https://truckmanualshub.com/

1000183745	4.2
0312	

Track Excavator

50Z3, 6003



OPERATOR'S MANUAL

1 0 0 0 1 8 3 7 4 5

This Operator's Manual includes the AEM Pafety J anual @B*. - - 6

AEM MEMBER

www.wackerneuson.com

https://truckmanualshub.com/

Documentation

Description	*Order no.*
Operator's Manual	1000183745
Service manual	1000129833
Spare parts list	1000125820

Legend

Edition	Issued
4.2	03/2012

Copyright – 2012 Wacker Neuson Linz GmbH, Linz-Leonding
Printed in Michigan U.S.A
All rights reserved

No part of this publication may be reproduced, translated or used in any form or by any means – graphic, electronic or mechanical including photocopying, recording, taping or information storage or retrieval systems – without prior permission in writing from the manufacturer.

Translation of original Operators Manual.
Non-metric weights and measurements are approximate.

The cover features the machine with possible optional equipment.

Wacker Neuson Linz GmbH
Haidfeldstr. 37
A-4060 Linz-Leonding

Document: OM 50Z3 6003 US
Order no.: 1000183745
Edition: 4.2

https://truckmanualshub.com/

Table of contents

Introduction

Important Operator Information 1-1
Abbreviations/symbols 1-2
Machine overview 1-3
Brief description 1-4
Travelling drive 1-5
Operating hydraulics 1-5
Shock cartridges (option) 1-5
Cooling system 1-5
Cab (ROPS and FOPS) 1-5
Fields Of Application of Attachments 1-5
Use: attachment 1-6
Regulations 1-7
EC declaration of conformity for all machines delivered before 29 December 2009 1-8
EC declaration of conformity for all machines delivered after 29 December 2009 .. 1-9
Declaration of conformity for machines without CE mark on the type label 1-10
EC declaration of conformity for all machines delivered before 29 December 2009 1-11
EC declaration of conformity for all machines delivered after 29 December 2009 1-12
Declaration of conformity for machines without CE mark on the type label 1-13
Type labels and component numbers 1-14
Signs and symbols 1-17
Overview of adhesive labels 1-17
Overview of safety labels 1-22
Fire extinguisher 1-27

Safety instructions

Safety Symbols Found In This Manual 2-1
Warranty 2-2
Disposal 2-2
Designated Use 2-2
Preparing To Use The Machine 2-3
Conditions for use 2-3
User training and knowledge 2-3
Preparing for use 2-3
Information on visibility 2-3
Modifications and spare parts 2-4
Operator and Technician Qualifications and Basic Responsibilities 2-4
User/Owner responsibility 2-4
Repair person qualifications 2-4
Safety Instructions Regarding Operation 2-4
Preparing for use 2-4
Starting and stopping 2-5
Work area awareness 2-5
Danger area awareness 2-5
Operating the machine 2-5
Carrying passengers 2-6
Mechanical integrity 2-6
Traveling 2-6
Operator Protection System (from serial no. AJ02777) 2-7
Shatter protection (Option) for canopy 2-8
Installing/removing the Front Guard 2-8
Work range and restricted visibility 2-9
Applications with Lifting Gear 2-9
General information 2-9
Conditions for safe operation 2-10

https://truckmanualshub.com/

Attachments 2-11
General information regarding attachments 2-11
Installation notes 2-11
Trailers 2-11
Hammer operation 2-12
Safety instructions 2-12
Working with a hammer 2-12
Transport and Towing 2-13
Towing 2-13
Transporting 2-13
Safety Guidelines for Maintenance 2-13
General maintenance notes 2-13
Personal safety measures 2-14
Preparing for maintenance and repair work 2-14
Performing maintenance and repairs 2-15
Special Hazards 2-15
Electrical energy 2-15
Underground electric lines 2-16
Overhead electric lines 2-16
Gas, dust, steam, smoke 2-17
Hydraulics 2-17
Noise 2-17
MSDS 2-17
Using the quickhitches in water 2-17
Battery 2-18
Safety Guidelines while using Internal Combustion Engines 2-18
Running the engine 2-18
Fueling the engine 2-18

Operation

Cab 50Z3/6003 (up to serial no. AH02781) 3-2
Cab 50Z3 2 / 6003 2 (from serial no. AJ02777) 3-4
Control elements 50Z3 (up to serial no. AH02781) / 6003 (up to serial no. AH00578) .. 3-6
Control elements 6003 (serial nos. AH00579 to AH02750) 3-7
Control elements 50Z3 2 / 6003 2 (from serial no.AJ02777) 3-9
Indicator lights and warning lights Overview 3-11
Operating the Excavator 3-14
Safety instructions 3-14
Putting the machine into operation for the first time 3-14
Running-in period 3-14
Check lists 3-15
Start-up checklist 3-15
Operation checklist 3-16
Parking checklist 3-16
Starting the Excavator 3-17
Preheating start switch 3-17
Throttle 3-17
Automatic engine speed setting 3-18
Before starting the engine 3-19
Starting the engine (general information) 3-20
Starting with the drive interlock – internal transponder (option) (from serial no. AJ02777)

https://truckmanualshub.com/

3-21
Jump-starting the engine (supply battery) 3-22
Starting at low temperatures 3-23
When the engine has started 3-23
Engine warm-up 3-23
Special instructions for driving on public roads 3-24
Drive position 3-24
Drive levers 3-24
High speed 3-25
Moving off 3-25
Hydraulic brake 3-25
Mechanical brake 3-25
Operating on slopes 3-26
Stabilizer blade operation 3-28
Parking the machine 3-29
Parking the machine on slopes 3-29
Light system 3-30
Working light 3-30
Roof working lights (option) 3-31
Interior light 3-31
Rotating beacon (option) 3-32
Cab heating and ventilation 3-33
Summer/winter operation (up to serial no. AD04650) 3-34
Heating controls (from serial no. AD04651) 3-34
Air conditioning (option) 3-35
Recirculated air mode 3-35
Wiper/wash system 3-36
Tank for washer system 3-36
Seat (50Z3) 3-37
Weight adjustment 3-38
Height adjustment 3-38
Horizontal adjustment 3-38
Backrest adjustment 3-38
Seat (6003) 3-39
Weight adjustment 3-39
Horizontal adjustment 3-40
Seat depth adjustment 3-40
Backrest adjustment 3-40
Head rests 3-40
Height adjustment 3-41
Seat (air suspension option) 3-41
Weight adjustment 3-42
Height adjustment 3-42
Horizontal adjustment 3-42
Seat depth adjustment 3-43
Backrest adjustment 3-43
Adjusting the head rest 3-43
Horizontal suspension 3-43
Seat belt 3-44
Retracting lap belt (option) 3-45
Mirrors (option) 3-46
Safety instructions 3-46
Adjusting the mirrors 3-47
Emergency exit 3-49
Emergency exit on machines equipped with protective Front Guard structures (option) 3-49

https://truckmanualshub.com/

Front window (up to serial no. AD06526) 3-50
Front window (from serial no. AD06527) 3-51
Opening the front window 3-51
Closing the front window 3-52
Opening the lower front window 3-52
Closing the lower front window 3-53
Opening the whole front window 3-53
Closing the whole front window 3-54
Opening the front window to a gap 3-55
Opening and closing the side window 3-55
Mounting/removing the canopy shatter protection (option) 3-56
Door 3-57
Door 50Z3 3-57
Door 6003 3-57
Exit through the door (up to serial no. AH02764) 3-59
Exit through the door (from serial no. AJ02777) 3-60
Armrest adjustment (up to serial no. AH02764) 3-61
Armrest adjustment (from serial no. AJ02777) 3-62
Engine cover 3-62
Battery master switch 3-63
Tilting the cab 3-64
Towing the machine 3-67
Lifting the Excavator 3-68
Safety instructions 3-68
Loading and transporting the machine 3-70
Safety instructions 3-70
Tying down the machine 3-71
Driving signal (option) 3-71
Operating the machine 3-72
General safety instructions 3-72
Control levers/control pattern ''A'': Overview 3-73
Left-hand control lever 3-73
Hammer pedal lock (up to serial no. AH02781) 3-73
Boom/triple articulation boom operation (up to serial no. AH02781) 3-74
Hammer pedal lock (from serial no. AJ02777) 3-74
Boom/triple articulation boom operation (from serial no. AJ02777) 3-75
Right-hand control lever 3-75
Lowering the boom with the engine stopped 3-75
Rotating the upper carriage 3-76
Rotating upper carriage brake 3-76
Changeover valve for control pattern ''B'' (option) 3-77
Left-hand control lever 3-77
Right-hand control lever 3-77
Directional valve position 3-77
Directional valve 3-78
Control lever with proportional controls (option): overview 3-79
Function 3-79
Left-hand control lever 3-80
Changeover between auxiliary hydraulics and boom swivel 3-80
Switching the status indicator light on/off for auxiliary hydraulics/boom swivel 3-80
Operating the boom/auxiliary hydraulics 3-81
Hammer operation 3-81
Adjusting control response 3-81
Characteristic curves – status indicator 3-82
Right-hand control lever 3-82
Lowering the boom with the engine stopped 3-83
Releasing pressure 3-83

https://truckmanualshub.com/

Control lever if equipped with 3rd control circuit (option): overview 3-84
Left-hand control lever 3-84
Boom swivel controls (up to serial no. AH02781) 3-84
Boom swivel controls (from serial no. AJ02777) 3-85
Right-hand control lever 3-85
Right-hand control lever if equipped with proportionally controlled 3rd control circuit (option) 3-86
Lowering the boom with the engine stopped 3-86
Releasing pressure 3-86
Tilting the upper carriage – Vertical Digging System (option) 3-87
Operation (up to serial no. AH02781) 3-87
Operation (from serial no. AJ02777) 3-88
Vario (6003 option) 3-89
Vario operation 3-89
Driving across slopes with the Vario feature 3-89
Danger zone of the Vario feature 3-90
Working with the Vario feature 3-91
Improved reach with the Vario feature 3-91
Releasing the pressure on the Operating Hydraulics 3-92
Releasing pressure 3-92
Pressure release with proportional controls (option) 3-92
Attaching attachments 3-93
Specific safety instructions 3-93
Removing a bucket 3-94
Mounting a bucket 3-94
Quickhitch (option) 3-95
Hydraulic quickhitch Easy Lock (option) 3-96
Picking up an attachment 3-96
Powertilt (option) 3-100
Attaching 3-100
Operation 3-101
Right-hand control lever (Powertilt) 3-101
Auxiliary hydraulics connections 3-102
Quick-connect couplings 3-102
Load indicator (option) 3-103
Load holding control device safety feature (option) 3-104
Applications with lifting gear 3-104
Lifting gear applications 3-105
Fastening loads 3-105
Worksite Evaluation and Preparation 3-105
Examining the site 3-105
Preparing the ground 3-105
Working with the machine 3-106
Working with the standard bucket 3-106
Prohibited work procedures 3-106
Excavator operating position 3-107
Bucket position when digging 3-108
Excavating trenches 3-108
Loading 3-109
Grading 3-109
Excavating trenches sideways 3-109
Working alongside trenches 3-110
Stabilizer blade at rear 3-110
Further practical hints for digging 3-111
Loading vehicles 3-111
Freeing the machine 3-111

https://truckmanualshub.com/

Grading 3-111
Grading 3-111

Troubleshooting
Troubleshooting the engine 4-1
Indicator lights 4-3
Seals, hoses 4-3
Undercarriage 4-4
Engine error codes 4-5
Malfunctions of the Powertilt unit 4-9
Troubleshooting the central lubrication system (option) 4-10
Proportional controls (option) diagnosis display 4-11

Maintenance
Introduction 5-1
Specific Safety Instructions 5-1
Fuel system 5-2
Refueling 5-3
Fuel-filling pump (option) (up to serial no. AD04862) 5-3
Fuel-filling pump (option) (from serial no. AD04863) 5-4
Stationary fuel pumps 5-4
Diesel fuel specification 5-5
Bleeding the fuel system 5-5
Fuel prefilter with water separator 5-6
Engine lubrication system 5-7
Checking the engine oil level 5-7
Adding engine oil 5-8
Engine and hydraulics cooling system 5-9
Specific safety instructions 5-9
Checking/adding coolant 5-10
Air filter 5-12
Replacing the air filter 5-13
Air intake 5-14
Change cab air filter 5-14
Replacing the filter element of the air conditioning system (option) 5-15
Diesel particulate filter (option) 5-16
Main components of diesel particulate filter system 5-16
How the diesel particulate filter works 5-17
Machine operation with diesel particulate filter 5-17
Display 5-19
Temperature scale 5-19
Exhaust gas back pressure scale 5-19
Alarm messages 5-20
Maintenance 5-23
Oils and fuels 5-24
Troubleshooting 5-24
Warranty 5-24
V-belt 5-25
Checking V-belt tension 5-25
Retightening the V-belt 5-26
Checking the V-belt of the air conditioning system (option) 5-26
Tightening the V-belt of the air conditioning system 5-27
Hydraulic system 5-28
Specific safety instructions 5-28
Checking the hydraulic oil level 5-29
Adding hydraulic oil 5-30
Important information for the use of biodegradable oil 5-31
Checking hydraulic pressure lines 5-32

https://truckmanualshub.com/

Tracks 5-33
Checking the track tension of the rubber tracks 5-33
Checking the track tension of the steel tracks (option) and hybrid tracks (option) .. 5-34
Adjusting track tension 5-34
Track propulsion final drive 5-36
Checking the oil level and adding oil 5-36
Draining oil 5-36
Maintenance of attachments 5-37
Electrical system 5-37
Service and maintenance work at regular intervals 5-37
Instructions concerning specific components 5-37
Alternator 5-37
Battery 5-38
General maintenance work 5-40
Cleaning 5-40
General instructions for all areas of the machine 5-40
Inside the cab 5-40
Cleaning the seat belt 5-41
Exterior of the machine 5-41
Engine compartment 5-41
Screw connections and attachments 5-41
Pivots and hinges 5-41
Overview of lubrication points 5-42
Parking the machine 5-43
Lubrication points on the boom, bucket and stick hydraulic cylinders 5-43
Lubrication points on the boom and stick 5-44
Joint rod lubrication point 5-45
Lubrication points on the stabilizer blade and stabilizer blade hydraulic cylinder 5-45
Lubrication points on the slewing hydraulic cylinder and swivelling console ... 5-46
Lubrication points of ball bearing race of live ring 5-47
Lubrication points of live ring teeth 5-48
Powertilt lubrication points (option) 5-49
Lubrication points of hydraulic quickhitch (option) 5-49
Lubrication points of control lever base (from serial no. AJ02777) 5-50
VDS lubrication points (option) 5-50
Central lubrication system (option) 5-51
Function 5-51
Status LEDs 5-51
Adjusting cycle time and lubrication time 5-52
Repair in case of clogging 5-52
Preparatory work before taking the machine out of service 5-53
Maintenance if the machine is out of service for a longer period of time 5-53
Putting into operation again 5-53
Fluids and lubricants 5-54
Oil grades for the diesel engine, depending on temperature 5-55
Additional oil change and filter replacement (hydraulic system) 5-55
Oil grades for the hydraulic system, depending on temperature 5-56
Maintenance plan (overview) 5-57
Maintenance label 5-62
Explanation of symbols on the maintenance label 5-62

Specifications

https://truckmanualshub.com/

Chassis 6-1
Engine 6-1
Hydraulic system 6-2
Work hydraulics 6-2
Undercarriage and swivel unit 6-2
Stabilizer blade 6-2
Electrical system, model 50Z3 6-3
Fuse box in instrument panel 6-3
Main fuse box with relays underneath the cab 6-3
Relays 6-4
Electrical system, model 6003 (from serial no. AH0611) 6-4
Fuse box on instrument panel (up to serial no. AH02750) 6-4
Main fuse box with relays 6-5
Fuse box on instrument panel (from serial no. AJ02777) 6-5
ECU control unit (6003 from serial no. AH00611) 6-6
Noise levels 6-6
Vibration 6-6
Coolant compound table 6-7
Powertilt 6-7
Weight indications 6-8
Dimensions model 50Z3 6-9
Dimensions model 50Z3 VDS 6-11
Dimensions model 6003 standard boom, Vario (option) 6-13
Dimensions model 6003 triple articulation boom (option) 6-15
Lift capacity table 50Z3 6-17
Lift capacity table 50Z3 counterweight (option) 6-18
Lift capacity table 50Z3 long stick (option) 6-19
Lift capacity table 50Z3 long stick, counterweight (option) 6-20
Lift capacity table 50Z3 VDS short stick (option) 6-21
Lift capacity table 50Z3 VDS short stick, counterweight (option) 6-22
Lift capacity table 50Z3 VDS long stick (option) 6-23
Lift capacity table 50Z3 VDS long stick, counterweight (option) 6-24
Lift capacity table 6003 6-25
Lift capacity table 6003 counterweight (option) 6-26
Lift capacity table 6003 long stick (option) 6-27
Lift capacity table 6003 long stick, counterweight (option) 6-28
Lift capacity table 6003 long stick, triple articulation boom (option) 6-29
Lift capacity table 6003 long stick, triple articulation boom, counterweight (option) 6-30
Lift capacity table 6003 triple articulation boom (option) 6-31
Lift capacity table 6003 triple articulation boom, counterweight (option) 6-32
Lift capacity table 6003 Vario (option) 6-33

https://truckmanualshub.com/

A

Abbreviations 1-2
Air filter 5-12
Air intake 5-14

B

Battery master switch 3-63
Biodegradable oil 5-31

C

Cab air filter 5-14, 5-15
Cab entry and exit 3-60
Check lists 3-15
Craning operation 3-68

D

Designated use and exemption from liability 2-2
Diesel particulate filter (option) 5-16
Driving on public roads 3-24
Driving the excavator 3-17

E

Emergency exit
Front Guard (option) 3-49

F

Fire extinguisher 1-27
Fluids and lubricants 5-54

H

Heating 3-33
Hose burst valve (option) 3-104

I

Indicator lights and warning lights 3-11
Interior light 3-31

L

Legal regulations 1-7
Light system 3-30
Lowering the boom with the engine stopped 3-75, 3-83, 3-86

M

Machine
Brief description 1-4
Fields of application 1-5
Loading and transporting 3-70
Overview 1-3
Maintenance
Air filter 5-13, 5-14
Biodegradable oil 5-31
Bleeding the fuel system 5-5
Cab air filter 5-14
Central lubrication system (option) 5-51
Checking the coolant level 5-10
Checking the engine oil level 5-7
Checking the hydraulic oil level 5-29
Cleaning 5-40
Diesel particulate filter (option) 5-16
Electrical system 5-37
Engine and hydraulics cooling system 5-9
Engine lubrication system 5-7
Filling in engine oil 5-8
Filling up coolant 5-10
Filling up hydraulic oil 5-30
Filter element of air conditioning system (option) 5-15
Fluids and lubricants 5-54
Fuel system 5-2
General maintenance work 5-40
Hydraulic pressure lines 5-32
Hydraulic system 5-28
Instructions concerning specific components 5-37
Maintenance plan 5-57
Pivots and hinges 5-41
Screw connections 5-41
Service and maintenance work at regular intervals 5-37
Track maintenance 5-33
V-belt 5-25

N

Noise levels 1-18

O

Operation 3-1
3rd control circuit (option) 3-84
Before starting the engine 3-19
Moving off 3-24
Parking the machine 3-29
Seat belt height adjustment 3-44
Starting the engine 3-20
Triple articulation boom (option) 3-74, 3-75, 3-101
Vario (option) 3-89

P

Preheating start switch 3-17
Preparing for maintenance and repair work 2-14
Putting into operation 3-7, 3-9
Check lists 3-15
Putting the machine into operation for the first time 3-14
Safety instructions 3-14

R

Refuelling 5-3
Rotating beacon 3-32
Running-in period 3-14

https://truckmanualshub.com/

S

Safety instructions 2-1
General conduct 2-3
Identification 2-1
Trailers and attachments 2-11
Seat (air suspension option) 3-41
Seat (standard) 3-39
Seat adjustment 3-37
Backrest adjustment 3-38, 3-40
Horizontal adjustment 3-38, 3-40, 3-42
Seat depth adjustment 3-40, 3-43
Weight adjustment 3-38, 3-39, 3-42
Seat belt 3-44
Seat belt height adjustment 3-44
Shatter protection 2-8, 3-56
Side window 3-55
Specifications 6-1
Chassis 6-1
Dimensions 6-9
Electrical system 6-3
Engine 6-1
Noise levels 6-6
Vibration 6-6
Work hydraulics 6-2
Starting aid 3-22

T

Tilting the upper carriage 3-87
Track maintenance 5-33

V

Ventilation 3-33
Ventilation, fresh air 3-33

W

Warranty 2-2
Washer system 3-36
Tank 3-36
Wiper 3-36
Working
Freeing the machine 3-111
Practical hints 3-111

https://truckmanualshub.com/

Supplementary Operator's Manual for Protective Structures for Excavators

Edition	**1.0**
Language	**us**
Article number	**1000293107**
Valid for machine model	803, 1403, 1404, 1503, 1703, ET18, 1903, 2003, ET20, 2203, 2404, ET24, 2503, 28Z3, 3003, 3503, 3703, 38Z3, 5002, 50Z3, 6002, 6003, 6502, 6503, 75Z3, 8002, 8003, 9503, 12002, 14504

1.1 Supplementary Operator's Manual

Important

This Supplementary Operator's Manual must be added to the original Operator's Manual of which it forms part. Read, understand and follow this Supplementary Operator's Manual and all other manuals supplied with the machine.

Legend	
Supplementary Operator's Manual for original Operator's Manual	–
Supplementary Operator's Manual for translation of original Operator's Manual	x

Copyright – 2012 Wacker Neuson Linz GmbH, Hörsching
Printed in Michigan U.S.A.

All rights reserved, in particular the globally applicable copyright, right of reproduction and right of distribution.
No part of this publication may be reproduced, translated or used in any form or by any means – graphic, electronic or mechanical including photocopying, recording, taping or information storage or retrieval systems – without prior permission in writing from the manufacturer.
No reproduction or translation of this publication, in whole or part, without the written consent of Wacker Neuson Linz GmbH.
Violations of legal regulations, in particular of the copyright protection, will be subject to civil and criminal prosecution.
Wacker Neuson Linz GmbH keep abreast of the latest technical developments and constantly improve their products. For this reason, we may from time to time make changes to diagrams and descriptions in this documentation which do not reflect products which have already been delivered and which will not be implemented on these machines.
Technical data, dimensions and weights are given as an indication only. Responsibility for errors or omissions not accepted.

Wacker Neuson Linz GmbH
Flughafenstr. 7
A-4063 Hörsching
Phone +43 7221 63000
E-mail: office.linz@wackerneuson.com
www.wackerneuson.com

https://truckmanualshub.com/

Definition of the term "Protective Structure"

Protective structures are additional elements that protect the operator or user against risk. These elements can be installed later on or as standard equipment.

Explanation of abbreviations

ROPS:

Roll Over Protective Structure

TOPS:

Tip Over Protective Structure

FOPS:

Falling Objects Protective Structure

FGPS:

Front Guard Protective Structure. Called "Front Guard" in this Supplementary Operator's Manual.

https://truckmanualshub.com/

1.2 Safety Symbols Found In This Manual

Important indications regarding the safety of the personnel and the machine are identified in this Supplementary Operator's Manual with the following terms and symbols:

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

Potential consequences of the hazard.

- Obey all safety messages that follow this symbol to avoid injury or death.

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

Potential consequences of the hazard.

- Obey all safety messages that follow this symbol to avoid possible injury or death.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

Potential consequences of the hazard.

- Obey all safety messages that follow this symbol to avoid possible minor or moderate injury.

NOTICE

NOTICE indicates a situation which, if not avoided, could result in property damage.

Important

Important identifies an instruction that, when followed, provides for a more efficient and economical use of the machine.

https://truckmanualshub.com/

1.3 Mechanical integrity

WARNING

Accident hazard due to modified cab and protective structures.

Incorrect work on the cab and protective structures could causes serious injury or death.

- No drilling, cutting or grinding on the cab and protective structures.
- Welding, straightening or bending work on the cab and protective structures is prohibited.
- Immediately have a damaged cab or protective structure replaced.

Important

Check the cab/canopy/rollbar and all protective structures once a day for damage.

Important

Protective structures may only be installed or removed by an authorized Wacker Neuson Service Center.

https://truckmanualshub.com/

1.4 Differentiation of protective structures

Important

- Machine operation is only allowed with a correctly installed and intact cab, correctly installed and intact canopy or rollbar for the 803 (option).
- For additional protection, only use correctly installed and intact Wacker Neuson protective structures that have been released for the machine.

Rollbar (valid for 803)

The rollbar has been specially designed for protection in case of an accident.

- ROPS/TOPS tested rollbar (option).
- Shatter protection (option from AI00967); protective structure against falling objects (fragments or splinters) projected from front of machine.

Cab/canopy (valid for 1403/1404/1503/1703/ET18/1903/2003/ET20/2203/2404/ ET24/2503/28Z3/3003/3503/3703/38Z3/50Z3)

The cab/canopy have been specially designed for protection in case of an accident.

- ROPS/TOPS tested canopy (open version).
- ROPS/TOPS tested cab (closed version/option).
- Protective FOPS structure (option) for cab/canopy; protective structure against falling objects.
- Front Guard (option) for cab/canopy; protective structure against objects from the front (for instance pipes, tree trunks etc.).
- Shatter protection (option) for canopy; protective structure against falling objects (fragments or splinters) projected from front of machine.

Important

Unless otherwise specified, the term "Cab" refers both to the open and closed variants.

Cab (valid for 5002/6002/6003/6502/6503/75Z3/8002/8003/9503/12002/14504)

The cab has been specially designed for protection in case of an accident:

- ROPS/TOPS tested cab.
- Protective FOPS structure (option) for cab; protective structure against falling objects.
- Front Guard (option) for cab; protective structure against objects from the front (for instance pipes, tree trunks etc.).

Not all protective structures are available for all machines, and not all protective structures can be combined with each other. If you are not sure, contact a Wacker Neuson service center.

https://truckmanualshub.com/

Definition of FOPS/Front Guard categories

Category I:

FOPS and Front Guard to protect against small falling objects or small objects penetrating the cab from the front of the machine, such as bricks, small pieces of concrete, tools, for machines that are used for repairing roads, landscaping work and for working on other construction sites, for instance.

Category II:

FOPS or Front Guard to protect against heavy falling objects or heavy objects penetrating the cab from the front of the machine, such as trees, pieces of rock, for machines that are used for clearance work, demolition work and forestry work.

Responsibility for machine equipped with protective structures

The decision regarding the necessary protective structures (type and category I or II) must be made by the machine operator and depends on the specific work situation.

The operator must observe the national regulations and he must inform the user on the protective structure to be used in a specific work situation.

https://truckmanualshub.com/

Protective FOPS structure/small screen – category I (option)

DANGER

Crushing hazard. Falling objects.

Objects will cause severe injury or death.

- Machine operation is prohibited in areas with risks of falling objects, without a protective FOPS structure.

Important

The protective FOPS structure corresponds to category I according to ISO 3449:1992 (valid for 1404 from AG02423) or ISO 10262:1998 (valid for ET18/ ET20/ET24/2503/28Z3/3503/38Z3/50Z3/6003/6503/75Z3/8003/9503/14504).

- Follow all local, state, or national regulations covering falling objects.
- The operator must ensure that only work is performed that does not require any higher protection.
- Accidents cannot be fully avoided despite equipping a machine with protective structures.

Important

Protective structures may only be installed or removed by an authorized Wacker Neuson Service Center.



Fig. 1: FOPS category I (symbolic representation)

https://truckmanualshub.com/

Protective FOPS structure/large screen – category I (option)

DANGER

Crushing hazard. Falling objects.

Objects will cause severe injury or death.

- Machine operation is prohibited in areas with risks of falling objects, without a protective FOPS structure.

Important

The protective FOPS structure corresponds to category I according to ISO 3449:1992 (valid for 38Z3) or according to ISO 3449:2008 (valid for 28Z3).

- Follow all local, state, or national regulations covering falling objects.
- The operator must ensure that only work is performed that does not require any higher protection.
- Accidencts cannot be fully avoided despite equipping a machine with protective structures.

Important

Protective structures may only be installed or removed by an authorized Wacker Neuson Service Center.



Fig. 2: FOPS category I (symbolic representation)

https://truckmanualshub.com/

Protective FOPS structure/canopy – category I (option)

DANGER

Crushing hazard. Falling objects.

Objects will cause severe injury or death.

- Machine operation is prohibited in areas with risks of falling objects, without a protective FOPS structure.

Important

The protective FOPS structure corresponds to category I according to ISO 3449:1992 (valid for 1403/1503/1703 (up to AF05530)/1903/2003 (up to AF05530)/2203/2503/3003/3503/3703/5002/6002/6502).

- Follow all local, state, or national regulations covering falling objects.
- The operator must ensure that only work is performed that does not require any higher protection.
- Accidencts cannot be fully avoided despite equipping a machine with protective structures.

Important

Protective structures may only be installed or removed by an authorized Wacker Neuson Service Center.



Fig. 3: FOPS category I (symbolic representation)

https://truckmanualshub.com/

Protective FOPS structure/large screen – category II (option)

DANGER

Crushing hazard. Falling objects.

Objects will cause severe injury or death.

- Machine operation is prohibited in areas with risks of falling objects, without a protective FOPS structure.

Important

The protective FOPS structure corresponds to category II according to ISO 3449:1992 (valid for 1404/1703 (from AG02503)/2003 (from AG02503)/2404/50Z3/6003/6503/75Z3/8002/8003/9503/12002) or according to ISO 3449:2005 (valid for 14504).

- Follow all local, state, or national regulations covering falling objects.
- The operator must ensure that only work is performed that does not require any higher protection.
- Accidencts cannot be fully avoided despite equipping a machine with protective structures.

Important

Protective structures may only be installed or removed by an authorized Wacker Neuson Service Center.



Fig. 4: FOPS category II (symbolic representation)

https://truckmanualshub.com/

Protective Front Guard structure with integrated FOPS/category I respectively (option)

DANGER

Stabbing/puncture/crushing hazard from falling objects (fragments or splinters) projected from front of machine.

Objects will cause severe injury or death.

- Machine operation is prohibited in areas with risks of objects penetrating the cab from the front of the machine, for instance pipes, tree trunks etc. and of falling objects, without a protective Front Guard structure with an integrated FOPS.

Important

The protective Front Guard structure with integrated FOPS corresponds to category I according to ISO 10262:1998 (valid for ET18/ET20/ET24).

- Follow all local, state, or national regulations covering falling objects.
- The operator must ensure that only work is performed that does not require any higher protection.
- Accidencts cannot be fully avoided despite equipping a machine with protective structures.

Important

Protective structures may only be installed or removed by an authorized Wacker Neuson Service Center.

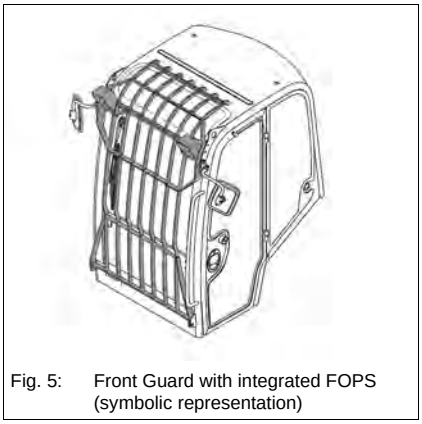


Fig. 5: Front Guard with integrated FOPS (symbolic representation)

https://truckmanualshub.com/

Protective Front Guard structure category I (option)

DANGER

Stabbing/puncture/crushing hazard from falling objects (fragments or splinters) projected from front of machine.

Objects will cause severe injury or death.

- Machine operation is prohibited in areas with risks of objects penetrating the cab from the front of the machine, for instance pipes, tree trunks etc. and of falling objects, without a protective Front Guard structure with an integrated FOPS.

Important

The protective Front Guard structure corresponds to category I according to ISO 10262:1998 (valid for 2503/28Z3/3003/3503/3703/38Z3).

- Follow all local, state, or national regulations covering falling objects.
- The operator must ensure that only work is performed that does not require any higher protection.
- Accidencts cannot be fully avoided despite equipping a machine with protective structures.

Important

Protective structures may only be installed or removed by an authorized Wacker Neuson Service Center.



Fig. 6: Protective Front Guard structure (symbolic representation)

https://truckmanualshub.com/

Protective Front Guard structure category II (option)

DANGER

Stabbing/puncture/crushing hazard from falling objects (fragments or splinters) projected from front of machine.

Objects will cause severe injury or death.

- Machine operation is prohibited in areas with risks of objects penetrating the cab from the front of the machine, for instance pipes, tree trunks etc. and of falling objects, without a protective Front Guard structure with an integrated FOPS.

Important

The protective Front Guard structure corresponds to category II according to ISO 10262:1998 (valid for 50Z3/6003/6503/75Z3/8002/8003/9503/12002/14504).

- Follow all local, state, or national regulations covering falling objects.
- The operator must ensure that only work is performed that does not require any higher protection.
- Accidencts cannot be fully avoided despite equipping a machine with protective structures.

Important

Protective structures may only be installed or removed by an authorized Wacker Neuson Service Center.

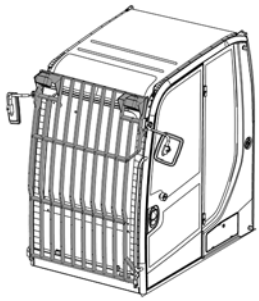


Fig. 7: Protective Front Guard structure (symbolic representation)

https://truckmanualshub.com/

Emergency exit for cab equipped with protective Front Guard structure

WARNING

Cutting Hazard. Risk of injury due to broken glass.

Risk of personal injury.

- Only smash windows in an absolute emergency.
- Protect face and eyes sufficiently from glass splinters before breaking a window pane.
- Remove all broken glass from the window frame before exiting the cab.

WARNING

Tripping/Slipping/Falling hazard. Use the rear window as an exit only in an emergency.

Risk of personal injury.The machine has no footholds or handles at the rear for a safe exit. Therefore injuries may arise when exiting in an emergency.

- Exit the machine through the rear window only in an absolute emergency.

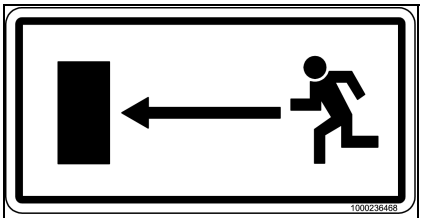


Fig. 8: Emergency exit label

Meaning (option)

This label identifies the emergency exit for a cab equipped with protective Front Guard structure.

Position

Inside the cab, above the rear window

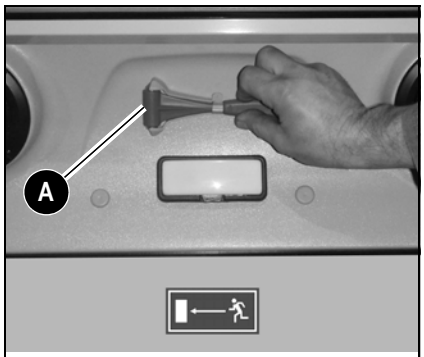


Fig. 9: Position of emergency hammer (symbolic representation)

The rear window can be used as an exit if the door is blocked.

Smash the rear window with emergency hammer **A**.

https://truckmanualshub.com/

Shatter protection (option)

DANGER

Stabbing/puncture/crushing hazard from falling objects (fragments or splinters) projected from front of machine.

Objects will cause severe injury or death.

- A shatter protection must be installed on a canopy version if an attachment (a hammer, for instance) causes fragments to fly. This shatter protection takes over the function of a front window.
- Pay attention to the restricted work range (see fig. 13 and 14).
- For 803 machines up to serial number AI00966, operation with an attachment causing fragments to fly is absolutely prohibited.

WARNING

Accident hazard in conditions of restricted visibility due to rain, snowfall, dust etc..

Could causes severe injury or death.

- Stop work immediately.

Important

The shatter protection (canopy option) protects the driver against fragments from the front.

- Follow all local, state, or national regulations covering falling objects.
- The operator must ensure that only work is performed that does not require any higher protection.
- Accidents cannot be fully avoided despite equipping a machine with protective structures.

Important

Do not use brushes, steel wool or other abrasive cleaners for cleaning the polycarbonate disc. Do not wipe dust in a dry state.

Important

Protective structures may only be installed or removed by an authorized Wacker Neuson Service Center.

https://truckmanualshub.com/

Important

A shatter protection must be installed on a canopy version if an attachment (a hammer, for instance) causes fragments to fly. Pay attention to the restricted work range (see fig. 13 and 14).

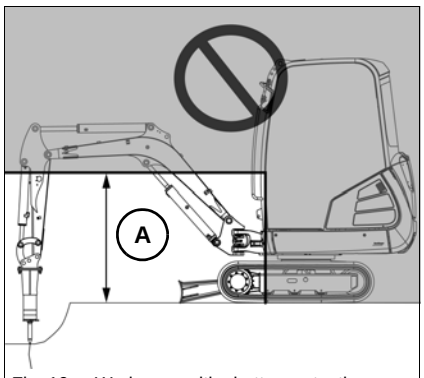


Fig. 10: Work area with shatter protection

Work area with shatter protection

Height of work area **A**: 120 cm (47 in).

Figures 13 and 14 refer to work with a Wacker Neuson hydraulic hammer.

Important

Working with another attachment can modify the height of the work area.

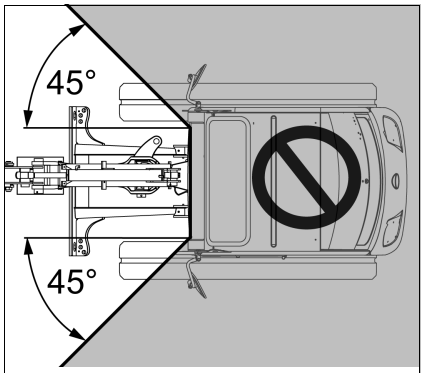


Fig. 11: Work area with shatter protection (top view)

https://truckmanualshub.com/

1 Introduction

1.1 Important Operator Information

Store the Operator's Manual in the storage compartment behind the seat.

This Operator's Manual contains important information on how to work safely, correctly and economically with the machine. This Operator's Manual provides information and instructions for all operators regardless of experience. It helps to avoid risky situations and reduce repair costs and downtimes. Furthermore, the reliability and the service life of the machine will be increased by following the instructions in the Operator's Manual. This is why the Operator's Manual must always be kept at hand in the machine.

Your own safety, as well as the safety of others, depends to a great extent on how the machine is moved and operated. Thoroughly read and understand the information in this Operator's Manual before operating the machine for the first time. This Operator's Manual will help to familiarize yourself more easily with the machine, thereby enabling you to use it more safely and efficiently.

Before operating this machine for the first time, carefully read the section "Safety Instructions" to learn how to operate the machine safely.

Important

Careful and prudent working is the best way to avoid accidents.

- Instructions are provided for bucket attachments. No instructions are provided for other attachments. Refer to the specific attachment operator's manual for safe operation.
- Wacker Neuson reserves the right to make product improvement changes during the course of series production of this machine.
- Modifying the manufacturer specification and configuration of this machine, or using unapproved attachments, can cause personal hazards and damage the machine. Contact your Wacker Neuson dealer for additional information and clarification regarding modifications.

Operational safety and readiness of the machine do not only depend on your skill, but also on maintenance and servicing of the machine. This is why regular maintenance and service work is absolutely necessary. Extensive maintenance and repair work must always be performed by an expert with appropriate training. Use only original spare parts for repairs. This ensures operational safety and readiness of your machine, and maintains its value.

- Special equipment and superstructures are not described in this Operator's Manual.
- We reserve the right to improve the technical standard of our machines without adapting the Operator's Manual.
- Modifying Wacker Neuson products and fitting them with additional equipment and attachments not included in our delivery program requires Wacker Neuson's written authorization, otherwise warranty and product liability for possible damage caused by these modifications shall not be applicable.
- Subject to modifications and printing errors.

Your Wacker Neuson dealer will be pleased to answer any further questions regarding the machine or the Operator's Manual.

https://truckmanualshub.com/

Abbreviations/symbols

- This symbol stands for a list.
  - Subdivision within lists or an activity. Follow the steps in the recommended order.

☞ *This symbol requires you to perform the activity described.*

➥ Description of the effects or results of an activity.

 This symbol shows the driving direction – for better orientation in figures and graphics.

Important

Unless otherwise specified, all indications made in this Operator's Manual refer to models 50Z3 / 6003 and 50Z3 2 / 6003 2.

https://truckmanualshub.com/

1.2 Machine overview

1 Working lights (option)
2 Boom mounted work light
3 Undercarriage
4 Stabilizer blade
5 Engine cover
6 Handrail
7 Fuel tank filler inlet
8 Exhaust pipe
9 Lifting/tying down point
10 Rotating beacon (option)
11 Auxiliary hydraulics
12 Tank cover
13 Door arrester
14 Door handle and lock
15 Counterweight (option)

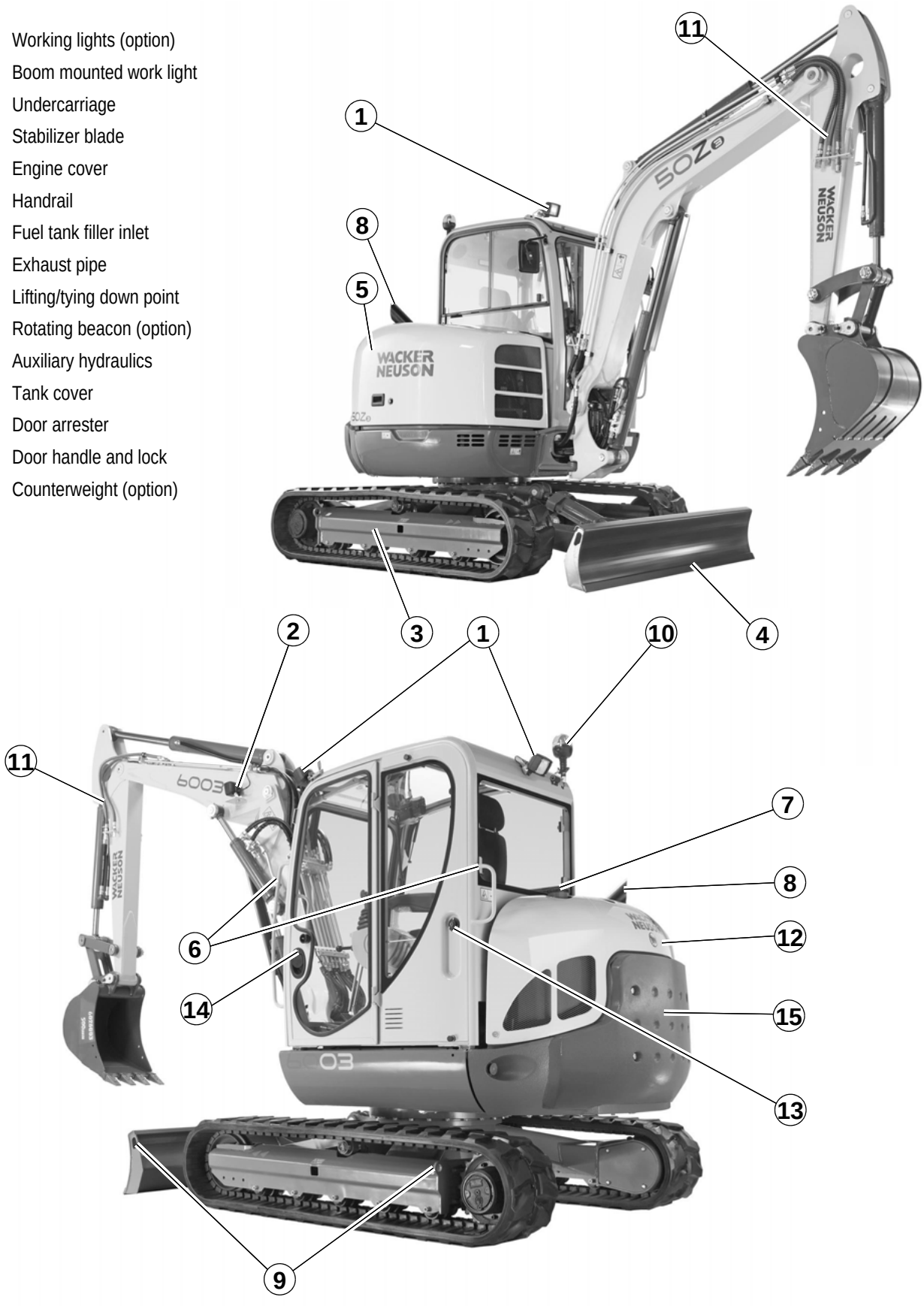


Fig. 1: Machine outside views

https://truckmanualshub.com/

1.3 Brief description

The Wacker Neuson Model 50Z3/6003 is a self-propelled hydraulic excavator. Before operating the excavator, read the instruction manual, understand the instruction and practice operation until confident of operating familiarity and competence. Know and comply with regulations for operation and use of the excavator on the worksite or traveling on public roads. This excavator is intended for use as an earth-moving machine. Attachments described in *Chapter 1.4 "Fields Of Application of Attachments"* are approved to expand the utility of the 50Z3/6003 as an earth-moving machine. Do not use any other attachments with the excavator. Contact the Wacker Neuson dealer for attachment advice for equipment not described in 1.4.

Major excavator assemblies are:

- Rotating upper structure.
- Undercarriage supporting the upper structure.
- Propulsion system consisting of tracked travel gear and motor for machine mobility.
- Earthmoving structures (boom, stick and bucket).

The upper structure consists of the following major components or systems:

- Diesel engine/ pump drive.
- Pressure compensated hydraulic system.
- Operator compartment.
- Control systems for work and machine propulsion.
- Swing bearing and hydraulic coupling for upper and lower structure connection.
- Swing gear box and motor.
- Boom mounting points.
- Fuel and hydraulic oil reservoir.
- Counterweight.
- Engine and component enclosure.

The lower structure supports the upper structure through a large bearing permitting 360 degree continuous rotation:

- Welded structure.
- Large support bearing.
- Stabilizer blade.
- Track drive.
- Drive motor.

Hydraulic systems are supplied power from pumps mounted to a drive box bolted to the diesel engine. The system is pressure compensated automatically adjusting speed and force to the working conditions and engine power. The following functions are hydraulically actuated:

- Upper structure rotation.
- Excavator mobility.
- Steering during excavator movement on the worksite or public roads.
- Stabilizer extension and retraction.
- Boom vertical movement.
- Stick movement in and out.
- Auxiliary hydraulics for attachments.
- Excavator propulsion brakes/park brake.
- Optional horizontal boom slewing motion.

https://truckmanualshub.com/

Travelling drive

The diesel engine permanently drives the twin axial variable displacement pump whose oil flow is sent to a hydraulic motor for each track drive.

Operating hydraulics

The diesel engine also drives the joint gear pump for the operating hydraulics. The oil flow of this pump depends on the diesel engine speed only.

Shock cartridges (option)

The auxiliary hydraulics are equipped with a Shock cartridge to compensate pressure peaks in the hydraulic system.

Cooling system

The indicator lights in the instrument panel of the machine ensure constant monitoring of the engine and hydraulic oil temperature, as well as of the coolant temperature and level.

Cab (ROPS and FOPS)

The cab has been specially designed for protection in case of an accident.

- ROPS (Roll Over Protective Structure) tested cab / canopy
- FOPS (Falling Object Protective Structure) – option

Do not modify or attempt to repair the ROPS cab or ROPS structure. Any permanent deflection of the ROPS is a failure mode and the cab or structure must be replaced to ensure future protection to the operator space in the event of a tipping incident. Contact a Wacker Neuson dealer for instruction or clarification.

The ROPS is a special safety device designed and produced to exacting material and assembly standards for certification. Bending, heating, welding, cutting, or drilling holes in the ROPS will reduce the protection performance in a tipping incident.

Fasten your seat belt, otherwise you can be thrown around or even outside the cab and crushed. Therefore always fasten your seat belt as you drive and work with the machine. Tighten the seat belt before starting work with the machine.

1.4 Fields Of Application of Attachments

The attachments will decide in the first place how the machine is used.

NOTICE

In order to avoid damage to the machine, only the attachments listed below have been certified for installation on the machine.

- Contact your Wacker Neuson dealer if you wish to use other attachments.

Using attachments of other manufacturers, or attachments which have been released for other machine types, can reduce the machine's output and stability considerably, and can also cause damage to the machine and injuries to the operator or the staff.

Always compare the weight of the attachment and its maximum payload with the indications in the lift capacity table. Never exceed the maximum payload stated in the lift capacity table.

Important

Please refer to the Operator's and maintenance manual of the attachment manufacturer for using and performing maintenance on attachments such as hammers, grabs etc.

https://truckmanualshub.com/

Use: attachment

The measurements are Metric (Imperial)

Description of attachment	Weight	Capacity	Machine	Remarks
Mechanical quickhitch	71 kg (157 lbs)		50Z3 / 6003	Required for operation of the Wacker Neuson quickhitch system[3]
Easy Lock quickhitch	81 kg (179 lbs)		50Z3/6003	
Powertilt with Easy Lock	187 kg (412 lbs)		50Z3/6003	
Hammer console	62 kg (137 lbs)		50Z3/6003	
Backhoe bucket 340 mm (13 in)	79 kg (174 lbs)	0.058 m³ (2.05 ft³)	50Z3	
	103 kg (227 lbs)	0.058 m³ (2.05 ft³)	50Z3	Mechanical quickhitch
	92 kg (203 lbs)	0.058 m³ (2.05 ft³)	6003	
	104 kg (229 lbs)	0.058 m³ (2.05 ft³)	6003	Mechanical quickhitch
Backhoe bucket 350 mm (14 in)	95 kg (209 lbs)	0.095 m³ (3.35 ft³)	50Z3	Easy Lock quickhitch
	114 kg (251 lbs)	0.123 m³ (4.34 ft³)	6003	Easy Lock quickhitch
Backhoe bucket 400 mm (16 in)	100 kg (220 lbs)	0.074 m³ (2.61 ft³)	50Z3/6003	
	112 kg (247 lbs)	0.074 m³ (2.61 ft³)	50Z3/6003	Mechanical quickhitch
	98 kg (216 lbs)	0.109 m³ (3.85 ft³)	50Z3	Easy Lock quickhitch
	116 kg (256 lbs)	0.140 m³ (4.94 ft³)	6003	Easy Lock quickhitch
Backhoe bucket 500 mm (20 in)	100 kg (220 lbs)	0.116 m³ (4.10 ft³)	50Z3	
	114 kg (25 lbs)	0.095 m³ (3.35 ft³)	6003	
	126 kg (278 lbs)	0.095 m³ (3.35 ft³)	6003	Mechanical quickhitch
	113 kg (249 lbs)	0.136 m³ (4.80 ft³)	50Z3	Easy Lock quickhitch
	132 kg (291 lbs)	0.176 m³ (6.21 ft³)	6003	Easy Lock quickhitch
Backhoe bucket 600 mm (24 in)	125 kg (276 lbs)	0.164 m³ (5.79 ft³)	50Z3	Easy Lock quickhitch
	146 kg (322 lbs)	0.210 m³ (7.42 ft³)	6003	Easy Lock quickhitch
Backhoe bucket 650 mm (26 in)	115 kg (254 lbs)	0.160 m³ (5.65 ft³)	50Z3	
	137 kg (302 lbs)	0.130 m³ (4.59 ft³)	50Z3	Mechanical quickhitch
	132 kg (291 lbs)	0.197 m³ (6.96 ft³)	6003	
	144 kg (317 lbs)	0.165 m³ (5.83 ft³)	6003	Mechanical quickhitch
Backhoe bucket 700 mm (28 in)	136 kg (300 lbs)	0.191 m³ (6.75 ft³)	50Z3	Easy Lock quickhitch
	160 kg (353 lbs)	0.245 m³ (8.65 ft³)	6003	Easy Lock quickhitch
Backhoe bucket 800 mm (32 in)	151 kg (333 lbs)	0.218 m³ (7.70 ft³)	50Z3	Easy Lock quickhitch
	176 kg (388 lbs)	0.280 m³ (9.89 ft³)	6003	Easy Lock quickhitch
Backhoe bucket 850 mm (33 in)	138 kg (304 lbs)	0.218 m³ (7.70 ft³)	50Z3	
	161 kg (355 lbs)	0.175 m³ (6.18 ft³)	50Z3	Mechanical quickhitch
	160 kg (353 lbs)	0.268 m³ (9.46 ft³)	6003	
	172 kg (379 lbs)	0.225 m³ (7.95 ft³)	6003	Mechanical quickhitch
Backhoe bucket 900 mm (35 in)	190 kg (419 lbs)	0.314 m³ (11.08 ft³)	6003	Easy Lock quickhitch
Ditch cleaning bucket 1.2 m (47 in)	126 kg (278 lbs)	0.205 m³ (7.24 ft³)	50Z3/6003	
	169 kg (373 lbs)	0.205 m³ (7.24 ft³)	50Z3/6003	Mechanical quickhitch
	132 kg (291 lbs)	0.174 m³ (6.14 ft³)	50Z3/6003	Easy Lock quickhitch

https://truckmanualshub.com/

Description of attachment	Weight	Capacity	Machine	Remarks
Ditch cleaning bucket 1.4 m (55 in)	145 kg (320 lbs)	0.238 m³ (8.40 ft³)	50Z3/6003	
	187 kg (412 lbs)	0.238 m³ (8.40 ft³)	50Z3/6003	Mechanical quickhitch
	147 kg (324 lbs)	0.205 m³ (7.24 ft³)	50Z3/6003	Easy Lock quickhitch
Ditch cleaning bucket 1.5 m (59 in)	155 kg (558 lbs)	0.220 m³ (7.77 ft³)	50Z3/6003	Easy Lock quickhitch
Offset bucket 1.2 m (47 in)	200 kg (441 lbs)	0.110 m³ (3.88 ft³)	50Z3	
	134 kg (295 lbs)	0.110 m³ (3.88 ft³)	50Z3	Mechanical quickhitch
	231 kg (509 lbs)	0.145 m³ (5.12 ft³)	50Z3	Easy Lock quickhitch
	237 kg (522 lbs)	0.150 m³ (5.30 ft³)	6003	
	187 kg (412 lbs)	0.150 m³ (5.30 ft³)	6003	Mechanical quickhitch
Offset bucket 1.4 m (55 in)	216 kg (476 lbs)	0.130 m³ (4.59 ft³)	50Z3	
	140 kg (309 lbs)	0.130 m³ (4.59 ft³)	50Z3	Mechanical quickhitch
	247 kg (545 lbs)	0.170 m³ (6 ft³)	50Z3	Easy Lock quickhitch
	234 kg (516 lbs)	0.180 m³ (6.36 ft³)	6003	
	255 kg (562 lbs)	0.180 m³ (6.36 ft³)	6003	Mechanical quickhitch
Offset bucket 1.5 m (59 in)	253 kg (558 lbs)	0.217 m³ (7.66 ft³)	6003	Easy Lock quickhitch
Hydraulic hammer NE 28	285 kg (628 lbs)		50Z3	
Hydraulic hammer NE 36	350 kg (772 lbs)		50Z3/6003	
Hydraulic hammer NE 42	438 kg (966 lbs)		6003	

1.5 Regulations

Requirements to be met by the Operator

Earth moving machines may be operated and serviced only by persons who meet the following requirements:

- 18 years or older.
- Physically and mentally suited for this work.
- Persons have been instructed in operating and servicing the earth moving machine and have proven their qualifications to the contractor.
- Persons are expected to perform work reliably.

They have been assigned by the contractor for operating and servicing the earth moving machine.

Get informed on and follow the legal regulations of your country.

https://truckmanualshub.com/

1.6 EC declaration of conformity for all machines delivered before 29 December 2009

EC Declaration of Conformity

according to EC Directive 98/37/EC, 2000/14/EC Appendix 6

Wacker Neuson Linz GmbH
Haidfeldstr. 37
A-4060 Linz-Leonding

declare, under their own responsibility, that the product

Product name	Track excavator $50Z_3$
Model	$50Z_3$
Version	$50Z_3$
Serial no.	- - - - - - - - - - -

to which this declaration refers, corresponds to the pertinent fundamental requirements regarding safety and health of

EC Directive 98/37/EC,
and the requirements of further pertinent EC Directives and standards
.

ISO 3471 and EN 13510	Tested		Administrative unit reported according to Appendix 6
2000/14/EC	information Noise level	dBA	TÜV München (Munich/Germany Industrial Supervisory Board) Westendstr. 199 D-80686 Munich
	Measured value		
	Guaranteed value	96	

The following standards and/or technical specifications have been used for the proper application of the requirements regarding safety and health stated in the EC Directives:
EN 474-1, EN 474-3, EN 12100-1, EN 12100-2, ISO 3471, EN 13510;

Place of storage of technical documentation:
Wacker Neuson Linz GmbH
Department: R & D
Haidfeldstr. 37
A-4060 Linz-Leonding

Linz-Leonding, (date) _ _ . _ _ . _ _ _ _

Ing. Hans Neunteufel (Managing Director)
Wacker Neuson Linz GmbH

https://truckmanualshub.com/

1.7 EC declaration of conformity for all machines delivered after 29 December 2009

EC Declaration of Conformity

According to Machine Directive 2006/42/EC, appendix II A

Manufacturer

Wacker Neuson Linz GmbH
Haidfeldstr. 37
A-4060 Linz-Leonding

Product

Machine designation: Hydraulic excavator
Machine model: 50Z3/50Z3$_2$
Serial no.: _____
Output (kW): 28.6 kW
Measured sound power level:94.8 dB (A)
Guaranteed sound power level:96 dB (A)

Conformity assessment procedure

Notified body according to Directive 2006/42/EC, appendix XI:
Fachausschüsse Bau und Tiefbau
Prüf- und Zertifizierungsstelle im BG-PRÜFZERT
Landsberger Str. 309
D-80687 Munich
Distinguishing EU number 0515

Notified body according to Directive 2000/14/EC, appendix VI:
TÜV SÜD Industrie Service GmbH
Westendstr. 199
D-80686 Munich

Directives and standards

We hereby declare that this product corresponds to the relevant regulations and requirements of the following Directives and standards:
2006/42/EC (old 98/37 EC), 2004/108/EC (old 89/336/EEC), 2002/44/EC, 2005/88/EC, 2000/14/EC;
DIN EN ISO 12100-1 and 2, DIN EN 474-1 and 5, DIN EN 14121,
DIN EN 3471, DIN EN 13510, EN ISO 3744, EN ISO 3746, DIN EN ISO 3449

Leonding, _____	_____	_____
Place, date	Thomas Köck, Responsible for documentation	Josef Erlinger, Managing director

https://truckmanualshub.com/

1.8 Declaration of conformity for machines without CE mark on the type label

Declaration of conformity

Manufacturer
Wacker Neuson Linz GmbH
Haidfeldstr. 37
A-4060 Linz-Leonding

Product
Machine designation: Hydraulic excavator
Machine model: 50Z3/50Z3$_2$
Serial no.: _____
Output (kW): 28.6 kW
Measured sound power level:94.8 dB (A)
Guaranteed sound power level:96 dB (A)

Conformity assessment procedure
Notified body according to Directive 2006/42/EC, appendix XI:
Fachausschüsse Bau und Tiefbau
Prüf- und Zertifizierungsstelle im BG-PRÜFZERT
Landsberger Str. 309
D-80687 Munich
Distinguishing EU number 0515

Notified body according to Directive 2000/14/EC, appendix VI:
TÜV SÜD Industrie Service GmbH
Westendstr. 199
D-80686 Munich

Directives and standards
We hereby declare that this product corresponds to the relevant regulations and requirements of the following Directives and standards:
2006/42/EC (old 98/37 EC), except 1.7.3., 2004/108/EC (old 89/336/EEC), 2002/44/EC, 2005/88/EC, 2000/14/EC;
DIN EN ISO 12100-1 and 2, DIN EN 474-1 (except 7.3.) and 5, DIN EN 14121,
DIN EN 3471, DIN EN 13510, EN ISO 3744, EN ISO 3746, DIN EN ISO 3449

https://truckmanualshub.com/

1.9 EC declaration of conformity for all machines delivered before 29 December 2009

WACKER NEUSON

EC Declaration of Conformity

according to EC Directive 98/37/EC, 2000/14/EC Appendix 6

Wacker Neuson Linz GmbH
Haidfeldstr. 37
A-4060 Linz-Leonding

declare, under their own responsibility, that the product

Product name	Track excavator 6003
Model	6003
Version	6003
Serial no.	- - - - - - - - - - -

to which this declaration refers, corresponds to the pertinent fundamental requirements regarding safety and health of

EC Directive 98/37/EC,
and the requirements of further pertinent EC Directives and standards
.

ISO 3471 and EN 13510	Tested		Administrative unit reported according to Appendix 6
2000/14/EC	information Noise level	dBA	TÜV München (Munich/Germany Industrial Supervisory Board) Westendstr. 199 D-80686 Munich
	Measured value	98.4	
	Guaranteed value	98	

The following standards and/or technical specifications have been used for the proper application of the requirements regarding safety and health stated in the EC Directives:
EN 474-1, EN 474-3, EN 12100-1, EN 12100-2, ISO 3471, EN 13510;

Place of storage of technical documentation:
Wacker Neuson Linz GmbH
Department: R & D
Haidfeldstr. 37
A-4060 Linz-Leonding

Linz-Leonding, (date) _ _ . _ _ . _ _ _ _

Ing. Hans Neunteufel (Managing Director)
Wacker Neuson Linz GmbH

https://truckmanualshub.com/

1.10 EC declaration of conformity for all machines delivered after 29 December 2009

EC Declaration of Conformity

According to Machine Directive 2006/42/EC, appendix II A

Manufacturer

Wacker Neuson Linz GmbH
Haidfeldstr. 37
A-4060 Linz-Leonding

Product

Machine designation: Hydraulic excavator
Machine model: 6003/6003$_2$
Serial no.: _____
Output (kW): 43.4 kW
Measured sound power level:97.3 dB (A)
Guaranteed sound power level:98 dB (A)

Conformity assessment procedure

Notified body according to Directive 2006/42/EC, appendix XI:
Fachausschüsse Bau und Tiefbau
Prüf- und Zertifizierungsstelle im BG-PRÜFZERT
Landsberger Str. 309
D-80687 Munich
Distinguishing EU number 0515

Notified body according to Directive 2000/14/EC, appendix VI:
TÜV SÜD Industrie Service GmbH
Westendstr. 199
D-80686 Munich

Directives and standards

We hereby declare that this product corresponds to the relevant regulations and requirements of the following Directives and standards:
2006/42/EC (old 98/37 EC), 2004/108/EC (old 89/336/EEC), 2002/44/EC, 2005/88/EC, 2000/14/EC;
DIN EN ISO 12100-1 and 2, DIN EN 474-1 and 5, DIN EN 14121,
DIN EN 3471, DIN EN 13510, EN ISO 3744, EN ISO 3746, DIN EN ISO 3449

Leonding, _____	_____	_____
Place, date	Thomas Köck,	Josef Erlinger,
	Responsible for documentation	Managing director

https://truckmanualshub.com/

1.11 Declaration of conformity for machines without CE mark on the type label

Declaration of conformity

Manufacturer
Wacker Neuson Linz GmbH
Haidfeldstr. 37
A-4060 Linz-Leonding

Product
Machine designation: Hydraulic excavator
Machine model: 6003/6003$_2$
Serial no.: _____
Output (kW): 43.4 kW
Measured sound power level:97.3 dB (A)
Guaranteed sound power level:98 dB (A)

Conformity assessment procedure
Notified body according to Directive 2006/42/EC, appendix XI:
Fachausschüsse Bau und Tiefbau
Prüf- und Zertifizierungsstelle im BG-PRÜFZERT
Landsberger Str. 309
D-80687 Munich
Distinguishing EU number 0515

Notified body according to Directive 2000/14/EC, appendix VI:
TÜV SÜD Industrie Service GmbH
Westendstr. 199
D-80686 Munich

Directives and standards
We hereby declare that this product corresponds to the relevant regulations and requirements of the following Directives and standards:
2006/42/EC (old 98/37 EC), except 1.7.3., 2004/108/EC (old 89/336/EEC), 2002/44/EC, 2005/88/EC, 2000/14/EC;
DIN EN ISO 12100-1 and 2, DIN EN 474-1 (except 7.3.) and 5, DIN EN 14121,
DIN EN 3471, DIN EN 13510, EN ISO 3744, EN ISO 3746, DIN EN ISO 3449

https://truckmanualshub.com/

1.12 Type labels and component numbers



Fig. 2: Type label: location

Serial number

The serial number is stamped on the machine chassis. It is also located on the type label.
The type label is located at the front left on the machine chassis (at cab level)

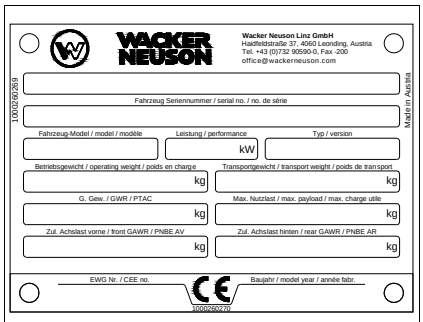


Fig. 3: Type label

Type label information (example):

Field below Wacker Neuson logo:	HYDRAULIC EXCAVATOR
Fahrzeug Seriennummer/serial no./no. de série:	Serial number of machine
Fahrzeug Modell/model/modèle:	Machine designation
Leistung/performance:	Engine output
Typ/version:	Machine type
Betriebsgewicht/operating weight/poids en charge:	Operating weight
Transportgewicht/transport weight/poids en transport:	Transport weight
G. Gew./GWR/PTAC:	Gross weight rating (admissible)
Max. Nutzlast/max. payload/max. charge utile:	Maximum payload
Zul. Achslast vorne/front GAWR/PNBE AV:	Front gross axle weight rating
Zul. Achslast hinten/rear GAWR/PNBE AR:	Rear gross axle weight rating
EWG Nr./CEE no.:	EEC check number
Baujahr/model year/année fabr.:	year of construction

Other information – *see chapter 6 Specifications* on page 6-1

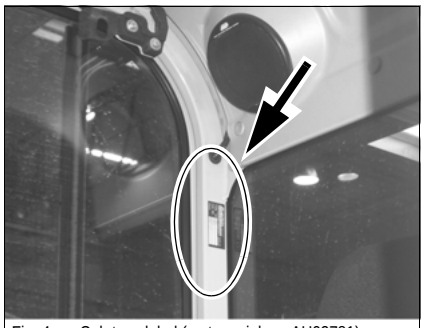


Fig. 4: Cab type label (up to serial no. AH02781)

Cab type label

The type label (arrow) is located in the cab, on the upper rear right chassis member.

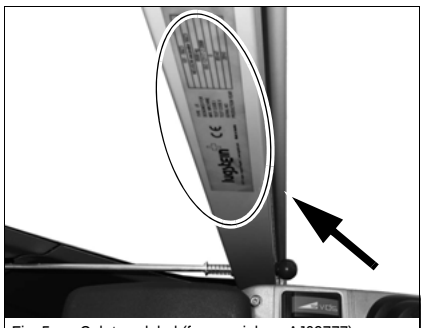
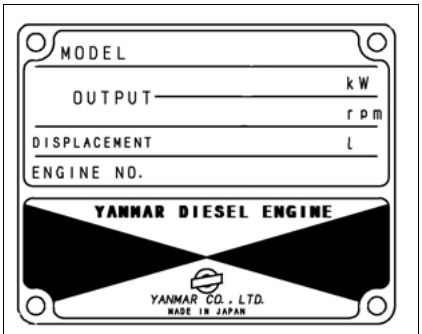


Fig. 5: Cab type label (from serial no. AJ02777)

The type label (arrow) is located on the chassis of the cab, at the upper left beside the door.

https://truckmanualshub.com/



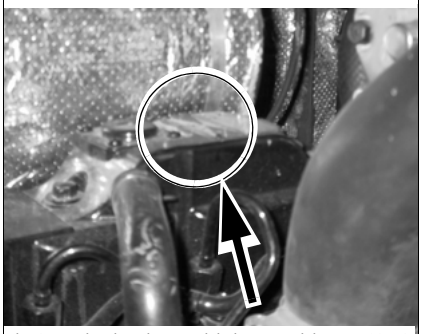
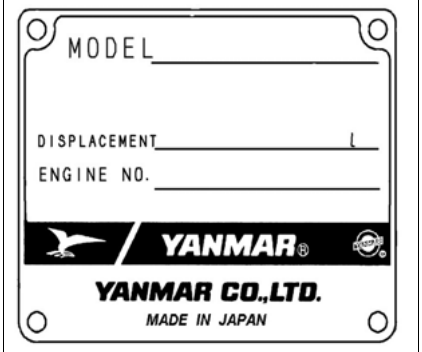


Fig. 6: Diesel engine type label up to serial no. AH00578



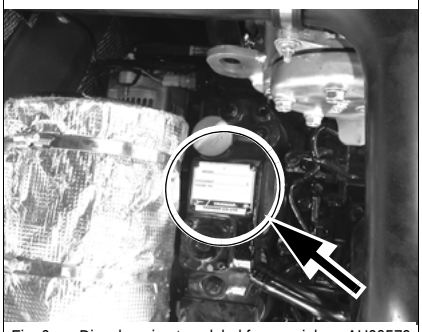


Fig. 6: Diesel engine type label from serial no. AH00579

Engine number

The type label (arrow) is located on the valve cover (engine).

Example: Yanmar 46557

https://truckmanualshub.com/

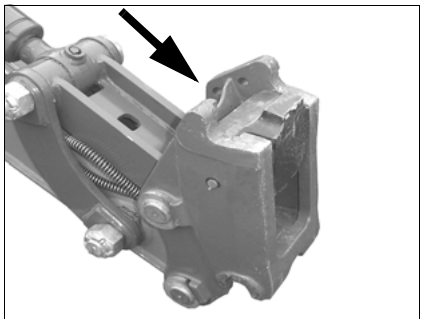


Fig. 7: Type label (hydraulic quickhitch system)

Hydraulic quickhitch type label

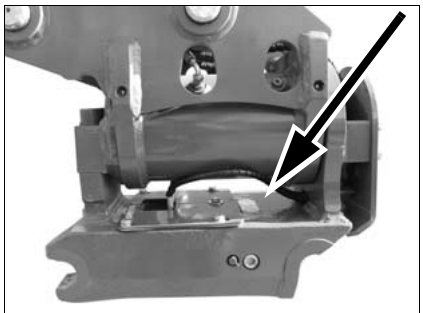


Fig. 8: Powertilt type label

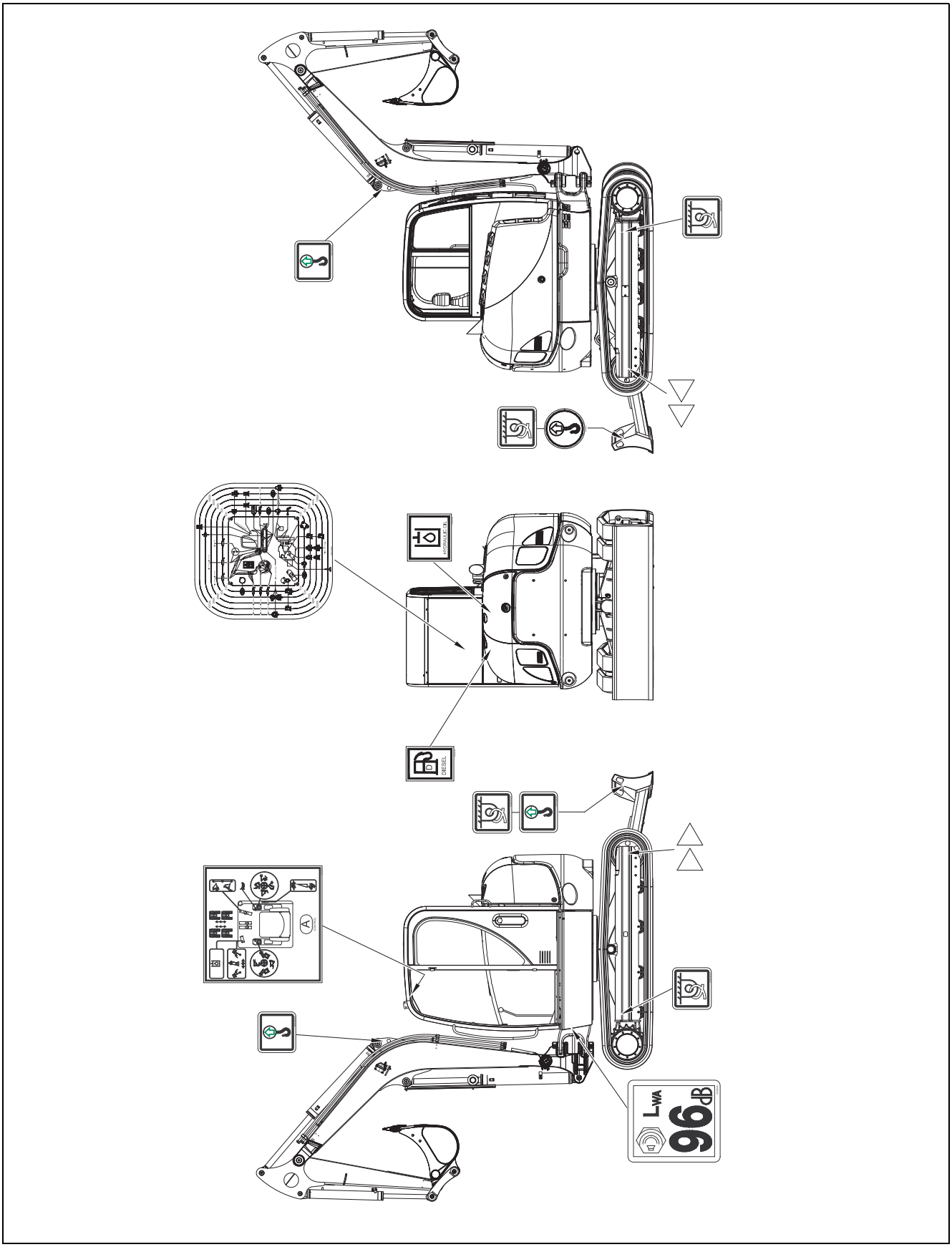
Powertilt with Easy Lock type label

The type label is located at the rear on the hydraulic quickhitch fork.

https://truckmanualshub.com/

1.13 Signs and symbols

Overview of adhesive labels



https://truckmanualshub.com/

The following symbols are displayed on the machine to provide pictorial information to the user. The information and explanations are provided to avoid misinterpretation by the user. The symbols have been chosen to provide important information to those involved with operating, adjusting, maintaining, and repairing this machine.

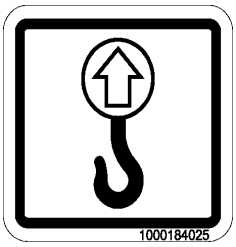


Fig. 9: Eye hooks

Description

Lifting points for raising the machine.

– *see chapter 3.45 Lifting the Excavator* on page 3-68

Location

On either side of the stabilizer blade, and on either side of the boom



Fig. 10: Slinging points for tying down the machine

Description

Points for tying down the machine.

– *see chapter 3.47 Tying down the machine* on page 3-71

Location

On either side of the stabilizer blade, and on either side of the undercarriage.



Fig. 11: Noise level indication

Description

Noise levels produced by the machine.

L_{WA} = sound power level

– *see chapter 6.10 Noise levels* on page 6-6

Location

At the front on the chassis.

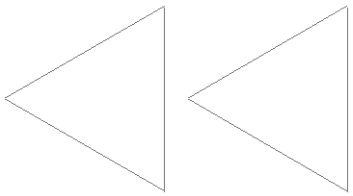


Fig. 12: Direction indicator

Description

This label shows the forward driving direction.

Location

On either side of the undercarriage



Fig. 13: Hydraulic oil

Description

Hydraulic oil reservoir. Use only specified hydraulic fluids.

– *see chapter 5.21 Fluids and lubricants* on page 5-54

Location

On the tank cover.

https://truckmanualshub.com/

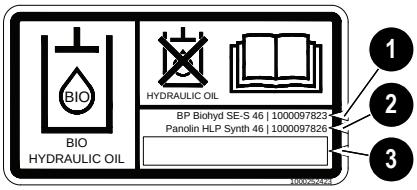


Fig. 14: Biodegradable hydraulic oil

Description (option)

The hydraulic oil reservoir contains biodegradable hydraulic oil.

This label is notched on the side depending on the biodegradable hydraulic oil used.

1 BP Biohyd SE-S 46

2 PANOLIN HLP Synth 46

3 Other producer of biodegradable hydraulic oil

– *see chapter Important information for the use of biodegradable oil* on page 5-31

Location

Under the tank cover on the hydraulic oil reservoir.

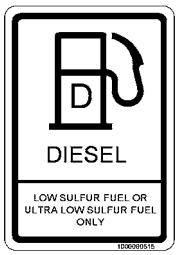


Fig. 15: Diesel

Description

Only add diesel fuel with a low content of sulphur.

– *see chapter 5.21 Fluids and lubricants* on page 5-54

Location

Next to the fuel tank filler inlet.

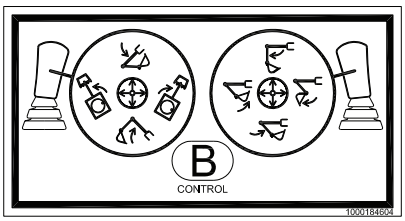


Fig. 16: Controls (B)

Description

Explains the joystick functions (control pattern B).

Check before starting the machine the control pattern that has been chosen.

– *see chapter 3.51 Changeover valve for control pattern "B" (option)* on page 3-77

Location

On the headliner.

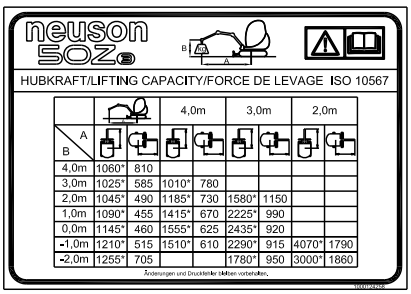


Fig. 17: Lift capacity table

Description

Bear in mind the authorized (pay)load according to the table.

– *see chapter 6.19 Lift capacity table 50Z3* **on page 6-17**

Location

On the headliner.

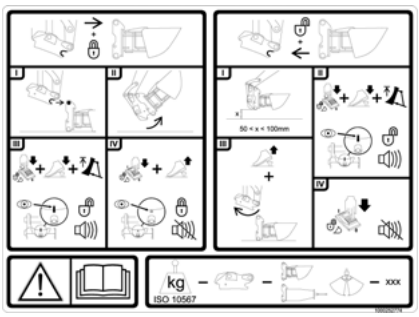


Fig. 18: Hydraulic quickhitch

Description (option)

This label describes the functions of the hydraulic quickhitch.

– *see chapter 3.59 Hydraulic quickhitch Easy Lock (option)* on page 3-96.

Location

On the headliner.

https://truckmanualshub.com/

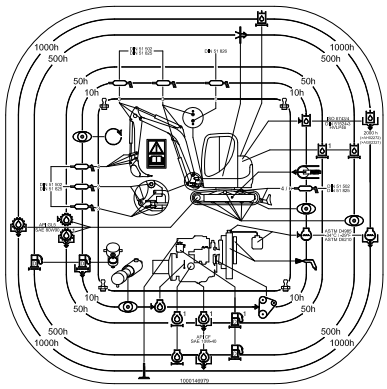


Fig. 19: Maintenance plan

Description

Shows the main service intervals. For complete list of service interval see the maintenance section of this Operator's Manual.
– *see chapter 5 Maintenance* on page 5-1.

Location

On the left of the cab.

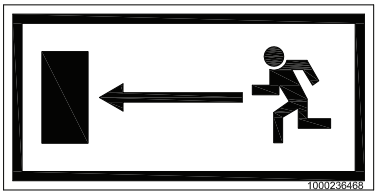


Fig. 20: Emergency exit

Description (option)

This label indicates the emergency exit on machines equipped with the Front Guard option.

Location

On the upper edge of the rear window in the cab.

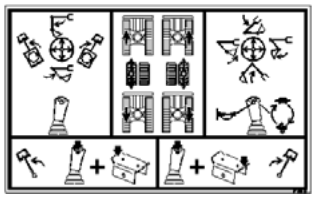


Fig. 21: Controls

Description (up to serial no. AH01643)

This label describes the pedal and control lever functions.
– *see chapter 3.50 Control levers/control pattern "A": Overview* on page 3-73

Location

Cab roof lining

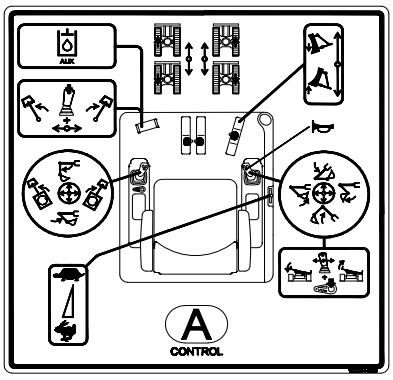


Fig. 22: Controls (A)

Description (up to serial no. AH02781)

This label describes the pedal and control lever functions (control pattern A).
– *see chapter 3.50 Control levers/control pattern "A": Overview* on page 3-73

Location

On the headliner

Controls

A = ISO controls

B = SAE controls

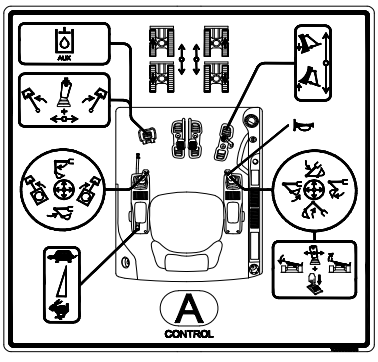


Fig. 23: Controls (A)

Description (from serial no. AJ02777)

This label describes the pedal and control lever functions (control pattern A).
– *see chapter 3.50 Control levers/control pattern "A": Overview* on page 3-73

Location

On the headliner

Controls

A = ISO controls

B = SAE controls

https://truckmanualshub.com/

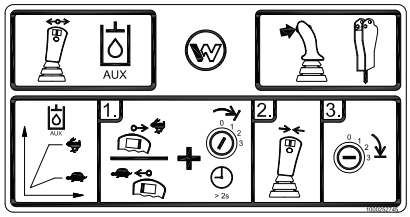


Fig. 25: Proportional controls

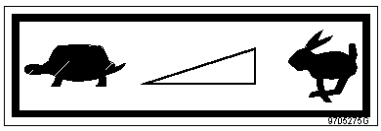


Fig. 26: Describes the throttle lever function

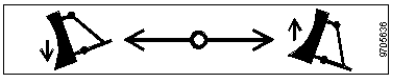


Fig. 27: Stabilizer blade lever function

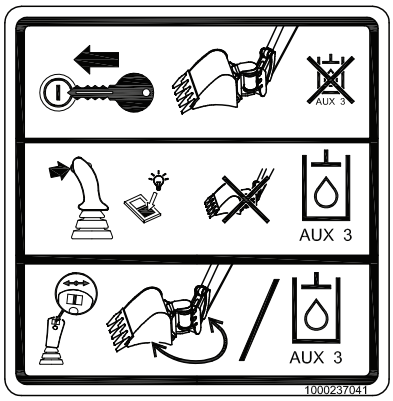


Fig. 28: Cab label

Description (option)

This label describes the proportional controls and the setting of the control response.

– *see chapter 3.52 Control lever with proportional controls (option): overview* on page 3-79

Location

On the headliner

Description (up to serial no. AH01643)

Describes the throttle lever function.

– *see chapter Throttle* on page 3-17

Location

Below the throttle lever

Description (up to serial no. AH01643)

Describes the stabilizer blade lever function

Location

Inside the cab

Description

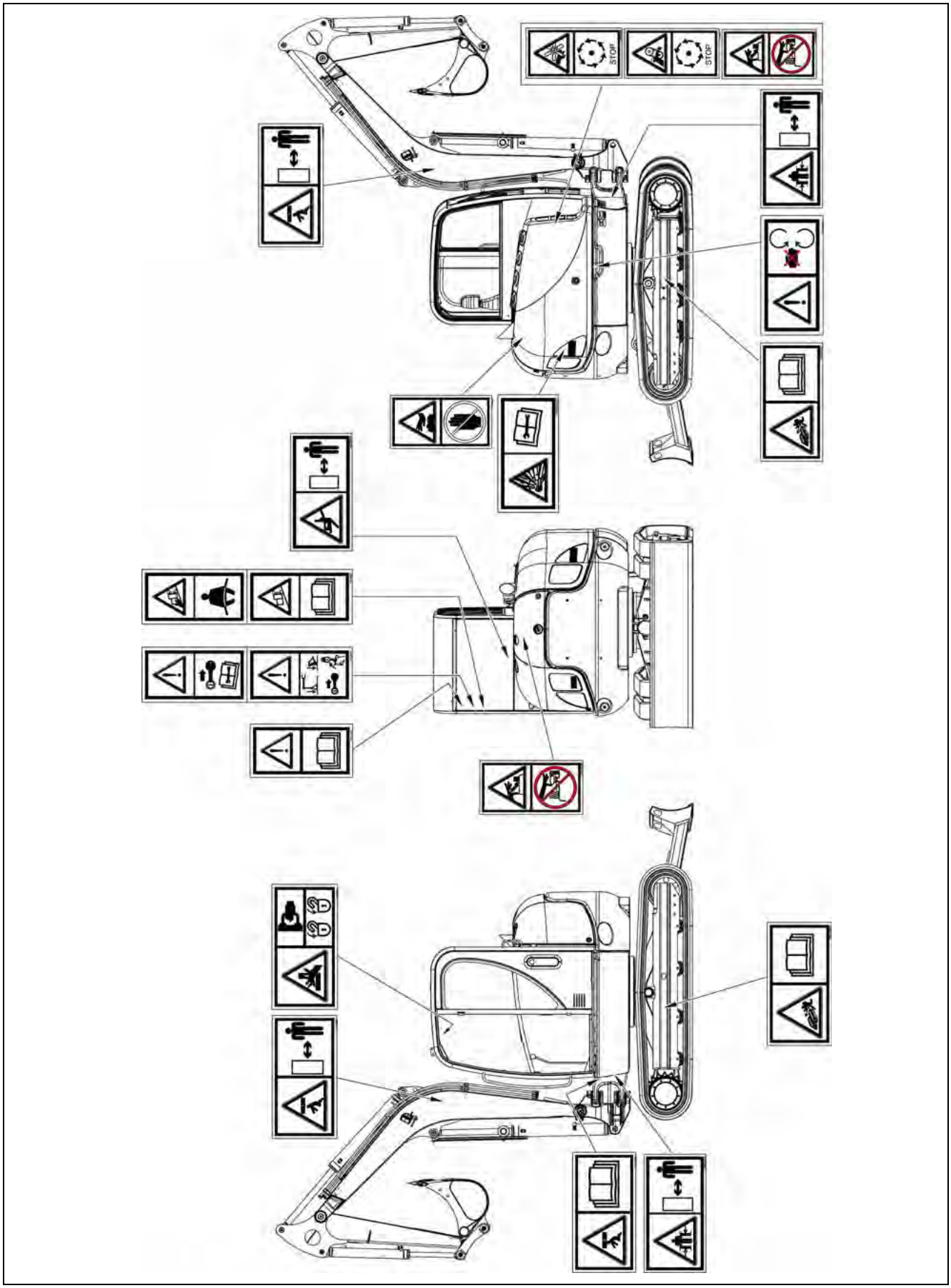
The Powertilt function is enabled once the machine is started. The 3rd control circuit is disabled.

The 3rd control circuit is enabled with the button on the right-hand control lever. The status indicator light illuminates.

The function is performed with the slide switch on the right-hand control lever.

https://truckmanualshub.com/

Overview of safety labels



https://truckmanualshub.com/

Important

Always follow the instructions given on the safety labels to avoid severe injuries or death.

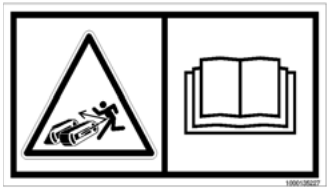


Fig. 29: Tightening the tracks

Description

- Danger due to grease squirting out.
- Always read the Operator's Manual before working on the tracks.

Location

On the undercarriage near the lubrication system.

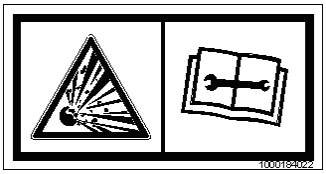


Fig. 30: Under pressure

Description

Accumulator is under high pressure. Always read the Operator's Manual before performing maintenance or repairs.

Location

Below the floor mat.

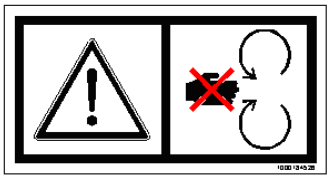


Fig. 31: Stop the engine

Description

Entanglement hazard.

Stop the engine before opening or dismounting the safety devices (like engine cover, fan guard, etc.)

Location

On the chassis on the right.

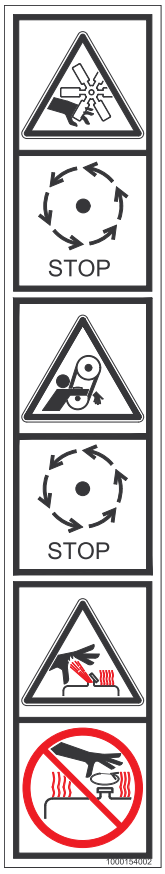


Fig. 32: Rotating V-belt

Description

Cutting hazard. Cooling fan can cut when rotating.

- Stop the engine before opening the engine cover.
- Stay clear of the engine compartment if the fan is still running.

Entanglement hazard. You can be pinched or entangled in the engine V-belt when the engine is running.

- Stay clear of the engine compartment with the engine running.
- Perform work in the engine compartment at engine standstill only.

Burn hazard. Hot surface. Do not touch.Contents are under pressure.

- Allow the tank to cool down.
- Carefully and slowly open the cover only after the tank has cooled down, to release the pressure.
- Wear suitable protective clothing and goggles to open the cover.

Location

In the engine compartment.

https://truckmanualshub.com/



Fig. 33: Tank under pressure

Description

The tank is hot and under pressure.

- Allow the fluids to cool down.
- Carefully and slowly open the cover only after the tank has cooled down, to release the pressure.
- Wear suitable protective clothing and goggles to open the cover.

Location

On the hydraulic oil reservoir.



Fig. 34: Hot surfaces

Description

Burn hazard. Hot surface. Do not touch.

- Wait for parts to cool down.

Location

In the engine compartment.



Fig. 35: Read the Operator's Manual

Description

Attention! Read and understand the Operator's Manual before starting, operating, adjusting, maintaining or repairing the machine.

Location

Inside the cab, on the side.

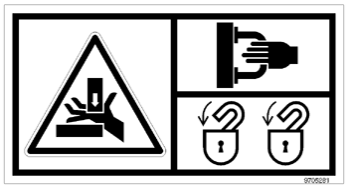


Fig. 36: Front window label

Description

Pinch point hazard.

1 Always use the handles to open and close the front window.

2 Always lock the front window with both locks.

3 Ensure that no-one hits the window with their head as you open and close it.

Location

On the front window.

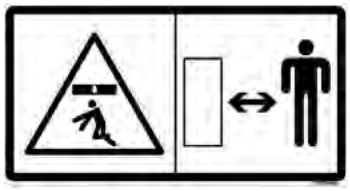


Fig. 37: Boom operation

Description

Crushing hazard.

- Stay clear of the machine's work range during operation.

Location

On either side of the boom.

https://truckmanualshub.com/

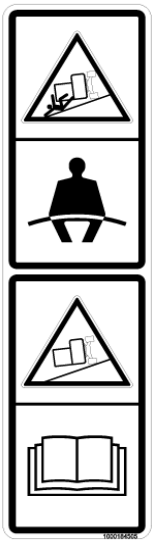


Fig. 38: Warnings

Description

Crushing hazard. Risk of being thrown from the machine.

- Fasten the seat belt.
- Operate the machine only from the operator's seat.

Operate within stability limits of machine to avoid tipping over.

- Always work ensuring machine stability, do not overload the machine and use only attachments that have been released by the manufacturer. Always work on firm ground.
- Follow the instructions given in the Operator's Manual.

Location

Inside the cab, on the side.

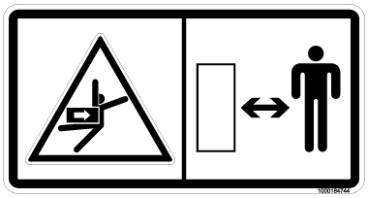


Fig. 39: Slewing range

Description

Collision hazard.

- Stay clear of the machine's slewing range during operation.

Location

At the rear of the cab near the handle.

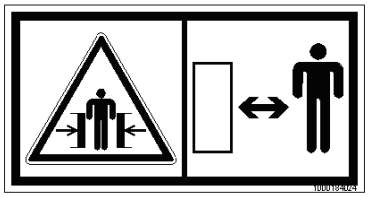


Fig. 40: Slewing range

Description

Crushing hazard.

- Stay clear of the machine's work range during operation.

Location

At the front of the chassis near the swivelling console.

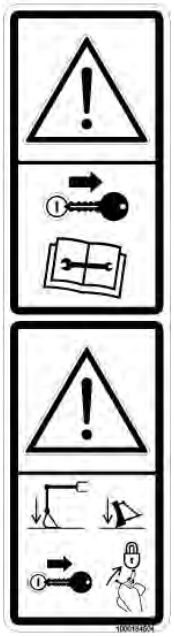


Fig. 41: Warnings

Description

Attention. Remove starter key and read the Operator's Manual before servicing the machine. The key must be kept by the operator.

Attention.Before leaving the machine, lower the boom and the stabilizer blade to the ground, stop the engine, remove the starting key and fold up the armrest.

Location

Inside the cab, on the side.

https://truckmanualshub.com/

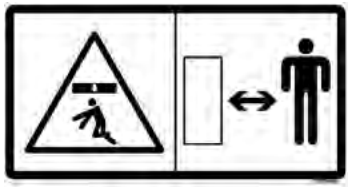


Fig. 42: Boom operation

Description

Crushing hazard.

- Stay clear of the machine's work range during operation.

Location

On either side of the boom.

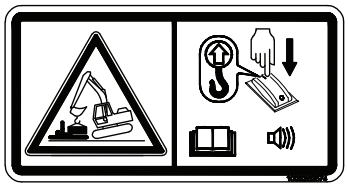


Fig. 43: Safe load indicator

Description

Caution, the safe load indicator must always be switched on during lifting gear applications.

- Stay clear of the machine’s work range during operation.

Location

Beside the safe load indicator switch.



Fig. 44: Danger label

Description (up to serial no. AH01643)

General indication of danger

This label warns persons standing or working near the machine of an existing danger within the area of increased danger around the machine.

Location

On either side of the boom

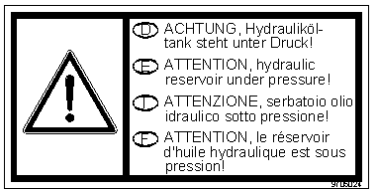


Fig. 45: hydraulic oil reservoir under pressure

Description (up to serial no. AH01643)

Hydraulic oil reservoir under pressure.

– *see Adding hydraulic oil* on page 5-30

Location

On the hydraulic oil reservoir.



Fig. 46: Parking the machine correctly

Description (up to serial no. AH01643)

Press the boom and the stabilizer blade into the ground as you leave the machine, remove the starting key and place chocks on the left and right under the tracks – *see chapter Parking checklist* on page 3-16.

Location

Cab roof lining.

https://truckmanualshub.com/

1.14 Fire extinguisher



Fig. 47: Fire extinguisher (up to serial no. AH02781)

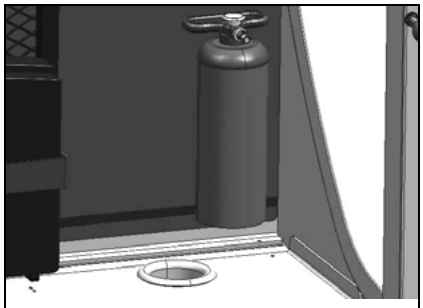


Fig. 48: Fire extinguisher (from serial no. AJ02777)

The fire extinguisher is neither included in the machine's standard equipment nor is it available as an option from Wacker Neuson.

- Retrofitting a fire extinguisher according to NFPA must be performed by an authorized service center.

Important

The fastening of the fire extinguisher must be checked regularly.

https://truckmanualshub.com/

https://truckmanualshub.com/

2 Safety instructions

2.1 Safety Symbols Found In This Manual



This is the safety alert symbol. It is used to alert you to potential personal hazards.

- Obey all safety messages that follow this symbol.



DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

Potential consequences of the hazard.

- Obey all safety messages that follow this symbol to avoid injury or death.



WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

Potential consequences of the hazard.

- Obey all safety messages that follow this symbol to avoid possible injury or death.



CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

Potential consequences of the hazard.

- Obey all safety messages that follow this symbol to avoid possible minor or moderate injury.

NOTICE

NOTICE indicates a situation which, if not avoided, could result in property damage.



Important

Important identifies an instruction that, when followed, provides for a more efficient and economical use of the machine.



Environment

Failure to observe the instructions identified by this symbol can result in damage to the environment. The environment is at risk if environmentally hazardous material, such as waste oil, is not subject to proper use or disposal.

https://truckmanualshub.com/

2.2 Warranty

Warranty claims can be brought forward to your Wacker Neuson dealer only. Furthermore, the instructions in this Operator's Manual must be observed.

2.3 Disposal

All fluids, lubricants, material, etc., used on the machine are subject to specific regulations regarding collection and disposal. Dispose of different materials and consumables separately and responsibly in accordance with environmental protection legislation.



Environment

Avoid damage to the environment. Do not allow the oil and oily wastes to get into the ground or stretches of water.

If the machine is no longer used according to its designated use, ensure that it is decommissioned or put out of operation and disposed of according to applicable regulations.

- Observe all applicable safety regulations during machine disposal.
- Machine disposal must be carried in accordance with state-of-the-art standards that apply at the time of disposal.

2.4 Designated Use

1. In accordance with this designated use, the machine may be used ONLY for moving earth, gravel, coarse gravel or ballast and rubble. It may also be used for working with the attachments approved in the *"Fields Of Application of Attachments"* chapter.
2. No other applications are designated for the use of the machine. Wacker Neuson will not be liable for damage resulting from use other than mentioned above. The user alone will bear the risk.
3. "Designated use" also includes observing the instructions set forth in the Operator's Manual and observing the maintenance schedule.
4. Machine safety can be negatively affected by performing out machine modifications without proper authority and by using spare parts, equipment, attachments and optional equipment which have not been checked and released by Wacker Neuson. Wacker Neuson will not be liable for damage resulting from unapproved parts or unauthorized modifications.
5. Wacker Neuson shall not be liable for personal injury and/or damage to property caused by failure to observe the safety instructions on labels and in this Operator's Manual, and by the negligence of the duty to exercise due care when:
   - transporting the machine
   - operating the machine
   - servicing the machine and performing maintenance work
   - repairing the machine.

   This is also applicable when special attention has not been drawn to the duty to exercise due care.
6. Read and understand the Operator's Manual before starting, moving, operating, servicing or repairing the machine. Observe the safety instructions.
7. The machine shall not be used for transport jobs on public roads without a specific certification.
8. In applications with lifting gear, the machine is used according to its designated use only if the prescribed devices are installed and functional.
9. The quickhitch is only used for locking an attachment.
10. Hammer operation is only allowed in specified areas.

https://truckmanualshub.com/

2.5 Preparing To Use The Machine

Conditions for use

- The machine has been designed and built in accordance with state-of-the-art standards and the recognized safety regulations. Nevertheless, its use can constitute a risk to life and limb of the user or of third parties, or cause damage to the machine and to other material property.
- Read and follow this Operator's manual and other manuals that accompany the machine.
- The machine must only be used in accordance with its designated use and the instructions set forth in the Operator's manual.
- The machine must only be used by qualified operators who are fully aware of the risks involved in operating the machine.
- Before putting the machine into operation, inspect the machine for safety in work and road operation.
- Do not start, move or operate a damaged or malfunctioning machine. Any mechanical dysfunctions, especially those affecting the safety of the machine, must be repaired immediately. Only qualified technicians shall determine how to move a damaged or malfunctioning machine to a safe place for diagnoses and repair.
- The user/owner commits himself to operate and keep the machine in serviceable condition and, if necessary or required by law, to require the operating or servicing persons to wear protective clothing and safety equipment.

User training and knowledge

- Always keep this Operator's Manual and other manuals that accompany the machine in their storage compartment provided in the operator station on the machine. Immediately replace an incomplete or illegible Operator's Manual.
- All persons working on or with the machine must read and understand the safety information in this Operator's Manual before beginning work. This applies especially to persons working only occasionally on the machine, such as performing set-up or maintenance tasks.
- Follow, and instruct the operator in, legal and other mandatory regulations relevant to accident prevention and environmental protection. These may include handling hazardous substances, issuing and/or wearing personal protective equipment, or obeying traffic regulations.
- The user/owner must regularly ensure that all persons entrusted with operation or maintenance of the machine are working in compliance with the Operator's Manual and are aware of risks and safety factors of the machine.

Preparing for use

- Before starting the machine, ALWAYS inspect the machine to make sure that it is ready for safe work and travel operation.
- Wear close-fitting work clothes that do not hinder movement. Tie back long hair and remove all jewelry (including rings).

Information on visibility

- Before putting the machine into operation, perform a visual check to ensure that there are neither persons nor objects or other sources of risk around the machine.
- When using the machine, check the surroundings constantly in order to identify potential hazards in time.

https://truckmanualshub.com/

- Before using the machine, before starting work or when changing operators, ensure that all visual aids (mirrors) work correctly, that they are clean and adjusted in accordance with the instructions in this Operator's Manual. The operator must observe the local regulations.
- Do not make any changes or modifications that impair visibility. Otherwise the machine does not meet the requirements for conformity and licensing.

Modifications and spare parts

- NEVER make any modifications, additions or conversions to the machine and its superstructures (for example, cab, etc.), or the machine's attachments, without the approval of Wacker Neuson. Such modifications may affect safety and/or machine performance. This also applies to the installation and adjustment of safety devices and valves, as well as to welding work on load-bearing elements.
- Spare parts must comply with the technical requirements specified by Wacker Neuson. Contact your Wacker Neuson dealer for assistance.

2.6 Operator and Technician Qualifications and Basic Responsibilities

User/Owner responsibility

- Only allow trained and experienced individuals to operate, maintain, or repair the machine. NEVER let unauthorized or underaged persons operate the machine.
- Clearly and unequivocally define the individual responsibilities of the operator and technician for operation, maintenance and repair.
- Define the machine operator's responsibilities on the job site and for observing traffic rules. Give the operator the authority to refuse instructions by third parties that are contrary to safety
- Do not allow persons to be trained or instructed by anyone other than an experienced person. Also, NEVER allow persons taking part in a general training course to work on or with the machine without being supervised by an experienced person.

Repair person qualifications

- Work on the electric system and equipment, on the undercarriage and the steering and brake systems may be performed only by skilled individuals who have been specially trained for such work.
- Work on the hydraulic system of the machine must be performed only by a technician with special knowledge and experience in hydraulic equipment.

2.7 Safety Instructions Regarding Operation

Preparing for use

- Keep the machine clean. This reduces the risk of fire hazards (such as from combustible materials like rags), and reduces the risk of injury or operational accidents that can be caused by dirt build-up on the travel pedals, mirrors or foot rests and steps.
- Observe all safety, warning, and information signs and labels on the machine.
- Start and operate the machine from the seat only.
- The operator must sit in the seat, fasten and adjust the seat belt and check if all mirrors are adjusted correctly before putting the machine into operation.
- Always adjust the seat position before starting work. Never change the seat position when operating the machine.
- Make sure that all safety devices are properly installed and functional before starting work.

https://truckmanualshub.com/

- Before putting the machine/attachment into operation (starting/moving), ensure that no one in the immediate vicinity will be at risk.

Starting and stopping

- Perform starting and stopping procedures according to this Operator's Manual.
- Observe all indicator lights.



- Do not use starting fluid (for example, ether) especially in those cases in which a heater plug (intake air pre-heating) is used at the same time – risk of explosions.
- Make sure the brakes, the steering, the travel pedals, the control levers and the signalling and light systems are functional before operating the machine, and also before restarting after an interruption of work.
- Fold up the control lever base before releasing the seat belt in order to avoid unintentional operation.
  - Lower the attachments to the ground.

Work area awareness

- Familiarize yourself with the surroundings and circumstances of the work site before beginning work. Be aware of:
  - obstacles in the working and travelling area
  - the soil bearing capacity
  - any necessary barriers separating the work site from public roads
- Always keep at a safe distance from the edges of building pits and slopes.
- Look out for the following when working in buildings or in enclosed areas:
  - height of the ceiling/clearances
  - width of entrances
  - maximum load of ceilings and floors
  - sufficient room ventilation – risk of carbon monoxide poisoning.



- Observe the danger area. See “Danger area awareness“.
- Use the rearview mirror to stay aware of work area obstacles and personnel.
- Always use the work lights in conditions of poor visibility and after dark. However, make sure that users of public roads will not be temporarily blinded by the work lights.
- Provide additional lighting of the work area if the lights of the machine are not sufficient for performing work safely.

Danger area awareness

- The danger area is the area in which persons are in at risk due to the movements of the machine, work equipment, additional equipment or material.
- The danger area also includes the area affected by falling material, equipment or constructions debris. The danger area must be extended by 0.5m (20 in) in the immediate vicinity of buildings, scaffolds or other elements of construction.
- Seal off the danger area if it is not possible to keep a safe distance. Stop work immediately if persons do not leave the danger area in spite of warnings.

Operating the machine

- Never operate the machine if you are standing on the ground.
- Operate the machine ONLY when you are seated and you have fastened your seat belt. Stop the engine before releasing the seat belt.

https://truckmanualshub.com/

- During operation on slopes, move or work uphill or downhill. If traveling across a slope cannot be avoided, bear in mind the tilting limit of the machine. Always keep the attachments/work equipment close to the ground. This also applies to traveling downhill. When traveling or working across a slope, the load must be on the uphill side of the machine.
- On sloping terrain, ALWAYS adapt your travel speed to the prevailing ground conditions.
- Never get on or off a moving machine, and do not jump off the machine.
- The travel pedals require practice before a user becomes familiar with the pedal response. Therefore, adjust the travel speed to your abilities and the surroundings.

Carrying passengers

- Do not lift, lower or transport people on the machine or in the attachment.
- Never install a man basket or a working platform to the machine.

Mechanical integrity

- Take the necessary precautions to make sure the machine is used only when in a safe and serviceable state.
- Operate the machine ONLY if all protective and safety-oriented devices (ROPS, removable safety-devices, soundproofing elements, mufflers, etc.) are in place and fully functional.
- Check the machine before entering the cab to operate the machine for visible damage and defects. Report any changes, including changes in the machine's function and response, to your supervisor immediately.
- If the machine is functioning unpredictably or in event of malfunctions, stop the machine immediately, lock it, and report the malfunction to a qualified technician or supervisor. Safety-relevant damage or malfunctions oft the machine must be rectified immediately.

Traveling

- Before moving the machine always check whether the supplementary equipment and the attachments have been safely stowed away or attached.
- Careful when reversing the machine – risk of accidents.
- Persons in the blind spot of the machine cannot seen by the driver.
- Ensure that nobody is within the danger area of the machine when changing the driving direction.
- Use the rearview mirrors to reverse with the machine.
- When traveling on or in public areas, observe all applicable regulations. Make sure beforehand that the machine is in compliance with these regulations.
- Installed work lights must NOT be used for travel.
- When crossing underpasses, gates, bridges and tunnels, or when passing under overhead lines, make sure the clearance height and width are sufficient to avoid contact.
- Empty the bucket and dump it in until the bucket opening is in the upward horizontal position as a minimum before traveling on public roads.
- Apart from the user, no other persons are allowed to ride on the machine.

https://truckmanualshub.com/

2.8 Operator Protection System (from serial no. AJ02777)

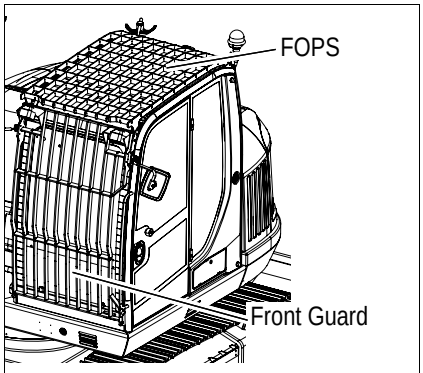


Fig. 49: Protective FOPS and Front Guard structure

- The machine is equipped with a ROPS safety cab/canopy as a standard.
- The optional protective FOPS structure protects the user against material falling from above.
- The optional protective Front Guard structure protects the user against material from the front.

DANGER

Cruhshing hazard by objects falling from above.

Falling object will cause serious or deadly injuries.

- When working in areas with a risk install protective FOPS structure (Option).
- Otherwise machine operation is prohibited.

DANGER

Stabbing/puncture hazard by objects from the front.

Objects will cause serious or deadly injuries.

- When working in areas with a risk install protective Front Guard structure (Option).
- When working in areas with a risk install a shatter protection (Option) on machines equipped with a canopy.
- Otherwise machine operation is prohibited.

WARNING

Do not modify the cab.

Failure to follow this precautionary measure can lead to fatal injury or death.

- No drilling, cutting or grinding.
- No welding, straightening or bending.
- Do not mount any brackets.
- Repair work may be performed by a Wacker Neuson dealer only.
- Always replace the complete cab/canopy, FOPS or Front Guard if it is deformed, cracked or otherwise damaged.
- If you are not sure, always contact a Wacker Neuson dealer.

NOTICE

The protective FOPS structure corresponds to category II and protects the user against falling material according to EN ISO 3449:2008.
The protective Front Guard structure corresponds to category II and protects the user against material from the front according to ISO 10262:1998.

☞ *Perform only work that does not require any higher-level protection.*

https://truckmanualshub.com/

Shatter protection (Option) for canopy

The optional shatter protection protects the user against material falling from the front.

DANGER

Stabbing/puncture hazard by objects from the front.

Objects will cause serious or deadly injuries.

- When working in areas with a risk of material falling from the front, install a shatter protection (Option) on machines equipped with a canopy. This shatter protection can be combined a protective FOPS structure and/or a protective Front Guard structure.
- Otherwise machine operation is prohibited.

WARNING

Do not modify the shatter protection.

Failure to follow this precautionary measure can lead to fatal injury or death.

- No drilling, cutting or grinding.
- Do not mount any brackets.
- Do not perform any welding/bonding work.
- Replace the complete protective structure if it is damaged, deformed and/or cracked.
- If you are not sure, always contact a Wacker Neuson dealer.
- Repair work may be performed by a Wacker Neuson dealer only.

Important

Do not use brushes, steel wool or other abrasive cleaners for cleaning the polycarbonate disc. Do not wipe dust in a dry state.

Installing/removing the Front Guard

Important

The Front Guard may be installed and removed only by an authorized service center.

https://truckmanualshub.com/

Work range and restricted visibility

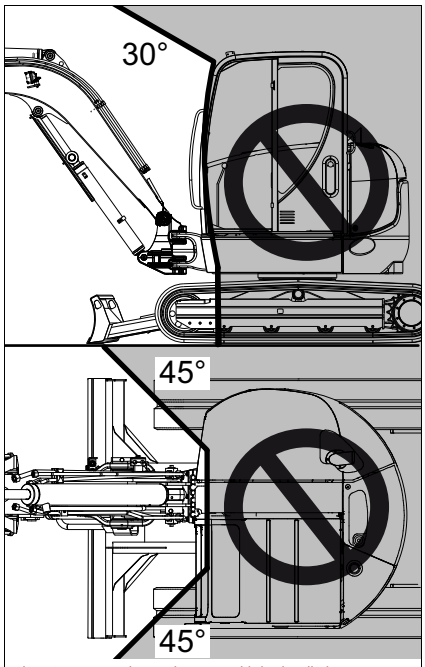


Fig. 50: Example: work range with hydraulic hammer

WARNING

Accident harzard. The size of the work range depends on the attachment used.

Risk of injury.

☞ *– see Operator's Manual of attachment*
– see example: work range with hydraulic hammer Fig. 50

☞ *Do not use the attachment outside the defined work range.*

NOTICE

Stop working when visibility is restricted due to rain, snowfall, dust etc.

☞ *Resume work only if visibility is no longer restricted.*

2.9 Applications with Lifting Gear

General information

- Craning applications are procedures involving raising, transporting and lowering point loads with the help of slings and load-securing devices (for example, ropes and chains). In doing so, the help of persons is necessary for securing and detaching the load. This applies, for example, to lifting and lowering pipes, shaft rings or containers.

DANGER

Crushing hazard. The excavator may be used for applications with lifting gear ONLY if the prescribed safety devices are in place and functional:

Failure to follow this precautionary measure will lead to fatal injury or death.

- Machines with a maximum authorized lifting capacity of over 1000 kg (2250 lbs) or an overturning moment of over 40,000 Nm (29,500 ft.lbs) may be used for lifting gear applications ONLY if the following conditions are fulfilled:
  - Acoustic or optical warning device *– see chapter 3.62 Load indicator (option)* on page 3-103.
  - Boom-lowering control device *– see chapter 3.63 Load holding control device safety feature (option)* on page 3-104.
  - Suitable equipment for fastening and securing loads must be available.
  - The lift capacity table must be observed *– see chapter 6.19* on page 6-17.
  - Get informed on and follow the legal regulations of your country.

https://truckmanualshub.com/

Conditions for safe operation

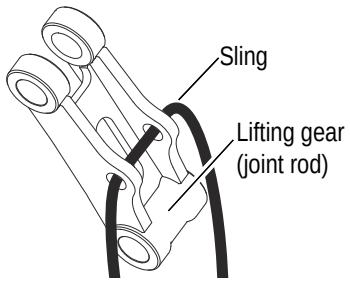


Fig. 51: Lifting gear – joint rod (option)

- Secure the load to prevent it from falling or slipping.
- Fasten the lifting gear so that it is not possible to unhook the sling unintentionally.
- Position the lifting gear ensuring the sling is not deflected by other parts.
- Do not use any lifting gear and slings that are damaged or not sufficiently dimensioned.
- The lifting gear must be designed to withstand the loads that can arise in the different positions of the work equipment or parts of the boom. Lateral loads and diagonal tensile forces must also be taken into account.
- The sling must be checked regularly by a qualified technician, at least once a year. Replace damaged slings immediately.

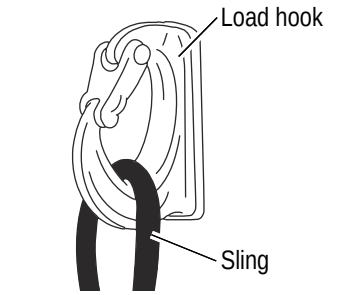


Fig. 52: Load hook (option)

- Fasten lifting gear and slings avoiding risk (rotating parts, crushing or shearing) for the person securing the load. Furthermore, neither must the work equipment be affected by the lifting gear, nor must the functions of the lifting gear be affected by external influences (for example, dirt that cannot be removed by simple means).
- Do not place slings over sharp edges.
- Always wear protective gloves, a hard hat and safety boots when working with lifting gear and slings.
- The persons attaching or securing loads may approach the boom from the side only, and only after the machine operator has given his permission. The machine operator may give his permission only after the machine is at a standstill and the work attachment no longer moves.
- Staying under suspended loads, in the danger area or under the machine's attachment is forbidden.
- Have loads fastened, and crane operators instructed, by a qualified person competent in ranging operation and standard hand signals. The person giving instructions to the operator must be in sight of the operator during load attachment and load disconnection. Is this not be possible, ask another person to guide.
- The machine operator must guide the load the nearest possible to the ground and avoid any oscillating or swinging movements.
- Machine travel with a raised load must be done very carefully on a level surface moving very slowly to avoid sudden motion that can cause swinging or oscillating motion of the load.
- The machine operator must not raise loads over persons.
- The machine operator may not leave his seat as long as the load is raised.

https://truckmanualshub.com/

2.10 Attachments

General information regarding attachments

- Prior to traveling on public roads remove all attachments which cannot be secured in compliance with the legal regulations of your country.
- Attachments and counterweights affect handling and the machine's steering capability.
- Fit the attachments with the specially required devices only.
- Coupling and remove attachments requires special care.
- Confirm that the attachment has been properly and securely attached to the machine according to the instructions. Before using the attachment, the operator shall confirm that the attachment performs correctly in response to control actuation.
- Do not couple the attachment with the engine running and the machine moving.
- Before putting the machine/attachment into operation (starting/moving), make sure that no one in the immediate vicinity will be at risk.
- Before leaving the seat, always secure the machine against unintentional movement and unauthorized use. Lower the attachments to the ground.
- Secure the attachments against unintentional movement.

Installation notes

- Before uncoupling or coupling hydraulic lines (hydraulic quick couplers):
  - Stop the engine
  - Release the pressure in the hydraulic system. In order to do so, move the control levers of the hydraulic control units back and forth a couple of times – *see chapter 3.56 Releasing the pressure on the Operating Hydraulics* on page 3-92
- Operate the machine only if all protective devices for the attachments have been installed and are functional, and, if all brake, light and hydraulic connections have been connected.
- If optional equipment is installed, all light installations, indicator lights etc. that are required in addition must be installed and functional.
- Especially when traveling or working with machines equipped with a quickhitch for the attachments, ensure that the attachment is securely locked in the quickhitch.
  - for machine equipped with quickhitch – *see chapter 3.58 Quickhitch (option)* on page 3-95.
  - for machine equipped with hydraulic quickhitch – *see chapter 3.59 Hydraulic quick-hitch Easy Lock (option)* on page 3-96.
- Prior to fitting attachments to the stick, secure the control lever of the hydraulic control unit against unintentional movement.

2.11 Trailers

Important

Towing a trailer with this machine is not permitted.

https://truckmanualshub.com/

2.12 Hammer operation

- Contact your Wacker Neuson dealer for information on the correct equipment.

Safety instructions

- Use the canopy version only with appropriate protective structures. *– see chapter 3.35 Mounting/removing the canopy shatter protection (option)* on page 3-56.
- If there is a risk of material coming off in fragments and splinters, a suitable protection, for example a protective Front Guard structure or another suitable protective facility must be installed on the machine.
- During operation, all persons must stay clear of the work area of the machine.
- Do not place the machine directly underneath the workplace during demolition, otherwise parts can fall onto the machine or the building can collapse.
- Do not perform demolition work below the machine, this could cause the machine to tip over.
- The machine can become unstable and tip if a demolition hammer or other heavy attachment is used. Proceed as follows to perform work both on level ground and on slopes:
  - Never turn, lower or set down the attachment abruptly.
  - Do not extend or retract the boom abruptly, otherwise the machine can tip over.
- Stop work immediately if a hydraulic hose moves back and forth in an unusual manner. This could be a cause for a pressure accumulator defect. Contact your Wacker Neuson dealer and have the error repaired immediately.
- All windows and doors must be closed.

Working with a hammer

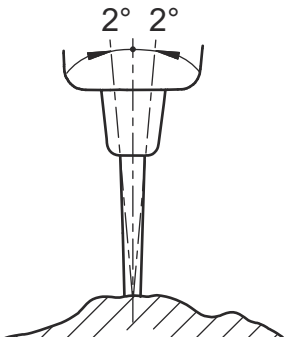


Fig. 53: Hammer position

NOTICE

Always observe the following instructions:

- Do not use the impact force of the attachment to perform demolition work.
- Keep the hammer perpendicular to the surface (max. deviation to all sides is 2°).
- After you have driven the hammer into the material, do not try to fragment the material with movements to the sides.
- Never move the hammer as you drive it into the material.
- Do not operate the hammer in the same spot uninterruptedly for more than 15 seconds.
- If the applied impact force does not break the material, move the hammer to the edge or start again in another place in order to break the material.
- Do not put the hammer into operation if a hydraulic cylinder is fully extended or retracted.
- Never use the hammer horizontally or upward.
- Do not use the hammer for catching or collecting material.
- Press the hammer firmly against the material to avoid hammer operation without any resistance.
- Do not use the hammer to raise loads.
- Do not hit the hammer-body against rocks, concrete, etc.
- Do not raise the machine with the boom.
- Do not perform any movements with the machine during hammer operation.
- Working with the hydraulic cylinders and/or the boom fully extended is not allowed.

https://truckmanualshub.com/

2.13 Transport and Towing

Towing

- The machine must be towed according to the procedures described within this Operator's Manual.
- Observe the prescribed transport position, admissible speed and itinerary.

Transporting

- The machine must be loaded and transported according to the procedures described within this Operator's Manual.
- The transporting vehicle must have sufficient load capacity and platform size to safety transport the machine. Refer to Chapter *6 Specifications* of this manual to determine the physical characteristic of the machine before loading and transporting.
- Use OSHA-approved straps, chains or cables to securely fastened the machine to the surface of the transport.
- Use the tie down points provided on the load surface of the transport.
- Attach the tie down devices to the excavator at the designated tie down points.
- Confirm that the excavator tie down procedures will prevent sideways, forward, rearward and upward motion of the excavator in the event the transport vehicle is involved in an incident or sudden avoidance maneuver.
- The recommissioning procedure must be strictly in accordance with the Operator's Manual.

2.14 Safety Guidelines for Maintenance

General maintenance notes

- Operational readiness and the service life of machines are heavily dependent on maintenance.
- It is therefore in the interest of the machine owner to perform the prescribed maintenance work.
- The manufacturer requires the owner to perform maintenance work under all circumstances. Otherwise warranty shall not be given in full.
- Adhere to prescribed intervals or those specified in this Operator's Manual for routine checks/inspections and maintenance work.
- For inspection and maintenance work, ensure that all tools and service center equipment are capable of performing the tasks prescribed. Do not use malfunctioning or broken tools. Use certified measuring devices that are routinely calibrated for accuracy (torque wrench, pressure gauge, ammeter, etc.).
- Replace hydraulic hoses within stipulated and appropriate intervals even if no safety-relevant defects have been detected.
- Recycle scrapped parts and drained fluids according to environmental and hazardous material requirements. To avoid fire and health hazards, dispose of soiled shop towels by approved methods.
- Always retighten any screws, electrical connections, or hose connections that may have been loosened during maintenance and repair.
- Any safety devices removed for set-up, maintenance or repair purposes must be refitted and checked immediately upon completion of the maintenance and repair work.

https://truckmanualshub.com/

Personal safety measures

- Brief the technician and the operator before beginning special operations, repair work and maintenance work. Appoint a person to supervise the activities.
- Observe the specific safety instructions in the Maintenance section of this Operator's Manual.
- Before taking up work on machine parts risky for life and limb (bruising, cutting), always ensure safe blocking/support of these areas.



- Apply special care when working on the fuel system – increased risk of fire.
- Engine block and muffler system become very hot during operation and require cool-down time after machine is shut off. Avoid contact with hot parts. Wait for the machine to cool before touching components.



- Retainer pins can fly out or splinter when struck with force. Avoid striking the pins during operation, repair or maintenance – risk of personal injury.



- Do not use starting fluid (for example, ether), especially in those cases in which a heater plug (intake air pre-heating) is used at the same time – risk of explosions.

Preparing for maintenance and repair work

- In any work concerning the operation, conversion or adjustment of the machine and its safety-oriented devices, or any work related to maintenance, inspection and repair, observe the starting and stopping procedures set forth in the Operator's Manual, and the information on maintenance work.
- Prior to performing assembly work on the machine, ensure that no movable parts will roll away or start moving.
- If required, secure the maintenance area appropriately.In accordance with this Operator's Manual and instructions for the respective assembly, release the pressure in all system sections and pressure lines (hydraulic system) before performing any maintenance work.
- Perform service, maintenance and repair work ONLY if:
  - machine is positioned on firm and level ground
  - all hydraulically movable attachments and working equipment have been lowered to the ground
  - engine is stopped
  - the starting key has been removed
  - pressure accumulator is empty
  - control lever base is folded up
  - machine has been secured against unintentional movement
- Should maintenance or repair be inevitable with the engine running:
  - Lower the stabilizer blade and lock the controls
  - Only work in groups of two
  - Both persons must be authorized for the operation of the machine
  - One person must be seated on the seat and maintain visual contact with the other person
  - Observe the specific safety instructions in the work manual
  - Always keep a safe distance from all rotating and moving parts, for example, fan blades, V-belt drives, PTO shaft drives, etc.
- Prior to performing service, maintenance and repair work, always attach a warning label, such as “Repair work – do not start machine” to the starter lock or to the control elements as a precautionary measure.

https://truckmanualshub.com/

- Prior to performing assembly work on the machine, stabilize the area under repair and use proper lifting and support devices to change parts weighing more than 9 kg (20 lbs).
- Perform maintenance and repair work beneath a raised machine, attachments or additional equipment ONLY if a safe and secure support has been provided. The use of hydraulic cylinders or jacks as the sloe method of support does NOT sufficiently secure raised machines or equipment/attachments.
- Before cleaning the machine with water, steam jet (high-pressure cleaner) or detergents, cover or tape up all openings which – for safety and functional reasons – must be protected against water, steam or detergent penetration. Special care must be taken with the electrical system.
- Clean the machine, especially connections and threaded unions, of any traces of oil, fuel or preservatives before performing maintenance/repair work. Do not use aggressive detergents. Use lint-free cleaning rags.
- To avoid the risk of accidents, parts and large assemblies being moved for replacement purposes must be carefully attached and secured to lifting gear. Use only suitable lifting gear and suspension systems in a technically perfect state with adequate load-bearing capacity.
  Stay clear of suspended loads.
- Have loads fastened and crane operators instructed by experienced persons only. The person giving the instructions to the operator must be within sight or sound of him.

Performing maintenance and repairs

- After cleaning, remove all covers and tapes applied for that purpose.
- After cleaning, examine all fuel, lubricant and hydraulic oil lines for leaks, chafe marks and damage. Rectify all defects without delay.
- Observe the adjustment, maintenance and inspection activities and intervals set forth in the Operator's Manual, including information on the replacement of parts/partial equipment.
  These activities may be performed only by a Wacker Neuson service center.
- Disconnect the negative terminal of the battery if work needs to be performed on the electrical system.
- Do not allow the machine not be serviced, repaired or test-driven by unauthorized personnel.
- Always use specially designed or otherwise safety-oriented ladders and working platforms to perform overhead assembly work. NEVER use machine parts or attachments/superstructures as a climbing aid.
- Wear a safety harness when performing elevated maintenance work. Keep all handles, steps, handrails, platforms, landings and ladders free from dirt, snow and ice.
- Do not use the work equipment as lifting platforms for persons.

2.15 Special Hazards

Electrical energy

- Use only original fuses with the specified current rating.
- In case of electrical system malfunctions, stop the machine immediately, disconnect the battery (for example, by using the battery master switch), and perform troubleshooting procedures.
- Work on the electrical system may only be performed by a technician with appropriate training, in accordance with the applicable electrical engineering codes.
- Inspect and check the electric equipment of the machine at regular intervals. Defects such as loose connections or scorched cables must be repaired immediately.

https://truckmanualshub.com/

- Observe the operating voltage of the machine/attachments. The voltages must be compatible (12 volts) and confirm that an appropriate fuse or circuit breaker is incorporated in the system to prevent damage from malfunction or short circuit.
- Always remove the grounding strap from the battery when working on the electrical system or when performing welding work.
- Starting the machine with a battery jumper cable can be risky if performed improperly. Observe the safety instructions regarding the battery.

Underground electric lines

- Before starting any work, the machine operator must ensure that there are no lines in the work area.
- If you are not sure, contact the person in charge at the network operator.
- If there are lines, take the following safety measures:
  - Mark the position and path of the lines unambiguously.
  - Fasten, support or secure exposed lines.
  - Safely fasten lines if vibration or shocks to these lines must be avoided.

Overhead electric lines

DANGER

Electrical shock hazard.

Risk of fatal injuries or death due to electric shock.

- When working with the machine, maintain a safe distance from overhead electric lines.
- If work must be performed close to overhead lines, the equipment/attachments must be kept well away from them.

Rated voltage (volt)	Safety distance	
	Meter	Foot
Up to 1000 V	1 m	3.3 '
Over 1 kV to 110 kV	3 m	9.8 '
Over 110 kV to 220 kV	4 m	13.1'
Over 220 kV to 380 kV	5 m	16.4 '
Unknown rated voltage	5 m	16.4 '

- If no sufficient distance can be kept to overhead electric lines, the machine operator must take other safety measures, for instance switching off the current, in agreement with the owner or operator of the lines.
- If an energized line is touched nevertheless:
  - Do not leave the machine.
  - Drive the machine out of the area.
  - Warn others against approaching and touching the machine.
  - Have the live wire de-energized.
  - Do not leave the machine until the line that has been touched or damaged has been safely de-energized.

https://truckmanualshub.com/

Gas, dust, steam, smoke

- Operate the machine only on adequately ventilated premises. Before starting internal combustion engines or operating fuel-operated heating systems on enclosed premises, ensure that there is sufficient ventilation. Observe the regulations in force at the respective site.
- Welding, burning and grinding work on the machine may only be performed by a Wacker Neuson dealer.



- Before performing welding, flame-cutting and grinding work, clean the machine and its surroundings from dust and other inflammable substances, and ensure that the premises are adequately ventilated – risk of explosions.
- In areas with special hazards (for example, toxic gases, caustic vapors, toxic environments), carry appropriate protective equipment (breathing filters, protective clothing).

Hydraulics

- Work on the hydraulic equipment of the machine must be performed only by persons having specific technical knowledge and experience in hydraulic systems.
- Check all lines, hoses, fittings, and threaded couplers regularly for leaks and obvious damage. Repair any damage and leaks immediately. Splashed oil can cause injury and fire.
- In accordance with the Operator's Manual for the respective assembly, release the pressure in all system sections and pressure lines (hydraulic system) to be opened before performing any implementing/repair work.
- Hydraulic and compressed-air lines must be laid and fitted properly. Ensure that no connections are interchanged. The fittings, lengths and quality of the hoses must comply with the technical requirements.

Noise

- Close all doors and windows if practical.
- Removing sound baffles on the machine during operation is not allowed.
- Wear ear protectors. This is especially important when performing hammer operations or working in enclosed areas.

MSDS

- When handling oil, grease and other chemical substances such as battery electrolyte or hydraulic fluid, observe the product-related safety regulations (Material Safety Data Sheet (MSDS)).



- Be careful when handling hot consumables – risk of burning or scalding.
- When using the machine in contaminated areas, take appropriate measures for the protection of the operator and the machine.

Using the quickhitches in water

- Apply grease to the lubrication points before using the quickhitch in water.
- After using the quickhitch in water, apply grease to the lubrication points to remove all water.
- Using the quickhitch in salt water is prohibited.

https://truckmanualshub.com/

Battery

- When handling the battery observe the specific safety instructions and regulations relevant to accident prevention. Batteries contain caustic sulphuric acid.
- In case of a frozen battery or of an insufficient electrolyte level, do not try starting the machine with battery jumper cables. The battery can burst or explode.
  - Dispose of the battery immediately.
- A potentially combustible oxygen-hydrogen mixture forms in batteries during normal operation and especially when charging. Always wear gloves and eye protection when working with batteries.

2.16 Safety Guidelines while using Internal Combustion Engines

WARNING

Special hazard during operation and fueling.

Risk of severe injury or death.

- Read and follow the warning instructions and the safety guidelines below.

Running the engine

When running the engine:

- Keep the area around the muffer and exhaust pipe free of flammable materials.
- Check the fuel lines and the fuel tank for leaks and cracks before starting the engine. Do not run the machine if fuel leaks are present or the fuel lines are loose.
- Engine exhaust CAN KILL YOU IN MINUTES. Engine exhaust contains carbon monoxide. This is a poison you cannot see or smell. Never run the machine indoors or in an enclosed area such as a deep trench unless adequate ventilation, through such items as exhaust fans or hoses, is provided.
- Do not smoke while operating the machine.
- Do not run the engine near open flames.
- Do not touch the engine or exhaust while the engine is running or immediately after it has been turned off.
- Do not operate a machine when its fuel cap is loose or missing.
- Do not remove the radiator cap when engine is running or hot. The radiator fluid is hot and under pressure, and may cause severe burns.

Fueling the engine

When fueling the engine:

- Clean up any spilled fuel immediately.
- Refill the fuel tank in a well-ventilated area.
- Replace the fuel tank cap after refueling.
- Do not smoke.
- Do not refuel a hot or running engine.

Do not refuel the engine near an open flame

https://truckmanualshub.com/

3 Operation

This chapter describes the controls, and contains information on the function and handling of the indicator lights and controls in the cab.

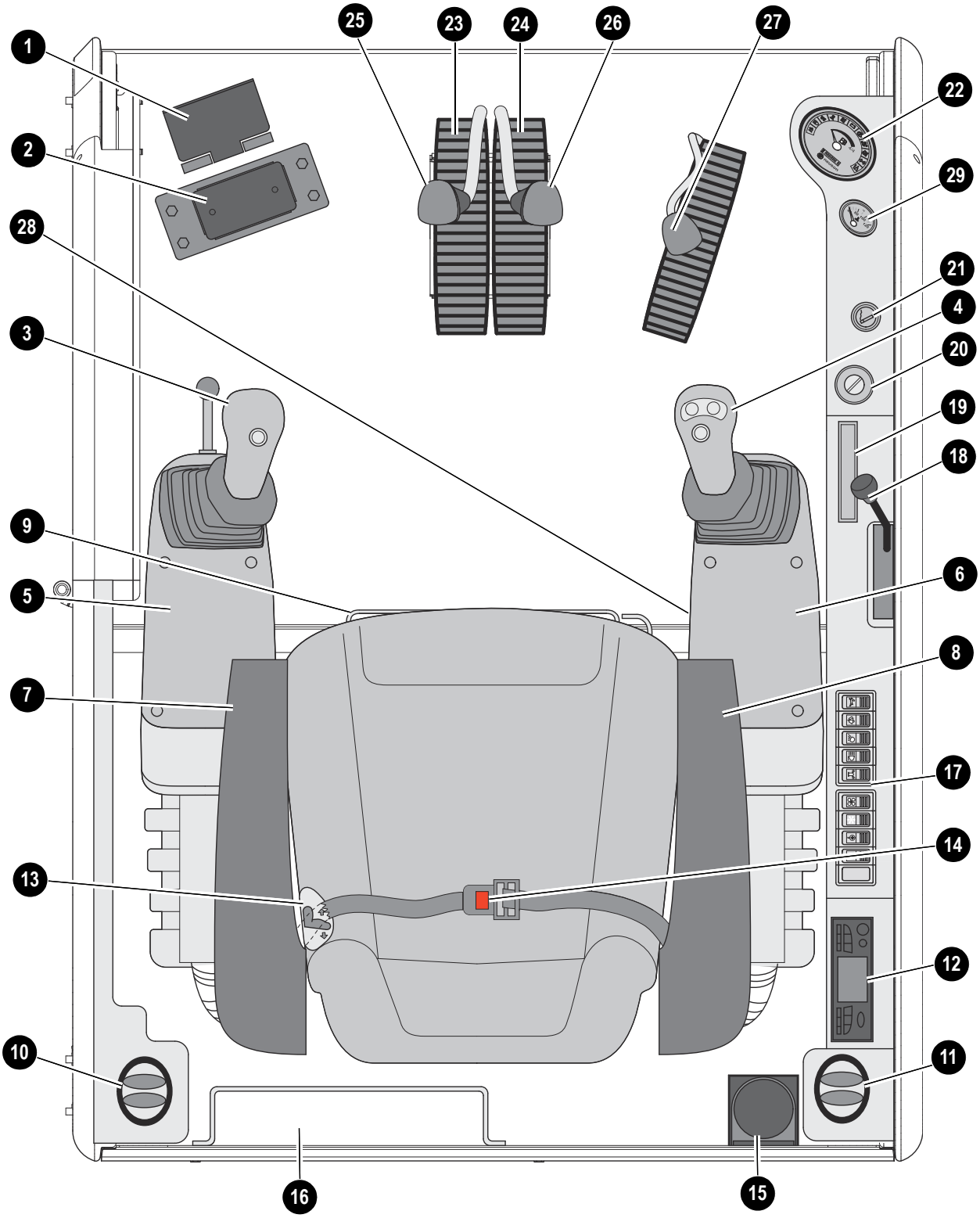
The pages stated in the table refer to the description of the controls.

A combination of digits, or a combination of digits and letters (for example 40/**18** or 40/**A**) used for identifying the control elements, means:
fig. no. 40/control element no. 18 or position **A** in fig. no. 40

Figures carry no numbers if they are placed to the left of the text.

https://truckmanualshub.com/

3.1 Cab 50Z3/6003 (up to serial no. AH02781)

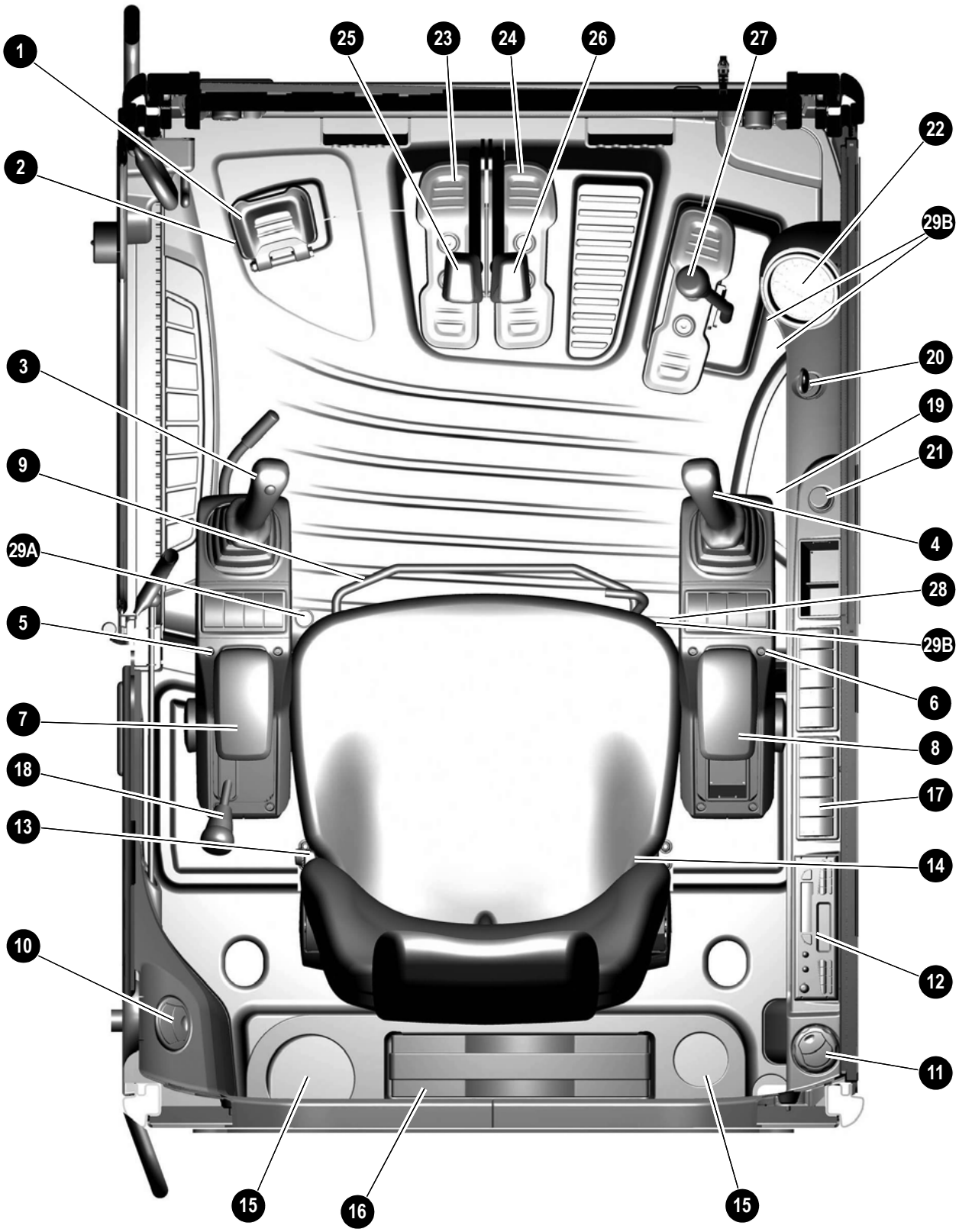


https://truckmanualshub.com/

Pos.	Description	For more information see page
1	Cover for hammer pedal	
2	Hammer pedal	*3-74*
3	Left-hand control lever	*3-73*, *3-77*, *3-84*, *3-84*
4	Right-hand control lever	*3-82*, *3-77*, *3-82*, *3-82*
5	Control lever base (left)	*3-59*
6	Control lever base (right)	
7	Armrest (left)	
8	Armrest (right)	
9	Lever (horizontal seat adjustment)	*3-38*
10	Air vent (rear window, on the left)	
11	Air vent (rear window, on the right)	
12	Radio (option)	
13	Seat (backrest adjustment)	*3-38*
14	Seat belt (lock)	*3-44*
15	Cup holder	
16	Document storage bin	
17	Switch panel	*3-6*
18	Throttle	*3-17*
19	Fuse box	*6-3*
20	Preheating start switch	*3-17*
21	12V power outlet	
22	Round display element	*3-6*
23	Drive pedal (left)	*3-24*
24	Drive pedal (right)	*3-24*
25	Drive lever (left)	*3-24*
26	Drive lever (right)	*3-24*
27	Stabilizer blade lever/pedal	*3-28*
28	Heating controls (from serial no. AD04651)	*3-34*
29	Coolant temperature indicator	*3-13*

https://truckmanualshub.com/

3.2 Cab 50Z3 2 / 6003 2 (from serial no. AJ02777)

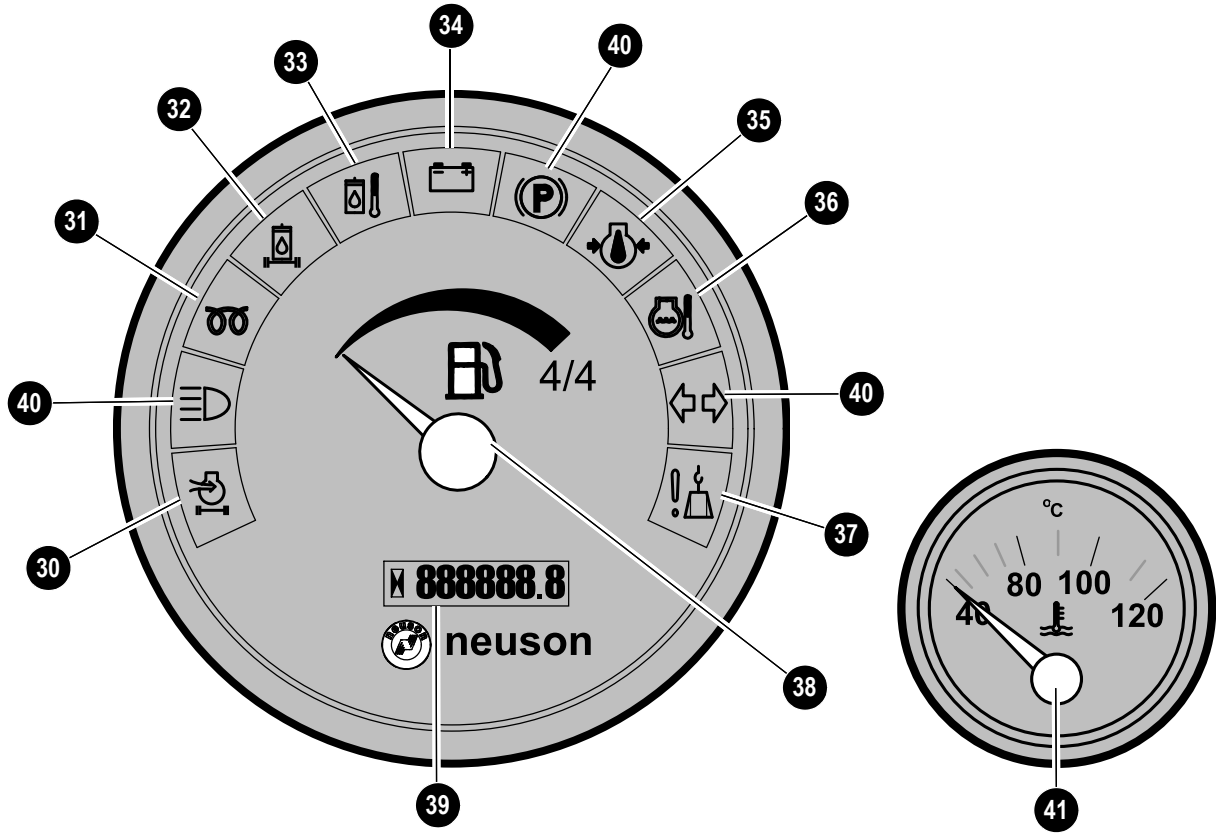


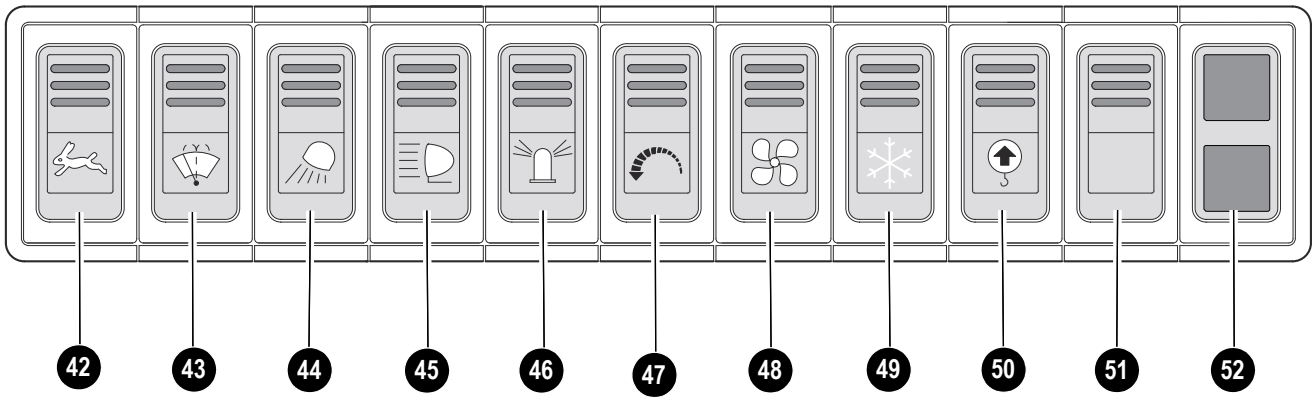
https://truckmanualshub.com/

Pos.	Description	For more information see page
1	Cover for hammer pedal	
2	Hammer pedal	*3-74*
3	Left-hand control lever	*3-73*, *3-77*, *3-84*, *3-84*
4	Right-hand control lever	*3-82*, *3-77*, *3-82*, *3-82*
5	Control lever base (left)	*3-59*
6	Control lever base (right)	
7	Armrest (left)	
8	Armrest (right)	
9	Lever (horizontal seat adjustment)	*3-38*
10	Air vent (rear window, on the left)	
11	Air vent (rear window, on the right)	
12	Radio (option)	
13	Seat (backrest adjustment)	*3-38*
14	Seat belt (lock)	*3-44*
15	Cup holder	
16	Document storage bin	
17	Switch panel	*3-6*
18	Throttle	*3-17*
19	Fuse box	*6-3*
20	Preheating start switch	*3-17*
21	12V power outlet	
22	Round display element	*3-6*
23	Drive pedal (left)	*3-24*
24	Drive pedal (right)	*3-24*
25	Drive lever (left)	*3-24*
26	Drive lever (right)	*3-24*
27	Stabilizer blade lever/pedal	*3-28*
28	Heating controls	*3-34*
29A	Foot-operated tip switch for hydraulic quickhitch system (option)	*3-96*
29B	Air vent	
29C	Switch panel on left-hand control lever base	
29D	Switch panel on right-hand control lever base	

https://truckmanualshub.com/

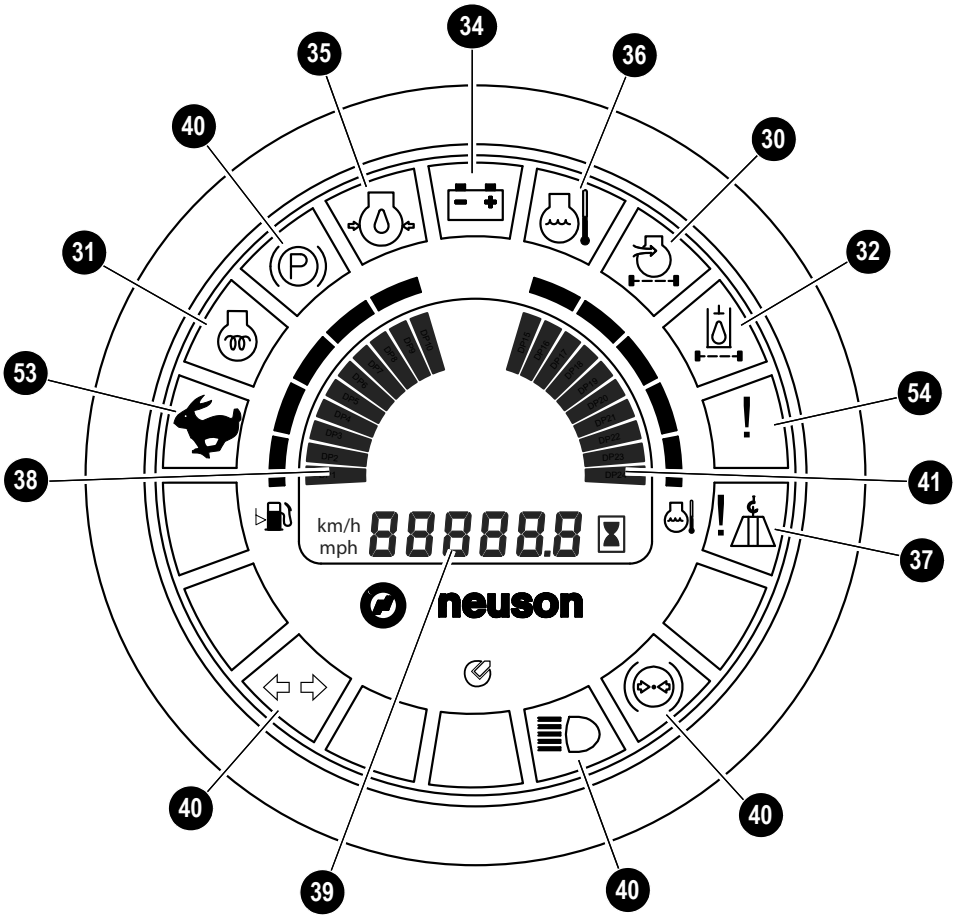
3.3 Control elements 50Z3 (up to serial no. AH02781) / 6003 (up to serial no. AH00578)

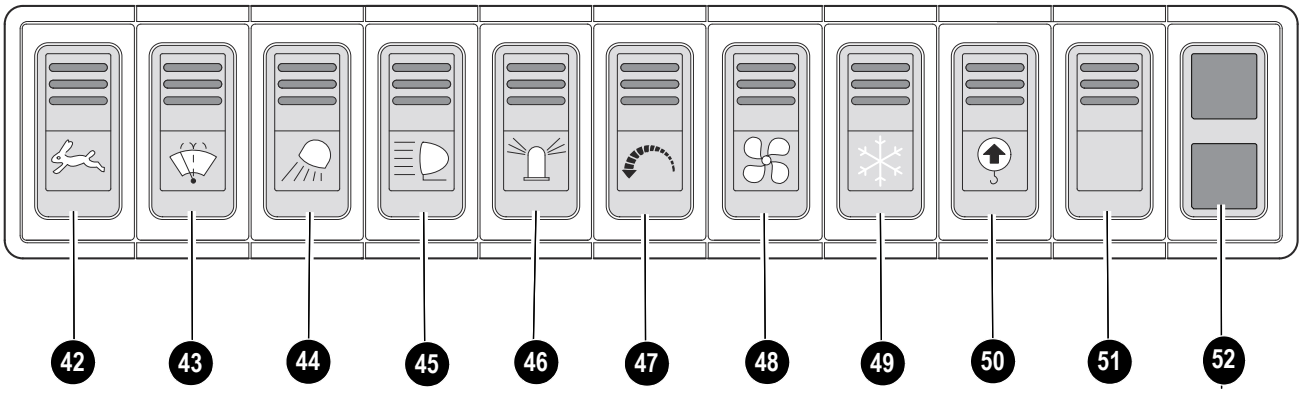




https://truckmanualshub.com/

3.4 Control elements 6003 (serial nos. AH00579 to AH02750)



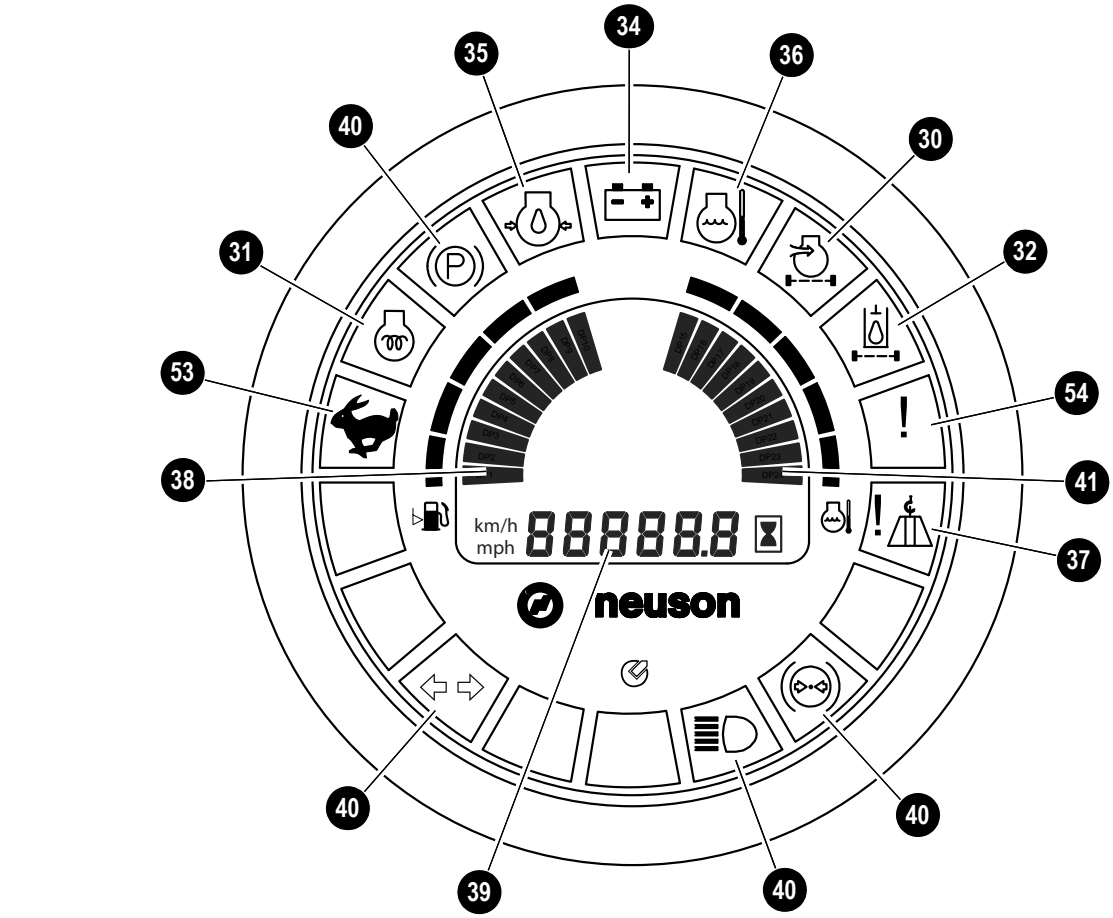


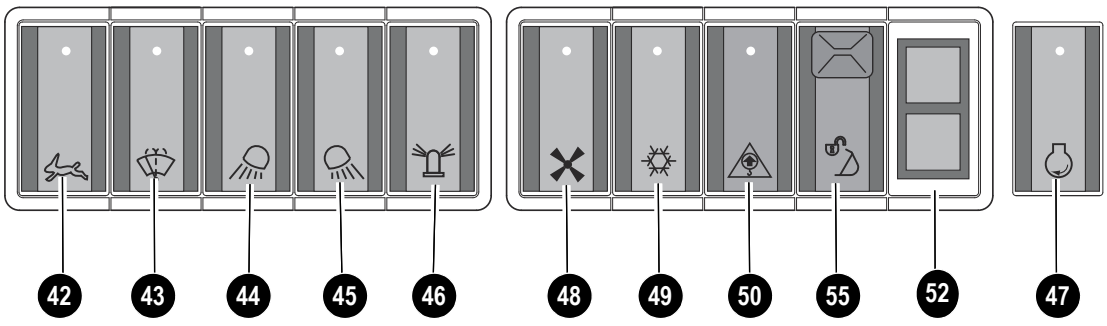
https://truckmanualshub.com/

Pos.	Description	For more information see page
30	Air filter indicator light (red)	3-11
31	Cold starter indicator light (yellow)	3-12
32	Hydraulic oil filter indicator light (red)	3-11
33	Not assigned	
34	Alternator charge function indicator light (red)	3-11
35	Engine oil pressure indicator light (red)	3-11
36	Indicator light (red) – coolant temperature too high	3-12
37	Indicator light (red) – safe load indicator	3-12
38	Fuel level indicator	3-13
39	Hour meter	3-12
40	Not assigned	
41	Coolant temperature indicator	3-13
42	High speed	3-25
43	Washer system switch	3-36
44	Working light switch	3-30
45	Roof lights switch (option)	3-32
46	Rotating beacon switch (option)	3-32
47	Automatic engine speed setting switch (option)	3-18
48	Ventilation switch	3-33
49	Air conditioning switch (option)	3-37
50	Safe load indicator switch (option)	3-103
51	Engine speed switch (option)	
52	Proportional controls (option)	3-79
53	Indicator light (green) – high speed enabled	3-25
54	Indicator light (red) – engine error	4-5

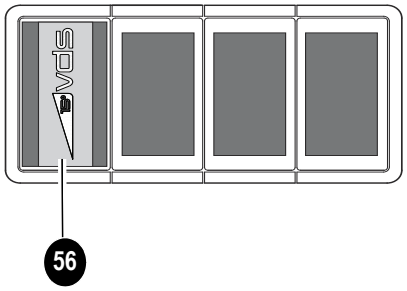
https://truckmanualshub.com/

3.5 Control elements 50Z3 2 / 6003 2 (from serial no.AJ02777)

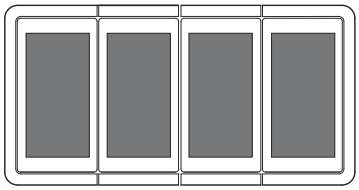




Switch panel on left-hand control lever base



Switch panel on right-hand control lever base



https://truckmanualshub.com/

Pos.	Description	For more information see page
30	Air filter indicator light (red)	3-11
31	Cold starter indicator light (yellow)	3-12
32	Hydraulic oil filter indicator light (red)	3-11
33	Not assigned	
34	Alternator charge function indicator light (red)	3-11
35	Engine oil pressure indicator light (red)	3-11
36	Indicator light (red) – coolant temperature too high	3-12
37	Indicator light (red) – safe load indicator	3-12
38	Fuel level indicator	3-13
39	Hour meter	3-12
40	Not assigned	
41	Coolant temperature indicator (not equipped)	3-13
42	High speed switch	3-25
43	Washer system switch	3-36
44	Working light switch	3-30
45	Roof lights switch (option)	3-31
46	Rotating beacon switch (option)	3-32
47	Automatic engine speed setting switch (option)	3-18
48	Ventilation switch	3-33
49	Air conditioning switch (option)	3-37
50	Safe load indicator switch (option)	3-103
51	Not assigned	
52	Proportional controls (option)	3-79
53	Indicator light (green) – high speed enabled	3-25
54	Indicator light (red) – engine error	4-5
55	Hydraulic quickhitch system switch (option)	3-96
56	Tilting the upper carriage – Vertical Digging System switch (option)	3-87

https://truckmanualshub.com/

3.6 Indicator lights and warning lights Overview



Hydraulic oil filter indicator light (red)

Indicates excessive pressure in the hydraulic return line to the tank. In this case:

☞ *Stop and park the machine.*

☞ *Have the hydraulic oil return filter checked and, if necessary, replaced by an authorized Wacker Neuson service center.*

☞ *The indicator light can illuminate briefly if the hydraulic oil is cold, but goes out again once operating temperature is reached.*



Air filter indicator light (red)

Illuminates if air filter is contaminated.

☞ *Stop the machine.*

☞ *Stop the engine. Check the primary and secondary filters and replace them if necessary.*



Alternator charge function indicator light (red)

NOTICE

The coolant pump no longer runs if the V-belt is faulty. Danger of engine overheating or breakdown.
If the indicator light illuminates with the engine running:

☞ *Stop the engine immediately and*

☞ *Have the cause repaired by an authorized Wacker Neuson service center.*

The V-belt or the charging circuit of the alternator is faulty if the indicator light illuminates with the engine running. The battery is no longer charged.



Engine oil pressure indicator light (red)

Illuminates if the engine oil pressure is too low. In this case:

☞ *Stop the machine.*

☞ *Stop the engine immediately and check the oil level.*

The indicator light illuminates when the ignition is turned on and goes out as soon as the engine runs.



Engine error indicator light (red)

Illuminates in case of an engine error – *see chapter 4.2 Engine error codes* on page 4-5.

https://truckmanualshub.com/

Coolant temperature indicator light (red)



CAUTION

Burn Hazard. The engine coolant is under pressure at high temperature.

Failure to observe specific instructions to check the coolant level in the radiator of the cooling system can cause serious injury.

- Do not attempt to remove the radiator filler cap or drain the radiator coolant until the coolant temperature is less than 43°C (110°F).
- Stop the engine and wait at least 10 minutes or until the cap is comfortable to the touch before attempting removal.
- Wear protective gloves and eye protection.
- After determining the temperature is low enough to avoid burns, slowly turn the cap counterclockwise to the first notch stopping cap rotation. Wait to confirm that any pressure has been relieved. Depress the cap and continue to rotate the cap in a counterclockwise motion until the cap is free and can be removed.

Illuminates if the coolant temperature is too high.

☞ *Stop and park the machine.*

Safe load indicator light (red) (option)



This optical warning device tells the operator whether he has reached the maximum permissible load or load moment according to the load diagram.

☞ *Reduce the load until the indicator light goes out.*

Cold starter indicator light (yellow)



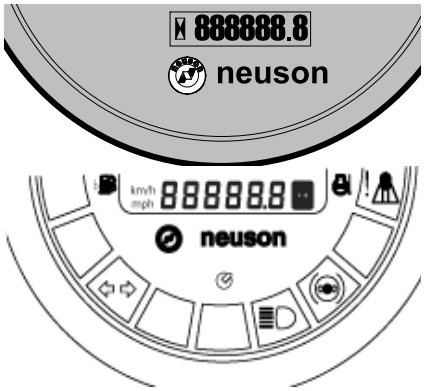
Illuminates when the key is in position **2** in the preheating start switch.

A glow plug preheats the air in the combustion chamber of the engine when the key is in this position.

High speed indicator light (green)



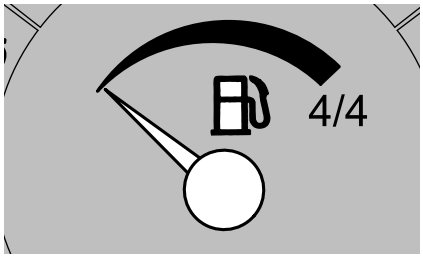
Illuminates with high speed enabled.

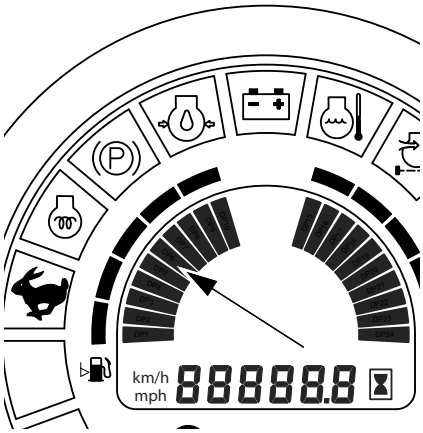


Hour meter

Records the engine service hours with the engine running.

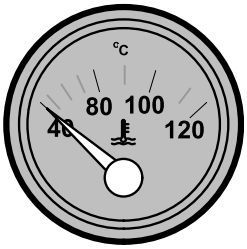
https://truckmanualshub.com/

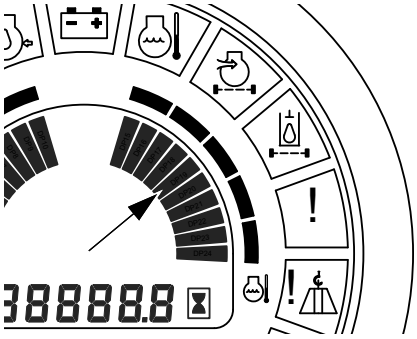




Fuel level indicator

Displays the fuel level.





Coolant temperature indicator

Displays the current coolant temperature.

https://truckmanualshub.com/

3.7 Operating the Excavator

Safety instructions

- Only use the steps and handholds provided when entering and leaving the cab.
- Never use the controls or movable lines and cables as handholds.
- Never get on or off a moving machine! Never jump off the machine.
- The lift capacity table must be observed – see Lift capacity tables on pages *6-17* to *6-33*.

Putting the machine into operation for the first time

Important

The machine may be put into operation by a trained operator only.

- *– see chapter 2.6 Operator and Technician Qualifications and Basic Responsibilities* on page 2-4.
- *– see chapter 2 Safety instructions* on page 2-1 of this Operator's Manual.

- The operator must have read and understood this Operator's Manual before putting the machine into operation.
- The machine may only be used in serviceable condition in accordance with its designated use and the instructions set forth in the Operator's Manual, and only by safety-conscious persons who are fully aware of the risks involved in operating the machine.
- Go through the “Starting” checklist in the following chapter.

Running-in period

Operate the machine carefully during its first 50 hours of operation.

The future performance and service life of the machine are heavily dependent on the observance of the following recommendations during the running-in period.

- Do not change engine speed abruptly.
- Avoid using the machine under heavy loads and/or at high speeds.
- Avoid abrupt acceleration, braking and changing travel direction.
- Do not run the engine at high speed for extended periods.
- Strictly observe the maintenance schedules in the appendix *– see chapter 5.22 Maintenance plan (overview)* on page 5-57.

https://truckmanualshub.com/

Check lists

The checklists below are intended to assist you in checking and monitoring the machine before, during and after operation.

These checklists cannot claim to be exhaustive; they are merely intended as an aid for you in fulfilling your duties as a conscientious operator.

The checking and monitoring jobs listed below are described in greater detail in the following chapters.

If the answer to one of the following questions is NO, first rectify the cause of the fault before the machine can be put into operation.

Start-up checklist

Walk around the machine and check the following points before putting the machine into operation:

No.	Question	✔
1	Enough fuel in the tank? (➠ *5-3*)	
2	Coolant level OK? (➠ *5-10*)	
3	Water drained from the fuel prefilter? (➠ *5-6*)	
4	Engine oil level OK? (➠ *5-7*)	
5	Oil level in hydraulic tank OK? (➠ *5-29*)	
6	Water level in washer tank OK? (➠ *3-36*)	
7	V-belt condition and tension checked? (➠ *5-25*)	
8	Lubrication points greased? (➠ *5-36*)	
9	Tracks checked for cracks, cuts etc. ? (➠ *5-33*)	
10	Lights, signals, warning lights and indicator lights OK? (➠ *3-30*)	
11	Dirt (e.g. mud, snow, ice, etc.) removed from all windows, mirrors, lights, footholds, drive pedals and control levers?	
12	Are all mirrors functional and adjusted correctly? Are other persons required to guide you?	
13	Control lever base folded up? (➠ *3-59*)	
14	Attachment safely locked? (➠ *3-93*)	
15	Engine cover safely locked? (➠ *3-62*)	
16	Especially after cleaning, maintenance or repair work: ➥ Rags, tools and other loose objects removed?	
17	Correct seat position? (➠ *3-37*)	
18	Seat belt fastened? (➠ *3-44*)	

https://truckmanualshub.com/

Operation checklist

After starting the engine and during operation, check and observe the following points:

No.	Question	✔
1	All indicator lights illuminates briefly.	
2	Indicator lights for engine oil pressure and alternator charge function gone out? (➠ *3-11*)	
3	Temperature indicator light for engine coolant in normal range? (➠*3-12*, *3-13*)	
4	Anyone dangerously close to the machine?	
5	Do the drive pedals and control levers work correctly? (➠ *3-24*)	

Parking checklist

Check and observe the following points when parking the machine:

No.	Question	✔
1	Attachments lowered to the ground? (➠ *3-72*)	
2	Stabilizer blade lowered to the ground?	
3	Control lever base folded up? (➠ *3-59*)	
4	Cab locked, especially if the machine cannot be supervised? (➠ *3-57*)	
When parking on public roads:		
5	Machine adequately secured?	
When parking on slopes:		
6	Machine adequately secured?	
7	Machine also secured with chocks under the tracks to prevent it from rolling away?	

https://truckmanualshub.com/

3.8 Starting the Excavator

Preheating start switch

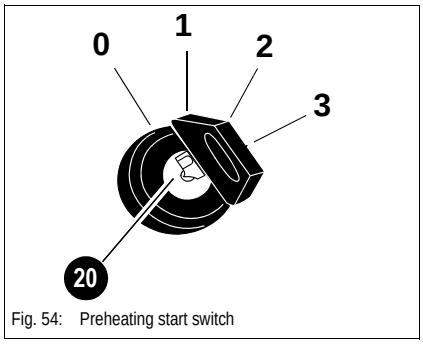


Fig. 54: Preheating start switch

Position	Function	Power consumer
0	Insert or remove the starting key	None
1	ON/drive position	Feed pump switched on ➥ Indicator lights illuminates All functions are operational ➥ Indicator lights illuminates ➥ Shrill sound
2	Preheats the engine (10 – 15 seconds)	Glow plugs
3	Starts the engine	➥ Starter is actuated ➥ Indicator lights must go out

Throttle

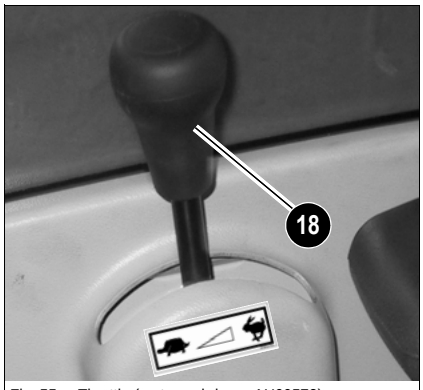


Fig. 55: Throttle (up to serial no. AH00578)



Fig. 55: Throttle (from serial no. AH00579)

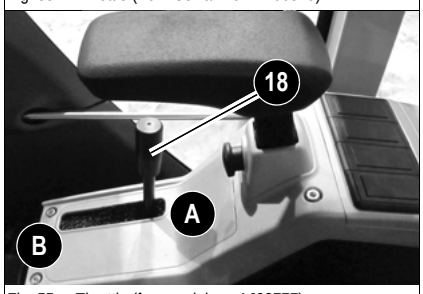


Fig. 55: Throttle (from serial no. AJ02777)

The throttle lever controls the engine speed as follows:

☞ *Speed can be set continuosly with throttle **18**.*

☞ *Speed can be set continuosly with throttle **18**.*

- Position **A**: idling speed
- Position **B**: max. engine speed

https://truckmanualshub.com/

3.9 Automatic engine speed setting

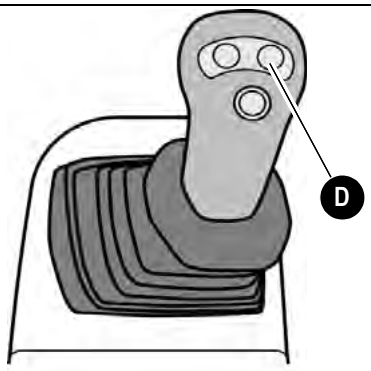


Fig. 56: Automatic engine speed setting (up to serial no. AH00578)

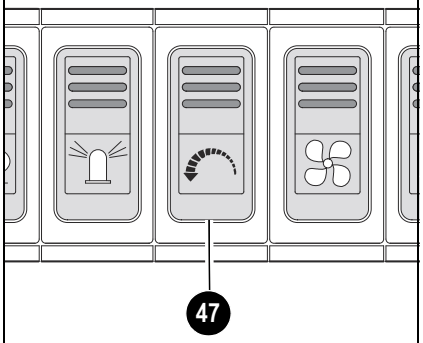


Fig. 56: Automatic engine speed setting (from serial no. AH00579)

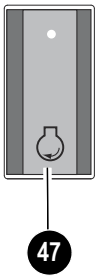


Fig. 56: Automatic engine speed setting (from serial no. AJ02777)

50Z3 / 6003 up to serial no. AH00578 (option)

Engine speed control with the right-hand control lever:

☞ *Press button **D** on the right-hand control lever.*

☞ *Speed can now be set continuosly with throttle **18**.*

☞ *Pressing button **D** on the control lever sets the engine speed back to idling speed even if the throttle lever is in maximum position*

☞ *Pressing button **D** again on the control lever automatically sets the engine speed back to the speed set previously with the throttle.*

50Z3 from serial no. AH00579 (option)
6003 from serial no. AH00645 (standard)

Diesel engine speed is reduced to idling after 5 seconds if the automatic engine speed setting is enabled and no hydraulic functions are performed.

The diesel engine automatically runs at the prior engine speed setting again if the control levers are moved hydraulically.

Automatic engine speed setting		
ON	Press switch **47** down	Indicator light in switch **47** illuminates
OFF	Press switch **47** up	Indicator light in switch **47** goes out

https://truckmanualshub.com/

3.10 Before starting the engine

Important

All controls must be within easy reach. You must be able to move the drive levers to their limit positions.

Important

Operate the machine only on adequately ventilated premises. Ensure sufficient ventilation on enclosed premises.

☞ *Adjust seat position and rearview mirror – see chapter 3.25 Seat (50Z3) on page 3-37.*

☞ *Fasten your seat belt – see chapter 3.28 Seat belt on page 3-44.*

☞ *Fold up the left-hand control lever base.*

☞ *Check whether all levers and pedals are in neutral position.*

☞ *Move the throttle to the center position (between minimum and maximum) if the engine is cold.*

☞ *Remove dirt (e.g. mud, snow, ice, etc.) from all windows, mirrors, lights, footholds, drive pedals and control levers.*

https://truckmanualshub.com/

3.11 Starting the engine (general information)

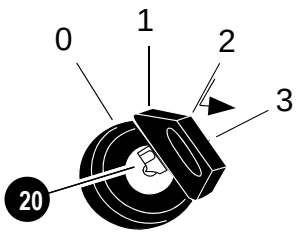


Fig. 57: Preheating start switch

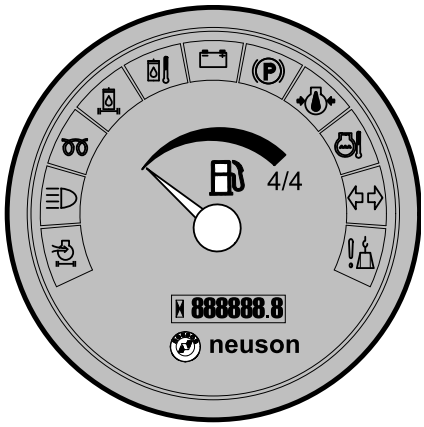


Fig. 58: Indicator lights (up to serial no. AH00578)

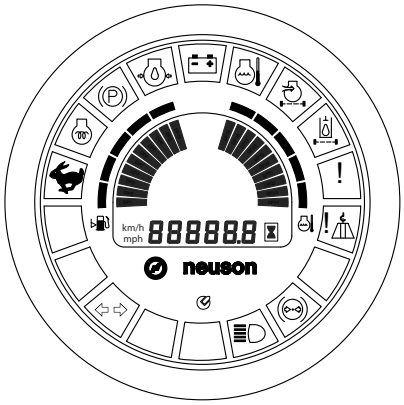


Fig. 57: Indicator lights (from serial no. AH00579)

- The starter cannot be actuated if the engine is already running (start repeat interlock).
- Do not engage the starter for more than 10 seconds.
- Wait about 1 minute so the battery can recover before trying again.

Procedure

NOTICE

Actuating the preheating system too long can damage the preheater.

☞ *Never preheat the engine more than 20 seconds.*

After you have completed the starting preparations:

☞ *Insert the starting key in preheating start switch **20**.*

☞ *Turn the starting key to position "**1**".*

☞ *Check whether all indicator lights illuminates.*

☞ *Have faulty indicator lights immediately replaced by a Wacker Neuson service center.*

☞ *Turn the starting key to position "**2**" and hold it in this position for about 5 seconds.*

➥ The intake air is preheated.

☞ *Turn the starting key to position "**3**" and hold it in this position until the engine starts.*

➥ If the engine does not start after 10 seconds:

☞ Stop starting the engine and try again after 30 seconds.

➥ If the engine still does not start after the second try:

☞ Contact a Wacker Neuson service center for troubleshooting.

➥ As soon as the engine runs:

☞ *Release the starting key.*

https://truckmanualshub.com/

3.12 Starting with the drive interlock – internal transponder (option) (from serial no. AJ02777)

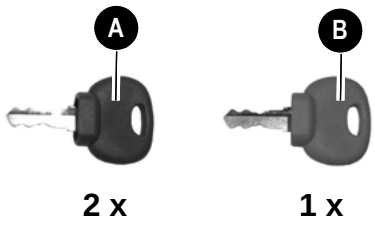


Fig. 58: Drive interlock key

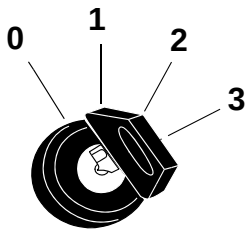


Fig. 59: Position on preheating start switch

A = operator's key (blue key)

For starting the machine. Scope of delivery includes 2 keys.

B = master key (red key)

Important

Store the master key in a safe place. It is only used for coding new keys.
All keys are deleted if the key remains in position **1** for more than 20 seconds.

The machine can be started without performing any further settings.

Coding a new key

- Insert master key **B** in the preheating start switch.
- Turn the key to position **1** for a maximum 5 seconds.
- Turn the key to position **0** and remove master key **B**.
- Now insert the new key or the key requiring coding in the preheating start switch and turn it to position **1** within 15 seconds.
- This action registers the key.

The procedure is automatically cancelled if no key requiring coding is detected within 15 seconds. Several keys requiring coding can be inserted one after another in the preheating start switch. Each key must then remain at least 1 second in position **1**. Coding can be performed for a maximum 10 keys.

Deleting coded keys

Deleting coded keys is necessary whenever a coded key is lost.

- Insert master key **B** in the preheating start switch.
- Leave the key in position **1** for a minimum 20 seconds.
- All coded keys are deleted after 20 seconds, and all existing keys can be re-coded.

The master key code is not deleted during deletion.

https://truckmanualshub.com/

3.13 Jump-starting the engine (supply battery)

Safety instructions

- Never jump-start the engine if the battery of the machine is frozen – risk of explosion.
  ☞ Exchange a frozen battery for a replacement at a Wacker Neuson service center. The service center will dispose the battery correctly and environmentally.
- The machine must not touch the jump-starting vehicle when connected with jump leads – risk of sparking.
- The external power source must deliver 12 V; higher supply voltages will damage the electrical system of the machine.
- Use only authorized jump leads which conform to the safety requirements and which are in perfect condition.
- The jump lead connected to the positive **+** terminal of the starting battery must never be brought into connection with electrically conductive machine parts – risk of short circuit.
- Route the jump leads so they cannot catch on rotating components in the engine compartment.

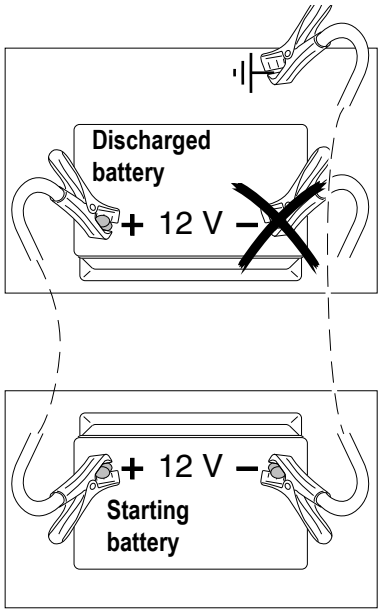


Fig. 60: Starting aid with battery jumper cable

Procedure

☞ *Move the jump-starting vehicle close enough to the machine so that the jump leads can reach to connect the two batteries.*

☞ *Let the engine of the jump-starting vehicle run.*

☞ *First connect one end of the red jump lead (+) to the + terminal of the discharged battery, then connect the other end to the + terminal of the starting battery.*

☞ *Connect one end of the black jump lead (–) to the – terminal of the starting battery.*

☞ *Connect the other end of the black jump lead (–) onto a solid metal component firmly mounted on the engine block or onto the engine block itself. Do not connect it to the negative terminal of the discharged battery, as otherwise explosive gas emerging from the battery can ignite if sparks are formed.*

☞ *Start the engine of the machine with the discharged battery.*

Once the engine has started:

☞ *With the engine running, disconnect both jump leads in exactly the reverse order (first the – terminal, then the + terminal).*

➥ This prevents sparking in the vicinity of the battery.

https://truckmanualshub.com/

3.14 Starting at low temperatures

☞ *Turn the starting key to position **2** and hold it in this position for about 15 seconds.*

➥ Engine is preheated.

☞ *Turn the starting key to position "**3**" and hold it in this position until the engine starts.*

➥ If the engine does not start after 10 seconds:

☞ Interrupt the start procedure and try again after about 1 minute.

➥ If the engine still does not start after the second try:

☞ Contact a Wacker Neuson service center for troubleshooting.

➥ As soon as the engine runs:

☞ Release the starting key.

Important

In general, a battery delivers less energy in cold conditions. Therefore ensure that the battery is always well charged.

3.15 When the engine has started

☞ *Check whether all indicator lights have gone out.*

☞ *Let the engine warm up.*

At cold temperatures:

☞ *Increase the engine speed slowly.*

☞ *Do not run the engine at full load until it has reached its operating temperature.*

3.16 Engine warm-up

After the engine has started, allow it to warm up at slightly increased idling speed until it reaches its operating temperature of 70 °C (160 °F) (coolant). Run the engine with no load during the warm-up phase (fold left-hand control lever base up). During the warm-up phase, check for unusual noise, exhaust color, leaks, malfunctions or damage.

In case of malfunctions, damage or leaks, park and secure the machine, and find out the cause for the damage and have it repaired.

https://truckmanualshub.com/

3.17 Special instructions for driving on public roads

The machine is subject to the:

- Applicable legal regulations of your country

Also observe the applicable regulations for accident prevention of your country.

Drive position

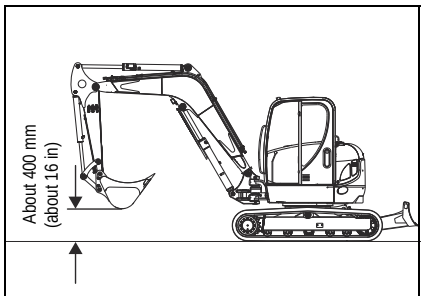


Fig. 61: Drive position

- Adjust the seat, head rest and armrest to the user's weight and size.
- Set the machine to drive position:
  - Position the machine as shown.
  - Position the boom at the center and raise it about 400 mm (about 16 in) off the ground.

Important

When driving, raise the stabilizer blade sufficiently high off the ground to avoid ground contact on rough terrain.

Drive levers

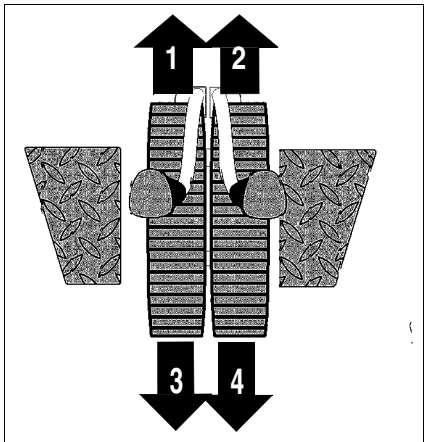


Fig. 62: Drive pedal (up to serial no. AH02781)

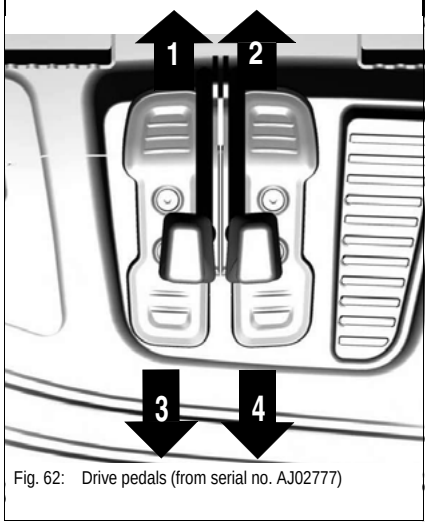


Fig. 62: Drive pedals (from serial no. AJ02777)

Important

Rotating through 180° inverts the drive lever functions (the stabilizer blade is at the rear).

- Bear in mind the stabilizer blade's position.

The stabilizer blade side is the front side.

Raise the boom and the stabilizer blade.

The machine can be moved either with the drive levers or with the pedals. Lock the upper carriage when travelling over longer distances.

Position	Function	
1 2	Push forward Push forward	Machine moves forward
3 4	Pull backward Pull backward	Machine moves backward
3 2	Pull backward Push forward	Machine turns to the left
1 4	Push forward Pull backward	Machine turns to the right

Forward or reverse drive speed depends on the position of the drive levers or the drive pedals, and of the position of the high-speed switch.

Important

Ensure that both tracks move as you change direction in order to avoid unnecessary abrasion.

https://truckmanualshub.com/

High speed

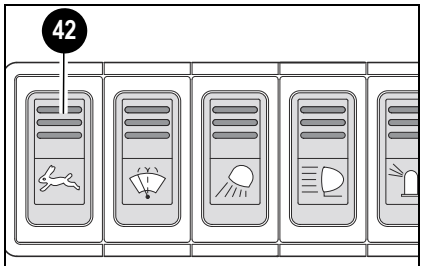


Fig. 63: High speed (up to serial no. AH02781)

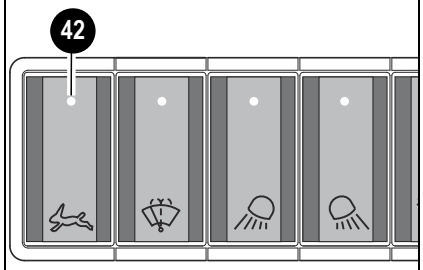


Fig. 63: High speed (from serial no. AJ02777)

The machine has two drive speeds which can be selected as follows:

☞ *Press switch **42**.*

➥ The machine now moves at higher speed.

➥ Indicator light **53** on the round display element illuminates

– *see Control elements 50Z3 2 / 6003 2 (from serial no.AJ02777)* on page 3-9.

The drive gear shifts to second speed after high speed is selected, the machine moves at higher speed. In case of increased resistance (grading, changing direction, travelling uphill), the drive gear shifts to the lower speed. The machine automatically shifts back to second speed is soon as there is no resistance.

Important

Reduced tractive power in high speed can affect machine handling when cornering.

Moving off

Important

The machine will not move off unless the left-hand control lever is folded down.

After starting the engine:

☞ *The alternator charge indicator light goes out.*

☞ *Press the drive pedal slowly.*

➥ Machine moves off.

Hydraulic brake

The pedals automatically return to their neutral positions as soon as they are released, which creates sufficient hydraulic braking effect.

When traveling downhill, the automatic hydraulic brake prevents the machine from “racing”. The machine does not run any faster than the admissible drive speed.

Mechanical brake

The parking brake is designed as a negative-action and hydraulically actuated multi-disc brake.

This brake is automatically applied after some time as soon as the drive levers are in neutral position.

https://truckmanualshub.com/

3.18 Operating on slopes

Follow these safety instructions carefully when traveling on slopes, in order to avoid accidents.

- Check track tension to prevent the tracks from coming off.
- Drive on slopes only on firm ground.
- Raise the boom about 20 – 30 cm (8 – 12 in) off the ground and position it straight ahead at the center of the machine. Lower the boom immediately in an emergency, in order to stop the machine more easily.
- Place the cab with the front side upward as you drive uphill.
- Place the cab with the front side downward as you drive downhill.
- Bear in mind the following instructions when driving downhill or uphill:
  - Keep the drive lever near the neutral position.
  - Perform slow and smooth drive movements.
  - Avoid sudden drive movements.
  - Reduce the engine speed.
  - Do not use high speed.
- Avoid reversing when driving downhill.
- Drive slowly on slippery ground (e.g. meadows, leaves, wet steel plates and ice). The machine can slip even if the ground is level. If the engine stops as you drive across a slope, immediately put the control levers to neutral position and start the engine again.
- If the tracks slip as you drive uphill and if it is not possible to move with the force of the tracks alone, do not apply pressure with the boom to move the machine.

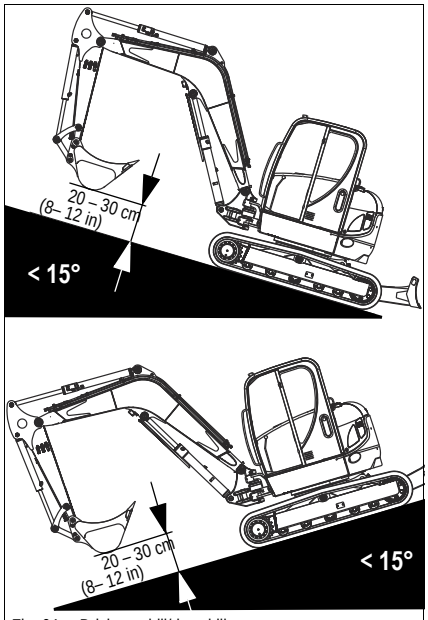


Fig. 64: Driving uphill/downhill

NOTICE

Risk of tipping over.

- Do not turn or swivel the upper carriage and the equipment when driving downhill or uphill with a full bucket.
  - This may be performed only on a level surface to ensure safe machine operation.

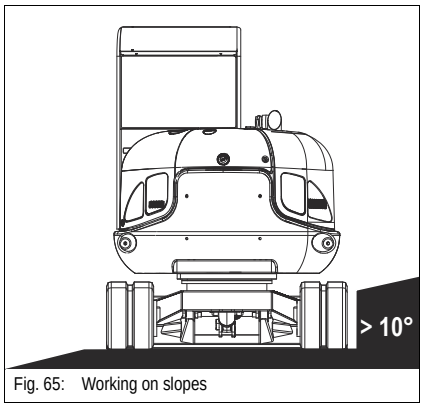


Fig. 65: Working on slopes

https://truckmanualshub.com/

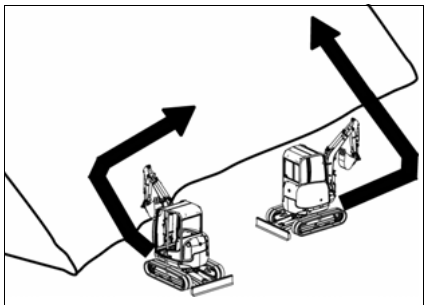


Fig. 66: Driving on slopes

- Always drive straight ahead when driving uphill or downhill. Always keep the boom on the downhill side of the machine.
- When changing position, do not exceed a maximum longitudinal inclination of 15° and a maximum lateral inclination of 10°.

Important

Change your driving direction on level ground. This may take more time but is safer.

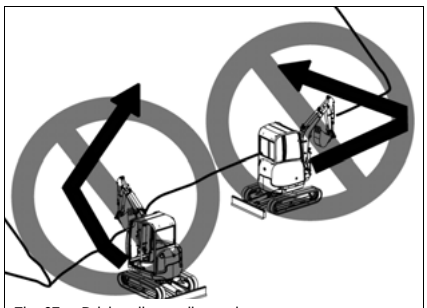


Fig. 67: Driving diagonally on slopes

NOTICE

Traveling diagonally on slopes is prohibited.

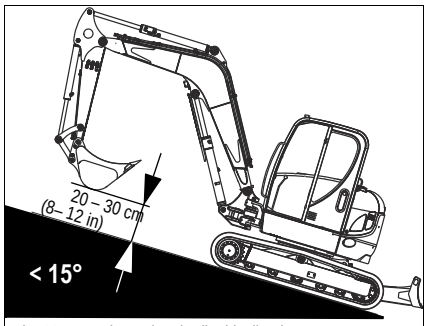


Fig. 68: Maximum longitudinal inclination

- Do not exceed a maximum longitudinal inclination of 15°.
- This applies for instance to driving on:
  - Slopes
  - Hollows
  - Obstacles

NOTICE

Risk of tipping over.

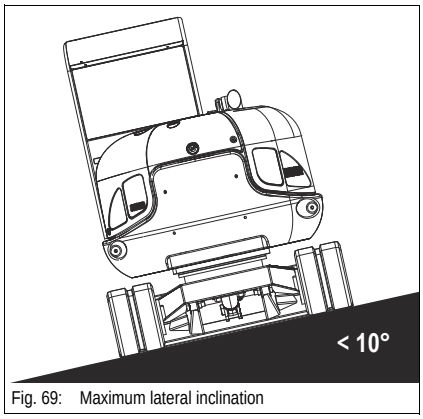


Fig. 69: Maximum lateral inclination

- Do not exceed a maximum lateral inclination of 10°.
- This applies for instance to driving on:
  - Slopes
  - Hollows
  - Obstacles

NOTICE

Risk of tipping over.

https://truckmanualshub.com/

3.19 Stabilizer blade operation

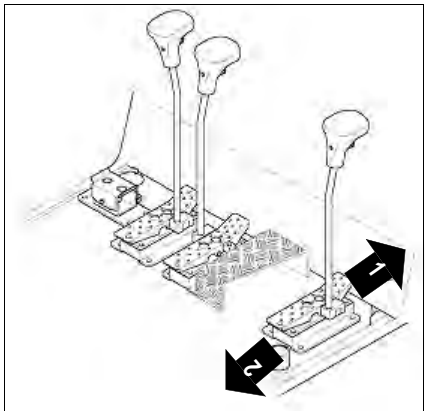


Fig. 70: Stabilizer blade operation (up to serial no. AH02781)

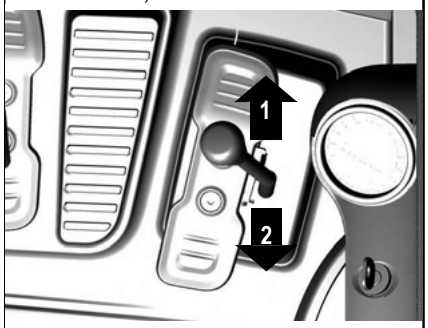


Fig. 70: Stabilizer blade operation (from serial no. AJ02777)

DANGER

Accident hazard. Do not touch the control lever for the stabilizer blade if it is not required for working.

Risk of severe injury.

- The stabilizer blade lever cannot be blocked: in case of unintentional operation – Risk of accidents.
- Fold the control lever base up.
- Ensure that no-one is in the danger zone when working with the stabilizer blade.
- Once work with the stabilizer blade is over, lower it to the ground.

NOTICE

Lowering the stabilizer blade too deeply into the ground can create a high resistance.

☞ *Slightly raise the stabilizer blade.*

☞ *The clearance between the stabilizer blade and the ground should be about 1 cm (0.39 in).*

Position	Function	
1	Push forward	Stabilizer blade is lowered
2	Pull backward	Stabilizer blade is raised

The stabilizer blade can also be operated with the pedal.

Important

Check the position of the stabilizer blade before moving the machine.

https://truckmanualshub.com/

3.20 Parking the machine

WARNING

Accident hazard. Always park the machine on firm ground.

Risk od injury.

- Place the machine on firm, level and horizontal ground.
- Position the boom straight ahead at the center of the machine and lower it.
- Lower the stabilizer blade to the ground.

NOTICE

Never stop the engine under full load, otherwise it can be damaged due to overheating.

☞ *Let the engine run at idling speed with no load for at least 5 minutes before you stop it.*

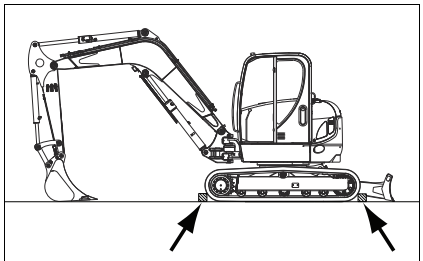


Fig. 71: Parking the machine

- Stop the engine.
- Lower the bucket and the stabilizer blade to the ground.
- Operate the joystick repeatedly to release the pressure in the hydraulic system.
- Remove the starting key and carry it with you.
- Fold the control lever base up.
- Close the windows and the door.
- Leave the cab.
- Close and lock all covers.
- Secure the tracks accordingly (e.g. chocks, etc.).

Important

Secure the machine against unauthorized operation.

- Fold the control lever base up.
- Remove the starting key and carry it with you.
- Lock the cab.

Parking the machine on slopes

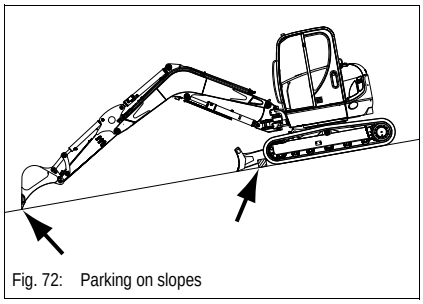


Fig. 72: Parking on slopes

- Firmly lower the boom into the ground on the downhill side of the machine.
- Place the stabilizer blade downhill and lower it to the ground.
- Secure the tracks accordingly (e.g. chocks, etc.) so the machine cannot move.

https://truckmanualshub.com/

3.21 Light system

Working light

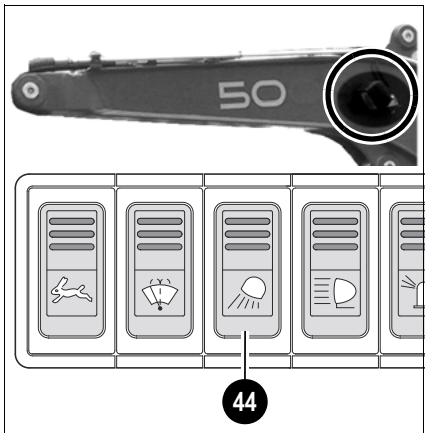


Fig. 73: Working light switch (up to serial no. AH02781)

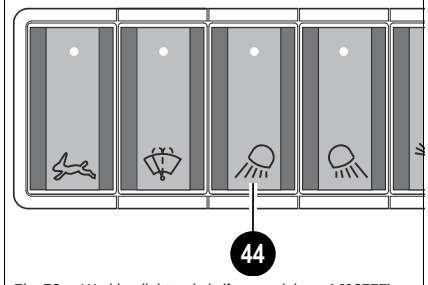


Fig. 73: Working light switch (from serial no. AJ02777)

The switch panel for the light system is located on the instrument panel.

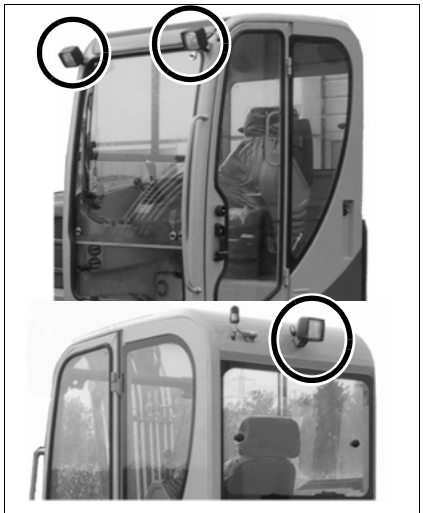
Working light		
ON	Press switch **44** down	The working light comes on, the indicator light in switch **44** illuminates
OFF	Press switch **44** up	The working light goes out, the indicator light in switch **44** goes out

Important

Switch on the working light in poor light conditions or during the night.

https://truckmanualshub.com/

Roof working lights (option)



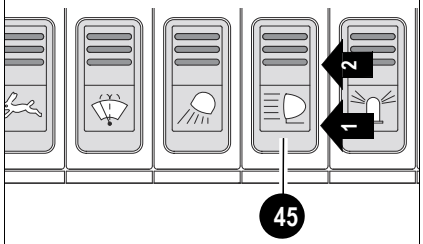


Fig. 74: Roof lights switch (up to serial no. AH02781)

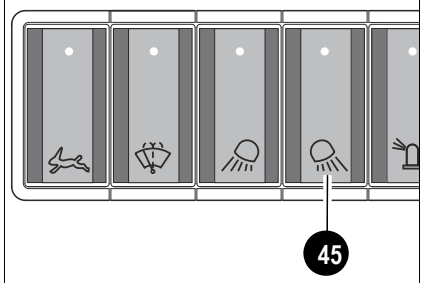


Fig. 74: Roof lights switch (from serial no. AJ02777)

WARNING

Accident hazard. The working lights can dazzle motorists on public roads.

Risk of injury.

- Switch them on during work operation only if you do not expect to dazzle users of public roads.

Roof lights (option)		
1st position	Press switch **45** to the **1st** position	The front roof lights and the indicator light in the switch illuminates
2nd position	Press switch **45** to the **2nd** position	Both front roof lights, and the rear roof light, illuminates
OFF	Press switch **45** up	All roof lights are switched off. The indicator light in the switch goes out

Important

Switch on the lights in poor light conditions or during the night.

Interior light

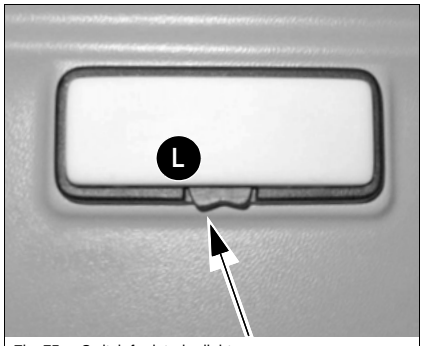


Fig. 75: Switch for interior light

Interior light	
ON	Press the switch to position **L**
OFF	Press the switch to the center position or to the right

https://truckmanualshub.com/

Rotating beacon (option)

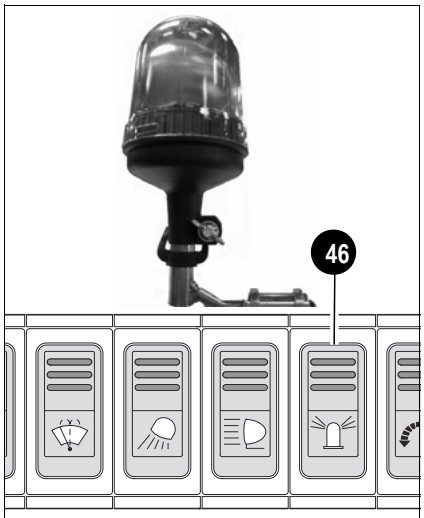


Fig. 76: Rotating beacon switch (up to serial no. AH02781)

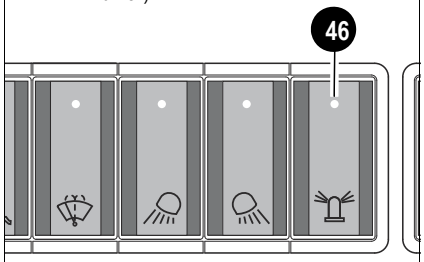


Fig. 76: Rotating beacon switch (from serial no. AJ02777)

Rotating beacon (option)		
ON	Press switch **46** down	The rotating beacon illuminates
OFF	Press switch **46** up	The rotating beacon is switched off

Important

Observe the legal regulations of your country for operating the rotating beacon.

https://truckmanualshub.com/

3.22 Cab heating and ventilation

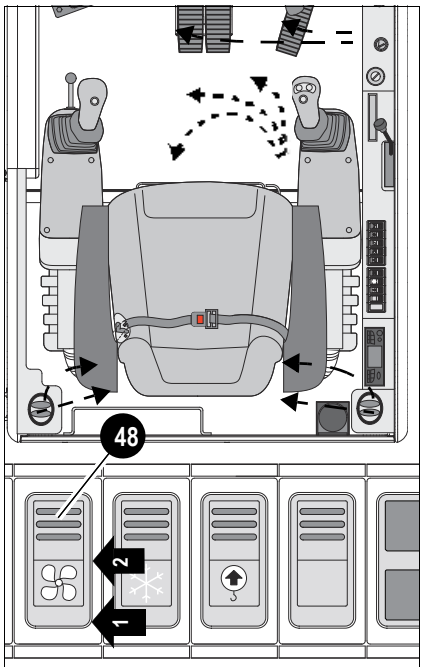


Fig. 77: Air circulation in cab (up to serial no. AH02781)

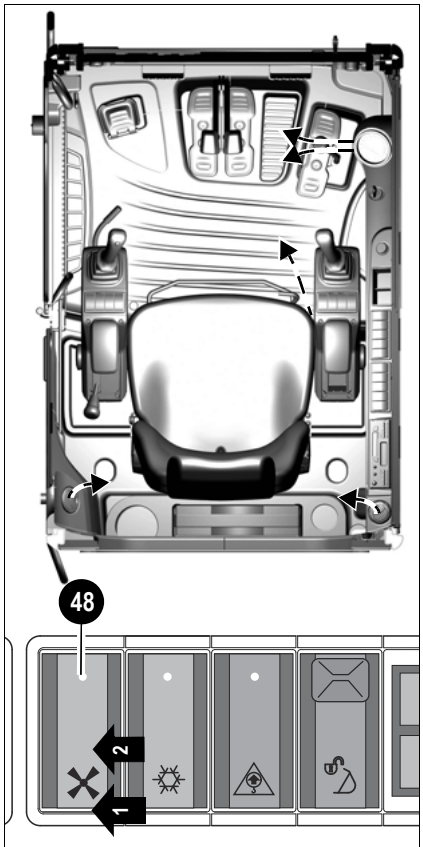


Fig. 78: Air circulation in cab (from serial no. AJ02777)

- The cab is fitted with five air nozzles. Each nozzle can be closed and directed separately.
- Open or close the nozzles as required to vent or heat the cab.
- Do not place flammable or explosive material or objects near the nozzles.
- Air the cab from time to time.

Important

The best defrosting results for the front window are achieved by opening both nozzles at the front right and in the leg room.

- Direct the nozzles to the front window.

Ventilation (fresh air)		
1st speed	Press switch **48** down one step	Low fan speed
2nd speed	Press switch **48** down two steps	High fan speed
OFF	Press switch **48** all the way down	Fan is switched off

https://truckmanualshub.com/

Summer/winter operation (up to serial no. AD04650)

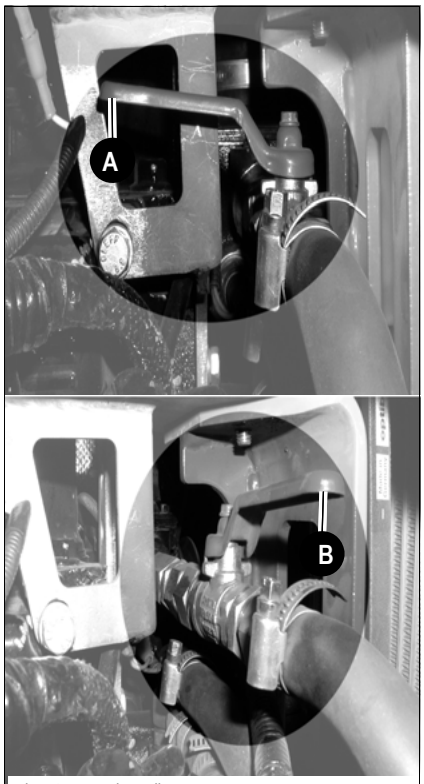


Fig. 79: Heating adjustment

WARNING

Entanglement hazard. Always stop the engine for switching over from summer to winter operation and vice versa

Risk of personal injury.

- Stop the engine.
- Open the engine cover only if the engine is at a standstill.

☞ *Open the engine compartment.*

☞ *Turn the ball-type cock as described, to summer or winter operation.*

Position	Function	
A	Summer operation	Cooling
B	Winter operation	Heating water circuit open

☞ *Close the engine compartment – see chapter 3.41 Engine cover on page 3-62.*

Important

Summer and winter operation does not depend on the season, adjust according to personal requirements.

Heating controls (from serial no. AD04651)

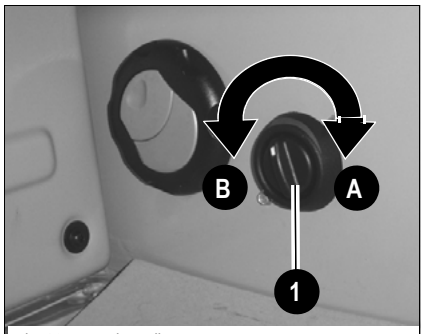


Fig. 80: Heating adjustment

Adjust the temperature inside the cab as follows:

Cooling:

☞ *Turn heater valve **1** toward **A** until you reach the required temperature.*

Heating:

☞ *Turn heater valve **1** toward **B** until you reach the required temperature.*

Important

To increase cab temperature to the desired level, make small, incremental increases for a quicker response.

https://truckmanualshub.com/

3.23 Air conditioning (option)

- In order to achieve best cooling results:

☞ *Open both nozzles on the left and right behind the seat and direct them to the roof. Keep all other nozzles closed – see chapter 3.22 Cab heating and ventilation on page 3-33.*

➥ This setting ensures good air circulation in the cab as the cool air flows to the cab floor.

☞ *The other nozzles can be opened and closed as required.*

- Air the cab from time to time.

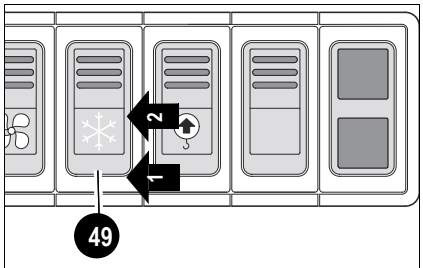


Fig. 81: Air conditioning system (up to serial no. AH02781

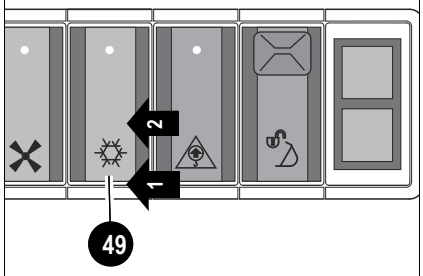


Fig. 81: Air conditioning system (from serial no. AJ02777)

Air conditioning		
OFF	Press switch **49** up	Fan OFF
1st speed	Press ventilation switch **49** to **1st** position (down)	Low fan speed
2nd speed	Press ventilation switch **49** to **2nd** position (down)	High fan speed

Important

Operate the air conditioner continuously for 10–15 minutes each month to maintain function and efficiency.

Recirculated air mode

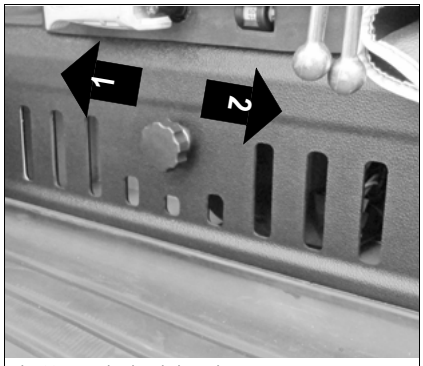


Fig. 82: Recirculated air mode

Position	Function	
1	Release the button and slide to the left	Recirculated-air mode switched on
2	Release the button and slide to the right	Recirculated-air mode switched off

In recirculated-air mode, the air in the cab is taken in and cooled, and a small amount of fresh air is added. If recirculated-air mode is switched off, only fresh air is used for heating, ventilating or cooling the cab.

Important

Open the windows and the door so the hot air can escape. Then switch on air conditioning, and close the windows and the doors. Keep all windows and doors closed to achieve best cooling results.

https://truckmanualshub.com/

3.24 Wiper/wash system

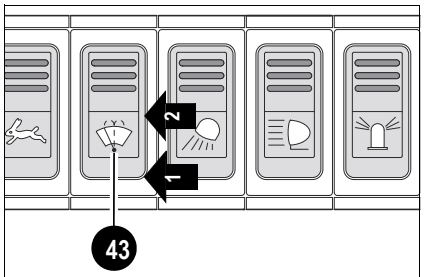


Fig. 83: Front wiper switch (up to serial no. AH02781)

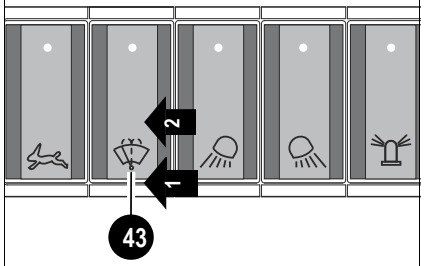


Fig. 83: Front wiper switch (from serial no. AJ02777)

Front window wiper		
OFF	Press switch **43** up	Front wiper returns to base position
1st position	Press switch **43** down to the 1st position	Front wiper is on
2nd position	Press switch **43** down to the 2nd position	Pump sprays washer water on the window

Important

Do not actuate the washer system with the front window folded up. Do not actuate the washer system if the tank is empty, otherwise this can damage the electric pump.

Tank for washer system



Fig. 84: Tank for washer system

The tank's filler inlet is located in the engine compartment.

Important

Fill with clean tap water only.
Add a suitable cleaning agent if required.
In winter: add antifreeze for washer systems to the clean tap water.
Refer to the antifreeze instructions for further information on concentrations.
The rubber diaphragm in the non-return valve in the housing conglutinates **if stored in a dry condition over a longer period of time**. In order to restore this valve's function, moisten this non-return valve, dip it briefly in water and then blow air through it.

https://truckmanualshub.com/

3.25 Seat (50Z3)

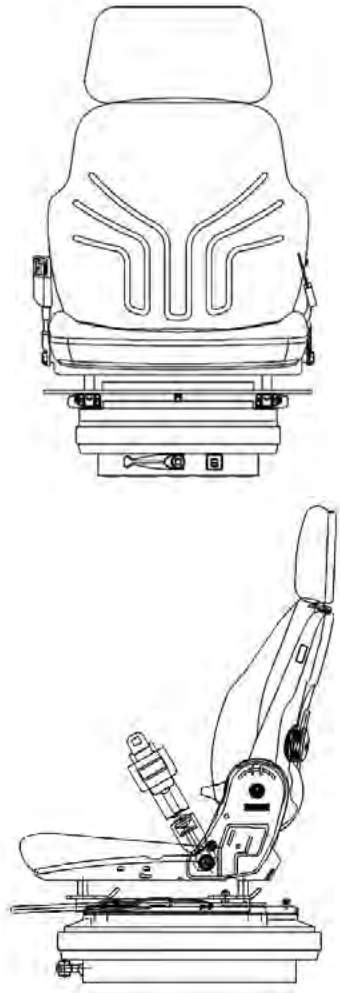


Fig. 85: Seat (50Z3)

WARNING

Accident hazard. Never change the seat position when traveling or operating.

Risk of injury.

- Adjust the seat before moving the machine – *see chapter 3.10 Before starting the engine* on page 3-19.

NOTICE

Adjusting the backrest can damage the rear window.

- Ensure that the backrest does not touch the rear window as you adjust backrest inclination.
- Select a seat position which will not damage the window when operating the machine.

Important

Adjust the seat to the operator's weight before putting the machine into operation. Adjust the seat suspension correctly to ensure a high level of ride comfort.

https://truckmanualshub.com/

Weight adjustment

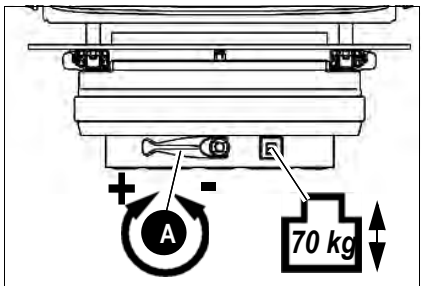


Fig. 86: Weight adjustment

☞ *Sit down on the seat*

To adjust to a higher weight:

☞ *Turn lever **A** counter-clockwise.*

To adjust to a lower weight:

☞ *Turn lever **A** clockwise.*

Height adjustment

Upward:

☞ *Raise the seat until you hear an audible click.*

Downward:

☞ *Raise the seat as far as it will go, then*

☞ *Lower the seat to the lowest position.*

Horizontal adjustment

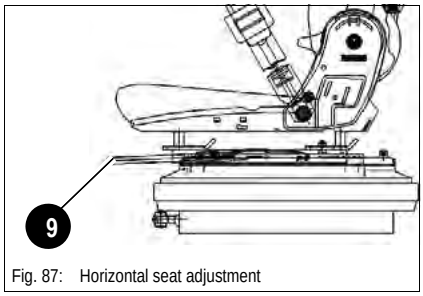


Fig. 87: Horizontal seat adjustment

☞ *Sit down on the seat.*

☞ *Pull lever **9** upward and at the same time*

☞ *Move the seat forward or backward.*

Backrest adjustment

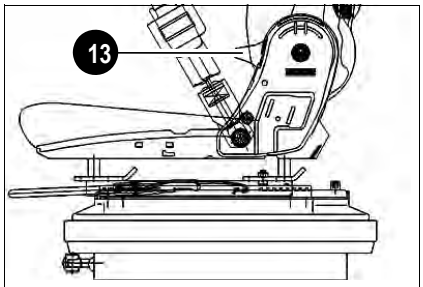


Fig. 88: Backrest adjustment

☞ *Sit down on the seat.*

☞ *Pull lever **13** upward and at the same time*

☞ *Lean back to push the backrest into the required position.*

☞ *Let lever **13** lock into place.*

https://truckmanualshub.com/

3.26 Seat (6003)

WARNING

Accident hazard. Never change the seat position when traveling or operating.

Risk of injury.

- Adjust the seat before moving the machine – *see chapter 3.10 Before starting the engine* on page 3-19.

NOTICE

Adjusting the backrest can damage the rear window.

☞ *Ensure that the backrest does not touch the rear window as you adjust backrest inclination.*

☞ *Select a seat position which will not damage the window when working with the machine.*

Important

Adjust the seat to the operator's weight before putting the machine into operation. Adjust the seat suspension correctly to ensure a high level of ride comfort.

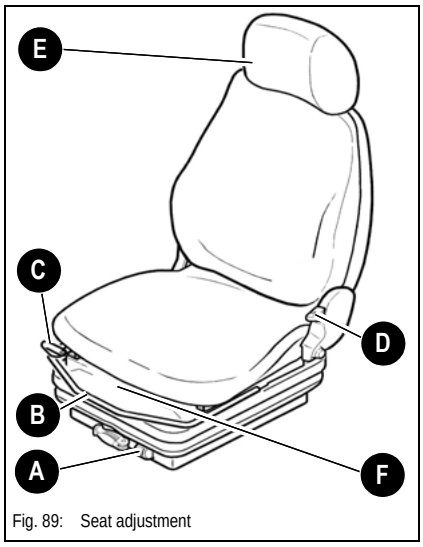


Fig. 89: Seat adjustment

A weight adjustment
B horizontal adjustment
C seat depth adjustment
D backrest adjustment
E head rest
F height adjustment

Weight adjustment

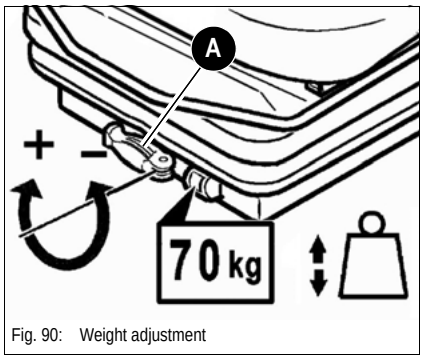


Fig. 90: Weight adjustment

Sit down on the seat.

To adjust to a higher weight:

☞ Turn lever **A** counter-clockwise.

To adjust to a lower weight:

☞ Turn lever **A** clockwise.

https://truckmanualshub.com/

Horizontal adjustment

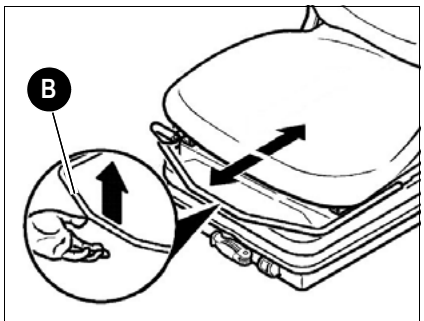


Fig. 91: Horizontal adjustment

☞ *Sit down on the seat.*

☞ *Pull lever **B** upward and at the same time*

☞ Move the seat forward or backward.

☞ *The lever must engage in the required position.*

Seat depth adjustment

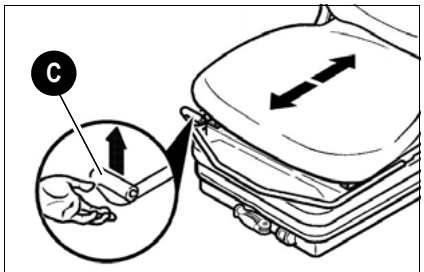


Fig. 92: Horizontal adjustment

☞ *Sit down on the seat.*

☞ *Pull lever **C** upward and at the same time*

☞ Move the seat surface forward or backward.

☞ *The lever must engage in the required position.*

Backrest adjustment

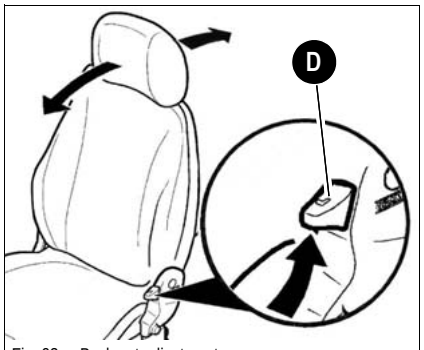


Fig. 93: Backrest adjustment

☞ *Sit down on the seat.*

☞ *Adjust by pulling lever **D** in the direction of the arrow.*

☞ *Lean back to push the backrest into the required position.*

☞ *The lever must engage in the required position.*

Head rests

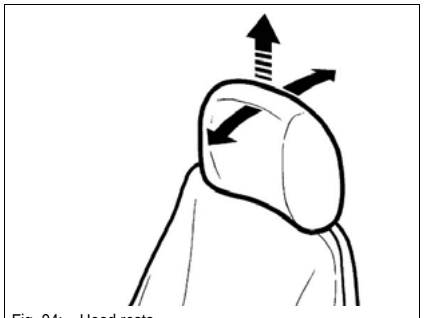


Fig. 94: Head rests

☞ *The head rest can be adjusted vertically by raising or lowering it in notched positions.*

☞ *Inclination can be adjusted by pressing the head rest forward or backward.*

https://truckmanualshub.com/

Height adjustment

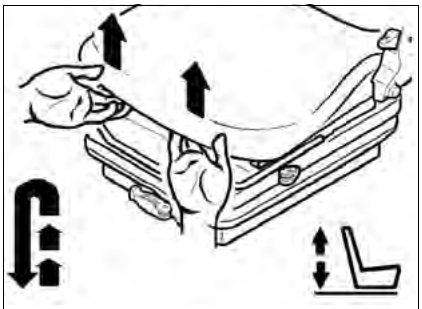


Fig. 95: Height adjustment

☞ *Raise the seat with force.*

☞ *Let the seat engage audibly in one of the three positions. The seat is lowered to the lowest position if it is raised beyond the last position.*

Upward:

☞ *Raise the seat as required until it engages audibly.*

Downward:

☞ *Raise the seat as far as it will go, then*

☞ *Lower the seat to the lowest position.*

3.27 Seat (air suspension option)

WARNING

Accident hazard. Never change the seat position when traveling or operating.

Risk of injury.

- Adjust the seat before moving the machine – *see chapter 3.10 Before starting the engine* on page 3-19.

NOTICE

Adjusting the backrest can damage the rear window.

- Ensure that the backrest does not touch the rear window as you adjust backrest inclination.
- Select a seat position which will not damage the window when operating the machine.

Important

Adjust the seat to the operator's weight before putting the machine into operation. Adjust the seat suspension correctly to ensure a high level of ride comfort.

Important

Adjust weight and height only with the ignition switched on or the machine started.

https://truckmanualshub.com/

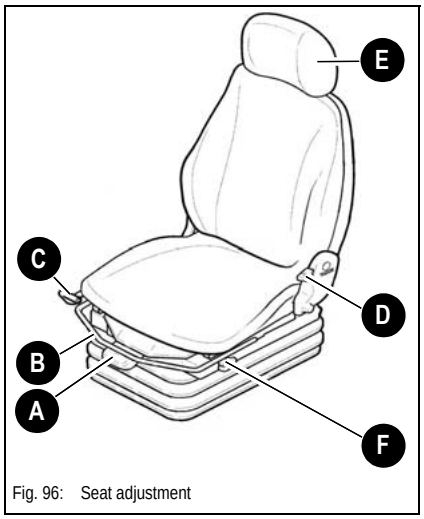


Fig. 96: Seat adjustment

A weight adjustment/height adjustment
B horizontal adjustment
C seat depth adjustment
D backrest adjustment
E head rest
F horizontal suspension

Weight adjustment

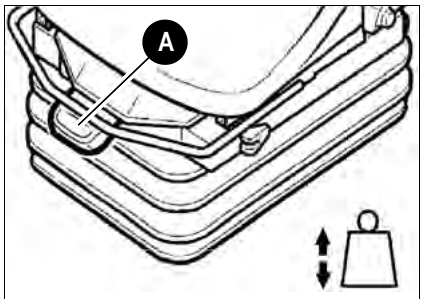


Fig. 97: Weight adjustment

☞ *Sit down on the seat.*

☞ *Actuate or press lever **A** briefly and then release it.*

☞ Do not move when adjusting.

Height adjustment

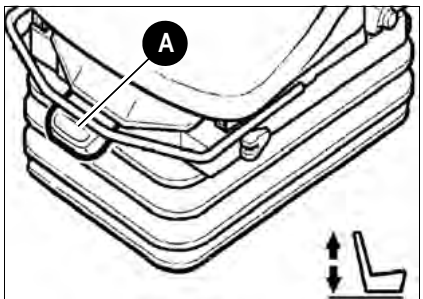


Fig. 98: Height adjustment

☞ *Sit down on the seat.*

☞ *Fully raise or press lever **A**.*

☞ Move the seat to the required position.

If the upper or lower limit is reached, height is automatically adjusted to ensure minimum spring travel.

NOTICE

Do not actuate uninterruptedly more than one minute in order not to damage the compressor.

Horizontal adjustment

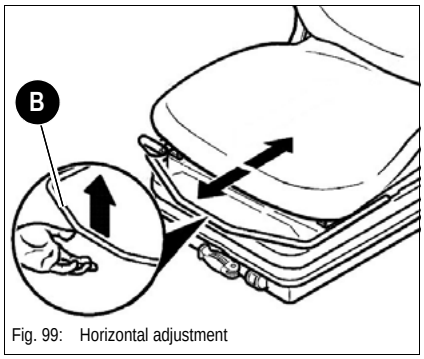


Fig. 99: Horizontal adjustment

☞ *Sit down on the seat.*

☞ *Pull lever **B** upward and at the same time*

☞ Move the seat forward or backward.

☞ *The lever must engage in the required position.*

https://truckmanualshub.com/

Seat depth adjustment

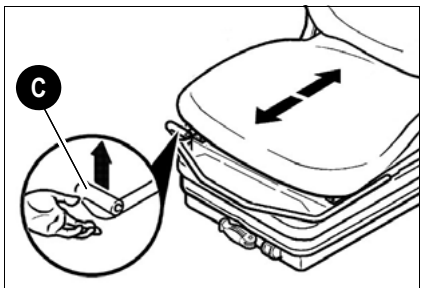


Fig. 100: Horizontal adjustment

☞ *Sit down on the seat.*

☞ *Pull lever **C** upward and at the same time*

☞ Move the seat surface forward or backward.

☞ *The lever must engage in the required position.*

Backrest adjustment

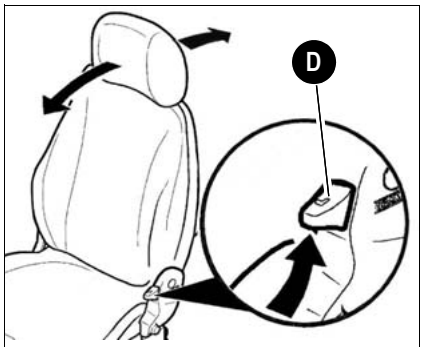


Fig. 101: Backrest adjustment

☞ *Sit down on the seat.*

☞ *Adjust by pulling lever **D** in the direction of the arrow.*

☞ *Lean back to push the backrest into the required position.*

☞ *The lever must engage in the required position.*

Adjusting the head rest

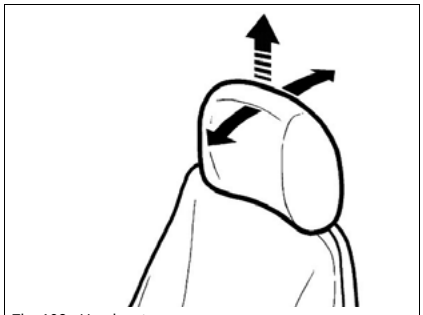


Fig. 102: Head rests

☞ *The head rest can be adjusted vertically by raising or lowering it in notched positions.*

☞ *Inclination can be adjusted by pressing the head rest forward or backward.*

Horizontal suspension

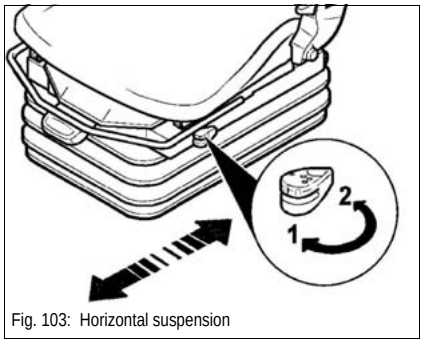


Fig. 103: Horizontal suspension

Shocks in driving direction are absorbed more easily.

☞ *Slide the seat fully back to enable the horizontal suspension.*

Pos.	Function
1	Horizontal suspension OFF (point toward front window)
2	Horizontal suspension ON (point toward rear window)

https://truckmanualshub.com/

3.28 Seat belt

DANGER

Personal injury hazard. Do not drive or work with the seat belt unbuckled.

Risk of fatal personal injury or death.

- Buckle up before moving or operating the machine.
- Seat belt must not be twisted.
- Seat belt must run over the hips – not over the stomach – and must always be applied tightly.
- Do not place the seat belt over hard, edged or fragile items (tools, meter rule, glasses, pen) carried inside your clothes.
- Never buckle up 2 persons (children) with one seat belt.
- Check seat belts regularly. Have damaged parts immediately replaced by an Wacker Neuson service center.
- Always keep the seat belt clean, as coarse dirt can impair proper functioning.
- Seat belt buckle must not be obstructed by foreign bodies (paper or similar); otherwise the buckle latch cannot lock into place.

DANGER

Personal injury hazard. After an accident the belt strap is stretched and no longer serviceable. In an accident, the seat belt will not provide adequate protection.

Risk of fatal personal injury or death.

- Replace the seat belt after an accident
- Have fastening points and seat fixture checked for bearing capacity.

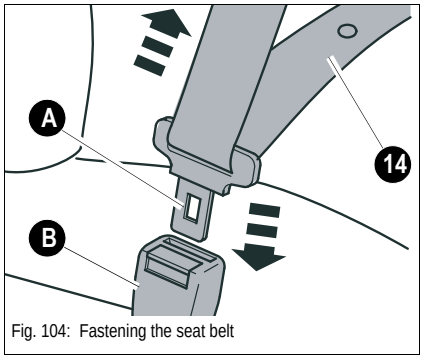


Fig. 104: Fastening the seat belt

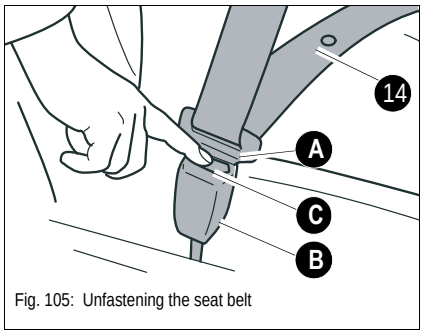


Fig. 105: Unfastening the seat belt

Seat belt **14** is for the operator's safety during work on construction sites and during road travel.

Fastening the seat belt:

☞ *Fasten seat belt **14** as follows before moving the machine:*

☞ *Hold belt on buckle latch **A** and run it slowly and steadily over the hips to buckle **B**.*

☞ *Insert buckle latch **A** into buckle **B** with an audible click (pull test).*

☞ *Tighten the seat belt by pulling at its end.*

➥ The seat belt must always be tightly in place over the hips.

Unfastening the seat belt:

☞ *Unfasten seat belt **14** as follows:*

☞ *Hold the seat belt.*

☞ *Press red switch **C** on buckle **B**.*

➥ Latch **A** is released from buckle **B** by spring pressure.

☞ *Slowly return the seat belt to the retractor.*

https://truckmanualshub.com/

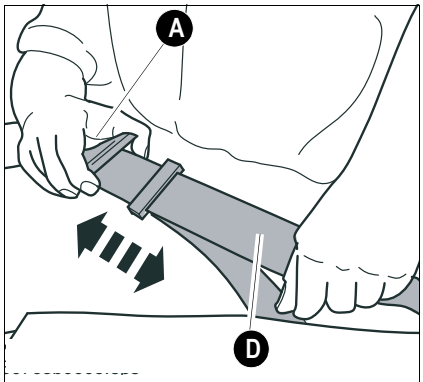


Fig. 106: Longer/shorter seat belt adjustment

Longer/shorter lap belt adjustment:

- Hold buckle latch **A** at a right angle to the seat belt and pull the seat belt to the required length.
- To shorten the lap belt, just pull the free end **D** of the belt.

3.29 Retracting lap belt (option)

DANGER

Personal injury hazard. Do not drive or work with the seat belt unbuckled.

Risk of fatal personal injury or death.

- Buckle up before moving or operating the machine.
- Seat belt must not be twisted.
- Seat belt must run over the hips – not over the stomach – and must always be applied tightly.
- Do not place the seat belt over hard, edged or fragile items (tools, meter rule, glasses, pen) carried inside your clothes.
- Never buckle up 2 persons (children) with one seat belt.
- Check seat belts regularly. Have damaged parts immediately replaced by an Wacker Neuson service center.
- Always keep the seat belt clean, as coarse dirt can impair proper functioning.
- Seat belt buckle must not be obstructed by foreign bodies (paper or similar); otherwise the buckle latch cannot lock into place.

DANGER

Personal injury hazard. After an accident the belt strap is stretched and no longer serviceable. In an accident, the seat belt will not provide adequate protection.

Risk of fatal personal injury or death.

- Replace the seat belt after an accident
- Have fastening points and seat fixture checked for bearing capacity.

https://truckmanualshub.com/

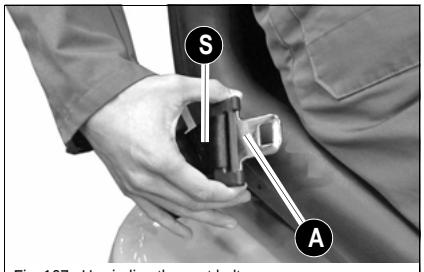


Fig. 107: Unwinding the seat belt

Seat belt **S** is for the user's safety.

Fastening the seat belt:

☞ *Fasten the seat belt as follows before starting the machine:*

- Hold belt on buckle latch **A** and run it slowly and steadily over the hips to buckle **B**.

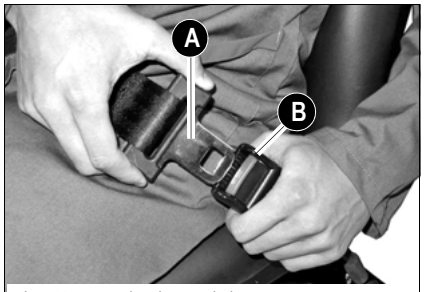


Fig. 108: Fastening the seat belt

- Insert buckle latch **A** into buckle **B** with an audible click (pull test).
- Tighten the seat belt by pulling at its end.

➥ The seat belt must be tightly in place over the hips.

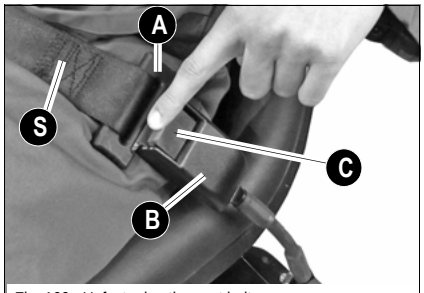


Fig. 109: Unfastening the seat belt

Unfastening the seat belt:

☞ *Unfasten seat belt **S** as follows:*

- Hold the seat belt.
- Press switch **C** on buckle **B**.

➥ Latch **A** is released by spring pressure.

☞ *Roll up the seat belt slowly.*

3.30 Mirrors (option)

Safety instructions

WARNING

Accident hazard. Adjust all mirrors as indicated in the Operator's Manual.

Risk of severe injuries that can cause death.

- Use safety-oriented ladders and work platforms for adjustment work on the machine.
- Never use machine parts or attachments/superstructures as a climbing aid.
- Do not adjust the mirrors when traveling the machine.
- Immediately replace damaged or broken mirrors.
- Additional equipment or attachments must not impair visibility.

https://truckmanualshub.com/

WARNING

Accident hazard. In spite of the visual aids (mirrors), not the entire area around the machine can be seen.

Risk of severe injuries that can cause death.

- Follow the safety instructions.
- Check the surroundings constantly.
- Put the machine into operation/drive it only if visibility is sufficient (have another person guide you if necessary).

WARNING

Accident hazard.Convex mirrors enlarge, reduce or distort the field of view.

Risk of severe injuries that can cause death.

- Bear this in mind when adjusting and using such mirrors (objects appear to be nearer, estimating distances is possible only to a certain extent).

Important

Set the machine to road travel position before adjusting the mirrors – *see Drive position* on page 3-24.

Adjusting the mirrors

Important

We recommend having the mirrors adjusted by a second person.

https://truckmanualshub.com/

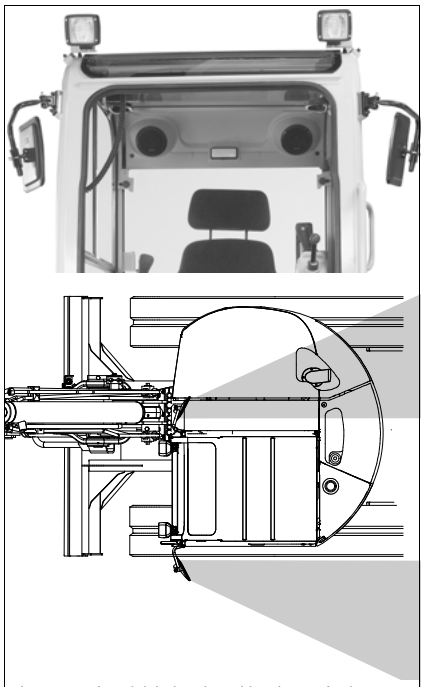


Fig. 110: Left and right-hand outside mirrors of cab

Left and right-hand outside mirrors of cab

Adjust the mirrors in order to:

- Ensure sufficient visibility from the seat onto the travel and operating area.
- Ensure maximum visibility to the rear.
- Ensure visibility of the rear left edge of the machine in the left-hand mirror.

https://truckmanualshub.com/

3.31 Emergency exit

You can enter and exit the cab through the side and front windows in an emergency.

WARNING

Personal injury hazard. Do not use the side or front window as routine exits from the machine.

Risk of personal injury.

- Windows are to be used as exits only if the access opening (door for cab) is blocked or cannot be opened through normal operating procedures.
- The controls are active if the engine is not stopped. Inadvertent control movement with the engine running during an emergency exit can increase the risk of injury. Stop the engine before exiting through an emergency exit.
- Enter and exit the cab through the side and front windows in an emergency only.
- The front and the right-hand of the machine have neither steps nor hand holds for safely entering or exiting the cab.
- Enter and exit the cab through the side and front windows in an emergency only.

Opening the side window completely:

☞ *– see chapter 3.34 Opening and closing the side window on page 3-55.*

Opening the front window completely:

☞ *– see chapter 3.32 Front window (up to serial no. AD06526) on page 3-50.*

☞ *– see chapter 3.33 Front window (from serial no. AD06527) on page 3-51.*

Emergency exit on machines equipped with protective Front Guard structures (option)

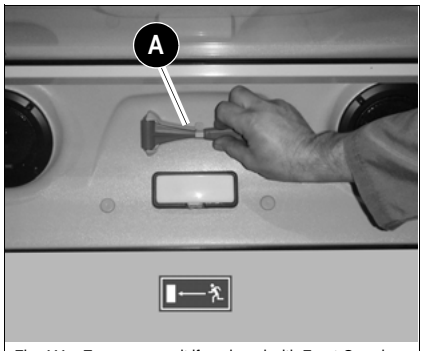


Fig. 111: Emergency exit if equipped with Front Guard

WARNING

Personal injury hazard. Use the rear window as an exit only in an emergency.

Risk of personal injury.

- Remove all glass splinters before leaving the cab.
- Make a sufficiently big opening for the exit.
- Remove all glass splinters inside and outside the cab.

The rear window can be used as an emergency exit if the door is blocked. The rear window is broken with emergency hammer **A** fastened over the rear window.

https://truckmanualshub.com/

3.32 Front window (up to serial no. AD06526)

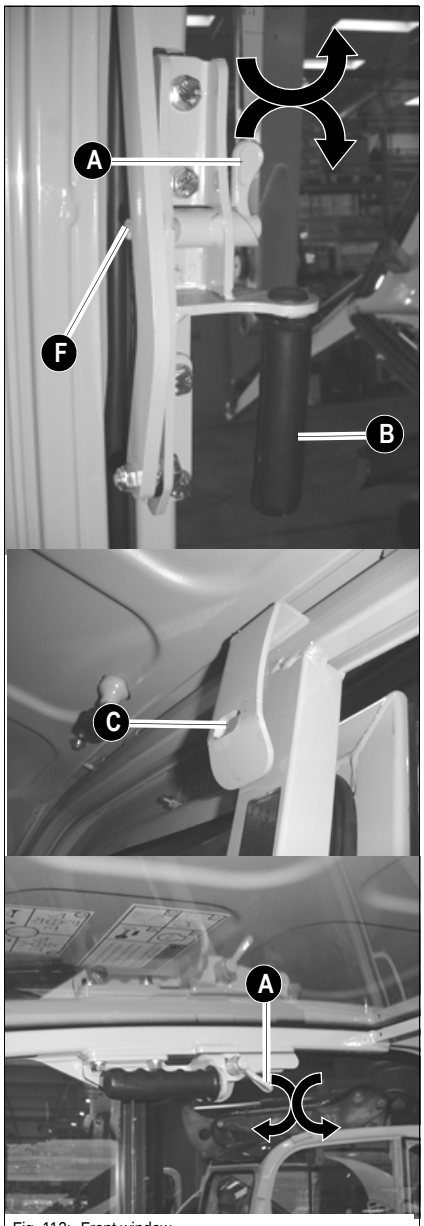


Fig. 112: Front window

CAUTION

Crushing hazard. Careful when opening the front window.

Risk of injury.

- Stay clear (extremities, clothing) of the window run.
- Always pull the front window upward with both hand holds **B**.
- Always let levers **A** lock into place on either side in locks **F**.
- In order to avoid any unintentional operation or movement of the machine, fold up the control lever base before you open or close the front window.
- Take care not to hit the front window with your head as you raise it.

Opening the front window

- Either side of the front window is fitted with a lever.

☞ *Push levers **A** down on either side.*

☞ *Pull the front window upward with handles **B**.*

➥ The front window must lock into rails **C** on either side.

☞ *Lock with levers **A** on either side in **C**.*

☞ Pull levers **A** to the rear to do this.

☞ Check whether both levers **A** are actually locked in rails **C**.

Lowering the front window

☞ *Push levers **A** forward on either side.*

☞ *Pull the front window downward with handles **B**.*

☞ *Lock the front window again by means of levers **A** in lock **F.***

☞ Pull levers **A** upward to do this.

☞ Check whether both levers **A** are actually locked in rails **F**.

https://truckmanualshub.com/

3.33 Front window (from serial no. AD06527)

CAUTION

Crushing hazard. Be careful when opening the front window.

Risk of injury.

- Stay clear (extremities, clothing) of the window run and of the window.
- Always open and close the front window by means of both hand holds.
- Always make the window lock into the recesses as you open and close it.
- Fold up the control lever base before opening or closing the front window, in order to avoid any unintentional operation or movement of the machine.
- In order to avoid any unintentional operation or movement of the machine, fold up the control lever base before you open or close the front window.
- Take care not to hit the front window with your head as you raise it.

Opening the front window

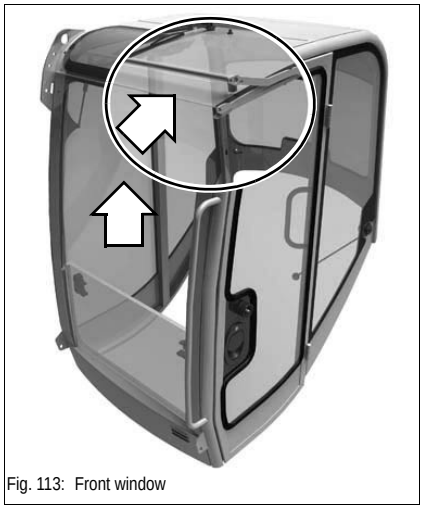


Fig. 113: Front window

☞ *Keep levers **A** pressed on the left and right, and pull the front window upward with both handholds **B**.*

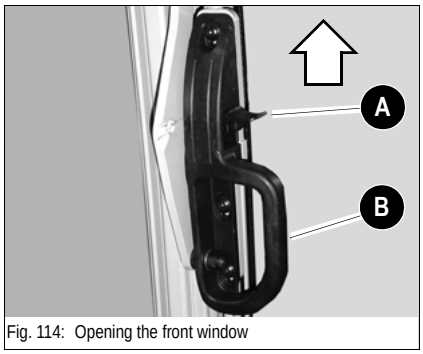


Fig. 114: Opening the front window

☞ *Release levers **A** and make them lock into place in both recesses **C**.*

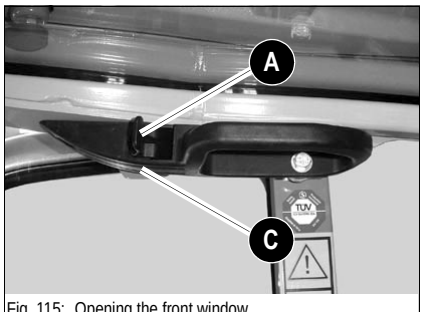


Fig. 115: Opening the front window

https://truckmanualshub.com/

Closing the front window

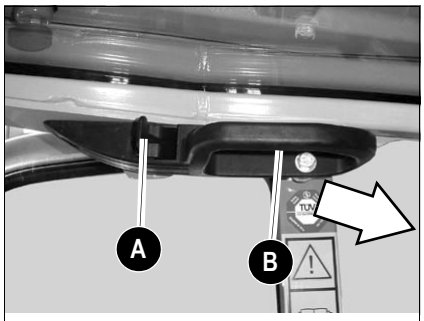


Fig. 116: Closing the front window

☞ *Press levers **A** on the left and right, and pull the front window downward with both handholds **B**.*



Fig. 117: Closing the front window

☞ *Press levers **A** on either side and engage them in the lock.*

Opening the lower front window



Fig. 118: Lower front window

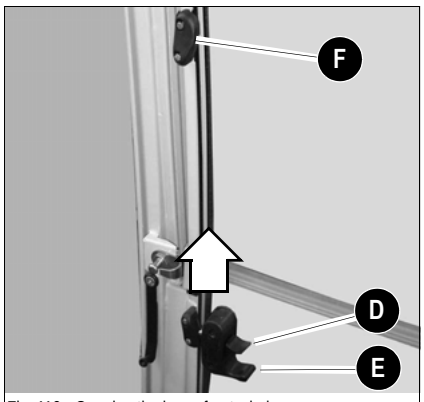


Fig. 119: Opening the lower front window

☞ *Press levers **D** on the left and right, and pull the lower front window upward with both handlholds **E**.*

☞ *Make levers **D** lock into both recesses **F**.*

https://truckmanualshub.com/

Closing the lower front window

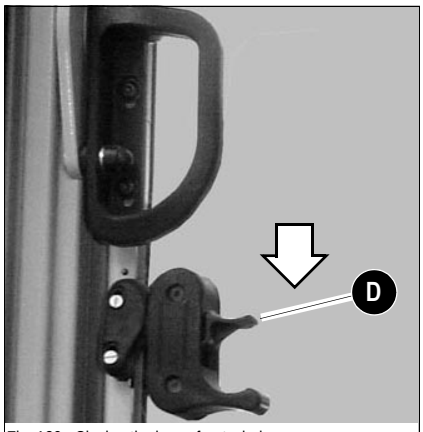


Fig. 120: Closing the lower front window

☞ *Keep levers **D** on the left and right pressed and pull the lower front window downward.*

☞ *Release levers **D** and make them lock into place on either side.*

Opening the whole front window

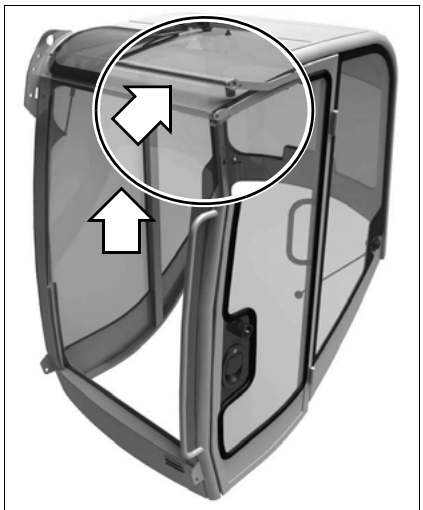


Fig. 121: Whole front window

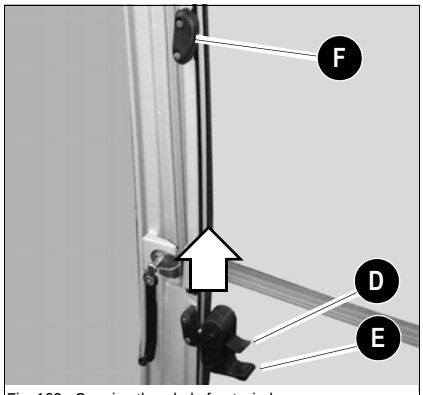


Fig. 122: Opening the whole front window

☞ *Press levers **D** on the left and right, and pull the lower front window upward with both handholds **E**.*

☞ *Make levers **D** lock into both recesses **F**.*

https://truckmanualshub.com/

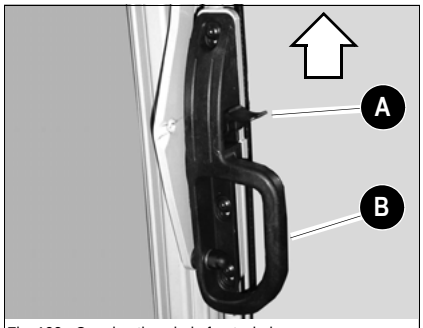


Fig. 123: Opening the whole front window

☞ *Keep levers **A** pressed on the left and right, and pull the entire front window upward with both handholds **B**.*

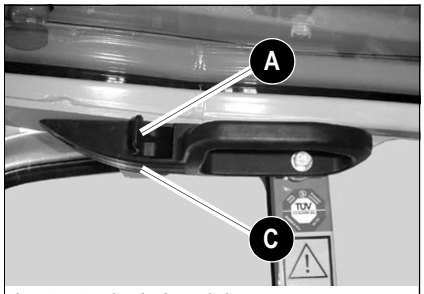


Fig. 124: Opening the front window

☞ *Release levers **A** and make them lock into place in both recesses **C**.*

Closing the whole front window

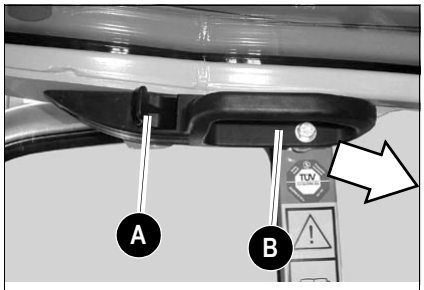


Fig. 125: Closing the front window

☞ *Press levers **A** on the left and right, and pull the entire front window downward with both handholds **B**.*



Fig. 126: Closing the front window

☞ *Press levers **A** on either side and make them lock into place.*

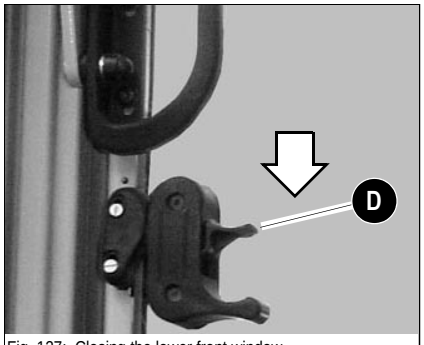


Fig. 127: Closing the lower front window

☞ *Keep levers **D** on the left and right pressed and pull the lower front window downward.*

☞ *Release levers **D** and make them lock into place on either side.*

https://truckmanualshub.com/

Opening the front window to a gap



Fig. 128: Opening the front window to a gap

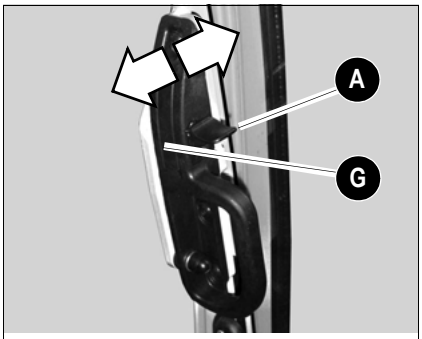


Fig. 129: Opening the front window to a gap

Open

☞ *Press levers **A** on either side and pull the front window to the inside.*

☞ *Release levers **A** and make them lock into place in both recesses **G**.*

Close

☞ *Press levers **A** on either side, close the front window and make it lock into place on either side.*

3.34 Opening and closing the side window

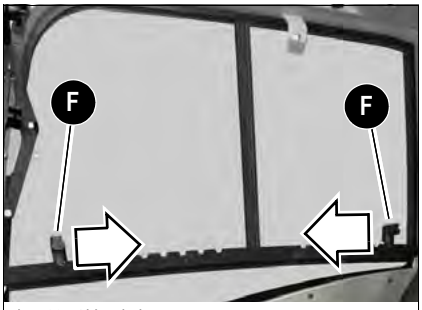


Fig. 130: Side window

☞ *Press button **F** upward.*

☞ At the same time, move the window in the required direction and make it lock into one of the recesses.

https://truckmanualshub.com/

3.35 Mounting/removing the canopy shatter protection (option)

Important

2 persons are required for mounting/removing.

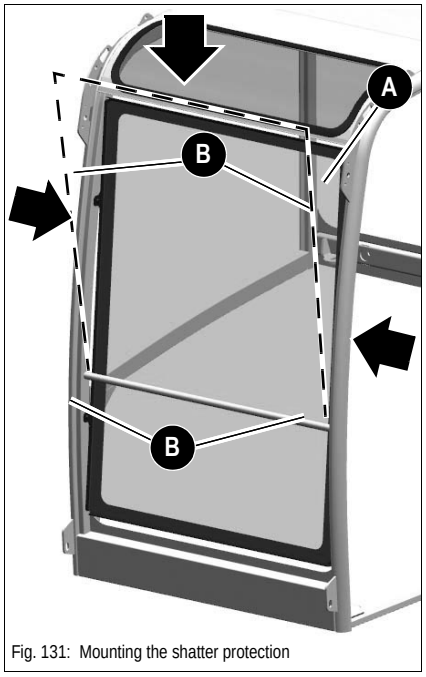


Fig. 131: Mounting the shatter protection

☞ *Follow the safety instructions for assembly.*
☞ *Put the boom in the center position and lower it to the ground.*
☞ *Lower the stabilizer blade.*
☞ *Stop the engine.*
☞ *Operate the joystick repeatedly to release the pressure in the hydraulic system.*
☞ *Remove the starting key and carry it with you.*
☞ *Fold the control lever base up.*
☞ *Install shatter protection **A** from above at points **B** with the fastening material supplied with it.*
☞ *Remove in the reverse order.*

Important

The shatter protection can be combined with a protective Front Guard structure.

https://truckmanualshub.com/

3.36 Door

CAUTION

Accident hazard. Close/secure the door and the side window when traveling and operating the machine.

Possibility of personal injury or injury to others.

- An open door on a moving machine may strike nearby people.
- Always make sure that doors and windows are securely closed before moving the machine.

Door 50Z3

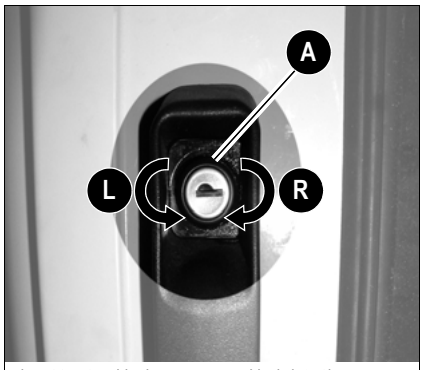


Fig. 132: Outside door opener and lock (50Z3)

Opening the door from the outside:

☞ *Press door lock **A**.*

Locking the door:

☞ *Turn the key in door locks **A** counter-clockwise (**L**).*

☞ The door is locked.

Unlocking the door:

☞ *Turn the key in door locks **A** clockwise (**R**).*

☞ The door is unlocked.

Door 6003

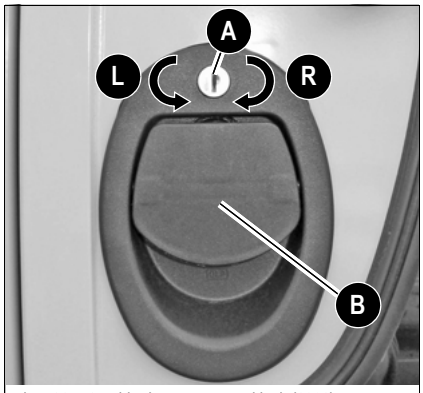


Fig. 133: Outside door opener and lock (6003)

Opening the door from the outside:

☞ *Push door handle **B** up.*

Locking the door:

☞ *Turn the key in door lock **A** counter-clockwise (**L**).*

☞ The door is locked.

Unlocking the door:

☞ *Turn the key in door lock **A** clockwise (**R**).*

☞ The door is unlocked.

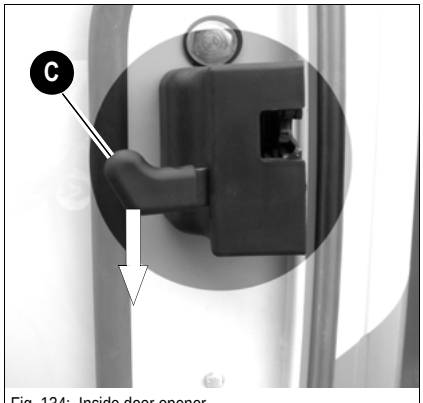


Fig. 134: Inside door opener

Opening the door from the inside:

☞ *Press down lever **C** on the inside left on the door lock.*

https://truckmanualshub.com/

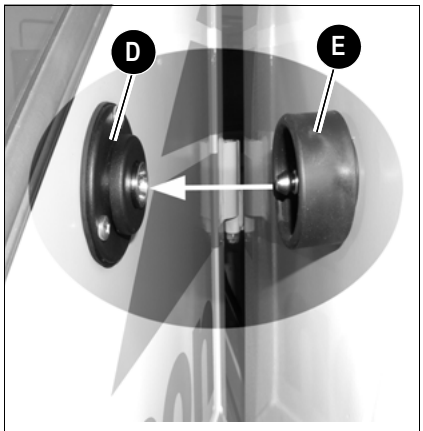


Fig. 135: Door stop/latch

Securing an open door:

☞ *Press the door against bracket **D** of stop/latch **E** with an audible click.*

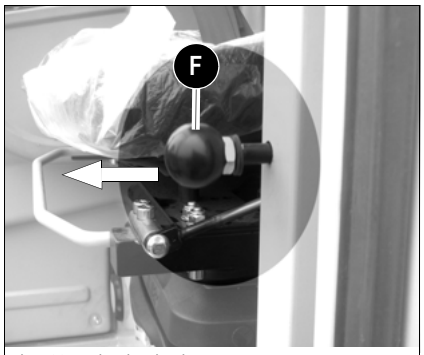


Fig. 136: Releasing the door arrester

Releasing the door opener:

☞ *Pull knob **F** to release the door from the stop/latch.*

https://truckmanualshub.com/

3.37 Exit through the door (up to serial no. AH02764)

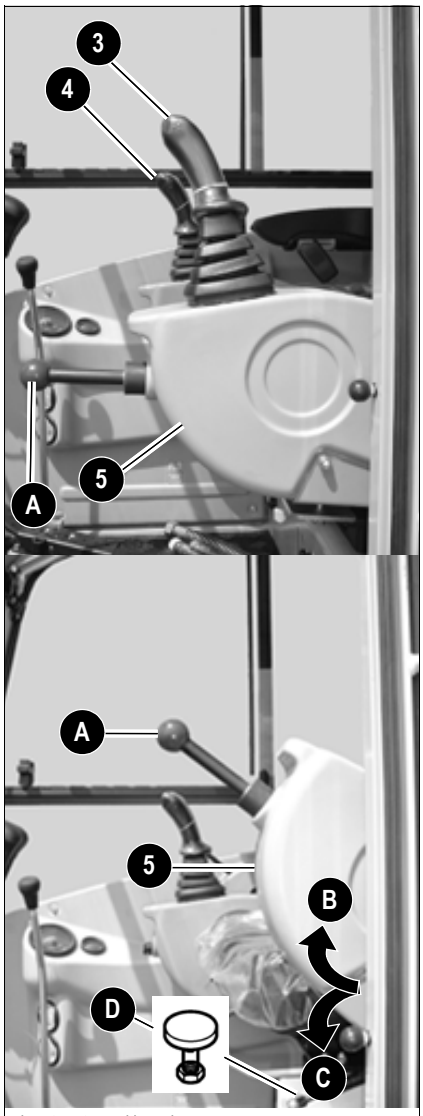


Fig. 137: Control lever base

WARNING

Accident hazard. Unintentional operation or movement of the machine when entering or exiting the cab.

Risk of accidents

- Stop and secure the machine before leaving the cab – *see chapter 3.20 Parking the machine* on page 3-29.
- Lower the boom.
- Stop the engine.
- Remove the starting key.
- Move control levers **3** and **4** in all directions repeatedly.

☞ *Raise control lever base **5** with handle **A** to position **B**.*

➥ The gas strut keeps the control lever base in the top position.

NOTICE

Do not use handle **A** on the control lever base, the outside mirror (option) or its bracket as a support to ease your entrance or exit from the cab:.

☞ *Use the entrance handholds on the cab.*

☞ *Fold control lever base **5** down to position **C** once you are in the cab.*

➥ The gas strut keeps the control lever base in the lower position.

Important

Do not adjust the height of the control lever base to ensure that the contacts between the safety switch and the control lever base are not affected.
If work is performed on the control lever base, check the safety switch and stop bolt **D** under all circumstances.

https://truckmanualshub.com/

3.38 Exit through the door (from serial no. AJ02777)

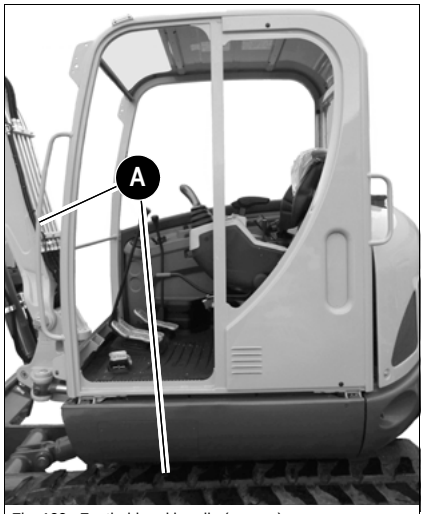


Fig. 138: Foothold and handle (canopy)

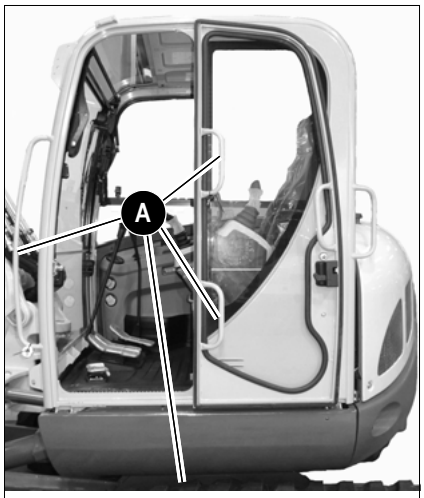


Fig. 139: Foothold and handles

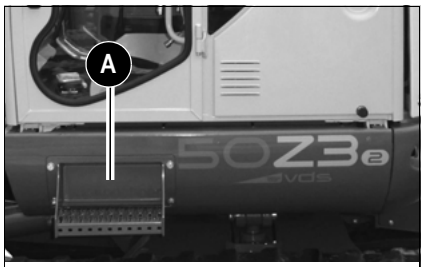


Fig. 140: VDS foothold

WARNING

Accident hazard. Unintentional operation or movement of the machine when entering or exiting the cab.

Risk of accidents.

- Stop and secure the machine before leaving the cab – *see chapter 3.20 Parking the machine* on page 3-29.
- Lower the boom.
- Stop the engine.
- Remove the starting key.
- Move control levers **1** and **2** in all directions repeatedly.

NOTICE

Do not use lever **B** on the control lever base, the outside mirror (option) or its bracket as a support to ease your entrance or exit from the cab:

☞ *Use handles **A** and footholds on the cab.*

Important

When entering or leaving the cab, the door must be locked in the stop/latch. – *see chapter 3.36 Door* on page 3-57.

VDS foothold

☞ *Use foothold and handholds **A**.*

https://truckmanualshub.com/

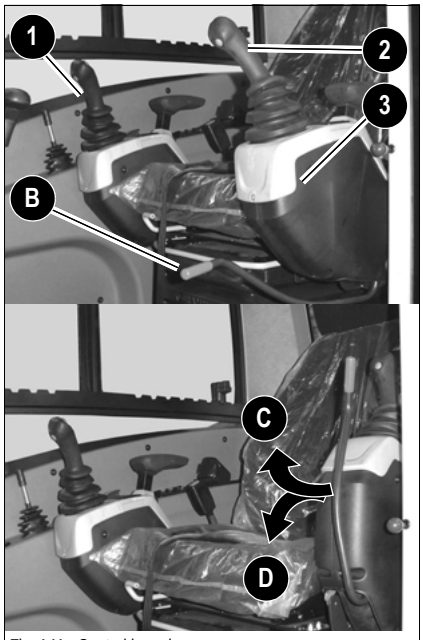


Fig. 141: Control lever base

☞ *Raise control lever base **3** to position **C** with lever **B***

➥ A torsion spring keeps the control lever base in the top position.

☞ *Fold control lever base **3** down to position **D** once you are in the cab*

➥ A torsion spring keeps the control lever base in the lower position.

3.39 Armrest adjustment (up to serial no. AH02764)

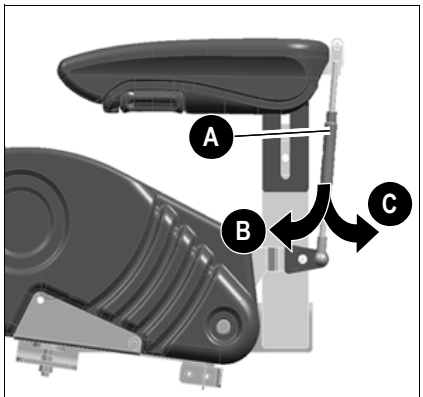


Fig. 142: Left-hand armrest

NOTICE

Ensure that the armrest does not touch the control lever as you fold it up.

- Adjust the armrest to prevent it from touching the control lever.

☞ *Turn tubular turnbuckle nut **A** counter-clockwise to **B**.*

➥ The armrest can be lowered.

☞ *Turn nut **A** clockwise to **C**.*

➥ The armrest can be raised.

https://truckmanualshub.com/

3.40 Armrest adjustment (from serial no. AJ02777)

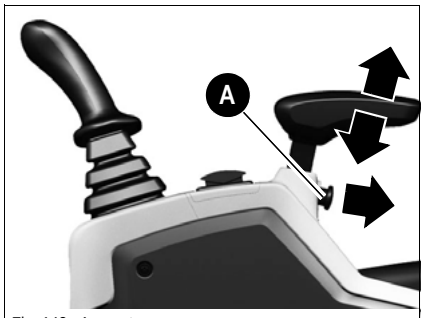


Fig. 143: Armrest

☞ *Release lock pin **A**.*

➥ Hold the armrest (it is pre-tensioned by a spring).

☞ *Pull out lock pin **A** and let the armrest engage in the required position.*

☞ *Tighten lock pin **A**.*

3.41 Engine cover

WARNING

Personal injury hazard. Open the engine cover only at engine standstill.
Risk of personal injury.

- Take care not to hit your head on the lock of the open engine cover.

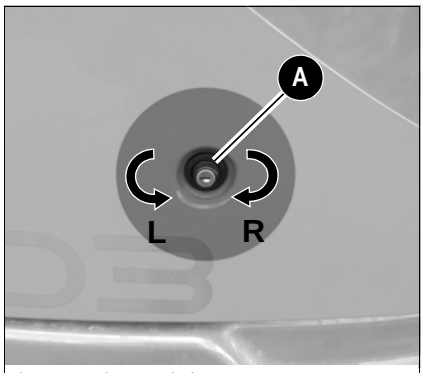


Fig. 144: Engine cover lock

Opening:

☞ *Press lock **A**.*

☞ *Pull the engine cover upward.*

Closing:

☞ *Firmly press down the engine cover until lock **A** engages with an audible click.*

Locking and unlocking:

Lock the engine cover with the starting key of the preheating start switch.

☞ *Turn the starting key in lock **A** counter-clockwise (**L**).*

➥ Engine cover locked.

☞ *Turn the starting key in lock **A** clockwise (**R**).*

➥ Engine cover unlocked.

https://truckmanualshub.com/

3.42 Battery master switch

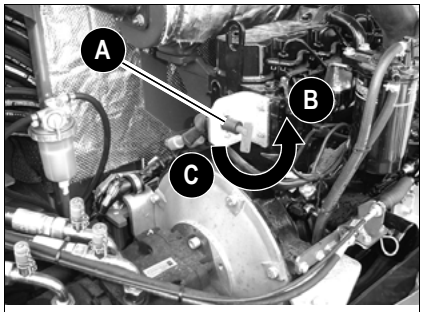


Fig. 145: Battery master switch model 50Z3 from serial no. AH00579

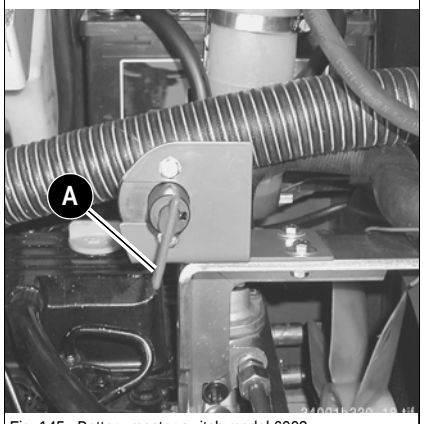


Fig. 145: Battery master switch model 6003 up to serial no. AH00578

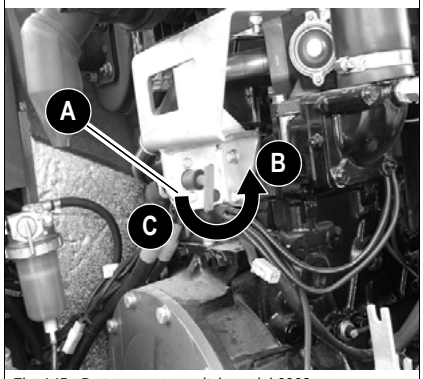


Fig. 145: Battery master switch model 6003 from serial no. AH00579

The battery master switch is located in the engine compartment.

Important

Do not disconnect the battery while the engine is running.
The power supply is interrupted directly after the battery, by means of key **A** of the battery master switch.
Actuate the battery master switch:

- Before working on the electrical system.
- Before performing welding work.
- As an antitheft precaution.

Interrupting power supply:

☞ *Turn key **A** of the battery master switch to position **B** and remove it.*

Engaging power supply:

☞ *Insert key **A** in the battery master switch.*

☞ *Turn key **A** down to the notched position **C**.*

https://truckmanualshub.com/

3.43 Tilting the cab

WARNING

Accident hazard. Careful when tilting the cab.

Risk of injury or death.

- Always tighten lock nuts **A** and **C** when traveling and operating the machine.
- Place the excavator on level ground.
- Lower the boom and the stabilizer blade to the ground.
- Stay clear from underneath the cab as you tilt it.

CAUTION

Crushing hazard. Close the door before tilting the cab to avoid hazards from uncontrolled door swing.

Risk of personal injury.

☞ *Always close and lock the door before tilting the cab.*

Preparations for tilting the cab:

☞ *Stop the engine.*

☞ *Remove the starting key and carry it with you.*

☞ *Fold the control lever base (left) up.*

Loosening the securing elements:

☞ *Raise the floor mat.*

☞ *Unscrew lock nuts **A** and **C** with a suitable tool.*

➥ Lock nut **A** is located at the front right of the cab.

➥ Lock nut **C** is located at the rear right of the cab.

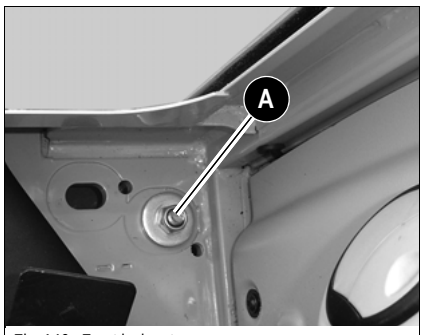


Fig. 146: Front lock nut

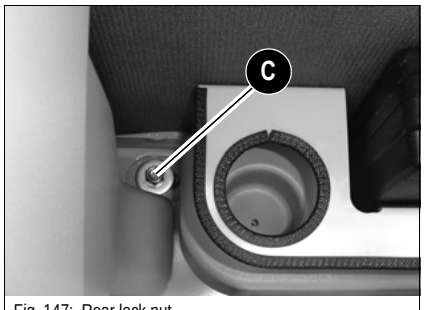


Fig. 147: Rear lock nut

https://truckmanualshub.com/

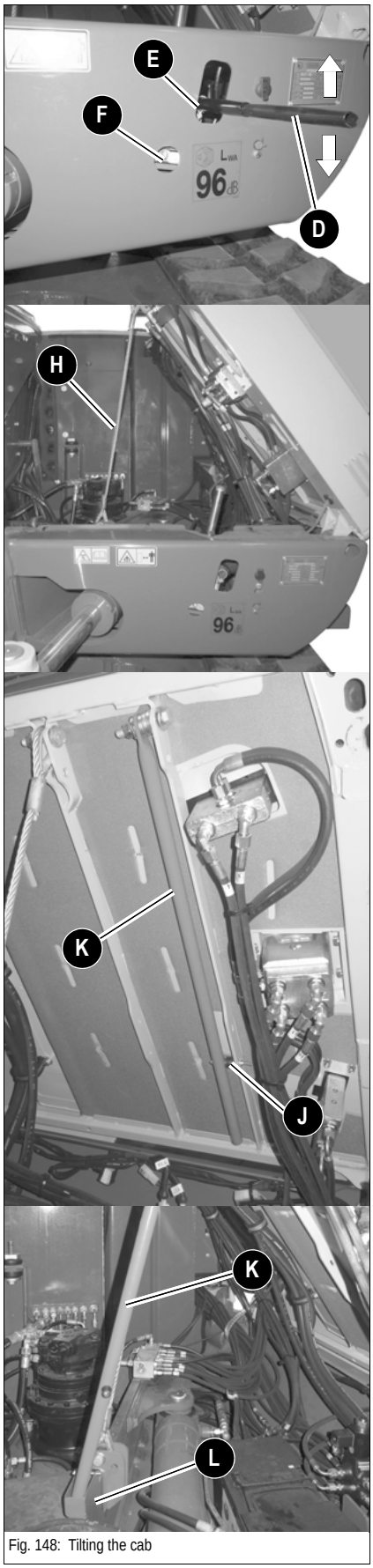


Fig. 148: Tilting the cab

Tilting the cab:

☞ *Insert tube **D** on valve **F**.*

☞ *Turn tube **D** clockwise (to the right).*

☞ *Insert tube **D** onto guide **E** and pump as far as it will go (jack function).*

➥ The cab is raised as far as the pump will go.

☞ *Place yourself beside the machine and pull the handrail until the cab is completely tilted beyond the center of motion.*

➥ The cab is secured with safety cable **H**.

Important

Do not let the cab fall into the safety cable with all its weight.

☞ *Pull tilt rod **K** out of bracket **J**.*

➥ Slide tilt rod **K** in guide **L** and secure it with the split pin.

Lowering the cab to the operating position:

NOTICE

Ensure that the piston of the lift pump is fully extended and that the valve is closed before lowering the cab.

- Turn valve **F** of the lift pump clockwise (to the right).

☞ *Remove the split pin from guide **L**.*

➥ Press tilt rod **K** into guide **J**.

☞ *Use the handrail to lower the cab until it is back on the pump.*

☞ *Insert tube **D** on valve **F**.*

☞ *Slowly turn tube **D** counter-clockwise (to the left).*

➥ The cab is lowered by its own weight.

NOTICE

Once the cab is fully lowered by its own weight, do not close the valve of the lift pump, otherwise the cab bearing can be severely damaged.

- Leave valve **F** open after you have lowered the cab.

NOTICE

Check tilt rod **K**, the split pin, safety cable **H**, and the fastening of the safety cable at regular intervals for cracks and cuts.

- Replace malfunctioning parts immediately.

https://truckmanualshub.com/

Important

Lock nuts must be replaced after each release.

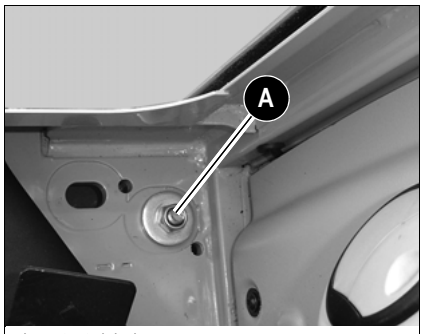


Fig. 149: Cab lock nut

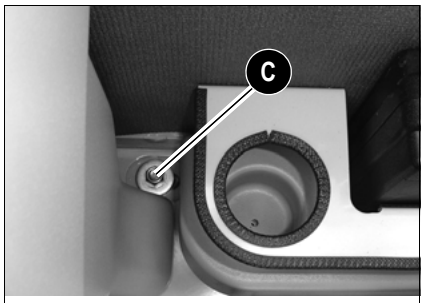


Fig. 150: Cab lock nut

☞ *Replace the lock nuts.*

☞ *Tighten the new lock nuts **A** and **C** to 87 Nm (64 ft.lbs.).*

☞ *Put floor mat back in place.*

https://truckmanualshub.com/

3.44 Towing the machine

DANGER

Accident hazard. Keep out of the danger zone of the machine.

Risk of serious injury or death.

- Ensure that no-one is dangerously close to the machine.

- Ensure that the machine can be towed safely.
- A tractor vehicle of the same weight category must be used as a minimum.
- Use towing bracket **A** for towing the machine.

NOTICE

The maximum admissible load of the towing bracket is 31100 N (6992 lbf).

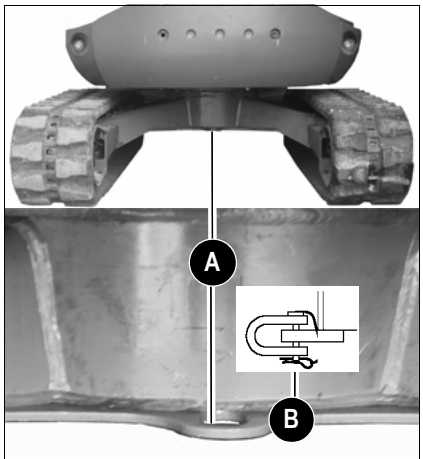


Fig. 151: Towing bore

- Use towing bracket **A** only for towing.
- Secure shackle **B** with the shackle pin and a lock pin.
- Mount a towing bar or cable of adequate size to the towing bore.
- Pull the machine slowly.
- Tow the machine only until the ground conditions allow the machine to move on its own.

NOTICE

Do not tow a malfunctioning machine, otherwise the drive can be damaged.

- The machine must be loaded with a crane – *see chapter 3.45 Lifting the Excavator* on page 3-68.

Important

The manufacturer's warranty shall not apply to accidents or damage caused by towing the machine.
Using towing bracket **A** to pull other machines or to tow equipment is not allowed.

https://truckmanualshub.com/

3.45 Lifting the Excavator

Safety instructions

- The crane and the lifting gear must have suitable dimensions.
- Lifting the excavator requires suitable lifting gear.
- Secure the machine against unintentional movement.

WARNING

Crushing hazard. Incorrect crane handling of the machine.

Risk of serious injury or death.

- Wear protective equipment (safety boots, protective gloves, hard hat, etc.).
- Do not lift the machine with someone in the operator seat/station or on the machine.
- Persons responsible for attaching the lifting devices to the machine shall be experienced with crane operations and hand signals.The crane operator shall maintain sight of the personnel attaching, guiding, and unhooking the excavator.
- Use OSHA rated and approved lifting devices capable lifting the excavator, attachments, options and accumulated debris. Refer to the general weight guidelines in the specification section of this manual.
- The person guiding the crane operator must be within sight or sound of him.
- Use only the lifting points provided to this effect and marked accordingly for attaching lifting gear.
- Do not place the lifting gear over sharp edges.
- Do not lift the machine with material in the bucket attachment.
- The crane operator shall observe the lift zone and lift the machine when the area is clear of people.
- Do not attempt to lift the excavator with any type of crane including wheel loaders unless the crane operator is qualified to lift loads in craning operations. The crane operator shall be knowledgable of OSHA 1910 craning regulations.
- The lifting devices must be the specified lengths shown as **L1** and **L2**.
- Always stay clear of suspended loads.

Environment

Do not crane-handle malfunctioning machines with leaks.

https://truckmanualshub.com/

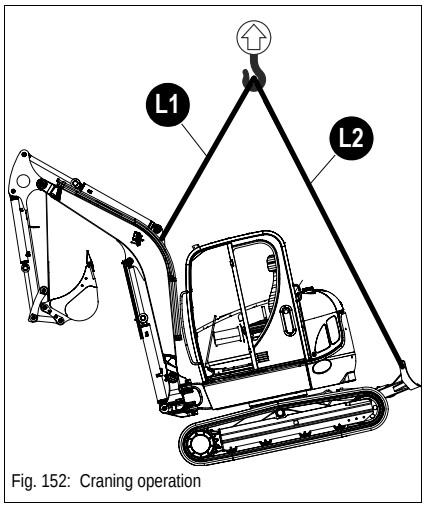


Fig. 152: Craning operation

Crane handling:

- Read and follow all instructions indicated before.
- Safely lock the attachment.
- Empty or clean and remove the attachment.
- Remove all dirt from the machine.
- Place the machine on firm, level and horizontal ground.
- Raise the boom completely.
- Pull the stick toward the machine.
- Move the attachment inward.
- Raise the stabilizer blade.
- Position the boom straight ahead at the center of the machine.
- Stop the engine.
- Operate the joystick repeatedly to release the pressure in the hydraulic system.
- Fold the control lever base up.
- Remove the starting key and carry it with you.
- Remove all loose objects from inside the machine.
- Close the windows and the door.
- Leave the cab.
- Close and lock all covers.
- Mount the lifting devices at the point on the boom provided for lifting the machine.
- Mount the lifting devices at the points on the stabilizer blade provided for lifting the machine.
- Slowly raise the machine until there is no more contact with the ground.
- Wait until the machine does swing any more and is completely steady.
- If the balance and the condition and position of the lifting gear is correct, slowly raise the machine to the required height and load it.

Required lengths **L1** and **L2** of the lifting gear:

Machine	Length	Dimension
50Z3	L1	1700 mm (67 in)
	L2	3930 mm (12' - 11")
6003	L1	2000 mm (79 in)
	L2	4600 mm (15' - 1")

https://truckmanualshub.com/

3.46 Loading and transporting the machine

Safety instructions

- The transport vehicle must be of adequate size – refer to *"Specifications"* for the machine's dimensions and weights.
- Remove dirt (e.g. mud, snow, ice, etc.) from the tracks so that the machine can be safely driven onto the ramp.
- Secure the machine against unintentional movement *– see chapter 3.20 Parking the machine* on page 3-29.

WARNING

Accident hazard. The machine must be loaded and transported properly.

Risk of injury.

- Read the safety instructions at the beginning of this chapter and follow any other safety instructions relevant in your country.

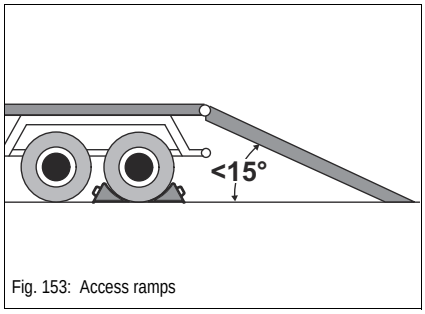


Fig. 153: Access ramps

- Secure the transport vehicle with chocks to prevent it from rolling.
- Place the access ramps at the smallest possible angle. Do not exceed a slope of 15°. Use access ramps with an anti-skid surface only.
- Ensure that the loading area is clear and access to it is not obstructed – e.g. by superstructures
- Ensure that the access ramps and the tracks of the machine are free of dirt (oil, grease, ice, etc.).
- Start the engine of the machine.
- Raise the boom enough so that it will not touch the access ramps.
- Carefully drive the machine onto the middle of the transport vehicle.
- Move the machine to transport position.
- Lower the attachment to the loading area.
- Stop the engine.
- Fold the control lever base up.
- Remove the starting key.
- Leave the cab, close the door and the windows.
- All covers must be closed.
- Secure the machine against unintentional movement.

Important

The manufacturer's warranty shall not apply to accidents or damage caused by loading or transporting the excavator.

https://truckmanualshub.com/

3.47 Tying down the machine

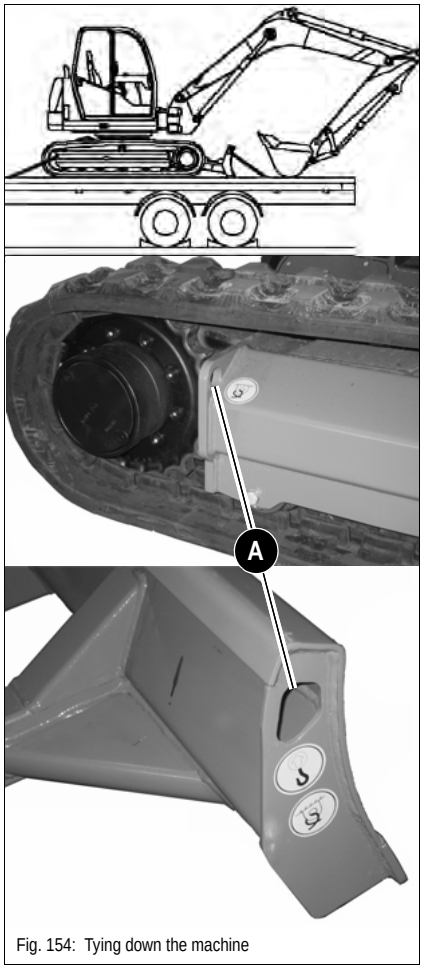


Fig. 154: Tying down the machine

WARNING

Personal injury hazard. The machine must be loaded and transported properly.

Risk of personal injury.

- Read the safety instructions at the beginning of this chapter and follow any other safety instructions relevant in your country.

- Ensure that the authorized maximum height is not exceeded.
- Secure the tracks of the machine at the front, rear and at the sides.
- Lower the stabilizer blade and the boom.
- Firmly tie down the machine at the tie down point **A** onto the platform, with OSHA approved tie down straps belts or chains of adequate size.

Important

Use edge protectors to avoid damage both to the machine and to the OSHA approved tie down straps, ropes or chains.

- Before transporting the machine through heavy rain:
  close the outlet of the exhaust silencer with a suitable cap or adhesive tape.
- Ensure that the user of the transport vehicle knows the overall height, width and weight of his vehicle (including excavator) before departure, as well as the legal transport regulations of the country or countries where transport is to take place.

3.48 Driving signal (option)

DANGER

Accident hazard. Careful when reversing or driving forward.

Risk of serious injury or death.

- There must be nobody within the danger zone of the machine when changing the driving direction.
- Do not rely on the drive signal under any circumstances when changing driving direction.

The warning device consists of a signal transmitter that emits an acoustic signal when driving forward or backward.

This signal sounds until the levers are moved to neutral position.

Have the signal transmitter repaired by an authorized Wacker Neuson service center if it does not sound when driving.

https://truckmanualshub.com/

3.49 Operating the machine

General safety instructions

Avoiding cave-in or collapse:

- Do not operate at the edge of an open excavation.
- Do not undermine wall foundations.

Preventing tip-overs:

- Do not excavate deeply under the front side of the machine. The ground under the machine could collapse and cause the machine to tip.
- Do not perform demolition work below the machine.

  ➥ Doing so can cause the machine to tip.
- In general the machine is more liable to tilt if the attachment is positioned laterally than if it is positioned at the front or rear of the machine.
- The machine can become unstable and tip if a demolition hammer or other heavy attachment is used. To perform work both on level ground and on slopes:

  ☞ Lower the stabilizer legs/stabilizer blade.(refer to the lift tables from page *6-17* to *6-33*)

  ☞ Do not move the attachment rapidly in any direction.

  ☞ Avoid use on slopes.

Avoiding falling debris:

- Do not create an overhang above the excavator.
- Do not create an overhang of debris during demolition.
- Install a front guard when working in areas with a risk of objects falling from the front (for example demolition work).

Increasing operator safety:

- In order to leave the cab more easily under especially difficult circumstances, position the chassis perpendicularly to the roadside or to the uphill slope.
- Prior to working on the structure surface, confirm that the floor or roof of a building is strong enough to support the excavator and any loads lifted by the excavator.
- Do not raise the bucket over the heads of other workers or over the driver seats of trucks or of other means of transport. The material can tilt, or the bucket can knock against the truck and cause severe injury or damage.
- Operation of the machine by unauthorized staff is prohibited.
- The hydraulic system of the machine is still pressurized even when the engine is not running. Release the pressure in the sections of the system and hydraulic lines which are to be opened before starting setup or repair work, for example fitting/removing an attachment with hydraulic functions
  – *see chapter 3.56 Releasing the pressure on the Operating Hydraulics* on page 3-92
  – *see Lowering the boom with the engine stopped* on page 3-75.

Preventing equipment damage

- Do not use the impact force of the attachment to perform demolition work. Demolished parts can cause personal injury or damage to property or the equipment.
- Look out for high-voltage cables, underground cables, gas and water pipes during excavation work.

https://truckmanualshub.com/

3.50 Control levers/control pattern ''A'': Overview

WARNING

Accident hazard. Potential loss of machine control.

Risk of injury.

- The attachment will move in response to movement of the left hand control lever.
- Do not actuate the left hand control lever while the machine is traveling at maximum speeds on the work site.

Important

Fast actuation of the control lever for the attachment moves the attachment fast. Slow actuation of the control lever moves the attachment slowly.

Left-hand control lever

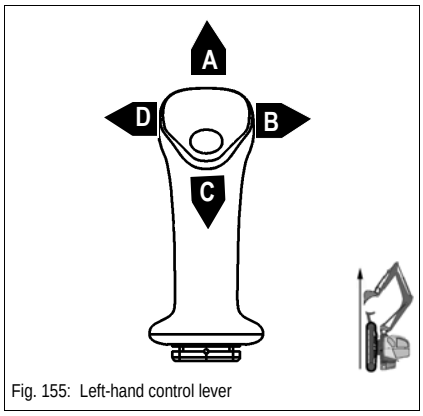


Fig. 155: Left-hand control lever

Position	Lever	Function
A	Forward	Stick is extended
B	To the right	Upper carriage rotates to the right
C	Backward	Stick is retracted
D	To the left	Upper carriage rotates to the left

Important

Always perform smooth control movements.

Hammer pedal lock (up to serial no. AH02781)

WARNING

Personal injury hazard. Do not press the pedal unintentionally.

Risk of personal injury.

- In order to avoid unintentional actuation of the pedal, fold cover **K** toward the seat once operation is over.

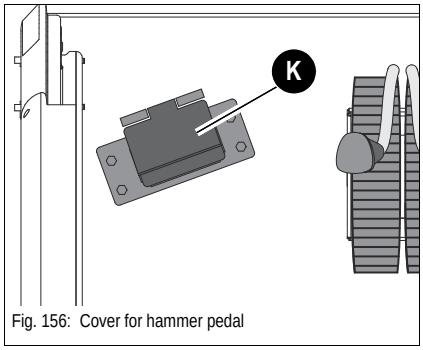


Fig. 156: Cover for hammer pedal

https://truckmanualshub.com/

Boom/triple articulation boom operation (up to serial no. AH02781)

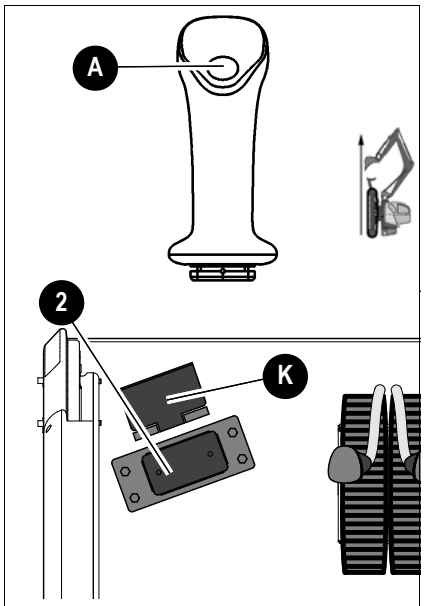


Fig. 157: Swivel controls

☞ *Fold cover **K** toward the front window.*

Swivel boom to the left:

☞ Press and hold button **A** on the left-hand control lever.

☞ Press hammer pedal **2** to the left at the same time.

Swivel boom to the right:

☞ Press and hold button **A** on the left-hand control lever.

☞ Press hammer pedal **2** to the right at the same time.

☞ *Fold cover **K** toward the seat once operation is over.*

Triple articulation boom (option 6003):

☞ Press hammer pedal **2** forward.

➥ The hydraulic cylinder of the triple articulation boom is extended.

☞ Press hammer pedal **2** backward.

➥ The hydraulic cylinder of the triple articulation boom is retracted.

☞ *Fold cover **K** toward the seat once operation is over.*

Important

With triple articulation boom option, the hammer pedal slides in driving direction and is not installed as shown in *Fig. 157*.

Hammer pedal lock (from serial no. AJ02777)

WARNING

Personal injury hazard. Do not press the pedal unintentionally.

Risk of personal injury.

- In order to avoid unintentional actuation of the pedal, fold hammer pedal **2** toward the seat once operation is over.

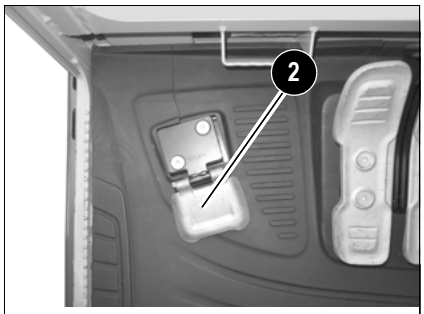


Fig. 158: Cover for hammer pedal

https://truckmanualshub.com/

Boom/triple articulation boom operation (from serial no. AJ02777)

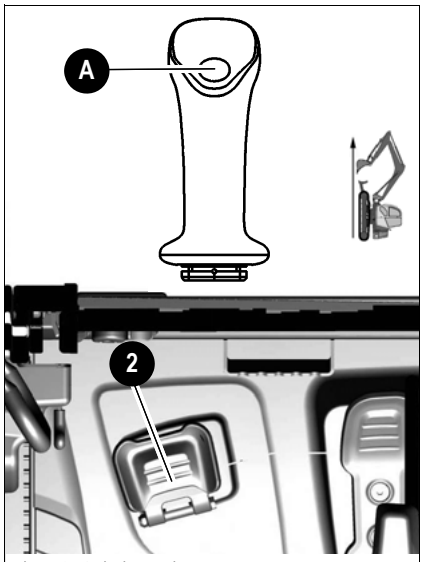


Fig. 159: Swivel controls

☞ *Fold hammer pedal **2** toward the front window.*

Swivel boom to the left:

☞ Press and hold button **A** on the left-hand control lever.

☞ Press hammer pedal **2** to the left at the same time.

Swivel boom to the right:

☞ Press and hold button **A** on the left-hand control lever.

☞ Press hammer pedal **2** to the right at the same time.

☞ *Fold hammer pedal **2** toward the seat once operation is over.*

Triple articulation boom (option 6003):

☞ Press hammer pedal **2** to the left.

➥ The hydraulic cylinder of the triple articulation boom is retracted.

☞ Press hammer pedal **2** to the right.

➥ The hydraulic cylinder of the triple articulation boom is extended.

☞ *Fold hammer pedal **2** toward the seat once operation is over.*

Right-hand control lever

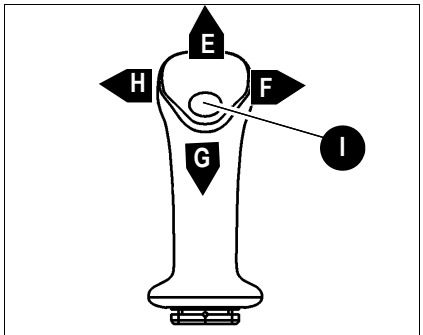


Fig. 160: Right-hand control lever

Position	Lever	Function
E	Forward	Boom is lowered
F	To the right	Dumps the bucket
G	Backward	Boom is raised
H	To the left	Fills the bucket

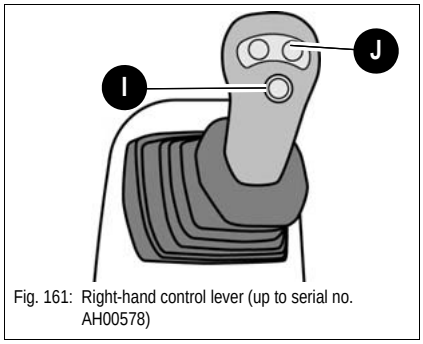


Fig. 161: Right-hand control lever (up to serial no. AH00578)

Button	Function
I	Horn
J	Engine speed controls (up to serial no. AH00578)

Lowering the boom with the engine stopped

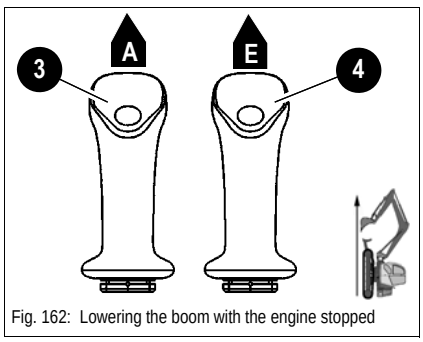


Fig. 162: Lowering the boom with the engine stopped

☞ *Ensure that no-one is dangerously close to the machine.*

☞ *Turn the starting key to position "**1**".*

☞ *Press forward and hold the control lever (**A** and **E**)*

➥ Until the boom is completely lowered.

☞ *Return the control lever to neutral.*

https://truckmanualshub.com/

Rotating the upper carriage

Rotating the upper carriage is described with control pattern “A“ controls.

Important

- The rear section of the machine protrudes over the undercarriage.
- Make sure there are no obstacles in the immediate area before rotating the upper carriage.
- Fast actuation of the control lever rotates the upper carriage fast, slow actuation of the control lever rotates the upper carriage slowly.
- Until the hydraulic fluid reaches operating temperature, the upper carriage can creep slightly after the control is placed in the neutral position.
- If the upper carriage needs to be rotated on a slope, let the engine run at idling speed and actuate the left-hand control lever very slowly. Proceed with extreme care and avoid abrupt movements if the bucket is full.

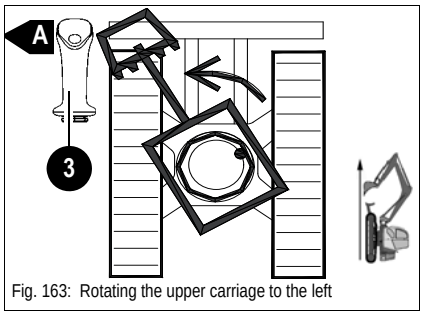


Fig. 163: Rotating the upper carriage to the left

In order to rotate the upper carriage to the left

☞ *Push the left-hand control lever **3** to the left **A**.*

➥ The upper carriage rotates to the left.

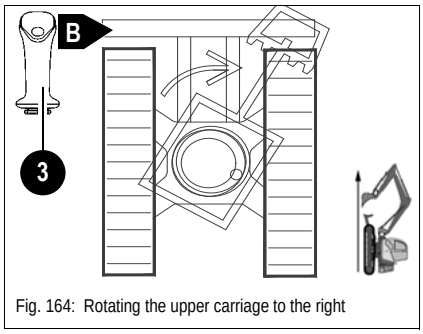


Fig. 164: Rotating the upper carriage to the right

In order to rotate the upper carriage to the right

☞ *Push the left-hand control lever **3** to the right **B**.*

➥ The upper carriage rotates to the right.

Rotating upper carriage brake

Upper carriage hydraulic brake:

The upper carriage’s rotation is sufficiently braked by moving control lever **3** back to initial position. Moving the control lever in the opposite direction (counteraction) brakes the upper carriage with maximum hydraulic output.

Upper carriage mechanical brake:

A multi-disk brake integrated in the rotation drive has an additional mechanical brake effect with time delay. This negative-effect brake is used as a stop brake and parking brake for the swivel unit. The upper carriage can be stopped in any position.

https://truckmanualshub.com/

3.51 Changeover valve for control pattern ''B'' (option)

WARNING

Accident hazard. Changing the directional valve over modifies the controls (control levers).

Risk of injury or death.

- Confirm that you know which control mode has been selected before starting work.
- Always secure wing nut **J** on the changeover lever of the directional valve.
- Before beginning work, familiarise yourself with the modified operation.

Left-hand control lever

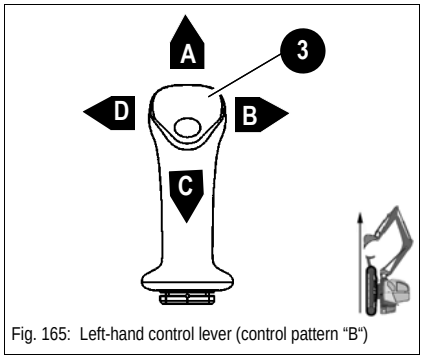


Fig. 165: Left-hand control lever (control pattern "B")

Position	Lever	Function
A	Forward	Boom is lowered
B	To the right	Upper carriage rotates to the right
C	Backward	Boom is raised
D	To the left	Upper carriage rotates to the left

Right-hand control lever

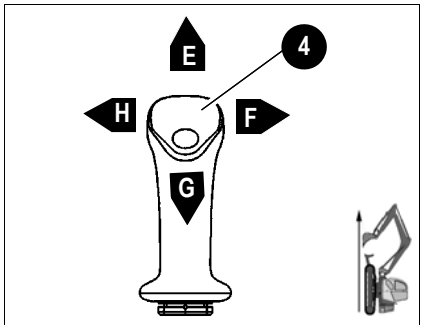


Fig. 166: Right-hand control lever (control pattern "B")

Position	Lever	Function
E	Forward	Stick is extended
F	To the right	Dumps the bucket
G	Backward	Stick is retracted
H	To the left	Fills the bucket

Directional valve position

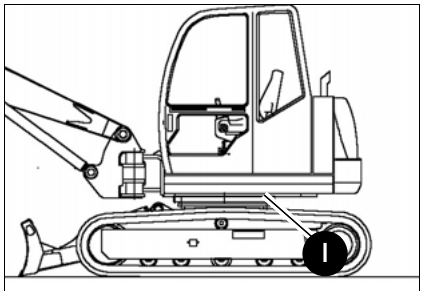


Fig. 167: Directional valve position

The directional valve is located on the left in base plate **I** of the chassis.

https://truckmanualshub.com/

Directional valve

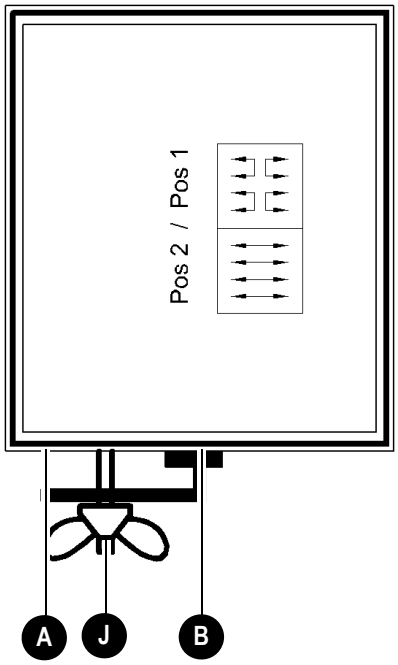


Fig. 168: Directional valve

The directional valve switches from control pattern “A“ to “B“ and vice versa.

Position	Function
A	control pattern “A“
B	control pattern “B“

☞ *Turn lever to the opposite side as far as it will go to change over the controls*

☞ *Tighten wing nut **J** after changing the control mode.*

NOTICE

No driving or working with the machine if wing nut **J** is malfunctioning.

- Immediately contact a Wacker Neuson service center to replace a malfunctioning wing nut.

https://truckmanualshub.com/

3.52 Control lever with proportional controls (option): overview

Important

Fast actuation of the control lever for the attachment moves the attachment fast. Slow actuation of the control lever moves the attachment slowly.

Function

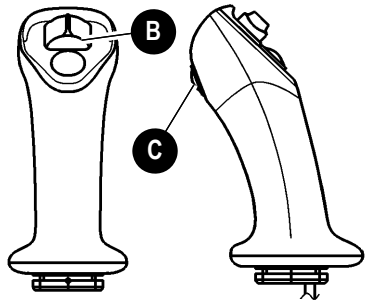


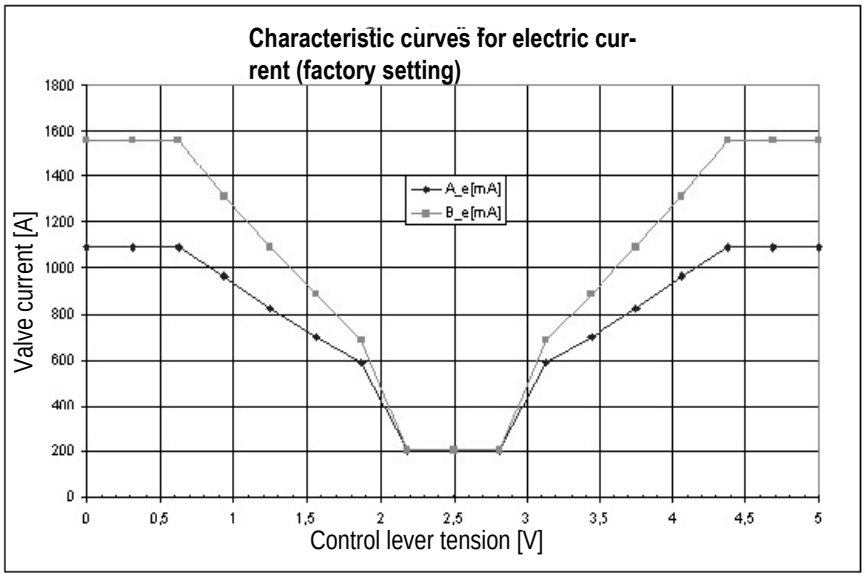
Fig. 169: Left-hand control lever

This control mode offers proportional control of the auxiliary hydraulics circuit depending on the position of slide switch **B** on the joystick.

You also have the choice of two characteristic curves. Precision work (for instance with an offset bucket) does not require the full throughput of the auxiliary hydraulics. Therefore we recommend selecting characteristic curve 1 (slow movements).

In this position, the slide switch is not actuated to full output and you can move the machine more smoothly (flat characteristic curve).

If you require the full throughput then characteristic curve 2 will be the choice to make (slide switch actuated to full output).



NOTICE

Pressing button **C** ensures full throughput irrespective of the characteristic curve that has been selected. Always use button **C** on the joystick for hammer operation.

- Do not use characteristic curve 1 for hammer operation since as described above, oil throughput is not set to maximum in this case and therefore the hydraulic output is not fully available for hammer operation.

https://truckmanualshub.com/

Left-hand control lever

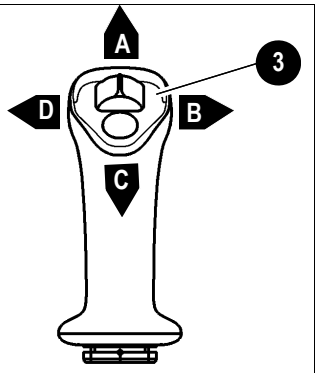


Fig. 170: Left-hand control lever

Position	Lever	Function
A	Forward	Stick is extended
B	To the right	Upper carriage rotates to the right
C	Backward	Stick is retracted
D	To the left	Upper carriage rotates to the left

Important

Always perform smooth control movements.

Changeover between auxiliary hydraulics and boom swivel

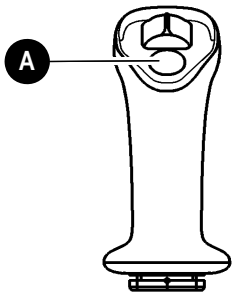


Fig. 171: Changeover between auxiliary hydraulics and boom swivel

Starting the machine automatically switches on the auxiliary hydraulics.

Switching on boom swivel

☞ *Press button A on the control lever.*

Switching on auxiliary hydraulics

☞ *Release button A on the control lever.*

Switching the status indicator light on/off for auxiliary hydraulics/boom swivel

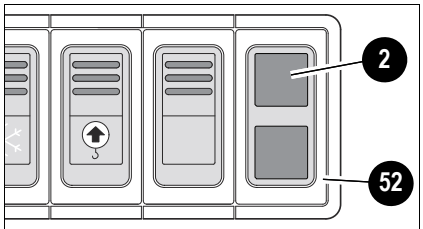


Fig. 172: Characteristic curves – status indicator (up to serial no. AH02781)

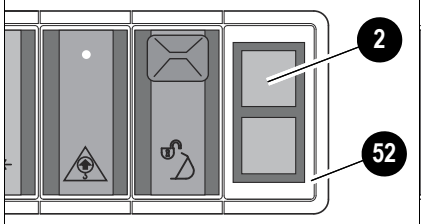


Fig. 172: Characteristic curves – status indicator (from serial no. AJ02777)

Boom swivel switched on

☞ *Indicator light **2** in status indicator **52** illuminates permanently.*

➥ Auxiliary hydraulics is switched off and the boom can be swivelled.

Auxiliary hydraulics switched on

☞ *Indicator light **2** in status indicator **52** is not lit.*

➥ The boom cannot be swivelled and the auxiliary hydraulics is now operational.

https://truckmanualshub.com/

Operating the boom/auxiliary hydraulics

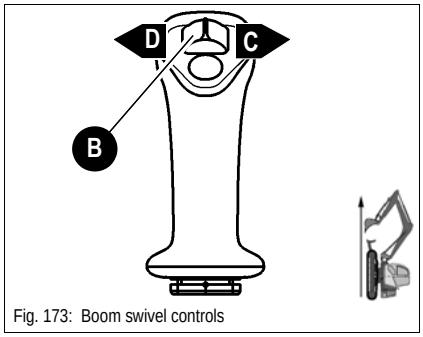


Fig. 173: Boom swivel controls

Movement to the left

☞ *Move slide switch **B** on the control lever to the left **D**.*

Movement to the right

☞ *Move slide switch **B** on the control lever to the right **C**.*

Hammer operation

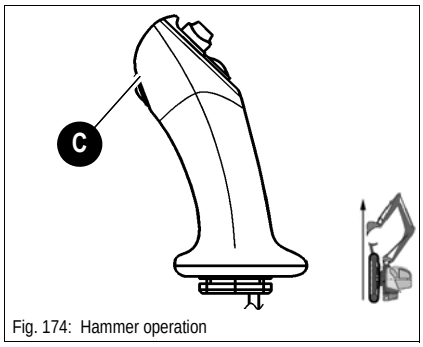


Fig. 174: Hammer operation

Switching on hammer operation

☞ *Press and hold button **C** on the control lever.*

Switching off hammer operation

☞ *Release button **C** on the control lever.*

Adjusting control response

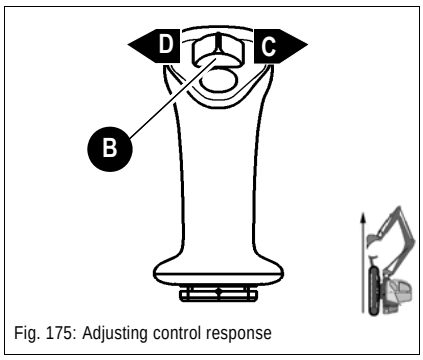


Fig. 175: Adjusting control response

Characteristic curve 1 (slow movements)

☞ *Disengage the starter.*

☞ *Press and hold slide switch **B** toward **D**.*

☞ *Switch on ignition at the same time.*

☞ *Wait 2 seconds and then release slide switch **B**.*

➥ Status indicator **52** acknowledges by flashing once.

Characteristic curve 2 (fast movements – maximum throughput)

☞ *Disengage the starter.*

☞ *Press and hold slide switch **B** toward **C**.*

☞ *Switch on ignition at the same time.*

☞ *Wait 2 seconds and then release slide switch **B**.*

➥ Status indicator **52** acknowledges by flashing twice.

https://truckmanualshub.com/

Characteristic curves – status indicator

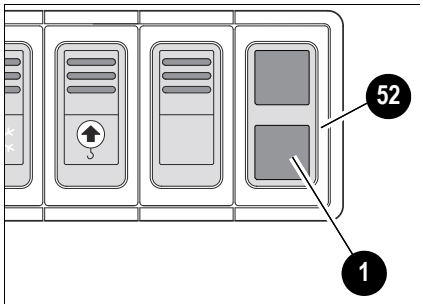


Fig. 176: Characteristic curves – status indicator (up to serial no. AH02781)

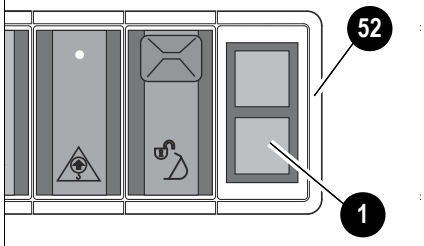


Fig. 176: Characteristic curves – status indicator (from serial no. AJ02777)

Displays the characteristic curve that has been selected for the control valve.

Characteristic curve 1 (slow movements)

➥ Indicator light **1** in status indicator **52** flashes once after switching on ignition.

Characteristic curve 2 (fast movements – maximum throughput)

➥ Indicator light **1** in status indicator **52** flashes twice after switching on ignition.

Important

The characteristic curve that has been set last is active after the machine is started again.

Right-hand control lever

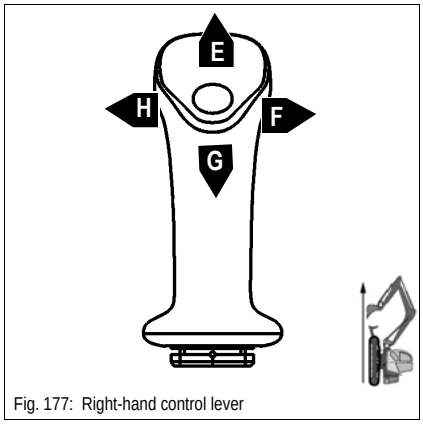


Fig. 177: Right-hand control lever

Position	Lever	Function
E	Forward	Boom is lowered
F	To the right	Dumps the bucket
G	Backward	Boom is raised
H	To the left	Fills the bucket

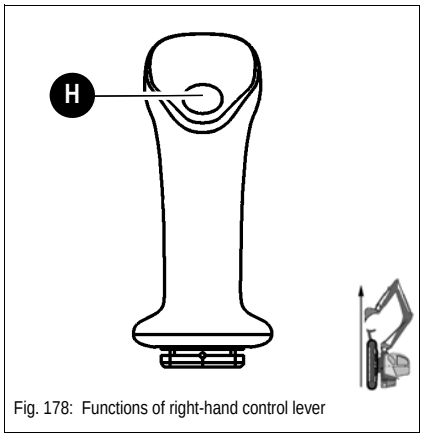


Fig. 178: Functions of right-hand control lever

Button	Function
H	Horn

https://truckmanualshub.com/

Lowering the boom with the engine stopped

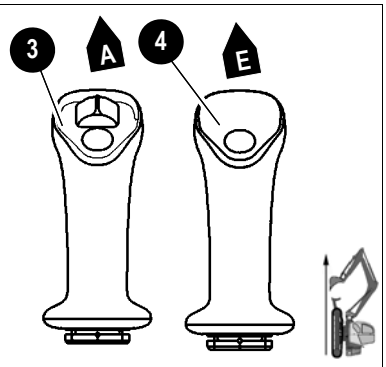


Fig. 179: Lowering the boom with the engine stopped

Lower the boom as follows:

☞ *Ensure that no-one is dangerously close to the machine.*

☞ *Turn the starting key to position "**1**".*

☞ *Press forward and hold the control lever (**A** and **E**)*

➥ Until the boom is completely lowered.

☞ *Return the control lever to neutral.*

Releasing pressure

Proceed as follows:

☞ *Stop the engine.*

☞ *Move the control lever in all directions a few times.*

➥ This releases the pressure in the hydraulic system.

– *see chapter 3.56 Releasing the pressure on the Operating Hydraulics* on page 3-92

https://truckmanualshub.com/

3.53 Control lever if equipped with 3rd control circuit (option): overview

Important

Fast actuation of the control lever for the attachment moves the attachment fast. Slow actuation of the control lever moves the attachment slowly.

Left-hand control lever

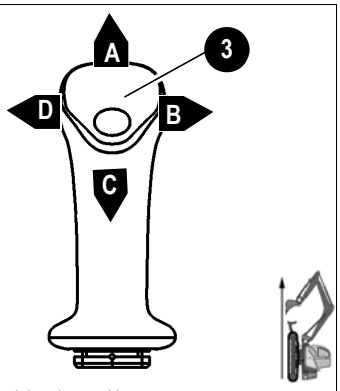


Fig. 180: Left-hand control lever

Position	Lever	Function
A	Forward	Stick is extended
B	To the right	Upper carriage rotates to the right
C	Backward	Stick is retracted
D	To the left	Upper carriage rotates to the left

Important

Always perform smooth control movements.

Boom swivel controls (up to serial no. AH02781)

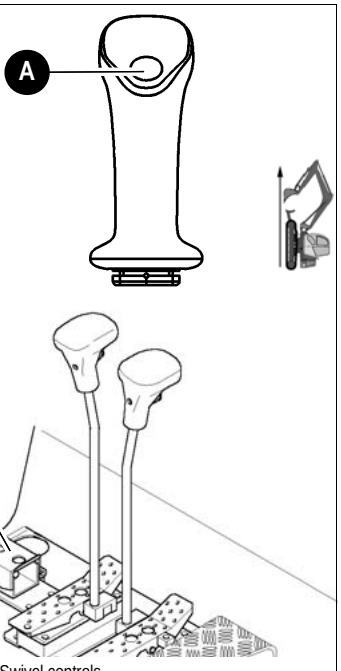


Fig. 181: Swivel controls

Swivelling the boom to the left:

☞ *Press and hold button **A** on the control lever*

☞ Move hammer pedal **2** forward at the same time.

Swivelling the boom to the right:

☞ *Press and hold button **A** on the control lever*

☞ Move hammer pedal **2** backward at the same time

https://truckmanualshub.com/

Boom swivel controls (from serial no. AJ02777)

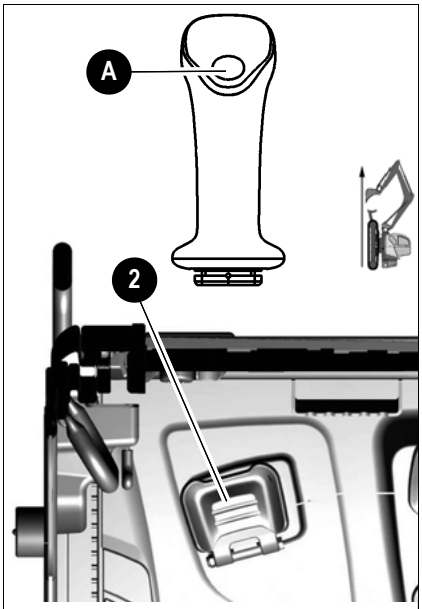


Fig. 182: Swivel controls

Swivelling the boom to the left:

☞ *Unfold the hammer pedal cover.*

☞ *Press and hold button **A** on the control lever.*

☞ Move hammer pedal **2** forward at the same time.

Swivelling the boom to the right:

☞ *Unfold the hammer pedal cover.*

☞ *Press and hold button **A** on the control lever.*

☞ Move hammer pedal **2** backward at the same time.

Right-hand control lever

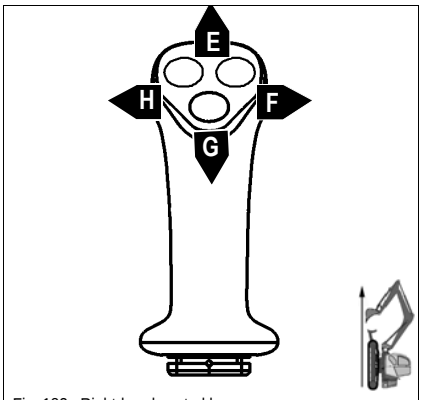


Fig. 183: Right-hand control lever

Position	Lever	Function
E	Forward	Boom is lowered
F	To the right	Dumps the bucket
G	Backward	Boom is raised
H	To the left	Fills the bucket

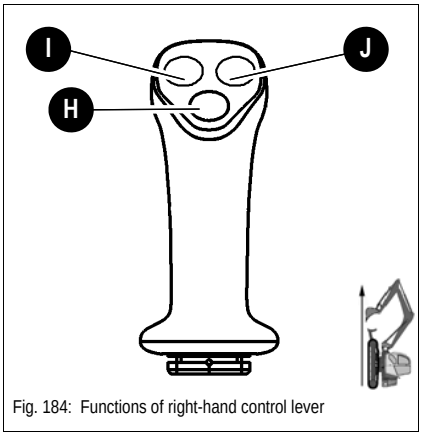


Fig. 184: Functions of right-hand control lever

Button	Function
H	Horn
I	Operates the 3rd control circuit
J	Operates the 3rd control circuit

https://truckmanualshub.com/

Right-hand control lever if equipped with proportionally controlled 3rd control circuit (option)

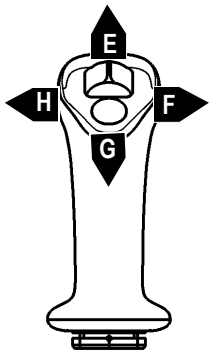


Fig. 185: Right-hand control lever with proportional controls

Position	Lever	Function
E	Forward	Boom is lowered
F	To the right	Dumps the bucket
G	Backward	Boom is raised
H	To the left	Fills the bucket

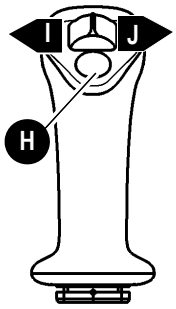


Fig. 186: Right-hand control lever with proportional controls

Button/rocker switch	Function
H	Horn
I	Operates the 3rd control circuit
J	Operates the 3rd control circuit

Lowering the boom with the engine stopped

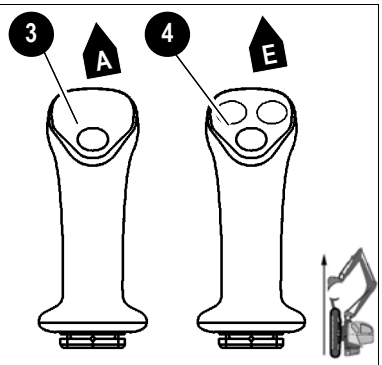


Fig. 187: Lowering the boom with the engine stopped

Lower the boom as follows:

☞ *Ensure that no-one is dangerously close to the machine.*

☞ *Turn the starting key to position "**1**".*

☞ *Press forward and hold the control lever (**A** and **E**)*

➥ Until the boom is completely lowered.

☞ *Return the control lever to neutral.*

Releasing pressure

Proceed as follows:

☞ *Stop the engine.*

☞ *Move the control lever in all directions a few times.*

➥ This releases the pressure in the hydraulic system – *see chapter 3.56 Releasing the pressure on the Operating Hydraulics* on page 3-92.

https://truckmanualshub.com/

3.54 Tilting the upper carriage – Vertical Digging System (option)

DANGER

Crushing hazard. Tilting the machine in the immediate vicinity of walls or parts of buildings.

Risk of serious injury or death.

- All persons must stay clear of the danger zone when tilting the machine.
- Neither access nor leave the machine when it is tilted.
- All doors and covers must be closed when tilting the machine.

WARNING

Tipping hazard. Perform smooth and slow movements with the machine.

Risk of injury or death.

- Tilt the machine only on firm ground.
- Tilt the machine only if it is at a standstill and if the attachment is empty.
- Never turn, lower, or set down the attachments abruptly.
- Do not extend or retract the boom abruptly.
- On a slope, position the machine so that the upper carriage is tilted toward the slope.
- Do not drive or work on slopes steeper than 15° even with a VDS machine.

NOTICE

When working in the immediate vicinity of a wall or parts of a building, ensure that the upper carriage does not touch anything when it is tilted.

Important

Pay attention to the following chapter: *"Operating on slopes"* *on page 3-26*

Tilting the upper carriage hydraulically and steplessly by up to 15° allows you to compensate slopes of up to 27 %.

Operation (up to serial no. AH02781)

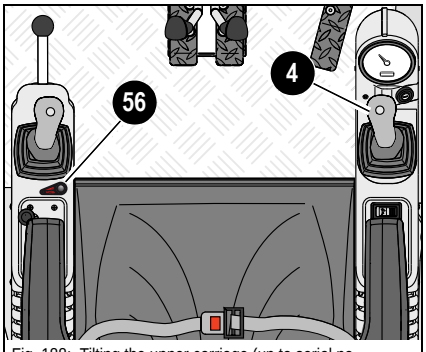


Fig. 188: Tilting the upper carriage (up to serial no. AH02781)

Tilting the upper carriage:

☞ Press and hold button **56**.

☞ Press control lever **4** to the right.

➥ The upper carriage is tilted.

☞ If the required tilt angle is reached, return control lever **4** to the neutral position and release button **56**.

https://truckmanualshub.com/

Lowering the upper carriage:

☞ Press and hold button **56**.

☞ Push control lever **4** to the left.

➥ The upper carriage is lowered.

☞ If the required tilt angle is reached, return control lever **4** to the neutral position and release button **56**.

Operation (from serial no. AJ02777)

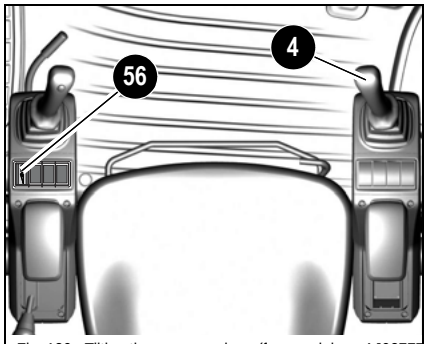


Fig. 189: Tilting the upper carriage (from serial no. AJ02777

Tilting the upper carriage:

☞ Press and hold switch **56** backward.

☞ Press control lever **4** to the right.

➥ The upper carriage is tilted.

☞ If the required tilt angle is reached, return control lever **4** to the neutral position and release button **56**.

Lowering the upper carriage:

☞ Press and hold switch **56** backward.

☞ Push control lever **4** to the left.

➥ The upper carriage is lowered.

☞ If the required tilt angle is reached, return control lever **4** to the neutral position and release button **56**.

https://truckmanualshub.com/

3.55 Vario (6003 option)

WARNING

Crushing hazard. Lower the boom to the ground when using the Vario feature.

Risk of injury or death.

- When using the Vario feature, support the machine with the boom on the ground.

Vario operation

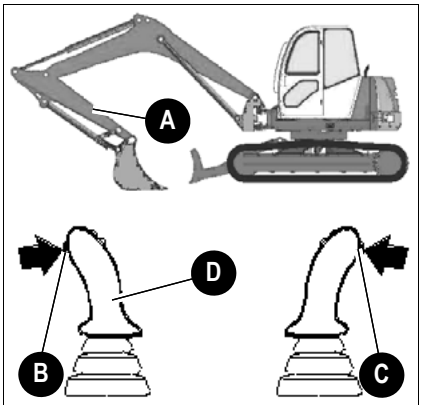


Fig. 190: Vario operation

The following steps must be followed under all circumstances when changing the eccentric position:

☞ *Lower boom **A** to the ground.*

☞ *To unlock the Vario feature, press and hold both front switches on the left-hand joystick **B** and right-hand joystick **C**.*

☞ Press and hold both buttons **B** and **C** about 5 seconds without moving the joysticks to unlock.

- The Vario feature has four lock positions at offset positions of 90° each.

☞ *Press the left-hand joystick **D** to the left or right for a 90° rotation, press and hold buttons **B** and **C** as you do so.*

☞ Both buttons **B** and **C** can be released once the machine moves.

➥ The Vario feature automatically engages after a 90° rotation.

☞ *If repositioning beyond 90° is required with the Vario feature, press buttons **B** and **C** beyond the 90° lock position.*

➥ As soon as buttons **B** and **C** are released, the Vario feature engages in the next possible lock position.

Important

Ensure that the lock is engaged correctly.

Driving across slopes with the Vario feature

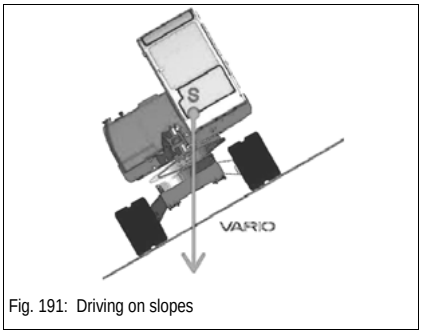


Fig. 191: Driving on slopes

WARNING

Tipping hazard. For safety reasons, only the eccentric position shown in *Fig. 191* may be selected for driving across slopes.

Risk of injury or death.

- Put machine in correct position before driving across slopes.

For increased stability for driving across slopes, position the excavator with respect to the slope (see *Fig. 191*).

https://truckmanualshub.com/

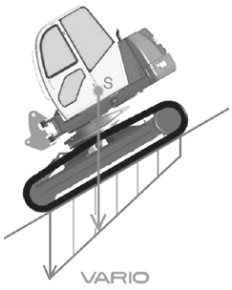


Fig. 192: Driving on slopes

For improved driving features on slopes, reposition the center of gravity toward the slope with the Vario feature.

Danger zone of the Vario feature

DANGER

Crushing hazard. Do not allow anyone to stay in the danger zone.

Risk of serious injury or death.

- Bear in the mind the danger zone when driving and working with the machine - see *Fig. 193*.

Depending on the position of the Vario feature, stability is higher or lower with respect to a standard machine. Observe the following
– *see chapter 6.27 Lift capacity table 6003* on page 6-25 and the danger zones *Fig. 193*.

Danger zone:

A	B
Crosswise excavation	Lengthwise excavation
Reduced stability	Upper carriage not in proper range with respect to Vario feature, no modification of stability (hydraulically limited)

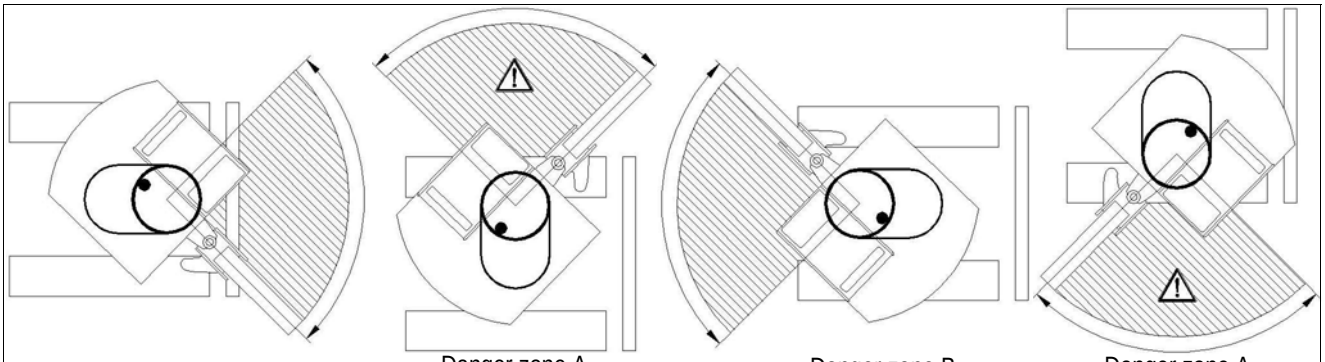


Fig. 193: Danger zone

https://truckmanualshub.com/

Working with the Vario feature

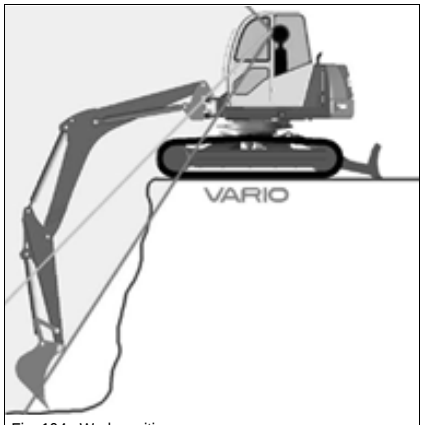


Fig. 194: Work position

The upper carriage can be rotated to the side with the stabilizer blade for excavating pits. This ensures increased stability when working on the side opposite the stabilizer blade, with perfect visibility of the pit.

Improved reach with the Vario feature

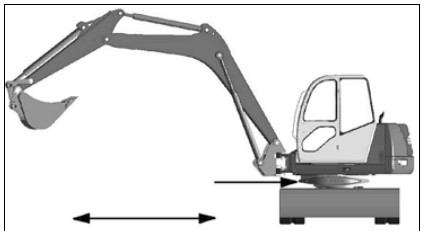


Fig. 195: Vario reach

- Reach can be improved with the Vario feature.

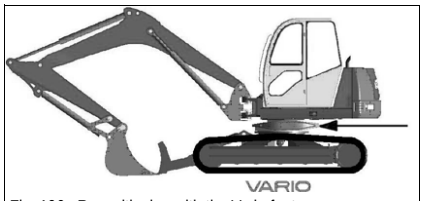


Fig. 196: Repositioning with the Vario feature

The attachment can be moved up to the stabilizer blade by repositioning the upper carriage to the side opposite the blade.

https://truckmanualshub.com/

3.56 Releasing the pressure on the Operating Hydraulics

CAUTION

High pressure fluid ejection hazard. Confirm that no-one is close to the machine.

Risk of injury.

- Before connecting or removing hydraulic lines from the attachment, ensure that the operating hydraulics is not under pressure.

Important

The hydraulic system of the machine is still pressurized even when the engine is not running. The hydraulic quick couplers can be released, however they cannot be re-attached due to the residual pressure in the lines.

- Release the pressure in the sections of the system and hydraulic lines which are to be opened before starting setup or repair work, for example fitting/ removing an attachment.

Releasing pressure

☞ *Park the machine on firm and level ground.*

☞ *Lower the attachment completely to the ground.*

☞ *Stop the engine.*

☞ *Turn the starting key to position **1**.*

☞ *Move the control lever or the pedal of the hydraulic circuit in all directions repeatedly.*

➥ The pressure in the system sections that have been actuated is released. This can be seen by the brief movement the hoses make as the pressure is actually released.

➥ Uncouple the attachment immediately after the pressure has been released, otherwise pressure can be created again.

Pressure release with proportional controls (option)

☞ *Park the machine on firm and level ground.*

☞ *Lower the attachment completely to the ground.*

☞ *Stop the engine.*

☞ *Turn the starting key to position **1**.*

➥ Release the load only after you have switched on ignition and waited 2 seconds (otherwise if actuated too early, the characteristic curve is shifted and the load is not released).

☞ *Release the pressure on the auxiliary hydraulics or the 3rd control circuit by pressing the rocker switch connected with the left or right-hand proportional joystick to the left and right.*

➥ The pressure in the system sections that have been actuated is released. This can be seen by the brief movement the hoses make as the pressure is actually released.

➥ Uncouple the attachment immediately after the pressure has been released, otherwise pressure can be created again.

https://truckmanualshub.com/

3.57 Attaching attachments

Attaching the attachments is described below for a bucket. If you are fitting or removing attachments with their own hydraulic functions – for example clamshell or offset bucket – you must follow the special information given in the Operator's Manual of the attachment. Also refer to the Operator's Manual of the attachment for the procedure to follow for fitting an attachment onto a quickhitch.

Specific safety instructions

WARNING

Personal injury hazard. Using improper tools or installation techniques while attaching attachments can cause injury.

Risk of personal injury.

- Avoid accidents and injuries by following the information below:
  - Stop the engine.
  - Fold the control lever base up.
  - Remove the starting key.
  - Attach attachments only with suitable tools.
  - Do not align components with your fingers or your hands but use suitable tools.
- Do not attempt to attach attachments on sloping or uneven surfaces. The excavator and the attachment to be attached shall be on firm surfaces to avoid sudden unintentional movement.
- Align the attachment holes in the bucket with a drift to facilitate sliding the pin into the respective holes provided for the connection between attachment and stick.
- Driving in pins with a suitable tool (e. g. soft-face hammer) can still cause them to splinter, which can cause severe personal injury.
- Always wear protective goggles, helmets, gloves, and other safety equipment when installing the attachment connecting pins.
- Do not remove the connecting pins from the bucket attachment unless the bucket has been stabilized to prevent motion when the connecting pins are removed. Do not stand on the closed (back) side of the bucket attachment when disconnecting the bucket. Do not place your foot underneath the bucket.
- Do not attempt to disconnect the bucket attachment until it rests firmly on the ground or a stable surface. Removing the connecting pins of the bucket attachment with the attachment raised is an unsafe practice that will create a hazardous condition from the falling bucket.
- Do not align the connecting holes with fingers. Do not place fingers and hands over the connecting brackets to align the connecting hole to avoid potential shearing, pinching or crushing injuries.
- Once you have attached the attachments, or before starting work, ensure that the attachment is safely locked with the stick and the tilt rod, or with the quickhitch (option).

https://truckmanualshub.com/

Removing a bucket

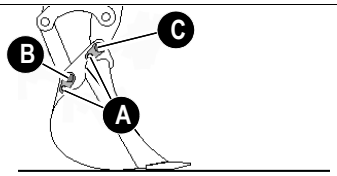


Fig. 197: Removing a bucket

- Lower the bucket to the ground with its flat side facing down.
- Stop the engine.
- Raise the control levers.
- Remove the starting key.
- Remove linchpin **A**.
- First remove pin **B**, and then pin **C**. Carefully expel pins that are stuck with a suitable tool (e. g. soft-face hammer and brass punch).

If pin **C** is stuck:

- Start the engine.
- Slightly raise and lower the boom to take the load off the pin.
- Stop the engine.
- Fold the control lever base up.
- Remove the starting key.

Important

Place the bucket only with minimum pressure on the ground as you remove the pins. The higher the pressure on the ground, the higher the resistance and the more difficult it is to remove the pins.

Mounting a bucket

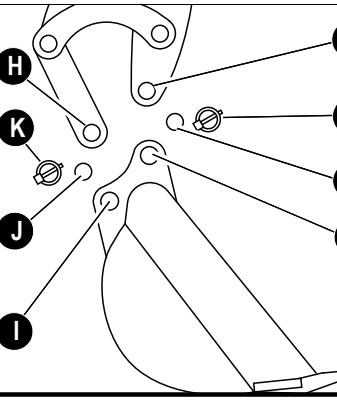


Fig. 198: Mounting a bucket

- Mount a bucket only if it is positioned on level ground with the flat side facing downward.
- Apply grease to the pins and joints before inserting the pins.
- Start the engine.
- Straighten the stick so that bores **D** and **E** are flush.
- Insert greased pin **F**.
- Actuate the stick hydraulic cylinder until bores **H** and **I** are flush.
- Insert the greased pin **J**.
- Mount linchpin **K**.

https://truckmanualshub.com/

3.58 Quickhitch (option)

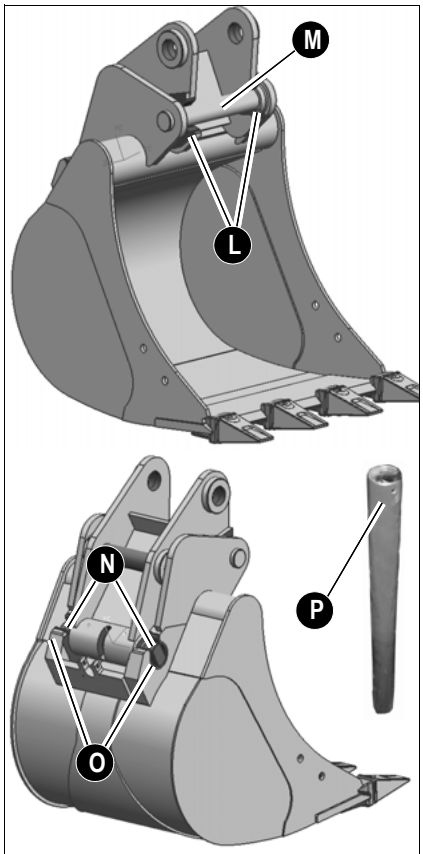


Fig. 199: Bucket with quickhitch

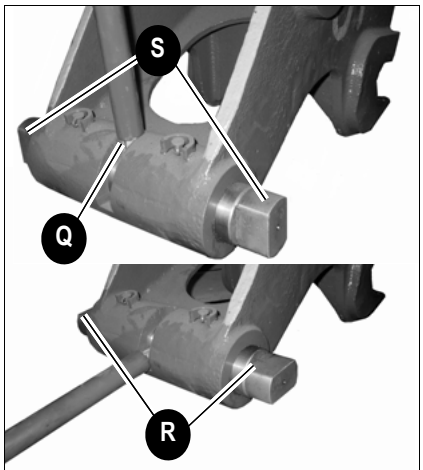


Fig. 200: Bucket with quickhitch

WARNING

Accident hazard. The attachment must always be safely locked onto the quickhitch.

Risk of injury.

- Before starting work, ensure that the attachment is securely locked onto the quickhitch by means of the lock mechanism. You must be able to see the lock on either side of the mounting bore of the attachment.

Picking up

- Approach the machine to the attachment.
- Hitch coupling claws **L** of the quick coupler onto coupling bar **M** of the bucket.
- Engage lock mechanism **N** into mounting bore **O**.
- Place the bucket on level ground.

Locking

- Stop the engine.
- Insert tube **P** (included in scope of delivery) in clamping sleeve **Q**.
- Press the tube downward.
- The lock pin must be in position **R**.

Unlocking

- Stop the engine.
- Insert tube **P** (included in scope of delivery) in clamping sleeve **Q**.
- Press the tube upward.
- The lock pin must be in position **S**.
- Disengage lock mechanism **N** at the mounting bores **O**.
- Disengage coupling bar **M** at coupling claws **L**.
- Place the attachment on level ground.

https://truckmanualshub.com/

3.59 Hydraulic quickhitch Easy Lock (option)

WARNING

Accident hazard. Before working, confirm that the attachment is mounted correctly and that it is fully functional.

Risk of injury.

- Do not allow anyone to stay in the danger zone.
- Ensure correct locking with a short and rapid succession of stick and bucket movements as close as possible to the ground.
- Do not operate an attachment with a malfunctioning lock under any circumstances.
- For system-specific reasons, the hydraulic quickhitch opens and closes with the functions “Stabilizer blade”, “Auxiliary hydraulics”, “Boom swivel” and “Rotate upper carriage”.
- For safety reasons, only use the function “Raise stabilizer blade” to open or close.

Important

Before putting this feature into operation, specific training must be performed by a qualified technician and must be understood by the operator. For reasons of safety, the quickhitch must be operated with two control elements. This avoids opening the quickhitch unintentionally during work operation.

Picking up an attachment

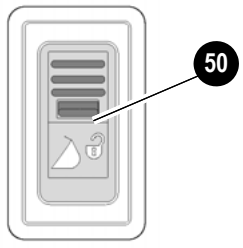


Fig. 201: Easy Lock switch (up to serial no. AH02781)

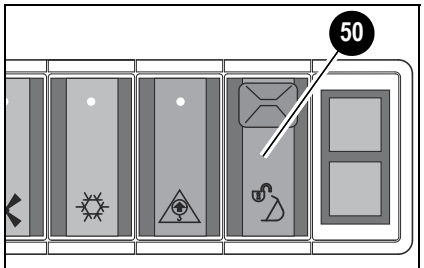


Fig. 202: Easy Lock switch (from serial no. AJ02777)

NOTICE

The optical check pin **K** must be fully retracted. If it can still be seen, or if you are unsure whether the bucket is mounted on the machine without any play:

- Troubleshoot and rectify immediately.

☞ *Actuate switch **50**.*

➥ The buzzer sounds.

➥ The hydraulic quickhitch is enabled and can be operated.

https://truckmanualshub.com/

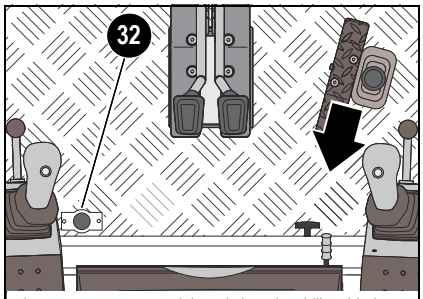


Fig. 203: Foot-operated tip switch and stabilizer blade lever (up to serial no. AH02781)

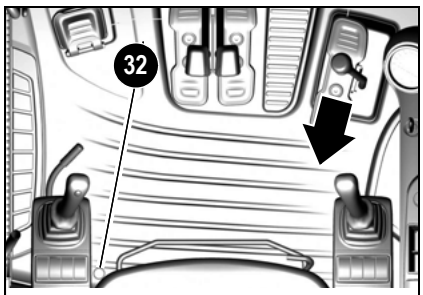


Fig. 204: Foot-operated tip switch and stabilizer blade lever (from serial no. AJ02777)

☞ *Press and hold foot-operated tip switch **32**.*

☞ *Pull and hold the stabilizer blade lever backward (as far as it will go).*

➥ The quickhitch opens.

➥ Check pin **K** (red) indicates that the quickhitch is fully open.

☞ *The stabilizer blade lever can be released once the quickhitch is open.*

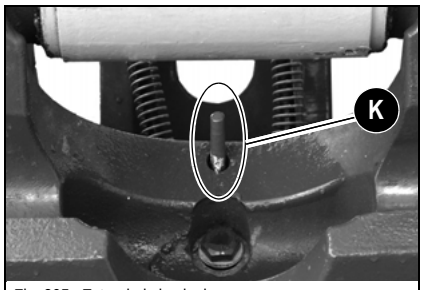


Fig. 205: Extended check pin

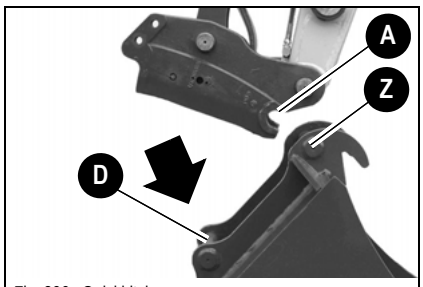


Fig. 206: Quickhitch

☞ *Hitch claws **A** (on the side of the machine) into pins **Z** of the attachment mount.*

☞ *Move the attachment inward with a turning movement by actuating the bucket hydraulic cylinder, so that the second pin **D** of the attachment also makes contact with quickhitch.*

☞ *Check whether the attachment touches the quickhitch with the second pin **D**.*

☞ *Release foot-operated tip switch **32**.*

☞ *Operate the stabilizer blade (raise as far as it will go).*

➥ The quickhitch closes.

☞ *Switch off switch **50**.*

➥ The buzzer is mute.

➥ The hydraulic quickhitch is disabled.

☞ *Check the bucket and ensure that it is firmly installed.*

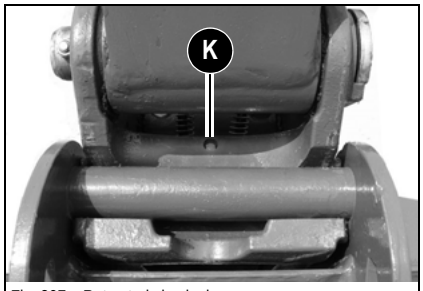


Fig. 207: Retracted check pin

https://truckmanualshub.com/

Setting down an attachment

CAUTION

Crushing hazard. Set down attachments only on surfaces that allow to pick up them without any problems later on.

Risk of personal injury.

- Do not set down the attachment on soft, sloping, slippery surfaces or near edges.

☞ *Lower the attachment to about 5 – 10 cm (2 – 4 in) above the ground.*

☞ *Actuate switch **50**.*

➥ The buzzer sounds.

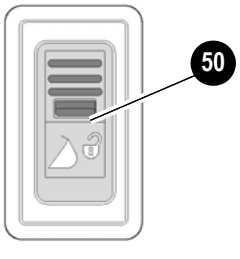


Fig. 208: Easy Lock switch (up to serial no. AH02781)

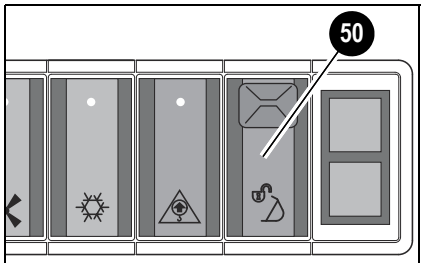


Fig. 209: Easy Lock switch (from serial no. AJ02777)

☞ *Press and hold foot-operated tip switch **32**.*

☞ *Operate the stabilizer blade (raise as far as it will go).*

➥ The quickhitch opens and unhitches the attachment.

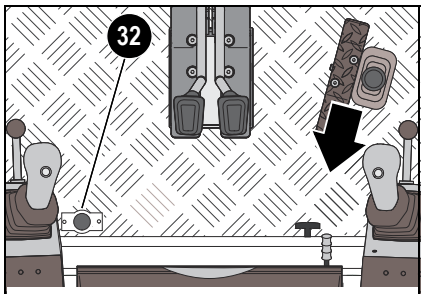


Fig. 210: Foot-operated tip switch and stabilizer blade lever (up to serial no. AH02781)

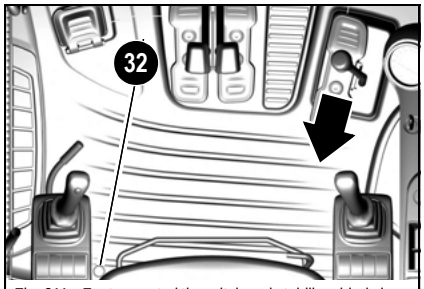


Fig. 211: Foot-operated tip switch and stabilizer blade lever (from serial no. AJ02777)

https://truckmanualshub.com/

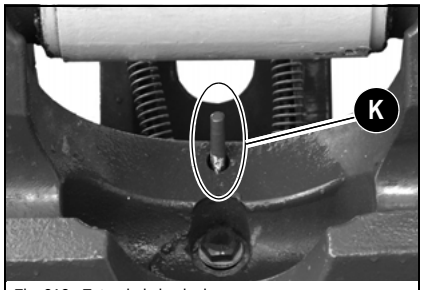


Fig. 212: Extended check pin

➥ Check pin **K** (red) indicates that the quickhitch is fully open.

☞ *Release the stabilizer blade lever.*

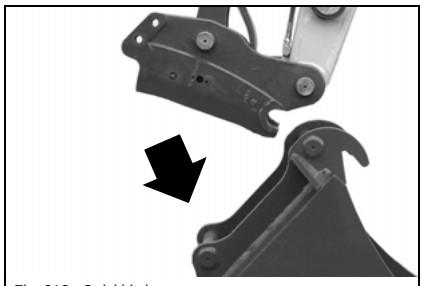


Fig. 213: Quickhitch

☞ *Retract the bucket hydraulic cylinder.*

➥ Set down the attachment.

☞ *Raise the boom.*

☞ *Release foot-operated tip switch **32**.*

☞ *Operate the stabilizer blade (as far as it will go).*

➥ The quickhitch closes.

☞ *Release the stabilizer blade lever.*

☞ *Switch off switch **50**.*

➥ The buzzer is mute.

Shovel bucket operation

With some restrictions, Wacker Neuson backhoe buckets can also be used for shovel bucket operation.



Fig. 214: Shovel bucket operation



Fig. 215: Possible damage

NOTICE

Do not tilt the bucket fully back in shovel bucket operation (see *Fig. 215*), otherwise the bucket base can touch and damage the stick.

https://truckmanualshub.com/

3.60 Powertilt (option)

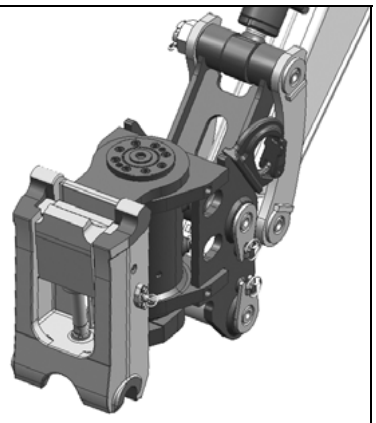


Fig. 216: Powertilt versions

WARNING

Crushing hazard. Risk due to the rotating movements of the Powertilt unit.

Risk of severe injury or death.

- Do not allow anyone to stay in the danger zone.

WARNING

Accident hazard. The Powertilt unit modifies a machine's geometry.

Risk of severe injuries.

- When working with the Powertilt unit and the attachment, ensure that they do not touch the boom or the cab.

Two versions are available:

- Powertilt with Easy Lock without load hook.
- Powertilt with Easy lock and load hook (option).

Do not put the Powertilt unit into operation unless:

- The machine is equipped with an acoustic or optical warning device – *see chapter 3.62 Load indicator (option)* on page 3-103.
- The machine is equipped with a boom lowering control device – *see chapter 3.63 Load holding control device safety feature (option)* on page 3-104.
- You read, understand and follow the instructions in the following chapter – *see chapter 2.9 Applications with Lifting Gear* on page 2-9.

Important

When using the Powertilt unit, the maximum bucket width is limited to 1400 mm (55 in).

Attaching

Important

The Powertilt unit may be installed and removed only by an authorized Wacker Neuson service center.

https://truckmanualshub.com/

Operation

The Powertilt function is only available with proportional controls.

Important

The Powertilt function is enabled once the machine is started.

➥ The 3rd control circuit is disabled.

WARNING

Crushing hazard. Risk due to the rotating movements of the Powertilt unit.

Risk of severe injury or death.

- Do not allow anyone to stay in the danger zone.

Right-hand control lever (Powertilt)

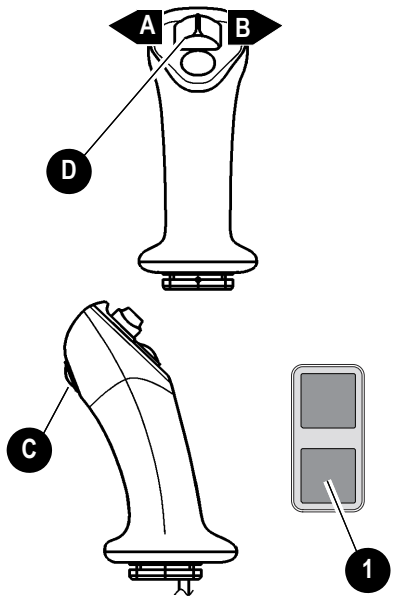


Fig. 217: Right-hand control lever

The Powertilt functions are operated with the right-hand control lever**.**

Position	Lever	Function
A	To the left	Powertilt turns to the left
B	To the right	Powertilt turns to the right
C		Powertilt and 3rd control circuit changeover

Enabling the 3rd control circuit

☞ *Press button **C** on the control lever.*

☞ *The unit installed on the 3rd control circuit can be moved or turned to the left **A** or right **B** with slide switch **D**.*

☞ *Indicator light **1** of the proportional control status indicator illuminates.*

https://truckmanualshub.com/

3.61 Auxiliary hydraulics connections

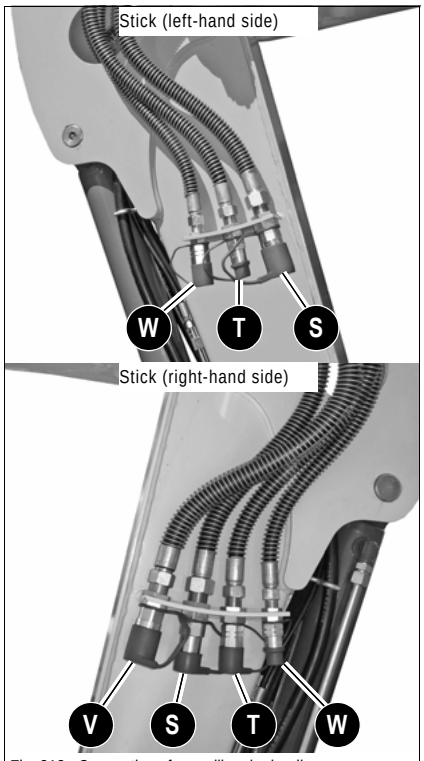


Fig. 218: Connections for auxiliary hydraulics

Connection	Stick (left)	Stick (right)
S	Auxiliary hydraulics	Auxiliary hydraulics
T	3rd control circuit (option)	3rd control circuit (option)
V		Hammer return line
W	Grab operation (option)	Grab operation (option)

Important

Follow the instructions in the Operator's Manual of the attachment manufacturer for connecting the auxiliary hydraulics to attachments.

Quick-connect couplings

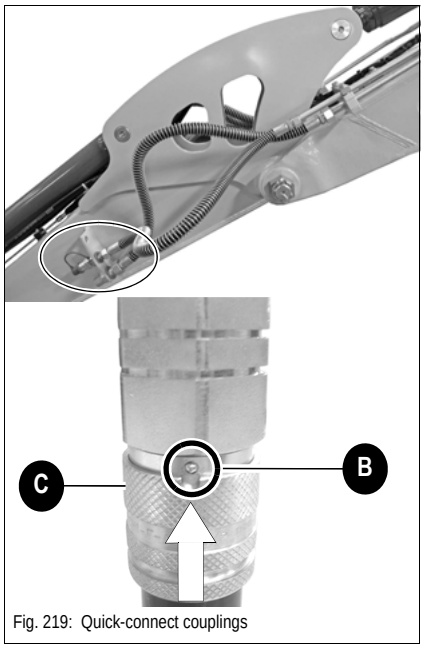


Fig. 219: Quick-connect couplings

Removing the coupling

☞ *Releasing the pressure in the work hydraulics – see chapter 3.56 Releasing the pressure on the Operating Hydraulics on page 3-92.*

☞ *Stop the engine.*

☞ *Fold the control lever base up.*

☞ *Turn lock sleeve **C** toward lock ball **B**.*

☞ *Pull lock sleeve **C** upward.*

➥ The coupling opens.

Connecting the coupling

☞ *Releasing the pressure in the operating hydraulics – see chapter 3.56 Releasing the pressure on the Operating Hydraulics on page 3-92.*

☞ *Fold the control lever base up.*

☞ *Remove dirt from the coupling (extends the service life of the coupling).*

☞ *Align the male and female ends of the coupling and push them together until movement stops.*

☞ *Pull the coupling sleeve away from the ball (Fig. 219) until it stops moving.*

☞ *Rotate the sleeve (Fig. 219) to misalign the slot in the sleeve with the ball **B** in the opposite half of the coupling. This will prevent unintended sleeve movement that may cause the coupling to disconnect unintentionally.*

https://truckmanualshub.com/

3.62 Load indicator (option)

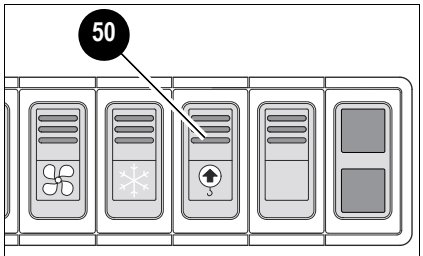


Fig. 220: Instrument panel switches (up to serial no. AH02781)

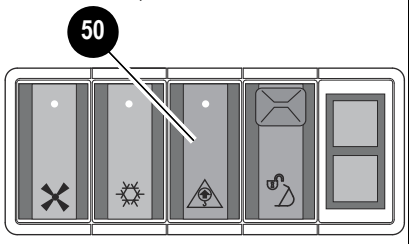


Fig. 220: Instrument panel switches (from serial no. AJ02777)

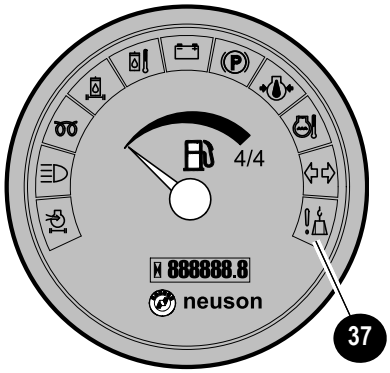


Fig. 220: Safe load indicator lights (up to serial no. AH00578)

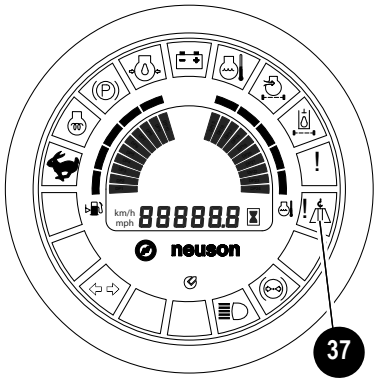


Fig. 220: Safe load indicator lights (from serial no. AH00579)

WARNING

Accident hazard. Load indicator (option) not switched on or adjusted incorrectly.

Risk of injury.

- Always engage the load indicator (option).
- Contact a Wacker Neuson service center if the load indicator (option) is not adjusted correctly (for example, if it responds too early or too late).

Switching on the load indicator

☞ *Press switch **50** on the instrument panel backward.*

➥ Indicator light **37** in the round display element illuminates to indicate that the load indicator (option) is active.

Switching off the load indicator

☞ *Press switch **50** on the instrument panel forward.*

The load indicator light illuminates, and an acoustic warning is given, to warn the user he has reached the maximum admissible load. Any further increase of the load moment can cause the machine to overturn in this situation. Therefore the user must immediately reduce the load moment as follows:

☞ *Reduce the distance between upper carriage and the load until both the acoustic signal and the indicator light in the round display element go out.*

Accidents cannot be fully excluded in spite of the load indicator (option) if work is not performed correctly.

This applies in particular to:

- Hitching lifting gear or loads on the lower side.
- Excessive deceleration or acceleration forces (abrupt braking or slewing with a load).
- Loads falling onto the lifting gear.
- Pulling sideways.
- Traveling the machine on steep slopes.
- Wind loads.

Important

Avoid these risky situations by carefully planning your work with the machine.

https://truckmanualshub.com/

3.63 Load holding control device safety feature (option)

Important

The load holding control valve limits boom drop in the event of a boom hydraulic hose assembly or fitting failure (reference ISO 8643).

☞ *Proceed as follows in case of damage:*

- Stop the machine immediately.
- Move the boom to transport position.
- Fold the control lever base up.
- Stop the engine.
- Remove the starting key and lock the cab.
- Secure the machine and the attachment.
- Have damage to the hydraulic system and to the load holding control valve itself immediately repaired and checked by a qualified technician.

Environment

Collect the drained hydraulic oil in a suitable container.

- Dispose of drained hydraulic oil by an ecologically safe method.
- Always contact the relevant authorities or commercial establishments in charge of oil disposal before disposing of biodegradable oil.

3.64 Applications with lifting gear

DANGER

Crushing hazard. The excavator may be used for applications with lifting gear ONLY if the prescribed safety devices are in place and functional.

Failure to follow this precautionary measure will lead to fatal injury or death.

- Maximum authorized lifting capacity of over 1000 kg (2205 lbs.) or an overturning moment of over 40000 Nm (29,500 ft. lbs.).
- An acoustic and optical warning device – *see chapter 3.62 Load indicator (option)* on page 3-103.
- Boom-lowering control device – *see chapter 3.63 Load holding control device safety feature (option)* on page 3-104.
- Suitable equipment for fastening and securing loads must be available.
- The lift capacity table must be observed - pages *6-17* to *6-33*
- Get informed on and follow the legal regulations of your country.
- Observe the safety instructions for lifting gear applications – *see chapter 2.9 Applications with Lifting Gear* on page 2-9.

- Only hitch loads that do not exceed the load-bearing capacities of the machine or the lifting gear – see lift capacity tables on pages *6-17* to *6-33*.

https://truckmanualshub.com/

Lifting gear applications

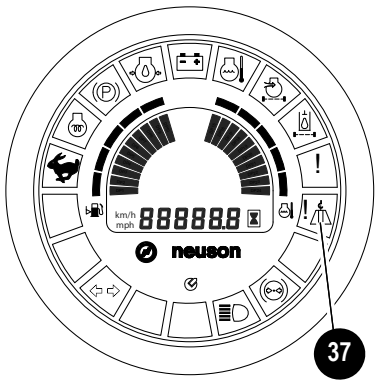


Fig. 221: Safe load indicator

Always switch on the load indicator (option) during lifting gear applications and observe indicator light **37**.

As soon as indicator light **37** illuminates:

☞ *Set down the load on the ground.*

☞ *Reduce the distance between upper carriage and the load and/or*

☞ *Reduce the load.*

Fastening loads

WARNING

Accident hazard. Persons guiding the load or securing it must stay in visual contact with the machine operator.

Risk of injury.

- *– see chapter 2.9 Applications with Lifting Gear* on page 2-9.

NOTICE

The load must be secured so as to prevent it from falling or slipping.

- Use suitable and sufficiently dimensioned lifting gear for picking up material.
- Always wear protective gloves when working with lifting gear.
- *– see chapter 2.9 Applications with Lifting Gear* on page 2-9.

3.65 Worksite Evaluation and Preparation

Examining the site

The driver must make himself familiar with the site before starting work.

He must know:

- Whether there are any underground pipe lines (gas, water etc.) or electric cables in the work area. If this is the case, measures must be taken to ensure safety – together with the operator of the supply lines.
- Whether the ground is stable enough for traveling and operating on. Special attention must be paid to the edges of slopes and pits, to undermined sections of the site etc.
- Whether the visibility is sufficient. In case of poor visibility (e.g. if the supply lines cannot be seen by the driver), always work with a second person giving signals that have been agreed upon beforehand.

Preparing the ground

The faster and safer the machine and transport vehicles can move on the work site, the higher safety and profitability during work. To this effect, prepare the work area as follows before starting work:

- If possible, remove large obstacles from the work area.
- Level out thrown-up and very uneven ground.

https://truckmanualshub.com/

3.66 Working with the machine

Working with the standard bucket

The following section describes work operations with the machine equipped with the standard bucket.

The standard bucket is mainly used for digging earth, and for loosening, picking up, digging and loading loose or solid material.

Prohibited work procedures

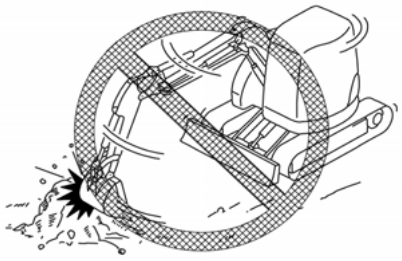


Fig. 222: Working with the swivel force

Swing function

☞ *Do not use the swivel force of the upper carriage to compact the ground or tear down piles or walls.*

☞ *Do not allow the bucket teeth to penetrate into the ground as you rotate the upper carriage.*

➥ Working this way damages the attachments.

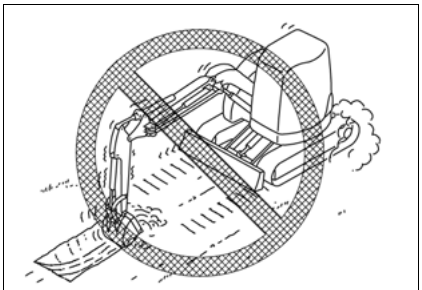


Fig. 223: Working with the drive force

Excavator propulsion system

☞ *Do not allow the bucket to penetrate into the ground and do not excavate by using the drive force of the machine.*

➥ Working this way can damage the machine or the attachments.

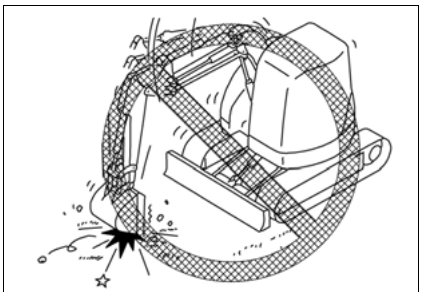


Fig. 224: Working with the falling force by lowering the

Dropping boom to compact soil

☞ *Do not suddenly drop the bucket to increase penetration, break material, or compact material.*

➥ Working this way can greatly reduce the machine's service life.

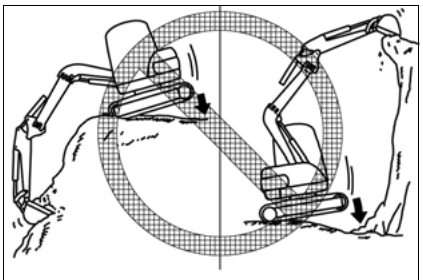


Fig. 225: Working with the falling force of the machine

Dropping the Excavator

☞ *This is not only hazardous operation; it is abusive operation.*

https://truckmanualshub.com/

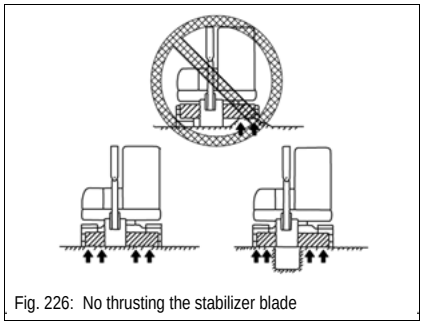


Fig. 226: No thrusting the stabilizer blade

Do not thrust the stabilizer blade against obstacles

☞ *Do not thrust the stabilizer blade against rocks or blocks to avoid damage to the stabilizer legs/the stabilizer blade and the hydraulic cylinders.*

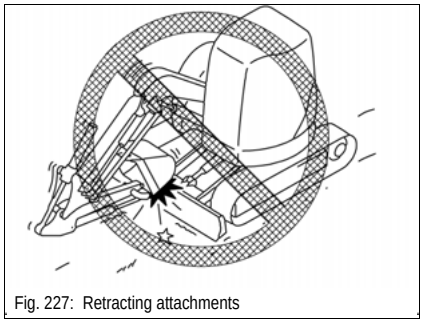


Fig. 227: Retracting attachments

Retracting attachments

☞ *Ensure that the bucket does not hit the stabilizer blade as you retract attachments for driving or transport.*

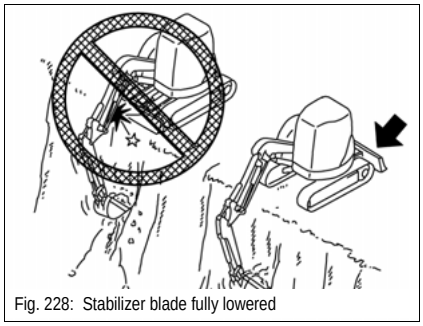


Fig. 228: Stabilizer blade fully lowered

Stabilizer blade fully lowered

☞ *Fully lower the stabilizer blade when using it on the side opposite the excavation side.*

Excavator operating position

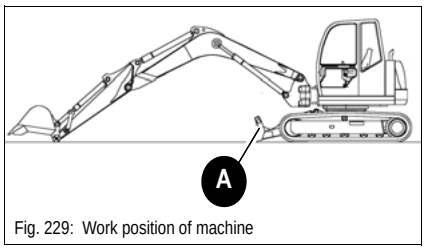


Fig. 229: Work position of machine

☞ *Place stabilizer blade **A** on the excavation side.*

https://truckmanualshub.com/

Bucket position when digging

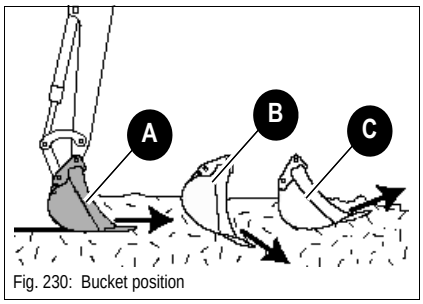


Fig. 230: Bucket position

☞ *Move the bucket as shown in **A**.*

➥ Move the flat side of the bucket parallel to the ground.

Important

Position **B** causes the bucket to penetrate into the ground. Work slows down, and the engine and the hydraulic pump are subject to overload if this position is used over a longer period of time.
Position **C** causes the bucket to be forced upward and not to be filled completely. This slows down work, too.

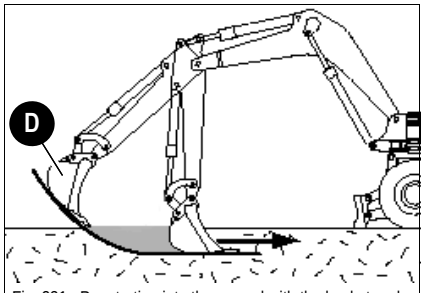


Fig. 231: Penetrating into the ground with the bucket and

☞ *Penetrate into the ground with the bucket **D**.*

☞ *Lower the stick and at the same time align the bucket until*

☞ *reaching the required digging depth and*

☞ *the flat side of the bucket is parallel to the ground (see bucket position).*

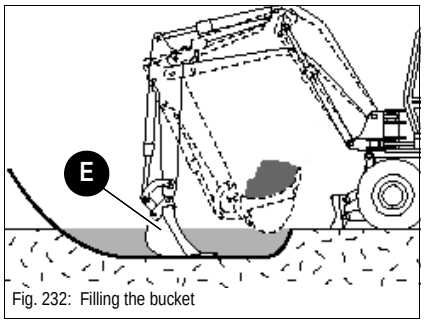


Fig. 232: Filling the bucket

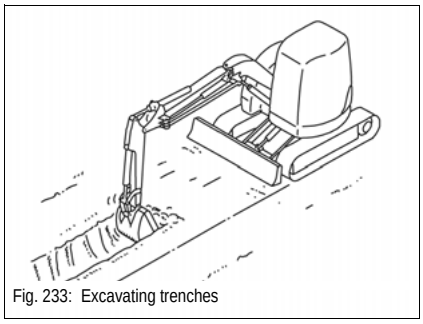
☞ *Pull bucket **E** parallel to the ground toward the machine. At the same time, if possible:*

- Move the stick toward the machine.
- Lower the boom.

☞ *With a sufficiently full bucket **E**:*

- Keep on moving the stick toward the machine and at the same time
- Curl the bucket to complete the filling operation as the stick is moved toward the machine.

Excavating trenches


Fig. 233: Excavating trenches

- Excavating trenches is more efficient

☞ by using a suitable bucket for this work and positioning the tracks parallel to the limit line of the trench.

☞ In case of large trenches, first excavate the side sections and then the center section.

https://truckmanualshub.com/

Loading

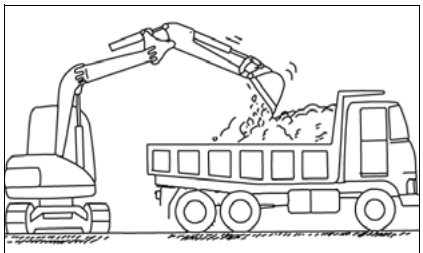


Fig. 234: Loading

- Loading in confined areas with a limited angle of rotation is more efficient
  ☞ by positioning the truck so as to ensure maximum visibility for the driver of the machine.
- Loading material on trucks is easier and faster
  ☞ if the machine is at the rear end of the truck and not at the side.

Grading

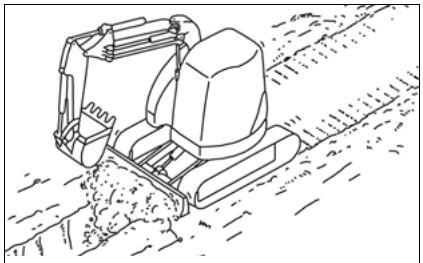


Fig. 235: Grading

- Use the stabilizer blade to fill in trenches and to grade (even out) surfaces.

Important

Work on level ground. Grade with the stabilizer blade first in case of sloping ground.

Excavating trenches sideways

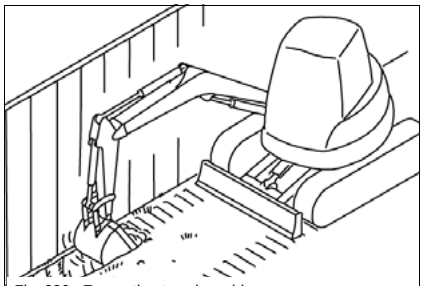


Fig. 236: Excavating trenches sideways

- The machine can be used for excavating trenches sideways in confined areas.
  ☞ by rotating the upper carriage and swivelling the main boom (combined position and movement of both).

https://truckmanualshub.com/

Working alongside trenches

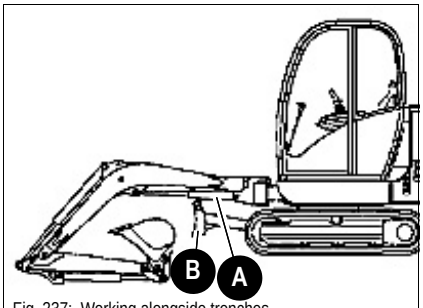


Fig. 237: Working alongside trenches

NOTICE

Risk of damaging piston rod A of the boom hydraulic cylinder when working alongside trenches, slopes etc. and operating the stabilizer blade and the boom incorrectly.

- Always use stabilizer blade **B** for stabilization during excavation work.
- Ensure that stabilizer blade **B** never touches piston rod **A**.
- If you perform deep excavations with stabilizer blade **B** at the front, ensure that piston rod **A** does not touch or rest on stabilizer blade **B** (*Fig. 238*).

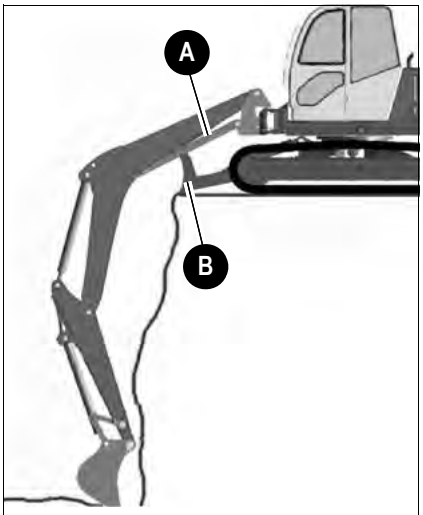


Fig. 238: Deep excavation

Stabilizer blade at rear

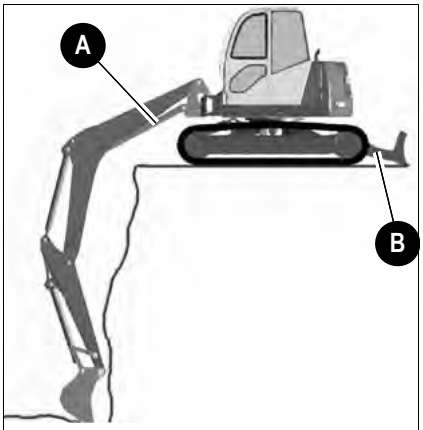


Fig. 239: Deep excavation

WARNING

Crushing hazard. Improper or careless operation of machine when working alongside trenches, slopes, etc., with the stabilizer blade B at the rear.

Risk of injury or death.

- Use this work position (*Fig. 239*) only in an extreme emergency since the machine can tip over forward into the trench.
- We recommend using the first work position (*Fig. 238*) described above and to ensure that piston rod **A** does not touch stabilizer blade **B** under any circumstances.

https://truckmanualshub.com/

Further practical hints for digging

When planning and performing digging work, observe the following points:

- Exits from pits must be outside the digging line and as level as possible.
- Dig by removing adjacent strips if possible.
- Always travel out of an excavation up the grade, with the bucket on the up slope side of the machine.
- When entering an excavation down a slope with a loaded bucket, always travel with the bucket on the up slope side.

Loading vehicles

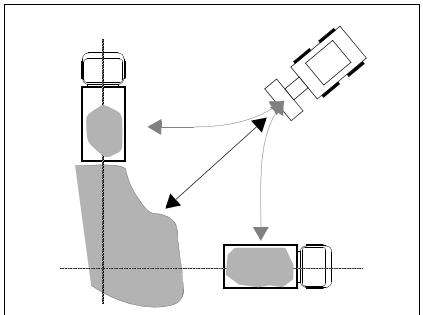


Fig. 240: Loading vehicles

When loading vehicles, we recommend taking the following into account:

- If possible, the vehicle and the working direction of the bucket should form an angle of 45°.
- Raise the full bucket to dump height only as you rotate towards the vehicle to be loaded.
- If possible dump with the wind behind you to keep the dust away from your eyes, air filters and fans.

Freeing the machine

☞ *Dump the bucket until the blade is vertical above the ground.*

☞ *Lower the boom all the way.*

☞ *Slowly dump out the bucket.*

➥ The machine is pushed backward.

☞ *Reverse slowly.*

☞ *Repeat this procedure until the tracks reach firm ground.*

☞ *Reverse the machine away.*

3.67 Grading

WARNING

Crushing hazard. Careful when grading.

Risk of injury.

- Ensure that no-one is in the danger zone when working with the stabilizer blade.

Grading

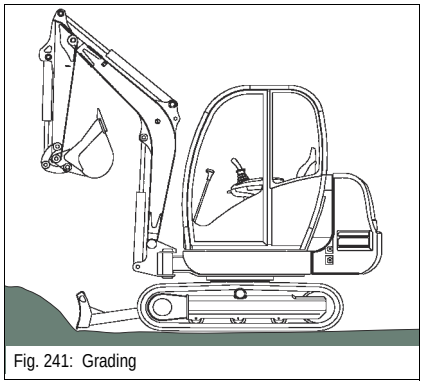


Fig. 241: Grading

☞ *Lower the stabilizer blade to the ground*
– see chapter 3.19 Stabilizer blade operation on page 3-28.

- Set the depth of the layer you want to remove with the stabilizer blade lever.
- No raising the machine by lowering the stabilizer blade.
- The clearance between the stabilizer blade and the ground should be about 1 cm (0.4 in).

https://truckmanualshub.com/

https://truckmanualshub.com/

4 Troubleshooting

The information given in this chapter is provided for maintenance staff, for fast and reliable detection of malfunctions and their appropriate repair.

Repairs must be performed by an authorized Wacker Neuson service center.

4.1 Troubleshooting the engine

Problem	Possible causes	See
Engine does not start or is not easy to start	Wrong SAE grade of engine lubrication oil	*5-54*
	Fuel grade does not comply with specifications	*5-54*
	Malfunctioning or flat battery	*5-38*
	Loose or oxidized cable connections in starter circuit	
	Malfunctioning starter, or pinion does not engage	
	Wrong valve clearance	
	Malfunctioning fuel injector	
	Malfunctioning cutoff solenoid	
	Malfunctioning fuse	
Engine starts, but does not run smoothly or faultless	Fuel grade does not comply with specifications	*5-54*
	Dirty fuel filter	
	Wrong valve clearance	
	Injection line leaks	
	Malfunctioning fuel injector	
Engine overheats. Temperature warning system responds	Oil pressure too low/too high	*5-7*
	Dirty air filter	*5-12*
	Dirty radiator fins	*5-9*
	Coolant level too low	*5-10*
	Malfunctioning fan, torn or loose V-belt	*5-25*
	Resistance in cooling system too high, flow capacity too low	
	Malfunctioning fuel injector	
Insufficient engine output	Oil level too high	*5-7*
	Fuel grade does not comply with specifications	*5-54*
	Dirty air filter	*5-12*
	Malfunctioning air filter maintenance switch or gauge	*3-11*
	Wrong valve clearance	
	Injection line leaks	
	Malfunctioning fuel injector	

https://truckmanualshub.com/

Problem		Possible causes	See
Engine does not run on all cylinders		Injection line leaks	
		Malfunctioning fuel injector	
		Malfunctioning fuel injection pump	
Insufficient or no engine oil pressure		Oil level too low	*5-7*
		Machine inclination too high (max. 15°)	
		Wrong SAE grade of engine lubrication oil	*5-54*
Engine oil consumption too high		Oil level too high	*5-7*
		Worn oil scraper ring	
		Machine inclination too high (max. 15°)	
		Wrong SAE grade of engine lubrication oil	*5-54*
Engine smoke	Blue	Oil level too high	*5-7*
		Wrong oil	
		Machine inclination too high (max. 15°)	
	White[1]	Engine starting temperature too low	
		Fuel grade does not comply with specifications	*5-54*
		Wrong valve clearance	
		Malfunctioning fuel injector	
		Malfunctioning cylinder head	
	Black[2]	Dirty air filter	*5-12*
		Wrong valve clearance	
		Malfunctioning fuel injector	

1. A small amount of white exhaust gas after starting a cold engine is normal.
2. A small amount of black exhaust gas when starting the engine or during load shifts (additional start quantity) is normal.

https://truckmanualshub.com/

Indicator lights

Problem	Possible causes	Troubleshooting
Engine oil pressure indicator light illuminates during operation	Oil pressure too low	Stop the engine immediately, check the oil level and add oil if necessary
		If oil level is OK, malfunctioning oil pump (contact an authorized service center)
Temperature indicator light illuminates or acoustic signal sounds	Oil level too low	Add oil
	Coolant level too low	Add coolant
	Dirty radiator	Clean the radiator
	Fan blades turn too slowly	Retighten the V-belt
	Dirty air filter	Clean the air filter
Alternator charge function indicator light illuminates during operation	Alternator does not charge correctly	Retighten the V-belt
Fuel gauge illuminates	Not enough fuel	Add fuel
Chassis is difficult to slew, or does not slew at all	Brakes cannot be released	Contact an authorized service center
	Insufficient lubrication	Lubricate the live ring
	Malfunctioning slewing motor	Contact an authorized service center
Machine does not work, or with reduced output	Not enough hydraulic oil	Add hydraulic oil
	Hydraulic oil not warm yet	Run the engine warm
	Not enough engine output	Let the engine run warm
	Malfunctioning coupling or pump	Contact an authorized service center
	Pressure limiting valves set too low	Contact an authorized service center
	Damaged hydraulic cylinders	Contact an authorized service center
	Damaged control valves	Contact an authorized service center
Hydraulic cylinder is lowered too fast	Dirty or malfunctioning seals	Contact an authorized service center
	Heavy leakage at the spools	Contact an authorized service center
	Malfunctioning secondary cartridge	Contact an authorized service center
Hydraulic lines overheat	Clogged hydraulic oil filter	Clean or replace the filter

Seals, hoses

Problem	Possible causes	Troubleshooting
Oil, fuel spots under the engine	Loose hose connection	Tighten the hose
	Damaged seal or hoses	Replace the seals and hoses, and check the oil level and add oil if necessary

https://truckmanualshub.com/

Problem	Possible causes	Troubleshooting
Oil loss in hydraulic system	Loose hose fittings	Retighten the hose fittings, check the hydraulic oil level and add oil if necessary
	Damaged seals, hoses or pipe lines	Replace the seals, hoses or pipe lines (authorized service center)

Undercarriage

Problem	Possible causes	Troubleshooting
Not possible to drive	Foreign bodies	Remove foreign bodies
	Malfunctioning gearbox	Contact an authorized service center

https://truckmanualshub.com/

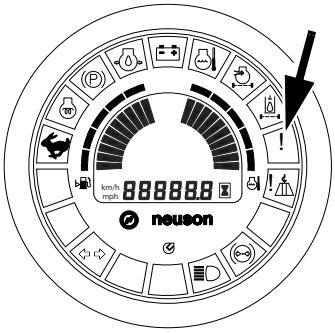
4.2 Engine error codes

In the case of specific errors:

➥ Engine speed and output is reduced.

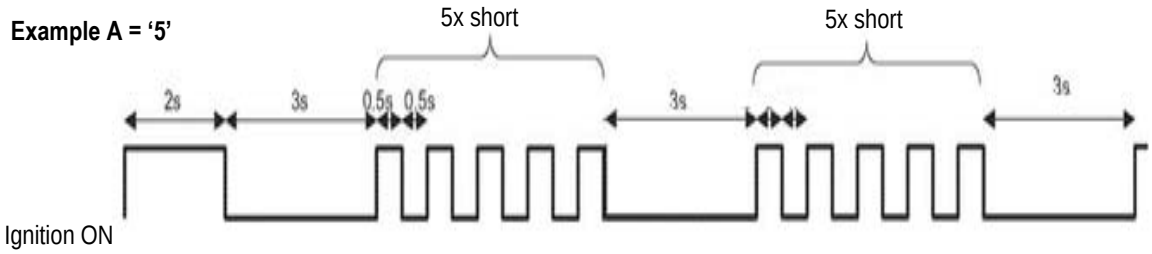
➥ The engine is switched off.

➥ The engine no longer starts.

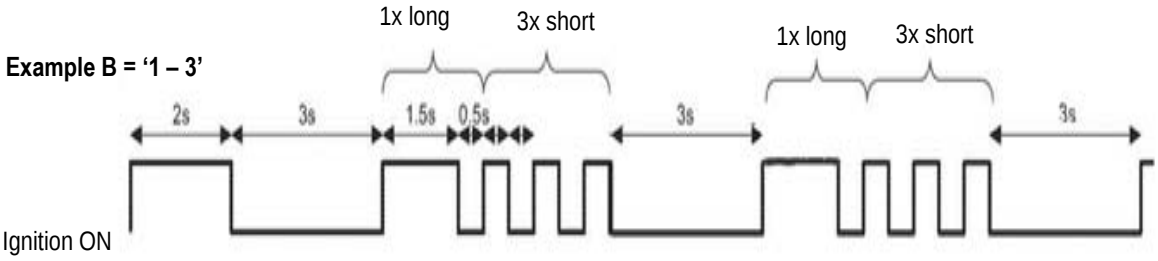


Example for flash codes:

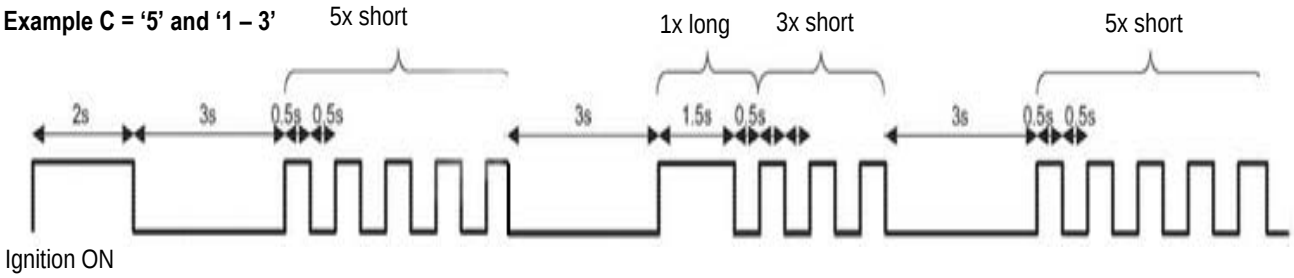
Example A = ‘5’



Example B = ‘1 – 3’



Example C = ‘5’ and ‘1 – 3’



https://truckmanualshub.com/

Engine diagnosis codes

Flash code	Component		Troubleshooting
7	Fuel injection pump regulator sensor	Loose connector	Tighten the connector
		Wiring error	Check and replace the malfunctioning component
		Malfunctioning sensor	Contact an authorized service center
5	Throttle	Wiring error	Check and replace the malfunctioning component
		Malfunctioning throttle lever sensor	Replace the throttle lever sensor
4-1	ECU temperature sensor	Internal ECU error ECU temperature too high	Allow to cool down and contact an authorized service center
2-5	ECU temperature	ECU temperature too high	Allow to cool down
4	Coolant temperature sensor	Wiring harness error	Check and replace the malfunctioning component
		Malfunctioning coolant temperature sensor	Replace the sensor
3-6	Coolant temperature too high	Overheated engine	Let the engine cool down
		Not enough coolant	Add coolant
		Malfunctioning engine cooling system	Check the engine cooling system and replace the malfunctioning component if necessary
		Malfunctioning coolant temperature sensor	Replace the sensor
2-4	5 V sensor	Wiring harness error	Check and replace the malfunctioning component
		Internal ECU error	Contact an authorized service center
2-3	Battery voltage	Worn battery	Replace the battery
		Oxidized battery terminals	Clean the battery terminals
		Malfunctioning alternator	Replace the alternator
		Wiring harness error	Check and replace the malfunctioning component
6	Speed sensor	Loose connector	Tighten the connector
		Malfunctioning starter	Replace the starter
		Malfunctioning fuel injection	Contact an authorized service center
		Battery voltage too low	Charge the battery
		Wiring harness error	Check and replace the malfunctioning component
1-1	Spare speed sensor (alternator)	Loose connector	Tighten the connector
		Malfunctioning wiring harness	Check and replace the malfunctioning component
		Internal ECU error	Contact an authorized service center

https://truckmanualshub.com/

9	Overspeed	Wiring harness error	Check and replace the malfunctioning component
		Engine runs at overspeed	Reduce engine speed and brake the machine
		Internal ECU error	Contact an authorized service center
1-7	Fuel injection pump regulator relay	Loose connector	Tighten the connector
		Malfunctioning fuel injection pump	Contact an authorized service center
		Internal ECU error	Contact an authorized service center
		Wiring harness error	Check and replace the malfunctioning component
1-5	Start relay	Loose connector	Tighten the connector
		Wiring harness error	Check and replace the malfunctioning component
		Malfunctioning start relay	Replace the start relay
		Internal ECU error	Contact an authorized service center
1-4	Cold starter	Loose connector	Tighten the connector
		Wiring harness error	Check and replace the malfunctioning component
		Malfunctioning cold starter solenoid valve	Contact an authorized service center
		Internal ECU error	Contact an authorized service center
1-3	Exhaust gas recirculation valve	Loose connector	Tighten the connector
		Wiring harness error	Check and replace the malfunctioning component
		Malfunctioning stepping motor of exhaust gas recirculation valve	Contact an authorized service center
		Internal ECU error	Contact an authorized service center
2-1	Oil pressure	Loose connector	Tighten the connector
		Wiring harness error	Check and replace the malfunctioning component
		Malfunctioning oil pressure switch	Replace the oil pressure switch
		Internal ECU error	Contact an authorized service center
3-3	Coolant temperature	Overheated engine	Let the engine cool down
		Coolant level too low	Add coolant
		Malfunctioning engine cooling system	Check the engine cooling system
		Wiring harness error	Check and replace the malfunctioning component
		Malfunctioning coolant temperature sensor	Replace the sensor
		Internal ECU error	Contact an authorized service center

https://truckmanualshub.com/

8	Fuel injection pump regulator	Loose connector	Tighten the connector
		Wiring harness error	Check and replace the malfunctioning component
		Malfunctioning regulator	Contact an authorized service center
		Internal ECU error	Contact an authorized service center
		Stuck regulator	Contact an authorized service center
		Engine runs at overspeed	Reduce engine speed and brake the machine
4-1	ECU	Internal ECU error	Contact an authorized service center
1-6	Main relay	Loose connector	Tighten the connector
		Wiring harness error	Check and replace the malfunctioning component
		Malfunctioning main relay	Replace the main relay
		Internal ECU error	Contact an authorized service center
1-2	CAN connection	Battery voltage too low	Charge the battery
		Loose connector	Tighten the connector
		Wiring harness error	Check and replace the malfunctioning component
		Internal ECU error	Contact an authorized service center
4-2	Antitheft protection	Battery voltage too low	Charge the battery
		Loose connector	Tighten the connector
		Wiring harness error	Check and replace the malfunctioning component
		Internal ECU error	Contact an authorized service center

https://truckmanualshub.com/

4.3 Malfunctions of the Powertilt unit

Problem	Possible causes
Powertilt does not maintain its position.	If the machine applies too much pressure against an obstacle, this can build up pressure in the Powertilt swivel device that activates the internal decompression valve.
	Oil escapes from the control valve.
	Malfunctioning decompression valve.
	Oil escapes from the seals.
Powertilt turns only in one direction.	A one-way valve has been installed.
	Malfunctioning internal decompression valve.
	Both lines are connected to either the P1 or P2 ports of the Powertilt swivel device.
Inexact lateral Powertilt movements.	Air in Powertilt swivel device or hydraulic system.
	Hose/pipe diameter/length is larger/longer than recommended.
Reverse and forward movement of shaft in housing (axial play of shaft).	Worn or missing pressure discs.
Lateral bucket movement.	A little play due to necessary spacing between teeth is normal.
Grease cannot be applied to Powertilt grease nipples.	Malfunctioning grease decompression valve of lubrication system, or grease decompression valve has been replaced by a grease nipple or plug.

https://truckmanualshub.com/

4.4 Troubleshooting the central lubrication system (option)

Problem	Possible causes	Remedy
Pump does not work	Malfunctioning integrated electronic controls	Replace the controls and the cap
	Electric line interrupted	Replace the electric line
	Malfunctioning pump	Replace the pump
Pump works but does not supply grease	Air inclusions in piston	Bleed the pump
	Level too low	Add the tank
	Malfunctioning pump element	Replace the pump element
No grease rims on *all* lubrication points	Pump does not work	See “Pump does not work”
	Breaks too long or lubrication time too short	Shorten breaks or increase lubrication time
	System clogged	See “Grease escapes by the pressure limiting valve”
No grease rims on *some* lubrication points	Burst or leaky supply lines to secondary distributor	Replace the lines
	Leaky screw connections	Retighten or replace the screw connections
Reduced pump speed	High system pressure	Check system bearings
	Low ambient temperatures	No damage (intermediate lubrication once or twice if necessary)
	System pressure too high	Detect and eliminate clogging
Grease escapes by the pressure limiting valve	System pressure too high	Detect and eliminate clogging
	Clogged distributor	Replace the distributor
	System clogged	Repair clogged/stuck bearings
	Malfunctioning valve spring	Replace the pressure limiting valve

https://truckmanualshub.com/

4.5 Proportional controls (option) diagnosis display

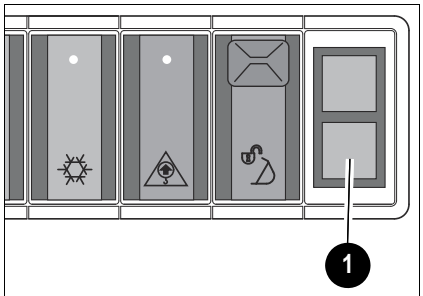


Fig. 242: Characteristic curves – status indicator light

The control valve status is displayed by means of a flashing code.
The error occurring last is issued if several errors occur at the same time.
The system switches off automatically if a critical error is detected.

Important

The flashing codes are for purposes of information only. If an error occurs, contact a Wacker Neuson dealer to have the error rectified immediately.

Indicator light **1** displays the following errors with the number of flashing pulses:

Number of flashing codes	Error	Critical error
0	No error	
1	Malfunctioning input voltage (channel I, left-hand joystick)	
2	Overload or overheating at output stage (channel I, left-hand joystick)	
3	Short circuit on earth or operating voltage (channel I, left-hand joystick)	●
4	Malfunctioning input voltage (channel I, right-hand joystick)	
5	Overload or overheating at output stage (channel I, right-hand joystick)	
6	Short circuit on earth or operating voltage (channel I, right-hand joystick)	●
7	System start	●
8	Overheating (output stage)	●
9	Data error	●
10	Malfunctioning supply	●

https://truckmanualshub.com/

https://truckmanualshub.com/

5 Maintenance

5.1 Introduction

Operational readiness and the service life of machines are heavily dependent on maintenance.

It is therefore in the interest of the machine owner to perform the prescribed maintenance work.

Bear in mind the following points before performing service and maintenance work:

- Chapter *2 Safety instructions* of this Operator's Manual.
- The Operator's Manuals of the attachments.

Perform the prescribed inspections and rectify any disorders immediately before putting the machine into operation, or have them rectified by an authorized service center. Secure the open engine cover and other open covers appropriately. Do not open the engine cover and other covers on slopes or in strong wind.

When using compressed air, dirt and debris can be blown into your face. Therefore, wear protective goggles, masks and clothing when using compressed air.

5.2 Specific Safety Instructions

Service and maintenance work must be performed by a specifically trained person.

All other maintenance work that is not indicated in this Operator's Manual must be performed only by the trained and qualified staff of a Wacker Neuson service center.

The following maintenance plans indicate the maintenance work to be performed.

This is necessary to ensure optimal functioning. – *see Maintenance plan (overview)* on page 5-57.

Immediately repair or replace parts that are already damaged or not working properly before they are due for replacement.

Important

Safety-relevant parts may only be repaired or replaced by a Wacker Neuson dealer or a Wacker Neuson service center.

Parts	Interval
Hydraulic hoses	Replace hydraulic hoses every 6 years from the date of manufacture, even if they do not seem to be damaged.
Bladder type accumulator	Must be checked by a Wacker Neuson dealer every 2 years.
Seat belt	No replacement necessary. Replace the seat belt after an accident.

https://truckmanualshub.com/

5.3 Fuel system

DANGER

Fire hazard. All work involving fuel.

Risk of fatal personal injury or death.

- Never perform work on the fuel system in the vicinity of naked flames or sparks.
- Do not refuel in closed rooms.
- No smoking, no fire.
- Do not smoke when working on the fuel system or when refueling.
- Wipe away fuel spills immediately.
- Keep the machine clean to reduce the risk of fire.
- Before refueling, apply the parking brake, stop the engine and remove the starting key.

CAUTION

Slipping/Tripping hazard. Bear in mind the following important points when refueling.

Risk of injury.

- When refueling the machine without a fuel-filling pump, use safety-oriented ladders and work platforms.
- Never use machine parts or attachments/superstructures as a climbing aid.

NOTICE

Avoid refueling with cans in order to avoid dirt in the fuel.

Important

Don't allow the fuel tank and fuel lines to completely empty while operating the machine. Otherwise, air is drawn into the fuel system. This requires bleeding the fuel system – *see* *Bleeding the fuel system* on page 5-5.

Important

Add the tank with the correct fuel type at the end of each working day. This prevents condensation water from forming in the fuel tank over night. Do not add the tank completely but leave some space for the fuel to expand.

Environment

Use a suitable container to collect the fuel as it drains and dispose of it in an environmentally friendly manner.

https://truckmanualshub.com/

Refueling



Fig. 243: Fuel filler inlet

Fuel filler inlet **A** for the fuel tank is located behind the cab, on the left in driving direction.

☞ *Before refueling, stop the engine and remove the starting key.*

☞ *Unlock lock **B** on fuel filler inlet **A** with the starting key.*

☞ *Use handle **C** to climb onto the track.*

☞ *Remove the filler cap.*

☞ *Refuel.*

☞ *Close and lock the filler cap.*

Environment

Use a suitable container to collect the fuel as it drains and dispose of it in an environmentally friendly manner.

Fuel-filling pump (option) (up to serial no. AD04862)

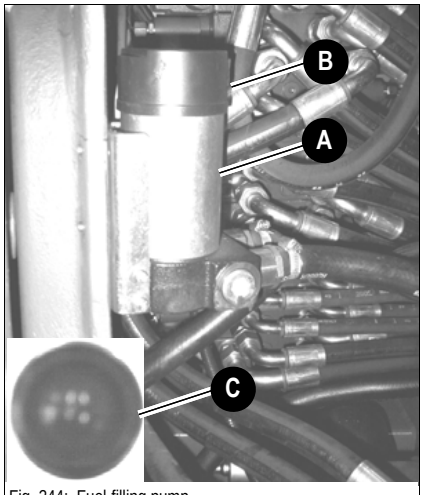


Fig. 244: Fuel-filling pump

Refuel with the fuel-filling pump **A** as follows:

☞ *Place the machine on level ground.*

☞ *Stop the engine.*

☞ *Open the engine cover.*

☞ *Insert the hose of fuel-filling pump **A** into the container with the fuel – see Stationary fuel pumps on page 5-4.*

☞ *Press button **B** to switch on fuel-filling pump **A**.*

➥ The fuel tank is full as soon as indicator light **C** illuminates.

☞ *Press button **B** to switch off fuel-filling pump **A***

Important

Switch off the fuel-filling pump as soon as indicator light **C** illuminates, otherwise the fuel tank may overflow and can be damaged.

- Bear in mind the fuel tank's maximum capacity.

https://truckmanualshub.com/

Fuel-filling pump (option) (from serial no. AD04863)

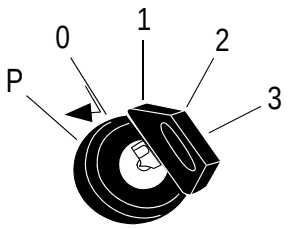


Fig. 245: Preheating start switch

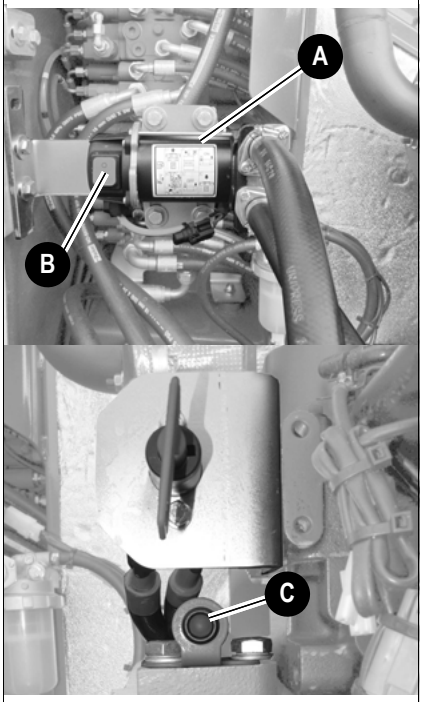


Fig. 245: Fuel-filling pump

☞ *Park the machine on firm and level ground.*

☞ *Stop the engine.*

☞ *Turn the starting key fully to the left to park position **P**.*

☞ *Fold the control lever base up.*

☞ *Open the engine cover.*

☞ *Insert the hose of fuel-filling pump **A** into the container with the fuel – see Stationary fuel pumps on page 5-4.*

☞ *Press button **B** to switch on fuel-filling pump **A**.*

☞ *Press tip switch **D**.*

➥ The float switch screwed into the fuel tank automatically switches off the fuel-filling pump.

☞ *Then press button **B** to switch off fuel-filling pump **A**.*

☞ *Put the hose back in the bracket.*

Stationary fuel pumps

General

Only refuel from stationary fuel pumps. Fuel from barrels or cans is usually contaminated.

Even the smallest particles of dirt can cause:

- Increased engine wear.
- Malfunctions in the fuel system and
- Reduced effectiveness of the fuel filters.

Refueling from barrels

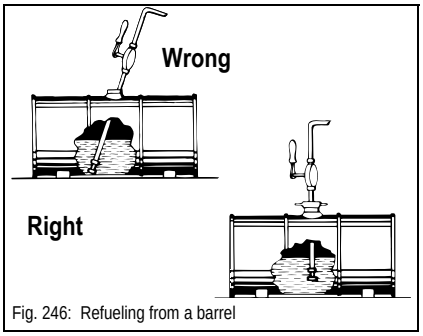


Fig. 246: Refueling from a barrel

If refueling from barrels cannot be avoided, note the following points:

- Barrels must neither be rolled nor tilted before refueling.
- Protect the suction pipe opening of the barrel pump with a fine-mesh screen.
- Immerse it down to a max. 15 cm (6 in) above the floor of the barrel.
- Only fill the tank using refueling aids (funnels or filler pipes) with integral microfilter.
- Keep all refueling containers clean at all times.

https://truckmanualshub.com/

Diesel fuel specification

Use only high-grade fuels

Grade	Use
EN 590 : 96	EU
BS 2869 – A1	England
BS 2869 – A2	
2-D ASTM D975 – 94	USA
1-D ASTM D975 – 94	
ISO 8217 DMX	International

- Sulphur content below 0.05 %
- Cetane number over 45

Bleeding the fuel system

WARNING

Burn hazard. If the fuel comes into contact with hot engine parts.

Risk of injury.

- Work on the fuel system may be performed only in an absolutely clean environment.
- Bleed the fuel system only if the engine is cold.
- Filter elements and drained fuel must be disposed of correctly.
- Always wear protective equipment and safety glasses when working with fuel.

WARNING

Entanglement hazard. Rotating parts.

Risk of injury.

- Before starting the engine, ensure that no-one is within danger zone of the engine/the machine.
- Start the engine only if the engine cover is closed.

https://truckmanualshub.com/

Bleed the fuel system in the following cases:

- After removing and fitting the fuel filter, prefilter or the fuel lines back on again.
- After running the fuel tank empty.
- After running the engine again, after it has been out of service for a longer period of time.

☞ *Bleed the fuel system as follows:*

- Fold the control lever base up.
- Remove the starting key.
- Add the fuel tank.
- Turn the starting key to the first position.
- Wait about 5 minutes while the fuel system bleeds itself automatically.
- Start the engine.

➥ If the engine runs smoothly for a while and then stops, or if it does not run smoothly:

- Stop the engine.
- Fold the control lever base up.
- Remove the starting key.
- Bleed the fuel system again as described above.
- Check for leaks after starting the engine.
- Have this checked by a qualified technician if necessary.

Fuel prefilter with water separator

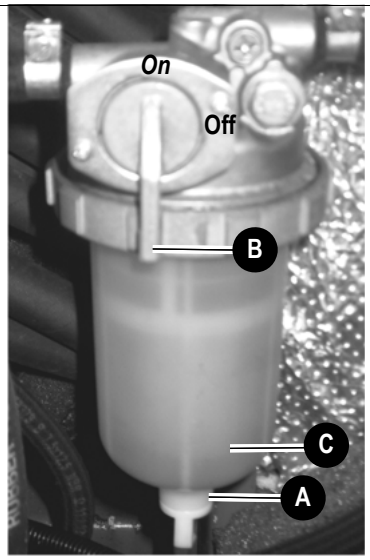


Fig. 247: Fuel prefilter

Draining the fuel/water mixture:

☞ *Stop the engine.*

☞ *Turn ball-type cock **B** to the **OFF** mark.*

➥ Fuel supply is interrupted.

Check the water separator:

☞ *Collect the fuel/water mixture in a suitable container.*

☞ *Stop the engine.*

☞ *Turn off the starter.*

☞ *Remove the starting key.*

☞ *Fold the control lever base up.*

☞ *If the red indicator ring rises to position **C**.*

☞ *Place a suitable container under the fuel prefilter to collect the fuel/water mixture as it drains.*

☞ *Unscrew thread **A**.*

➥ Fuel/water mixture drains.

➥ Wait until the indicator ring returns to the bottom of the water separator.

☞ *Screw thread **A** back on again.*

☞ *Turn ball-type cock **B** to the **ON** mark.*

➥ Fuel supply is open again.

Environment

Thread **A** is fitted with a hose. Collect the fuel/water mixture as it drains with a suitable container and dispose of it in an environmentally friendly manner.

https://truckmanualshub.com/

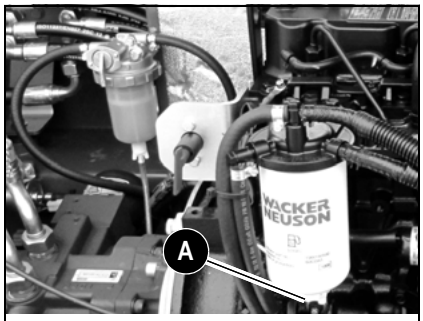


Fig. 248: Fuel filter

The fuel/water mixture must be drained directly on the fuel filter in addition.

Carry this out at regular intervals according to the maintenance plan.

☞ *Stop the engine.*

☞ *Place a suitable container under the filter.*

☞ *Unscrew screw **A**.*

➥ The fuel/water mixture drains from the filter housing.

☞ *Drain about 10 ml (0.3 US fl.oz.) of the fuel/water mixture.*

Environment

Collect the fuel/water mixture as it drains with a suitable container and dispose of it in an environmentally friendly manner.

5.4 Engine lubrication system

NOTICE

If the engine oil level is too high or too low, or if an oil change is overdue, this can cause loss of output and engine damage.

- Have the oil changed by an Wacker Neuson service center
– *see chapter 5.22 Maintenance plan (overview)* on page 5-57.

Checking the engine oil level

Important

Check the oil level once a day. We recommend checking it before starting the engine. After stopping a warm engine, wait at least 5 minutes before checking.

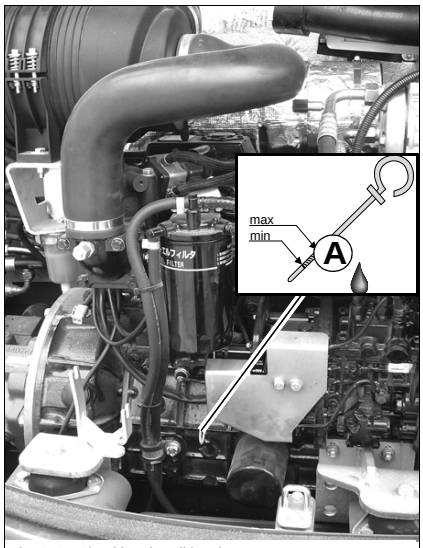


Fig. 249: Checking the oil level

- Park the machine on level and horizontal ground.
- Stop the engine.
- Fold the control lever base up.
- Turn off the starter.
- Remove the starting key and carry it with you.
- Let the engine cool down.
- Open the engine cover.
- Clean the area around the oil dipstick with a lint-free cloth.
- Pull out oil dipstick **A**.
- Clean it with a lint-free cloth.
- Push it back in as far as possible.
- Withdraw it and read off the oil level.
- Close and lock the engine cover.

Important

The oil level must be between the MAX and MIN marks. However if necessary, add oil at the latest when the oil reaches the MIN mark on the oil dipstick **A**.

https://truckmanualshub.com/

Adding engine oil

NOTICE

Too much, not enough or incorrect engine oil can result in engine damage.

Loss of output and engine damage.

- Add engine oil above the MIN mark of oil dipstick **A**.
- Do not add engine oil above the MAX mark of oil dipstick **A**.
- Use only the specified engine oil (refill with the same engine oil).

NOTICE

Adding the engine oil too fast via the filler inlet in the valve cover can cause engine damage.

- Add the engine oil slowly so it can go down without entering the intake system.

Environment

Use a suitable container to collect the engine oil as it drains and dispose of it in an environmentally friendly manner.

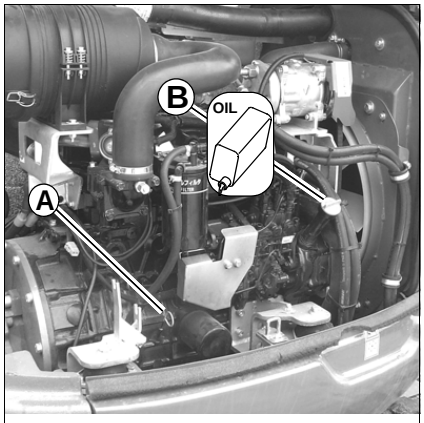


Fig. 250: Oil dipstick and oil filler cap

- Clean the area around oil filler cap **B** with a lint-free cloth.
- Open filler cap **B**.
- Raise oil dipstick **A** slightly to allow any trapped air to escape.
- Add engine oil.
- Wait about 3 minutes until all the oil has run into the oil sump.
- Check the oil level – *see Checking the engine oil level* on page 5-7.
- Add if necessary and check the oil level again.
- Close filler cap **B**.
- Push oil dipstick **A** back in as far as possible.
- Completely remove all oil spills.
- Close and lock the engine cover.

https://truckmanualshub.com/

5.5 Engine and hydraulics cooling system

The oil/water radiator is located in the engine compartment, on the right side of the engine. It cools the diesel engine, and the hydraulic oil of the drive and work hydraulics.

The expansion tank for the coolant is also located in the engine compartment, in front of and above the cooler.

Specific safety instructions

- Dirt on the radiator fins reduces the radiator's heat dissipation capacity. To avoid this:
  - ☞ Clean the outside of the radiator at regular intervals. Use oil-free compressed air (2 bar (29 psi) max.) to clean. Maintain a certain distance from the radiator to avoid damage to the radiator fins. Refer to the maintenance plans in the appendix for the cleaning intervals.
  - ☞ In dusty or dirty work conditions, clean more frequently than indicated in the maintenance plans.
- An insufficient coolant level reduces the heat dissipation capacity as well and can lead to engine damage. Therefore:
  - ☞ Check the coolant level at regular intervals. Refer to the maintenance plans in the appendix for the intervals.
  - ☞ If coolant must be added frequently, check the cooling system for leaks and/or contact an authorized Wacker Neuson service center.
  - ☞ Never add cold water/coolant if the engine is warm.
  - ☞ After filling the expansion tank, make a test run with the engine and check the coolant level again after stopping the engine.
- The use of the wrong coolant can destroy the engine and the radiator. Therefore:
  - ☞ Add enough antifreeze compound to the coolant – but never more than 50 %. If possible, use brand-name antifreeze compounds with anticorrosion additives.
  - ☞ Observe the coolant compound table – *see chapter 6.12 Coolant compound table* on page 6-7.
  - ☞ Do not use radiator cleaning compounds if an antifreeze compound has been added to the coolant – otherwise this causes sludge to form that can damage the engine.
- Once you have filled the expansion tank:
  - ☞ Test run the engine.
  - ☞ Stop the engine.
  - ☞ Let the engine cool down.
  - ☞ Check the coolant level again.



Environment

Use a suitable container to collect the coolant as it drains and dispose of it in an environmentally friendly manner.

https://truckmanualshub.com/

Checking/adding coolant

WARNING

Burn hazard. Never open the coolant tank and never drain coolant if the engine is warm since the cooling system is under high pressure

Risk of severe injury.

- Wait at least 15 minutes after stopping the engine.
- Wear protective gloves and clothing.
- Open filler cap **B** to the first notch and release the pressure.
- Confirm that the coolant temperature is sufficiently low so you can touch the radiator plug with your hands.

WARNING

Hazardous material. Antifreeze is flammable and poisonous. Contact with skin and eyes should be avoided.

Risk of injury.

- Keep away from flames.
- Wash skin immediately to remove coolant mixture from the skin to avoid irritation.
- Wash eyes immediately if coolant comes in contact with the eye. Seek medical attention immediately.
- Store coolant concentrate and mixtures in a secure space to prevent unauthorized contact.
- Do not store or use coolant or coolant mixtures near open flames including smoking materials.
- Dispose of used coolant through approved methods for recycling. Do not dispose of coolant or mixtures in sewers, toilets or dumping on the ground.

https://truckmanualshub.com/

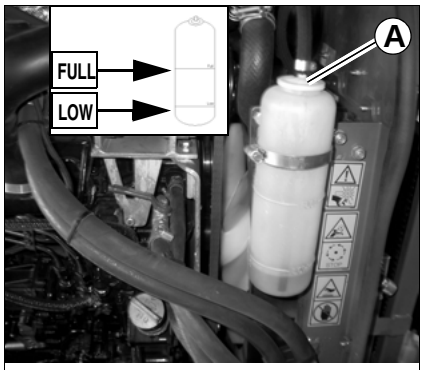


Fig. 251: Coolant expansion tank (model 50Z3)

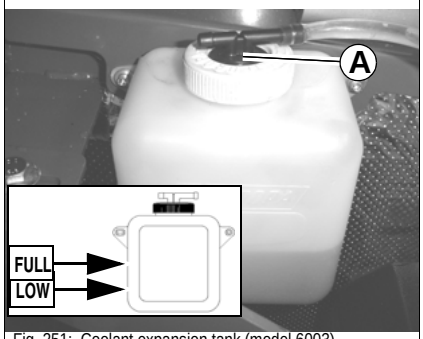


Fig. 251: Coolant expansion tank (model 6003)

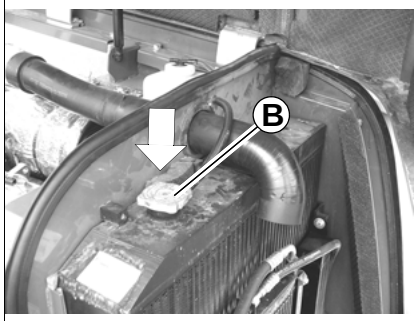


Fig. 251: Radiator

Checking the coolant level

- Park the machine on level and horizontal ground.
- Stop the engine.
- Fold the control lever base up.
- Turn off the starter.
- Remove the starting key and carry it with you.
- Let the engine and the coolant cool down.
- Open the engine cover.
- Check the coolant level on the transparent coolant tank **A** and on the radiator **B**

☞ *If the coolant level is below the **LOW** mark or if there is no coolant at the radiator's filler inlet:*

➥ Add coolant.

Important

Check the coolant level once a day.
We recommend checking it before starting the engine.

Adding coolant

After the engine has cooled down:

☞ *Release overpressure in the radiator.*

☞ *Carefully open the cap to the first notch and fully release the pressure.*

☞ *Open filler cap **B**.*

☞ *Add coolant up to the lower edge of the filler inlet (radiator).*

☞ *Close filler cap **B**.*

☞ *Start the engine and let it warm up for about 5 – 10 minutes.*

☞ *Stop the engine.*

☞ *Remove the starting key and carry it with you.*

☞ *Let the engine cool down.*

☞ *Check the coolant level again.*

➥ The coolant level must be between the **LOW** and **FULL** marks.

☞ *If necessary, add coolant and repeat the procedure until the coolant level remains constant.*

NOTICE

Do not mix the coolant with other coolants.

- Only use the coolant recommended by Wacker Neuson – *see chapter 6.12 Coolant compound table* on page 6-7.

Important

Check the antifreeze every year before the cold season sets in.

https://truckmanualshub.com/

5.6 Air filter

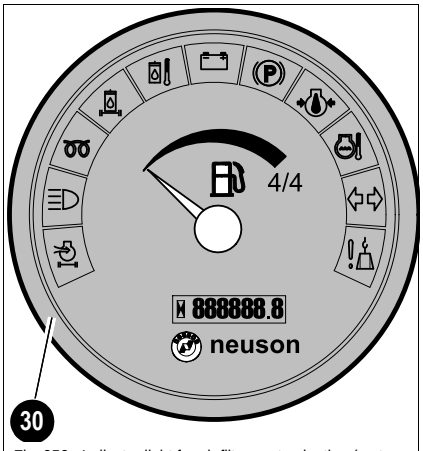


Fig. 252: Indicator light for air filter contamination (up to serial no.:

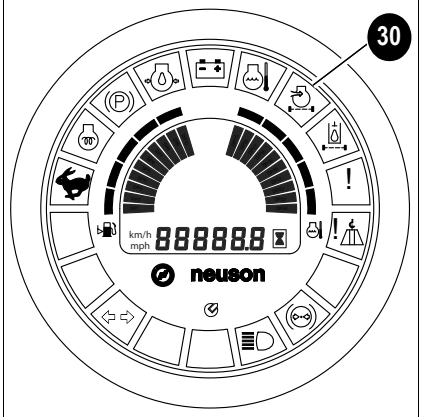


Fig. 252: Indicator light for air filter contamination (from serial no.:

NOTICE

The filter cartridge will be damaged if it is washed or brushed out.

Bear in mind the following to avoid premature engine wear:

- Do not clean the filter cartridge.
- Replace the filter cartridge according to the maintenance plan.
- Never reuse a damaged filter cartridge.
- Ensure cleanliness when replacing the filter cartridge.

Indicator light **30** in the round display element monitors the air filters.

Air filters **A** and **B** must be replaced:

- If indicator light **30** in the round display element illuminates.
- According to the maintenance plan.

NOTICE

Filter cartridges degrade prematurely when in service in acidic air for longer periods of time. This risk is present for example in acid production facilities, steel and aluminium mills, chemical plants, other nonferrous-metal plants and in environments with increased dust development.

- Check the air filter element every 50 service hours at the latest, and replace it if necessary.

General instructions for air filter maintenance:

- Store air filters in their original packaging and in a dry place
- Do not knock the air filters against other objects as you install them
- Check air filter attachments, air intake hoses and air filters for damage, and immediately repair or replace if necessary.
- Check the screws at the induction manifold and the clamps for tightness.
- Check the function of the discharge slot of the dust valve, clean it and replace it if necessary.

  ☞ Squeeze the end of the dust valve.
- Close and lock the engine cover.

https://truckmanualshub.com/

Replacing the air filter

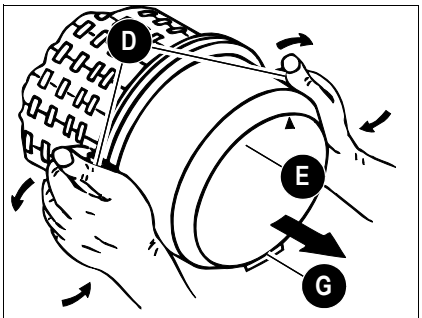


Fig. 253: Removing the lower housing section

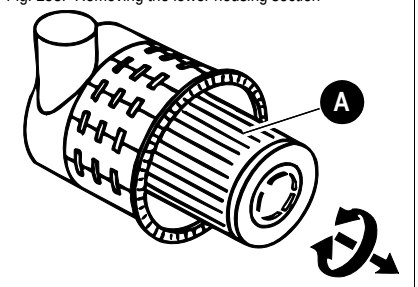


Fig. 254: Removing the air filter

Replacing the primary air filter

☞ *Stop the engine.*

☞ *Fold the control lever base up.*

☞ *Remove the starting key and carry it with you.*

☞ *Let the engine cool down.*

☞ *Open the engine cover.*

☞ *Remove dirt and dust from the air filter housing and the area around the air filter.*

☞ *Fold bow clips **D** on lower housing section **E** to the outside.*

☞ *Remove lower housing section **E**.*

☞ *Carefully remove primary filter **A** with slightly turning movements.*

☞ *Ensure that all dirt (dust) inside the upper and lower housing sections (**F** and **E**), including dust valve **G**, has been removed.*

☞ Clean the parts with a clean lint-free cloth, do not use compressed air.

☞ *Check the primary air filter for damage, only install intact air filters.*

☞ *Carefully insert the new primary air filter **A** in the upper housing section **F**.*

☞ *Position lower housing section **E** (ensure that it is properly seated)*

☞ *Close bow clips **D**.*

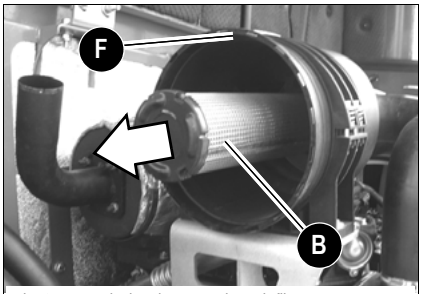


Fig. 255: Replacing the secondary air filter

Replacing the secondary air filter

☞ *Remove primary air filter **A** as described above to access secondary air filter **B**.*

☞ *Carefully pull out secondary air filter **B**.*

☞ Cover the air supply at the end of the filter with a clean lint-free cloth to prevent dust from entering the engine.

☞ *Ensure that all dirt (dust) inside the upper and lower housing sections (**F** and **E**), including the dust valve **G**, has been removed.*

☞ Clean the parts with a clean lint-free cloth, do not use compressed air.

☞ Remove the cloth from the air supply.

☞ *Check the secondary air filter for damage, only install intact air filters.*

☞ *Carefully insert the new secondary air filter **B** in the upper housing section **F**.*

☞ *Carefully insert the primary filter **A** in the upper housing section **F**.*

☞ *Position lower housing section **E** (ensure that it is properly seated).*

☞ *Close bow clips **D**.*

Important

Ensure that dust valve **G** shows downward once it is installed.

https://truckmanualshub.com/

Air intake



Fig. 256: Engine air intake

5.7 Change cab air filter

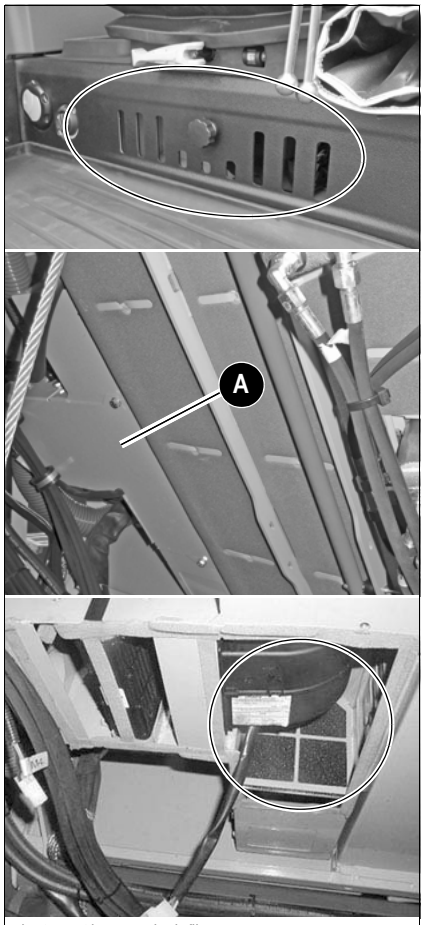


Fig. 257: Change cab air filter

NOTICE

When crossing water fords or similar, ensure that the engine air intake openings are always above water level, otherwise the engine is damaged.

- Check once a day for cleanliness before putting the machine into operation.

CAUTION

Injection hazard. Carefully clean the filter with compressed air.

Risk of injury.

- Wear goggles and protective clothing.
- Carefully clean the filter with compressed air.
- Do not aim the compressed air at the skin or at other people.
- Do not use compressed air for cleaning your clothing.

NOTICE

The filter elements will be damaged if they are washed or brushed out.

- Never reuse damaged filter elements.
- Ensure cleanliness when replacing the filter elements.

The machine is equipped with a cab air filter located under the seat. The heater is located at the rear half of the cab.

Clean the cab air filter every 500 service hours, and replace it every 1000 service hours.

Important

Tilt the cab to replace the cab air filter – *see chapter 3.43 Tilting the cab* on page 3-64

☞ *Stop the engine.*

☞ *Remove the starting key and carry it with you.*

☞ *Fold the control lever base up.*

☞ *Tilt the cab and secure it.*

☞ *Remove the screws and cover **A**.*

☞ *Remove the filter and clean or replace it.*

☞ *Install the filter.*

☞ *Mount the screws and cover **A** again.*

☞ *Tilt the cab back down again and secure it.*

https://truckmanualshub.com/

5.8 Replacing the filter element of the air conditioning system (option)

CAUTION

Injection hazard. Carefully clean the filter element with compressed air.

Risk of injury.

- Wear goggles and protective clothing.
- Carefully clean the filter with compressed air.
- Do not aim the compressed air at the skin or at other people.
- Do not use compressed air for cleaning your clothing.

NOTICE

The filter elements will be damaged if they are washed or brushed out.

- Never reuse damaged filter elements.
- Ensure cleanliness when replacing the filter elements.

If equipped with optional air conditioning, the machine is fitted with a filter element located under the seat.

Replace the filter element every 500 service hours by a new one.

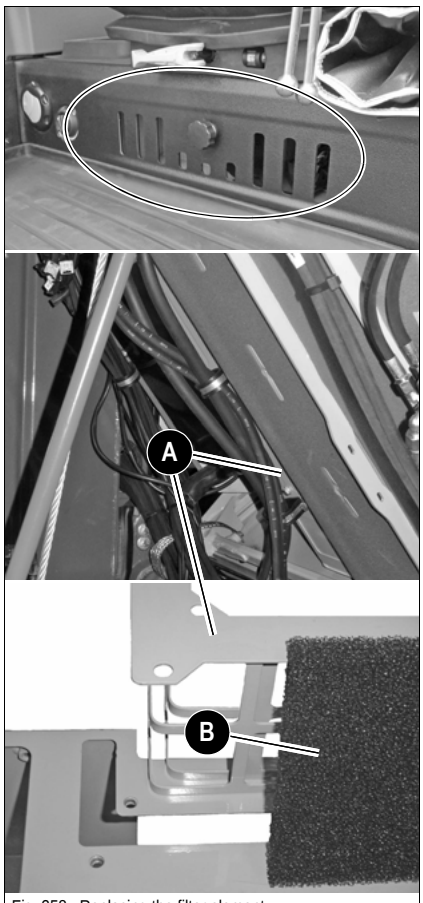


Fig. 258: Replacing the filter element

Important

Tilt the cab to replace the filter element – *see chapter 3.43 Tilting the cab* on page 3-64.

☞ *Stop the engine.*

☞ *Remove the starting key and carry it with you.*

☞ *Fold the control lever base up.*

☞ *Tilt the cab and secure it.*

☞ *Loosen the screws and the L-shaped bracket **A** of filter element **B** and remove the bracket.*

☞ *Remove filter element **B**.*

☞ *Install the new filter element **B**.*

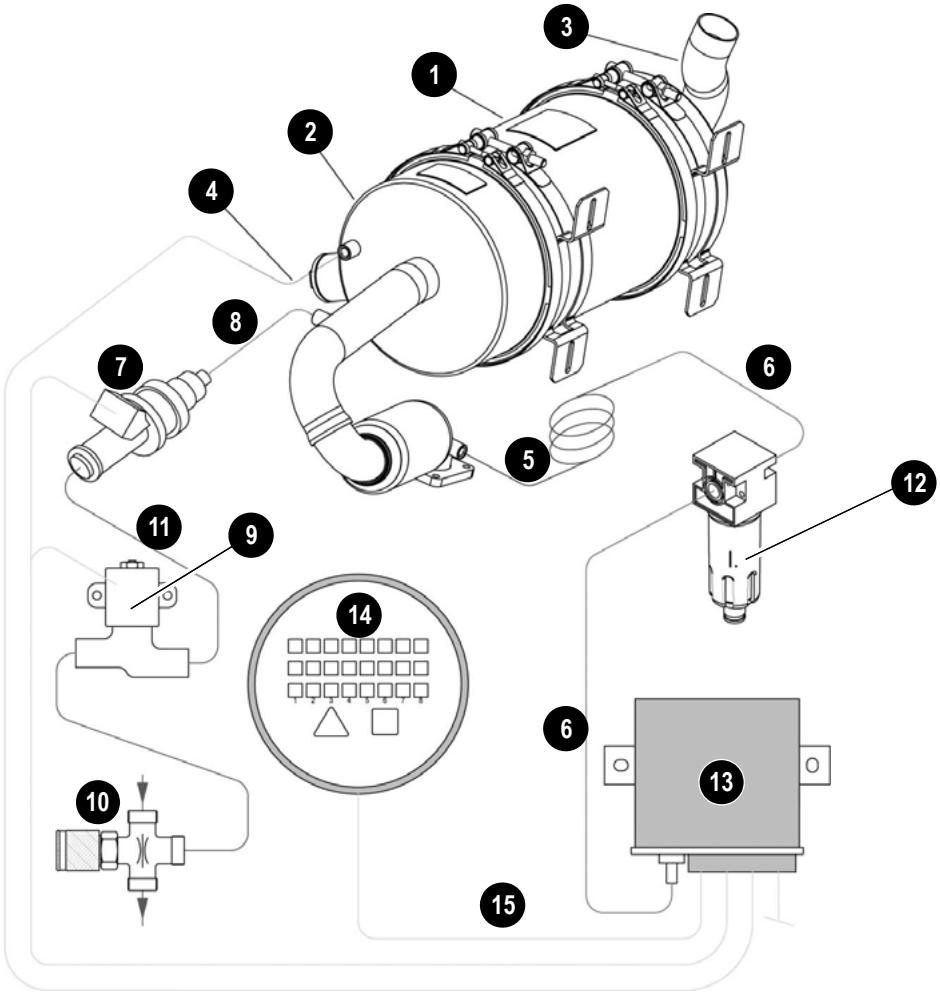
☞ *Mount the L-shaped bracket **A** of the filter element again with the screws.*

☞ *Tilt the cab back down again and secure it.*

https://truckmanualshub.com/

5.9 Diesel particulate filter (option)

Main components of diesel particulate filter system



Pos.	Designation
1	Diesel particulate filter *5-17*
2	Input cover with catalytic converter and input pipe (incl. flexible exhaust pipe) *5-17*
3	Output cover (incl. exhaust pipe)
4	Temperature sensor
5	Pressure line
6	Pressure hose
7	Injection nozzle *5-17*
8	Injection line
9	Stop cock
10	Throttle screw connection
11	Diesel lines
12	Condensate trap *5-17*
13	Control box *5-17*
14	Display *5-19*
15	Wiring

https://truckmanualshub.com/

How the diesel particulate filter works

The machine is equipped with a closed diesel particulate filter with passive regeneration, active diesel fuel injection and a catalytic converter installed before the filter.

Passive regeneration

The special coating of the diesel particulate filter lowers the ignition temperature of the diesel soot and ensures that the soot burns on its own including at low exhaust gas temperatures. Consequently, the soot particles retained by the diesel particulate filter are continuously burnt.

Active diesel fuel injection

If output requirements are low, the exhaust gas temperatures of the diesel engine are too low to ensure passive regeneration. The soot particles cannot be burnt and form deposits in the filter. If a certain pressure threshold is crossed and the temperature is briefly higher, the controls activate diesel fuel injection for a short time. This causes the temperatures in the filter to rise and makes regeneration possible.

Catalytic converter

In addition to sufficiently high temperature, soot regeneration also requires enough NOx. However, the exhaust gas of the new environment friendly diesel engines does not always contain enough NOx under all operating conditions. Therefore, a catalytic converter is installed before the filter to avoid any such shortcomings.

Control box

The control box monitors and saves the temperature and the pressure in the particulate filter system, transmits the data to the display and controls diesel fuel injection.

Condensate trap

The condensate trap protects the control box against damage caused by water by eliminating the condensation water in the pressure line.

Injection nozzle

The injection nozzle is controlled by the control box and if required, injects diesel fuel into the exhaust pipe in front of the particulate filter.

Machine operation with diesel particulate filter

The following points explain how machine operation with a diesel particulate filter differs from operation without such a filter:

Dangers

CAUTION

Burn hazard. The particulate filter, its piping and the exhaust gas can reach very high temperatures.

Risk of injury.

- Always keep a safe distance from these elements
- Let the machine cool down before performing inspection or maintenance work.

https://truckmanualshub.com/

Machine capacity

During normal machine operation, exhaust gas temperatures are sufficiently high to ensure continuous passive regeneration of the particulate filter. However, if the machine is operated at low capacity, the continuous passive regeneration stops and the exhaust gas back pressure in the diesel particulate filter rises. Diesel fuel injection is activated as soon as a certain pressure threshold is crossed and a higher exhaust gas temperature is reached for a short time.

NOTICE

The diesel particulate filter must be regenerated before the maximum authorized threshold value is reached. This can be achieved by running the machine at high capacity (high diesel engine output requirement)*. If the pressure does not drop and the maximum authorized threshold value (– *see Alarm messages* on page 5-20) is reached, stop the machine and regenerate the diesel particulate filter externally. Contact an authorized Wacker Neuson service center.

* This can cause the exhaust gas back pressure to rise even more, however soot combustion should then cause this pressure to return to the authorized range. The engines of the 50Z3 and 6003 machines are equipped with an exhaust gas recirculation valve that closes if the engine is cold and under high load, and therefore significantly raises the exhaust gas back pressure. Avoid these operating conditions if the pressure is already near the limit.

Cold starting

NOTICE

In order to avoid damage to the particulate filter system, warm up the engine at low idling engine speed without load for about 15 minutes**. This warm-up phase is of crucial importance for the 50Z3 and 6003 machines: on these machines, the exhaust gas recirculation valve is closed when the engine is cold, which causes the exhaust gas back pressure to rise considerably. Work cannot start unless the engine has reached its operating temperature and there is a sudden and very significant drop in counterpressure.

** Approximate value; at lower temperatures, a longer warm-up phase may be necessary, which can be considerably reduced at high temperatures.

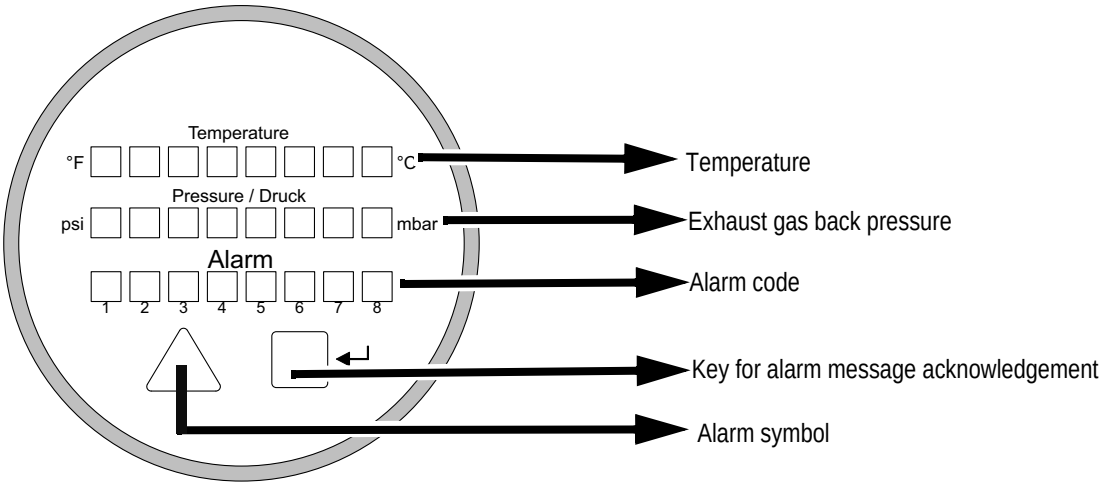
Bleeding the diesel engine fuel system

On machines equipped with diesel particulate filters, the throttle screw connection pre-tensions the system (– *see Throttle screw connection* on page 5-16) in order to create enough pressure for the diesel fuel injection nozzle of the particulate filter. In order to bleed the system, connect the minimess hose onto the throttle screw connection and insert the other end into a container to collect the fuel as it drains. Remove the hose again as soon as there are no more bubbles in the fuel draining from the minimess port. The machine can then be started.

https://truckmanualshub.com/

Display

The display of the diesel fuel particulate system is located in the cab and displays the alarm messages, and the temperature and exhaust gas counterpressure ranges. Moreover, alarms can also be acknowledged by pressing a key.



Temperature scale

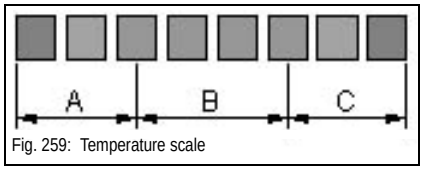


Fig. 259: Temperature scale

Pos.	Meaning
A	Idling speed, very low load
B	Low to average load
C	High load (optimal for regeneration)

Exhaust gas back pressure scale

Exhaust gas pressure increases as engine speed and load increase, since a larger amount of exhaust gas must go through the diesel particulate filter under these operating conditions.

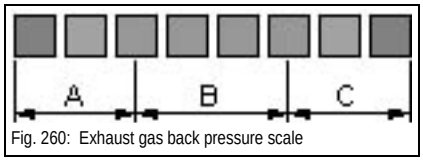


Fig. 260: Exhaust gas back pressure scale

Pos.	Meaning
A	Reached only under low load and at low engine speed
B	Range in which the machine should be operated
C	To be avoided, regeneration necessary under all circumstances

Alarm code

For more information – *see Alarm messages* on page 5-20.

Key for alarm message acknowledgement

See chapter “Alarm messages” for description.

Alarm symbol

- This symbol flashes in case of an alarm.
- This symbol goes out as soon as an error is acknowledged.

https://truckmanualshub.com/

Alarm messages

An alarm code is displayed as soon the diesel fuel particulate filter controls identify an error, or if the upper or lower temperature or exhaust gas back pressure thresholds have been crossed.

The following alarm codes can be displayed:

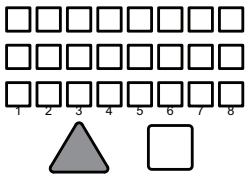


Fig. 261: Error: communication

Display

All LEDs off, the alarm symbol flashes.

Error

No communication between the display and the controls.

Troubleshooting

- Switch off ignition and switch it back on again.
- Check the wiring.

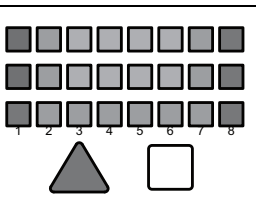


Fig. 262: Error: software

Display

All LEDs flash, the alarm symbol flashes.

Error

Software not identical for display and controls.

Troubleshooting

Contact an authorized Wacker Neuson service center.

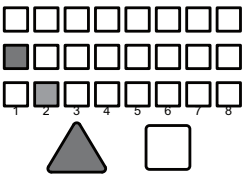


Fig. 263: Error: lower limit of exhaust gas pressure

Display

Pressure LED **1**, alarm LED **2** and alarm symbol flash.

Error

Lower limit of exhaust gas counterpressure exceeded.

Troubleshooting

- Check pressure hose and line for leaks.
- Check particulate filter and input pipe for leaks.
- Contact an authorized Wacker Neuson service center.

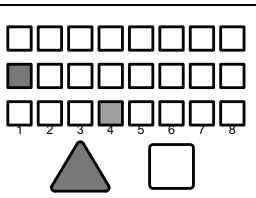


Fig. 264: Error: no pressure change

Display

Pressure LED **1**, alarm LED **4** and alarm symbol flash.

Error

No pressure change during the last 10 minutes.

Troubleshooting

- Engine does not start.

  ☞ Start the engine.
- Absolutely constant engine load.
- Clogged pressure line.

  ☞ Contact an authorized Wacker Neuson service center.

https://truckmanualshub.com/

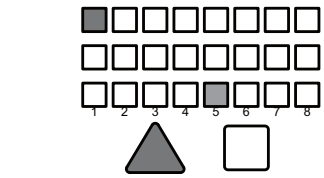


Fig. 265: Error: no temperature change

Display

Temperature LED **1**, alarm LED **5** and alarm symbol flash.

Error

No temperature change during the last 10 minutes.

Troubleshooting

- Engine does not start.
  ☞ Start the engine.
- Absolutely constant engine load.
- Replace the temperature sensor.
  ☞ Contact an authorized Wacker Neuson service center.

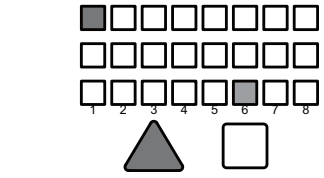


Fig. 266: Error: malfunctioning temperature sensor

Display

Temperature LED **1**, alarm LED **6** and alarm symbol flash.

Error

Malfunctioning temperature sensor.

Troubleshooting

- Replace the temperature sensor.
  ☞ Contact an authorized Wacker Neuson service center.

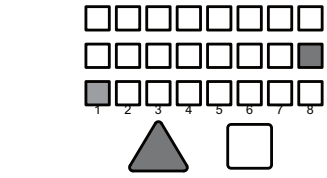


Fig. 267: Error: upper limit of exhaust gas counterpressure exceeded

Display

Pressure LED **8**, alarm LED **1** and alarm symbol flash.

Error

Upper limit of exhaust gas counterpressure exceeded.

Troubleshooting

- Immediately operate the machine in a way that puts a high load on the engine in order to regenerate the filter. If the pressure does not fall after 5 minutes, stop the engine and get in touch with an authorized Wacker Neuson service center.

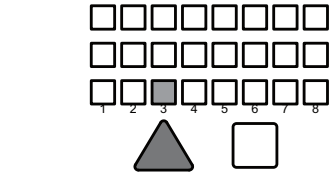


Fig. 268: Error: no engine speed signal from the alternator

Display

Alarm LED **3** and the alarm symbol flash.

Error

No engine speed signal from the alternator.

Troubleshooting

- Wiring from controls to alternator.
  ☞ Check the wiring.
- Contact an authorized Wacker Neuson service center.

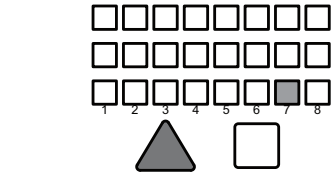


Fig. 269: Error: data recording

Display

Alarm LED **7** and the alarm symbol flash.

Error

Error during data recording.

Troubleshooting

- Contact an authorized Wacker Neuson service center.

https://truckmanualshub.com/

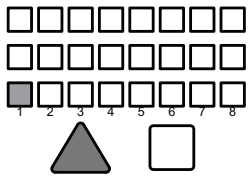


Fig. 270: Error: programming

Display

Alarm LED **1** and the alarm symbol flash.

Error

Error in controls program.

Troubleshooting

Contact an authorized Wacker Neuson service center.

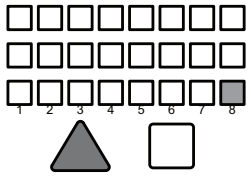


Fig. 271: Error: programming

Display

Alarm LED **8** and the alarm symbol flash.

Error

Error in controls program.

Troubleshooting

Contact an authorized Wacker Neuson service center.

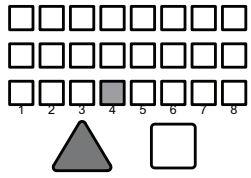


Fig. 272: Error: programming

Display

Alarm LED **4** and the alarm symbol flash.

Error

Error in controls program.

Troubleshooting

Contact an authorized Wacker Neuson service center.

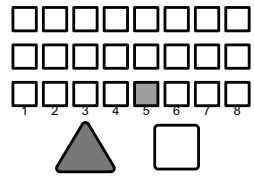


Fig. 273: Error: programming

Display

Alarm LED **5** and the alarm symbol flash.

Error

Error in controls program.

Troubleshooting

Contact an authorized Wacker Neuson service center.

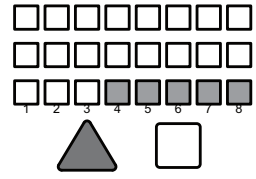


Fig. 274: Error: dirty display glass

Display

Alarm LEDs **4 to 8** and the alarm symbol flash.

Error

Dirty display glass.

Troubleshooting

Clean the display glass.

https://truckmanualshub.com/

Maintenance

The maintenance work listed below must be carried out in addition to the maintenance work stated in the Operator's Manual of the machine.

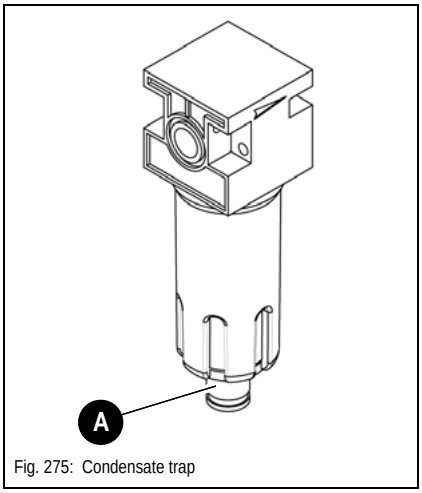


Fig. 275: Condensate trap

Daily maintenance

- Drain the water from the condensate trap by opening valve **A**.
- Ensure that there is no soot on the exhaust pipe *.
- Check whether all indicator lights on the display come on when switching on ignition.
- Check the plausibility of the temperature values.
- Check the plausibility of the pressure values. To this effect, open the valve on the condensate trap after the machine is warm and read the pressure off the display, then close the valve and read off the pressure again. The pressure must be higher with a closed valve, otherwise there is an error in the system.

Important

Once maintenance is over, ensure that condensate trap valve **A** is closed.

Every 50 h

- Visual check of the particulate filter system (wiring, pressure line, particulate filter, insulating mat, diesel fuel lines etc.).
- Ensure that the clips on the diesel particulate filter are fastened firmly.
- Check the fastening screws of the input pipe on the exhaust manifold for tightness.
- Ensure that there is no soot on the end pipe of the particulate filter*.

Once a year/every 500 h

- Have the system components checked for correct function by an authorized service.

  ☞Contact an authorized Wacker Neuson service center.

Statutory maintenance work

- Get in touch with an authorized Wacker Neuson service center for information on possible country-specific statutory maintenance work.

As required

- If the maximum authorized limit for the exhaust gas back pressure is exceeded, stop the machine and regenerate the diesel particulate filter externally.
  Contact an authorized Wacker Neuson service center.
- During fuel combustion in the diesel engine, part of the engine oil is burnt, too, and produces ashes that are deposited in the diesel particulate filter. These ashes contaminate the diesel particulate filter by and by and prevent the absorption of soot. This causes the machine to constantly work at the upper limit of the exhaust gas back pressure. As soon as this is the case**, the diesel particulate filter must be cleaned externally. Contact an authorized Wacker Neuson service center.

* Diesel fuel injection can create a slight black cloudiness at the end pipe, however, this does not affect the function of the system whatsoever.

** The time this condition comes into being greatly depends on the application, the user, the machine, and the oil and fuel used.

https://truckmanualshub.com/

Oils and fuels

Fuel

The machine can be operated with the authorized fuels stated in the Operator's Manual of the machine, with the following restrictions:

- Use only diesel fuel with a sulphur content of < 50 ppm
- No biodiesel allowed

Engine oil

The machine can be operated with the authorized engine oils stated in the Operator's Manual of the machine. However, in order to minimise soot in the diesel particulate filter, we recommend using oils with a low share of soot (so-called Low-Sap oils). These oils must comply with the same technical specifications as the authorized engine oils stated in the Operator's Manual of the machine.

Other material

See the Operator's Manual of the machine.

Troubleshooting

Blue exhaust gas

Blue exhaust gas is a sign of unburnt engine oil, and of a diesel engine malfunction. Switch off the diesel engine immediately to avoid damage to the diesel engine and the particulate filter.

Contact an authorized Wacker Neuson service center.

White exhaust gas

White exhaust gas is caused by evaporating water or unburnt diesel fuel. When starting, a cold engine normally emits white smoke briefly when the condensation water in the particulate filter evaporates.

On a warm engine, white exhaust gas is caused by unburnt diesel fuel of the active diesel fuel injection during active regeneration and should disappear again after a short time. Get in touch with an authorized Wacker Neuson service center if the white exhaust gas persists or if it appears freqently.

Black exhaust gas

Black exhaust gas is a sign of incomplete combustion and can have several causes (see the Operator's Manual of the machine for details). However, the particulate filter filters this contamination (soot) out of the exhaust gas if it works correctly. Therefore, black exhaust gas is a sign of a malfunction or of damage in the particulate filter system*. Contact an authorized Wacker Neuson service center.

* Diesel fuel injection can create a slight black cloudiness at the end pipe, however, this does not affect the function of the system whatsoever.

Warranty

Bear in mind that warranty for components of the diesel particulate filter becomes invalid if the instructions of this Operator's Manual are not followed, or if the system has been tampered with or modified.

https://truckmanualshub.com/

5.10 V-belt

WARNING

Entanglement hazard. Only check or retighten/replace the V-belts when the engine is stopped.

Risk of personal injury.

- Stop the engine before performing inspection work in the engine compartment.
- Disconnect the battery or the battery master switch.
- Let the engine cool down.

NOTICE

To avoid possible engine damage, replace cracked and/or stretched V-belts.

Check the V-belt once a day, and retighten if necessary.

Retighten new V-belts after about 15 minutes of running time.

Checking V-belt tension

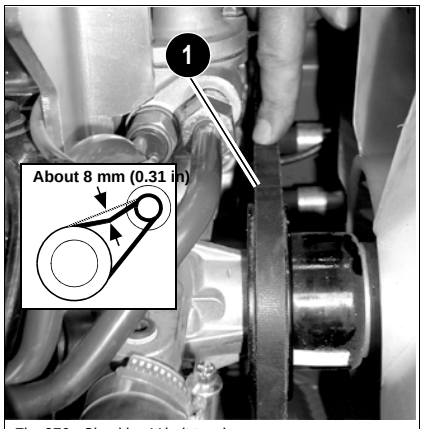


Fig. 276: Checking V-belt tension

☞ *Stop the engine.*

☞ *Fold the control lever base up.*

☞ *Remove the starting key and carry it with you.*

☞ *Disconnect the battery or actuate the battery master switch.*

☞ *Let the engine cool down.*

☞ *Open the engine cover.*

☞ *Carefully check V-belt **1** for damage, cracks or cuts.*

➥ If the V-belt is damaged:

☞ Have the V-belt replaced by a qualified technician.

➥ Replace the V-belt if it touches the base of the V-belt groove or if the pulleys are damaged.

☞ *Press with your thumb about 100 N (22.5 lbf) to check the deflection of the V-belt between the crankshaft disc and the fan wheel.*
A new V-belt should have a deflection of 6 to 8 mm (0.24 to 0.31 in), a used V-belt (after about 5 minutes running time) should have a deflection of 7 to 9 mm (0.27 to 0.35 in).

☞ *Retighten the V-belt if necessary.*

☞ *Close and lock the engine cover.*

https://truckmanualshub.com/

Retightening the V-belt

NOTICE

Overtightening the V-belts can damage the V-belts, the V-belt guide and the alternator, air conditioning compressor and water pump bearings.

- Checking V-belt tension – *see Checking V-belt tension* on page 5-25.
- Replace V-belts with damage, cracks, cuts etc.
- Avoid contact of oil, grease or similar substances with the V-belt.

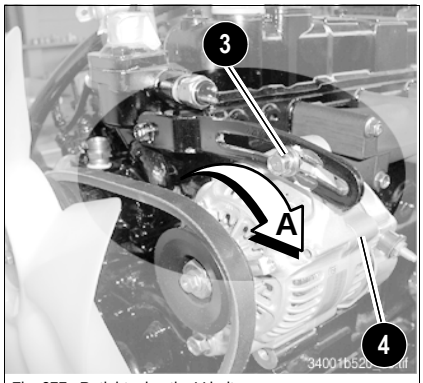


Fig. 277: Retightening the V-belt

☞ *Stop the engine.*
☞ *Fold the control lever base up.*
☞ *Remove the starting key and carry it with you.*
☞ *Disconnect the battery or actuate the battery master switch.*
☞ *Let the engine cool down.*
☞ *Open the engine cover.*
☞ *Slacken fastening screws **3** of alternator **4**.*
☞ *Use a suitable tool to push the alternator in the direction of arrow **A** until reaching the correct V-belt tension Fig. 277.*
☞ *Keep the alternator in this position, and at the same time retighten fastening screws **3**.*
☞ *Check V-belt tension again and adjust it if necessary.*
☞ *Connect the battery or the battery master switch.*
☞ *Close and lock the engine cover.*

Checking the V-belt of the air conditioning system (option)

NOTICE

Excessive or insufficient tension of the V-belt can cause damage to the V-belt or to the compressor of the air conditioning system.

- Always ensure that the V-belt has the correct tension.
- Replace V-belts with damage, cracks, cuts etc.
- Avoid contact of oil, grease or similar substances with the V-belt.

Check the V-belt once a day, and retighten if necessary.

Retighten new V-belts after about 15 minutes of running time.

https://truckmanualshub.com/

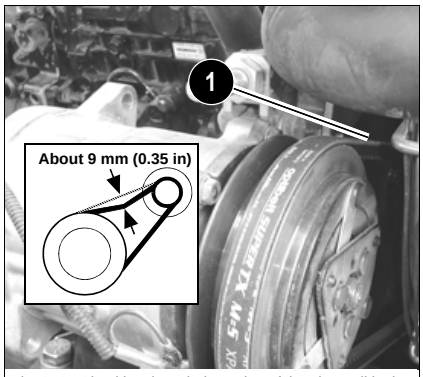


Fig. 278: Checking the V-belt tension of the air conditioning

☞ *Stop the engine.*

☞ *Fold the control lever base up.*

☞ *Remove the starting key and carry it with you.*

☞ *Disconnect the battery or actuate the battery master switch.*

☞ *Let the engine cool down.*

☞ *Open the engine cover.*

☞ *Carefully check V-belt* **1** *for damage, cracks or cuts.*

➥ If the V-belt is damaged:

☞ Have the V-belt replaced by a qualified technician.

➥ Replace the V-belt if it touches the base of the V-belt groove or if the pulleys are damaged.

☞ *Press with your thumb about 100 N (22.5 lbf) to check the deflection of the V-belt between the pulley and the crankshaft disc.*
A new V-belt should have a deflection of 7 to 9 mm (0.27 to 0.35 in), a used V-belt (after about 5 minutes running time) should have a deflection of 9 to 11 mm (0.35 to 0.43 in).

☞ *Retighten the V-belt if necessary.*

☞ *Connect the battery or the battery master switch.*

☞ *Close and lock the engine cover.*

Tightening the V-belt of the air conditioning system

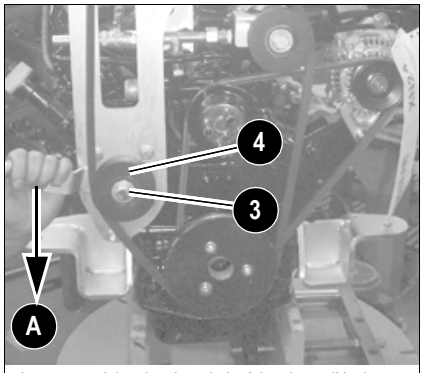


Fig. 279: Retightening the V-belt of the air conditioning sys-

☞ *Stop the engine.*

☞ *Fold the control lever base up.*

☞ *Remove the starting key and carry it with you.*

☞ *Disconnect the battery or actuate the battery master switch.*

☞ *Let the engine cool down.*

☞ *Open the engine cover.*

☞ *Slacken fastening screw* ***3*** *of spacer washer* ***4****.*

☞ *Press the belt tensioner in the direction of arrow* ***A*** *until reaching the correct V-belt tension (Fig. 279).*

☞ *Keep the belt tensioner in this position, and at the same time retighten fastening screw* ***3****.*

☞ *Check V-belt tension again and adjust it if necessary.*

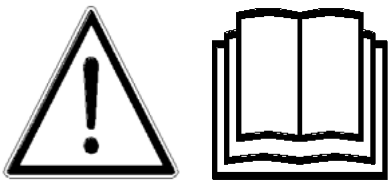
☞ *Connect the battery or the battery master switch.*

☞ *Close and lock the engine cover.*

https://truckmanualshub.com/

5.11 Hydraulic system

Specific safety instructions



- Release the pressure in all lines carrying hydraulic oil prior to any maintenance and repair work. To do this:
  - Lower the boom or the attachment to the ground.
  - Move all control levers of the hydraulic control valves several times.
- Fold the control lever base up.
- Hydraulic oil escaping under high pressure can penetrate the skin and cause serious injuries. Therefore always consult a doctor immediately, even in the case of minor wounds – otherwise serious infections could set in.
- If the hydraulic oil in the sight glass is cloudy, this indicates that water or air has penetrated the hydraulic system. This can cause damage to the hydraulic pump.
- Oil or fuel flowing out of high pressure lines can cause fire or malfunctions, and severe injuries or damage to property. Interrupt work immediately if slack nuts or damaged hoses and lines are detected.

  ☞ Contact a Wacker Neuson dealer immediately.
- Have a line replaced if one of the following problems is detected:

  ☞ Damaged or leaky hydraulic seals.

  ☞ Worn or torn shells or uncovered reinforcement branches.

  ☞ Expanded shells in several positions.

  ☞ Entangled or crushed movable parts.

  ☞ Foreign bodies jammed or stuck in protective layers.

NOTICE

Dirty hydraulic oil, lack of oil or wrong hydraulic oil can cause severe damage to the hydraulic system.

- Take care to avoid dirt when working.
- Always use the filling screen when refilling hydraulic oil.
- Only use authorized oils of the same type – *see chapter 5.21 Fluids and lubricants* on page 5-54.
- Always add hydraulic oil before the level gets too low – *see Adding hydraulic oil* on page 5-30.
- If the hydraulic system is filled with biodegradable oil, then use only biodegradable oil of the same type for adding – observe the sticker on the hydraulic oil tank.
- Contact customer service if the hydraulic system filter is dirty and contains metal chippings. Otherwise, follow-on damage can result.

Environment

Collect drained hydraulic oil and biodegradable oil in a suitable container. Dispose of drained oil and used filters by an ecologically safe method. Always contact the relevant authorities or commercial establishments in charge of oil disposal before disposing of biodegradable oil.

https://truckmanualshub.com/

Checking the hydraulic oil level

WARNING

High pressure hydraulic oil ejection hazard. Overfilling the hydraulic system with hydraulic oil can lead to high pressures and escaping hydraulic oil.

Risk of severe injury.

- Do not overfill the hydraulic system.
- Check the hydraulic oil level each time the machine is put into operation or once a day.

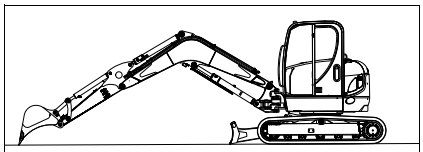


Fig. 280: Parking the machine

- Park the machine on level ground.
- Position the boom straight ahead.
- Retract the bucket and boom cylinders, lower the boom and the bucket teeth to the ground.
- Lower the stabilizer blade to the ground.
- Stop the engine.
- Fold the control lever base up.
- Remove the starting key and carry it with you.
- Unlock and raise the engine cover.

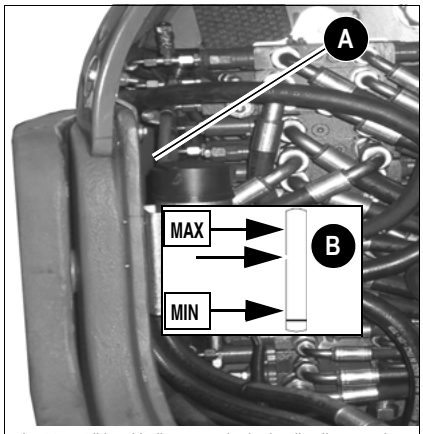


Fig. 281: Oil level indicator on the hydraulic oil reservoir

- Sight glass **B** is located at the rear right corner of the machine on hydraulic oil reservoir **A**.
- Check the oil level on sight glass **B**.
- The oil level must be about 1 cm (0.39 in) over the center, between positions **MIN** and **MAX**, as shown by the arrows in *Fig. 281*.
  - ➥ The **MIN** mark is black.
  - ➥ The **MAX** mark is yellow.

If the oil level is lower:

- Add hydraulic oil.
- Close and lock the engine cover.

The oil level varies according to the machine's operating temperature:

Machine condition	Temperature	Oil level
Before putting into operation	Between 10 and 30 °C (between 50 and 86 °F)	**MIN** mark
Normal operation	Between 50 and 90 °C (between 122 and 194 °F)	**MAX** mark

Important

Measure the oil level of the hydraulic system only after the machine reaches its operating temperature.

https://truckmanualshub.com/

Adding hydraulic oil

WARNING

High pressure hydraulic oil ejection hazard. Removing the filler plug can cause oil to escape.

Risk of injury.

- Carefully open breather filter **A** under tank cover **V** to slowly release the pressure inside the tank.

NOTICE

Do not add hydraulic oil unless the engine is stopped. Otherwise, hydraulic oil will overflow at the filler opening on the hydraulic reservoir.

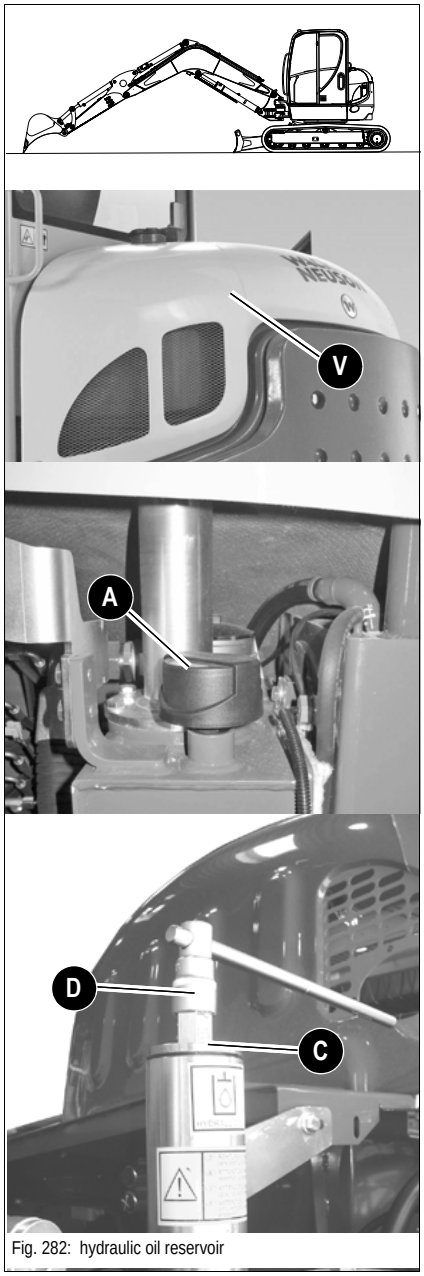


Fig. 282: hydraulic oil reservoir

- Park the machine on level ground.
- Retract the bucket and boom hydraulic cylinders, lower the boom and the bucket teeth to the ground.
- Lower the stabilizer blade to the ground.
- Set the boom straight (offset cylinder).
- Stop the engine.
- Fold the control lever base up.
- Let the engine cool down.
- Remove tank cover **V**.

➥ Open breather filter **A** carefully to release the pressure inside the tank.

- Slowly open plug **C** with tool **D** included in the tool kit.

With the filter insert in place:

- Add hydraulic oil.
- Check the hydraulic oil level on sight glass **B** – *see Checking the hydraulic oil level* on page 5-29.
- Add if necessary and check again.
- Tightly close plug **C** again with tool **D**.
- Retighten breather filter **A**.
- Install tank cover **V**.

Important

The tool kit is in the engine compartment.

https://truckmanualshub.com/

Important information for the use of biodegradable oil

- Use only the biodegradable hydraulic fluids which have been tested and approved by Wacker Neuson. Contact a Wacker Neuson dealer for the use of other products which have not been recommended. In addition, ask the oil supplier for a written declaration of guarantee. This guarantee is applicable to damage occurring on the hydraulic components, which can be proved to be due to the hydraulic fluid.
- Use only biodegradable oil of the same type for adding. In order to avoid misunderstandings, a label providing clear information is located on the hydraulic oil reservoir (next to the filler inlet) regarding the type of oil currently used. Replace missing labels. The joint use of two different biodegradable oils can affect the quality of one of the oil types. Therefore, ensure that the remaining amount of initial hydraulic fluid in the hydraulic system does not exceed 8 % when changing biodegradable oil (manufacturer indications).
- Do not add with mineral oil – the content of mineral oil should not exceed 2 % in order to avoid foaming problems and to ensure biological degradability.
- When running the machine with biodegradable oil, the same oil and filter replacement intervals are valid as for mineral oil – *see chapter 5.22 Maintenance plan (overview)* on page 5-57.
- Always have the condensation water in the hydraulic oil reservoir drained by an authorized Wacker Neuson service center before the cold season. The water content may not exceed 0.1 % by weight.
- The instructions in this Operator's Manual concerning environmental protection are also valid for the use of biodegradable oil.
- If additional hydraulic attachments are mounted or operated, use the same type of biodegradable oil for these attachments to avoid mixtures in the hydraulic system.
- Subsequent change from mineral oil to biodegradable oil must be performed by an authorized Wacker Neuson service center.

https://truckmanualshub.com/

Checking hydraulic pressure lines

Specific safety instructions

DANGER

High pressure hydraulic oil ejection hazard. Hydraulic oil escaping under high pressure can catch fire, damage property, penetrate the skin and cause severe burns.

Risk of serious injuries.

- Do not operate the machine with leaking or damaged hydraulic system components.
- Use a piece of cardboard to diagnose the source of hydraulic leaks.
- Hydraulic oil can be hot and can cause serious burns if contact is made with skin. If contact occurs with hot oil, seek immediate medical attention and treatment for the burn.
- Wear safety glasses/goggles to avoid eye contact. If oil contacts the eye flush immediately with clean water and seek emergency medical treatment.
- Seek immediate medical attention if oil penetrates the skin. Oil can cause serious infections.
- Retighten leaking threaded fittings and hose connections only when the system is not under pressure; i.e. release the pressure before working on pressurized lines.
- Never weld or solder damaged or leaking pressure lines and threaded connections. Replace damaged parts with new ones.
- Do not check for leaks with an incandescent light or open flame due to explosive fire risk from vaporized oil mist.
- Never search for leaks with your bare hands, but wear protective gloves.

NOTICE

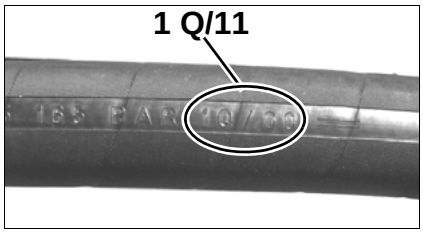
Leaks and damaged pressure lines must be immediately repaired or replaced by a Wacker Neuson service center. This not only increases the operating safety of your machine but also helps to protect the environment.

- Replace hydraulic hoses every 6 years from the date of manufacture, even if they do not seem to be damaged.

Environment

Ensure environmentally compatible disposal.

In this respect, we recommend that you observe all the relevant safety regulations for hydraulic lines, as well as the safety regulations regarding accident prevention and occupational health and safety in your country. Also observe DIN 20066, part 5.



The article number is marked on the clamping section, and the date of manufacture is indicated on the hose of each hose connection.

Example:

The indication **“1 Q/11”** means manufactured in the 1st quarter of 2011.

https://truckmanualshub.com/

5.12 Tracks

- Track wear can vary according to work and ground conditions.

  ☞ We recommend checking track wear and tension once a day.

  ☞ Park the machine on firm, level and horizontal ground to check and perform maintenance.

Checking the track tension of the rubber tracks

WARNING

Crushing hazard. Do not work under the machine unless it has been raised and supported properly.

Risk of injury or death.

- Raising the machine with the stabilizer blade and the attachment does not provide adequate safety for work that has to be performed under a raised machine.
- Do not allow anyone to stay in the danger area.
- Firmly support the machine with chocks or suitable brackets. Do not damage any parts of the machine as you support it.

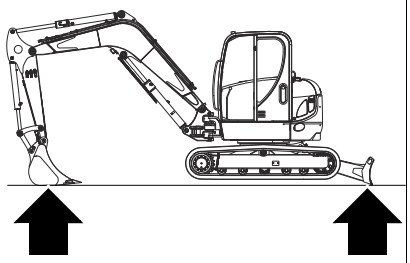


Fig. 283: Raising the machine

☞ *Place the machine on firm, level and horizontal ground.*

☞ *Raise the machine evenly and horizontally by means of the boom and the stabilizer blade.*

☞ Slowly and carefully actuate the control levers.

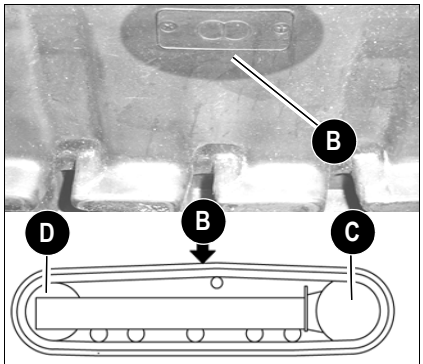


Fig. 284: Rubber track mark

☞ *The rubber track has a mark **B** as shown in Fig. 284.*

☞ *Place the machine so that mark **B** of the rubber track is between the drive pinion **C** and the track tension roller **D**.*

☞ *Stop the engine.*

☞ *Fold the control lever base up.*

☞ *Remove the starting key and carry it with you.*

☞ *Use suitable auxiliary means to support the machine.*

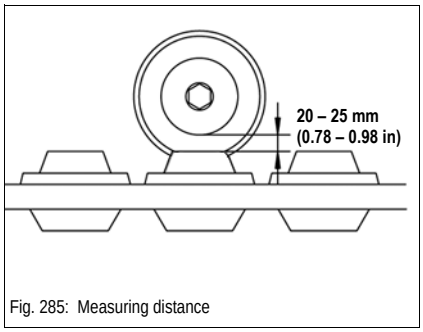


Fig. 285: Measuring distance

- Standard play between the sliding block's shoulder and the contact area of the second support roller of the drive pinion is 20 – 25 mm (0.78 – 0.98 in).

  ☞ Set the tension as follows if it is not in accordance with the rated value – *see Adjusting track tension* on page 5-34.

https://truckmanualshub.com/

Checking the track tension of the steel tracks (option) and hybrid tracks (option)

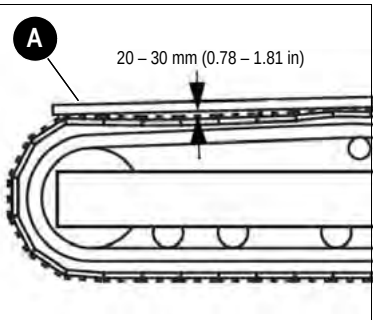


Fig. 286: Measuring distance

☞ *Place the machine on firm, level and horizontal ground.*

☞ *Stop the engine.*

☞ *Fold the control lever base up.*

☞ *Remove the starting key and carry it with you.*

☞ *Use suitable auxiliary means to support the machine.*

☞ *Place a measuring staff **A** across the highest points of the track.*

➥ The track must sag 20 – 30 mm (0.78 – 1.81 in) in the middle.

☞ Set the tension as follows if it is not in accordance with the rated value – *see Adjusting track tension* on page 5-34.

Adjusting track tension

CAUTION

Projectile hazard. The grease fitting for track adjustment is subject to high pressure. The grease fitting can become a projectile if pressure caused by track tension is not properly relieved.

Risk of injury.

- Do not remove the grease fitting.
- Wear safety goggles, gloves and protective clothing to reduce skin exposure to grease. Wipe grease from skin and seek immediate attention if grease contacts eyes.
- When relieving the pressure in the track tension system, do not turn the grease fitting farther than one counter-clockwise turn.
- Do not loosen any part of the track tension system until the pressure has been released from the track tension system.
- Keep your face away from the lubricating valve connection.
- Do not use auxiliary force on the track or idler in an effort to force grease from the loosened fitting. Contact an authorized Wacker Neuson service center.

NOTICE

Excessive tension of the tracks causes severe damage to the hydraulic cylinder and the track.

- Tighten the tracks only up to the prescribed measuring distance.

https://truckmanualshub.com/

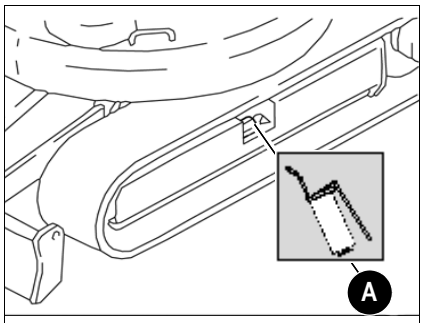


Fig. 287: Tightening the tracks

Tightening the tracks

☞ *Inject grease with the pump through lubricating valve **A**.*

☞ *Check the tension is correct by lowering the machine to the ground, starting the engine, letting it run at idling speed without any load and slowly moving the machine forward and reverse and switching it off again.*

☞ *Check the tension of the tracks again.*

➥ If the tension is not correct:

☞ Adjust again.

☞ *Should the tracks still be slack after injecting more grease, replace the tracks or the seals in the hydraulic cylinders. Contact an authorized Wacker Neuson service center in this case.*

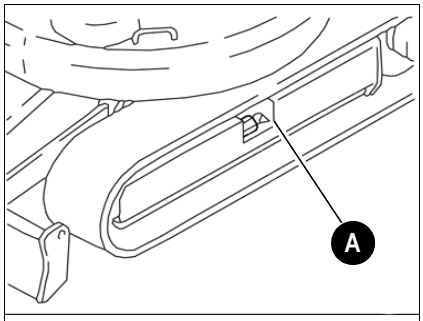


Fig. 288: Draining grease

Reducing tension

☞ Place a suitable container underneath to collect the grease.

☞ *Slowly rotate lubricating valve **A** counter-clockwise 1 turn to release the grease.*

➥ The grease flows out of the groove of the lubricating valve.

☞ *Retighten the lubricating valve **A**.*

☞ *Check the tension is correct by lowering the machine to the ground, starting the engine, letting it run at idling speed without any load and slowly moving the machine forward and reverse and switching it off again.*

☞ *Lift the machine again.*

☞ *Check the tension of the tracks again.*

➥ If the tension is not correct:

☞ Adjust again.

Environment

Use a suitable container to collect the grease as it flows out and dispose of it in an environmentally friendly manner.

https://truckmanualshub.com/

5.13 Track propulsion final drive

WARNING

Burn hazard. The engine components and the oil are very hot immediately after switching off the machine. If the inside of the drive gear is under pressure, the oil or the plug can be squeezed out.

Risk of injury and scalding.

- Wait until the engine has cooled down before taking up work.
- Slowly open the plug to release the pressure inside.

Checking the oil level and adding oil

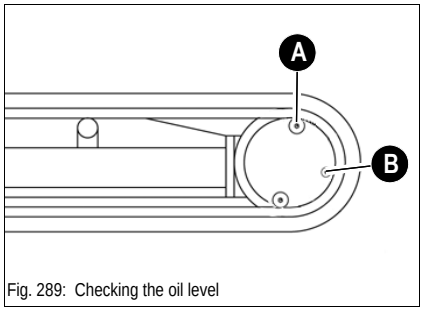


Fig. 289: Checking the oil level

☞ *Place the machine on firm, level and horizontal ground.*
☞ *Place the machine so that filler plug **A** is at the top.*
☞ *Stop the engine.*
☞ *Let the engine cool down.*
☞ *Fold the control lever base up.*
☞ *Remove the starting key and carry it with you.*
☞ *Unscrew screws **A** and **B** with a suitable tool.*
☞ *A small quantity of oil must flow out of opening **B**.*
➥ If the oil does not flow out of opening **B**, add oil:
☞ Add oil through opening **A**,
➥ until a small quantity of oil flows out of opening **B**.
☞ *Replace and tighten screws **A** and **B** back in again.*
☞ *Move the machine a few metres.*
☞ *Check the oil level again.*
➥ If the oil level is not correct:
☞ Repeat the procedure.

Draining oil

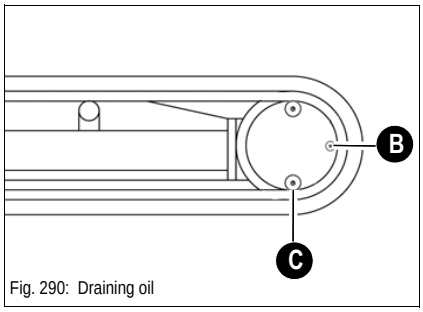


Fig. 290: Draining oil

☞ *Stop the machine on firm, level and horizontal ground.*
☞ *Place the machine so that drain plug **C** is at the bottom.*
☞ *Stop the engine.*
☞ *Let the engine cool down.*
☞ *Fold the control lever base up.*
☞ *Remove the starting key and carry it with you.*
☞ *Unscrew screws **B** and **C** with a suitable tool.*
➥ The oil flows out of opening **C**.
☞ Use a suitable container to collect the oil as it drains.

Environment

Collect the oil with a suitable container and dispose of it in an environmentally friendly manner.

https://truckmanualshub.com/

5.14 Maintenance of attachments

Important

Correct maintenance and service is absolutely necessary for smooth and continuous operation, and for an increased service life of the attachments. Please observe the lubrication and maintenance instructions in the Operator's Manuals of the attachments.

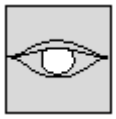
5.15 Electrical system

Service and maintenance work at regular intervals



Checks before driving the machine or when changing users

- Is the light system OK?
- Do the lights and the signalling and warning system work?



Every week

- Electric fuses – *see chapter Fuse box in instrument panel* on page 6-3.
- Cable and earth connections.
- Battery charge condition – *see Battery* on page 5-38.
- Condition of battery terminals.

Instructions concerning specific components

Cables, lamps and fuses

Always observe the following instructions:

- Malfunctioning components of the electrical system must always be replaced by an authorized expert. Bulbs and fuses may be replaced by the user.
- When performing maintenance work on the electrical system, pay particular attention to ensuring good contact in leads and fuses.
- Blown fuses indicate overloading or short circuits. The electrical system must therefore be checked before installing the new fuse.
- Only use fuses with the specified load capacity (amperage) – *see chapter Fuse box in instrument panel* on page 6-3.

Alternator

Always observe the following instructions:

- Start the engine only if the battery is connected.
- When connecting the battery, ensure that the poles (+/–) are not inverted.
- Always disconnect the battery before performing welding work or connecting a quick battery charger.
- Replace malfunctioning charge indicator lights immediately – *see chapter Alternator charge function indicator light (red)* on page 3-11.

https://truckmanualshub.com/

Battery

WARNING

Hazardous substances. Batteries contain caustic sulphuric acid.

Risk of severe injury.

- This acid must not be allowed to come into contact with the skin, the eyes, clothing or the machine.
- Always wear goggles and protective clothing with long sleeves.
- If acid is spilt:
- Thoroughly rinse all affected surfaces immediately with plenty of water.
- Thoroughly wash any part of the body touched by the acid immediately with plenty of water and seek medical attention at once.

WARNING

Explosion hazard. A potentially combustible oxygen-hydrogen mixture forms in batteries during normal operation and especially when charging.

Risk of severe injury.

- Always wear gloves and eye protection when working with batteries.
- Avoid naked flames and sparks and do not smoke in the vicinity of open battery cells.
- In case of a frozen battery or of an insufficient electrolyte level, do not try starting the machine with battery jumper cables. Dispose of the battery immediately.

- Use only 12 V power sources. Higher voltages will damage the electric components.
- When connecting the battery leads, ensure that the poles +/– are not inverted, otherwise sensitive electric components will be damaged.
- Do not interrupt voltage-carrying circuits at the battery terminals – danger of sparking.
- Never place tools or other conductive articles on the battery – danger of short circuit.
- Disconnect the negative (**–**) battery terminal from the battery before starting repair work on the electrical system.
- Dispose of used batteries properly.
- Also – *see Battery* on page 2-18.

Important

Do not disconnect the battery while the engine is running.

https://truckmanualshub.com/

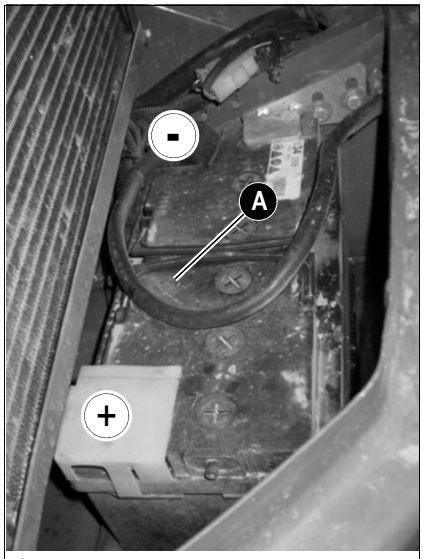


Fig. 291: Battery

Important

Battery **A** is located in the engine compartment, on the right in driving direction.

The battery is “maintenance-free”. However have the battery checked at regular intervals to ensure that the electrolyte level is between the MIN and MAX marks.

Checking the battery requires it to be removed and must be performed by an authorized service center.

Always follow the specific battery safety instructions.

https://truckmanualshub.com/

5.16 General maintenance work

Cleaning

Cleaning the machine is divided into 3 separate areas:

- Inside the cab.
- Exterior of the machine.
- Engine compartment.

The wrong choice of cleaning equipment and agents can impair the operating safety of the machine on the one hand, and on the other undermine the health of the persons in charge of cleaning the machine. It is therefore essential to observe the following instructions.

General instructions for all areas of the machine

Cleaning with washing solvents

- Ensure adequate room ventilation.
- Wear suitable protective clothing.
- Do not use flammable liquids, such as petrol or diesel.

Cleaning with compressed air

- Work carefully.
- Wear goggles and protective clothing.
- Do not aim the compressed air at the skin or at other people.
- Do not use compressed air for cleaning your clothing.

Cleaning with a high-pressure cleaner or steam jet

- Cover electric parts.
- Do not directly expose electric components and damping material to the jet.
- Cover the vent filter on the hydraulic oil reservoir and the filler caps for fuel, hydraulic oil etc.
- Protect the following components from moisture:
  - Electric components such as the alternator etc.
  - Control devices and seals.
  - Air intake filters etc.

Cleaning with volatile and easily flammable anticorrosion agents and sprays:

- Ensure adequate room ventilation.
- Do not use unprotected lights or naked flames.
- Do not smoke.

Inside the cab

NOTICE

Never use high-pressure cleaners, steam jets or high-pressure water to clean inside the cab. Water under high pressure can

- penetrate into the electrical system and cause short circuits and
- damage seals and disable the controls.

We recommend using the following aids to clean the cab:

- Broom
- Vacuum cleaner
- Damp cloth
- Brush

https://truckmanualshub.com/

- Water with mild soap solution

Cleaning the seat belt

- Clean the seat belt (which remains fitted in the machine) only with a mild soap solution; do not use chemical agents as they can destroy the fabric.

Exterior of the machine

The following articles are generally suitable:

- High-pressure cleaner
- Steam jet

Engine compartment

WARNING

Entanglement hazard. Clean the engine at engine standstill only.

Risk of personal injury.

- Stop the engine before cleaning.

WARNING

Burn hazard. Clean the engine at engine standstill only.

Risk of personal injury.

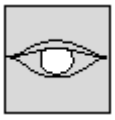
- Stop engine before cleaning.
- Let the engine cool down.

NOTICE

When cleaning the engine with a water or steam jet

- The engine must be cold and do not point the jet directly at electric sensors such as the oil pressure switch.
- The humidity penetrating any such sensors causes them to fail and leads to engine damage.

Screw connections and attachments



All screw connections must be checked regularly for tightness, even if they are not listed in the maintenance schedules.

☞ *Engine fastening screws.*

☞ *Fastening screws on the hydraulic system.*

☞ *Line, bucket teeth and pin fastenings on the attachment*

Retighten loose connections immediately. Contact an authorized service center if necessary.

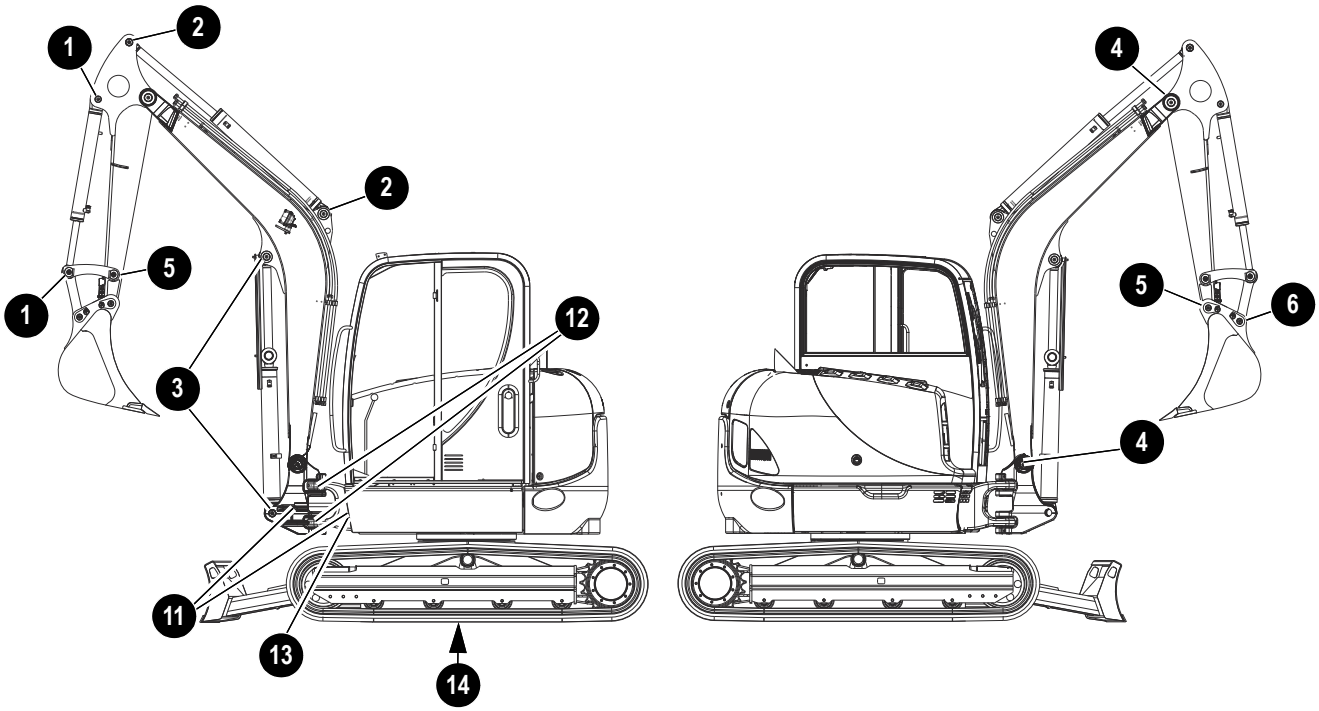
Pivots and hinges



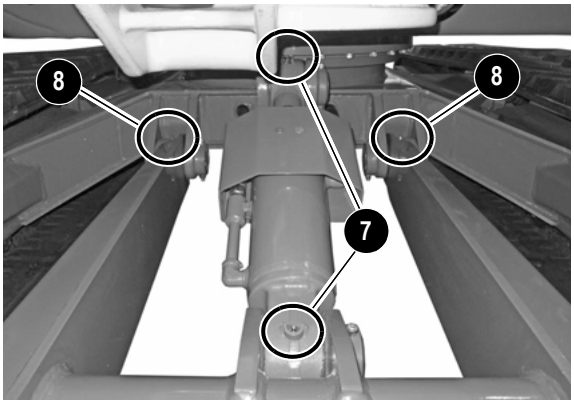
All mechanical pivot points on the machine (e.g. door hinges, joints) and fittings (e.g. door arresters) must be lubricated regularly, even if they are not listed in the lubrication plan.

https://truckmanualshub.com/

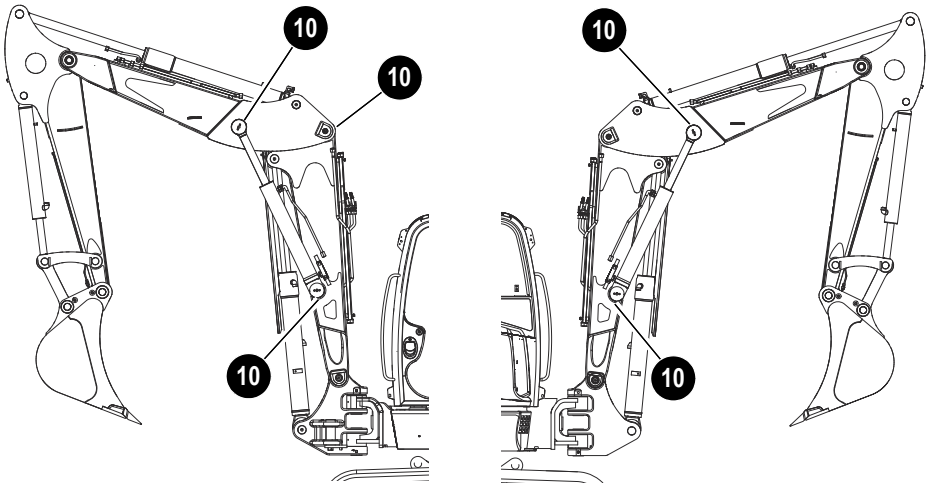
5.17 Overview of lubrication points



Stabilizer blade



Triple articulation boom 6003 (option)



https://truckmanualshub.com/

Pos.	Lubrication point	Interval	No
1	Bucket hydraulic cylinder	Daily	2
2	Stick hydraulic cylinder	Daily	2
3	Boom hydraulic cylinder	Daily	2
4	Boom	Daily	2
5	Stick	Daily	2
6	Joint rod	Daily	1
7	Stabilizer blade hydraulic cylinder	Daily	2
8	Stabilizer blade	Daily	2
9	Triple articulation boom 6003 (option)	Daily	5
10	Offset hydraulic cylinder	Daily	2
11	Swivelling console	Daily	2
12	Ball bearing race of live ring	Every week	1
13	Teeth of live ring	Every week	1
14	Powertilt (option)	Daily	4
15	Hydraulic quickhitch (option)	Daily	2

Parking the machine

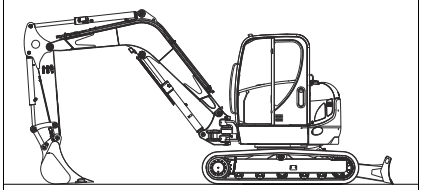


Fig. 292: Parking the machine

- Stop the machine on firm, level and horizontal ground.
- Position the boom straight ahead at the center of the machine.
- Lower the stabilizer blade to the ground.
- Stop the engine.
- Operate the joystick repeatedly to release the pressure in the hydraulic system.
- Remove the starting key and carry it with you.
- Move the control lever base in all directions repeatedly.
- Fold the control lever base up.
- Close the windows and the door.
- Leave the cab.
- Close the door and the engine cover.
- Perform maintenance work.

Important

Keep the lubrication points clean and remove ejected grease.

Lubrication points on the boom, bucket and stick hydraulic cylinders

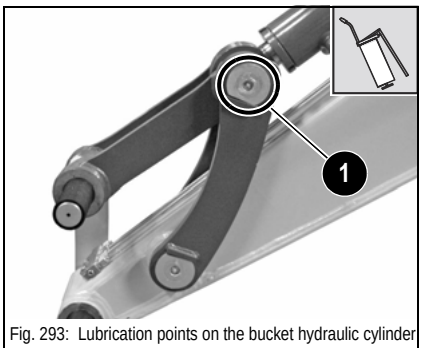


Fig. 293: Lubrication points on the bucket hydraulic cylinder

☞ *Apply grease to lubrication points **1** on the bucket hydraulic cylinder.*

https://truckmanualshub.com/

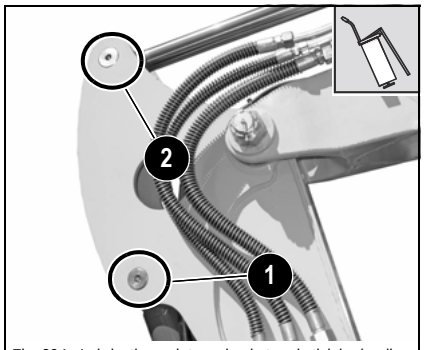


Fig. 294: Lubrication points on bucket and stick hydraulic cylinders

☞ *Apply grease to lubrication points **1** on the bucket hydraulic cylinder.*

☞ *Apply grease to lubrication points **2** on the stick hydraulic cylinder.*

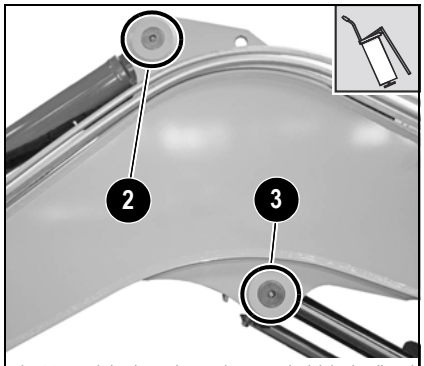


Fig. 295: Lubrication points on boom and stick hydraulic cylinders

☞ *Apply grease to lubrication points **2** on the stick hydraulic cylinder.*

☞ *Apply grease to lubrication points **3** on the boom hydraulic cylinder.*

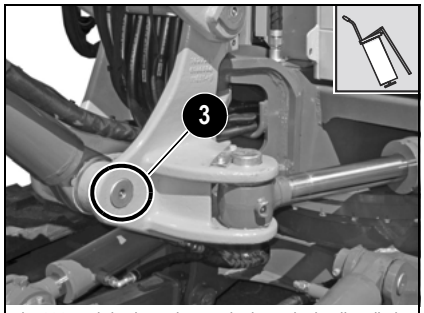


Fig. 296: Lubrication points on the boom hydraulic cylinder

☞ *Apply grease to lubrication points **3** on the boom hydraulic cylinder.*

Lubrication points on the boom and stick

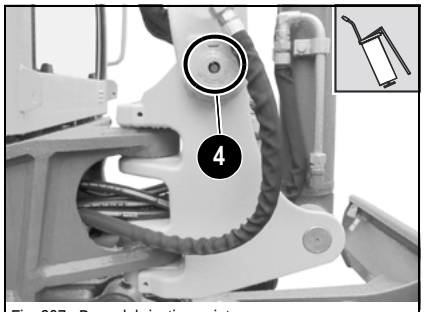


Fig. 297: Boom lubrication points

☞ *Apply grease to lubrication points **4** on the boom*

https://truckmanualshub.com/

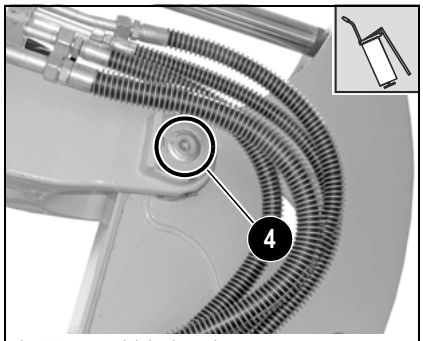


Fig. 298: Boom lubrication points

☞ *Apply grease to lubrication points **4** on the boom*

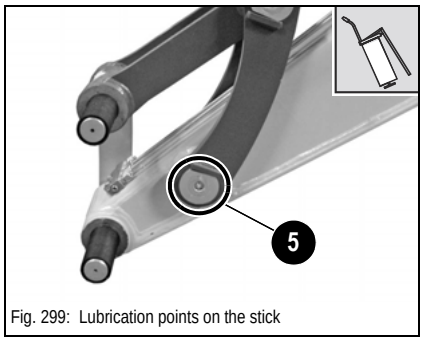


Fig. 299: Lubrication points on the stick

☞ *Apply grease to lubrication points **5** on the stick.*

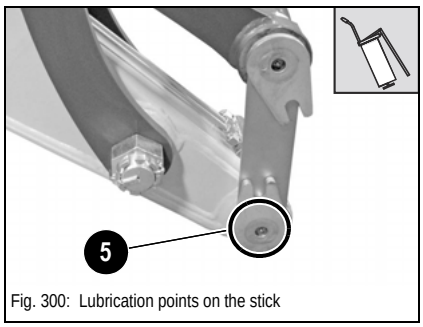


Fig. 300: Lubrication points on the stick

☞ *Apply grease to lubrication points **5** on the stick.*

Joint rod lubrication point

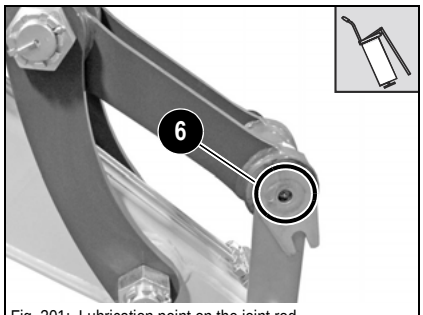


Fig. 301: Lubrication point on the joint rod

☞ *Apply grease to lubrication point **6** on the joint rod.*

Lubrication points on the stabilizer blade and stabilizer blade hydraulic cylinder

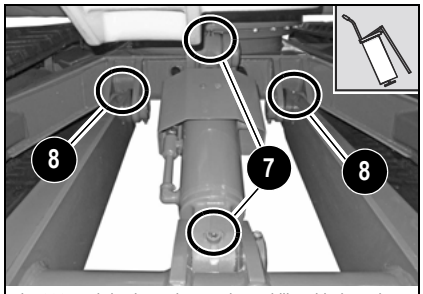


Fig. 302: Lubrication points on the stabilizer blade and hydraulic cylinder 75Z3

☞ *Apply grease to lubrication points **7** on the stabilizer blade hydraulic cylinder.*

☞ *Apply grease to lubrication points **8** (on either side) on the stabilizer blade.*

☞ *Apply grease to lubrication points **9** on the stabilizer blade hydraulic cylinder.*

https://truckmanualshub.com/

Lubrication points on the slewing hydraulic cylinder and swivelling console

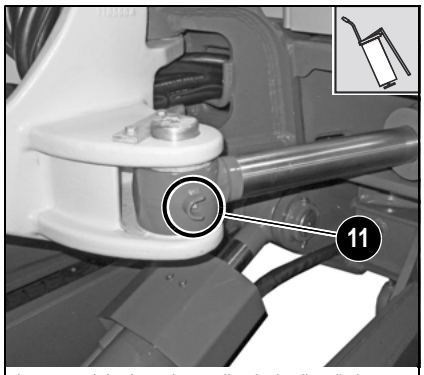


Fig. 303: Lubrication point on offset hydraulic cylinder

☞ *Apply grease to lubrication points **11** on the offset hydraulic cylinder.*

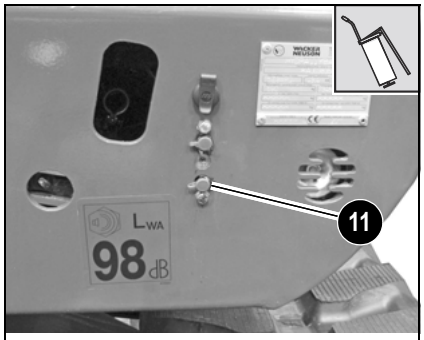


Fig. 304: Lubrication point on offset hydraulic cylinder

☞ *Apply grease to lubrication point **11** of the offset hydraulic cylinder.*

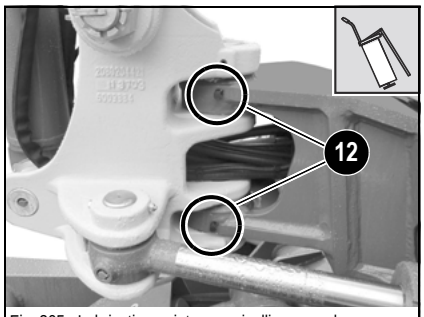


Fig. 305: Lubrication points on swivelling console

☞ *Apply grease to lubrication points **12** of the swivelling console.*

https://truckmanualshub.com/

Lubrication points of ball bearing race of live ring

DANGER

Crushing hazard. Do not rotate the machine during lubrication.

Risk of severe injury or death.

- Stop and park the machine – *see Parking the machine* on page 5-43

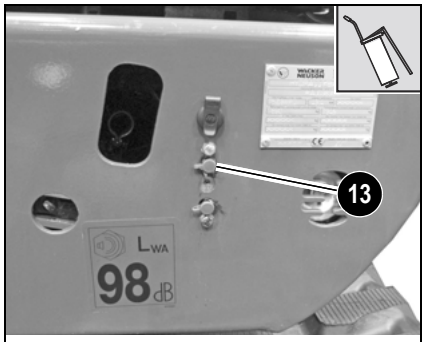


Fig. 306: Lubrication points of ball bearing race

☞ Stop and park the machine.

☞ Apply grease to lubrication points **13** with one stroke of the grease gun.

☞ Remove ejected grease.

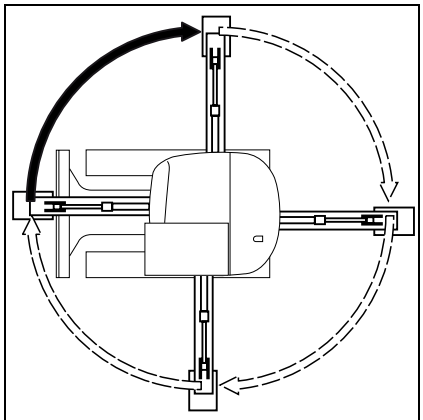


Fig. 307: Turn the machine 90° at a time

☞ Turn the machine 90° at a time.

☞ Stop and park the machine.

☞ Apply grease to each of lubrication points **13** with one stroke of the grease gun.

☞ Remove ejected grease.

☞ Turn the machine 360° a few times.

https://truckmanualshub.com/

Lubrication points of live ring teeth

DANGER

Crushing hazard. Do not rotate the machine during lubrication.

Risk of severe injury or death.

- Stop and park the machine – *see Parking the machine* on page 5-43
- Lubricate only over a pit.

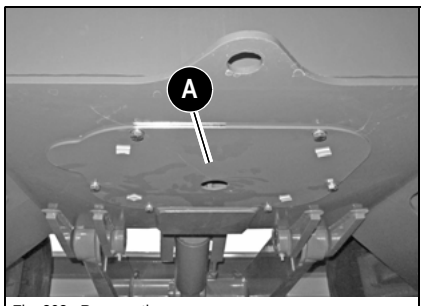


Fig. 308: Remove the cover

☞ Drive and stop the machine over a pit.

☞ The lubrication point is located on the lower side of the undercarriage.

☞ Remove cover **A** on the lower side with a suitable tool.

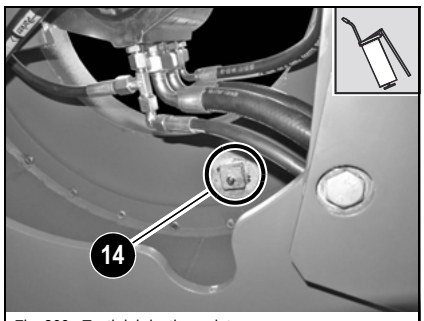


Fig. 309: Teeth lubrication point

☞ Apply grease to lubrication point **14** with five strokes of the grease gun.

☞ Remove ejected grease.

☞ Install the cover.

https://truckmanualshub.com/

Powertilt lubrication points (option)

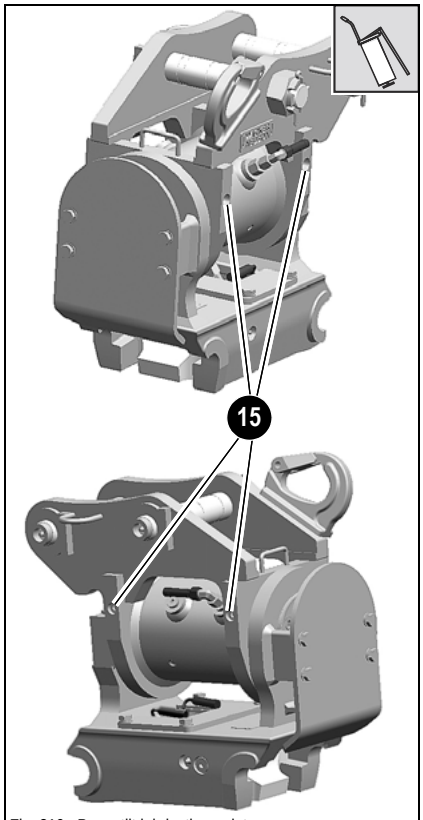


Fig. 310: Powertilt lubrication points

Perform maintenance of the Powertilt unit once a day with the other maintenance work for the machine.

Perform visual checks for possible defects, damage or cracks.

Remove all dirt on and around moving parts.

Apply grease via grease nipples **15**.

– *see chapter 3.60 Powertilt (option)* on page 3-100

Lubrication points of hydraulic quickhitch (option)

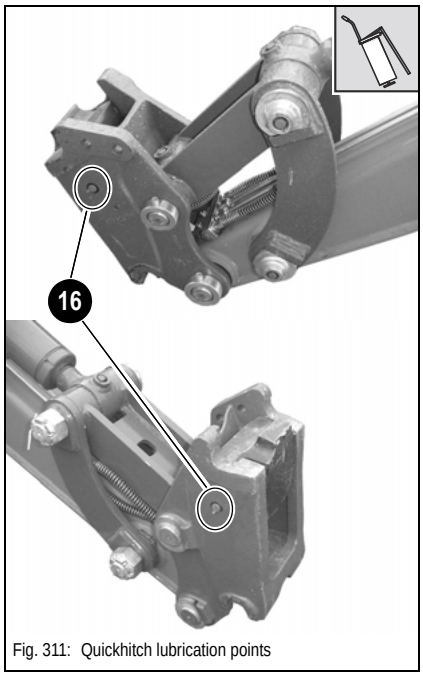


Fig. 311: Quickhitch lubrication points

Important

Before picking up an attachment, the driver must ensure that it can be hitched correctly by removing all dirt on either claw of the quickhitch.
Perform maintenance on the quickhitch once a day with the other maintenance work for the machine.

Perform visual checks for possible defects, damage or cracks.

Remove all dirt on and around moving parts.

The claws must be clean and slightly greased.

Apply grease to the friction surfaces of the lock mechanism via 2 grease nipples **16** on either side of the quickhitch (see *Fig. 311*).

Before starting work, check the acoustic signal. You must be able to hear the acoustic signal as you actuate the switch.

https://truckmanualshub.com/

Lubrication points of control lever base (from serial no. AJ02777)

CAUTION

Crushing hazard. In the area of the moving parts of the control lever base.

Risk of injury.

- Stay clear (extremities, clothing) of the moving parts.

☞ *Fold the control lever base up.*

☞ *Spray fluid grease onto guide lever **C**.*

☞ *Spray fluid grease on both sides of double spring **D**.*

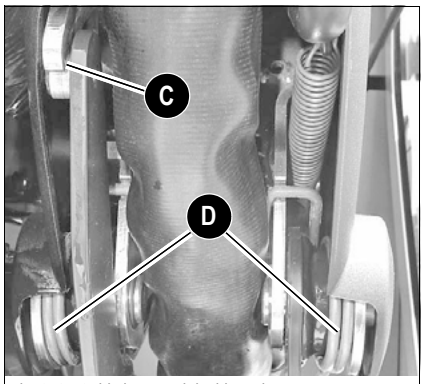


Fig. 312: Guide lever and double spring

Important

Spray fluid grease onto the lubrication points once a month (250 s/h).

VDS lubrication points (option)

Apply grease to lubrication points **A** once a week.

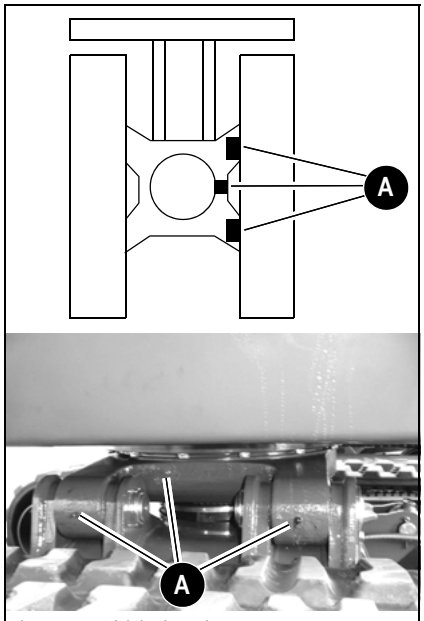


Fig. 313: VDS lubrication points

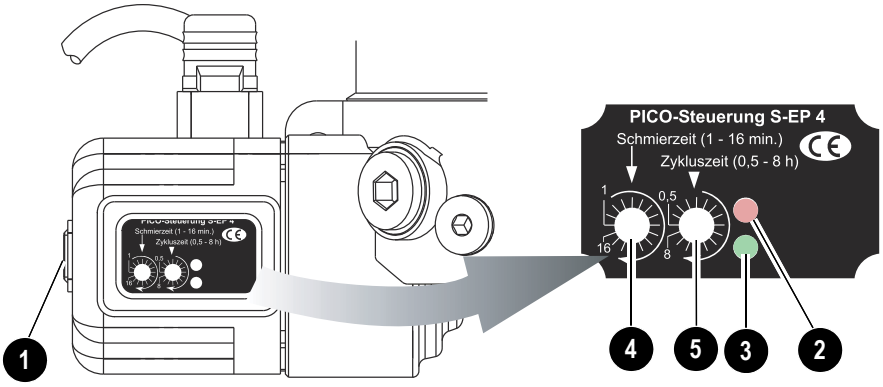
https://truckmanualshub.com/

5.18 Central lubrication system (option)

Grease-based central lubrication system with 12 lubrication points.

Not in connection with triple articulation boom (option).

Function



Pos.	Designation
1	Push button on motor housing
2	Red LED
3	Green LED
4	Lubrication time potentiometer
5	Cycle interval potentiometer

The green LED illuminates for about 1.5 sec once starter is turned on to indicate readiness.

Pressing the push button on the pump's motor housing starts the pump and starts the lubrication cycle. The pump drive motor stops and cycle interval begins once lubrication time is over.

All further lubrications start automatically according to the cycle interval set.

Lubrication time is stopped and saved if starter or lubrication is turned off during cycle interval. The data is read from the memory upon turning starter on again, and lubrication is resumed where it was interrupted.

Pressing the push button on the motor housing or on the instrument panel starts intermediate lubrication if starter is turned on.

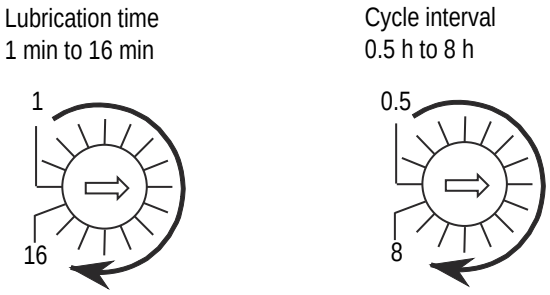
Status LEDs

Display	Meaning
Green LED 1.5 sec	Starter on (operational readiness)
Steady green light	Illuminates during lubrication
Steady red light	Grease level error Remains lit until grease tank is refilled
Blinking red light	Overpressure error

https://truckmanualshub.com/

Adjusting cycle time and lubrication time

Adjust the cycle time and the lubrication time with the potentiometers.



Repair in case of clogging

Clogging indication

Overpressure beyond operating pressure means the system is clogged and is indicated as follows:

- Grease escapes by the pressure limiting valve.
- Blinking red LED **2** on the pump housing.

Causes for clogging in the system

- Crushed or clogged lubrication line.
- Bearing overfilled or clogged with lubricant.
- Inadequate lubricant for central lubrication systems.
- Clogged distributor.

Detecting clogging

☞ *Remove the main line of the main distributor.*

☞ *Actuate the pump with the push button and check whether the lubricant is delivered correctly.*

☞ *Reattach the main line onto the main distributor.*

☞ *Remove the lines one after another and actuate the pump every time.*

Repairing a clogged distributor

☞ *Remove the distributor from the system.*

☞ *Remove the plug of the piston bore.*

☞ *Move the piston back and forth (do not remove).*

☞ *Screw the plugs back in again.*

You can remove the piston of the malfunctioning distributor and check it for scratches or damage.

If there are traces of hardened grease on the piston or the bores, remove the grease with compressed air or by washing the piston.

Important

Traces of hardened grease are a sign that the grease is not suitable for central lubrication systems.

https://truckmanualshub.com/

5.19 Preparatory work before taking the machine out of service

The measures indicated below refer to putting the machine out of operation for 30 days or longer.

- Park the machine – *see chapter 3.20 Parking the machine* on page 3-29.
- Check whether oil or other fluids leak from the machine.
- Clean the engine with a high-pressure cleaner in a suitable place – *see chapter 5.16 General maintenance work* on page 5-40.
- Carefully clean and dry the entire machine.
- Spray an anticorrosion agent onto bare metal parts of the machine (e.g. piston rods of hydraulic cylinders).
- Apply grease to all lubrication points.
- Change engine oil.
- Check and if necessary add hydraulic oil and coolant.
- Store the machine indoors if possible.
- If the machine is stored outdoors, place it on a wooden base and cover it with a watertight tarpaulin to protect it against humidity.
- Add the fuel tank to the maximum level.
- Remove the earthing strap from the battery, or remove the battery and store it in a safe place. Charge the battery and perform battery maintenance at regular intervals.
- Switch off the fuel filter on the upper carriage and the fuel filter on the engine (turn to OFF).
- Close the exhaust pipe and the air intake opening of the air filter system.

5.20 Maintenance if the machine is out of service for a longer period of time

Following measures must be taken if the machine is out of service for more than 30 days.

Putting into operation again

- Remove anticorrosion agent from the piston rods.
- Charge, install and connect the battery.
- Remove the seals from the exhaust pipe and the air filter intake.
- Check the condition of the air filter element and replace the element if necessary.
- Check the dust valve.
- Switch on the fuel filters on the upper carriage and the engine (turn to ON).
- Turn the starter to position 1 for 2 minutes (to supply the engine with fuel).
- Check whether oil or other fluids leak from the machine.
- Lubricate the machine according to the lubrication plan.
- Check and if necessary add engine oil, hydraulic oil, coolant and fuel in the units and tanks.
- If the machine was out of service for over 6 months, change the oil in the gearbox, engine, etc. and the hydraulic oil reservoir.
- Also replace hydraulic oil filters (return and breather filters) if the machine has been out of service for over 6 months.
- Remove the starting key, remove fuse F2 on the right-hand cover.
- Let the engine run 15 seconds.
- Wait 15 seconds.
- Let the engine run 15 seconds again.
- Remove the starting key, put fuse F2 back in.
- Start the diesel engine.
- Let the engine run at idling speed at least 15 minutes without load.
- Check the oil levels in all units and add oil if necessary.
- Start the machine and ensure that each function and all warnings work correctly before putting the machine back into operation.

https://truckmanualshub.com/

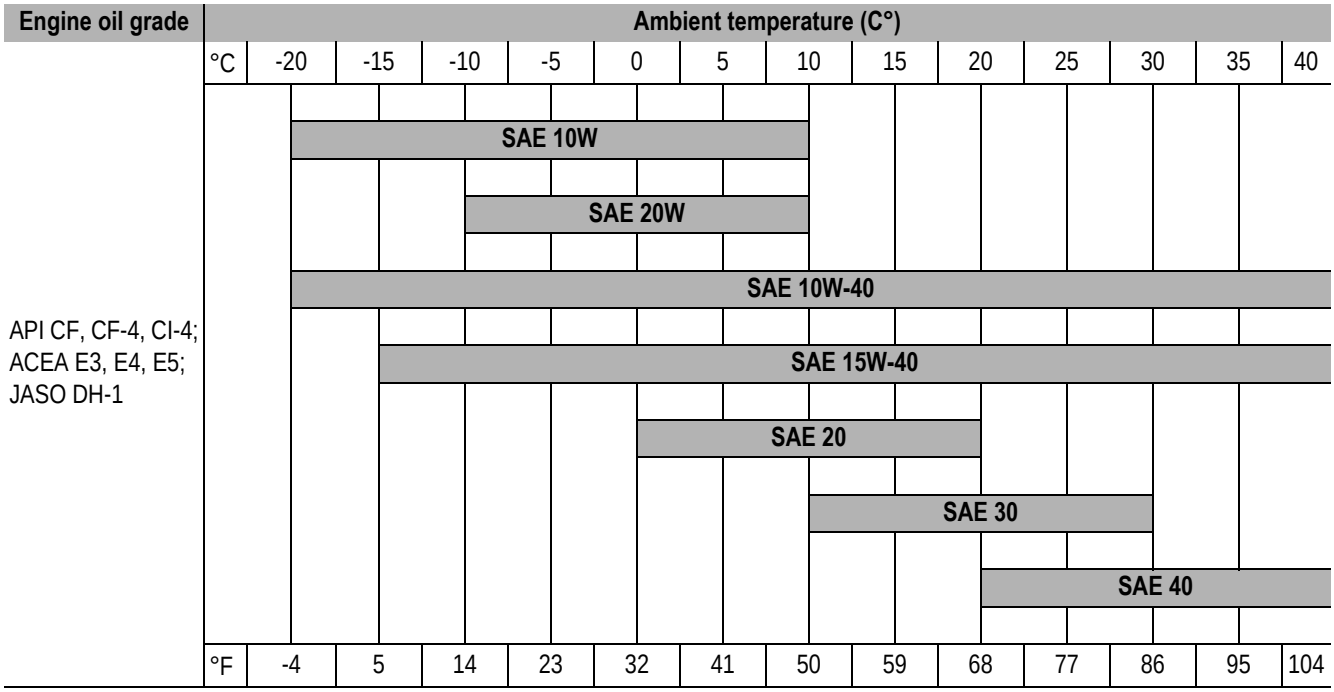
5.21 Fluids and lubricants

Component/application	Engine/machine fluid	Specification	Season/temperature	Capacities [1]	
				50Z3	6003
Diesel engine	Engine oil[2]	SAE10W-40	−20 °C (−4 °F) +40 °C (+104 °F)	7.8 l (2.06 gal)	10.2 l (2.69 gal)
Travelling drive	Gearbox oil[3]	SAE80W-90[4]	Year-round	About 1.3 l each (0.34 gal)	
hydraulic oil reservoir	Hydraulic oil	HVLP 46[5]	Year-round[6]	73 l (19.3 gal)	
		HV 46[7]			
	Biodegradable oil [8]	HLP Synth 46			
		BIOHYD SE-S 46			
Grease	Roller and friction bearings	KPF 2 K-20[9], ISO-L-X-BCEB 2[10]	Grease	As required	
	Open transmissions live ring: ball bearing				
	Live ring gears				
	Grease nipples				
Grease nipples	Multipurpose grease	KPF 2 K-20[11]	Year-round	As required	
Battery terminals	Acid-proof grease[12]	FINA Marson L2	Year-round	As required	
Fuel tank	Diesel fuel	ASTM D975-94: 1D, 2D (USA)	Summer or winter diesel depending on outside temperatures	78 l (20.6 gal)	
		EN 590 : 96 (EU)			
		ISO 8217 DMX			
		BS 2869-A1, A2 (GB)			
		JIS K2204			
		KSM-2610			
		GB252			
	Biodegradable diesel fuel	EN 14214			
		ASTM D-6751			
Engine cooling system	Coolant	Soft water + antifreeze SF D12 Plus	Year-round	7 l (1.85 gal)	
Air conditioning	Refrigerant	R134a[13]	Year-round	750 g (1.65 lbs)	
	Compressor oil	Sanden SP10	Year-round	116.5 cm³ (7.11 in³)	
Washer system	Cleaning agent	Water + antifreeze	Year-round	2 l (0.53 gal)	
Control lever base	Adhesive fluid grease	Förch S401	Year-round	As required	

1. The capacities indicated are approximate values; the oil level check alone is relevant for the correct oil level
   Capacities indicated are no system fills
2. According to DIN 51511 (API CF, CF-4, CI-4; ACEA E3, E4, E5; JASO DH-1).
3. Hypoid gearbox oil based on basic mineral oil (SAE80W-90 according to DIN 51502), (API GL-4, GL5).
4. According to DIN 51502 on a mineral oil basis. Do not mix gearbox oils.
5. According to DIN 51524 section 3, ISO-VG 46.
6. Depending on local conditions – *see Hydraulics oil grade* on page 5-56.
7. According to ISO 6743/4.
8. Biodegradable hydraulic oil based on saturated synthetic esters with an iodine value of < 10, according to DIN 51524, section 3, HVLP, HEES.
9. KPF 2 K-20 according to DIN 51502 multipurpose lithium grease.
10. ISO-L-X-BCEB 2 according to DIN ISO 6743-9.
11. KPF 2 K-20 according to DIN 51502 multipurpose lithium grease.
12. Standard acid-proof grease NGLI category 2.
13. According to DIN 8960.

https://truckmanualshub.com/

Oil grades for the diesel engine, depending on temperature



Additional oil change and filter replacement (hydraulic system)

NOTICE

An additional oil change and filter replacement can be required depending on how the machine is used. Failure to observe these replacement intervals can cause damage to hydraulic components.

- Observe the following intervals.

Application		Hydraulic oil	Hydraulic oil filter insert
Normal work (excavation work)		Every 1000 s/h	Replace the first time after 50 s/h, then every 500 s/h
Percentage of hammer work	20 %	Every 800 s/h	300 s/h
	40 %	Every 400 s/h	
	60 %	Every 300 s/h	100 s/h
	Over 80 %	Every 200 s/h	

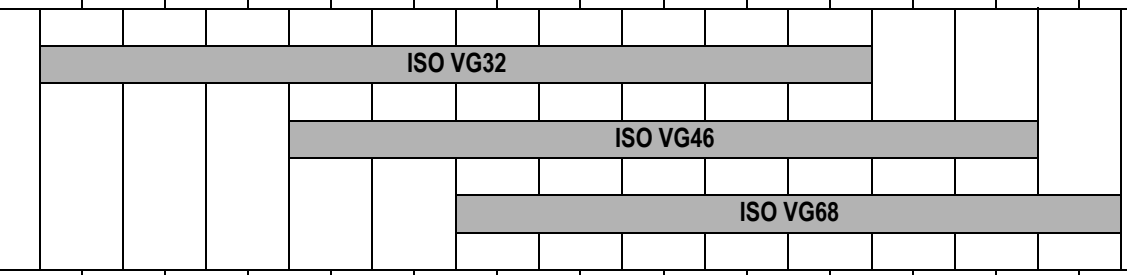
Important

Please refer to the maintenance plan on page 5-57 for additional maintenance work.

https://truckmanualshub.com/

Oil grades for the hydraulic system, depending on temperature

Hydraulics oil grade	Ambient temperature													
	°C	-20	-15	-10	-5	0	5	10	15	20	25	30	35	40	50
HVLP 46 [1] HV 46 [2]															
	°F	-4	5	14	23	32	41	50	59	68	77	86	95	104	122



1. According to DIN 51524 section 3, ISO-VG 46.
2. According to ISO 6743/4.

5.22 Maintenance plan (overview)

Work description

For service and maintenance work on the attachment, please refer to the operation and maintenance manual of the attachment manufacturer as well.

	Maintenance plan/service hours (s/h)								
	Maintenance work (once a day)	Every 50 s/h	Every 250 s/h	Every 500 s/h	Every 1000 s/h once a year	Every 1500 s/h	Every 2000 s/h	Customer	authorized service center
Fluid and filter changes ( ):									
Perform the following oil and filter changes (check oil levels after test run):									
• Engine oil[1]		●		●					●
• Engine oil filter[2]		●		●					●
• Fuel filter[3]		●		●					●
• Air filter element as indicated by indicator light[4]				●				●	
• Coolant					●				●
• Hydraulic oil filter insert [5]		●		●					●
• Hydraulic oil					●				●
• hydraulic oil reservoir breather					●				●
• Drain the condensation water from the hydraulic oil reservoir				●					●
• Replace cab air filter for heating and air conditioning					●			●	
• Drive gearbox oil [6]		●			●				●
Inspection work ( ):									
Check the following material. Refill if necessary:									
• Engine oil	●							●	
• Engine coolant	●							●	
• Hydraulic oil	●							●	
• Fuel	●							●	
• Drive gearbox oil		●							●
Clean water ducts							●		●
Check pedal function	●							●	
Check engine/hydraulic oil radiator and air conditioning for dirt. Clean if necessary	●							●	
Check cooling systems, heating and hoses for leaks and pressure (visual check)	●							●	
Check the pilot control filter for dirt, clean it if necessary					●				●
Clean the cab air filter of the heating system				●				●	

https://truckmanualshub.com/

https://truckmanualshub.com/

5.22 Maintenance plan (overview)

Work description

For service and maintenance work on the attachment, please refer to the operation and maintenance manual of the attachment manufacturer as well.

	Maintenance plan/service hours (s/h)								
	Maintenance work (once a day)	Every 50 s/h	Every 250 s/h	Every 500 s/h	Every 1000 s/h once a year	Every 1500 s/h	Every 2000 s/h	Customer	authorized service center
Replace the cab air filter of the heating system					●			●	
Check the air filter for damage	●							●	
Check the air filter elements for dirt, replace them if necessary			●					●	
Check correct function of air filter contamination gauge				●					●
Remove dust from dust valve	●							●	
Prefilter with water separator: drain water	●							●	
• Clean				●					●
Diesel particulate filter (option) – *see chapter 5.9 Diesel particulate filter (option)* on page 5-16	●	●		●				●	●
Check the exhaust gas recirculation valve, clean it if necessary					●				●
Check V-belt condition and tension	●							●	
Check exhaust system for damage and condition	●							●	
Check valve clearance. Adjust if necessary					●				●
Lapping the intake and exhaust valves							●		●
Check and adjust the injection pressure of the injection nozzles, clean the injection needles/nozzles						●			●
Empty the fuel tank and check for dirt				●					●
Check battery electrolyte. Add with distilled water if necessary		●		●				●	
Check alternator, starter and electric connections, bearing play and function				●					●
Check preheating system and electric connections				●					●
Pressure check of primary pressure limiting valves[7]		●		●					●
Check tracks for cracks and cuts	●							●	
Check track tension. Retighten if necessary	●							●	
Check bearing play of tread rollers, track carrier rollers, front idlers				●					●
Check piston rods for damage	●							●	

5.22 Maintenance plan (overview)

Work description

For service and maintenance work on the attachment, please refer to the operation and maintenance manual of the attachment manufacturer as well.

	Maintenance plan/service hours (s/h)								
	Maintenance work (once a day)	Every 50 s/h	Every 250 s/h	Every 500 s/h	Every 1000 s/h once a year	Every 1500 s/h	Every 2000 s/h	Customer	authorized service center
Check the screw connections of the safety devices (e.g. cab, etc.) for tightness	●			●					●
Check screws for tightness				●					●
Check pin lock	●							●	
Check line fixtures	●							●	
Check indicator lights for correct function	●							●	
Check cab tilt lock, cables and cable holders for damage and correct function		●		●					●
Couplings, dirt pile-up on hydraulic system dust caps	●							●	
Check insulating mats in the engine compartment for damage/condition		●						●	
Ensure grease supply of central lubrication system (option)	●							●	
Check labels and Operator's Manual for completeness and condition		●						●	
Adjust the mirrors (option) correctly, clean them and check them for damage and correct function	●							●	
Check all fastening screws on the mirrors (option) and tighten them if necessary		●						●	
Check function of engine cover gas strut	●							●	
Check hydraulic quickhitch for damage	●							●	
Lights and acoustic warning system [8]	●							●	
Check gearing of swivel unit pinion					●				●
Check Powertilt (option) for damage	●							●	
Check the axial play of the Powertilt (option). (must not be over 0.38 mm/0.015 in)			●						●
Actuate the Powertilt (option) swivel device in the final position for 1 minute[9]	●							●	
Check protective structures (cab, Front Guard, FOPS)					●			●	
Lubrication service ( ):									
Lubricate the following assemblies/components: – *see Maintenance label* on page 5-62 When used in water – *see Using the quickhitches in water* on page 2-17									
• Stabilizer blade	●							●	
• Swivelling console	●							●	

https://truckmanualshub.com/

5.22 Maintenance plan (overview)

Work description

For service and maintenance work on the attachment, please refer to the operation and maintenance manual of the attachment manufacturer as well.

	Maintenance plan/service hours (s/h)								
	Maintenance work (once a day)	Every 50 s/h	Every 250 s/h	Every 500 s/h	Every 1000 s/h once a year	Every 1500 s/h	Every 2000 s/h	Customer	authorized service center
• Boom	●							●	
• Stick	●							●	
• Attachment	●							●	
• Hydraulic quickhitch system (option) – *see Hydraulic quickhitch Easy Lock (option)* on page 3-96	●[10]							●	
• Powertilt (option) with Easy Lock (option)	●[10]							●	
• Grease strip on chassis – *see Maintenance label* on page 5-62	●							●	
• Ball bearing race and teeth of live ring		●						●	
• Control lever base			●					●	
Air conditioning ( ):									
Perform the following maintenance and inspection work:									
• Air conditioning function[11]		●							●
Change cab air filter				●				●	
Check dehumidifier for corrosion, condensation and air bubbles		●							●
Replace dehumidifier						●			●
Compressor oil [12]						●			●
Functional check ( ):									
Check the function of the following assemblies/components. Rectify if necessary:									
• Lights, signalling system, acoustic warning system	●							●	
• Heating function		●						●	
• Upper carriage Kippmatik tilting mechanism (VDS)		●						●	
• Hydraulic quickhitch system (option) (lock)	●							●	
• Check the Powertilt (option)	●							●	
Leakage check ( ):									
Check for tightness, leaks and chafing: pipes, flexible lines and screw connections of the following assemblies and components. Rectify if necessary:									
• Visual check	●							●	
☞ Engine, hydraulic system and components	●							●	

https://truckmanualshub.com/

5.22 Maintenance plan (overview)

Work description

For service and maintenance work on the attachment, please refer to the operation and maintenance manual of the attachment manufacturer as well.

	Maintenance plan/service hours (s/h)								
	Maintenance work (once a day)	Every 50 s/h	Every 250 s/h	Every 500 s/h	Every 1000 s/h once a year	Every 1500 s/h	Every 2000 s/h	Customer	authorized service center
☞ Cooling and heating circuit	●							●	
☞ Travelling drive	●							●	
☞ Air conditioning	●								●
☞ Hydraulic quickhitch system (option) (hoses, valve)	●							●	

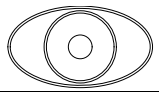
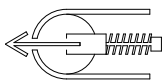
1. Drain engine oil the first time after 50 s/h, then every 500 s/h
2. Replace the engine oil filter the first time after 50 s/h, then every 500 s/h
3. Replace the fuel filter the first time after 50 s/h, then every 500 s/h
4. According to the fouling indicator, replace every 500 s/h at the latest. (Replace after 50 s/h when in extensive use in environments with acidic air, such as acid production facilities, steel and aluminium mills, chemical plants and other nonferrous-metal plants)
5. Replace the hydraulic oil filter insert the first time after 50 s/h, then every 500 s/h
6. Drain the gearbox oil the first time after 50 s/h, then every 1000 s/h
7. Check the first time after 50 s/h, then every 500 s/h.
8. Check once a week.
9. Check once a week. Rinse the system to remove dirt. Repeat the procedure in the opposite flow direction.
10. Twice a day when using in water
11. Switch on once every week
12. Replace the compressor oil every other 1500 s/h servicing.

https://truckmanualshub.com/

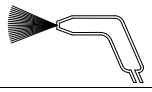
https://truckmanualshub.com/

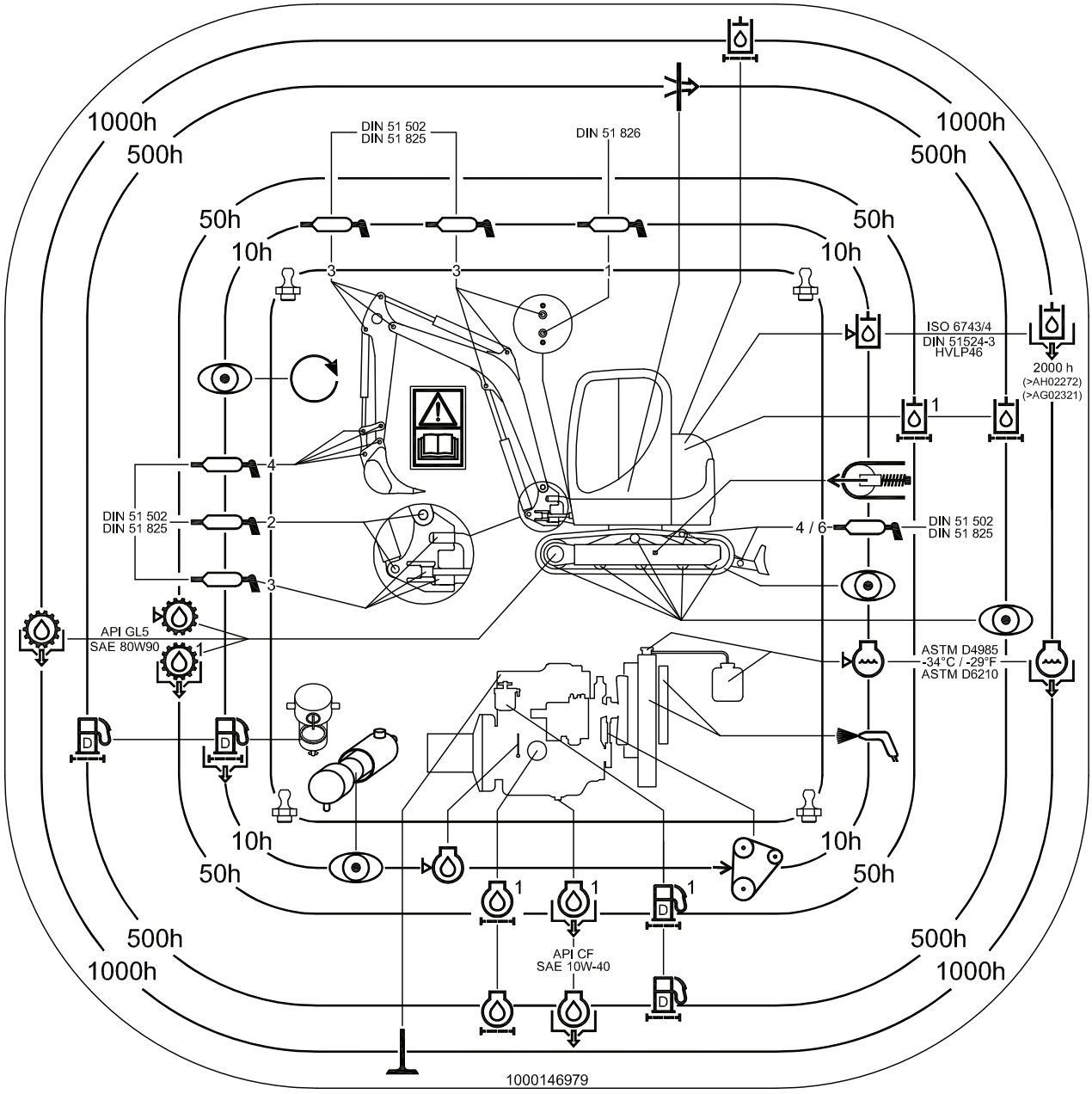
5.23 Maintenance label

Explanation of symbols on the maintenance label

Symbol	Assembly	Explanation
	General	Visual check
	General	Grease instructions
	Fuel system	Drain condensation water
	Fuel system	Replace the fuel filter, clean the fuel prefilter
	Radiator	Check the coolant level
	Radiator	Drain and add new coolant
	Engine	Check valve clearance. Adjust if necessary
	Engine	Check the engine oil level
	Engine	Change engine oil
	Engine	Replace the oil filter
	Engine	Check V-belt tension
	Travelling drive	Change oil
	Travelling drive	Check oil
	Undercarriage	Check track tension
	Hydraulic system	Check oil level
	Hydraulic system	Change hydraulic oil
	Hydraulic system	Replace the hydraulic oil filter, replace the breather filter

https://truckmanualshub.com/

Symbol	Assembly	Explanation
	Radiator fins	Clean
	Heating, air conditioning	Replace the recirculated air filter



https://truckmanualshub.com/

https://truckmanualshub.com/

6 Specifications

6.1 Chassis

Sturdy steel sheet chassis, rubber-mounted engine

6.2 Engine

Engine	Model 50Z$_3$		Model 6003	
	Up to serial no. AH00578	From serial no. AH00579	Up to serial no. AH00578	From serial no. AH00579
Product	Yanmar diesel engine			
Type	4TNV88-PNS	4TNV88-BPNS	4TNV98-VNS	4TNV98-ZVNS
Design	Water-cooled 4 stroke diesel engine			
No. of cylinders	4			
Displacement	2189 cm³ (133.6 in³)	2189 cm³ (133.6 in³)	3319 cm³ (202.5 in³)	3319 cm³ (202.5 in³)
Nominal bore and stroke	88 x 90 mm (3.46 x 3.54 in)	88 x 90 mm (3.46 x 3.54 in)	98 x 110 mm (3.85 x 4.3 in)	98 x 110 mm (3.85 x 4.3 in)
Output	28.2 kW (37.8 hp) at 2400 rpm	28.6 kW (38.3 hp) at 2400 rpm	43.4 kW (58.2 hp) at 2100 rpm	43.4 kW (58.2 hp) at 2100 rpm
Max. torque	138.3 Nm (102 ft. lbs.) at 1100 rpm	142.3 Nm (104.9 ft. lbs.) at 1350 rpm	238.3 Nm (175.8 ft. lbs.) at 1350 rpm	238.3 Nm (175.8 ft. lbs.) at 1350 rpm
Max. engine speed without load	2575 +/- 50 rpm	2590 +/- 50 rpm	2275 +/- 50 rpm	2130 +/- 25 rpm
Idling speed	1050 +/- 50 rpm	1100 +/- 50 rpm	1050 +/- 50 rpm	1100 +/- 25 rpm
Fuel injection system	Direct injection			
Starting aid	Glow plug (preheating time 10 – 15 seconds)		Intake manifold preheating (preheating time 10 – 15 sec)	
Max. inclined position (engine no longer supplied with oil):	30° – permanently in all directions 35° – no longer than 3 minutes Observe the machine's climbing ability (15°)!			
Fuel tank	83 l (21.9 gal)			
Exhaust values according to	EPA Tier II	EPA Tier III-A, 97/68/EC	EPA Tier II	EPA Tier III-A, 97/68/EC

https://truckmanualshub.com/

6.3 Hydraulic system

Hydraulics	Model 50Z$_3$	Model 6003
Pump	Double variable displacement + twin gear pump 2 x 20.7 + 16 + 4.5 cm³ (2 x 1.26 + 0.98 + 0.27 in³)	Double variable displacement + twin gear pump 2 x 28 + 21 + 4.5 cm³ (2 x 1.71 + 1.28 + 0.27 in³)
Flow rate	2 x 53.6 + 41.4 + 11.7 l/min (2 x 14.2 + 10.9 + 3.1 gal/min) at 2590 rpm	2 x 59.6 + 44.7 + 9.6 l/min (2 x 15.7 + 11.8 + 2.5 gal/min) at 2130 rpm
Operating pressure for work and drive hydraulics	230 bar (3336 psi)	240 bar (3481 psi)
Swivel unit operating pressure	215 bar (3118 psi)	215 bar (3118 psi)
Hydraulic oil radiator	Standard	
Hydraulic tank capacity	73 l (19.28 gal)	
Hydraulic oil quantity (system fill)	120 l (31.7 gal)	130 l (34.34 gal)

6.4 Work hydraulics

Work hydraulics	Model 50Z$_3$	Model 6003
Control valve	10 sections/11 sections (3rd control circuit)	11 sections/12 sections (3rd control circuit)/ 13 sections (triple articulation boom control)
Max. operating pressure	230 $^{\pm 5}$ bar (3336 $^{\pm 72}$ psi)	240 $^{\pm 5}$ bar (3481 $^{\pm 72}$ psi)
Main pressure restriction for boom/bucket/stick	230 $^{\pm 5}$ bar (3336 $^{\pm 72}$ psi)	240 $^{\pm 3}$ bar (3481 $^{\pm 72}$ psi)
Main pressure restriction for stabilizer blade	230 $^{\pm 3}$ bar (3336 $^{\pm 72}$ psi)	240 $^{\pm 3}$ bar (3481 $^{\pm 72}$ psi)
Main pressure restriction for pilot control pressure	42 $^{\pm 1}$ bar (609$^{\pm 14}$ psi)	
Main pressure restriction for swivel drive (hydraulic motor pressure restriction)	215 $^{\pm 3}$ bar (3118$^{\pm 43}$ psi)	215$^{\pm 3}$ bar (3118 $^{\pm 43}$ psi)
Filter	Return filter	

6.5 Undercarriage and swivel unit

Undercarriage/swivel unit	Model 50Z$_3$	Model 6003
2 drive speeds	2.7 / 4.6 kph (1.7 / 2.8 mph)	2.8 / 4.7 kph (1.7 / 2.9 mph)
Track width	400 mm (15.7 in)	
No. of track rollers on either side	4	5
Ground clearance	305 mm (12 in)	290 mm (11.4 in)
Ground pressure	0.27 kg/cm² (3.84 lbs / in²)	0.33 kg/cm² (4.69 lbs / in²)
Upper carriage swivel speed	8.7 rpm	9 rpm

6.6 Stabilizer blade

Stabilizer blade	Model 50Z$_3$	Model 6003
Width/height	1990 / 380 mm (78.3 / 14.9 in)	1990 / 425 mm (78.3 / 16.7 in)
Max. lift over/under subgrade	415 / 455 mm (16.3 / 17.9 in)	390 / 400 mm (15.3 / 15.7 in)

https://truckmanualshub.com/

6.7 Electrical system, model 50Z3

Electrical system	
Alternator	12 V 55 A
Starter	12 V 2.3 kW
Battery	12 V 88 Ah
Socket	E.g. for cigarette lighter; 15 A max.

Fuse box in instrument panel

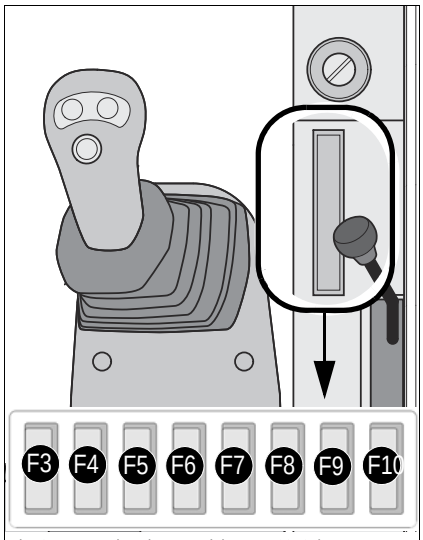


Fig. 314: Fuse box (up to serial no. AH02781)

Fuse no.	Rated current (A)	Protected circuit
F3	10 A	Indicators, cutoff solenoid, relays
F4	10 A	Boom light
F5	15 A	Roof lights
F6	10 A	Valves, horn
F7	15 A	Heating, air conditioning
F8	10 A	Wiper, interior light
F9	10 A	Rotating beacon, radio, drive interlock
F10	15 A	Socket, 12V power outlet

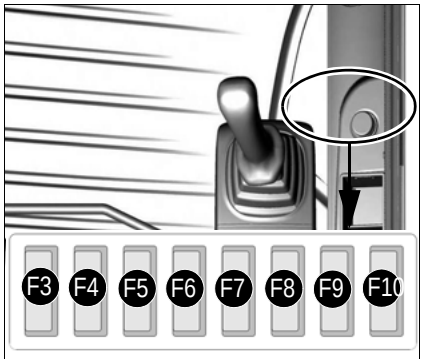


Fig. 315: Fuse box (from serial no. AJ02777)

Main fuse box with relays underneath the cab

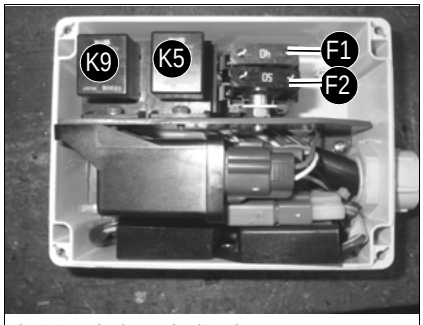


Fig. 316: Relay box under the cab

Fuse no.	Rated current (A)	Protected circuit
F1	40 A	Main fuse – start, preheating, cutoff solenoid
F2	50 A	Main fuse – fuel-filling pump, ignition lock

Relay no.	Protected circuit
K 9	Cutoff solenoid
K 5	Preheating

https://truckmanualshub.com/

Relays

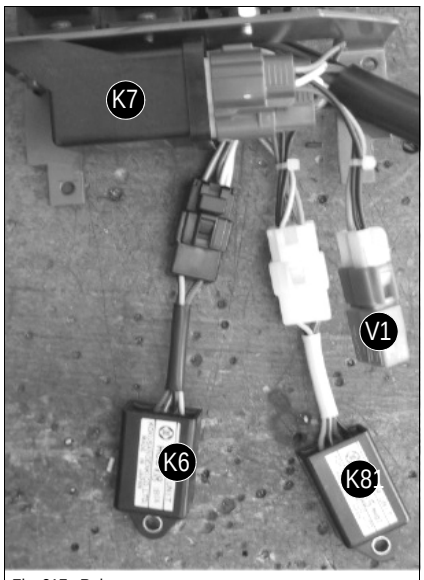


Fig. 317: Relays

The relays are located in the relay box under the cab, next to the swivelling console

Switching relay no.	Protected circuit
K 6	– Preheating timer
K 7	– Starting relay
K 8	– Cutoff solenoid timer
V 1	– Diode

6.8 Electrical system, model 6003 (from serial no. AH0611)

Electrical system	
Alternator	12 V 55 A
Starter	12 V 3.0 kW
Battery	12 V 88 Ah
Socket	E.g. 12V power outlet; 15 A max.

Fuse box on instrument panel (up to serial no. AH02750)

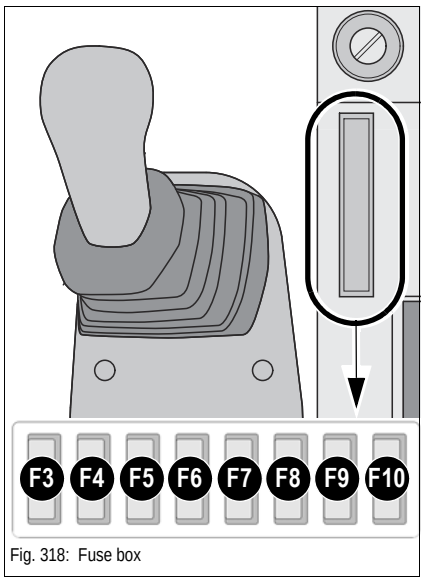


Fig. 318: Fuse box

Fuse no.	Rated current (A)	Protected circuit
F3	10 A	Displays, E-ECU
F4	10 A	Boom working light
F5	15 A	Cab working light
F6	10 A	Valves, horn
F7	15 A	Heating, air conditioning
F8	10 A	Wiper, interior light
F9	10 A	Rotating beacon, radio
F10	15 A	Socket, 12V power outlet

https://truckmanualshub.com/

Main fuse box with relays

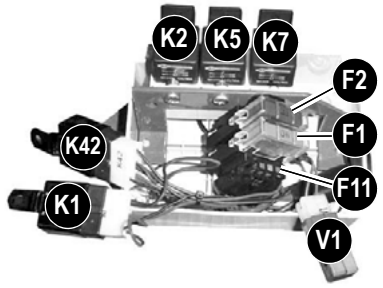


Fig. 319: Relay box under the cab

The main fuse box is located under the cab at the front right.

Fuse no.	Rated current (A)	Protected circuit
F1	40 A	Start, preheat
F2	50 A	Fuel-filling pump, main fuse, ignition lock
F11	10 A	E-ECU, engine relays

Relay no.	
K1	Engine electronics main relay
K2	Fuel-filling pump relay
K5	Preheating high-current relay
K7	Start high-current relay
K42	Fuel injection pump relay
V1	Blocking diode

Fuse box on instrument panel (from serial no. AJ02777)

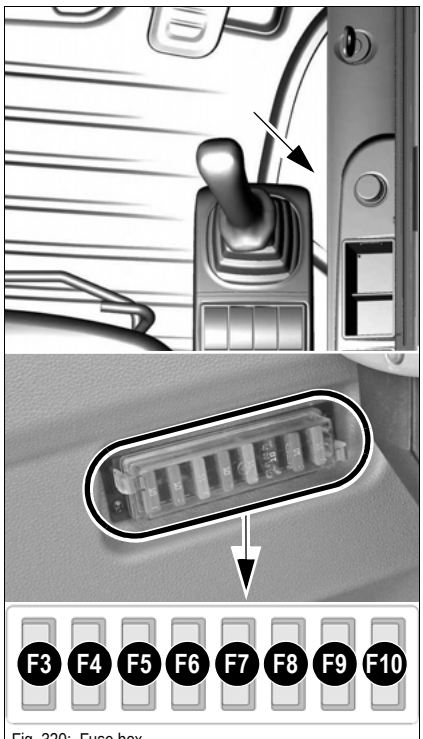


Fig. 320: Fuse box

Fuse no.	Rated current (A)	Protected circuit
F3	10 A	Displays, E-ECU
F4	10 A	Boom working light
F5	15 A	Cab working light
F6	10 A	Valves, horn
F7	15 A	Heating, air conditioning
F8	10 A	Wiper, interior light
F9	10 A	Rotating beacon, radio
F10	15 A	Socket, 12V power outlet

https://truckmanualshub.com/

6.9 ECU control unit (6003 from serial no. AH00611)

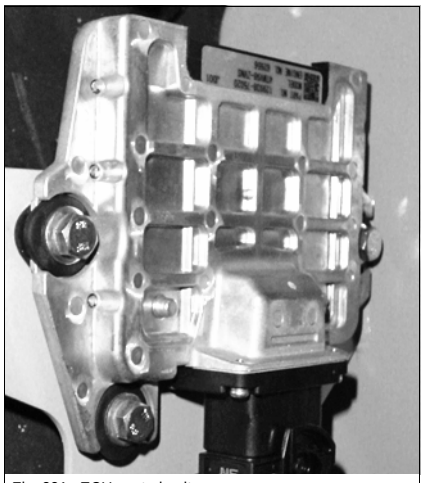


Fig. 321: ECU control unit

The ECU control unit is located above the main fuse box, under the cab.

6.10 Noise levels

Sound power level	Model 50Z$_3$	Model 6003
Sound power level (L_{WA}) [1]	96 dB (A)	98 dB (A)
Driver-perceived sound pressure level (L_{PA})[2]	77 dB (A)	79 dB (A)
Uncertainty (K_{PA}) [3]	1.4 dB (A)	1.1 dB (A)

1. According to ISO 6395
2. According to ISO 6396
3. According to EN ISO 4871

Notice!

Measurement of sound power level according to EC Directive 2000/14/EC and 2005/88/EC. Driver-perceived noise level measured according to EC Directives 84/532/EEC, 89/514/EEC and 95/27/EEC.
Measurements performed on asphalted surface.

6.11 Vibration

Vibration	
Effective acceleration value for the upper extremities of the body [1]	< Trigger value $< 2.5 \frac{m}{s^2}$
Effective acceleration value for the body [1]	$< 0.5 \frac{m}{s^2}$

1. Measurements as per 2002/44/EC, ISO EN 20643 and ISO/TR 25398 (excavating, driving and hammering with a Wacker Neuson hammer). Machine and attachment operation and maintenance as per Operator's Manual.
Uncertainty of measurement: measurements as per EN 12096:1997

https://truckmanualshub.com/

6.12 Coolant compound table

Outside temperature	Coolant			
	Water	Anticorrosion agent		Antifreeze agent
Up to °C (°F)	% by volume	cm³/l / (in³/gal)	% by volume	% by volume
−37 (−34.6)	50	10 (2.6)	1	50

Use the 1:1 concentration for warm outside temperatures, too:

- Protection against corrosion, cavitation and deposits

Do not mix the coolant with other coolants.
Machine filled at the factory with Eurolub SF D12 coolant (ethylene glycol basis).

6.13 Powertilt

Powertilt	Models 50Z3/6003
Model size	7
Piston stroke	1060 cm³ (64.7 in³)
Required oil flow	6 – 12 l/min (1.6 – 3.2 gal/min)
Ports	1/4"
Slewing range	180°[1]
Weight	115 kg (253.5 lbs.)
Drive torque – at 210 bar (3045 psi)	4300 Nm (3194 ft. lbs.)
Holding torque – at 225 bar (3263 psi)	10800 Nm (7966 ft. lbs.)
Minimum hose/pipe size Connecting hose size	10 mm (0.4 in) 6 mm (0.23 in)

1. The actual angle can vary slightly from the indication made here.

https://truckmanualshub.com/

6.14 Weight indications

Weight		50Z3	50Z3 VDS
Transport weight [1]	With canopy	4907 kg (10,818 lbs)	5292 kg (11,667 lbs)
	With cab	5029 kg (11,087 lbs)	5414 kg (11,936 lbs)
Service weight [2]	With canopy	5180 kg (11,420 lbs)	5565 kg (12,269 lbs)
	With cab	5302 kg (11,689 lbs)	5687 kg (12,538 lbs)
Option [3]	Counterweight	+ 312 kg (688 lbs)	
	Steel track	+ 44 kg (97 lbs)	
	Long stick	+ 28 kg (62 lbs)	
	FOPS/TOPS II protective screen	+ 54 kg (119 lbs)	
	Front protective screen	+ 52 kg (115 lbs)	

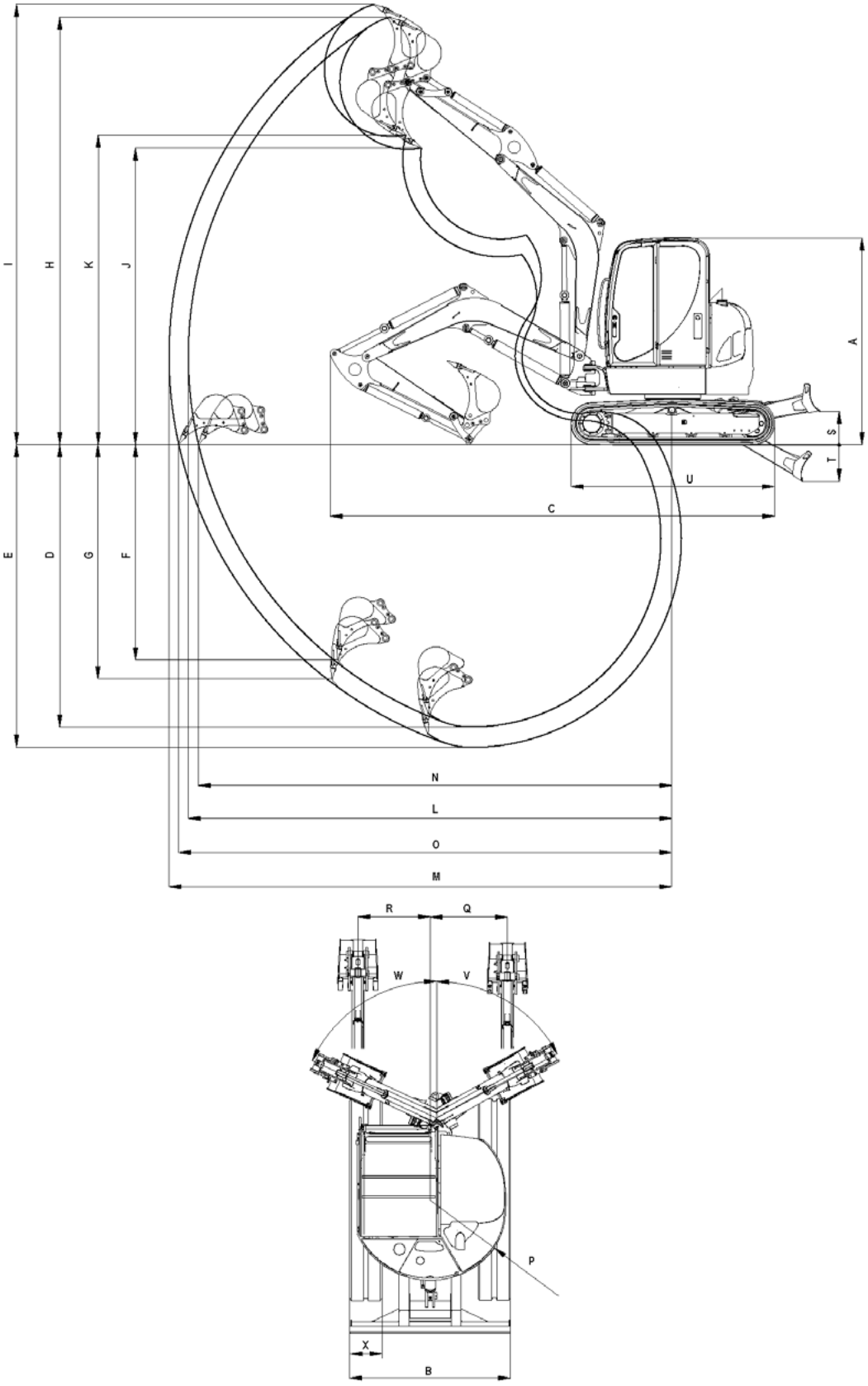
1. Transport weight: basic machine + 10 % fuel capacity.
2. Opeating weight: basic machine + full fuel tank + attachment + user (75 kg according to standard).
3. If the machine is equipped with an option, the weight of the option must be added to the transport or operating weight of the machine to obtain the actual machine weight. All indications on options are calculated differential values and are not the actual weight indications of the options.

Weight		6003	6003 Vario
Transport weight [1]	With standard boom	5607 kg (12,361 lbs)	6072 kg (13,386 lbs)
	With triple articulation boom	6195 kg (13,658 lbs)	Not available
Service weight [2]	With standard boom	5904 kg (13,016 lbs)	6369 kg (14,041 lbs)
	With triple articulation boom	6492 kg (14,312 lbs)	Not available
Option [3]	Counterweight	+ 312 kg (688 lbs)	
	Steel track	+ 44 kg (97 lbs)	
	Hybrid track	+ 32 kg (71 lbs)	
	Long stick[4]	+ 28 kg (62 lbs)	
	FOPS/TOPS II protective screen	+ 54 kg (119 lbs)	
	Front protective screen	+ 52 kg (115 lbs)	

1. Transport weight: basic machine + 10 % fuel capacity.
2. Opeating weight: basic machine + full fuel tank + attachment + user (75 kg according to standard).
3. If the machine is equipped with an option, the weight of the option must be added to the transport or operating weight of the machine to obtain the actual machine weight. All indications on options are calculated differential values and are not the actual weight indications of the options.
4. Not available with triple articulation boom.

https://truckmanualshub.com/

6.15 Dimensions model 50Z3

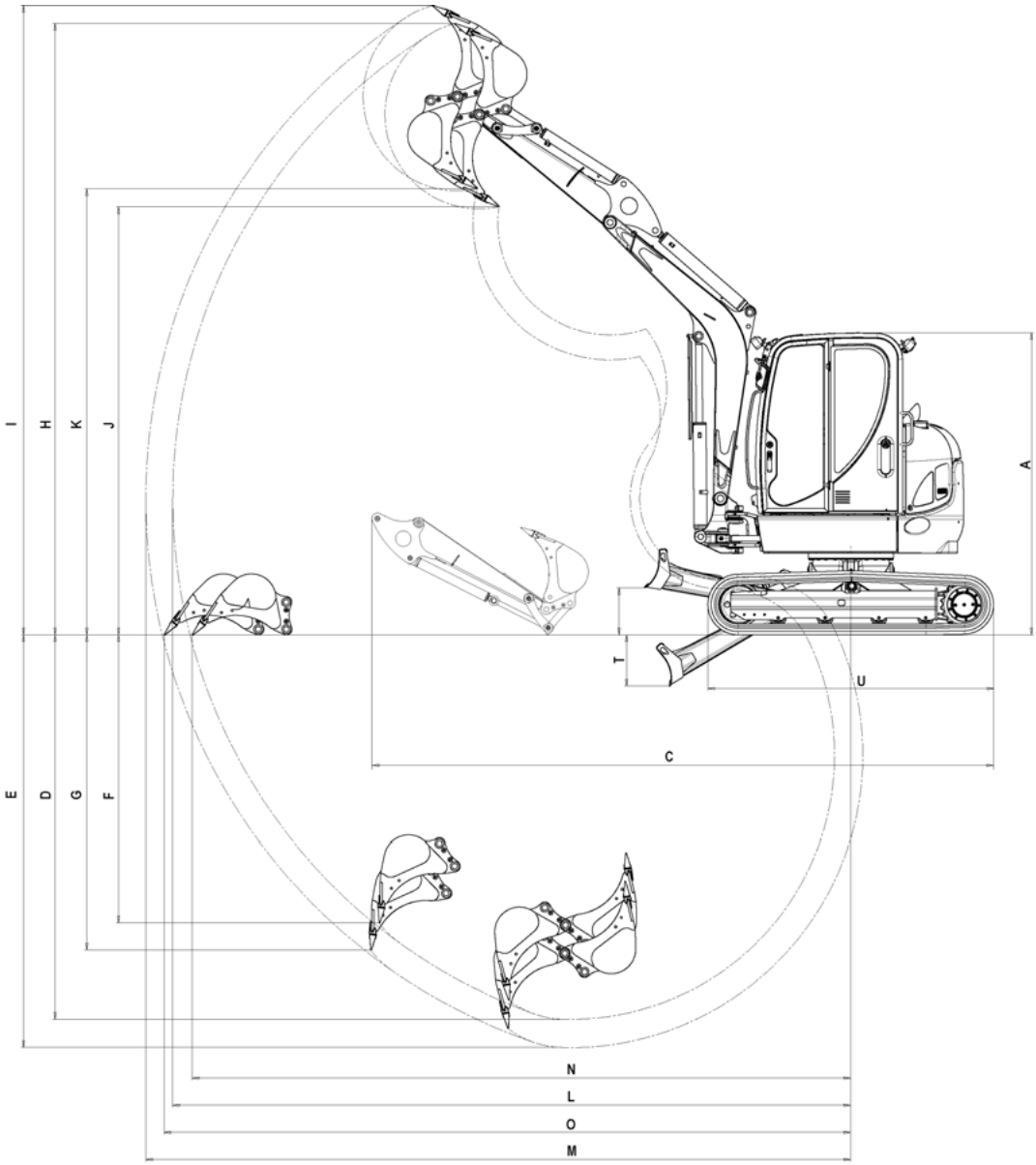


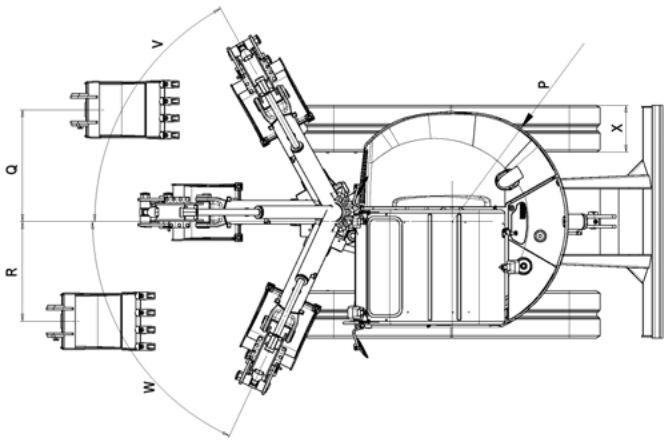
https://truckmanualshub.com/

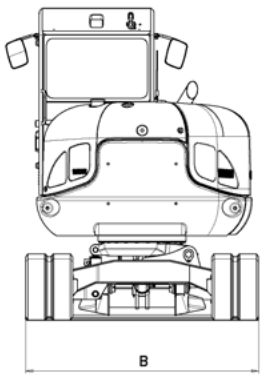
	Main data	Model 50Z3
A	Height	2570 mm (8'-5")
B	Width	1990 mm (78 in)
C	Transport length	5500 mm (18'-1")
D	Max. digging depth (short stick)	3500 mm (11'-6")
E	Max. digging depth (long stick)	3750 mm (12' 4")
F	Max. vertical digging depth (short stick)	2670 mm (8'-9")
G	Max. vertical digging depth (long stick)	2885 mm (9'-6")
H	Max. digging height (short stick)	5300 mm (17'-5")
I	Max. digging height (long stick)	5460 mm (17'-11")
J	Max. dump height (short stick)	3680 mm (12'-1")
K	Max. dump height (long stick)	3840 mm (12'-8")
L	Max. digging radius (short stick)	5985 mm (19'-3")
M	Max. digging radius (long stick)	6225 mm (20'-5")
N	Max. reach at ground level (short stick)	5860 mm (19'-3")
O	Max. reach at ground level (long stick)	6105 mm (20'-0")
P	Min. tail end slewing radius	995 mm (39 in)
Q	Max. boom displacement to bucket center (right-hand side)	960 mm (38 in)
R	Max. boom displacement to bucket center (left-hand side)	895 mm (35 in)
S	Max. lift height of stabilizer blade over ground	415 mm (16 in)
T	Max. scraping depth of stabilizer blade below ground surface	455 mm (18 in)
U	Running gear length	2500 mm (98 in)
V	Max. tilting angle of boom to the right	61°
W	Max. tilting angle of boom to the left	65°
X	Track width	400 mm (16 in)
	Max. breakout force at bucket tooth	33.80 kN (7598 lbf)
	Max. tearout force (short stick)	26.60 kN (5980 lbf)
	Max. tearout force (long stick)	23.50 kN (5283 lbf)
	Max. tail end lateral projection over tracks	0 mm (0 in)

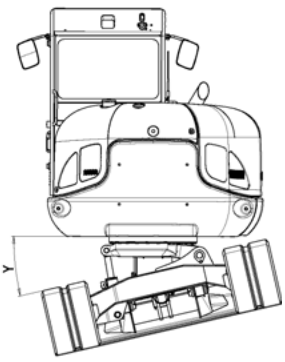
https://truckmanualshub.com/

6.16 Dimensions model 50Z3 VDS







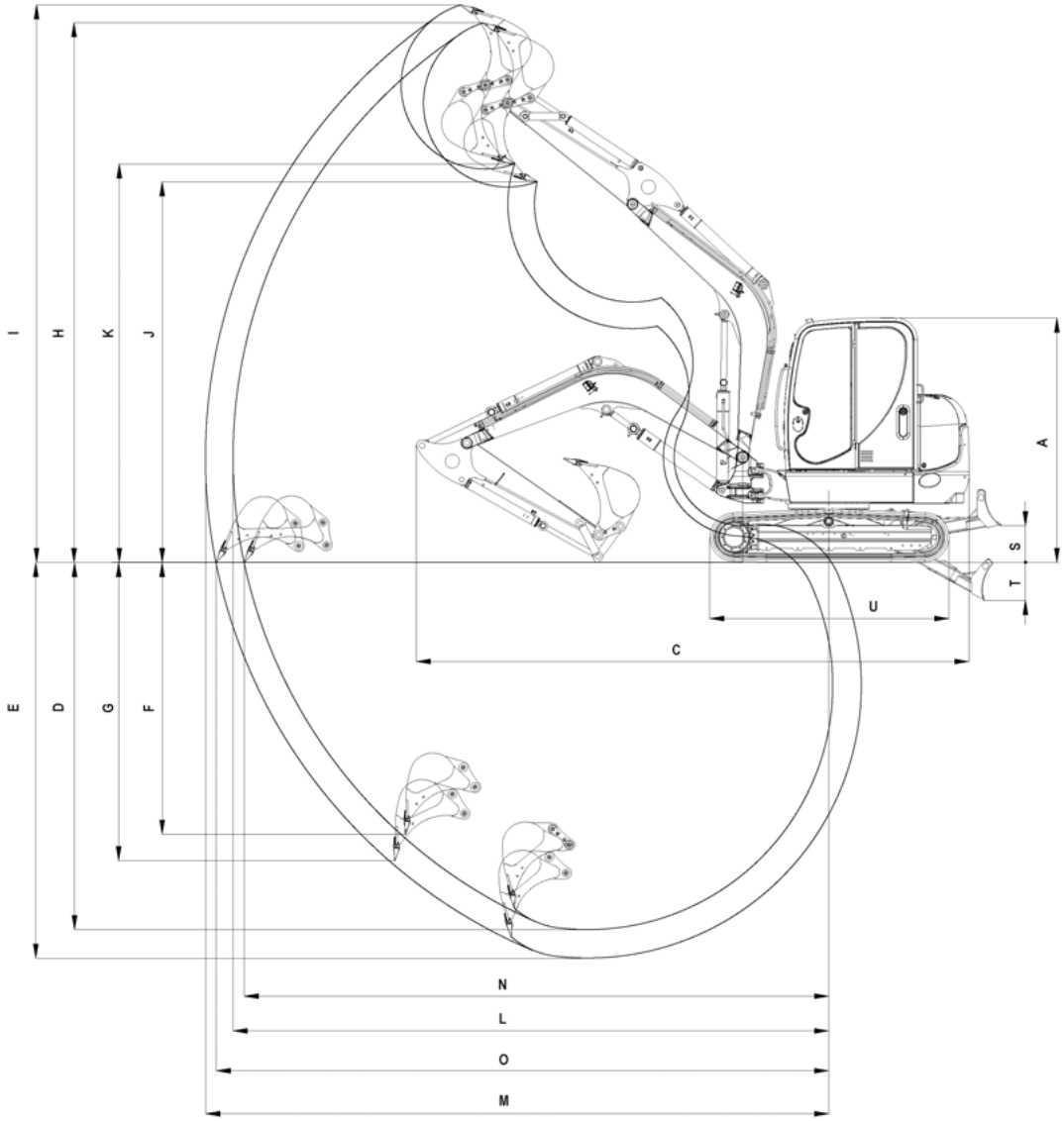


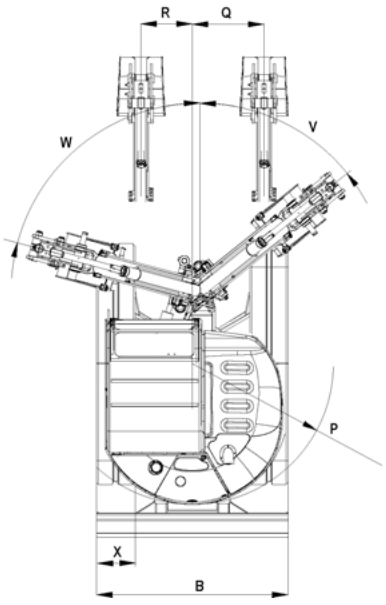
https://truckmanualshub.com/

	Main data	Model 50Z3 VDS
A	Height	2670 mm (8'-9")
B	Width	1990 mm (78 in)
C	Transport length	5500 mm (18'-1")
D	Max. digging depth (short stick)	3400 mm (11'-2")
E	Max. digging depth (long stick)	3650 mm (11'-12")
F	Max. vertical digging depth (short stick)	2540 mm (8'-4")
G	Max. vertical digging depth (long stick)	2780 mm (9'-1")
H	Max. digging height (short stick)	5400 mm (17'-9")
I	Max. digging height (long stick)	5560 mm (18'-3")
J	Max. dump height (short stick)	3780 mm (12'-5")
K	Max. dump height (long stick)	3940 mm (12'-11")
L	Max. digging radius (short stick)	5985 mm (19'-3")
M	Max. digging radius (long stick)	6225 mm (20'-5")
N	Max. reach at ground level (short stick)	5820 mm (19'-1")
O	Max. reach at ground level (long stick)	6070 mm (19'-11")
P	Min. tail end slewing radius	995 mm (39 in)
Q	Max. boom displacement to bucket center (right-hand side)	960 mm (38 in)
R	Max. boom displacement to bucket center (left-hand side)	895 mm (35 in)
S	Max. lift height of stabilizer blade over ground	415 mm (16 in)
T	Max. scraping depth of stabilizer blade below ground surface	455 mm (18 in)
U	Running gear length	2500 mm (98 in)
V	Max. tilting angle of boom to the right	61°
W	Max. tilting angle of boom to the left	65°
X	Track width	400 mm (16 in)
Y	Max. tilt angle VDS	15°
	Max. breakout force at bucket tooth	33.80 kN (7598 lbf)
	Max. tearout force (short stick)	26.60 kN (5980 lbf)
	Max. tearout force (long stick)	23.50 kN (5283 lbf)
	Max. tail end lateral projection over tracks	0 mm (0 in)

https://truckmanualshub.com/

6.17 Dimensions model 6003 standard boom, Vario (option)





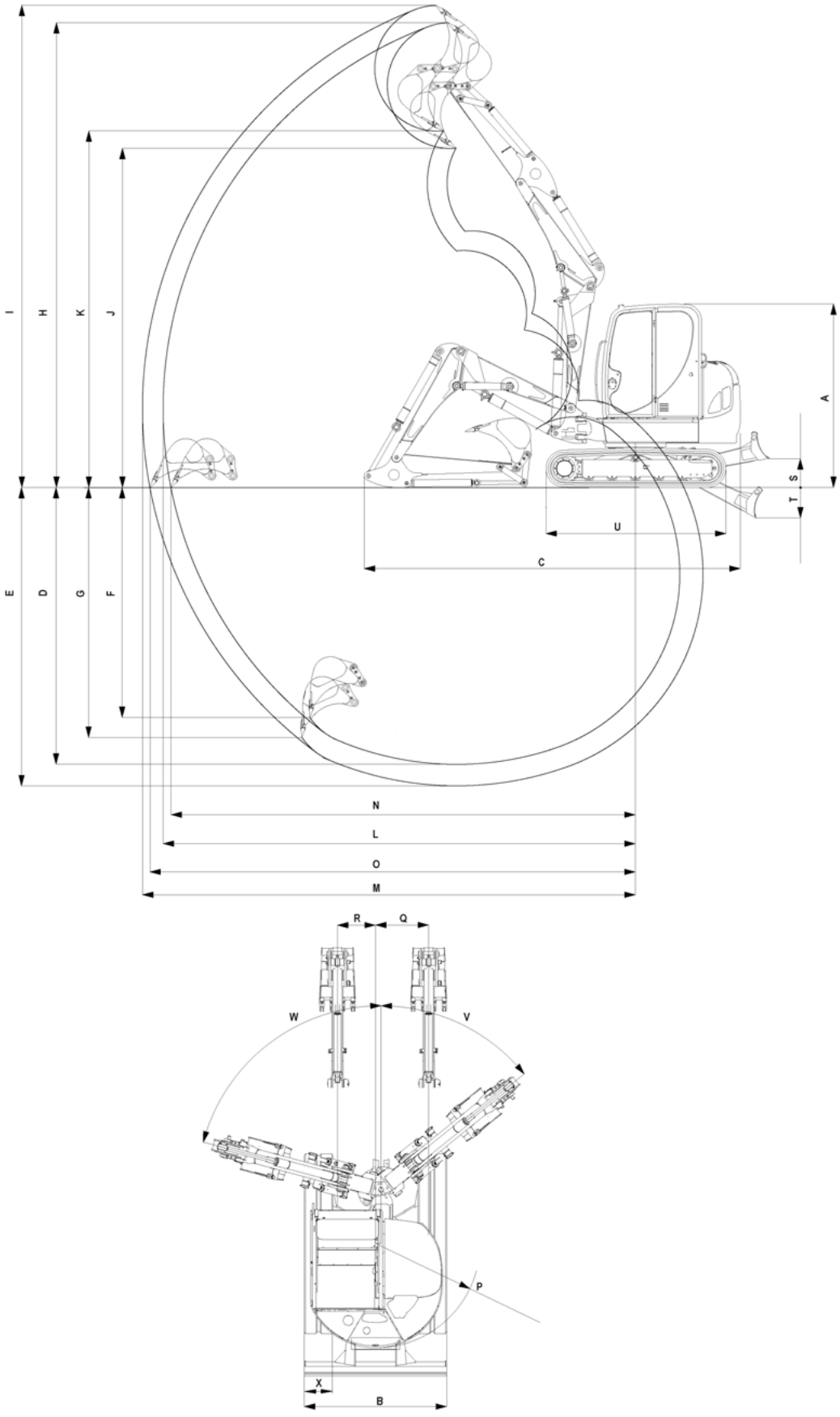
https://truckmanualshub.com/

	Main data	Model 6003	Vario (option)
A	Height	2570 mm (8'-5")	2684 mm (8'-10")
B	Width	1990 mm (78 in)	1990 mm (78 in)
C	Transport length	5800 mm (19'-0")	5800 mm (19'-0")
D	Max. digging depth (short stick)	3854 mm (12'-8")	3740 mm (12'-3")
E	Max. digging depth (long stick)	4153 mm (13'-7")	4040 mm (13'-3")
F	Max. vertical digging depth (short stick)	2855 mm (9'-4")	2735 mm (8'-12")
G	Max. vertical digging depth (long stick)	3135 mm (10'-3")	3015 mm (9'-11")
H	Max. digging height (short stick)	5660 mm (18'-7")	5780 mm (18'-12")
I	Max. digging height (long stick)	5850 mm (19'-2")	5970 mm (19'-7")
J	Max. dump height (short stick)	3995 mm (13'-1")	4110 mm (13'-6")
K	Max. dump height (long stick)	4185 mm (13'-9")	4300 mm (14'-1")
L	Max. digging radius (short stick)	6237 mm (20'-6")	6487[1] / 6987[2] mm (21'-3" / 22'-11")
M	Max. digging radius (long stick)	6524 mm (21'-5")	6774[1] / 7274[2] mm (22'-3" / 23'-10")
N	Max. reach at ground level (short stick)	6122 mm (20'-1")	6345[1] / 6845[2] mm (20'-10" / 22'-5")
O	Max. reach at ground level (long stick)	6415 mm (21'-1")	6640[1] / 7140[2] mm (21'-9" / 23'-5")
P	Min. tail end slewing radius	1465 mm (58 in)	1465 mm (58 in)
Q	Max. boom displacement to bucket center (right-hand side)	745 mm (29 in)	745 mm (29 in)
R	Max. boom displacement to bucket center (left-hand side)	535 mm (21 in)	535 mm (21 in)
S	Max. lift height of stabilizer blade over ground	390 mm (15 in)	390 mm (15 in)
T	Max. scraping depth of stabilizer blade below ground surface	400 mm (18 in)	400 mm (18 in)
U	Running gear length	2500 mm (98 in)	2500 mm (98 in)
V	Max. tilting angle of boom to the right	51°	51°
W	Max. tilting angle of boom to the left	75°	75°
X	Track width	400 mm (16 in)	400 mm (16 in)
	Max. breakout force at bucket tooth	39.70 kN (8925 lbf)	39.70 kN (8925 lbf)
	Max. tearout force (short stick)	28.10 kN (6317 lbf)	28.10 kN (6317 lbf)
	Max. tearout force (long stick)	25.10 kN (5643 lbf)	25.10 kN (5643 lbf)
	Max. tail end lateral projection over tracks	470 mm (19 in)	470 mm (19 in)

1. Vario to the rear
2. Vario to the front

https://truckmanualshub.com/

6.18 Dimensions model 6003 triple articulation boom (option)



https://truckmanualshub.com/

	Main data	Model 6003 triple articulation boom (option)
A	Height	2570 mm (8'-5")
B	Width	1990 mm (78 in)
C	Transport length	5260 mm (17'-3")
D	Max. digging depth (short stick)	3872 mm (12'-8")
E	Max. digging depth (long stick)	4174 mm (13'-8")
F	Max. vertical digging depth (short stick)	3218 mm (10'-7")
G	Max. vertical digging depth (long stick)	3497 mm (11'-6")
H	Max. digging height (short stick)	6504 mm (21'-4")
I	Max. digging height (long stick)	6747 mm (22'-2")
J	Max. dump height (short stick)	4746 mm (15'-7")
K	Max. dump height (long stick)	4990 mm (16'-4")
L	Max. digging radius (short stick)	6604 mm (21'-8")
M	Max. digging radius (long stick)	6894 mm (22'-7")
N	Max. reach at ground level (short stick)	6495 mm (21'-4")
O	Max. reach at ground level (long stick)	6790 mm (22'-3")
P	Min. tail end slewing radius	1465 mm (58 in)
Q	Max. boom displacement to bucket center (right-hand side)	745 mm (29 in)
R	Max. boom displacement to bucket center (left-hand side)	535 mm (21 in)
S	Max. lift height of stabilizer blade over ground	390 mm (15 in)
T	Max. scraping depth of stabilizer blade below ground surface	400 mm (18 in)
U	Running gear length	2500 mm (98 in)
V	Max. tilting angle of boom to the right	51°
W	Max. tilting angle of boom to the left	75°
X	Track width	400 mm (16 in)
	Max. breakout force at bucket tooth	39.70 kN (8925 lbf)
	Max. tearout force (short stick)	28.10 kN (6317 lbf)
	Max. tearout force (long stick)	25.10 kN (5643 lbf)
	Max. tail end lateral projection over tracks	530 mm (21 in)

https://truckmanualshub.com/

6.19 Lift capacity table 50Z3

	max		4.0 m (13'-1")		3.0 m (9'-10")		2.0 (78.7 in)	
A / B	Lowered blade		Lowered blade		Lowered blade		Lowered blade	
4.0 m (13'-1")	1060* (2337*)	810 (1785)						
3.0 m (9'-10")	1025* (2260*)	585 (1290)	1010* (2227*)	780 (1720)				
2.0 m (78.7 in)	1045* (2304*)	490 (1080)	1185* (2612*)	730 (1609)	1580* (3483*)	1150 (2535)		
1.0 m (39.4 in)	1090* (2403*)	455 (1003)	1415* (3119*)	670 (1477)	2225* (4905*)	990 (2183)		
0.0 m (0.0 in)	1145* (2524*)	460 (1014)	1555* (3428*)	625 (1378)	2435* (5368*)	920 (2028)		
−1.0 m (−39.4 in)	1210* (2668*)	515 (1135)	1510* (3329*)	610 (1344)	2290* (5048*)	915 (2017)	4070* (8973*)	1790 (3946)
−2.0 m (−78.7 in)	1255* (2767*)	705 (1554)			1780* (3924*)	915 (2094)	3000* (6614*)	1860 (4100)

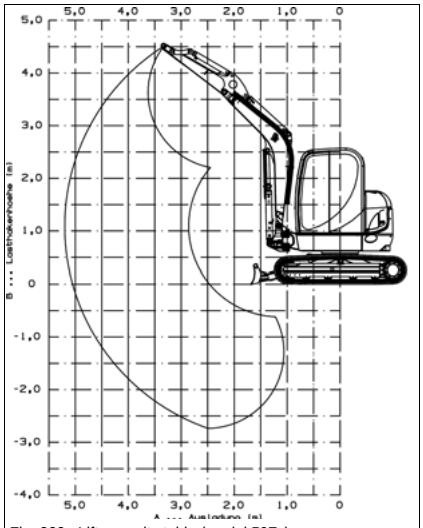
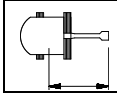


Fig. 322: Lift capacity table (model 50Z3)

max	Admissible load on extended stick
A	Reach from live ring center
B	Load hook height
*	Lift capacity limited by hydraulic system

All table indications in kg (lbs) and horizontal position on firm ground without bucket.

	With the stabilizer blade in driving direction
	Without the stabilizer blade, 90° to driving direction

If equipped with a bucket or other attachments, lift capacity or tilt load is reduced by bucket or attachment dead weight.

Calculation basis: according to ISO 10567

The machine's lift capacity is restricted by the settings of the pressure limiting valves and the hydraulic system's stabilizing features.

Neither 75 % of the static tilt load nor 87 % of the hydraulic lift capacity is exceeded.

https://truckmanualshub.com/

6.20 Lift capacity table 50Z3 counterweight (option)

	max		4.0 m (13'-1")		3.0 m (9'-10")		2.0 (78.7 in)	
A / B	Lowered blade		Lowered blade		Lowered blade		Lowered blade	
4.0 m (13'-1")	1060* (2337*)	915 (2017)						
3.0 m (9'-10")	1025* (2260*)	675 (1488)	1010* (2227*)	910 (2006)				
2.0 m (78.7 in)	1045* (2304*)	580 (1279)	1185* (2612*)	865 (1907)	1580* (3483*)	1345 (2965)		
1.0 m (39.4 in)	1090* (2403*)	545 (1201)	1415* (3119*)	805 (1775)	2225* (4905*)	1185 (2612)		
0.0 m (0.0 in)	1145* (2524*)	550 (1212)	1555* (3428*)	760 (1675)	2435* (5368*)	1115 (2458)		
−1.0 m (−39.4 in)	1210* (2668*)	620 (1367)	1510* (3329*)	745 (1642)	2290* (5048*)	1110 (2448)	4070* (8973*)	2155 (4751)
−2.0 m (−78.7 in)	1255* (2767*)	830 (1830)			1780* (3924*)	1140 (2513)	3000* (6614*)	2225 (4905)

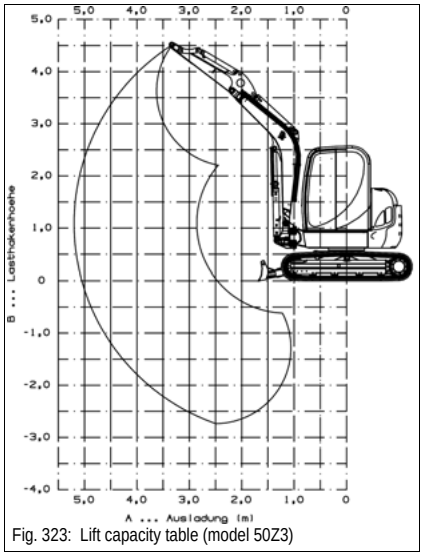


Fig. 323: Lift capacity table (model 50Z3)

max	Admissible load on extended stick
A	Reach from live ring center
B	Load hook height
*	Lift capacity limited by hydraulic system

All table indications in kg (lbs) and horizontal position on firm ground without bucket.

	With the stabilizer blade in driving direction
	Without the stabilizer blade, 90° to driving direction

If equipped with a bucket or other attachments, lift capacity or tilt load is reduced by bucket or attachment dead weight.

Calculation basis: according to ISO 10567

The machine's lift capacity is restricted by the settings of the pressure limiting valves and the hydraulic system's stabilizing features.

Neither 75 % of the static tilt load nor 87 % of the hydraulic lift capacity is exceeded.

https://truckmanualshub.com/

6.21 Lift capacity table 50Z3 long stick (option)

	max		4.0 m (13'-1")		3.0 m (9'-10")		2.0 (78.7 in)	
A / B	Lowered blade		Lowered blade		Lowered blade		Lowered blade	
4.0 m (13'-1")	920* (2028*)	660 (1455)	855* (1885*)	785 (1731)				
3.0 m (9'-10")	915* (2017*)	500 (1102)	865* (1907*)	780 (1720)				
2.0 m (78.7 in)	935* (2062*)	425 (937)	1050* (2315*)	730 (1610)	1315* (2900*)	1170 (2580)		
1.0 m (39.4 in)	970* (2139*)	395 (871)	1310* (2889*)	665 (1466)	2025* (4465*)	1010 (2227)		
0.0 m (0.0 in)	1015* (2238*)	400 (882)	1495* (3297*)	610 (1345)	2385* (5259*)	915 (2018)		
−1.0 m (−39.4 in)	1065* (2348*)	440 (970)	1515* (3341*)	590 (1301)	2350* (5182*)	890 (1962)	4570* (10077*)	1750 (3859)
−2.0 m (−78.7 in)	1110* (2448*)	565 (1246)	1250* (2756*)	600 (1323)	1970* (4344*)	910 (2007)	3590* (7916*)	1805 (3980)

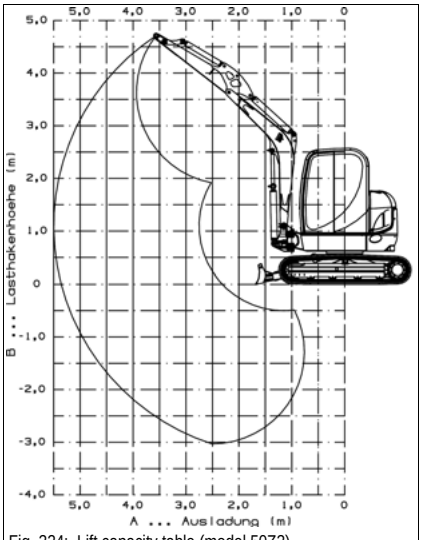
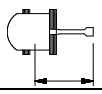


Fig. 324: Lift capacity table (model 50Z3)

max	Admissible load on extended stick
A	Reach from live ring center
B	Load hook height
*	Lift capacity limited by hydraulic system

All table indications in kg (lbs) and horizontal position on firm ground without bucket.

	With the stabilizer blade in driving direction
	Without the stabilizer blade, 90° to driving direction

If equipped with a bucket or other attachments, lift capacity or tilt load is reduced by bucket or attachment dead weight.

Calculation basis: according to ISO 10567

The machine's lift capacity is restricted by the settings of the pressure limiting valves and the hydraulic system's stabilizing features.

Neither 75 % of the static tilt load nor 87 % of the hydraulic lift capacity is exceeded.

https://truckmanualshub.com/

6.22 Lift capacity table 50Z3 long stick, counterweight (option)

	max		4.0 m (13'-1")		3.0 m (9'-10")		2.0 (78.7 in)	
A / B	Lowered blade		Lowered blade		Lowered blade		Lowered blade	
4.0 m (13'-1")	920* (2028*)	780 (1720)	855* (1885*)	855* (1885*)				
3.0 m (9'-10")	915* (2017*)	600 (1323)	865* (1907*)	865* (1907*)				
2.0 m (78.7 in)	935* (2062*)	520 (1147)	1050* (2315*)	865 (1907)	1315* (2900*)	1315* (2900*)		
1.0 m (39.4 in)	970* (2139*)	485 (1069)	1310* (2889*)	800 (1764)	2025* (4465*)	1205 (2657)		
0.0 m (0.0 in)	1015* (2238*)	490 (1080)	1495* (3297*)	745 (1643)	2385* (5259*)	1110 (2448)		
−1.0 m (−39.4 in)	1065* (2348*)	540 (1191)	1515* (3341*)	720 (1588)	2350* (5182*)	1085 (2392)	4570* (10077*)	2115 (4664)
−2.0 m (−78.7 in)	1110* (2448*)	690 (1521)	1250* (2756*)	735 (1621)	1970* (4344*)	1105 (2436)	3590* (7916*)	2115 (4664)

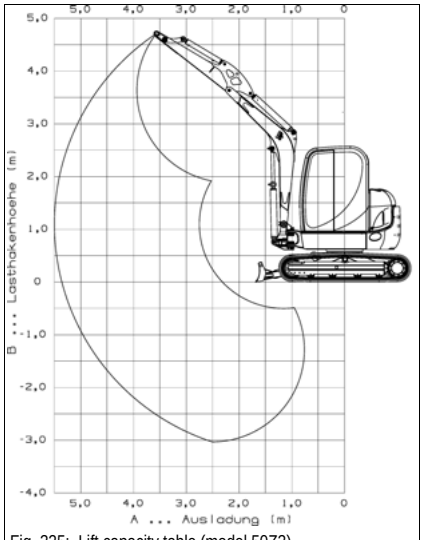
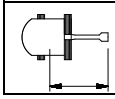


Fig. 325: Lift capacity table (model 50Z3)

max	Admissible load on extended stick
A	Reach from live ring center
B	Load hook height
*	Lift capacity limited by hydraulic system

All table indications in kg (lbs) and horizontal position on firm ground without bucket.

	With the stabilizer blade in driving direction
	Without the stabilizer blade, 90° to driving direction

If equipped with a bucket or other attachments, lift capacity or tilt load is reduced by bucket or attachment dead weight.

Calculation basis: according to ISO 10567

The machine's lift capacity is restricted by the settings of the pressure limiting valves and the hydraulic system's stabilizing features.

Neither 75 % of the static tilt load nor 87 % of the hydraulic lift capacity is exceeded.

https://truckmanualshub.com/

6.23 Lift capacity table 50Z3 VDS short stick (option)

	max	5.0 m (16'-5")			4.0 m (13'-1")			3.0 m (9'-10")			2.0 (78.7 in)		
B\A	Lowered blade		Raised blade	Lowered blade		Raised blade	Lowered blade		Raised blade	Lowered blade		Raised blade	Lowered blade		Raised blade
3.0 m (9'-10")	1018* (2245*)	617 (1360)	683 (1506)				965* (2128*)	829 (1828)	921 (2031)						
2.0 m (78.7 in)	1049* (2313*)	537 (1184)	594 (1310)	1048* (2311*)	552 (1217)	612 (1349)	1155* (2547*)	791 (1744)	881 (1942)	1501* (3310*)	1233 (2718)	1398 (3082)			
1.0 m (39.4 in)	1095* (2414*)	511 (1127)	566 (1248)	1122* (2474*)	535 (1179)	594 (1309)	1406* (3100*)	743 (1638)	831 (1832)	2196* (4841*)	1114 (2456)	1271 (2802)			
0.0 m (0.0 in)	1153* (2542*)	528 (1164)	587 (1294)				1563* (3446*)	711 (1567)	797 (1757)	2459* (5421*)	1062 (2341)	1216 (2681)			
−1.0 m (−39.4 in)	1218* (2685*)	607 (1338)	677 (1492)				1511* (3331*)	706 (1556)	792 (1746)	2329* (5134*)	1061 (2339)	1214 (2676)	4357* (9607*)	2082 (4590)	2526 (5570)
−2.0 m (−78.7 in)	1258* (2773*)	866 (1909)	976 (2152)							1738* (3832)	1098 (2420)	1254 (2765)	3075* (6780*)	2149 (4739)	2602 (5737)

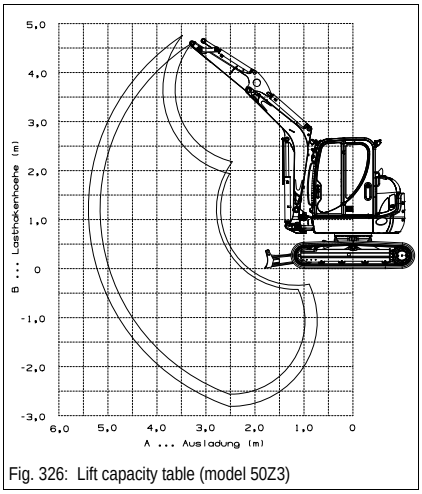
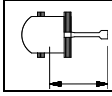


Fig. 326: Lift capacity table (model 50Z3)

max	Admissible load on extended stick
A	Reach
B	Load hook height
*	Lift capacity limited by hydraulic system

All table indications in kg (lbs) and horizontal position on firm ground without bucket.

	With the stabilizer blade in driving direction
	Without the stabilizer blade, 90° to driving direction

If equipped with a bucket or other attachments, lift capacity or tilt load is reduced by bucket or attachment dead weight.

Calculation basis: according to ISO 10567

The machine's lift capacity is restricted by the settings of the pressure limiting valves and the hydraulic system's stabilizing features.

Neither 75 % of the static tilt load nor 87 % of the hydraulic lift capacity is exceeded.

https://truckmanualshub.com/

6.24 Lift capacity table 50Z3 VDS short stick, counterweight (option)

	max	5.0 m (16'-5")			4.0 m (13'-1")			3.0 m (9'-10")			2.0 (78.7 in)		
B\A	Lowered blade		Raised blade	Lowered blade		Raised blade	Lowered blade		Raised blade	Lowered blade		Raised blade	Lowered blade		Raised blade
3.0 m (9'-10")	1018* (2245*)	669 (1475)	744 (1640)				965* (2128*)	894 (1971)	965* (2128*)						
2.0 (78.7 in)	1049* (2313*)	585 (1290)	650 (1433)	1048* (2311*)	601 (1325)	669 (1475)	1155* (2547*)	856 (1887)	957 (2110)	1501* (3310*)	1328 (2928)	1501* (3310*)			
1.0 m (39.4 in)	1095* (2414*)	558 (1230)	621 (1369)	1122* (2474*)	584 (1288)	651 (1435)	1406* (3100*)	808 (1782)	907 (2000)	2196* (4841*)	1209 (2666)	1384 (3052)			
0.0 m (0.0 in)	1153* (2542*)	577 (1272)	644 (1420)				1563* (3446*)	776 (1711)	873 (1925)	2459* (5421*)	1158 (2553)	1330 (2933)			
−1.0 m (−39.4 in)	1218* (2685*)	663 (1462)	742 (1636)				1511* (3331*)	771 (1700)	868 (1914)	2329* (5134*)	1156 (2549)	1328 (2928)	4357* (9607*)	2260 (4983)	2752 (5671)
−2.0 m (−78.7 in)	1258* (2773*)	942 (2077)	1065 (2348)							1738* (3832)	1193 (2631)	1368 (3016)	3075* (6780*)	2326 (5129)	2828 (6236)

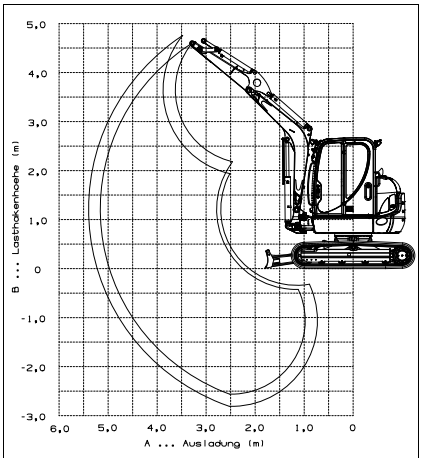
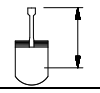
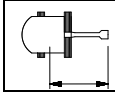


Fig. 327: Lift capacity table (model 50Z3)

max	Admissible load on extended stick
A	Reach
B	Load hook height
*	Lift capacity limited by hydraulic system

All table indications in kg (lbs) and horizontal position on firm ground without bucket.

	With the stabilizer blade in driving direction
	Without the stabilizer blade, 90° to driving direction

If equipped with a bucket or other attachments, lift capacity or tilt load is reduced by bucket or attachment dead weight.

Calculation basis: according to ISO 10567

The machine's lift capacity is restricted by the settings of the pressure limiting valves and the hydraulic system's stabilizing features.

Neither 75 % of the static tilt load nor 87 % of the hydraulic lift capacity is exceeded.

https://truckmanualshub.com/

6.25 Lift capacity table 50Z3 VDS long stick (option)

	max	5.0 m (16'-5")			4.0 m (13'-1")			3.0 m (9'-10")			2.0 (78.7 in)		
B\A	Lowered blade		Raised blade	Lowered blade		Raised blade	Lowered blade		Raised blade	Lowered blade		Raised blade	Lowered blade		Raised blade
3.0 m (9'-10")	929* (2048*)	555 (1224)	615 (1356)	929* (2048*)	555 (1224)	615 (1356)	843* (1859*)	829 (1828)	843* (1859*)						
2.0 (78.7 in)	960* (2117*)	486 (1072)	540 (1191)	961* (2119*)	545 (1202)	605 (1334)	1043* (2300*)	787 (1735)	878 (1936)	1275* (2811*)	1246 (2747)	1275* (2811*)			
1.0 m (39.4 in)	1005* (2216*)	463 (1021)	515 (1136)	1060* (2337*)	522 (1151)	582 (1283)	1315* (2900*)	733 (1616)	821 (1810)	2017* (4447*)	1112 (2452)	1270 (2800)			
0.0 m (0.0 in)	1060* (2337*)	475 (1047)	530 (1169)	1127* (2485*)	505 (1113)	564 (1244)	1511* (3332*)	693 (1528)	780 (1720)	2396* (5283*)	1041 (2295)	1194 (2633)			
−1.0 m (−39.4 in)	1124* (2478)	537 (1184)	600 (1323)				1524* (3360*)	680 (1499)	766 (1689)	2365* (5215*)	1028 (2267)	1181 (2604)	4685* (10330*)	2018 (4450)	2456 (5415)
−2.0 m (−78.7 in)	1184* (2611*)	722 (1592)	812 (1791)							1928* (4251*)	1056 (2328)	1211 (2670)	3567* (7865*)	2080 (4586)	2527 (5572)

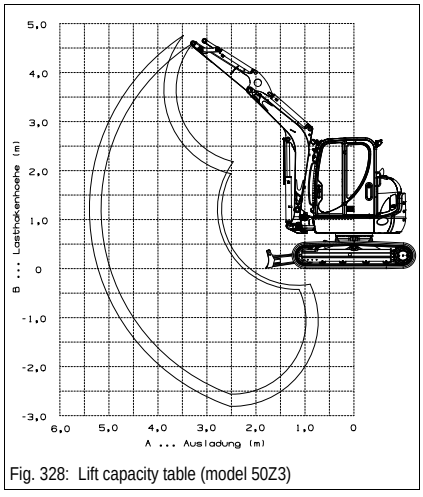
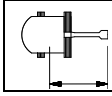


Fig. 328: Lift capacity table (model 50Z3)

max	Admissible load on extended stick
A	Reach
B	Load hook height
*	Lift capacity limited by hydraulic system

All table indications in kg (lbs) and horizontal position on firm ground without bucket.

	With the stabilizer blade in driving direction
	Without the stabilizer blade, 90° to driving direction

If equipped with a bucket or other attachments, lift capacity or tilt load is reduced by bucket or attachment dead weight.

Calculation basis: according to ISO 10567

The machine's lift capacity is restricted by the settings of the pressure limiting valves and the hydraulic system's stabilizing features.

Neither 75 % of the static tilt load nor 87 % of the hydraulic lift capacity is exceeded.

https://truckmanualshub.com/

6.26 Lift capacity table 50Z3 VDS long stick, counterweight (option)

	max	5.0 m (16'-5")			4.0 m (13'-1")			3.0 m (9'-10")			2.0 (78.7 in)		
B\A	Lowered blade		Raised blade	Lowered blade		Raised blade	Lowered blade		Raised blade	Lowered blade		Raised blade	Lowered blade		Raised blade
3.0 m (9'-10")	929* (2048*)	604 (1332)	672 (1482)	929* (2048*)	604 (1332)	672 (1482)	843* (1859*)	843* (1859*)	843* (1859*)						
2.0 (78.7 in)	960* (2117*)	532 (1173)	593 (1308)	961* (2119*)	594 (1310)	662 (1460)	1043* (2300*)	852 (1879)	954 (2104)	1275* (2811*)	1275* (2811*)	1275* (2811*)*			
1.0 m (39.4 in)	1005* (2216*)	508 (1120)	567 (1250)	1060* (2337*)	572 (1261)	639 (1409)	1315* (2900*)	798 (1760)	897 (1978)	2017* (4447*)	1207 (2661)	1384 (3051)			
0.0 m (0.0 in)	1060* (2337*)	522 (1151)	584 (1288)	1127* (2485*)	554 (1222)	621 (1370)	1511* (3332*)	758 (1671)	856 (1887)	2396* (5283*)	1136 (2505)	1308 (2884)			
−1.0 m (−39.4 in)	1124* (2478)	589 (1299)	661 (1457)				1524* (3360*)	745 (1643)	842 (1857)	2365* (5215*)	1123 (2476)	1295 (2855)	4685* (10330*)	2195 (4840)	2682 (5914)
−2.0 m (−78.7 in)	1184* (2611*)	789 (1740)	890 (1962)							1928* (4251*)	1151 (2538)	1324 (2919)	3567* (7865*)	2258 (4979)	2753 (6070)

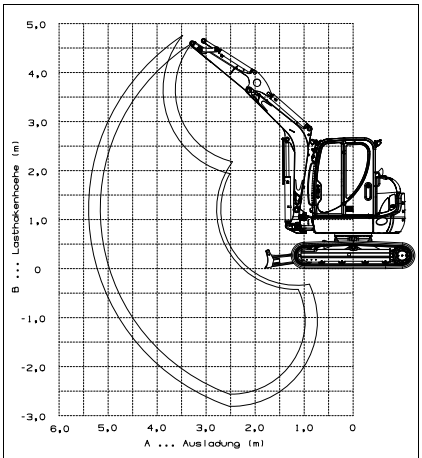
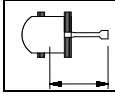


Fig. 329: Lift capacity table (model 50Z3)

max	Admissible load on extended stick
A	Reach
B	Load hook height
*	Lift capacity limited by hydraulic system

All table indications in kg (lbs) and horizontal position on firm ground without bucket.

	With the stabilizer blade in driving direction
	Without the stabilizer blade, 90° to driving direction

If equipped with a bucket or other attachments, lift capacity or tilt load is reduced by bucket or attachment dead weight.

Calculation basis: according to ISO 10567

The machine's lift capacity is restricted by the settings of the pressure limiting valves and the hydraulic system's stabilizing features.

Neither 75 % of the static tilt load nor 87 % of the hydraulic lift capacity is exceeded.

https://truckmanualshub.com/

6.27 Lift capacity table 6003

	max		5.0 m (16'-5")		4.0 m (13'-1")		3.0 m (9'-10")		2.0 (78.7 in)	
A / B	Lowered blade		Lowered blade		Lowered blade		Lowered blade		Lowered blade	
4.0 m (13'-1")	1310* (2889*)	1020 (2249)			1245* (2745*)	1155 (2547)				
3.0 m (9'-10")	1300* (2867*)	805 (1775)			1265* (2789*)	1145 (2525)				
2.0 m (78.7 in)	1320* (2911*)	710 (1566)	1330* (2933*)	775 (1709)	1490* (3285*)	1100 (2425)	1885* (4156*)	1700 (3748)		
1.0 m (39.4 in)	1360* (2999*)	675 (1488)	1435* (3164*)	750 (1654)	1775* (2591*)	1035 (2282)	2615* (5766*)	1550 (3418)		
0.0 m (0 in)	1410* (3109*)	690 (1521)	1495* (3296*)	730 (1610)	1970* (4333*)	990 (2183)	2970* (6549*)	1470 (3241)		
−1.0 m (−39.4 in)	1465* (3230*)	760 (1676)			1965* (4333*)	970 (2139)	2910* (6417*)	1450 (3197)	5010* (11047*)	2795 (6163)
−2.0 m (−78.7 in)	1495* (3296*)	965 (2128)					2450* (5402*)	1475 (3352)	4005* (8831*)	2855 (6295)

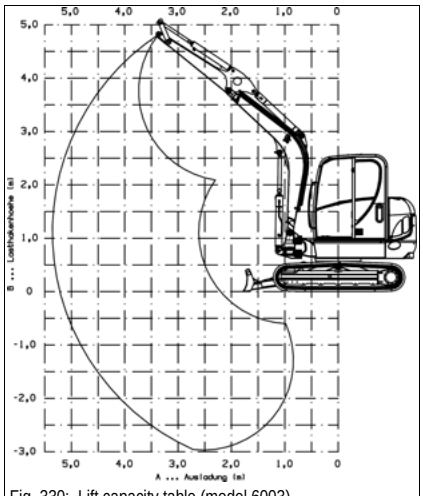
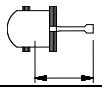


Fig. 330: Lift capacity table (model 6003)

max	Admissible load on extended stick
A	Reach from live ring center
B	Load hook height
*	Lift capacity limited by hydraulic system

All table indications in kg (lbs) and horizontal position on firm ground without bucket.

	With the stabilizer blade in driving direction
	Without the stabilizer blade, 90° to driving direction

If equipped with a bucket or other attachments, lift capacity or tilt load is reduced by bucket or attachment dead weight.

Calculation basis: according to ISO 10567

The machine's lift capacity is restricted by the settings of the pressure limiting valves and the hydraulic system's stabilizing features.

Neither 75 % of the static tilt load nor 87 % of the hydraulic lift capacity is exceeded.

https://truckmanualshub.com/

6.28 Lift capacity table 6003 counterweight (option)

	max		5.0 m (16'-5")		4.0 m (13'-1")		3.0 m (9'-10")		2.0 (78.7 in)	
A / B	Lowered blade		Lowered blade		Lowered blade		Lowered blade		Lowered blade	
4.0 m (13'-1")	1310* (2889*)	1175 (2591)			1245* (2745*)	1245* (2745*)				
3.0 m (9'-10")	1300* (2867*)	935 (2062)			1265* (2789*)	1265* (2789*)				
2.0 m (78.7 in)	1320* (2911*)	830 (1830)	1330* (2933*)	905 (1995)	1490* (3285*)	1265 (2789)	1885* (4156*)	1885* (4156*)		
1.0 m (39.4 in)	1360* (2999*)	795 (1753)	1435* (3164*)	880 (1940)	1775* (2591*)	1205 (2657)	2615* (5766*)	1795 (3958)		
0.0 m (0 in)	1410* (3109*)	810 (1786)	1495* (3296*)	850 (1874)	1970* (4333*)	1155 (2547)	2970* (6549*)	1715 (3782)		
−1.0 m (−39.4 in)	1465* (3230*)	895 (1973)			1965* (4333*)	1140 (2518)(	2910* (6417*)	1695 (3737)	5010* (11047*)	3250 (7166)
−2.0 m (−78.7 in)	1495* (3296*)	1130 (2492)					2450* (5402*)	1720 (3793)	4005* (8831*)	3310 (7299)

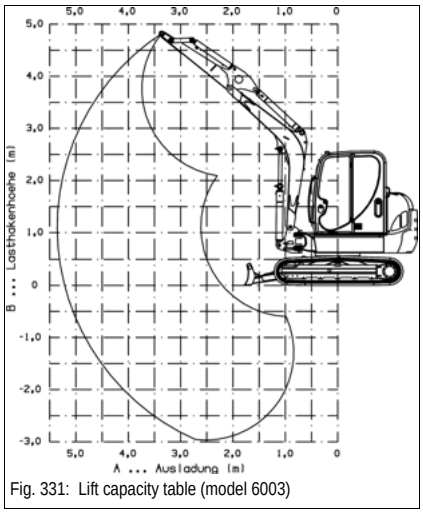
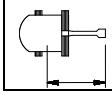


Fig. 331: Lift capacity table (model 6003)

max	Admissible load on extended stick
A	Reach from live ring center
B	Load hook height
*	Lift capacity limited by hydraulic system

All table indications in kg (lbs) and horizontal position on firm ground without bucket.

	With the stabilizer blade in driving direction
	Without the stabilizer blade, 90° to driving direction

If equipped with a bucket or other attachments, lift capacity or tilt load is reduced by bucket or attachment dead weight.

Calculation basis: according to ISO 10567

The machine's lift capacity is restricted by the settings of the pressure limiting valves and the hydraulic system's stabilizing features.

Neither 75 % of the static tilt load nor 87 % of the hydraulic lift capacity is exceeded.

https://truckmanualshub.com/

6.29 Lift capacity table 6003 long stick (option)

A / B	max		5.0 m (16'-5")		4.0 m (13'-1")		3.0 m (9'-10")		2.0 (78.7 in)	
	Lowered blade		Lowered blade		Lowered blade		Lowered blade		Lowered blade	
4.0 m (13'-1")	1190* (2624*)	990 (2183)			1050* (2315*)	865 (1907)				
3.0 m (9'-10")	1190* (2624*)	640 (1411)			1120* (2469*)	1055 (2326)				
2.0 m (78.7 in)	1220* (2690*)	285 (628)	1245* (2745*)	715 (1577)	1375* (3032*)	1085 (2392)	1670* (3682*)	1670* (3685*)		
1.0 m (39.4 in)	1265* (2789*)	530 (1169)	1380* (3043*)	725 (1599)	1690* (3726*)	1030 (2271)	2400* (5292*)	1570 (3462)		
0.0 m (0 in)	1315* (2900*)	585 (1290)	1485* (3274*)	705 (1554)	1925* (4245*)	980 (2161)	2805* (6185*)	1465 (3230)		
−1.0 m (−39.4 in)	1375* (3032*)	665 (1466)			1990* (4388*)	955 (2106)	2855* (6295*)	1425 (3142)	4570* (10077*)	2785 (6141)
−2.0 m (−78.7 in)	1425* (3142*)	825 (1819)					2580* (5689*)	1440 (3175)	3980* (8776*)	2800 (6174)

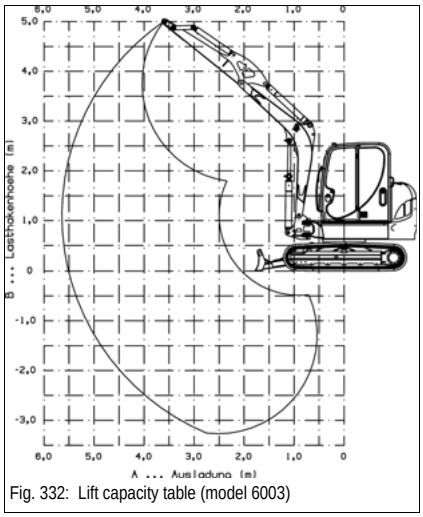
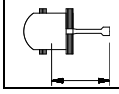


Fig. 332: Lift capacity table (model 6003)

max	Admissible load on extended stick
A	Reach from live ring center
B	Load hook height
*	Lift capacity limited by hydraulic system

All table indications in kg (lbs) and horizontal position on firm ground without bucket.

	With the stabilizer blade in driving direction
	Without the stabilizer blade, 90° to driving direction

If equipped with a bucket or other attachments, lift capacity or tilt load is reduced by bucket or attachment dead weight.

Calculation basis: according to ISO 10567

The machine's lift capacity is restricted by the settings of the pressure limiting valves and the hydraulic system's stabilizing features.

Neither 75 % of the static tilt load nor 87 % of the hydraulic lift capacity is exceeded.

https://truckmanualshub.com/

6.30 Lift capacity table 6003 long stick, counterweight (option)

	max		5.0 m (16'-5")		4.0 m (13'-1")		3.0 m (9'-10")		2.0 (78.7 in)	
A / B	Lowered blade		Lowered blade		Lowered blade		Lowered blade		Lowered blade	
4.0 m (13'-1")	1190* (2624*)	1130 (2492)			1050* (2315*)	1035 (2282)				
3.0 m (9'-10")	1190* (2624*)	760 (1676)			1120* (2469*)	1120* (2469*)				
2.0 m (78.7 in)	1220* (2690*)	395 (871)	1245* (2745*)	845 (1863)	1375* (3032*)	1250 (2756)	1670* (3682*)	1670* (3682*)		
1.0 m (39.4 in)	1265* (2789*)	640 (1411)	1380* (3043*)	850 (1874)	1690* (3726*)	1200 (2646)	2400* (5292*)	1815 (4002)		
0.0 m (0 in)	1315* (2900*)	700 (1543)	1485* (3274*)	835 (1841)	1925* (4245*)	1145 (2525)	2805* (6185*)	1710 (3771)		
−1.0 m (−39.4 in)	1375* (3032*)	785 (1731)			1990* (4388*)	1120 (2470)	2855* (6295*)	1670 (3682)	4570* (10077*)	3240 (7144)
−2.0 m (−78.7 in)	1425* (3142*)	970 (2139)					2580* (5689*)	1685 (3715)	3980* (8776*)	3260 (7188)

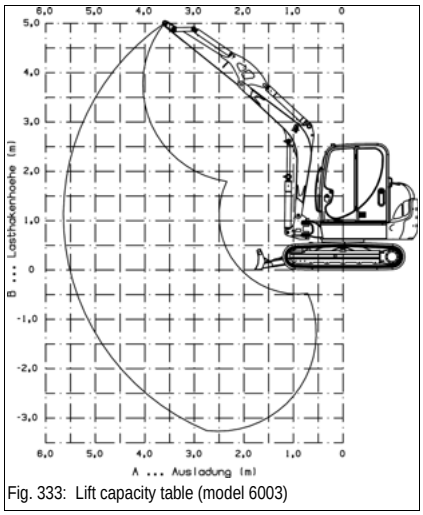
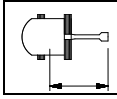


Fig. 333: Lift capacity table (model 6003)

max	Admissible load on extended stick
A	Reach from live ring center
B	Load hook height
*	Lift capacity limited by hydraulic system

All table indications in kg (lbs) and horizontal position on firm ground without bucket.

	With the stabilizer blade in driving direction
	Without the stabilizer blade, 90° to driving direction

If equipped with a bucket or other attachments, lift capacity or tilt load is reduced by bucket or attachment dead weight.

Calculation basis: according to ISO 10567

The machine's lift capacity is restricted by the settings of the pressure limiting valves and the hydraulic system's stabilizing features.

Neither 75 % of the static tilt load nor 87 % of the hydraulic lift capacity is exceeded.

https://truckmanualshub.com/

6.31 Lift capacity table 6003 long stick, triple articulation boom (option)

A / B	max		5.0 m (16'-5")		4.0 m (13'-1")		3.0 m (9'-10")	
	Lowered blade		Lowered blade		Lowered blade		Lowered blade	
5.0 m (16'-5")	1335* (2944*)	1005 (2216)						
4.0 m (13'-1")	1180* (2602*)	710 (1566)	1175* (2591*)	745 (1643)	1225* (2701*)	1150 (2536)		
3.0 m (9'-10")	1120* (2470*)	580 (1279)	1175* (2591*)	745 (1643)	1330* (2933*)	1105 (2436)		
2.0 m (78.7 in)	1090* (2403*)	515 (1136)	1255* (2767*)	705 (1554)	1540* (3396*)	1020 (2249)	2110* (4653*)	1610 (3550)
1.0 m (39.4 in)	1070* (2359*)	485 (1069)	1340* (2955*)	660 (1455)	1740* (3837*)	925 (2040)	2540* (5601*)	1380 (3043)
0.0 m (0.0 in)	1050* (2315*)	485 (1069)	1370* (3021*)	620 (1367)	1830* (4035*)	850 (1367)	2620* (5777*)	1255 (2767)
−1.0 m (−39.4 in)	1010* (2227*)	525 (1158)	1285* (2833*)	600 (1323)	1755* (3870*)	815 (1797)	2430* (5358*)	1225 (2701)
−2.0 m (−78.7 in)	915* (2018*)	630 (1389)			1460* (3219*)	820 (1808)	2010* (4432*)	1245 (2745)

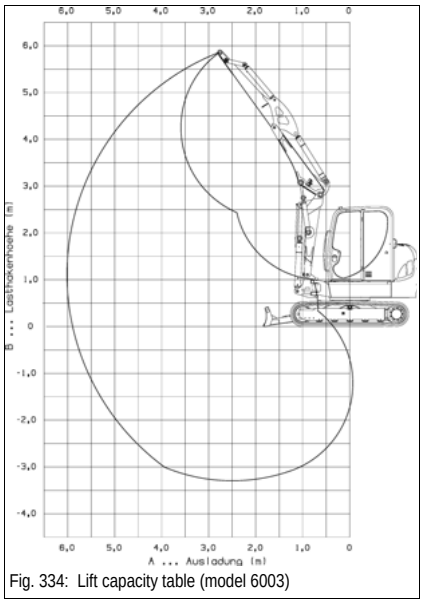
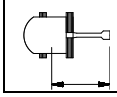


Fig. 334: Lift capacity table (model 6003)

max	Admissible load on extended stick
A	Reach from live ring center
B	Load hook height
*	Lift capacity limited by hydraulic system

All table indications in kg (lbs) and horizontal position on firm ground without bucket.

	With the stabilizer blade in driving direction
	Without the stabilizer blade, 90° to driving direction

If equipped with a bucket or other attachments, lift capacity or tilt load is reduced by bucket or attachment dead weight.

Calculation basis: according to ISO 10567

The machine's lift capacity is restricted by the settings of the pressure limiting valves and the hydraulic system's stabilizing features.

Neither 75 % of the static tilt load nor 87 % of the hydraulic lift capacity is exceeded.

https://truckmanualshub.com/

6.32 Lift capacity table 6003 long stick, triple articulation boom, counterweight (option)

	max		5.0 m (16'-5")		4.0 m (13'-1")		3.0 m (9'-10")	
A / B	Lowered blade		Lowered blade		Lowered blade		Lowered blade	
5.0 m (16'-5")	1335* (2944*)	1160 (2558)						
4.0 m (13'-1")	1180* (2602*)	830 (1830)	1175* (2591*)	875 (1929)	1225* (2701*)	1225* (2701*)		
3.0 m (9'-10")	1120* (2470*)	690 (1521)	1175* (2591*)	870 (1918)	1330* (2933*)	1275 (2811)		
2.0 m (78.7 in)	1090* (2403*)	615 (1356)	1255* (2767*)	835 (1841)	1540* (3396*)	1190 (2624)	2110* (4653*)	1855 (4090)
1.0 m (39.4 in)	1070* (2359*)	585 (1290)	1340* (2955*)	785 (1731)	1740* (3837*)	1090 (2403)	2540* (5601*)	1625 (3583)
0.0 m (0.0 in)	1050* (2315*)	590 (1301)	1370* (3021*)	750 (1654)	1830* (4035*)	1015 (2238)	2620* (5777*)	1500 (3307)
−1.0 m (−39.4 in)	1010* (2227*)	640 (1411)	1285* (2833*)	730 (1610)	1755* (3870*)	985 (2172)	2430* (5358*)	1470 (3241)
−2.0 m (−78.7 in)	915* (2018*)	755 (1665)			1460* (3219*)	990 (2183)	2010* (4432*)	1490 (3285)

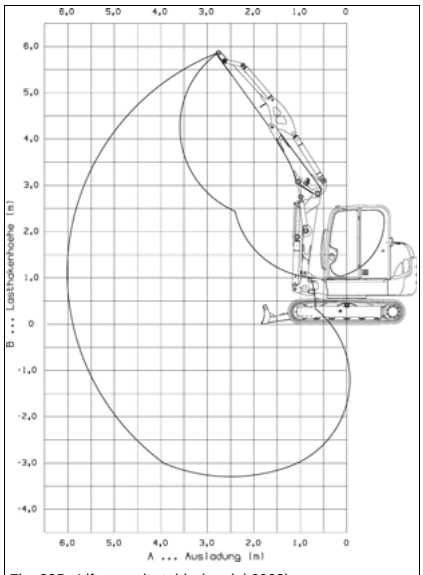
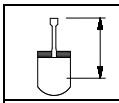
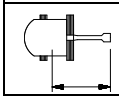


Fig. 335: Lift capacity table (model 6003)

max	Admissible load on extended stick
A	Reach from live ring center
B	Load hook height
*	Lift capacity limited by hydraulic system

All table indications in kg (lbs) and horizontal position on firm ground without bucket.

	With the stabilizer blade in driving direction
	Without the stabilizer blade, 90° to driving direction

If equipped with a bucket or other attachments, lift capacity or tilt load is reduced by bucket or attachment dead weight.

Calculation basis: according to ISO 10567

The machine's lift capacity is restricted by the settings of the pressure limiting valves and the hydraulic system's stabilizing features.

Neither 75 % of the static tilt load nor 87 % of the hydraulic lift capacity is exceeded.

https://truckmanualshub.com/

6.33 Lift capacity table 6003 triple articulation boom (option)

A / B	max		5.0 m (16'-5")		4.0 m (13'-1")		3.0 m (9'-10")	
	Lowered blade		Lowered blade		Lowered blade		Lowered blade	
5.0 m (16'-5")	1510* (3330*)	1220 (2690)						
4.0 m (13'-1")	1300* (2866*)	805 (1775)			1335* (2944*)	1125 (2481)		
3.0 m (9'-10")	1220* (2690*)	640 (1411)	1250* (2756*)	735 (1621)	1415* (3120*)	1090 (2403)		
2.0 m (78.7 in)	1180* (2602*)	565 (1246)	1300* (2866*)	705 (1554)	1600* (3528*)	1010 (2227)	2265* (4994*)	1555 (3429)
1.0 m (39.4 in)	1155* (2547*)	535 (1180)	1365* (3010*)	665 (1466)	1785* (3936*)	920 (2029)	2710* (5976*)	1350 (2977)
0.0 m (0.0 in)	1125* (2481*)	540 (1191)	1365* (3010*)	630 (1389)	1840* (4057*)	855 (1885)	2715* (5987*)	1265 (2789)
−1.0 m (−39.4 in)	1075* (2370*)	590 (1301)	1215* (2679*)	620 (1367)	1710* (3771*)	835 (1841)	2420* (5336*)	1255 (2767)
−2.0 m (−78.7 in)	940* (2073*)	725 (1599)			1315* (2900*)	855 (1885)	1850* (4079*)	1285 (2833)

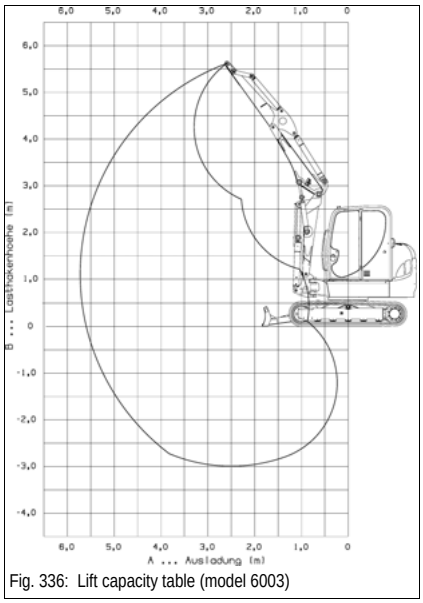
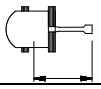


Fig. 336: Lift capacity table (model 6003)

max	Admissible load on extended stick
A	Reach from live ring center
B	Load hook height
*	Lift capacity limited by hydraulic system

All table indications in kg (lbs) and horizontal position on firm ground without bucket.

	With the stabilizer blade in driving direction
	Without the stabilizer blade, 90° to driving direction

If equipped with a bucket or other attachments, lift capacity or tilt load is reduced by bucket or attachment dead weight.

Calculation basis: according to ISO 10567

The machine's lift capacity is restricted by the settings of the pressure limiting valves and the hydraulic system's stabilizing features.

Neither 75 % of the static tilt load nor 87 % of the hydraulic lift capacity is exceeded.

https://truckmanualshub.com/

6.34 Lift capacity table 6003 triple articulation boom, counterweight (option)

	max		5.0 m (16'-5")		4.0 m (13'-1")		3.0 m (9'-10")	
A / B	Lowered blade		Lowered blade		Lowered blade		Lowered blade	
5.0 m (16'-5")	1510* (3330*)	1400 (3087)						
4.0 m (13'-1")	1300* (2866*)	940 (2073)			1335* (2944*)	1295 (2855)		
3.0 m (9'-10")	1220* (2690*)	760 (1676)	1250* (2756*)	860 (1896)	1415* (3120*)	1255 (2767)		
2.0 m (78.7 in)	1180* (2602*)	675 (1488)	1300* (2866*)	830 (1830)	1600* (3528*)	1175 (2591)	2265* (4994*)	1800 (3969)
1.0 m (39.4 in)	1155* (2547*)	640 (1411)	1365* (3010*)	790 (1742)	1785* (3936*)	1085 (2392)	2710* (5976*)	1595 (3517)
0.0 m (0.0 in)	1125* (2481*)	650 (1433)	1365* (3010*)	760 (1676)	1840* (4057*)	1025 (2260)	2715* (5987*)	1510 (3330)
−1.0 m (−39.4 in)	1075* (2370*)	710 (1566)	1215* (2679*)	750 (1654)	1710* (3771*)	1000 (2205)	2420* (5336*)	1500 (3307)
−2.0 m (−78.7 in)	940* (2073*)	865 (1907)			1315* (2900*)	1020 (2249)	1850* (4079*)	1530 (3374)

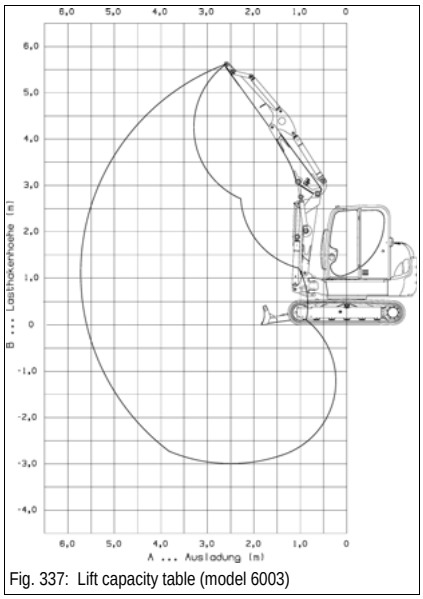
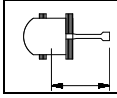


Fig. 337: Lift capacity table (model 6003)

max	Admissible load on extended stick
A	Reach from live ring center
B	Load hook height
*	Lift capacity limited by hydraulic system

All table indications in kg (lbs) and horizontal position on firm ground without bucket.

	With the stabilizer blade in driving direction
	Without the stabilizer blade, 90° to driving direction

If equipped with a bucket or other attachments, lift capacity or tilt load is reduced by bucket or attachment dead weight.

Calculation basis: according to ISO 10567

The machine's lift capacity is restricted by the settings of the pressure limiting valves and the hydraulic system's stabilizing features.

Neither 75 % of the static tilt load nor 87 % of the hydraulic lift capacity is exceeded.

https://truckmanualshub.com/

6.35 Lift capacity table 6003 Vario (option)

A	max	5.0 m (16'-5")			4.0 m (13'-1")			3.0 m (9'-10")			2.0 m (78.7 in)		
C / B		Rear Vario position	Front Vario position		Rear Vario position	Front Vario position		Rear Vario position	Front Vario position		Rear Vario position	Front Vario position		Rear Vario position	Front Vario position
4.0 m (13'-1")	1310* (2889*)	1310* (2889*)	780 (1720)				1245* (2742*)	1245* (2742*)	885 (1951)						
3.0 m (9'-10")	1300* (2866*)	1105 (2436)	615 (1356)				1265* (2789*)	1265* (2789*)	880 (1940)						
2.0 m (78.7 in)	1320* (2911*)	975 (2150)	545 (1202)	1330* (2933*)	1060 (2337)	595 (1312)	1490* (3285*)	1490* (3285*)	845 (1863)	1885* (4156*)	1885* (4156*)	1305 (2877)			
1.0 m (39.4 in)	1360* (2999*)	925 (2040)	520 (1147)	1435* (3164*)	1030 (2271)	575 (1268)	1775* (3914*)	1420 (3131)	795 (1753)	2615* (5766*)	2125 (4686)	1190 (2624)			
0.0 m (0 in)	1410* (3109*)	945 (2083)	530 (1169)	1495* (3296*)	1000 (2205)	560 (1235)	1970* (4344*)	1355 (2988)	760 (1676)	2970* (6549*)	2015 (4443)	1125 (2481)			
−1.0 m (−39.4 in)	1465* (3274*)	1040 (2293)	585 (1290)				1965* (4333*)	1330 (2933)	745 (1643)	2910* (6417*)	1985 (4377)	1110 (2448)	5010* (11047*)	3830 (8445)	2145 (4730)
−2.0 m (−78.7 in)	1495* (3296*)	1320 (2911)	740 (1632)							2450* (5402*)	2020 (4454)	1130 (2492)	4005* (8831*)	3910 (8622)	2190 (4829)

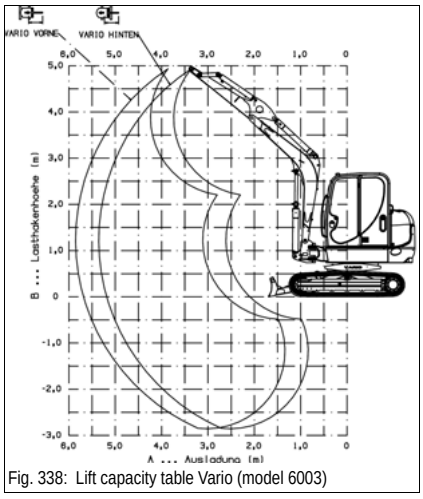


Fig. 338: Lift capacity table Vario (model 6003)

max	Admissible load on extended stick
A	Reach from live ring center
B	Load hook height
C	Vario position
*	Lift capacity limited by hydraulic system

All table indications in kg (lbs) and horizontal position on firm ground without bucket.

	With the stabilizer blade in driving direction
	Without the stabilizer blade 90° in driving direction Upper carriage shifted to the rear with Vario option
	Without the stabilizer blade 90° in driving direction Upper carriage shifted to the front with Vario option

If equipped with a bucket or other attachments, lift capacity or tilt load is reduced by bucket or attachment dead weight.

Calculation basis: according to ISO 10567

The machine's lift capacity is restricted by the settings of the pressure limiting valves and the hydraulic system's stabilizing features.

Neither 75 % of the static tilt load nor 87 % of the hydraulic lift capacity is exceeded.

https://truckmanualshub.com/

https://truckmanualshub.com/

COMPACT EXCAVATOR

www.aem.org

SAFETY MANUAL

FOR OPERATING AND MAINTENANCE PERSONNEL



Contents

Acknowledgment 2
Foreword 3
Safety Alerts 4
One-Call First 5
A Word To The User/Operator 6
Follow A Safety Program 7
Prepare For Safe Operation 13
Start Safely 22
Operate Safely 26
Shut Down Safely 39
Load And Unload The Machine Safely 40
Perform Maintenance Safely 41
Final Word To The User 51

Acknowledgment

We wish to acknowledge the contributions of the members of AEM's Compact Loader/Compact Excavator Council to the preparation of this Safety Manual.

NOTICE OF COPYRIGHT PROTECTION

Copyright, 2010, by the Association of Equipment Manufacturers. All rights reserved. This work may not be reproduced or disseminated in whole or in part by any means without the prior written permission of the Association of Equipment Manufacturers.

Copyright 2002-2010© AEM (Association of Equipment Manufacturers)
Revised 05/03, 09/10

https://truckmanualshub.com/

Foreword

This safety manual is intended to point out some of the basic safety situations that may be encountered during the normal operation and maintenance of the machine and to suggest possible ways of dealing with these conditions. This manual is **NOT** a substitute for the compact excavator manufacturer's operator manual(s).

Additional precautions may be necessary, or some instructions may not apply, depending on equipment, attachments and conditions at the worksite or in the service area. The manufacturer has no direct control over equipment application, operation, inspection or maintenance. Therefore, it is **YOUR** responsibility to use safe work practices in these areas.

The information provided in this manual supplements the specific information about the machine that is contained in the manufacturer's manual(s). Other information that may affect the safe operation of the machine may be contained on safety signs or in insurance requirements, employer's safety and training programs, safety codes, local, state/provincial and federal laws, rules and regulations.



Read And Understand Manuals Before Operating

IMPORTANT! Before you operate the compact excavator, make sure you have the manufacturer's manual(s) for this machine and all attachments. If the manufacturer's manuals are missing, obtain replacement manuals from your employer, equipment dealer or directly from the manufacturer. Keep this safety manual and the manufacturer's manuals with the machine at all times. Read and understand all manuals.

Safety videos and other training resources are available from some manufacturers. Operators are encouraged to periodically review the safety video.

Safety Alerts

Symbol

This Safety Alert Symbol means: **"ATTENTION! STAY ALERT! YOUR SAFETY IS INVOLVED!"**



The Safety Alert Symbol identifies important safety messages on equipment, safety signs, in manuals or elsewhere. When you see this symbol, be alert to the possibility of death or personal injury. Carefully read the message that follows and inform other operators. Follow instructions in the safety message.

Signal Words

Signal words are distinctive words that will typically be found on safety signs on the compact excavator and other worksite equipment. These words may also be found in this manual and the manufacturer's manuals. These words are intended to alert the operator to a hazard and the degree of severity of the hazard.

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE indicates a property damage message.

https://truckmanualshub.com/

One-Call First



Call Before You Dig
Dial 811 (USA only)



888-258-0808
(USA and Canada)

Call

Before starting any digging project, contact the local One-Call service by dialing 811 (USA only) to have underground utilities located. A One-Call referral number, **1-888-258-0808**, is also available for both USA and Canada.

One-Call will notify participating utility companies that you intend to dig. You must also call utility companies that do not participate in the One-Call service.

Always inspect the jobsite for evidence of unmarked utilities and contact others if necessary.

Plan The Work

Be aware of the lead time for marking the work area. This time may vary from state to state and county to county. If you do not locate utilities, you may have an accident or suffer injuries, cause service interruptions, damage the environment or experience job delays.

Dig

Most utilities mark their underground facilities using American Public Works Association (APWA) underground color codes. Verify marks before digging.

In the United States, OSHA Standard 29 CFR 1926.651 requires that the estimated location of underground utilities be determined before beginning an excavation. When actual excavation approaches an estimated utility location, the exact location of the underground installation must be determined by a safe, acceptable and dependable method. Other OSHA regulations may also apply to the jobsite.

A Word To The User/Operator

It is **YOUR** responsibility to read and understand the safety manual and the manufacturer's manuals before operating this machine. This safety manual takes you step by step through the working day.

Graphics have been provided to help you understand the text.

IMPORTANT: This manual covers safe practices for Compact Excavators. If the machine is equipped with special attachments, read the manufacturer's operator and safety manuals pertaining to those attachments before using them.



Read And Understand All Safety Signs

Remember that **YOU** are the key to safety. Good safety practices not only protect you but also protect the people around you. Study this manual and the manufacturer's manuals for the specific machine. Make them a working part of your safety program. Keep in mind that this safety manual is written only for compact excavators.

Contact the manufacturer of the equipment to answer any questions about safe operation that remain after studying the manufacturer's manual(s) and this safety manual.

Practice all other usual and customary safe working precautions and remember:

SAFE OPERATION IS UP TO YOU!

YOU CAN PREVENT DEATH OR SERIOUS INJURY CAUSED BY UNSAFE WORK PRACTICES!

https://truckmanualshub.com/

Follow A Safety Program

Be Alert!

Know where to get assistance. Know where to find and how to use a first aid kit and fire extinguisher/fire suppression system.

Be Aware!

Take advantage of training programs offered.

Be Careful!

Human error is caused by many factors: carelessness, fatigue, overload, preoccupation, unfamiliarity of the operator with the machine or attachment, drugs, and alcohol to name a few. You can prevent death or serious injury caused by unsafe work practices.

For your safety and the safety of others, encourage fellow workers to act safely.



For Safe Operation

You must be a qualified and authorized operator for safe operation of this machine. You must clearly understand the written instructions supplied by the manufacturer, be trained—including actual operation of the compact excavator—and know the safety rules and regulations for the worksite. It is a good safety practice to point out and explain safety signs and practices and ensure others understand the importance of following these instructions.

WARNING! Drugs and alcohol affect an operator's alertness and coordination and the operator's ability to safely operate the equipment. **Never operate the compact excavator while impaired by use of alcohol or drugs. Never knowingly allow the operation of this machine when operator alertness or coordination is impaired.** An operator taking prescription or over-the-counter medication must consult a medical professional regarding any side effects of the medication that would hinder the ability to safely operate this equipment.

Follow A Safety Program

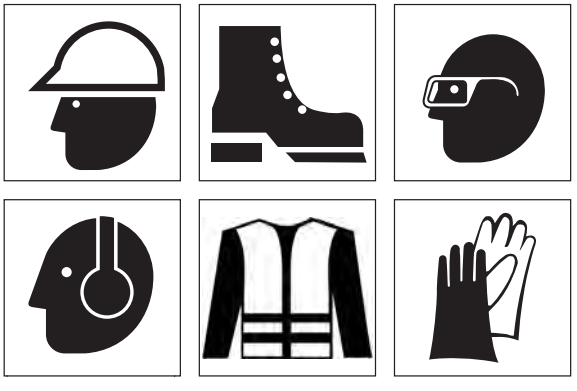
Protect Yourself

Wear personal protective clothing and Personal Protective Equipment (PPE) issued to you or called for by job conditions.

You may need:
— Hard hat
— Safety boots with non-slip soles
— Safety glasses, goggles or face shield
— Heavy-duty gloves
— Hearing protection
— Reflective or high-visibility clothing
— Wet weather gear
— Respirator or filter mask

Wear whatever is needed to protect yourself—do not take chances.





WARNING! Prevent death or serious injury from entanglement. **Do not wear loose clothing or accessories. Restrain long hair. Stay away from all rotating components when the engine is running.** Contact, wrapping or entanglement with rotating or moving parts could result in death or serious injury.

https://truckmanualshub.com/

Follow A Safety Program

Know The Rules

Most employers have rules governing operation and maintenance of equipment. Before you start work at a new location, check with your supervisor or the safety coordinator. Ask about the rules you will be expected to obey.

The Occupational Safety and Health Administration (OSHA) enforces federal laws within the United States that apply to the safe operation, application and maintenance of equipment on a worksite. It is the employer's responsibility to comply with these laws. A federal representative may periodically inspect a worksite to see that these laws are being followed.

There may also be local, state/provincial, federal laws or international regulations that apply to this equipment and its use, along with specific worksite or employer rules. It is important that you know and comply with all applicable laws and rules, including those requiring operator training and certification.



Know And Understand Rules Of Operation

Follow A Safety Program

Some Rules You Must Work By

— Know the limitations and operating characteristics of the compact excavator. Do not overload it.
— Always wear the seat belt, if equipped. If the compact excavator is equipped with a foldable TOPS/ROPS, do not fasten the seat belt when the TOPS/ROPS is in the down position.
— Always have all shields and guards properly installed before operating the machine.
— Inspect the machine and all attachments before each use as specified by the manufacturer and your employer. Ensure the attachment is properly installed. (See page 17, **Quick-coupling Device Safety**.)
— Only use parts and attachments that are approved by the original equipment manufacturer.
— Never modify or remove any part of the equipment (except for service—then make sure it is replaced).
— Read and understand all safety signs installed on the machine.
— Know the location of other personnel and machines and make sure they are a safe distance from the machine.
— Know the worksite. Be aware of possible hazards that you may encounter.

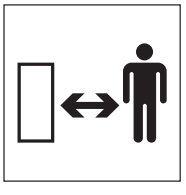


Know Machine Limitations And Operating Characteristics



Inspect The Machine Before Each Workday





Be Aware Of Worksite Hazards, Keep Bystanders Away

https://truckmanualshub.com/

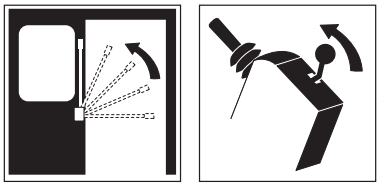
Follow A Safety Program

— Always look in the direction of machine or boom movement. Drive facing the travel direction whenever possible.
— Make sure you understand the rules covering traffic at the worksite. Know what all signs, flags and markings mean.
— Understand hand, flag, horn, whistle, siren and bell signals, if used at the worksite.
— Know when to use lights, turn signals, flashers and horns, if equipped.
— Do not allow riders.
— Keep hands and feet on controls when operating.
— Never lift or swing a load or attachment over anyone.
— Whenever you leave the machine, lower the excavator blade, bucket or other attachments to the ground. Stop the engine. Cycle the hydraulic controls, including auxiliary hydraulic control, to relieve trapped pressure. Engage control lock if equipped, and remove the ignition key. (See page 39, **Machine Shutdown**.)
— When transporting the compact excavator on a trailer, follow the manufacturer's instructions for loading, tying down and unloading the compact excavator.







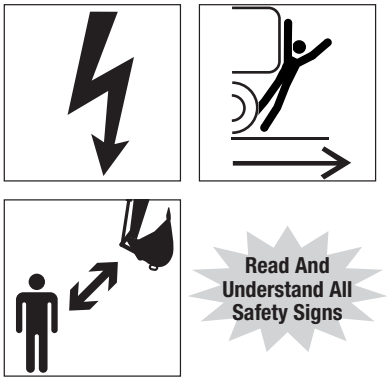


Follow A Safety Program

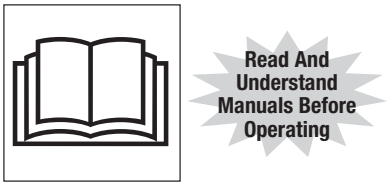
Know The Equipment

Read and understand the DANGER, WARNING, CAUTION and NOTICE safety signs and other informational signs found on the compact excavator and in the manufacturer's operator manual. Ask your supervisor to explain any information you do not understand. Failure to obey safety instructions could result in death or serious injury.

Make sure all the manufacturer's protective structures, guards, shields, screens and panels are in good repair, in place and securely fastened. Damaged, missing or weakened safety components can create a hazardous situation for you as the operator. **Never** remove or modify any safety components on the compact excavator. The excavator can be operated temporarily with a foldable TOPS/ROPS lowered for access through height-restricted openings. Do not fasten the seat belt when the TOPS/ROPS is in the down position.



Know the following about this compact excavator and all attachments.
— Function, purpose and use of controls
— The functions of all gauges, lights, dials, switches
— Slope and uneven terrain capabilities and proper operation – never operate on a slope with a foldable TOPS/ROPS in the down position.
— Braking and steering characteristics
— Turning radius and clearances
— How to quickly stop equipment in an emergency



https://truckmanualshub.com/

Prepare For Safe Operation

Check And Use All Available Protective And Safety Devices

Keep all protective devices in place and tightly fastened. Make certain all guards, screens and panels, manufacturer's operator manuals, and safety signs are installed on the machine and legible as supplied by the manufacturer. See that each item is securely in place and in operating condition.

The machine may be equipped with:

— A seat belt or other type of restraint
— Control locking device
— Safety signs
— Access and egress system (i.e., grab handles, handrails) and protective covers
— Travel alarm and back-up alarm
— Falling object guard structure (FOGS), falling object protective structure (FOPS), roll-over protective structure (ROPS)/tip-over protective structure (TOPS)
— Guards
— Special enclosures or accessories required for task or worksite conditions
— Operator protective structure (OPS) – side, front and rear shields, screens and doors
— Warning lights and devices
— Alternate exits
— Mirrors
— Fire extinguisher
— First aid kit
— Windshield wipers and washers
— Window defroster
— Operating lights
— Horn

Know which devices are required for protection during your specific operation and use them. The excavator can be operated temporarily with the TOPS/ROPS lowered for access through height restricted openings. Do not fasten the seat belt when the TOPS/ROPS is in the down position.

WARNING! NEVER remove or modify safety equipment. Operating a machine without a protective structure (TOPS/ROPS, FOGS/FOPS or OPS) could result in death or serious injury. (See page 44, **Protective Structure Safety**.)



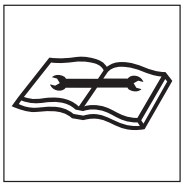
Follow A Checklist

Prepare For Safe Operation

Check The Machine

Before you begin the workday, inspect the machine and have all systems in good operational condition. Do not operate the machine until all problems are corrected.

— Perform daily and periodic service procedures as instructed by the equipment manufacturer.
— Check that no safety switches or interlocks have been bypassed and that no warning tags have been placed on the machine.
— Check that safety signs, special instructions, lift capacity charts and operator manuals are legible and in the proper location.
— Check condition and operation of the seat belt and its mounts, if equipped.
— Make sure that the foldable TOPS/ROPS, if equipped, is properly secured in the raised position.
— Check condition and operation of the attachment quick-coupling device, if equipped. Perform daily cleaning and maintenance following the manufacturer's instructions. (See page 17, **Quick-coupling Device Safety**.)
— Inspect steps, guardrails, platforms and handholds for damage or loose parts.



Maintain Machine



Check Manuals And Safety Signs



Check Seat Belt And Its Mounts



Check That TOPS/ROPS Is Raised And Properly Secured

https://truckmanualshub.com/

Prepare For Safe Operation

— Check the fuel and hydraulic systems. Have leaks repaired and fill to proper level.
— Check all exposed hydraulic components for leaks, routing problems or damage. Report worn or damaged components.

WARNING! Diesel fuel and hydraulic fluid under pressure can penetrate the skin or eyes and cause serious injury, blindness or death. Fluid leaks under pressure may not be visible. **Use a piece of cardboard or wood to find leaks, not your hand. Wear a face shield or safety goggles for eye protection.** If fluid is injected into the skin, it must be removed within a few hours by medical personnel familiar with this type of injury. (See page 46, **Hydraulic System Hazards**.)

— Check the cooling system.

WARNING! Prevent possible injury from explosive release of hot fluids. **Allow the radiator to cool before checking the fluid level**. (See page 45, **Cooling System Hazards.**)

— Keep radiators and coolers clean and free of oil, grease, dirt, debris and moisture.
— Make sure all doors, guards and covers are in place and secured properly.



Prepare For Safe Operation

Check The Machine (continued)

— Check the tracks for broken or damaged pins, bushings, and other parts.
— Check the tracks for proper tension adjustment according to manufacturer's instructions.
— Check the tracks for damage or wear. Replace badly worn or damaged tracks.
— Check the slew/swing brake for proper operation.
— Inspect working and other lights for proper operation.
— Inspect boom, arm and attachment for wear and damage.
— Make sure fire extinguishers are fully charged and in good working order.

Check Attachment And Coupler Installation

When changing buckets or installing attachments, follow the manufacturer's instructions for proper maintenance and coupling. Make sure all connectors are securely fastened. Tighten all bolts, nuts and screws to torques recommended.

Check the attachment coupler and the attachment for wear and hydraulic leaks before coupling the attachment.

Before operating, ensure that quick-coupler pins or wedges are fully engaged and visibly locked to the attachment.

WARNING! Avoid possible crushing injury. **Failure to properly secure the attachment to the machine coupler can allow the attachment to come off and could result in death or serious injury.** (See page 17, **Quick-coupling Device Safety**.)

https://truckmanualshub.com/

Prepare For Safe Operation

Quick-coupling Device Safety

Before using a quick-coupling device you must know and understand proper installation, maintenance and operation.

WARNING! Failure to read and follow manufacturer's instructions for the correct operation and maintenance of the quick-coupler can allow the attachment to come off and cause death or serious injury.

Protect yourself from injury:
- — Install and maintain equipment, attachments and their operating systems according to manufacturers' instructions.
- — Securely latch attachments before work begins.
- — Follow the manufacturer's instructions for using positive locks on quick-coupling equipment.
- — Make frequent visual inspections of quick-coupling systems—especially after changing attachments.
- — Always check for interference limits of the coupler or tool with the carrier before operating.

Do not operate the machine if:
- — there exists an incompatibility among components.
- — there are broken, damaged or badly worn components.
- — the lock/secure feature of the quick-coupler is impaired.
- — the engaging lever or device is not fully engaged in a lock/secure condition.



Read And Understand Manuals Before Operating

WARNING! A quick-coupler that is not properly locked/secured could result in death or serious injury. **Perform all steps to lock/secure the device.** The steps to confirm that the device is properly locked/secured may include any or all of the following:
- — Manually installing a locking pin, actuating a lever or other device.
- — Movement of the attached work tool to confirm its engaged lock/secure condition.
- — A visual check of the components as instructed by the quick-coupler manufacturer.

WARNING! A quick-coupler that is disengaged when the attachment is in an unstable position could result in death or serious injury. **Place the attachment in a stable position, as instructed by the manufacturer, whenever coupling or uncoupling the attachment.**

Prepare For Safe Operation

Clean Up

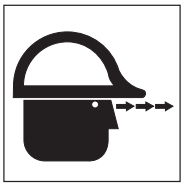
Clean windshields, mirrors and all lights. Use water and a clean cloth. Know and follow the manufacturer's recommendations for using cleaning agents other than clean water on polycarbonate glazing.

Clean out the operator's area. Steps and handholds must be clean and functional. Oil, grass, leaves, needles, snow, ice or mud in these areas can cause you to slip and fall.

Clean your boots before getting on the machine.

Clean out trash and debris buildup promptly, especially in the engine compartment, the battery box, around exhaust components, under the machine and around rotating components.

Remove all loose personal items or other objects from the operator's compartment. Secure these items in a fixed tool box or remove them from the machine. Do not store any flammable material such as ether/cold-start fluid or oily rags in the operator's compartment.



Maintain Vision – Clean Up



Avoid Falls – Clean Slippery Surfaces



Avoid Fire – Clean Out Debris



Put Away Tools And Loose Items

https://truckmanualshub.com/

Prepare For Safe Operation

Check The Work Area

Know—beforehand—as much about the worksite as possible. Locate all ground workers near the worksite and make sure clothing worn is easily seen. Be aware of weather conditions that can affect visibility, ground stability and traction.

Check for:
- Location of steep slopes, slide areas, drop-offs and overhangs
- Adequate traction on slopes
- Traffic locations and movement
- Thick dust, smoke and fog
- Soil conditions—look for signs of instability such as cracks or settlement
- Standing water and marshy areas
- Rocks and stumps
- Holes, obstructions, mud or ice
- Location of open trenches
- Exact location of any buried and/or overhead electrical, gas, telephone, water, sewer or other utility lines

Have the utility company mark, shut off or relocate the utility before you begin working.

Know the location and work plan for other machines on the worksite.

Correct unsafe conditions. Avoid operating in problem areas that cannot be corrected.

When operating the machine inside a building, know what clearances you will encounter—overhead, doorway, aisles, etc. Also, know the weight limitations of floors and ramps. Make sure there is sufficient ventilation for inside operation.



Walk Around The Worksite



Be Seen – Wear Visible Clothing

Prepare For Safe Operation

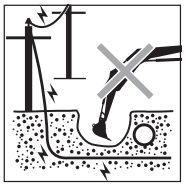
Check The Work Area (continued)

Know the exact location of electrical, telephone, gas or other utility lines. (See page 5, **One-Call First**.)

DANGER! Death or serious injury will result from touching or being near a machine that is in contact with or near an energized electrical source. **Never approach power lines with any part of the machine or load unless all local, state/provincial and federal (OSHA) required safety precautions have been taken.** Use extreme caution because high voltage sources can arc without contact.

When working near power lines, you must assume all lines are energized.

Maintain a safe distance from all utilities.
(See page 31, **Utilities—Overhead And Underground**.)



Locate All Utilities, Maintain A Safe Distance

Use Caution When Fueling

IMPORTANT! Always use approved fuel containers and dispensing equipment.

Fuels are flammable, so observe these practices to reduce the possibility of a serious accident.
- Shut off engine and ignition during refueling.
- Always ground the fuel nozzle against the filler neck to avoid sparks.
- Keep sparks and open flames away from fuel.
- Do not use a cell phone or two-way radio while fueling or handling fuel—they could cause sparks.
- Do not smoke while refueling or when handling fuel containers.
- Do not overfill the tank or spill fuel. Clean up spilled fuel immediately.

https://truckmanualshub.com/

Prepare For Safe Operation

Mount And Dismount Properly

When you enter or leave the machine:

— Maintain a three-point contact with the machine. Three-point contact is defined as maintaining contact with at least one hand and two feet, or two hands and one foot, at all times.
— Face the machine when either mounting or dismounting.
— Use handholds, handrails, ladders or steps (as provided).
— The upperstructure and undercarriage must be oriented to align the access system.
— Never use control levers as handholds.
— Never step on foot controls when entering or leaving.
— Clean your boots and wipe your hands before mounting or dismounting.
— Never jump on or off the machine.
— Never attempt to mount or dismount a moving machine.
— Never mount or dismount while carrying tools or objects that prevent three-point contact.







Start Safely

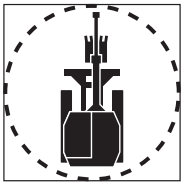
Look Out For Others

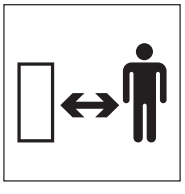
Before starting, walk completely around the machine operating area. Make sure no one is under it, on it or close to it. Do not start the engine until everyone is clear of the operating area.

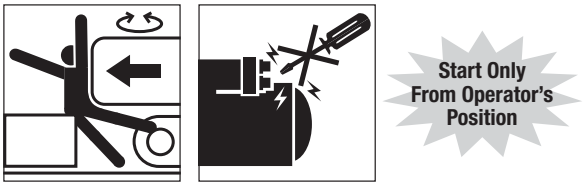
Starting The Engine

Do not start the engine or move any of the controls if there is a “DO NOT OPERATE” or similar warning tag attached to the start switch or controls. Check with your supervisor.

WARNING! Start the engine only from the operator’s seat. Never attempt to start the engine by shorting across starter terminals or reaching for the key from outside the cab. This could result in the machine moving suddenly and unexpectedly and cause death or serious injury.







https://truckmanualshub.com/

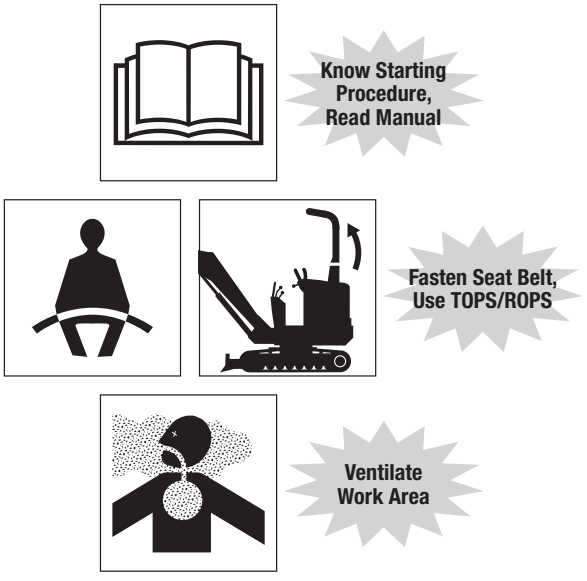
Start Safely

Know the exact starting procedures for this machine. See the manufacturer's manual(s) for starting procedures.

— Clear the area of all persons.
— Sit in the operator's seat and adjust the seat so you can operate all the controls properly.
— Familiarize yourself with warning devices, gauges and operating controls.
— Close or secure the cab door, if equipped.
— Fasten the seat belt, if equipped. If the compact excavator is equipped with a foldable TOPS/ROPS, do not fasten the seat belt when the TOPS/ROPS is in the down position.
— Put all controls, including those for auxiliary equipment, in the neutral/park position.
— Activate controls by releasing the control lock, if equipped.
— Start the engine following the instructions in the manufacturer's manual(s).

If it is necessary to run the engine or operate the machine within an enclosed area, be sure there is adequate ventilation.

WARNING! Never operate any type of engine without proper ventilation—exhaust fumes can kill.



Start Safely

Starting Aids

Do not use ether/cold-start fluid if the engine is equipped with glow plugs or intake manifold preheater.

Ether/cold-start fluid is HIGHLY FLAMMABLE. Before using it, always read the instructions on the ether/cold-start fluid container and the instructions in the manufacturer's manual(s). **Do not** carry loose cans of starting fluid on the machine while operating.

If booster cables are used, follow the instructions in the manufacturer's manual(s). The operator must be in the operator's seat when boost-starting the engine so that the machine will be under control when the engine starts. Boost-starting is a two-person operation. A battery explosion or a run-away machine could result from improper starting procedures.

Never boost-start a frozen battery. (See page 48, **Avoid Battery Explosion**.)

After Starting The Engine

Observe gauges, instruments, and warning lights to ensure that they are functioning and their readings are within the operating range.

With the control levers or joysticks in neutral, test engine speed control.

Run An Operating Check

Do not use a machine that is not in proper operating condition. It is the **operator's responsibility** to check the condition of all systems, and to run the check in a safe area.

WARNING! Do not allow anyone to stand within the operating work radius of the machine and load. Contact with moving parts of the compact excavator or load can cause death or serious injury.



https://truckmanualshub.com/

Start Safely

Test All Controls

Follow the manufacturer's recommended warm-up procedures and bring all machine systems to operating temperature.

Machines come equipped with various control configurations, patterns and operating modes. Some have selectable or configurable controls that allow operation to suit personal preferences or specific applications. Make sure that you know which control pattern has been selected and understand how the machine will operate.

Make sure the engine is operating correctly. Operate each machine control to check all functions.

Check for possible interference between the attachment and the cab and operate appropriately.

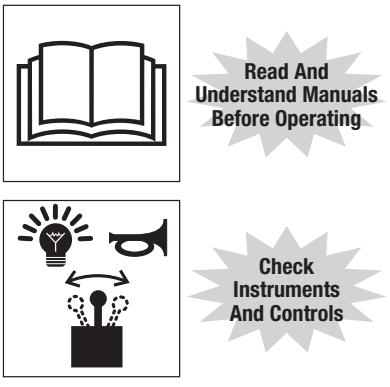
Make sure the attachment quick-coupling device (if equipped) is operating properly, fully engaged and visibly locked. (See page 17, **Quick-coupling Device Safety**.)

Check the blade location before traveling. When the blade is in the rear, operate the steering levers in the opposite direction as when the blade is in the front. See the machine manufacturer's manual.

Operate the control(s) to ensure correct operation in forward, neutral and reverse.

Test steering—right and left—while moving slowly.

WARNING! Prevent possible injury from loss of control. **Know and understand the selected control pattern and operating mode before operating. Be certain you can control speed, direction, braking and boom motion before operating the machine.**



Operate Safely

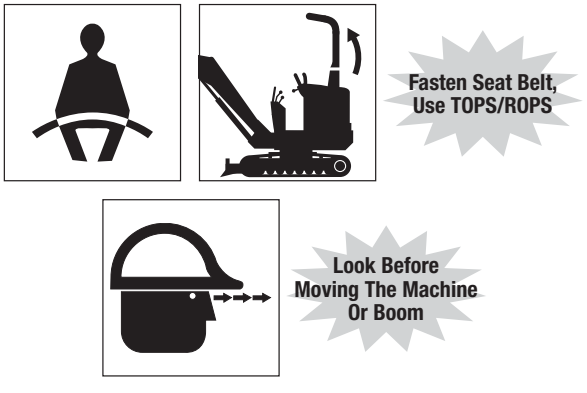
Remember

— Stay in the operator's seat, with the seat belt fastened, if equipped. If the compact excavator is equipped with a foldable TOPS/ROPS, do not fasten the seat belt when the TOPS/ROPS is in the down position.
— Understand the machine's limitations. Be in control of the machine at all times.
— Assure yourself that the work area is clear of all bystanders and other machines. Stop the machine immediately if anyone approaches.
— If a failure that causes loss of control occurs, stop all machine motion as quickly as possible. Shut the machine down and remove the key. Correct or report the problem immediately.

Remember The Other Person

WARNING! Never allow an untrained or unqualified person to operate this machine. Handled improperly, this machine could cause death or serious injury.

Do not allow anyone within the operating work radius of the compact excavator.



Never use a bucket or other attachment as a work platform or personnel carrier.

WARNING! Prevent possible injury from fall or runover. The compact excavator is a one-person machine. **NEVER PERMIT RIDERS.**

Always look around before you travel or move the boom. Look in the direction of machine movement.

Awareness on your part can prevent accidents.

https://truckmanualshub.com/

Operate Safely

Traveling On The Worksite

Know and understand the worksite traffic flow patterns and obey signalmen, road signs and flagmen.

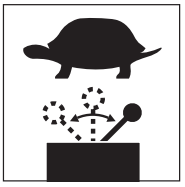
Check blade location before traveling. When blade is positioned to the rear, operate the steering levers in the opposite direction as when the blade is in the front.

The retractable track frame, if equipped, should be extended for traveling on the worksite. The track frame can be retracted to access narrow areas. Read and know manufacturer's instructions before operation.

Know the maximum height and width of the machine. Do not obstruct your vision when traveling. Always look in the direction of travel. Drive facing the travel direction when possible.

Operate the controls smoothly and slowly. Rapid and jerky movement of the controls can cause loss of both machine stability and control of the load.

When moving the machine, watch that enough clearance is available on both sides and above the boom and cab. Be especially careful to allow extra clearance on uneven ground.



Operate Controls Smoothly And Slowly



Know Weight Limits

Check for hazards or obstructions before entering an underpass or other area with restricted clearance. Check height and side clearances.

WARNING! Avoid possible injury. The weight of the machine may cause the ground, dock, ramp or floor to give way, causing loss of control, fall or tipover. **Know weight limits and stay clear of the edges of excavations and drop-offs.** Failure to know and observe weight limits and use caution could result in death or serious injury.

Operate Safely

Traveling On The Worksite (continued)

Make sure all surfaces will support the weight of the machine.

Do not cross ditches, creeks or wet draws without an adequate fill or bridge crossing.

Match travel speed to the traffic, weather and ground conditions. Take it slow and easy when traveling. Travel cautiously over rough or slippery ground and on slopes. Reduce speed when travelling over a rise.

Always give the right of way to loaded machines. Maintain a safe distance from other machines.

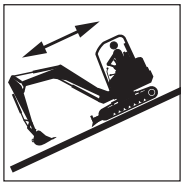
If you encounter a blind corner, stop and then proceed with caution.

Avoid traveling over obstacles (logs, tree stumps, rough terrain, ditches, curbs, railroad tracks) whenever possible. If you must cross an obstacle, do so slowly and with caution.

Avoid steep slopes or unstable surfaces. If it is necessary to travel on a slope, follow manufacturer's specific instructions. When on a slope, keep the boom centered and attachment as low and as close to the machine as possible. Proceed with extreme caution. Do not drive **ACROSS** a steep slope under any circumstances. Drive straight up and down a slope.



Travel Slowly Over Rough, Hazardous Terrain



Drive Straight Up And Down – NOT ACROSS – Steep Slopes

Avoid turning on a slope. If it is necessary, use extreme caution and make the turn **WIDE and SLOW** with the boom centered and attachment as low and as close to the machine as possible.

Avoid sudden movement of the travel controls.

https://truckmanualshub.com/

Operate Safely

Safety Precautions

Never reach into the compact excavator and attempt to operate the controls from outside the cab.

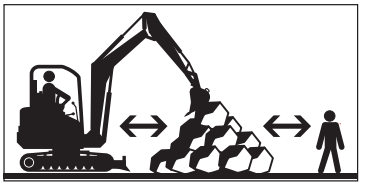
Before starting to excavate, set up safety barriers to the sides and rear area of the swing pattern to prevent anyone from walking into the working area.

Read and know manufacturer's instructions before operation.

Make sure you are aware of personnel or machines that may be hidden in blind spots on the worksite, such as piles or stacks of material.

Make sure the machine has sufficient clearance from other machines or material on the worksite to prevent contact during machine or attachment movement.

WARNING! Prevent death or serious injury. **Never lift, move or swing a load over any person or any machine cab.**





Know and use the hand signals required for particular jobs. Know who has the responsibility for signaling. Take signals from one person only.

Do not operate during storms with high winds or lightning strikes. Do not mount or dismount during a period of lightning strikes. If you are on the machine, stay on it. Warn others to stay clear of the machine in case of a lightning strike.

Operate Safely

Load Lifting

Consult the rated lift capacity chart. Do not overload this machine. Know the exact lifting capacity of the machine as equipped. Make sure you have and know how to use a current lift capacity chart for the machine. Changing conditions such as slopes, wind, ice, mud, soft ground, type of load or the weight of attachments will affect the capacity and operating characteristics of the machine.

Consult your lift chart. Lifting and handling loads over the end of the machine, rather than over either side, will improve the lifting performance of the machine.

The retractable track frame, if equipped, should be fully extended for increased lifting performance.

Attach loads only to the manufacturer's designated lifting points, if equipped.

If equipped, keep blade lowered for increased lifting performance. If ground is soft, place pads or timbers under the blade.

Operate the controls smoothly and slowly. Rapid and jerky movement of the controls can cause loss of both machine stability and control of the load.



When lifting, be sure the load is properly balanced. Move slowly so the load does not sway or swing around. Use a tag line for control.

If tracks or blade leave the ground, slowly lower the load to return the machine to the ground. Do not drop the load suddenly, because this can lead to loss of control.

Do not exceed rated lift capacity. Excessive load can cause tipping or loss of control.

Carry the load/attachment low and as close to the machine as possible. You must allow for movement in all directions. Be careful to maintain clearance of the attachment and load from the cab.

Keep all guards in place and windows closed or locked open. Keep cab doors closed or otherwise secured, if equipped.

Never leave the operator's seat with a load suspended. (See page 39, **Machine Shutdown.**)

https://truckmanualshub.com/

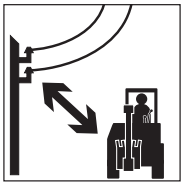
Operate Safely

Utilities – Overhead And Underground

DANGER! Electrocution or serious injury will result from CONTACTING or APPROACHING power lines or apparatus. Maintain Minimum Approach Distance. (See chart.)

DANGER! Death or serious injury will result from touching or being near a machine that is in contact with or near an energized electrical source. **Never approach power lines with any part of the machine or load unless all local, state/provincial and federal (OSHA) required safety precautions have been taken.** Use extreme caution because high voltage sources can arc without contact.

REQUIRED CLEARANCE FOR OPERATION NEAR HIGH VOLTAGE POWER LINES		
Normal Voltage, kV (Phase to Phase)	Minimum Approach Distance [Note (1)] ft	(m)
to 50	10	(3.0)
Over 50 to 200	15	(4.6)
Over 200 to 350	20	(6.1)
Over 350 to 500	25	(7.6)
Over 500 to 750	35	(10.7)
Over 750 to 1,000	45	(13.7)
NOTE: (1) Environmental conditions such as fog, smoke or precipitation may require increased clearances.		



Maintain Minimum Approach Distance



Stay Clear Of Energized Equipment

Check overhead clearances. If possible, have power to the lines de-energized and visibly grounded. If not possible, request a signal person for guidance to maintain at least the Minimum Approach Distance. (See chart.)

If the machine or load contacts an energized line, stay in the machine and attempt to break contact. Warn others to stay away from the machine. If machine catches fire and you are forced to leave, jump clear of the machine with both feet together and hop or shuffle away. **DO NOT** touch machine and ground at the same time.

Operate Safely

Locate All Underground Utilities

Confirm that One-Call has been contacted. Confirm that any utilities not subscribing to One-Call have been contacted. Confirm that the site has been marked or cleared. (See page 5, **One-Call First**.)

Obtain all information pertaining to the locate request, including the One-Call confirmation code or ticket number. If the facility owner has provided a locate sketch, obtain a copy. Review any engineering drawings provided by utilities. This information should be retained.

Personally verify One-Call utility marks. There are variations from state to state.

Take a copy of the locate sketch to the job site. Confirm all of the locates. Review the site for signs of unmarked utilities. These signs may include pedestals, pole risers, meters, trench lines, manhole covers, sewer drain outlets, etc. Review not only the immediate area, but also the perimeter of the area for utility markers.

Additionally, the area should be swept by an experienced operator using a device to locate utilities and large metal objects.

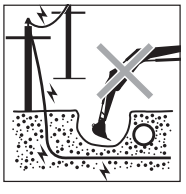
Any inconsistencies with line locations or any inaccurate locates must be resolved.

When excavating near underground services, expose the service by hand-digging or by using soft excavation, such as vacuum excavation, if permitted by local utilities.

When gas lines are present on the site, do not smoke or do anything to cause a spark in the vicinity of a gas line.

Make plans to restrict working area access—with cones and tape, barriers, warning signs, fences, etc.—until the job is complete.

Make certain that you are in compliance with all local, state/provincial, national and other requirements and regulations, including those regarding open excavations, or “potholes.”



Locate All Utilities, Maintain A Safe Distance

https://truckmanualshub.com/

Operate Safely

Trenching Safety Precautions

Follow the worksite plan for proper construction of the trench. Check with your supervisor if you are unsure of correct trench construction or if operating conditions change.

Stay alert to changes in soil conditions. Trench collapse is hazardous to all workers in the area and could cause the machine to slide into the trench.

Keep heavy loads and equipment as far from the trench as possible.

Keep spoil and stored materials such as pipe at least two feet from the edge of the trench.

Keep personnel away from the equipment and attachments.

Never swing a load or attachment over anyone.

Do not undercut the machine.

WARNING! Do not dig under the machine or blade. A resulting cave-in could cause death or serious injury.

WARNING! Avoid possible death or serious injury from trench wall collapse. **Before backfilling, see the manufacturer's manual for any specific instructions. Do not get too close to the edge of the cut.** The weight of the machine plus the fill could cause the trench wall to collapse.



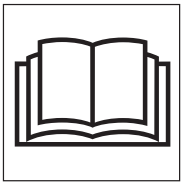
Keep Personnel Away From Equipment And Attachments

Operate Safely

Slope And Uneven Terrain Operation

Compact excavator stability and load capacity are greatly reduced on slopes. Ensure the operation can be done safely. Prevent overturns and maintain stability control:

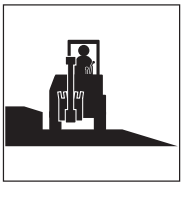
- Use machines equipped with TOPS/ROPS and a seat belt. Make sure folding TOPS/ROPS is raised and locked in place—always use the seat belt.
- The retractable track frame, if equipped, should be extended for operating on slopes or uneven terrain. Read and know manufacturer's instructions before operation.
- Review the manufacturer's manual for specific instructions and limitations, including those for proper operation of alternate/emergency exits.
- Avoid extremely steep slope operation.
- Keep machine movements slow and smooth.
- Level the working area and machine as much as possible.
- Avoid working with the tracks across a slope. This will reduce stability and increase the tendency of the machine to slide. Position the machine with the tracks running up and down the slope—blade downhill and lowered.
- Avoid slippery ground conditions.



Always Check Manuals For Specific Instructions



Fasten Seat Belt, Use TOPS/ROPS



Level The Work Area If Possible

https://truckmanualshub.com/

Operate Safely

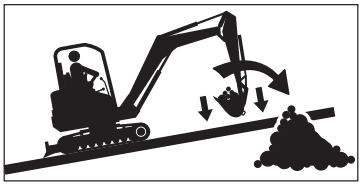
— Travel straight up and down the slope with the attachment low and close to the machine. Do not move the boom while travelling.
— Avoid swinging to the downhill side of a slope. Always keep the boom and attachment as low and close to the machine as possible.

If the machine begins to tip, roll or slide, stay in the machine with the seat belt securely fastened. Lower the attachment immediately. Hold on firmly and brace your feet on the floor. Lean away from the point of impact.

When operating the compact excavator on a slope, swing to the uphill side to dump load, if possible. If downhill dumping is necessary, swing only as far as required to dump the bucket. Use extreme caution. Always drop spoil a sufficient distance from a trench to prevent cave-ins.

If possible, avoid working with the tracks across a slope.

Before moving the machine, raise the blade sufficiently to clear the ground, and then drive the machine forward or backward as required. Lower the blade to level the machine.



Swing Load Uphill When On A Slope

Operate Safely

Hazardous Conditions

When working in hazardous areas, be extremely alert.

Always consult the manufacturer's operator manual for specific instructions.

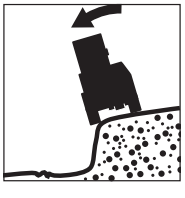
Extreme caution is required when working near the edge of an excavation. Keep the machine a safe distance away from the edge. Avoid undercutting.

WARNING! Never undercut a high bank. The edges could collapse or a slide could occur, resulting in death or serious injury.

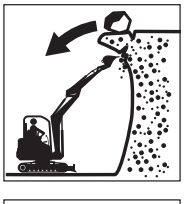
Work the jobsite in a manner that avoids creating overhangs or the need to be on top of banks or slopes. Never operate the machine close to the edge of an overhang or stockpile.

Extreme caution should be used when working along the top of banks and slopes. Keep as far back from the edge as possible. Level the area if possible. Keep the machine tracks perpendicular to the edge so that if part of the edge collapses, the machine can be moved back.

Immediately move the machine back at any indication the edge may be unstable.



Use Caution – Stay Safely Away From Bank Or Excavation Edge



Never Undercut A High Bank

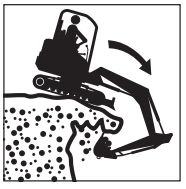


Operate Perpendicular To Banks – Stay Back From The Edge

https://truckmanualshub.com/

Operate Safely

WARNING! Do not dig under the machine. A cave-in could result and the machine could fall into the excavation, resulting in death or serious injury.



Use Caution Near Excavation Edge – Do Not Undercut Machine

Avoid Silica Dust

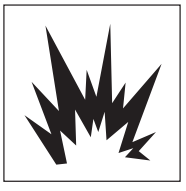
Cutting or drilling concrete or rock containing quartz may result in exposure to silica dust. **Do not exceed Permissible Exposure Limits (PEL) to silica dust as determined by OSHA or other worksite rules and regulations.** Use a respirator, water spray or other means to control dust. Silica dust can cause lung disease and is known to cause cancer.



Avoid Silica Dust

Operation In Flammable/Explosive Atmosphere

WARNING! Avoid possible death or serious injury. **Never operate an excavator in these areas. Use of these excavators in explosive atmospheres can result in fires and explosions, causing death or serious injury.**



Do Not Operate In Explosive/Flammable Atmosphere

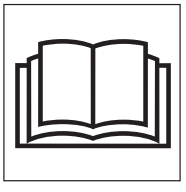
.

Operate Safely

Towing

Many compact excavators may not be towed. Refer to the manufacturer's manual(s) for specific towing instructions.

Never straddle a tow line or stand near a tow line under tension.



Consult Manufacturer's Manual Before Towing

Parking

Park the machine in a designated area out of traffic, preferably on level ground. (See page 39, **Machine Shutdown**.)

If freezing conditions are expected, the tracks should be first cleared of mud and dirt and the machine parked on planks or suitable debris.

Public roads are not suitable for parking. If the machine is disabled or you must park on a public road, barricade and mark the machine according to local and worksite regulations.

https://truckmanualshub.com/

Shut Down Safely

Machine Shutdown

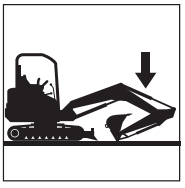
Properly shutting down a compact excavator can help prevent accidents when the machine is left unattended. Shut down the excavator following the specific procedures in the manufacturer's operator manual.

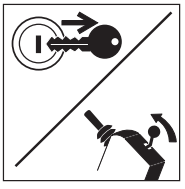
A typical list includes:
— Stop the machine.
— Make sure the area around the machine is clear of personnel.
— Slew the machine to align the upperstructure with the undercarriage, if possible.
— Return controls to neutral, including the auxiliary hydraulic controls.
— Lower the attachment and blade to the ground with slight down-pressure.
— Idle engine for a short cool-down period.
— Stop the engine.
— Cycle all hydraulic controls to relieve system pressure.
— Engage the control locking device, if equipped.
— Remove ignition key.
— Block the tracks if on a slope or incline.
— Check for and clean out trash build-up, especially in the engine compartment, battery box, around exhaust components, in confined spaces, under the machine and around rotating components.

Safe Dismounting

Never dismount from moving equipment. Observe proper shutdown practices before dismounting. Check for slippery steps and handholds.

Dismount carefully using three-point contact facing the machine. (See page 21, **Mount And Dismount Properly**.)





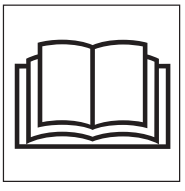
Load And Unload The Machine Safely

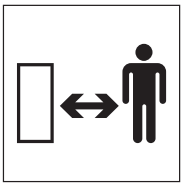
Loading And Unloading For Transport

All machines are not loaded in the same way, and the procedures given in the manufacturer's manual(s) should always be followed.

Some precautions apply to all machines:
— Keep bystanders away.
— Wear the seat belt, if equipped.
— If the compact excavator is equipped with a foldable TOPS/ROPS, make sure it is properly secured in the raised position.
— Place transport vehicle on a firm, level surface.
— Block or support the rear of the trailer.
— Secure the parking brake and block transport vehicle so it cannot move.
— Use ramps with slip-resistant surfaces, adequate size and strength, low angle (15 degrees or less) and proper height.
— Keep trailer bed and ramps clear of mud, oil, ice, snow, leaves and other debris.
— Position the attachment to the front of the machine.
— Drive forward up the ramps, raising the blade high enough for clearance.
— Cover or remove any SMV (Slow-Moving Vehicle) emblem.
— Secure the cab door, attachment and accessories in the transport position.
— Engage upperstructure slew lock, if equipped.
— Chain and block the excavator securely for transport. Refer to the manufacturer's operator manual for tie-down procedures.

Measure the transport height and width of the loaded machine to avoid overhead and width obstructions. Make sure clearance flags, all lights and warning signs are in place and visible.

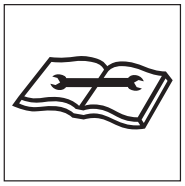




https://truckmanualshub.com/

Perform Maintenance Safely

Maintain Equipment



Be sure to maintain equipment according to manufacturer's instructions. Regularly check the operation of the protective and safety devices.

Do not perform any work on the compact excavator unless you are authorized and qualified to do so.

If you have been authorized to maintain the equipment, **read the operator, maintenance and service manuals.** Study the instructions, check the lubrication charts and examine all the instruction messages on the machine. Maintenance can be dangerous unless performed properly. Be sure you have the necessary skill, information, tools and equipment to do the job correctly.

If adjustments must be made with the engine running, always work as a 2-person team with one person sitting in the operator's seat while the other works on the machine.

IMPORTANT! Do not modify equipment or add components not approved by the manufacturer. Use parts, lubricants and service techniques recommended by the manufacturer.

Protect Yourself

Wear personal protective clothing and Personal Protective Equipment (PPE) issued to you or called for by job conditions.

You may need:
— Hard hat
— Safety boots with non-slip soles
— Safety glasses, goggles or face shield
— Apron and heavy-duty gloves
— Hearing protection
— Welding helmet or goggles
— Respirator or filter mask

Wear whatever is needed to protect yourself—do not take chances.

Perform Maintenance Safely

WARNING! Prevent death or serious injury from entanglement. **Do not wear loose clothing or accessories. Restrain long hair. Stay away from all rotating components when the engine is running.** Contact with or entanglement in rotating or moving parts could result in death or serious injury.

Wear a rubber apron and rubber gloves when working with corrosives. Wear gloves and safety shoes when handling wooden blocks, wire rope or sharp-edged metal.

Always use safety glasses, goggles or a face shield. They provide eye protection from fluids under pressure, during grinding and while servicing batteries. Protection is also needed from flying debris, liquids and loose material produced by equipment, tools and pressurized air/water/oil/fuel.

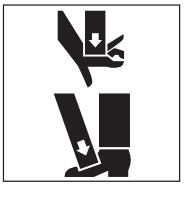
Wear a face shield when you disassemble spring-loaded components or work with battery acids. Wear a welding helmet or goggles with a shaded filter when you weld or cut with a torch.

Do not sand, grind, flame-cut, braze or weld without an approved respirator or appropriate ventilation. If welding is required on the machine, refer to the manufacturer's manuals or consult the equipment dealer for proper procedures. Make sure all flammable material is cleared from the area.

Keep pockets free of all objects that could fall out and drop into machinery.

Handle tools and heavy parts sensibly, with regard for yourself and other persons. Lower items—do not drop them.





https://truckmanualshub.com/

Perform Maintenance Safely

Prepare The Work Area

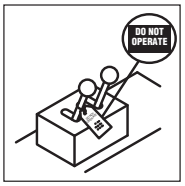
— Position the compact excavator in a level area out of the way of other working equipment.
— Make sure there is adequate light, ventilation and clearance.
— Remove oil, grease, ice and snow or water to eliminate any slippery surfaces.
— Clean around the machine and work area to minimize contamination. Clean up oil or fuel spills promptly and dispose of the material properly.

Prepare The Machine

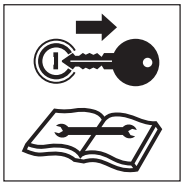
— Attach a “DO NOT OPERATE” warning tag to the control levers and remove the ignition key if the machine should not be started.
— Block the tracks.
— Release all hydraulic, water and air pressure. Lower, lock or block all hydraulically supported components.

WARNING! Disconnecting or loosening any hydraulic component or a part failure can cause unsupported equipment to drop. **Do not go under or near raised equipment unless supported by a manufacturer-approved support device(s).** Death or serious injury could result from falling equipment.

— Remove only guards or covers that provide access to the area being serviced. Replace all guards and covers when work is complete.



Use Warning Tags



Remove Key And Read Maintenance Manual



Use Approved Support Device

Perform Maintenance Safely

Use Approved Ventilation

If it is necessary to run an engine in an enclosed area, remove the exhaust fumes from the area with an exhaust pipe extension.

WARNING! Prevent possible injury. **Never work on machinery with the engine running unless instructed by the manufacturer’s manuals for specific service.**

WARNING! Never operate any type of engine without approved ventilation—EXHAUST FUMES CAN KILL.



Ventilate Work Area

Use Jacks And Hoists Carefully

If you must work beneath raised equipment, use solid wood blocks, jack-stands or other rigid and stable supports. Never use concrete blocks. When using jacks or hoists, always be sure they are adequately supported and of adequate capacity.

Make sure the hoists or jacks you use are in good repair. Never use jacks with cracked, bent or twisted parts. Never use frayed, twisted or pinched cables. Never use bent, worn or distorted hooks.

Protective Structure Safety

Do not remove or modify a protective structure (TOPS/ROPS, FOGS/FOPS OPS) except for service. Reinstall with manufacturer-approved fasteners before further machine operation.

Replace a damaged protective structure. Refer to the manufacturer’s manual for specific instructions and inspection requirements.

https://truckmanualshub.com/

Perform Maintenance Safely

Common Maintenance Safety Practices

Fuel Hazards

IMPORTANT! Always use approved fuel containers and dispensing equipment.

Fuels are flammable, so observe these practices to reduce the possibility of a serious accident.
- — Shut off engine and ignition before refueling.
- — Always ground the fuel nozzle against the filler neck to avoid sparks.
- — Keep sparks and open flames away from fuel.
- — Do not use a cell phone or two-way radio while fueling or handling fuel—they could cause sparks.
- — Do not smoke while refueling or when handling fuel containers.
- — Do not cut or weld on or near fuel lines, tanks or containers.
- — Do not overfill the tank or spill fuel. Clean up spilled fuel immediately.

Always use a nonflammable solvent when you clean parts. Do not use gasoline, diesel fuel or other flammable fluids.

Store all flammable fluids and materials away from work areas in suitable containers, per local regulations.

Cooling System Hazards

Liquid cooling systems build up pressure as the liquid gets hot, so **use extreme caution** before removing the radiator or tank cap. Be sure to:
- — Stop the engine and wait for the system to cool.
- — Wear protective clothing and safety glasses.
- — Turn the radiator or tank cap slowly to the first stop to allow the pressure to escape before removing the cap completely.



Perform Maintenance Safely

Hydraulic System Hazards

The hydraulic system is under pressure whenever the engine is running and may hold pressure even after the engine is shut off. Cycle all hydraulic controls, including auxiliary controls, after the engine is shut down to relieve trapped pressure in the lines.

During inspection of the hydraulic system:
- — Wait for fluid to cool before disconnecting the lines. Hot hydraulic fluid can cause SEVERE BURNS.
- — **Do not** use your hand to check for leaks.
- — Wear appropriate eye protection. Hydraulic fluid can cause permanent eye injury.

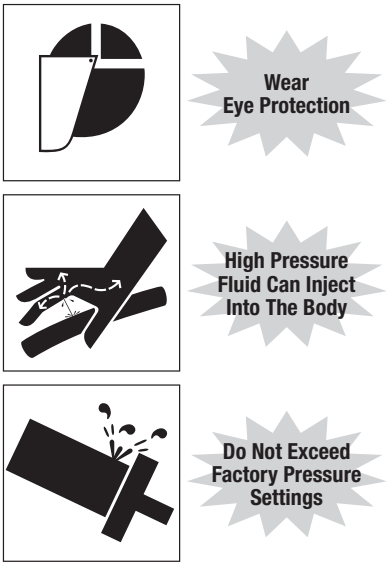
WARNING! Diesel fuel and hydraulic fluid under pressure can penetrate the skin or eyes and cause serious injury, blindness or death. Fluid leaks under pressure may not be visible. **Use a piece of cardboard or wood to find leaks, not your hand. Wear a face shield or safety goggles for eye protection.** If fluid is injected into the skin, it must be removed within a few hours by medical personnel familiar with this type of injury.

When venting or filling the hydraulic system, loosen the filler cap slowly and remove it gradually.

Never reset any relief valve in the hydraulic system to a pressure higher than recommended by the manufacturer.

Follow manufacturer's instructions when taking oil samples.

Do not permit an open flame around the hydraulic system.



https://truckmanualshub.com/

Perform Maintenance Safely

Electrical System Hazards

Before working on the electrical system, disconnect the battery cable(s).

— Remove the battery negative (-) cable(s) first.
— When reconnecting the battery, connect the battery negative (-) cable(s) last.

Battery electrolyte contains acid, which is a POISON and can cause SEVERE CHEMICAL BURNS.

Avoid Injury

— Wear a face shield to prevent electrolyte contact with your eyes.
— Wear chemical-resistant gloves and clothing to keep electrolyte off your skin and regular clothing.

WARNING! Electrolyte will damage eyes or skin on contact. **Always wear a face shield to avoid getting electrolyte in eyes.** If electrolyte contacts eyes, flush immediately with clean water and get medical attention. **Wear rubber gloves and protective clothing to keep electrolyte off skin.** If electrolyte contacts exposed skin or clothing, wash off immediately with clean water.

If electrolyte is ingested, seek MEDICAL ATTENTION IMMEDIATELY. NEVER give fluids that would induce vomiting.



Perform Maintenance Safely

Avoid Battery Explosion

WARNING! Avoid possible death or serious injury from explosion. Lead-acid batteries produce extremely explosive gases, especially when being charged. **Keep arcs, sparks, flames and lighted tobacco away.**

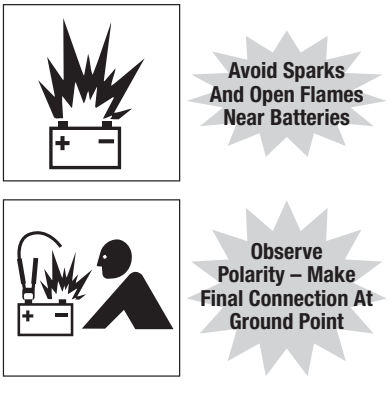
— **Do not** smoke near batteries.
— Check battery cables for worn or damaged insulation.
— Keep arcs, sparks and open flames away from batteries.
— Provide adequate ventilation.

Never check the battery by placing a metal object across the battery posts; the resulting spark could cause an explosion.

WARNING! Avoid possible death or serious injury from battery explosion. **Do not charge a battery or boost-start the engine if the battery is frozen. Warm to 60°F (15.5°C) or the battery may explode.**

Safety rules during battery boost-starting:

— Follow the instructions for proper “battery boost-starting” as specified in the manufacturer’s manual.
— Be sure the machines are not touching.
— Observe the polarity of the batteries and connections.
— Make the final cable connection to the engine or the ground point farthest from the battery and away from fuel lines. Never make the final connection at the starter or dead battery—sparks may ignite the explosive gases present at the battery.
— When disconnecting cables after boost-starting, remove the cables in reverse order of connection (i.e., final connection first).



https://truckmanualshub.com/

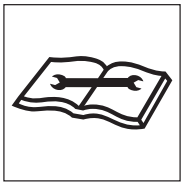
Perform Maintenance Safely

Track Maintenance And Adjustment

Check the tracks daily because the stability of the compact excavator can be dramatically affected by damage to tracks.

Check for:
— Damage or wear
— Correct tension according to manufacturer's instructions
— Proper lubrication of track rollers and idlers—refer to the manufacturer's manuals.

Track tension is important for good performance, reducing excessive track wear and preventing the tracks from coming off. Track and roller wear varies with working conditions and soil conditions. Special tools and procedures may be needed to check or adjust track tension. Follow manufacturer's specific service procedure(s) when removing and installing tracks.





WARNING! Track tensioning systems have compressed springs or pressurized fluid (oil or grease). Improperly releasing track tension forces can result in death or serious injury. **Always follow the manufacturer's warnings and instructions for track adjustment and other maintenance and servicing procedures.**

WARNING! Avoid possible death or serious injury. **Never strike or pound on track tension springs.** They may be under very high compression and could shatter explosively.

Perform Maintenance Safely

Complete Service And Repairs Before Machine Is Released

Tighten all bolts, fittings and connections to torques specified by the manufacturer.

Clean or replace all damaged, missing or painted-over signs, plates and decals that cannot be read.

Inspect and install all guards, covers and shields after servicing. Replace or repair any damaged parts. Refill and recharge pressure systems only with manufacturer-approved or recommended fluids.

Check readiness of fire extinguishers, if so equipped. Do not paint over or otherwise interfere with fire detectors or fire extinguisher access points.

Follow the instructions in the manufacturer's manual(s) for proper service of any fire suppression equipment on the machine.

Air conditioning service is limited to approved service personnel. Refer to the manufacturer's manual(s).



Start the engine and check for leaks. (See page 46, **Hydraulic System Hazards**.) Operate all controls to make sure the machine is functioning properly. Test the machine if necessary. After testing, shut down and check the work you performed. Are there any missing cotter pins, washers, locknuts, etc.? Recheck all fluid levels before releasing the compact excavator for operation.

All parts should be inspected during repair and replaced if worn, cracked or damaged. Excessively worn or damaged parts can fail and cause death or injury.

https://truckmanualshub.com/

Final Word To The User

You have just finished reading the AEM Compact Excavator Safety Manual. It is impossible for this manual to cover every safety situation you may encounter on a daily basis. Knowledge of these safety precautions and your application to the basic rules of safety will help to build good judgment in all situations. Our objective is to help you develop, establish and maintain good safety habits to make operating a Compact Excavator easier and safer for you.

This manual is another in a series on the safe operation of machinery published by AEM.
Many pictorials in this safety manual can be found and downloaded at http://pictorials.aem.org.
For additional publications visit our website at www.safetymaterials.org.

AEM
ASSOCIATION OF
EQUIPMENT MANUFACTURERS

e-mail safetymaterials@aem.org
www.aem.org

FORM CE-1009
Printed in U.S.A.

https://truckmanualshub.com/

Wacker Neuson Linz GmbH keep abreast of the latest technical developments and constantly improve their products. For this reason, we may from time to time need to make changes to diagrams and descriptions in this documentation which do not reflect products which have already been delivered and which will not be implemented on these machines.

Technical data, dimensions and weights are given as an indication only. Responsibility for errors or omissions not accepted.

No reproduction or translation of this publication, in whole or part, without the written consent of Wacker Neuson Linz GmbH.

All rights under the provision of the Copyright Act are reserved.

Wacker Neuson Linz GmbH
Haidfeldstr. 37
A-4060 Linz-Leonding
Austria

https://truckmanualshub.com/

Important: For spare parts information, please see your Wacker Neuson Dealer, or visit the Wacker Neuson website at http://www.wackerneuson.com/.

Wichtig! Informationen über Ersatzteile erhalten Sie von Ihrem Wacker Neuson Händler oder besuchen Sie die Wacker Neuson Website unter http://www.wackerneuson.com/.

Important : Pour des informations sur les pièces détachées, merci de consulter votre distributeur Wacker Neuson, ou de visiter le site Internet de Wacker Neuson sur http://www.wackerneuson.com/.

Importante : Para saber más sobre las piezas de repuesto, póngase en contacto con su distribuidor de Wacker Neuson o acceda al sitio web de Wacker Neuson en http://www.wackerneuson.com/.

Importante : Per informazioni sui pezzi di ricambio, contattare il rivenditore Wacker Neuson o visitare il sito di Wacker Neuson all'indirizzo www.wackerneuson.com.

Viktigt : För information om reservdelar, kontakta din Wacker Neuson-leverantör eller besök Wacker Neusons webbplats på http://www.wackerneuson.com/.

Tärkeää : Pyydä varaosatietoja Wacker Neusonin jälleenmyyjältä tai vieraile Wacker Neusonin web-sivustolla osoitteessa http://www.wackerneuson.com/

Viktig : For informasjon om reservedeler, vennligst kontakt din Wacker Neuson-forhandler, eller besøk Wacker Neusons nettside på http://www.wackerneuson.com/.

Vigtigt : Hvis du ønsker oplysninger om reservedele, bedes du kontakte din Wacker Neuson forhandler eller besøg Wacker Neuson websiden på http://www.wackerneuson.com/.

Belangrijk! Neem contact op met uw Wacker Neuson dealer of bezoek de website van Wacker Neuson op http://www.wackerneuson.com/ voor meer informatie over reserveonderdelen.

Importante : Para obter informações sobre as peças sobresselentes, consulte o seu fornecedor da Wacker Neuson ou aceda ao site Web da Wacker Neuson em http://www.wackerneuson.com

Ważne : W celu uzyskania informacji na temat części zamiennych skontaktuj się z przedstawicielem firmy Wacker Neuson lub skorzystaj z witryny internetowej http://wackerneuson.com/.

Důležité upozornění! Pro informace o náhradních dílech, prosím, kontaktujte svého Wacker Neuson dealera, nebo navštivte webové stránky http://www.wackerneuson.com/.

FONTOS: A pótalkatrészekre vonatkozó információkért kérjük, forduljon Wacker Neuson kereskedőjéhez vagy látogasson el a Wacker Neuson weboldalára a következő címen: http://www.wackerneuson.com/.

Важно! Для ознакомления с информацией о запасных частях, пожалуйста, обратитесь к местному торговому представителю компании Wacker Neuson или посетите веб-сайт http://www.wackerneuson.com/.

Σημαντικό : Για πληροφορίες σχετικά με τα ανταλλακτικά, μιλήστε με τον αντιπρόσωπό σας της Wacker Neuson, ή επισκεφθείτε τον ιστότοπο http://www.wackerneuson.com/.

Važno : Za rezervne dijelove obratite se svom Wacker Neuson prodavaču ili posjetite mrežne stranice tvrtke Wacker Neuson: http://www.wackerneuson.com/.

Önemli : Yedek parça bilgileri için Wacker Neuson Bayinize bakın veya Wacker Neuson web sitesini ziyaret edin. http://www.wackerneuson.com/

重要 交換部品の情報については、ワッカーノイソンディーラーにお問い合わせ頂くか、ワッカーノイソンウェブサイト http://www.wackerneuson.com/ をご覧ください。

重要 有关备件信息，请咨询您的威克诺森经销商或访问威克诺森网站：http://www.wackerneuson.com/。

Important : Pentru informaţii referitoare la piesele de schimb, vă rugăm să vă adresaţi distribuitorului Wacker Neuson sau să vizitaţi site-ul web Wacker Neuson la adresa http://www.wackerneuson.com/.

Важно : За информация относно резервни части, моля, обърнете се към местния дилър на Wacker Neuson или посетете уебсайта на Wacker Neuson на адрес http://www.wackerneuson.com/.

Wacker Neuson Corporation
P. O. Box 9007
Menomonee Falls, WI 53052-9007
Telephone: (262) 255-0500
Fax: (262) 255-0550
Telephone: (800) 770-0957
www.wackerneuson.com

Wacker Neuson Linz GmbH
Haidfeldstr. 37
A-4060 Linz/Leonding
Telephone +43 (0) 732/90590-0
Fax +43 (0) 732/90590-0
E-mail: office.linz@wackerneuson.com
www.wackerneuson.com

Wacker Neuson Produktion GmbH & Co. KG, Preußenstraße 41, D-80809 München,
Tel.: +49-(0)89-3 54 02-0 Fax: +49 - (0)89-3 54 02-390
Wacker Neuson Production Americas LLC, N92W15000 Anthony Ave., Menomonee Falls, WI. 53051
Tel.: (262) 255-0500 Fax: (262) 255-0550 Tel.: (800) 770-0957
Wacker Neuson Limited - Room 1701–03 & 1717–20, 17/F. Tower 1, Grand Century Place, 193 Prince Edward Road West, Mongkok, Kowloon, Hongkong. Tel: (852) 3605 5360, Fax: (852) 2758 0032