

ZETOR

33 21	Super	53 41	Super
33 41	Super	63 21	Super
43 21	Super	63 41	Super
43 41	Super	73 21	Super turbo
53 21	Super	73 41	Super turbo

2/2000

Operator's manual

ZETOR



This operator's manual will help you to become familiar with the operation and maintenance of your new tractor. In spite of fact many of you have reach experiences in operation of various Zetor tractor models, please, read carefully all safety rules and operating instructions in this operator's manual before attempting to operate the tractor.

You will find a lot of new information and receive a perfect overview how to use the tractor with highest efficiency at various operations.

Your new Zetor tractor will be your reliable friend if observing the mentioned safety rules, tractor maintenance and safe operation.

Manufacturer of Your tractor wishes you thousands of satisfactorily worked hours.

ZETOR
Brno

Information about technical specifications, design, equipment, material, and external appearance is valid in the time of this operator's manual issue. Manufacturer reserves rights for changes.

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The operator's manual contains description, operation and maintenance of standard and optional tractor equipment.

The option that isn't a part of standard tractor equipment can't be a subject of claim in case it isn't assembled from factory and is marked by (*) in this manual.

Service check book isn't a part of operator's manual. This is the separate booklet that is passed to you at purchasing of your new tractor.

CAB TRACTORS

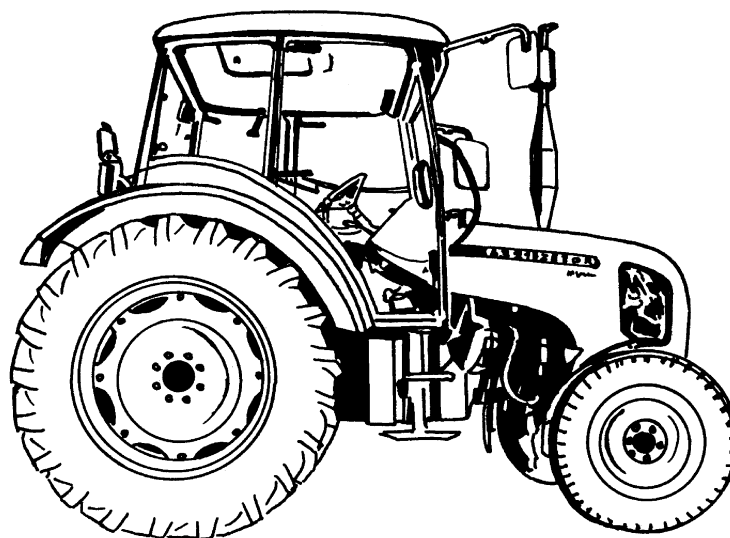
ZETOR 3321 - 33 kW

ZETOR 4321 - 44 kW

ZETOR 5321 - 47 kW

ZETOR 6321 - 51 kW

ZETOR 7321 - 58 kW



A 1

CAB TRACTORS

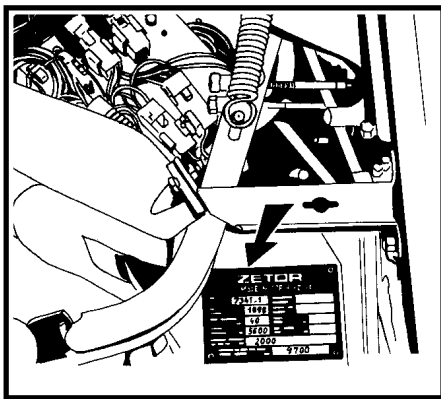
ZETOR 3341 - 33 kW
ZETOR 4341 - 44 kW
ZETOR 5341 - 47 kW
ZETOR 6341 - 51 kW
ZETOR 7341 - 58 kW



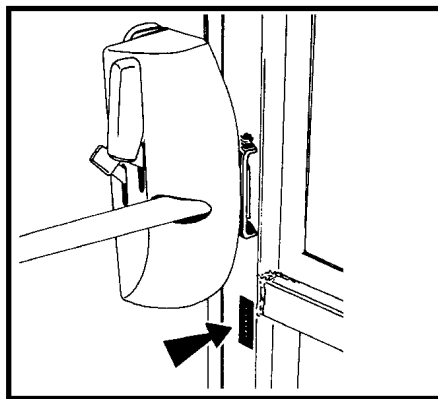
A 2

LOCATION OF SERIAL NUMBERS

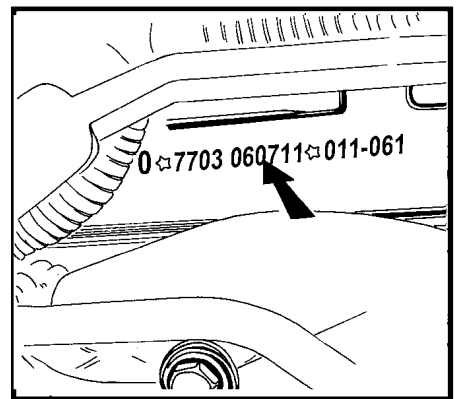
Tractor Serial Number Plate



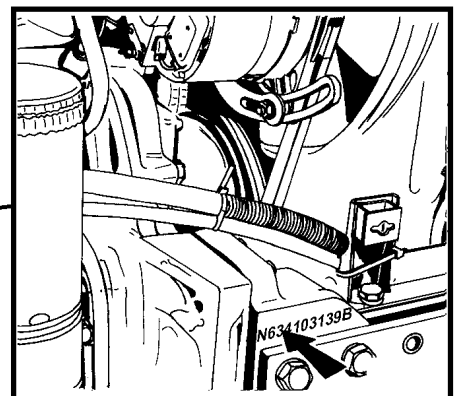
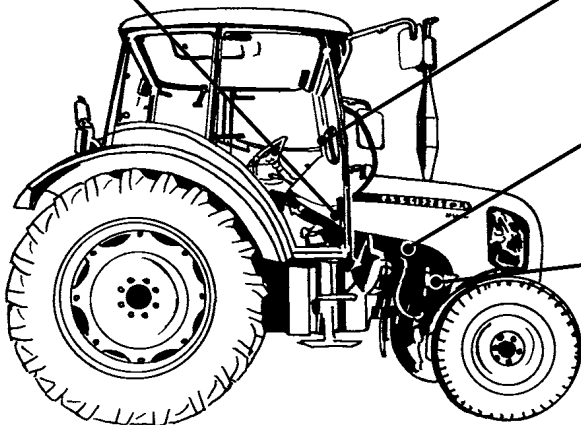
Cab Serial Number



Engine Serial Number



Tractor Serial Number



M97-vyrcisla

LOCATION OF SERIAL NUMBERS

Whenever you contact your authorized service dealer or the factory for order of service parts, always know the model and serial numbers of your tractor. For your convenience, write those numbers in the frames below.

--

Tractor model

ZETOR 3321 ZETOR 3341
ZETOR 4321 ZETOR 4341
ZETOR 5321 ZETOR 5341
ZETOR 6321 ZETOR 6341
ZETOR 7321 ZETOR 7341

--

Tractor serial number

--

Engine serial number

The "left", "right", "front" and "back" side of the tractor is determined by sitting on the seat in the normal operator's position and in the traveling direction.

Manufacturer reserves rights for changes of design and option, that improves the tractor features.



A 7



You will find this symbol at all important warnings identifying the safety of tractor operation. Keep all safety messages and however regardless of the hazard, be extremely careful. Inform your co-operators and other users on these messages.

GENERAL SAFETY REGULATIONS

1. Only a trained operator having a valid driving license and being properly acquainted with operating and safety rules can operate the tractor.
2. Except of safety warnings mentioned in this operator's manual you must respect all general safety and traffic regulations of country where the tractor works.

SAFETY INSTRUCTIONS FOR USERS

PROPER CLOTHING

3. Don't wear a loose clothing and free flying long hair at operation.
4. Use suitable (prescribed) personal protection means (working boots, gloves etc.) at work.

ENGINE START

5. Don't start the engine by driving tractor downhill.
6. Starting tractor by means of towing with another tractor or vehicle is allowed when the pull bar is used only.



1. Start the tractor from driver's seat only with shifting lever in neutral position. Life hazard at starting by starter connector short circuit.

2. The key must be at the key switch in position "I".

3. When preheating engine by electrical heater, plug the heater first and connect the cable into electricity after. After preheating disconnect the cable from electricity first.

WARNING: Electrical shock hazard

OPERATION

10. Hoses of hydrostatic steering, brakes and fuel system must be checked and replaced in case of any damage indication.

11. The damage indication is for example: surface cracks on hose, loosening of hose fittings (verify it by pulling of hose from fitting) and mechanical damage of hose. Brakes and steering must be permanently in perfect condition.

12. Brake pedals must be latched at transportation with trailers and implements on the road.

13. Driving downhill without shifted gear is forbidden!

14. Pay special attention when driving on hilly, muddy, sandy, icy and uneven terrain.

15. Don't exceed the max. specified inclination angle 11° for 2WD tractors and 12° for 4WD tractors.

16. Don't exceed the max. total weight of trailers mentioned on the tractor serial number plate or the rear fender label.

17. Don't use the diff-lock when driving into the turning.

18. Never get out or into the driving tractor. It is forbidden.

19. Reduce the travel speed to 15 km/h when transportation with agricultural implements hitched in front three point hitch.

20. The front axle load must not be lower than 18 to 20 % of total tractor weight when transportation with agricultural implements hitched in rear three point hitch.

SAFETY INSTRUCTIONS FOR USERS

21.Reduced gears 1R, 2R,3R must not be used in case that tractors Z 6321, Z 6341, Z 7321, Z 7341 are implemented with machines and implements having a big resistance when engine speed is dropping and the tendency of engine is to be stopped.

22.Reduced gears 1R, 2R must not be used in case that tractors Z 4321, Z 4341, Z 5321, Z 5341 are implemented with such machines.

TRANSPORTATION OF PERSONS, OPERATION

23.Number of persons transported by tractor must not exceed number mentioned in tractor technical license.

24.Persons, unauthorized to work with attached implement, must not stand between tractor and hitched implement (machine).

25.Make sure neither any person nor any obstacle allows driving before starting tractor move.

26.Max. allowed travel speed of tractor and trailer equipped with air trailer brakes is 30kmph. Only tractor models Z 4341, Z 5341, Z 6341, Z 7341 equipped with braked front driving axle can travel by max. allowed speed (tractor and trailer) 40 kmph.

TRACTOR RELEASE, PUSHING

27.Use a pull bar or a rope for releasing of immobilized tractor. Never use chains. It is life dangerous to stand near the rope when releasing the tractor.

28.Front hook assembled on front tractor frame serves for pulling of the tractor alone only, i.e. without trailer or another implement.

29.Never use free wooden blocks, planks or bars put between tractor and pushed subject when pushing other vehicles (trailers, wagons etc.).

LEAVING TRACTOR

30.Do not park the tractor with attached implement in lifted position.

31.Don't forget to brake the tractor with parking brake (shift the gear) remove the key from key switch and lock the cab before leaving tractor.

32.Shift the reversor lever into forward position at tractor equipped with reversor gear.

33.Brake the tractor with parking brake before leaving tractor with running engine.

AT STOPPED ENGINE ONLY

34.All activities like refueling, cleaning, lubrication, and tractor or attached implement adjustment can be done at stopped engine and stopped moving tractor parts only, except of brake,

hydraulics and charging function inspection.

35.Stop the engine before removing bonnet side shields. The engine can run in closed room and house only when the perfect ventilation works. Exhaust gases are health dangerous.

FIRE PREVENTIVE RULES

36.Refuel the tractor after finishing work and at stopped engine.

37.Don't refuel the fuel tank up to the top in summer season. Wipe the fuel immediately when spilled.

38.Don't refuel the tractor nearby the open flame, don't smoke.

39.Don't smoke and don't use the open flame when inspecting the battery electrolyte level.

40.Keep properly the fire prevention regulations in areas with increased fire hazard (hay-lofts, straw-stocks etc.).

41.If the tractor is equipped with a fire extinguisher keep it ready for use.

HEALTH AND ENVIRONMENT PROTECTION

42.Tractors are not equipped with special cab air ventilation filters. That's why tractors are not intended for work with aerosols and other substances harmful to health. Kerosene, diesel fuel, mineral oils and other products from crude oil used for operation and maintenance of

SAFETY INSTRUCTIONS FOR USERS

tractor may cause an injury in case of direct contact with skin and it can irritate mucous membranes, eyes, digestive or respiratory organs. Some of them can cause poisoning when swallowed.

43. Persons working with crude oil products must properly keep safety and hygienic regulations, they must use the suitable protectors and work in properly ventilated areas.

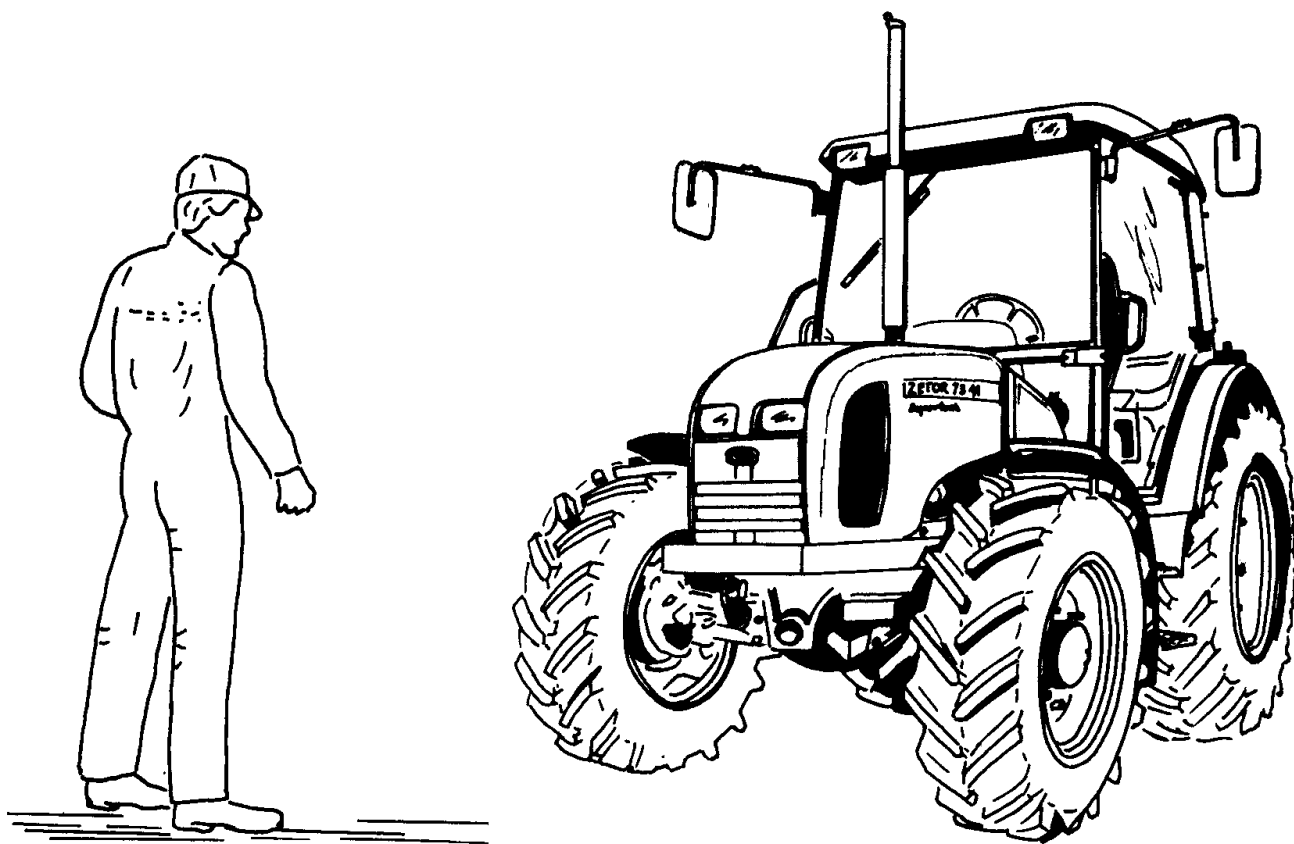
WORKING WITH CRUDE OIL PRODUCTS

44. Wash properly your hands with mild detergent and protect them with suitable skin ointment or cream after finishing work or before eating.

45. Remove oil drops from quickcouplers (from male and female) by textile material after disconnecting or connecting hydraulic circuit.

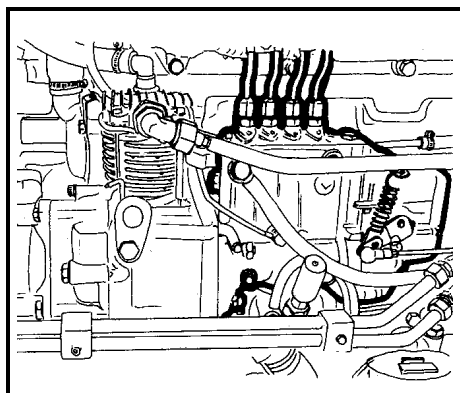
PREVENTIVE DAILY SERVICE

Do this service every day or at least every 8 to 10 hours.



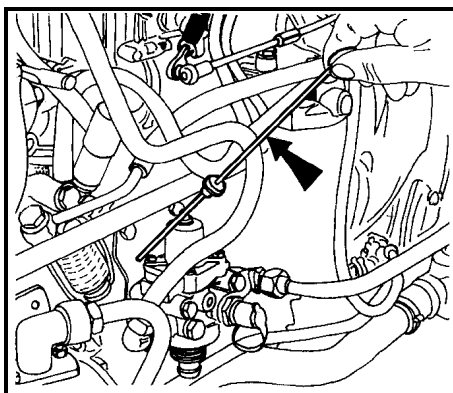
A 8

PREVENTIVE DAILY SERVICE



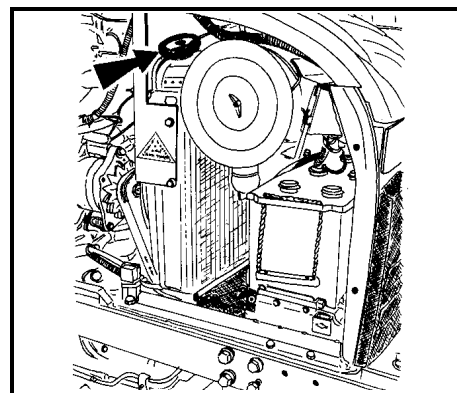
FUEL SYSTEM LEAKAGE

Inspect the fuel system for leakage including the fuel tank. Repair immediately any leaks.



ENGINE OIL LEVEL

Check the engine oil level after unscrewing and removing of oil dipstick. Inspect the lubrication system for leakage. Maintain the oil level between dipstick marks.



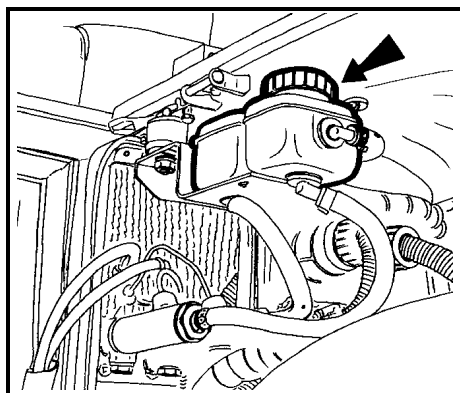
COOLING SYSTEM

Inspect the engine cooling system for leaks. Check the coolant level. Add the coolant to correct level.



Release the filler cup after coolant temperature cooling down. Avoid scalding!

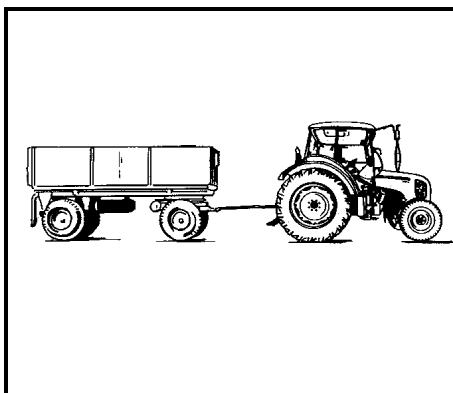
PREVENTIVE DAILY SERVICE



A 12

SERVICE BRAKES

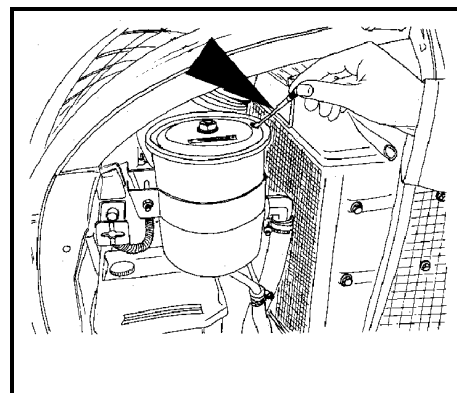
Check the brake fluid level in the brake fluid expansion reservoir. Inspect the brake and clutch circuit for leaks if loss of brake fluid level.



A 13

AIR BRAKES

Inspect the air brake system leak and tractor break efficiency with trailer (see „inspection for air brake leak“).

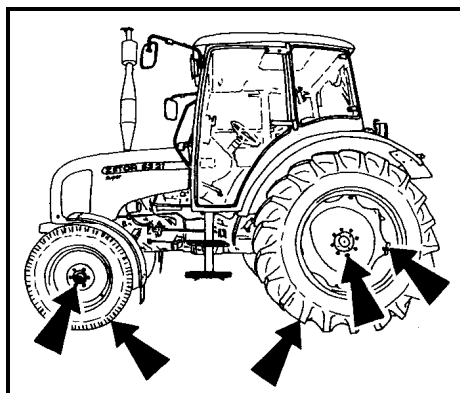


a 14

STEERING

Check the oil level in the hydrostatic steering oil tank by dipstick. Inspect status of hydrostatic steering circuit hoses for damage and oil leak. Check and Retorque bolts and nuts of steering tie-rods and arms.

PREVENTIVE DAILY SERVICE



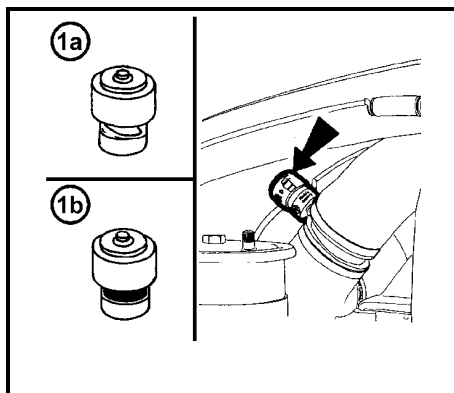
A 15

TIRES AND WHEELS

Check the inflation air pressure of front and rear tires. Inflate them up to the recommended pressure according to operating conditions.



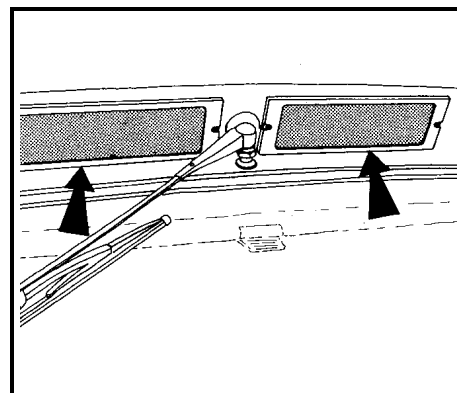
Check bolt and nut tightening at front and rear wheels



A 16

AIR CLEANER

Air cleaner is equipped with clogging indicator located on the suction pipe. The indicator is visible after side shield removal. If the air filter clogging, clean the cleaner and fix the correct function of indicator by the following way: push the push-button on the indicator body (2a) you will mechanically release the indicator lock of read field indicating clogging. Indicator is again working (2b).



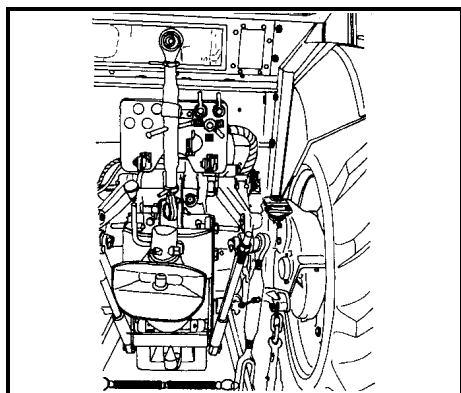
A 17

CAB FILTRATION

Check and eventually clean cab filters located under the roof in front part. Filters are accessible after removing of grilles.

Filter exchange interval depends upon dustiness of working condition. Partial regeneration of filters can be done by shaking-out or blowing by press air.

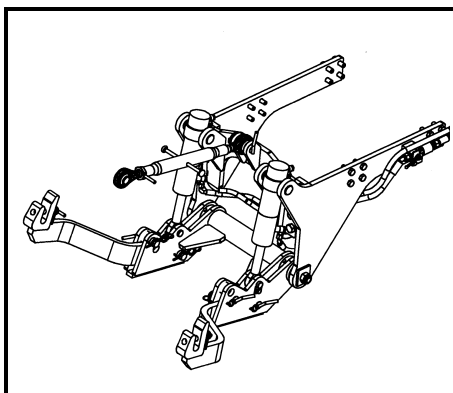
PREVENTIVE DAILY SERVICE



A 18

HITCHES

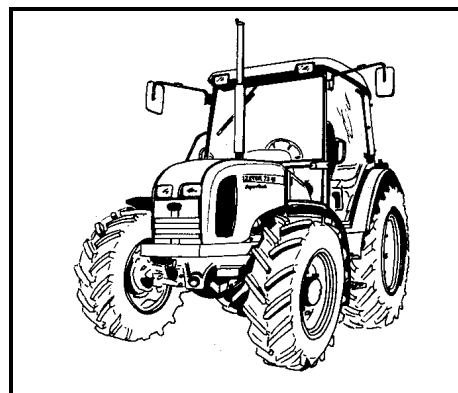
Check the status of hitches and attachments including the trailer.



A 18a

AFTER OPERATION WITH FRONT IMPLEMENTS

Clean the front part of radiator by the press air and inspect the front three point hitch hydraulic circuit for leaks.



A 19

SHORT FUNCTIONAL TEST

Check if the lubrication indicator light is "off" after starting engine. Check the function of charging (charging control lamp must be "off"). Check the hydraulic circuit of hydrostatic steering for leaks and function.

NOTE

NOTE

NOTE

ACQUAINTANCE WITH TRACTOR

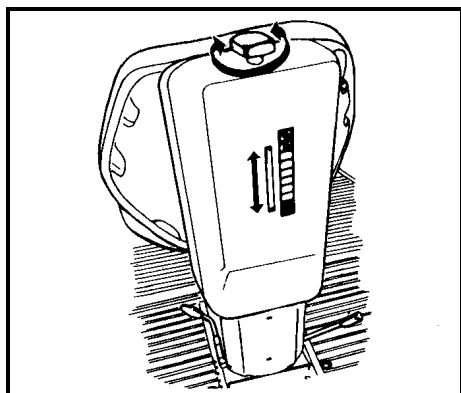
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Tractor user must be properly acquainted with recommended operating and safety rules in advance. It is too late to do it within operation!

ACQUAINTANCE WITH TRACTOR

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DRIVER'S SEAT



A 20

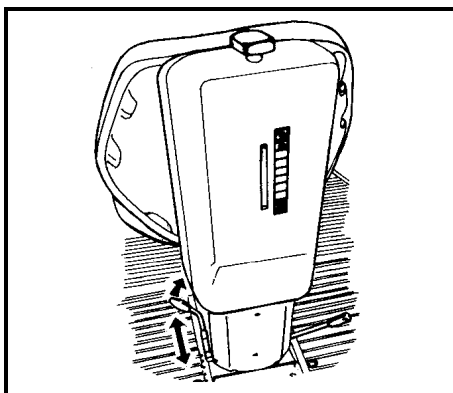
SEAT ADJUSTMENT FOR DRIVER'S WEIGHT (MARS SVRATKA)

The suspended seat is adjustable for driver's weight from 50 up to 120 kg. Adjustment is done by turning of square knob. Weight indicator is located in the slot of rear seat cover.

Spring stroke is 120 mm.



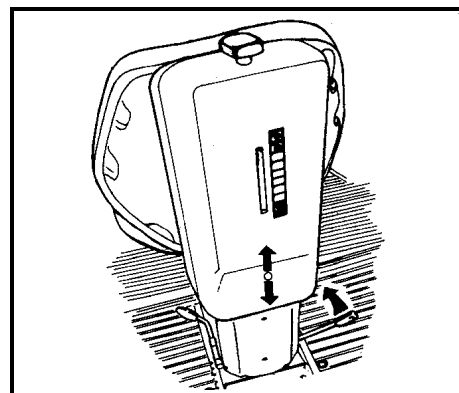
*Do not adjust the seat on the go.
Danger of accident!*



A 21

LONGITUDINAL SEAT ADJUSTMENT

The seat can be longitudinally adjusted within range ° 75 mm (11 positions) after unlocking of left hand side lever.

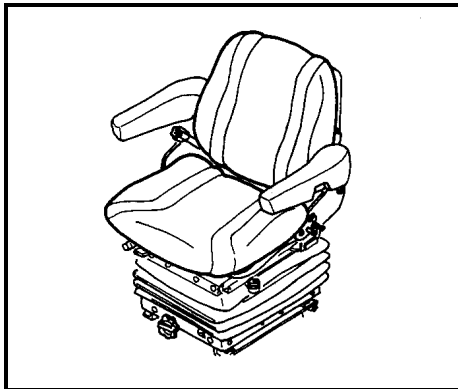


A 22

VERTICAL SEAT ADJUSTMENT

Vertical seat adjustment is done by the right hand side lever by moving the lever from middle position to two marginal positions within range ° 30 mm.

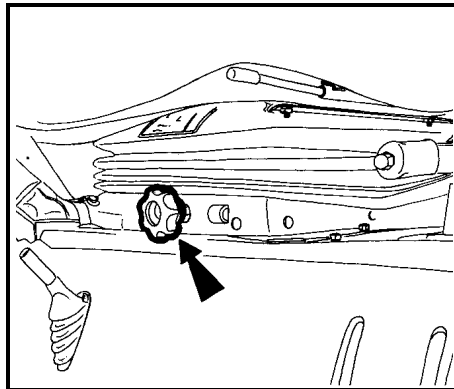
***DRIVER'S SEAT - GRAMMER**



A 23

***DRIVER'S SEAT**

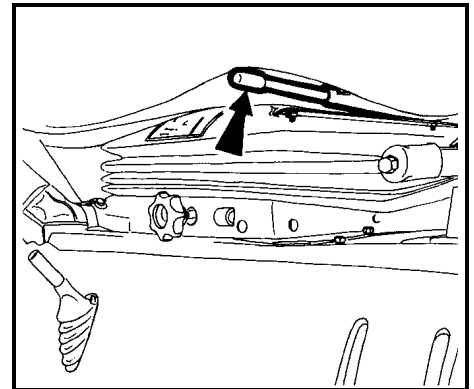
Tractor can be equipped with Grammer or KAB seat as an option.



A 23a

SEAT ADJUSTMENT FOR DRIVER'S WEIGHT

Adjust the seat by a plastic knob located on the front part of seat support

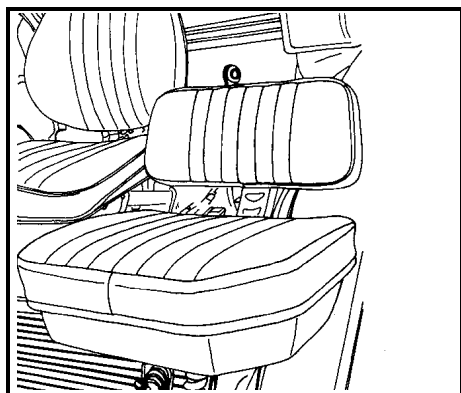


A 23b

LONGITUDINAL SEAT ADJUSTMENT

Adjust the seat longitudinal position by a lever located on the left hand side of the seat

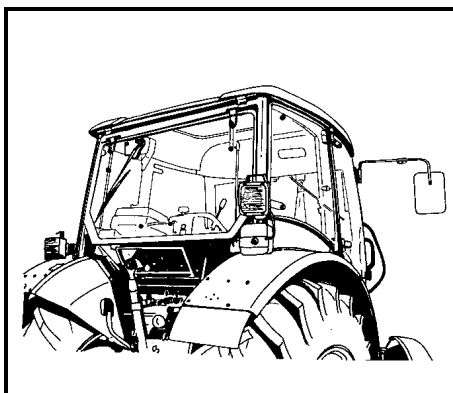
DRIVER'S AND PASSENGER'S SEAT - SAFETY CAB



A 24

***PASSENGER'S SEAT**

Passenger's seat is tiltable and is located on the left cab fender. Passenger's seat can be tilted up for the better access to the driver's seat.



A 25

SAFETY CAB

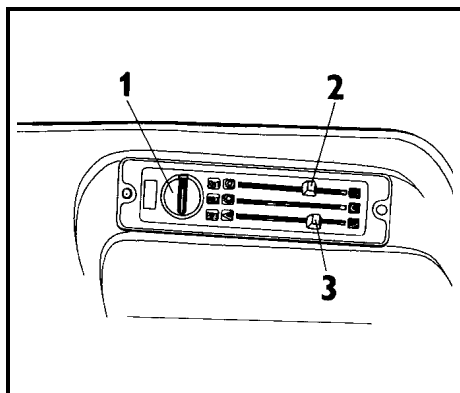
Rear tiltable window and cab doors are equipped with inner handles and gas struts. Front window is equipped with the sunshade. The internal cab space is noise protected. The roof is optionally equipped with a tiltable cover.



Use steps for entering and leaving the cab. Use handles for your safety.

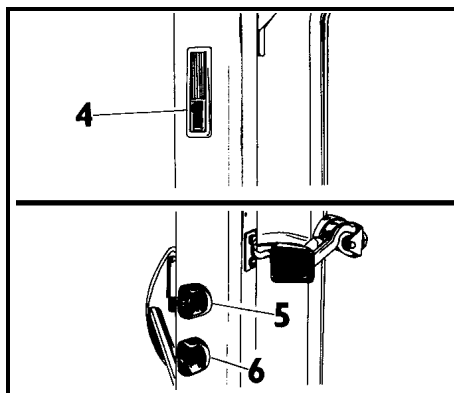
*Colored (tinted) glasses can be ordered as an option.

SAFETY CAB



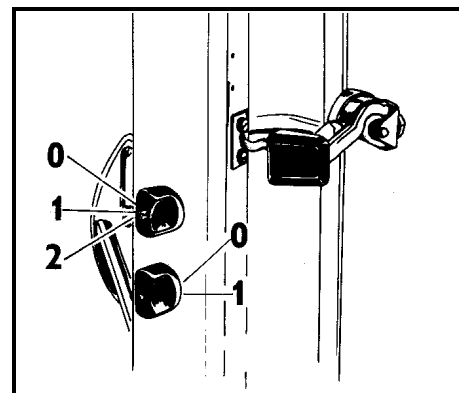
HEATING CONTROL PANEL

1. Four-position blower switch
 - vertical position - blower is řoffř
 - first right position - blower low speed
 - second right position - blower middle speed
 - third right position - blower high speed
 2. Shut off heater control.
 3. Heater valve control lever.
 - right lever position - heating řonř
 - left lever position - heating řoffř
- *Radio can be assembled into the space under heating system control panel



CONTROL PANEL ON RIGHT CAB PILLAR

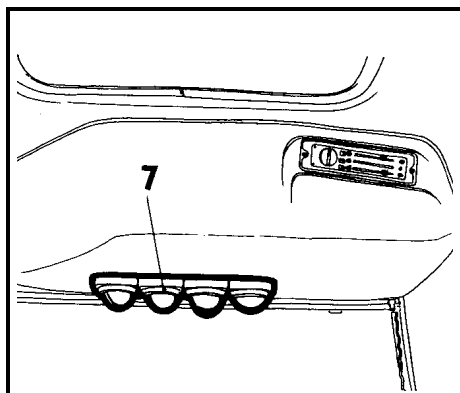
4. Cab illumination light with switch
5. Two speed front windshield wiper and washer switch.
6. Rear window wiper switch.



FRONT AND REAR WIPER SWITCH

- Front and rear wiper switch is located on the right hand side cab pillar.
0. vertical position - wiper is řoffř
 1. right position - low wiper speed
 2. right position - high wiper speed
- front windshield washer is řonř after switch pressing.
- Max. time of uninterrupted washer pump work is 10 sec.

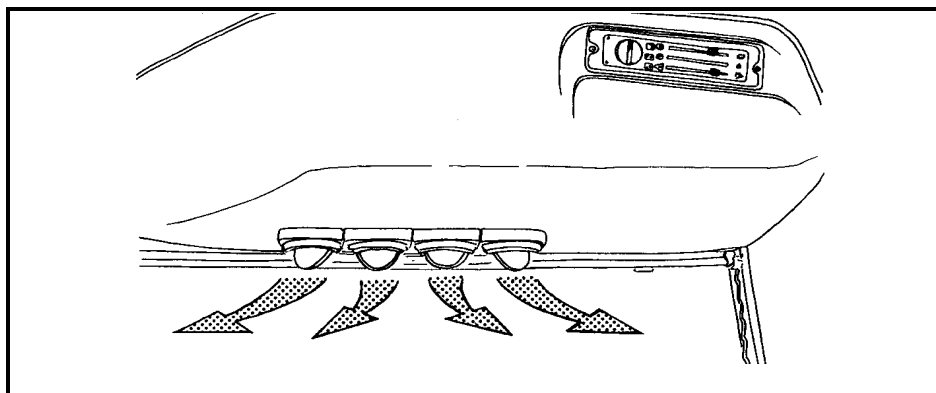
SAFETY CAB



A 29

VENTILATION OUTLETS

7. Position adjustable outlets of ventilation and heating.



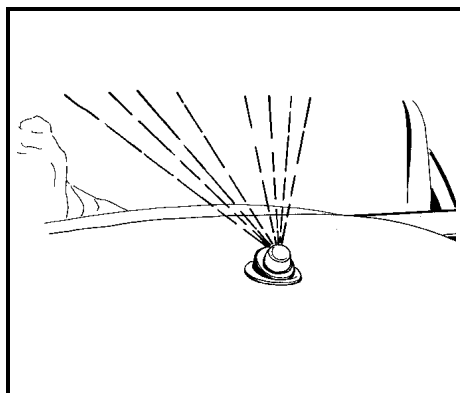
A 30

FRONT WIND SHIELD DEFROSTING

For fast defrosting of front wind shield the middle outlets needs to be directed to the front wind shield with 45° angle from vertical position the "B" side outlets directed towards front corners of cab.

After front wind shield defrosting the side outlets can be directed towards door glasses for their step by step defrosting. After defrosting the outlets should be adjusted that way not to blow the air directly to the driver but to driver's legs.

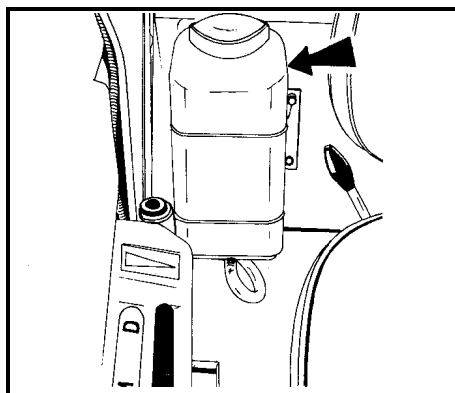
FRONT WIND SHIELD WASHER - CAB DOORS AND WINDOWS



A 31

WASHER NOZZLE

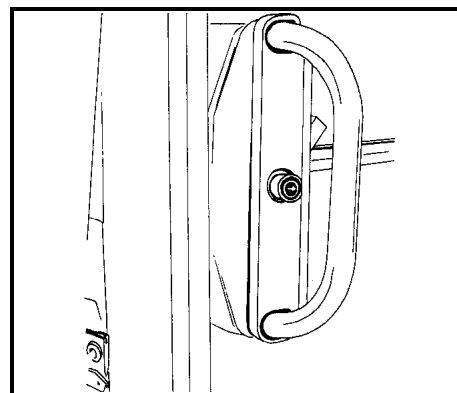
The washer nozzle is located in the upper part of hood and is adjustable by needle or steel wire of 0,8 mm diameter. The washer sprays after switch pressing.



A 32

WASHER RESERVOIR

The washer reservoir is located in the cab, on the right hand side of rear wall behind the driver's seat. The washer reservoir capacity is 2,5 liters. Anti-freeze mixture must be used in winter season for filling of washer reservoir.

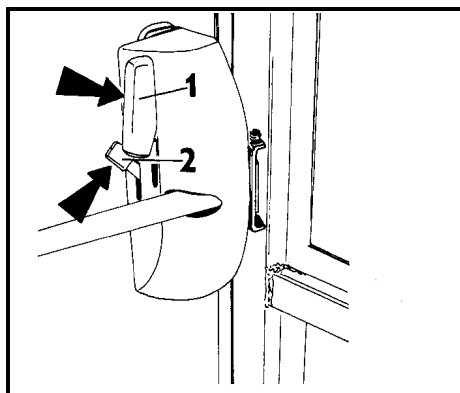


A 33

OUTSIDE DOOR OPENING

Doors can be locked from outside. Depress the lock button after unlocking and use handle for door opening.

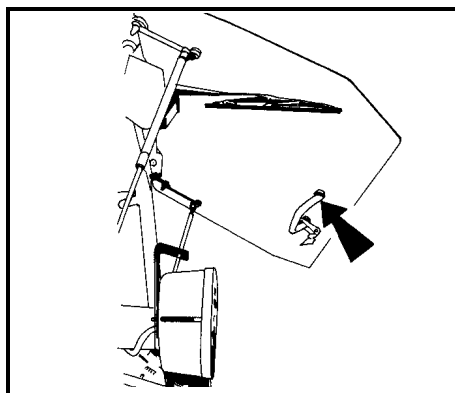
CAB DOORS AND WINDOWS



A 34

CAB DOORS

1. Lever for door opening from inside
2. Lever for door locking from inside



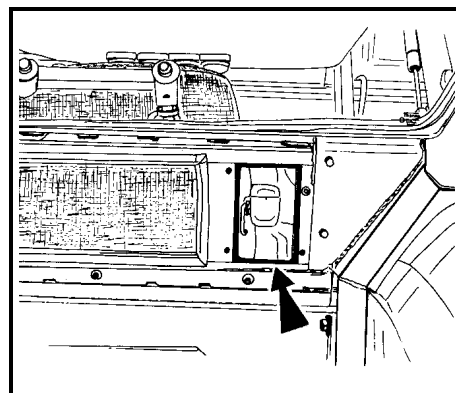
A 35

REAR WINDOW

Rear window is equipped with handle and is kept in the open position by gas struts.



We recommend to latch the window in closed position when driving on uneven terrain - danger of window cracking. Before starting work with machines implemented in the rear three point hitch be sure that the interference between hitched implement and opened rear window is avoided at the maximal lifting of the rear three point hitch. In case of interference we recommend to work with closed window.

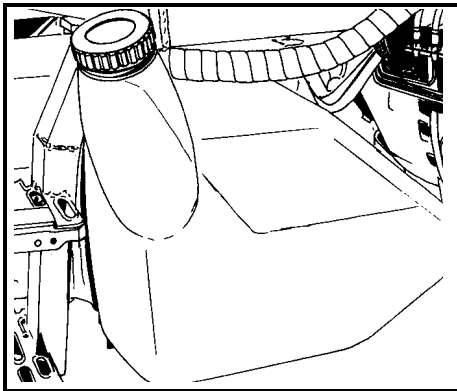


A 35a

OPENING FOR IMPLEMENTATION PURPOSES

The bottom window is rigid and is equipped with opening for connection of controls with attached implements.

FUEL TANK



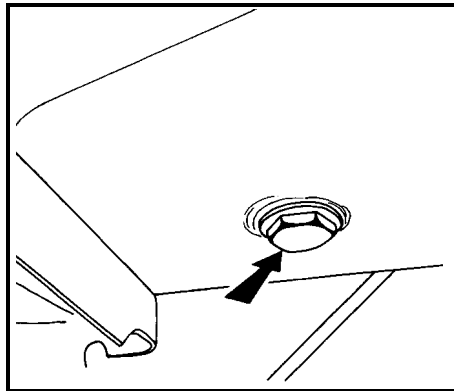
A 36

FUEL TANK

Plastic fuel tank with capacity 120 liters is assembled at all models of tractors as a standard equipment.



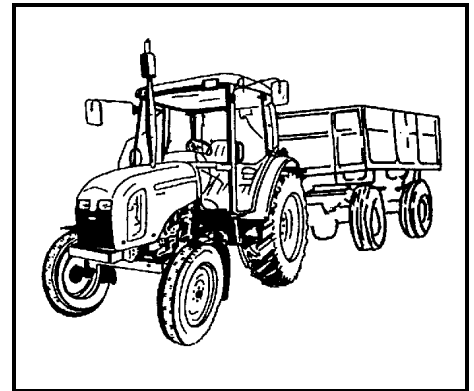
Do not step on the fuel tank.



A 37

DRAINING OPENING

Opening for draining of impurities is located in the bottom part of fuel tank.

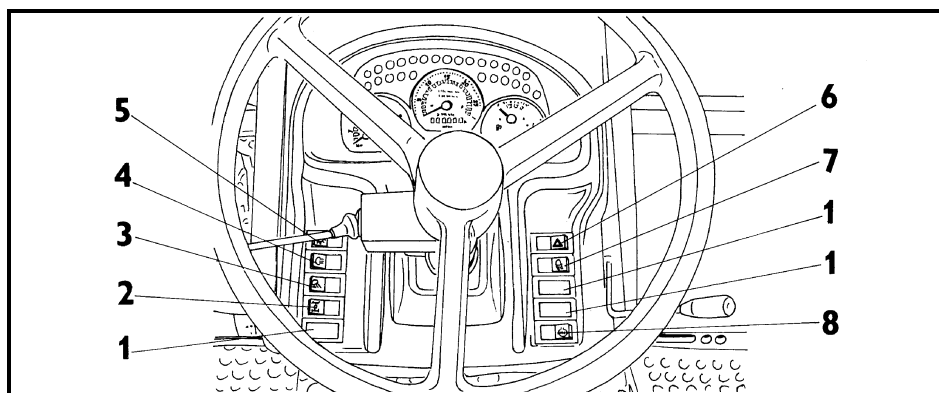


A 37a

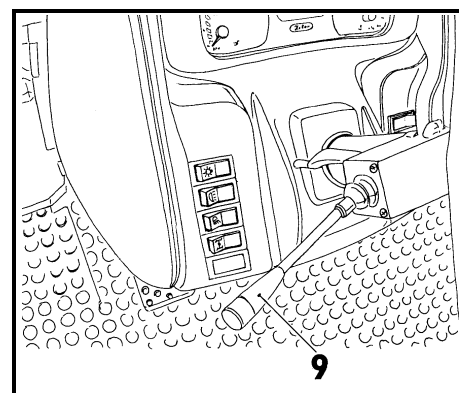
AVERAGE FUEL CONSUMPTION IN LITERS PER HOUR AT ZETOR TRACTOR

Tractor Model	Engine Load		
	100%	80%	50%
Z 3321, 3341	10,2	8,40	6,40
Z 4321, 4341	10,78	8,62	5,39
Z 5321, 5341	11,52	9,21	5,76
Z 6321, 6341	12,50	10,00	6,25
Z 7321, 7341	14,04	11,23	7,02

DASHBOARD



A 38

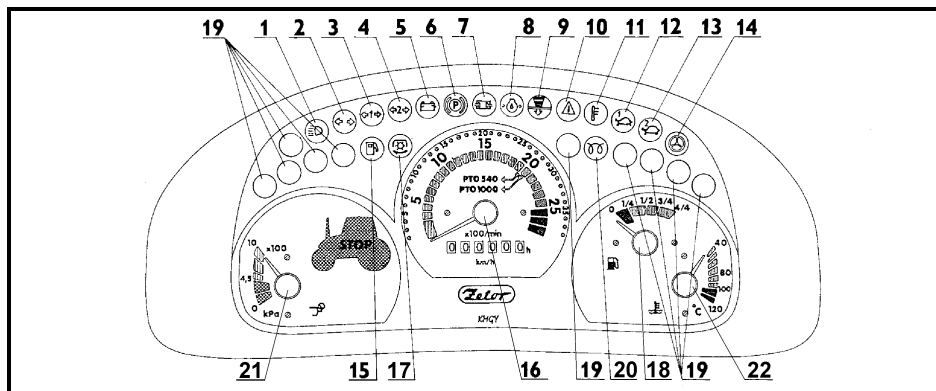


A 38a

1. Free position.
2. Front wheel drive control switch with indicator light.
3. Working light switch with indicator light.
4. Fog light switch with indicator light.
5. Position, high and low beam headlight switch with indicator light.
6. Warning light switch with indicator light.
7. Low beam roof-light switch with indicator light.
8. Differential lock control switch with indicator light.

9. Toggle switch - turn signal, lights, horn (high and low beam headlight switch, acoustic horn).

INDICATOR LIGHTS

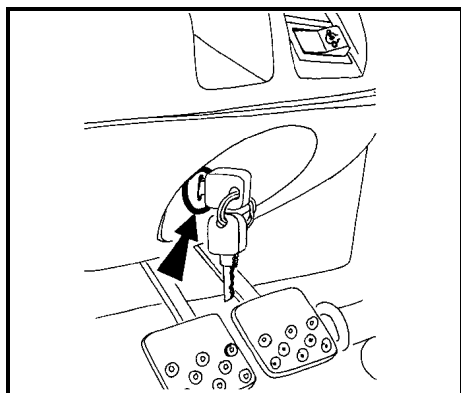


A 39

INDICATOR LIGHTS

1. High beam light (blue). It lights if high beam head lights are řonř. Turn signal lever position-downwards in direction of steering wheel axis.
2. Turn signal indicator light (green).
3. Turn signal indicator light (green) - first trailer.
4. Turn signal indicator light (green) - second trailer.
5. Charging indicator light (red). This is řonř after charging failure.
6. Parking hand brake (red). It is řonř if the hand brake applied.
7. Indicator light of min. air pressure in braking system (red): it lights if the air pressure for trailer air brakes drops under a critical margin i.e. 420 kPa.
8. Lubrication indicator light (red). It is řonř if the engine oil pressure drops below 120 to 60 kPa.
9. Air cleaner clogging indicator light is řonř after air cleaner clogging (yellow), (not assembled).
10. Indicator light for warning lights
11. Critical coolant temperature indicator light is řonř after of temperature exceeding of temperature approx. 100„C (not assembled).
12. Indicator for torque mulplier (green - ON).
13. Indicator for torque mulplier (green - ON).
14. Indicator light in hydrostatic steering circuit fault.
15. Min. fuel level indicator light (orange). It lights if 1/6 to 1/10 fuel tank capacity stays at the fuel tank.
16. Tachometer with engine hour counter.
17. Front wheel drive indicator light (red).
18. Fuel gauge.
19. Free.
20. Glowing indicator light (yellow), (not assembled).
21. Air pressure gauge.
22. Thermometer of coolant.

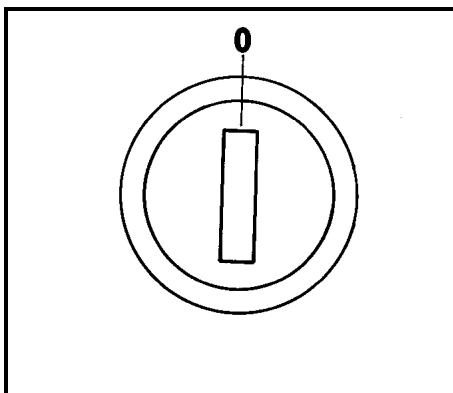
INDICATOR LIGHTS - KEY SWITCH



A 39a

KEY SWITCH

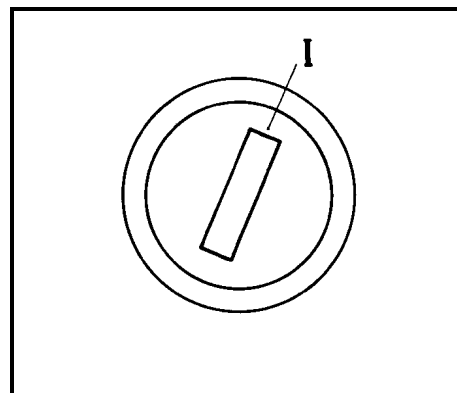
Key switch is located on the front part of steering wheel support under the dashboard



A 40

KEY IN "0" POSITION

All electrical appliances controlled by the key switch are disconnected. The key can be removed.

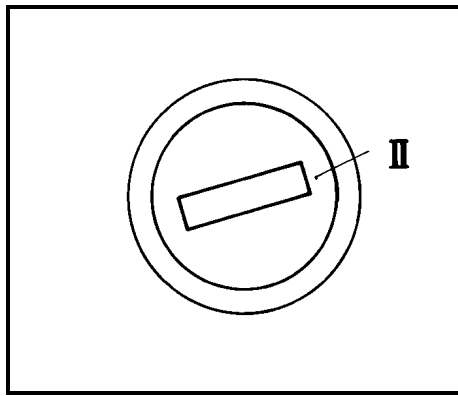


A 41

KEY IN "I" POSITION

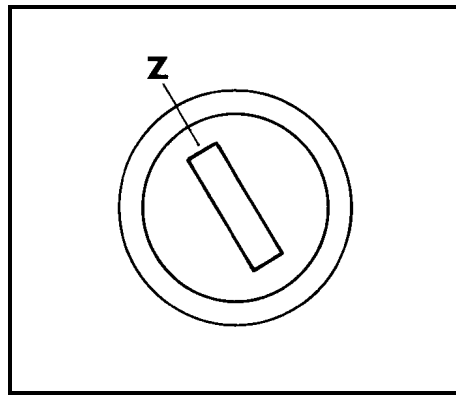
All electrical appliances controlled by the key switch are connected except of starter motor. The key is in this position when engine running.

INDICATOR LIGHTS - KEY SWITCH



KEY IN "II" POSITION

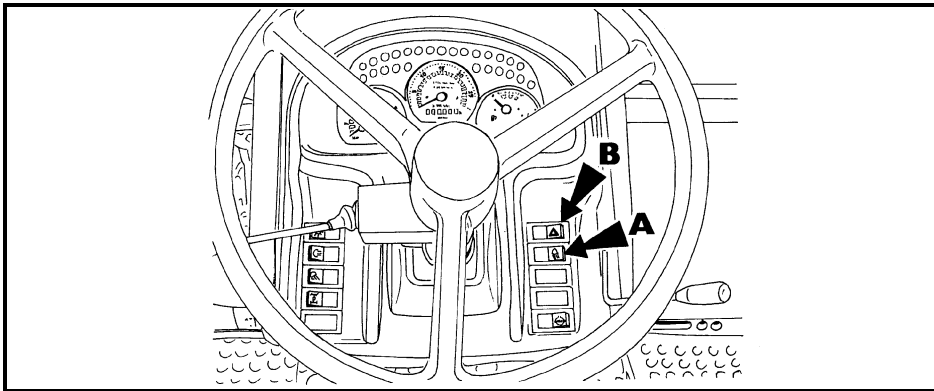
Starter motor is connected in this position. All electrical appliances controlled by the key switch are connected except of wipers, washer, blower of cab and AC. The key is turned automatically to řř position after starting.



RESERVE KEY POSITION

The key is in reserve - not used position (some electrical systems are on) by turning the key into left from ř0ř position (.ř0ř position is necessary for inserting the key) The key can not be removed in this position, similarly as in řř and řIIř position.

SWITCHES



A 44

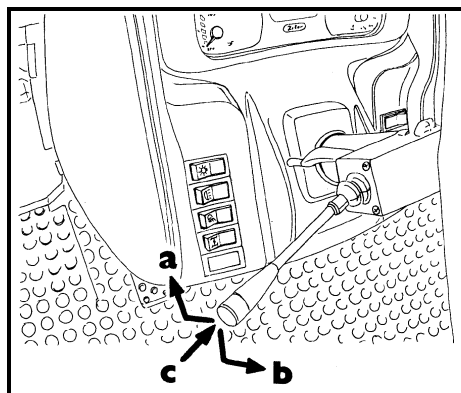
LOW BEAM HEADLIGHT SWITCH (GRILL - CAB) "A"

- "0" Off.
- "I" Low or high beam headlights in the grill are on.
- "II" Low beam headlights in the roof are on (these lights are used only if the front grill headlights are covered by attached implement hitched in front three point hitch).

HAZARD LIGHT SWITCH "B"

- "0" Hazard lights off.
- "I" Hazard lights on.

SWITCHES, PEDALS AND LEVERS CONTROLLED BY DRIVER



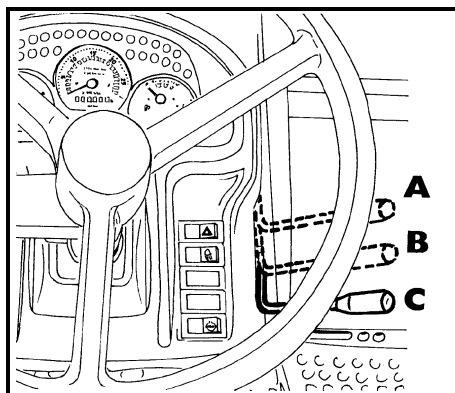
A 45

TURN SIGNAL, HEADLIGHT AND HORN TOGGLE SWITCH

(lever underneath the steering wheel)

- a - Turn signal - right.
- b - Turn signal - left.
- c - Acoustic horn.

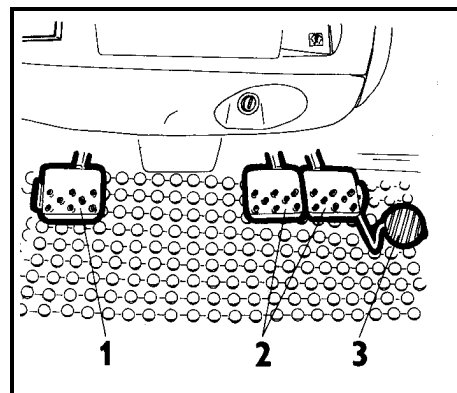
High beam light - move the lever downwards in direction of steering wheel axis.



A 46

THROTTLE CONTROL LEVER

- A - Max. throttle.
- B - Low idle.
- C - Stop.

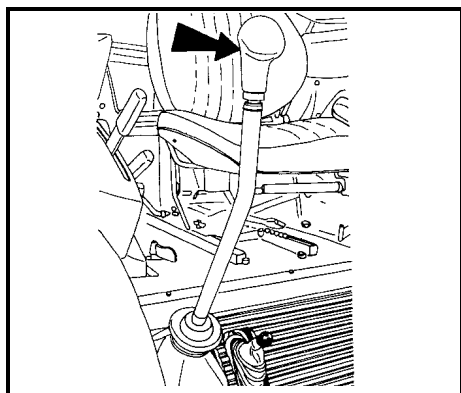


A 47

PEDALS AND LEVERS

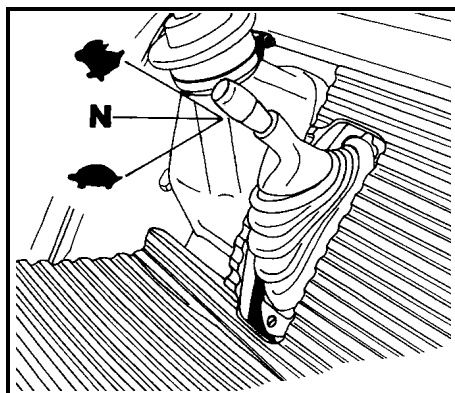
- 1. Travel clutch pedal.
- 2. Foot operated service brake pedals connected by latch.
- 3. Throttle pedal.

PEDALS AND LEVERS CONTROLLED BY DRIVER



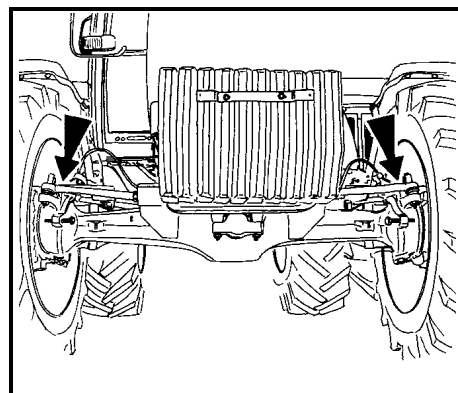
GEAR SHIFTING LEVER

Main shifting lever.
The shifting lever grip is red.



ROAD SPEED AND REDUCED SPEED SHIFTING LEVER

Reduction gear shifting lever .
hare - road speeds
N - neutral
turtle - reduced speeds
The shifting lever grip is black.

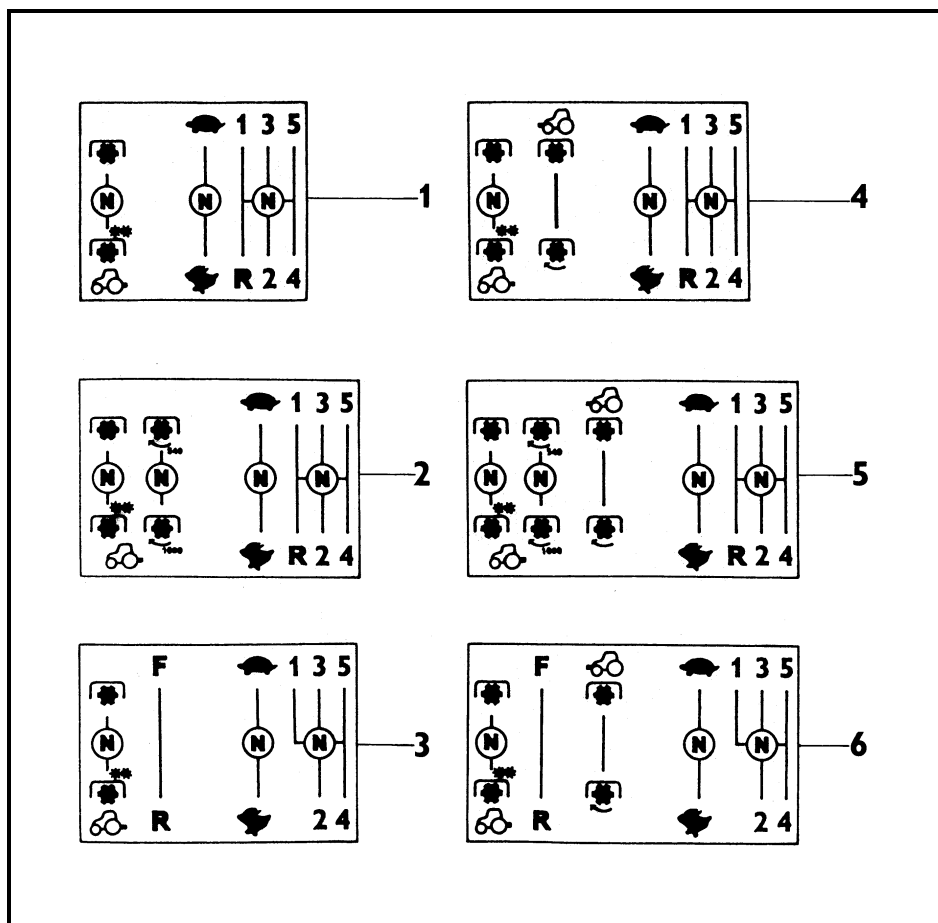


TRACTORS WITH TRAVEL SPEED 40 kmph

All models of four cylinder tractors equipped with Carraro front driving axle and brakes in front final drive can optionally have 40 kmph.

Front driving axle brakes are controlled by air-liquid amplifier depending upon pressure in the rear brake circuit of tractor. Hydraulic circuit of front brakes is filled with brake fluid.

SHIFTING PATTERN

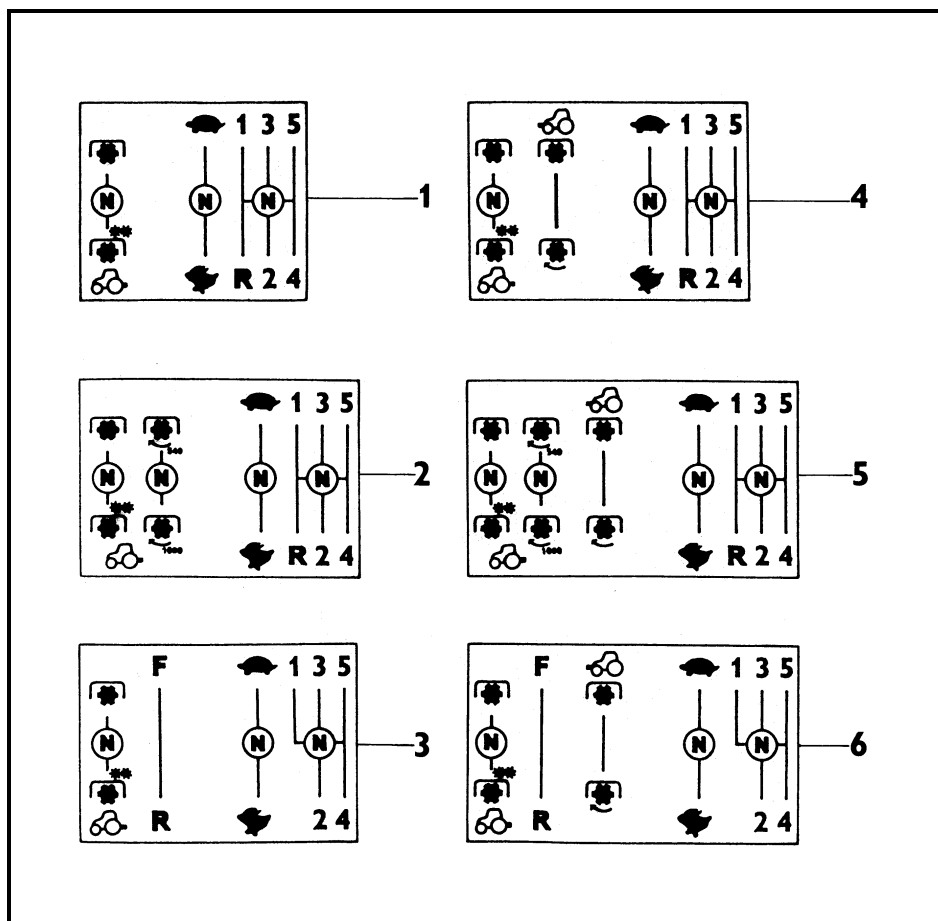


Shifting pattern decal is fixed on the right hand side of front cab wind shield.

1. Shifting pattern decal for transmission with reduction, rear PTO shaft - 540 RPM and ground PTO speed.
2. Shifting pattern decal for transmission with reduction, rear PTO shaft - 540 or 1000 RPM and ground PTO speed
3. Shifting pattern decal for reversible transmission with reduction, rear PTO shaft - 540 RPM and ground PTO speed.
4. Shifting pattern decal for reversible transmission with reduction, front PTO- 1000 RPM rear PTO shaft - 540 RPM and ground PTO speed.

A 50

SHIFTING PATTERN



5. Shifting pattern decal for transmission with front PTO - 1000 RPM, reduction, rear PTO shaft - 540 or 1000 RPM and ground PTO speed.

6. Shifting pattern decal for reversible transmission with front PTO - 1000 RPM, reduction, rear PTO shaft - 540 RPM and ground PTO speed.

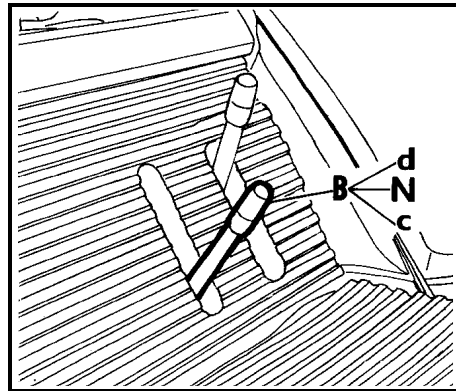
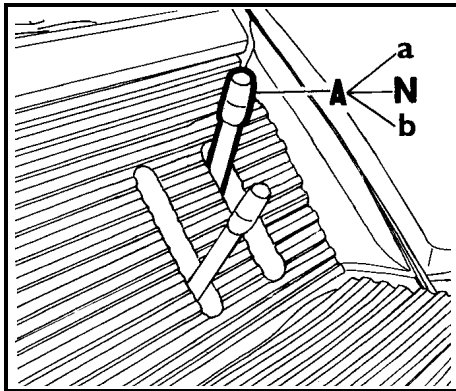
Positions of reverse lever

F - forward

R - reverse

A 51

PEDALS AND LEVERS CONTROLLED BY DRIVER



PTO SELECTION CONTROL LEVER (A) – BLACK

- a - PTO ground speed - PTO is driven by transmission - PTO speed depends upon the shifted gear speed.
- N - neutral position
- b - PTO Independent speed - PTO shaft drive with 540 RPM, optionally 540 / 1000 RPM.

At tractor equipped with reversor when working with PTO and with stopped tractor the reversor shifting lever must be in forward position (F).

*PTO SPEED CONTROL LEVER 540 OR 1000 RPM (B) - YELLOW

- c - 540 - RPM
- N - neutral
- d - 1000 - RPM

Tractor is equipped with the six spline PTO shaft end for 540 RPM as a standard. Tractor can be equipped with the twenty-one spline PTO shaft end for 1000 RPM as an option.

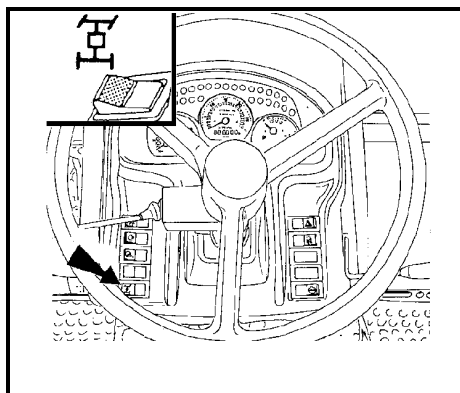


PTO speed shifting either 540 or 1000 RPM is possible regardless to assembled PTO shaft end - six or twenty-one splines.

Both levers can be shifted at stopped tractor only.

PTO speed and spline shaft end type must be chosen depending upon prescribed speed of implemented machine.

PEDALS AND LEVERS CONTROLLED BY DRIVER

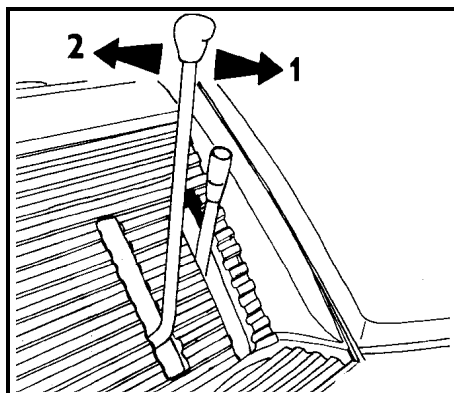


*FRONT WHEEL DRIVE DISENGAGEMENT

Front wheel drive is disengaged by means of the switch located on the dash. Engaged front wheel drive is indicated by indicator light that is a part of the switch.



Driving with engaged front wheel drive on the road is prohibited! Engaged front wheel drive use for fields working only!



*REVERSOR SHIFTING LEVER

1. Forward drive - lever in forward position (F).
2. Backward drive - lever in reverse position (R).

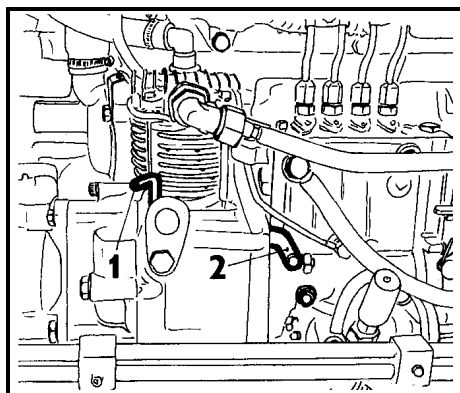
Altogether 10 forward speeds and 10 reverse speeds are reached in combination with reduction range. The main shifting lever has 5 positions without reverse gear. PTO shaft speed 1000 RPM is excluded at tractor with reversor.



Reversor lever does not have a neutral position. That's why neutral must be shifted by the main shifting lever for stopping tractor.

Working with PTO at stopped tractor the reversor shifting lever must be in forward position (F).

PEDALS AND LEVERS CONTROLLED BY DRIVER

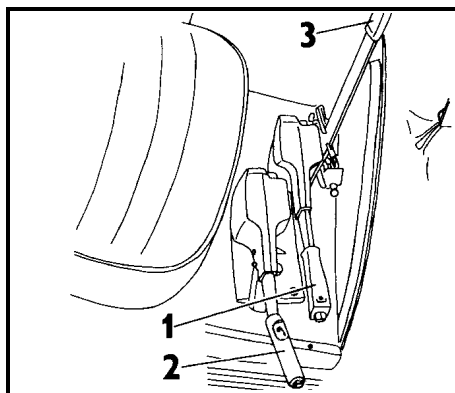


COMPRESSOR ENGAGEMENT

1. Safety pin for compressor engagement.
2. Lever for compressor engagement.

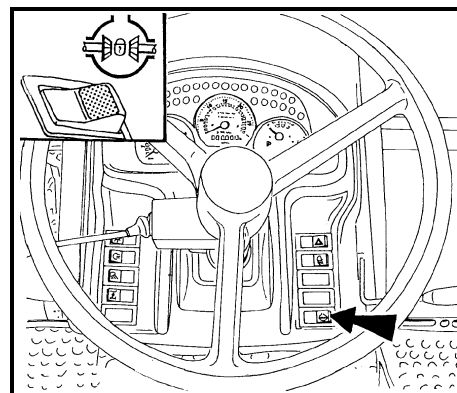


The compressor must be ever engaged when driving the tractor with trailer or implement that is braked with air trailer brakes.



PARKING BRAKE LEVER, PTO SHAFT CONTROL LEVER AND * PICK UP HITCH CONTROL LEVER

1. Control lever of PTO shaft clutch
2. Parking brake lever
3. Pick up hitch control lever

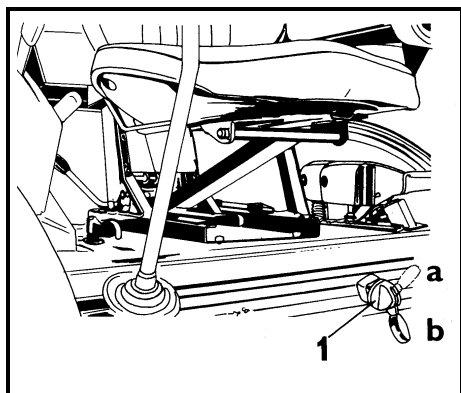


DIFFERENTIAL LOCK

Rear axle differential lock is controlled by switch located on the dash board. Indicator light is on if the differential lock is engaged.

Differential lock is disengaged by break pedal depressing.

PEDALS AND LEVERS CONTROLLED BY DRIVER



*FRONT PTO CLUTCH VALVE CONTROL LEVER

1. Front PTO clutch valve control lever.

a - engaged

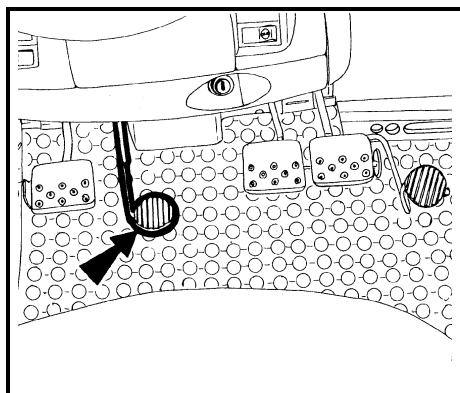
b - STOP

Clutch is engaged when the air pressure is minimally 500 kPa (indicated on pressure gauge). The valve insures automatic disengaging of PTO shaft if the air pressure drops under 410 kPa $\pm$ 60 kPa.

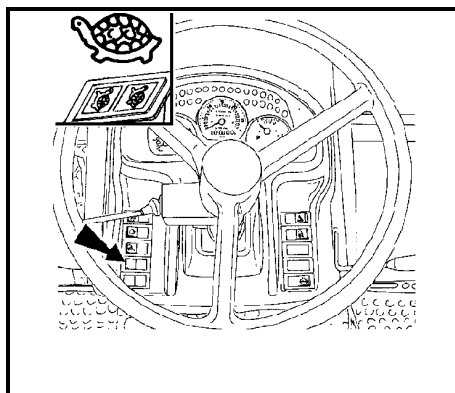


It's life dangerous to do any repairs or cleaning of front attached implements driven by front PTO shaft if the lever is not in STOP position.

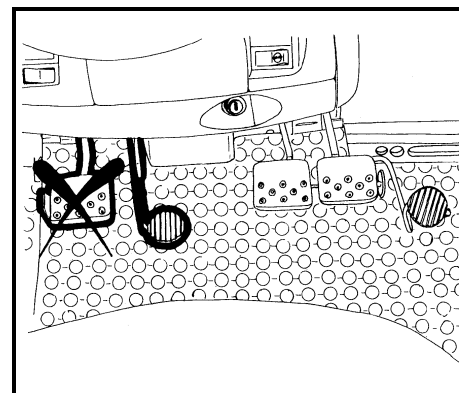
PEDALS AND LEVERS CONTROLLED BY DRIVER



A 58a



A 58b



A 58c

* HI-LO - TORQUE MULTIPLIER

Tractors can be optionally equipped with torque multiplier. Torque multiplier is electro-pneumatically controlled by means of foot pedal located on the right hand side of clutch pedal. The tractive force of tractor is increased after depression of Hi-Lo pedal. Number of transmission gears is twice higher (20/4) at tractors equipped with Hi-Lo.

Hi-Lo (torque multiplier) is automatically disengaged after depressing of clutch pedal, brake pedals or after applying of PTO control lever (i.e. at disengaged PTO shaft).

HI-LO FUNCTION INDICATION

The indicator light on dashboard lights when the Hi-Lo is actuated.

SAFETY RULES WHEN WORKING WITH HI-LO



For the reason of safety it is forbidden to press the travel clutch pedal and Hi-Lo pedal simultaneously and to use the Hi-Lo when going downhill.

OPERATION

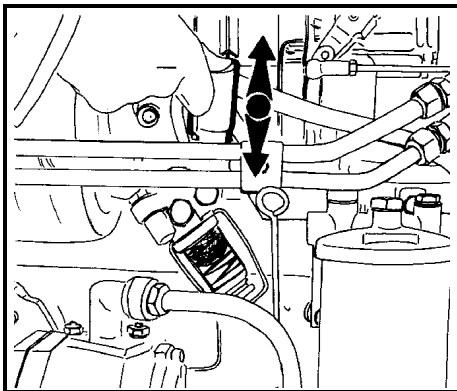
	Page
Engine starting fail.....	44
*Coolant heater	45
Engine starting with coolant heater	45
Turbocharged engine (at tractors Z 7321 and Z 7341 only)	46
Shifting from higher to lower gear	48
Driving downhill	48
Driving uphill	49
Gear shifting of reduced speeds	49
Tractor stopping - parking brake	49
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Leaving tractor	50
Foot operated disk brakes.....	51
*Single and double hose air trailer brakes	51
*Single and double hose air brakes	52
Warning device	52
Hydraulic trailer brakes	53
In time of running in - first 100 hours	54
First 10 hours	54
10 hours after	54
70 hours after	55
70 hours after	55
100 hours after	55



Be familiar with shifting pattern and test all positions of shifting lever at stopped engine before driving new tractor.

Be sure that the technical status of tractor corresponds to the safety traffic condition before driving.

ENGINE STARTING - TRACTOR IS EQUIPPED WITH STARTING SAFETY INTERLOCK SYSTEM

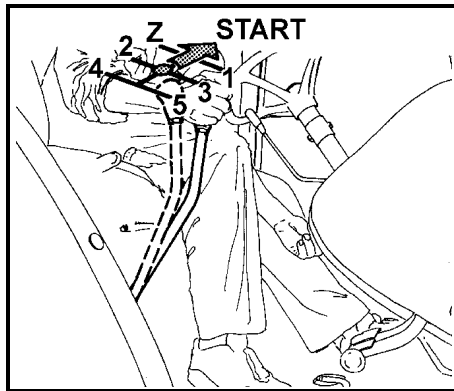


A 59



Be sure the tractor is braked by parking brake and shifting lever is in neutral position before starting engine.

Prime the fuel system by 5 to 10 strokes of hand fuel transfer pump and screw properly the knob into the pump body.



A 60

1. Insert the key into the key switch ("0" position).
2. Depress the clutch pedal.
3. Move the shifting lever, shifted in neutral, towards you - shifting safety interlock system will be actuated by this way.
4. Turn the key through "I" position into "II" position (start). Crank the engine 3 - 5 second, than release the key and turn it into "0" position. Engine cranking can be eliminated at higher ambient temperature.
5. Set the max. throttle and again move the shifting lever, shifted in neutral, towards you - starting safety system will be switched on.

6. Turn the key through "I" position into "II" position (start). Release the key immediately after engine starting and release also the shifting lever. Don't start engine longer than 15 second.
7. After starting engine, step by step reduce the throttle. Avoid running engine at high idle.

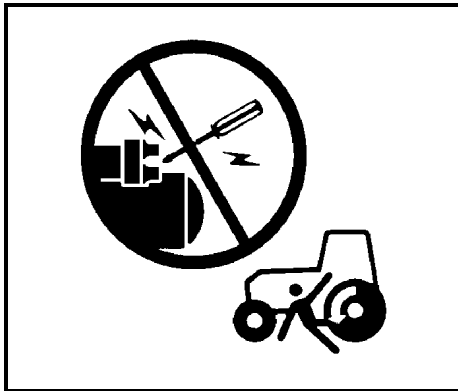
ENGINE STARTING FAIL

Repeat starting after 30 seconds. Max. 6 starting cycles are allowed (15 seconds starting and 30 second brake is one cycle). Farther starting engine is allowed after cooling of starter motor to the ambient temperature.



Never help to the stopping engine by the starter motor. You will avoid starter damage.

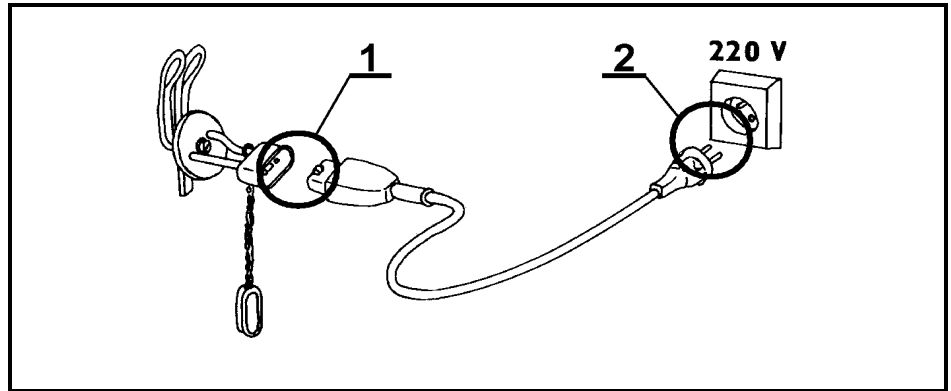
ENGINE STARTING



A 60a



Disconnect the ground battery pole, shift all levers into neutral position, including PTO engagement, when any manipulation with starter or its repair. Starting engine by short circuit of starter connectors is forbidden. The basic rule is that the tractor is started from driver's seat only. Starter motor connectors are protected by a cover.



A 61



After heating unplug the electricity first and the heater after.

ELECTRICAL SHOCK HAZARD!

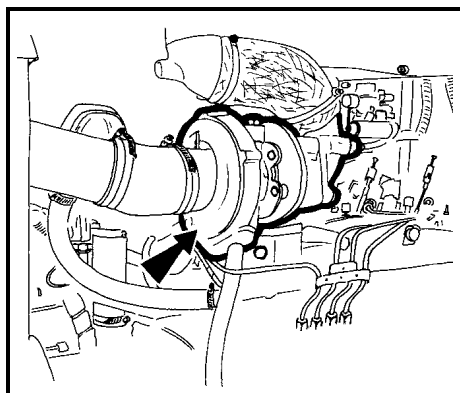
*COOLANT HEATER

Coolant heater is assembled into engine block as an option. Its output is 1000 W at voltage 220 V of alternating electrical current. Heater is used at ambient temperature below -10°C.

ENGINE STARTING WITH COOLANT HEATER

The electrical installation and its protection against electrical shock hazard must be done according to the proper regulations. Inspect the electrical circuit before use, plug the heater first and the cable into 220 V electricity after.

IMMEDIATELY AFTER STARTING



A 61a

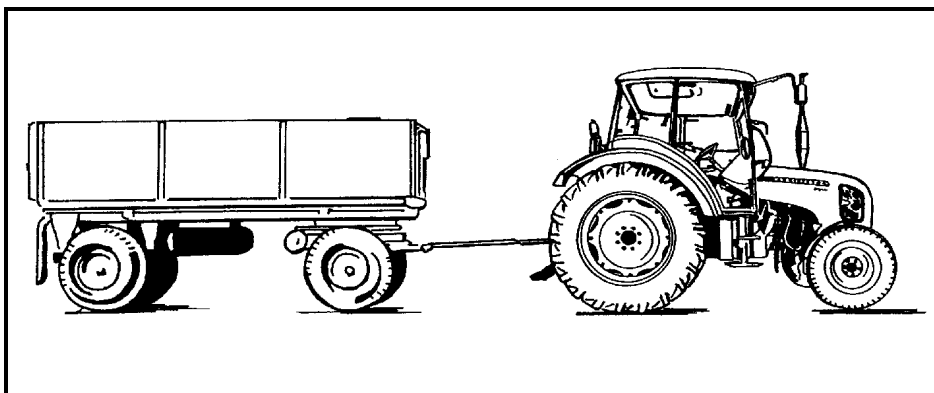
TURBOCHARGED ENGINE (at tractors Z 7321 and Z 7341 only)

Crank the engine for 3 to 5 seconds with throttle control lever in position C - STOP. You will assure lubrication of turbocharger and prolongation of its life.



Set engine speed for 800 to 1000 RPM after starting and let the engine idle for 3 minutes without load.

In this time check for proper lubrication, charging (indicator lights must be °off°) and other functions assuring correct engine operation.



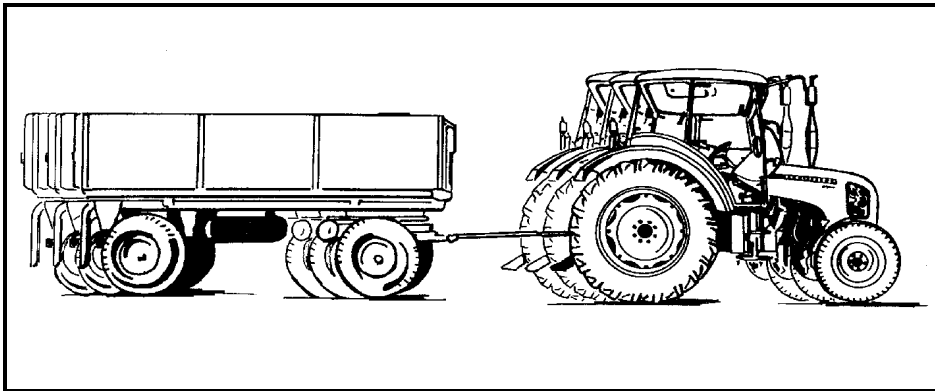
A 62

Engine idle time without load must be kept especially in winter season.

Continue with warming up the engine while driving. Warming up the engine by long idle run or fast increase of speed is dangerous for the engine.

Do not exceed engine speed above 2000 RPM until the coolant temperature reaches 45°C.

STARTING MOVE



A 63

Depress the clutch pedal, select the road or reduced range speed. Start the engine and set the engine speed for 750 to 800 RPM. Shift the proper gear speed suitable for starting move and slightly increase the engine speed. Prepare the parking brake for releasing. Release the clutch pedal up to point of the starting move and simultaneously with engine speed increasing, continue with smooth clutch releasing. Fully release the parking brake.

Start moving smoothly and slowly. Fast starting move can cause the overload of transmission, increased fuel consumption, excessive tire wear and damage of the transported load.

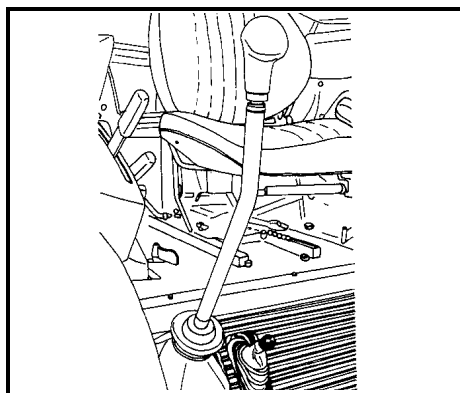
Use the 1 st. gear only for starting move when driving with heavy trailer going up the hill and in heavy terrain.

Regularly check the operation engine regime, engine speed, lubrication, coolant temperature, air press, battery charging and fuel level.

Regularly check tightening of the transported load if the trailer or other implement is hitched to the tractor.

Don't use the differential lock when driving on the dry road or if taking the turning.

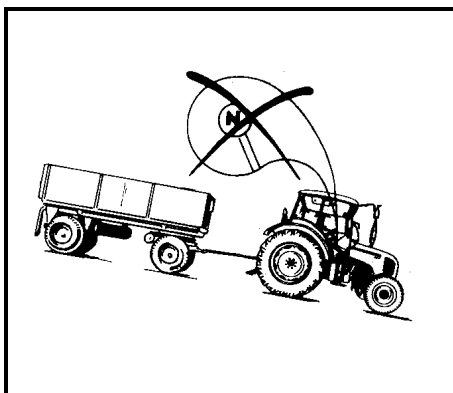
GEAR SHIFTING



A 64

SHIFTING FROM HIGHER TO LOWER GEAR

Double clutching is necessary at transmissions with 2nd, 3rd, 4th and 5th synchronized speed when shifting from the 2nd to the 1st speed. Double clutching is also recommended when shifting from the other speeds.



A 65

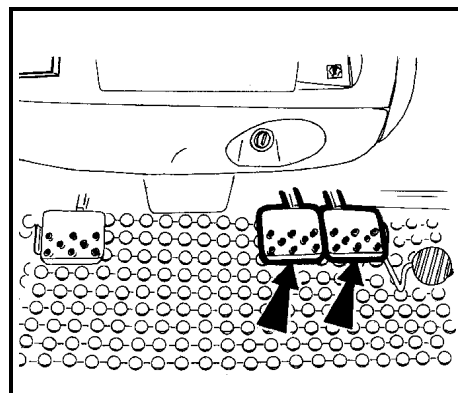
DRIVING DOWNHILL



Driving downhill without the shifted gear is forbidden. If driving down the long hill, shift so lower gear the sharper one the hill is. If possible shift the lower gear before driving downhill.

Remember:

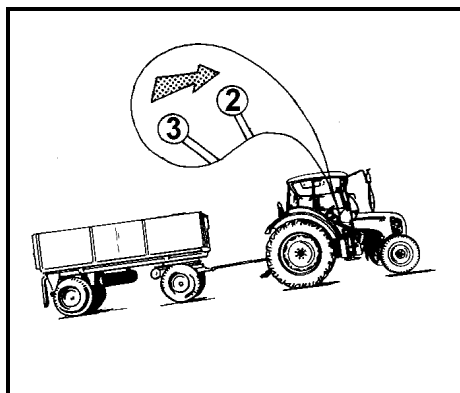
The gear you use reliably for driving uphill is safely suitable for driving downhill.



A 66

Driving down the sharp hill with trailer equipped with air or hydraulic trailer brakes the foot operated brakes must be applied already from beginning of declination!

GEAR SHIFTING

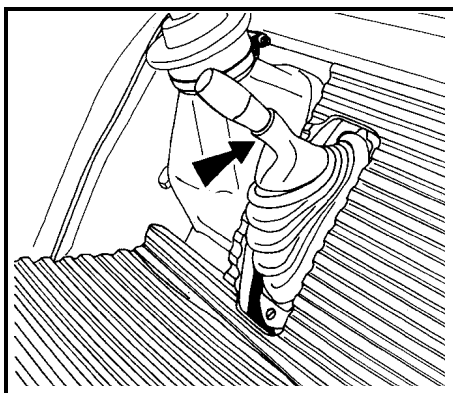


A 66a

DRIVING UPHILL



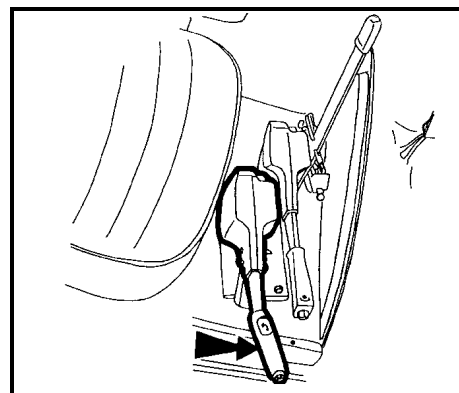
Shift in time when shifting from the higher speed to the lower one when going uphill, to avoid dropping engine speed below 800 RPM and stopping the engine by overload.



A 67

GEAR SHIFTING OF REDUCED SPEEDS

Shifting lever of road-reduced range can be shifted at stopped tractor only. Gear shifting of reduced speeds is the same as shifting of road speeds. With regard to the low travel speed of the tractor at shifting, the tractor must almost always be moved from the stop.

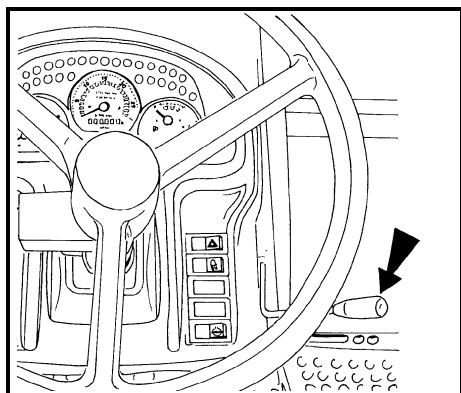


A 68

TRACTOR STOPPING - PARKING BRAKE

Stop gently and slowly the tractor at normal conditions. Shortly before stopping depress the clutch pedal and move the shifting lever into neutral. Set the parking brake and so protect the tractor against accidental movement at each tractor stopping especially when engine running. Parking brake setting is indicated by indicator lights located on the dash.

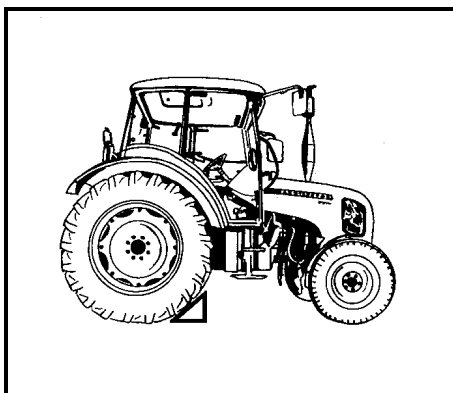
TRACTOR STOPPING



A 69

TURBOCHARGED ENGINE STOPPING

At the tractor with turbocharger the engine must cool after work with fully loaded engine. That's why first reduce the engine speed to 800 - 1000 RPM before stopping engine and let it run without load approximately for 5 minutes. Stop the engine by moving the throttle control lever into STOP position. The same is recommended for naturally aspirated engines too.



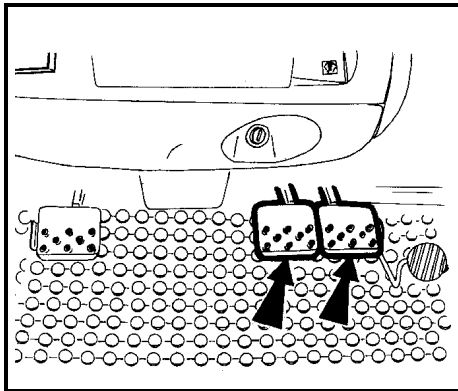
A 70

LEAVING TRACTOR

Do not forget to remove the key from the key switch and lock the cab at cab tractors before leaving tractor. (The key can not be removed when at left, I or II position).

Tractor must be properly assured against accidental move, it must be braked, with engine °off ° and first gear shifted. Wheels must be locked by blocks when standing tractor on the hill.

SERVICE BRAKES - AIR TRAILER BRAKES



A 71

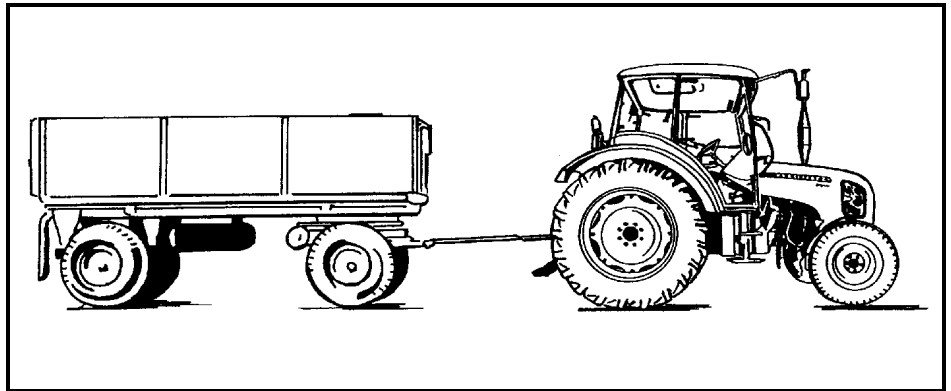
FOOT OPERATED DISK BRAKES

Disc brakes are of wet type, hydraulically actuated, double pedal with automatic compensator integrated in the main brake cylinders.



Both brake pedals must be latched together when driving on the road.

Use unlatched pedals for braking right or left wheel separately when working in terrain and fields only.



A 72

*SINGLE AND DOUBLE HOSE AIR TRAILER BRAKES

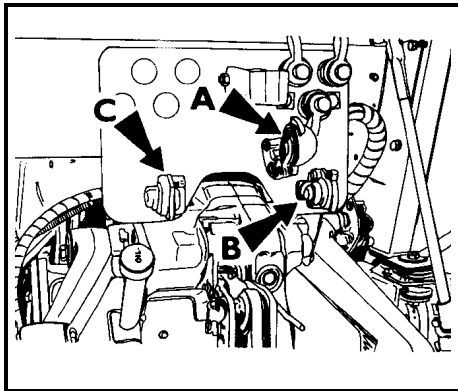
Control of air trailer brake is derived from the foot operated disc brakes and this works at latched pedals only. The air brake operation is synchronized with braking tractor including the brake effect. Working pressure is set by a pressure valve (regulator) adjusted to 730 „ 20 kPa. If the pressure drops under 550 - 40 kPa the priority valve disconnects pneumatic circuits of secondary appliances (front PTO control, PTO clutch control, torque multiplier etc.).

Disconnecting of secondary appliances is not signalized by any indicator lamp.



Pedals of foot operated brake must be connected and latched when driving tractor with attached trailer.

AIR TRAILER BRAKES



A 73

*SINGLE AND DOUBLE HOSE AIR BRAKES

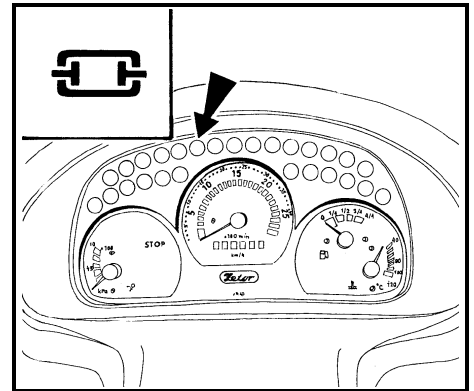


It is recommended to connect air brake couplings to the tractor at tractor braked by parking brake.

Connector couplings must be covered by a cap if the trailer is not hitched.

Connector couplings.

- A - coupling of single hose air brake system
- B - coupling of double hose air brake system (red - filling circuit)
- C - coupling of double hose air brake system (yellow - braking circuit)



A 74

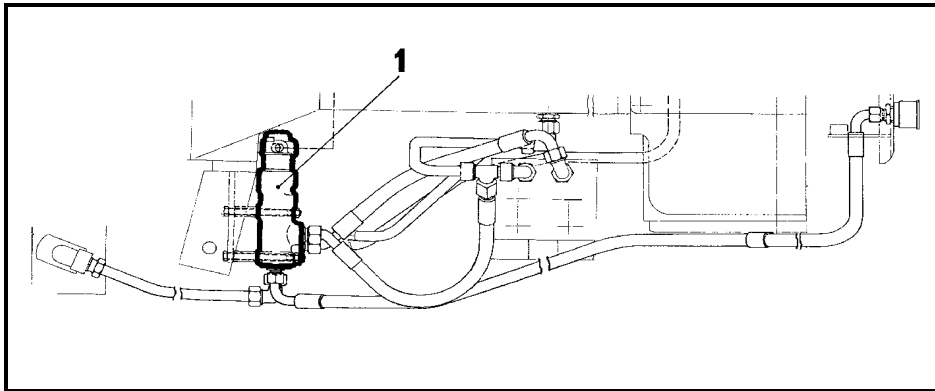
WARNING DEVICE

Dropping of air pressure under critical margin 450 ± 30 kPa is indicated by red indicator light located on the dashboard.



Tractor with a braked trailer can not continue in driving when air pressure drops under the critical margin and until the pressure is increased.

HYDRAULIC TRAILER BRAKES



A 74a

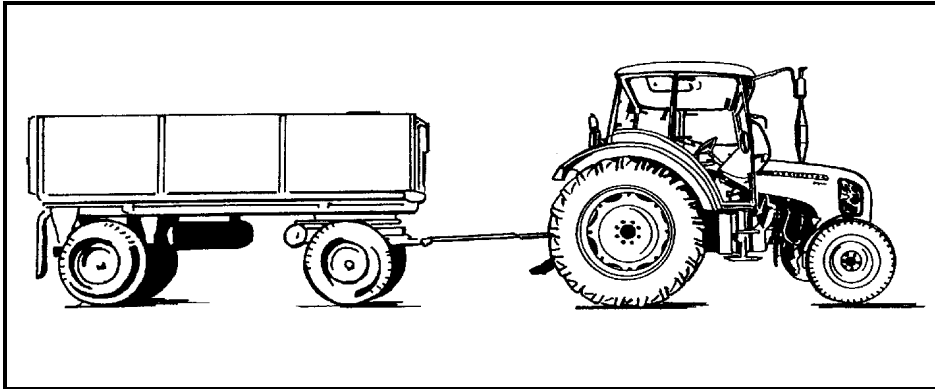
HYDRAULIC TRAILER BRAKES

Hydraulic trailer brake control is synchronized with braking the tractor including the braking effect. Working pressure is activated by oil pressure from hydraulic pump. The hydraulic valve BOSCH (1) is used in circuit of hydraulic pump (disengageable pump). The pressure in the brake coupling must be 12 - 15 MPa at maximal press on the brake pedal. Trailer brake valve prioritizes the brake function to hydraulic control.

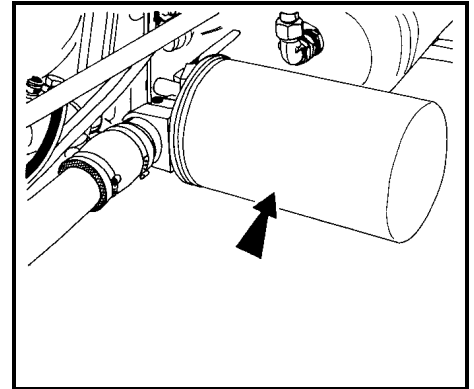


Brake pedals must be connected and secured by latch when driving the tractor with attached trailer.

NEW TRACTOR RUNNING IN



A 75



A 76

IN TIME OF RUNNING IN - FIRST 100 HOURS

Within the first 100 operation hours:

- load the engine normally
- avoid the maximal engine load at operation
- avoid the long operation at low idle
- frequently inspect the engine oil level (the increased oil consumption is normal in this time)
- check the hardware connections especially connections of highly stressed parts of the tractor
- remove immediately all found problems. You will avoid subsequently created damage eventually even traffic hazard

FIRST 10 HOURS

- do running in at transportation only
- retorque front and rear wheel nuts by prescribed torque

70 HOURS AFTER

Change the hydraulic oil filter element. Add the oil into transmission, if necessary check the oil level, to be in area of flattened part of oil dipstick.

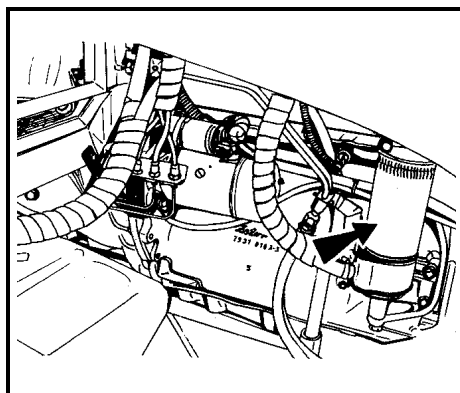


Change the hydraulic oil filter element when cold oil - danger of your burning, see the chapter HYDRAULIC OIL FILTRATION in this manual.

Use the following intervals for exchange of hydraulic oil cleaning cartridge:

1. 70 hours
2. 200 hours
3. and each 600 hours

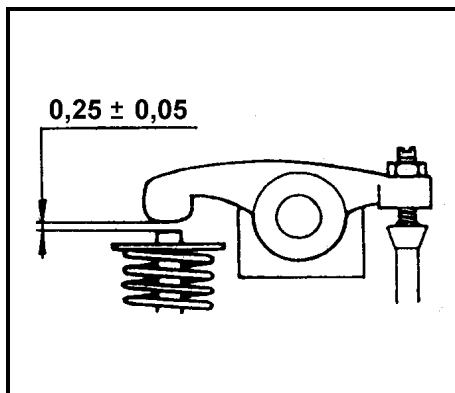
NEW TRACTOR RUNNING IN



A 77

70 HOURS AFTER

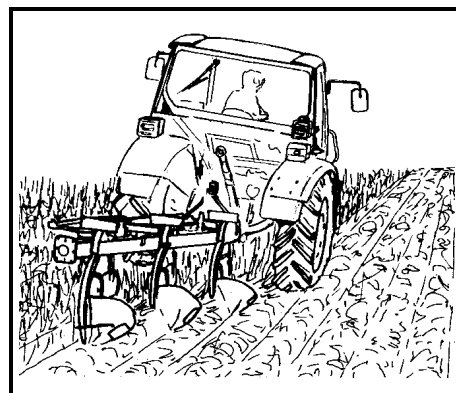
Drain the hot engine oil and exchange the full-flow engine oil filter. Fill in the engine with new oil to the prescribed level - upper mark of oil dipstick (inspect after engine cranking and oil level stabilizing).



A 78

70 HOURS AFTER

Retorque the cylinder head nuts (recommended torque is 167 to 177 Nm at the cold engine) and check for valve clearance ($0,25 \pm 0,05$ mm at the cold engine).



A 79

100 HOURS AFTER

You can work without any restrictions with the tractor after running in.

The operating engine mode - speed:

- recommended operating engine speed 1400 to 2300 RPM.
- low idle speed 700 to 650 RPM.

NOTE

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TRANSPORTATION

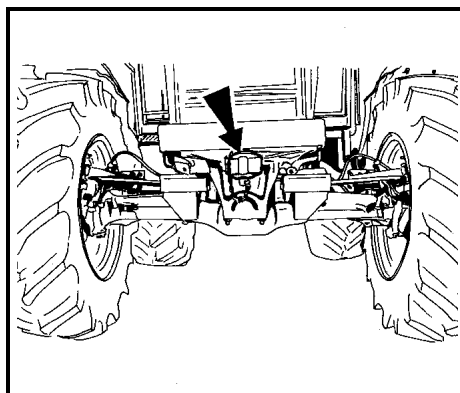
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Be sure that the tractor technical status corresponds to the safe traffic requirements before driving.

Verify hitching of trailer and fixing of transported load if the attached trailer or agricultural implement. Never leave the tractor in move for attaching trailer yourself. Keep also safety of your assistant.

TRANSPORTATION

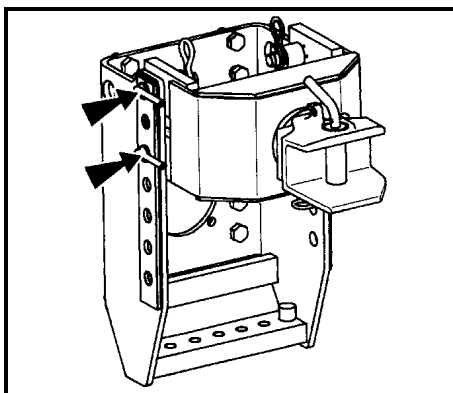


A 80

FRONT HOOK

Front hook is used only for pulling tractor without any attached trailer or implements only.

Use the pull bar or rope when releasing tractor, never use chains.

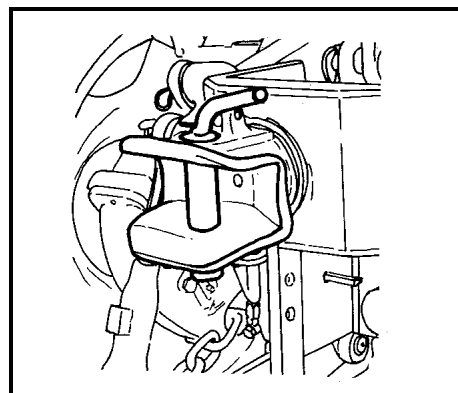


A 81

* TRAILER HITCH

Trailer hitch is used for attaching of four wheel trailers or light two wheel trailers. The trailer hitch is height adjustable in 5 positions by 50 mm. Hitch is attached by means of bolts or pins with cotter pins.

Important: Working with various agricultural implement if necessary the trailer hitch needs to be adjusted, tilted or eventually removed together with carrier.

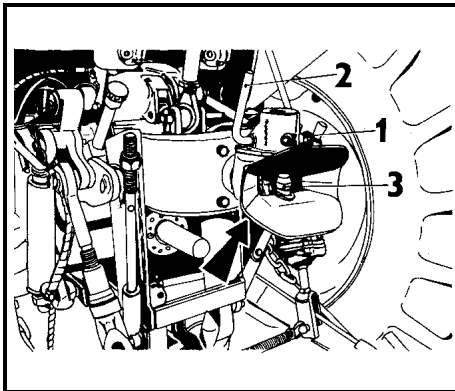


A 82

* MECHANICAL MOUTH OF TRAILER HITCH

Hitch pin diameter is 30 mm. Maximal vertical static load is 10 kN.

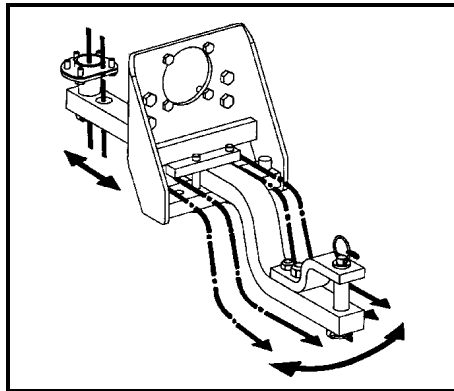
TRANSPORTATION



A 83

*AUTOMATIC MOUTH OF TRAILER HITCH

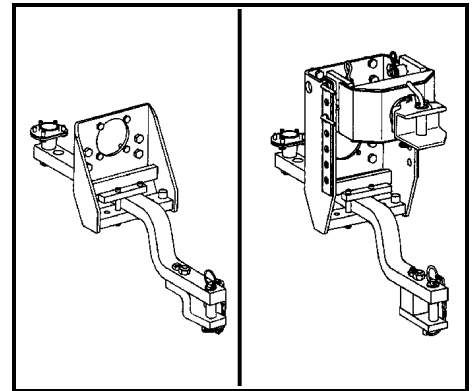
Hitch mouth enables automatic coupling trailer to the tractor. For attaching trailer do the following - pull out the latch (1) and simultaneously raise the main hitch pin (3) into its upper position by means of lever (2). Pin automatically slides into trailer yoke eye after mouth and yoke coupling. Be sure the latch is back in position after coupling trailer. Maximal allowed vertical static load is 10 kN.



A 84

* SWINGING DRAWBAR

Swinging drawbar can be set side to side in 5 positions. Drawbar is fixed by the brace in desired position. The drawbar can be longitudinally set in two positions - measured from the end of PTO shaft (350 or 400 mm). Setting is done after removing of quick lock pin under the differential housing. Secure again the drawbar with pin after setting. Drawbar can be vertically set in 2 positions (by turning the drawbar round its axis and by assembly of drawbar clevis into a different position).

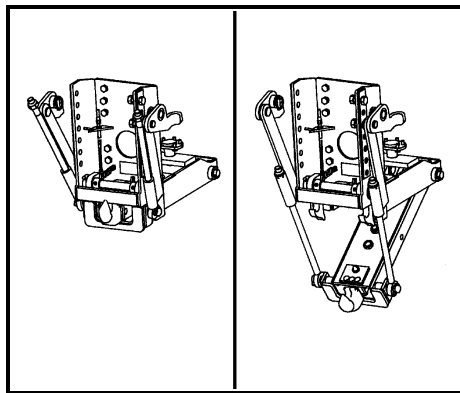


A 85

* SWINGING DRAWBAR

The needed free space at work with cardan shaft is ensured only if the drawbar clevis is in its lowest position

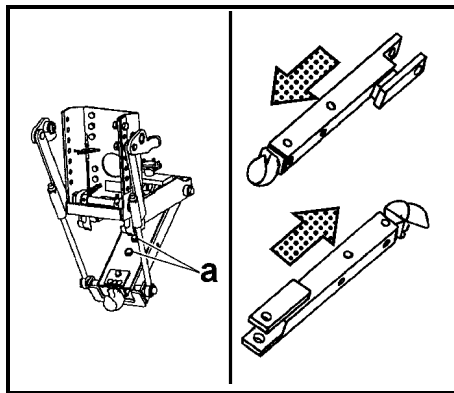
TRANSPORTATION



A 86

* PICK UP HITCH

Pick up hitch is intended for coupling of two wheel trailers with yoke corresponding to ISO 5692 (the internal yoke eye diameter is 50 mm and eye height is 30 mm). Pick up hitch hook is hydraulically raised and lowered by means of length adjustable telescopic links. Maximal vertical static load is 17 kN. Pick up hitch is capable for pulling of maximal traction force.

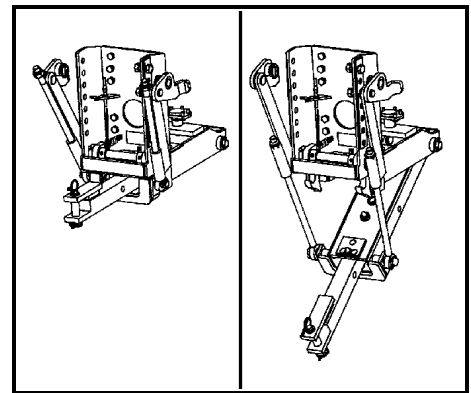


A 86a

EXCHANGE OF HOOK FOR DRAW BAR

This hitch device can be equipped with swinging draw bar that is in the opposite side of hitch hook.

Swinging draw bar can have three working positions. Change of hitch hook for swinging draw bar is carried out by lowering of hitch hook carrier into position suitable for removing of pins (a). Afterwards the hitch hook is removed from the carrier and inserted into such position that the swinging draw bar clevis is in front of carrier.

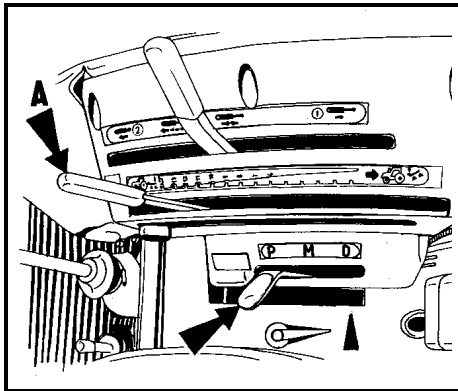


A 86b

*SWINGING DRAWBAR FOR TRAILERS

Maximal vertical static load is 12 kN. Swinging draw bar is capable for pulling of maximal traction force.

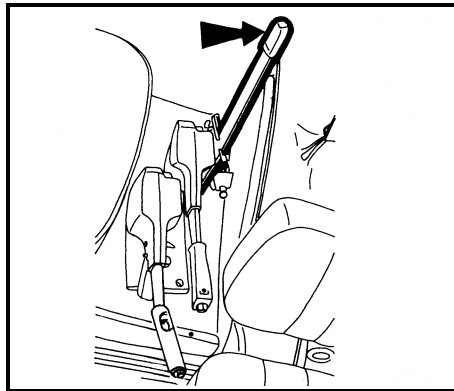
TRANSPORTATION



A 87

ATTACHING TRAILER

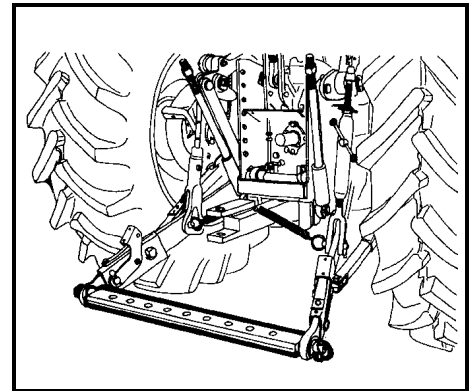
Trailer is attached by means of the hydraulic inner circuit lever (A) with selected position regulation. The hitch hook together with trailer yoke eye is hydraulically raised into position where the latches lock down over hitch carrier pins. Hydraulic arms must be subsequently lowered so that the hook latches sit into carrier pins - telescopic hitches must not be stretched.



A 87a

DISATTACHING TRAILER

Trailer is disattached after slight raising of hitch by internal circuit lever. Move the pick up hitch control lever forward with selected position control. The lever is located on the left hand side of at driver's seat.



A 88

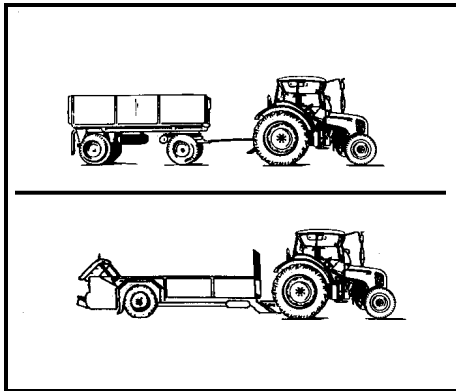
*DRAW BAR

Draw bar is height adjustable by the hydraulic lifting system within its hole lifting range. Only agricultural implements loading permanently the drawbar downwards can be attached into the drawbar. Maximal vertical static load is 5 kN (stopped tractor).



Disassemble the trailer hitch with carrier when working with the draw bar.

TRANSPORTATION



TRAILER IMPLEMENTATION

Tractor must be implemented only with suitable tractor trailer because tractor service brakes and air brakes of trailer must match together. Static rear axle load must not exceed the max. allowed axle load when implemented with two wheel trailer.

Type	Allowed vertical static load	Type	Allowed vertical static load
	10 kN		8 kN
	8 kN		18 kN
	6 kN		12 kN
	12 kN		5 kN

Maximal weight of implemented braked trailer must not exceed the weight value mentioned on tractor warning decal and value mentioned in the vehicle technical license. The maximal vehicle set speed is limited by the max. allowed speed of the slowest vehicle.

TRANSPORTATION

Speed (km/h)	Tire	G _{z dov} (kg)	2WD tractor			4WD tractor	
			F (kN)	G _p (%)	v (km/h)	F (kN)	G _p (kN)
8, 20, 30	16,9-28	4000	18	19	15	18	27
8, 20, 30	16,9-30	4000	18	19	15	18	27
8, 20, 30	16,9-34	4000	17	20	15	17	28
8, 20, 30	18,4-30	4000	16	20	15	17	28
8, 20, 30	18,4-30	4000	16	20	15	17	28
40	16,9-28	3400	-	-	-	13	32
40	16,9-30	3400	-	-	-	12	32
40	16,9-34	3400	-	-	-	12	32
40	18,4-30	3400	-	-	-	12	30
40	18,4-34	3400	-	-	-	12	30
8	13,6-36	4000	18	19	-	18	28
20	13,6-36	3870	17	20	15	16	29
30	13,6-36	3230	11	25	-	11	34
40	13,6-36	2900	-	-	-	8,5	37
- Additional front ballast weights							
- under frame			155			155	
- in front of mask			-			210	

- G_{z dov} - maximal allowed load at rear axle
 F - allowed vertical static load of hitch
 G_p - front axle load (regarding total tractor weight)
 v - restricted maximal speed (regarding steeringability)

The table is valid for tractor with pick up hitch only.

NOTE

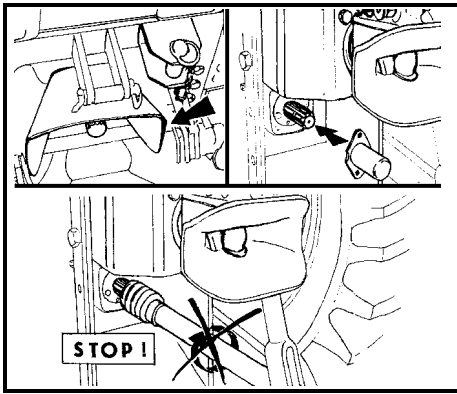
AGRICULTURAL MACHINE PTO DRIVE

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PTO clutch hand control lever	67
PTO clutch mechanical control	68
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Adjusting process for pneumatic control with mechanical linkage	69
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Check the speed compatibility of both, tractor PTO and machine driven shaft before attaching PTO driven machine (540 or 1000 RPM). Different PTO speeds may cause serious damage and accidents .

AGRICULTURAL MACHINE PTO DRIVE



A 90

SAFETY REGULATIONS WHEN WORKING WITH PTO



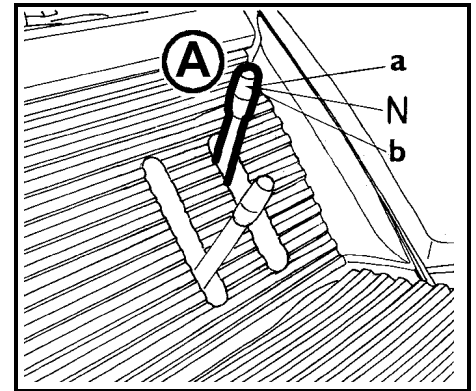
Take care for proper assembly of all covers and guards. Always re-assemble the PTO shaft guard after finishing of work. Connect and disconnect the cardan shaft only after definitive stopping of PTO shaft.

Disconnect the PTO drive by the hand lever - upper position (fig. A 93) before starting the tractor with attached machine.

Unauthorized persons must not stay between tractor and attached machine.

WARNING FOR WORK WITH PTO

It is recommended to shift the reverse control lever into forward position and main shifting lever into neutral when working with PTO at stopped tractor equipped with reversor. It is recommended not to work with engaged fourth and fifth road speed gear when the reversor shifting lever is in reverse position R for backward drive at tractor equipped with such reversor.



A 91

PTO INDEPENDENT AND GROUND SPEED SHIFTING

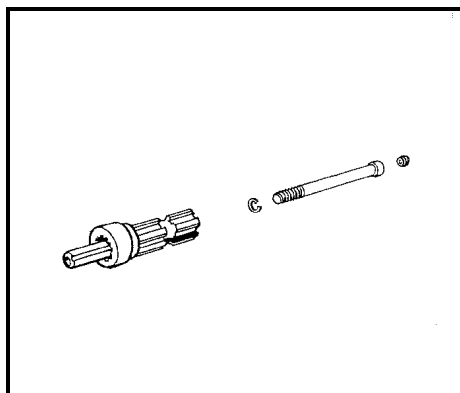
a - PTO ground speed (PTO is driven by transmission - PTO ground speed depends upon the shifted gear.)

N - Neutral.

b - Independent PTO speed (independent upon tractor travel speed), (540 RPM- standard, 540 and 1000 RPM- option)

PTO speed is shifted at stopped engine. PTO shifting lever handle is black.

AGRICULTURAL MACHINE PTO DRIVE



A 92

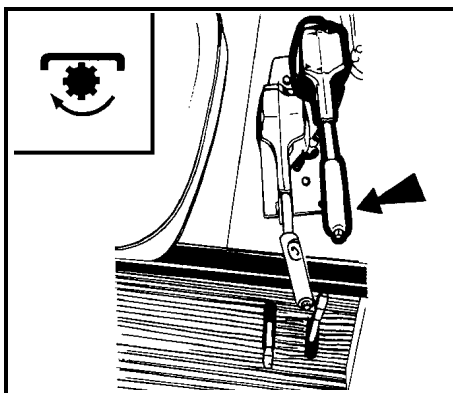
* PTO SHAFT - EXCHANGEABLE PTO SHAFT ENDS

The PTO shaft end for 540 RPM has six splines.

The PTO shaft end for 1000 RPM has twenty-six splines.

The six spline shaft is assembled in the factory. PTO guard, plug and the PTO end fixing screw must be disassembled when exchanging the PTO shaft end.

Lever grip for shifting of 540 and 1000 RPM is yellow.



A 93

PTO CLUTCH HAND CONTROL LEVER

Upper position - clutch is disengaged

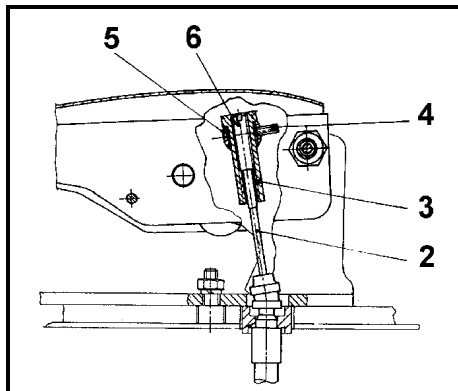
Lower position - clutch is engaged

The application of lever into disengage position is indicated with indicator light located on the dashboard.

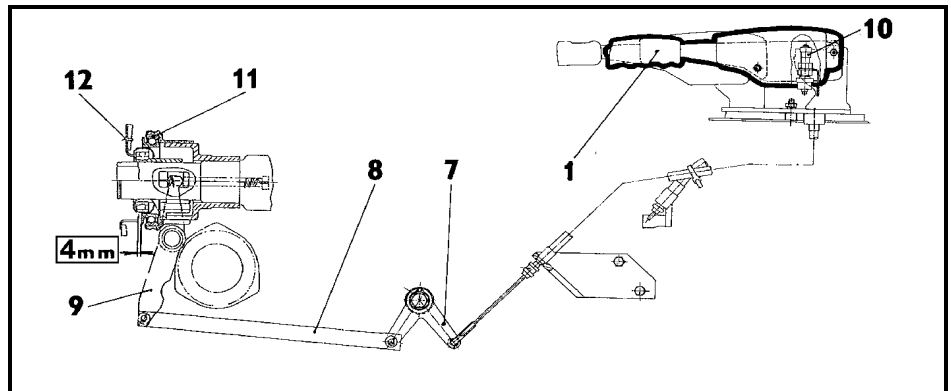


Connecting and disconnecting of cardan shaft to and from aggregated machine must be always carried out with shifting lever of dependent and independent PTO speed into neutral position (picture A 91 - position N). In addition, it is forbidden to carry out any repairs or cleaning on aggregated machines driven by rear PTO if shifting lever of dependent and independent PTO speed is not into neutral position.

AGRICULTURAL MACHINE PTO DRIVE



A 93a



A 94

PTO CLUTCH MECHANICAL CONTROL

Mechanical control actuates the PTO clutch levers through the thrust bearing. Disengaging mechanism consists of:

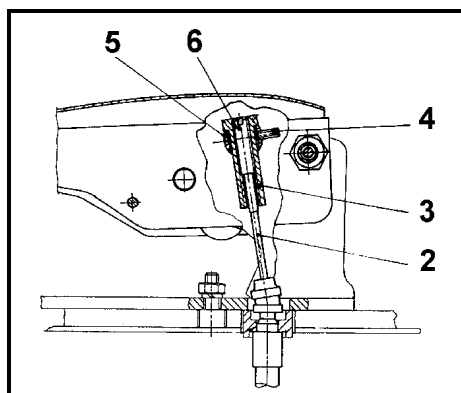
1. Lever.
2. Push-pull cable.
3. Adjusting nut.
4. Adjusting screw
5. Pin
6. Push-pull cable bolt
7. Double-arm lever.
8. Pull link.
9. Shaft with lever.
10. Switch
11. Bearing
12. Disengage levers of travel clutch

ADJUSTING PROCESS

1. Remove the plastic cover of PTO clutch hand control lever
2. Loosen the adjusting screw (4). You will loosen the nut (3) by this way.
3. Adjust the play between bearing (11) and clutch levers (12) by means of adjusting nut (3) so that, to be 4 mm play between bearing (11) and clutch levers (12), the play must not be lower than 2,5 mm. Hold the push-pull cable screw (6) in adjusting nut (3) to avoid its rotation together with adjusting nut (3) and so to avoid ply apart of push-pull cable wire (2).
4. Secure the adjusting nut (3) by adjusting screw (4). Pay attention that the adjusting nut (3) bears on upper surface of pin (5).

5. Indicator light must be 'on' after raising lever (1) into position in that the clutch is disengaged.
6. Control force on the lever (1) is maximally 200 N when correctly adjusted travel clutch disengage levers. travel clutch disengage levers must be adjusted if the force is excessively increased (approximately twice).

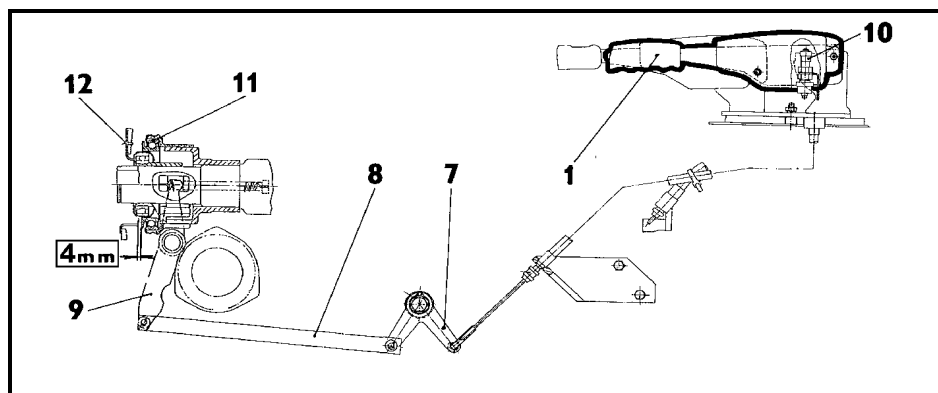
AGRICULTURAL MACHINE PTO DRIVE



A 94a

* PNEUMATIC CONTROL WITH MECHANICAL LINKAGE

PTO clutch is disengaged by raising of lever handle. Lever is automatically latched in the upper position.



A 95

1. Lever
2. Push-pull cable
3. Adjusting nut
4. Adjusting screw
5. Pin
6. Push-pull cable bolt
7. Two arm lever
8. Pin
9. Shaft with lever
10. Switch
11. Bearing
12. Travel clutch disengage levers
13. Adjusting link
14. Link
15. Pneumatic cylinder
16. Electromagnetic valve.

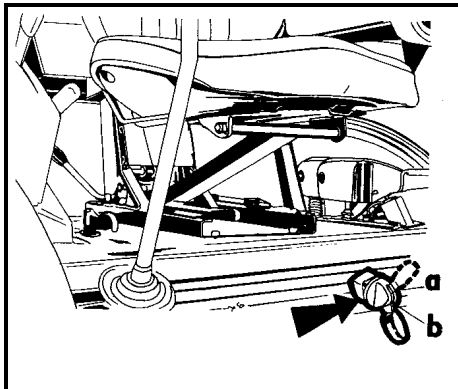
ADJUSTING PROCESS FOR PNEUMATIC CONTROL WITH MECHANICAL LINKAGE

1. Remove the plastic cover of PTO clutch hand control lever.
2. Adjust the play between bearing (11) and clutch levers (12). Do the adjusting by means of link (13) that way the play between bearing (11) and clutch levers (12) is 4 mm, this must not be lower than 2,5 mm.
3. Pneumatic cylinder piston (15) must be in its initial stop position when adjusting.

AGRICULTURAL MACHINE PTO DRIVE

4. Loosen the adjusting screw (4) and nut (3). Set the play $0,1^{+0,2}$ mm between pin (8) and opening of link (14) by adjusting nut (3). Hold the push-pull cable bolt 6) in adjusting nut (3) to avoid its turning together with adjusting nut (3) and ply apart of push-pull cable wire (2).
5. Secure the adjusting nut (3) by adjusting screw (4) after adjusting. Keep attention that the bearing surface of nut (3) touches the upper surface of pin (5).
6. Inspect the play between bearing (11) and clutch levers (12), eventually adjust by link (13).
7. After adjusting raise the PTO control hand lever (1) (with disconnected electrical supply for electromagnetic valve (16)) by force that is necessary for PTO declutching. Check adjusting according to points 4.,5. and 6. after releasing the lever (1).
8. Indicator light on the dashboard must be 'on' after raising PTO control hand lever (1) into declutching position.
9. The force on PTO control hand lever (1) is max. 120 N with connected electromagnetic valve switch (16) - 'on' and 200 N with disconnected electromagnetic valve switch at correctly adjusted travel clutch disengage levers (12). If the force is excessively increased (twice) the travel clutch engage levers must be again adjusted.

AGRICULTURAL MACHINE PTO DRIVE



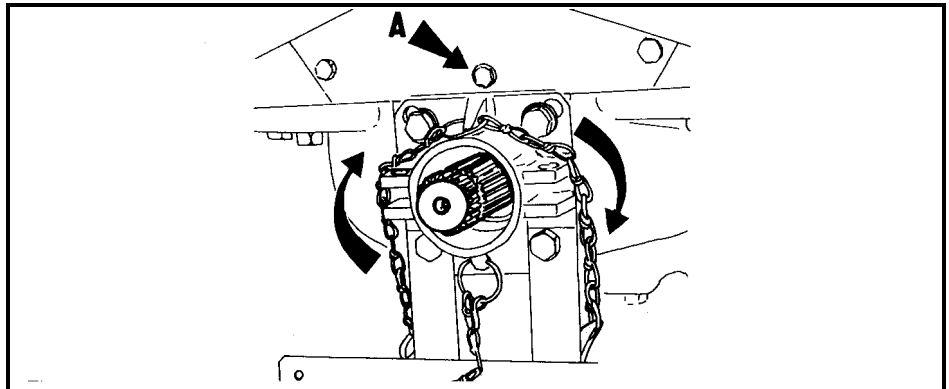
FRONT PTO CLUTCH CONTROL VALVE LEVER

Front PTO clutch control valve lever.

a - engaged PTO

b - disengaged (STOP) PTO

Clutch is engaged when the air pressure reaches minimally 500 kPa (measured on pressure gauge). The valve ensures automatic PTO clutch disengaging when the air pressure drops under 410 ± 60 kPa.



FRONT PTO SHAFT

Front end	PTO	21 splines, dia. Ø 35 mm, standardized
Speed		1000 RPM at 1820 engine RPM
Turning direction		see picture
Max. transmitted power		30 kW



There is a time gap between control valve lever move and machine starting move.

Warning!

The condensed water from the space of clutch sealing cuff must be removed before each winter time. This is done by several times clutch engaging and disengaging after removing the plug (A). The pressure air blows the impurities and condensed water from the space of clutch sealing cuff. Do not forget to reassemble the plug back.

NOTE

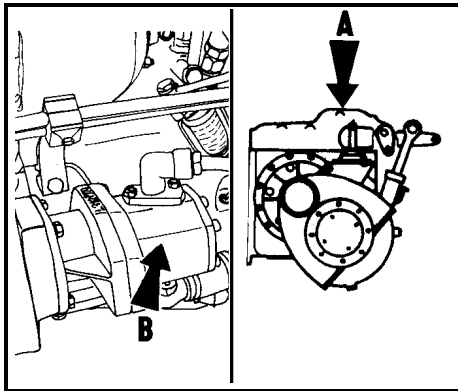
PDF byl vytvořen zkušební verzí FinePrint pdfFactory ⁷² <http://www.fineprint.cz>

HYDRAULIC SYSTEM

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Warning	87

The hydraulic system is intended for lifting and lowering of agricultural machines and implements attached in the rear three point hitch.

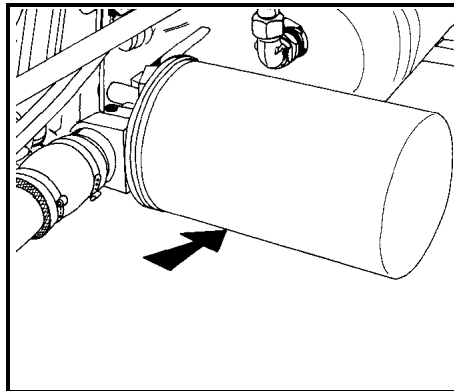
HYDRAULIC SYSTEM



A 98

HYDRAULIC SYSTEM (A)

Hydraulic system consists of inner and outer circuit. The oil from transmission and differential case is used for hydraulic system. The gear type pump (B), driven by engine timing gears, delivers the pressure oil into system. The non-disengageable pump is located on the left side of engine. The pump capacity is 40 l.min^{-1} (* 50 l.min^{-1} as an option) at nominal engine speed. Max. pressure 20 MPa is maintained by pressure relieve valve in the circuit (set to $18 \pm 2 \text{ MPa}$).



A 99

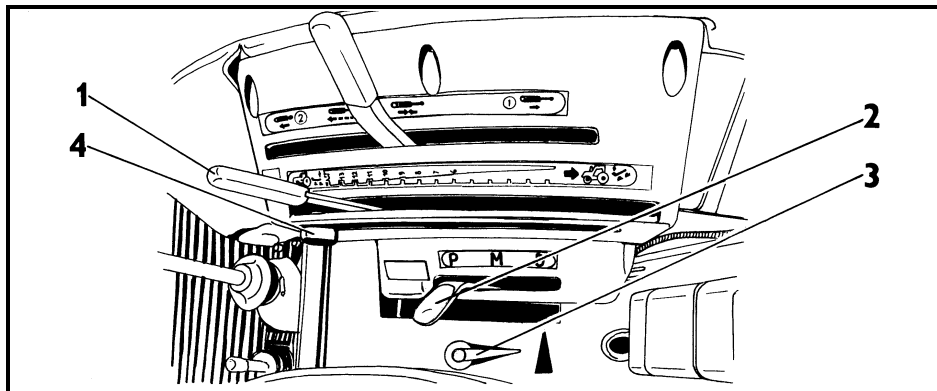
HYDRAULIC OIL FILTRATION

Hydraulic pump sucks the oil through the suction cleaner located on the left side of transmission. You can change the oil cleaner without transmission oil draining. The oil drains from the cleaner cartridge at cleaner exchange. A clean vessel of approximately 10 l capacity must be used. Prepare the new cartridge advance. The drained oil can be again used in transmission (in case the cartridge is exchanged outside of recommended time of oil or cleaner exchange).



Exchange the cleaner cartridge when cool oil - danger of your burning.

HYDRAULIC SYSTEM

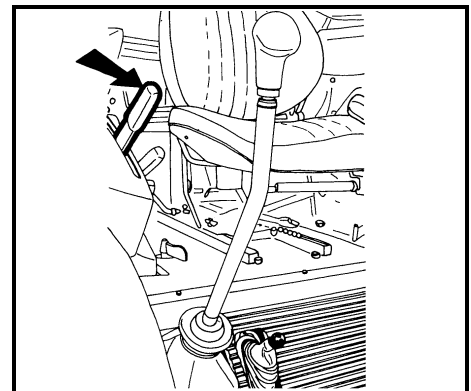


HYDRAULIC INNER CIRCUIT

Hydraulic inner circuit is controlled by the inner circuit control lever (1), control position mode selection lever (2) and response rate control lever (3). Adjustable stop (4) maintains the inner circuit control lever in the selected position.

RESPONSE RATE CONTROL LEVER (3)

The oil flow into inner circuit is the biggest one if the lever is in position towards driver's seat. Hydraulic response rate is reduced by restriction of the oil flow at the draft or mixed control, for example when ploughing in various soil conditions.

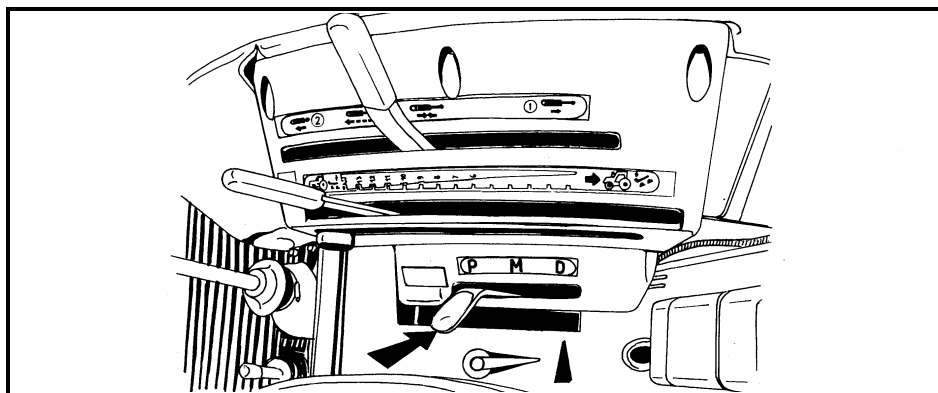


INNER CIRCUIT CONTROL LEVER (1)

Inner circuit control lever controls:

- Lifting and lowering implements.
- Height adjustment of three point hitch with implements at selected position control.
- Pulling force adjustment (resistance of implement at draft or mixed control)
- Setting of so called floating position at work with implement equipped with supporting wheel.

HYDRAULIC SYSTEM



A 102

CONTROL POSITION MODE SELECTION LEVER

Lever has three positions marked by P, M, D:

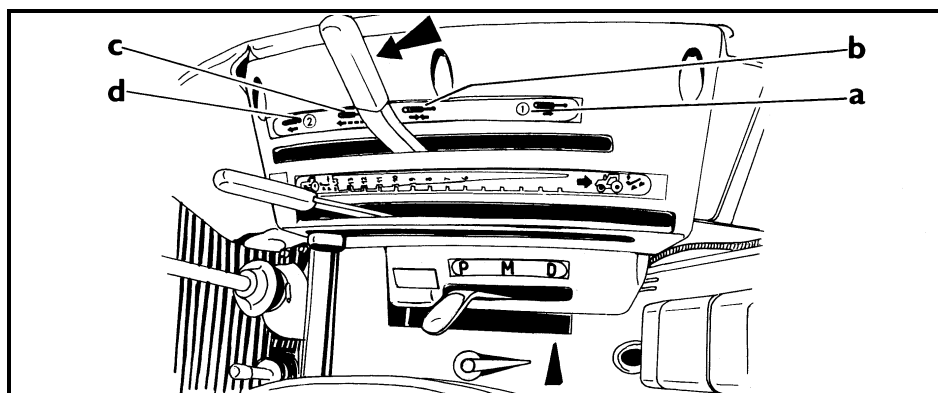
- P - Position control - Implement attached in the three point hitch is automatically maintained in the constant position with regard to the tractor.
- M - Mix control - is a combination of position and draft control. This is suitable especially for ploughing at soils with various resistance.
- D - Draft control - Implement attached in the three point hitch is automatically readjusted depending upon the soil resistance change.

All position controls enable also work with implement having the supporting wheel in so called floating (free) position.



The control position mode selection lever must be moved into P position when transporting implement.

HYDRAULIC SYSTEM



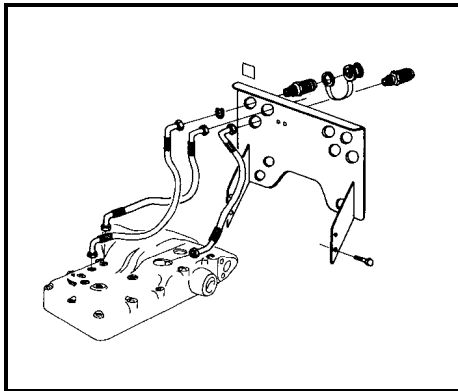
A 103

OUTER CIRCUIT CONTROL LEVER

There are three positions on the label:

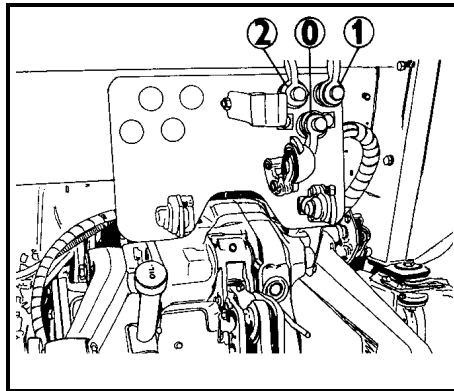
- a - Pressure is in quick-coupler No "1", quick-coupler No "2" is connected with return line. Lever is moved into its rear margin position. The lever must be kept in this position otherwise is automatically turned into neutral position "b".
- b - Neutral position (locked). Outlets of quick-couplers No "1" and "2" are closed and the oil is blocked in attached hydraulic implement. The lever is automatically kept by spring in this position.
- c - Floating (free) position. Both outlets of quick-couplers No "1" and "2" are connected with return line and the oil can freely flow in both directions. Lever is locked by valve ball lock in this position.
- d - Pressure in quick-coupler No "2", quick-coupler No "1" is connected with return line. Lever is moved into its forward margin position. The lever must be kept in this position otherwise is automatically turned into floating position "c".

HYDRAULIC SYSTEM



HYDRAULIC OUTER CIRCUIT

Hydraulic outer circuit delivers the pressure oil into hydraulic implements connected to hydraulic outer outlets equipped with quick-couplers. Quick-coupler sockets have inner diameter 12,5 mm and correspond to the ISO international recommendation.



HYDRAULIC OUTER CIRCUIT OUTLETS -REAR

Hydraulic outer circuit outlets are equipped with three quick-couplers located on quick-coupler panel. Quick-couplers No "1" and No "2" are alternatively pressurized. The third quick-coupler No "0" is connected directly with differential case space and is intended for turning of the oil from hydraulic implements (for example from rotary hydro-motors etc.).

Attached implements using the oil from hydraulic outer circuit must be filled with the same kind of oil as recommended for tractor transmission.

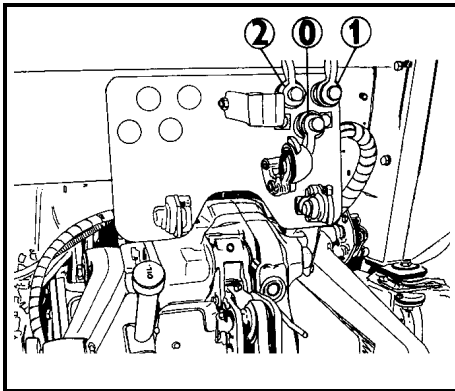
MAX. OIL CAPACITY SUPPLIED FROM OUTER CIRCUIT

Max. 20 liters of oil can be temporarily supplied from outer outlets for work of attached implements. At bigger supply of oil the hydraulic pump might draw in the air and the pump could be damaged.

In case the oil level dropped after disconnecting implement caused by permanent supply of oil from tractor into hydraulic circuit of implement it's necessary to add the missing quantity of oil.

Transmission and differential case oil capacity - see table "QUANTITY OF LIQUIDS". Quantity of oil is bigger by two liters at 4WD tractors.

HYDRAULIC SYSTEM

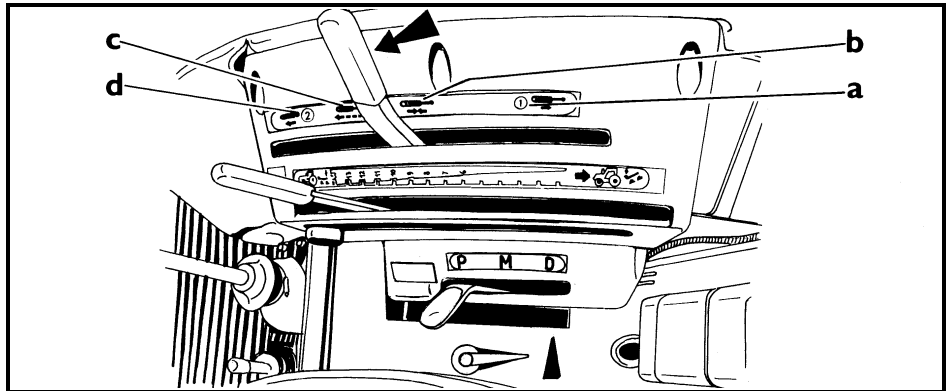


A 106

SINGLE-ACTING HYDRAULIC CYLINDER CONTROL

Single-acting hydraulic cylinder is ever connected with quick-coupler No "1":

- lifting, - lever is in the rear margin position (it must be kept by hand in this position)
- neutral, - lever is in the middle position and is kept by spring in this position
- lowering, - lever is in the middle, between neutral and front margin position and is automatically locked (so called floating position)



A 107

DOUBLE-ACTING HYDRAULIC CYLINDER CONTROL

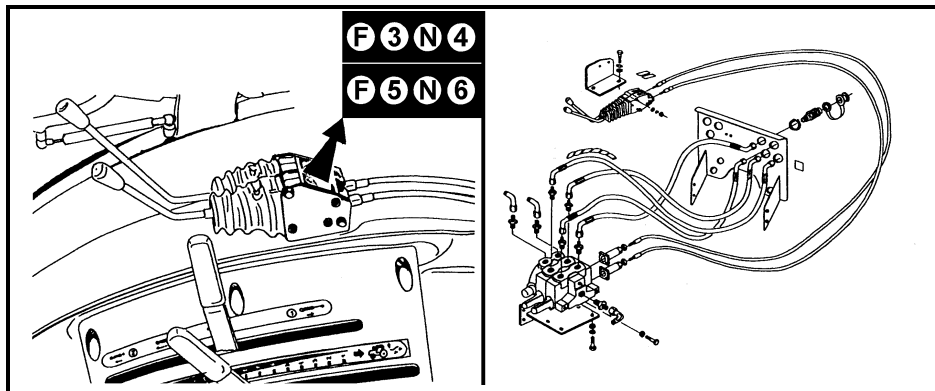
Double-acting hydraulic cylinder is connected with quick-coupler No "1" for moving piston rod out of cylinder and with quick-coupler No "2" for sliding in:

- lifting, lever is in the rear margin position "a" (it must be kept by hand in this position)
- neutral, lever is in the middle position "b" and is kept by spring in this position
- lowering, lever is in the front margin position "d"
- floating (free) position "c", lever is in the middle, between neutral and lower margin position and is automatically locked - both quick-couplers are connected with return line.



Control lever must be moved as quickly as possible over position "c" (floating position) at work with outer circuit double-acting hydraulic cylinder because both sides of cylinder are connected with the return line and so the uncontrolled movement of piston rod can start.

HYDRAULIC SYSTEM



A 108

*SELECTIVE CONTROL VALVE

2nd & 3rd selective control valve (SCV) consists of two sections. Each section has two pressure outlets (marked by °3,4,5,6°). Those are alternatively connected with:

- a - quick-couplers (°3,4,5,6°), located on the rear panel
- b - front three point hitch circuit for lifting and lowering (quick-couplers °5,6°)
- c - front quick-couplers located on front panel (quick-couplers °3,4°)

Quick-couplers °3,4° are located on the rear panel even for alternative No °2 and 3°.

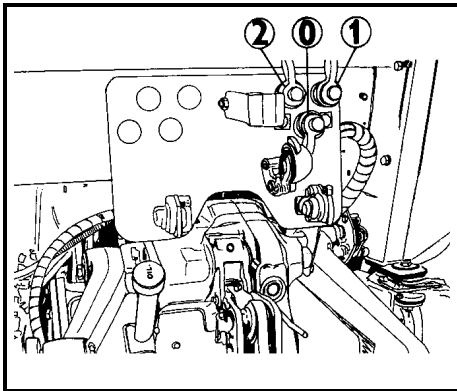
Both sections are equipped with floating position (labeled F), sections with outlets °5, 6° are moreover equipped with lock in

both pressure positions. The spool valve in this section is automatically turned into neutral position when the pressure reaches the relieve valve pressure. SCV control levers are located on the right fender in the cab nearby hydraulic control levers.

*FRONT OUTER CIRCUIT OUTLETS

Front outer outlets are equipped with the three quick-couplers located on panel, quick-couplers °3,4° are alternatively pressurised. The third quick-coupler °0° is directly connected with the differential housing space and is intended for the oil coming back from outer hydraulic implements.

HYDRAULIC SYSTEM



A 109

CONNECTION OF MACHINES AND IMPLEMENT TO HYDRAULIC OUTER CIRCUIT

ROTARY HYDROMOTOR OR SCV

Oil inlet line into these implements (marked P) is connected with quick-coupler "1", oil return line is connected with quick-coupler "0". If the reversible hydromotor is used the oil lines are connected with quick-couplers "1" and "2".

REAR THREE POINT HITCH

REAR THREE POINT HITCH

Rear three point hitch is intended for attaching of carried or semi-carried agricultural machines and implements with hitch points of category I and II according to ISO regulation. Categories are differed on the base of hitch axis length (implement attachment points distance). This is the distance of lower link joint ball centers at attached implement. The link axis length is 728 mm for category I and 870 mm for category II. The inner opening of lower link ball is 28 mm equal for both categories according to ISO regulation. The inner opening of top link ball is 25 mm.

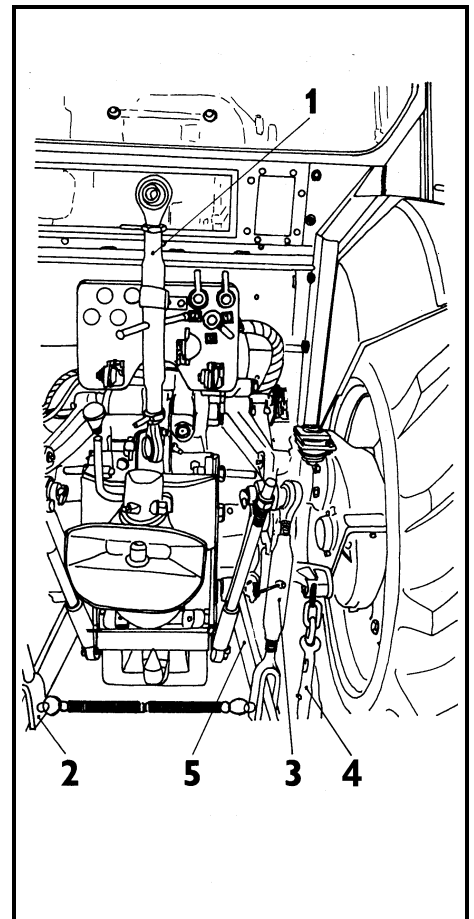
The three point hitch consists of:

1. Top link.
2. Left lift link.
3. Right adjustable lift link.
4. Lower draft link stabilizers.
5. Lower draft links.

The extended lower link supports are assembled as the standard at tractors Z 6321 to Z 7341, those enable fixing of lower links and their stabilizers. The narrow lower link supports - category I as the standard or * extended lower link supports are assembled at tractors Z 3321 to Z 5341.



Non authorized persons who are not charged to handle the attached tractor implements must not be left between tractor and attached implement. Do not park the tractor with lifted implement.



A 110

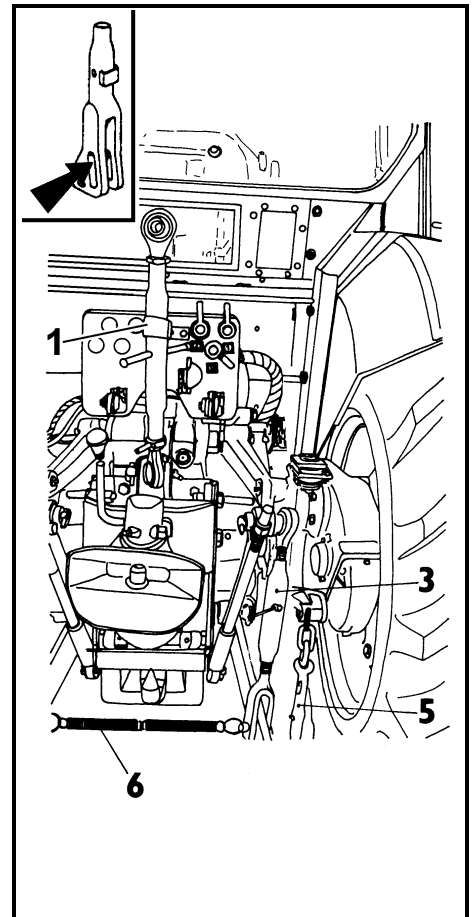
REAR THREE POINT HITCH

REAR THREE POINT HITCH ATTACHING

The left lifting link is intended for course vertical adjustment of lower link position and is adjustable after disconnecting of its upper end from hydraulic lifting arm pin. The right lift link (3) serves for fine adjustment of lower link position by means of gearbox controlled from driver's cab. Lower link ends can be mutually vertically adjusted within range 200 mm. Floating (free) position of implement and swinging round the axis is enabled after sliding of left link pin into the groove. In this case the lower draft link ends can be freely vertically moved by 100 mm one each other. Lower link stabilizers (5) serve for limiting of side to side swing of lower links within the whole three point hitch lift. The side swing can be max. 125 mm to each side measured on the lower link balls after adjusting to maximal stabilizer length.

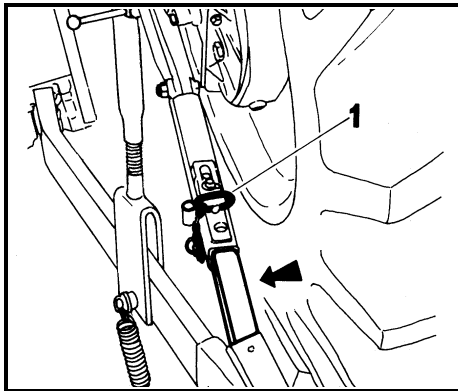


Lower draft links have to be connected by springs (6) and the top link (1) hooked in the spring holder when transportation without implement. Lower link stabilizers (5) need to be shortened at transportation to avoid the undesired side swing of implement.



A 111

REAR THREE POINT HITCH



A 112

* LOWER LINK STABILIZERS

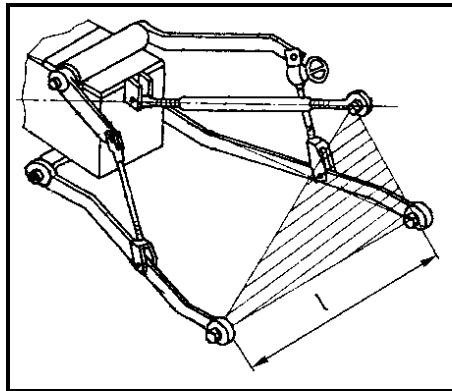
Lower link stabilizers enable the side swing of lower links approximately 125 mm to each side measured on lower balls when working with implement category I and 90 mm with implement category II.

Lower link stabilizers are automatically set by attaching implement.



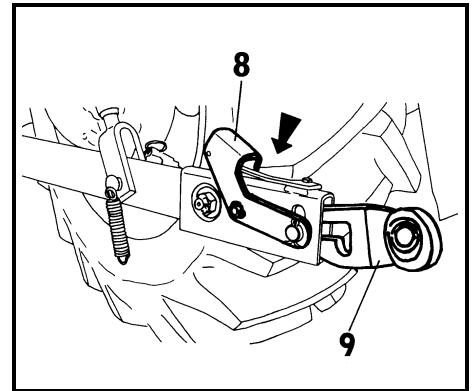
Both stabilizers must be always assembled on the tractor.

The side swing is limited by locking of stabilizers with pin 1.



A 112a

The opening nearby the groove is intended for category I and the other one for category II. The rear wheel tread must be readjusted when working with implement of category II that needs the side swing (for example plough). The rear tread 1500 mm (standard setting) must be set for tires 16,9-30, 16,9-34, 18,4-34 and at link axis 870 mm (implement attachment points distance)

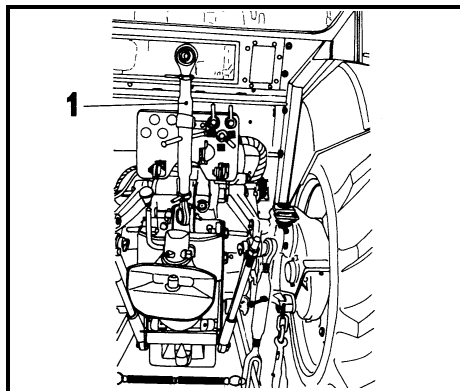


A 113

* TELESCOPIC LOWER DRAFT LINKS

Telescopic lower draft links make implement attaching easy. Telescopic draft link ends (9) are loosened after pushing of latches (8) down. Slipped out draft link ends are fitted onto both implement pins and are locked by quick lock pins. Draft link ends are slid into draft links after driving reverse and are automatically locked in working position.

REAR THREE POINT HITCH



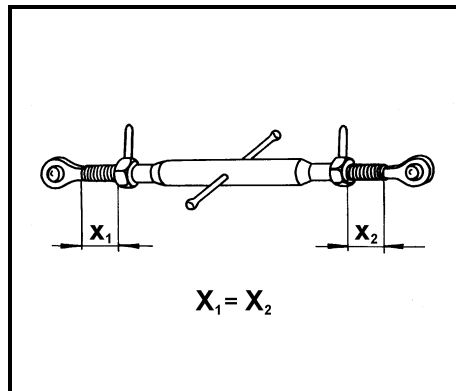
A 114

TOP LINK

Top link (1) is length adjustable within range 180 mm. This is attached to the tractor into one from four openings of bracket that transfers impulses (senses) from attached implement to the torsion shaft located in hydraulic rockshaft.



Top link must be moved into opening d at implement transportation to avoid overload of hydraulic kinematics system or attached implement falling down.

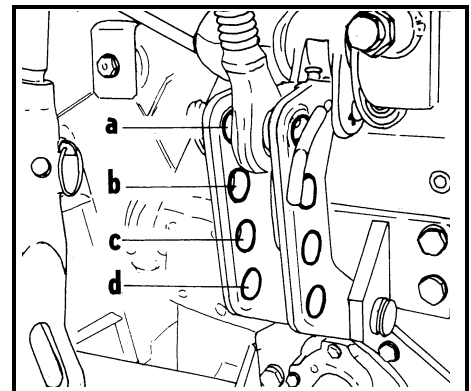


A 115

TOP LINK



Pay attention to keep the same length of joints from the link tube at prolongation of the top link.



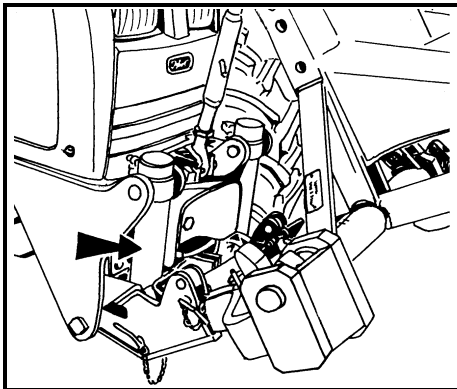
A 116

SELECTION OF TOP LINK POSITION

Attachment of top link into one from openings "a"-"d" influences the following:

- Sensitivity of hydraulic response control position selection lever in position "D" or "M"). The biggest response sensitivity is with top link in the opening "a".
- Implement tilting when in lifted position with regard to the implement frame high (460 mm to 610 mm). The smallest tilting is with top link in the opening "a".

*FRONT THREE POINT HITCH



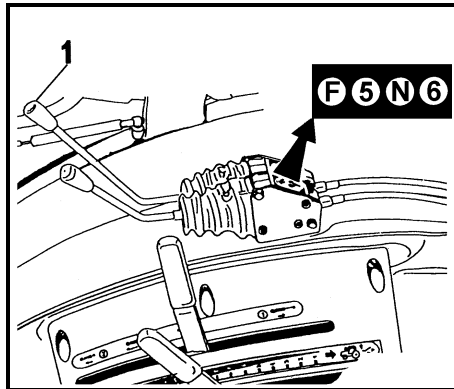
A 117

*FRONT THREE POINT HITCH

Front three point hitch is intended for attaching of frontal carried agricultural machines and implements of category II according to ISO standard.

! *Within the implement transportation the front three point hitch must be always hydraulically locked in lifted position by the ball valve located on the left hand side of tractor above the front axle.*

This hydraulic lock is also recommended in case if no implement is attached into the front three point hitch.

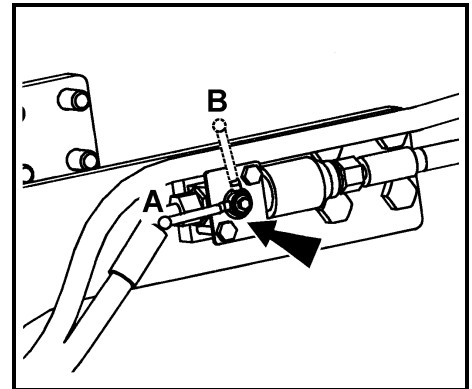


A 118

FRONT THREE POINT HITCH CONTROL

Three point hitch is equipped with two single or double - acting cylinders that are controlled by oil from the 2nd and 3rd selective control valve. Lifting and lowering is controlled by SCV lever (1):

- lifting is done by moving the lever into position 6
- lowering is done by moving the lever into position 5
- position F serves for floating position.
- position N serves for locking of hitch

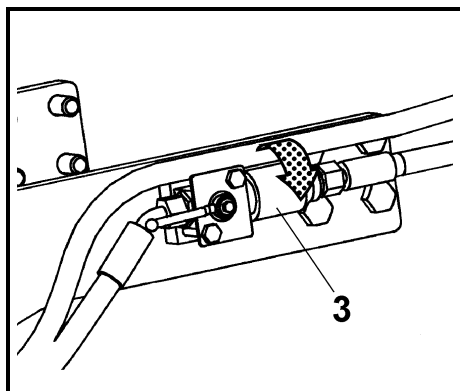


A 119

REGULATION OF LOWERING AND HYDRAULIC LOCK OF FRONT THREE POINT HITCH

Lowering speed of hitch with implement can be controlled by return reduction valve. Hydraulic lock of front three point hitch in any position is carried out by means of the ball valve and by turning the lever from position A by 90°, (perpendicularly to valve axis) to B position.

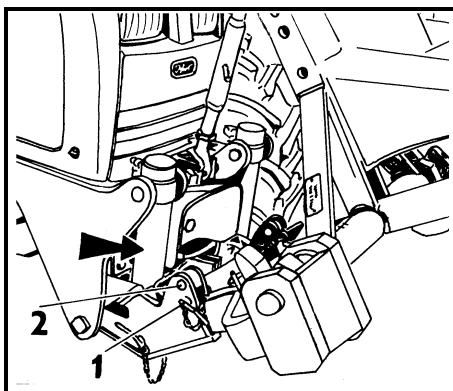
*FRONT THREE POINT HITCH



A 120

REDUCTION VALVE SETTING

Reduction valve (3) setting is recommended before starting work with attached implement in front three point hitch that way the time needed for implement lowering from the upper position is 1 to 1,5 second. Lowering speed is increased by turning the valve body into left (in arrow direction).

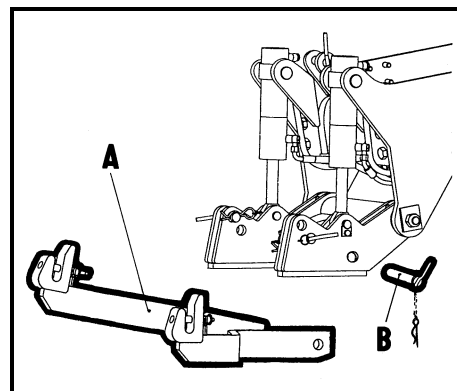


A 121

CARRIED IMPLEMENT ATTACHING

The implement is attached into the front three point hitch forks and is locked by pins. Fixed and floating position is provided by pins:

- fixed position of attached implement is provided by assembly of pins into position 1
- floating position of attached implement is provided by assembly of pins into position 2



A 122

WARNING

The highest allowed speed of tractor with agricultural machine attached into the front three point hitch is 15 kmph.

We recommend removing of lower lifting arms (A) from supports at tractor equipped with front three point hitch if not used for attaching implement. Front lower links are disassembled after removing of safety pins and hitch pins (B).

NOTE

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FRONT AND REAR AXLE

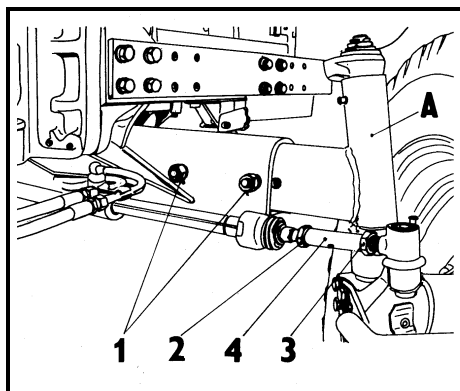
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Rear wheel tread setting	96

FRONT AXLE KNEES

Tractor Type	Z 3321	Z 3321, Z 4321	Z 3321, Z 4321 Z 5321, Z 6321	Z 4321, Z 5321 Z 6321, Z 7321
Front tyre	6,00-16	6,50-16	*7,50-16	7,50-20
Adjustable tread	1450, 1525, 1825	1450, 1525, 1825	1425, 1500, 1800	1425, 1500, 1800
Tractor knee load capacity 20 km.h ⁻¹ at tractor speed 8 km.h ⁻¹	1510 kg 2240 kg	1660 kg 2460 kg	2010 kg 2980 kg	2360 kg 3000 kg

Complete summary of treads and maximal allowed loads caused by additional devices or attached machines for front axles of particular tractor models is mentioned in chapter 'MAIN TECHNICAL PARAMETERS'.

FRONT WHEEL TREAD SETTING



FRONT WHEEL TREAD SETTING AT NON-DRIVEN AXLE

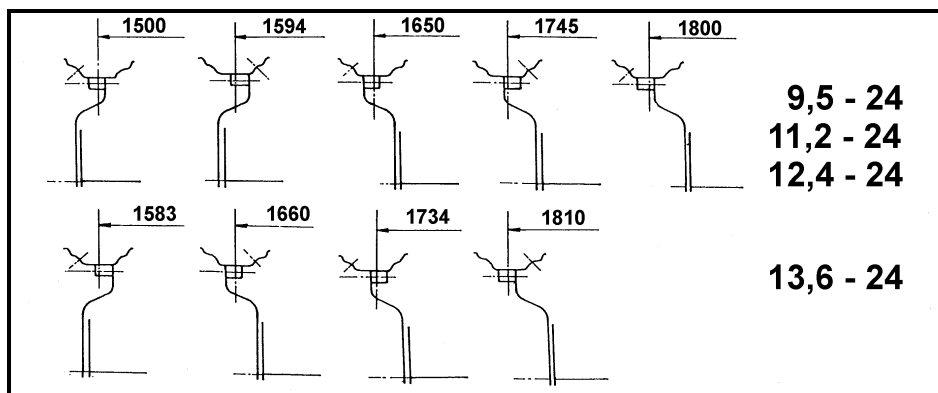
Front wheel tread setting is provided by sliding out and in of front axle knees (A) at lifted axle and with corresponding setting of adjusting elements.

ADJUSTMENT OF FRONT AXLE KNEES

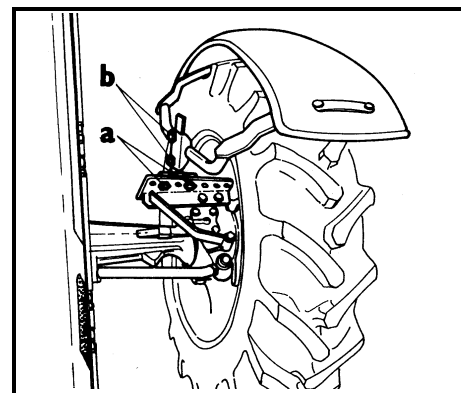


- Thread out axle knee nuts (1) and remove the screws.
- Loosen the lock nuts on ball joints (2) on ball joint sockets (3) and remove both connecting rods (4).
- Slide out or in the knees to the required tread, reassemble screws. Tighten axle knee nuts by torque 177-196 Nm.
- First of all fix the tractor against possible movement, lift the axle by lifting jack and support it.
- Thread the correct connecting rods (4) with marking of wheel tread (delivered as an option) adjust the toe-in and secure by lock nuts (2,3).
- Tighten nuts by torque 122 - 136 Nm.

FRONT DRIVING AXLE TREAD SETTING



A 124



A 125

FRONT DRIVING AXLE TREAD SETTING

The following treads can be set for front driving axle at used tires 9,5-24, 11,2-24 and 12,4-24:

1500, 1594, 1650, 1745 and 1800 mm.

The following treads can be set for front driving axle at used tire 13,6-24:

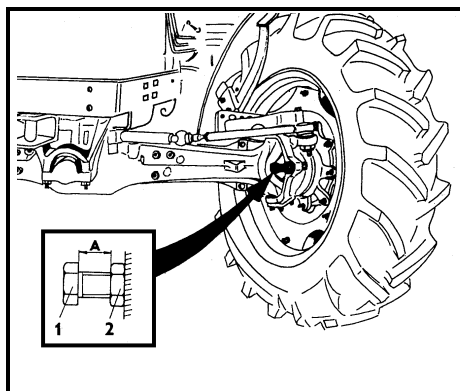
1583, 1660, 1734 and 1810 mm

Tighten front wheel nuts by torque 270 - 300 Nm.

FRONT DRIVING AXLE FENDERS

Front fenders are located on adjustable holders that can be side (moving of screws "a" into another openings) and/or height (moving of screws "b" into another openings) adjustable according to the desired wheel treads and used wheel tire size.

FRONT DRIVING AXLE STOP SETTING AT Z 3341, Z 4341, Z 5341, Z 6341, Z 7341



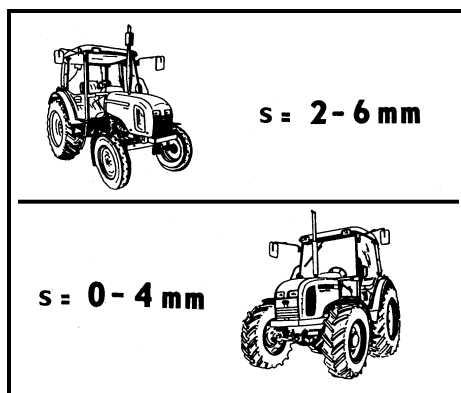
SETTING OF STOPS

Set stops at each change of front wheel tread according to the mentioned tables after loosening of nut "2" and treading out or in of screw "1" to value "A".

tractor	w/fenders				
tire	9,5-24	11,2-24	11,2-24	12,4-24	13,6R24
treads	A (mm)	A (mm)	A (mm)	A (mm)	A (mm)
1500	33	44	-	-	-
1583	-	-	-	-	43
1594	29	-	43	43	-
1650	22	-	37	37	-
1660	-	-	-	-	37
1734	-	-	-	-	33
1745	19	-	29	30	-
1800	-	-	25	26	-
1810	-	-	-	-	26
tractor	w/o fenders				
tire	9,5-24	11,2-24	11,2-24	12,4-24	13,6R24
treads	A (mm)	A (mm)	A (mm)	A (mm)	A (mm)
1500	29	*36	-	-	-
1583	-	-	-	-	36
1594	24	*30	26	31	-
1650	19	*25	22	27	-
1660	-	-	-	-	30
1734	-	-	-	-	25
1745	13	*21	18	21	-
1800	13	*17	14	17	-
1810	-	-	-	-	21

* - for Z 3341 only

FRONT WHEEL TOE-IN



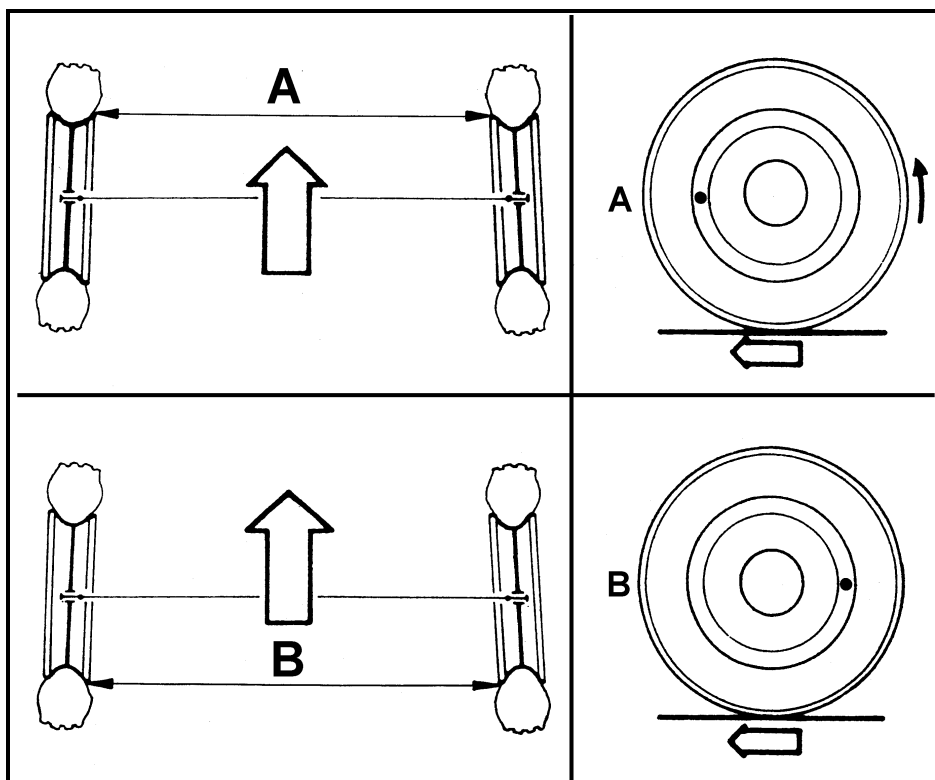
A 127

FRONT WHEEL TOE-IN

Front wheel toe-in is measured on the rim and is 2 to 6 mm at tractor with non - driven axle.

Front wheel toe-in is 0 to 4 mm at tractor with front driving axle.

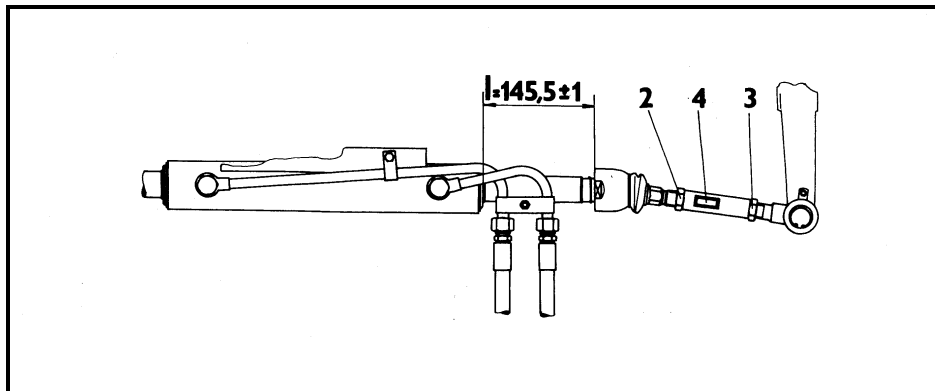
Check and eventually adjust the play of front wheel bearings before toe-in checking.



A 128

Front wheel toe-in is measured on rims. The toe-in "S" is calculated as difference of measured values: $S = B - A$

FRONT WHEEL TOE-IN



A 129

THE TRACTORS ARE STANDARTLY EQUIPPED WITH HYDROSTATIC STEERING

The process of setting is valid for both axles:

- Measure the distance between rims in front in the horizontal wheel axis plain. Mark the measuring points.
- Drive the tractor so that the marked points will be in rear horizontal position (turned by 180°) and again measure the distance between marked points
- Tighten the nuts of ball joint socket by torque 122 - 136 Nm. The upper surfaces of joint sockets must be parallel.

Tractors with front non-driven axle:

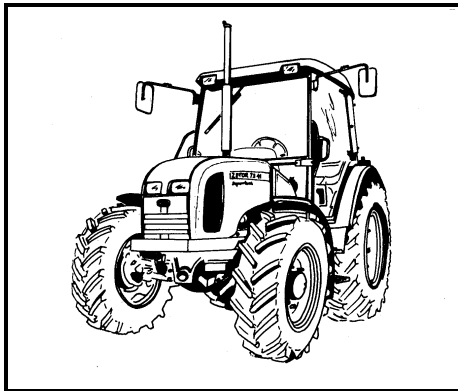
- Slide out the steering cylinder piston rod up to value 145,5 „ 1.
- Loosen nuts (2,3) and adjust the toe-in to the required value by turning of rod (4) (measure on the rim side)

Tractors with front driving axle:

- Turn wheels parallel with longitudinal tractor axis.
- Loosen the ball joint socket nuts of steering connecting rod at hydraulic cylinder.
- Adjust the prescribed toe-in by turning of ball joint pin. Adjust both joints to keep the same steering angle on both sides (measure on rim side).

If you use tractor in the road traffic (dominant using) we recommend to turn the front tires on the rims. You prolong the durability of tires.

REAR WHEEL TREAD



A 130

REAR WHEEL TREAD SETTING

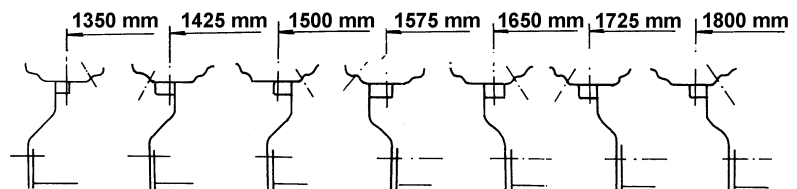
On the base of rear tire width, the rear wheel tread can be set within the following range by 75 mm:

1350 to 1800 mm - Z 3321, Z 3341, Z 4321, Z 4341, Z 5321, Z 5341, Z 6321, Z 6341, Z 7321, Z 7341

Standard rear wheel tread 1500 mm is set at the factory on models Z 3321 to Z 7341.

Rear wheel tread 1350 can be minimally set for following tires (12,4-28; 12,4-32; 13,6-36).

Z 3321 - Z 7341



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REAR WHEEL TREAD SETTING

The rear wheel treads are adjustable by step 75 mm and are set by changing of rim and disc position. Tread setting is done with lifted tractor rear part to enable rear wheel free turning.

 *Don't forget to block front wheels against movement before lifting.*

Tighten all screws connecting the disc and rim by torque 225 - 250 Nm and nuts of studs connecting the disc and shaft by torque 400 - 470 Nm after tread setting.

NOTE

PDF byl vytvořen zkušební verzí FinePrint pdfFactory⁹⁷ <http://www.fineprint.cz>

NOTE

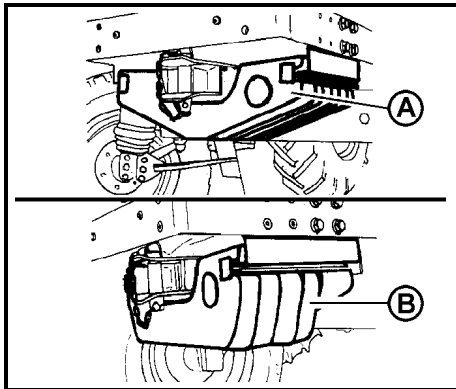
PDF byl vytvořen zkušební verzí FinePrint pdfFactory⁹⁸ <http://www.fineprint.cz>

BALLAST WEIGHTS

	Page
* Under frame front ballast weights (A)	100
* Under frame front ballast weights (B)	100
* Ballast weights for 4wd tractors (A)	100
* Front ballast weights	100
Rear wheel ballast weights	100
Valve for filling of tires with liquid	101
Blocking front wheels	101
Process for filling water into tires (picture on the following page)	101
Process for draining liquid from tires	102
Max. liquid weight (kg) depending upon tire size	103
Antifreeze liquid for filling of tires	103

Ballast weights are necessary for axle load increase, for ensuring of tractor steeringability or stability (keep manufacturer's instructions when working with front loader).

*BALLAST WEIGHTS



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* UNDER FRAME FRONT BALLAST WEIGHTS (A)

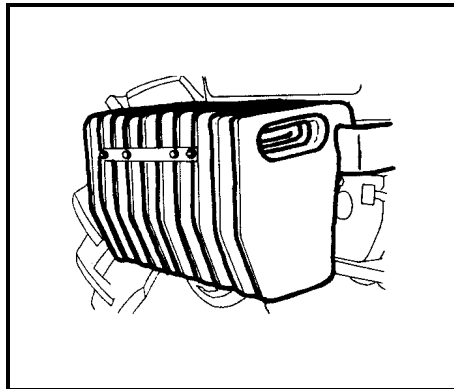
ballast weight frame (1) - 20 kg
ballast weights (2) - 135 kg

* UNDER FRAME FRONT BALLAST WEIGHTS (B)

ballast weight frame (3) - 20 kg
ballast weights (4) - 100 kg

* BALLAST WEIGHTS FOR 4WD TRACTORS (A)

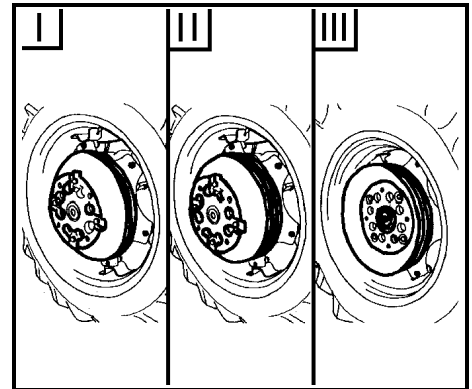
ballast weight frame (1) - 20 kg
ballast weights (2) - 100 kg



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* FRONT BALLAST WEIGHTS

a - ballast weight frame (1) - 20 kg
b - ballast weights in front of mask (2) - 210 kg
c - front three point hitch weights - holder + 12 pcs of weights - 260 kg
Ballast weight c) with holder is attached in the front three point hitch lower links. This weight is intended for assuring of longitudinal stability when implementation with heavier implements attached in the rear three point hitch.

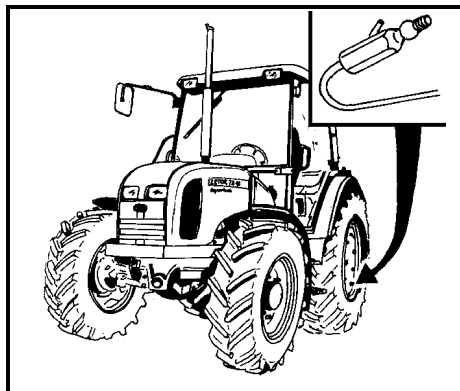


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REAR WHEEL BALLAST WEIGHTS

I
2 + 4 pcs - 150 kg for wheel tread 1350 and 1500 mm
II
2 + 8 pcs - 270 kg for wheel tread 1575 to 1800 mm
III
2 + 8 pcs - 270 kg for wheel tread 1500 to 1800 mm
IV
2 + 2 pcs - 90 kg for wheel tread 1350 to 1800 mm

FILLING LIQUID INTO TIRES

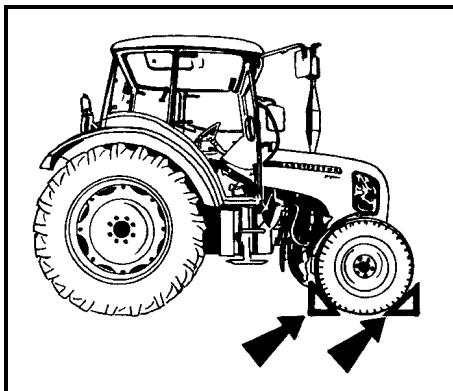


VALVE FOR FILLING OF TIRES WITH LIQUID

All rear wheel tubes are equipped with valve enabling filling of tires with liquid when the adapter is used.



Filling of front tires and rear tires double assembly with liquid is not allowed.



BLOCKING FRONT WHEELS



Don't forget to block front tires against movement before lifting of rear wheels.

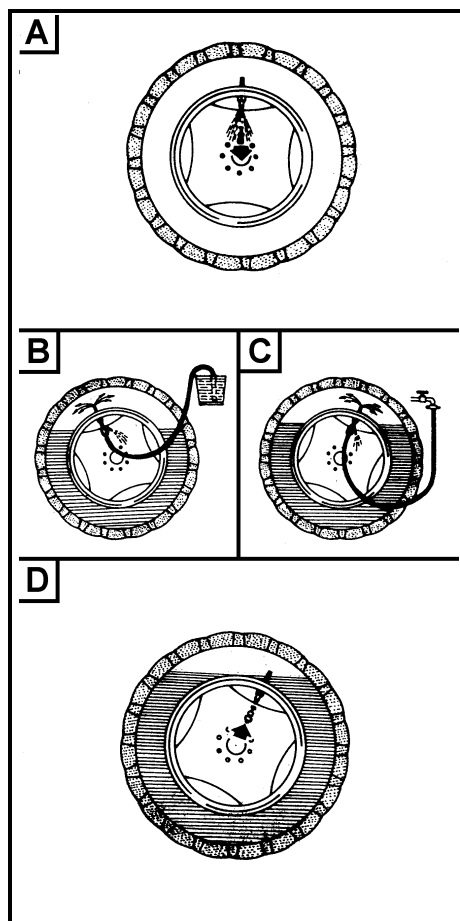
PROCESS FOR FILLING WATER INTO TIRES (picture on the following page)

- Unload tire by lifting tractor and turn it with valve upwards (A).
- Deflate the tube and remove the valve insert.
- Thread the adapter for filling of tires with water and slide the water hose over adapter.

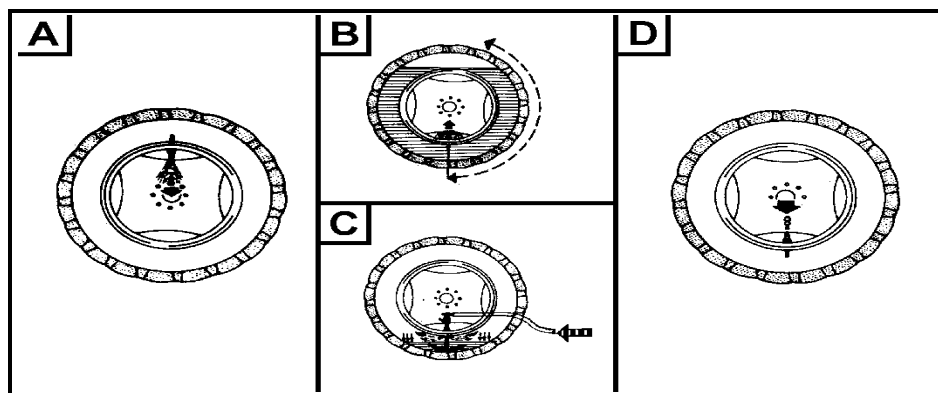
Fill the tube with prescribed quantity of liquid. The tank (B) or pressure water (C) can be used for filling of tire. Remove the water hose and the adapter for filling of tire with water.

- Thread the valve insert and inflate the tire into prescribed inflation pressure (D).
- Thread the valve dust cap after inflation.
- Fill the second tire by the same way.

FILLING LIQUID INTO TIRES



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PROCESS FOR DRAINING LIQUID FROM TIRES

- Unload tire by lifting tractor and turn it with valve upwards (A).
- Deflate the tube and remove the valve insert. Turn wheel with valve downwards.
- ATTENTION!** Underpressure can be created in tire when draining liquid. That's why turn sometimes the wheel with the valve upwards (B).
- Remove the rest of liquid from tire by means of pressure air after assembly of adapter for filling tires with water (C). Blow out the liquid so long until liquid runs from adapter extension tube.
- Remove the adapter for filling of tires with water. Thread the valve insert back and inflate the tire into prescribed inflation pressure(D).
- Thread the valve dust cap after inflation.
- Remove liquid from the second tire by the same way.

FILLING LIQUID INTO TIRES

MAX. LIQUID WEIGHT (KG) DEPENDING UPON TIRE SIZE

TIRE SIZE	12,4-28	12,4-32	12,4-36	13,6-36	14,9-28	16,9-28	16,9-30	16,9-34	18,4-30	18,4-34
WEIGHT (kg)	125	140	160	180	190	215	240	250	337	345

ANTIFREEZE LIQUID FOR FILLING OF TIRES

Water for preparation of liquid (litters)	Calcium chloride CaCl_2 (kg)	Hydrated lime (kg)	Liquid density at 20°C	Solidity point "C (approx.)	Total volume (litters)	Additional weight (kg)
45	11,8	0,21	1,13	-18	50	57
45	13,9	0,23	1,18	-25	50	59
45	15,4	0,25	1,21	-30	50	61

Liquid preparation:

1. Dry calcium chloride CaCl_2 is added into water, never the other way!
2. Liquid is not dangerous, but it must be handled carefully. Wash the spilt liquid drops with clean water.
3. Let the liquid cool down before filling. Keep the prescribed quantity of hydrated lime.
4. Liquid must not get into contact with metal parts and with electrical installation. Tube valve is liquid resistant.
5. Antifreeze liquid prepared in this consistency must not be used in cooling system.

NOTE

TRACTOR MAINTENANCE

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Lubrication chart of tractor Z 3341, Z 4341, Z 5341, Z 6341, Z 7341	116
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Warning:.....	120
Quantity of liquids (in liters)	121

Regular and properly done technical maintenance ensures trouble-free and safe operation of tractor. All necessary actions are covered in planned technical maintenance that starts immediately after starting tractor in operation. You will avoid possible technical troubles and prolong life of your tractor by properly done technical maintenance. Keep consistently safety regulations at all operations.

PLANNED TECHNICAL MAINTENANCE

INSPECTION AND TRACTOR MAINTENANCE														
Inspection and maintenance operation	After engine hours													
	10	70	100	200	600	1200	1800	2400	3000	3600	4200	4800	5400	6000
ENGINE														
Engine oil exchange		X		X				Every 200 hours						
Engine oil cleaner exchange		X		X				Every 200 hours						
Cylinder head nuts retorque		X												
Valve clearance inspection and adjustment		X				X		X		X		X		X
Engine lubrication pressure inspection - after starting								Every starting						
Inspection for oil level and lubrication system leaks	X							Every 10 hours						
Turbocharger compressor housing and intake manifold cleaning								X				X		
Inspection for turbocharger leaks and bearing play								X				X		
Inspection for water pump bearing play								X				X		
ENGINE ACCESSORY														
Inspection for leaks and function of hydraulic system clutch control	X							Every 10 hours						
Inspection for coolant level and cooling system leaks	X							Every 10 hours						
Inspection for fuel tank and fuel system leaks	X							Every 10 hours						
Inspection for air pre-cleaner clogging	X							Every 10 hours						
1 Radiator fins cleaning by pressure air	X			X				Every 200 hours						
Dry air cleaner maintenance (maintain it depending upon clogging indicator)	X							Every 10 hours						
2 Coolant exchange						X		X		X		X		X
Inspection and adjustment of injection pump								X				X		

PLANNED TECHNICAL MAINTENANCE

INSPECTION AND TRACTOR MAINTENANCE															
	Inspection and maintenance operation	After engine hours													
		10	70	100	200	600	1200	1800	2400	3000	3600	4200	4800	5400	6000
	Inspection for turbocharger lubrication system leaks		X		X				X				X		
	Inspection for injector opening pressure and nozzle function		X			X	X		X		X		X		X
	Fuel cleaner cartdridge exchange		X			X	X	X	X	X	X	X	X	X	X
	Drive belt tension inspection and adjustment		X		X	Every 200 hours									
	Fuel course cleaner inspection and cleaning		X		X	Every 200 hours									
TRANSMISSION															
	Transmission oil cleaner cartridge exchange (Hydraulic pump suction cleaner)	X			X	Every 600 hours									
	Inspection of oil level in transmission, differential housing and bull gear housings (portals)	*	X		X	Every 600 hours									
2	Exchange of oil in transmission, differential housing and bull gear housing (portals)					X		X		X		X		X	
	Front PTO oil level inspection				X	Every 200 hours									
2	Front PTO oil exchange		*		X	X		X		X		X		X	
	Greasing of front PTO cardan shaft joint by vaseline			X	X	Every 10 hours									
AXLES AND STEERING															
	Exchange of oil and hydrostatic steering cleaner cartridge				*	X		X		X		X		X	
3	Hydrostatic steering hoses exchange								X			X			
	Greasing of front axle pivot pin				X	Every 200 hours									
	Greasing of front axle knee (extension)				X	Every 200 hours									

PLANNED TECHNICAL MAINTENANCE

INSPECTION AND TRACTOR MAINTENANCE															
	Inspection and maintenance operation	After engine hours													
		10	70	100	200	600	1200	1800	2400	3000	3600	4200	4800	5400	6000
2	Greasing of front wheel hub (add grease max. to 1/3 of space)							X			X			X	
	Greasing of steering ball joints					X	X	X	X	X	X	X	X	X	X
	Inspection for front wheel bearing play		X			X	X	X	X	X	X	X	X	X	X
	Inspection for front wheel toe in		X			X	X	X	X	X	X	X	X	X	X
	Inspection for torque of steering connection rod bolts, nuts, steerig arms and wheels	X	Every 10 hours												
	Inspection for tire inflation pressure	X	Every 10 hours												
	Inspection for steering function,steering oil level in steering tank	X	Every 10 hours												
FRONT DRIVING AXLE															
	Exchange of oil in front axle housing and final drive housings				*	X	X	X	X	X	X	X	X	X	X
	Inspection for oil level in front axle housing and final drive housings				X	Every 200 hours									
	Greasing of drive shaft joits					X	X	X	X	X	X	X	X	X	X
	Greasing of king pins				X	Every 200 hours									
	Greasing of pivot pin sliding bearing				X	Every 200 hours									
HYDRAULICS															
	Greasing of top sensing torsion bar					X	X	X	X	X	X	X	X	X	X
	Greasing of top sensing lever				X	Every 200 hours									
	Greasing of top sensing link				X	Every 200 hours									
	Greasing of lift assist cylinder pins				X	Every 200 hours									
	Greasing of telescopic control link				X	Every 200 hours									
	Greasing of right lifting link					X	X	X	X	X	X	X	X	X	X

PLANNED TECHNICAL MAINTENANCE

INSPECTION AND TRACTOR MAINTENANCE														
Inspection and maintenance operation	After engine hours													
	10	70	100	200	600	1200	1800	2400	3000	3600	4200	4800	5400	6000
Greasing of front three point hitch pins					X	X	X	X	X	X	X	X	X	X
Inspection for front three point hitch hydraulic circuit leaks	X					Every 10 hours								
Inspection for leaks and functions of particular hydraulic systems		X		X		Every 200 hours								
BRAKE SYSTEM														
Inspection for brake liquid level and brake system leaks	X					Every 10 hours								
Inspection for air brake system leaks and brake efficiency of tractor with trailer	X					Every 10 hours								
Inspection for function and adjustment of service and parking brake														
Air brake adjustment		X			X	X	X	X	X	X	X	X	X	X
Clutch and brake pedal free-travel adjustment				X			X		X		X			X
Greasing of hydraulic brake system control								X				X		
Draining of condensed water from air tank					X	X	X	X	X	X	X	X	X	X
Greasing of all sliding surfaces of air instruments								X				X		
4 Exchange of brake system rubber parts								X				X		
5 Air tank revision according to valid regulations								X				X		
Exchange of rubber parts, eventually adjustment of air instruments								X				X		
ELECTRICAL INSTALLATION														
Inspection for charging function						Every starting								
6 Inspect for status and function of electrical equipment and accessory		X		X		Every 200 hours								
Inspection for charging voltage							X				X			
7 Inspection for battery electrolyte level			X			Every 200 hours								

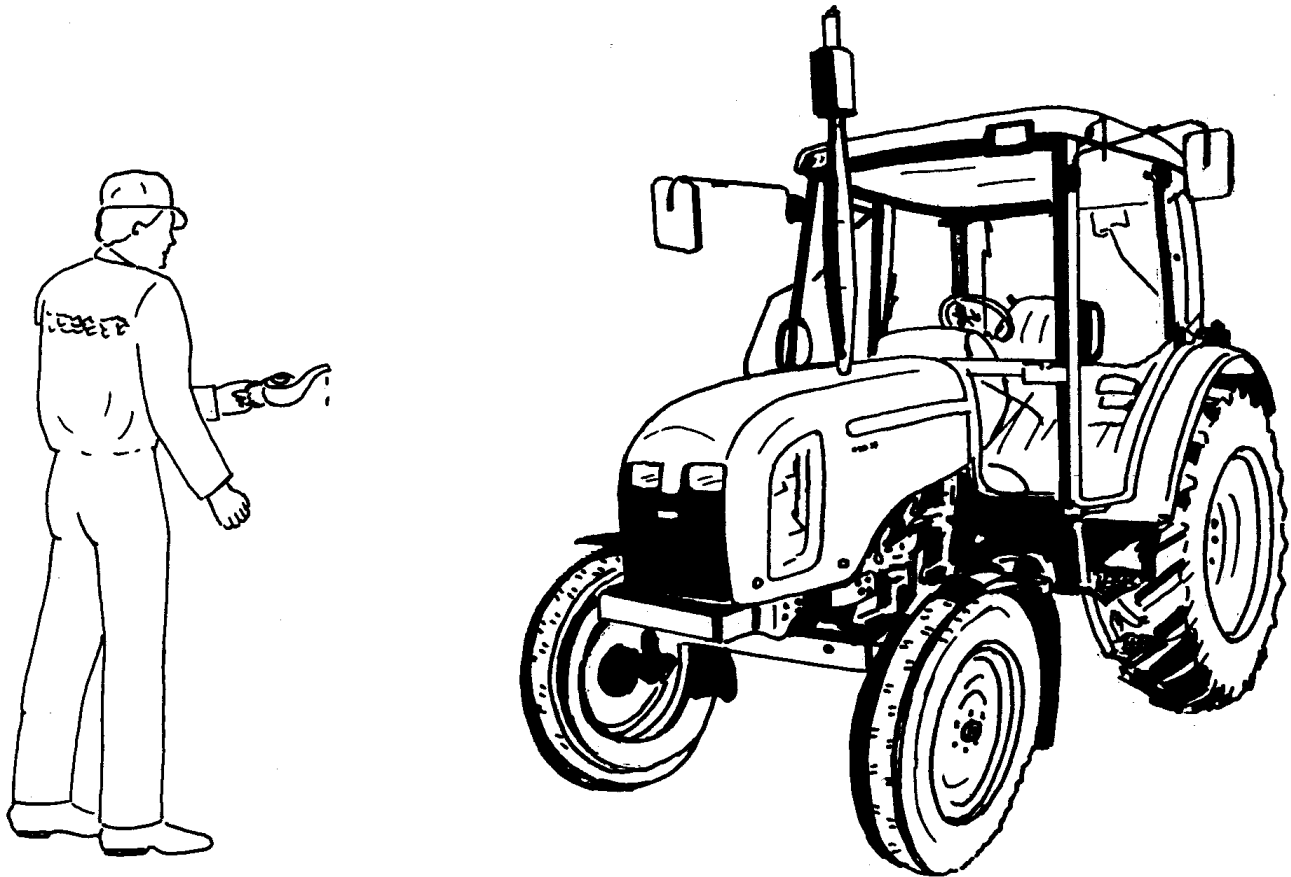
PLANNED TECHNICAL MAINTENANCE

INSPECTION AND TRACTOR MAINTENANCE															
	Inspection and maintenance operation	After engine hours													
		10	70	100	200	600	1200	1800	2400	3000	3600	4200	4800	5400	6000
7	Cleaning of battery terminals and their conservation by vaseline Inspection of starter, bearings,carbon brushes and their holders Inspection of alternator,bearings, electronics, collectors				X	Every 200 hours									
2	Greasing of front and rear wiper mechanism					X		X		X		X		X	
8	Inspection for plays in the complete system of hydrostatic steering		X		X	Every 200 hours									
	Inspection for driver`s seat function, greasing of moving parts				X	Every 200 hours									
	Inspection for seat schock absorber leaks							X			X				
	Exchange of seat schock absorber oil							X			X			X	
	Greasing of door hinge, rear window,pin and door lock					X	X	X	X	X	X	X	X	X	
	Greasing of trailer hitch automatic mouth				X	Every 200 hours									
	Greasing of pick up hitch and controll push pull cable					X	X	X	X	X	X	X	X	X	
	Inspection and eventual cleaning of cab filters	X				Every 10 hours									
	Inspection of hitches, attachements including trailer	X				Every 10 hours									
	Greasing of heating blower bearing					X	Every 600 hours								
	Draining of condensed water from front PTO clutch					before winter season									

Note:

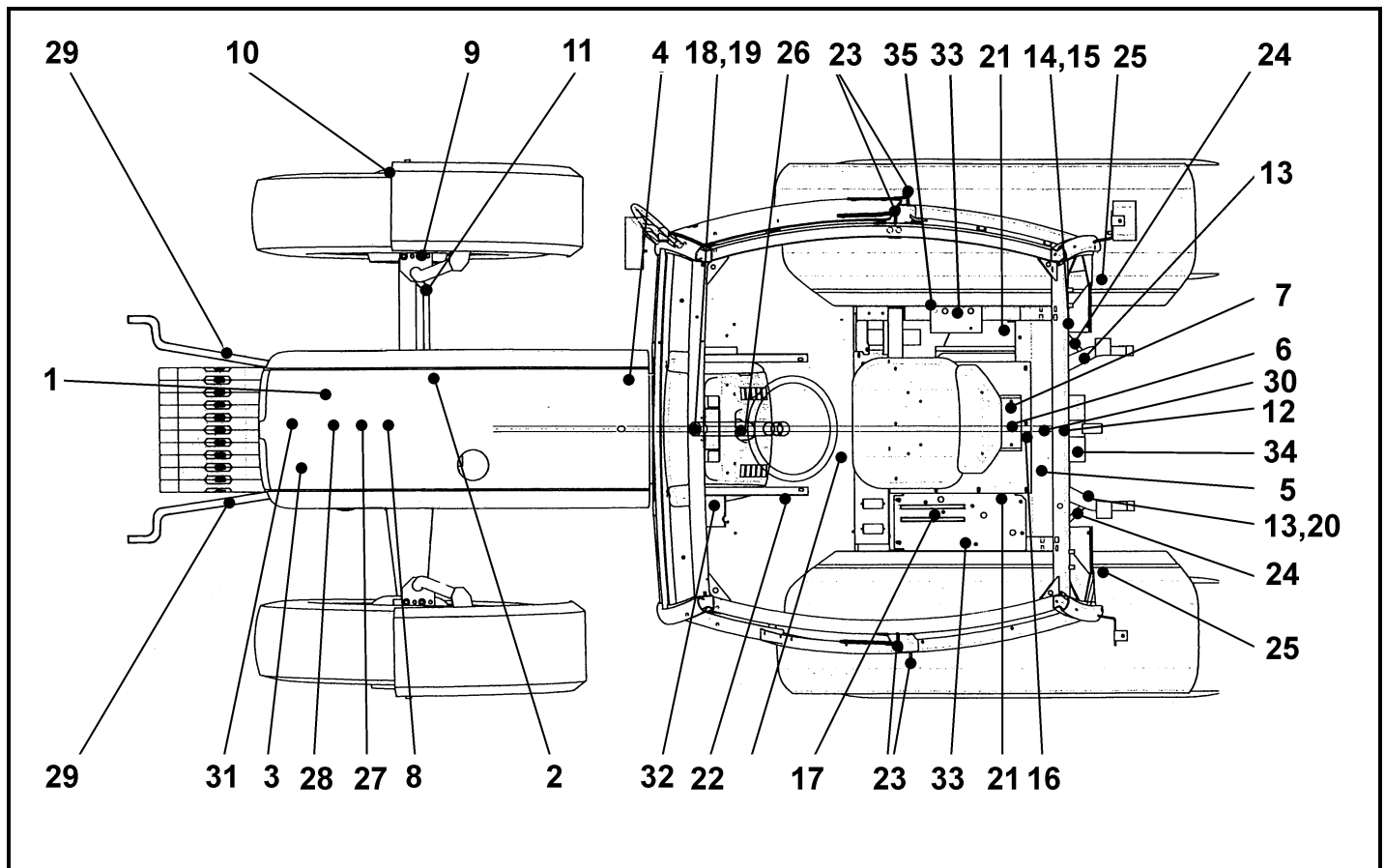
- * After first implementation of new tractor or at after general repair.
- 1 Clean daily when working with front attached machines if necessary in shorter periods
- 2 Max. period - 2 years.
- 3 Change hoses at least after four years from time of their production.
New hoses must not be older two years from time of their production mentioned on hose surface.
- 4 Max. period - five years from tractor production time.
- 5 Max. period - five years from air-tank production time or after accident.
- 6 This covers the adjustment of front asymmetric headlight and adjustment of brake indicator light switches (max. play between switch and foot brake pedal stop must be 0,5 to 1,0 mm).
- 7 In summer season - every 100 hours.
- 8 In case of leakage remove the failed piston rod sealing, flush out the shock absorber by petrol and fill it up with 70 ccm of shock absorber oil.

LUBRICATION CHART OF TRACTOR Z 3321 - Z 7341



A 139

LUBRICATION CHART OF TRACTOR Z 3321 - Z 7341



A 140

LUBRICATION CHART OF TRACTOR Z 3321 - Z 7341

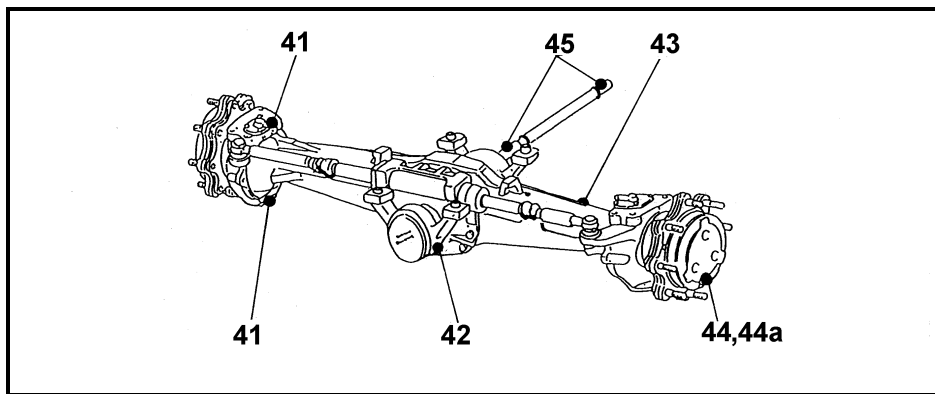
Pos.	Lubrication point - inspection	Fill sort	
		Summer	Winter
1	Cooling system - antifreeze exchange	antifreeze	
2	Engine - oil exchange	acc. to TAB.1	
3	Steering oil reservoir	ARAL	
4	Brake fluid reservoir	Synthol 205	
5	Transmission	acc. to TAB.4	
6	Driver's seat (handle and seat rollers)	PM - LA 2	
7	Driver's seat shock absorber	Shock abs. oil	
8	Front axle pivot pin (2 lub. nipples)	PM - LA 2	
9	Rigid knees of front axle (2 lub. nipples)	PM - LA 2	
10	Front wheel bearings	PM - LA 2	
11	Steering lever ball joints	PM - LA 2	
12	Top link sensing lever (1 lub. nipple)	PM - LA 2	
13	Lift assisting cylinder pins (2 or 4 lub. nipples)	PM - LA 2	
14	Telescopic control of vertical lift link (1 lub. nipple)	PM - LA 2	
15	Right vertical lift link of three point hitch (1 lub. nipple)	PM - LA 2	
16	Torsion shaft of sensing control (1 lub. nipple)	PM - LA 2	
17	Push-pull cable of pick up hitch, hand parking brake, and PTO clutch control	PM - LA 2	
18	Cab blower bearings	acc. to TAB.2	
19	Bearing and lever system of front and rear wiper	acc. to TAB.5	
20	Left lifting arm pin	PM - LA 2	
21	Lower pin of three point hitch support	PM - LA 2	
22	Clutch control shaft (2 lubrication. nipples)	PM - LA 2	
23	Cab door hinge	acc.to TAB.2	
24	Lower draft link nuts	PM - LA 2	
25	Bull gears (portals)	acc.to TAB.4	
26	Clutch control bearing sleeve	acc.to TAB.2	
27	Front PTO joints	PM - LA 2	
28	Front PTO gear box	acc.to TAB.3	
29	Front three point hitch pins	PM - LA 2	
30	Trailer hitch automatic mouth (4 lubrication. nipples)	PM - LA 2	

LUBRICATION CHART OF TRACTOR Z 3321 - Z 7341

Pos.	Lubrication point - inspection	Fill sort	
		Summer	Winter
31	Battery	*Distilled water	
32	Clutch control cylinder (after disassembly)	WACKER Silicon paste P4 Weich	
33	Brake control cylinders (after disassembly)	WACKER Silicon paste P4 Weich	
34	Pick up hitch pin	PM " LA 2	
35	Brake booster	PM - LA 2	
	- pneumatic circuit	WACKER Silicon	
	- hydraulic circuit	paste P4 Weich	

* - add water up to level marked on battery case

LUBRICATION CHART OF TRACTOR Z 3341, Z 4341, Z 5341, Z 6341, Z 7341



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Pos.	Lubrication point - inspection	Fill sort	
		Summer	Winter
41	Front axle king pin nipples	MOGUL LV 2 M	
42	Pivot pin sliding bearing nipples	MOGUL LV 2 M	
43	Front axle differential housing	API GL5*/MIL-L2105D	
44	Front axle final drive housing	API GL5*/MIL-L2105D	
44a	Front axle final drive with brakes	AGIP Rotra Multi THT	
45	Driving shaft connection bushings	MOGUL LV 2 M	

* - oil with additives for limited slip differential and wet brakes

USED LIQUIDS AND FILLS

TRACTORS Z 3321, Z 3341, Z 4321, Z 4341, Z 5321, Z 5341, Z 6321, Z 6341, Z 7321, Z 7341

Engine oils TAB.1:

Viscosity class SAE J 300 JUN 87	API class API, SAE J 183 MAR 88		Suitability for ambient temperature	Specification	API class CCMC APR 95	
	turbocharged	naturally aspirated			turbocharged	naturally aspirated
10W/30 10	CD+, CE, CF-4	CC	below -7 ⁰ C	MIL-L-2104	D-4/PD 2	
20W/30 20W/40 15W/30 15W/40	CD+, CE, CF-4	CC	below -7 ⁰ C up to +30 ⁰ C	MIL-L-2104	D-4/PD 2	
20W/30 20W/40 20W/50 30 40	CD+, CE, CF-4	CC	above +30 ⁰ C	MIL-L-2104	D-4/PD 2	

USED LIQUIDS AND FILLS

The following oils were verified in Zetor engines TAB.2:

Manufacturer	Oil mark	Viscosity class	API class
Oils for turbocharged engines			
Paramo Pardubice	M7ADS III-TRYSK	20W/40	SF/CD+
Paramo Pardubice	M7ADS III-TRYSK SUPER	15W/40	SG/CE
Paramo Pardubice	M7ADS IV-TRYSK SUPER TURBO	15W/40	SG/CF-4
SHELL	RIMULA TX	10W/30	SG/CF-4
ARAL	MULTI TURBORAL	15W/40	CF-4/SH
ARAL	AUSTROTRAC	10W/30	CE/SF
KORAMO Kolín	MOGUL DIESEL DTT Plus	10W/40	CF-4
° MV	° MV truck M plus	15W/40	CF-4/SG
	° MV truck FE plus	10W/40	CF-4
	° MV truck FE	10W/40	CE/SG
	° MV austrotrac	10W/30	CE
	° MV truck LD	15W/40	CE
	° MV RME plus	15W/40	CE/SG
Oils for naturally aspirated engines			
KORAMO Kolín	MOGUL M7ADX SUPER STABIL	15W/40	SF/CC
KORAMO Kolín	MOGUL DIESEL DT	15W/40	CC
° MV	Super diesel	15W/40	SD/SE

USED LIQUIDS AND FILLS

The following oils were verified in front PTO gearbox of Zetor tractor TAB. 3:

Viscosity class	API class	Suitability for ambient temperature	Specification
SAE J 306 MAR 85	API, SAE J 308 NOV 82		
Paramo Pardubice 80W	GYROL PP 80 GL-4	all season all season	GL4 MIL-L-2105

The following oils were verified in transmission of Zetor tractor TAB. 4:

Manufacturer	Oil mark	Viscosity class	API class
SHELL	DONAX TT	80W	GL-4
ARAL	FLUID HGS		

The following oils were verified in hydrostatic steering of Zetor tractor TAB.5:

Manufacturer	Oil mark	Standard
ARAL	VITAM HF 32	
° MV	HLP-D32	ISO VG 32
° MV	HLP-D46	ISO VG 46
° MV	HLP-32	DIN 51 524-HLP
° MV	HLP-46	DIN 51 524-HLP
SHELL	DONAX TA	-

The following Vaseline were verified in Zetor tractors TAB. 6:

Manufacturer	Oil Mark	Standard
° MV	° MV signum L2	DIN 51 825-K2-30
	° MV ecodur EP 2	DIN 51 825-KPF E 2K-20
-	PM-LA 2	ISO 6743/9, ISO-L-XBCEA 2

USED LIQUIDS AND FILLS

HYDRAULIC BRAKE AND TRAVEL CLUTCH CONTROL FLUIDS

Brake fluid SYNTHOL 205 yellow according to PND 31-656-80 (classification of fluid according to ISO regulation 4925 or SAE J 1703).

The fluid is not intended for arctic conditions.

WARNING:

1. Fluids of the same classification can be mutually mixed
2. Brake fluid must be exchanged minimally once per two years independently on operation hours

FUEL

Summer diesel fuel NM-4 according to SN 656506 for period from 1 April to 31 October.

Winter diesel fuel NM-22 according to SN 656506 for period from 1 November to 31 March.

NOTE: Similarly the suitable fuels must be used abroad .

ANTIFREEZE FOR COOLING SYSTEM AND HEATING

Antifreeze FRIDEX-STABIL or FRIDIOL 91 and demineralized water in ratio 1:1,5 (add the mixture in this ratio).

Antifreeze liquids exchanged abroad must contain anti-corrosion additives protecting all materials of cooling system and tractor heating (including rubber parts and cylinder head gasket).

WARNING:

1. Antifreeze FRIDEX STABIL and FRIDIOL 91 are mutually mixable.
2. Above mentioned liquids must not be mixed with liquids of another marks.
3. Exchange the liquid after two years.

QUANTITY OF LIQUIDS (IN LITERS)

Name, destination	Fill sort	Z 3321 Z 3341 (in liters)	Z 4321 to Z 7341 (in liters)
Antifreeze w/o heating	Fridex-Stabil	9,5	10,6
w/ heating	(FRIDIOL 91) + demineralized water	10,5	11,6
Fuel	Diesel fuel 4 Diesel fuel 22	120	120
Engine oil	acc. to TAB. 1, 2	9,0	12,0
Olej do p'evodovky a rozvodovky	podle TAB. 4	62 - 64***	62 - 64***
Oil for bull gear housing	PP 80	2x1,9	2x1,9
Oil for front axle housing	API GL5*/MIL-L2105D	5,5	5,5
Oil for front axle planet gear	API GL5*/MIL-L2105D	2x0,6	2x0,6
Oil for front axle planet gear with brakes	AGIP Rotra Multi THT	2x1,7	2x1,7
Oil for front PTO gearbox	TAB.3	0,8	0,8
Brake fluid	HD 205	0,5	0,5
Hydrostatic steering oil	Aral Vitamin HF 32 Shell Donax TA acc. to TAB. 5	2,2	2,5
Oil for front axle final drive	shock absorber oil	0,07	0,07

*** - The oil quantity is increased by 2 liters at 4WD tractors. The oil quantity needs to be by 7 liters increased at tractor working in hilly conditions. This needs to be done also in case of implementation with machine connected to the outer hydraulic circuit.

NOTE

NOTE

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MAINTENANCE INSTRUCTIONS

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Driver or tractor user alone can do almost any work on planned technical maintenance. If you don't have a sufficient technical equipment let to do more complicated work at the authorized service.



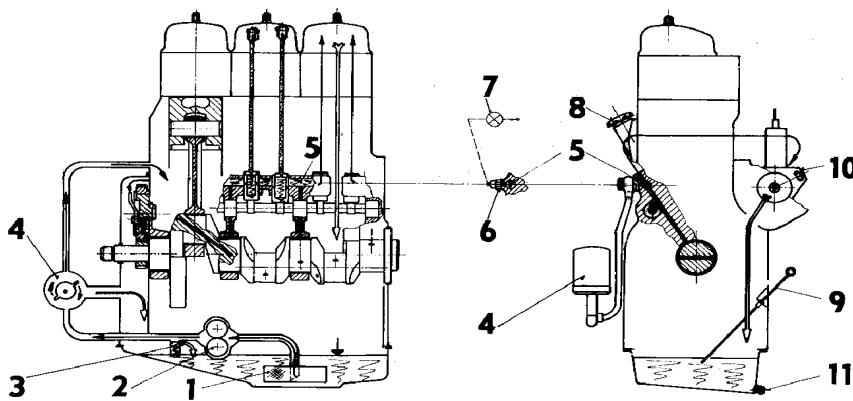
All work in connection with cleaning, lubrication and adjustment of tractor or implemented machine must be done only after stopping engine and other moving parts, except of brake, charging and hydraulic inspection.

MAINTENANCE INSTRUCTIONS

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MAINTENANCE INSTRUCTIONS

Z 5202



LUBRICATION OF ENGINE Z 5202

1. Suction strainer
2. Oil pump
3. Reduction valve
4. Oil filter w/ exchangeable cartridge
5. Main oil channel
6. Pressure switch
7. Indicator light
8. Filler
9. Oil dipstick
10. Injection pump
11. Oil draining plug

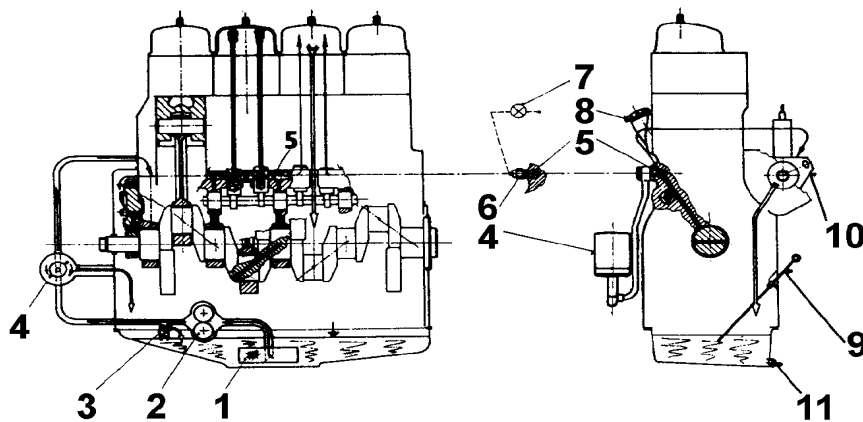
A 141a

MAINTENANCE INSTRUCTIONS

Z 6202

Z 7202

Z 7702



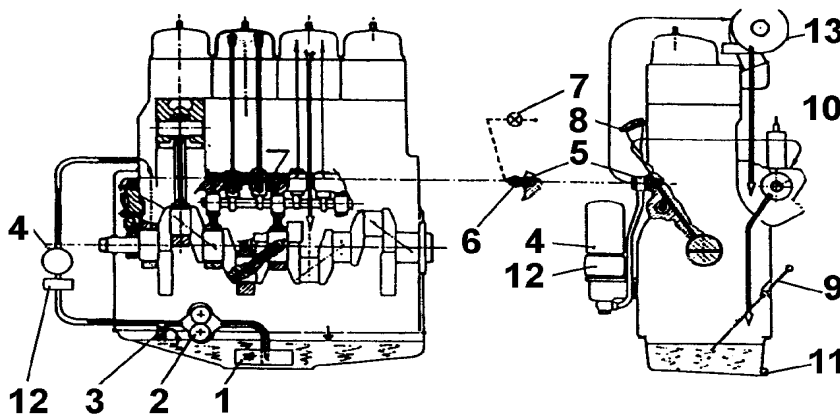
LUBRICATION OF ENGINE Z 6202 - Z 7702

1. Suction strainer
2. Oil pump
3. Reduction valve
4. Oil filter w/ exchangeable cartridge
5. Main oil channel
6. Pressure switch
7. Indicator light
8. Filler
9. Oil dipstick
10. Injection pump
11. Oil draining plug

A 142

MAINTENANCE INSTRUCTIONS

Z 7302 TURBO

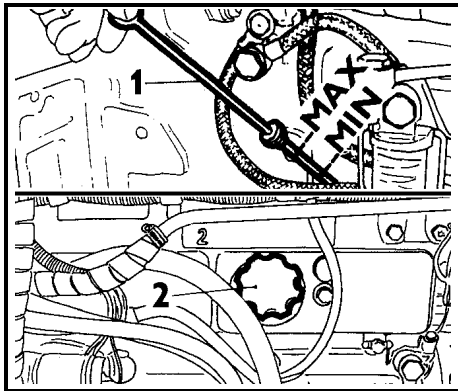


LUBRICATION OF ENGINE Z 7302

1. Suction strainer
2. Oil pump
3. Reduction valve
4. Oil filter w/ exchangeable cartridge
5. Main oil channel
6. Pressure switch
7. Indicator light
8. Filler
9. Oil dipstick
10. Injection pump
11. Oil draining plug
12. Cooling exchanger
13. Turbocharger

A 143

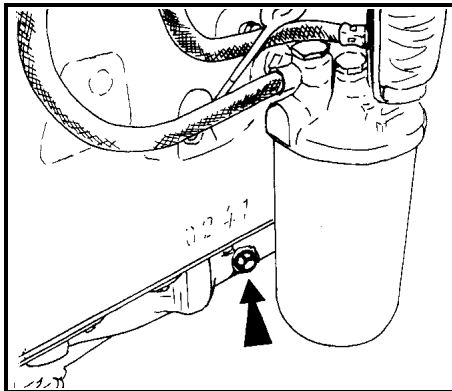
MAINTENANCE INSTRUCTIONS



A 144

ENGINE OIL LEVEL INSPECTION

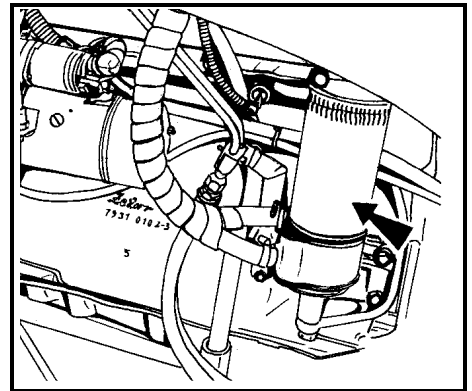
Daily inspect the oil level before starting work and with tractor in horizontal position. Remove the oil dipstick (1), wipe it with cloth and thread it. The oil must not be under lower dipstick mark after repeated removing. Add the oil into filler (2) if needed.



A 145

ENGINE OIL DRAINING

Drain the oil by removing of draining plug, do it immediately after stopping tractor or after engine preheating to working temperature. Clean the draining plug before reassembly

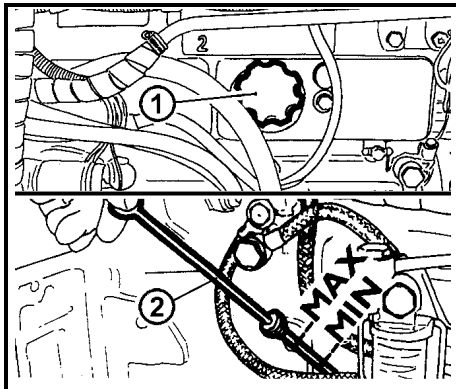


A 146

ENGINE OIL CLEANER EXCHANGE

The engine oil cleaner is exchanged at every engine oil exchange. Disassemble the cleaner. Grease the sealing area of new cleaner by oil, assemble the new cleaner and tighten it by hand only. Tighten again the oil cleaner by hand after few minutes of engine run and warming the oil up. Check the cleaner for leak.

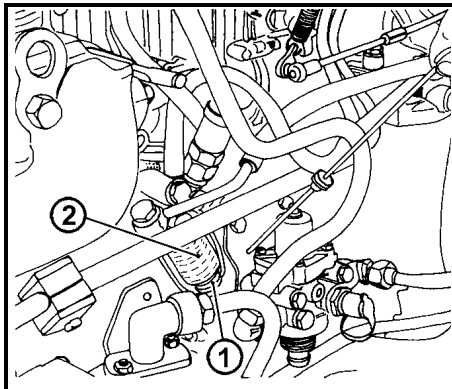
MAINTENANCE INSTRUCTIONS



A 147

ENGINE OIL FILLING UP

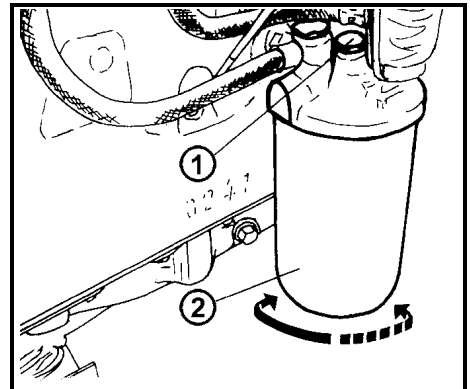
Fill the prescribed quantity of oil into the filler (2). Start the engine and let it run 2 to 3 minutes at 750 to 800 RPM. Check the oil level by dipstick (1) after stopping engine and stabilizing of engine oil level. Inspect for oil leakage of oil cleaner, draining plug and other fittings.



A 148

FUEL COURSE CLEANER CLEANING

Remove the ring nut (1) and the fuel cleaner bowl (2) with sealing and strainer. Clean the bowl and strainer with diesel fuel. Check the right position of sealing at reassembly of fuel cleaner bowl, before tightening of ring nut. Bleed the fuel system.

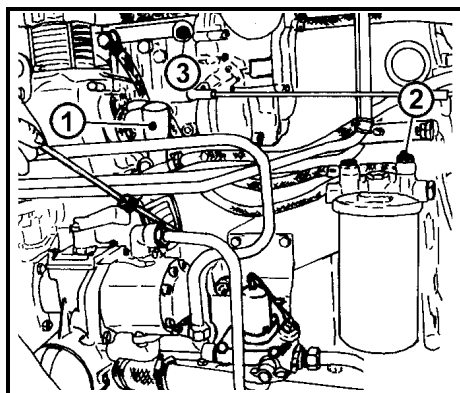


A 149

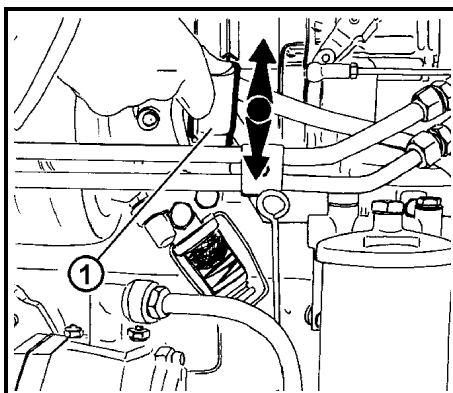
FUEL CLEANER CARTRIDGE EXCHANGE

Put the suitable vessel under the engine before fuel cleaner cartridge exchange to catch dropping fuel from the cleaner. Exchange the fuel cleaner cartridge after releasing of the nut (1) and removing the bowl (2). Check for the proper bowl sealing position at reassembly of cleaned bowl with the new fuel cleaner cartridge. Bleed the fuel system.

MAINTENANCE INSTRUCTIONS



A 150



A 151

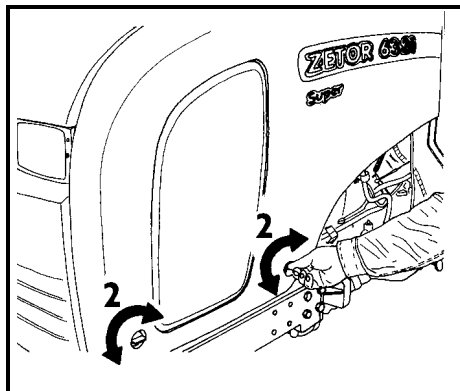
FUEL SYSTEM BLEEDING

Put the suitable vessel under the engine before bleeding to catch dropping fuel from the cleaner and injection pump.

Do the following:

- Prime the fuel system by several strokes of hand priming pump (1).
- Loosen the screw of fuel cleaner input fitting (2) and let escape the foam.
- Retorque the screw (2) and repeat the process until the clean foam-free fuel fluently leaks after screw loosening.
- Bleed the injection pump by the same way by means of screw located on injection pump case (3).

MAINTENANCE INSTRUCTIONS



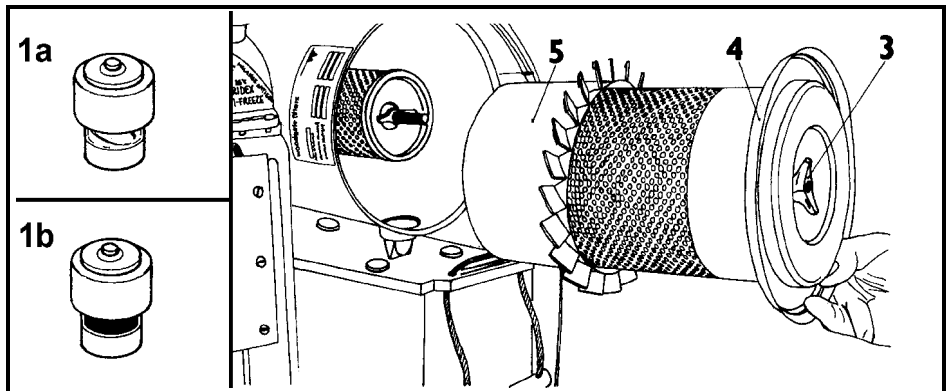
A 152

DRY AIR CLEANER MAINTENANCE

Dry air cleaner maintenance must be done after indication of clogging by clogging indicator (1b). The indicator is accessible after removing of left (right) tractor side shield. The indicator is located on suction pipe. Clogging is mechanically indicated by red field appeared on the clogging indicator after the air cleaner clogging

1a - air cleaner is not clogged

1b - air cleaner is clogged - do the maintenance.



A 153

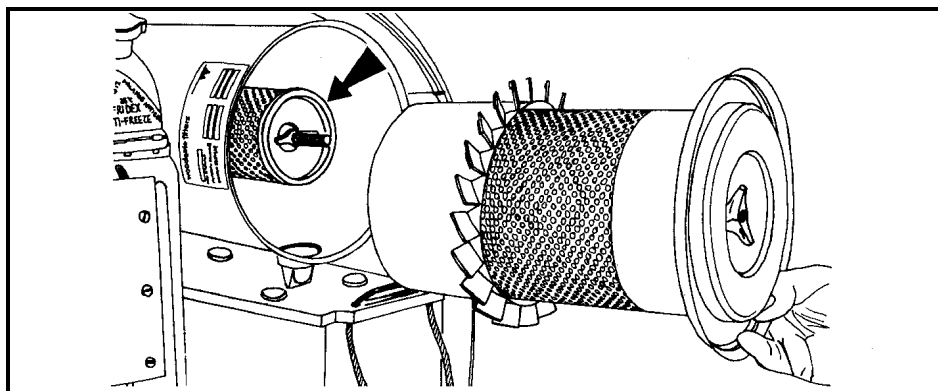
Maintain the air cleaner by the following way:

1. Push and turn two quick lockers (2) on the left (right) tractor side shield.
2. Lift a little the side shield and remove it from the tractor.
3. Remove the wing nut (3) of air cleaner cover.
4. Remove the air cleaner cover (4).
5. Remove the main air filter element (5).

MAIN AIR FILTER ELEMENT REGENERATION

If the main air filter element is not damaged (dust on the inner side of air filter element must not be appeared) do regeneration by pressure air blown from the inner side of element. The main air filter element can be regenerated maximally three times. The main air filter element needs to be replaced once per year.

MAINTENANCE INSTRUCTIONS



A 154

INNER SAFETY AIR FILTER ELEMENT EXCHANGE



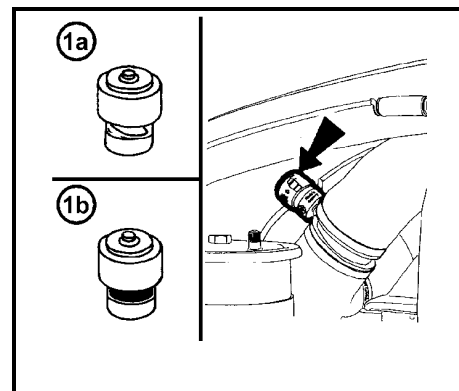
Inner safety air filter element can not be regenerated. It must be exchanged in the following cases:

- if the main air filter element is damaged
- after 5th maintenance of air cleaner
- minimally once per two years

AIR FILTER ELEMENT REASSEMBLY

Be careful at the air filter element reassembly:

- keep the contact surfaces clean
- air filter elements must not be deformed and must not vibrate after assembly
- rubber sealing must be fitted properly round the complete circumference, the proper tightness of the complete cleaner must be assured after reassembly of air filter cover



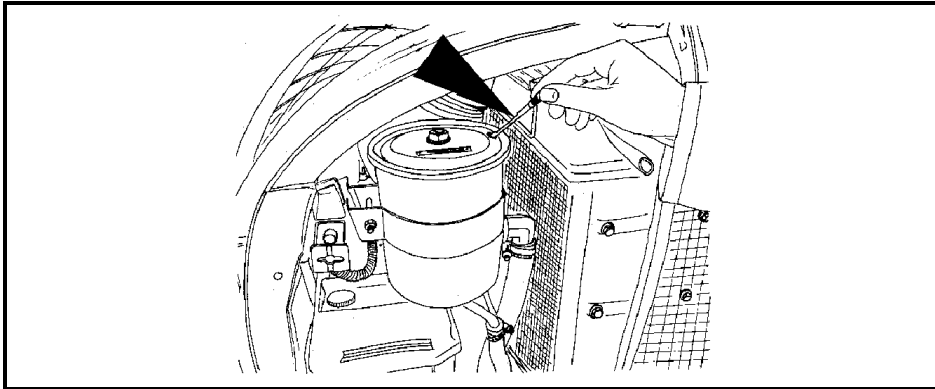
A 155

CLOGGING INDICATOR RESET



Reset the clogging indicator after dry air cleaner maintenance.

MAINTENANCE INSTRUCTIONS

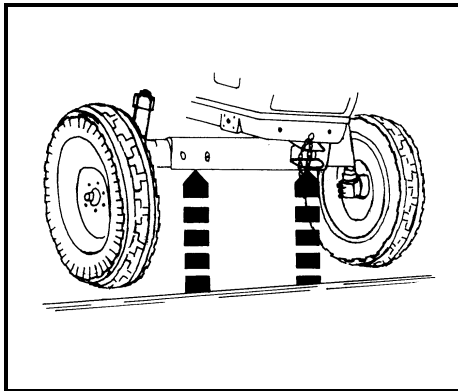


A 156

HYDROSTATIC STEERING OIL AND FILTER ELEMENT EXCHANGE

- Remove the left tractor side shield. Loosen suction and draining hose clamps and remove hoses from oil tank necks. Drain the oil from tank.
- Remove the oil tank filler cap, push the filter spring, turn the filter towards the filler and remove it. Install the new filter element.
- Remove both hoses from steering cylinder and put them together with return line hose into vessels for the old oil
- Start the engine and turn the steering wheel twice or three times into both sides at low engine idle run (max. 10 seconds) to remove the oil from the steering unit.
- Fix the tractor against movement and lift the front axle.
- Put a vessel for the old oil under the steering cylinder and remove the oil from cylinder by turning of wheels (by hand).
- Reassemble all disconnected fittings.
- Fill the tank by oil and bleed the hydrostatic steering circuit.

MAINTENANCE INSTRUCTIONS

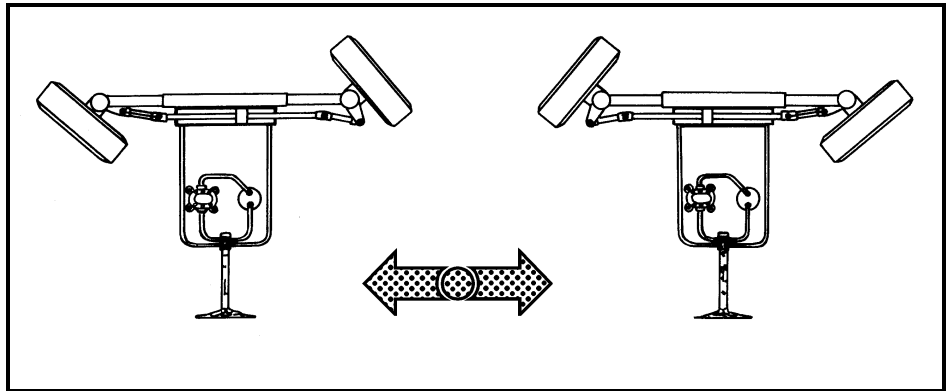


A 157

HYDROSTATIC STEERING SYSTEM BLEEDING

Attention: Don't turn the steering wheel when doing step 1 and 2. The steering system might be aerated.

1. Fill almost the complete oil tank capacity. Crank the engine 10 seconds without starting if possible (with hand throttle in STOP position). If the engine starts stop it immediately. Check and add oil into tank. Repeat this minimally three times, ever check and add oil into tank.

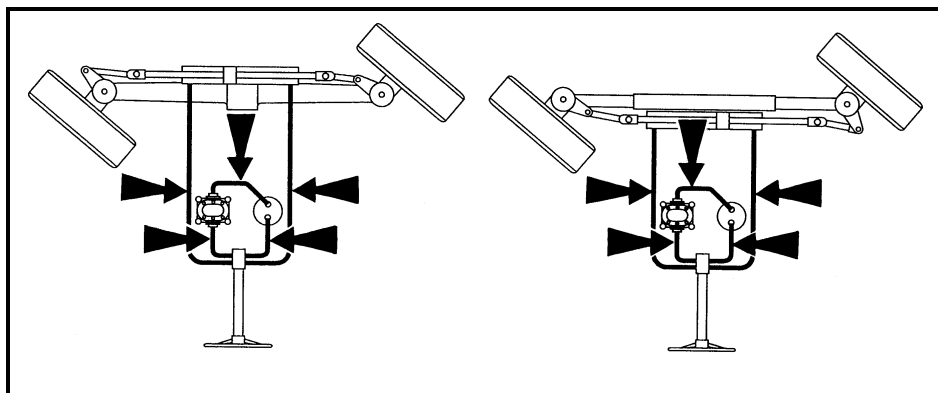


A 157a

Attention: Don't allow draining or dropping the oil from tank or hydrostatic steering circuit. The steering system might be aerated.

2. Start the engine and let it run for 2 minutes at low idle. Stop the engine and check the tank oil level.
3. Lift front wheels of tractor.
4. Turn the steering wheel several times at engine low idle run (to left and right stop for a short time) you will bleed the hydrostatic steering system by this way.
5. Check and add the oil into tank up to the mark and lower the front wheels to the ground.

MAINTENANCE INSTRUCTIONS



A 158

EXCHANGE OF HYDROSTATIC STEERING HOSES

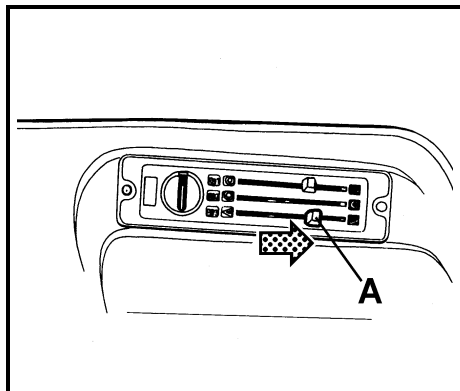
Hydrostatic steering hoses must be exchanged after four years from time of manufacturing (time is marked on hose surface) or after 3 000 hours of tractor operation, eventually immediately after founding any symptoms of damage i.e. hose sweating, local bulging, leakage of oil at fittings and on hose surface, mechanical damage of hose surface up to steel wire cord.

Don't keep the steering wheel in the max. steering angle positions (max. time is 20 seconds), otherwise the oil is excessively heated in the hydrostatic steering circuit.



Steeringability is kept even in case of hydrostatic steering pump failure or if the engine stops but the steering force is bigger on the steering wheel. Tractor can be driven into the nearest place for repair at reduced transportation speed.

MAINTENANCE INSTRUCTIONS

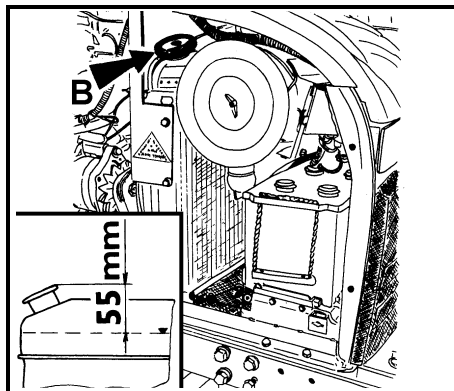


A 159

EXCHANGE OF COOLANT

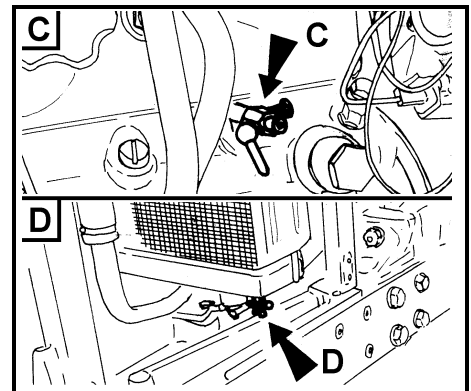
Keep the following instruction:

- Open the heating system valve (A) (at cab tractors only) and release the radiator overpressure filler cap (B).



A 160

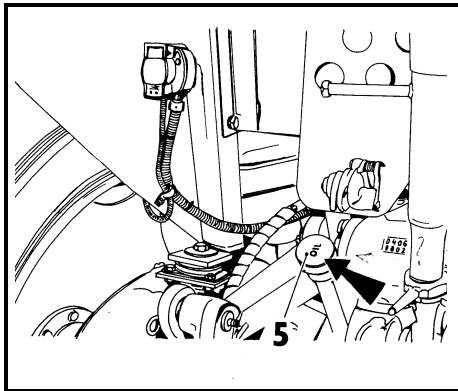
- Drain the coolant from engine block (C). Draining valve is accessible after removing of the right side shield.
- Drain the coolant from radiator (D). Draining valve is accessible after removing of the left side shield.
- Close both draining valves after draining of coolant (let the heating system valve (A) opened).



A 161

Fill the cooling system with antifreeze mixture - antifreeze + demineralized water in ratio 1:1,5. Start the engine and let it run approximately 1 minute. Add the coolant and close the radiator by overpressure filler cap. The right coolant level is approximately 55 mm from the upper edge of filler when the cold engine. Exchange the coolant at least after every two years if the antifreeze is used in coolant.

MAINTENANCE INSTRUCTIONS



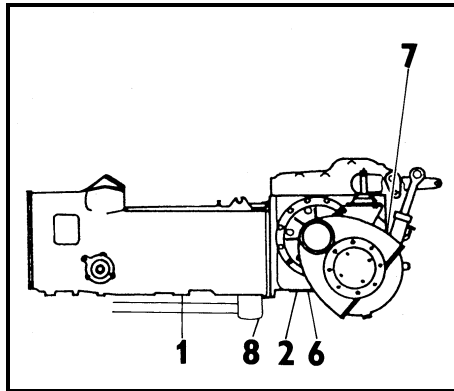
A 162

INSPECTION AND OIL EXCHANGE IN TRANSMISSION, DIFFERENTIAL HOUSING, AND BULL GEAR HOUSINGS (PORTALS)

The oil level is inspected by oil dipstick integrated in filler cap (5), that is located on the left rear part of differential case. Inspect the oil level at stopped engine, the oil must be within the range of oil dipstick flattened part.



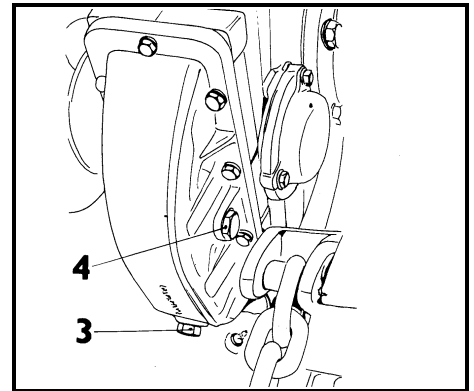
Damaged or lost plug must be exchanged by an original plug only this will assure breathing of transmission case.



A 163

DRAINING AND INSPECTION OPENINGS

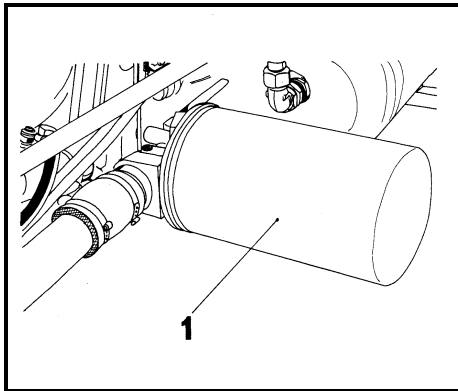
1. Transmission draining plug.
2. Differential case draining plug.
3. Bull gear housing draining plug.
4. Inspection and filling plug of bull gear housing (valid for standard position of bull gear housing)
5. Inspection and filling plug of transmission.
6. Draining plug of right and left brake chamber.



A 164

7. Brake chamber oil dipstick.
8. Front wheel drive gearbox draining plug.

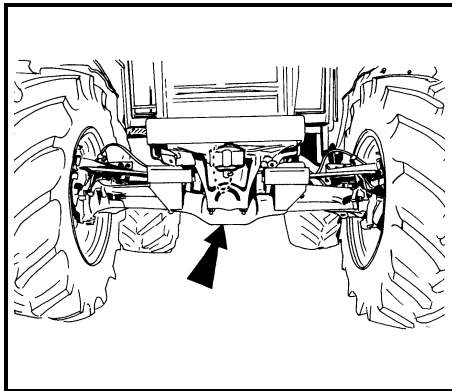
MAINTENANCE INSTRUCTIONS



A 165

AFTER DRAINING OIL

- Change the oil cleaner cartridge (1)
- Assemble all draining plugs after their cleaning. Check the status of sealing rings, eventually exchange them for new ones.
- Fill 60 liters of oil, start the engine and let it run approximately for 2 minutes.
- Add the oil up to the maximum level (see the tab. for liquid quantity) after stopping engine and stabilizing oil level. Check for the right quantity by the oil dipstick depending upon tractor operating conditions (see the next text).
- You can inspect the oil level by the inspection opening in the right part of transmission.



A 166

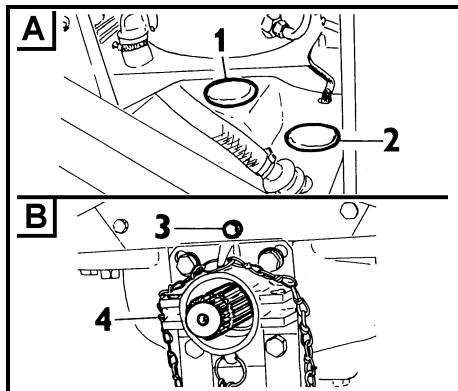
FRONT DRIVING AXLE

Front driving axle is equipped with central drive with swinging axle in bevel gear axes. Hydrostatic steering cylinder is fitted on axle beam. The axle is equipped with automatic differential lock. Front wheel drive is engaged and disengaged Electro-pneumatically. Front wheel drive engage is indicated by indicator lamp on dashboard.



Front driving axle is engaged when tractor and engine stopped.

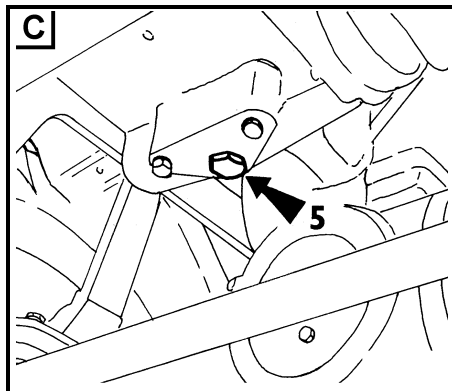
MAINTENANCE INSTRUCTIONS



A 167

* FRONT PTO GEARBOX

1. Opening for filler.
 2. Opening for greasing of front cardan shaft joint.
 3. Condensed water and impurity draining plug.
 4. Oil inspection plug
- Openings 1, 2 are accessible after side shield removing.



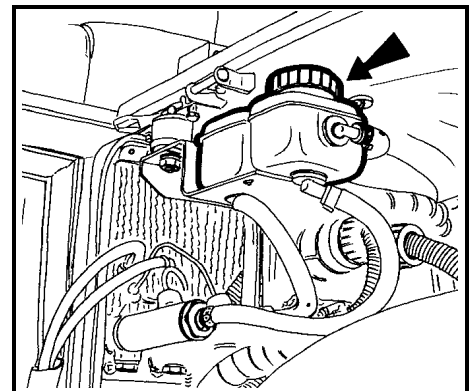
A 168

5. Oil draining plug.



Water condensed in space of clutch sealing cuff must be removed before every winter season by removing of plug (B - 3) and several time engaging and disengaging of PTO shaft. PTO engaging and disengaging is done by control lever located on steering panel.

Pressure air will blow eventual impurities or condensed water. Reassemble the plug after its cleaning.



A 169

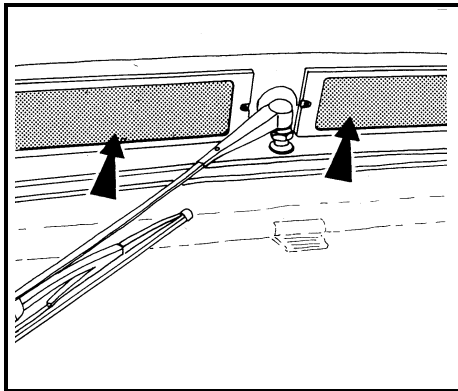
BRAKE FLUID FILLING UP



Maintain the brake fluid level within 3/4 (max. level) up to 1/2 (min. level) reservoir capacity. Keep the strict cleanness when manipulating with brake fluid.

Daily inspect the brake fluid level before driving. Fill up the brake fluid through the filler strainer.

MAINTENANCE INSTRUCTIONS



A 170

HEATING SYSTEM AIR FILTER CLEANING

Filters are located under grills above the front windshield outside the cab. Regenerate filters by kicking out, or by pressure air blowing through, according to the stage of clogging. Daily check for clogging. Exchange the strong clogged filters.



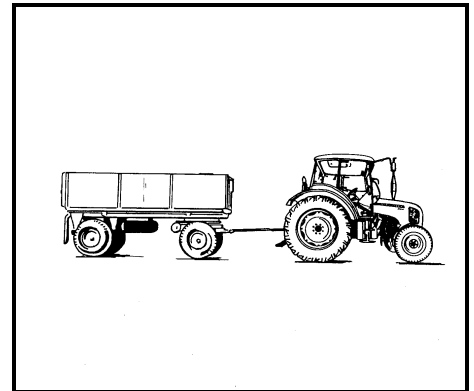
Tractors are not equipped with special filters of cab intake air. That's why tractors are not intended for operation with aerosols and other health dangerous mediums.



A 171

DRAINING OF CONDENSED WATER FROM AIR TANK

Drain the condensed water by inclination of draining valve by pulling of its ring. Valve is located on the bottom part of air tank.



A 172

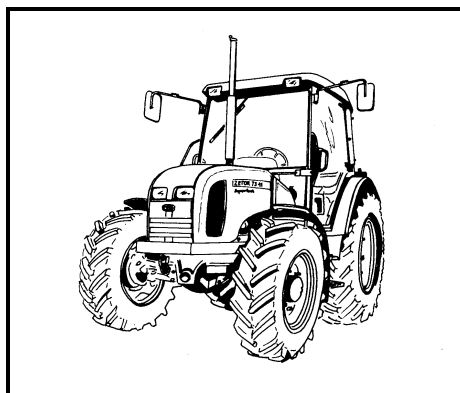
AIR SYSTEM INSPECTION FOR LEAKS

- Fill the air tank to the max. pressure.
- The pressure must not drop down by more than 10 kPa after 10 minutes at stopped engine.



Daily inspect the system for leaks before operation with trailer. The indicator light on the dashboard is "on" when the air brake system fails or after dropping of pressure under 420 kPa.

MAINTENANCE INSTRUCTIONS



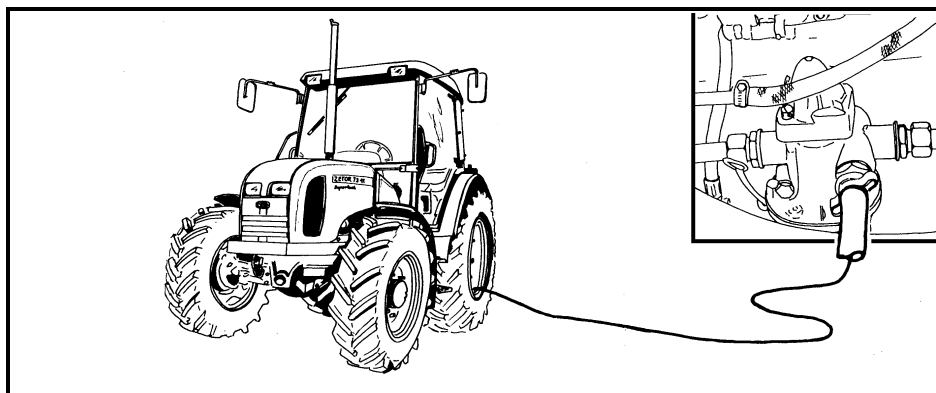
A 173

TIRE MAINTENANCE

Regularly check the outer surface of tires and verify that tires are without defects in the side part and the cord is not damaged.



Discard tires with defects.



A 174

TIRE INFLATION

Basic values of recommended inflation pressure are mentioned in the following tables. Regularly check for the inflation pressure before operation. Check the inflation pressure at cold tires. The tractor air pressure regulator can be used for tire inflation. Remove the regulator rubber plug when inflating tire and assemble a hose for tire inflating instead of it. Screw down the hose fitting up to the end of thread for pushing the back pressure valve. Reduce the air pressure by brake pedal depressing in case of mall function. The rubber plug must be reassembled on the air pressure regulator after tire inflating.

MAINTENANCE INSTRUCTIONS

RECOMMENDED TIRE INFLATION PRESSURE FOR FRONT WHEELS OF TRACTORS - Z 3321 Z 4321, Z 5321, Z 6321, Z 7321

Sum of load capacity for both tires used at front axle must not exceed allowed axle load capacity (see TECHNICAL TRACTOR PARAMETERS). Tires of different design, tread pattern and mark must not be assembled on the same axle of tractor.

Main operating conditions		Tire size and design			
		6,50-16 6 PR	6,50-16 6 PR	7,50-16 6 PR	7,50-20 6 PR
Cultivation with light implement	inflating pressure (kPa) load capacity (kg)	280-330 505-560	280-310 575-615	230-280 660-745	230-280 795-875
Ploughing	inflating pressure (kPa) load capacity (kg)	280-330 505-560	280-310 575-615	230-280 660-745	230-280 795-875
Road transportation	inflating pressure (kPa) load capacity (kg)	280-330 505-560	280-310 575-615	230-280 660-745	230-280 795-875
Operation with front loader (8 kmph)	inflating pressure(kPa) load capacity (kg)	- -	385 max. 1230	350 max. 1490	350 max. 1750

MAINTENANCE INSTRUCTIONS

RECOMMENDED TIRE INFLATING PRESSURE FOR FRONT DRIVING WHEELS OF TRACTORS - Z 3341, Z 4341, Z 5341, Z 6341, Z 7341

Sum of load capacity for both tires used at front axle must not exceed allowed axle load capacity (see TECHNICAL TRACTOR PARAMETERS). Tires of different design, tread pattern and mark must not be assembled on the same axle of tractor.

Main operating conditions		Tire size and design					
		9,5-24 8 PR	11,2-24 8 PR	11,2 R 24	12,4-24 8 PR	12,4 R 24	13,6 R 24
Cultivation with light implement	inflating pressure (kPa) load capacity (kg)	150-190 770-890	150-190 935-1080	100-140 875-1086	150-190 1115-1280	100-140 1005-1250	100-140 1075-1330
Ploughing	inflating pressure (kPa) load capacity (kg)	190-240 890-1010	190-240 1080-1225	140-160 1085-1180	190-230 1280-1415	140-160 1250-1360	140-160 1330-1450
Road transportation	inflating pressure(kPa) load capacity (kg)	240-280 max. 1010	240-280 max. 1225	200 max. 1180	230-270 max. 1415	200 max. 1360	200 max. 1450
Operation with front loader (8 kmph)	inflating pressure(kPa) load capacity (kg)	300 1410	300 1715	200 1770	300 1980	200 2040	200 2175
Operation with front attached implements up to 15 kmph	inflating pressure(kPa) load capacity (kg)	290 1410	240 1590	160 1580	230 1830	160 1820	160 1940

MAINTENANCE INSTRUCTIONS

RECOMMENDED TIRE INFLATING PRESSURE FOR REAR WHEELS OF TRACTORS - Z 3321, Z 3341, Z 4321, Z 4341, Z 5321, Z 5341, Z 6321, Z 6341, Z 7321, Z 7341

Sum of load capacity for both tires used at rear axle must not exceed allowed axle load capacity (see TECHNICAL TRACTOR PARAMETERS).

Main operating conditions		Tire size and design				
		16,9-28 8 PR	16,9-30 8 PR	12,4-32 6 PR	16,9-34 8 PR	13,6-36 6 PR
Cultivation with light implement	inflating pressure (kPa) load capacity (kg)	110-140 1675-1925	110-140 1730-1990	110-140 1120-1220	110-140 1830-2110	110-140 1300-1490
Ploughing	inflating pressure (kPa) load capacity (kg)	140-170 1925-2175	140-170 1990-2245	140-170 1220-1355	140-170 2110-2380	140-160 1490-1615
Road transportation	inflating pressure (kPa) load capacity (kg)	200 2175	200 2245	200 1355	200 2380	190 1615

Main operating conditions		Tire size and design				
		12,4-28 6 PR	14,9-28 8 PR	12,4-36 6 PR	18,4-30 6 PR	18,4-34 8 PR
Cultivation with light implement	inflating pressure (kPa) load capacity (kg)	110-140 1005-1140	110-140 1405-1610	110-140 1135-1285	80-120 1820-2225	80-120 2020-2360
Ploughing	inflating pressure (kPa) load capacity (kg)	140-170 1146-1275	140-180 1610-1880	140-170 1285-1440	120-140 2225-2415	120-140 2360-2565
Road transportation	inflating pressure (kPa) load capacity (kg)	200 1275	210 1880	200 1440	160 2415	160 2565

MAINTENANCE INSTRUCTIONS

RECOMMENDED TIRE INFLATION PRESSURE FOR RADIAL REAR WHEELS OF TRACTORS - Z 3321, Z 3341, Z 4321, Z 4341, Z 5321, Z 5341, Z 6321, Z 6341, Z 7321, Z 7341

Sum of load capacity for both tires used at rear axle must not exceed allowed axle load capacity (see TECHNICAL TRACTOR PARAMETERS).

Main operating conditions		Tire size and design				
		16,9R28	16,9R30	16,9R34	13,6R36	12,4R32
Cultivation with light implement	inflating pressure (kPa)	100-140	100-140	100-140	100-140	100-140
	load capacity (kg)	1660-2055	1705-2110	1800-2230	1295-1605	1110-1375
Ploughing	inflating pressure (kPa)	140-160	140-160	140-160	140-160	140-160
	load capacity (kg)	2055-2270	2110-2300	2230-2430	1605-1750	1375-1500
Road transportation	inflating pressure (kPa)	200	200	200	200	200
	load capacity (kg)	2240	2300	2430	1750	1500

Main operating conditions		Tire size and design		
		12,4R36	18,4R30	18,4R34
Cultivation with light implement	inflating pressure (kPa)	100-140	100-140	100-140
	load capacity (kg)	1270-1490	1960-2435	2075-2570
Ploughing	inflating pressure (kPa)	140-160	140-160	140-160
	load capacity (kg)	1490-1600	2435-2650	2570-2800
Road transportation	inflating pressure (kPa)	200	200	200
	load capacity (kg)	1600	2650	2800

MAINTENANCE INSTRUCTIONS

INCREASED TIRE LOAD CAPACITY

The allowed axle load capacity mentioned in tab. "TRACTOR TECHNICAL PARAMETERS" must not be exceeded at loading tractor.

It is not allowed to increase the tire load capacity by farther increase of inflating pressure over values mentioned in table and with reducing tractor travel speed except of mentioned cases.

TRACTOR STORAGE

If the tractor is stored out of operation for short period, inflate tires to value used for road transportation. When storage of tractor for a long period, support the tractor and reduce the tire pressure to minimum (wheels must not touch the ground).

Tire load capacity can be increased in the following cases:

Tools	Tire type	Respected limits:			
		% load capacity increase	% inflating pressure increase*	travel speed limit (kmph)	min. number of PR
Front attached implements	non-driven wheels	35%	-	20	-
	driving wheels	40%	max. 25%	8	6PR
Front loader	not driven wheels	100%	max. 25%	8	-
	driving wheels	40%	max. 25%	8	6PR

* - over values mentioned in tables "RECOMMENDED TIRE INFLATION"

NOTE

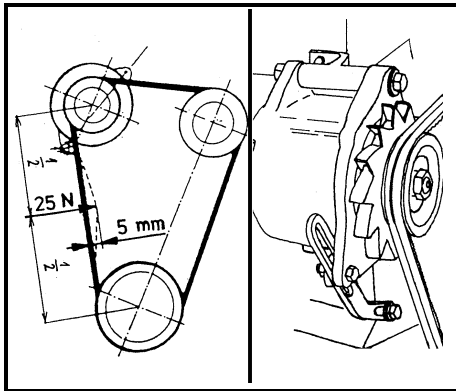
NOTE

ADJUSTMENT

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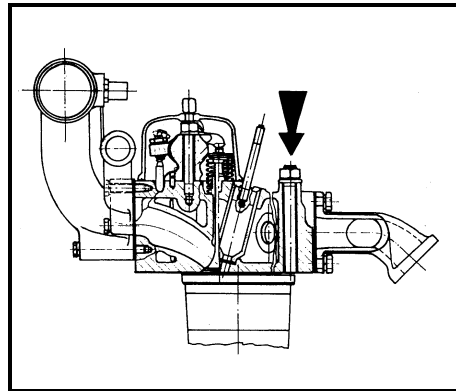
Almost all these following works require certain experience and service and diagnostic equipment. That's why we recommend to do this work at specialized or authorized workshop.

ADJUSTMENT



DRIVE BELT TENSION INSPECTION

The correct tension of each belt is assured when the belt is deflected 5 mm after pushing on the belt by force 25 N.

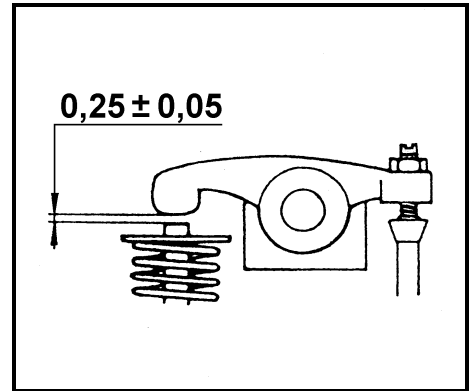


CYLINDER HEADS RETORQUE

Cylinder heads are retorqued at cold engine in the prescribed cross sequence. The torque is 167 to 177 Nm.

VALVE CLEARANCE ADJUSTMENT AT ENGINES Z 5202, Z 6202, Z 7202, Z 7702, Z 7302

Engine valve clearance is adjusted at cold engine. The correct valve clearance at suction and exhaust valve is 0,25“ 0,05 mm.

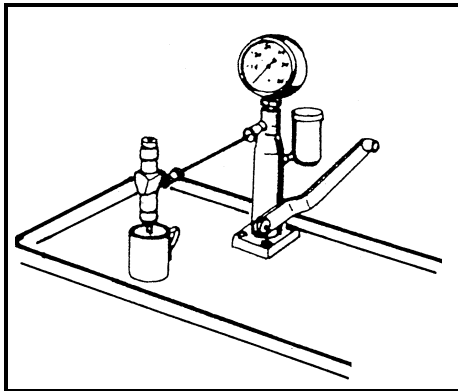


At change of rocker arm movement

cylinder arm changes	rocker arm is adjusted
1st	4th
3rd	2nd
4th	1st
2nd	3rd

At the engine Z 5202, after rocker arm changing, turn the crankshaft by one revolution (360°) and do adjusting.

ADJUSTMENT



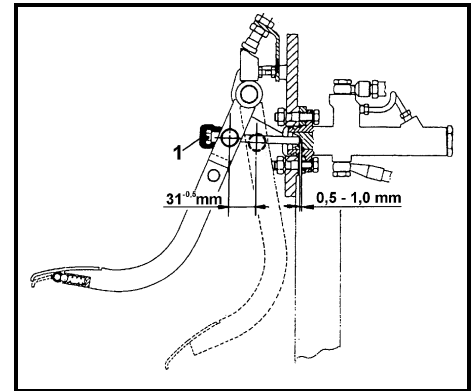
A 178

ADJUSTMENT OF INJECTORS

Injectors are adjusted by the instrument NV 50 or by the portable tester NV 251, that enables injector inspection directly on the engine without its disassembly. The inspection process is described in instruction manual of testers produced by Motorpal Jihlava. The injector opening pressure is 18,6-0,8 MPa at engines Z 5202, Z 6202, Z 7202, Z 7702 and Z 7302. Adjust the pressure to the upper limit of tolerance. If the injector is removed at the inspection, the sitting surface for injector in the cylinder head must be properly cleaned before injector reassembly. Repaired and adjusted injector must be cleaned and the injector body needs to be coated by vaseline LT 2.

ATTENTION:

Pay the special attention for correct position at reassembly of injector into the engine. Position the injector in cylinder head that way the injector neck is maximally 1,5 mm from the bolt.

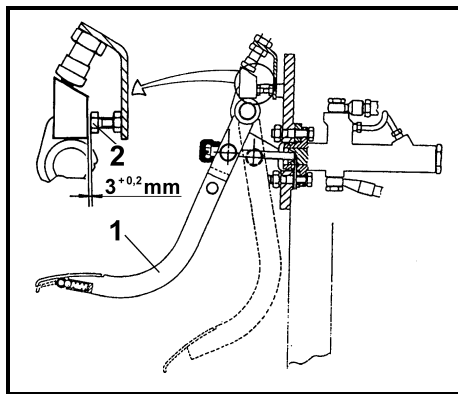


A 179

BRAKE PEDAL FREE TRAVEL ADJUSTMENT

The correct play between the brake pedal piston rod and the main brake valve piston is 0,5-1,0 mm. Adjust the play with unlatched pedals and after releasing of piston rod adjusting nut (1).

ADJUSTMENT



Dop 5

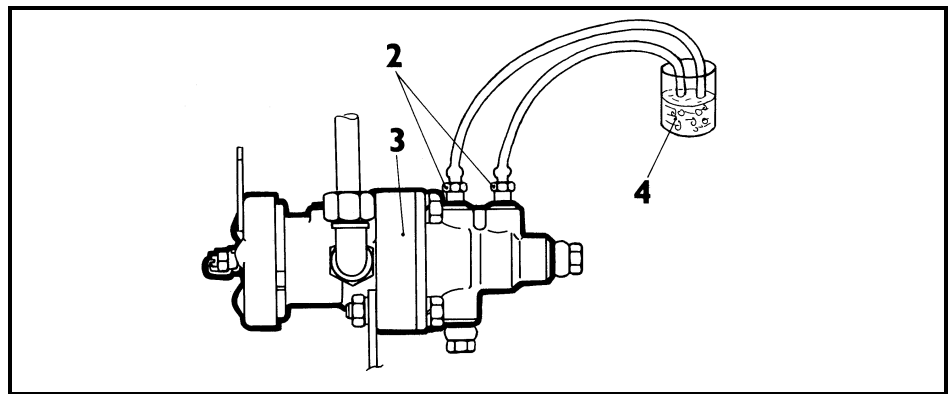
TRACTOR BRAKE SYSTEM BLEEDING

Do it in the following order.

Bleed the system with unlatched pedals separately for each wheel. Follow these instructions:

Important

 When bleeding the brake hydraulic circuit, one pedal (1) must be pressed by $7,5^{+0,5}$ mm - measured on the main brake valve piston rod i.e. $3^{+0,2}$ mm on adjusting screw (2) and the second pedal is used for bleeding. To be able to keep the right distance, insert the flat gauge of corresponding thickness between pedal (1) and adjusting screw (2) i.e. $3^{+0,2}$ mm.



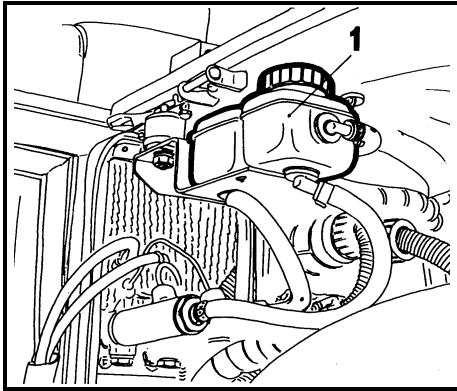
Dop 6

1. BLEEDING OF TRAILER AIR BRAKE SYSTEM

Bleed the system at working air pressure 730 " 20 kPa.

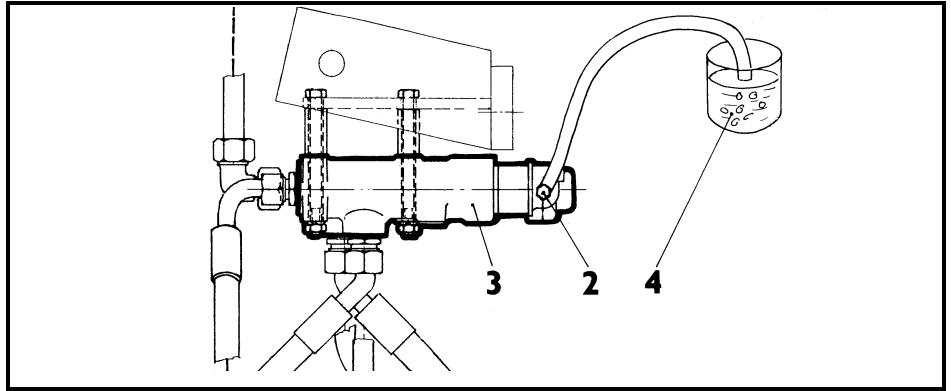
- Add the missing volume of brake fluid at the brake fluid reservoir up to max. level.
- Remove plugs from vent screws (2) of trailer control valve (3) located on the right hand side of tractor between fuel tank and axle.
- Slide the hose on the vent screws and put the other end of hose into the transparent reservoir (4) partially filled with brake fluid. Place the reservoir minimally 300 mm above the vent screw. The vent screws must be permanently under pressure to avoid aerating of brake system through the screw threads.
- Loosen the bleeding screws max. by 1/4 turns.
- Process for bleeding is the same as mentioned in - **Important** (see page 156).
- Fully press the pedal which is not blocked by gauge and tighten the adjusting screw.
- Release the brake pedal and repeat the process so long until bubbles come from the hose.

ADJUSTMENT



Dop 7

Check the brake fluid level in the brake fluid reservoir (1) when bleeding to avoid aerating of the brake system. Keep the hose end permanently under brake fluid level. Reservoir (3) needs to be kept in the highest possible position. The brake fluid must be completely exchanged in the whole brake circuit minimally after two years.



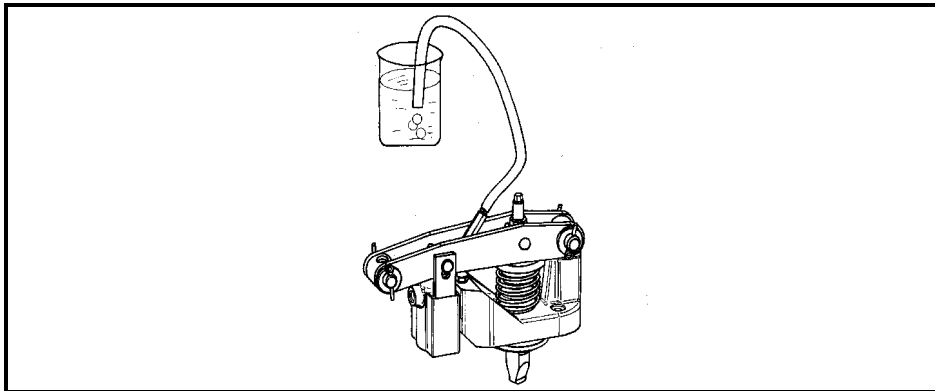
Dop 8

2. BLEEDING OF HYDRAULIC TRAILER BRAKE SYSTEM

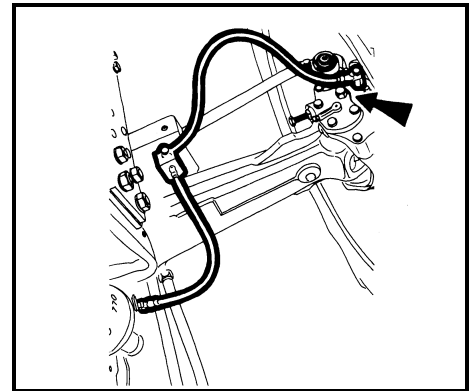
Bleed the system following the instructions:

- Add the missing volume of brake fluid into the brake fluid reservoir up to max. level.
- Remove plugs from vent screws (2) of hydraulic trailer control valve (3) located on the left cab silentblock support.
- Slide the hose on the vent screw and put the other end of hose into the transparent reservoir (4) partially filled with brake fluid. Place the reservoir minimally 300 mm above the vent screw. The vent screw must be permanently under pressure to avoid aerating of brake system through the screw threads.
- Loosen the bleeding screws max. by 1/4 turns.
- Test which pedal causes flowing the fluid into tank after pressing pedal. You will do bleeding by this pedal.
- Process for bleeding is the same as mentioned in - **Important** (see page 156).
- Fully press the pedal which is not blocked by gauge and tighten the adjusting screw.
- Release the brake pedal and repeat the process so long until bubbles come from the hose.

ADJUSTMENT



Dop 9



Dop 10

3. SERVICE BRAKE SYSTEM BLEEDING

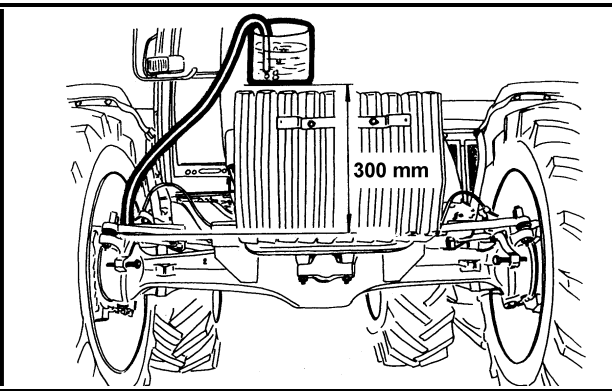
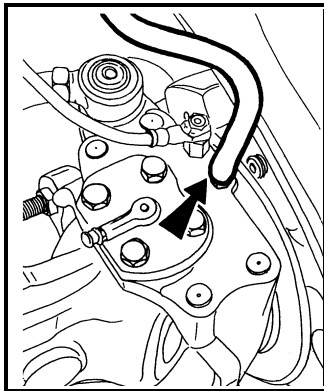
- Check the brake fluid level at the brake fluid reservoir (1). Add the missing volume with the new brake fluid up to max. level.
- Slide the hose on the vent screw after removing of rubber plug and put the other end of hose into the transparent reservoir partially filled with brake fluid . The vent screw must be permanently under pressure to avoid aerating of brake system trough the screw threads. Place the reservoir minimally 300 mm above the vent screw at this work.
- Loosen the vent screw maximally by 1/4 turn.
- Process for bleeding is the same as mentioned in - **Important** (see page 156).
- Fully press the pedal which is not blocked by gauge and tighten the adjusting screw.
- Release the brake pedal and repeat the process so long until bubbles come from the hose.

4. BLEEDING OF FRONT DRIVING AXLE BRAKE SYSTEM

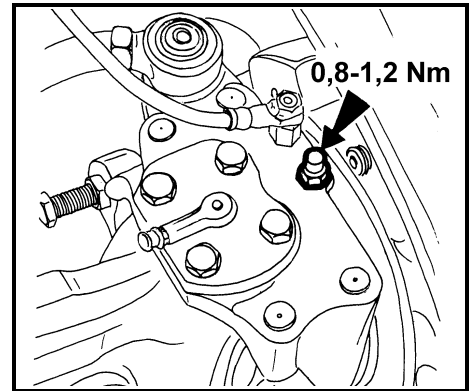
It is necessary to bleed the trailer control valve before bleeding according to the point 2. **Bleeding of trailer air brake system** and this must be done even in case that air trailer brakes are not installed.

Bleed the system at working air pressure 730" 20 following the instructions:

ADJUSTMENT



Dop 11



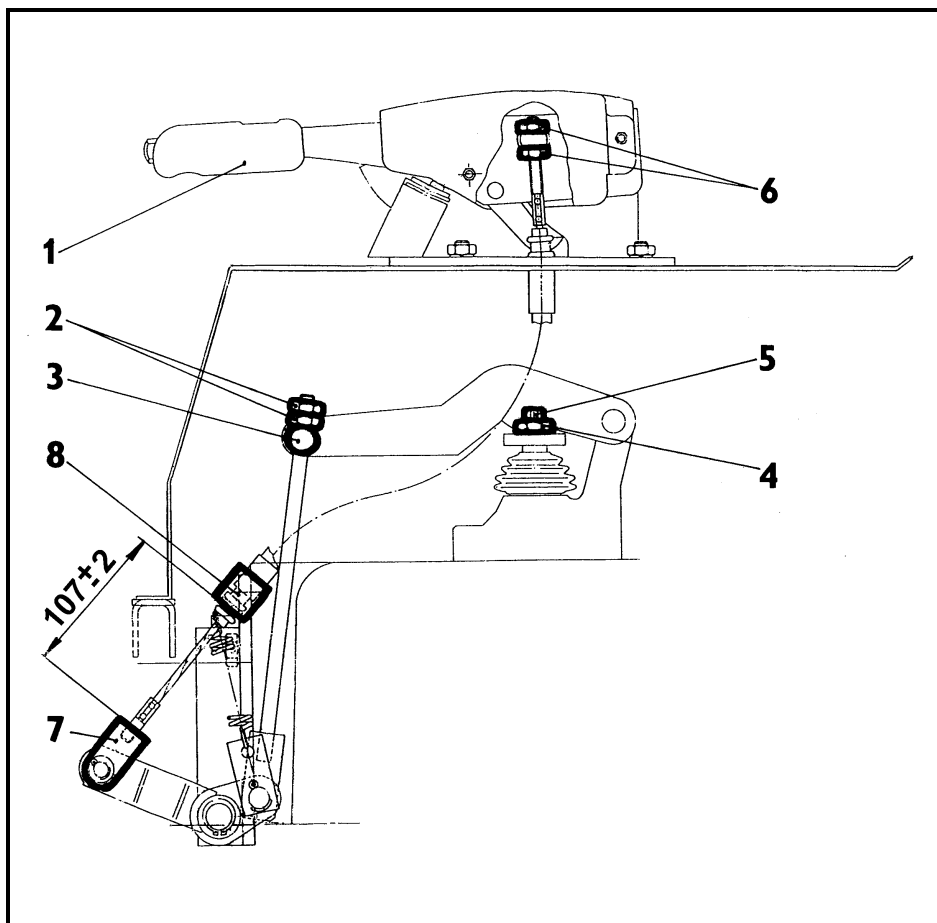
Dop 12

BLEEDING PROCESS

- Check the brake fluid level at the brake fluid reservoir. Add the missing volume of brake fluid into the brake fluid reservoir up to max. level.
- Remove plugs from vent screws of front driving (screws are located on the upper surfaces of final drive housings).
- Slide the hose on the vent screws and put the other end of hose into the transparent reservoir partially filled with brake fluid. Place the reservoir minimally 300 mm above the vent screw. The vent screw must be permanently under pressure to avoid aerating of brake system through the screw threads.
- Left and right brake is bled simultaneously.
- Loosen the vent screw maximally by 1/4 turn.
- Press fully latched brake pedals up to stop and tighten the vent screw.
- Release the brake pedal and repeat procedure so long until the clear brake fluid without bubbles flows out from the hose.

- Tightened the vent screws by torque 0,8 - 1,2 Nm. after bleeding of front driving axle brake system.
- Check the brake fluid level in the brake fluid reservoir when bleeding to avoid aerating of the brake system.
- Keep the hose end permanently under brake fluid level.
- Reservoir needs to be kept in the highest possible position.
- The brake fluid must be completely exchanged in the whole brake circuit minimally after two years.

ADJUSTMENT



A 184

SERVICE AND PARKING BRAKE INSPECTION AND ADJUSTMENT

Adjustment must be done in the following steps:

1. service brake adjustment
2. parking brake adjustment

The another way is not possible. Separately also only adjustment either service or parking brake is not possible. Adjustment operations depend one upon the another.

ADJUSTMENT

SERVICE BRAKE ADJUSTMENT

- Lift rear tractor wheels
- Loosen nuts (6), nuts (2) and nut (4).
- Loosen screw (5).
- Let turn one wheel by means of your helper. Simultaneously tighten screw (5) so long the wheel can not be turned by hand.
- After blocking of wheel loosen the adjusting screw (5) by 4/6 of nut surface i.e. 3/4 turns of screw
- Fix the screw position (5) by locking nut (4)
- Adjusting process is the same for both left and right side of tractor

If the asymmetry of brake effect appears between left and right brake the adjusting screw (5) of brake with bigger brake effect needs to be loosened to adjust brake effect of both right and left wheel. The screw can be loosened maximally by 1/2 turn.

If the asymmetry of brake effect is not eliminated after adjusting, the tractor brakes must be adjusted in the authorized service.

PARKING BRAKE ADJUSTMENT

- Measure and adjust the distance between fork (7) and bracket (8) to value 107 ± 2 mm.
- Tighten nut (2) so to be play 0,1 mm between lower nut (2) and pin (3) i.e. light contact of nut (2) with pin (3).

- Rise and lower the parking brake lever (1) several-times. You will eliminate mutual plays among parts by this way.
- Check the play between nut (2) and pin (3), settled to 0,1 mm. i.e. light contact of nut (2) with pin (3).and eventually adjust it.
- Fix the nut (2) by the second lock nut (2).

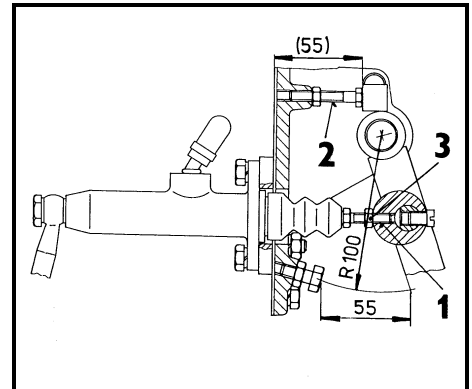
If the asymmetry of brake effect appears between left and right brake when parking brake applied the upper adjusting nut (6) of brake with bigger brake effect needs to be loosened to adjust brake effect of both right and left wheel. The nut can be loosened maximally by 1,5 turn.

If the asymmetry of brake effect is not eliminated after adjusting, the tractor brakes must be adjusted in the authorized service.

Tighten all locking nuts after brake adjustment.

Note:

There are adjusting openings in the tractor cab floor for making easy the brake adjustment.

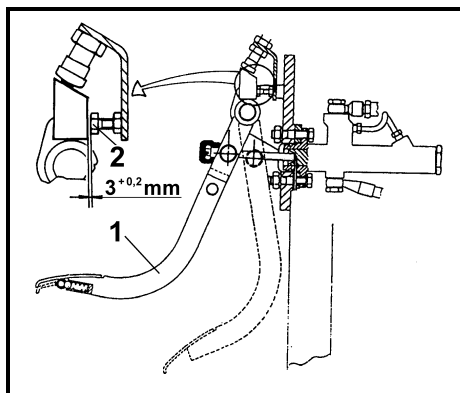


CLUTCH PEDAL FREE TRAVEL ADJUSTMENT

The play between pedal piston rod and clutch valve piston is not adjusted - this is adjusted by producer.

The mutual position between piston rod and piston rod eye (1) is adjusted that way the piston rod is maximally pulled from cylinder and the pedal is stopped on the upper stop screw (2) in the same time. Subsequently the piston rod is fixed by nut (3) to piston rod eye. Check an eventual deformation of dust cap after adjustment in, case of deformation correct it by hand.

ADJUSTMENT



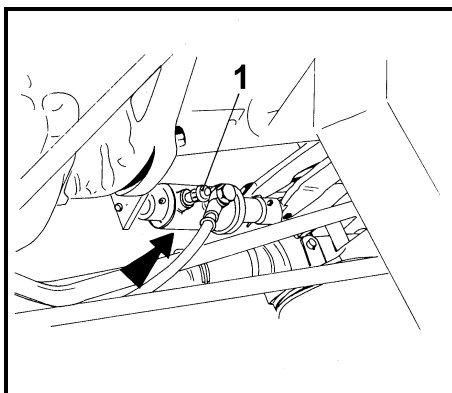
A 185a

CHECK OF CLUTCH PEDAL POSITION ADJUSTMENT

This check is carried out only in case the Hi-Lo (torque multiplier) * is assembled at your tractor.

The right position of clutch pedal is adjusted in the manufacturing plant.

In the field, the play 0,5 - 1 mm is checked between piston rod and piston rod pin.



A 186

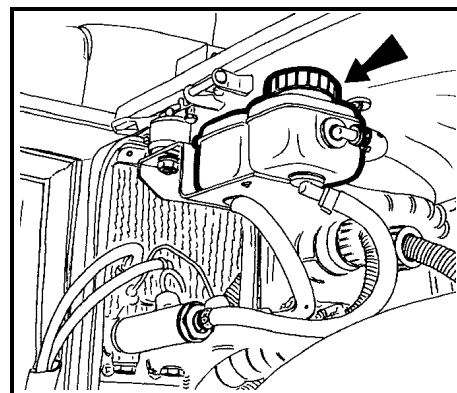
CLUTCH HYDRAULIC CIRCUIT BLEEDING

Bleed the clutch hydraulic circuit by the same way as rear brake system bleeding. Vent screw of clutch hydraulic circuit is located on the clutch control cylinder (1).



Add only the fresh brake fluid into the brake fluid reservoir that is common for both brake and clutch circuit.

The brake fluid must be completely exchanged in the whole brake circuit minimally after two years including the clutch hydraulic circuit.



A 187

Brake fluid filling is easier after silent-block nut loosening and brake fluid reservoir holder tilting.

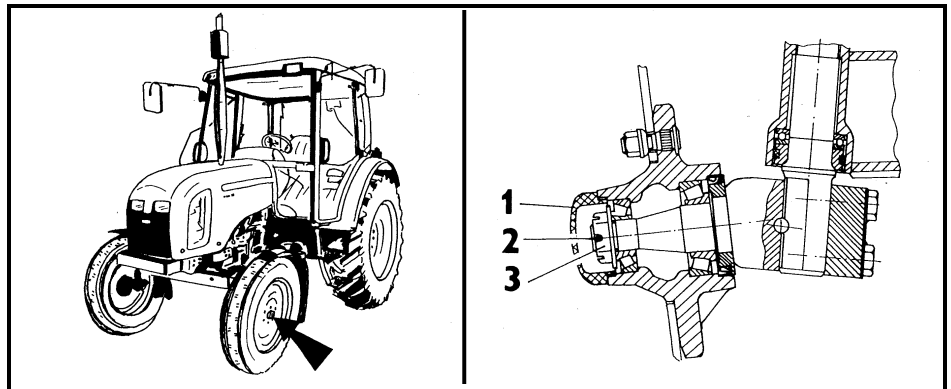


Hoses from the main clutch valve towards brake fluid reservoir must be upwards or horizontally directed. Turns of hoses downwards are not allowed.

ADJUSTMENT

ENGINE CLUTCH ADJUSTMENT

All three travel clutch levers must be in one line, and are in touch with control collar thrust bearing. In case the play of one or two levers is bigger than 0,15 mm from bearing, so adjust levers by nuts to be in touch with bearing. The complete clutch wear is indicated by clutch slippage. Adjust the clutch to the following values at disassembled tractor when exchanging clutch plate. Set travel clutch levers by nuts 25 mm from the recess on clutch cover. The difference in levers setting can be maximally 0,15 mm. Press the clutch pedal approx. 5x up to stop after assembly of engine with transmission.

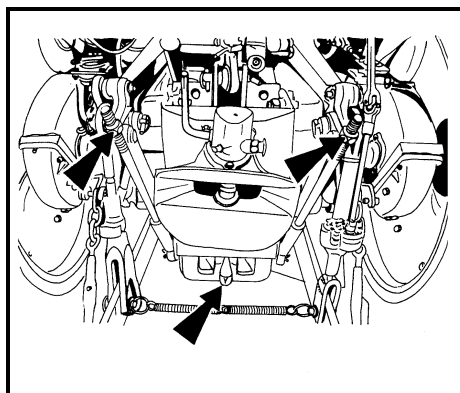


A 188

FREE PLAY ADJUSTMENT OF FRONT WHEEL TAPERED ROLLER BEARINGS AT TRACTOR Z 3321, Z 4321, Z 5321, Z 6321, Z 7321.

- Fix tractor against movement, lift up and support the front axle.
- Remove the bearing cover (1) and remove the cotter pin (2) from the castle nut (3).
- Torque the castle nut (3) by 15 Nm.
- Loosen the nut by 180° and release the bearing by knocking of mallet to the wheel hub.
- Retorque the castle nut (3) with torque wrench by 3-5 Nm. Wheel must be freely turned without evident play but without evident resistance. (Hub sealing creates a friction against turning and needs to be taken into consideration).
- Lock the castle nut with a new cotter pin.
- Assemble the bearing cover (1).

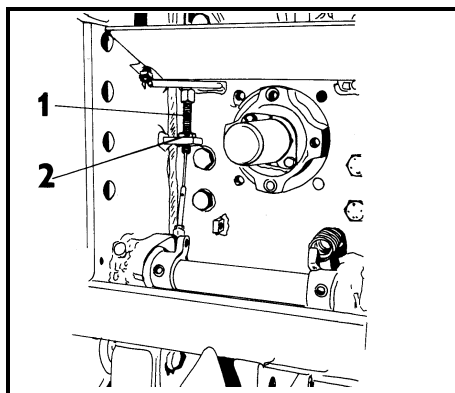
ADJUSTMENT



A 189

PICK UP HITCH ADJUSTMENT

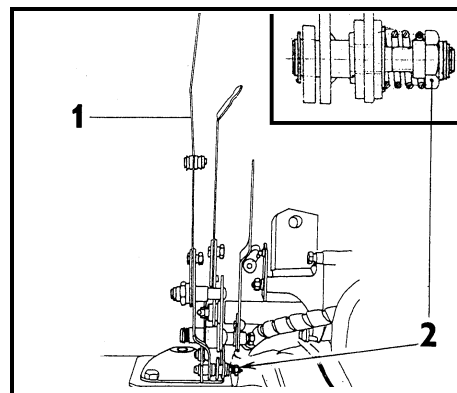
Chose the position control - "P" by hydraulic selection control lever. Raise the hydraulic lifting arms into the upper position. Hitch is in its working position. Adjust the telescopic links that way you thread the lock nuts to guiding tube without play. Than screw down the nut by 5 threads. The carrier is lifted a little by this way and hooks are moved into their working position.



A 190

ADJUSTMENT OF PICK UP HITCH RELEASING PUSH PULL CABLE

Pick up hitch is in its working position. The push pull cable must be under tension that way to be the lever in cab without play. If the push pull cable is not properly under tension, adjust it by screwing up or down of adjusting screw (1). Lock the screw by lock nut (2) after finishing adjusting.



A 191

ADJUSTMENT OF HYDRAULIC INNER CIRCUIT CONTROL LEVER FORCE

Adjust the friction force of inner circuit lever(1) by tightening of nut (2) that way to avoid self-loosening of lever in any position of hydraulic inner circuit lever at chosen draft control.

NOTE

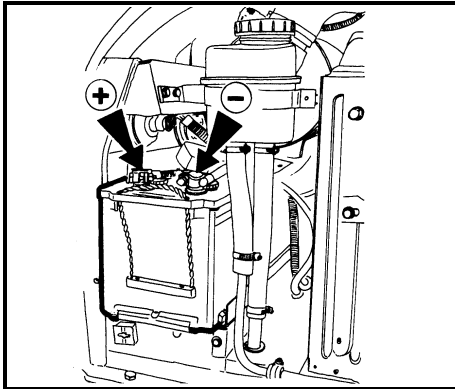
NOTE

ELECTRICAL INSTALLATION

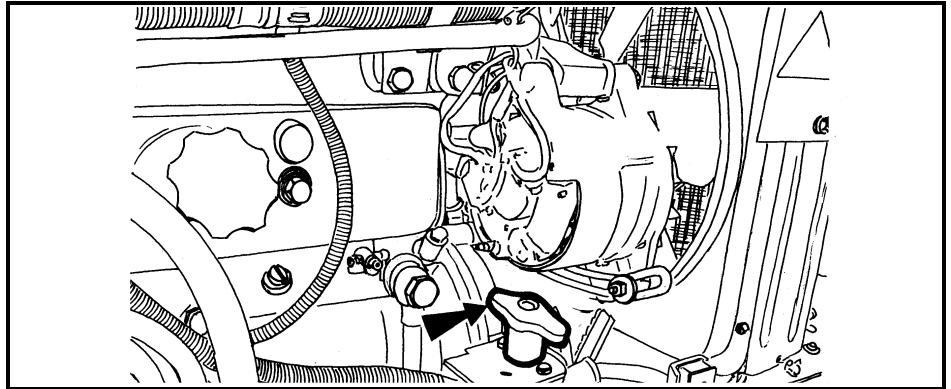
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Pay special attention for manipulation with battery when repairing electrical installation to avoid contact of skin or clothes with electrolyte.

ELECTRICAL INSTALLATION



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A 193

ELECTRICAL EQUIPMENT

Nominal voltage (minus poll (-) grounded)	12 V
Battery	12V / 135 Ah
Alternator with integrated voltage regulator	14V; 70 A
Starter motor	12 V; 2,9 kW
Drive belts for: alternator, water pump	AVX 10-1125 La (2 PCs)

BASIC SERVICE INFORMATION

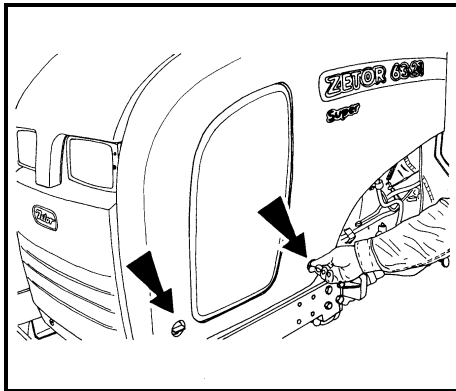
Battery "minus" poll must be ever connected with the ground and "plus" poll connected with alternator. Vice versa connected battery destroys the complete electronics of alternator.

If starting tractor by means of another battery or auxiliary source don't forget to connect "plus" to "plus" and "minus" to "minus" and the auxiliary source must be set to 12 V. Disconnect battery by battery switch * or remove the connector for tractor ground (-) if changing any part of charging circuit to avoid possible short circuit.

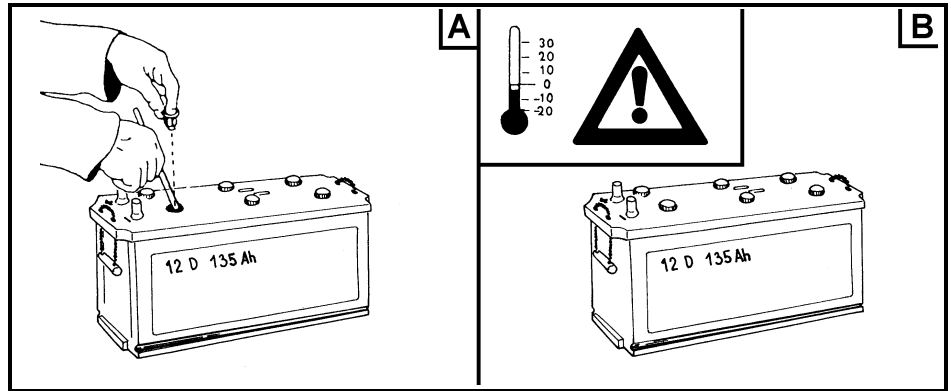


At any manipulation or repair of starter the battery must be disconnected and all shifting levers including PTO lever must be in neutral position to avoid self starting and life hazard. Starting tractor by short circuit of starter connectors is forbidden! Tractor must be always started from driver's seat.

ELECTRICAL INSTALLATION



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BATTERY

Battery is located behind the front mask of bonnet and is accessible after removing the side shields. Battery switch is assembled as an option. Battery switch is located on the right hand side of engine compartment.



If the tractor is out of operation for longer period of time, it is necessary to change the battery at least once in three month because of the battery selfdischarging and the spacing current of AEV warning lights breaker. It is recommended to disconnect the battery by means of the battery disconnecting switch in case the tractor is put out of action.

BATTERY MAINTENANCE

Check the electrolyte level after each charging or minimally once per 6 month. Add the electrolyte only by distilled water to be its level 5 mm above separators (A). Add water basically before operation to assure good mixing of electrolyte. The electrolyte density is; by charging to $1,28 \text{ g.cm}^{-3}$ that corresponds to 32°B° (in tropic countries $1,23 \text{ g.cm}^{-3}$ i.e. 27°B°). Electrolyte might be frozen at discharged battery in winter season and the battery will be destroyed (B). Never let battery in discharged status. Clean battery terminals and grease it slightly by vaseline (every 100 hours in summer season). Farther instructions are mentioned in the battery instruction manual.

The momentary status of charging depends upon electrolyte density, at battery properly formatted and with density $1,28 \text{ g.cm}^{-3}$ at fully charged status - see the following table :

Charging status (%)	electrolyte density (g.cm^{-3})
100	1,28
70	1,23
50	1,20
20	1,15
fully discharged	1,12

Electrolyte density is considered at temperature 25°C . Measured density is higher by $0,01 \text{ g.cm}^{-3}$ at temperature decreased by 15°C . Charge insufficiently charged battery outside the tractor in two regimes:

1. By current $13,5 \text{ A}$ up to status of gassing ($14,4 \text{ V}$).
2. By current 7 A up to fully charged status with density mentioned above.

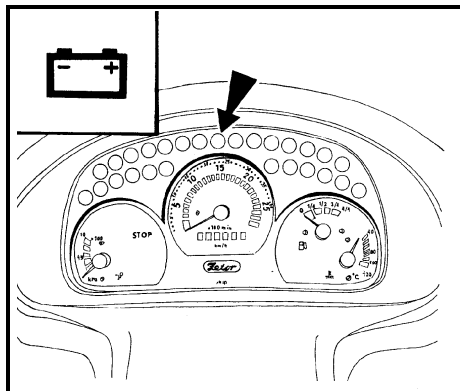
Battery can be charged only by one current 7 A for the total time of charging if the charging time is not a matter.

ELECTRICAL INSTALLATION

SAFETY REGULATIONS FOR WORK WITH BATTERY

1. Safe your eyes by glasses or safety shield. The eye stained by electrolyte must be immediately washed by clear water for time of several minutes. Look for a first aid.
2. Electrolyte is a caustic agent. Use protective gloves at manipulation with battery protect the skin and coats against staining. Neutralize the stained areas by soap water and wash them by clean water.
3. Keep children out of battery and electrolyte.
4. Manipulation with open flame and smoking at battery is forbidden. Don't handle with any sparkling devices nearby the battery.
5. Hydrogen is released from electrolyte at charging battery and this creates the explosive mixture being mixed with the air. The explosion might be caused by a spark created at manipulation with battery terminals when the closed charging circuit.
6. Discarded battery is ecologically dangerous reject. Let it scrap by specialists (service network).

ELECTRICAL INSTALLATION



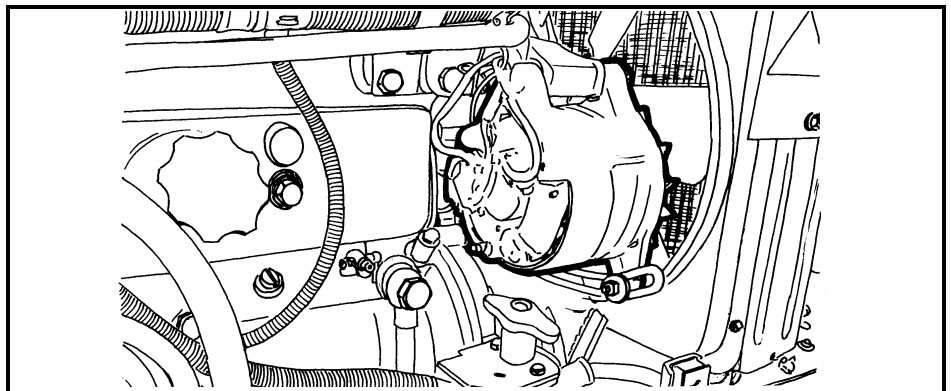
A 196

ALTERNATOR

Alternator is located on the right hand side of engine. Charging status is indicated by the red indicator light on the instrument panel. Damaged indicator light bulb must be immediately exchanged at service shop.



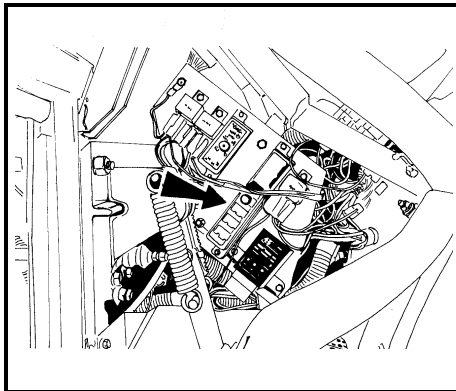
All wires connected with the alternator must be disconnected when repairing tractor by electric arc welding. Protect the wire "+B" against short circuit.



A 197

ALTERNATOR MAINTENANCE

- Protect the alternator against penetration of water or diesel fuel when washing and cleaning tractor.
- Battery must never be disconnected at operation!
- The alternator must never run without load i.e. with disconnected terminal "+B" and connected terminal "+D". This status creates excessively high voltage of alternator at increased engine speed and this voltage damages the alternator electronics.
- Never create the short circuit of any alternator connector at operation.
- Alternator must not be additionally excited. Alternator electronics is damaged in this case.
- Keep the perfect electrical connection of alternator terminals and perfect alternator ground.



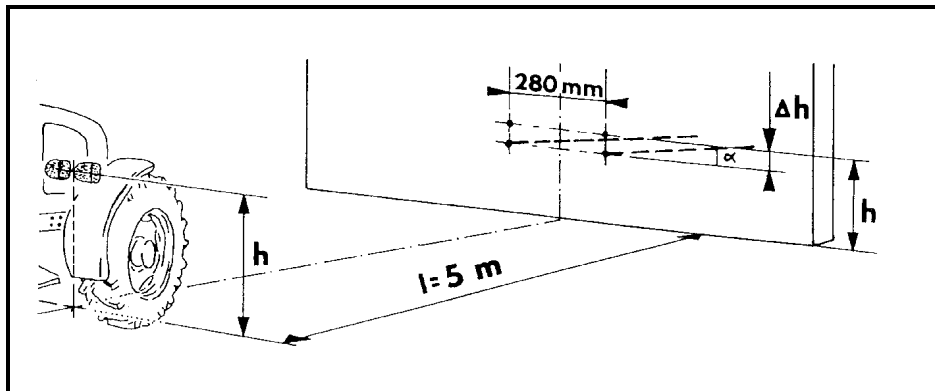
FUSE BOX

Fuse box is accessible after removing of steering support left cover. The main fuse box has eight polls. Farther four poll fuse box located nearby the main box is assembled at cab tractors. Fuses are of knife type and the prescribed value of amperage must be kept when exchanging fuse. In case of repeated fuse exchange look for the authorized service.

ELECTRICAL INSTALLATION

Connection of fuses in fuse box	Pos.	Fuse amperage	Protected circuit
→ 1 30 →	1	15A	hazard lights, brake lights acoustic horn, 30relay of start safety switch control valves of MFWD, differential lock, front PTO with indicator light, diff. lock relay 3 , dashboard power, plug socket for assembly lamp high beam head lights with indicator light left low beam head light, license plate light right low beam head light, working headlight with indicator light right low beam head light, fog light with indicator light left low beam head light, indicator light for mask/roof head light front and rear wiper, washer, relay 4 heating blower, relay 5 and 6 reserve air condition (AC compressor clutch)
→ 2 30 →	2	15A	
→ 3 54 →	3	15A	
→ 4 58a →	4	15A	
→ 5 58L →	5	15A	
→ 6 58p →	6	15A	
→ 7 56b →	7	15A	
→ 8 56b →	8	15A	
→ 9 54 →	9	15A	
→ 10 30 →	10	15A	
→ 11 30 →	11	15A	
→ 12 30 →	12	15A	

ELECTRICAL INSTALLATION



A 201

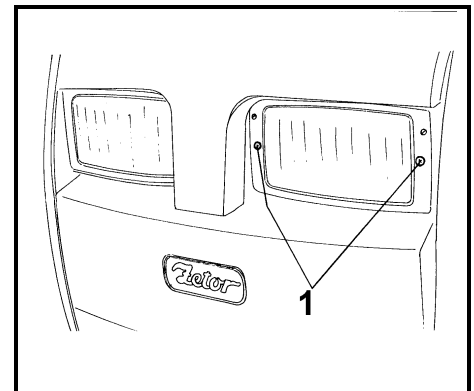
CHECKING OF FRONT MASK HEADLIGHTS ADJUSTMENT

Adjustment needs to be checked at each exchange of light or bulb. Tractor must stand on horizontal ground and tires must be inflated to the specific pressure when checking on a testing wall.

Basic vertical setting of mask headlights with low beam is adjusted with - 3,5 % tolerance from basic setting (measured at stopped tractor with shipping weight).

- Distance between testing wall and tractor headlight is 5 m.
- Height of headlight (H). Dedicate 175 mm from this value and draw a link parallel with ground on the wall.
- Recheck, eventually adjust the light centers with switched high beams - points (A).

Light and dark margin, at low beam on , must be under the drawn link or maximally on the link. The right part of this margin is approximately 15" upwards. The full line is valid for the left headlight and the interrupted line for the right one.



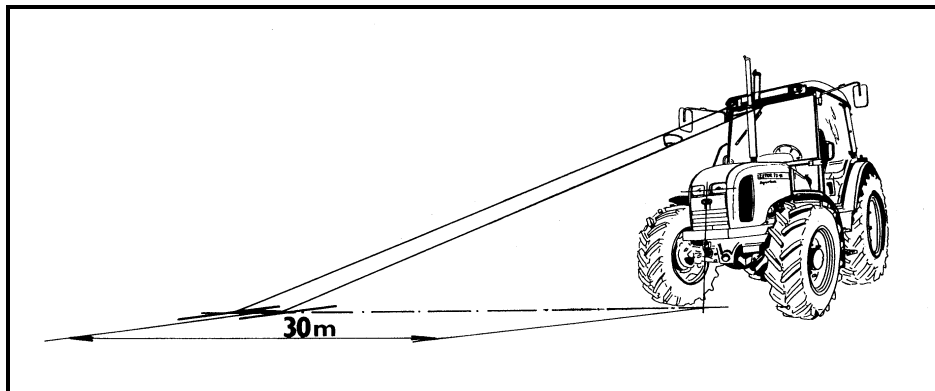
A 202

ADJUSTMENT OF FRONT MASK HEADLIGHTS

Adjust the light by means of both screws (1) for vertical and horizontal direction simultaneously - horizontally 2"; vertically +1" to -6".

Each light is adjusted separately. Bulb is exchanged from the rear part of parabola. Slide out or remove the battery because of limited space.

ELECTRICAL INSTALLATION



A 203

CHECKING OF CAB ROOF HEADLIGHTS ADJUSTMENT

Any point of illuminated surface on the left side must not be far off 30 m from front tractor part. Headlight beams must be parallel with tractor axes.

Adjust the headlights at tractor shipping weight. Front roof headlights can be used on the road only in case, front implement is attached or machine covers mask headlights.

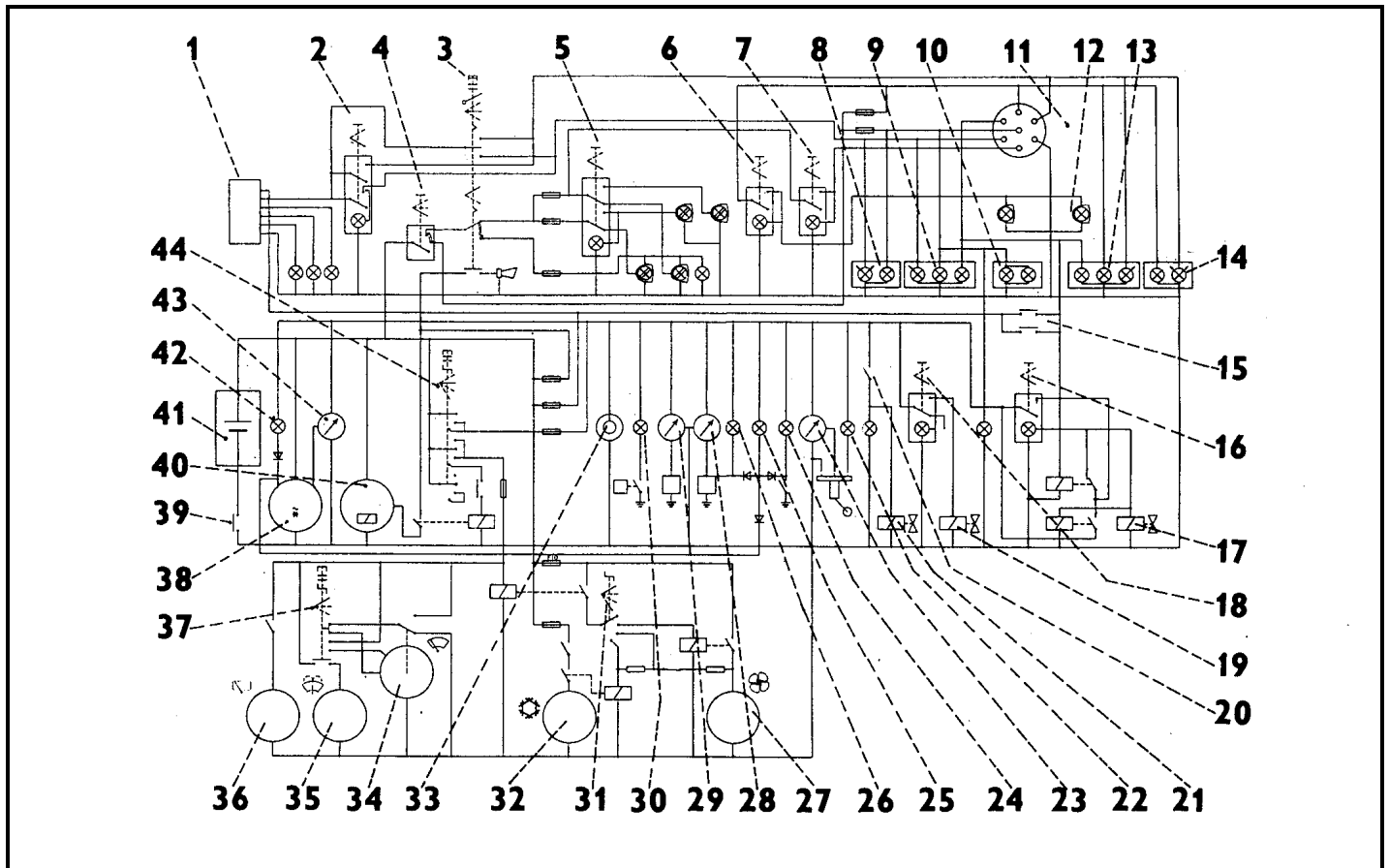
CAB ROOF HEADLIGHTS ADJUSTMENT

Cab roof headlights are adjusted by the same way as the tractor mask headlights.

WIRING HARNESS DIAGRAM OF TRACTOR Z 3321 - Z 7341

- | | |
|---|-----------------------------|
| 1. warning light interrupter | 35.washer |
| 2. warning lights (on , off) | 36.rear wiper |
| 3. multifunctional switch | 37.wiper switch |
| 4. headlight switch - main, position, off | 38.alternator |
| 5. low beam headlight switch (roof-grill) | 39.battery switch |
| 6. front headlights | 40.starter motor |
| 7. fog light | 41.battery |
| 8. left front headlight | 42.charging indicator light |
| 9. left rear light | 43.tachometer |
| 10.license number plate illumination | 44.key switch |
| 11.seven poll socket | |
| 12.front headlights | |
| 13.right rear light | |
| 14.right front headlight | |
| 15.service brake switch | |
| 16.differential lock | |
| 17.differential lock valve | |
| 18.MFWD switch | |
| 19.MFWD valve | |
| 20.PTO switch | |
| 21.PTO valve | |
| 22.fuel level indicator light | |
| 23.fuel gauge | |
| 24.parking brake indicator light | |
| 25.failure indicator light | |
| 26.min. air pressure indicator light | |
| 27.blower | |
| 28.pressure gauge | |
| 29.thermometer | |
| 30.lubrication indicator light | |
| 31.blower | |
| 32.air condition | |
| 33.socket for assembly light | |
| 34.front wiper | |

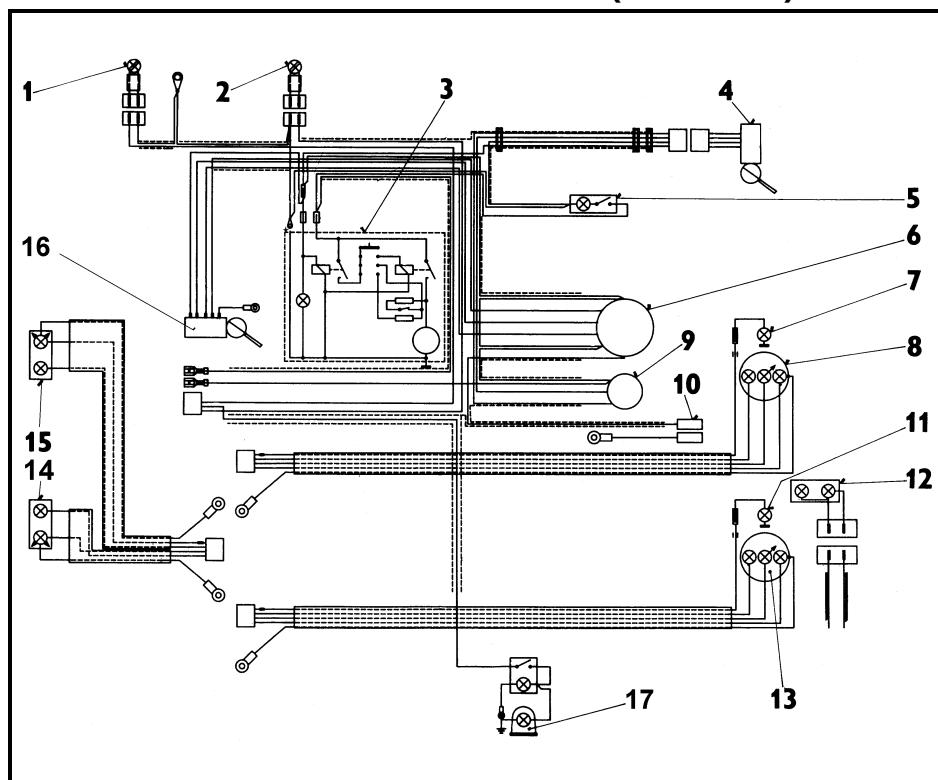
WIRING HARNESS DIAGRAM OF TRACTOR Z 3321 - Z 7341



A 204

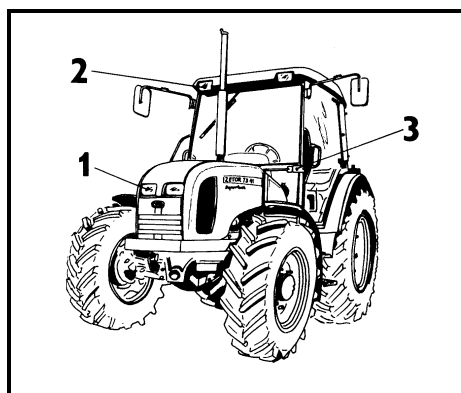
WIRING HARNESS DIAGRAM OF TRACTOR Z 3321 - Z 7341 (WITH CAB)

1. left roof headlight
2. right roof headlight
3. heating
4. rear wiper
5. cab illumination
6. front wiper switch
7. working light (right hand side traffic)
8. right rear light
9. rear wiper switch
10. washer
11. working light (left hand side traffic)
12. license number plate illumination
13. left rear light
14. left front headlight
15. right front headlight
16. front wiper
17. flash beacon

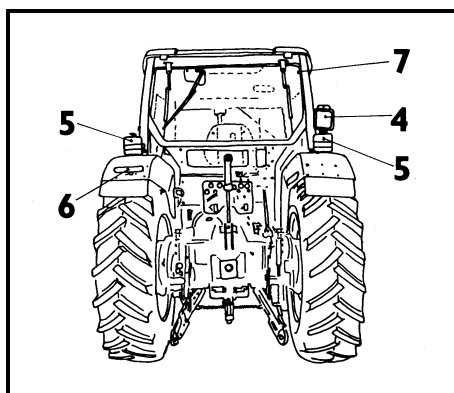


A 205

ELECTRICAL INSTALLATION



A 206



A 207

A 208

Pos.	Bulb destination	Voltage	Outlet	Socket	Note
1	front headlights	12 V	45/40 W	P 45t	
2	roof headlights	12 V	45/40 W	P 45t	low beam filament connected
3	front combined lights:				
	turn signal lights	12 V	21 W	BA 15s	
	position lights	12 V	10 W	BA 15s	
4	working headlight	12 V	55 W - H 3		
5	rear combined lights				
	tail and brake lights	12 V	21/10 W	BAY 15D	
	turn signal lights	12 V	21 W	BA 15s	
6	license number plate illumination	2x12 V	5 W	S 8,5	
7	illumination	12 V	5 W	S 8,5	

NOTE

NOTE

MAIN TECHNICAL PARAMETERS

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TECHNICAL DATA OF ENGINES Z 5202, Z 6202, Z 7202, Z 7702, Z 7302

Tractor model	unit	Z 3321/3341	Z 4321/4341	Z 5321/5341	Z 6321/6341	Z 7321/7341
Engine model		Z 5202	Z 6202	Z 7202	Z 7702	Z 7302
Engine type		diesel, four stroke with direct fuel injection				
Engine execution		in line, water-cooled				
Number of cylinders		3	4	4	4	4
Displacement	cm ³	2696,5	3922	3922	3922	3922
Bore x stroke	mm	102x110	102x120	102x120	102x120	102x120
Rated speed	min ⁻¹	2200				
Ignition sequence		1-3-2	1-3-4-2			
Compression ratio		17				
Max. overrun	min ⁻¹	2440				
Low idle speed	min ⁻¹	700-50	700-50	700-50	700-50	700-50
Engine power	kW	33,1	44	47	51	58
Specific fuel consumption at rated speed	g.kW ⁻¹ .h ⁻¹	251	245	245	245	242
Engine lubrication		pressure type with splashing				
Max. engine oil consumption after 100 hour running in	g.kW ⁻¹ .h ⁻¹	0,8				0,9
Engine oil pressure at rated speed and oil temperature 90°C	MPa	0,2-0,5				
Minim. oil pressure at 700 RPM and oil temperature 80°C	MPa	0,05				
Coolant temperature	°C	80-95				
Valve gear		OHV				
Oil cleaner		full flow				
Fuel cleaner		full flow				
Injection pump		PP3M85K1e-3143	PP4M9K1e-3065	PP4M9K1e-3066	PP4M9K1e-3137	PP4M9K1e-3149
Governor		RV 3M 350/1100-3303			RV 3M 350/1100-3309	
Nozzle		DOP 160 S 430-1436				

TECHNICAL DATA OF ENGINES Z 5202, Z 6202, Z 7202, Z 7702, Z 7302

Tractor model	unit	Z 3321/3341	Z 4321/4341	Z 5321/5341	Z 6321/6341	Z 7321/7341
Injector opening pressure	MPa	18,6-0,8				
Timing angle	"	25+1				
Valve clearance measured at cold engine						
- suction	mm	0,25 ° 0,05				
- exhaust	mm	0,25 ° 0,05				

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm)	Tractor model	ZETOR 3321		
WEIGHT (kg)	Front tire	6,00-16	6,50-16	
	Rear tire	12,4-32	12,4-32	14,9-28
Main dimensions (mm) (tolerance ' 2%)				
Overall length with hitch		3686	3686	3686
Overall width at rear standard tread setting		1900	1900	1900
Height up to muffler top (muffler with flap without spark arrestor)		2805	2815	2810
Height up to cab top (cab with cover)		2575	2585	2580
Height up to steering wheel top		1860	1860	1855
Ground clearance without hitches (under front axle housing)		460	470	470
with hitches (under draw bar clevis bottom - at lowest position)		326	326	316
Height of trailer hitch (up to mouth middle) 50 mm step		685-885	685-885	675-875
Height of swinging draw bar (inner bottom surface of clevis)		366	366	356
Height of pick up hitch (bottom surface of hook)		431	431	421
Height of PTO shaft		671	671	661
Front wheel tread standard setting			1450	
(for agricultural purpose)			1450, 1525, 1825	

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 3321					
	Front tire	7,50-16					
	Rear tire	12,4-32	12,4-36	13,6-36	14,9-28	16,9-28	16,9-30
Main dimensions (mm) (tolerance ' 2%)							
Overall length with hitch		3686	3686	3686	3686	3686	3686
Overall width at rear standard tread setting		1900	1900	1900	1900	1900	1900
Height up to muffler top (muffler with flap without spark arrestor)		2830	2840	2825	2815	2820	2840
Height up to cab top (cab with cover)		2595	2625	2650	2600	2615	2625
Height up to steering wheel top		1870	1895	1910	1870	1860	1895
Ground clearance without hitches (under front axle housing)		490	490	490	490	490	490
Ground clearance with hitches (under draw bar clevis bottom - at lowest position)		326	380	403	316	340	376
Height of trailer hitch (up to mouth middle) 50 mm step		685-885	739-939	762-962	675-875	699-899	735-935
Height of swinging draw bar (inner bottom surface of clevis)		366	420	443	356	380	416
Height of pick up hitch (bottom surface of hook)		431	485	508	421	445	481
Height of PTO shaft		671	725	748	661	685	721
Front wheel tread standard setting (for agricultural purpose)		1425 1425, 1500, 1800					

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm)	Tractor model	ZETOR 3321		
WEIGHT (kg)	Front tire	6,00-16	6,50-16	
	Rear tire	12,4-32	12,4-32	14,9-28
Rear wheel tread standard		1500	1500	1500
setting by 75 mm (for agricultural purpose)		1350-1800	1350-1800	1425-1800
Wheel base		2123	2123	2123
Contour turning diameter with one wheel braked		7000+500	7000+500	
Tread turning diameter with one wheel braked		6600+500	6600+500	
Weights (kg) - standard Tolerance ' 5%)				
Tractor shipping weight with cab		3025	3030	3045
front axle		1030	1035	1035
rear axle		1995	1995	2010
without cab		2725	2730	2745
front axle		980	985	985
rear axle		1745	1745	1760
Weight of ballast weights				
front			155 (135+20)	
rear			270	
Water weight in rear tires		2x140	2x140	2x190

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 3321					
	Front tire	7,50-16					
	Rear tire	12,4-32	12,4-36	13,6-36	14,9-28	16,9-28	16,9-30
Rear wheel tread standard setting by 75 mm (for agricultural purpose)		1500	1500	1500	1500	1500	1500
Wheel base		1350-1800	1350-1800	1350-1800	1425-1800	1425-1800	1425-1800
Contour turning diameter with one wheel braked		2123	2123	2123	2123	2123	2123
Tread turning diameter with one wheel braked		7000+500					
		6600+500					
Weights (kg) - standard Tolerance ' 5%)							
Tractor shipping weight with cab		3035	3045	3070	3050	3075	3085
front axle		1040	1040	1040	1040	1040	1040
rear axle		1995	2005	2030	2010	2035	2045
without cab		2735	2745	2770	2750	2775	2785
front axle		990	990	990	990	990	990
rear axle		1745	1755	1780	1760	1785	1795
Weight of ballast weights							
front		155 (135+20)					
rear		270					
Water weight in rear tires		2x140	2x160	2x180	2x190	2x215	2x240

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm)	Tractor model	ZETOR 3321		
WEIGHT (kg)	Front tire	6,00-16	6,50-16	
	Rear tire	12,4-32	12,4-32	14,9-28
Max. allowed axle loads (kg) - inflation pressure (kPa)				
Front axle with rigid knees(wheel tread 1450, eventually 1425 mm) at max. speed				
30 kmph		1120-325	1230-300	
20 kmph		1510-325	1660-300	
8 kmph		2240-406	2460-375	
Rear axle at max. speed				
30 kmph		2710-170	2710-170	3370-150
20 kmph		3250-170	3250-170	4000-150
8 kmph		3790-215	3790-215	4000-150

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 3321					
	Front tire	7,50-16					
	Rear tire	12,4-32	12,4-36	13,6-36	14,9-28	16,9-28	16,9-30
Max. allowed axle loads (kg) - inflation pressure (kPa)							
Front axle with rigid knees(wheel tread 1450, eventually 1425 mm) at max. speed							
30 kmph		1490-250					
20 kmph		2010-250					
8 kmph		2980-315					
Rear axle at max. speed							
30 kmph		2710-170	2880-170	3230-160	3370-150	4000-150	4000-150
20 kmph		3250-170	3450-170	3870-160	4000-150	4000-150	4000-150
8 kmph		3790-215	4000-215	4000-200	4000-150	4000-150	4000-150

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 3341					
	Front tire	9,5-24			11,2-24		
	Rear tire	12,4-32	14,9-28	16,9-28	12,4-36	16,9-28	16,9-30
Main dimensions (mm) (tolerance ' 2%)							
Overall length with hitch		3686	3686	3686	3686	3686	3686
Overall length with hitch and front ballast weight		3956	3956	3956	3956	3956	3956
Overall width at rear standard tread setting		1945	1945	1945	1945	1945	1945
Height up to muffler top							
(muffler with flap without spark arrestor)		2845	2845	2855	2875	2875	2885
Height up to cab top (cab with cover)		2590	2585	2595	2607	2605	2630
Height up to steering wheel top		1870	1865	1875	1910	1890	1910
Ground clearance without hitches							
(under front axle housing)		379	379	379	405	405	405
with hitches							
(under draw bar clevis bottom - at lowest position)		320	310	334	371	331	367
Height of trailer hitch (up to mouth middle) 50 mm step		650-850	640-840	660-860	709-909	669-869	705-905
Height of swinging draw bar (inner bottom surface of clevis)		360	350	374	411	371	407
Height of pick up hitch (bottom surface of hook)		425	415	439	476	436	472
Height of PTO shaft		665	655	679	716	676	712
Front wheel tread standard setting			1500			1594	
(for agricultural purpose)		1594, 1650, 1745, 1800			1650, 1745, 1800		

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 3341					
	Front tire	9,5-24			11,2-24		
	Rear tire	12,4-32	14,9-28	16,9-28	12,4-36	16,9-28	16,9-30
Rear wheel tread standard setting by 75 mm (for agricultural purpose) Wheel base Contour turning diameter with one wheel braked Tread turning diameter with one wheel braked		1500 1425-1800 2070 8700+500 8400+500					
Weights (kg) - standard Tolerance ' 5%)							
Tractor shipping weight with cab		3320	3350	3375	3360	3390	3400
front axle		1315	1315	1315	1330	1330	1330
rear axle		2015	2035	2060	2030	2060	2070
without cab		3020	3050	3075	3060	3090	3100
front axle		1265	1265	1265	1280	1280	1280
rear axle		1755	1785	1810	1780	1810	1820
Weight of ballast weights							
front		155+210			155+210		
rear		270			270		
Water weight in rear tires		2x140	2x190	2x215	2x160	2x215	2x240

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm)	Tractor model	ZETOR 3341					
WEIGHT (kg)	Front tire	9,5-24			11,2-24		
	Rear tire	12,4-32	14,9-28	16,9-28	12,4-36	16,9-28	16,9-30
Max. allowed axle loads (kg) - inflation pressure (kPa)							
Front driving axle (wheel tread 1500 1594,mm) at max. speed							
30 kmph		2000-240			2160-190		
20 kmph		2400-240			2500-180		
8 kmph		2800-300			3400-300		
Rear axle at max. speed							
30 kmph		2710-170	3370-150	4000-150	2880-170	4000-150	4000-150
20 kmph		3250-170	3760-180	4000-150	3450-170	4000-150	4000-150
8 kmph		3700-215	4000-190	4000-150	4000-215	4000-150	4000-150

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 4321							
	Front tire	6,50-16			7,50-16		7,50-20		
	Rear tire	14,9-28	16,9-28	16,9-30	13,6-36	16,9-30	16,9-30	16,9-34	
Main dimensions (mm) (tolerance ' 2%)									
Overall length with hitch		3820	3820	3820	3820	3820	3820	3820	
Overall width at rear standard tread setting		1900	1900	1900	1900	1900	1900	1900	
Height up to muffler top (muffler with flap without spark arrestor)		2795	2810	2830	2850	2840	2870	2890	
Height up to cab top (cab with cover)		2565	2589	2625	2652	2625	2625	2660	
Height up to steering wheel top		1850	1865	1885	1905	1895	1915	1935	
Ground clearance without hitches (under front axle housing)		470	470	470	490	490	540	540	
with hitches (under draw bar clevis bottom - at lowest position)		320	344	380	407	380	380	415	
Height of trailer hitch (up to mouth middle) 50 mm step		676-976	700-900	735-935	762-962	735-935	735-935	770-970	
Height of swinging draw bar (inner bottom surface of clevis)		360	384	420	447	420	420	455	
Height of pick up hitch (bottom surface of hook)		425	449	485	512	485	485	520	
Height of PTO shaft		665	689	725	752	725	725	760	
Front wheel tread standard setting		1450			1425		1425		
(for agricultural purpose)		1375, 1450, 1525, 1825			1350, 1425, 1500, 1800		1350, 1425, 1500, 1800		

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 4321							
	Front tire	6,50-16			7,50-16		7,50-20		
	Rear tire	14,9-28	16,9-28	16,9-30	13,6-36	16,9-30	16,9-30	16,9-34	
Rear wheel tread standard setting by 75 mm (for agricultural purpose)		1500			1500	1500	1500		
		1425-1800			1350- 1800	1425- 1800	1425-1800		
Wheel base		2257			2257		2257		
Contour turning diameter with one wheel braked		7100+500			7100+500		7100+500		
Tread turning diameter with one wheel braked		6700+500			6700+500		6700+500		
Weights (kg) - standard Tolerance ' 5%)									
Tractor shipping weight with cab		3110	3135	3145	3135	3150	3165	3185	
front axle		1080	1080	1080	1085	1085	1100	1100	
rear axle		2030	2055	2065	2059	2065	2065	2085	
without cab		2810	2835	2845	2835	2850	2865	2885	
front axle		1030	1030	1030	1035	1035	1050	1050	
rear axle		1780	1805	1815	1800	1815	1815	1835	
Weight of ballast weights									
front		155 (135+20)			155 (135+20)		155 (135+20)		
rear		270	270	270	270	270	270	270	
Water weight in rear tires		2x190	2x215	2x240	2x180	2x240	2x240	2x250	

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 4321							
	Front tire	6,50-16			7,50-16		7,50-20		
	Rear tire	14,9-28	16,9-28	16,9-30	13,6-36	16,9-30	16,9-30	16,9-34	
Max. allowed axle loads (kg) - inflation pressure (kPa)									
Front axle with rigid knees(wheel tread 1450, eventually 1425 mm) at max. speed									
30 kmph		1230-300			1490-250		1500-225		
20 kmph		1660-300			2010-250		2360-275		
8 kmph		2460-375			2980-315		3000-285		
Rear axle at max. speed									
30 kmph		3370-150	4000-150	4000-150	3230-160	4000-150	4000-150	4000-130	
20 kmph		4000-150	4000-150	4000-150	3870-160	4000-150	4000-150	4000-130	
8 kmph		4000-150	4000-150	4000-150	4000-200	4000-150	4000-150	4000-130	

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 4341				
	Front tire	11,2-24		12,4-24		
	Rear tire	16,9-28	16,9-30	13,6-36	16,9-30	16,9-34
Main dimensions (mm) (tolerance ' 2%)						
Overall length with hitch		3820	3820	3820	3820	3820
Overall length with hitch and front ballast weight		4090	4090	4090	4090	4090
Overall width at rear standard tread setting		1945	1945	1900	1945	1945
Height up to muffler top						
(muffler with flap without spark arrestor)		2880	2900	2920	2910	2930
Height up to cab top (cab with cover)		2573	2609	2639	2612	2647
Height up to steering wheel top		1905	1923	1929	1925	1943
Ground clearance without hitches						
(under front axle housing)		402	402	417	417	417
with hitches						
(under draw bar clevis bottom - at lowest position)		331	367	397	370	405
Height of trailer hitch (up to mouth middle) 50 mm step		704-904	740-940	762-962	735-935	770-970
Height of swinging draw bar (inner bottom surface of clevis)		371	407	437	410	445
Height of pick up hitch (bottom surface of hook)		436	472	502	475	510
Height of PTO shaft		676	712	742	715	750
Front wheel tread standard setting		1594		1594		
(for agricultural purpose)		1650, 1745, 1800		1650, 1745, 1800		

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 4341					
	Front tire	11,2-24		12,4-24			
	Rear tire	16,9-28	16,9-30	13,6-36	16,9-30	16,9-34	
Rear wheel tread standard setting by 75 mm (for agricultural purpose) Wheel base Contour turning diameter with one wheel braked Tread turning diameter with one wheel braked		1500 1500-1800		1500 1500-1800 2204 8700+500 8400+500			
Weights (kg) - standard Tolerance ' 5%)							
Tractor shipping weight with cab		3485	3495	3490	3505	3550	
front axle		1415	1415	1425	1425	1425	
rear axle		2070	2080	2065	2080	2125	
without cab		3185	3195	3190	3205	3250	
front axle		1365	1365	1375	1375	1375	
rear axle		1820	1830	1815	1830	1875	
Weight of ballast weights							
front		155+210			155+210		
rear		270	270	270	270	270	
Water weight in rear tires		2x215	2x240	2x180	2x240	2x250	

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm)	Tractor model	ZETOR 4341					
WEIGHT (kg)	Front tire	11,2-24		12,4-24			
	Rear tire	16,9-28	16,9-30	13,6-36	16,9-30	16,9-34	
Max. allowed axle loads (kg) - inflation pressure (kPa)							
Front driving axle (wheel tread 1594 mm) at max. speed							
40 kmph		2000-210		2000-170			
30 kmph		2160-190		2400-170			
20 kmph		2500-180		2880-170			
8 kmph		3400-300		3400-220			
Rear axle at max. speed							
40 kmph		3400-150	3400-150	2900-160	3400-150	3400-130	
30 kmph		4000-150	4000-150	3230-160	4000-150	4000-130	
20 kmph		4000-150	4000-150	3870-160	4000-150	4000-130	
8 kmph		4000-150	4000-150	4000-200	4000-150	4000-130	

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm)	Tractor model	ZETOR 5321				
WEIGHT (kg)	Front tire	7,50-16		7,50-20		
	Rear tire	16,9-28	16,9-30	13,6-36	16,9-30	16,9-34
Main dimensions (mm) (tolerance ' 2%)						
Overall length with hitch		3820	3820	3820	3820	3820
Overall width at rear standard tread setting		1900	1900	1900	1900	1900
Height up to muffler top (muffler with flap without spark arrestor)		2820	2840	2880	2870	2890
Height up to cab top (cab with cover)		2589	2625	2652	2625	2660
Height up to steering wheel top		1859	1895	1925	1915	1935
Ground clearance without hitches (under front axle housing)		490	490	540	540	540
with hitches (under draw bar clevis bottom - at lowest position)		344	380	407	380	415
Height of trailer hitch (up to mouth middle) 50 mm step		700-900	735-935	762-962	735-935	770-970
Height of swinging draw bar (inner bottom surface of clevis)		384	420	447	420	455
Height of pick up hitch (bottom surface of hook)		449	485	512	485	520
Height of PTO shaft		689	725	752	725	760
Front wheel tread standard setting		1425		1425		
(for agricultural purpose)		1425,1500,1800		1425,1500,1800		

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm)	Tractor model	ZETOR 5321				
WEIGHT (kg)	Front tire	7,50-16		7,50-20		
	Rear tire	16,9-28	16,9-30	13,6-36	16,9-30	16,9-34
Rear wheel tread standard setting by 75 mm (for agricultural purpose)		1500		1500	1500	1500
		1425-1800		1350-1800	1425-1800	1425-1800
Wheel base		2257			2257	
Contour turning diameter with one wheel braked		7100+500			7100+500	
Tread turning diameter with one wheel braked		6700+500			6700+500	
Weights (kg) - standard Tolerance ' 5%)						
Tractor shipping weight with cab		3140	3150	3150	3165	3185
front axle		1085	1085	1100	1100	1100
rear axle		2055	2065	2050	2065	2085
without cab		2840	2850	2850	2865	2885
front axle		1035	1035	1050	1050	1050
rear axle		1805	1815	1800	1815	1835
Weight of ballast weights						
front		155 (135+20)			155 (135+20)	
rear		270	270	270	270	270
Water weight in rear tires		2x215	2x240	2x160	2x240	2x250

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm)	Tractor model	ZETOR 5321					
	Front tire	7,50-16		7,50-20			
WEIGHT (kg)	Rear tire	16,9-28	16,9-30	13,6-36	16,9-30	16,9-34	
Max. allowed axle loads (kg) - inflation pressure (kPa)							
Front axle with rigid knees(wheel tread 1425 mm) at max. speed							
30 kmph		1490-250		1500-225			
20 kmph		2010-250		2360-275			
8 kmph		2980-315		3000-285			
Rear axle at max. speed							
30 kmph		4000-150	4000-150	3230-160	4000-150	4000-130	
20 kmph		4000-150	4000-150	3870-160	4000-150	4000-130	
8 kmph		4000-150	4000-150	4000-200	4000-150	4000-130	

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 5341				
	Front tire	11,2-24		12,4-24		
	Rear tire	16,9-28	16,9-30	13,6-36	16,9-30	16,9-34
Main dimensions (mm) (tolerance ' 2%)						
Overall length with hitch without ballast weight		3820	3820	3820	3820	3820
Overall length with hitch and with ballast weight		4090	4090	4090	4090	4090
Overall width at rear standard tread setting		1945	1945	1900	1945	1945
Height up to muffler top (muffler with flap without spark arrestor)		2880	2900	2920	2910	2930
Height up to cab top (cab with cover)		2573	2609	2639	2612	2647
Height up to steering wheel top		1905	1923	1929	1925	1943
Ground clearance without hitches (under front axle housing)		402	402	417	417	417
with hitches (under draw bar clevis bottom - at the lowest position)		331	367	397	370	405
Height of trailer hitch (up to mouth middle) 50 mm step		704-904	740-940	762-962	735-935	770-970
Height of swinging draw bar (inner bottom surface of clevis)		371	407	437	410	445
Height of pick up hitch (bottom surface of hook)		436	472	502	475	510
Height of PTO shaft		676	712	742	715	750

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 5341					
	Front tire	11,2-24		12,4-24			
	Rear tire	16,9-28	16,9-30	13,6-36	16,9-30	16,9-34	
Front wheel tread standard setting (for agricultural purpose)		1594		1594			
Rear wheel tread standard setting by 75 mm (for agricultural purpose)		1650,1745,1800		1650,1745,1800			
Wheel base		1500		1500			
Contour turning diameter with one wheel braked		1500-1800		1500-1800			
Tread turning diameter with one wheel braked		2204		2204			
		8700+500		8700+500			
		8400+500		8400+500			
Weights (kg) - standard Tolerance ' 5%)							
Tractor shipping weight with cab		3485	3495	3490	3505	3550	
front axle		1415	1415	1425	1425	1425	
rear axle		2070	2080	2065	2080	2125	
without cab		3185	3195	3190	3205	3250	
front axle		1365	1365	1375	1375	1375	
rear axle		1820	1830	1815	1830	1875	
Weight of ballast weights							
front		155+210		155+210			
rear		270	270	270	270	270	
Water weight in rear tires		2x215	2x240	2x180	2x240	2x250	

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 5341					
	Front tire	11,2-24		12,4-24			
	Rear tire	16,9-28	16,9-30	13,6-36	16,9-30	16,9-34	
Max. allowed axle loads (kg) - inflation pressure (kPa)							
Front driving axle (wheel tread 1594 mm) at max. speed							
40 kmph		2000-210		2000-170			
30 kmph		2160-190		2400-170			
20 kmph		2500-180		2880-170			
8 kmph		3400-300		3400-220			
Rear axle at max. speed							
40 kmph		3400-150	3400-150	2900-160	3400-150	3400-130	
30 kmph		4000-150	4000-150	3230-160	4000-150	4000-130	
20 kmph		4000-150	4000-150	3870-160	4000-150	4000-130	
8 kmph		4000-150	4000-150	4000-200	4000-150	4000-130	

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 6321					
	Front tire	7,50-16		7,50-20			
	Rear tire	16,9-28	16,9-30	13,6-36	16,9-30	16,9-34	
Main dimensions (mm) (tolerance ' 2%)							
Overall length with hitch		3820	3820	3820	3820	3820	
Overall width at rear standard tread setting		1900	1900	1900	1900	1900	
Height up to muffler top (muffler with flap without spark arrestor)		2820	2840	2880	2870	2890	
Height up to cab top (cab with cover)		2589	2625	2652	2625	2660	
Height up to steering wheel top		1859	1895	1925	1915	1935	
Ground clearance without hitches (under front axle housing)		490	490	540	540	540	
with hitches (under draw bar clevis bottom - at the lowest position)		344	385	412	385	420	
Height of trailer hitch (up to mouth middle) 50 mm step		700-900	735-935	762-962	735-935	770-970	
Height of swinging draw bar (inner bottom surface of clevis)		384	425	452	425	460	
Height of pick up hitch (bottom surface of hook)		449	490	517	490	525	
Height of PTO shaft		689	730	757	730	765	
Front wheel tread standard setting		1425		1425			
(for agricultural purpose)		1425,1500,1800		1425,1500,1800			

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 6321					
	Front tire	7,50-16		7,50-20			
	Rear tire	16,9-28	16,9-30	13,6-36	16,9-30	16,9-34	
Rear wheel tread standard setting by 75 mm (for agricultural purpose)		1500		1500	1500		
		1425-1800		1350-1800	1425-1800		
Wheel base		2257			2257		
Contour turning diameter with one wheel braked		7100+500			7100+500		
Tread turning diameter with one wheel braked		6700+500			6700+500		
Weights (kg) - standard Tolerance ' 5%)							
Tractor shipping weight with cab		3155	3165	3165	3180	3200	
front axle		1085	1085	1100	1100	1100	
rear axle		2070	2080	2065	2080	2100	
without cab		2855	2865	2865	2880	2900	
front axle		1035	1035	1050	1050	1050	
rear axle		1820	1830	1815	1830	1850	
Weight of ballast weights							
front		155 (135+20)			155 (135+20)		
rear		270	270	270	270	270	
Water weight in rear tires		2x215	2x240	2x160	2x240	2x250	

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm)	Tractor model	ZETOR 6321					
WEIGHT (kg)	Front tire	7,50-16		7,50-20			
	Rear tire	16,9-28	16,9-30	13,6-36	16,9-30	16,9-34	
Max. allowed axle loads (kg) - inflation pressure (kPa)							
Front axle with rigid knees(wheel tread 1425 mm) at max. speed							
30 kmph		1490-250		1500-225			
20 kmph		2010-250		2360-275			
8 kmph		2980-315		3000-285			
Rear axle at max. speed							
30 kmph		4000-150	4000-150	3230-160	4000-150	4000-130	
20 kmph		4000-150	4000-150	3870-160	4000-150	4000-130	
8 kmph		4000-150	4000-150	4000-200	4000-150	4000-130	

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 6341							
	Front tire	11,2-24		12,4-24			13,6R-24		
	Rear tire	16,9-28	16,9-30	13,6-36	16,9-30	16,9-34	18,4-34	18,4-30	
Main dimensions (mm) (tolerance ' 2%)									
Overall length with hitch without front ballast weight		3820	3820	3820	3820	3820	3820	3820	
Overall length with hitch and front ballast weight		4090	4090	4090	4090	4090	4090	4090	
Overall width at rear standard tread setting		1945	1945	1945	1945	1945	2000	2000	
Height up to muffler top (muffler with flap without spark arrestor)		2880	2900	2920	2910	2930	2950	2930	
Height up to cab top (cab with cover)		2573	2609	2639	2612	2647	2680	2640	
Height up to steering wheel top		1905	1923	1929	1925	1943	1950	1940	
Ground clearance without hitches (under front axle housing)		402	402	417	406	417	433	433	
with hitches (under draw bar clevis bottom - at the lowest position)		331	367	397	370	405	437	398	
Height of trailer hitch (up to mouth middle) 50 mm step		704-904	740-940	762-962	735-935	770-970	795-995	755-955	
Height of swinging draw bar (inner bottom surface of clevis)		471	407	437	410	445	447	438	
Height of pick up hitch (bottom surface of hook)		436	472	502	475	510	542	503	
Height of PTO shaft		676	712	742	715	750	782	743	

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 6341							
	Front tire	11,2-24		12,4-24			13,6R-24		
	Rear tire	16,9-28	16,9-30	13,6-36	16,9-30	16,9-34	18,4-34	18,4-30	
Front wheel tread standard setting (for agricultural purpose)		1594		1594			1583		
Rear wheel tread standard setting by 75 mm (for agricultural purpose)		1650,1745,1800		1650,1745,1800			1660,1734,1810		
Wheel base		1500		1500			1500		
Contour turning diameter with one wheel braked		1500-1800		1500-1800 2204			1500-1800		
Tread turning diameter with one wheel braked		8700+500		8700+500			8700+500		
		8400+500		8400+500			8400+500		
Weights (kg) - standard Tolerance ' 5%)									
Tractor shipping weight with cab		2500	3510	3505	3520	3550	3625	3605	
front axle		1415	1415	1425	1425	1425	1475	1475	
rear axle		2085	2095	2080	2095	2125	2125	2130	
without cab		3200	3210	3205	3220	3250	3325	3305	
front axle		1365	1365	1375	1375	1375	1425	1425	
rear axle		1835	1845	1830	1845	1875	1900	1880	
Weight of ballast weights									
front		155+210		155+210			155+210	155+210	
rear		270	270	270	270	270	270	270	
Water weight in rear tires		2x215	2x240	2x180	2x240	2x250	2x310	2x300	

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 6341							
	Front tire	11,2-24		12,4-24			13,6R-24		
	Rear tire	16,9-28	16,9-30	13,6-36	16,9-30	16,9-34	18,4-34	18,4-30	
Max. allowed axle loads (kg) - inflation pressure (kPa)									
Front driving axle (wheel tread 1594 mm) at max. speed									
40 kmph		2000-210		2000-170			2000-130	2000-130	
30 kmph		2160-170		2400-170			2570-130	2570-170	
20 kmph		2500-180		2880-170			2880-160	2880-160	
8 kmph		3400-300		3400-220			3400-160	3400-160	
Rear axle at max. speed									
40 kmph		3400-150	3400-150	2900-160	3400-150	3400-130	3400-130	3400-130	
30 kmph		4000-150	4000-150	3230-160	4000-150	4000-130	4000-130	4000-130	
20 kmph		4000-150	4000-150	3870-160	4000-150	4000-130	4000-130	4000-130	
8 kmph		4000-150	4000-150	4000-200	4000-150	4000-130	4000-130	4000-130	

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 7321					
	Front tire	7,50-16		7,50-20			
	Rear tire	16,9-28	16,9-30	13,6-36	16,9-30	16,9-34	
Main dimensions (mm) (tolerance ' 2%)							
Overall length with hitch		3820	3820	3820	3820	3820	
Overall width at rear standard tread setting		1900	1900	1900	1900	1900	
Height up to muffler top (muffler with flap without spark arrestor)		2820	2840	2880	2870	2890	
Height up to cab top (cab with cover)		2589	2625	2652	2625	2660	
Height up to steering wheel top		1859	1895	1925	1915	1935	
Ground clearance without hitches (under front axle housing)		490	490	540	540	540	
with hitches (under draw bar clevis bottom - at lowest position)		344	380	407	380	415	
Height of trailer hitch (up to mouth middle) 50 mm step		700-900	735-935	762-962	735-935	770-970	
Height of swinging draw bar (inner bottom surface of clevis)		384	420	447	420	455	
Height of pick up hitch (bottom surface of hook)		449	485	512	485	520	
Height of PTO shaft		689	725	752	725	760	
Front wheel tread standard setting		1425		1425			
(for agricultural purpose)		1425,1500,1800		1425,1500,1800			

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 7321					
	Front tire	7,50-16		7,50-20			
	Rear tire	16,9-28	16,9-30	13,6-36	16,9-30	16,9-34	
Rear wheel tread standard setting by 75 mm (for agricultural purpose)		1500		1500			
Wheel base		1425-1800		1350-1800	1425-1800		
Contour turning diameter with one wheel braked		2257		2257			
Tread turning diameter with one wheel braked		7100+500		7100+500			
		6700+500		6700+500			
Weights (kg) - standard Tolerance ' 5%)							
Tractor shipping weight with cab		3165	3175	3175	3190	3210	
front axle		1095	1095	1110	1110	1110	
rear axle		2070	2080	2065	2080	2100	
without cab		2865	2875	2875	2890	2910	
front axle		1045	1045	1060	1060	1060	
rear axle		1820	1830	2115	1830	1850	
Weight of ballast weights							
front		155 (135+20)		155 (135+20)			
rear		270	270	270	270	270	
Water weight in rear tires		2x215	2x240	2x160	2x240	2x250	

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 7321					
	Front tire	7,50-16		7,50-20			
	Rear tire	16,9-28	16,9-30	13,6-36	16,9-30	16,9-34	
Max. allowed axle loads (kg) - inflation pressure (kPa)							
Front axle with rigid knees(wheel tread 1425 mm) at max. speed							
30 kmph		1490-250		1500-225			
20 kmph		2010-250		2360-275			
8 kmph		2980-315		3000-285			
Rear axle at max. speed							
30 kmph		4000-150	4000-150	3230-160	4000-150	4000-130	
20 kmph		4000-150	4000-150	3870-160	4000-150	4000-130	
8 kmph		4000-150	4000-150	4000-200	4000-150	4000-130	

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 7341					
	Front tire	12,4-24			13,6R24		
	Rear tire	13,6-36	16,9-30	16,9-34	16,9-34	18,4-30	18,4-34
Main dimensions (mm) (tolerance ' 2%)							
Overall length with hitch without front ballast weight		3820	3820	3820	3820	3820	3820
Overall length with hitch and with front ballast weight		4090	4090	4090	4090	4090	4090
Overall width at rear standard tread setting		1945	1945	1945	1945	2000	2000
Height up to muffler top (muffler with flap without spark arrestor)		2920	2910	2930	2940	2930	2950
Height up to cab top (cab with cover)		2639	2612	2647	2650	2640	2680
Height up to steering wheel top		1929	1925	1943	1945	1940	1960
Ground clearance without hitches (under front axle housing)		417	417	417	433	433	433
with hitches (under draw bar clevis bottom - at lowest position)		397	370	405	407	398	437
Height of trailer hitch (up to mouth middle) 50 mm step		762-962	735-935	770-972	765-965	755-955	795-995
Height of swinging draw bar (inner bottom surface of clevis)		437	410	445	447	438	477
Height of pick up hitch (bottom surface of hook)		502	475	510	512	503	542
Height of PTO shaft		742	715	750	752	743	782

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm) WEIGHT (kg)	Tractor model	ZETOR 7341					
	Front tire	12,4-24			13,6R24		
	Rear tire	13,6-36	16,9-30	16,9-34	16,9-34	18,4-30	18,4-34
Front wheel tread standard setting (for agricultural purpose)		1594			1583		
Rear wheel tread standard setting by 75 mm (for agricultural purpose)		1650,1745,1800			1660,1734,1810		
Wheel base		1500			1500		
Contour turning diameter with one wheel braked		1500-1800			1500-1800		
Tread turning diameter with one wheel braked		2204			2204		
		8700+500			8700+500		
		8400+500			8400+500		
Weights (kg) - standard Tolerance ' 5%)							
Tractor shipping weight with cab		3515	3530	3560	3585	3615	3635
front axle		1435	1435	1435	1485	1485	1485
rear axle		2080	2095	2125	2100	2130	2150
without cab		3215	3230	3260	3285	3315	3335
front axle		1385	1385	1385	1435	1435	1435
rear axle		1830	1845	1875	1850	1880	1900
Weight of ballast weights							
front			155+210			155+210	
rear		270	270	270	270	270	270
Water weight in rear tires		2x180	2x240	2x250	2x250	2x300	2x310

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

MAIN DIMENSIONS (mm)	Tractor model	ZETOR 7341					
WEIGHT (kg)	Front tire	12,4-24			13,6R24		
	Rear tire	13,6-36	16,9-30	16,9-34	16,9-34	18,4-30	18,4-34
Max. allowed axle loads (kg) - inflation pressure (kPa)							
Front driving axle (wheel tread 1594 mm) at max. speed							
40 kmph		2000-210			2000-130		
30 kmph		2400-170			2570-130		
20 kmph		2880-170			2880-160		
8 kmph		3400-210			3400-160		
Rear axle at max. speed							
40 kmph		2900-160	3400-150	3400-130	3400-130	3400-130	3400-130
30 kmph		3230-160	4000-150	4000-130	4000-130	4000-130	4000-130
20 kmph		3870-160	4000-150	4000-130	4000-130	4000-130	4000-130
8 kmph		4000-200	4000-150	4000-130	4000-130	4000-130	4000-130

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

FORCE, POWER, CONSUMPTION	3321	3341	Z 4321	Z 4341
Forces (kN) tolerance ° 5%				
Max. pulling force in swinging draw bar, measured on concrete, tractor shipping weight with ballast weight, slippage 15%: with cab without cab	26,38 24,17	31,45 29,15	27,11 24,90	32,60 30,30
Max. pulling force in pick up hitch, tractor shipping weight with ballast weight, and water in rear tire: with cab without cab	29,9 27,7	35,12 32,83	30,79 28,58	36,42 34,13
Lifting force in lower draft link balls of three point hitch within the whole lifting range at 90% max. pressure: without lift assisting cylinder (kN) with one lift assisting cylinder (kN) with two lift assisting cylinders (kN)	19,9 28 -	19,9 28 -	19,9 28 36	- 28 36
Lifting force in lower draft link balls of three point hitch fixed within the whole range at max. pressure: without lift assisting cylinder (kN) with one lift assisting cylinder (kN) with two lift assisting cylinders (kN)	22 31 -	22 31 -	22 31 -	22 31 -
Max. lifting force in lower draft link balls of three point hitch at max. pressure: without lift assisting cylinder (kN) with one lift assisting cylinder (kN) with two lift assisting cylinders (kN)	24 33,8 -	24 33,8 -	24 33,8 43,5	- 33,8 43,5
Power and consumption (kW, g.kW ⁻¹ .h ⁻¹)				
PTO power at engine rated speed and shifted 540 PTO RPM	29,9 (28,7)	29,9 (28,7)	40,3 (38,7)	40,3 (38,7)
Specific fuel consumption at above mentioned power	275,4	275,4	267,6	267,6
Power and consumption is taken after 100 hour running in. Value in brackets is valid for engine without running in and is for information only.				

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

FORCE, POWER, CONSUMPTION	Z 5321	Z 5341	Z 6321	Z 6341
Forces (kN) tolerance ° 5%				
Max. pulling force in swinging draw bar, on concrete, tractor shipping weight with ballast weight, slippage 15%: with cab without cab	27,11 24,91	32,60 30,30	27,22 25,02	33,17 30,88
Max. pulling force in pick up hitch, tractor shipping weight with ballast weight, and water in rear tire: with cab without cab	30,79 28,60	36,42 34,12	30,90 28,70	37,91 35,62
Lifting force in lower draft link balls of three point hitch within the whole range at 90% max. pressure: without lift assisting cylinder (kN) with one lift assisting cylinder (kN) with two lift assisting cylinders (kN)	- 28 36	- 28 36	- 28 36	- 28 36
Lifting force in lower draft link balls of three point hitch within the whole range at max. pressure: without lift assisting cylinder (kN) with one lift assisting cylinder (kN) with two lift assisting cylinders (kN)	- 31,0 39,9	- 31,0 39,9	- 31,0 39,9	- 31,0 39,9
Max. lifting force in lower draft link balls of three point hitch at max. pressure: without lift assisting cylinder (kN) with one lift assisting cylinder (kN) with two lift assisting cylinders (kN)	- 33,8 43,5	- 33,8 43,5	- 33,8 43,5	- 33,8 43,5
Power and consumption (kW, g.kW ⁻¹ .h ⁻¹)				
PTO power at engine rated speed and shifted 540 PTO RPM	43 (41,28)	43 (41,28)	46,8 (44,9)	46,8 (44,9)
Specific fuel consumption at above mentioned power	267,3	267,3	268,9	266,9
Power and consumption is taken after 100 hour running in. Value in brackets is valid for engine without running in and is for information only.				

MAIN TECHNICAL PARAMETERS (at tractor shipping weight)

FORCE, POWER, CONSUMPTION	Z 7321	Z 7341
Forces (kN) tolerance ° 5%		
Max. pulling force in swinging draw bar, measured on concrete, tractor shipping weight with ballast weight, slippage 15%: with cab without cab	27,30 25,09	33,25 30,95
Max. pulling force in pick up hitch, tractor shipping weight with ballast weight, and water in rear tire: with cab without cab	30,98 28,77	37,99 35,70
Lifting force in lower draft link balls of three point hitch within the whole lifting range at 90% max. pressure: without lift assisting cylinder (kN) with one lift assisting cylinder (kN) with two lift assisting cylinders (kN)	- 28 36	- 28 36
Lifting force in lower draft link balls of three point hitch fixed within the whole range at max. pressure: without lift assisting cylinder (kN) with one lift assisting cylinder (kN) with two lift assisting cylinders (kN)	- 31,0 39,9	- 31,0 39,9
Max. lifting force in lower draft link balls of three point hitch at max. pressure: without lift assisting cylinder (kN) with one lift assisting cylinder (kN) with two lift assisting cylinders (kN)	- 33,8 43,5	- 33,8 43,5
Power and consumption (kW, g.kW ⁻¹ .h ⁻¹)		
PTO power at engine rated speed and shifted 1000 PTO RPM	53,3 (51,17)	53,3 (51,17)
Specific fuel consumption at above mentioned power	263	263
Power and consumption is taken after 100 hour running in. Value in brackets is valid for engine without running in and is for information only.		

TRACTOR EQUIPPED WITH SYNCHRONIZED TRANSMISSION - SPEED 30 kmph (valid for all Zetor super models)

Shifted gear	Ground PTO speed (RPM)	Tractor travel speed (kmph) at rated engine speed and tire dimension						
		14,9-28	16,9-28	16,9-30	16,9-34	13,6-36	18,4-30	18,4-34
1	289,3	5,51	5,77	5,99	6,42	6,16	6,20	6,63
2	405,6	7,73	8,09	8,39	8,99	8,63	8,67	9,30
3	527,5	10,05	10,52	10,91	11,70	11,23	11,30	12,09
4	847,4	16,14	16,89	17,53	18,79	18,04	18,16	19,42
5	1344,4	25,61	26,80	27,82	29,81	28,62	28,81	30,82
1L	289,3	1,41	1,48	1,53	1,64	1,58	1,59	1,70
2L	405,6	1,98	2,07	2,15	2,30	2,21	2,22	2,38
3L	527,5	2,57	2,69	2,79	2,99	2,87	2,89	3,09
4L	847,4	4,13	4,32	4,49	4,81	4,62	4,65	4,97
5L	1344,4	6,55	6,86	7,12	7,63	7,32	7,37	7,88
R	-393,7	7,50	7,85	8,14	8,73	8,38	8,44	9,02
RL	-393,7	1,92	2,01	2,08	2,23	2,14	2,16	2,31

L - reduction, R - reverse gear

TRACTOR EQUIPPED WITH SYNCHRONIZED TRANSMISSION AND FRONT DRIVING AXLE
- SPEED 40 kmph (valid for Z 4341, Z 5341, Z 6341, Z 7341)

Shifted gear	Ground PTO speed (RPM)	Tractor travel speed (kmph) at rated engine speed and tire dimension					
		18,4-30	18,4-34	16,9-28	16,9-30	16,9-34	13,6-36
1	289,3	7,48	8,00	6,96	7,22	7,74	7,43
2	405,6	10,49	11,21	9,76	10,12	10,85	10,41
3	527,5	13,64	14,58	12,69	13,16	14,11	13,54
4	847,4	21,91	23,43	20,39	21,15	22,67	21,75
5	1344,4	34,76	37,17	32,34	33,55	35,96	34,51
1L	289,3	1,91	2,05	1,78	1,85	1,98	1,90
2L	405,6	2,68	2,87	2,50	2,59	2,78	2,66
3L	527,5	3,49	3,73	3,25	3,37	3,61	3,46
4L	847,4	5,60	5,99	5,21	5,41	5,80	5,57
5L	1344,4	8,89	9,51	8,27	8,58	9,20	8,83
R	-393,7	10,18	10,88	9,47	9,82	10,53	10,11
RL	-393,7	2,60	2,78	2,42	2,51	2,69	2,59

L - reduction, R - reverse gear

TRACTOR EQUIPPED WITH SYNCHRONIZED TRANSMISSION AND Hi-Lo - SPEED 30 kmph (valid for all Zetor super models)

Shifted gear	Ground PTO speed (RPM)	Tractor travel speed (kmph) at rated engine speed and tire dimension						
		14,9-28	16,9-28	16,9-30	16,9-34	13,6-36	18,4-30	18,4-34
1	289,3	5,51	5,77	5,99	6,42	6,16	6,20	6,63
2	405,6	7,73	8,09	8,39	8,99	8,63	8,69	9,30
3	527,5	10,05	10,52	10,91	11,70	11,23	11,30	12,09
4	847,4	16,14	16,89	17,53	18,79	18,04	18,16	19,42
5	1344,4	25,61	26,80	27,82	29,81	28,62	28,81	30,82
1L	289,3	1,41	1,48	1,53	1,64	1,58	1,59	1,70
2L	405,6	1,98	2,07	2,15	2,30	2,21	2,22	2,38
3L	527,5	2,57	2,69	2,79	2,99	2,87	2,89	3,09
4L	847,4	4,13	4,32	4,49	4,81	4,62	4,65	4,97
5L	1344,4	6,55	6,86	7,12	7,63	7,32	7,37	7,88
1M	220,4	4,20	4,39	4,56	4,89	4,69	4,72	5,05
2M	309,0	5,89	6,16	6,39	6,85	6,58	6,62	7,08
3M	401,8	7,65	8,01	8,31	8,91	8,55	8,61	9,21
4M	645,5	12,30	12,87	13,36	14,31	13,74	13,83	14,79
5M	1024,1	19,51	20,42	21,19	22,71	21,80	21,95	23,47
1LM	220,4	1,07	1,12	1,17	1,25	1,20	1,21	1,29
2LM	309,0	1,51	1,58	1,64	1,75	1,68	1,69	1,81
3LM	401,8	1,96	2,05	2,13	2,28	2,19	2,20	2,36
4LM	645,5	3,15	3,29	3,42	3,66	3,52	3,54	3,78
5LM	1024,1	4,99	5,22	5,42	5,81	5,58	5,61	6,00
R	- 393,7	7,50	7,85	8,14	8,73	8,38	8,44	9,02
RL	- 393,7	1,92	2,01	2,08	2,23	2,14	2,16	2,31
RM	- 299,8	5,71	5,98	6,20	6,65	6,38	6,43	6,87
RLM	- 299,8	1,45	1,53	1,59	1,70	1,63	1,64	1,76

L - reduction, M - Hi-Lo, R - reverse gear

TRACTOR EQUIPPED WITH SYNCHRONIZED TRANSMISSION, FRONT DRIVING AXLE AND Hi-Lo - SPEED 40 kmph (valid for Z 4341, Z 5341, Z 6341, Z 7341)

Shifted gear	Ground PTO speed (RPM)	Tractor travel speed (kmph) at rated engine speed and tire dimension					
		18,4-30	18,4-34	16,9-28	16,9-30	16,9-34	13,6-36
1	289,3	7,48	8,00	6,96	7,22	7,74	7,43
2	405,6	10,49	11,21	9,76	10,12	10,85	10,41
3	527,5	13,64	14,58	12,69	13,16	14,11	13,54
4	847,4	21,91	23,43	20,39	21,15	22,67	21,75
5	1344,4	34,76	37,17	32,34	33,55	35,96	34,51
1L	289,3	1,91	2,05	1,78	1,85	1,98	1,90
2L	405,6	2,68	2,87	2,50	2,59	2,78	2,66
3L	527,5	3,49	3,73	3,25	3,37	3,61	3,46
4L	847,4	5,60	5,99	5,21	5,41	5,80	5,57
5L	1344,4	8,89	9,51	8,27	8,58	9,20	8,83
1M	220,4	5,70	6,09	5,30	5,50	5,90	5,66
2M	309,0	7,99	8,54	7,43	7,71	8,26	7,93
3M	401,8	10,39	11,11	9,67	10,03	10,75	10,31
4M	645,5	16,69	17,85	15,53	16,11	17,27	16,57
5M	1024,1	26,47	28,31	24,64	25,56	27,39	26,29
1LM	220,4	1,46	1,56	1,36	1,41	1,51	1,45
2LM	309,0	2,04	2,19	1,90	1,97	2,11	2,03
3LM	401,8	2,66	2,84	2,47	2,56	2,75	2,64
4LM	645,5	4,27	4,57	3,97	4,12	4,42	4,24
5LM	1024,1	6,77	7,24	6,30	6,54	7,01	6,73
R	-393,7	10,18	10,88	9,47	9,82	10,53	10,11
RL	-393,7	2,60	2,78	2,42	2,51	2,69	2,59
RM	-299,8	7,75	8,29	7,21	7,48	8,02	7,70
RLM	-299,8	1,98	2,12	1,85	1,91	2,05	1,97

L - reduction, M - Hi-Lo, R - reverse gear

TRACTOR EQUIPPED WITH SYNCHRONIZED TRANSMISSION AND REVERSOR - SPEED 30 kmph (valid for all Zetor super model)

Shifted gear	Ground PTO speed (RPM)	Tractor travel speed (kmph) at rated engine speed and tire dimension						
		14,9-28	16,9-28	16,9-30	16,9-34	13,6-36	18,4-30	18,4-34
1	289,3	5,51	5,77	5,99	6,42	6,16	6,20	6,63
2	405,6	7,73	8,09	8,39	8,99	8,63	8,69	9,30
3	527,5	10,05	10,52	10,91	11,70	11,23	11,30	12,09
4	847,4	16,14	16,89	17,53	18,79	18,04	18,16	19,42
5	1344,4	25,61	26,80	27,80	29,81	28,62	28,81	30,82
1L	289,3	1,41	1,48	1,53	1,64	1,58	1,59	1,70
2L	405,6	1,98	2,07	2,15	2,30	2,21	2,22	2,38
3L	527,5	2,57	2,69	2,79	2,99	2,87	2,89	3,09
4L	847,4	4,13	4,32	4,49	4,81	4,62	4,65	4,97
5L	1344,4	6,55	6,86	7,12	7,63	7,32	7,37	7,88
1R	-317,6	6,05	6,33	6,57	7,04	6,76	6,81	7,28
2R	-445,2	8,84	8,88	9,21	9,87	9,47	9,54	10,20
3R	-578,9	11,03	11,55	11,98	12,84	12,32	12,41	13,27
4R	-930,1	17,72	18,55	19,24	20,63	19,80	19,93	21,32
5R	-1475,6	28,11	29,43	30,53	32,72	31,41	31,63	33,82
1RL	-317,6	1,55	1,62	1,68	1,80	1,73	1,74	1,86
2RL	-445,2	2,17	2,27	2,36	2,53	2,42	2,44	2,61
3RL	-578,9	2,82	2,95	3,06	3,28	3,15	3,17	3,39
4RL	-930,1	4,53	4,75	4,92	5,28	5,06	5,10	5,45
5RL	-1475,6	7,19	7,53	7,81	8,37	8,03	8,09	8,65

L - reduction, R - reverse gear

TRACTOR EQUIPPED WITH SYNCHRONIZED TRANSMISSION, FRONT DRIVING AXLE AND REVERSOR - SPEED 40 kmph (valid for Z 4341, Z 5341, Z 6341, Z 7341)

Shifted gear	Ground PTO speed (RPM)	Tractor travel speed (kmph) at rated engine speed and tire dimension					
		18,4-30	18,4-34	16,9-28	16,9-30	16,9-34	13,6-36
1	289,3	7,48	8,00	6,96	7,22	7,74	7,43
2	405,6	10,49	11,21	9,76	10,12	10,85	10,41
3	527,5	13,64	14,58	12,69	13,16	14,11	13,54
4	847,4	21,91	23,43	20,39	21,15	22,67	21,75
5	1344,4	34,76	37,17	32,34	33,55	35,96	34,51
1L	289,3	1,91	2,05	1,78	1,85	1,98	1,90
2L	405,6	2,68	2,87	2,50	2,59	2,78	2,66
3L	527,5	3,49	3,73	3,25	3,37	3,61	3,46
4L	847,4	5,60	5,99	5,21	5,41	5,80	5,57
5L	1344,4	8,89	9,51	8,27	8,58	9,20	8,83
1R	-317,6	8,21	8,78	7,64	7,93	8,50	8,15
2R	-445,2	11,51	12,31	10,71	11,11	11,91	11,43
3R	-578,9	14,97	16,01	13,93	14,45	15,49	14,86
4R	-930,1	24,05	15,72	22,38	23,21	24,88	23,88
5R	-1475,6	38,15	40,80	35,50	36,83	39,48	37,89
1RL	-317,6	2,10	2,25	1,95	2,03	2,17	2,09
2RL	-445,2	2,94	3,15	2,74	2,84	3,05	2,92
3RL	-578,9	3,83	4,09	3,56	3,70	3,96	3,80
4RL	-930,1	6,15	6,58	5,72	5,94	6,36	6,11
5RL	-1475,6	9,76	10,44	9,08	9,42	10,10	9,69

L - reduction, R - reverse gear

REAR INDEPENDENT PTO

Gear ratio	PTO shaft speed/engine speed RPM	PTO shaft speed/engine speed RPM
48/13	540/1994	596/2200
41/20	1000/2050	1073/2200

FRONT PTO

Gear ratio	PTO shaft speed/engine speed RPM	PTO shaft speed/engine speed RPM
40/22	1000/1818	1210/2200

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