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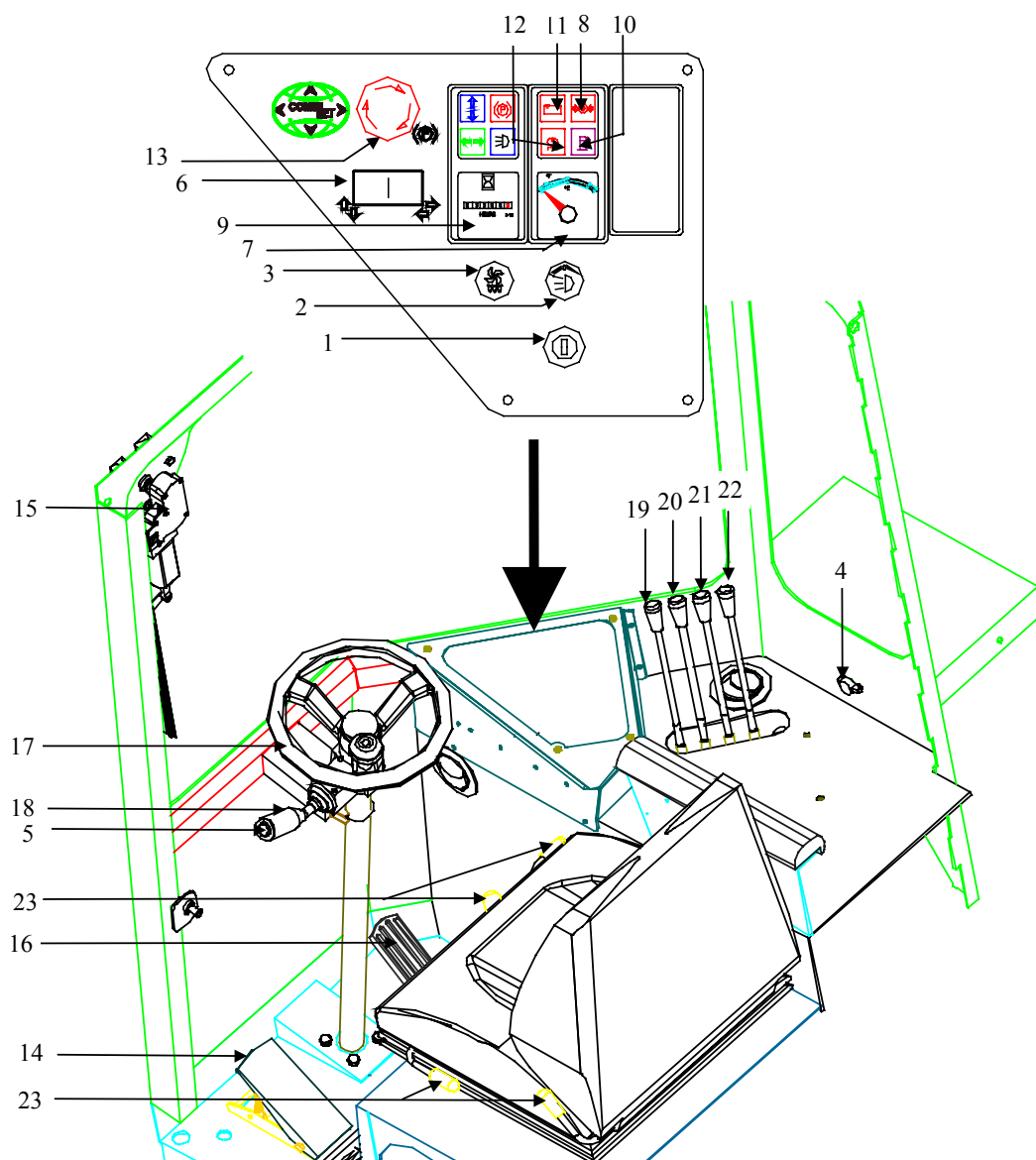
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SECTION 1

OPERATOR CONTROLS

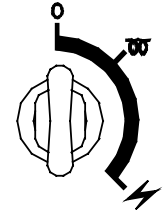
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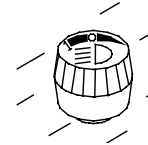
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|--|--------------------------------------|
| 1. Ignition / Starter Switch. | 13. Parking Brake. |
| 2. Light Switch. | 14. Brake / Inching Pedal. |
| 3. Cabin heater Switch. (Optional) | 15. Wipers. |
| 4. Cabin Temperature Control. (Optional) | 16. Accelerator Pedal. |
| 5. Horn Button. | 17. Steering. |
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| 11. Battery Charging Indicator. | 23. Seat Adjustment. |
| 12. Pre-Heat Indicator. | 24. Mast Height Cut Out (Optional) |

1. IGNITION/STARTER SWITCH

- This is a three-position key switch that isolates the electrical system when in the 'OFF' position - See Section 2 for Operating Instructions and Conditions.

**2. LIGHT SWITCH**

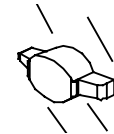
- Illuminates all work lights, dash light and cabin light.
- To illuminate all lights, turn the switch clockwise.
- To extinguish all lights, turn the switch anti-clockwise.

**3. CABIN HEATER SWITCH (OPTIONAL)**

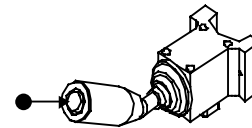
- A four position rotary switch, which selects off, low, medium or high fan speeds.

**4. CABIN TEMPERATURE CONTROL (OPTIONAL)**

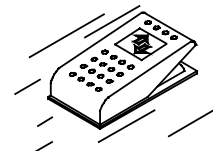
- To increase cabin temperature, turn anti-clockwise.
- To decrease cabin temperature, turn clockwise.

**5. HORN BUTTON**

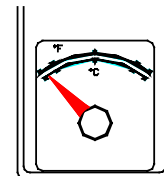
- The horn button is located on the end of the direction control (F-N-R) lever. Press to operate.

**6. DIRECTION CONTROL SWITCH**

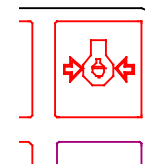
- A two-position switch that engages either forward mode, or sideward mode.
- Press to the left for forward mode.
- Press to the right for sideward mode.

**7. WATER TEMPERATURE GAUGE**

- The truck must not be operated if the gauge pointer moves to the red area as this indicates a fault in the cooling system.

**8. ENGINE OIL PRESSURE INDICATOR**

- When the key switch is in the 'ON' position, with the engine at rest, the oil pressure indicator is illuminated. If the indicator is illuminated when the engine is 'running' then this indicates low engine oil pressure and/or insufficient oil in the sump.



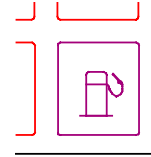
NOTE: Do NOT run engine if oil pressure indicator is illuminated.

9. HOUR METER

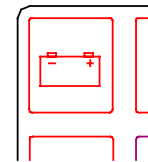
- A digital meter that indicates, in hours and tenths of an hour, the operating time of the truck. Use meter to determine maintenance intervals.

**10. DIESEL INDICATOR**

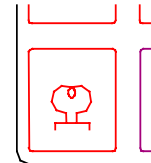
- This gauge registers the quantity of fuel in the tank, and only operates when the ignition switch is turned to 'ON.' When the indicator is illuminated a quantity of approximately 4.5 litres (1 gallon) remains in the tank and indicates that the tank requires refilling.

**11. BATTERY CHARGE INDICATOR**

- This charging lamp indicates whether the alternator is charging the system or not. With the key switch turned ON and the engine not running, this red charge lamp should illuminate.
- If the charging lamp remains illuminated with the engine running, it indicates a malfunction of the charging system or associated components.

**12. PRE-HEAT INDICATOR**

- When operating in cold conditions, wait until the pre-heat indicator extinguishes before attempting to start engine.

**13. PARKING BRAKE**

- To APPLY brakes, PUSH button.
- To RELEASE brakes, TURN BUTTON CLOCKWISE.
- Machine will not drive with Parking Brake ON.

**NOTE**

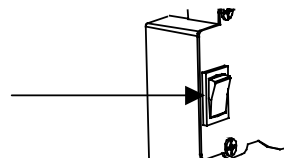
When carrying the maximum permitted load on a smooth, dry and clean concrete surface, and the parking brake is in the 'ON' position, the brakes will hold the truck on a 15% (6.75°) gradient.

14. BRAKE/INCHING PEDAL

- The combined Brake/Inching Pedal has two functions;
 - Brakes the machine completely.
 - May be used to permit slow speed, for precise manoeuvring of the truck in confined spaces - See Section 2 for Operating Instructions and Conditions.

15. WIPERS

The wipers are located on the front windows and are activated by the switch on the wiper motor.



16. ACCELERATOR PEDAL

- The accelerator pedal provides the operator control of the engine speed.
- To INCREASE engine speed, DEPRESS pedal.

17. STEERING

- All models have both front and rear-end steering.
- When in forward mode the front wheels are fixed and the rear wheel steers the truck.
- Rear-end steering allows sharper turns in confined areas but demands greater driver care when turning.
- When in sideward mode, the rear wheel is fixed and the front wheels steer the truck.
- When driving forwards/right:
 - Turn steering wheel CLOCKWISE to turn truck CLOCKWISE.
 - Turn steering wheel ANTI-CLOCKWISE to turn truck ANTI-CLOCKWISE.
- The steering wheel is also equipped with a spinner knob for easier steering.

NOTE: When in Sideward mode, the right side of the machine is considered to be the “front” of the machine.

18. DIRECTION CONTROL (F-N-R) LEVER

- To select NEUTRAL, move lever to CENTRE position.
- To select FORWARD, lift lever and move forwards - truck will move forwards with FORKS LEADING.
- To select REVERSE, lift lever and move backwards - truck will move backwards with FORKS TRAILING.
- To move to the RIGHT while in sideward mode, move lever FORWARDS.
- To move to the LEFT while in sideward mode, move lever BACKWARDS.
- Always ensure that the Direction Control (F-N-R) Lever is returned to the neutral position after bringing the truck to a halt.

NOTE

The engine cannot be started unless the direction control (F-N-R) lever is in the NEUTRAL position.

19. LIFT CONTROL LEVER

- To RAISE forks, PULL lever.
- To LOWER forks, PUSH lever.

20. MAST EXTENSION LEVER

- To EXTEND the mast, PUSH lever.
- To RETRACT the mast, PULL lever.

21. TILT CONTROL LEVER

- To tilt mast/forks FORWARD, PUSH lever.
- To tilt mast/forks BACKWARD, PULL lever.

22. AUXILARY LEVER (OPTIONAL)

- This lever controls the flow of oil to an attachment when fitted.
- On trucks fitted with attachments providing more than one function, the truck may be fitted with a button on the fourth function lever. The operators must acquaint themselves with the operation of these special provisions before using the truck.

IMPORTANT



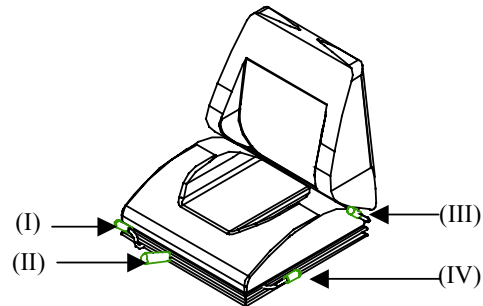
A new truck capacity plate **MUST** be obtained from COMBI-LIFT to reflect the new maximum load capacity when **ANY** attachment is fitted.

NOTE

Only attachments approved by COMBI-LIFT personnel should be fitted.

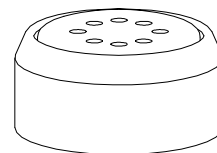
23. SEAT ADJUSTMENT

- All seats are provided as standard with:
 - (I) Horizontal adjustment.
 - (II) Weight adjustment.
 - (III) Backrest angle adjustment.
 - (IV) Thigh support adjustment.
- It is the responsibility of the driver to ensure that the seat adjuster is fully engaged before operating the truck.
- ALWAYS report any malfunctioning of the adjuster immediately.
- ALWAYS wear the seat belt provided.



24. MAST HEIGHT CUT OUT

- This push button switch is used on Triplex masts and is connected to a sensor on the mast. When the mast is above 3.5m high contact with the sensor is broken and the machine will not drive, this push button must be pressed to allow the machine to drive.



SECTION 2

OPERATING INSTRUCTIONS AND CONDITIONS

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INTRODUCTION

The following instructions should be read in conjunction with the other sections of this handbook. Before operating a truck the user and operator should be familiar with all sections of this publication.

The term 'user' refers to the person or organisation responsible for the operational activity of the truck and the term 'operator' refers to a qualified and authorised driver. The operator should observe the "ATTENTION" decal located inside the cabin.


ATTENTION

STARTING

- Engine will not start if direction control (F-N-R) lever is in forward or reverse.
- Wheels will automatically align relative to position of direction control switch when engine is started.

DRIVE

- Machine will not drive with parking brake ON.
- Lift direction control (F-N-R) lever to enable Forward / Reverse selection.
- Place direction control (F-N-R) lever in neutral OR depress inching pedal fully before shifting direction control switch.
- In sideward mode, "forward" is "right" and "reverse" is "left".
- Machine will not drive when forks are above critical height. To drive, lower forks, or in an emergency, press over-ride button on dash.

FRONT WHEEL ALIGNMENT

- If front wheel alignment is incorrect, change into sideward mode and steer front wheels completely anticlockwise.

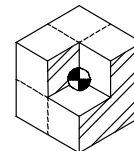
1. OPERATING INSTRUCTIONS

1.1 Understand the Capacity of your Lift-Truck

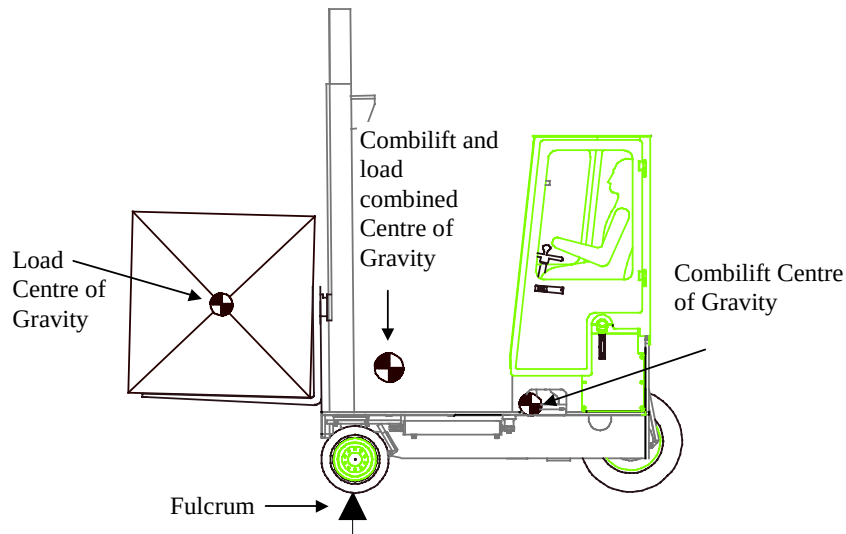
The basic function of a lift truck is to lift, move and place materials. It operates on the seesaw principle - two weights on opposite sides of a fulcrum. In this case, the load on the forks must be balanced by the weight of the Combilift. The location of the centre of gravity of both the Combilift and the load is a major factor.

1.2 Centre of Gravity (CG)

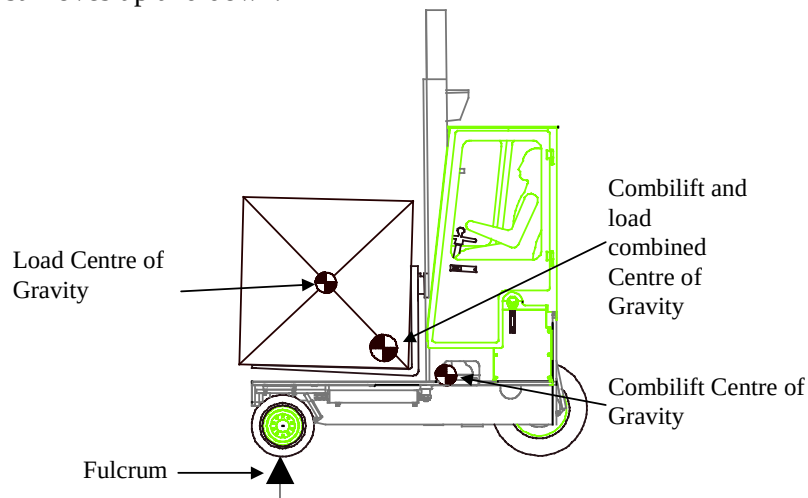
The centre of gravity of any object is the single point about which the object is balanced in all directions.



Every object has a centre of gravity. When the lift truck picks up a load, the truck and load have a new, combined centre of gravity.



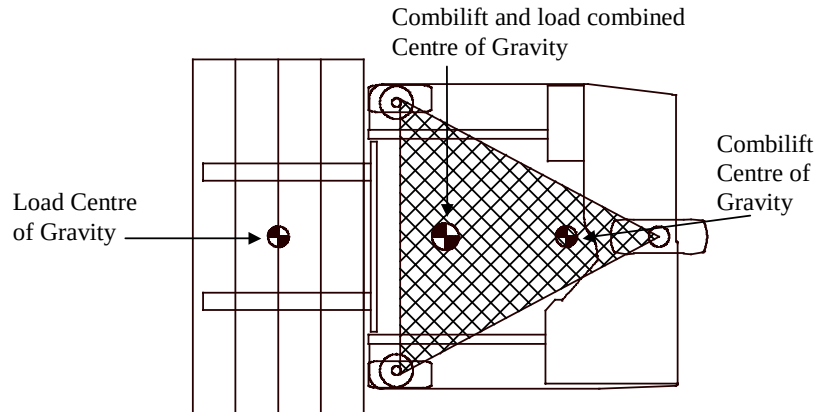
The Combilift has moving parts that change its centre of gravity. The centre of gravity moves forward and back as the mast is extended and retracted and also as the mast is tilted backwards and forwards. The centre of gravity also moves up and down as the mast moves up and down.



The centre of gravity and therefore stability is also affected by the size, weight, shape and position of the load; the height to which it is raised; extension of mast forward and backward; tilt and side shift. Truck movement such as acceleration, braking, turning and uneven surfaces will also affect truck stability.

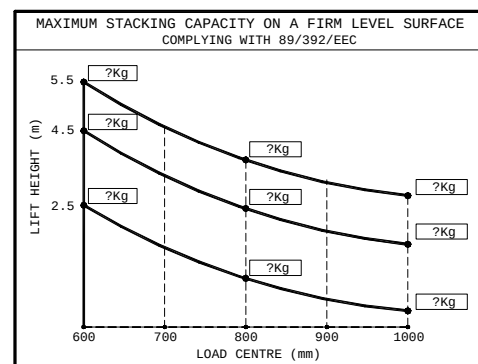
To keep the lift truck stable, the centre of gravity must stay within the area of the lift truck represented by a triangle drawn between the three wheels.

If the centre of gravity moves forward of the triangle front, the lift truck will tip forwards. If it moves outside the right or left of the triangle the truck will tip to the side.



1.3 Load Chart

The rated capacity of the truck is illustrated on a load chart located inside the cabin. The load centre is determined by its centre of gravity and is measured from the front face of the forks to the centre of gravity of the load. It is assumed that the centre of gravity in the vertical direction is no greater than the specified horizontal load centre.



It is the responsibility of the operator to determine that the weight of the load to be handled is not greater than the capacity shown on the load chart.

The operator **must not** handle any load that is greater than the capacity shown.

1.4 Operator Qualification

Fully trained, qualified and authorised drivers must only operate fork Lift Trucks.

1.5 Operator Responsibilities

Always ensure that the truck is in good working order before commencing work. Unless authorised and trained to do so, do not attempt any repairs but report defects immediately. When authorised to perform maintenance work and/or repairs, ALWAYS ensure that the appropriate Health and Safety regulations are strictly adhered to.

Report any operational problems that may develop, (damaged pallets, ground surface breaking up etc.) which could not only reduce safety but also cause damage to the truck.

Never attempt to exceed your truck's handling capacity and take all precautions to ensure safety of others as well as yourself. Stop working and switch off if for any reason, in your opinion, the truck becomes unsafe or defective.

2. STARTING PROCEDURE

NOTE

Engine will not start if the direction control (F-N-R) lever is in forward or reverse.

2.1 Diesel Engine

- Move the direction control lever (F-N-R) to neutral
- Insert the key into the ignition switch and turn clockwise to the preheat position. The charge indicator lamp must light up.
- Depress the accelerator.
- Turn the ignition key further clockwise to the “Start” position. After the engine starts, release the ignition key which will return automatically to the ON position.
- Check that all the indicator lamps are extinguished and that all gauges are registering correctly.

2.1.1 Cold Starting

- When the ambient temperature is cold, turn the key to the preheat position and wait about 10 seconds until the glow plug indicator lamp extinguishes before turning the engine.

WARNING

Before starting engine, check that the position of the direction control switch is in the desired position. Wheels will automatically align themselves according to switch position once engine is started.

2.2 LP Gas System

- Open the valve on the LPG tank.
- Move the direction control (F-N-R) lever to neutral.
- Insert the key into the ignition switch and turn clockwise to the ‘ON’ position. The charge indicator lamp must light up.
- Turn the ignition key further clockwise to the ‘start’ position.
- As soon as the engine starts, release the ignition key which will automatically return to the ‘ON’ position.
- Check that all warning lamps are extinguished and that all gauges are registering correctly.

CAUTION

The starter must not be operated continuously for more than 30 seconds. If the engine does not start, return the key to the ‘OFF’ position and wait 10 seconds before trying again.

3. SAFE OPERATION

3.1 Moving Off

- Ensure that the forks are as low as possible. If loaded, rest the load on the platforms where possible.
- Select forward/right or reverse/left with Direction Control (F-N-R) Lever.
- Look around and when all is clear release parking brake and apply light pressure to the accelerator pedal until the truck begins to move.
- Increase pressure on accelerator pedal to increase truck speed.

3.2 Changing Direction

- Remove foot from the accelerator pedal.
- Gradually apply inching pedal to halt the truck.
- Select change of direction and gradually increase pressure on accelerator until truck is traveling at desired speed.

3.3 Changing Into Sideward Mode

- Bring the truck slowly to a halt.
- Place Direction control (F-N-R) lever in neutral, or depress inching pedal fully.
- Ensure that all observers stand clear of the truck.
- Engage the sideward mode switch. The wheels will automatically align themselves at right angles to the forks.
- Wait until wheels are locked and dash light is illuminated before moving.
- Select forward with the direction control (F-N-R) lever to travel to the right and reverse to travel to the left.

NOTE

When in sideward mode the front wheels steer the truck while the back wheel remains fixed.

3.4 To Change Back to Forward Mode

NOTE

When in sideward mode, turn the steering completely anti-clockwise at least once.
This ensures correct alignment of the front wheels in forward mode.

- Bring the truck slowly to a halt.
- Place Direction control (F-N-R) lever to neutral, or depress inching pedal fully.
- Ensure all observers stand clear of truck.
- Engage the forward mode switch.
- Wheels will automatically align themselves parallel with the forks.
- Wait until wheels are locked and dash light is illuminated before moving.

NOTE

When in forward mode the back wheel steers the truck, while the front wheels remain fixed.

3.5 Brake/ Inching Pedal

- The brake/inching pedal permits slow drive speed for precise manoeuvring of the truck in confined spaces. It operates independently of the accelerator pedal, but if fully depressed, stops the machine driving.

3.6 Stopping

- Always brake evenly and smoothly. Violent braking may cause the load to slip from the forks.
- The forks must be lowered when the truck has stopped.
- After stopping the truck, return the direction control lever to neutral.
- When the operator leaves the forklift truck unattended, the parking brake must be applied and the ignition key removed to prevent unauthorised use.

NOTE

On L.P. gas engined trucks turn off the supply valve on the LP gas cylinder.

3.7 Loading

- Do not exceed rated capacity of truck. Overloading can cause truck instability. If in doubt, check with the load chart, located inside the cabin.
- Before picking up a load adjust the forks to ensure that they are equally spaced about the centre line of the fork carriage and as widely spaced as possible to take the weight of the load evenly.
- Check that the forks are of sufficient length. The length should be at least two thirds of the depth (front to back) of the load.
- When manoeuvring to pick up a load, avoid erratic movements that could result in damage to the load and/or truck.
- Apply parking brake when loading.

3.8 When Loading in Sideward Mode

- Retract the mast fully.
- Drive the front of the machine as close to the load as possible.
- Drive until the machine is at the centre of the load.
- Apply parking brake.
- Lower/raise the forks to the required height.
- Extend mast.
- Lift load.
- Double fork load if necessary until load is tight against face of forks. (See section on “double forking”)
- Tilt rearward to secure the load.
- Raise load above platform height.
- Retract mast fully.
- Lower forks until load is just above platform height. Rest the load on the platforms where possible.

3.9 When Loading in Forward Mode

- Lower/raise forks to the required height.
- Enter the centre of the load.
- Drive as close to the load as possible.
- Extend mast to secure load if not already extended
- Apply parking brake.
- Lift load.
- Tilt rearward to secure load.
- Raise load above platform height.
- Retract mast fully
- Double fork load if necessary until load is tight against face of forks.
- Lower forks until load is just above platform height. Rest the load on the platforms where possible.

3.10 Placing A Load When In Sideward Mode

- Drive the front of the machine as close to the placing area as possible.
- Apply parking brake.
- Lower/raise the forks to the required height.
- Extend mast.
- Lower load.
- Tilt forward.
- Retract mast fully.
- Release parking brake.
- Continue to drive in the sideward direction.

3.11 Placing A Load When In Forward Mode

- Drive the front of the machine as close to the placing area as possible.
- Apply parking brake.
- Lower/raise the forks to the required height.
- Extend mast.
- Lower load.
- Tilt forward.
- Retract mast if operating in confined spaces.
- Drive rearward until machine is clear of load.

3.12 Double Forking

If it is not possible to engage forks fully when lifting a load it will be necessary to move the load closer to the front of the machine before lifting.

Note: The lift capacity of the Combilift is reduced if the forks are not fully engaged.

To Double Fork a Load:

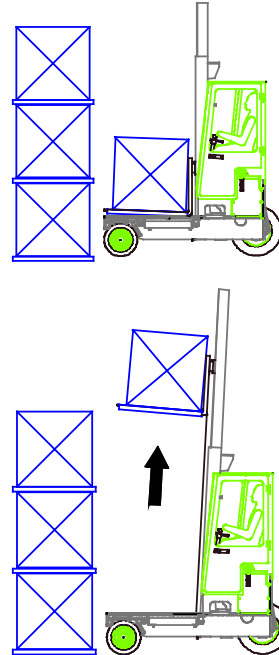
Raise the load slightly and retract the mast sufficiently to bring the load closer to the machine. Lower the load and extend the mast again until the load is against the fork face. The load is now ready to be lifted.

NOTE

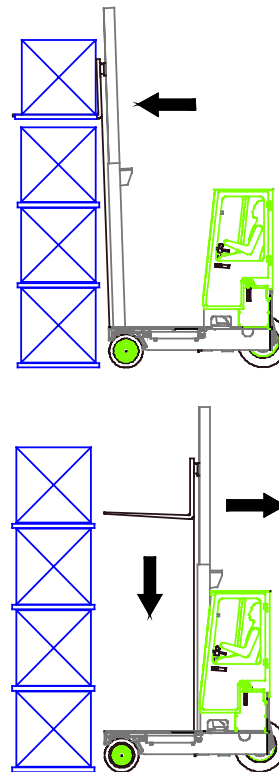
With a long length load, drive whenever possible in the sideward mode.
Tilt elevated loads forwards, only when directly over load destination.

3.13 Stacking

- Slowly approach stack with load retracted and tilted backwards.
- Stop at face of stack, select neutral and apply parking brake.
- Elevate load until clear of stack top. Operate accelerator pedal to ensure that engine speed is sufficient to prevent stalling and to give the required lifting speed.
- Extend mast until load is above the stack.
- Tilt mast to vertical position and lower load onto stack.
- Retract mast fully and lower forks to 150mm (6") above ground before moving off.

**3.14 De-Stacking**

- Approach stack with mast retracted and in vertical position.
- Stop at face of stack, select neutral and apply parking brake.
- Elevate forks to permit entry into pallet.
- Extend mast and enter the pallet with the forks.
- Elevate load until clear of stack and tilt mast backwards to stabilise load. Operate accelerator pedal to ensure that the engine speed is sufficient to prevent stalling.
- Retract mast fully and lower load to 150mm (6") above ground, or where possible on to the platforms.



3.15 Adjusting Load Forks

- Forks should be spaced as far apart as the load being moved will allow. Both forks should always be the same distance from the centre of the fork carriage.
- To adjust, raise forks approximately 25mm (1”) off the floor.
- Apply parking brake and switch off engine.
- Lift up the keeper pin and slide the forks along the carriage.
- When the forks are set to the desired position ensure that the keeper pin is engaged in a slot on the top of the fork carriage bar.

4. OPERATING CONDITIONS

4.1 Ground Surface

- Floor and road surfaces should be of adequate load capacity, firm, smooth and level. Approaches to kerbs, railway crossings etc. should also be firm, smooth and adequately ramped to prevent possible displacement.

4.2 Aisle Dimensions

- Aisles should be arranged to eliminate corners, angles, inclines, steep ramps, narrow passages and low ceilings.

4.3 Headroom

- Structures over aisles, which may be potential obstacles should be defined and marked with a conspicuous colour. Low doorways should be marked with their clearance limits.

4.4 Operating in Hazardous Areas

- Standard trucks are not equipped to operate in cold stores, flammable or explosive areas, corrosive atmospheres or areas containing a high degree of dust contamination.

4.5 Gradients

- When differences in levels exist, low gradient ramps should be provided, having smooth, gradual level changes at top and bottom to prevent shocks to the load or fouling of the forks.
- Except in emergencies, do not turn the truck on gradients.
- Correct gradient procedure should be followed at all times (see Safety Precaution)
- Do not park on a gradient. In an emergency apply parking brake and chock wheels, but do not leave the truck unattended.

NOTE

Always approach an incline straight on and keep forks and / or load facing uphill at all times.

SECTION 3

DAILY CHECKS

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INTRODUCTION

Before commencing the daily checks, ensure that the ignition switch is turned to the 'OFF' position. Carefully examine the truck for evidence of damage. Check all hydraulic components for leaks.

1. WHEELS AND TYRES

Inspect the tyres for wear or damage. Remove stones, swarf etc. from the tyre tread. Pneumatic tyre trucks require tyre pressure checks.

WARNING

Under inflated tyres have a serious effect on the truck's stability and reduce the load capacity that can be handled safely.
Always keep tyres at their proper inflation pressure as shown on the tyre wall.

CAUTION

Always use a safety cage or restraining device when inflating tyres.

Read the following before doing any work on pneumatic tyre assemblies.

WARNING

Tyre changing can be dangerous, and should only be done by specially trained personnel using proper tools and procedures.

WARNING

When lifting wheels and tyres, due allowance for the weight **MUST** be made. Failure to do so could result in personal injury.

WARNING

Deflate tyres before disassembly.

WARNING

If the tyre has been run flat it must be disassembled from the rim and all parts inspected.

2. BATTERY

Under normal operating conditions the battery will require little or no maintenance. If, however the battery requires re-charging, the guidelines relating to battery charging in Section 3 should be noted and strictly adhered to.

NOTE

Check level of electrolyte in each battery cell and top-up if necessary, using only clean, distilled water. Bring level up to markers.

3. ENGINE OIL LEVEL

Remove the dipstick from the engine and check the oil level. If necessary, top-up to the correct level using the appropriate engine oil. (See Note 1.1 in Maintenance Section,)

4. COOLANT LEVEL

Check that the coolant level is between the 'Max' and 'Min' marks on the radiator reservoir tank. The cooling system is a 'sealed' type, therefore if the level is below the 'Min' mark on the tank, a leak in the cooling system is indicated. Report to your supervisor. (See Note 1.3 in Maintenance section)

CAUTION

In normal circumstances the coolant reservoir cap should not be removed. If however the cap must be removed then this should only be done when the system has cooled and is not pressurised.

5. HYDRAULIC TANK

Fully lower the mast. Check the oil level on the sight gauge. If necessary top-up to the correct level using clean hydraulic oil. (See Note 1.4 in Maintenance Section)

The following checks should be made;

- Check the tank for leaks, damage, rust and other corrosion.
- Ensure that the drain plug is securely tightened.

Report all defects, leaks and damage immediately.

6. FUEL TANK

6.1 Diesel Tank

The following checks should be made;

- Check the tank for leaks, damage, rust and other corrosion.
- Check that the filler cap and sender unit are leak free, secure and functioning correctly.

6.2 L.P. Gas Tank

The gas tank is a pressure vessel and should be checked regularly.

The following checks should be made;

- Check the tank for dents scrapes and gouges in the pressure vessel section.
- Check for damage to the valve and the liquid level gauge.
- Check for damage or deterioration of flexible hoses.
- Check for indications of leakage at valves or threaded connections.
- Check that the fuel tank is securely attached to the truck.

Report all defects, leaks and damage immediately.

7. FAN BELT TENSION

The V-belts that drive the cooling water pump and the alternator must be tensioned to a point where a deflection of approx. 5mm (3/16") is obtained.

When installing a new belt, tension until a deflection of 2mm is obtained to allow for stretching.

8. LOAD FORKS

Inspect the forks for signs of cracking, bending or distortion. DO NOT use the truck if you suspect serious damage.

To determine the amount of wear of the fork blade use the fork shank as a reference. If fork blade thickness has been reduced by more than 10% anywhere, the ISO Safety Standard for used Forks requires that the fork MUST be replaced.

9. CONTROLS

Check that all controls are in the NEUTRAL position.

With the engine running, check that all indicator lamps are off and that the following function satisfactorily;

- Lift and lower function
- Reach function
- Tilt function
- Auxiliary function (where fitted)
- Horn function
- Work lights
- Brake/Inching function
- Accelerator pedal
- Parking Brake
- Forward / Reverse drive function
- Steering
 - Forward mode
 - Sideward mode

SECTION 4

SAFETY PRECAUTIONS

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INTRODUCTION

Combi-Lift forklift trucks are equipped with certain safety devices as standard equipment and strongly urge that these vehicles be operated with the safety devices supplied.

1. SAFE OPERATION

- Combi-Lift will not assume any liability for injuries or damage arising from or caused by the removal of any safety devices from their vehicles by the user.
- Fully trained, qualified and authorised drivers must only operate combi-Lift forklift trucks.
- Ensure that the truck is suitable for the area in which it is to be operated.
- Before raising or lowering forks, give clear indication of your intentions to other people and ask them to stand clear.
- Do not allow anyone to walk or stand beneath elevated forks.
- Do not exceed rated load capacity of the truck. In no circumstances should counterweights be added to increase capacity.
- If the hoist mechanism malfunctions or becomes stuck in a raised position, operate the hoist control lever to eliminate any slack in the chains. **DO NOT** go under the elevated parts of the truck to attempt to carry out repairs.

WARNING

Never lower the hoist mechanism with the load forks mechanically supported.

Failure to observe this rule will result in carriage plus load forks falling as they are pulled clear of the support causing excess shock loading and possible damage to the hoist components as the hoist chain slack is taken up.

2. SAFE DRIVING

- Before moving off, look around and when clear, commence driving without causing inconvenience to other aisle users. Remember that pedestrians have right of way and must be safeguarded at all times.
- Operate truck smoothly without erratic movements avoiding fast turns.
- Regulate the speed of the truck to conform to prevailing conditions. Ensure that the truck can be brought to a halt safely.
- Maintain a safe driving distance from other vehicles. Always give clear indication of your intentions to other people.
- Do not carry passengers.
- Do not overtake at aisle intersections, in areas of limited visibility, or in dangerous locations.
- Maintain a safe distance from railway lines, ramps, platforms, dock edges etc

- When approaching crossings and areas where driving vision is restricted or obscured, reduce speed to a minimum and sound the horn - a series of short blasts is more effective than one long blast.
- Cross railway lines slowly, only at authorised points and diagonally whenever possible.
- Be conscious of height and width restrictions and watch for sudden appearance of pedestrians from behind obstacles.
- Do not carry unsafe or insecure loads. Never carry loads stacked higher than the top of the fork carriage or backrest.
- Operators' arms, hands, head or legs must not overhang the running lines when the truck is in motion. Take care when indicating a turn or other manoeuvre.
- Always travel with forks as low as possible. If loaded, rest the load on platforms where possible. (See fig.2)
- Ensure load is tight against face of forks. (See fig 2)

CAUTION

Take special care when travelling without a load as the risk of tip-over may be greater when cornering at high speed.
In the event of a tip-over, hold tightly to steering wheel. Do not leave overhead guard.

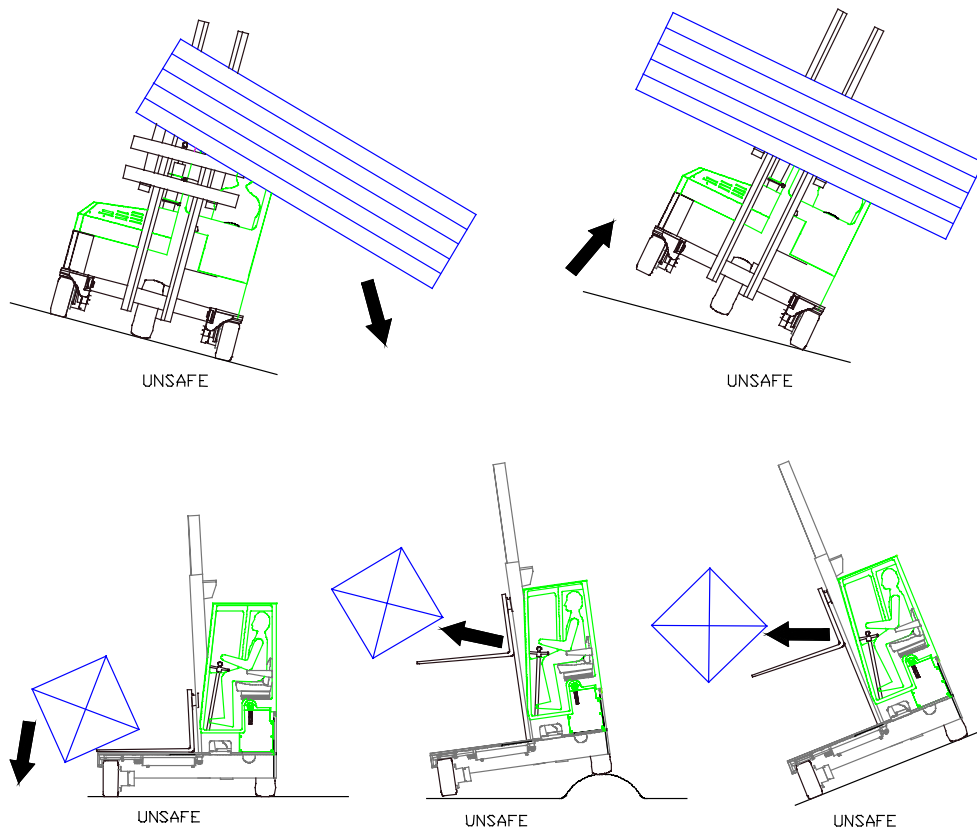


FIG 1 DRIVING HAZARDS

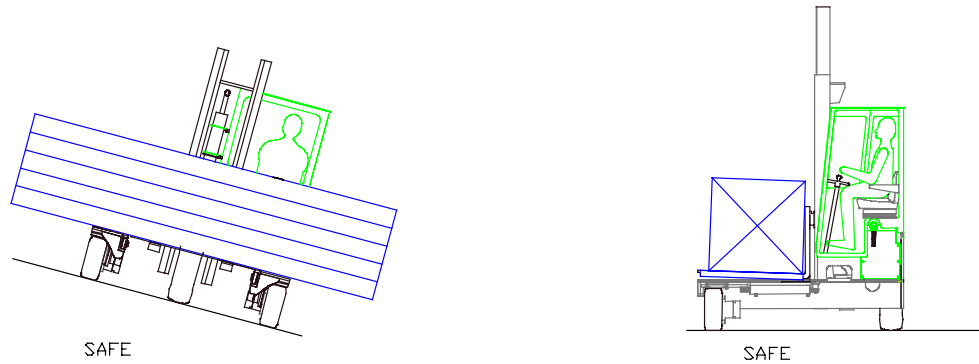


FIG 2 CORRECT PROCEDURE

3. FUEL HANDLING & STORAGE

3.1 General

- The facilities for storing and handling liquid fuels of all kinds **MUST** be strictly in accordance with all current regulations.

WARNING

Adequate fire fighting equipment must be readily available in the refuelling area at all times.

SAFETY RULES

No smoking, naked lights or other sources of ignition should be permitted in the vicinity of the refuelling area and signs to this effect should be clearly posted and free from obstructions at all times. Litter and other readily ignitable materials should not be permitted to accumulate or be stored in the area.

3.2 Refueling - Diesel

- Trained and authorised personnel should carry out refueling at designated points only.
- Before refuelling the truck, switch off the engine, apply brakes and vacate truck.
- If a pump appliance is not available, fuel **MUST** be stored and transported in clean, uncontaminated and approved containers. Containers **MUST** comply with current regulations and be clearly labelled.
- When refuelling the truck, always ensure that the hose nozzle or the can pourer is making good electrical contact with the tank filler tube to prevent the accumulation of a hazardous charge of static electricity. Exercise adequate care to prevent fuel spillage or over-filling.
- After refuelling the truck, replace the tank filler cap and ensure that it is securely fitted and leak free. Clean up any spillage using non-combustible absorbent material before restarting the engine.

3.3 Refuelling - L.P. Gas

- Trained and authorised personnel should carry out recharging and changing L.P. Gas containers at designated points only.
- LP Gas trucks should not be refuelled or stored near underground entrances, lift shafts or any other place where leakage could collect in a potentially dangerous gas pocket.
- Trucks equipped with exchangeable fuel containers should ALWAYS ensure that the service valve on the container is closed and all gas in the connecting hoses used BEFORE disconnecting the quick release coupling.
- All reserve containers should be stored with the service valves closed and on racks arranged such that the container is in the same relative position as when installed on the truck.
- Careless handling of gas containers can result in serious accidents. Extreme care should be exercised at all times when transporting containers to ensure that they are not dropped or damaged.
- Containers should always be transported in the vertical position to ensure that the pressure within the container is in the form of vapour, not liquid.
- Damage such as dents, scrapes or gouges in the container may materially weaken the structure of the container and render it unsafe for use.
- All containers should be checked regularly for dents, scrapes and gouges in the pressure vessel section.
- Also Check for:
 - Damage to the various valves and the liquid level gauge.
 - Debris in the relief valve.
 - Deterioration, damage or loss of flexible seals in the filling or Servicing connections.
 - Indications of leakage at valves or threaded connections i.e. Signs of frost on fittings and hoses usually signify a leak.
 - Any defective or damaged container should be removed from service immediately.
 - Any leaking container should be moved immediately to a safe distance from the truck, free from all ignition leaks.

4. BATTERY CHARGING

- Batteries contain sulphuric acid and generate explosive gases when being charged. Trained and authorised personnel only must charge them in designated, well-ventilated areas.
- In the event of an accident flush acid away from the eyes and/or skin using plain water and obtain medical attention immediately.
- Check level of electrolyte in each battery cell and top-up if necessary, using only clean distilled water. Bring level up to markers.

WARNING

Protective clothing and goggles should be worn and particular care taken not to come into contact with or spill electrolyte when checking its level.

Keep the battery clean and dry, and terminals free from corrosion. Check that the ventilation holes in battery caps are clear.

Temperature must not exceed of 38° C (100° F) during charging.

Smoking and the use of naked lights in the charging area are strictly prohibited.

NOTE

A smear of petroleum jelly applied to clean terminals will offer protection against acid corrosion

5. OPERATING IN HAZARDOUS AREAS

- No spark proofing is fitted to the truck as standard; consequently it **MUST NOT** be used in flammable or explosive areas.
- The truck **MUST NOT** be used in corrosive atmospheres or in areas containing a high degree of dust contamination.

6. SAFE DRIVING ON GRADIENTS

- When differences in levels exist, gradient ramps should be provided, having smooth, gradual level changes at the top and bottom to prevent shocks to the load or fouling of the forks.
- Do not drive across, turn or stack on gradients.
- Correct gradient procedure should be followed at all times.
- Do not park on a gradient. In an emergency apply the parking brake and chock the wheels - but do not leave the truck unattended.
- Always approach an incline straight on, and keep forks and /or load facing uphill at all times.

7. DRIVING POSITION

Only operate controls from the correct driving position and do not operate any control until you are certain of its function.

8. PARKING

- Apply parking brake by pressing the red button.
- Ensure that the direction control (F-N-R) lever is set to neutral.
- Lower the forks fully.
- Park clear of aisles, doorways, stairways and fire points and ensure that the truck will not obstruct other traffic.

NOTE

On L.P. gas engine trucks turn off the supply valve on the L.P. gas cylinder.

9. BRIDGE PLATES AND DOCK BOARDS

- Bridge plates and dock boards must have an adequate safety factor to support a loaded truck and be secured when in use to prevent accidental movement.
- Do not exceed the maximum permissible load, which must be clearly marked on all bridge plates and dock boards.
- The sides of bridge plates, and where possible dock boards, must be raised to minimise the possibility of the truck being driven over the edge.
- The surface of the above equipment must be of a slip resistant substance.
- Drive slowly when crossing bridge plates and dock boards.

10. LIFTING THE MACHINE

Lift the machine only when necessary. Check machine weight before lifting Use only the two lifting points on the mast and ensure that the mast is fully retracted and tilted back before lifting.

SECTION 5

MAINTENANCE SCHEDULE

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INTRODUCTION

Routine maintenance may be carried out by the users/operators, but only if the correct facilities and replacement parts, e.g. filters are used.

The service intervals are given in both operating hours (recorded on the lift truck meter) and in calendar time.

Service the machine at the interval that occurs first. These intervals are based on normal operation of 8 hours per day. The time intervals must be decreased from the recommendations in the maintenance schedule for the following reasons: -

- If the lift truck is used more than 8 hours per day.
- If the lift truck must work in dusty operating conditions.

Combi-Lift trucks are built with quality components, the use of inferior spare parts can result in inadequate safety and poor reliability. Only use genuine approved parts.

1. INITIAL SERVICE AT 100 HOURS

- Change engine oil & oil filter. (See Note 1.1)
- Check air cleaner and replace if necessary.
- Replace fuel filter.
- Check fan belt tension and adjust if required.
- Replace hydraulic suction filter located at rear. (See Note 1.2)
- Replace return filter located at front.
- Check all bolts and fittings are tight.
- Check all mast carriage-bearing lock nuts are tight.
- Check all wheel nuts for tightness. (200 N/m)
- Grease all points. (See grease point chart)
- Check radiator, and if necessary, clean fins.
- Check mast chains; lubricate and adjust. (See Note 1.5)
- Check machine for hydraulic, coolant and fuel leaks.
- Check hydraulic oil level. (See Note 1.4)
- Check coolant level. (See Note 1.3)

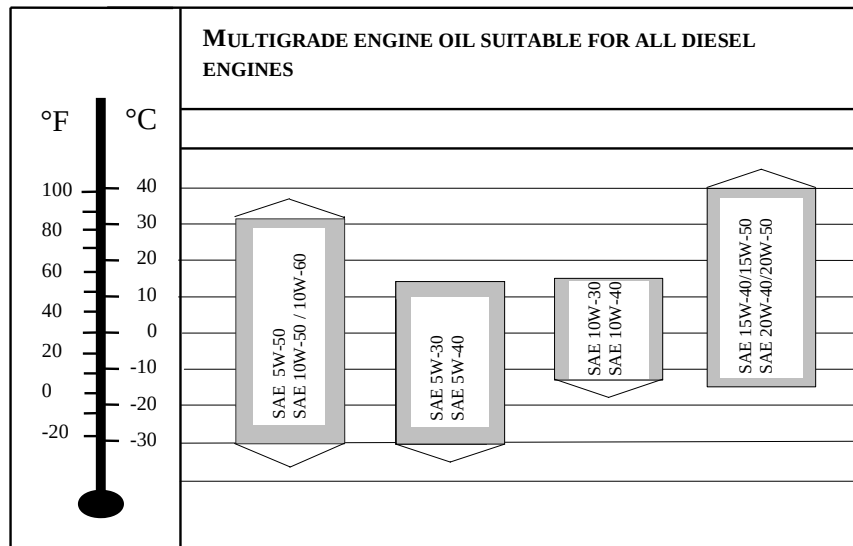
NOTE: Lubricate all grease points weekly. (See grease point chart).

1.1 Engine Oil

The engine oil used in the Combi-Lift should have the correct temperature range for the ambient temperature in which the machine is to be operating. Temperature affects the viscosity of the oil and therefore its lubricity.

All Combi-Lift trucks leave the factory with a special, high multigrade oil in the engine and this can be used all year round except in very cold climates.

The following table illustrates the correct oil grades for the varying ambient temperatures.



For further notes, see Volkswagen manual.

1.2 To Change Suction Filter

Unscrew the filter element. Lightly smear the sealing ring of the new filter with hydraulic oil. Hand tighten.

IMPORTANT: Fill the replacement filter with oil before fitting. This prevents cavitation to the pump during start up.

1.3 Engine Coolant

The coolant must consist of a mixture of 50% water to 50% coolant additive (glycol based with anti-corrosion additives). This will give frost protection down to -25°C and also protect the alloy parts in the cooling system against corrosion. Therefore, the concentration of coolant additive must not fall below 40%.

If greater frost protection is required, the coolant additive can be increased but only up to 60% (frost protection to -40°C approx.). Any greater proportion of coolant will decrease the frost protection and also the anti corrosive properties.

1.4 Hydraulic Oil

The hydraulic oil used in the Combi-Lift should conform to the International Standard I.S.O. G344 HV grade oils with improved viscosity / temperature characteristics. It should also have the correct temperature range for the ambient temperature in which the machine is being operated. If the operating temperature is outside the standard range, the standard oil should be replaced with the correct grade. The following table shows examples of commercially available oils. Ensure that the correct type is used in the relevant ambient temperature.

AMBIENT TEMPERATURE	Low Range -20°C to 25°C -4°C to 77°C	Standard Range -10°C to 35°C +14°C to 95°C	High Range 0°C to 45°C 32°F to 113°F
Castrol: Hyspin	AWH 32	AWH 46	AWH 68
B.P. Bartran	HV 32	HV 46	HV 68
Esso: Univis	N 32	N46	N 68
Mobil:	13 M	15 M	16 M
Shell: Tellus Oil	T32	T46	T68
Texaco:	HDZ 32	HDZ 46	HDZ 60

NOTE: The Sequence in which the brand names are listed does not signify any grading as to their quality or preference.

NOTE: The machine is supplied with an AWH46 hydraulic fluid when leaving the factory. Please check if this is suitable for the ambient temperature in which the machine is to be operated.

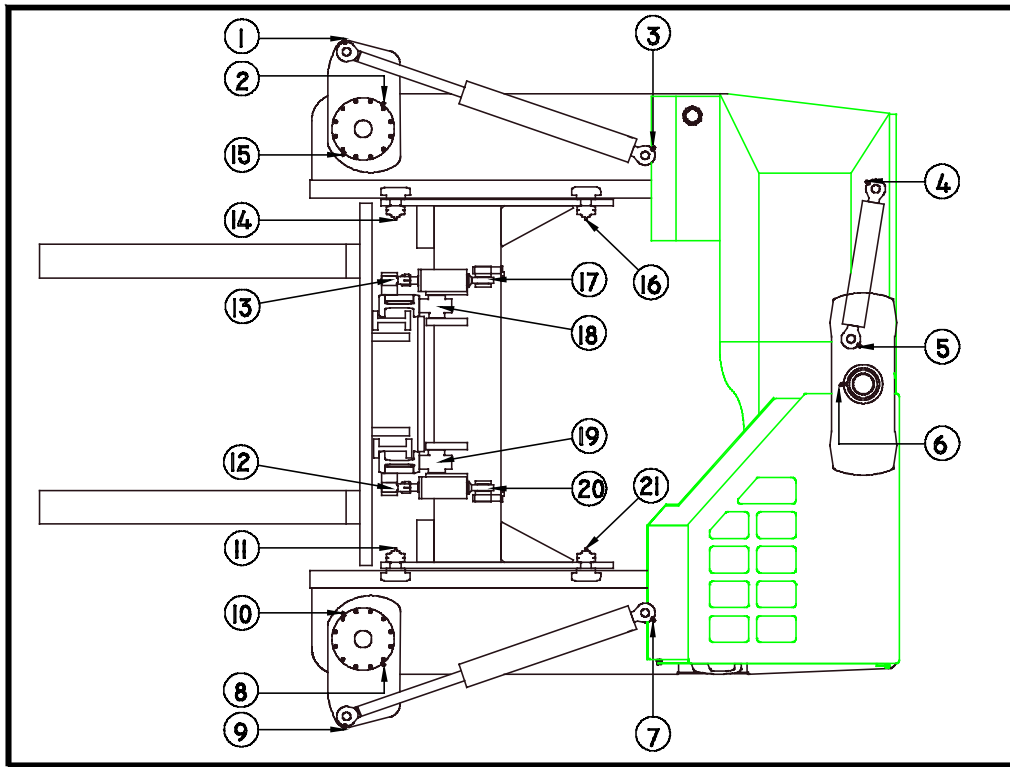
1.5 Chain Maintenance

Mast chains should be checked for elongation and adjusted as required.

To lubricate the chains, use oil with a viscosity that will remain fluid at all occurring ambient temperature conditions, lubricating oils with a viscosity from SAE20 to SAE40 are suitable. The following are examples of commercially available chain-lubricating products: -

1. Rexnord high performing chain spray
2. BP Energol Transmission Oil 80
3. ESSO Transmission Oil ST80
4. Shell Tonna Oil T200.

2. GREASE POINT CHART



- | | | |
|--------------------|-------------------|------------------|
| 1. Steering Front | 8. Swivel back | 15. Swivel front |
| 2. Swivel back | 9. Steering front | 16. Rear bearing |
| 3. Steering back | 10. Swivel front | 17. Rear tilt |
| 4. Rear Steering | 11. Front Bearing | 18. Mast bushing |
| 5. Rear Steering | 12. Front tilt | 19. Mast bushing |
| 6. Spindle Housing | 13. Front tilt | 20. Rear tilt |
| 7. Steering back | 14. Front bearing | 21. Rear bearing |

Lubricate all points weekly using an EP2 grease. Also lubricate all grease points on the mast, and attachments where fitted.

3. MAINTENANCE CHART**Schedule:** A = EVERY 250 HOURS / 4 MONTHS (OR WHICHEVER OCCURS FIRST).

B = Every 1000 HOURS

C = EVERY 2000 HOURS

	Check	Change
Engine Oil (See Note 1)		A
Engine Oil Filter		A
Air cleaner element		A
Engine belts	A	
Idling speed	A	
Diesel Fuel Filter		A
Engine coolant level	A	C
Radiator & Fans	A	
Hydraulic Oil Cooler	A	
Timing belt condition & Tension	A	C
LPG Spark plugs		B
Diesel Glow plugs		B
Engine mounting bolts	B	
Pump mounting bolts	B	
Hydraulic Oil	A	B
Tank internal filter		B
Suction filter (See note 2)		A
Return filter		A
Back arm bearing & lock nuts	A	
Slew bearings (front wheels)	A	
Wheel Nuts (200 N/m)	A	
Mast bearings & lock nuts	B	
Carriage bearings and lock nuts	B	
Carriage wear pad adjustment	A	
Mast chain adjustment	A	