GEHL

Form No.
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March
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CT7-23 Turbo

Telescopic Handler

Beginning with Serial Number 263524

Operator's Manual

INTRODUCTION

The information in this Operator's Manual was written to give the owner/operator assistance in preparing, adjusting, maintaining and servicing the Telescopic Handler. More important, this manual provides an operating plan for safe and proper use of the machine. Major points of safe operation are detailed in the **SAFETY** chapter of this manual.

GEHL Company asks that you read and understand the contents of this manual COMPLETELY, and become familiar with the machine before operating it.

The use of this Telescopic Handler is subject to certain hazards that cannot be eliminated by mechanical means, but only by the exercise of intelligence, care and common sense. It is therefore essential to have competent and careful operators, who are not physically or mentally impaired, and who are thoroughly trained in the safe operation of the equipment and the handling of the loads.

Throughout this manual information is provided that is set in *italic* type and introduced by the word **IMPORTANT** or **NOTE.** Be sure to read carefully and comply with the message or directive given. Following this information will improve operating and maintenance efficiency, help to avoid breakdowns and damage, and extend the machine's life. A chart of standard hardware torques is located in the back of this manual.

A storage area is provided on the unit for storing the Operator's Manual. After using the manual, please return it to the storage area and keep it with the unit at all times! If this machine is resold, this manual should be given to the new owner.

If this machine was purchased "used," or if the owner's address has changed, please provide your GEHL dealer or GEHL Company Service Department with the owner's name and current address, along with the machine model and serial number. This will allow the registered owner information to be updated, so that the owner can be notified directly in case of an important product issue, such as a safety update program.

"Right" and "left" are determined from a position sitting on the seat and facing forward.

The wide GEHLdealership network stands ready to provide any assistance needed, including genuine GEHL service parts. All parts should be obtained from or ordered through your GEHL dealer. Give complete information about the part and include the model and serial number of the machine. Record the serial number in the space provided on page 4 as a handy record for quick reference.

Please be aware that GEHL Company reserves the right to make changes or improvements in the design or construction of any part without incurring the obligation to install such changes on any unit previously delivered.

GEHL Company, in cooperation with the Society of Automotive Engineers, has adopted this

Safety Alert Symbol

to identify potential safety hazards, which, if not properly avoided, could result in injury. When you see this symbol in this manual or on the machine itself, you are reminded to BE ALERT! Your personal safety is involved!

Table of Contents

IDENTIFICATION INFORMATION

Write the GEHL Telescopic Handler model and serial numbers below.
Refer to these numbers when inquiring about parts or service from your GEHL dealer.

MODEL NO.	
SERIAL NO.	

The model and serial numbers for this machine are on a decal located inside the operator's station.

Chapter 1

SPECIFICATIONS

IDENTIFICATION OF THE TELESCOPIC HANDLER

Because of our policy to promote a continual improvement of our products, our lines of telescopic handlers may undergo certain modifications, without obligation to update units previously delivered.

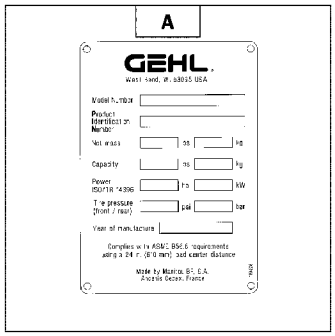
When ordering parts or when requesting technical information, always specify applicable model and serial numbers.

NOTE: *For the owner's convenience, it is recommended these numbers be recorded in the spaces provided at the time of the delivery of the telescopic handler.*

SERIAL PLATE OF THE TELESCOPIC HANDLER (FIG. A)

- Model _____
- P.I.N. _____
- Net Mass _____
- Capacity _____
- Year of Manufacture _____

For further technical information regarding the telescopic handler, refer to chapter: 1 - SPECIFICATIONS: SPECIFICATION.

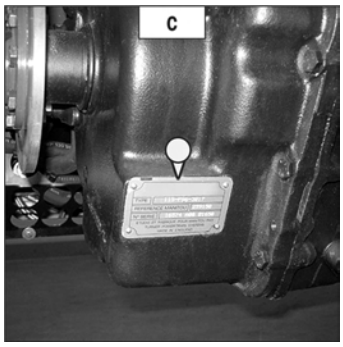


ENGINE (FIG. B)

- Engine No. _____

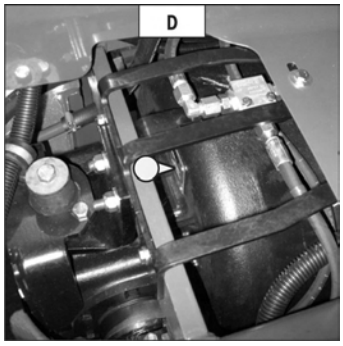
TRANSMISSION (FIG. C)

- Type _____
- Serial No. _____



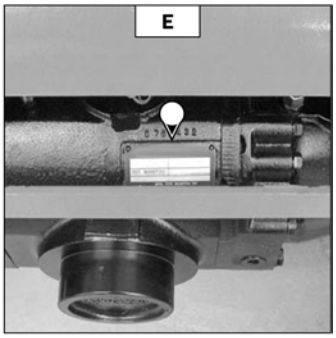
ANGLE GEARBOX (FIG. D)

- Type _____
- Serial No. _____



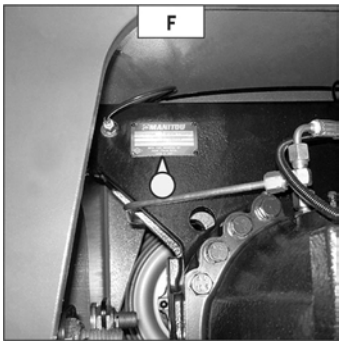
FRONT AXLE (FIG. E)

- Type _____
- Serial No. _____
- Reference No. _____



REAR AXLE (FIG. F)

- Type _____
- Serial No. _____
- Reference No. _____

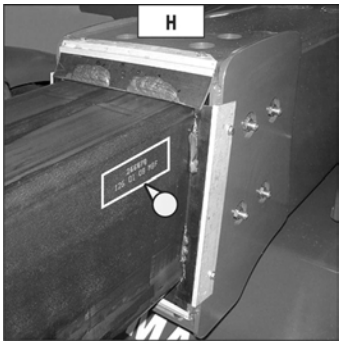


CAB (FIG. G)

- Type _____
- Serial No. _____

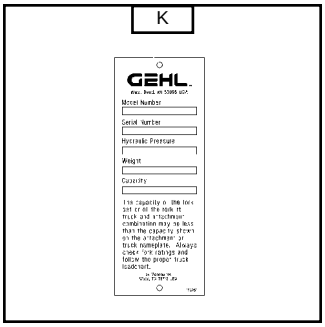
BOOM (FIG. H)

- Reference No. _____
- Date of Manufacture _____



SERIAL PLATE OF THE ATTACHMENT (FIG. K)

- Model _____
- Serial No. _____
- Hydraulic Pressure _____
- Weight _____
- Capacity _____



SPECIFICATIONS

ENGINE

- Make	PERKINS
- Model	1104D-44TA NM38858
- Number of cylinders	4 in-line
- Number of cycles	4
- Aspiration	Turbocharged
- Injection system	Direct
- Power (SAE J1995)	101 hp (74.5 kW)
- Maximum torque	302 ft.-lbs. (410 Nm) @ 1400 rpm
- Displacement	268 cu. in. (4400 cc)
- Bore	4.13” (105 mm)
- Stroke	5” (127 mm)
- Compression ratio	18.2:1
- Low idle	930 rpm
- High idle	2400 rpm
- Nominal loaded rating	2200 rpm
- Ignition sequence	1-3-4-2
- Air cleaner	Dry w/safety element
- Type of cooling	Liquid
- Fan	Puller

TRANSMISSION

- Type	Turner
- Forward/reverse selector	Electro-hydraulic
- Torque converter	Sachs
- Gear box	
Number of forward speeds	4
Number of reverse speeds	4

ANGLE GEAR-BOX

- Type — Turner

FRONT AXLE

- Differential — Limited-slip

REAR AXLE

- Differential — Non-locking

FRONT AND REAR TIRES

DIMENSIONS	PRESSURE	TIRE LOAD	
460/70 R24 159A8 XMCL TUBELESS MICHELIN	50 PSI	FRONT NO LOAD FRONT FULL LOAD REAR NO LOAD REAR FULL LOAD	3638 lb. 9700 lb. 4189 lb. 1543 lb.

BRAKE SYSTEM

- Service brake — Hydraulic power brake
  - Type of brake — Multi-disc brake immersed in oil
  - Type of control — Foot-operated for the front and rear axles
- Parking brake — Mechanical
  - Type of brake — Disc on gear-box output
  - Type of control — Manual operated hand lever

ELECTRICAL SYSTEM

- Ground — Negative
- Battery — 12-V, 135 Ah - 850 A
- Alternator — 12-V, 85 A
  - Type — Denso Ai115
- Starter — 12-V, 3.2 kW
  - Type — AZE

SOUND LEVELS

- Sound Pressure (in cab) — 76 dB(A)
- Sound Power environment
  - 104 dB(A) measured
  - 105 dB(A) guaranteed

HYDRAULIC CIRCUIT

Type of pump . . . . . .Variable-Displacement, Piston
- Capacity/rev . . . . . .2.75 cu. in. (45 cc)
- Pump flow rate . . . . . .28.5 gpm (108 L/min)

Filtration
- Return . . . . . .15 micron
- Suction . . . . . .125 micron

Maximum service pressure . . . . . .3916 psi (270 bar)
- Telescoping circuit . . . . . .2900 / 3916 psi (200 / 270 bar)
- Lifting circuit . . . . . .3916 / 3916 psi (270 / 270 bar)
- Tilt circuit . . . . . .2756 / 3916 psi (190 / 270 bar)
- Attachment circuit . . . . . .3916 psi (270 bar)
- Steering circuit . . . . . .2030 psi (140 bar)

HYDRAULIC TIMES

Lifting times (boom retracted)
- No load, lifting . . . . . .7.1 seconds
- Rated load, lifting . . . . . .8.3 seconds
- No load, lowering . . . . . .5.3 seconds
- Rated load, lowering . . . . . .5.4 seconds

Telescoping times
- No load, extending . . . . . .8.2 seconds
- Rated load, extending . . . . . .8.2 seconds
- No load, retracting . . . . . .6.3 seconds
- Rated load, retracting . . . . . .6.6 seconds

Rearward tilt time, no load . . . . . .3.2 seconds

Forward tilt time, no load . . . . . .2.7 seconds

SPECIFICATIONS AND WEIGHTS

Travel Speed maximum (standard configuration on level ground)
- Forward, no load . . . . . .20 mph (32.5 km/h)
- Reverse, no load . . . . . .20 mph (32.5 km/h)

Standard lift height . . . . . .22’7” (6.90 m)

Rated capacity (with standard attachment) . . . . . .7000 lbs. (3175 kg)

Load center . . . . . .24” (610 mm)

Weight of standard attachment . . . . . .210 lbs. (95 kg)

Weight of forks (each) . . . . . .159 lbs. (72 kg)

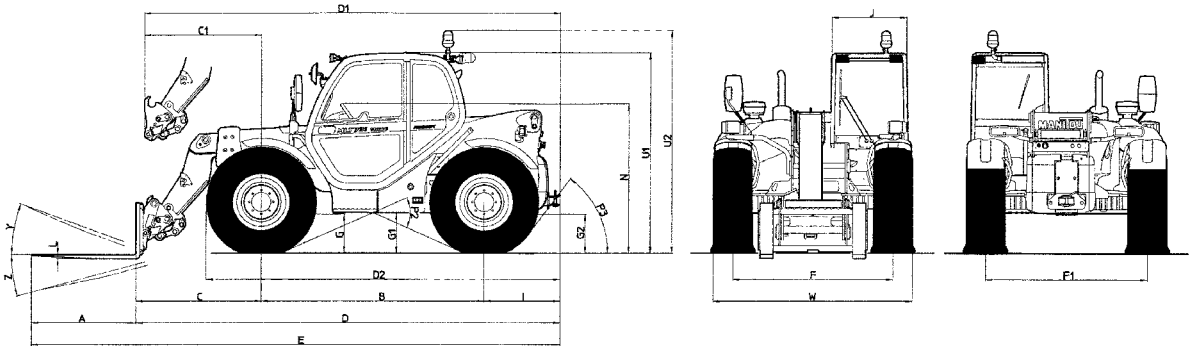
Operating weight with standard attachment . . . . . .15,565 lbs. (7060 kg)

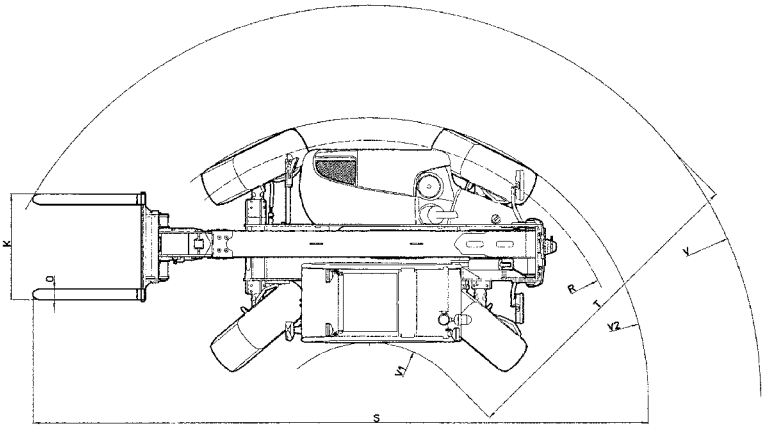
Axle weight with attached equipment (transport position)
- Front, no load . . . . . .7231 lbs. (3280 kg)
- Front, rated load . . . . . .19,379 lbs. (8790 kg)
- Rear, no load . . . . . .8333 lbs. (3780 kg)
- Rear, rated load . . . . . .3020 lbs. (1370 kg)

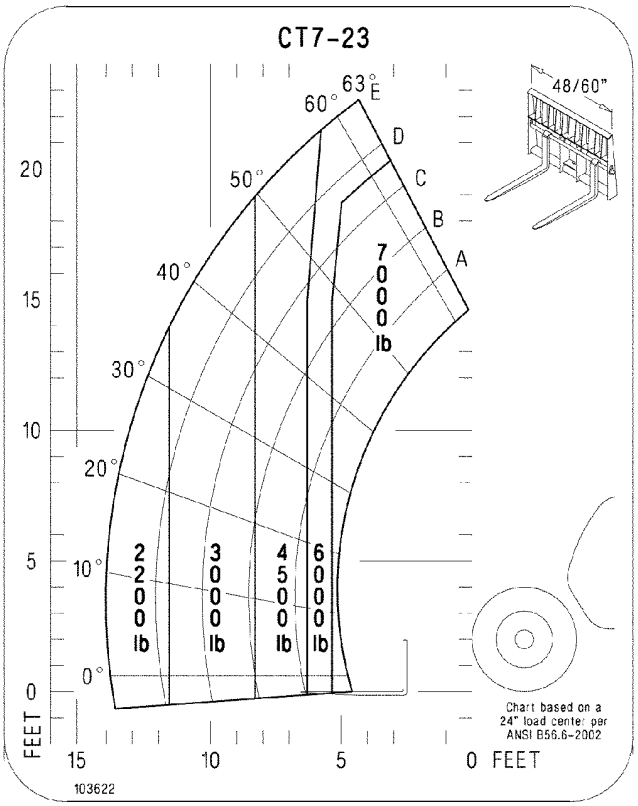
Drawbar pull, rated load . . . . . .18705 lbf. (83.2 kN)

Breakout force on bucket teeth with tilt cylinder (ISO 14397-2) . . .12,702 lbf. (56.5 kN)

DIMENSIONS AND LOAD CHART







A	3’ 11” (1200 mm)
B	8’ 5” (2560 mm)
C	4’ 9” (1441 mm)
C1	5’ (1537 mm)
D	16’ (4878 mm)
D1	16’ 4” (4974 mm)
D2	13’ 1-1/2” (4003 mm)
E	19’ 11” (6078 mm)
F	6’ 2” (1870 mm)
F1	6’ 2” (1870 mm)
G	1’ 6” (450 mm)
G1	1’ 5” (435 mm)
G2	1’ 5” (435 mm)
I	2’ 11” (877 mm)
J	2’ 10” (865 mm)
K	4’ 2” (1260 mm)
L	1 3/4” (45 mm)
N	5’ 8” (1715 mm)
O	5” (125 mm)
P2	47.5°
P3	53°
R	11’ 5” (3475 mm)
S	25’ (7630 mm)
T	11’ 10” (3615 mm)
U1	7’ 7” (2295 mm)
U2	8’ 4” (2550 mm)
V	15’ 11” (4865 mm)
V1	4’ 1” (1250 mm)
V2	12’ 2” (3709 mm)
W	7’ 8” (2337 mm)
Y	12.5°
Z	133.7°

Chapter 2

CHECKLISTS

PRE-DELIVERY

The following Checklist is an important reminder of inspections that MUST be made before delivering the Telescopic Handler to the customer. Check off each item after the prescribed action is taken.

✔ Check that:

- ❑ No parts of machine have been damaged in shipment. Check for such things as dents and loose or missing parts; correct or replace components as required.
- ❑ Battery is securely mounted and not cracked. Cable connections are tight. Electrolyte at proper level.
- ❑ Cylinders, hoses and fittings are not damaged, leaking or loosely secured.
- ❑ Oil, fuel and air filters are not damaged, leaking or loosely secured.
- ❑ All grease fittings have been properly lubricated and no fittings are missing; see MAINTENANCE chapter of this manual.
- ❑ Wheel nuts are torqued to 465 ft.-lbs. (630 Nm).
- ❑ Tires are inflated to 50 psi (345 kPa) cold.
- ❑ Hydraulic system reservoir, engine crankcase, engine coolant, transmission and axles are filled to the proper operating fluid levels.
- ❑ All adjustments have been made to comply with the settings given in this manual and in the separate engine manual.
- ❑ All guards, shields and decals are in place and securely attached.
- ❑ Model and serial numbers for this unit are recorded in space provided on this page and page 4.

Start the machine and test-run the unit while checking that proper operation is exhibited by all controls.

✔ Check that:

- ❑ All indicators (lamps, switches, etc.) function properly.
- ❑ All hand and foot controls operate properly.
- ❑ Boom, Quick-attach System with attachment tool and frame level control all function properly.
- ❑ No hydraulic system leaks when under pressure.
- ❑ Listen for abnormal noises or vibrations; if detected, determine their cause and repair as necessary.

I acknowledge that pre-delivery procedures were performed on this unit as outlined above.

_____
Dealership's Name

_____
Dealer Representative's Name

_____
Date Checklist Filled Out

_____
Machine Model No. Machine Serial No. Engine Serial No.

DELIVERY

The following Checklist is an important reminder of valuable information that MUST be passed on to the customer at the time the unit is delivered. Check off each item as you explain it to the customer.

✔ Check that:

- ❑ Review with the customer the contents of the AEM Safety Manual and this manual for the following:
- ❑ The Index at the back, for quickly locating topics.
- ❑ The Safety and Operating and Safety Instructions chapters for information regarding safe use of the machine.
- ❑ The Maintenance chapter for information regarding proper maintenance of the machine. Explain that regular lubrication and maintenance are required for continued safe operation and long life.
- ❑ Give this Operator's Manual and the AEM Safety Manual to the customer and instruct them to be sure to read and completely understand their contents before operating the unit.
- ❑ Explain that the customer must consult the engine manual (provided) for related specifications, operating adjustments and maintenance instructions.
- ❑ Completely fill out the Owner's Registration, including customer's signature, and return it to the Company.
- ❑ Explain that a copy of the product warranty is included on the inside back cover of this operator's manual.

_____
Customer's Signature

_____
Date Delivered

(Dealer's File Copy - Remove at Perforation)

INTENTIONALLY BLANK

(To be removed as Dealer's file copy)

Chapter 2

CHECKLISTS

PRE-DELIVERY

The following Checklist is an important reminder of inspections that MUST be made before delivering the Telescopic Handler to the customer. Check off each item after the prescribed action is taken.

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- ❑ Battery is securely mounted and not cracked. Cable connections are tight. Electrolyte at proper level.
- ❑ Cylinders, hoses and fittings are not damaged, leaking or loosely secured.
- ❑ Oil, fuel and air filters are not damaged, leaking or loosely secured.
- ❑ All grease fittings have been properly lubricated and no fittings are missing; see MAINTENANCE chapter of this manual.
- ❑ Wheel nuts are torqued to 465 ft.-lbs. (630 Nm).
- ❑ Tires are inflated to 50 psi (345 kPa) cold.
- ❑ Hydraulic system reservoir, engine crankcase, engine coolant, transmission and axles are filled to the proper operating fluid levels.
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- ❑ All hand and foot controls operate properly.
- ❑ Boom, Quick-attach System with attachment tool and frame level control all function properly.
- ❑ No hydraulic system leaks when under pressure.
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I acknowledge that pre-delivery procedures were performed on this unit as outlined above.

_____
Dealership's Name

_____
Dealer Representative's Name

_____
Date Checklist Filled Out

_____
Machine Model No. Machine Serial No. Engine Serial No.

DELIVERY

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- ❑ The Index at the back, for quickly locating topics.
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- ❑ The Maintenance chapter for information regarding proper maintenance of the machine. Explain that regular lubrication and maintenance are required for continued safe operation and long life.
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- ❑ Completely fill out the Owner's Registration, including customer's signature, and return it to the Company.
- ❑ Explain that a copy of the product warranty is included on the inside back cover of this operator's manual.

_____
Customer's Signature

_____
Date Delivered

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Chapter 3

SAFETY

GENERAL INSTRUCTIONS

Before operating this equipment, read and study the following safety information. In addition, be sure that everyone who operates or works with this equipment, is familiar with these safety precautions.

WHENEVER YOU SEE THIS SYMBOL:

IT MEANS: WARNING! BE CAREFUL! YOUR SAFETY OR THE SAFETY OF OTHERS IS AT RISK.

DANGER

“DANGER” indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.

WARNING

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

CAUTION

“CAUTION” indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury. It may also alert users to unsafe practices.

WARNING

The risk of accident while using, servicing and repairing the telescopic handler can be minimized by following the safety warnings and instructions detailed in this manual.

GEHL Company has ensured that this telescopic handler is suitable for use under normal operating conditions defined in this Operator's Manual and in accordance with safety standard ANSI/ITSDF B56.6.

Before using the telescopic handler, the owner must make sure that the telescopic handler is appropriate for the work to be done.

In addition to standard equipment mounted on the telescopic handler, many options are available, such as: flashing lights, front light, rear light, light at the boom head, etc.

The operator must take into account the operating conditions to determine the necessary signalling and lighting equipment. Contact your dealer for information.

GEHL Company always takes the operator’s safety into consideration when designing its machinery, and guards exposed moving parts for his/her protection. However, some areas cannot be guarded in order to assure proper operation. Further, this Operator’s Manual and decals on the machine warn of additional hazards and should be read and observed closely.

It is the responsibility of the operator to read and understand the Operator’s Manual and other information provided, and to use correct operating procedures. Machines should be operated only by qualified operators.

It is the owner’s responsibility for communicating information on the safe use and proper maintenance of this machine! This includes providing understandable interpretations of these instructions to operators who are not fluent in reading English.

MANDATORY SAFETY SHUTDOWN PROCEDURE

BEFORE cleaning, adjusting, lubricating or servicing the unit:

1. **Stop machine on a level surface. (Avoid parking on a slope, but if necessary, park across the slope and block the tires.)**
2. **Fully retract the boom and lower the attachment tool to the ground. Idle engine for gradual cooling.**
3. **Place controls in neutral and apply parking brake.**
4. **Shut off the engine and remove the key.**

ONLY when you have taken these precautions can you be sure it is safe to proceed. Failure to follow the above procedure could lead to death or serious bodily injury.

WARNING

U.S. OSHA regulations require employers in general industry and the construction, shipyard and cargo-handling industries (excepting agricultural operations) to ensure that forklift operators are competent, as demonstrated by successful completion of a training course.

The training course must consist of a combination of formal instruction and practical training, including both forklift-related and workplace-related topics, and evaluation of the operator's performance in the workplace.

All operator training and evaluation is to be conducted by persons who have the knowledge, training and experience to train and evaluate operators.

WARNING

ALWAYS maintain a safe distance from electric power lines and avoid contact with any electrically charged conductor or gas line. It is not necessary to make direct contact with a power line for power to ground through the structure of the machine. Keep the boom at least 10 ft. (3 m) from all power lines. Accidental contact or rupture can result in electrocution or an explosion. Contact the "Call Before You Dig" referral system number at 8-1-1 in the U.S., or 888-258-0808 in the U.S. and Canada, to locate any underground utility lines BEFORE starting to dig.

WARNING

The telescopic handler is designed for outdoor use under normal atmospheric conditions, and indoor use in suitably ventilated premises.

It is prohibited to use the telescopic handler in areas where there is a risk of fire or potentially explosive materials (e.g., refineries, fuel or gas depots, stores of flammable products). For use in these areas, specificly approved equipment is available. (Ask your dealer for information.)

Additional Safety Reminders

- User/operator safety practices, as established by industry standards, are included in this Operator's Manual and intended to promote safe operation of the machine. These guidelines do not, of course, preclude the use of good judgment, care and common sense, as may be indicated by the particular jobsite work conditions.
- It is essential that operators be physically and mentally free of mind-altering drugs and chemicals, and thoroughly trained in the safe operation of the machine. Such training should be presented completely to all new operators and not condensed for those claiming previous experience. Information on operator training is available from several sources, including the manufacturer.

- Some illustrations used in this manual may show doors, guards and shields open or removed for illustration purposes ONLY. BE SURE that all doors, guards and shields are in their proper operating positions before starting the engine.
- For the safety of the operator and others, do not change the structure or settings of the various components used in the telescopic handler (hydraulic pressure, calibrating limits, engine speed, addition of extra equipment, addition of counterweight, unapproved attachments, alarm systems, etc.). In this event, the manufacturer cannot be held responsible.
- The operator must keep the telescopic handler properly cleaned.
- Read the operator's manual carefully.
- The operator's manual must always be in good condition and in the place provided for it on the telescopic handler.

Before Operation Safety Reminders

- Check brakes, steering, and hydraulic system prior to starting operation. Operate all controls to ensure proper operation. Observe all gauges and indicators for proper operation. If any malfunctions are found, correct the cause prior to using the machine.
- ALWAYS wear appropriate personal protective equipment for the job and working conditions. Hard hats, goggles, protective shoes, gloves, reflector-type vests, respirators and ear protection are examples of types of equipment that may be required. DO NOT wear loose-fitting clothing, long hair, jewelry or loose personal items while operating or servicing the machine.
- ALWAYS check the job site for terrain hazards, obstructions and people. Remove all objects that do not belong in or on the machine and its equipment.
- Walk around the machine and warn all personnel who may be servicing the machine or who are in the machine’s path prior to starting. DO NOT start until all personnel are clearly away from the machine.
- The operator must immediately advise his supervisor if the telescopic handler is not in good working condition.
- The operator must carry out daily maintenance (see: chapter: 6 - MAINTENANCE: A - DAILY OR EVERY 10 HOURS SERVICE) if this is among his responsibilities.

Operation Safety Reminders

WARNING

There are a number of possible situations in which operating the telescopic handler is not allowed. Such abnormal uses are strictly forbidden. For example:

- **Abnormal behavior resulting from carelessness.**
- **Behavior resulting from “doing it the easy way” when performing a task.**
- **Operation by such persons as: teenagers, handicapped persons, trainees tempted to drive a telescopic handler, and operators tempted to operate in a manner to win a bet, in competition or for their own personal experience.**

The person in charge of the equipment must take these possibilities into account when assessing whether or not a person will make a suitable operator.

- Any or all of the following elements may affect the stability of the machine: terrain, engine speed, type of load being carried and placed, improper tire inflation, weight of the attachment tool, and abrupt movement of any control lever. IF YOU ARE NOT CAREFUL WHILE OPERATING THIS MACHINE, ANY OF THE ABOVE FACTORS COULD CAUSE THE MACHINE TO TIP AND THROW YOU OUT OF THE OPERATOR’S STATION, WHICH MAY CAUSE SERIOUS BODILY INJURY OR DEATH!
- ALWAYS wear the seat belt provided to prevent being thrown from the machine. If you are in an overturn:

  - DO NOT jump!

  - Hold on tight and stay with the machine!

  - Lean away from the fall!
- ALWAYS use the recommended hand holds and steps with at least three points of support when get-

ting on and off the machine. Keep steps and platform clean. Face the machine when climbing up and down.

- Only the operations and actions described in this operator's manual may be performed. The manufacturer cannot predict all possible risky situations. Consequently, the safety instructions in this operator's manual and on the telescopic handler itself are not 100% exhaustive, and operators must always consider the possible risks to themselves, to others and to the telescopic handler itself.
- A telescopic handler operating in an area without fire extinguishing equipment must be equipped with an individual extinguisher.
- Only qualified, trained and authorized personnel may use the telescopic handler. This authorization is given by the appropriate person in the company in charge of using the telescopic handler.
- The operator is not allowed to authorize the use of the telescopic handler by another person.
- The operator must always be in the normal position in the cab. It is prohibited to have arms, legs or any part of the body protruding from the cab of the telescopic handler.
- The seat belt must be worn and adjusted to the operator's size.
- The controls must never be used for anything except their intended purposes (e.g., climbing onto or down from the telescopic handler).
- NEVER allow any riders on this machine or use as a lift for personnel. This is strictly a single-seat, NO-passenger machine!
- The operator must ensure the tires are suitable for the nature of the ground (see contact surface area of the tires in chapter: 1 - SPECIFICATIONS: CHARACTERISTICS).

WARNING

Do not use the telescopic handler if the tires are incorrectly inflated, damaged or excessively worn, because this could put operator safety or that of others at risk, or cause damage to the telescopic handler. The fitting of foam-filled tires is prohibited and is not warranted by the manufacturer without prior authorization.

Servicing Safety Reminders

WARNING

The telescopic handler must be inspected periodically to ensure that it remains in good operating condition. The frequency of inspections is determined by usage and regulations of the country and state/province in which the telescopic handler is used.

WARNING

Failure to follow the safety and operating instructions, and the instructions for repairing and servicing the telescopic handler may lead to serious, or even fatal accidents.

- NEVER use your hands to search for hydraulic fluid leaks. Instead use a piece of paper or cardboard. Escaping fluid under pressure can be invisible and can penetrate the skin, causing serious injury. If any fluid is injected into your skin, see a doctor at once. Injected fluid MUST be surgically removed by a doctor familiar with this type of injury or gangrene may result.
- ALWAYS wear safety glasses with side shields when striking metal against metal. In addition, it is recommended that a softer (chip-resistant) material be used to cushion the blow. Failure to heed could lead to serious injury to the eyes or other parts of the body.
- Avoid lubrication or mechanical adjustments with the machine in motion or the engine running. If the engine must be running to make certain adjustments, position the equipment in a safe position, place the transmission in neutral, apply the parking brake, securely block the tires and use extreme caution.
- The operator is prohibited from performing any repairs or adjustments unless he/she has been trained for this purpose.
- To ensure continued safe operation, replace damaged or worn-out parts with genuine GEHL service parts before using this equipment.

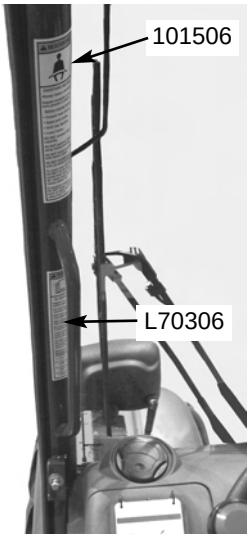
Modifications, Nameplates, Markings and Capacities

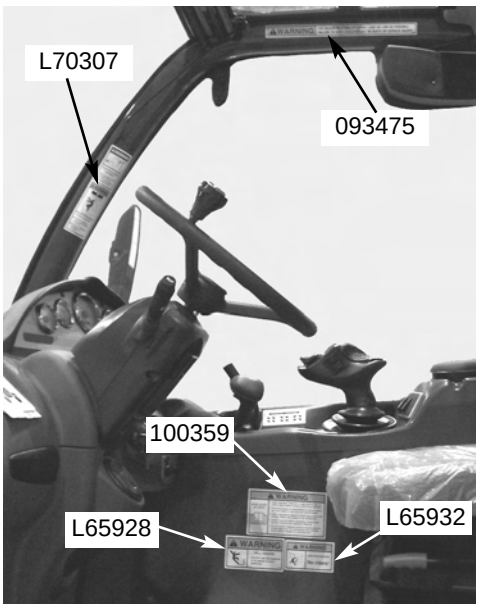
- Modifications and additions that affect capacity or safe operation must never be performed without the manufacturer's prior written approval. Where such authorization is granted, any applicable markings are to be changed accordingly.
- All attachment tools MUST be marked to identify the attachment tool and the total capacity with the attachment tool at maximum elevation with the load laterally centered.
- Be sure all nameplates, warnings and instruction markings are in place and legible. Local government regulations may require specific equipment, which is the responsibility of the owner to provide.
- Report any warning decals that are no longer legible.

Safety Guards and Warning Devices

- This machine is fitted with a Roll-Over Protective Structure (ROPS) and Falling Object Protective Structure (FOPS) in accordance with industry standards. It is intended to offer protection to the operator from falling objects and in case of an overturn, but it cannot protect against every possible hazard. Therefore, it should not be considered a substitute for good judgment and safe practices in operating the machine. If the ROPS / FOPS structure is damaged, it must be replaced to restore the protection it provides.

SAFETY DECAL LOCATIONS





101506

WARNING

TO AVOID INJURY

Inspect machine before operating it.

Be sure work tool is securely attached.

Start and operate only from operator's seat.

Use 2-wheel steer for high speed travel.

Be sure backup alarm is functioning.

Look in direction of travel and clear path before moving.

DO NOT use hands to find oil leak -- oil can inject into skin. See a doctor if injured.

Before exiting, follow Mandatory Safety Shutdown Procedure:

1) Stop in level area;

2) Fully retract boom, lower work tool;

3) Shift into Neutral, apply park break;

4) Shut off engine, remove key.

101506

L70306

WARNING

OVERTURN HAZARD

Always fasten seatbelt.

Inspect worksite to be sure ground is stable.

Before raising boom:

- Consult load charts,
- Apply park brake,
- Shift into Neutral,
- Level frame.

DO NOT exceed rated capacity.

DO NOT position load using frame leveling.

DO NOT move machine with boom raised.

DO NOT transport load with jib boom or winch.

To avoid rear overturn, DO NOT tilt jib boom or winch back more than 45° when main boom is raised above 45°.

If machine overturns, DO NOT jump. Instead, hold on tight and lean away from fall.

L70306

100359

WARNING

AVOID INJURY OR DEATH

- Read Operator's Manual (in seat pouch) and all safety signs before using or servicing machine.
- Owner/employer is responsible to ensure users are instructed on safe use and maintenance.
- OSHA regulations require forklift operators to be trained, tested and judged to be competent.
- Check machine before operating, inspect and service machine per Operator's Manual.
- Do not modify machine without manufacturer's written approval. For information and service parts, contact dealer (or manufacturer).

L65932

WARNING

RUN-OVER HAZARD

No riders!

L65932

L65928

WARNING

FALL HAZARD

- DO NOT use this machine to lift people or work platforms.

L65928

093475

WARNING FOR MAXIMUM STABILITY CARRY LOAD AS LOW AS POSSIBLE. FAILURE TO HEED COULD RESULT IN DEATH OR SERIOUS INJURY. 093475

L70307

DANGER

ELECTROCUTION HAZARD

Keep machine, boom and load 10 feet (3 m) or more away from power lines.

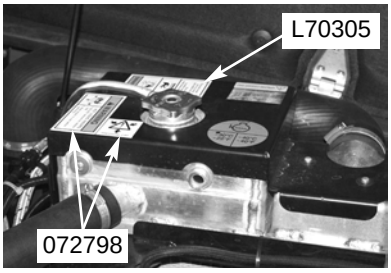
WARNING

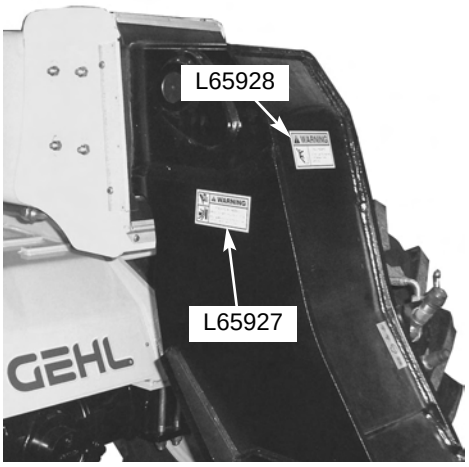
CRUSH HAZARD

- DO NOT remove right side window or panel.
- Replace if broken, damaged or missing.

L70307

SAFETY DECAL LOCATIONS





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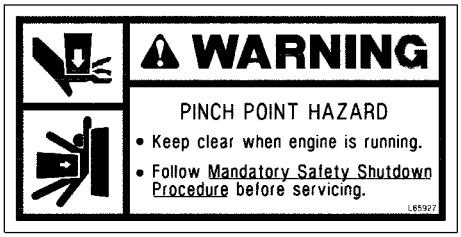

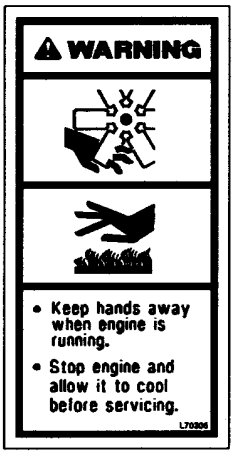

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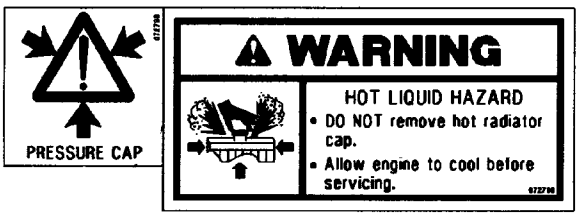


L65928

Chapter 4

OPERATING AND SAFETY INSTRUCTIONS

A - BEFORE STARTING THE TELESCOPIC HANDLER

- Perform daily maintenance (see chapter: 6 - MAINTENANCE: A - DAILY OR EVERY 10 HOURS SERVICE).
- Make sure the lights, indicators and windshield wipers are working properly.
- Make sure the rearview mirrors are in good condition, clean and properly adjusted.
- Make sure the horn works.

B - OPERATOR INSTRUCTIONS

- Whatever his/her experience, the operator is advised to familiarize himself/herself with the location and operation of all the controls and instruments before operating the telescopic handler.
- Wear clothes suited for operating the telescopic handler. Avoid loose clothing.
- Make sure you have the appropriate personal protective equipment for the job.
- Prolonged exposure to high noise levels may cause hearing problems. It is recommended to wear ear muffs to protect against excessive noise.
- Always keep alert when using the telescopic handler. Do not listen to the radio or music using headphones or earphones.
- Never operate the telescopic handler when hands or feet are wet or soiled with greasy substances.
- For increased comfort, ensure that the seat is adjusted to your requirements and in the correct position.

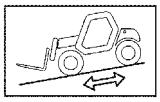
WARNING

DO NOT adjust the seat while the telescopic handler is moving.

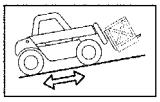
- If a control is equipped with a locking device, it is forbidden to leave the cab without first locking the control in neutral.

C - ENVIRONMENT

- Comply with all work site safety rules.
- If the telescopic handler must be used in a dark area or at night, make sure it is equipped with working lights.
- During operation, make sure that no one is in the way of the telescopic handler and its load.
- Do not allow anybody to come near the work area of the telescopic handler or pass under an elevated load.
- When using the telescopic handler on a side slope, before lifting the boom, follow the instructions given in the paragraph: INSTRUCTIONS FOR HANDLING A LOAD: M - TRANSVERSE ATTITUDE OF THE TELESCOPIC HANDLER.
- Travelling on a longitudinal slope:
  - Drive and brake gently.
  - Moving without a load: Forks or attachment facing downhill.



  - Moving with a load: Forks or attachment facing uphill.



- Never move onto a trailer without having first checked:
  - That it is suitably positioned and made fast.
  - That the unit to which it is connected (wagon, truck, etc.) will not shift.
  - That the trailer is suitable for the total weight of the telescopic handler.
  - That the trailer is suitable for the size of the telescopic handler.
- Never move onto a bridge, floor or elevator, without being certain that it is suitable for the weight and size of the telescopic handler and without having checked that it is in good condition.
- Be careful in the area of loading bays, trenches, scaffolding, soft ground and manholes.

- Make sure the ground is stable and firm under the wheels and/or stabilizers before lifting or removing the load. If necessary, add sufficient wedging under the stabilizers, if equipped.
- Make sure that the scaffolding, loading platform, pilings or ground is capable of bearing the load.
- Never stack loads on uneven ground, because they may tip over.
- In the case of work near power lines, ensure that the safety distance is sufficient between the work area of the telescopic handler and the power lines.

WARNING

You could be electrocuted or seriously injured if you operate or park the telescopic handler too close to power lines. Consult your local utilities.

WARNING

In the event of high winds, do not perform work that jeopardizes the stability of the telescopic handler and its load, particularly if the load can be affected by the wind.

D - VISIBILITY

- Maintain good visibility throughout the route. In reverse, either look directly behind or use the rearview mirrors. In any case, avoid driving in reverse over long distances.
- Visibility may be reduced on the right side when the boom is raised, so before lifting the boom make sure that the movement can be made in complete safety.
- If the forward visibility is not sufficient because of the bulkiness of the load, drive in reverse. This movement must be an exception and only done for short distances.
- Ensure good visibility (clean windows, adequate lighting, correctly adjusted rearview mirrors, etc.).
- If visibility of the road is inadequate, ask someone to help, standing outside the area in which the machine will be moving, and making sure you always have a good view of this person.

E - STARTING THE TELESCOPIC HANDLER

WARNING

The telescopic handler must only be started or moved when the operator is sitting in the cab with the seat belt fastened and adjusted.

- Never try to start the telescopic handler by pushing or towing it. Such operation may cause severe damage to the transmission. If it's necessary to tow the telescopic handler in an emergency, the transmission must be placed in neutral (see chapter: 6 - MAINTENANCE: G - PERIODIC MAINTENANCE).
- Check for closing and locking of covers.
- Make sure that the forward/reverse lever is in neutral.
- Turn the ignition key to position "I" to activate the electrical system.
- Make sure the signal lights on the instrument panel and fuel level indicators are working properly (see chapter: 5 - INSTRUMENTS AND CONTROLS: 3 - CONTROL AND SIGNAL LAMP PANEL).
- Turn the ignition key to position "II" to preheat for 15 seconds and then turn the ignition key fully; the engine should then start. Release the ignition key and let the engine run at idle.
- Do not engage the starter motor for more than 15 seconds. Carry out the preheating for 10 seconds between unsuccessful attempts.
- Make sure all the signal lamps on the instrument panel are off.
- Check all instruments when the engine is warm and at regular intervals during use, to detect any faults and be able to correct them without delay.
- If an instrument does not show the correct display, stop the engine and immediately carry out the necessary corrections.

⚠ WARNING

The electrolyte in the battery may produce an explosive gas. Avoid open flames and sparks close to the batteries. Never disconnect a battery while it is charging.

Failure to ensure proper polarity between batteries can cause serious damage to the electrical circuit.

Jump-Starting Procedure

If the battery becomes discharged or does not have enough power to start the engine, use jumper cables and the following procedure to jump-start the engine.

If using a jumper battery for start-up, use a battery with the same voltage and ensure proper polarity when connecting it.

IMPORTANT: *BE SURE that the jumper battery is also a 12-volt D. C. battery, and the vehicle used for jump starting has a negative-ground electrical system.*

⚠ WARNING

The ONLY safe method for jump-starting a discharged battery is for TWO PEOPLE to perform the following procedure. The second person is needed for removing the jumper cables so that the operator does not have to leave the operator's compartment while the engine is running. NEVER connect the jumper cables directly to the starter solenoid of either engine. DO NOT start the engine from any position other than the operator's seat, and then ONLY after making sure all controls are in "neutral."

Closely follow the jump-start procedures, in the order listed, to avoid personal injury. In addition, wear safety glasses to protect your eyes, and avoid leaning over the batteries while jump-starting.

DO NOT attempt to jump-start the machine if the battery is frozen, because this may cause it to rupture or explode.

1. Turn the keyswitches on both vehicles to "OFF". Be sure that both vehicles are in "neutral" and not touching.
2. Connect one end of the positive (+) jumper cable to the positive (+) battery terminal on the disabled machine first. DO NOT allow the positive (+) jumper cable clamps to touch any metal other than the positive (+) battery terminals. Connect the other end of the positive jumper cable to the jumper battery positive (+) terminal.
3. Connect one end of the negative (-) jumper cable to the jumper battery negative (-) terminal.
4. Make the final negative (-) jumper cable connection to the disabled machine's engine block or frame (ground) - NOT to the disabled battery negative post. If making the connection to the engine, keep the jumper clamp away from the battery, fuel lines, or moving parts.

NOTE: *Twist the jumper cable clamps on the battery terminals to ensure a good electrical connection.*

5. Proceed to start the machine. If it does not start immediately, start the jumper vehicle engine to avoid excessive drain on the booster battery.
6. After the machine is started and running smoothly, have the second person remove the jumper cables (negative (-) jumper cable first) from the jumper vehicle battery, and then from the disabled machine, while ensuring NOT to short the two cables together.

Allow sufficient time for the alternator to build up a charge in the battery before operating the machine or shutting off the engine.

NOTE: *If the battery frequently becomes discharged, have the battery checked for possible dead cells, or troubleshoot the electrical system for possible short circuits or damaged wire insulation.*

F - OPERATING THE TELESCOPIC HANDLER

⚠ WARNING

Operators must always consider the risks involved in using the telescopic handler, in particular:

- Risk of losing control

- Risk of losing side or front stability of the telescopic handler

The operator must remain in control of the telescopic handler at all times.

In the event of the telescopic handler overturning, do not try to leave the cabin during the incident. THE BEST PROTECTION IS TO STAY IN THE CABIN, AND LEAN AWAY FROM THE FALL.

- Do not perform operations that exceed the capacities of the telescopic handler or attachments.
- Always drive the telescopic handler with the forks or attachment in the transport position, i.e., 1 foot (300 mm) from the ground, the boom retracted and the carriage tilted rearward.
- Only carry loads that are balanced and properly anchored to avoid any risk of a load falling off.
- Ensure that pallets, cases, banding, etc. are in good condition and suitable for the load to be lifted.
- Familiarize yourself with the telescopic handler on the terrain where it will be used.
- Ensure that the service brakes are working properly.
- The loaded telescopic handler must not travel at speeds in excess of 7 mph (12 km/h).
- Drive smoothly at an appropriate speed for the operating conditions (terrain, load on the telescopic handler).
- Do not use the hydraulic boom controls when the telescopic handler is moving.
- Do not move the telescopic handler with the boom in the raised position unless under exceptional circumstances, and then with extreme caution, at very low speed and using gentle braking. Ensure that visibility is adequate.
- Drive around turns slowly.
- In all circumstances make sure you are in control of your speed.
- On damp, slippery or uneven terrain, drive slowly, and brake gently, never abruptly.
- Only use the telescopic handler's forward/reverse lever from a stationary position and never do so abruptly.
- Do not drive with your foot on the brake pedal or with the parking brake on.
- Always remember that hydrostatic steering is very sensitive to movement of the steering wheel, so turn it gently and smoothly.
- Never leave the engine running when the telescopic handler is unattended.
- Do not leave the cab when the telescopic handler has a raised load.
- Look where you are going and always make sure you have good visibility along the route.
- Use the rear-view mirrors frequently.
- Drive around, not over, obstacles.
- Never drive along the edge of a ditch or a steep slope.
- It is hazardous to use two telescopic handlers simultaneously to handle heavy or large loads, because this operation requires particular precautions to be taken. It must only be used when no other option is available and after risk analysis.
- Engage the gear required (see chapter: 5 - INSTRUMENTS AND CONTROLS: 16 - SHIFT LEVER AND TRANSMISSION CUT-OFF).
- Select the steering mode appropriate for its use and working conditions.
- Shift the forward/reverse lever to the selected direction of travel.
- Release the parking brake and accelerate gradually.

G - STOPPING THE TELESCOPIC HANDLER

- Never leave the ignition key in the telescopic handler during the operator's absence.
- When the telescopic handler is stationary, or if the operator has to leave the cab (even for a moment), place the forks or attachment on the ground, apply the parking brake and put the forward/reverse lever in neutral.

- Make sure that the telescopic handler is stopped where it will not interfere with the traffic flow and is at least 3 feet (1 meter) away from any railway tracks.
- Park the telescopic handler on flat ground or on an incline less than 15 %.
- Place the forward/reverse lever in neutral.
- Apply the parking brake.
- Entirely retract the boom.
- Lower the forks or attachment to rest on the ground.
- When using an attachment with a grab or jaws, or a bucket with hydraulic opening, close the attachment fully.
- Before stopping the telescopic handler after a long working period, let the engine idle for a few minutes, to allow the coolant and oil to lower the temperature of the engine and transmission. Do not neglect this precaution in the event of frequent stops or stalling of the engine, or else the temperature of certain parts will rise significantly due to the stopping of the cooling system, with the risk of badly damaging such parts.
- Stop the engine with the ignition switch.
- Remove the ignition key.
- Make sure all means of access to the telescopic handler are closed and locked (doors, windows, engine cover…).
- In the event of prolonged parking on a site, protect the telescopic handler from bad weather, particularly from freezing (check the level of antifreeze).

H - DRIVING THE TELESCOPIC HANDLER ON A PUBLIC HIGHWAY

- Operators driving on a public highway must comply with highway regulations.
- The telescopic handler must also comply with highway regulations. If necessary, contact your dealer.
- If equipped, make sure the rotating beacon is in place. Switch it on and verify its operation.
- Check for good working order and cleanliness of lights, indicators and windshield wipers.
- Switch off the working lights if the telescopic handler is so equipped.
- Select the steering mode for "HIGHWAY TRAFFIC" (see chapter: 5 - INSTRUMENTS AND CONTROLS: 19 - STEERING MODE SELECTION).
- Entirely retract the boom and position the attachment approximately 1 foot (300 mm) from the ground.
- On the road, start off in 3rd gear and shift into 4th when the conditions allow. In hilly areas, start off in 2nd gear and shift into 3rd when the conditions allow.

WARNING

Never coast in neutral (forward/reverse lever in neutral or transmission cut-off button pressed) to avoid the effects of engine braking. Failure to follow this warning on a slope will lead to excessive speed, which may make the telescopic handler uncontrollable (steering, brakes) and may cause an accident or severe mechanical damage.

I - DRIVING THE TELESCOPIC HANDLER WITH A FRONT-MOUNTED ATTACHMENT

- You must comply with regulations in your state/province.
  - The attachment must not be loaded.
  - Make sure that the attachment does not block the forward lights.

J - OPERATING THE TELESCOPIC HANDLER WITH A TRAILER

- For using a trailer, observe the regulations in force in your state/province (maximum travel speed, braking, maximum weight of trailer, etc.).
- Do not forget to connect the trailer's electrical equipment to that of the telescopic handler if equipped.
- The trailer's braking system must comply with regulations.
- When pulling a trailer with brakes, the telescopic handler must be equipped with a trailer brake control. In this case, remember to connect the trailer brake equipment to the telescopic handler.
- The maximum vertical load on the trailer hook must not exceed 3372 lbs. (1530 kg).

- The authorized maximum trailer weight must not exceed the maximum weight authorized by the manufacturer (consult the manufacturer's plate on the telescopic handler).
- When driving with a trailer, start off in 2nd gear and shift into 3rd when the conditions and condition of the road allow. Do not use 4th gear, to avoid overheating the engine and transmission. IF NECESSARY, CONSULT YOUR DEALER.

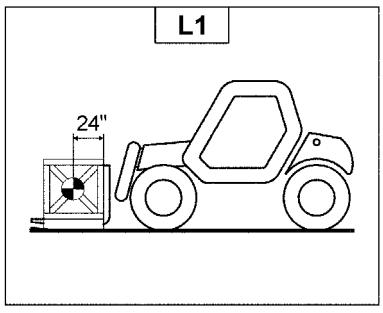
INSTRUCTIONS FOR HANDLING A LOAD

K - CHOICE OF ATTACHMENTS

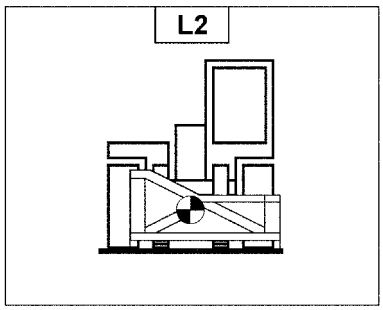
- Only attachments approved by GEHL can be used on GEHL telescopic handlers.
- Make sure the attachment is appropriate for the work to be done (see chapter: 7 - ATTACHMENTS).
- Make sure the attachment is correctly installed and locked onto the carriage.
- Make sure that the attachments work properly.
- Comply with the load chart limits for the attachment used.
- Do not exceed the rated capacity of the attachment.
- Never lift a load in a sling without the proper attachment for the purpose.

L - MASS AND CENTER-OF-GRAVITY OF LOAD

- Before picking up a load, you must know its weight and its center-of-gravity.
- The load chart for your telescopic handler is valid for a load in which the longitudinal position of the load center is 24" (610 mm) forward of the base of the forks (fig. L1). For different load centers, contact your dealer.



- For irregular loads, determine the side to side center-of-gravity before any movement (fig. L2) and set it on the longitudinal axis of the telescopic handler.



WARNING

DO NOT move a load heavier than the telescopic handler's rated capacity as listed on the load charts.

WARNING

For loads with a moving center-of-gravity (e.g., liquids), take into account the movement of the center-of-gravity to determine the load that can be safely handled. Be vigilant and take extra care to limit these movements as much as possible.

M - TRANSVERSE ATTITUDE OF THE TELESCOPIC HANDLER

The transverse (side-to-side) attitude is the angle of the chassis with respect to horizontal.

Raising the boom reduces the telescopic handler's lateral stability.

- Position the telescopic handler so that the bubble in the inclinometer is between the two lines (see chapter: 5 - INSTRUMENTS AND CONTROLS: 35 - INCLINOMETER).

Grade and Slope Precautions

The Telescopic Handler complies with industry stability test requirements and is stable when properly operated. However, improper operation, faulty maintenance, and poor housekeeping can contribute to a condition of instability and defeat the purpose of the standard.

The amount of forward and rearward tilt to be used is governed by the application. Although use of maximum rearward tilt is allowable under certain conditions, such as traveling with the load fully lowered, the stability limits of the machine, as determined by the industry standard tests, do not encompass consideration for excessive tilt at high elevations, or the handling of off-center loads.

Only handle loads within the capacity limits of the machine, and which are stable and safely arranged. When attachments are used, extra care should be taken in securing, manipulating, positioning and transporting the load.

Grade Limits

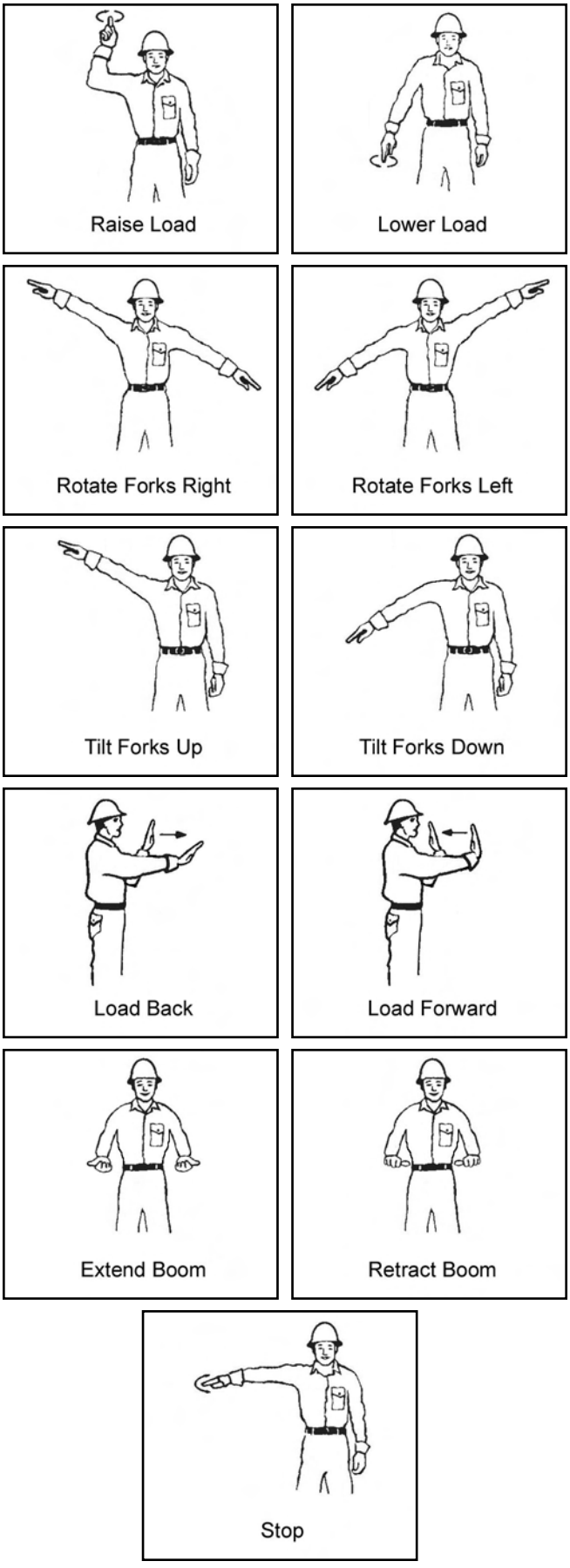
NOTE: *Grade limits are based on ANSI/ITSDF standard B56.6-2005.*

This Telescopic Handler meets or exceeds the safety standard (ANSI/ITSDF B56.6) stability limits for rough terrain forklifts. The stability tipping limits cover specific, controlled test conditions, which are extremes, and which are not intended to be achieved during normal worksite operations. The following specifications are provided only as information to the operator, and must not be used as a guideline for operating the Telescopic Handler. For safe operation, always follow the instructions and warnings provided in this manual.

1. DO NOT place or retrieve loads on an up or down slope or grade that exceeds 7% or 4°.
2. DO NOT travel up or down a grade or slope that exceeds 22% or 12° while loaded.
3. DO NOT place or retrieve loads on a side hill with a slope or grade that exceeds 12% or 7°. Check the location of the ball in the frame angle indicator located on the ROPS/FOPS cross member. If the ball in the frame angle indicator is in the green zone, it is safe to place or retrieve the load. If the ball in the frame angle indicator is in the yellow zone, use slower movements and extra caution to ensure remaining within the limits of the load chart, because the machine is nearing an unstable condition. If the ball in the frame angle indicator is in the red zone, loads cannot be placed or retrieved.
4. DO NOT travel across a side hill that exceeds 18% or 10° grade. Check the frame angle indicator on the ROPS/FOPS cross member to determine the angle of the grade. The attachment tool MUST be maintained at the “carry” position, with the boom fully retracted and attachment tool at minimum ground clearance.

When ascending or descending grades in excess of 5% or 3°, the machine should be driven with the load upgrade. An unloaded machine should be operated on all grades with the load handling attachment tool downgrade, tilted back if applicable, and raised only as far as necessary to clear the ground surface.

Avoid turning if possible and use extreme caution on grades, ramps and inclines. Normally travel straight up and down the slope.



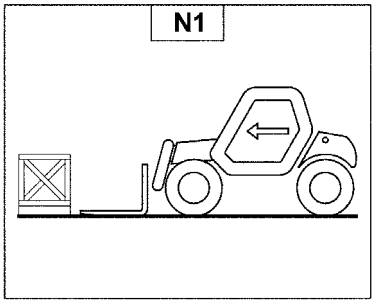
Safety Hand Signals

Traffic Flow Patterns

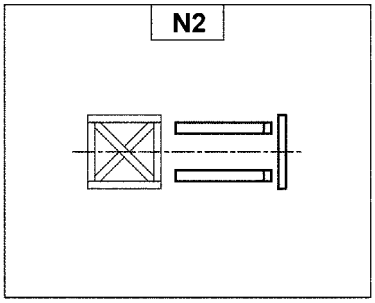
Know and understand the traffic flow patterns of your jobsite. Know all Telescopic Handler hand signals for safety. Use signal persons as necessary for safe operation, and be sure you can see the signal person and acknowledge the signals given.

N - PICKING UP A LOAD ON THE GROUND

- Approach the load with the telescopic handler perpendicular to the load, with the boom retracted and the forks in a horizontal position (fig. N1).



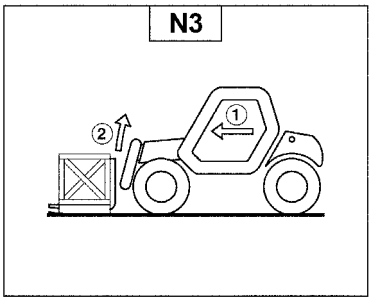
- Adjust the fork spread and centering to best connect with the load (fig. N2).



WARNING

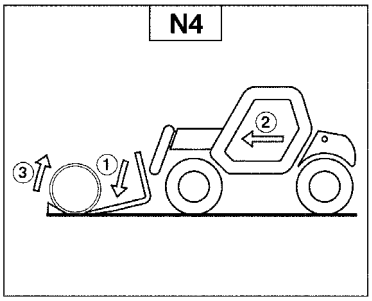
Beware of the risks of trapping or pinching limbs when manually adjusting the forks.

- Never lift a load on a single fork.
- Move the telescopic handler forward slowly (1) and bring the forks to stop in front of the load (fig. N3). If necessary, slightly lift the boom (2) while picking up the load.
- Bring the load into the transport position.
- Tilt the load back far enough to ensure stability (loss of load while braking or going downhill).



FOR A NON-PALLETIZED LOAD:

- Tilt the carriage (1) forward and move the telescopic handler slowly forward (2), to insert the forks under the load (fig. N4) (block the load if necessary).
- Continue to move the telescopic handler forward (2) tilting the carriage (3) (fig. N4) rearward to position the load on the forks and check the load's longitudinal and lateral stability.

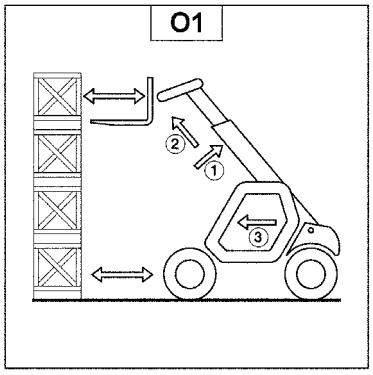


O - PICKING UP A HIGH LOAD

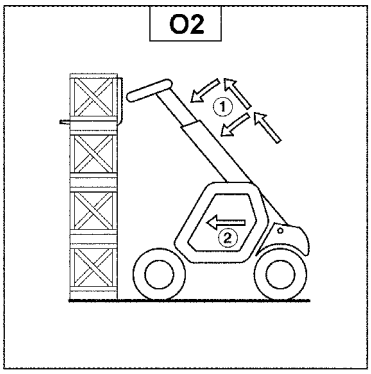
WARNING

DO NOT raise the boom until you have verified the side-to-side attitude of the telescopic handler.
Make sure that the following operations can be performed with good visibility.

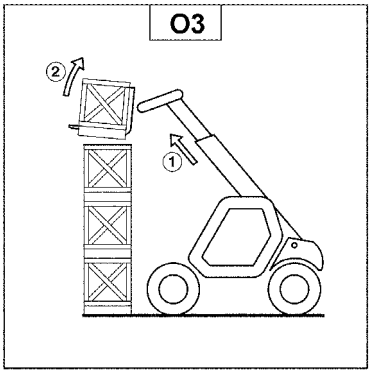
- Ensure that the forks will easily pass under the load.
- Lift and extend the boom (1) (2) until the forks are level with the load, moving the telescopic handler (3) forward if necessary (fig. O1), moving very slowly and carefully.
- Always think about keeping the distance necessary to fit the forks under the load between the pile and the telescopic handler (fig. O1) and use the shortest possible extension of the boom.



- Stop the forks in front of the load by alternately raising and extending the boom (1) or, if necessary, moving the telescopic handler forward (2) (fig. O2). Apply the parking brake and shift the transmission into neutral.

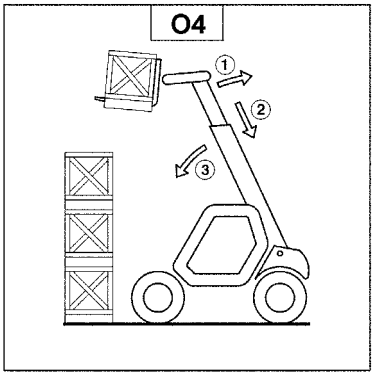


- Slightly lift the load (1) and tilt the carriage (2) rearward to stabilize the load (fig. O3).

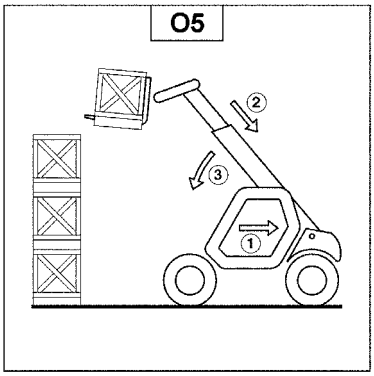


- Tilt the load sufficiently rearward to ensure its stability.

➲ If possible lower the load without moving the telescopic handler. Lift the boom (1) to release the load, retract (2) and lower the boom (3) to bring the load into the transport position (fig. O4).

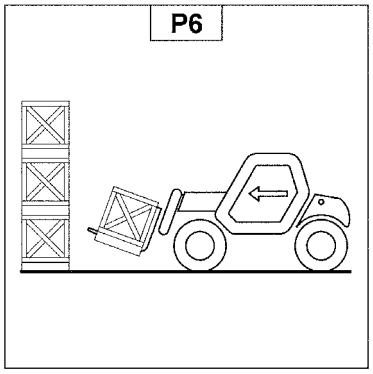


➲ If this is not possible, back up the telescopic handler (1), maneuvering very gently and carefully to release the load. Retract (2) and lower the boom (3) to bring the load into the transport position (fig. O5).



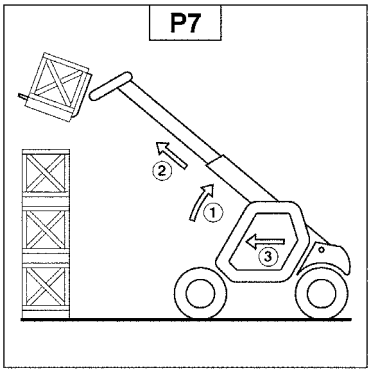
P - SETTING DOWN A HIGH LOAD

➲ Approach with the load in the transport position in front of the stack (fig. P6).

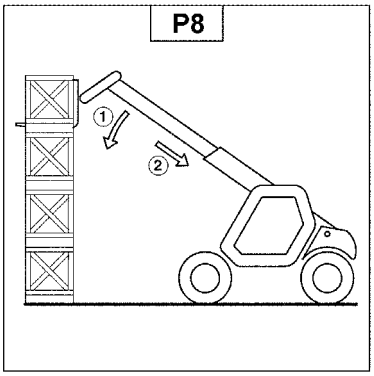


➲ Apply the parking brake and set the forward/reverse lever in neutral.

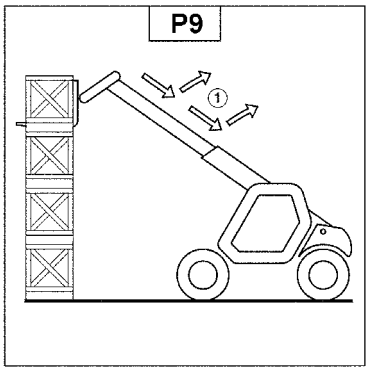
➲ Lift and extend the boom (1) (2) until the load is above the stack. If necessary, move the telescopic handler (3) forward (fig. P7), driving very slowly and carefully.



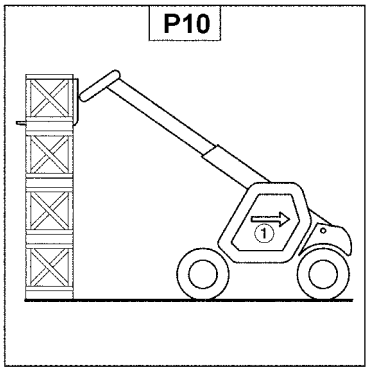
➲ Place the load in a horizontal position and set it down on the stack by lowering and retracting the boom (1) (2) to position the load correctly (fig. P8).



➲ If possible, release the fork by alternately retracting and raising the boom (1) (fig. P9). Then return the forks to transport position.



➲ If this is not possible, reverse the telescopic handler (1) very slowly and carefully to release the forks (fig. P10). Then return the forks to transport position.



Q - SUSPENDED LOADS

The handling of suspended loads by means of the truss boom or other similar device can introduce dynamic forces affecting the stability of the machine that are not considered in the stability criteria of industry test standards. Grades, sudden starts, stops and turns can cause the load to swing and create a hazard.

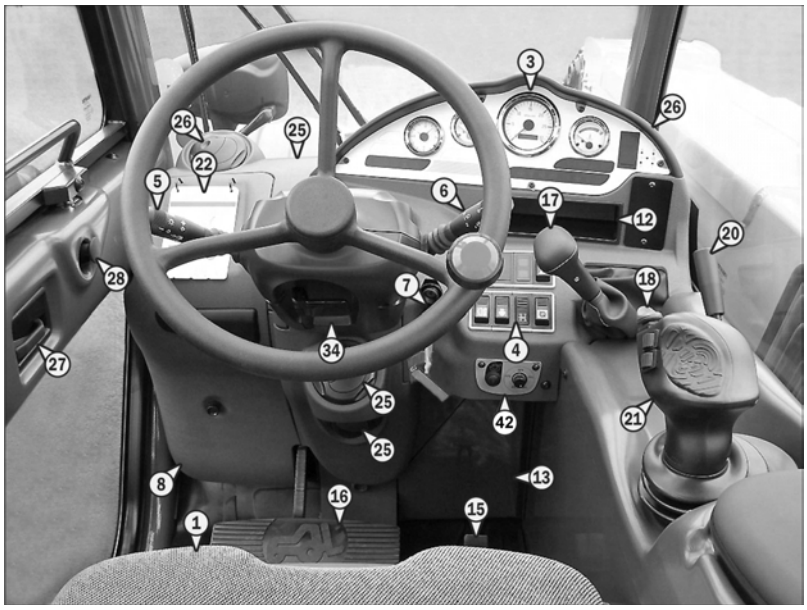
DO NOT exceed the Telescopic Handler capacity for handling suspended loads. Only lift the load vertically; NEVER drag it horizontally. Use tag lines to restrain load swing whenever possible.

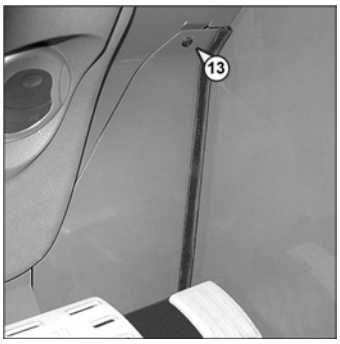
GUIDELINES FOR "FREE RIGGING/ SUSPENDED LOADS"

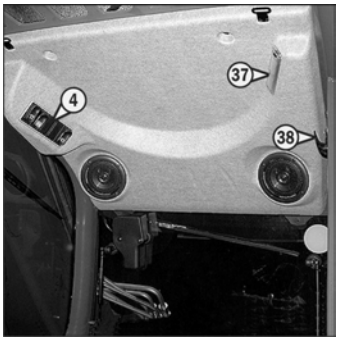
1. The rigging equipment must be in good condition and comply with the applicable U.S. OSHA regulation, 1910.184, "Slings," or 1926.251, "Rigging equipment for material handling."
2. The rigging equipment must be secured to the forks such that it cannot slip or slide either sideways or fore and aft.
3. The capacity of the fork(s) and the machine (whichever is less) must not be exceeded.
4. The load center must remain at 24" (610 mm) or less.
5. No lifting of material may be done when anyone is on the load, rigging or forks.
6. Multiple pickup points on the load are preferred to prevent the load from rotating, but a single pickup point may be used if one or more tag lines are utilized. And, of course, the load must never be positioned over personnel at any time.

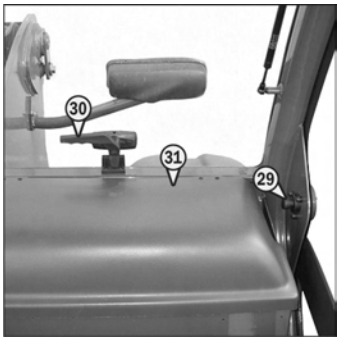
Chapter 5

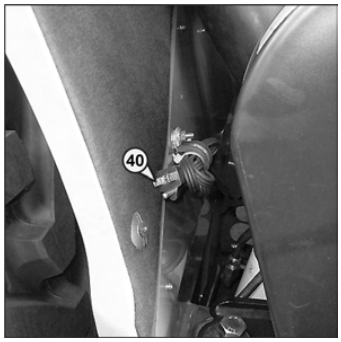
INSTRUMENTS AND CONTROLS

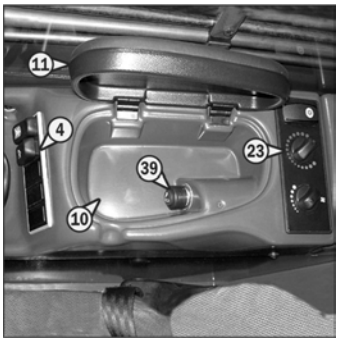


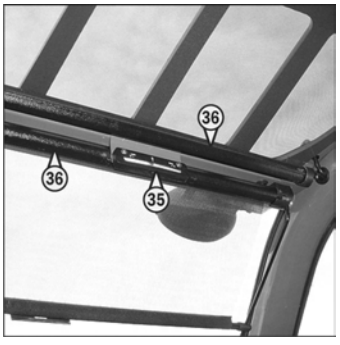












DESCRIPTION

1 - Operator's Seat
2 - Seat Belt
3 - Control and Signal Lamp Panel
4 - Switch Panels
5 - Light Switch, Horn and Turn Indicator Switch
6 - Front and Rear Windshield Wiper Switch
7 - Ignition Switch
8 - Brake Fluid Reservoir and Windshield Washer Reservior Access Panel
9 - Brake Fluid Reservoir
10 - Windshield Washer Reservoir
11 - Armrest and Storage
12 - Storage Tray (Optional Radio)
13 - Fuse and Relay in the Cab
14 - Fuses and Relays under the Engine Cover
15 - Accelerator Pedal
16 - Service Brake and Transmission Cutoff Pedal
17 - Shift Lever and Transmission Cutoff
18 - Forward / Neutral / Reverse Switch
19 - Parking Brake Lever
20 - Steering Mode Selector Lever
21 - Hydraulic Controls and Transmission Cutoff*
22 - Function Controls / Load Charts
23 - Air Conditioner / Heater Controls
24 - Cab Air Filter
25 - Windshield Defroster Vents
26 - Heating Vents
27 - Door Lock
28 - Lock Handle for Upper Half Door
29 - Release Button for Upper Half Door
30 - Handle for Rear Window Opening
31 - Manual Holder
32 - Front Lights
33 - Rear Lights
34 - Steering Wheel Position Adjustment Handle
35 - Inclinometer
36 - Sun Visor (Roof and Windshield)
37 - Cab Interior Light
38 - Clothes Hook
39 - Cigar Lighter and 12-VDC Accessory Outlet
40 - Engine Block Heater
41 - Hydraulic Attachment Locking
42 - Attachment Hydraulic Control for Continous Operation and Flow Control

TOW PIN (Not shown on page 32. See page 48).

A - Tow Pin
B - Trailer Electric Connector

OPTIONS (Not shown on page 32. See page 49).

1 - Boom Ride Control
2 - Reversible Fan
3 - Second Auxiliary Hydraulic Circuit with Hydraulic Attachment Locking
4 - Boom Mounted Work Lights
5 - Windshield Protection Grill
6 - AM/FM Radio
7 -Rear Window De-icing

*** NOTE:** *If the hydraulic functions do not operate, turn the steering wheel to recharge the hydraulic control accumulator and hydraulic functions should be restored.*

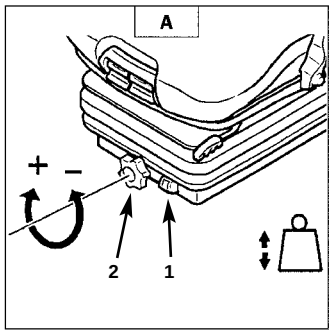
NOTE: *All terms such as: RIGHT, LEFT, FRONT, REAR are meant for an observer seated in the operator's seat and looking forward.*

1 - OPERATOR'S SEAT

Designed for maximum comfort, this seat can be adjusted as follows:

WEIGHT ADJUSTMENT (FIG. A)

It is recommended that the weight be adjusted when the operator is not sitting in the seat.

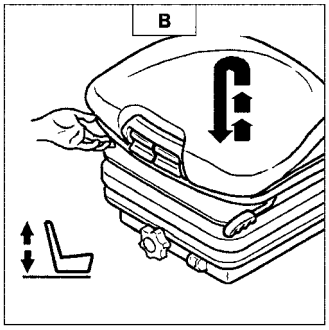


- Refer to graduation (1) of the seat.
- Turn handle (2) depending on the operator's weight.

NOTE: *It is recommended that the weight should be checked and adjusted before starting the telescopic handler.*

HEIGHT ADJUSTMENT (FIG. B)

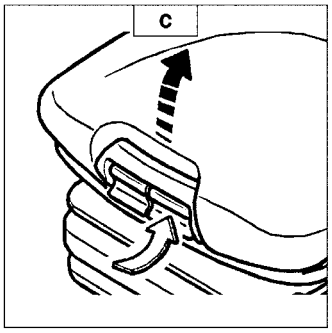
Raise the seat to the desired position, until the ratchet clicks. If the seat is raised above the last notch (stop), the seat drops down to the lowest position.



SEAT CUSHION ANGLE ADJUSTMENT (FIG. C)

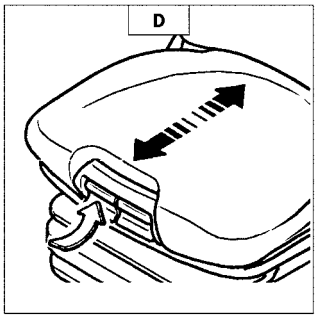
The angle of the seat cushion may be adjusted to suit the individual.

- Press the left-hand button while pushing on the seat or relaxing pressure on the seat to find a comfortable position.



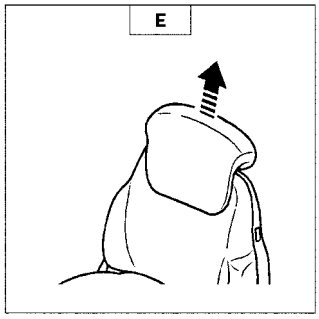
FORE AND AFT ADJUSTMENT (FIG. D)

The depth of the seat may be adjusted to suit the individual.



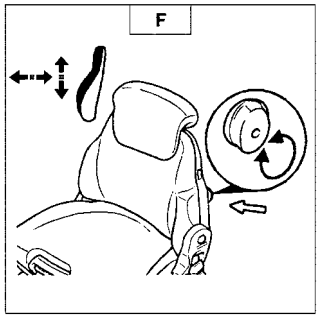
- Press the right-hand button while moving the seat to find the desired position.

EXTENDING THE HEADREST (FIG. E)



- The height of the headrest can be adjusted by pulling it upwards (the notches will click) up to the stop.
- The headrest can be removed by applying sufficient force to pull it off the stop.

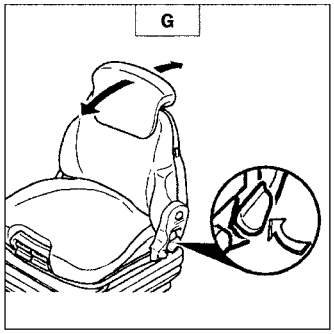
LUMBAR ADJUSTMENT (FIG. F)



This increases the comfort of the seat and the operator's freedom of movement.

- Turn the handle either left or right to adjust the height or depth of the lumbar support.

ANGLE ADJUSTMENT OF THE BACKREST (FIG. G)

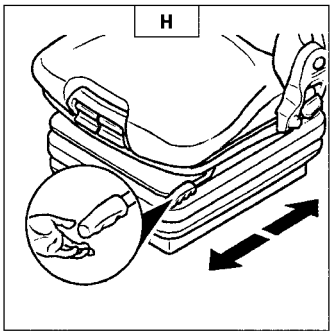


- Support the backrest, pull the lever and position the backrest to find the desired position.

WARNING

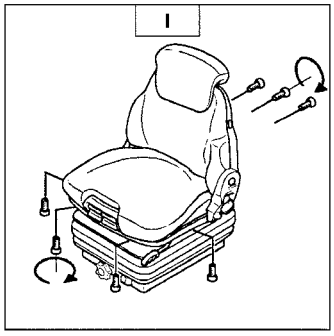
Support the backrest when making adjustments to prevent it from swinging completely forward.

LONGITUDINAL ADJUSTMENT (FIG. H)



- Adjust the locking lever until you reach the position required. This then locks and the seat will not shift into another position.

MAINTENANCE (FIG. I)



Dirt may adversely affect the correct functioning of the seat. For this reason, make sure the seat is always clean.

- To clean or change the cushions, simply remove them from the seat frame.

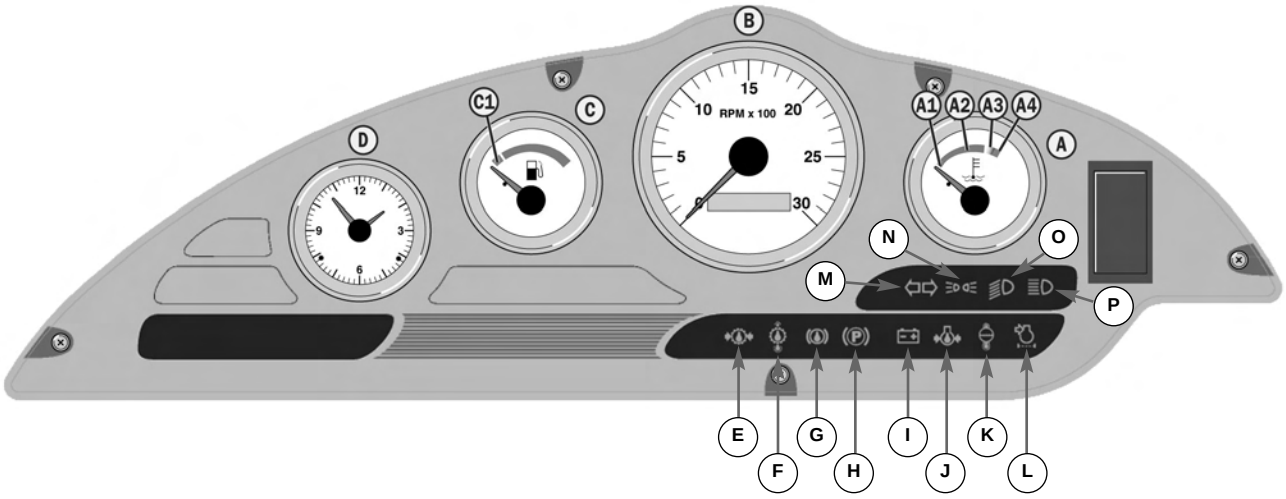
Avoid getting the cushion fabric wet when cleaning. Check the color-fastness of the fabric on a small hidden area before using any fabric or vinyl cleaner.

2 - SEAT BELT

WARNING

Do not use the telescopic handler if the seat belt is damaged (not latching, cuts, tears, etc.). Repair or replace the seat belt immediately.

- Sit properly on the seat.
- Check that seat belt is not twisted.
- Place the seat belt at hip level.
- Attach the seat belt and check that it latches.
- Adjust the seat belt to your body shape, without squeezing your hips and without excess slack.



3 - CONTROL AND SIGNAL LAMP PANEL

INSTRUMENTS

A - ENGINE COOLANT TEMPERATURE

Temperature zones:

A1 - Blue zone: 32° - 122°F (0° - 50°C) Use the telescopic handler under a light load until the temperature reaches the green zone.

A2 - Green zone: 122° - 212°F (50° - 100°C) Use the telescopic handler normally.

A3 - White/red zone: 212° - 221°F (100° - 105°C) Use the telescopic handler moderately and monitor the temperature.

A4 - Red zone: 221° - 248°F (105° - 120°C) Stop the telescopic handler, look for the cause of the engine overheating.

NOTE: *Red indicator lamp "K" comes on between zone A3 and A4.*

B - HOURMETER AND TACHOMETER

C - FUEL LEVEL

Red zone (C1) indicates that the reserve fuel supply is being used and that engine run time is limited.

D - CLOCK

Indicates the time of the day. Time is adjusted by pressing and holding one of the two small buttons located in the face of the clock. The right button adjusts the time forward and the left button adjusts the time backwards.

SIGNAL LAMPS

When activating the electrical system of the telescopic handler, all the red and orange lamps must light and the panel's buzzer must sound to indicate their good working order. If one of the red lamps or the buzzer does not function, carry out the necessary repairs.

WARNING

A permanently lit or flashing warning lamp, with the engine running, indicates an operating fault. The lighting of some lamps may be accompanied by an audible signal. Do not ignore this warning, contact your dealer without delay.

If one of the warning lamps comes on while the telescopic handler is in motion, stop the telescopic handler under the safest possible conditions.

Contact your Gehl Telescopic Handler dealer to diagnose the cause of the malfunction.

E - RED TRANSMISSION OIL PRESSURE LAMP

The lamp and the buzzer come on when the pressure in the transmission, when driving forward, is abnormally low. Stop the telescopic handler and look for the cause (insufficient transmission oil level, internal leak in the transmission, etc.).

NOTE: *The signal lamp operates in forward travel conditions only. The signal should not be taken into account when the engine is running at idle or is stopped.*

F - RED TRANSMISSION OIL TEMPERATURE LAMP

The lamp and the buzzer come on when the torque converter oil temperature is abnormally high. Stop the telescopic handler and look for the cause of this overheating.

G - RED BRAKE FLUID LEVEL LAMP

If the lamp and the buzzer come on when the telescopic handler is running, stop the engine immediately and check the brake fluid level. In the event of an abnormal dropping of the fluid level, consult your dealer.

H - RED PARKING BRAKE LAMP

This lamp comes on when the parking brake is applied.

I - RED ALTERNATOR CHARGE LAMP

If the lamp and the buzzer come on when the telescopic handler is running, stop the engine immediately and check the electrical circuit and the alternator belt.

J - RED ENGINE OIL PRESSURE LAMP

If the lamp and the buzzer come on when the telescopic handler is running, stop the engine immediately and look for the cause (check oil level in engine crankcase).

K - RED ENGINE COOLANT TEMPERATURE LAMP

If the lamp and the buzzer come on when the telescopic handler is running, stop the engine immediately and investigate the cooling system for the cause of the malfunction.

L - RED LAMP - AIR FILTER OR HYDRAULIC RETURN FILTER CLOGGED

The lamp and buzzer come on when the air filter cartridge or the hydraulic return oil filter cartridge is clogged. Stop the telescopic handler and carry out the necessary repairs (see cleaning and replacement requirements in chapter 6 - MAINTENANCE: FILTER CARTRIDGES AND BELTS).

M - GREEN TURN INDICATOR LAMP

This lamp will be lighted when the turn indicators are on.

N - GREEN SIDELIGHTS LAMP

This lamp will be lighted when the sidelights are on.

O - GREEN LOW BEAM LAMP

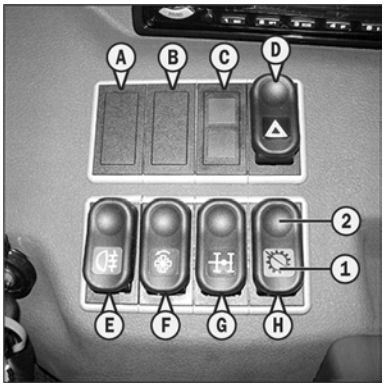
This lamp will be lighted when the low beam lights are on.

P - BLUE MAIN BEAM LAMP

This lamp will be lighted when the main beam lights are on.

4 - SWITCH PANELS

NOTE: *The location of the switches may vary depending on the options.*



A - OPTION

B - OPTION

C - WHEEL ALIGNMENT LAMPS

These lamps will light when the front and rear wheels are in the straight-ahead position.

D - WARNING LIGHTS

This switch enables the left and right turn indicators to be switched on simultaneously, with the ignition off, for use as a hazard indicator. The signal lamp indicates that the switch is being used.

E - REAR FOG LIGHT

This switch lights the fog lights on the rear of the machine. The head lights must be on before this switch can be activated. Pressing the bottom of the switch turns “ON” the rear fog lights.

F - REVERSIBLE FAN (OPTION)

This switch activates the reversible fan to clean the radiator core and engine cover grill. The lamp in the switch will be on when the switch is activated.

G - STEERING SELECTION

H - TRANSMISSION CUT-OFF

The switch selects transmission cut-off feature to either the service brake pedal or the joystick control lever.

Position 1: Indicator lamp on, transmission cut-off to service brake pedal enabled.

Position 2: Indicator lamp off, transmission is cut-off from forward/neutral/reverse gear selector.

USE OF TRANSMISSION CUT-OFF

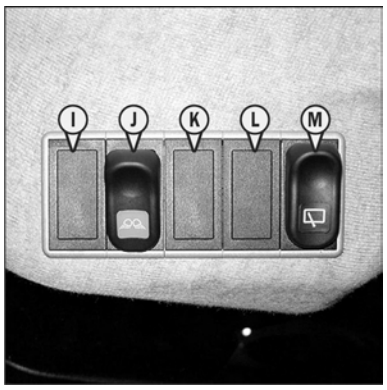
Transmission cut-off to brake pedal (position 1):

- When loading.

Transmission cut-off to hydraulic control lever (position 2):

- When driving;
- For inching and continuous stopping and starting (delicate handling). In order to optimize hydraulic movements, cut off transmission to the hydraulic controls lever;
- Starting on a slope.

NOTE: *In all cases, transmission cut-off can be effected by using the shift lever.*



I - OPTION

J - FRONT AND REAR WORK LIGHTS

Pressing the top of this switch turns “ON” the front and rear work lights. Pressing the bottom of this switch turns “ON” the front work lights. The center position of the switch turns the front and rear work lights “OFF”. The signal lamp in the switch will be “ON” when the switch is activated.

K - BOOM-MOUNTED WORK LIGHTS, OPTION

This switch lights the work lights mounted at the end of the boom. Pressing the bottom of the switch turns “ON” the boom work lights.

L - REAR WINDOW DEFROSTING, OPTION

This switch activates the heating element in the rear window.

M - SIDE WINDOW WIPER AND ROOF WINDOW WIPER

Pressing the top of the switch activates the roof window wiper. Pressing and holding the bottom of the switch activates the side window wiper.

N - OPTION

O - OPTION

P - ATTACHMENT HYDRAULIC LOCKING DEVICE

See chapter: 7 - ATTACHMENTS: INSTALLING ATTACHMENTS.

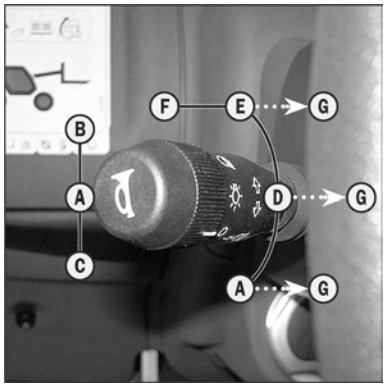
Q - BOOM RIDE CONTROL (OPTION)

This switch activates the boom ride control to reduce abrupt movement of the telescopic handler on rough ground. The lamp in the switch will be on when the switch is activated.

R - JOYSTICK LOCKOUT

When activated, this switch disables the joystick hydraulic functions. The lamp in the switch will be on when the switch is activated. This switch should be activated for road travel.

5 - LIGHT SWITCH, HORN AND TURN INDICATOR SWITCH



The switch controls the visual and audible alarms.

A - All lights are off; the direction indicators do not flash.

B - The right turn indicators flash.

C - The left turn indicators flash.

D - The sidelights and the rear lights are on.

E - The low-beam headlights and the rear lights are on.

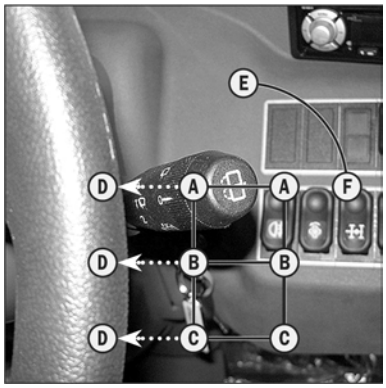
F - The high-beam headlights and the rear lights are on.

G - Flashes high-beam headlights when held in this position.

Pressing the end of the switch sounds the horn.

NOTE: *The positions D - E - F - G can be used without the ignition being on.*

6 - FRONT AND REAR WINDSHIELD WIPER SWITCH



The switch controls the operation of the front and rear-windshield wipers.

A - Front windshield wiper off

B - Front windshield wiper low speed setting

C - Front windshield wiper high speed setting

D - Front windshield washer

E - Rear windshield wiper off

F - Rear windshield wiper on

NOTE: *These functions will only operate when the ignition switch is on.*

7 - IGNITION SWITCH

The key switch has five positions:

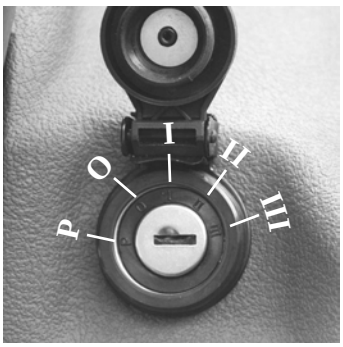
P - Ignition off, parking position

O - Ignition switched off and engine stopped

I - Ignition on

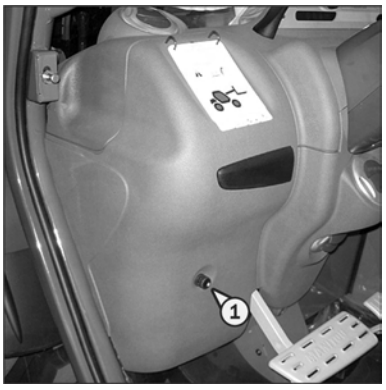
II - Pre-heating

III - Start



When the engine starts, the key returns to position I as soon as it is released.

8 - BRAKE FLUID RESERVOIR AND WINDSHIELD WASHER RESERVOIR ACCESS PANEL



- Loosen screw (1) and lift up the brake fluid and windshield washer access panel.

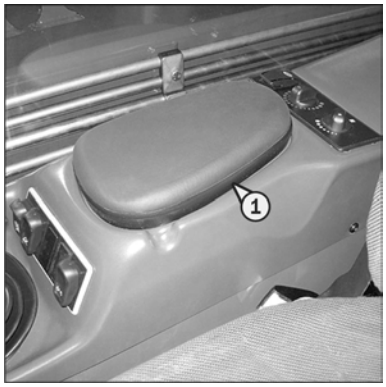
9 - BRAKE FLUID RESERVOIR

See chapter: 6 - MAINTENANCE: B - EVERY 50 HOURS SERVICE.

10 - WINDSHIELD WASHER RESERVOIR

See chapter: 6 - MAINTENANCE: B - EVERY 50 HOURS SERVICE.

11 - ARMREST AND STORAGE



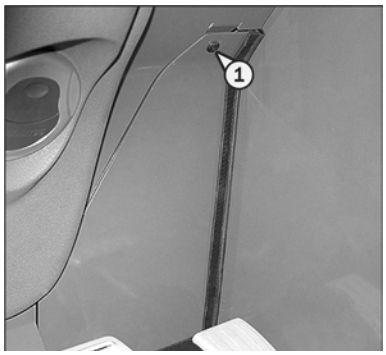
- Lift the armrest (1) to access the storage area.

12 - STORAGE TRAY - RADIO (OPTION)

Radio option shown in place of the storage tray. Review the radio manual provided with your machine for radio operation controls.

13 - FUSES AND RELAYS IN THE CAB

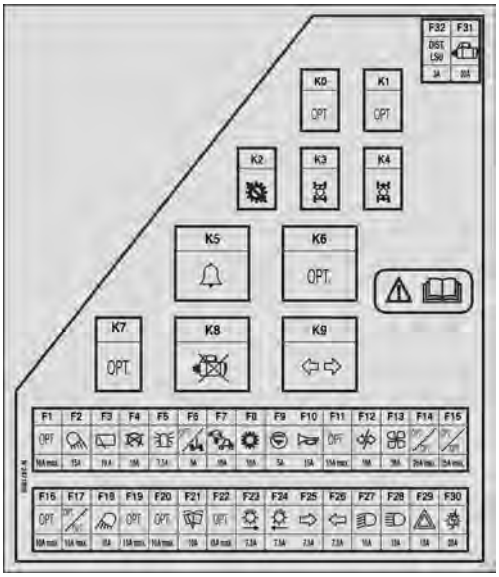
- Lift up the fuse and relay access panel (1).



A sticker on the inside of the access panel gives a clear display of the use of the components described below.

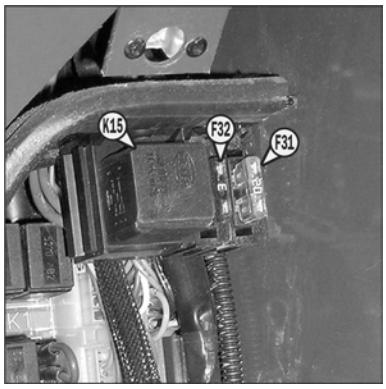
IMPORTANT: *Replace a failed fuse with a new fuse of the same quality and capacity. Never use a repaired fuse.*

F1 - Attachment hydraulic locking device (7.5A)
F2 - Working tail light (10A)
F3 - Rear windscreen wiper (7.5A)
- Side windscreen wiper + Roof windscreen wiper (10A)



F4 - Engine shut-off solenoid (7.5A)
F5 - OPTION
F6 - Wheel alignment (5A)
F7 - OPTION
F8 - Forward/neutral/reverse selector (15A)
- Transmission cut-off (15A)
- Reverse lights (15A)
- Backup alarm (15A)
F9 - Control panel (5A)
F10 - Backup alarm (15A)
- Stop switch (15A)
F11 - Boom work lights (10A)
F12 - Indicator power supply (10A)
F13 - Heating (30A)
F14 - Cigar lighter (10A)
F15 - OPTION
F16 - Air conditioner (7.5A)
F17 - Attachment hydraulic locking device
- Reversible fan (10A)
- Electric valve on boom and reversible fan (15A)
F18 - Front working light (15A)
F19 - OPTION Rear window defrosting (15A)
F20 - OPTION
F21 - Front windshield wiper and windshield washer (10A)
F22 - Optional boom ride control (10A)
F23 - Right sidelight (7.5A)
- Sidelight indicator lamp (7.5A)
- Control panel lighting (7.5A)
F24 - Left sidelights (7.5A)

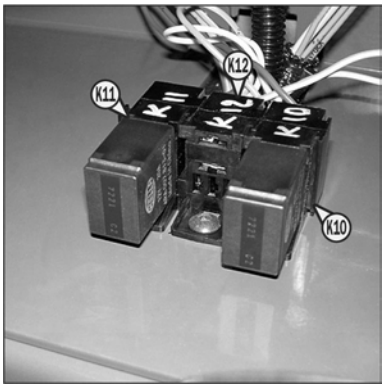
F25 - Right turn indicators (7.5A)
F26 - Left turn indicators (7.5A)
F27 - Low beam (15A)
- Low beam indicator lamp (15A)
- Rear fog light (15A)
F28 - High beam (15A)
- High beam indicator lamp (15A)
F29 - Hazard warning lights (15A)
- Roof light (15A)
F30 - Lights, horn and indicator switch (25A)
F31 - Starter (20A)
F32 - Electroproportional hydraulic control modules (3A)
- OPTION Boom suspension (5A)
- OPTION Attachment hydraulic control forced operation (5A)



K0 - Air conditioning
K1 - Relay transmission cut-off to hydraulic controls
K2 - Transmission cut-off relay
K3 - Reverse gear relay
K4 - Forward gear relay
K5 - Buzzer
K6 - Electric valve on boom.
- Electric valve on boom head + attachment hydraulic locking device
K7 - OPTION
K8 - Safety system starting switch relay
K9 - Flashing unit
K15 - Relay cutting power supply to proportional hydraulic controls

- Remove the covers 2 and 3 for the hydraulic control for access to relays.

K10 - Optional boom ride control
K11 - Boom ride control.
K12 - OPTION



14 - FUSES AND RELAYS UNDER THE ENGINE COVER

Remove casing 1 and cover 2 for access to fuses and relays.

IMPORTANT: *Replace a failed fuse with a new fuse of the same quality and capacity. Never use a repaired fuse.*

F40 - Telescopic handler electrical equipment (40A)

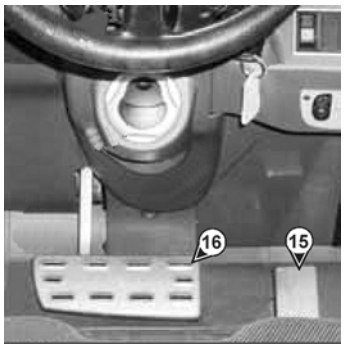
F41 - Telescopic handler electrical equipment (40A)

F42 - Preheating engine (80A)

F43 - Alternator (80A)

K16 - Engine preheating relay

15 - ACCELERATOR PEDAL



16 - SERVICE BRAKE AND TRANSMISSION CUTOFF PEDAL

Pressing the brake pedal hydraulically activates the internal braking mechanism in the front and rear axles. Depending on the position of the transmission cut-off switch, power to the transmission is cut off. This allows greater engine acceleration and power to the hydraulic system without power to the drive axles while the service brake pedal is depressed. (see: chapter 5 - INSTRUMENTS AND CONTROLS: 5 - SWITCH PANEL).

17 - SHIFT LEVER AND TRANSMISSION CUTOFF

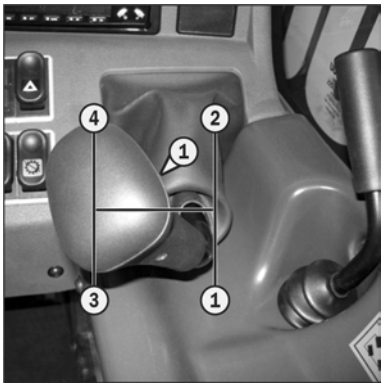
To shift gears, it is necessary to cut off the transmission by pressing the button (1) on the shift lever.

1st gear: To the right, rearward

2nd gear: To the right, forward

3rd gear: To the left, rearward

4th gear: To the left, forward



SHIFTING THE TRANSMISSION

Because this telescopic handler has a torque converter, it is not necessary to always start up in 1st gear and progress up through the gears.

IMPORTANT: *The choice of transmission gear should be made carefully according to the nature of the work being carried out. A poor choice may result in an extremely rapid elevation of the transmission oil temperature through excessive slipping of the converter, which could lead to serious damage to the transmission. (It is essential to stop and change the working conditions if the transmission oil temperature indicator light comes on.) This poor choice may also result in a reduction in the telescopic handler's performance in forward speed. When the forward force increases, the forward speed in the chosen gear (for example, 3rd gear) may be lower than the forward speed that could be obtained with a lower gear (in 2nd instead of the 3rd).*

In general, use the following gears according to the nature of the work being carried out:

- On the road: Start off in 3rd gear and shift up to 4th if the conditions permit. In hilly areas: Start off in 2nd gear and shift up to 3rd if the conditions permit.
- With a trailer on the road: Start off in 2nd gear and shift up to 3rd if the conditions permit.
- Material handling: Start in 3rd gear, or 2nd gear in restricted spaces.
- Earthmoving: Start in 1st gear.
- Loading (with bucket, manure fork, etc.): Start in 2nd gear.

18 - FORWARD/NEUTRAL/REVERSE SWITCH

This switch is used to change the direction of travel (forward or reverse).

NOTE: *To prevent damage to the transmission, the telescopic handler should be traveling at a slow speed and not accelerating when changing the direction of travel.*

FORWARD: Push the switch forward (position A).

REVERSE: Pull the switch rearward (position B).

NEUTRAL: To start the telescopic handler, the switch must be in the intermediate position (position C).

NOTE: *The reverse lights and the backup alarm indicate that the telescopic handler is operating in reverse.*

PROCEDURE TO MOVE THE TELESCOPIC HANDLER

The telescopic handler is equipped with an electronic unit that prevents the machine from moving unless the operator is seated in the seat.

To move the telescopic handler, the following sequence must be followed:

1 - sit in the operator's seat,

2 - release the parking brake, and

3 - shift into forward or reverse.

To stop the telescopic handler, the following sequence must be followed:

1 - shift into neutral,

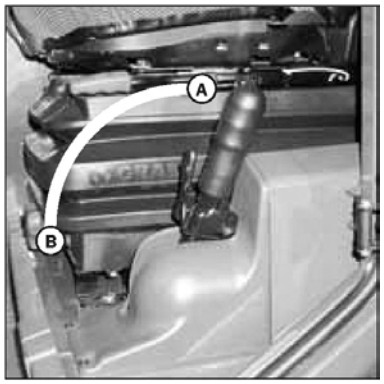
2 - apply the parking brake, and

3 - step out of the telescopic handler.

If this sequence is not followed (for example, leaving the operator's seat without applying the parking brake), an alarm will sound. The operator must then shift into neutral and follow the sequence.

19 - PARKING BRAKE LEVER

To prevent inadvertent release, the lever is fitted with a safety lock.



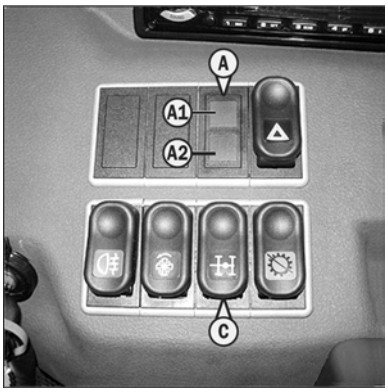
- To apply the parking brake, pull the lever rearward (position A).
- To release the parking brake, release the safety lock and push the lever forward (position B).

20 - STEERING MODE SELECTOR LEVER

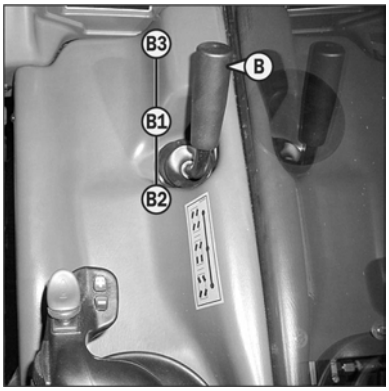
Before selecting one of the three steering modes, bring the four wheels into alignment, i.e., in the straight-ahead position.

A - GREEN LAMPS FOR ALIGNMENT OF THE WHEELS

These lamps come on to indicate the alignment of the wheels in relation to the axles of the telescopic handler. The lamp (A1) is for the front wheels, and the lamp (A2) is for the rear wheels.



B - STEERING SELECTOR LEVER



B1 - Front-wheel steer (highway traffic)

B2 - Front and rear wheels steer in oppo site directions (4-wheel steer)

B3 - Front and rear wheels steer in the same direction (crab steer)

C - SWITCH FOR ALIGNMENT OF THE WHEELS

This switch activated indicator lamps A1 and A2 to aid in the alignment of the front and rear wheels. The indicator lamp in the switch indicates if it is ON.

WHEEL ALIGNMENT PROCEDURE

- Press the switch (signal lamp ON).
- Shift the hydraulic valve control lever for steering selection (B) to position (B2) (4-wheel steering).
- Turn the steering wheel and bring the rear wheels into alignment until the lamp (A2) is ON.
- Shift the hydraulic valve control lever for steering selection (B) to position (B1) (highway use).
- Turn the steering wheel and bring the front wheels into alignment until the lamp (A1) is ON.

⚠ WARNING

Before driving on roads, it is necessary to check the alignment of the rear wheels and to select front-wheel steering mode. The alignment of the rear wheels must be done regularly while driving the telescopic handler, with the help of the green lamps. In case of problems, consult your dealer.

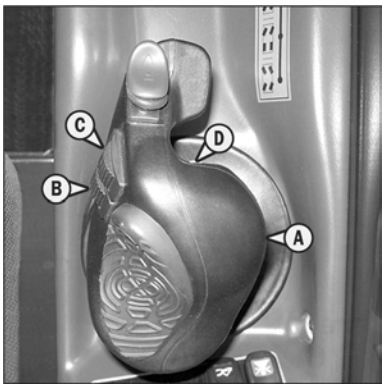
21 - HYDRAULIC CONTROLS AND TRANSMISSION CUTOFF

IMPORTANT*: Do not attempt to alter the hydraulic system pressure by adjusting the pressure regulating valve. In the event of suspected malfunction, contact your dealer. ANY ALTERATION MAY VOID THE WARRANTY.*

⚠ WARNING

Use the hydraulic controls carefully without jerking, to avoid accidents caused by sudden movement of the telescopic handler.

NOTE: *If the hydraulic functions do not operate, turn the steering wheel to recharge the hydraulic control accumulator and hydraulic functions should be restored.*



A - Boom lift and attachment tilt control lever.

B - Boom extend/retract control button.

C - Attachment control button.

D - Electric valve on boom control button option.

LIFTING THE LOAD

- Pull the lever (A) rearward for lifting.
- Push the lever (A) forward for lowering.

TILTING THE CARRIAGE

- Move the lever (A) to the left for rearward tilt.
- Move the lever (A) to the right for forward tilt.

TELESCOPING THE BOOM

- Push the button (B) forward to extend the boom.
- Pull the button (B) rearward to retract the boom.

ATTACHMENT

- Move the button (C) forward or rearward.

BOOM NOSE ELECTRICAL VALVE- Button D (see chapter: 5 - DESCRIPTION: DESCRIPTION ELECTRICAL AND HYDRAULIC).

22 - FUNCTION CONTROLS / LOAD CHARTS

These charts include the description of the hydraulic controls and the load charts for the attachments used on the telescopic handler.

23 - AIR CONDITIONER / HEATER CONTROLS

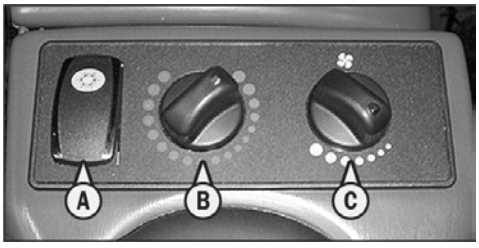
IMPORTANT: *The air conditioner only comes on when the telescopic handler has been started. When using the air conditioning, the doors and windows should be kept closed.*

In winter: To ensure proper operation and complete efficiency of the air conditioning unit, switch on the compressor once a week, if only briefly, to lubricate the internal seals.

In cold weather: Warm the engine before switching on the compressor, to allow any refrigerant that has collected in the liquid state at the lowest point of the compressor circuit to turn into gas under the effect of the heat given off by the engine, because the compressor is liable to be damaged by liquid refrigerant.

IMPORTANT: *If the air conditioning does not seem to be working properly, have it examined by your dealer (see chapter: 6 - MAINTENANCE: H - EVERY TWO YEARS). Never try to repair any problems yourself.*

DESCRIPTION OF THE AIR CONDITIONING CONTROLS



A - Air conditioning system ON/OFF control switch with indicator lamp. Only works when control switch "C" is set to 1, 2 or 3.

B - Air temperature control.

C - Air flow setting and fan speed control. In position "0" the air conditioning system no longer functions.

NOTE: *Possible losses of water under the telescopic handler are due to condensation discharges caused by the drying effect of the air conditioning, especially with high outside temperatures and high relative humidity.*

For the air conditioning to perform properly, the air intakes must not be blocked.

When the air conditioner is running, at least one of the cab air vents must be open to avoid the risk of freezing the evaporator.

HEATING MODE

The controls must be adjusted in the following way:

A - Switch with signal lamp off,

B - At the selected temperature, and

C - At the selected fan speed 1, 2 or 3.

AIR CONDITIONING MODE

The controls must be adjusted in the following way:

A - Switch with signal lamp on,

B - At the selected temperature, and

C - At the selected fan speed 1, 2 or 3.

DEFROSTING MODE

The controls must be adjusted in the following way:

A - Switch with signal lamp on,

B - At the selected temperature,

C - At the selected fan speed 1, 2 or 3.

NOTE: *Direct the vents onto the cab's windows for increased efficiency.*

24 - CAB AIR FILTER

See chapter: 6 - MAINTENANCE: D - EVERY 500 HOURS SERVICE.

25 - WINDSHIELD DEFROSTER VENTS

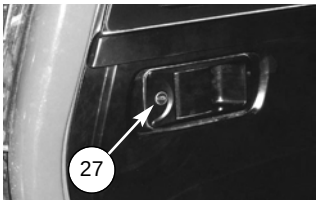
For optimum effectiveness, close the heater vents.

26 - HEATER VENTS

These heater vents enable the air to be directed to the interior of the cab and onto the side windows.

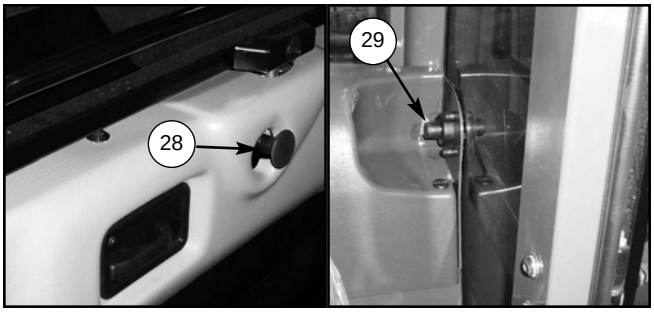
27 - DOOR LOCK

Two keys are provided with the telescopic handler to enable the cab to be locked.



28 - LOCKING HANDLE FOR UPPER HALF-DOOR

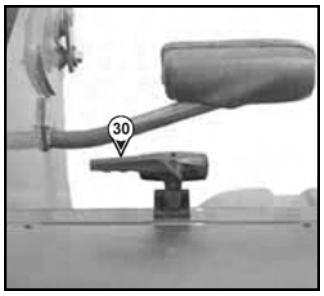
29 - RELEASE BUTTON FOR UPPER HALF-DOOR



30 - HANDLE FOR REAR WINDOW OPENING

EMERGENCY EXIT

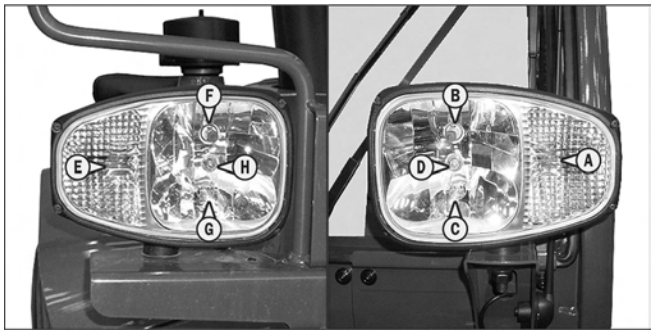
Use the rear window as an emergency exit if it is not possible to leave the cab by the door.



31 - MANUAL HOLDER

Ensure that the Operator's Manual is in place in the document holder.

32 - FRONT LIGHTS



A - Left front indicator

B - Left front low beam

C - Left front high beam

D - Left front sidelight

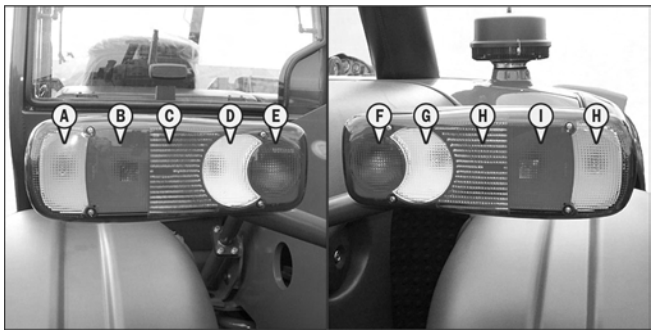
E - Right front indicator

F - Right front low beam

G - Right front high beam

H - Right front sidelight

33 - REAR LIGHTS



A - Left rear indicator

B - Left rear stoplight

C - Left tail light

D - Left rear backup light

E - Left rear fog light

F - Right rear fog light

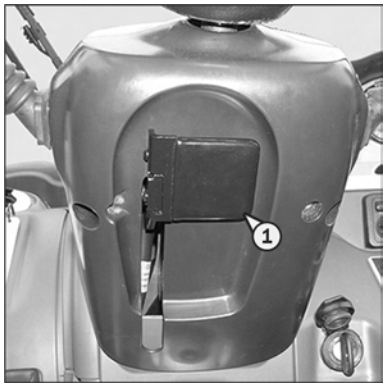
G - Right rear backup light

H - Right tail light

I - Right rear stoplight

J - Right rear indicator

34 - STEERING WHEEL POSITION ADJUSTMENT HANDLE

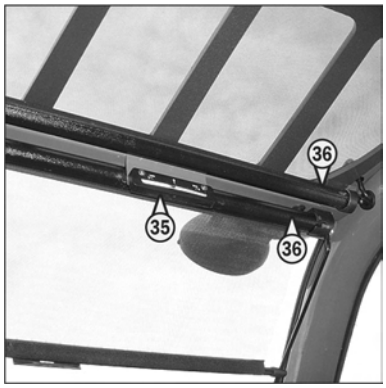


This handle enables the angle and height of the steering wheel to be adjusted.

- Pull handle (1) to adjust the steering wheel.
- Push in handle (1) to lock the steering wheel in the desired position.

35 - INCLINOMETER

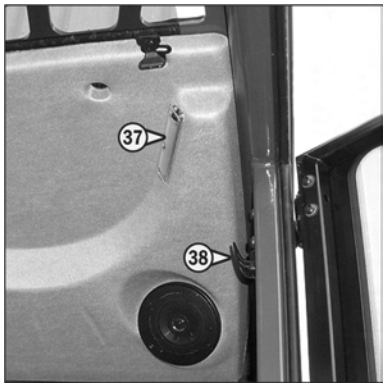
Enables the operator to check that the telescopic handler is in a horizontal position.



36 - SUN VISOR

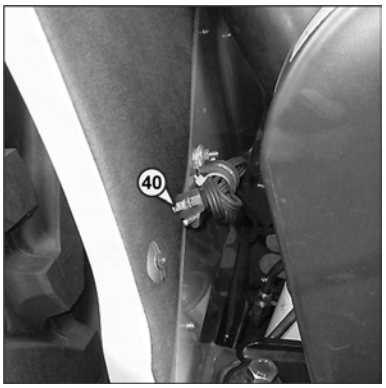
37 - CAB INTERIOR LIGHT

38 - CLOTHES HOOK



39 - CIGARETTE LIGHTER and 12-VDC ACCESSORY OUTLET

40 - ENGINE BLOCK HEATER



41 - HYDRAULIC ATTACHMENT LOCKING

Enables the attachment to be hydraulically locked to the carrier using the auxiliary hydraulic circuit. See chapter: 8 - INSTALLING ATTACHMENTS.

42 - ATTACHMENT HYDRAULIC CONTROL FOR CONTINUOUS OPERATION AND FLOW CONTROL

WARNING

This device must only be used with attachments that require continuous hydraulic flow, such as a rotary broom or cement mixer. It is strictly forbidden to use it in material handling operations and other applications, such as with a winch.

CONTINUOUS HYDRAULIC MOVEMENT OF AN ATTACHMENT

- Make sure the potentiometer (C) is set to 0 %.
- Push switch (A) up or down (depending on the type of attachment), press button (B) and release switch (A). The red indicator lamp (1), flashes to indicate that it is in operation.
- Set the required flow rate using potentiometer (C).
- To stop continuous hydraulic movement of the attachment, push switch (A) up or down, or press button (B). Indicator lamp (1) goes out.
- Set potentiometer (C) back to 0 %.

WARNING

Never leave the cab without resetting the potentiometer (C) to 0 %. Before starting the telescopic handler, make sure the potentiometer is set to 0 %.

TOW PIN

Located at the rear of the telescopic handler, this device is used to attach a trailer. Its capacity is limited for each telescopic handler by the authorized gross vehicle weight, tractive effort and maximum vertical force on the coupling point. This information is given on the manufacturer's plate fixed to each telescopic handler (see chapter: 1 - SPECIFICATIONS AND CONTROLS: IDENTIFICATION OF THE TELESCOPIC HANDLER).

- To use a trailer, see current regulations in your state/province (maximum running speed, braking, maximum weight of trailer, etc.).
- Verify the trailer's condition before using it (tire condition and pressures, electrical connection, hydraulic hose, braking system).

WARNING

Do not tow a trailer that is not in good working condition. Using a trailer in poor condition may affect the telescopic handler's steering and braking, and cause an accident.

WARNING

If an assistant helps in connecting or disconnecting the trailer, this person must always be visible to the operator and wait until the telescopic handler has stopped, the parking brake is on and the engine is stopped before performing the operation.

A - TOW PIN

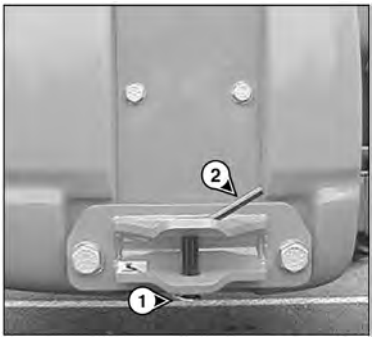
CONNECTING AND DISCONNECTING A TRAILER

WARNING

Be careful not to get your fingers caught or crushed during this operation.

Do not forget to put clip (1) back in place.

When disconnecting, make sure that the trailer is supported independently.



- To connect a trailer, position the telescopic handler as close as possible to the trailer hitch ring.
- Apply the parking brake and turn off the engine.
- Remove the clip (1), lift the trailer pin (2) and insert (or remove) the trailer hitch ring.

B - TRAILER ELECTRIC CONNECTOR

This 7-pin connector (1) enables electrical power supply connection for a trailer or signal bar.

OPTIONS

1 - BOOM RIDE CONTROL

The boom is suspended to reduce shaking of the telescopic handler on rough ground (e.g., moving straw in a field).

OPERATION

- Set the forks or attachment on the ground and raise the front wheels a few inches only.
- Press switch (1) to the (A) position, the indicator lamp comes on indicating that boom ride control is activated.
- Press switch (1) to the (B) position, the indicator lamp goes out indicating that boom ride control is deactivated.
- When the engine is turned off, boom ride control is automatically deactivated.

⚠ WARNING

Boom ride control is active to a lifting height of 9.75 feet (3 m) from the axis of articulation of the carriage with respect to the ground with the boom retracted. When raised above this height or when another hydraulic movement is made (tilting, telescoping, attachment), boom ride control is deactivated momentarily and the visual indicator of switch (A) goes out.

2 - REVERSIBLE FAN

The fan blades are rotated to direct the air flow in the opposite direction through the radiator to clean chaff from the radiator and engine cover grill.

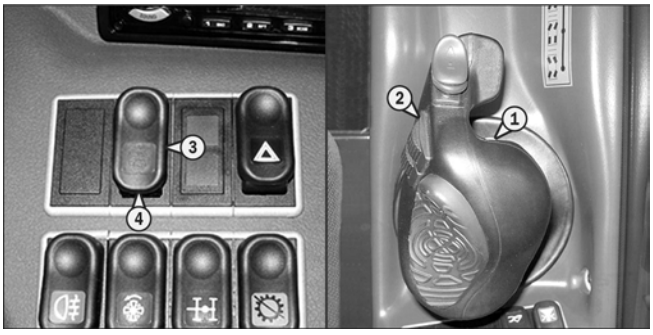
OPERATION

- Start the engine.
- Press bottom of switch (1) to the (A) position. Green LED should come on.
- Timer is set to reverse the position of the fan blades approximately every three minutes. Check by placing a piece of paper on radiator. During normal operation it draws air in, and during cleaning it blows air out.
- To switch off, press top of switch (1) to the (B) position. Green LED should go out.

3 - SECOND AUXILIARY HYDRAULIC CIRCUIT WITH HYDRAULIC ATTACHMENT LOCKING

Enables the use of two hydraulic functions on the attachment circuit.

NOTE: *To make connecting the quick connectors easier, relieve the pressure in the hydraulic circuit by press button (1) on the joystick controller.*



OPERATION

- Button (1) not pressed: Button (2) controls the first auxiliary hydraulic function.
- Button (1) pressed: Button (2) then controls the second auxiliary hydraulic function.
- Press switch (3) to lock the hydraulic function of button (1). The lamp (4) lights to indicate this function is activated.

4 - BOOM MOUNTED WORK LIGHTS

Work lights mounted at the end of the boom for additional lighting when placing a high load.

5 - WINDSHIELD PROTECTION GRILL

A grill mounted in front of the windshield for added protection off the windshield and operator from falling objects.

6 - AM/FM RADIO

Installed in place of the storage tray located in the dash below the instrument panel.

7 - REAR WINDOW DE-ICING

An electric grid in the rear window that when activated, will de-ice the rear window.

Chapter 6

MAINTENANCE

GEHL TELESCOPIC HANDLERS MUST BE SERVICED USING GEHL ORIGINAL EQUIPMENT SERVICE PARTS.

IF PARTS ARE USED THAT ARE NOT GEHL ORIGINAL EQUIPMENT SERVICE PARTS, YOU RISK:

- legally - being held responsible in the event of an accident, and
- technically - causing an operating failure or shortening the life of the telescopic handler.

THE USE OF COUNTERFEIT PARTS OR COMPONENTS NOT APPROVED BY THE MANUFACTURER MEANS YOU LOSE THE BENEFIT OF THE WARRANTY.

BY USING GEHL ORIGINAL EQUIPMENT PARTS FOR MAINTENANCE OPERATIONS, YOU BENEFIT THROUGH ITS DEALER NETWORK, WHICH PROVIDES USERS WITH:

- expert know-how and competence,
- guarantee of high-quality work,
- original equipment replacement components,
- help with preventive maintenance,
- efficient help with diagnosis,
- improvements due to experience feedback, and
- operator training.

Only the GEHL dealer network has detailed knowledge of the design of the telescopic handler, and therefore has the best technical ability to provide maintenance.

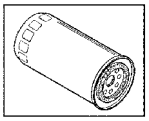
ORIGINAL EQUIPMENT REPLACEMENT PARTS ARE DISTRIBUTED EXCLUSIVELY BY GEHL COMPANY AND ITS DEALER NETWORK.

A Gehl “Dealer Locator” is available on the Gehl Company website: www.gehl.com.

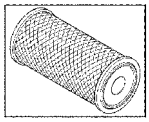
FILTER CARTRIDGES AND BELTS

ENGINE

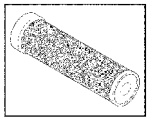
ENGINE OIL FILTER
Part number: 219975
Change: 500 H



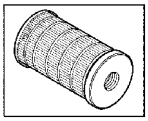
DRY AIR FILTER CARTRIDGE
Part number: 219980
Clean: 50 H*
Change: 500 H*



SAFETY DRY AIR FILTER CARTRIDGE
Part number: 219979
Change: 1000 H*

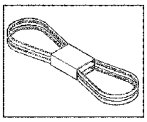


FUEL FILTER CARTRIDGE
Part number: 219994
Change: 500 H

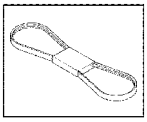


FUEL WATER SEPERATOR
Part number: 215350
Change: 500 H

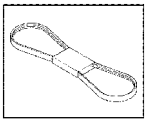
ALTERNATOR BELT
Part number: 217784



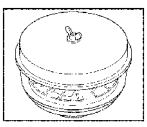
FAN BELT
Part number: 219956



A/C COMPRESSOR BELT
Part number 215896

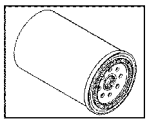


CYCLONIC PRE-FILTER
Part number: 218591
Clean: 10 H



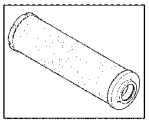
TRANSMISSION

TRANSMISSION OIL FILTER
Part number: 219976
Change: 500 H

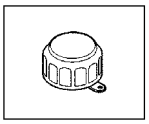


HYDRAULICS

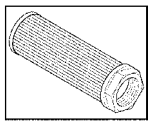
HYDRAULIC RETURN OIL FILTER CARTRIDGE (15µ)
Part number: 218042
Change: 500 H



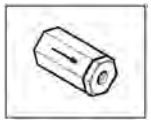
FILTER CAP FOR HYDRAULIC OIL RESERVOIR
Part number: 219937
Change: 1000 H



SUCTION STRAINER FOR HYDRAULIC OIL RESERVOIR
Part number: 219945
Clean: 1000 H

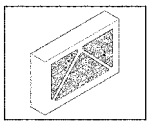


CONTROL HEAD FILTER
Part number: 215532
Change: 1000 H



CAB

CAB VENTILATION FILTER
Part number: 219947
Clean: 50 H
Change: 250 H



* This service interval is given for information only for cleaning and changing (see chapter: 6 - MAINTENANCE: SERVICING SCHEDULE).

LUBRICANTS AND FUEL

SYSTEM/COMPONENT	CAPACITY	RECOMMENDED
ENGINE		
CRANKCASE	11.6 qts. (11 liters)	Below 32°F (0°C) - SAE 10W-30 Above 32°F (0°C) - SAE 15W-40 Service Classification: API CH-4
COOLING SYSTEM	19.6 qts. (18.5 liters)	Ethylene Glycol/Water Solution [protection -30° F (-35° C)]
FUEL TANK	31.7 gal. (120 liters)	Diesel Fuel (*)
TRANSMISSION	17.5 qts. (16.6 liters)	Automatic Transmission Fluid
ANGLE GEAR BOX	2.3 qts. (2.2 liters)	API GL5 80W-90
TRANS. UNIVERSAL JOINT		No. 2 Lithium-based Grease
BOOM		
WEAR PADS		No. 2 Lithium-based Grease
GREASING THE BOOM		No. 2 Lithium-based Grease
HYDRAULIC SYSTEM		
HYDRAULIC OIL RESERVOIR	34 gal. (128 liters)	Hydraulic ISO VG46 (Mobil DTE 15 M or equal)
BRAKE SYSTEM		
BRAKE CIRCUIT	As Required	Sunco Multi-ATF or equivalent
CAB		
CAB DOOR		No. 2 Lithium-based Grease
WINDSHIELD WASHER RESERVOIR		Windshield Washer Fluid
FRONT AXLE DIFFERENTIAL	7.7 qts. (7.3 liters)	API GL5 SAE 80W-90 with (1) Brake Additive Gehl Part L71456
REAR AXLE DIFFERENTIAL	7.7 qts. (7.3 liters)	API GL5 SAE 80W-90 with (1) Brake Additive Gehl Part L71456
FRONT WHEEL PLANETARIES	0.80 qts. (0.75 liters)	API GL5 SAE 80W-90
REAR WHEEL PLANETARIES	0.80 qts. (0.75 liters)	API GL5 SAE 80W-90
FRONT AND REAR WHEEL STEERING SPINDLES		No. 2 Lithium-based Grease
REAR AXLE OSCILLATION		No. 2 Lithium-based Grease

IMPORTANT: *Use only the recommended lubricants and fuel.*

NOTE: *For topping up, all oils may not be compatible.*

(*) FUEL CHARACTERISTICS

Use a high-quality diesel fuel specified to EN590 or ASTM D975 to obtain optimal performance of the engine.

MAINTENANCE INSTRUCTIONS

GENERAL INSTRUCTIONS

- Ensure the area is sufficiently ventilated before starting the telescopic handler.
- Wear clothes suitable for the maintenance of the telescopic handler. Avoid wearing jewelry and loose clothes. Tie and protect your hair, if necessary.
- Stop the engine and remove the ignition key, when service is necessary.
- Read the operator's manual carefully.
- Carry out all repairs immediately, even if the repairs are minor.
- Repair all leaks immediately, even if the leak is minor.
- Make sure that the disposal of materials and of service parts is carried out in total safety and in a ecological way.
- Be careful of the risk of burning and splashing (exhaust, radiator, engine, etc.).

MAINTENANCE

- Perform the periodic service (see chapter: 6 - MAINTENANCE) to keep the telescopic handler in good working conditions. Failure to perform the periodic service may void the warranty.

LUBRICANT AND FUEL LEVELS

IMPORTANT: *For operation under normal climatic conditions, i.e., between 5°F (-15°C) and 95°F (35°C), correct types of lubricants in all the systems are provided from the factory. For operation under more severe climatic conditions, before starting up, it may be necessary to drain some or all the systems, and ensure correct types of lubricants and coolant properly suited to the ambient temperatures.*

- Use the recommended lubricants. Never use contaminated lubricants.
- Do not fill the fuel tank when the engine is running.
- Only fill the fuel tank in areas specified for this purpose.
- Do not fill the fuel tank to the maximum level.
- Do not smoke or approach the telescopic handler with an open flame, when the fuel tank is open or is being filled.

HYDRAULIC SYSTEM

- Do not attempt to loosen connections, hoses or any hydraulic component with the circuit under pressure.

WARNING

COUNTER-BALANCE VALVES: For inspection, see chapter: 6 – MAINTENANCE: D8 - EVERY 500 HOURS SERVICE. It is hazardous to change the setting or remove the counter-balance valves or other safety valves that may be fitted to the telescopic handler cylinders. These operations must only be performed by trained personnel (consult your dealer).

WARNING

HYDRAULIC ACCUMULATORS, which may be on your telescopic handler, are under pressure and it is hazardous to disassemble them. This operation must only be performed by trained personnel (consult your dealer).

ELECTRICAL SYSTEM

- Do not short-circuit the starter relay to start the telescopic handler. If the forward/reverse shifter is not in neutral, the telescopic handler will start to move immediately.
- Do not drop metal items on the battery.
- Disconnect the battery before working on the electrical system.

WELDING

- Disconnect the battery before performing any welding operations on the telescopic handler.
- When carrying out electric welding work on the telescopic handler, connect the negative cable for the welding equipment directly to the part being welded, to avoid high voltage current passing through the alternator.
- Never perform welding or work that gives off heat on an assembled tire. The heat would increase the tire pressure, which could cause the tire to explode.

- If the telescopic handler is equipped with an electronic control unit, disconnect this before starting to weld, to avoid the risk of causing permanent damage to electronic components.

WASHING THE TELESCOPIC HANDLER

- Clean the telescopic handler or at least the area concerned before any servicing.
- Remember to close and lock all accesses to the telescopic handler (door, window, …).
- During washing, avoid the pinch points and electrical components and connections.
- If necessary, protect components susceptible to being damaged, against the penetration of water, steam or cleaning agents, particularly electrical components and connections and the injection pump.
- Clean the telescopic handler of any fuel, oil or grease and grime.

IMPORTANT: *For any service other than regular maintenance, consult your dealer.*

STORAGE INSTRUCTIONS

The following recommendations are intended to prevent the telescopic handler from being damaged when it is withdrawn from service for an extended period.

IMPORTANT: *Procedures to follow if the telescopic handler is not to be used for a long time and for starting it up again afterward are best performed by a dealer.*

PREPARING THE TELESCOPIC HANDLER

- Clean the telescopic handler thoroughly.
- Check and repair any leakage of fuel, oil, water or air.
- Replace or repair any worn or damaged parts.
- Wash the painted surfaces of the telescopic handler with clean clear water and wipe them dry.
- Touch up the paint if necessary.
- Shut down the telescopic handler (see chapter: 4 OPERATING AND SAFETY INSTRUCTIONS: STOPPING THE TELESCOPIC HANDLER).
- Make sure the boom cylinder rods are all in retracted position.
- Relieve the pressure in the hydraulic circuits.

PROTECTING THE ENGINE

- Fill the fuel tank (see chapter: 6 - MAINTENANCE: A - DAILY OR EVERY 10 HOURS SERVICE).
- Drain and replace the coolant (see chapter: 6 - MAINTENANCE: F - EVERY 2000 HOURS SERVICE).
- Leave the engine running at idle speed for a few minutes, then turn off.
- Replace the engine oil and oil filter (see chapter: 6 - MAINTENANCE: D - EVERY 500 HOURS SERVICE).
- Add the protective product to the engine oil.
- Run the engine for a short time so that the oil and coolant circulate.
- Disconnect the battery after charging it, and store it in a safe place away from the cold.
- Remove the injectors and spray the protective product into each cylinder for two seconds with the piston at bottom dead center.
- Turn the crankshaft once slowly and reinstall the injectors (see engine manual).
- Remove the intake hose from the manifold or turbocharger and spray the protective product into the manifold or turbocharger.
- Cap the intake manifold or turbocharger inlet with waterproof adhesive tape.
- Remove the exhaust pipe and spray the protective product into the exhaust manifold or turbocharger.

IMPORTANT: *The spray time is noted on the product packaging and must be increased by 50% for turbocharged engines.*

- Reinstall the exhaust pipe and block the outlet with waterproof adhesive tape.
- Open the oil filler cap, spray the protective product around the rocker arm shaft and reinstall the filler cap.
- Cap the fuel tank using waterproof adhesive tape.
- Remove the drive belts and store them in a safe place.
- Disconnect the engine fuel cut-off solenoid on the injection pump and carefully insulate the connection.

PROTECTING THE TELESCOPIC HANDLER

- Set the telescopic handler on axle stands so that the tires are not in contact with the ground and release the parking brake.
- Protect cylinder rods that will not be retracted from corrosion.
- Wrap the tires.

IMPORTANT: *If the telescopic handler is to be stored outdoors, cover it with a waterproof tarpaulin.*

RETURNING THE TELESCOPIC HANDLER INTO SERVICE

- Remove the waterproof adhesive tape from all the inlets.
- Reinstall the intake hose.
- Reinstall and reconnect the battery.
- Remove the protection from the cylinder rods.
- Perform the daily service (see chapter: 6 - MAINTENANCE: A - DAILY OR EVERY 10 HOURS SERVICE).
- Apply the parking brake and remove the axle stands.
- Drain and replace the fuel, and replace the fuel filter (see chapter: 6 - MAINTENANCE: D - EVERY 500 HOURS SERVICE).
- Reinstall and adjust the tension in the drive belts (see chapter: 6 - MAINTENANCE: C - EVERY 250 HOURS SERVICE).
- Turn the engine using the starter, to allow the oil pressure to rise.
- Reconnect the engine fuel cut-off solenoid.
- Lubricate the telescopic handler completely (see chapter: 6 - MAINTENANCE: SERVICING SCHEDULE).
- Start up the telescopic handler, following the safety instructions (see chapter: 4 - OPERATING AND SAFETY INSTRUCTIONS).

WARNING

Make sure the area is adequately ventilated before starting the telescopic handler.

- Run all the boom's hydraulic movements, concentrating on the ends of travel for each cylinder.

TOWING THE TELESCOPIC HANDLER

TOWING

WARNING

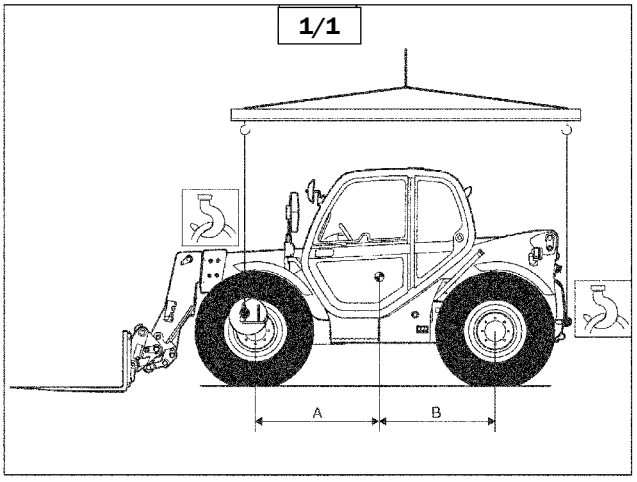
Do not tow the telescopic handler at more than 15 mph (25 km/h).

- Place the forward/reverse lever and the gear shift in neutral.
- Release the parking brake.
- Switch on the hazard warning lights.
- If the engine is not running, there will be no steering or braking assistance. Operate the steering and brake pedal slowly, avoiding sudden jerky movements.

LIFTING THE TELESCOPIC HANDLER

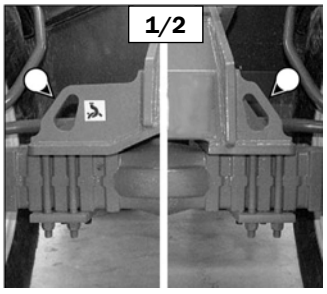
- Take into account the position of the telescopic handler center-of-gravity for lifting (fig. 1/1).
- A = 54 inches (1370 mm), B = 47 inches (1190 mm)

1/1

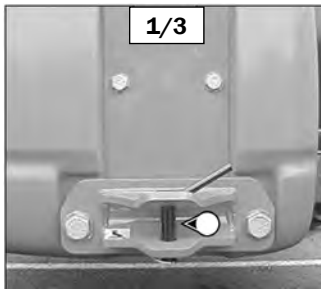


- Place the hooks in the fastening points provided (fig. 1/2 and 1/3).

1/2



1/3



LOADING THE TELESCOPIC HANDLER ON A TRAILER

WARNING

Ensure that the safety instructions for the trailer are followed before loading the telescopic handler, and that the driver of the truck knows the dimensions and the weight of the telescopic handler (see chapter: 1 - SPECIFICATIONS: SPECIFICATIONS).

WARNING

Ensure that the trailer has the size and load capacity sufficient for transporting the telescopic handler.

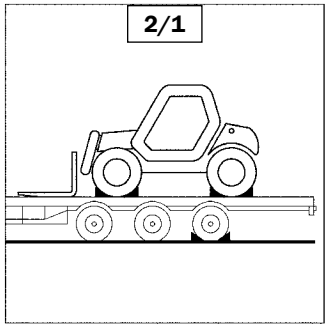
IMPORTANT: *For telescopic handlers equipped with a turbocharged engine, block off the exhaust outlet to avoid rotation of the turbocharger without lubrication when transporting the machine.*

LOADING THE TELESCOPIC HANDLER

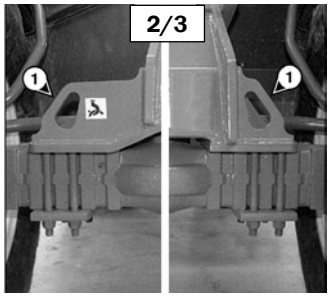
- Block the wheels of the trailer.
- Attach the loading ramps to obtain an angle as low as possible to load the telescopic handler.
- Load the telescopic handler parallel to the trailer.
- Stop the telescopic handler (see chapter: 4 - OPERATING AND SAFETY INSTRUCTIONS: OPERATOR INSTRUCTIONS).

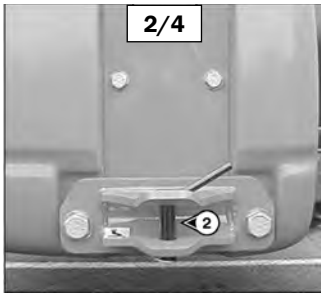
TYING DOWN THE TELESCOPIC HANDLER

- Insert wheel chocks to the trailer at the front and back of each tire (fig. 2/1).

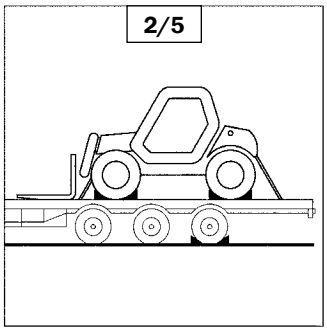


- Tie down the telescopic handler on the trailer with chains and binders, at the front of the telescopic handler, at the tie-down points (1) (fig. 2/3), and at the back, at the tow pin (2) (fig. 2/4).





- Tighten the chains and binders (fig. 2/5).

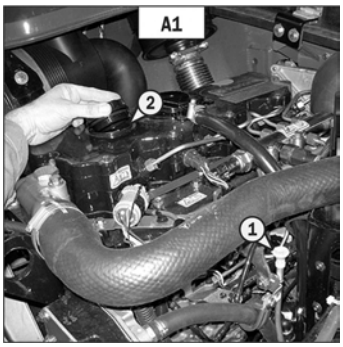


A - DAILY OR EVERY 10 HOURS OF SERVICE

A1 - ENGINE OIL LEVEL

CHECK

Park the telescopic handler on level ground with the engine stopped, and let the oil drain into the oil pan.

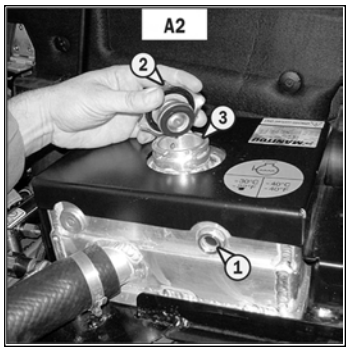


- Open the engine cover.
- Remove the dipstick (1) (fig. A1).
- Wipe the dipstick and check for the correct level at the upper mark.
- If necessary, add oil (see chapter: 6 - MAINTENANCE: LUBRICANTS AND FUEL) at the filler port (2) (fig. A1).
- Visually check that there is no leakage of oil from the engine.

A2 - ENGINE COOLANT LEVEL

CHECK

Park the telescopic handler on level ground with the engine stopped, and allow the engine to cool.



- Open the engine cover.
- Check the correct level in the middle of site gauge (1) (fig. A2).
- If necessary, add coolant (see chapter: 6 - MAINTENANCE: LUBRICANTS AND FUEL).
- Slowly turn the cap of the radiator (2) (fig. A2) counter-clockwise to the safety stop.
- Allow the pressure and vapor to escape.
- Press down and turn the cap to release the cap.
- Add coolant at the filler neck (3) to the middle of the site gauge (1) (fig. A2).
- Lubricate the filler neck slightly to ease closing and opening of the radiator cap.
- Visually check that there is no leakage from the radiator and hoses.

WARNING

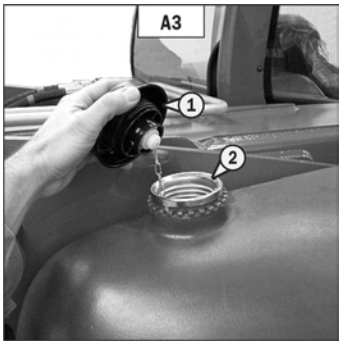
To avoid the risk of spraying and scalding, wait until the engine has cooled before removing the cooling system filler plug. If the coolant is very hot, add only hot coolant 176°F (80°C). In an emergency, you can use water as a coolant, and then change the coolant as soon as possible (see chapter: 6 - MAINTENANCE: F1 - COOLANT).

A3 - FUEL LEVEL

CHECK

Keep the fuel tank full, to reduce condensation due to atmospheric humidity.

- Remove cap (1) (fig. A3).



- Fill the fuel tank with clean fuel (see chapter: 6 - MAINTENANCE: LUBRICANTS AND FUEL), filtered through a strainer or a clean, lint-free cloth, through the filler neck (2) (fig. A3).
- Replace the cap (1) (fig. A3).
- Visually check that there is no leakage from the tank and hoses.

WARNING

Never smoke or have an open flame nearby during filling operations or when the tank is open.

Never refuel while the engine is running.

IMPORTANT: *The fuel tank is vented through the filler cap. When changing it, always use an original equipment part, with a vent.*

A4 - FUEL PRE-FILTER

CHECK

- Open the engine cover.
- Check the pre-filter bowl (1) (fig. A4) for the presence of water. Empty the water if it is present.
- Place a container under drain plug (2) (fig. A4) and loosen it two to three turns.

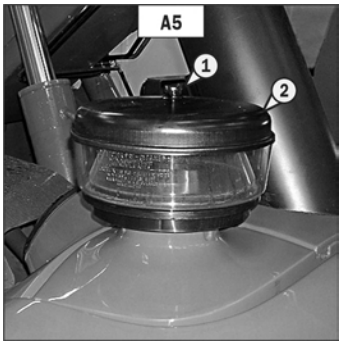
- Allow fuel to flow from the drain plug until the fuel is free from impurities and water.
- Retighten the drain plug while the fuel is still flowing from the drain.

A5 - CYCLONIC PRE-FILTER

CLEAN

The cleaning interval is given as a guide; however, the pre-filter must be emptied as soon as impurities reach the MAX level on the collector bowl.

- Loosen nut (1) (fig. A5), remove cover (2) (fig. A5) and empty the collector bowl.
- Clean the pre-filter unit with a clean dry cloth and reassemble the unit.



IMPORTANT: *When cleaning the pre-filter, take care not to let impurities into the dry air filter.*

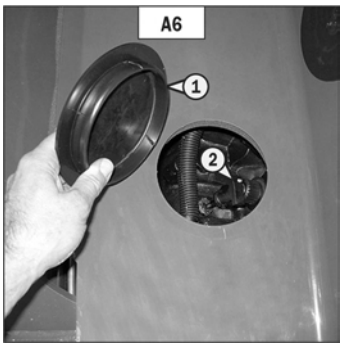
A6 - TRANSMISSION OIL LEVEL

CHECK

Park the telescopic handler on level ground with the boom raised, the engine stopped and cold.

Check the oil level within five minutes of the engine being stopped.

- Remove the plastic cap (1) (fig. A6).
- Remove the dipstick (2) (fig. A6).



- Wipe the dipstick and check for the correct level between the MIN and MAX marks.
- If necessary, add oil (see chapter: 6 - MAINTENANCE: E3 TRANSMISSION OIL).
- Visually check that there is no leakage of oil from the transmission.

A7 - TIRE PRESSURES AND WHEEL NUTS TORQUE

CHECK

- Check the condition of the tires, to detect cuts, bulges, wear, etc.
- Check the torque of the wheel nuts.

IMPORTANT: *Loose wheel nuts can cause damage and failure of the wheel bolts and distortion to the wheels.*

Wheel nuts tightening torque:

- Front wheels: 465 ft.-lbs. (630 Nm) ± 15 %
- Rear wheels: 465 ft.-lbs. (630 Nm) ± 15 %

Check and adjust the tire pressures if necessary (see chapter: 1 - SPECIFICATIONS).

WARNING

Check that the air hose is correctly connected to the tire valve before inflating. Keep everyone away during inflation.

Follow the recommended tire pressures.

WARNING

Inflating or servicing tires can be hazardous. Whenever possible, only trained personnel should service and mount tires. To avoid possible death or serious injury, follow the safety precautions below:

1. **Be sure the rim is clean and free of rust.**
2. **Lubricate both the tire beads and rim flanges with a soap solution. DO NOT use oil or grease.**
3. **DO NOT place your fingers on the tire bead or rim during inflation. Use a clip-on tire chuck with a remote hose and gauge, which allows you to stand clear of the tire while inflating it.**
4. **NEVER inflate beyond 35 psi (240 kPa) to seat the beads. If the beads have not seated by the time the pressure reaches 35 psi (240 kPa), deflate the assembly, reposition the tire on the rim, relubricate both parts and re-inflate. Inflation pressure beyond 35 psi (240 kPa) with unseated beads may break the bead or rim with explosive force sufficient to cause death or serious injury.**
5. **After seating the beads, adjust the inflation pressure to the recommended operating pressure listed.**
6. **DO NOT weld, braze, or otherwise attempt to repair and use a damaged rim.**

A8 - BOOM WEAR PADS

CLEAN - GREASE

To be carried out every 10 hours during the first 50 hours of service, then once every 250 hours.

- Extend the boom completely.
- With a brush, apply a coat of grease (see chapter: 6 - MAINTENANCE: LUBRICANTS AND FUEL) on the four sides of the telescoping sections (fig. A8).
- Extend and retract the boom several times in order to spread the grease evenly.
- Remove any excess grease.

IMPORTANT: *If the telescopic handler is used in an abrasive environment (dust, sand, coal…), use lubricating oil instead. Consult your dealer.*

A9 - GENERAL MACHINE OPERATION AND CONDITION

CHECK

Are any decals missing or damaged? Are all guards, shields and covers in place? Do all controls function smoothly and properly? Are there any abnormal vibrations or noises? Are any hose or fitting connections leaking? Is the engine exhaust color normal?

WARNING

Manufacturers of push-pull control cables advise taking the following operation and maintenance precautions:

Do not adjust the control cable with the engine running.

A gradual or sudden increase in the no-load friction (cable disconnected at both ends) of a control cable is an indication of an impending or present performance problem. The control cable should be replaced.

A gradual or sudden decrease in the useable travel is a indication of an impending or present performance problem. The cable should be replaced.

Control cables that have moisture inside of them and/or have frozen should be replaced. Do not apply heat to thaw or dry control cables.

Control cable are lubricated for the life of the control cable. Do not remove the seals or lubricate the control cable.

Control cables are designed to be non-repairable. Do not attempt to repair control cables.

Failure to heed could result in death or serious injury.

B - EVERY 50 HOURS OF SERVICE

Perform the operations described previously as well as the following operations:

B1 - DRY AIR FILTER CARTRIDGE

CHECK - CLEAN

In case of use in a very dusty atmosphere, there are pre-filtration cartridges (see chapter: 6 - MAINTENANCE: FILTER CARTRIDGES AND BELTS). Also, the checking and cleaning period of the cartridge must be reduced.

IMPORTANT: *If the clogged filter indicator light comes on, this operation must be carried out as quickly as possible (1 hour maximum). The cartridge must not be cleaned more than seven times, after which the cartridge must be changed.*

- For the disassembly and reassembly of the cartridge, see chapter: 6 - MAINTENANCE: D3 - DRY AIR FILTER CARTRIDGE.
- Clean the filter cartridge using a compressed air jet [max. pressure 30 psi (2 bar)] directed from the top to the bottom and from the inside toward the outside at a minimum distance of 1 inch (25 mm) from the cartridge wall.
- Cleaning is completed when there is no more dust on the cartridge.

IMPORTANT: *Keep the safe distance of 1 inch (25 mm) between the air jet and the cartridge to avoid tearing or making a hole in the cartridge. The cartridge must not be blown out near the air filter box. Never clean the cartridge by tapping it against a hard surface. (Protect your eyes during this procedure.)*

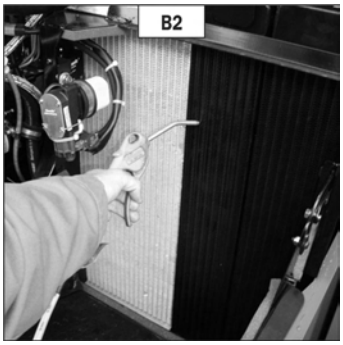
- Clean the cartridge seal surfaces with a damp, clean lint-free cloth and grease with a silicone lubricant.
- Visually check the outer condition of the air filter and its mounts. Also verify the condition of the hoses and their connections.

IMPORTANT: *Do not clean the dry air filter cartridge by washing it. Do not clean the safety cartridge located inside the filter cartridge. Instead, replace it if it is dirty or damaged.*

B2 - RADIATOR

CLEAN

IMPORTANT: *In a dirty atmosphere, clean the radiator every day. Do not use a water jet or high-pressure steam, because this could damage the radiator fins.*



- Open the engine cover.
- In order to prevent the radiator becoming clogged, clean the radiator with a compressed air jet directed in the same direction as the cooling air flow. For best results, clean with the fan running.
- If necessary, clean the screen on the engine cover.

B3 - AIR CONDITIONING CONDENSER CORE

CHECK - CLEAN

IMPORTANT: *In a dirty atmosphere, clean the condenser core every day. Do not use a water jet or high-pressure steam, because this could damage the fins.*

- Remove the protective cover (1) (fig. B3) and clean it if necessary.
- Visually check if the condenser (2) (fig. B3) is clean and clean it if necessary.
- Clean the condenser using a compressed air jet aimed in the same direction as the air flow.

NOTE: *To aid in the cleaning process, carry out this operation with the fan running.*

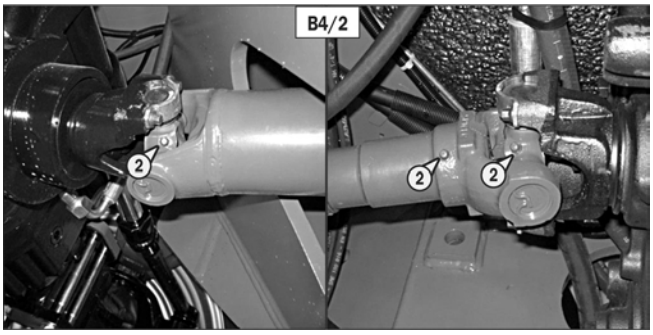
B4 - TRANSMISSION UNIVERSAL JOINTS

GREASE

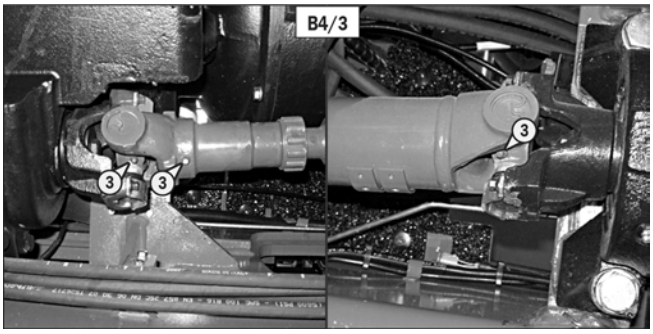
Clean and lubricate the following points with grease (see chapter: 6 - MAINTENANCE: LUBRICANTS AND FUEL). Remove any excess grease.

1 - Grease fittings (1) for the universal joint between engine and angle gear box (fig. B4/1).

2 - Grease fittings (2) for the universal joints between the transmission and front axle (fig. B4/2).



3 - Grease fittings (3) for the universal joint between the transmission and rear axle (fig. B4/3).



B5 - BOOM

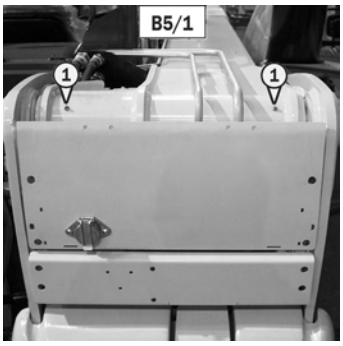
GREASE

To be performed weekly, even if the telescopic handler has been operated for less than 50 hours during the week.

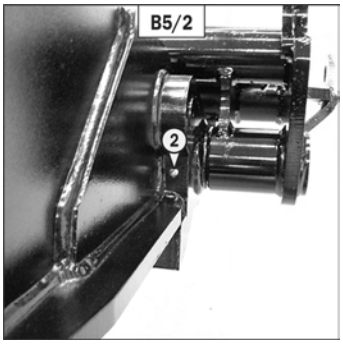
IMPORTANT: *In the event of prolonged use in an extremely dusty or caustic atmosphere, reduce the service interval to 10 working hours or daily.*

Clean and lubricate the following points with grease (see chapter: 6 - MAINTENANCE: LUBRICANTS AND FUEL). Remove any excess grease.

- Grease fittings (1) for the boom pivot shaft (fig. B5/1).

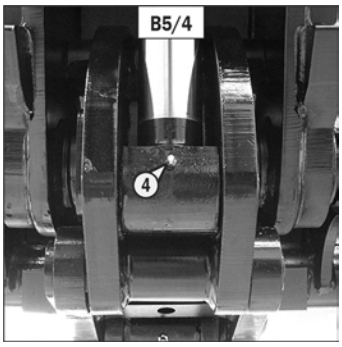


- Grease fittings (2) of the carriage pivot (fig. B5/2).

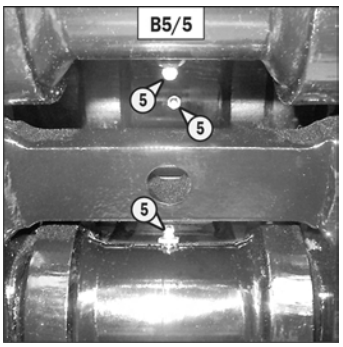


- Grease fitting (3) for the tilt cylinder base end (fig. B5/3).

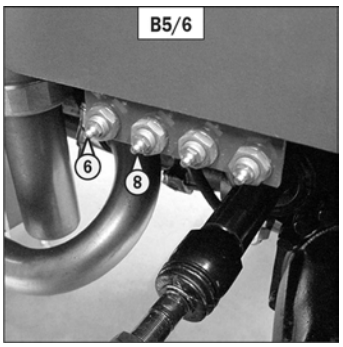
- Grease fitting (4) for the tilt cylinder rod end (fig. B5/4).



- Grease fittings (5) for the carriage connecting rod shaft (fig. B5/5).

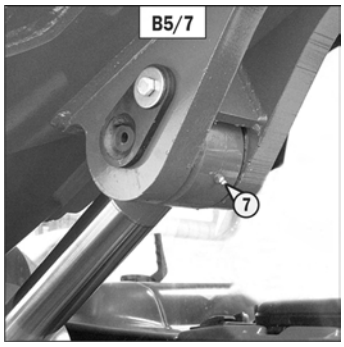


- Grease fitting (6) for the lift cylinder base end (fig. B5/6).
- Grease fitting (8) for the slave cylinder base end (fig. B5/6).

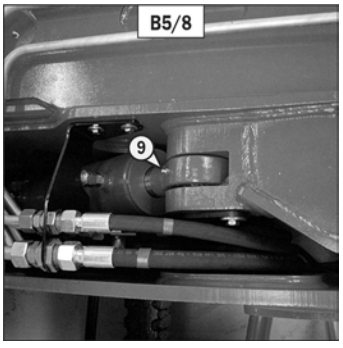


IMPORTANT: *Visually check the grease line leading to the lubrication point to be sure the line is in good condition and the grease is reaching the lubrication point.*

- Grease fitting (7) for the lifting cylinder rod end (fig. B5/7).



- Grease fitting (9) for the slave cylinder rod end (fig. B5/8).

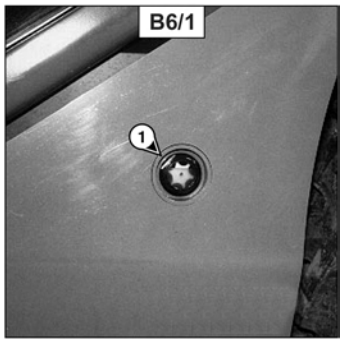


B6 - HYDRAULIC OIL LEVEL

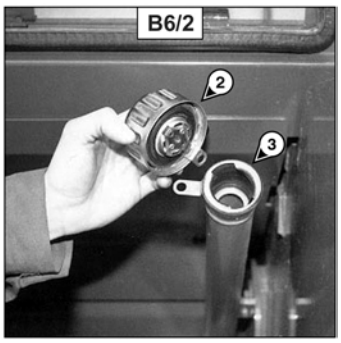
CHECK

Park the telescopic handler on level ground with the engine stopped, and the boom retracted and lowered as far as possible.

- Refer to sight gauge (1) (fig. B6/1).



- The oil level is correct when it is at the level of the red point.
- If necessary, add oil (see chapter: 6 - MAINTENANCE: LUBRICANTS AND FUEL).
- Remove filler cap (2) (fig. B6/2).
- Add oil at filler neck (3) (fig. B6/2).



- Replace the cap.
- Visually check that there is no leakage from the reservoir and pipes.

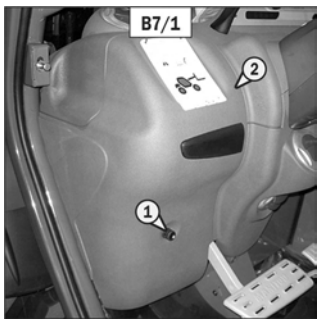
Always maintain the oil level at the maximum, because cooling depends on oil flowing through the reservoir.

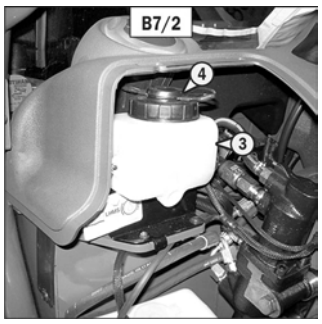
B7 - BRAKE FLUID LEVEL

CHECK

Park the telescopic handler on level ground.

- Loosen screw (1) (fig. B7/1) and remove the access panel for the brake fluid reservoir and windshield washer tank (2) (fig. B7/1).
- The level is correct when it is at the MAX level in the reservoir (3) (fig. B7/2).



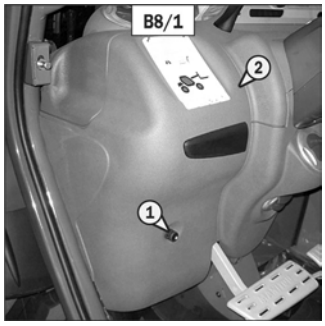


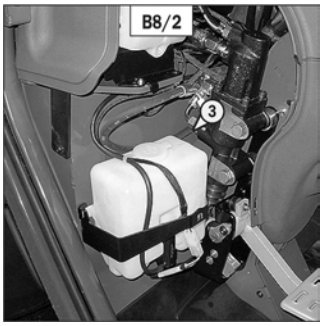
- If necessary, add oil (see chapter: 6 - MAINTENANCE: LUBRICANTS AND FUEL) at the filler neck (3) (fig. B6/2).
- Visually check that there is no leakage at the reservoir and connections.

B8 - WINDSHIELD WASHER FLUID LEVEL

CHECK

- Loosen screw (1) (fig. B8/1) and remove the access panel for brake fluid reservoir and windshield washer tank (2) (fig. B8/1).



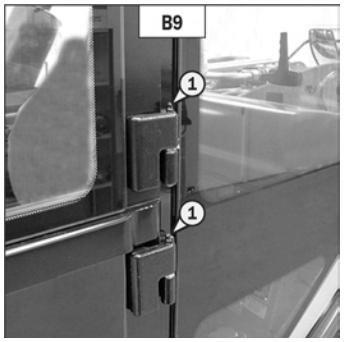


- Visually check the level.
- If necessary, add windshield washer fluid (see: 6 - MAINTENANCE: LUBRICANTS AND FUEL) at filler neck (3) (fig. B8/2).

B9 - CAB DOOR

GREASE

Clean and lubricate the points (1) (4 fittings) (fig. B9) with grease (see chapter: 6 - MAINTENANCE: LUBRICANTS AND FUEL). Remove any excess grease.



B10 - CAB VENTILATION FILTER

CLEAN

- Lift up protective cover (1) (fig. B10).
- Remove filter (2) (fig. B10).

- Clean the filter with a compressed air jet.
- Check its condition and change if necessary (see chapter; 6 - MAINTENANCE: FILTER CARTRIDGES AND BELTS).
- Reinstall the filter and protective cover.

B11 - FRONT AND REAR AXLE SPINDLES

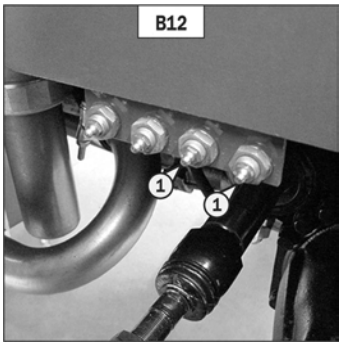
GREASE

Clean and lubricate the points (1) (8 fittings) (fig. B11) with grease (see chapter: 6 - MAINTENANCE: LUBRICANTS AND FUEL). Remove excess grease.

B12 - REAR AXLE OSCILLATION

GREASE

Clean and lubricate the points (1) (2 fittings) (fig. B12) with grease (see chapter: 6 - MAINTENANCE: LUBRICANTS AND FUEL). Remove any excess grease.



IMPORTANT: *Visually check the grease line leading to the lubrication point to be sure the line is in good condition and the grease is reaching the lubrication point.*

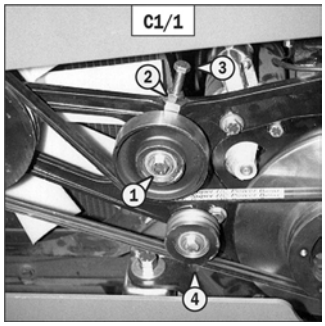
C - EVERY 250 HOURS OF SERVICE

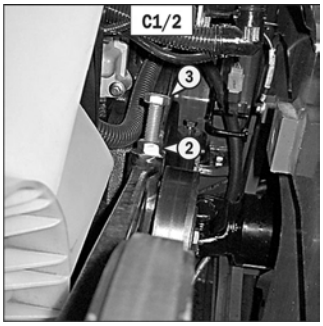
Perform the operations described previously as well as the following operations:

C1 - FANBELT TENSION

CHECK - ADJUST

- Open the engine cover.
- Check the belt for signs of wear and cracks, and change if necessary (see chapter: 6 - MAINTENANCE: FILTER CARTRIDGES AND BELTS).
- Loosen screw (1) (fig. C1/1) on the tension pulley.
- Loosen lock nut (2) (fig. C1/1 and C1/2) and screw (3) (fig. C1/1 and C1/2).
- Bring the belt just into contact with pulley (4) (Fig. C1/1) (check this operation by feel).
- Mark the head of screw (3) (fig. C1/1 and C1/2) and tighten, turning it five times.
- Tighten the lock nut (2) (fig. C1/1 and C1/2).
- Retighten screw (1) (fig. C1/1) on the tension pulley.



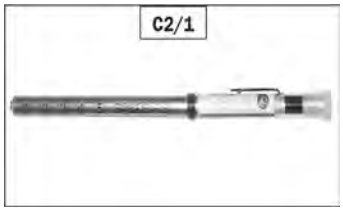


IMPORTANT: *When changing the fanbelt, tighten screw (3) (fig. C1/1 and C1/2) one-and-a-half turns, after having allowed the engine to idle for 30 minutes.*

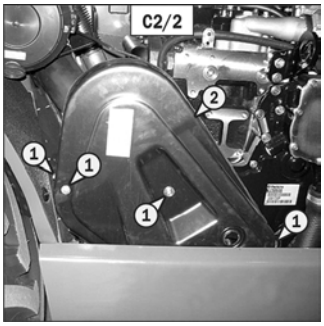
C2 - ALTERNATOR/CRANKSHAFT BELT TENSION

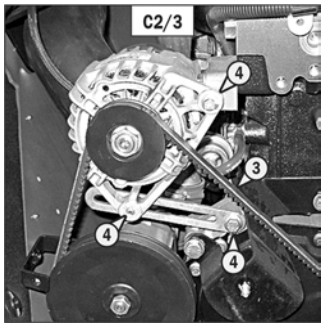
CHECK - ADJUST

It is recommended to use a belt tension meter (fig. C2/1) for this operation



- Open the engine cover.
- Loosen the fastening screws (1) (fig. C2/2).
- Remove the protective guard (2) (fig. C2/2).
- Check the belt for signs of wear and cracks, and replace if necessary (see chapter: 6 - MAINTENANCE: FILTER CARTRIDGES AND BELTS).
- Check the belt tension between the pulleys of the crankshaft and the alternator.
- Under normal pressure of 3.38 lbf. (15 N), on belt (3) (fig. C2/3) the movement should be approximately 5/32” (4 mm).
- Adjust if necessary:
  a. Loosen screws (4) (fig. C2/3) two to three turns.
  b. Pivot the alternator assembly to obtain the belt tension required.
  c. Retighten screws (4) (fig. C2/3).
- Replace the protective guard (2) (fig. C2/2).



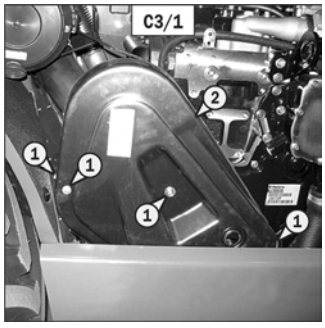


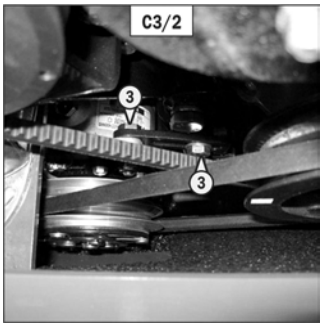
IMPORTANT: *If the alternator belt is replaced, check the tension again after 20 hours of operation.*

C3 - A/C COMPRESSOR BELT TENSION

CHECK - ADJUST

- Open the engine cover.
- Remove the fastening screws (1) (fig. C3/1).
- Remove the guard (2) (fig. C3/1).
- Check the belt for signs of wear and cracks, and replace if necessary (see chapter: 6 - MAINTENANCE: FILTER CARTRIDGES AND BELTS).
- Check the belt tension between the pulleys of the crankshaft and the compressor.
- Under normal pressure exerted with the thumb of 10 lbf. (45 N), the movement should be approximately 3/8” (10 mm).
- Adjust if necessary:
  a. Loosen screws (3) (fig. C3/2) two to three turns.
  b. Pivot the compressor assembly to obtain the belt tension required.
  c. Retighten screws (3) (fig. C3/2).
- Replace the protective guard (2) (fig. C3/1).



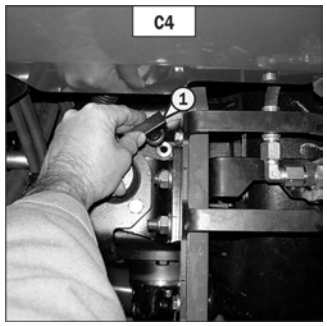


IMPORTANT: *If the compressor belt is changed, check the tension again after the first 20 hours of operation.*

C4 - ANGLE GEAR BOX OIL LEVEL

CHECK

Park the telescopic handler on level ground with the boom raised and the engine stopped.

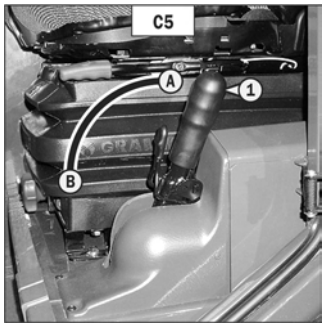


- Remove level plug (1) (fig. C4).
- Wipe the dipstick and check for the correct level between the MIN and MAX marks.
- If necessary, add oil (see chapter: 6 - MAINTENANCE: E5 - ANGLE GEAR BOX OIL).

C5 - PARKING BRAKE

CHECK - ADJUST

Park the telescopic handler on a slope of less than 15% with the rated load in the transport position.



- Check the tightening adjustment by applying the parking brake to position A (fig. C5).
- The adjustment is correct if the telescopic handler is held stationary on a slope.
- Adjust if necessary.
- Press and release the brake pedal, then release the parking brake, putting it in position B (fig. C5).
- Progressively tighten the end piece of the lever (1) (fig. C5) and recheck braking adjustment.
- Repeat the operation until the correct braking adjustment is obtained.

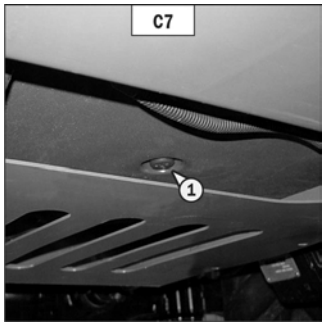
C6 - CAB VENTILATION FILTER

CHANGE

- Lift up protective cover (1) (fig. C6).
- Remove filter (2) (fig. C6) and install new replacement filter (see chapter: 6 - MAINTENANCE: FILTER CARTRIDGES AND BELTS).
- Replace the protective cover.

C7 - HEATER CONTROL VALVE

CLEAN

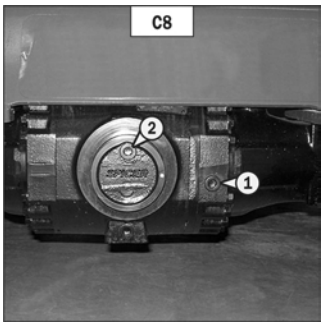


- Because the control valve (1) (fig. C7) is located under the cab, it is possible for it to become spattered with mud and obstructed. Clean if necessary.

C8 - FRONT AND REAR AXLE DIFFERENTIAL OIL LEVEL

CHECK

Park the telescopic handler on level ground with the engine stopped.

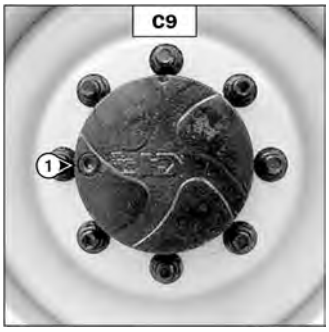


- Remove level plug (1) (fig. C8). The oil should be flush with the edge of the hole.
- If necessary, add oil (see chapter: 6 - MAINTENANCE: LUBRICANTS AND FUEL) at the filler port (2) (fig. C8).
- Replace and tighten the level plug (1) (fig. C8) [tightening torque: 25 to 36 lbs.-ft. (34 to 49 Nm)].
- Repeat the operation for both differentials.

C9 - FRONT AND REAR AXLE PLANETARIES OIL LEVEL

CHECK

Park the telescopic handler on level ground with the engine stopped.



- Check the level on both front axle planetaries.
- Place level plug (1) (fig. C9) in the horizontal position.
- Remove the level plug; the oil should be flush with the edge of the hole.
- If necessary, add oil (see chapter: 6 - MAINTENANCE: LUBRICANTS AND FUEL) through the same hole.
- Replace and tighten the level plug (1) (fig. C9) [tightening torque: 25 to 36 lbs.-ft. (34 to 49 Nm)].
- Repeat the operation on both rear axle planetaries.

D - EVERY 500 HOURS SERVICE

Perform the operations described previously as well as the following operations:

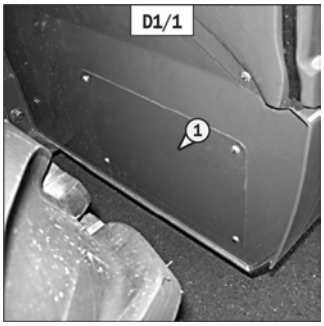
D1 - ENGINE OIL

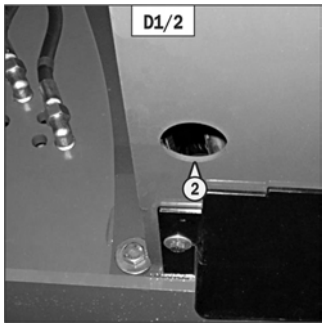
DRAIN

Park the telescopic handler on level ground, let the engine run at idle for a few minutes, and then stop the engine.

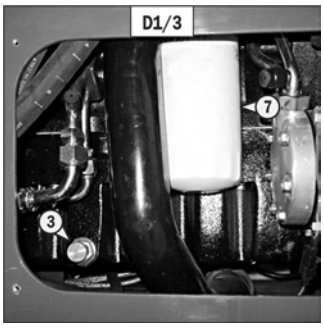
DRAINING THE OIL

- Open the engine cover.
- Remove access panel (1) (fig. D1/1).

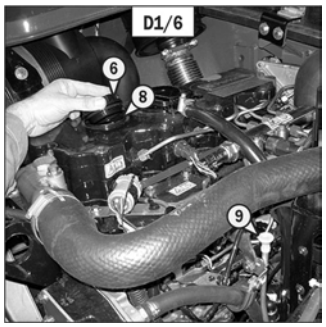




- Place a container under drain plug (2) (fig. D1/2) and unscrew the plug (3) (fig. D1/3).
- Remove the drain hose (4) (fig. D1/4).



- Place one end of the drain hose in the container and tighten the union onto the drain port 5 (fig. D1/5).
- Remove the filler cap (6) (fig. D1/6) to ensure that the oil drains properly



IMPORTANT: *Dispose of the drain oil in an ecological manner.*

D2 - ENGINE OIL FILTER

CHANGE

REPLACING THE FILTER

- Remove engine oil filter (7) (fig. D1/3); discard the filter and the filter seal.
- Clean the filter mounting surface with a clean, lint-free cloth.
- Fill the new oil filter with engine oil and lightly grease the seal (see chapter: 6 - MAINTENANCE: FILTER CARTRIDGES AND BELTS).
- Install the new oil filter.

IMPORTANT: *Tighten the oil filter by hand, and then secure the filter with a quarter turn more.*

REFILLING THE OIL

- Loosen, clean and replace the drain hose (4) (fig. D1/4).
- Replace and tighten drain plug (3) (fig. D1/3).
- Replace access panel (1) (fig. D1/1).
- Fill with oil (see chapter: 6 - MAINTENANCE: LUBRICANT AND FUEL) by filler port (8) (fig. D1/6).
- Wait a few minutes to allow the oil to flow into the crankcase.
- Start the engine and let it run for a few minutes.
- Check for possible leaks at the drain plug and the oil filter.
- Stop the engine, wait a few minutes and check that the level is between the two notches on the dipstick (9) (fig. D1/6).
- Top up if necessary.

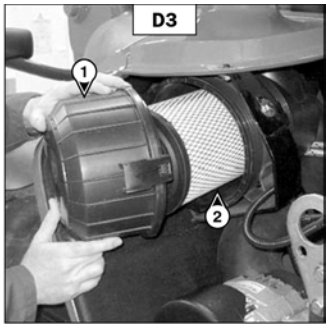
D3 - DRY AIR FILTER CARTRIDGE

CHANGE

In case of use in a very dusty conditions, the checking and cleaning period of the cartridge must be reduced to 250 hours.

IMPORTANT: *Change the cartridge in a clean location, with the engine stopped. Never run the engine with the air filter removed or damaged.*

- Open the engine cover.
- Loosen the clips and remove cover (1) (fig. D3).
- Gently remove the cartridge (2) (fig. D3), taking care to avoid spilling the dust.
- Leave the safety cartridge in place.



- The following parts must be cleaned with a damp, clean lint-free cloth:
  - The inside of the filter and cover.
  - The inside of the filter inlet hose.
  - The gasket surfaces on the filter and on the cover.
- Check pipes and connections between the air filter and the engine, and the connection and condition of the filter indicator.
- Before installing, check the condition of the new cartridge (see chapter: 6 - MAINTENANCE: FILTER CARTRIDGES AND BELTS).
- Install the cartridge onto the filter axis and push it in, pressing the edges and not the middle.
- Reassemble the cover, with the dust valve downward.

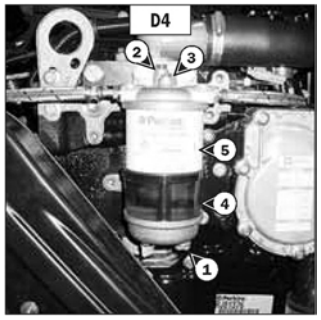
D4 - FUEL PRE-FILTER

CHANGE

WARNING

Make sure the electrical system on the telescopic handler is disconnected, otherwise fuel will be released if the fuel pump is on.

- Open the engine cover.
- Carefully clean the outside of the filter and its holder, to prevent dust from getting into the fuel system.
- Place a container under the pre-filter and drain it using drain plug (1) (fig. D4).
- Remove the bleeder screw (2) (fig. D4) in order to ensure the the fuel is drained properly.



- Unscrew locking screw (3) (fig.D4).
- Remove glass bowl (4) (fig. D4) and discard the filter cartridge (5) (fig. D4) as well as its seals.
- Clean the inside of the filter head and the housing,

using a brush and clean diesel fuel.

- Re-assemble using a new cartridge and seals (see chapter: 6 - MAINTENANCE: FILTER CARTRIDGES AND BELTS).
- If necessary, bleed the fuel circuit (see chapter: 6 - MAINTENANCE: G3 - FUEL SYSTEM).

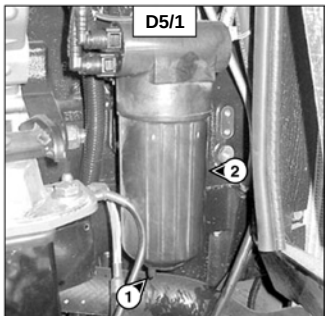
D5 - FUEL FILTER CARTRIDGE

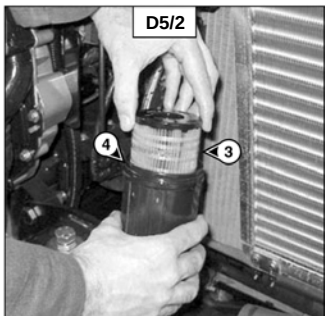
CHANGE

WARNING

Make sure the electrical system on the telescopic handler is disconnected, otherwise fuel will be released if the fuel pump is on.

- Open the engine cover.
- Carefully clean the outside of the filter and its holder, to prevent dust from getting into the fuel system.
- Place a container under the filter and drain it via drain plug (1) (fig. D5/1).
- Loosen the body of filter (2) (fig. D5/1).



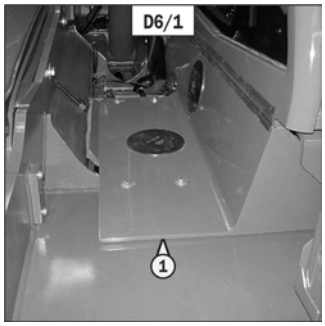


- Remove the filter cartridge by pressing the cartridge (3) (fig. D5/2) down against the pressure of the spring and turning it to the left.
- Insert a new cartridge (see chapter: 6 - MAINTENANCE: FILTER CARTRIDGES AND BELTS), by pressing the cartridge (3) (fig. D5/2) down against the pressure of the spring and turning it to the right to lock it into the body of the filter.
- Place the new seal (4) (fig. D5/2) onto the body of the filter and lubricate the contact surface using clean engine oil.
- Remount the body of the filter onto its holder. Hand-tighten it and then secure it with a quarter turn more.
- Close drain plug (1) (fig. D5/1) and remove the container.
- Before starting the engine, leave the ignition on for one minute, to give the fuel pump time to relieve air from the filter.
- Start the engine and make sure there is no leakage.

D6 - TRANSMISSION OIL FILTER

CHANGE

- Remove the cover plate (1) (fig. D6/1).
- Remove and discard the transmission oil filter (2) (fig. D6/2).



- Carefully clean the filter head with a clean, lint-free cloth.
- Slightly lubricate the new seal and fit the seal on the filter.
- Fill the new transmission oil filter (see chapter: 6 - MAINTENANCE: FILTER CARTRIDGES AND BELTS) with oil (see chapter: 6 - MAINTENANCE: LUBRICANTS AND FUEL).
- Install the filter, making sure that the seal is correctly positioned and tightened.

IMPORTANT: *Tighten the transmission oil filter by hand, and then secure the filter with a quarter turn more.*

- Replace the cover plate (1) (fig. D6/1).

D7 - HYDRAULIC RETURN OIL FILTER CARTRIDGE

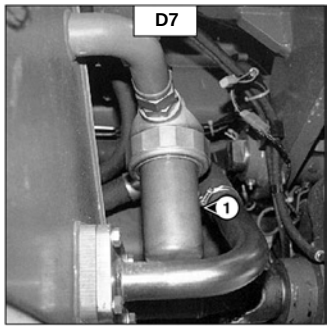
CHANGE

Stop the engine and relieve the pressure from the circuits by cycling the hydraulic controls.

IMPORTANT: *Thoroughly clean the outside of the filter and its surroundings before servicing, to prevent contaminating the hydraulic system.*

- Place a container under hydraulic filter drain (1) (fig. D7).
- Unscrew the body of the filter.

- Remove the hydraulic return oil filter cartridge and install a new replacement cartridge (see chapter: 6 - MAINTENANCE: FILTER CARTRIDGES AND BELTS).



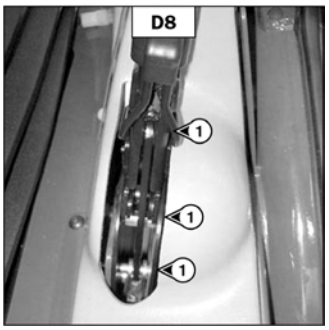
- Make sure that the cartridge is correctly positioned, and replace the body of the filter.

IMPORTANT: *Tighten the body of the filter by hand, and then secure the body of the filter with a quarter turn more.*

D8 - PARKING BRAKE LEVER MECHANISM

GREASE

- Clean and lubricate pivot pins (1) (fig. D8) with oil (see chapter: 6 - MAINTENANCE: LUBRICANTS AND FUEL).



D9 - CAB VENTILATION FILTER

CLEAN

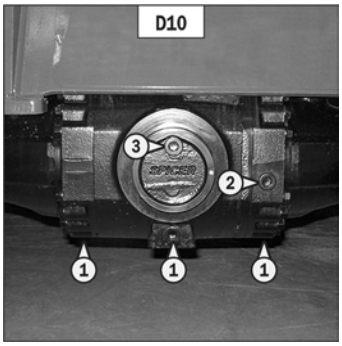
- Lift up the protective cover (1) (fig. D9).
- Remove filter (2) (fig. D10).
- Clean the filter with a compressed air jet.
- Check its condition and replace if necessary (see chapter: 6 - MAINTENANCE: FILTER CARTRIDGES AND BELTS).
- Reinstall the filter and protective cover.

D10 - FRONT AND REAR AXLE DIFFERENTIAL OIL

DRAIN

Park the telescopic handler on level ground with the engine stopped and the differential oil still warm.

IMPORTANT: *Dispose of the drain oil in an ecological manner.*



- Place a container under the drain plugs (1) (fig. D10) and unscrew the plugs.
- Remove level plug (2) (fig. D11) and filler plug (3) (fig. D10) to ensure that the oil drains properly.
- Replace and tighten drain plugs (1) (fig. D10) [tightening torque: 25 to 36 ft.-lbs. (34 to 49 Nm)].
- Fill with oil (see chapter: 6 - MAINTENANCE: LUBRICANTS AND FUEL) at filler port (3) (fig. D10).
- The level is correct when the oil level is flush with the edge of port (2) (fig. D11).
- Check for any leaks at the drain plugs.
- Replace and tighten level plug (2) (fig. D10) [tightening torque: 25 to 36 ft.-lbs. (34 to 49 Nm)] and filler plug (3) (fig. D10) [tightening torque: 25 to 36 ft.-lbs. (34 to 49 Nm)].
- Repeat this operation for the rear axle differential.

E - EVERY 1000 HOURS OF SERVICE

Perform the operations described previously as well as the following operations:

E1 - FUEL TANK

CLEAN

WARNING

Do not smoke or work near an open flame while performing these operations.

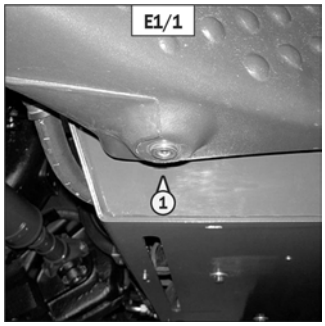
Park the telescopic handler on level ground with the engine stopped.

- Inspect the fuel system and tank for leaks.
- In the event of a leak, contact your dealer.

⚠ WARNING

Never weld on the fuel tank, because welding can cause an explosion or a fire.

- Place a container under drain plug (1) (fig. E1/1) and unscrew the plug.
- Remove cap (2) (fig. E1/2).

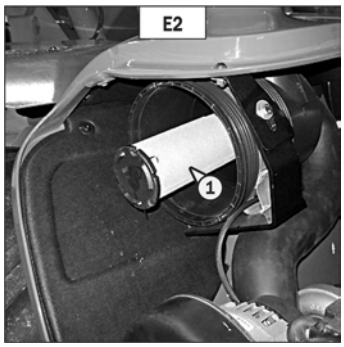


- Rinse out with 2-1/2 gallons (10 litres) of clean fuel at filler port (3) (fig. E1/2).
- Replace and tighten drain plug (1) (fig. E1/1) [tightening torque: 21 to 29 ft.-lbs. (29 to 39 Nm)].
- Fill the fuel tank with clean fuel (see chapter: 6 - MAINTENANCE: LUBRICANTS AND FUEL) filtered through a strainer or a clean, lint-free cloth and replace the filler plug (2) (fig. E1/2).

E2 - SAFETY DRY AIR FILTER CARTRIDGE

CHANGE

- For the disassembly and reassembly of the cartridge, see chapter: 6 - MAINTENANCE: D3 - AIR FILTER CARTRIDGE.
- Gently remove the air filter safety cartridge (1) (fig. E2), taking care to avoid spilling the dust.



- Clean the gasket surface on the filter with a damp, clean lint-free cloth.
- Before mounting, check the condition of the new safety cartridge (see chapter: 6 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS).
- Install the cartridge onto the filter axis and push it in, pressing the edges and not the middle.

NOTE: *The period for changing the safety cartridge is given for information only. The safety cartridge must be changed after every two changes of the air filter cartridge.*

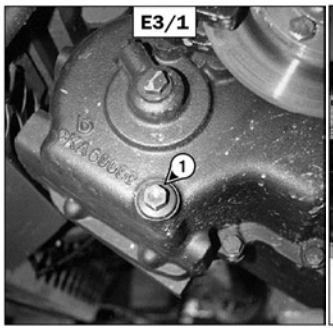
E3 - TRANSMISSION OIL

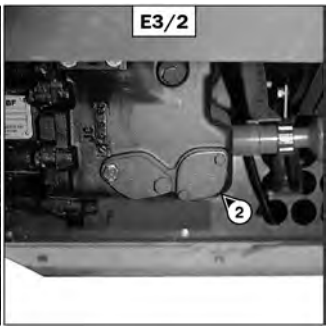
DRAIN

Park the telescopic handler on level ground with the engine stopped and the transmission oil still warm.

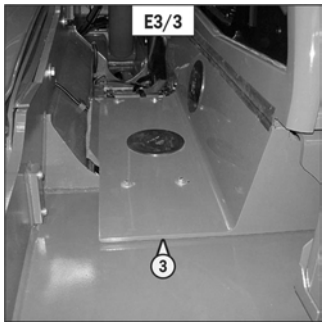
DRAINING THE OIL

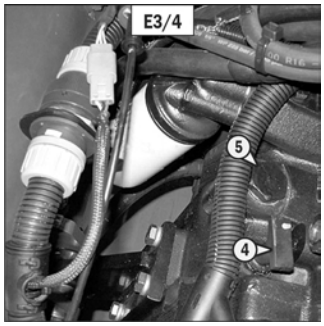
- Place a container under drain plug (1) (fig. E3/1) and under cover (2) (fig. E3/2) and unscrew the drain plug.





- Remove cover plate (3) (fig. E3/3).
- Remove dipstick (4) (fig. E3/4) and unscrew filler plug (5) (fig. E3/4) to ensure that the oil drains properly.





IMPORTANT: *Dispose of the drain oil in an ecological manner.*

E4 - TRANSMISSION HOUSING STRAINER

CLEAN

CLEANING THE STRAINER

- Remove cover (2) (fig. E3/2) and set aside the o-ring joint and sealing washer.
- Allow the rest of the oil to drain.
- Remove and clean the strainer using a compressed air jet.
- Clean the magnetic section on the plate.
- Replace the assembly and tighten plate (2) (fig. E3/2) [tightening torque: 13 to 23 ft.-lbs. (18 to 31 Nm)].

REFILLING THE OIL

- Replace and tighten drain plug (1) (fig. E3/1) [tightening torque: 25 to 40 ft.-lbs. (34 to 54 Nm)].
- Fill with oil (see chapter: 6 - MAINTENANCE: LUBRICANTS AND FUEL) at filler port (5) (fig. E3/4) and replace the plug.
- Start the engine and let it run for a few minutes.
- Check for leaks from the drain plug and cover.
- Stop the engine, and within five minutes of the engine being stopped, check on the dipstick (4) (fig. E3/4) for the correct level between the MIN and MAX marks.
- Top up if necessary.
- Replace the cover plate (3) (fig. E3/3).

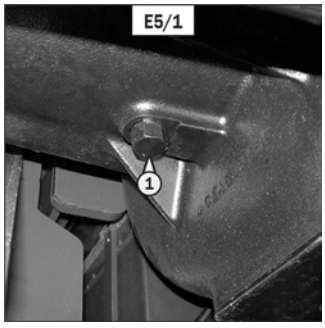
E5 - ANGLE GEAR BOX OIL

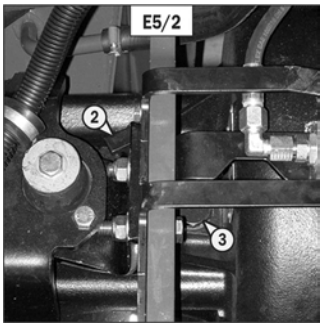
DRAIN

Park the telescopic handler on level ground with the engine stopped and the angle gear box oil still warm.

- Place a container under drain plug (1) (fig. E5/1) and unscrew the plug.

IMPORTANT: *Dispose of the drain oil in an ecological manner.*





- Remove dipstick (2) (fig. E5/2) and unscrew filler cap (3) (fig. E5/2) to ensure that the oil drains properly.
- Replace and tighten drain plug (1) (fig. E5/1) [tightening torque: 15 to 21 ft.-lbs. (20 to 29 Nm)].
- Fill with oil (see chapter: 6 - MAINTENANCE: LUBRICANTS AND FUEL) at filler port (3) (fig. E5/2) and replace the filler cap.
- Check for the correct level between the MIN and MAX marks on the dipstick (2) (fig. E5/2).
- Check for any leaks at the drain plug.

E6 - HYDRAULIC OIL

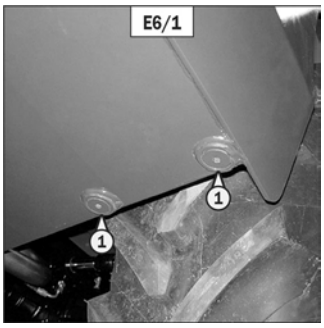
DRAIN

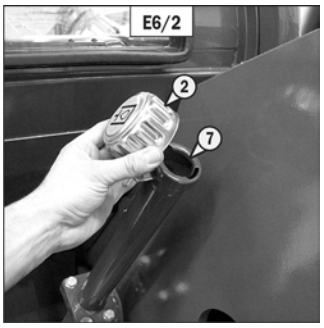
Park the telescopic handler on level ground with the engine stopped and telescopic boom retracted and lowered as far as possible.

IMPORTANT: *Before servicing, thoroughly clean the area surrounding the drain plugs and the suction cover on the hydraulic tank.*

DRAINING THE OIL

- Place a container under drain plug (1) (fig. E6/1) and unscrew the plug.
- Remove filler cap (2) (fig. E6/2) to ensure that the oil drains properly.





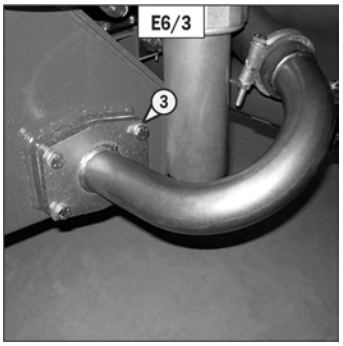
IMPORTANT: *Dispose of the drain oil in an ecological manner.*

E7 - SUCTION STRAINER FOR HYDRAULIC OIL TANK

CLEAN

CLEANING THE STRAINER

- Remove suction strainer cover (3) (fig. E6/3).
- Remove and clean the strainer using a compressed air jet. Check its condition and replace if necessary (see chapter: 6 - MAINTENANCE: FILTER CARTRIDGES AND BELTS).



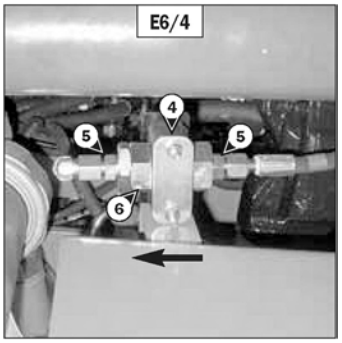
- Replace the strainer and tighten the suction strainer cover (3) (fig. E6/3) [tightening torque: 60 ft.-lbs. (81 Nm)] making sure the seal is in the correct position.

E8 - DISTRIBUTOR CONTROL HEAD FILTER

CHANGE

REPLACING THE DISTRIBUTOR CONTROL HEAD FILTER

- Remove the half clamp (4) (fig. E6/4).
- Disconnect the two couplings (5) (fig. E6/4) and replace the filter (6) fig. E6/4).



IMPORTANT: *Be sure to install filter (6) (fig. E6/4) in the same direction as the arrow.*

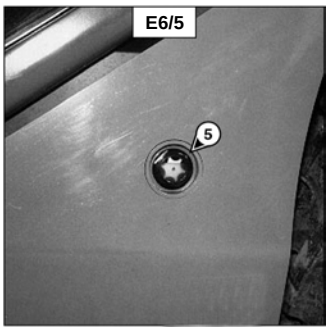
- Re-install the half clamp (4) (fig. E6/4).

E9 - FILTER CAP FOR HYDRAULIC OIL TANK

CHANGE

FILLING THE OIL TANK

- Clean and reinstall the drain plug (1) (fig. E6/1) [tightening torque: 21 to 29 ft.-lbs. (29 to 39 Nm)].
- Fill with oil (see chapter: 6 - MAINTENANCE: LUBRICANTS AND FUEL) at filler port (7) (fig. E6/2).
- Observe the oil level in sight glass (5) (fig. E6/5); the oil level should be at the level of the red point.



- Check for any possible leaks at the drain plug.
- Replace filler plug (2) (fig. E6/2) with a new filler plug (see chapter: 6 - MAINTENANCE: FILTER CARTRIDGES AND BELTS).

E10 - SEATBELT

CHECK

- Check the following points:

SEATBELT WITH TWO ANCHOR POINTS

- Tightness of the anchor points on the seat
- Cleanliness of the belt and the locking mechanism
- Actuation of the locking mechanism
- Condition of the belt (cuts, curled edges)

RETRACTABLE SEATBELT WITH TWO ANCHOR POINTS

- The correct retracting of the belt
- Condition of the reel guards
- Roller locking mechanism when the belt is given a sharp pull

WARNING

Under no circumstances should the telescopic handler be used if the seatbelt is faulty (not latching, has cuts or tears, etc.). Replace the seatbelt immediately.

IMPORTANT: *After an accident that involved stressing the seatbelt, replace the seatbelt.*

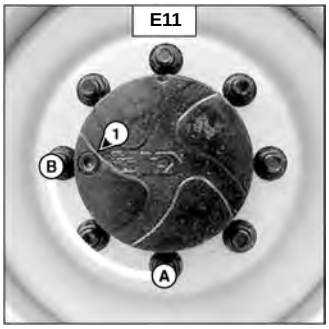
E11 - FRONT AND REAR AXLE PLANETARIES OIL

DRAIN

Park the telescopic handler on level ground with the engine stopped and the planetaries still warm.

IMPORTANT: *Dispose of the drain oil in an ecological manner.*

- Drain and change both front axle plantaries:
  - Place drain plug (1) (fig. E11) in position A.
  - Place a container under the drain plug and unscrew the plug.
  - Let the oil drain fully.
  - Place the drain port in position B, i.e., in a level position.



  - Fill with oil (see chapter: 6 - MAINTENANCE: LUBRICANTS AND FUEL) by level port (1) (fig. E11).
  - The level is correct when the oil level is flush with the edge of the hole.
  - Reinstall and tighten the drain plug (1) (fig. E11) [tightening torque: 25 to 36 ft.-lbs. (34 to 49 Nm)].
  - Repeat this operation on both rear axle planetaries.

F - EVERY 2000 HOURS OF SERVICE

Perform the operations described previously as well as the following operations:

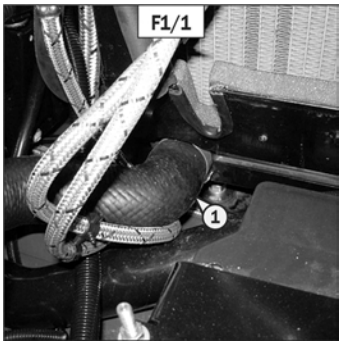
F1 - COOLANT

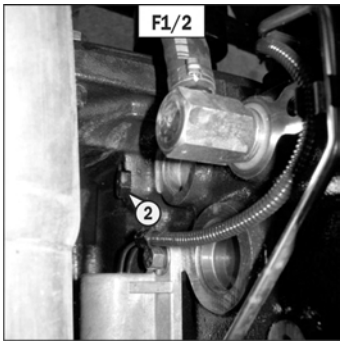
DRAIN

These operations are to be performed as necessary, or every two years at the beginning of winter. Park the telescopic handler on level ground with the engine stopped and cold.

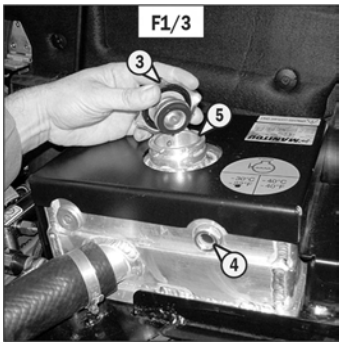
DRAINING THE COOLANT

- Open the engine cover and lift the battery cover.
- Set a container under hose (1) (fig. F1/1) on the radiator and drain plug (2) (fig. F1/2) of the engine block. Remove hose (1) from the radiator and loosen drain plug (2) on the engine block.





- Remove the radiator filler cap (3) (fig. F1/3).



- Let the coolant drain entirely while ensuring that the ports do not get clogged.
- Check the condition of the hoses as well as the clamping devices and change the hoses if necessary.
- Rinse the cooling system with clean water. Use a cleaning agent if necessary.

REFILLING THE COOLANT

- Re-install hose (1) (fig. F1/1) and tighten drain plug (2) (fig. F1/2) [tightening torque: 30 ft.-lbs. (40 Nm)].
- Slowly fill the cooling system with coolant (see chapter: 6 - MAINTENANCE: LUBRICANTS AND FUEL) through filler neck (5) (fig. F1/3) to the middle of the site gauge (4) (fig. F1/3).
- Replace radiator filler cap (3) (fig. F1/3).
- Run the engine at idle for a few minutes.

- Check for any leaks.
- Check the level and refill if necessary.

IMPORTANT: *The engine does not contain corrosion protection and must be filled during the entire year with a mixture containing 50% ethylene glycol-based antifreeze.*

F2 - AIR CONDITIONING

- **CLEANING THE CONDENSER AND EVAPORATOR COILS (*)**
- **CLEANING THE HOTWELL AND THE PRESSURE RELIEF VALVE (*)**
- **COLLECTING THE REFRIGERANT TO REPLACE THE FILTER-DRIER (*)**
- **RELOADING REFRIGERANT AND CHECKING THE THERMOSTATIC CONTROL AND PRESSURE SWITCHES (*)**

NOTE: *When opening the evaporator unit, remember to replace the cover seal.*

(*): CONSULT YOUR DEALER.

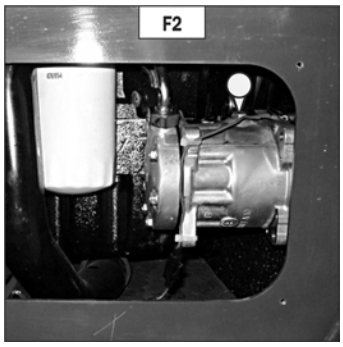
WARNING

Never try to repair the air conditioning system yourself. To recharge the circuit, always contact your dealer, who has the appropriate parts, technical training and necessary tools.

- Do not open the circuit under any circumstances, because this will cause the refrigerant to be lost.
- The air conditioning system contains a gas, which can be hazardous under certain conditions. This gas, refrigerant R134a, is colorless, odorless and heavier than air.
- The compressor has an oil level gauge (fig, F2). Never unscrew this gauge, because it would depressurize the installation. The oil level is only checked when changing the oil in the system.

WARNING

- **If refrigerant is inhaled, take those affected into fresh air, give them oxygen or artificial respiration if necessary and call a doctor.**
- **If refrigerant contacts the skin, wash immediately under running water and remove any contaminated garments.**
- **If refrigerant contacts the eyes, rinse in clear water for 15 minutes and call a doctor.**



G - PERIODIC MAINTENANCE

G1 - BLEEDING THE FUEL SYSTEM

These operations are necessary only in the following cases:

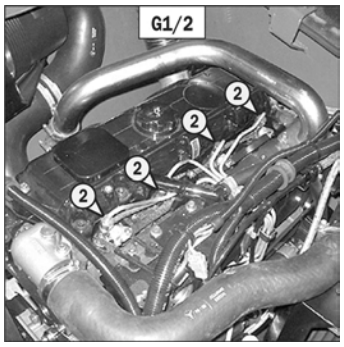
- A component of the fuel system is replaced.
- A drained fuel tank.
- Running out of fuel.

Ensure that the fuel level in the tank is sufficient and bleed in the following order:

- Open the engine cover.
- Turn on the ignition for three minutes, to give the lift pump time to release air from the filter.
- Switch off the ignition key.

BLEEDING THE INJECTORS

- Remove the injectors cover (1) (fig. G1/1).
- Loosen the high pressure connectors (2) (fig. G1/2) of all the injectors.
- Activate the starter until the diesel fuel flows out free of air at the high pressure connectors (2) (fig. G1/2).



IMPORTANT: *Do not engage the starter motor for more than 30 seconds. Let it cool between unsuccessful starting attempts.*

- Tighten the connections while the diesel fuel is flowing out [tightening torque: 22 ft.-lbs. (30 Nm)].
- The engine is then ready to be started.
- Run the engine slowly for five minutes immediately after bleeding the fuel system, to ensure that the injection pump has been bled thoroughly.

NOTE: *If the engine runs properly for a short time and then stops or runs irregularly, check for possible leaks in the low pressure circuit. If in doubt, contact your dealer.*

G2 - WHEELS

CHANGE

For this operation, use a hydraulic jack and a safety support.

WARNING

In the event of a wheel being changed on a public highway, follow this procedure:

- Stop the telescopic handler, if possible on even and hard ground. Apply the parking brake.
- To stop the telescopic handler (see chapter: 4 - OPERATING AND SAFETY INSTRUCTIONS: G - STOPPING THE TELESCOPIC HANDLER).
- Switch on the hazard warning lights.
- Block the telescopic handler in both directions on the wheel opposite to the wheel to be changed.
- Break loose the nuts of the wheel to be changed.
- Place the jack under the flared axle tube, as near as possible to the wheel and adjust the jack (fig. G2/1).

- Lift until the tire comes off the ground, and put the safety support in place under the axle (fig. G2/2).

- Completely loosen and remove the wheel nuts.
- Remove the wheel and roll it to the side.
- Install the new wheel on the wheel hub.
- Replace the nuts by hand. If necessary, grease them.
- Remove the safety support and lower the telescopic handler with the jack.
- Tighten the wheel nuts with a torque wrench (see chapter: 6 - MAINTENANCE: A - DAILY OR EVERY 10 HOURS SERVICE for tightening torque).

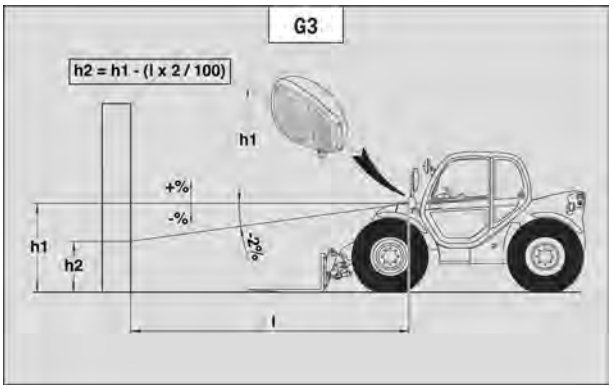
G3 - ADJUSTING FRONT HEADLAMPS

RECOMMENDED SETTING

Set the low beam to -2% in relation to the horizontal line of the headlamp.

ADJUSTING PROCEDURE

- Park the telescopic handler unloaded and in the transport position and facing to a white wall on flat, level ground (fig. G3).



- Check the tire pressures (see chapter: 1 - SPECIFICATIONS: SPECIFICATIONS).
- Place the shift lever in neutral and apply the parking brake.

CALCULATING THE HEIGHT OF THE LOW BEAM (H2):

- h1 = Height of the headlamp in relation to the ground
- h2 = Height of the dipped beam
- l = Distance between the headlamp and the wall

SERVICE SCHEDULE

A = ADJUST C = CHECK D = DESCALE G = GREASE	N = CLEAN P = BLEED R = CHANGE V = DRAIN	After the first 50 hours	Daily or 10 hours	50 hours	250 hours	1 year or 500 hours	1 year or 1000 hours	2000 hours	4000 hours	Periodically
Engine Oil			C							
Engine Coolant Level			C							
Fuel Level			C							
Fuel Pre-Filter			C							
Cyclonic Pre-Filter			N							
Transmission Oil Level			C							
Tire Pressures and Wheel Nuts Torque			C							
Boom Wear Pads			C/G*							
General Machine Operation and Condition			C							
Dry Air Filter Element				C/N						
Radiator Core				N						
Air Conditionor Condenser Core				N						
Transmission Universal Joints				G						
Boom				G						
Hydraulic Oil Level				C						
Brake Fluid Level				C						
Windshield Washer Fluid Level				C						
Cab Door				G						
Cab Ventilation Filter				N						
Front and Rear Axle Spindles				G						
Rear Axle Oscillation				G						
Fan Belt Tension		A			C/A					
Alternator Belt Tension		A			C/A					
Air Conditionor Compressor Belt Tension		A			C/A					
Angle Gear Box Oil Level					C					
Parking Brake					C/A					
Cab Ventilation Filter					R					
Heater Control Valve					N					
Front and Rear Axle Differential Oil Level					C					
Front and Rear Axle Planetaries Oil Level					C					
Engine Oil		V				V				
Engine Oil Filter		R				R				
Dry Air Filter Element						R				
Fuel Pre-Filter		R				R				
Fuel Filter Cartridge		R				R				
Transmission Oil Filter		R				R				
Hydraulic Return Oil Filter Cartridge		R				R				
Parking Brake Lever Mechanism						G				
Cab Ventilation Filter						N				
Front and Rear Axle Differential Oil		V				V				
Fuel Tank							N			
Safety Dry Air Filter Element							R			
Transmission Oil		V					V			
Transmission Housing Strainer							N			
Angle gear box oil		V					V			
Hydraulic Oil							V			
Suction Strainer for Hydraulic Tank							N			
Filter Cap for Hydraulic Oil Tank							R			
Distributor Control Head Filter							R			
Seat Belt							C			
Front and Rear Axle Planetaries Oil		V					V			
Adjust the front headlamps							C			
Engine Coolant								V		

(*): Every 10 hours during the first 50 hours, then again every 250 hours.
(**): Consult your dealer.

A = ADJUST C = CHECK D = DESCALE G = GREASE	N = CLEAN P = BLEED R = CHANGE V = DRAIN	After the first 50 hours	Daily or 10 hours	50 hours	250 hours	1 year or 500 hours	1 year or 1000 hours	2000 hours	4000 hours	Periodically
Park Brake Mechanism on Transmission						G**				
Carriage Forks for Wear						C**				
Engine Mounts							C**			
Engine Rates							C**			
Engine Valve Clearances		C**					C**			
Transmission Mounts							C**			
Transmission Controls							C**			
Boom Pads Wear							C**			
Speeds of Hydraulic Movements							C**			
Condition of Hoses and Flexible Tubes							C**			
Condition of Cylinders (leakage, rods)							C**			
Condition of Wiring Harness and Cables							C**			
Lights and Signals							C**			
Warning Indicators							C**			
Brake Oil							V**			
Brake System							P**			
Brake System Pressure							C**			
Brakes							A**			
Tire and Wheel Condition							C**			
Condition of Rear View Mirrors							C**			
Structure							C**			
Carriage							C**			
Other Attachment Condition							C**			
Radiator								N/D**		
Water Pump and Thermostat								C**		
Alternator and Starter Motor								C**		
Transmission Pressures								C**		
Convertor Pressure								C**		
Condition of Boom Unit								C**		
Boom Pins and Bushings								C**		
Hydraulic Circuit Pressures								C**		
Hydraulic Circuit Flows								C**		
Hydraulic Oil Tank								N**		
Rear Axle Oscillation								C**		
Steering								C**		
Frame Bearing and Pivot Points								C**		
Front and Rear Axle Brake Disc Wear									C**	
Front and Rear Axle Planetary Universal Joint									C**	
Front and Rear Axle Planetary Clearance									C**	
Steering Swivel Joints									C**	
Transmission Universal Joints									G/C**	
Front and Rear Axle Spindles									G/C**	
Fuel System										P
Wheel										R
Front Headlights										A

(*): Every 10 hours during the first 50 hours, then again every 250 hours.
(**): Consult your dealer.

SERVICE LOG

Date	Hours	Service Procedure

SERVICE LOG

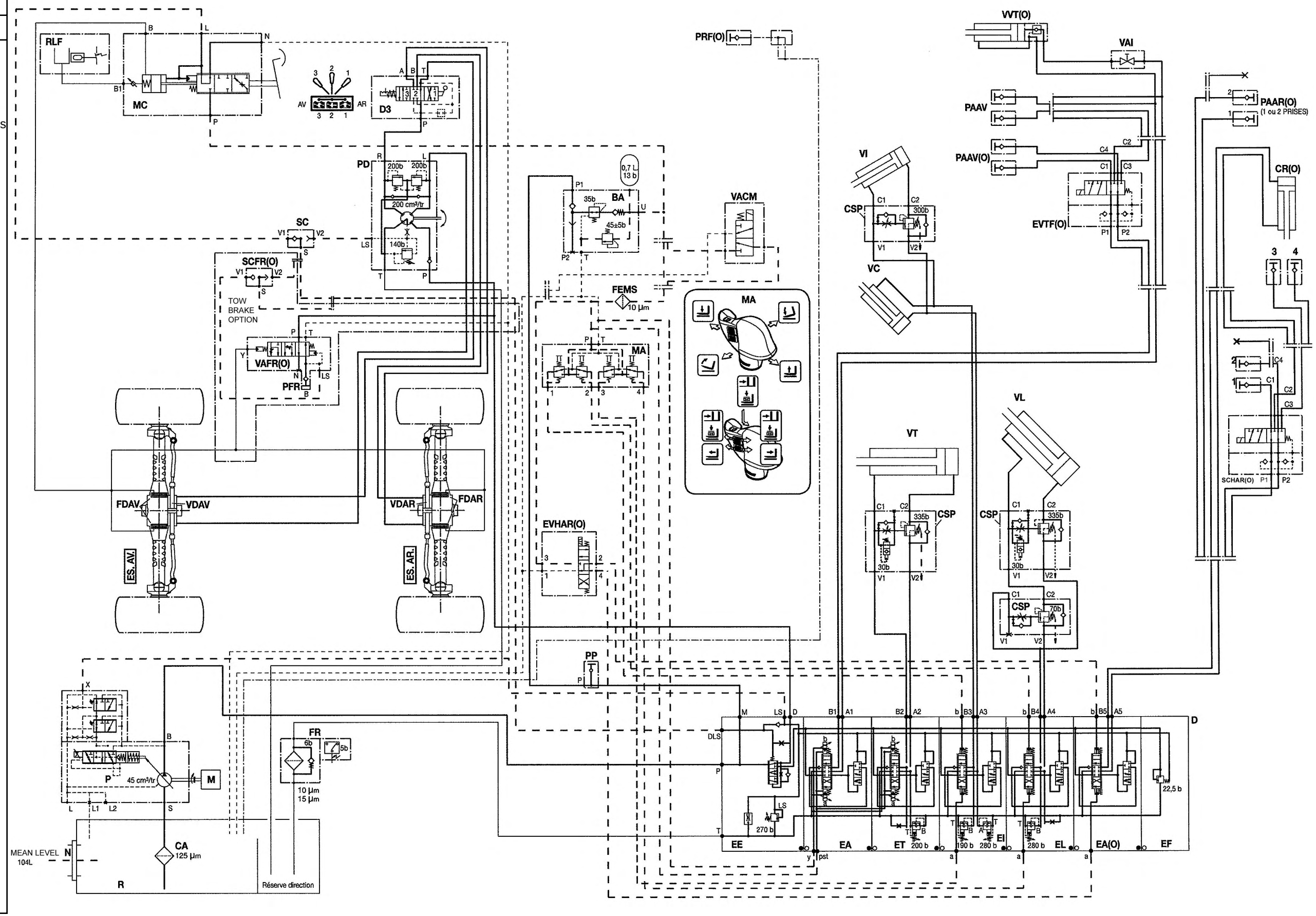
Date	Hours	Service Procedure

SERVICE LOG

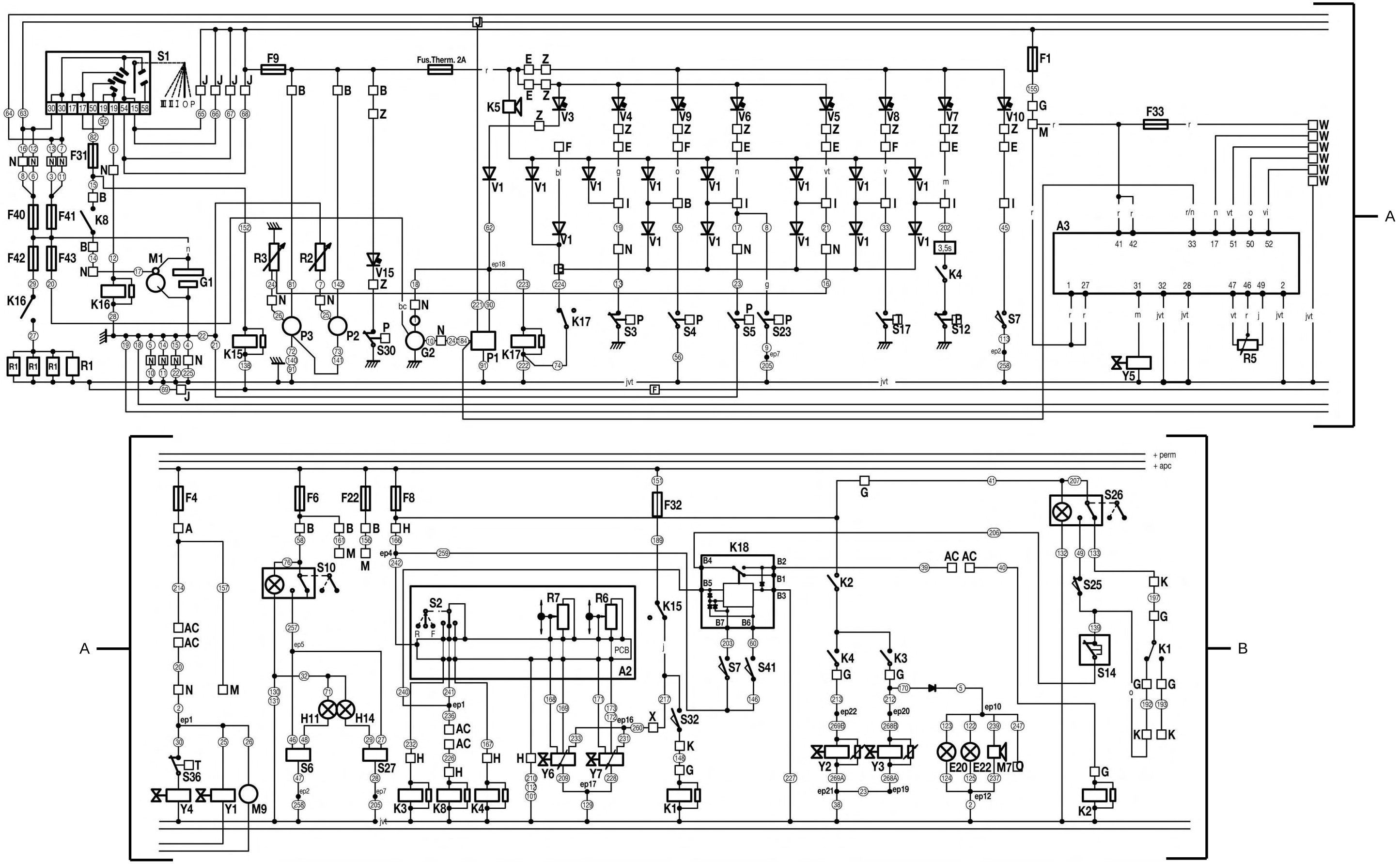
Date	Hours	Service Procedure

Hydraulic Schematic

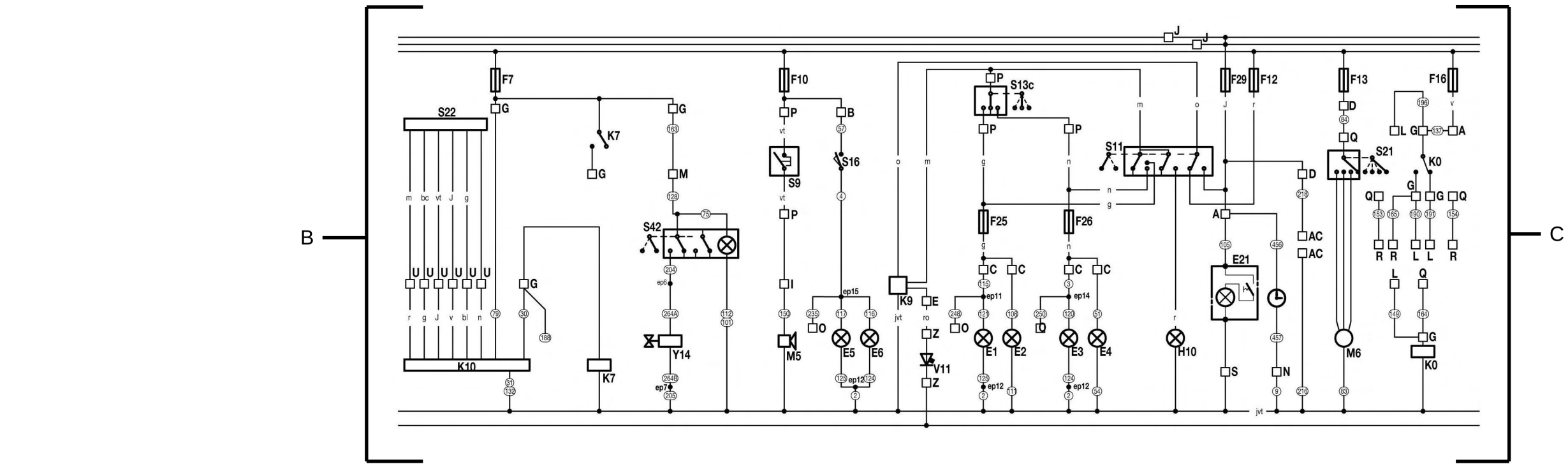
HYDRAULIC DIAGRAM KEY	
ITEM	**DESCRIPTION**
BA	Power unit + Accumulator
CA	Suction Strainer
CSP	Piloted Safety Valve
CR(O)	Towing Hook (Option)
D	Valve Bank 4 or 5 Sections
EE	Inlet Section
EA(O)	Attachment Section
EL	Lift Section
EI	Tilt Section
EA	Attachment Section
ET	Telescope Section
EF	Closing Section
D3	Steer Valve, 3 position Position 1: 4-wheel Position 2: Front wheel Position 3: Crab
EVHAR(O)	Rear Hyd. Electrovalve
EVTF(O)	Boom Head Electrovalve
FDAV	Front Disc Brake
FDAR	Rear Disc Brake
FEMS	Filter Head
FR	EMS Filter
M	Engine
MA	Joystick
MC	Master Cylinder
N	Level
P	Hydraulic Pump
PAAV	Front Attach. Adptr.
PAAV(O)	Front Attach. Adptr. (opt.)
PAAR(O)	Rear Attach. Adptr. (opt.)
PD	Steering Pump
PFR(O)	Trailor Brake Adptr.
PP	Pressure Point
PRF(O)	Drain-back Adptr. (option)
R	Hydraulic Tank
RLF	Brake Fluid Reservoir
SC	Circuit Selector
SCFR(O)	Trailer Brake Select (opt.)
SCHAR(O)	Rear Hyd. Selector (opt.)
VC	Slave Cylinder DE
VI	Tilt Cylinder DE
VDAV	Front Steer Cylinder DE
VDAR	Rear Steer Cylinder DE
VL	Lift Cylinder
VT	Telescope Cylinder DE
VAFR(O)	Trailer Brake Valve (opt.)
VVT(O)	Carriage Lock Cylinder
VAI	Insulation Valve
VACM(O)	Movement Cut-off Valve

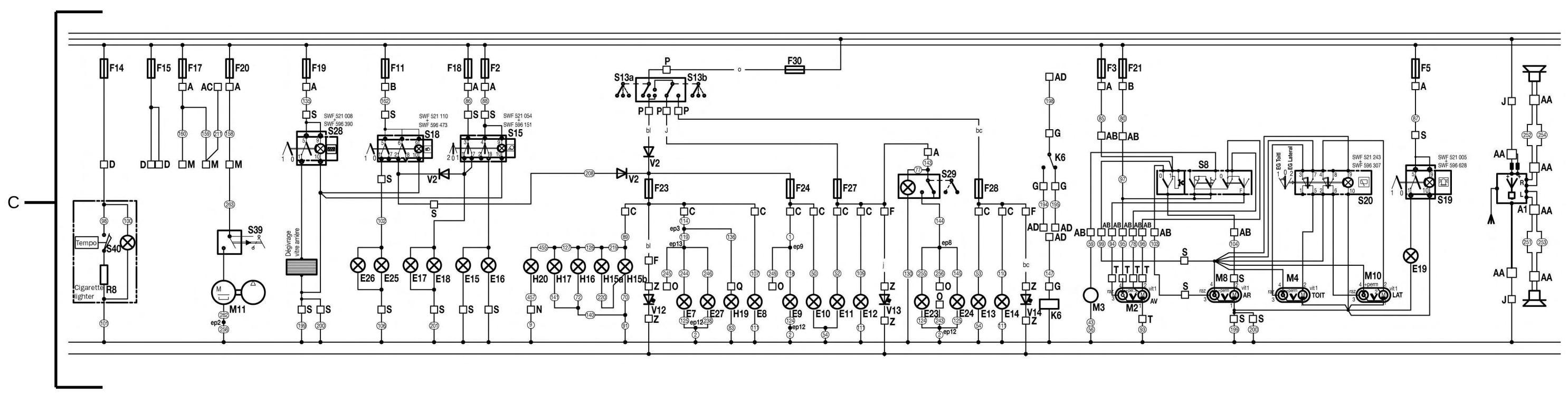


Electrical Schematic



Electrical Schematic





ELECTRICAL DIAGRAM KEY

ITEM DESCRIPTION

ELECTRONIC

A1 . . . . Radio
A2 . . . . Discharge valve module
A3 . . . . ECU Module

LIGHTING

E1 . . . . Rear right turn signal light
E2 . . . . Front right turn signal light
E3 . . . . Rear left turn signal light
E4 . . . . Font left turn signal light
E5 . . . . Left brake light
E6 . . . . Right brake light
E7 . . . . Sidelight rear right
E8 . . . . Sidelight front right
E9 . . . . Sidelight rear left
E10 . . . Sidelight front left
E11 . . . Front left low beam
E12 . . . Front right low beam
E13 . . . Front left headlight
E14 . . . Front right headlight
E15 . . . Working light rear right
E16 . . . Working light rear left
E17 . . . Working light front left
E18 . . . Working light front right
E19 . . . Rotating Beacon
E20 . . . Left rear backup light
E21 . . . Cab light
E22 . . . Right rear backup light
E23 . . . Rear left fog lamp
E24 . . . Rear right fog lamp
E25 . . . Working light left boom
E26 . . . Working light right boom
E27 . . . Numberplate lighting

FUSES

F1 . . . Fuse, Option
F2 . . . Fuse, Rear working light
F3 . . . . Fuse Rear window / roof wiper
F4 . . . . Fuse Engine stop solenoid
F5 . . . . Fuse Revolving light
F6 . . . . Fuse Wheel alignment
F7 . . . . Fuse Overload security
F8 . . . . Fuse Front/Rear/Neutral transmission
F9 . . . . Fuse Indicator / fault alarm
F10 . . . Fuse Brake alarm
F11 . . . Fuse Working lights on boom
F12 . . . Fuse Hazard lights
F13 . . . Fuse Ventilation fan
F14 . . . Fuse Cigarette lighter
F15 . . . Fuse Empty
F16 . . . Fuse Air conditionning
F17 . . . Fuse Empty
F18 . . . Fuse Front working lights
F19 . . . Fuse Rear window defroster
F20 . . . Fuse Pneumatic seat
F21 . . . Fuse Front windshield-wiper / Front windshield washer
F22 . . . Fuse Empty
F23 . . . Fuse Right sidelight / dashboard
F24 . . . Fuse Left sidelight
F25 . . . Fuse Right indicator
F26 . . . Fuse Left indicator
F27 . . . Fuse Low beam lights
F28 . . . Fuse Head lights
F29 . . . Fuse Warning / roof light
F30 . . . Fuse Light switch
F31 . . . Fuse Starter
F32 . . . Fuse Proportional module
F33 . . . Fuse ECU Module
F40 . . . Fuse Equipments
F41 . . . Fuse Equipments
F42 . . . Fuse Preheating
F43 . . . Fuse Alternator
G1 . . . . Battery
G2 . . . . Alternator

INDICATORS

H10 . . . Indicator hazard light
H11 . . . Indicator front wheels alignment
H14 . . . Indicator rear wheels alignment
H15 . . . Indicator Tachometer light
H16 . . . Indicator Engine water temperature
H17 . . . Indicator Fuel gauge
H19 . . . Indicator Fan light
H20 . . . Indicator Clock light

RELAYS

K0 . . . . Relay air conditionning
K1 . . . . Relay Joystick transmission cut-off reverse
K2 . . . . Relay transmission cut-off
K3 . . . . Relay reverse gear
K4 . . . . Relay foward gear
K5 . . . . Relay Buzzer machine fault
K6 . . . . Empty
K7 . . . . Relay movements cut-off
K8 . . . . Relay starter
K9 . . . . Relay Flashing / Warning
K10 . . . Relay Overload safety module
K15 . . . Relay Proportional joystick cut-off
K16 . . . Relay preheating
K17 . . . Relay Lights module
K18 . . . Relay Module transmission cut-off

ELECTRICAL COMPONENTS

M1. . . . Starter
M2. . . . Front Windshield wiper
M3. . . . Front windshield washer
M4. . . . Roof window wiper
M5. . . . Alarm
M6. . . . Fan
M7. . . . Backup alarm
M8. . . . Rear window wiper
M9. . . . Fuel pump
M10. . . Side window wiper
M11. . . Air seat compressor

GAUGES

P1 . . . . Hourmeter / Tachometer
P2 . . . . Indicator fuel gauge
P3 . . . . Indicator engine water temperature

SENSORS

R1 . . . . Preheating plug
R2 . . . . Fuel sender
R3 . . . . Temperature engine water sender
R5 . . . . Pump control module resistance
R6 . . . . Attachment proportional module resistance
R7 . . . . Telescoping proportional module resistance
R8 . . . . Cigarette lighter resistance

SWITCHES

S1 . . . . Ignition switch
S2 . . . . Reverse/forward gear shift
S3 . . . . Engine oil pressure switch
S4 . . . . Brake fluid level switch
S5 . . . . Air filter restiction switch
S6 . . . . Front wheel alignment sensor
S7 . . . . Handbrake switch
S8 . . . . Switch front windshield wiper / washer switch
S9 . . . . Alarm control
S10 . . . Wheels alignment switch
S11 . . . Warning light switch
S12 . . . Transmission oil pressure switch
S13a . . Side light switch
S13b . . Low beam light switch / headlight
S13c . . Flashing switch
S14 . . . Transmission cut-off gear lever switch
S15 . . . Front / rear working light switch
S16 . . . Stop switch
S17 . . . Transmission oil temperature
S18 . . . Boom work lights switch
S19 . . . Revolving light switch
S20 . . . Rear window wiper / roof wiper switch
S21 . . . Fan switch
S22 . . . Overload constraint gauge
S23 . . . Hydraulic filter restiction
S25 . . . Brake pedal transmission cut-off switch
S26 . . . Transmission cut-off switch
S27 . . . Rear wheel alignment sensor
S28 . . . Rear window defroster switch
S29 . . . Rear fog light switch
S30 . . . Steering pressure
S32 . . . Transmission cut-off switch on mono-lever
S33 . . . ECS switch
S36 . . . Cold start switch
S39 . . . Pneumatic seat switch
S40 . . . Cigarette lighter time delay switch
S41 . . . Seat switch
S42 . . . Joystick cut-off switch

ELECTRICAL DIAGRAM KEY

ITEM DESCRIPTION

DIODES

V1 . . . . Diode
V2 . . . . Diode (TUV adaptation)
V3 . . . . Diode (LED) battery charge lamp
V4 . . . . Diode (LED) engine oil pressure lamp
V5 . . . . Diode (LED) engine coolant temperature lamp
V6 . . . . Diode (LED) air/oil restriction lamp
V7 . . . . Diode (LED) transmission oil pressure lamp
V8 . . . . Diode (LED) transmission oil temperature lamp
V9 . . . . Diode (LED) brake fl uid lamp
V10 . . . Diode (LED) brake lamp
V11 . . . Diode (LED) fl ashing/warning light lamp
V12 . . . Diode (LED) side lights lamp
V13 . . . Diode (LED) dipped lights light
V14 . . . Diode (LED) headlights light
V15 . . . Diode (LED) steering fault light

SOLENOIDS

Y1 . . . . Solenoid valve engine stop
Y2 . . . . Solenoid valve forward gear
Y3 . . . . Solenoid valve reverse gear
Y4 . . . . Solenoid valve cold starting
Y5 . . . . Solenoid pump
Y6 . . . . Solenoid valve boom extend/retract proportional
Y7 . . . . Solenoid valve attachment proportional
Y14 . . . Solenoid valve movements neutralization

CONNECTORS

A . . . . . Fuse / relay panel (13 contact plug) X41
B . . . . Fuse / relay panel (13 contact plug) X40
C . . . . . Fuse / relay panel (13 contact plug) X39
D . . . . . Fuse / relay panel (6 contact plug) X37
E . . . . . Fuse / relay panel (8 contact plug)
F . . . . . Fuse / relay panel (8 contact plug)
G . . . . . Fuse / relay panel (21 contact plug) X44
H . . . . . Fuse / relay panel (5 contact plug) X42
I. . . . . Fuse / relay panel (7 contact plug) X38
J . . . . . Relay/fuse panel (8 contact plug + 2 contact plug) X45
K . . . . . K1 X6 relay option provision
L . . . . . K0 X5 relay option provision
M. . . . . Provision option (8 contact plug + 1 contact plug) X4
N . . . . . Engine box X24
O . . . . . Rear plug option provision (8 contact plug) X19
P . . . . . Switch
Q . . . . . Fan heating X30
R . . . . . Air conditioning X31
S . . . . . Cab X26
T . . . . . Front windshield wiper X77
U . . . . . Strain gauge
V . . . . . JSM adaptation harness
W . . . . Diagnostic connector
X . . . . . Adaptation TUV X2
Z . . . . . 16 way plug (PCB dashboard)
AA. . . . Radio X27
AB. . . . Windscreen wiper switch connector (9 ways + 2 ways) X79 X80
AC. . . . Digicode connector X78
AD. . . . K6 Relay Option Provision

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Chapter 7

DECALS

GENERAL INFORMATION

CAUTION

ALWAYS read and follow the safety precautions and information shown on decals. If any decals are damaged or unreadable, or if the unit is repainted, the decals must be replaced. If repainting, BE SURE that all decals that apply to your machine are affixed in their proper locations

When a decal is applied on a part that is to be replaced, make sure that the replacement part has the decal applied or apply a new decal.

Decal location information is provided to assist in the proper selection and application of new decals, in the event the original decals become damaged or the machine is repainted.

For correct replacement of decals, compare the location photographs to the machine before starting to refinish the unit. Check off each required decal using the illustration reference number to find the part number, description and quantity in the list. Refer to the appropriate illustration for replacement locations.

NOTE: *Refer to the Safety chapter of this manual for the specific information provided on the various safety decals.*

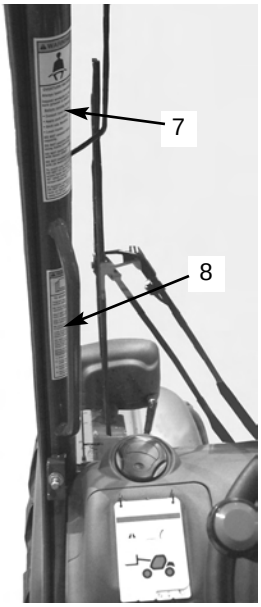
NEW DECAL APPLICATION

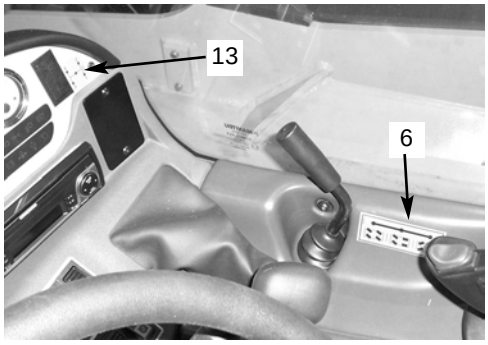
Before applying new decals, surfaces must be free from dirt, dust, grease and other foreign material. To apply a solid-formed decal, remove the smaller portion of the decal backing paper and apply this part of the exposed adhesive backing to the clean surface while maintaining proper position and alignment. Slowly peel off the other portion of the backing paper while applying hand pressure to smooth out decal surface. To apply a die-cut decal, first remove the backing paper. Then, properly position the decal onto the clean mounting surface. After the decal is firmly applied and smoothly pressed down, remove the front covering paper.

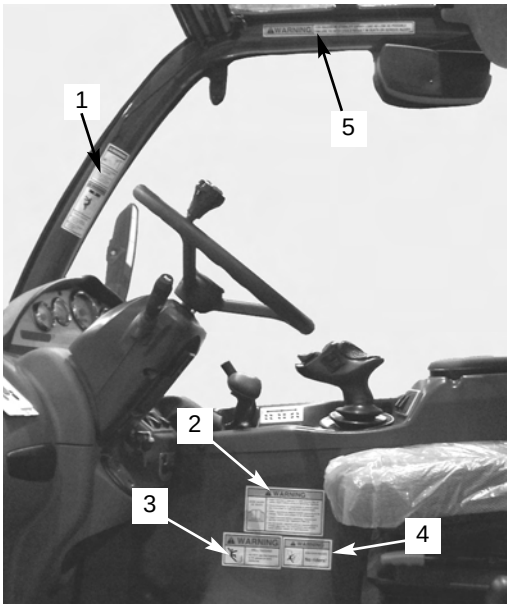
Decal Kits

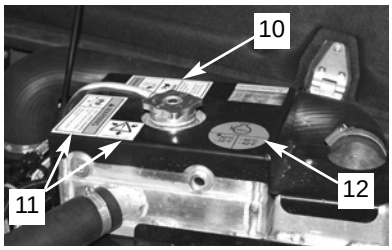
215070	CT7-23 Turbo Telescopic Handler

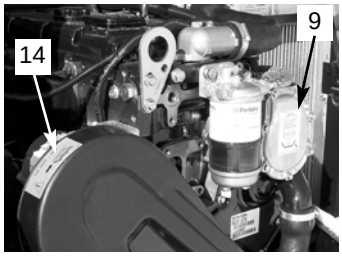
NOTE: *Decals may be purchased in kits or individually.*

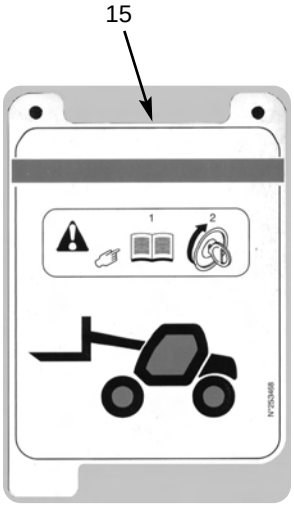


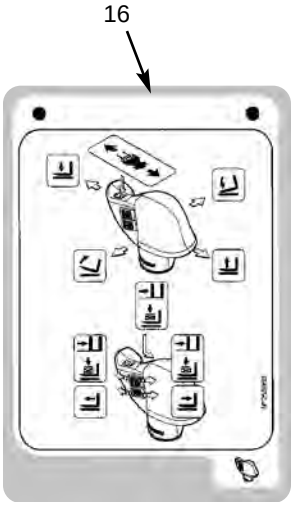


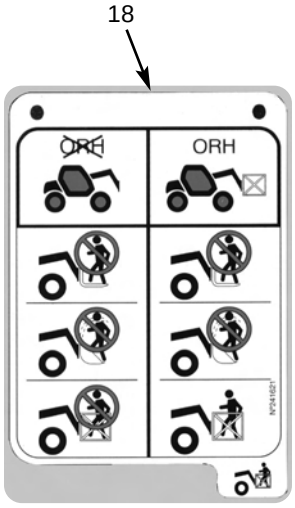






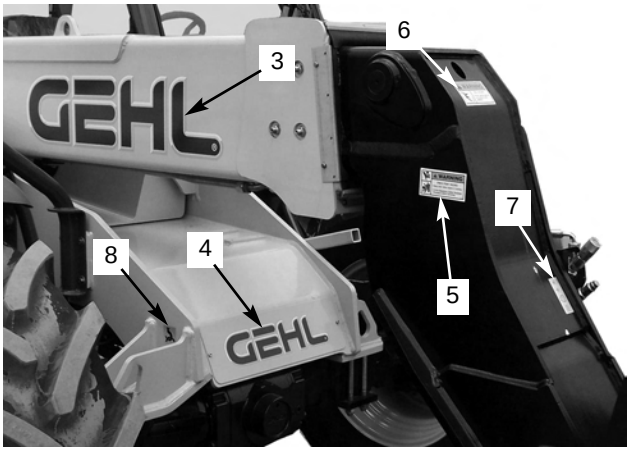


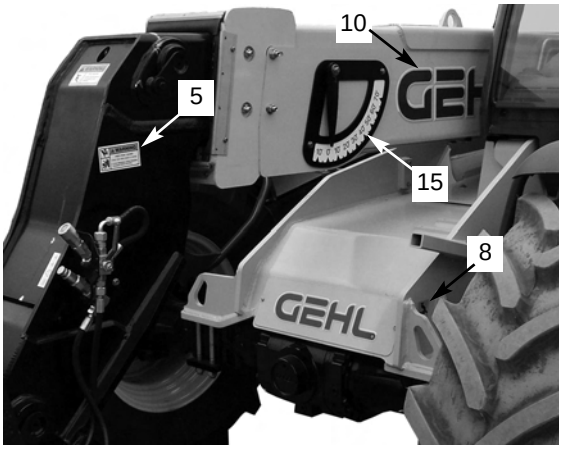


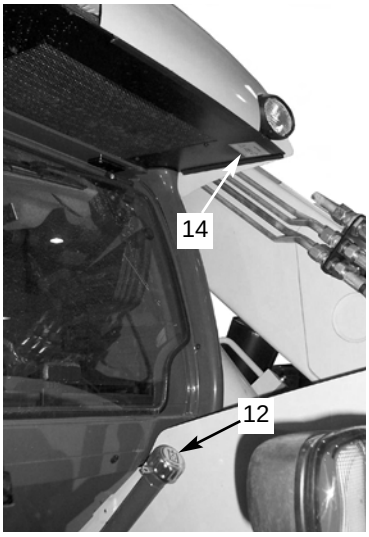


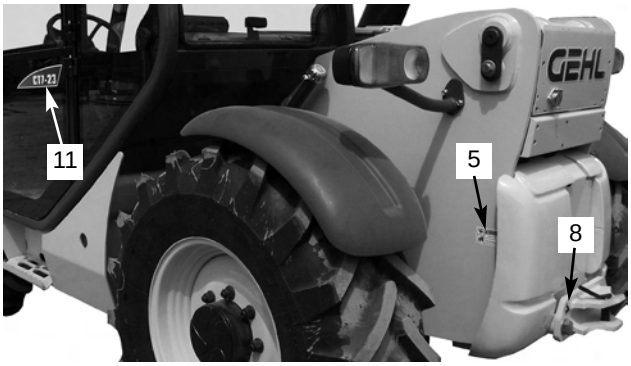
Ref. No.	Part No.	Description	Qty. Req.
01	L70307	Decal-Danger Hi-Volt	1
02	100359	Decal-Operator Manual	1
03	L65928	Decal-Personlift	1
04	L65932	Decal-Warning No Riders	1
05	093475	Decal-Warning Carry Load	1
06	218418	Decal-Steer Mode	1
07	101506	Decal-Seat Belt and Park Brake	1
08	L70306	Decal-Warning Tilt Hzrd	1
09	215188	Decal-Fuel/Water Separator	1
10	L70305	Decal-Danger Rotating	1
11	072798	Decal-Coolant Under Pres	1
12	218843	Decal-Engine Coolant	1
13	219039	Decal-Shift Pattern	1
14	215822	Belt Guard	1
15[a]	216390	Cover Chart	1
16[a]	215187	Joystick Control Chart	1
17[a]	215057	Declutch Control Chart	1
18[a]	218915	Proper Operation Chart	1

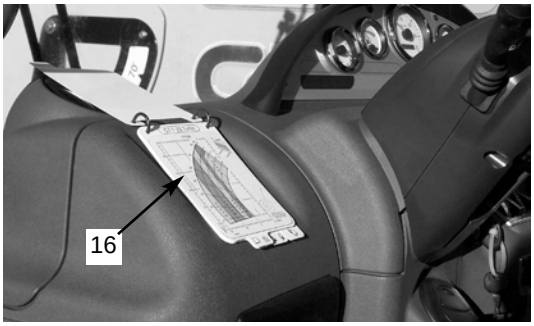
Note a - Not included in Decal Kit 215070.

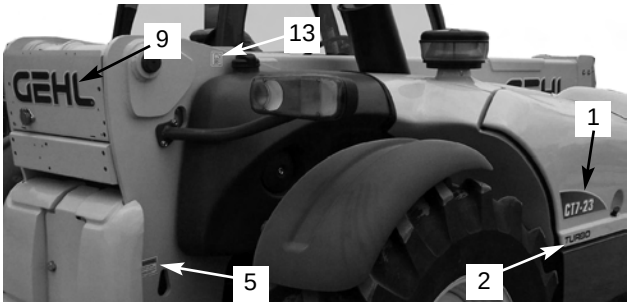












Ref. No.	Part No.	Description	Qty. Req.
01	103206	Decal-CT7-23 Engine Side	1
02	103202	Decal- "TURBO"	1
03	102025	Decal-Gehl 8.00 x 33.95	1
04	183963	Decal-Gehl 3.75 x 15.92	1
05	L65927	Decal-Pinch Point Warning	4
06	L65928	Decal-Personlift	1
07	218845	Decal-Hydraulic Couplers	1
08	219002	Decal-Tie-Down Point	3
09	184306	Decal-Gehl 4.75 X 20.16	1
10	183962	Decal-Gehl 6.00 x 25.47	1
11	103207	Decal- CT7-23 Cab Side	1
12	218842	Decal-Hydraulic Oil	1
13	137634	Decal-Diesel Fuel	1
14	215598	Decal-A/C	1
15	217684	Decal-Boom Angle	1
16	103622	Load Chart-Standard Carriage	1
	103623	Load Chart-Rotating Carriage	1
	103624	Load Chart-1.25 Yard Bucket	1
	103625	Load Chart-2.50 Yard Bucket	1

Chapter 8

ATTACHMENTS

INTRODUCTION

- The telescopic handler can be used with interchangeable equipment, called attachments.
- A wide range of attachments, specially designed and suitable for the telescopic handler is available and approved by GEHL.
- Attachments are delivered with a load chart applicable to the telescopic handler. The operator's manual and the load chart should be kept in the place provided in the telescopic handler. For standard attachments, their use is covered by the instructions contained in this manual.
- Some particular uses require an adaptation of the attachment, which is not provided in the listed options. Consult your dealer.

IMPORTANT: *Certain attachments may, when the boom is lowered and retracted, come into contact with the front tires and cause damage to them, if the attachment is tilted forward. TO AVOID THIS RISK, EXTEND THE BOOM SO THAT SUCH CONTACT IS NOT POSSIBLE.*

WARNING

Only attachments approved by the manufacturer are to be used on GEHL telescopic handlers (see chapter: 8 - ATTACHMENTS: TECHNICAL SPECIFICATIONS OF ATTACHMENTS). The manufacturer's liability will be denied in case of modification or adaptation without the manufacturer's approval.

WARNING

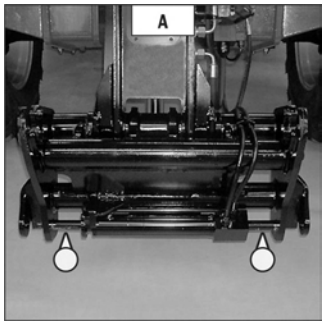
Maximum loads are defined by the capacity of the telescopic handler, based on the attachment's mass and center-of-gravity. If an attachment has less capacity than the telescopic handler, never exceed the attachment's limit.

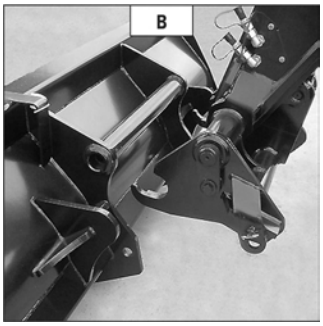
INSTALLING ATTACHMENTS

A - ATTACHMENT WITHOUT HYDRAULICS AND WITH HYDRAULIC LOCKING DEVICE

INSTALLING AN ATTACHMENT

- Ensure that the attachment is in a position for locking it to the carriage. If it is not correctly oriented, take the necessary precautions to safely position it.
- Check that the pins on the locking cylinder are retracted (fig. A).
- Park the telescopic handler with the boom lowered in front of and in line with the attachment. Tilt the carriage forward (fig. B).

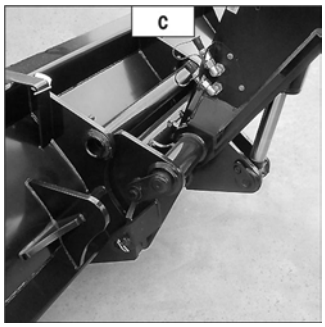


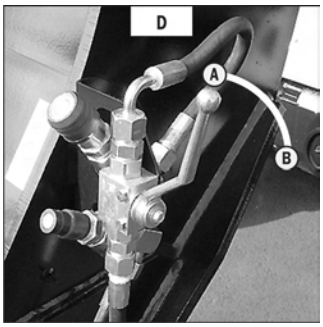


- Bring the carriage under the locking tube of the attachment, slightly lift the boom, and tilt the carriage rearward to position the attachment (fig. C).
- Lift the attachment off the ground to ease locking.

HYDRAULIC LOCKING OF AN ATTACHMENT

- Place the selector valve in position (A) (fig. D), with the hydraulic circuit for attachment locking "open."
- Switch button (1) (fig. E) of the hydraulic control valve joystick up to lock the attachment on the carriage.
- Close the valve to position (B) (fig. D), with the hydraulic circuit for attachment locking "closed."





WARNING

Always close the valve to position (B) (fig. D) after locking on the attachment, to avoid accidental unlocking, and to use the attachment safely.

HYDRAULIC RELEASING OF AN ATTACHMENT

- Place the valve in position (A) (fig. D), with the hydraulic circuit for attachment locking "open."
- Switch button (1) (fig. E) of the hydraulic control valve joystick down to completely release the attachment.

REMOVING AN ATTACHMENT

- Proceed in the reverse order of paragraph INSTALLING AN ATTACHMENT
- Be sure to place the attachment flat on the ground and in a closed position.

DEACTIVATING THE HYDRAULIC RELEASE CONTROL

Operators can change an attachment without leaving the operator's station, by cutting the electrical power to the hydraulic control.

- Leave the valve in position (A) (fig. D).
- Use switch (2) (fig. F) to cut the electrical power to the hydraulic control. The circuit is inactive when indicator (3) (fig. F) is "on."

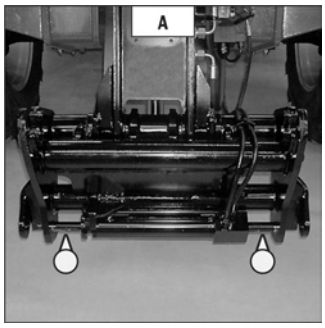
WARNING

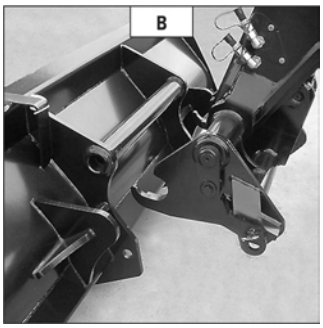
Always switch off the electrical power to the circuit using switch (2) (fig. F) after each change of attachment to avoid accidental release, and to use the attachment safely.

B - ATTACHMENT WITH HYDRAULICS AND HYDRAULIC LOCKING DEVICE

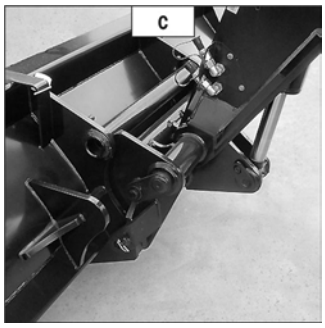
INSTALLING AN ATTACHMENT

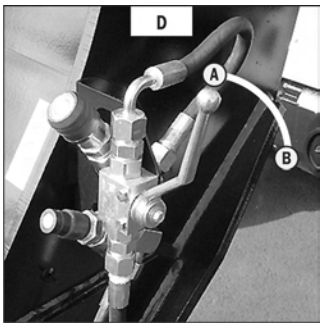
- Ensure that the attachment is in a position for locking it to the carriage. If it is not correctly oriented, take the necessary precautions to safely position it.
- Check that the pins on the locking cylinder are retracted (fig. A).
- Park the telescopic handler with the boom lowered in front of and in line with the attachment. Tilt the carriage forward (fig. B).





- Bring the carriage under the locking tube of the attachment, slightly lift the boom, and tilt the carriage rearward to position the attachment (fig. C).





- Lift the attachment off the ground to ease locking.

HYDRAULICLY LOCKING AND CONNECTING AN ATTACHMENT

- Place the selector valve in position (A) (fig. D), with the hydraulic circuit for the attachment locked open.
- Switch button (1) (fig. E) of the hydraulic control valve joystick up to lock the attachment on the carriage.
- Stop the engine, but keep the ignition “on.”
- Relieve the pressure from the attachment hydraulic circuit by pressing button (1) (fig. E) on the hydraulic control valve joystick up and down four or more times.

- Connect the quick-connectors as needed for the attachment’s hydraulic movements.

IMPORTANT: *Make sure that the quick-connectors are clean, and protect the connections that are not used with the caps provided.*

- Close the selector valve in position (B) (fig. D), with the hydraulic circuit for the attachment locking “closed.”

WARNING

Always close the valve in position (B) (fig. D) after the locking of the attachment, in order to avoid accidental unlocking, and to use the attachment safely.

HYDRAULICLY RELEASING AND DISCONNECTING AN ATTACHMENT

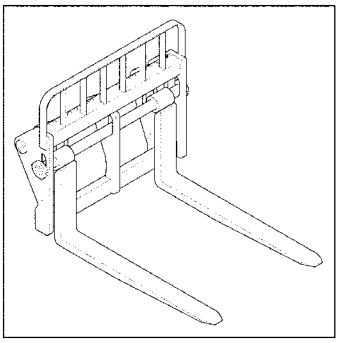
- Close the attachment.
- Place the selector valve in position (A) (fig. D), with the hydraulic circuit for the attachment locked “open.”
- Switch button (1) (fig. E) of the hydraulic control valve joystick down to release the attachment.
- Stop the engine, but keep the ignition “on.”
- Relieve the pressure from the attachment hydraulic circuit by pressing button (1) (fig. E) on the hydraulic control valve joystick up and down four or more times.
- Disconnect the quick-connectors of the attachment.

REMOVING AN ATTACHMENT

- Proceed in the reverse order of paragraph INSTALLING AN ATTACHMENT
- Be sure to place the attachment flat on the ground and in its closed position.

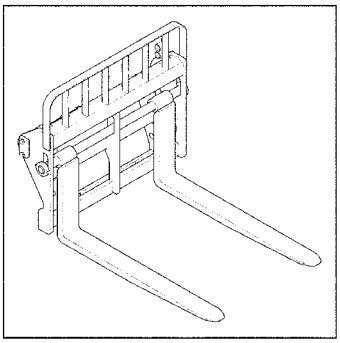
TECHNICAL SPECIFICATIONS OF ATTACHMENTS

MASONRY AND FRAMERS CARRIAGE



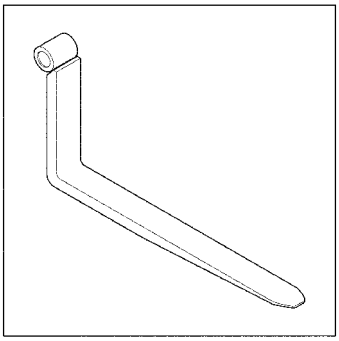
MASONRY	**STOCK NUMBER:**	**820269**
	Nominal load capacity:	7,000 lbs. (3175 kg)
	Width:	48”
	Weight:	541 lbs. (245 kg)
FRAMERS	**STOCK NUMBER:**	**820270**
	Nominal load capacity:	7,000 lbs. (3175 kg)
	Width:	60”
	Weight:	645 lbs. (293 kg)

MASONRY AND FRAMERS ROTATING CARRIAGE



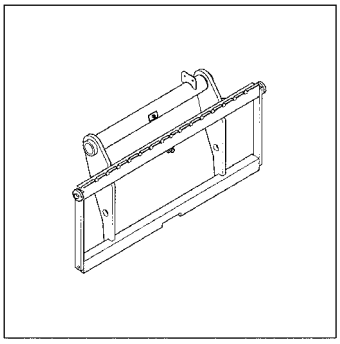
MASONRY	**STOCK NUMBER:**	**820271**
	Nominal load capacity:	7,000 lbs. (3175 kg)
	Width:	48”
	Weight:	820 lbs. (372 kg)
FRAMERS	**STOCK NUMBER:**	**820272**
	Nominal load capacity:	7,000 lbs. (3175 kg)
	Width:	60”
	Weight:	880 lbs. (400 kg)

FORK SETS



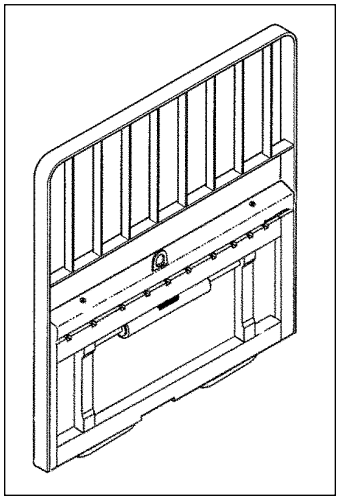
	STOCK NUMBER:	**809498**
	Section:	5” x 1 3/4” x 48”
	Weight:	300 lbs. (136 kg)
	Rated Capacity:	8,500 lbs. (3856 kg)
	STOCK NUMBER:	**809502**
	Section:	4” x 2” x 48”
	Weight:	260 lbs. (118 kg)
	Rated Capacity:	8,400 lbs. (3810 kg)
	STOCK NUMBER:	**809499**
	Section:	2” x 2” x 48”
	Weight:	160 lbs. (73 kg)
	Rated Capacity:	4,200 lbs. (1905 kg) (requires two sets)
	STOCK NUMBER:	**809501**
	Section:	2” x 5” x 60”
	Weight:	390 lbs. (177 kg)
	Rated Capacity:	10,500 lbs. (4763 kg)

ITA HOOK-TYPE CARRIAGE WITH NO BACKREST



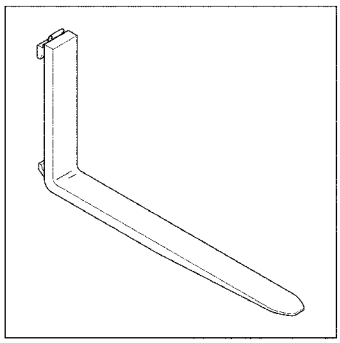
STOCK NUMBER:	**820193**
Nominal load capacity:	10,000 lbs. (4536 kg)
Width:	48”
Weight:	375 lbs. (170 kg)

ITA HOOK-TYPE SIDE-SHIFT CARRIAGE WITH LOAD BACKREST



STOCK NUMBER:	**820194**
Nominal load capacity:	10,000 lbs. (4536 kg)
Side-shift:	2 x 4”
Width:	48”
Weight:	225 lbs. (102 kg)

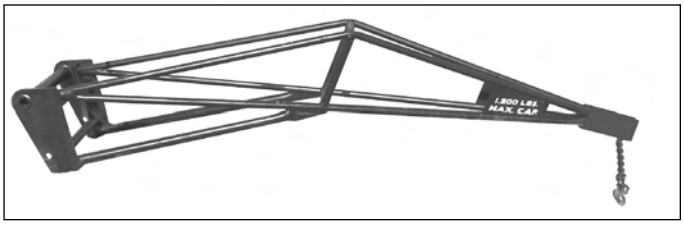
ITA HOOK-TYPE FORK SETS



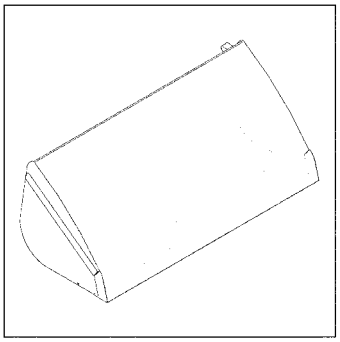
STOCK NUMBER:	**820195**
Section:	5” x 1 3/4” x 48”
Weight:	325 lbs. (147 kg)
Rated Capacity:	7,500 lbs. (3402 kg)
STOCK NUMBER:	**820196**
Section:	5” x 1 3/4” x 60”
Weight:	380 lbs. (172 kg)
Rated Capacity:	7,500 lbs. (3402 kg)

JIB BOOM, 12’ LENGTH WITH HOOK

STOCK NUMBER:	**820202**
Capacity:	1,300 lbs. (590 kg)
Weight:	350 lbs. (159 kg)



LIGHT MATERIAL BUCKET with OPTIONAL BOLT-ON CUTTING EDGE



STOCK NUMBER:	**820277**
Load capacity - heaped:	2.0 cu. yd.
Width:	96”
Weight:	1,480 lbs. (671 kg)

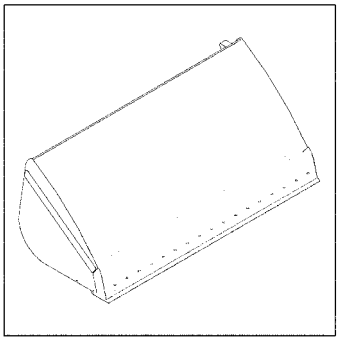
STOCK NUMBER:	**820256**
Load capacity - heaped:	2.5 cu. yd.
Width:	96”
Weight:	1,400 lbs. (635 kg)

STOCK NUMBER:	**820278**
Load capacity - heaped:	3.25 cu. yd.
Width:	96”
Weight:	1,105 lbs. (501 kg)

BOLT-ON CUTTING EDGE

STOCK NUMBER:	**820259**
Weight:	130 lbs. (59 kg)

GENERAL PURPOSE BUCKET WITH BOLT-ON CUTTING EDGE

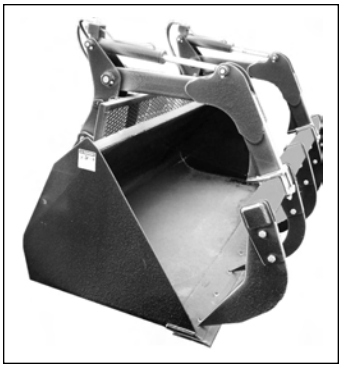


STOCK NUMBER:	**820258**
Load capacity - heaped:	1.25 cu. yd.
Width:	96”
Weight:	1130 lbs. (513 kg)

BOLT-ON CUTTING EDGE

STOCK NUMBER:	**820259**
Weight:	130 lbs. (59 kg)

BUCKET WITH GRAPPLE



STOCK NUMBER:	**820257**
Load capacity - heaped:	2.15 cu. yd.
Width:	96”
Weight:	1,900 lbs. (862 kg)

BOLT-ON CUTTING EDGE

STOCK NUMBER:	**820259**
Weight:	130 lbs. (59 kg)

ROCK BUCKET *(shown with Grapple Kit)*

STOCK NUMBER: **820412**

1-1/2” Tines with 3” Spacing

Width: 84”

Weight: 930 lbs. (422 kg)

GRAPPLE KIT FOR ROCK BUCKET

STOCK NUMBER: **820413**

SCRAP GRAPPLE BUCKET

STOCK NUMBER: **820329**

Load capacity - heaped: 1.75 cu. yd.

Width: 96”

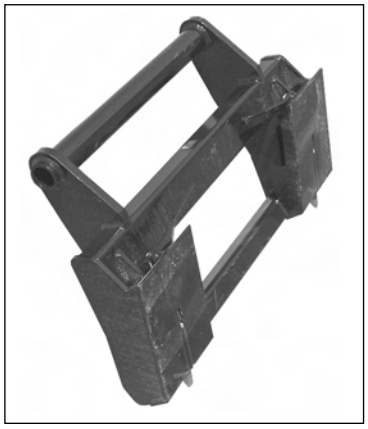
Weight: 1,800 lbs. (816 kg)

UNIVERSAL SKID-STEER ADAPTER

(with manual engagement and 1/2” flat-face couplers)

STOCK NUMBER: **820295**

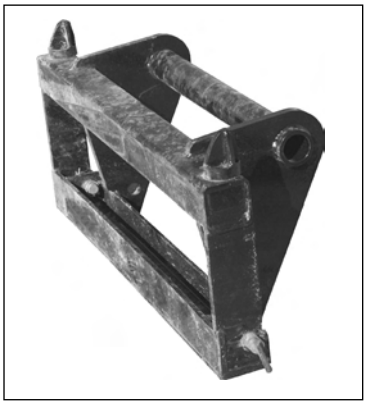
Weight: 285 lbs. (129 kg)



JOHN DEERE TO CT SERIES APADTER

STOCK NUMBER: **820409**

Weight: 262 lbs. (118 kg)



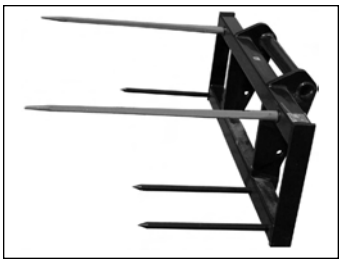
BUNKER BUSTER II

STOCK NUMBER:	**820155**
Width:	96”
Weight:	1,130 lbs. (513 kg)

BALE CARRIAGE *(for two square bales)*

STOCK NUMBER:	**820153**
Weight:	940 lbs. (426 kg)

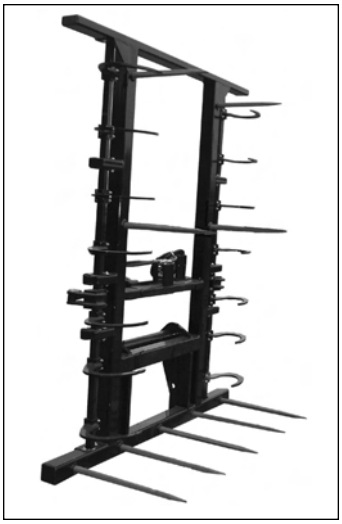
BALE SPIKE *(for two round bales)*



STOCK NUMBER:	**820326**
Capacity:	Two 6’ Dia. Bales
Width:	95”
Weight:	605 lbs. (274 kg)

STOCK NUMBER:	**820152**
Capacity:	Two 5’ Dia. Bales
Width:	68”
Weight:	420 lbs. (274 kg)

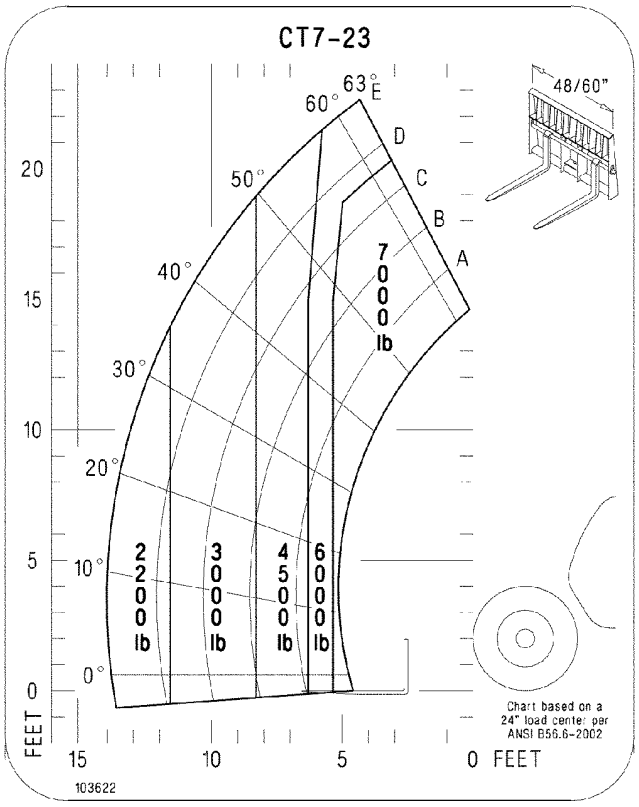
BALE GRAB *(for three square bales)*



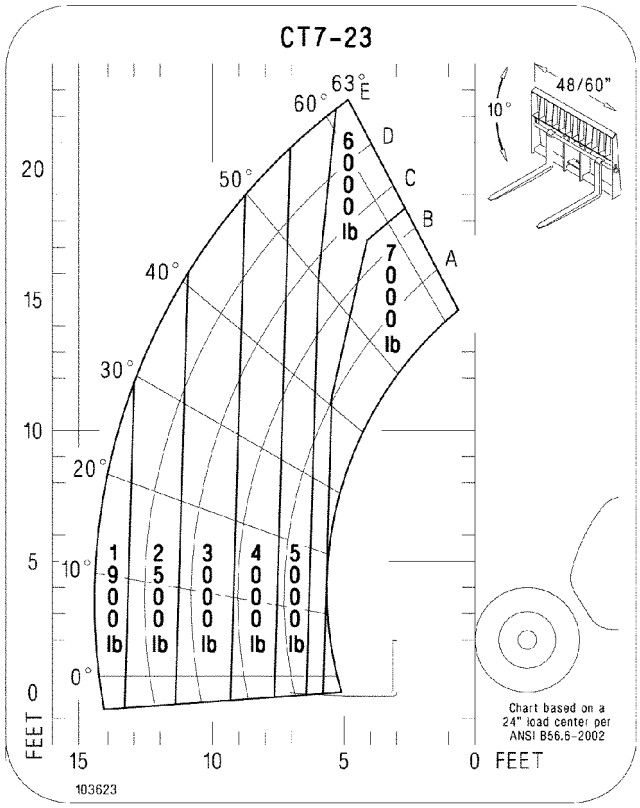
STOCK NUMBER:	**820154**
Weight:	1,098 lbs. (498 kg)

LOAD ZONE CHARTS

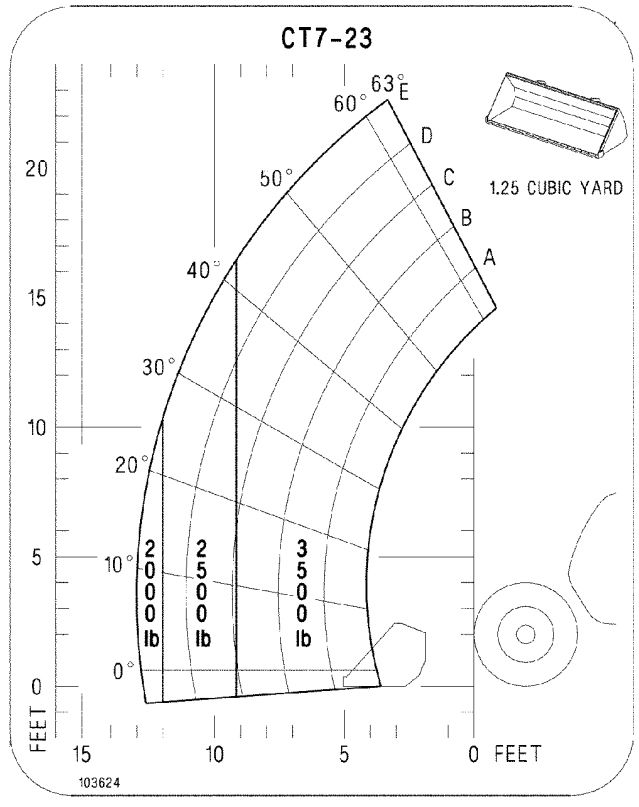
Standard Carriage Load Chart - 103622



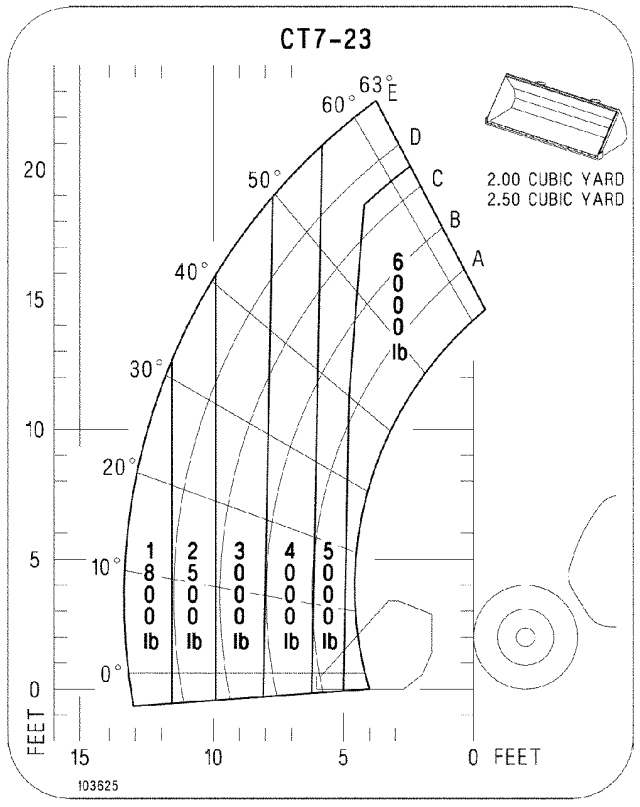
Rotating Carriage Load Chart - 103623



1.25-Cu.-Yd. Bucket Load Chart - 103624



2.0/2.5-Cu.-Yd. Bucket Load Chart - 103625



Torque Specifications

Use these torque values when tightening hardware (excluding: locknuts and self-tapping, thread-forming and metal screws) unless otherwise specified.

Unified National Thread	Grade 2		Grade 5		Grade 8	
	Dry	Lubed	Dry	Lubed	Dry	Lubed
8-32	19*	14*	30*	22*	41*	31*
8-36	20*	15*	31*	23*	43*	32*
10-24	27*	21*	43*	32*	60*	45*
10-32	31*	23*	49*	36*	68*	51*
1/4-20	66*	50*	9	75*	12	9
1/4-28	76*	56*	10	86*	14	10
5/16-18	11	9	17	13	25	18
5/16-24	12	9	19	14	25	20
3/8-16	20	15	30	23	45	35
3/8-24	23	17	35	25	50	35
7/16-14	32	24	50	35	70	55
7/16-20	36	27	55	40	80	60
1/2-13	35	35	75	55	110	80
1/2-20	40	40	90	65	120	90
9/16-12	55	55	110	80	150	110
9/16-18	60	60	120	90	170	130
5/8-11	75	75	150	110	220	170
5/8-18	85	85	180	130	240	180
3/4-10	130	130	260	200	380	280
3/4-16	150	150	300	220	420	320
7/8-9	125	125	430	320	600	460
7/8-14	140	140	470	360	660	500
1-8	190	190	640	480	900	680
1-14	210	210	710	530	1000	740

Metric Course Thread	Grade 8.8		Grade 10.9		Grade 12.9	
	Dry	Lubed	Dry	Lubed	Dry	Lubed
M6-1	8	6	11	7	13.5	10*
24M8-1.25	19	14	27	20	32.5	24*
M10-1.5	37.5	28	53	39	64	47
M12-1.75	65	48	91.5	67.5	111.5	82
M14-2	103.5	76.5	145.5	108	176.5	131
M16-2	158.5	117.5	223.5	165.5	271	200

* *All torque values are in lb-ft, except those marked with an *, which are in lb-in.*
For metric torque values (Nm), multiply lb-ft value x 1.355, or lb-in value x 0.113.

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GEHL COMPANY

WARRANTY

GEHL COMPANY, hereinafter referred to as Gehl, warrants new Gehl equipment to the Original Retail Purchaser to be free from defects in material and workmanship for a period of twelve (12) months from the Warranty Start Date.

GEHL WARRANTY SERVICE INCLUDES:

Genuine Gehl parts and labor costs required to repair or replace equipment at the selling dealer's business location.

GEHL MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED (INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE), EXCEPT AS EXPRESSLY STATED IN THIS WARRANTY STATEMENT.

ANY OF THESE LIMITATIONS EXCLUDED BY LOCAL LAW SHALL BE DEEMED DELETED FROM THIS WARRANTY; ALL OTHER TERMS WILL CONTINUE TO APPLY.

SOME STATES DO NOT PERMIT THE EXCLUSION OR LIMITATION OF THESE WARRANTIES AND YOU MAY HAVE GREATER RIGHTS UNDER YOUR STATE LAW.

GEHL WARRANTY DOES NOT INCLUDE:

1. Transportation to selling dealer's business location or, at the option of the Original Retail Purchaser, the cost of a service call.

2. Used equipment.

3. Components covered by their own non-Gehl warranties, such as tires, batteries, trade accessories and engines.

4. Normal maintenance service and expendable, high-wear items.

5. Repairs or adjustments caused by: improper use; failure to follow recommended maintenance procedures; use of unauthorized attachments; accident or other casualty.

6. Liability for incidental or consequential damages of any type, including, but not limited to lost profits or expenses of acquiring replacement equipment.

No agent, employee or representative of Gehl has any authority to bind Gehl to any warranty except as specifically set forth herein.

⚠ WARNING ⚠

THIS OPERATOR'S MANUAL IS PROVIDED FOR OPERATOR USE

DO NOT REMOVE FROM THIS MACHINE

Do not start, operate or work on this machine until you have carefully read and thoroughly understand the contents of the operator's manual.

Failure to follow safety, operating and maintenance instructions could result in serious injury to the operator or bystanders, poor operation, and costly breakdowns.

If you have any questions on proper operation, adjustment or maintenance of this machine, contact your dealer or the service department of Gehl Company before starting or continuing operation.

California Proposition 65 Warnings

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer and birth defects or other reproductive harm.

Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. **Wash hands after handling battery.**

GEHL®

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www.gehl.com

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