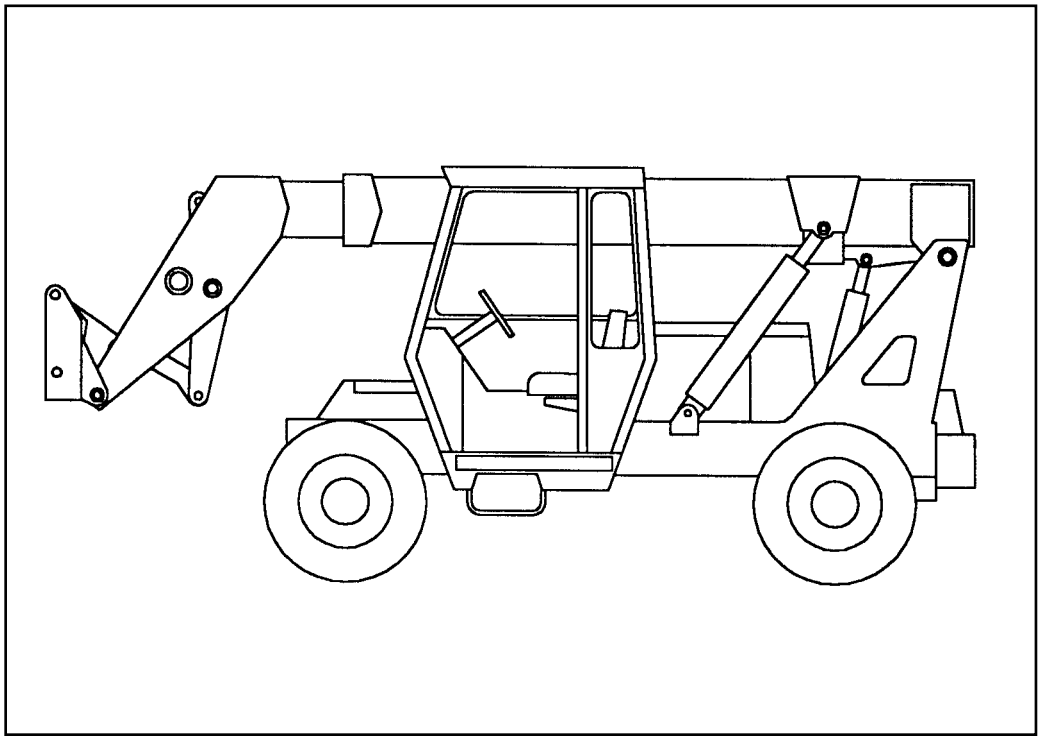
Form No.
907880

562

Dyna-Handler®
Telescopic Handler



OPERATOR'S MANUAL

GEHL®

Dynalift® Indicator & Operation

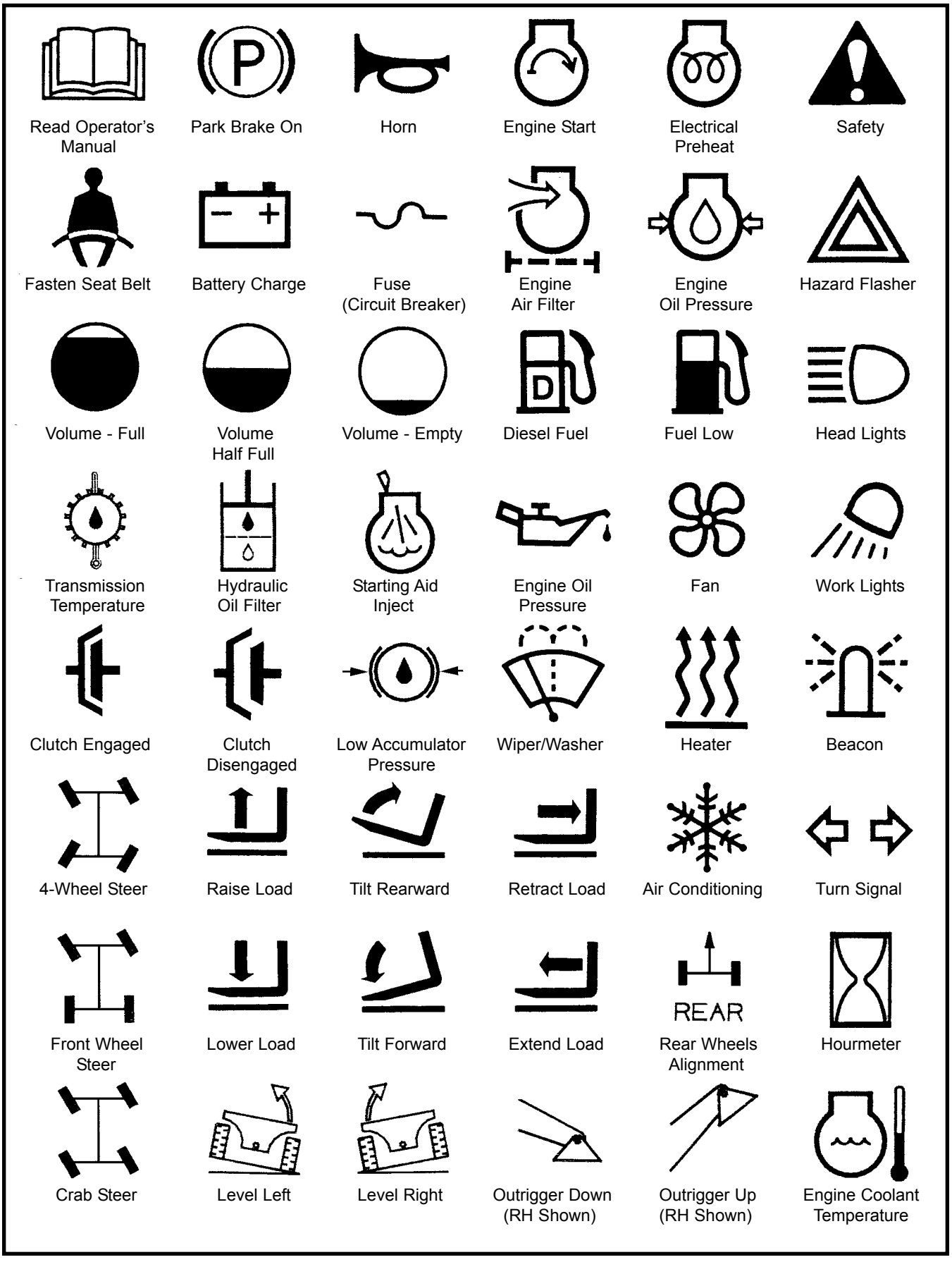
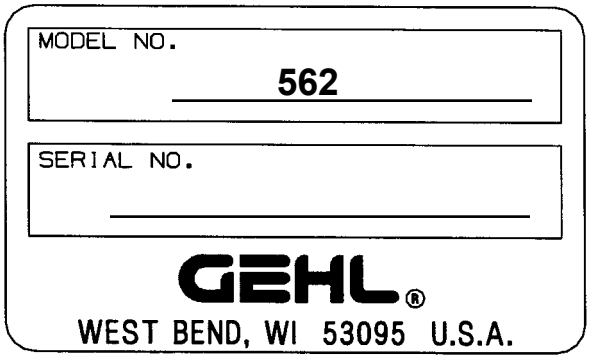


Table of Contents

IDENTIFICATION INFORMATION

Write your Gehl Dynalift Model and Serial Numbers in the space provided below.
Refer to these numbers when inquiring about parts or service from your Gehl dealer.



The Model and Serial Numbers for this machine are on a decal located inside the Operator's Station.

Chapter 1

INTRODUCTION

The information in this Operator's Manual was written to give the owner/operator assistance in preparing, adjusting, maintaining and servicing of the Telescopic Boom Handler. More importantly, 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.

The GEHL Company asks that you read and understand the contents of this manual COMPLETELY and become familiar with your new machine, BEFORE attempting to operate it.

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

A plastic container is provided on the unit for storing the Operator's Manual. After using the manual, please return it to the container and keep it with the unit at all times! If this machine is resold, **GEHL** Company recommends that this manual be given to the new owner.

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

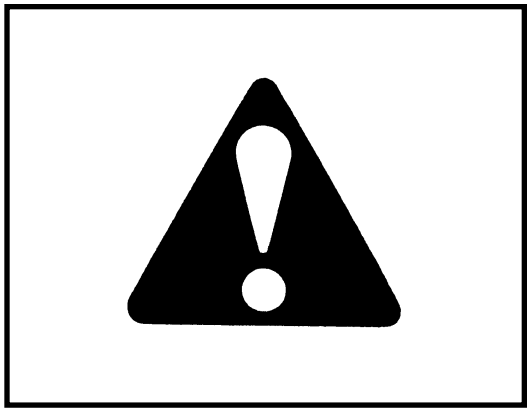
Our wide dealership network stands ready to provide you with any assistance you may require, including genuine **GEHL** service parts. All parts should be obtained from or ordered through your **GEHL** dealer. Give complete information about the part and include the model and serial numbers of your machine. Record the serial number in the space provided on the previous page, as a handy record for quick reference.

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.

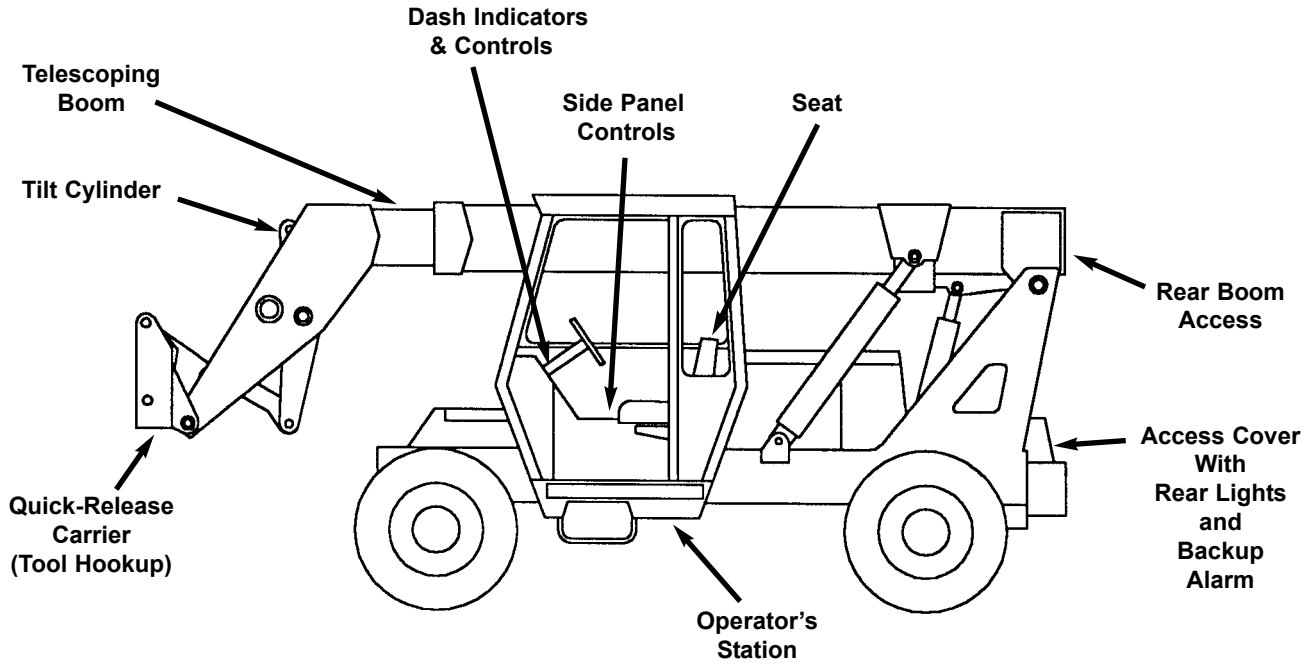
The GEHL Company, in cooperation with the Society of Automotive Engineers, has adpoted this

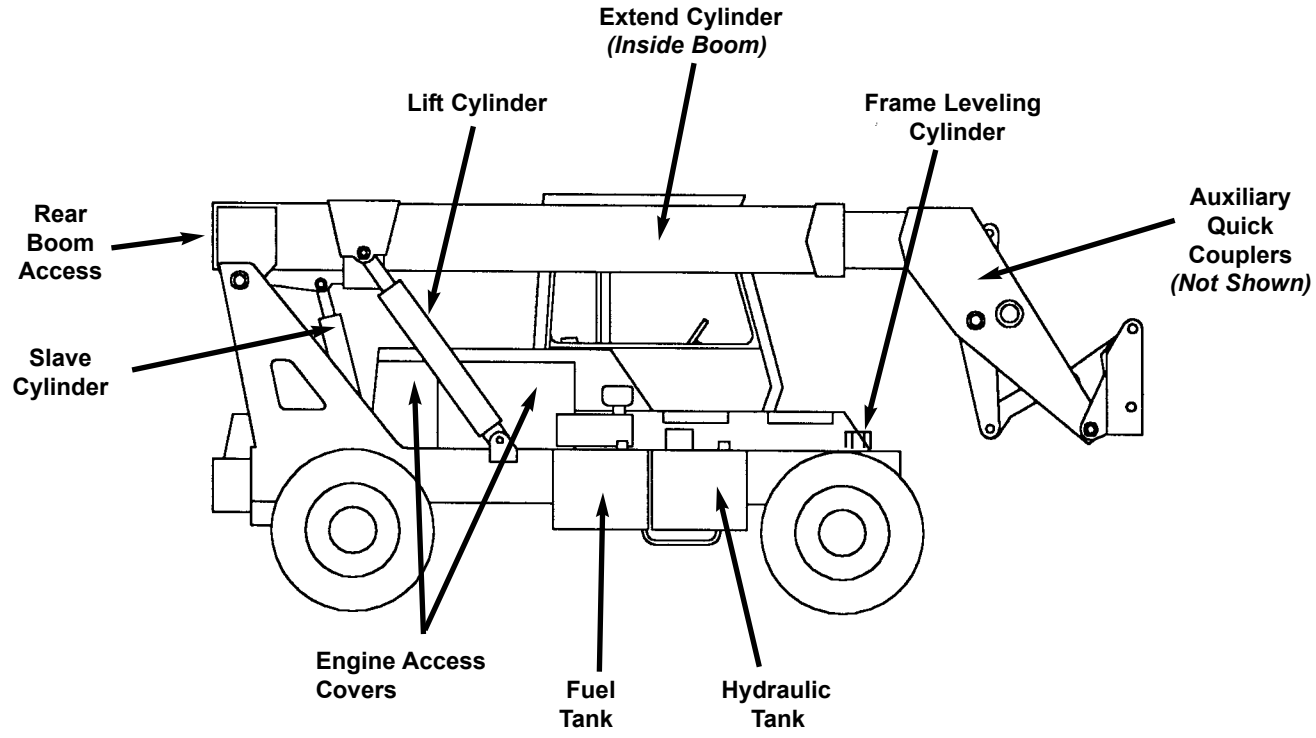
Safety Alert Symbol

to pinpoint characteristics which, if NOT properly followed, can create a safety hazard. When you see this symbol in this manual or on the machine itself, you are reminded to BE ALERT! Your personal safety is involved!



Identification





Chapter 2

SPECIFICATIONS

Lifting Performance

Maximum lift capacity:
6000 lbs (2727 kg)

Maximum lift height:
23’-9” (7.2 m)

Capacity at maximum lift height:
6000 lbs (2727 kg)

Loader Capacities

Bucket size:
1 cu. yd. (.76 m^3)

Breakout force:
11,000 lbs (5000 kg)

Maximum dump height:
20’-6” (6.0 m)

Reach at maximum dump height:
40” (1016 mm)

Dump angle at max. dump height:
40°

Dump height at 45° angle:
20’-6” (6.0 m)

General Dimensions

Based on standard machine equipped with listed tires, 48” masonry carriage and 48” pallet forks.

Recommended tire type:
15.00 x 19.5 12 ply
405/70 R 20 x M27 Traction Type
9.00 R 20 x Mine D2 Severe Duty

Overall length, less forks:
15’-5” (4.70 m)

Overall width:
7’-10” (2.39 m)

Overall height:
7’-9” (2.36 m)

Ground clearance: 14” (356 mm)
Wheel base: 9’-2” (2.80 m)
Outside turn radius: 12’-6” (3.81 m)

Machine weight:
15,000 lbs (6795 kg)

Instrumentation

Gauges: Fuel level, hourmeter and coolant temperature

Monitoring lights:
Engine oil pressure, alternator, transmission oil temperature, brake failure.

Monitoring alarms:
Park brake on

Visual indicators:
Boom angle, frame angle

Steering System

Steer Valve: Fixed displacement rotary
Displacement/Rev: 17.9 cu. in. (293 cc)
System pressure: 2000 psi (138 bar)
Steer cylinders: 1 per axle
Steer mode valve:
3-position, 4-way solenoid with dash-mounted switch actuation.
Steer modes: 2 wheel, 4 wheel, crab

Braking System

Service brakes: Oil immersed in-board hydraulic wet disc type. Separate front and rear systems.
Manual foot pedal actuation.

Parking brake: Mechanical disc type

Electrical System

Type: 12 volt negative ground,
Battery: 745 cold cranking amps
Circuit protection: Circuit breaker
Backup alarm: 107 dB(A)
Horn: 111 dB(A)

Standard on all models:
Brake lights, neutral start switch

Alternator: 65 Amp alternator

Service Capacities

Cooling System:
17.2 qts. (16.3 L)
50/50 mixture
Anti-freeze protection -34°F (-31°C)
Pressure cap: 10 psi (69 pKa)

Fuel tank: 29 gals. (110 L)
Hydraulic tank & system: 35 gals. (133 L)
Transmission & cooler: 24 qts. (22.7 L)
Trans. cooler flow: 19 GPM (71.9 L/m)
Axles:
Differentials: 9.6 qts. (9 L) ea.
Hubs: 0.55 qts. (0.5 L) ea.

Transmission

Type: Clark Powershift T12000
Speeds: 3 fwd / 3 rev
Torque converter:
Single stage, dual phase

Travel Speeds:
1st gear: 3.6 mph (5.8 km/h)
2nd gear: 7.9 mph (12.7 km/h)
3rd gear: 20.2 mph (32.5 km/h)

Axles (front and rear)

Type: Hurth
Drive/steer, open differential, double reduction planetary, full- time four wheel drive
Overall ratio: 15.4:1

Engine Options

Common to all options:
In-line 4 cycle, 4 cylinder, direct injection diesel fuel system, in-line fuel filter w/water trap, positive pressure lubrication, liquid pressurized cooling system, 18” (457 mm) blower fan, dry single-element air cleaner, spin-on oil filter

Natural aspiration:
John Deere 4045D
276 cu. in. (4523 cc) displacement,
80 hp (60 kW) @ 2500 rpm
Oil capacity: 10 qts. (9.5 L)

Turbocharged aspiration:
John Deere 4045T
276 cu. in. (4523 cc) displacement,
115 hp (86 kW) @ 2500 rpm
Oil capacity: 10 qts. (9.5 L)
Oil capacity: 8 qts. (7.6 L)

Hydraulic System

Type: Open center
Pump: Single section gear type

Displacement / revolution:
2.7 cu. in. (44.3 cc)

Flow @ 2500 RPM:
29 gpm (110 L/min)

Main relief pressure:
2800 psi (193 bar)
Steer relief pressure:
2000 psi (138 bar)

Main control valve:
Parallel, 3-spool block with remote cable actuation

Frame level control valve:
Parallel, single spool block with remote cable actuation

Hydraulic filter:
In-tank return type, 10 micron media, replaceable element.
Rated flow: 100 gpm (379 L/min)
Rated pressure: 100 psi (690 kPa)
By-pass pressure (full flow):
25 psi (172 kPa)

Hydraulic strainer:
In-tank suction, 149 micron media, replaceable element.
Rated flow: 50 gpm (189 L/min)
By-pass pressure: 3 psi (21 kPa)

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Chapter 3

CHECKLISTS

PRE-DELIVERY

The following Checklist is an important reminder of valuable information and inspections which MUST be made before delivering the Telescopic Handler to the Customer. Check off each item after 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 LUBRICATION chapter of this manual.
- ❑ 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. All tires have proper operating pressure.
- ❑ Model and Serial Number for this unit is recorded in space provided on this page and page 1.

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, Dynattach® 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# Machine Serial # Engine Serial #

DELIVERY

✔ Check that:

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.

- ❑ Review with the Customer the contents of the EMI Safety Manual and this manual for the following:
- ❑ The INDEX at the back, for quickly locating topics;
- ❑ The SAFETY; INDICATORS & CONTROLS; and OPERATION & ADJUSTMENTS chapters for information regarding safe use of the machine.
- ❑ The LUBRICATION, SERVICE & STORAGE chapters 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 EMI Safety Manual to the Customer and instruct them to be sure to read and completely understand its 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.

_____
Customer's Signature

_____
Date Delivered

(Dealer's File Copy - Remove at Perforation)

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(To be removed as Dealer's file copy)

Chapter 3

CHECKLISTS

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- ❑ All adjustments have been made to comply with the settings given in this manual and in the separate engine manual.
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Dealer Representative's Name

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Machine Model# Machine Serial # Engine Serial #

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Customer's Signature

Date Delivered

(Pages 7 & 8 - have been removed at perforation)

Chapter 4

SAFETY

The above Safety Alert Symbol means **ATTENTION! ALWAYS BE ALERT! YOUR SAFETY IS INVOLVED!** It stresses an attitude of "Heads Up for Safety" and can be found throughout this Operator's Manual and the machine itself.

Before operating this equipment, read and study the following safety information. In addition, be sure that every individual who operates or works with this equipment, whether family member or employee, is familiar with these safety precautions.

The 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 or shielded in order to assure proper operation. Further, this Operator's Manual, the EMI Safety Manual and decals on the machine warn of additional hazards and should be read and observed closely.

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, will result in death or serious injury.

CAUTION

"CAUTION" indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. Also alerts to unsafe practices.

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

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

MANDATORY SAFETY SHUTDOWN PROCEDURE

BEFORE cleaning, adjusting, lubricating or servicing the unit:

1. Bring machine to full stop on level surface (AVOID parking on a slope or hillside, but if necessary, park across the slope and block the wheels).

2. Fully retract boom and lower attachment tool to ground.

3. Place controls in neutral and set park brake.

4. Idle engine for gradual cooling. Shut off engine and remove 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 injury.

SAFETY

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.

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 to operate the machine.

- Any or all of the following elements affect the stability of the machine: The terrain, the engine speed, the type of load being carried and placed, the 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 INJURY OR DEATH!**

- ALWAYS wear the seat belt to prevent being throwned 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 keep hands, feet and arms inside of the operator's station when operating the machine!

- ALWAYS wear appropriate personal protective equipment called for by the job and working conditions. Hard hats, protective glasses, protective shoes, gloves, reflector type vests, respirators and ear protection are examples of types of equipment that may be required. DO NOT wear loose or baggy clothing, long hair, jewelry or loose personal items while operating or servicing the machine.

- ALWAYS be aware of pinch point areas on the machine such as wheels to frame, cylinders to frame, boom and attachment tool to frame, etc.

- ALWAYS maintain safe clearance from electrical power lines and avoid contact with any electrically charged conductor. Contact can result in electrocution. Contact proper local authorities for utility line location BEFORE starting a job.

SAFETY

- ALWAYS check the job site for terrain hazards, obstructions and people. Remove all objects which 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 are in the machine's path prior to starting. DO NOT start until all personnel are away from the machine.

- ALWAYS use the recommended hand holds and steps with at least three points of support when getting on and off the machine. Keep steps and platform clean. Face the access system when climbing up and down.

- NEVER attempt to by-pass the keyswitch to start the engine. ONLY use the jump-starting procedure detailed in the SERVICE & STORAGE chapter. DO NOT bypass the machine's neutral-start system. The neutral-start system must be repaired if it malfunctions.

- NEVER use your hands to search for hydraulic fluid leaks. 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.

- DO NOT exceed the machine's rated operating capacity for the type of attachment tool being used.

- DO NOT allow minors or unqualified personnel to operate or be near the machine unless properly supervised; this is strictly a single seat, NO passenger machine!

- DO NOT start the engine or operate any controls unless properly seated in the operator's seat!

- DO NOT run the engine in an enclosed area without providing proper ventilation for the exhaust. Exhaust gases contain carbon monoxide, an odorless and deadly gas. Internal combustion engines deplete the oxygen supply within enclosed spaces and may create a serious hazard unless the oxygen is replaced. This includes the atmosphere within the cab when provided.

- DO NOT leave the operator's station with the boom and attachment tool raised. ALWAYS lower the boom and attachment tool to the ground, shut off the engine and engage the parking brake BEFORE leaving the operator's station.

- DO NOT refill the fuel tank when the engine is hot. Allow engine to cool down BEFORE refilling to prevent hot engine from igniting the fuel if it should spill or splash.

- DO NOT smoke while filling the fuel tank, while working on the fuel or hydraulic systems, or while working around the battery.

- DO NOT drive too close to an excavation or ditch. BE SURE that the surrounding ground has adequate strength to support the weight of the machine and the load it is carrying.

- DO NOT turn quickly while traveling on a slope or operate the machine beyond the grade and slope limits noted in the OPERATION & ADJUSTMENT chapter of the Operator's Manual.

- If necessary to park on a grade, park across the slope and block the wheels.

- DO NOT fill the fuel tank to capacity. Allow room for expansion. Maintain control of the fuel filler nozzle when filling the tank. Use the correct fuel grade for the operating season.

- NEVER use fuel for cleaning purposes.

SAFETY

- DO NOT remove the radiator cap after the engine has reached operating temperature or if it is overheated. At operating temperatures, the engine coolant will be extremely HOT and under pressure. ALWAYS wait for the engine to cool down before attempting to relieve pressure and remove the radiator cap. Failure to heed this warning could result in severe burns.

- DO NOT attempt to loosen or disconnect any hydraulic lines, hoses or fittings without first relieving hydraulic circuit pressure. Also, be careful not to touch any hydraulic components that have been in recent operation because they can be extremely hot and can burn you!

- Avoid lubrication or mechanical adjustments with the machine in motion or the engine operating. If the engine must be in operation to make certain adjustments, place the transmission in neutral, apply the parking brake, place the equipment in a safe position, securely block the wheels and use extreme caution.

- NEVER allow any riders on this machine or use as a lift for personnel.

- To insure continued safe operation, replace damaged or worn-out parts with genuine GEHL service parts, before using this equipment.

- When road travel is required, know and use the signaling devices required on the machine. Provide an escort when required.

Modifications, Nameplates, Markings and Capacities

- Modifications or additions that affect capacity or safe operation shall NOT be performed without the manufacturer's prior written approval. Where such authorization is granted, tags or decals shall be changed accordingly.

- All attachment tools MUST be marked to identify the attachment tool and the total capacity with attachment tool at maximum elevation with load laterally centered.

- ALWAYS make sure all nameplates, caution and instruction markings are in place and legible. Local government regulations may require local decals, which then become the responsibility of the local owner to provide.

- Study the load chart carefully. It shows maximum capacity to be lifted and placed at specific outward and upward distances. ALWAYS be aware of load weights prior to attempting lift and placement with this machine.

Protective Guards And Warning Devices

- This machine is fitted with an overhead guard in accordance with industry standards. It is intended to offer protection to the operator from falling objects, but cannot protect against every possible impact. Therefore, it should not be considered a substitute for good judgment and care in operating the machine.

- This machine is equipped with a horn and backup alarm. The user shall determine if operating conditions require the machine be equipped with additional devices (mirrors, rotating beacon, etc.) and be responsible for providing and maintaining such devices.

- Do NOT modify the ROPS in any manner. Unauthorized modifications such as welding, drilling, cutting or adding components can weaken the structure and reduce its protective ability. If a ROPS is subjected to roll-over or other damage it must be replaced. Do NOT attempt to reapir a ROPS.

SAFETY

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

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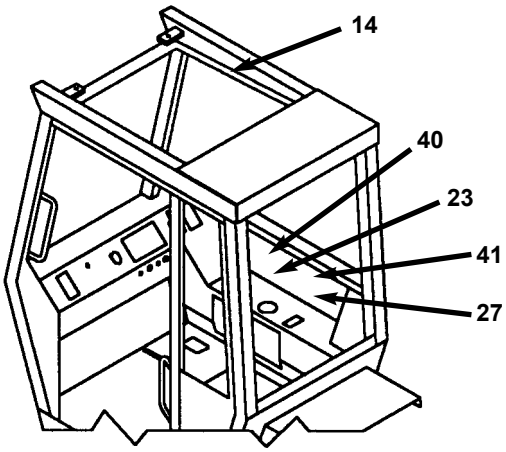

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WARNING

- REARWARD TILT AND TRANSPORT HAZARD.
- DO NOT TILT TRUSS BOOM OR WINCH REARWARD MORE THAN 45° WHEN MAIN BOOM IS ELEVATED ABOVE 45°.
- DO NOT TRANSPORT MATERIAL WITH TRUSS BOOM OR WINCH. SEE OPERATOR'S MANUAL.
- FAILURE TO HEED COULD RESULT IN DEATH OR SERIOUS INJURY.

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DANGER

PERSONAL INJURY HAZARD.

DO NOT USE THIS MACHINE AS A PERSONLIFT, OR FIT MACHINE WITH ANY FORM OF PERSONNEL WORK PLATFORM.

FAILURE TO HEED WILL RESULT IN DEATH OR SERIOUS INJURY.

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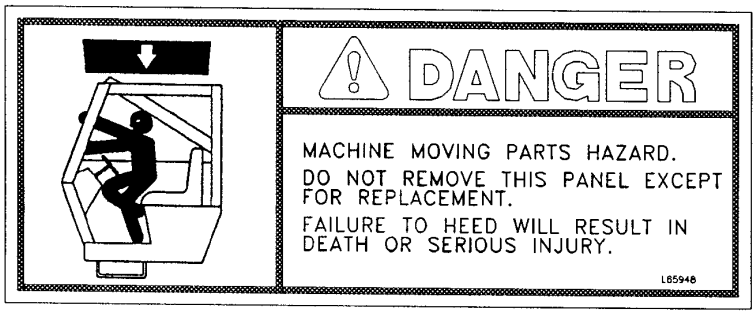

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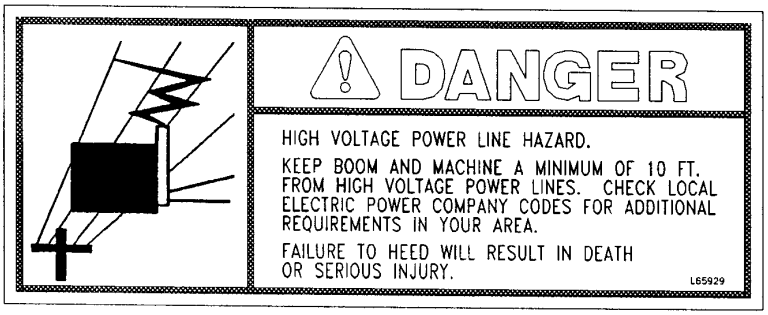

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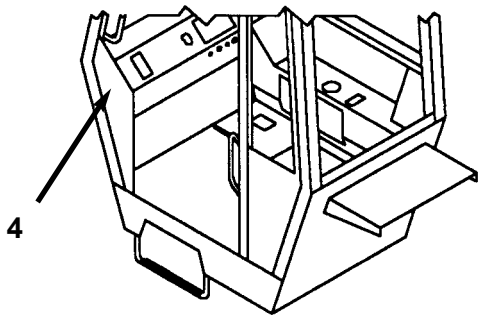
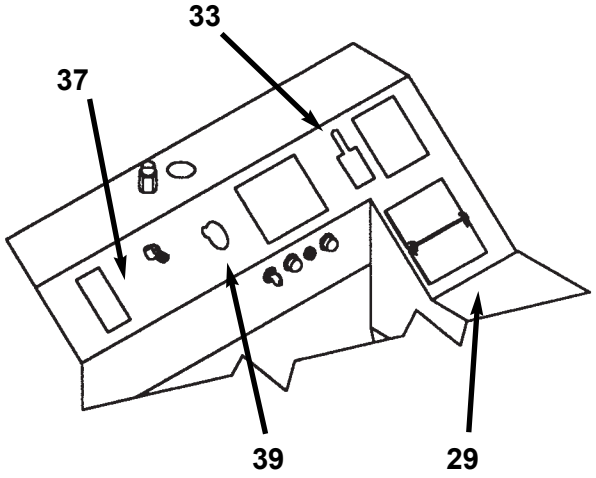
SAFETY





4

⚠ WARNING

RIDER INJURY HAZARD.

ABSOLUTELY NO RIDERS ALLOWED.

FAILURE TO HEED COULD RESULT IN DEATH OR SERIOUS INJURY.

L65932

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⚠ WARNING

MACHINE ROLLOVER HAZARD.

ALWAYS LEVEL MACHINE BEFORE ELEVATING BOOM. NEVER LEVEL FRAME TO POSITION AN ELEVATED LOAD.

FAILURE TO HEED COULD RESULT IN DEATH OR SERIOUS INJURY.

L65930

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⚠ WARNING

BEFORE OPERATING READ AND FULLY UNDERSTAND THE OPERATOR'S MANUAL AND LOAD CHARTS.

ALWAYS START AND OPERATE THIS MACHINE SEATED ON THE SEAT.

BE SURE ATTACHMENT IS IN LOCKED POSITION BEFORE OPERATING MACHINE.

SET PARK BRAKE AND PUT TRANSMISSION IN NEUTRAL BEFORE RAISING OR EXTENDING BOOM.

USE ONLY FRONT WHEEL STEER FOR HIGH SPEED TRAVEL.

IF BRAKE FAILURE LAMP ILLUMINATES DURING NORMAL OPERATION, FOLLOW MANDATORY SAFETY SHUTDOWN PROCEDURE.

NEVER LEAVE OPERATOR'S SEAT WITH BOOM IN ELEVATED POSITION.

FAILURE TO HEED COULD RESULT IN DEATH OR SERIOUS INJURY.

L63690

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PARKING BRAKE

⚠ WARNING

AN UNATTENDED MACHINE CAN MOVE OR ROLL.

SET PARKING BRAKE, LOWER CARRIAGE OR ATTACHMENT TO GROUND BEFORE LEAVING MACHINE.

FAILURE TO HEED COULD RESULT IN DEATH OR SERIOUS INJURY.

L65925

39

⚠ WARNING

BEFORE STARTING ENGINE

FASTEN SEAT BELT

UNSTABLE TERRAIN OR MISUSE OF THE MACHINE CAN CAUSE A ROLLOVER. DO NOT JUMP, HOLD TIGHT AND LEAN AWAY FROM FALL, KEEP SEAT BELT FASTENED AT ALL TIMES.

FAILURE TO HEED WARNING COULD RESULT IN DEATH OR SERIOUS INJURY.

L65440

SAFETY

23

DANGER

PERSONAL INJURY HAZARD.
DO NOT USE THIS MACHINE AS A PERSONLIFT, OR FIT MACHINE WITH ANY FORM OF PERSONNEL WORK PLATFORM.
FAILURE TO HEED WILL RESULT IN DEATH OR SERIOUS INJURY.
L65928

8

WARNING

PINCH POINT HAZARD.
KEEP CLEAR WHEN MACHINE IS RUNNING. FOLLOW MANDATORY SAFETY SHUT DOWN PROCEDURE AS SPECIFIED IN OPERATOR'S MANUAL BEFORE WORKING ON MACHINE.
FAILURE TO HEED COULD RESULT IN DEATH OR SERIOUS INJURY.
L65927

1

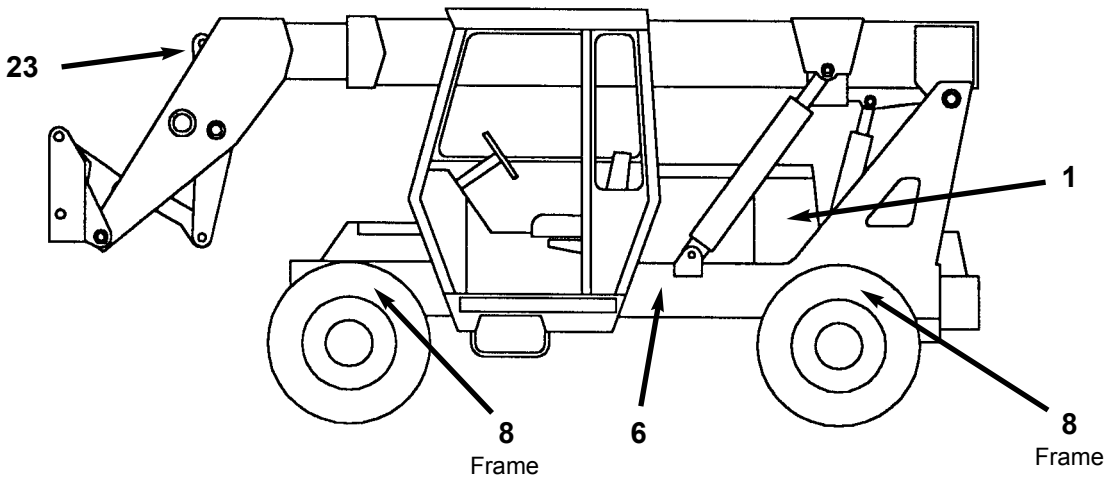
DANGER

KEEP HANDS OUT.
ROTATING COMPONENTS CAN CUT HANDS.
FAILURE TO HEED WILL RESULT IN DEATH OR SERIOUS INJURY.
L65924

6

DANGER

DON'T BYPASS STARTER SOLENOID
FOLLOW RECOMMENDED PROCEDURE IN THE OPERATOR'S MANUAL FOR JUMP STARTING USING THE IGNITION KEY AND START BUTTON.
FAILURE TO HEED WILL RESULT IN DEATH OR SERIOUS INJURY.
L65933



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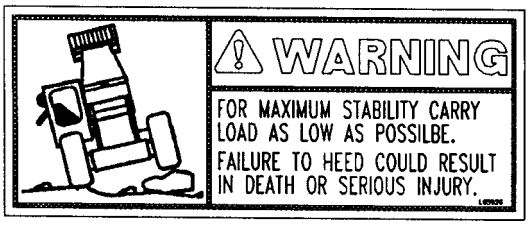

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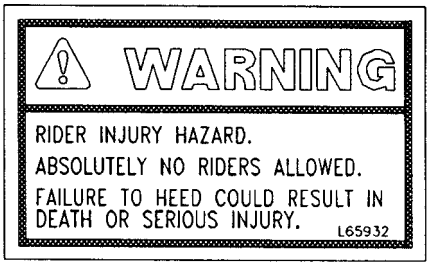

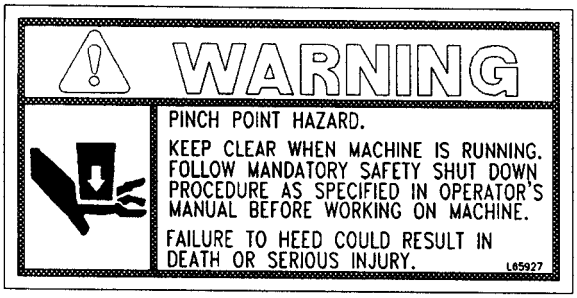

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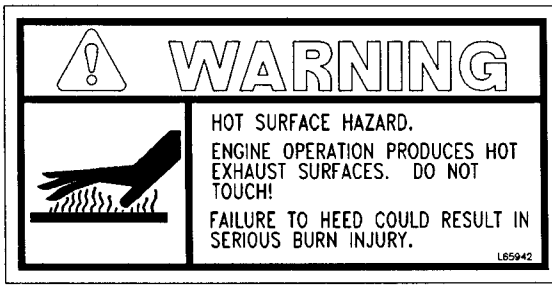

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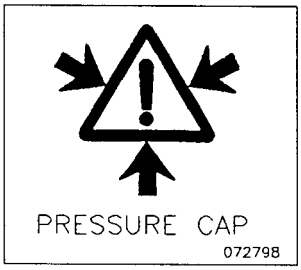

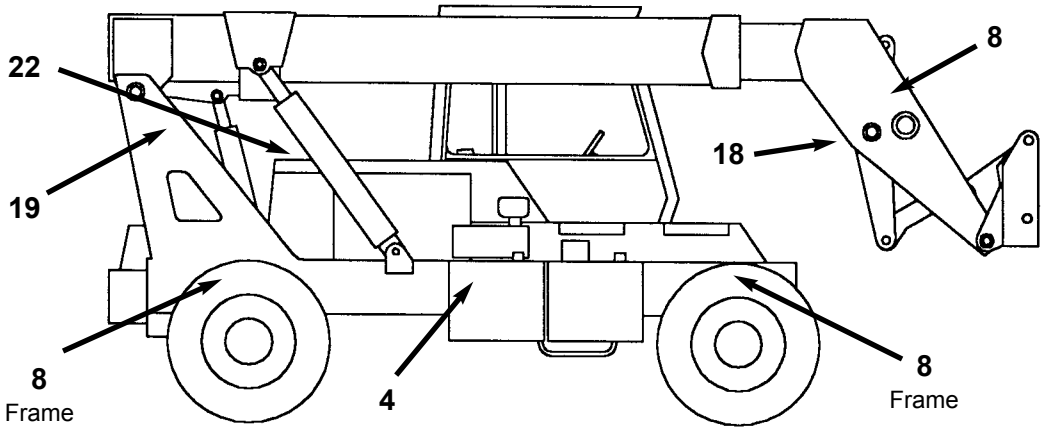

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Chapter 5

INDICATORS AND CONTROLS

CAUTION

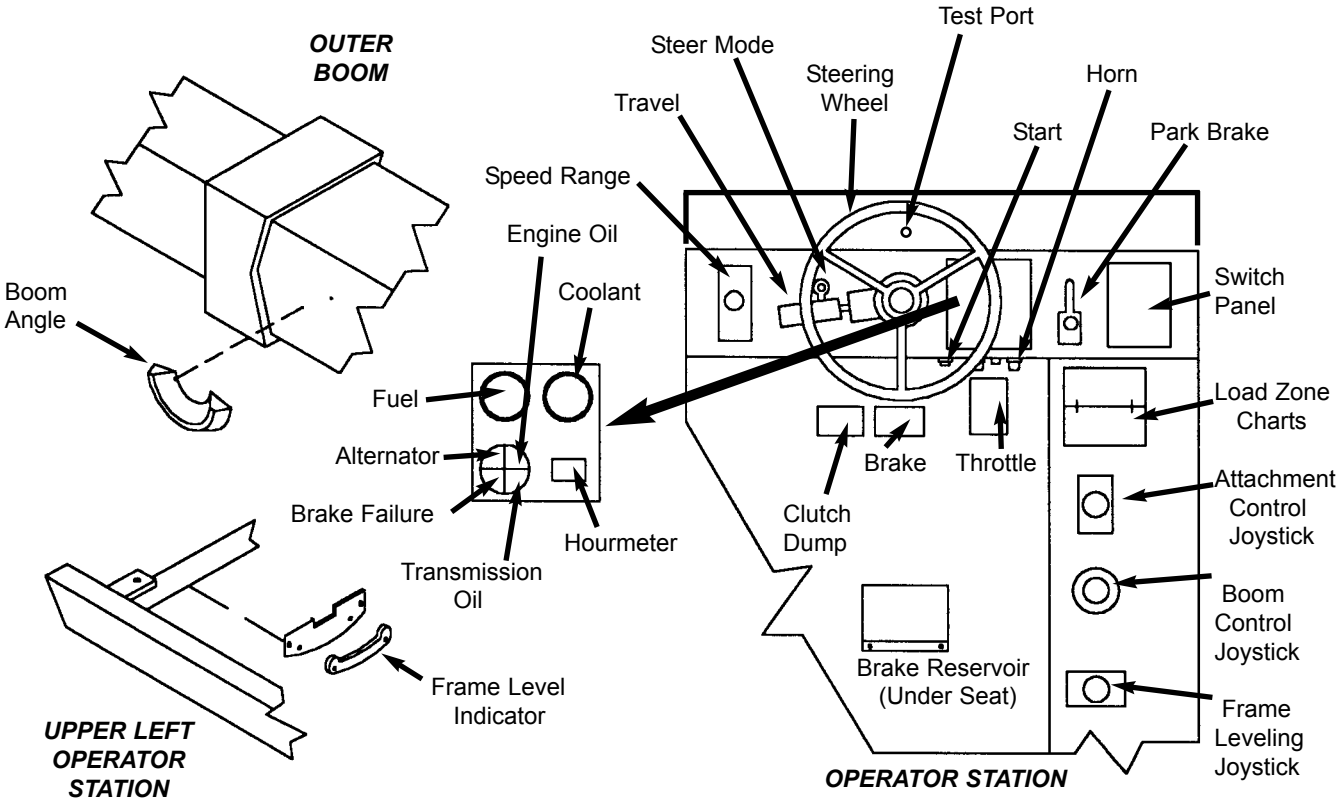
Become familiar with and know how to use ALL safety devices and controls on the Telescopic Handler BEFORE operating it. Know how to stop the machine BEFORE operating it. This GEHL machine is designed and intended to be used ONLY with a mounted GEHL Company attachment tool or a GEHL Company approved accessory or referral attachment tool. The GEHL Company cannot be responsible for operator safety if the machine is used with an unapproved accessory or attachment tool.

GUARDS AND SHIELDS

Whenever possible and without affecting machine operation, guards and shields are used to protect potentially hazardous areas. In many places, decals are also provided to warn of potential dangers and to display special operating procedures.

WARNING

Read and thoroughly understand ALL safety decals on the Telescopic Handler BEFORE operating it. DO NOT operate the machine unless ALL factory installed guards and shields are properly secured in place.



Operator Compartment & Boom Indicators/Controls Location

DASH AREA

Start Keyswitch OFF: When the key is vertical in the keyswitch, power from the battery is disconnected to the control and instrument panel electrical circuits. Also, this is the only position in which the key can be inserted or removed.

Start Keyswitch ON: When the key is turned one position clockwise from the vertical (OFF) position, power from the battery is supplied to all control and instrument panel electrical circuits.

NOTE: *If the engine requires repeated attempts to start, the key MUST be returned to the OFF position between starting attempts to prevent battery run down.*

Start Pushbutton: With keyswitch in ON position, depress the button to activate the starter. Release it as soon as the engine starts.

Circuit Breaker: The 15 amp breaker protects dash and engine electrical circuits. If it is not in the depressed position, the gauges and indicators on the dash will not work and the engine will shut off.

Horn Push Button: With the keyswitch ON, depress the horn button to activate warning sound.

Park Brake ON: A buzzer located behind the dash sounds as long as the park brake lever is engaged, and the transmission is in forward or reverse.

Transmission Oil Temperature: This lamp indicates whether the transmission oil is at the proper temperature or not. During normal operation this lamp should be off indicating that the transmission oil system is at the proper temperature.

IMPORTANT: *If this lamp comes on during normal operation, a problem may exist in the transmission oil system. Stop the machine immediately and investigate the cause of the problem!*

Alternator Lamp: Indicates the condition of the electrical charging system. During normal operation, this lamp should be off. If the charge rate is too high or too low, this lamp will come on.

Brake Failure Lamp: The front and rear brakes are on independent brake line systems. If during normal operation with the brake pedal depressed, a loss of pressure occurs in either system, the brake failure lamp comes on.

Failure in one line of the system does not affect the operation of the other system line. However, the **MANDATORY SAFETY SHUTDOWN PROCEDURE (Safety chapter p.10)** should be followed and required repairs made immediately.

During normal operation the lamp should remain off.

Engine Oil Pressure Lamp: Indicates whether sufficient engine lubricating oil pressure is present or not. During normal operation, with the engine running, this lamp should be off. During starting and when the engine is not running, this lamp will be on.

IMPORTANT: *If this lamp comes on during normal operation with the engine running, stop the engine immediately. After allowing the oil to drain down for a few minutes, check the engine oil level. Maintain oil level at the FULL mark on the dipstick*

Hourmeter: Indicates the operating time of the machine and should be used for keeping up the maintenance log.

Coolant Temperature Gauge: Indicates the temperature of the engine coolant. Under normal conditions, this gauge should indicate approximately 185ºF (85ºC)

Fuel Level Gauge: Indicates the amount of fuel remaining in the fuel tank.

Hydraulic Pressure Test Port: A test gauge can be inserted to check main and steering system pressures.

Boom Load Capacity: A series of flip charts show lift height and reach limits relative to the load weight being handled with various attachment tools.

Switch Panel

Clutch Cutout Function: When activated, it allows greater engine acceleration and power to the hydraulics system without power to the drive axles while the service brake pedal is depressed.

In the “OFF” position, the clutch mechanism of the transmission remains engaged when applying brakes. In the “ON” position, the clutch mechanism is disengaged while applying the brakes.

Normal brake force will hold the machine in position while accelerating the engine to power hydraulic control functions during load placement.

NOTE: *The switch panel also includes control switches for the following accessories used with the cab enclosure option:*

Heater: Provides circulating heated air throughout the cab interior.

Heater/AC: This switch turns on or off either heating or cooling selection for the operator’s station interior. Units without air conditioning have only the heater mode switch.

Head Lights/Work Lights: Work lights may be added to the operator station and boom to provide illumination for forward travel and work operations.

Windshield Wiper: Helps maintain proper visibility for the operator through the windshield area.

Windshield Washer: Used to apply cleansing agent while activating the windsheld wiper motor.

Turn Signal: Used with the light package to indicate direction of turns.

Hazard: This switch can be activated to make the tail lights flash off and on if the machine is stalled or temporarily stopped in a traffic area on the road or jobsite.

Cold Start: Activates injection of ether agent for faster engine start in cold weather.

Travel Controls

These controls are used to maneuver the machine around the jobsite or for road travel. Decals on the dash area provide graphic representation of the various control actions.

Steering: The power steering motor is designed to give effortless steering with no shock reaction from the axle wheels to the steering wheel. Turn the direct connected steering wheel to the right or left to turn the machine in the direction of wheel turn action.

Steer Selector: Use “2-wheel mode” for higher speed travel. Use “4-wheel mode” for making tighter turns, usually on jobsite. Use “crab mode” when a small amount of side shift is needed for picking or placing loads. Any mode can be used in forward or reverse travel.

NOTE: *The rear wheels are not self-centering. Make sure all wheels are in a straight ahead position before changing the selector mode.*

Any of the steering position modes can be used in forward or reverse travel. The operator should learn to anticipate changes in machine movement if the steering selector mode must be changed.

Park Brake: Functions as both a parking brake and emergency brake. The park brake handle is linked by a cable to a brake assembly on the transmission output shaft.

To adjust the tension, turn the knob on the top of the brake lever until a pull effort on the hand lever is 20 lbs. (89 N) is achieved.

⚠ WARNING

Unattended machine hazard.

Set park brake and lower attachment tool to ground before leaving machine. An unattended machine can move or roll and cause death or serious injury to operator or bystanders.

Periodically check the park brake tension and adjust, if required, to maintain adequate holding power. Always be sure the park brake lever is off when resuming machine operation.

The park brake may be used as an emergency stopping system on relatively level terrain should the service brakes fail. When properly adjusted and maintained it meets ANSI test requirements providing 35% of service brake performance at 20 lb (89 N) hand lever effort.

Travel Direction Selector: This lever is used to change travel direction (forward or reverse). The selec-

tor MUST be in N (Neutral) position before the engine will start.

Position **"F"** (FORWARD)
Position **"N"** (NEUTRAL)
Position **"R"** (REVERSE)

NOTE: *Backup alarm automatically sounds with travel lever in reverse.*

IMPORTANT: *Care should be taken when downshifting or reversing as damage to the transmission can occur if shifting is forced or attempted at too high a speed. Allow engine RPM to slow before any down shift or directional change is attempted.*

Speed Range Selector: Twist this lever counter clockwise or clockwise to change the transmission speed between low and travel range.

Position **"3"** TRAVEL RANGE
Position **"2"** MEDIUM RANGE
Position **"1"** LOW RANGE

FLOOR & SEAT AREA

Throttle Pedal: This is right-foot operated and controls the engine RPM to match increased power requirements. Pushing down on the pedal increases the RPM. Letting up on the pedal decreases RPM.

Service Brake Pedal: Depressing this pedal hydraulically activates the internal braking mechanism of the front and rear axles to all four wheels.

Clutch Dump Pedal: Depressing this pedal activates a switch which allows greater engine acceleration and power to the hydraulic system, without power to the drive axles, while maintaining service brake pressure.

The right (service brake) pedal only keeps the transmission engaged while applying brake force to stop the engine. The left (clutch dump) pedal automatically depresses the right pedal while disengaging the clutch mechanism. The transmission remains in gear. Normal brake force holds the machine in position while accelerating the engine to power hydraulic control functions during load handling placement.

Brake Fluid Reservoirs: Lift the hinged cover to check the levels.

Seat Positioning: The seat is mounted on rails for forward or backward repositioning to accommodate operator's size and comfort. A spring-loaded latch handle under the front of the seat activates the adjustment mechanism.

RIGHT SIDE PANEL

These controls and indicators are used to position the frame, boom, and attachment. Graphic symbols on the side panel illustrate the control actions.

Frame Level Joystick: The machine may be tilted slowly 10º to the left or right to level the frame and boom in relation to the ground. Position the lever to the left to tilt to the left. Position the lever to the right to tilt to the right.

Bubble Indicator: Located in front of the operator on the ROPS upper cross tube, movement of the bubble shows when the frame is at level position relative to slopping ground surface.

⚠ WARNING

DO NOT attempt to correct the frame level condition with the boom raised or extended. Only level the machine while at complete stop with the boom fully retracted and the attachment raised just enough to clear the ground.

Boom Control Joystick: This machine has a hydraulic type boom with one telescopic section. This section extend by means of a hydraulic cylinder.

To RAISE the boom, move the joystick REARWARD. To LOWER the boom, move the joystick FORWARD. Depress the rocker switch on the handle top RIGHT to EXTEND the boom. Depress the switch LEFT to RETRACT the boom. When the boom is raised, extended or retracted; speed of operation is a function of engine speed. The higher the engine RPM, the faster the boom will move.

This joystick also controls the tilt position of the attachment on the inner section nose. Move the joystick RIGHT to tilt the attachment FORWARD. Move the joystick LEFT to tilt the attachment REARWARD.

Once the operator tilts the attachment tool to a desired angle, that angle will be maintained as the boom is

raised or lowered, extended or retracted, until a new angle is desired.

Boom Angle Indicator: Mounted on the left side of the outer boom. Movement of a bubble shows the angle of boom elevation relative to the frame ground surface.

⚠ WARNING

Use extreme caution when raising or extending the boom. The Telescopic Handler MUST be level. Loaded or empty, this machine can tip if not level.

ALWAYS place the transmission in neutral, set the park brake and keep the service brake pedal fully depressed before raising or extending the boom.

NEVER exceed the specified lifting or extending capacities of this machine. Serious machine damage or personal injury may result. Refer to the load charts in the operator's station or this manual.

If a boom circuit hose should break with the boom up, with or without a load, shut the machine down following the MANDATORY SAFETY SHUTDOWN PROCEDURE (Safety chapter p.10). DO NOT attempt repairs. Call your GEHL dealer immediately for assistance.

The truss boom and winch attachment tools should ONLY be used to lift and place loads when the machine is stationary. DO NOT use truss boom to transport loads around the jobsite. This can cause the load to swing, resulting in either the load dropping or machine tipover.

NEVER use winch for lifting or moving of personnel. NEVER exceed the maximum rated capacity of the winch (3000 lbs/1360 kg) or exceed the load chart rating for winch applications.

DO NOT tilt the truss boom back more than 45º from horizontal. DO NOT attempt to use the rotating carriage as a load leveling function. Always level the frame prior to handling a load.

Failure to heed could result in death or seri-

Optional Attachments Joystick: For other options a 2-position joystick is provided. Moving the joystick to the right or left for ROTATE or LOWER action (grapple, winch, etc.). Depress the top switch for a secondary attachment function. Depress the side button for hydraulic release of the attachment tool from the carrier.

Quick-Release Carrier System: The inner boom nose is equipped with an attachment carrying device. This provides the operator with a convenient means of utilizing various option attachment tools. Refer to the OPERATION & ADJUSTMENTS chapter for changing attachment tools procedure.

Auxiliary Hydraulics: The Telescopic Handler is shipped from the factory with standard flow auxiliary front hydraulic connections. A pair of quick-disconnect fittings conveniently located at the right side of the inner boom nose can be used for operating hydraulic flow attachments.

OTHER OPERATION INDICATORS

The following indicators are for fluid level and operator rear vision/safety.

Hydraulic Reservoir Oil Level & Fill Cap: The sight gauge on the side of the reservoir indicates the level of the hydraulic oil. The fill cap is accessible by removing the front cover of the front hood section.

Battery Compartment: The battery electrolyte level can be checked by removing the front hood cover

Transmission Oil Level: The dipstick can be checked by removing the front hood cover.

Engine Oil Level: The dipstick is located on the left side of the mid-section of the main hood.

Coolant Level: The coolant can be checked and added through the radiator cap located under the top rear opening on the main hood.

Backup Alarm: Located inside the rear frame cover, it produces a loud warning sound whenever the machine is in reverse.

Side Mirror: This is located on the front outside corner of the hydraulic tank. It provides the operator with a rear view on the right hand side and rear area behind the machine.

ATTACHMENT TOOLS

Gehl offers a versatile range of attachment tools to meet various lifting and material handling applications with this machine. Contact your area Gehl dealer for specifications and ordering information.

ACCESSORIES

Gehl offers a versatile range of special accessories for this machine. Contact your area Gehl dealer for specifications and ordering information.

NOTE: *All accessories are field-installed unless otherwise noted. Information and parts for field installing of all of the accessories will be provided by the factory or Gehl Telescopic Handler dealers.*

Chapter 6

OPERATION & ADJUSTMENTS

GENERAL INFORMATION

CAUTION

BEFORE starting the engine and operating the Telescopic Handler, review and comply with ALL safety recommendations set forth in the SAFETY chapter of this manual. Know how to STOP the machine before starting it. Also, BE SURE to fasten and properly adjust the seat belt.

ENGINE BREAK-IN

Your new engine does not require extensive "break-in". However, for the first 100 hours of operation, keep the following in mind. Allow the engine to idle for a few minutes after every cold start. DO NOT idle the engine for long periods of time. DO NOT operate the engine at maximum power for long periods of time. Check the oil level frequently and replenish, as necessary.

A special "break-in" oil is NOT used. The oil in the engine crankcase is the same specified for regular oil changes. Change the oil and replace the oil filter at the intervals specified in the SERVICE chapter. DO NOT add special additives or special "break-in" components to the crankcase.

BEFORE STARTING ENGINE

Before starting the engine and running the machine, refer to the INDICATORS & CONTROLS chapter and familiarize yourself with the various operating controls, indicators and safety features.

STARTING THE ENGINE

Before mounting the operator's compartment, walk completely around the machine to make sure NO one is under, on, or close to it. Let others near the area know you are going to start up and wait until everyone is clear of the machine.

WARNING

ALWAYS fasten your seat belt BEFORE starting the engine. Leave the parking brake "engaged" until the engine is running and you are ready to operate the machine.

The following procedure is recommended for starting the engine:

1. Carefully step up and grasp the hand holds to step into the operator's compartment.

2. Adjust the seat and fasten the seat belt.

3. Check that all controls are in their "neutral" positions, except the parking brake lever which should be in the "ON" position.

4. Turn the keyswitch to "ON" position and depress the start button. If the button is released before the engine starts, turn the keyswitch to "OFF" position, allowing the starter to stop before attempting to start again.

IMPORTANT: *Crank the starter until the engine is started. If the engine fails to start within 10 seconds, return the key to the "OFF" position, wait 2 minutes, and try to restart the engine. Cranking the engine for longer than 30 seconds will result in premature failure of the starter.*

After the above steps proceed as follows:

1. After the engine starts, allow a sufficient warm-up time before attempting to operate the controls.

2. Check that indicators are in normal condition.

3. Check that there are no fuel, oil or engine coolant leaks, and no abnormal noises or vibrations.

COLD STARTING PROCEDURES

A block heater or lower radiator hose heater is recommended for starting in temperatures of 20ºF (-7ºC) or lower. See your Gehl dealer for recommended heater.

If prevailing temperature is 40ºF (4ºC) or below, it may be necessary to use a cold weather starting aid to start the diesel engine. For proper use of starting aids, check instructions in the engine manual.

If the battery becomes discharged and fails to have sufficient power to start the engine, jumper cables can be used to obtain starting assistance. Refer to the jump starting instructions in the SERVICE chapter of this manual for safe jump-start procedure.

STOPPING

The following procedure is the recommended sequence for stopping the machine:

1. Bring the machine to full stop on a level surface. Avoid parking on slope if possible, but if necessary, park across the slope and block the wheels.

2. Retract the boom all the way and lower the attachment to the ground.

3. Place controls in neutral. Set the parking brake lever to "ON"

4. Idle the engine for gradual cooling. Turn the keyswitch key to the "OFF" position to shut the engine off. Remove the key.

5. Unlatch the seat belt. Grasp the hand holds while climbing out of the operator's compartment.

⚠ CAUTION

Be sure the area being used for test-running is clear of spectators and obstructions. For the initial operation, operate the machine with an empty attachment tool.

INITIAL OPERATION

Make sure the engine is warm and then go through the following procedures.

Select the travel direction and the speed range mode. Release the parking brake lever and move slowly, while testing the steering and brakes. Stop and operate all boom, attachment tool functions and frame level controls checking for smooth response.

Apply the service brakes, stop the machine and move the travel selector to the opposite direction (forward or reverse).

Shifting to the next higher gear may be done at any engine RPM while the machine is in motion. DO NOT overspeed the engine when down-shifting. Allow the machine to slow down before shifting to the next lower gear.

PARK BRAKE

NOTE: *The park brake mechanism is NOT designed for, NOR intended to be used as, the primary means of stopping forward or reverse movement of the machine. Hydraulic braking provided through the service brakes within the axles is the primary means for stopping movement. The axle by-axle-split brake system is the secondary means of stopping movement.*

The proper sequence for correct machine operation is to always engage the park brake lever before shutting off the engine; to disengage the brake ONLY after the engine is running. In an EMERGENCY, when it becomes necessary to STOP the movement, pull out the park brake lever.

CHANGING ATTACHMENT TOOLS

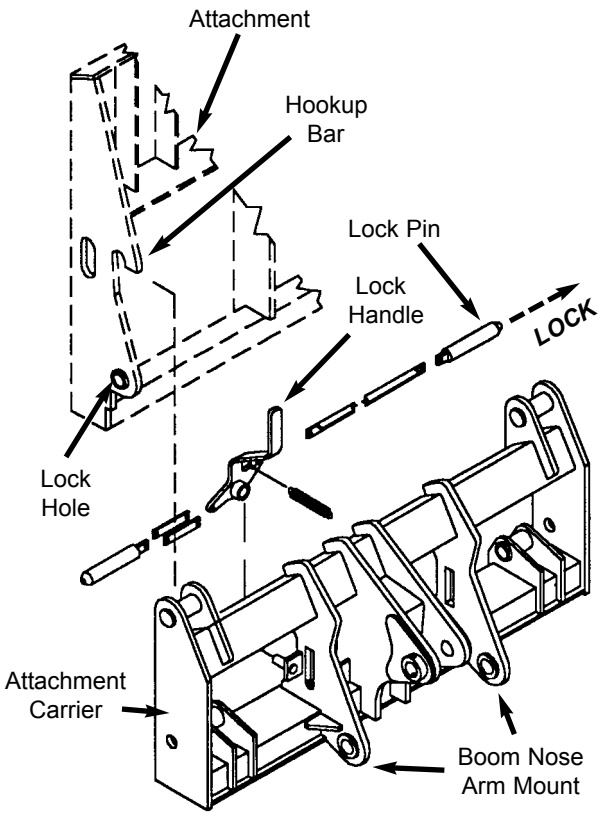
The Telescopic Handler boom nose features an attachment tool carrier with a quick-release locking mechanism. The mechanism uses a single lock lever control for attaching and detaching attachment tools.

Attaching

To pickup the attachment tool proceed as follows:

1. With the engine off, leave the operator's station. Manually rotate the lock lever on the carrier completely to the left (counterclockwise, as viewed from the operator's station) to full retract the lock pins.

2. Raise the boom slightly and extend it 2 to 3 feet (0.6 to 0.9 m) for better visibility and tilt the carrier forward.



Attachment Release Mechanism

⚠ WARNING

To prevent unexpected and undesired attachment tool release from the boom carrier, be sure to properly secure the quick-release lock pins by rotating the lock lever all the way to the right or inside.

Modifications, alterations to, or use of attachment tools NOT authorized by GEHL Co. in writing can void warranty and cause machine damage and/or serious personal injury or death.

3. Align the carrier squarely with the back of the attachment tool.

4. Slowly extend the carrier and roll it forward until the support pins on each side are in-line with and slightly below the hookup ears on the back side of the attachment tool.

5. Drive the machine forward slowly and at the same time roll the carrier back to engage the hookup ears on the attachment tool. Also establish proper alignment of the carrier lock pins to the attachment.

6. Stop forward travel when the hookup ears are engaged but continue to roll the carrier back to pick the attachment tool off the ground.When the carrier is rolled all the way back, perform the MANDATORY SAFETY SHUTDOWN PROCEDURE (Safety chapter p.10)

7. With the engine off, leave the operator's station and swing the lock lever completely to the right (clockwise as viewed from the operator's station) to fully engage the lock pins.

8. For attachment tool with auxiliary hydraulics, connect hoses to the quick-connect connectors on the boom nose.

Detaching

To detach attachment tool, proceed as follows:

1. Raise the boom slightly and extend it 2 to 3 feet (0.6 m to 0.9 m) for better visibility. Lower the boom until the attachment tool is approximately 12" (0.3 m) off the ground.

2. Roll the carrier backward as far as it will go. Once the carrier is rolled all the way back, perform the MANDATORY SAFETY SHUTDOWN PROCEDURE (Safety chapter p.10).

3. With the engine off, leave the operator's station. Manually rotate the lock lever completely to the left (counterclockwise, as viewed from the operator's station) to fully retract the lock pins.

4. If the attachment tool has auxiliary hydraulics, disconnect the hoses from the quick-disconnects on the boom nose.

5. Start the engine.

6. Roll the carrier forward then slowly back the machine until the attachment is free from the carrier.

SELF-LEVELING

The machine is provided with a hydraulic self-leveling feature. This feature is designed to keep the attachment tool level while the boom is being raised.

GENERAL MACHINE OPERATION

Take time to check the Telescopic Handler to make sure all systems are in good operating condition. Perform the following steps before starting the machine for the first time each day.

1. Check the engine oil and coolant, transmission oil and hydraulic oil levels.

2. Make sure weekly lubrication has been done.

3. Visually inspect for leaks, broken or malfunctioning parts. Make sure all caps, covers and safety shields are in place.

4. Check tires for cuts, bulges, nails, correct pressure, loose wheel nuts, etc.

5. Inspect the work area. Make sure you know where you will make load pickups, lifts, and turns. Look over the terrain of the jobsite for holes, obstacles, slippery surfaces, soft or deep mud.

6. Check clearances of ramps, doorways and passage ways. Check overhead clearances if you will travel and place loads near power or telephone lines.

⚠ WARNING

Exhaust fumes can kill. Insure proper ventilation when starting indoors or in enclosed areas.

Use proper grab handles, NOT the steering wheel or control levers as hand holds when mounting or dismounting.

NEVER operate the machine with safety guards or covers removed.

Over-inflated tires can explode and cause injury or death. Tire repairs MUST be made only by authorized personnel using proper tools and equipment.

If the machine is found to be in need of repair or in any way unsafe, or contributes to an unsafe condition, the matter shall be reported immediately to the user's designated authority. The machine shall NOT be operated until it has been restored to a safe operating condition.

Operate the travel controls gradually and smoothly when starting, stopping, turning and reversing the directions.

Grade and Slope Precautions

The Telescopic Handler complies with industry stability test requirements and is stable when properly operated. However, improper operation, faulty maintenance, or poor housekeeping may 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 of the machine as determined by the industry standard tests, does not encompass consideration for excessive tilt at high elevations, or the handling of off-center loads.

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

Grade Limits

NOTE: *Grade limits are based on ANSI standard B56.6-1992.*

1. DO NOT place or retrieve loads on an up or down slope or grade that exceeds 7% or (4º) grade.

2. DO NOT travel up or down a grade or slope that exceeds 22% (12º) grade while loaded.

3. DO NOT place or retrieve loads on a side hill with a slope or grade that exceeds 12% or (6.8º) grade. Regardless of terrain or position of wheels, the **FRAME MUST BE LEVEL** as indicated by the level indicator on the ROPS cross member.

⚠ WARNING

DO NOT attempt to correct the frame level condition with the boom raised or extended. Only level the machine while a complete stop with the boom fully retracted and the attachment tool raised just enough to clear the ground.

4. DO NOT travel across a side hill that exceeds 18% (10º) grade. Regardless of the terrain or position of the wheels, the **FRAME MUST BE LEVEL** as indicated by the level indicator on the ROPS cross member. The attachment tool MUST be maintained at the "carry" position with the boom fully retracted, and attachment tool at minimum ground clearance.

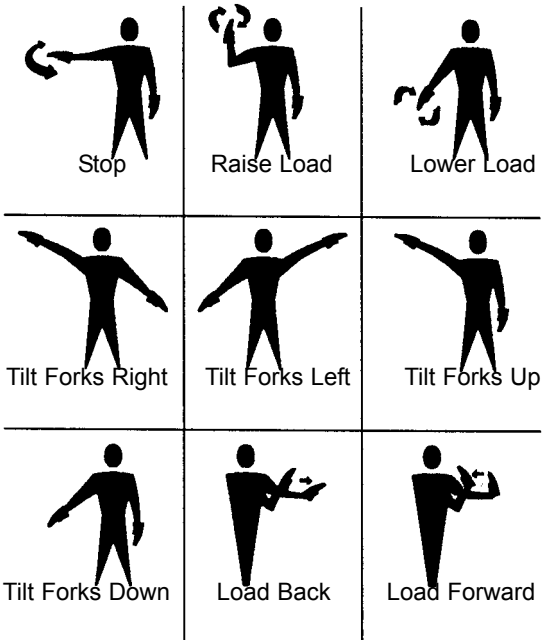
When ascending or descending grades in excess of 5% or (3º), the machine shall be driven with the load upgrade. Unloaded machine should be operated on all forward grades with the load handling attachment tool downgrade, tilted back if applicable, and raised only as far as necessary to clear the road surface.

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

Traffic Flow Patterns

Know and understand the traffic flow patterns of your jobsite and also know all Telescopic Handler hand signals for safety. Utilize signalmen and make sure you can see the signalmen and acknowledge the signals given.

The backup alarm automatically sounds with the travel selector in reverse. Care should be taken when down shifting or reversing as damage to the transmission can occur if shifting is forced or attempted while traveling.



Safety Hand Signals

When ramps MUST be utilized in transporting loads with the machine, the following shall be minimum widths for safe travel:

Compacted dirt, gravel, etc. - 12 ft. (3.6 m)
Woodboard, concrete, etc. - 10 ft. (3.0 m)

Permanent aisles, roadways or passageways, floors and ramps shall be defined in some fashion or marked. Permanent or temporary protrusion of loads, equipment, material and construction facilities into the usual operating area shall be guarded, clearly and distinctively marked, or clearly visible.

Maintain a safe distance from the edge of ramps, platforms or other similar working surfaces.

Controlled lighting of adequate intensity should be provided in operating areas. Where operating conditions indicate, the operator/user shall be responsible for having the machine equipped with lights.

Provision shall be made to prevent trucks, semi-trailers and railroad cars from being moved during loading and unloading.

Wheel stops, hand brakes, or other recognized positive means shall be used to prevent movement during loading and unloading.

DO NOT move railroad cars or trailers with the machine.

DO NOT use the boom and attachment for leverage to push the machine out of mud.

IMPORTANT: *DO NOT lower boom at high engine RPM when attachment tool is at maximum rearward tilt. Damage to slave cylinders may result.*

GENERAL LOAD HANDLING

NEVER attempt to work controls except from the operator's seat. NEVER jerk or use fast movements. Avoid sudden stops, starts or changes in direction.

Operation of the hydraulic system depends on engine speed and the distance the controls are moved. When operating these controls it is important to develop a technique called "feathering". Feathering the control means you start the desired motion by moving the control away from neutral a small amount. After movement has started, the control can be eased to full power. Use the same technique to stop the motion.

⚠ WARNING

Excessive speed can be hazardous. ALWAYS exercise caution and good judgement while operating the machine.

Twice daily, increase the engine speed (fast idle) and extend and retract the frame level cylinder to the stroke limit. This removes any trapped air in the circuit, which could cause the machine to lean to one side or the other.

The machine shall not be used to lift or carry personnel, or be fitted with any form of personnel work platform.

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 "Digger's Hotline" or proper local authorities for utility line locations BEFORE starting to dig!

Keep all body parts inside the operator's station while operating the machine. BE SURE of clearance of the attachment tool when turning, working around buildings, etc.

Turning corners too fast can tip the machine and cause a load to lean excessively and tip off the attachment. Sudden slowing or stopping of the machine may cause the load to drop off the attachment tool.

Be certain you can control both speed and direction before moving. Always place the machine in neutral and set the park brake before raising or extending the boom. NEVER drive the machine up to someone standing in front of the load.

NEVER leave the operator's station without first lowering the attachment tool to the ground. Set the park brake, place controls in neutral, shut off engine and remove the key. Avoid parking the machine on a slope or hill side, but if necessary, park across the slope and block the wheels.

Load Capacity and Reach

This machine has a flip-chart in the operator's station which provides, at a glance, the capacity limits at various positions of attachment tool extension and elevation. A set of current load zone charts is reproduced at the end of this manual for reference.

A typical load chart is reproduced on the next page. The scale on the left indicates height in feet above the ground level. The scale on the bottom shows the distance in feet out from the front of the machine. The arch lines noted by the numbers "1 through 5" correspond with the position extension markers on the operator side of the intermediate boom section.

The following example illustrates proper use of the load charts for the Telescopic Handler:

Example:

The operator, using a standard carriage attachment tool without outriggers, MUST raise a 3000 lb load 15 feet high and can only get to within 10 feet of the load placement point. Can it be done within the capacity of the machine?

Analysis: See "Typical Load Zone Chart" p. 31.

Projecting up from the 10 foot mark on the horizontal axis to intersect a line through the 15 foot mark on the vertical axis shows the load can be safely placed in the 3000 lb Zone.

During placement, the operator observes when the boom extension reference number "2" on the boom is visible. He knows the maximum safe distance of extension with this load has been reached.

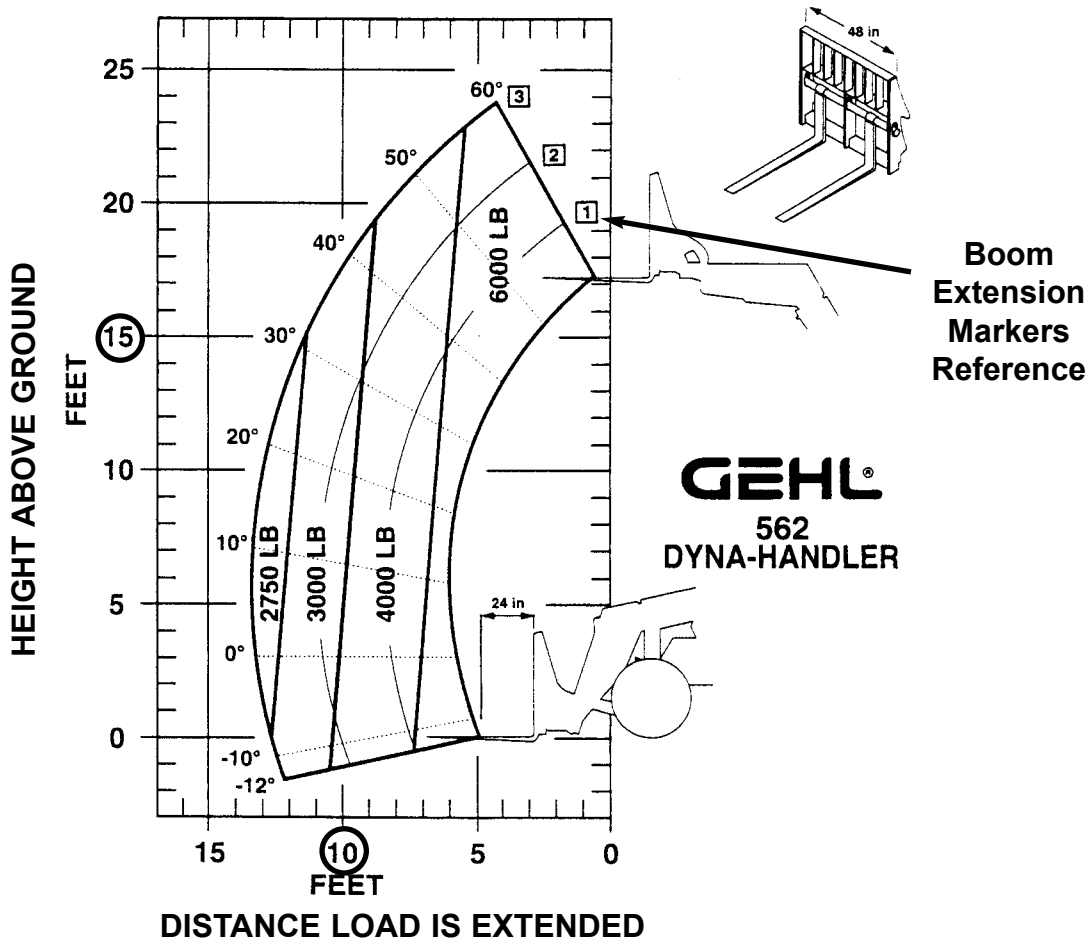
⚠ WARNING

NEVER exceed the rated operating capacity of the Telescopic Handler as shown on the capacity decal.

CARRIAGE ATTACHMENT TOOL APPLICATIONS

Picking Up The Load

Inspect the load. If it appears unstable, DO NOT attempt to move it. DO NOT attempt lifting double-tiered loads, or straddling side-by-side pallets one on



Typical Load Zone Chart

WARNING

Operating conditions can reduce the safe lift of near capacity or capacity loads. Exceeding capacity when lifting or extending the boom will cause the machine to tip forward.

each fork. NEVER add extra unauthorized counterweights to this machine. Consider the additional weight of any attachment tool as part of the picking load capacity of the machine.

Approach the load squarely and slowly with the machine straight and level. Adjust the space between forks, if necessary. Engage the load equally on forks until the load touches the carriage backrest. Tilt the forks back to position the load for travel.

Carrying The Load

If the load obstructs your view get someone to direct you. Maintain ground speed consistent with ground conditions and that permit stopping in a safe manner.

WARNING

NEVER travel with the boom above the carry position (attachment tool should be at minimum ground clearance). Boom should be fully retracted.

Use lower gear when traveling down an incline. NEVER coast with the transmission in neutral. Travel up and down grades slowly.

DO NOT operate the machine on a slope or grade that exceeds 22% (12º).

Load Elevation And Placement

For ground level placement, make sure the area under the load and around the machine is clear of equipment and personnel. Lower the load to the ground, tilt the forks to the horizontal position, then back away carefully to disengage forks from the load. For elevated or overhead placement, bring the machine as close as possible to the landing point.

Level the machine BEFORE raising the load. Use extreme caution for high placement. Make sure personnel are clear of the area where the load or the machine could tip or fall.

Set the park brake, hold the service brake pedal in fully depressed position and slowly raise the load maintaining a slight back tilt to cradle the load. As the load approaches the desired height, feather the boom control at minimum speed until the load is slightly higher than the landing point.

Continue the feathering technique and lower the load in place, until the Forks are free. Level the Forks and retract clear of the load. Lower the Forks to travel height, before moving the machine.

⚠ WARNING

NEVER use frame leveling to position an elevated load. Always lower the load to the ground and reposition the machine.

If a hydraulic boom circuit hose should break with the boom up, shut down the machine. Do NOT attempt to bring down the boom or make repairs. Call your GEHL dealer immediately.

As lift height increases, depth perception decreases. High elevation placement may require a signal man to guide the operator. The machine becomes less stable as load is raised higher.

Do NOT ram the lift cylinders to the end of the stroke. The resulting jolt could spill the load.

The truss boom attachment tools should ONLY be used to lift and place loads when the machine is stationary. Do NOT use truss boom to transport loads around the jobsite. This can cause the load to swing, resulting in either the load dropping or machine tipover.

SUSPENDED LOADS

DO NOT exceed the Telescopic Forklift capacity as equipped for handling suspended loads. Only lift the load vertically and NEVER drag it horizontally. Use guy lines to restrain load swing, whenever possible.

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 and sudden starts, stops and turns can cause the load to swing and create a hazard.

BUCKET APPLICATIONS

Material Densities

The table on the following page lists densities for some common materials which could be carried in a Telescopic Handler Bucket. The densities listed are average values and intended only as a guide.

Digging and Loading

Retract and lower the boom down. Roll the bucket's cutting edge down into contact with the ground. Move the bucket into the material. As the engine loads, roll the bucket back slowly while, decreasing travel speed

NOTE: *Always retract the boom before driving into material.*

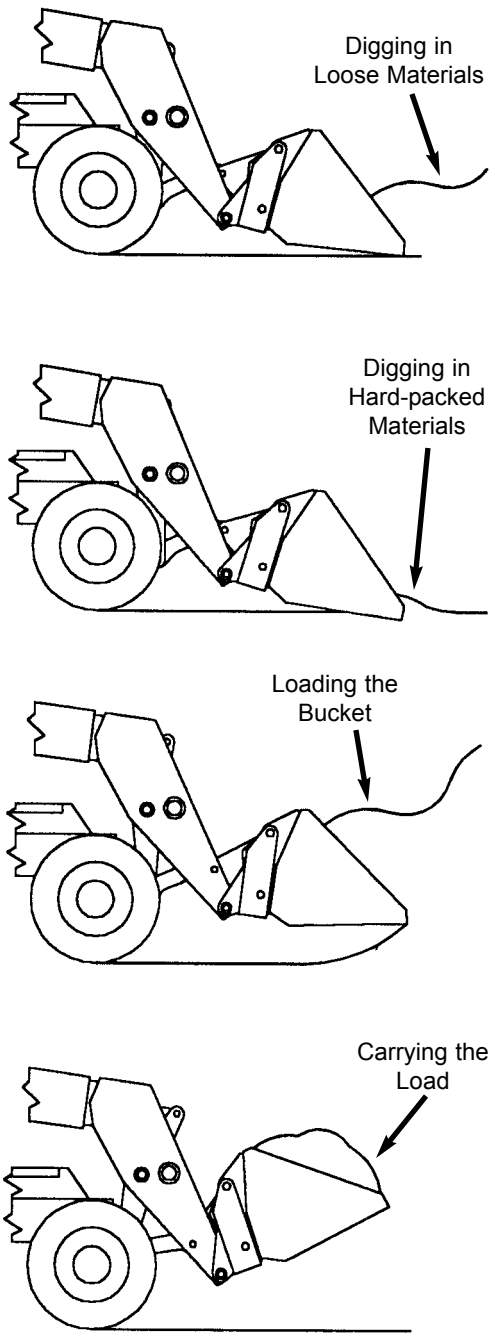
When attempting to fill the bucket while working with most hard-packed materials, it may be necessary to raise the boom while rolling the bucket back.

With the bucket filled, back the machine away from the material and roll the bucket back before proceeding to the dumping area.

⚠ WARNING

ALWAYS carry loaded bucket as close to the ground as possible. For additional stability when operating on inclines, ALWAYS travel with heavier end of the Teloscopic Handler toward the top of the incline.

Table of Common Materials & Densities	
Material	**Density in (lb./yd^3)**
Ashes	945-1350
Brick-common	3024
Cement	2970
Charcoal	621
Clay	2160-2700
Coal	1431-1701
Concrete	3105
Cinders	1350
Coal-anthracite	2538
Coke	810
Earth-dry loam	810
Earth-wet loam	1755
Granite	2511-2997
Gravel-dry	1782
Gravel-wet	2430
Gypsum-crushed	3105
Iron Ore	3915
Lime	1620
Lime Stone	2430
Manure-liquid	1755
Manure-solid	1215
Peat-solid	1269
Phosphate-granular	2430
Potash	1836
Quartz-granular	2970
Salt-dry	2700
Salt-rock solid	3645
Sand-dry	2916
Sand-wet	3375
Sand-foundry	2565
Shale-crushed	2430
Slag-crushed	1890
Snow	405-1350
Sulpha	2565
Taconite	2889



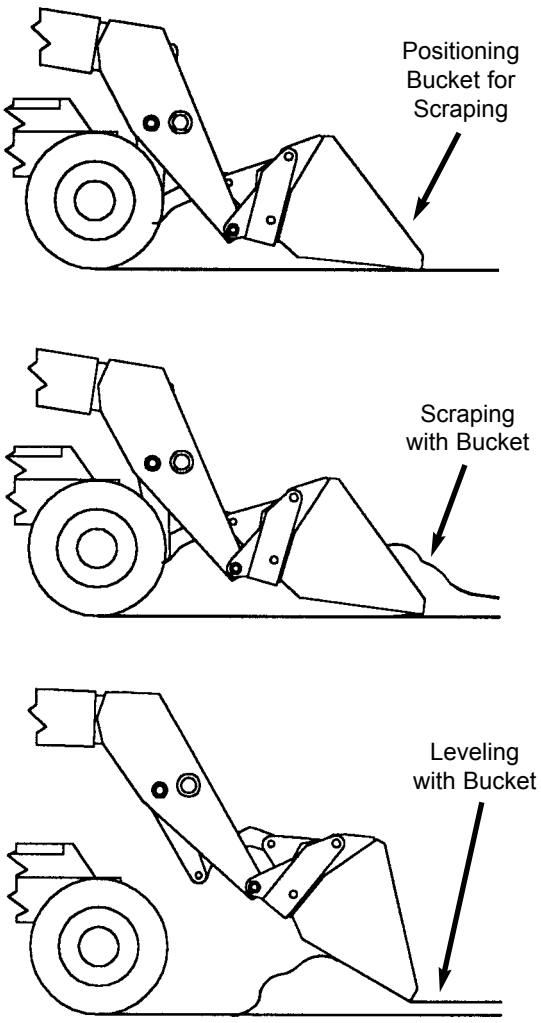
Digging, Loading and Carrying Bucket

Dumping the Load Onto a Pile

Slowly stop forward motion upon reaching the pile. Raise and extend the boom high enough so that the bucket clears the top of the pile. Slowly move the machine ahead to position the bucket for dumping. Empty the bucket and back the machine away while retracting and lowering the boom, and rolling the bucket back.

Dumping the Load Into a Box

With the load low, approach the truck or trailer box squarely with the side. Stop your approach as close to the side of the box as possible while still allowing clearance for raising and extending the boom. Raise and extend the boom until the bucket clears the top of the box. Slowly position the bucket over the inside of the box. Dump the material then retract and lower the boom while rolling the bucket back.



Scraping and Leveling with Bucket

Dumping the Load Over a Solid Embankment

WARNING

DO NOT drive too close to an excavation or ditch. Be sure the surrounding ground has adequate strength to support the weight of the Telescopic Handler and the load.

Travel slowly with load low as possible toward the dumping area. Stop the machine at the position where the bucket extends half-way over the edge of the embankment. Roll the bucket forward, raise and extend the boom to dump the material. After dumping, slowly back away from the embankment while retracting and lowering the boom and rolling the bucket back.

Scraping With a Bucket

Operate the Telescopic Handler in a forward position for scraping. Position the boom retracted with bucket down. Tip the bucket cutting edge at a slight angle to the surface being scraped. Travel slowly forward so material can flow over the cutitng edge and collect inside the bucket.

Leveling With a Bucket

Drive the Telescopic Handler to the outer edge of the area being leveled. Position the boom retracted with the bucket down. Roll the bucket forward and place the cutting edge at a 30 to 45 degree angle to the surface. Travel backwards while feathering the boom control joystick, dragging the dirt and leveling it at the same time.

ROAD TRAVEL

For short distance highway travel, attach a SMV (slow moving vehicle) emblem (purchased locally) to the back of the Telescopic Handler. Activate hazard lights on the machine. For highway operation, obtain and install an amber flashing beacon.

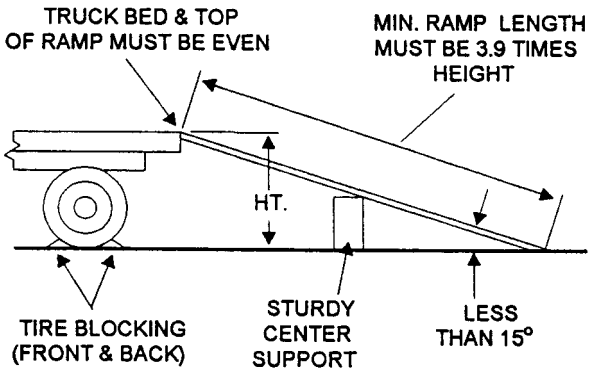
NOTE: *ALWAYS follow ALL state and local regulations regarding the operation of equipment on or across public highways! Also, whenever any appreciable distance exists between jobsites or if operation on public highway is prohibited, be sure to transport the machine using a vehicle of appropriate size and weight.*

TRANSPORTING BETWEEN JOBSITES

When transporting the Telescopic Handler, know the overall height to allow clearance of obstructions. Remove or tape over the slow moving vehicle (SMV) emblem if it will be visible to traffic.

WARNING

ALWAYS abide by the following recommended procedures and guidelines, when attempting to use ramps to load the machine onto (or unload it from) a truck or trailer. Failure to heed can result in damage to equipment and serious personal injury or death!



Ramp Placement

Tie-down hooks are provided for inserting chains to secure the machine while transporting.

Loading Machine Using Ramps

NOTE: *A matched pair of ramps is required.*

1. See illustration above. The ramps MUST be of sufficient strength to support the machine. Whenever possible, the use of strong steel ramps is recommended as well as some type of center supporting block.

2. The ramps MUST be firmly attached to the truck or trailer bed with NO step between the bed and the ramps.

3. Incline of ramps MUST be less than 15 degrees; ramp length MUST be at least 16 feet (4.8 m) long.

4. Ramp width MUST be at least 1-1/2 times the tire width.

5. Slowly (at the lowest engine speed possible) and carefully drive the machine up the ramps.

⚠ WARNING

NEVER attempt to adjust travel direction (even slightly) while traveling on the ramps. Instead, back down off the ramps and then realign the machine with the ramps.

NEVER transport the machine with the boom raised or extended. BE SURE to secure the machine (including boom) to the truck or trailer bed using chains and binders or steel cables to prevent any movement while transporting.

6. Remove the attachment tool from the boom. Position the machine (with the boom facing toward the front of the truck or trailer) so that it is straight in line with the ramps. Tie down slots are provided on the front and rear sides of the frame structure.

7. Block the front and rear of the tires on the truck or trailer. Engage the parking brake.

In Transit

If in transit for a few days: (a) Disconnect the battery. (b) Clean all bright surfaces and coat with heavy, very high flash point grease to prevent rusting.

Unloading Machine Using Ramps

NOTE: *A matched pair of ramps is requlred.*

Use ramps as described in Steps 1 thru 4 and proceed as follows to unload the machine:

8. If necessary, adjust the machine so that the wheels are in line and centered with the ramps.

9. Slowly (at the lowest engine speed possible) and carefully drive the machine down the ramps

THEFT DETERRENTS

THE CERTAINTY OF APPREHENSION IS A STRONG DETERRENT TO THIEFT OF CONSTRUCTION EQUIPMENT! **GEHL** has recorded all part numbers and serial numbers. Users should take as many of the following actions as possible to discourage theft, to aid in the recovery in the event that the machine is stolen, or to reduce vandalism:

1. Remove keys from unattended machines.

2. Attach, secure, and lock all anti-vandalism and anti-theft devices on the machine.

3. Lock doors of cabs when not in use.

4. Inspect the gates and fences of the vehicle storage yard. If possible, keep machines in well lighted areas. Ask the law enforcement agency having jurisdiction to make frequent checks around the storage or work sites, especially at night, during weekends, or on holidays.

5. Report the theft to the dealer and insurance company. Provide the model and all serial numbers.

6. Request that your dealer forward this information to **GEHL** Company.

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Chapter 7

LUBRICATION

GENERAL INFORMATION

CAUTION

NEVER service this machine when any part of the machine is in motion. ALWAYS BE SURE to exercise the MANDATORY SAFETY SHUT-DOWN PROCEDURE (SAFETY chapter p.10) BEFORE servicing this equipment.

NOTE: *The "Maintenance" chapter in this manual has provisions for recording the dates and hourmeter readings after lubrication or other service has been performed; use those spaces to keep a log for maintaining a current service interval record. Proper routine lubrication is an important factor in preventing excessive part wear and early failure.*

LUBRICANTS

The chart on this page lists the locations, temperature ranges and types of recommended lubricants to be used when servicing this machine. Also refer to the separate engine manual for additional information regarding recommended engine lubricants, quantities required and grades.

NOTE: *Refer to Operator Services topic in the "Service & Storage" chapter of this manual for detailed information regarding periodic checking and replenishing of lubricants.*

Hydraulic System/Reservoir

Use a Mobil DTE 15M, or equivalent which contains anti-rust, anti-foam and anti-oxidation additives and conforms to ISO VG46.
Capacity:
35 gallons (132.5 liters)

All Grease Fittings

Use No. 2 Lithium-based Grease

Engine Crankcase Oil

Ambient Temperature	Grade
Below 32°F (0°C)	SAE 10 or 10W30
32-77°F (0-25°C)	SAE 20 or 10W30
Above 77°F (25°C)	SAE 30 or 10W30

***Service Classification: API - CD/CE/CF-4**

Capacity
Refer to Engine Specifications, Chapter 2

Axle Gear Oil

Use API-GL-5 80W90
Differential Capacity:
9.6 quarts (9 liters)
Planetary Capacity (each side):
0.55 quarts (0.5 liters)

Transmission/Cooler Oil

Use Sunco Multi-ATF or Equivalent
Capacity (each side):
24 Quarts (23 liters)

Brake System

Use Sunco Multi-ATF or Equivalent

Replacement Filters Chart	
John Deere Engine	
Oil Filter Element	Gehl P/N L99420
Fuel Filter Element	Gehl P/N L98978
Perkins Engine	
Oil Filter Element	Gehl P/N 078849
Fuel Filter	Gehl P/N L98602
Transmission	
Oil Filter Element	Gehl P/N L99184
IMPORTANT: Do NOT use a substitute replacement because high pressure may cause filter to rupture.	
Hydraulic System Filters	
In-Line Filter Element	Gehl P/N L97489
Reservoir Sump Strainer	Gehl P/N L49327
Air Cleaner	
Dry Element	Gehl P/N L120054

GREASING

Refer to the illustration and listing on the next page for fitting locations. Wipe dirt from the fittings before greasing them to prevent contamination. Replace any missing or damaged fittings. To minimize dirt build-up, avoid excessive greasing.

BASIC MACHINE GREASE FITTING LOCATIONS

Every 50 Hours (or weekly)

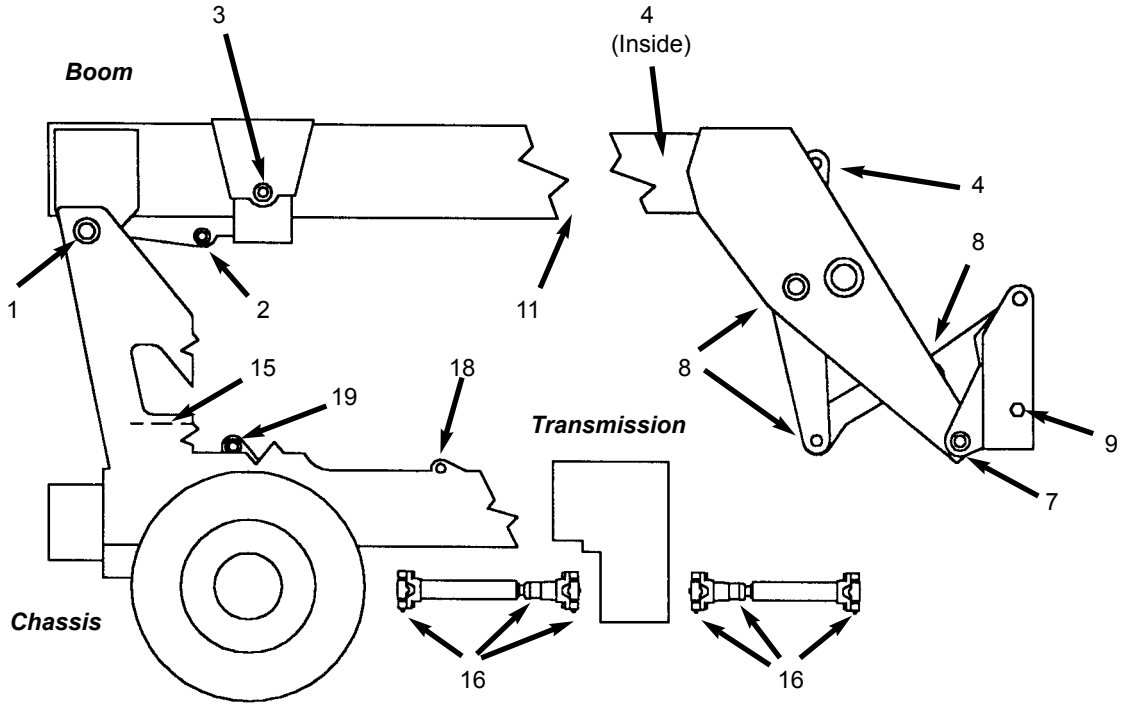
Refer to the illustration on the facing page for locations.

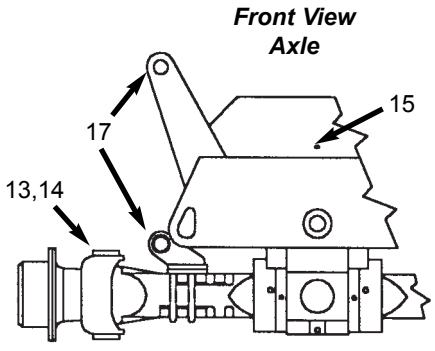
--- BOOM AREA ---

1. Boom to frame upright pivot pins (2)
2. Rod end slave cylinder pivot pins (2)
3. Rod end lift cylinder pins (2)
4. Extend cylinder pivot pins (2)
5. Attachment carrier to boom nose pivot pins (2)
6. Tilt cylinder pivot pins (2)
7. Attachment carrier pivot pins (2)
8. Carrier linkage pivot pins (3)
9. Attachment release pins (2)
10. Attachment release lever pivot (1)
11. Boom slide pads - as required, front and rear

--- CHASSIS AREA ---

12. Brake foot pedal linkage (1)
13. Wheel spindle pins (4 per axle)
14. Tie rod ends (2 per axle)
15. Axle-to-frame pivot pins (1 per axle)
16. Drive shafts (3 per each)
17. Leveling cylinder pivot pins (2)
18. Base end lift cylinder pivot pins (2)
19. Base end slave cylinder pivot pins (2)



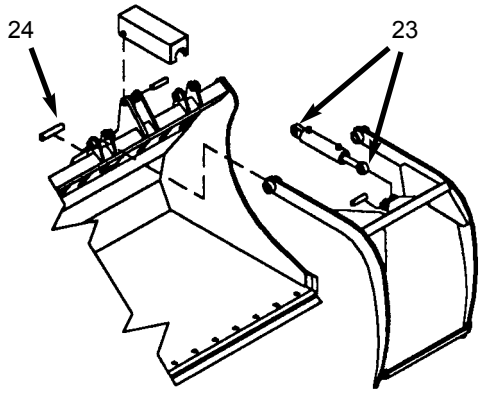


-- NOT SHOWN --
Operator Station Floor
Item (12)

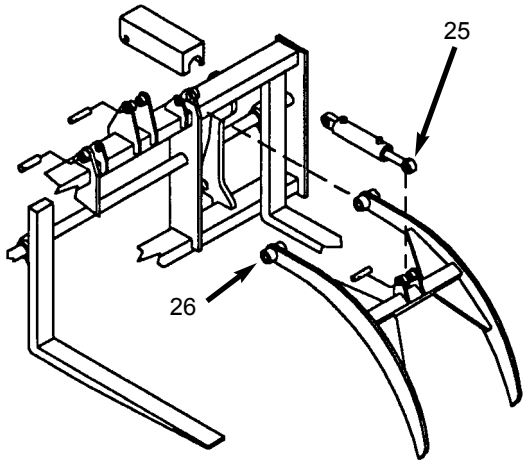
Location Reference for Grease Fittings (Basic Machine)

Every 50 Hours (or weekly)

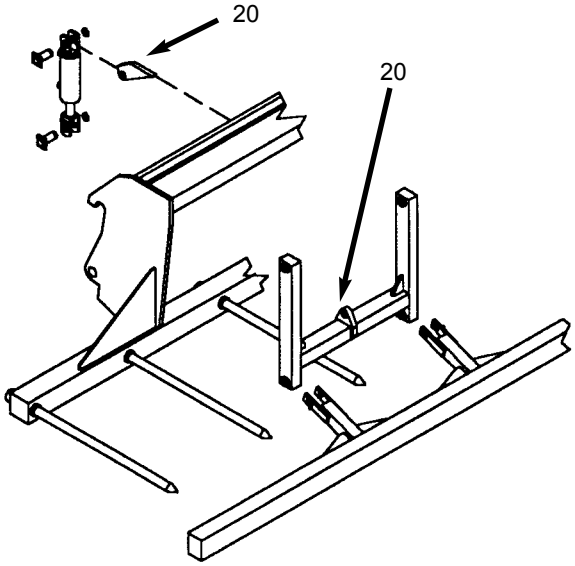
20. Push arm cylinder pivot pins (2)
21. Top clamp weldment pivot pins (2)
22. Top clamp cylinder pivot pins (2)
23. Top clamp cylinder pivot pins (2)
24. Top clamp weldment pivot pins (2)
25. Top clamp cylinder pivot pins (2)
26. Top clamp weldment pivot pins (4)



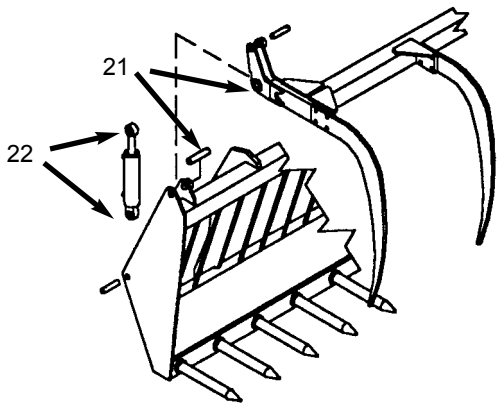
BUCKET TOP CLAMP



LOG/PIPE TOP CLAMP



BALE SPEAR



UNIVERSAL TOP CLAMP

Location Reference for Grease Fittings (Attachments)

Chapter 8

SERVICE & STORAGE

GENERAL INFORMATION

WARNING

BEFORE servicing the Telescopic Handler, unless expressly instructed to the contrary, exercise the MANDATORY SAFETY SHUTDOWN PROCEDURE (Safety chapter p.10). After service has been performed, BE SURE to restore all guards, shields and covers to their original positions BEFORE resuming machine operation.

NOTE: *All Service routines, with the exception of those described under the "Dealer Services" topic are owner-operator responsibilities. All Operator Services described under the hourly subtopics are also referred to on a decal which is located on the inside right side panel of the operator's station. Refer to the Lubrication chapter of this manual for lubrication information.*

NOTE: *This "Service" chapter describes procedures to follow for making routine maintenance checks, adjustments and replacements. The majority of the procedures are also referred to in the "Maintenance" chapter of this manual. For engine related adjustments and servicing procedures, be sure to refer to the engine manual provided.*

PRECAUTIONS

DO NOT perform any maintenance or repair without the owner's prior authorization. Allow only trained personnel to service the machine.

WARRANTY repairs can only be done by a GEHL Dealer. He will know what portions of the machine are covered under the terms of the GEHL Warranty and what portions are covered by other vendor OEM warranties.

When a problem occurs, don't overlook simple causes such as an empty fuel tank. Check for leaks and broken connections. Make note of any specific problem symptoms, noises, etc. and contact your local Gehl Dealer.

IMPORTANT: *Always dispose of waste lubricating oils, anti-freeze and hydraulic fluids according to local regulations or take them to a recycling center for disposal. DO NOT pour them onto the ground or into a drain.*

DEALER SERVICES

The following areas of internal components service, replacement and operating adjustments should only be attempted by (or under the direction of) an authorized GEHL Telescopic Handler Dealer.

IMPORTANT: *DO NOT attempt to service or repair major components, unless authorized to do so by your Gehl Dealer. Any unauthorized repair will void the warranty.*

POWER TRAIN COMPONENTS

The engine and transmission are coupled directly to each other. All service routines, related to the internal components are precise and critical to proper power train operation. The axle differential and planetary ends are also sophisticated assemblies which require special know-how and tools for servicing.

NOTE: *If any power train components are suspected of faulty operation, contact your Gehl Dealer for further assistance.*

HYDRAULIC SYSTEM COMPONENTS

Valves, pumps, motors and cylinders are also sophisticated assemblies which require special know-how and tools for servicing. All cylinders are appropriately designed with particular strokes, diameters, checks and hose connection provisions unique to the machine application requirements. A schematic (located at the end of this manual) can be used as a guide for service reference, as required.

⚠ WARNING

Tilt, lift, extend and leveling cylinders have counterbalance valves. These valves keep hydraulic fluid from entering or exiting the cylinders while not being used, and are under extremely high pressure. For your safety, before removing any of these valves, you must call Gehl Service. Failure to do so may result in serious injury or death.

Internal service on any of these components should only be attempted by (or under the direction of) an authorized GEHL Telescopic Forklift dealer. WARRANTY repairs can only be done by a GEHL dealer. He will know what portions of the machine are covered under the terms of the GEHL warranty and what portions are covered by other vendor warranties.

ELECTRICAL COMPONENTS

An electrical system schematic is provided which includes instrumentation, electrical components and switch connections. It is located at the end of this manual and can be used as a guide for service reference, as required.

OPERATOR SERVICES

Some of the operator related services will require access to components located inside the superstructure under shields, hoods and covers. The reference chart on this page notes components accessed in each particular area.

ACCESS TO COMPONENTS REFERENCE CHART

Component	Operator Station	Frame	Front Cover	Mid-Rear Hood
Axle (underside)		●		
Engine				●
Transmission (mid area)			●	
Drive Shafts (underside)		●		
Main Control Valve (rear)		●		
Muffler (underside)		●		
Air Cleaner (top fuel tank)		●		
Battery		●		
Radiator				●
Brake Valve (underside)	●			
Travel Controls (dash area)	●			
Boom Controls (right side)	●			
Hydraulic Test Ports (dash)	●			
Hourmeter (dash)	●			
Switches/Indicators (dash)	●			
Hydraulic Pump			●	
Hydraulic Filter (Reservoir)			●	
Misc. Hydraulic Valves			●	
Air Conditioner (rear)	●			
Heater (lower front)	●			

⚠ WARNING

DO NOT smoke or allow any open flames in the area while checking or servicing hydraulic, battery or fuel systems; all contain highly flammable liquids or explosive gases which can cause an explosion or fire if ignited.

Wear a face shield when you disassemble spring loaded components or work with battery acid. Wear a helmet or goggles with special lenses when you weld or cut with a torch.

When working beneath a raised machine, always use blocks, jack-stands or other rigid and stable supports. Wear appropriate protective clothing, gloves, shoes. Keep feet, clothing, hands and hair away from moving parts.

Always wear safety glasses or goggles for eye protection from electric arcs from shorts, fluids under pressure, and flying debris or loose material when the engine is running or tools are used for grinding or pounding.

NEVER weld on bucket, forks, boom, support frame or overhead guards without the consent of the manufacturer. Special metals may be used which require special welding techniques or have a design which should not have welded repairs. NEVER cut or weld on fuel lines or tanks.

If repair welding is ever required, BE SURE to attach the ground (-) cable from the welder as close as possible to the area to be repaired. Also remove battery (+) positive terminal connection before welding.

Choose a clean, level work area. Make sure you have sufficient room, clearances, and adequate ventilation. Clean the walking and working surfaces. Remove oil, grease and water to eliminate slippery areas. Utilize sand or oil absorbing compound, as necessary, while servicing the Telescopic Handler.

Before starting inspection and repair, move the machine onto a level surface, shut down engine, and release all hydraulic pressure. Always block the boom securely, or lower it to full ground contact. Place all controls in neutral.

Block the wheels. Remove the ignition key. Remove only guards or covers that provide needed access. Wipe away excess grease and oil.

NEVER weld on attachment tools, boom support frame or overhead guards without the consent of the manufacturer. Special metals may be used which require special welding techniques or have a design which should not have welded repairs. NEVER cut or weld on fuel lines or tank.

Excessively worn or damaged parts can fail and cause injury or death. Replace any cracked or damaged part. Care should be taken to assure that all replacement parts are interchangeable with original parts and of equal quality.

Use care not to damage machined and polished surfaces. Clean or replace all damaged or painted over plates and decals that cannot be read.

⚠ WARNING

NEVER leave guards off or access doors open when the machine is unattended. Keep bystanders away if access doors are open.

After servicing, check the work performed, no parts left over, etc. Install all guards, covers.

Service Every 10 Hours or Daily

CHECK FUEL TANK LEVEL

After operation each day, the fuel tank should be filled to prevent water from condensing in the tank. To fill, remove the filler cap and add fuel.

A drain plug is provided in the bottom of the fuel tank for removing condensation and other foreign materials. Open the plug and allow water and fuel to drain into a container until only clear fuel is flowing from the tank.

CHECK FUEL FILTER

NOTE: *The fuel filter will require occasional replacement to maintain a clean and adequate fuel flow for maximum engine horsepower. The*

frequency of filter replacement will be determined by the cleanliness of available fuel, the care used in storing fuel supplies and the operating conditions in which the machine is used.

Small amounts of water can be drained from the fuel filter. The drain plug should be removed weekly to drain off water accumulation until clear fuel is flowing from the outlet.

CHECK ENGINE OIL LEVEL

With the machine on level ground, and the engine stopped for ten minutes or more, slide open the side engine panel and remove the engine dipstick. Wipe it clean, re-insert it and remove to obtain a reading. If the oil level is down, or below the ADD mark, fill with the required amount of oil to bring the level to the FULL mark. See the LUBRICATION chapter for the type of oil to use.

CHECK RADIATOR COOLANT LEVEL

With the machine on level ground, remove the radiator cap. Add 50/50 water and anti-freeze mixture if the coolant level is below the filler neck. Replace the radiator cap securely.

⚠ WARNING

DO NOT remove the radiator cap when the engine is running hot or overheated. Coolant is extremely hot and under pressure and it can burn your skin. Allow sufficient time for the radiator and hydraulic oil cooler to cool BEFORE relieving the pressure and removing the radiator cap.

IMPORTANT: *If the engine is operated with a loose radiator cap, the pressure bypass will not work and the engine will run hot.*

CHECK TRANSMISSION OIL LEVEL

The machine must be on level ground and make sure the boom is lowered and completely retracted. With engine and transmission at operating temperature; park brake on, transmission in neutral and engine speed at low idle, remove the access cover to the transmission and hydraulic pump. Remove the dipstick and check the oil level. Add the required amount of oil to bring the level to the FULL mark. See the Lubricants chapter for the type of oil to use.

CHECK HYDRAULIC OIL LEVEL

The machine must be on level ground and make sure the boom is lowered and completely retracted. The fluid MUST be cool when checking the reservoir level. By doing this, you will reduce the possibility of overfilling the hydraulic system, and also reduce potential injury due to hot fluid.

Remove the front cover from the front hood section. Loosen the filler cap to release pressure. Remove the filler cap and check the level on the dipstick. If the oil level is down, or below the ADD mark, fill with the required amount of oil to bring the level to the FULL mark. See the Lubricants chapter for the type of oil to use.

IMPORTANT: *Be careful when removing the reservoir filler cap so that no dirt or other foreign matter enters the hydraulic system while the cap is removed. DO NOT OVERFILL.*

CHECK BRAKE RESERVOIR LEVELS

Flip up the floor cover under the seat mount. Remove both reservoir covers to check the levels. If low, fill to the proper level with correct fluid. See LUBRICATION chapter for the type used.

CHECK PARK BRAKE HANDLE

Check the tension when pulled. Adjust, if necessary, to a pull of 20 Lbs (89 N)

CHECK TIRE PRESSURES

Proper tire pressure should be maintained equally for all four tires to enhance operating stability and extend tire life.

When installing tires on the machine, be sure that all tires are of the same size and style. ALWAYS replace tires with the same size furnished as original equipment. Replacement tires must be purchased locally.

Check the tire pressure “cold”. All 12 ply tires should be inflated to 55 PSI (380 kPa).

NOTE:*If the tires have been filled with water or calcium chloride for weight, a calcium chloride tire*

⚠ WARNING

NEVER attempt to service tires if the bead lock ring appears loose. Clear the area and call for professional tire repair help.

Inflating or servicing tires can be dangerous. Whenever possible, trained personnel should service and mount tires. Do NOT place your fingers on the tire bead or rim during inflation; serious injury or amputation could result. 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. 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.

pressure gauge MUST be used to check the tire pressure.

When removing tires follow industry safety practices. Deflate completely prior to removal. Following assembly of the tire on the rim, use a safety cage or restraining device while inflating.

CHECK WHEEL NUT TORQUE

On NEW machines, re-torque until 450 ft-lbs (610 Nm) is maintained.

CHECK INSTRUMENTS OPERATION

Allow the engine to warm up for about five minutes before beginning operation. Indicator lamps should be OFF and gauges should register normal readings. Tilt the frame from side to side with the level control and note the angle indicator movement.

CHECK GENERAL MACHINE OPERATION & CONDITION

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 (light grey or colorless)?

Service Every 50 Hours or Weekly

LUBRICATE GREASE POINTS

Refer to the Lubrication chapter of this manual for weekly grease fitting locations and other related details.

100 Hours (New Machine Only)

The following initial oil and filter changes should be made at this time on a new machine. Thereafter these changes should be made at the regular maintenance schedule listed. Refer to those schedules for procedures necessary.

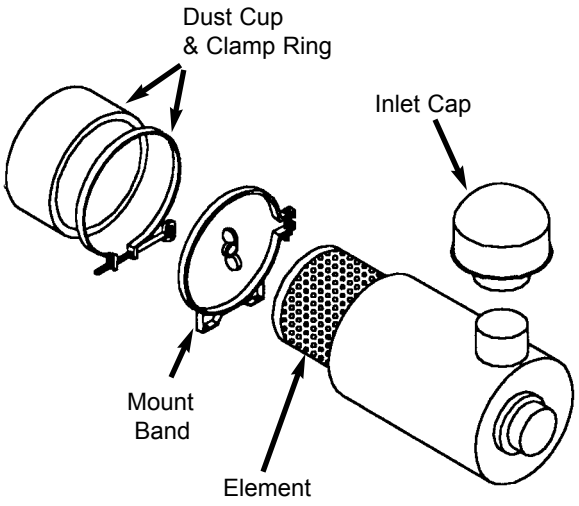
Engine Oil & Filter	(250 Hours)
Transmission Oil & Filter	(1000 Hours)
Hydraulic Oil Filter	(1000 Hours)

Service Every 250 Hours

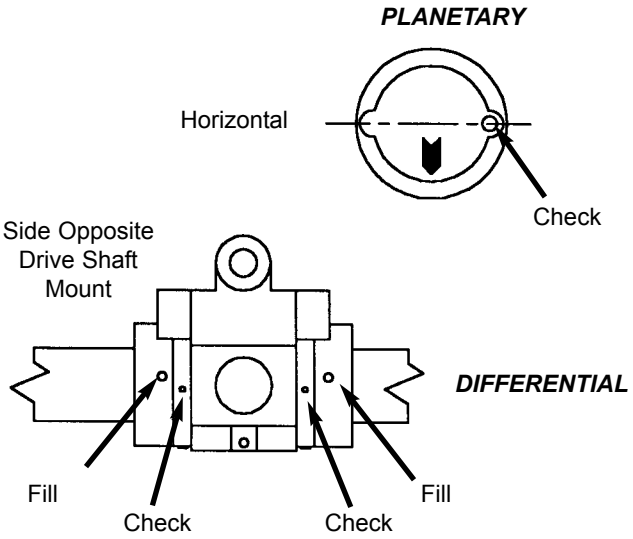
NOTE: *Perform all other service requirements up to this point as well as the following:*

CHANGE AIR FILTER ELEMENT

This air filter contains a single dry element. Wipe the outside of the body with a rag or cloth. Blow off excess dirt and dust with compressed air. Refer to illustration on the next page.



Air Cleaner Assembly



Axle Oil Plugs Location

1. Loosen the clamp ring and remove the dust cup. Remove the baffle. Wipe the cup and baffle completely clean. Reassemble the dust cup.

2. Remove the element wing bolt and slide out the element. Avoid knocking the element against the housing. Dirt accidentally transferred to the inside of the outlet tube will reach the engine and cause wear.

3. Wipe the entire inside of the main body and inlet cap screen.

A streak of dust on the clean air side of the old element indicates a leakage problem. Be sure to remove the cause before installing a new element.

4. Inspect the new element for possible damage. Placing a bright light inside the element and inspecting the outside will show up any holes or tears. Discard the element if such damage appears.

IMPORTANT: *NEVER use an element that is damaged. Severe engine wear and eventual failure can result if dirt gets through a hole in the element.*

5. Install the element and reassemble the end cup to housing. Make sure the large o-ring is in place between the end cup and the main body.

NOTE: *Keep spare elements on hand to eliminate down time.*

CHECK AXLE OIL LEVELS

Differential

NOTE: *The Telescopic Handler should be on a level surface for this procedure.*

See illustration. Remove the oil level check/fill plug (located on opposite side of the drive shaft u-joint). Oil should overflow the hole. If low, fill until oil overflows the hole. Replace the plug, wait 10 to 15 minute and repeat the fill procedure. Continue this process until the differential is full. See the Lubricants chapter of this manual for the proper oil specification. Replace the oil level check/fill plug.

Planetary Hubs

NOTE: *The planetary hubs can be checked without jacking up the machine.*

See illustration. The planetary hubs have one plug each used for filling and draining. For checking the level and filling, position the Wheel until the arrow points down. Remove the fill plug. If oil does not run out, add oil until it overflows. Check the remaining hubs the same way. Refer to the oil specifications found in the Lubricants chapter of this manual.

CHANGE FUEL FILTER

The frequency of filter replacement will be determined by the cleanliness of available fuel, the care used in storing fuel supplies and the operating conditions in which the machine is used.

NOTE: *For proper replacement procedures refer to the engine manual for your machine.*

After fuel filter replacement, bleed the air out of the fuel system following the procedures in the engine manual.

Fuel Bleeding Procedures

WARNING

NEVER service the fuel system while smoking, while near an open flame, or after the engine has been operated and is hot.

When the fuel filter is removed and replaced, or the engine runs out of fuel, air must be bled from the system. Refer to the engine manual relative to proper bleeding procedures.

If the engine still will not start, consult your nearest authorized engine dealer.

WARNING

Escaping diesel fuel under pressure can have sufficient force to penetrate the skin. Before applying pressure to the fuel system, BE SURE all connections are tight and lines and hoses are NOT damaged. Use a piece of wood or cardboard to search for suspected leaks. If injured by escaping fuel, see a doctor familiar with this type of injury at once or gangrene may result.

NOTE: *Only an authorized engine dealer can perform WARRANTY Service on the engine.*

Diesel Fuel Injectors

Whenever faulty or plugged injectors are indicated, see your nearest authorized engine dealer.

Diesel Injection Pump Timing

Whenever injection pump timing, or other pump service is indicated by abnormal engine operation, contact your nearest engine dealer.

CHANGE ENGINE OIL & FILTER

Change the engine oil and filter using the following procedure:

1. With the engine warm, remove the crankcase drain plug. Some plugs are equipped with a magnet to gather metal particles. Completely clean and flush away all metallic filings from the plug and re-install it.

IMPORTANT: *DO NOT discharge onto ground. Catch and dispose of per local waste disposal regulations.*

2. The engine oil filter should be changed at every oil change interval. Remove and discard the throw away filter canister. Wipe the gasket sealing area of the block with a clean cloth.

NOTE: *Your OEM engine oil filters have special by-pass valves built in. Use only genuine OEM engine replacement filters.*

3. Apply a thin coat of clean oil to the new oil filter gasket and spin tighten. Refill the crankcase with new oil. Follow specifications in the Lubrication chapter for type and viscosity of new oil to put in.

4. After new oil has been added, run the engine at idle speed until the oil pressure light is OFF. Check for leaks at the filter and drain plug. Re-tighten only as much as necessary to eliminate leakage.

CHECK THE BATTERY

The battery furnished with this machine is a 12 volt, wet-cell battery.

Handling Battery Safely

The top of the battery must always be kept clean. Clean the battery with a brush dipped in an alkaline solution (ammonia or baking soda and water). After the foaming has stopped, flush the top of the battery with clean water. If the terminals and cable connection clamps are corroded or have a buildup, disconnect the cables and clean the terminals and clamps with the same alkaline solution.

NOTE: *The battery in this machine is warranted by the supplier. See the punch tag on the top of the battery for warranty information.*

⚠ WARNING

Explosive gas is produced while a battery is in use or being charged. Keep flames or sparks away from the battery area. Make sure battery is charged in a well-ventilated area.

NEVER lay a metal object on top of a battery as a short circuit can result.

Battery acid is harmful on contact with skin or fabrics. If acid spills, follow these first aid tips:

1. **IMMEDIATELY remove any clothing on which acid spills.**
2. **If acid contacts the skin, rinse the affected area with running water for 10 to 15 minutes.**
3. **If acid comes in contact with the eyes, flood the eyes with running water for 10 to 15 minutes. See a doctor at once. NEVER use any medication or eye drops unless prescribed by the doctor.**
4. **To neutralize acid spilled on the floor, use one of the following mixtures:**
   a. **1 Pound (0.5 kg) of baking soda in 4 quarts (4 liters) of water.**
   b. **1 Pint (0.4 liters) of household ammonia in 4 quarts (4 liters) of water.**

Whenever battery is removed from the unit, BE SURE to disconnect the negative (-) battery terminal connection cable first.

⚠ WARNING

The ONLY safe method for jump-starting a dicharged 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.

Jump Starting

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.

NOTE: BE SURE that the jumper battery is also a 12 volt D. C. battery.

1. Turn the keyswitches on both vehicles to OFF. Make sure that both vehicles are in "Neutral" and NOT touching.

2. Remove the battery filler caps and make sure that electrolyte solution is up to the proper level. In addition, place a clean cloth over the uncapped filler holes to prevent the electrolyte solution from overflowing.

3. Connect one end of the positive (+) jumper cable to the positive (+) battery terminal on the disabled vehicle first. DO NOT allow the jumper's positive (+) 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.

4. Connect one end of the negative (-) jumper cable to the jumper battery negative (-) terminal.

5. Make the final negative (-) jumper cable connection to the disabled Telescopic Forklift'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 a couple of time on the battery terminals to insure a good electrical path for conducting current.*

6. Proceed to start the machine. If it does not start immediately, start the jumper vehicle engine to avoid excessive drain on the booster battery.

7. 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 making sure 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 engine. Be sure to discard the cloths and reinstall the vent caps removed in Step 2, above.

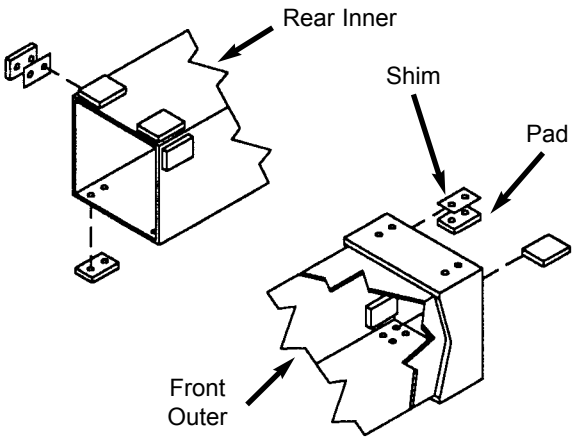
NOTE: *If the battery frequently becomes discharged, have the battery checked for possible dead cells or troubleshoot the entire electrical system for possible short circuits or damaged wire insulation.*

CHECK ALTERNATOR & FAN BELT TENSION

Refer to the engine manual relative to proper belt tension adjustment and replacement procedures. If the belt shows wear or cuts, it should be replaced. Order replacement belt from your engine dealer.

CHECK BOOM SLIDE PADS WEAR & CLEARANCE

This boom is equipped with special nylon low friction slide pads between the telescopic sections (see illustration). These are pre-greased and initially worn-in at the factory. Normally greasing is not required, except for maintaining a light film of grease on the pad tracking areas of the boom sections. An exception would be if a boom section has been replaced.



Slide Pad Detail

Visually check for loose pad bolts. The bolts are torqued to 30 ft-lb (40 Nm). If the bolts are re-torqued at any time, Loctite® thread lock must be re-applied to the bolts.

If the boom starts to chatter under load, grease the slide pads and wipe off the excess. If a top or side slide pad shows excessive wear, loosen bolts. Insert shims to each side or top and bottom for even distribution of clearance.

The clearance required between the boom sections should be checked every 200 hours and if necessary, adjusted by means of 1/16" (1.58 mm) or 1/8" (3.18 mm) shims between the top and side pads. Proper clearance allows the sections to track smothly and evenly support the load. Clearnace should be kept at 1/16" (1.58 mm).

NOTE: *The pads at the bottom front and top rear of the boom sections receive the greatest pressure.*

Re-apply Loctite® thread lock to the bolts and re-torque to 30 ft-lbs (40 Nm). Bottom slide pads should be replaced when the thickness is worn down to 3/8" (9.5 mm).

Service Every 1000 Hours

NOTE: *Perform all other service requirements up to this point, as well as the following.*

CHANGE TRANSMISSION OIL & FILTER

Operate the machine long enough to warm up the transmission oil. Shut down the engine. Access to filter and drain plug is from underneath the machine. Proceed as follows:

1. Remove the drain plug and drain out old oil. Replace the drain plug.

IMPORTANT: *DO NOT discharge oil onto ground. Catch and dispose of per local waste disposal regulations.*

2. Remove and discard the oil filter. Wipe the sealing surface on the transmission with a clean cloth. Apply a thin coat of clean oil to the new oil filter gasket. Spin tighten.

3. Refill the transmission with new oil as shown in the Lubrication chapter of this manual.

IMPORTANT: *DO NOT OVERFILL! If the oil level is too high, oil foaming, excessively high oil temperature and oil leakage at the seal could result.*

4. Start and run the machine long enough for the oil to circulate and warm slightly. Recheck the level with the dipstick.

CHANGE RADIATOR COOLANT

Drain, flush and refill the cooling system as follows:

IMPORTANT: *Do NOT discharge coolant onto ground. Catch and dispose of per local waste disposal regulations.*

WARNING

Remove the radiator cap only when the engine is cool, or painful burns could result.

1. Loosen the radiator cap to it's stop. This will release any system pressure. Remove the cap when all pressure is bled off.

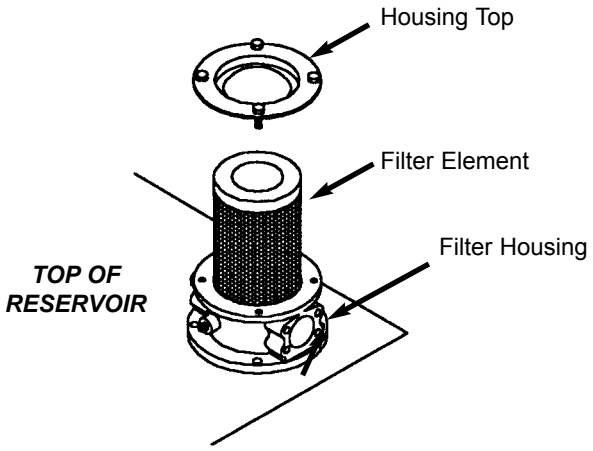
2. Open the radiator drain cock. Remove the water jacket drain plug from the engine block. When all coolant is drained, flush the system with clean fresh water. Allow the flush to drain completely.

3. Replace all drain plugs and tighten the radiator drain cock. Clean out the cooling fins in the radiator with water pressure or steam.

NOTE: *When cold weather is expected, fill the cooling system with a 50-50% mixture of water and ethylene glycol anti-freeze.*

4. Inspect the radiator cap seal before installing it. Replace it if it appears defective. The 10 PSI (69 kPa) pressure cap and engine thermostat work in conjunction with each other to maintain proper engine cooling.

NOTE: *Check the engine temperature lamp, every minute or two, after coolant has been changed. Air pockets can form. It may be necessary to refill the cooling system after a short period of use, as the air will naturally bleed out of the system.*



Reservoir Filter Removal

CHANGE HYDRAULIC RETURN FILTER ELEMENT

WARNING

When servicing the hydraulic system, lower the boom to the ground.

This element is a cartridge type accessible from a housing on top of the hydraulic reservoir. Initial replacement is after the first 100 hours. See illustration. Remove the top cover of the housing. Remove the element and discard. Insert the new element onto the housing and Replace the cover.

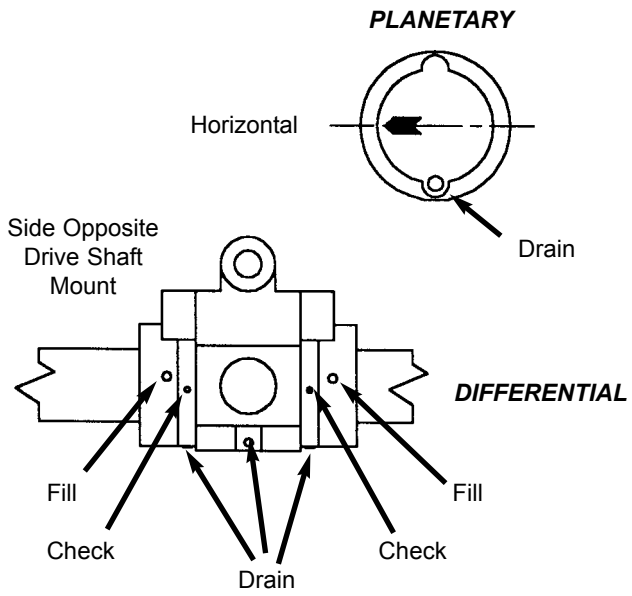
CHANGE AXLE DIFFERENTIAL & PLANETARY OIL

Differential

1. Remove the three drain plugs and drain out the old oil. Replace the drain plugs (see illustration).

IMPORTANT: *DO NOT discharge oil onto ground. Catch and dispose of per local waste disposal regulations.*

2. Remove the check and fill plugs. The larger hex head fill plug is located on the same side as the drain plug. The small allen wrench check plug is located on the opposite side of the fill plug.Fill the differential with oil as specified in the LUBRICATION chapter. When the oil overflows the check hole, replace the plug. Wait 10 to 15 minutes and repeat this process



Axle Oil Plug Locations

until the axle is full Repeat the procedure with the other axle.

Axle Planetary Hubs

The hubs have one plug each used for draining and filling *(see illustration)*.

1. Position the wheel until the arrow points to the left. Remove the drain/fill plug and allow the oil to drain out. Replace the plug.

IMPORTANT: *DO NOT discharge oil onto ground. Catch and dispose of per local waste disposal regulations.*

2. Re-position the hub so the arrow points down. Fill with fresh oil as specified in the Lubrication chapter. When the oil runs out, install the drain/fill Plug. Repeat this procedure on the three remaining hubs.

CHECK EXHAUST SYSTEM

Examine the muffler and tail pipe for possible holes. Re-tighten any loose clamps and make sure the manifold outlet gasket is not leaking.

Service Every 2000 Hours

NOTE: *Perform all other service requirements up to this point, as well as the following.*

CHECK HYDRAULIC SYSTEM RELIEF PRESSURES

Pressure settings for relief valves are pre-set at the factory. A single test port is provided on the dash front.

Before conducting any test port pressure checks, check the engine RPM. Engine speed must be 950 to 1000 RPM at idle and 2500 high idle RPM.

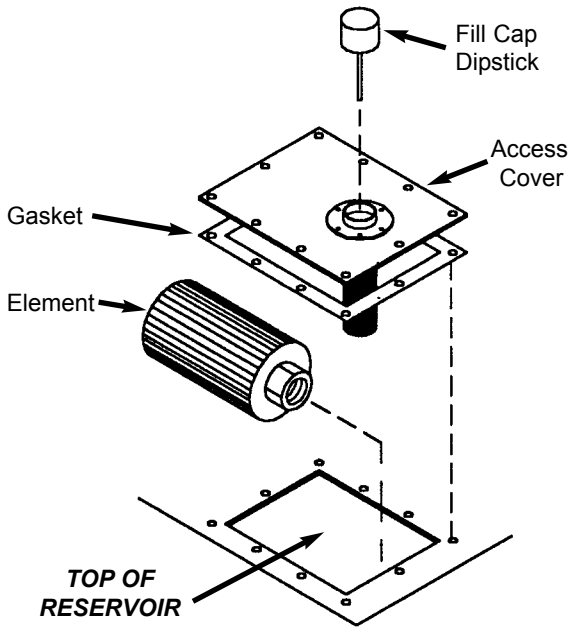
Steering Relief Pressure

Plug a 3000 PSI (206 bar) oil or liquid filled gauge in the test port. Cramp the steering full to the right or left. The gauge should read 2000 PSI (138 bar).

Check Main Relief Pressure

With the gauge in the test port and the boom extended, retract the boom fully. The gauge should read 2800 PSIG (193 bar).

CHANGE HYDRAULIC RESERVOIR OIL & STRAINER



Hydraulic Reservoir Sump Strainer Removal

Clean all dirt and debris from around the top of the reservoir, especially around the access cover. Refer to illustration on next page and use the following procedure:

1. Remove the drain plug and drain out all used oil. Wash or blow off all collected particles from the magnetic drain plug.

IMPORTANT: *DO NOT discharge oil onto ground. Catch and dispose of per local waste disposal regulations.*

2. Remove the access cover and wash the inlet screen with clean solvent. Remove the sump filter strainer from the bottom inside of the reservoir. Wash it also. If the strainer has any damage, holes, etc. it should be replaced.

3. Flush out the bottom of the tank with clean hydraulic oil. Re-install all cleaned components and put the top back on the reservoir with a new gasket. Clean the filter/breather cap..

4. Fill the tank with fresh oil. Follow specifications found in Lubrication chapter of this manual.

IMPORTANT: *Hydraulic fluid and filters should be replaced any time contamination is present before the normally scheduled change.*

STORAGE

WARNING

Escaping hydraulic oil under pressure can have sufficient force to penetrate the skin. Before applying pressure to the hydraulic system, be sure all connections are tight and lines and hoses are not damaged. Use a piece of wood or cardboard to search for suspected leaks. If injured by escaping hydraulic oil, see a doctor familiar with this type of injury at once or gangrene may result.

If the Telescopic Handler will not be operated for a long period of time, prepare and store it using the procedures as follows.

Before Storage

Perform the following prior to placing the machine in storage:

1 Wash off the entire machine.

2. Lubricate all grease fittings as described in the Lubrication chapter of this manual.

3. Change engine oil as outlined in the Service & Storage chapter of this manual.

4. Apply grease to all exposed hydraulic cylinder rod areas.

5. Disconnect the battery cable clamps and cover the battery or remove the battery from the machine and store it separately.

6. If the ambient temperature (at anytime during the storage period) is expected to drop below freezing, make sure the engine coolant is either completely drained from the radiator and engine block or that the amount of anti-freeze in it is adequate to keep the coolant from freezing. Refer to the separate engine manual provided for anti-freeze recommendations and quantities.

During Storage

1. About once each month, connect the battery and check all fluid levels to make sure they are at the proper level before starting the engine.

2. Start the engine and allow it to run until it warms up and then move the machine a short distance to help relubricate the internal parts. Run the engine until the battery has a chance to recharge and then shut it off.

IMPORTANT: *If it is desired to operate the hydraulic cylinders at this time, BE SURE to wipe the protective grease (and any adhering dirt) from the cylinder rods prior to starting the engine. After operating, BE SURE to recoat the cylinder rods with grease if the machine is going to be returned to storage.*

After Storage

After removing the machine from storage and BEFORE operating it, perform the following:

1. Change engine oil and filter to remove condensation or other residues.

2. Wipe off grease from cylinder rods.

3. Lubricate ALL grease fittings.

4. Review and refamiliarize yourself with all safety precautions as outlined in the Safety chapter of this manual.

5. Follow the starting and warm-up procedures as outlined in the OPERATION & ADJUSTEMENTS chapter of this manual.

Chapter 9

DECAL LOCATIONS

GENERAL INFORMATION

CAUTION

ALWAYS read and follow the safety precautions on decals. Replace decals if they are damaged, or if the unit is repainted. If repainting, BE SURE that all applicable decals are affixed in their proper locations.

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

For correct replacement of decal(s) compare the location illustrations to your 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(s) for replacement location(s).

NEW DECAL APPLICATION

Before applying the 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 orient and position the decal onto the clean mounting surface. After the decal is firmly applied and smoothly pressed down, remove the front covering paper.

PAINT FINISH

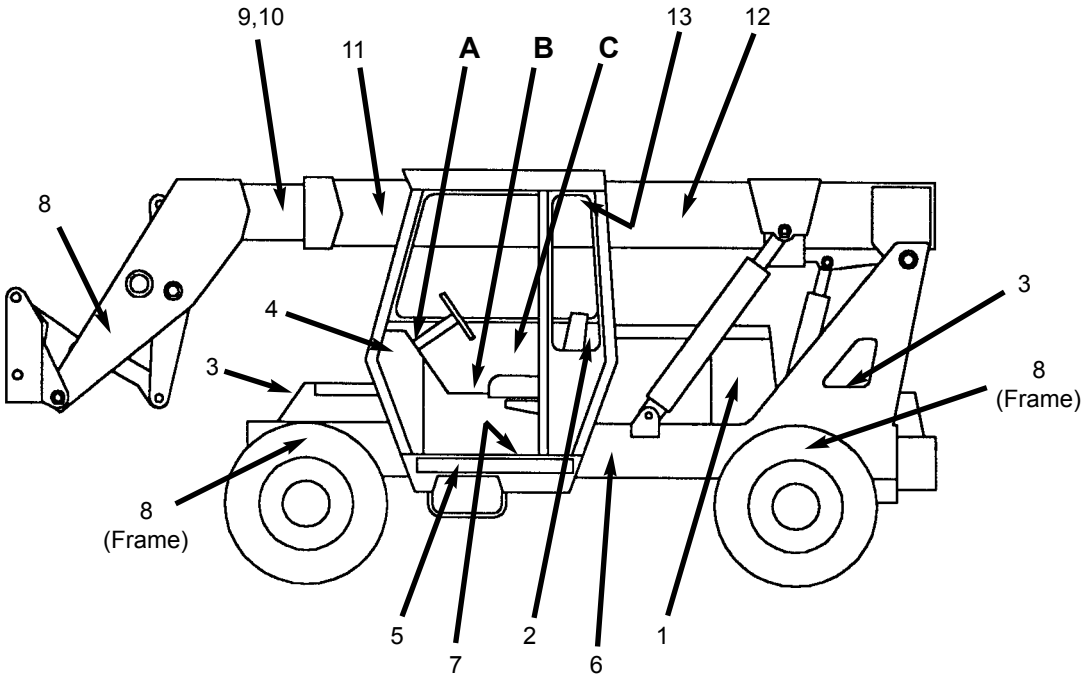
Use this list to order paint for refinishing:

906213	One Gal. Yellow
906317	One Gal. Charcoal Grey
906323	One Qt. Charcoal Grey
906214	6 (12 oz. Spray Cans) Yellow
906318	6 (12 oz. Spray Cans) Charcoal Grey

Decal Kits

L98856	Model 562

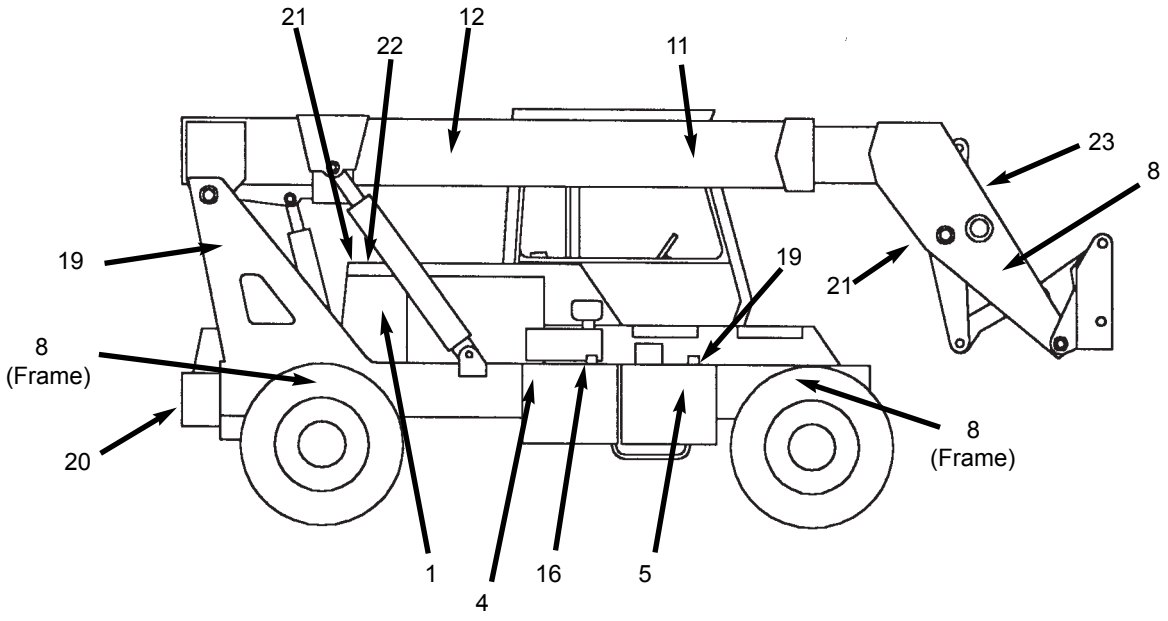
NOTE: *Decals may be purchased in kits or individually.*



DETAILS "A-C" SHOWN ON PAGE 57

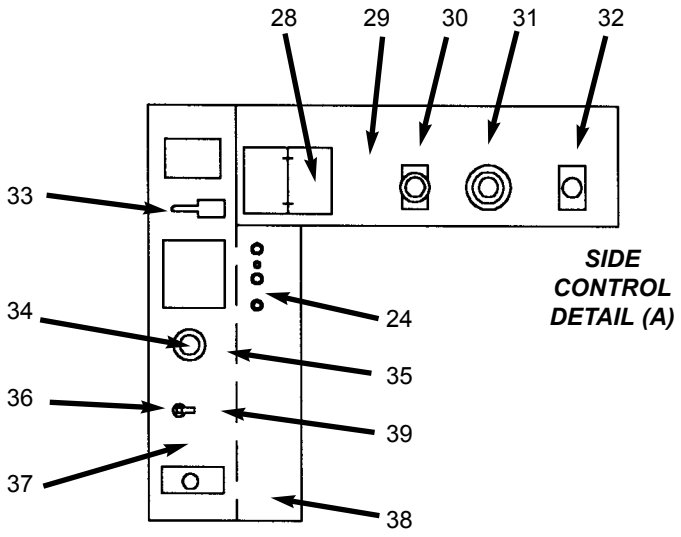
DECAL LOCATIONS - LEFT SIDE OF MACHINE (EXCEPT DETAILS "A-C")

REF. NO.	DESCRIPTION	562
01	DANGER - ROTATING FAN (1 ea.)	L65924
02	OPERATOR MANUAL INSIDE (1 ea.)	L65922
03	GREASE DAILY (2 plcs.)	L65920
04	WARNING - NO RIDERS (1 ea.)	L65932
05	DYNA-HANDLER (1 ea.)	L67384
06	WARNING - JUMP START (1 ea.)	L65933
07	BRAKE FLUID LEVEL (1 ea.)	L63474
08	WARNING - PINCH POINTS (3 ea.)	L65927
09	NO. "1" EXTENSION MARKER (1 ea.)	L67719
09	NO. "2" EXTENSION MARKER (1 ea.)	L67720
09	NO. "3" EXTENSION MARKER (1 ea.)	L67721
06	HALFZONE MARKER (3 ea.)	L62583
07	562 (1 ea.)	L66656
08	GEHL 6.38" (1 ea.)	122288
09	ROPS/FOPS (1 ea.)	L67659
10	CARRY LOAD LOW (1 ea.)	093475



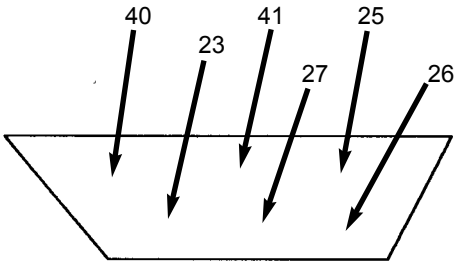
DECAL LOCATIONS - RIGHT SIDE OF MACHINE

REF. NO.	DESCRIPTION	562
01	DANGER - ROTATING FAN (1 ea.)	L65924
04	WARNING - NO RIDERS (1 ea.)	L65932
05	DYNA-HANDLER (1 ea.)	L67364
08	WARNING - PINCH POINTS (3 ea.)	L65927
11	562 (1 ea.)	L66656
12	GEHL 6.38” (1 ea.)	122288
16	DIESEL FUEL (1 ea.)	072797
17	HYDRAULIC OIL (1 ea.)	072794
18	WARNING - CARRY LOAD LOW (1 ea.)	L65926
19	WARNING - HOT SURFACE (1 ea.)	L65942
20	GEHL 4.5” (1 ea.)	L66565
21	ANTI-FREEZE NOTE (1 ea.)	056859
22	COOLANT UNDER PRESSURE (1 ea.)	072798
23	DANGER - PERSONNEL (1ea.)	L65928



DASH DETAIL (B)

SIDE CONTROL DETAIL (A)



RT. SIDE PANEL DETAIL (C)

DECAL LOCATIONS - DETAILS "A-C" IN OPERATOR STATION

REF. NO.	DESCRIPTION		562
23	DANGER - PERSONNEL (1 ea.)		L65928
24	IGNITION/HORN (1 ea.)		L68052
25	MAINTENANCE CHART (1 ea.)		L67363
26	FILTERS CHART (1 ea.)		L68084
27	WARNING - TRUSS BOOM TILT BACK (1 ea.)		L66042
28	LOAD ZONE CHART SET (1 ea.)		L67954
29	WARNING - MACHINE LEVEL (1 ea.)		L65930
30	STANDARD AUXILIARY FUNCTION CONTROL (1 ea.)		L67695
31	BOOM JOYSTICK CONTROL (1 ea.)		L68480
32	FRAME SWAY CONTROL (1 ea.)		L93311
33	WARNING - PARK BRAKE (1 ea)		L65925
34	GEHL 2.0" (1 ea.)		L66582
35	F-N-R SHIFT (1 ea.)		L68295
36	STEER SELECTOR (1 ea.)		L63618
37	WARNING - OPERATOR (1 ea.)		L63690
38	MADE IN USA (1 ea.)		094951
39	WARNING - SEAT BELT (1 ea.)		L95440
40	DANGER - PANEL IN PLACE (1 ea.)		L65928
41	DANGER - POWER LINES (1 ea.)		L65948

Chapter 10

MAINTENANCE

This Maintenance Chart was developed to match the Service chapter of this manual. Detailed information on each Service Procedure may be found in the Service chapter. A Maintenance Log follows the Interval Chart for recording the maintenance procedures performed. Recording the 10 Hour (or Daily) service intervals would be impractical and is therefore not recommended.

IMPORTANT: *Under extreme operating conditions more frequent service than the recommended intervals may be required. You must decide if your operation requires more frequent service.*

MAINTENANCE INTERVAL CHART

SERVICE PROCEDURE	Every 10 Hours (or Daily)	Every 50 Hours (or Weekly)	Every 100 Hours	Every 250 Hours
Check Fuel Tank Level	●			
Check Fuel Filter (Drain Water If Required)	●			
Check Engine Oil	●			
Check Hydraulic Oil Level	●			
Check Tire Pressures	●			
Check Instruments Operation	●			
Check General Machine Operation & Condition	●			
Lubricate Weekly Grease Points		●		
Check Axle Oil Levels				●
Check Air Filter Element		●		
Change Fuel Filter				●
Check Wheel Nut Torque	●[1,2]			
Check Transmission Oil Level				●
Check Battery				●
Change Engine Oil & Filter			●[2]	●
Change Hydraulic Oil & Filter			●[2]	

1 - Only Until 450 Ft-Lbs (610 Nm) Is Maintained.
2 - Only New Machines.

MAINTENANCE INTERVAL CHART (CONT.)

SERVICE PROCEDURE	Every 250 Hours	Every 1000 Hours	Every 2000 Hours
Change Transmission Oil and Filter		●	
Change Air Filter Element	●		
Check Alternator & Fan Belt Tension	●		
Check Boom Slide Pads Wear & Clearance	●		
Change Radiator Coolant		●	
Change Hydraulic Return Filter Element		●	
Change Axle Differential & Planetary Oil		●	
Check Exhaust System		●	
Check Hydraulic System Relief Pressures			●
Check Hydraulic Reservoir Oil & Strainer			●

MAINTENANCE LOG

Date	Hours	Service Procedure

MAINTENANCE LOG

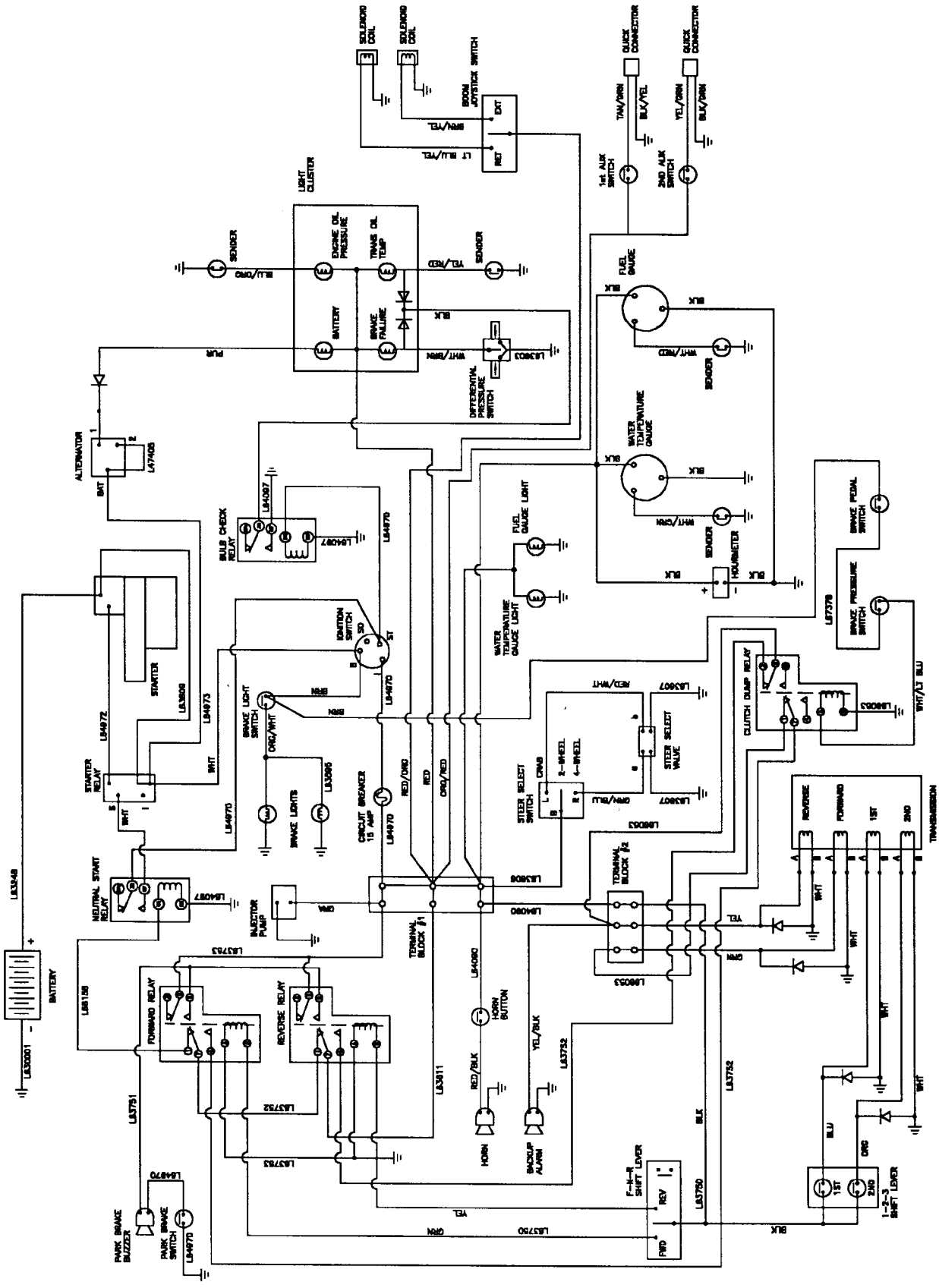
Date	Hours	Service Procedure

Index

W

562 Electrical Schematic

(J.D. Engine)



Torque Specifications

Use these torque values when tightening GEHL hardware (excluding: Locknuts and Self-tapping, Thread-forming and Metal Screws) unless otherwise specified.

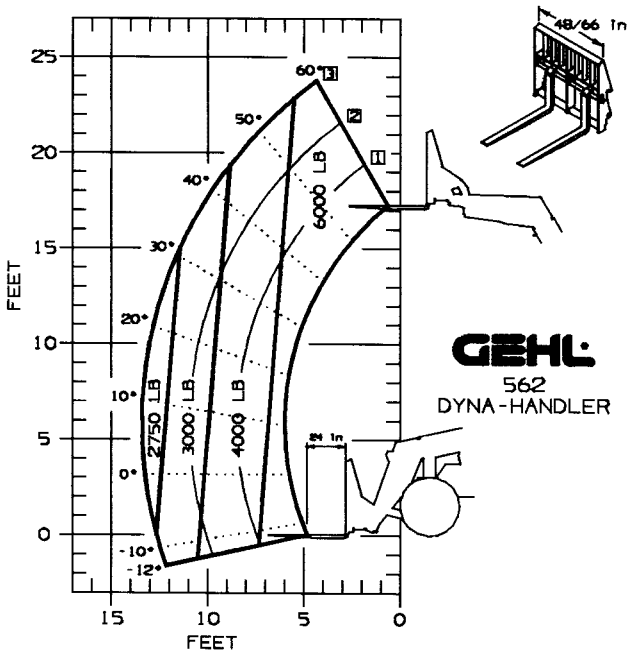
Unified National Thread	Grade 2		Grade 5		Grade 8	
	Dry	Lubed	Dry	Lubed	Dry	Lubed
8-32	19*	14*	30*	22*	41*	31*
8-36	20*	15*	31*	23*	43*	32*
10-24	27*	21*	43*	32*	60*	45*
10-32	31*	23*	49*	36*	68*	51*
1/4-20	66*	50*	9	75*	12	9
1/4-28	76*	56*	10	86*	14	10
5/16-18	11	9	17	13	25	18
5/16-24	12	9	19	14	25	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

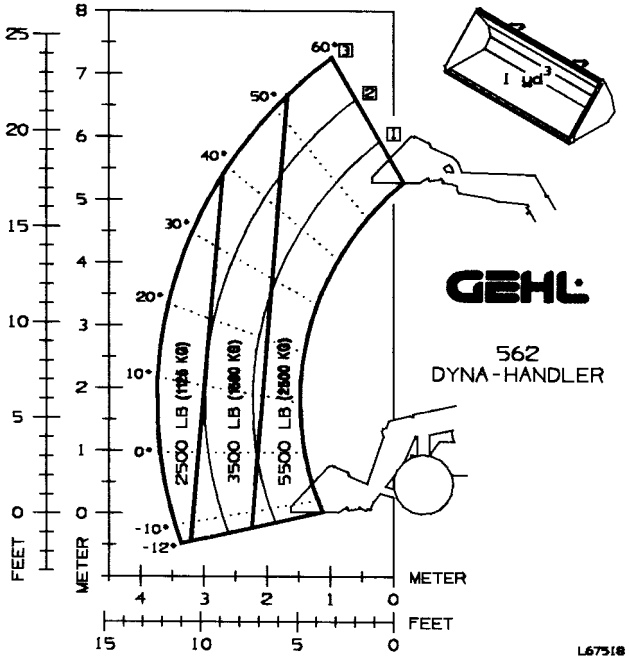
* *All torque values are in lb-ft except those marked with an * which are in lb-in.*
For metric torque value (Nm) muiltiply lb-ft x 1.355 or lb-in value x 0.113.

Load Zone Charts

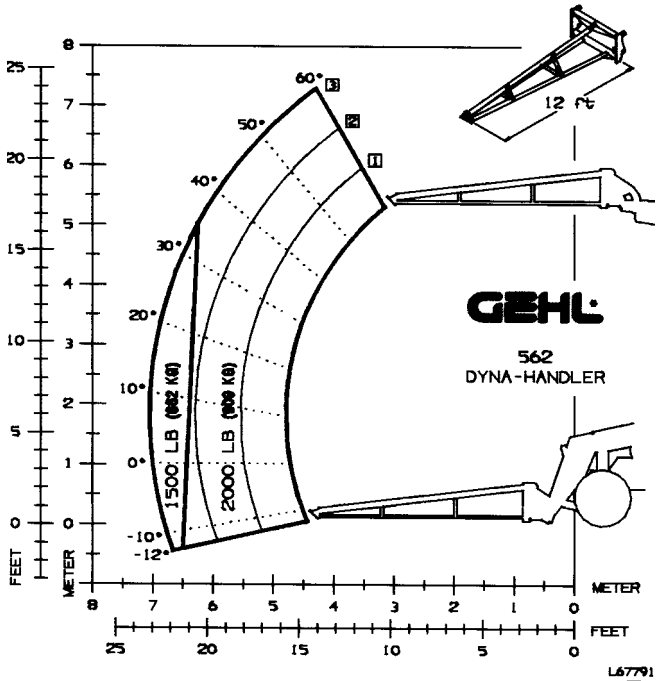
562
Standard Carriage



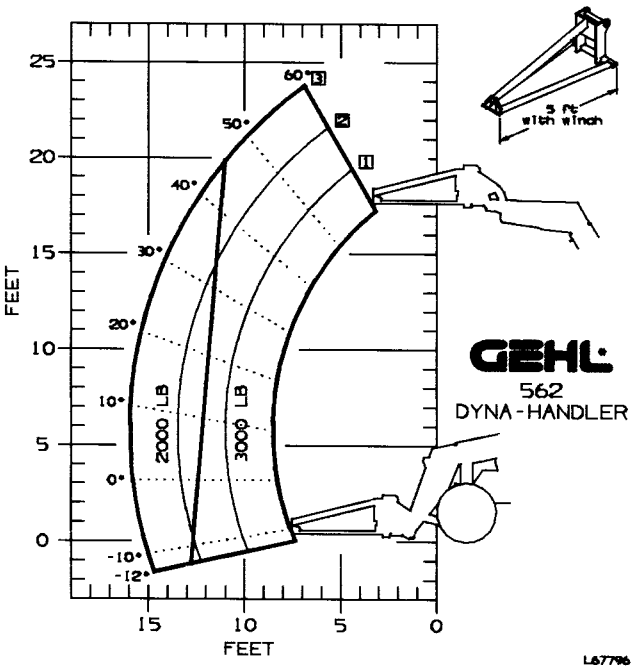
562
1 Cu. Yd. Bucket



562
12 Ft. Truss Boom

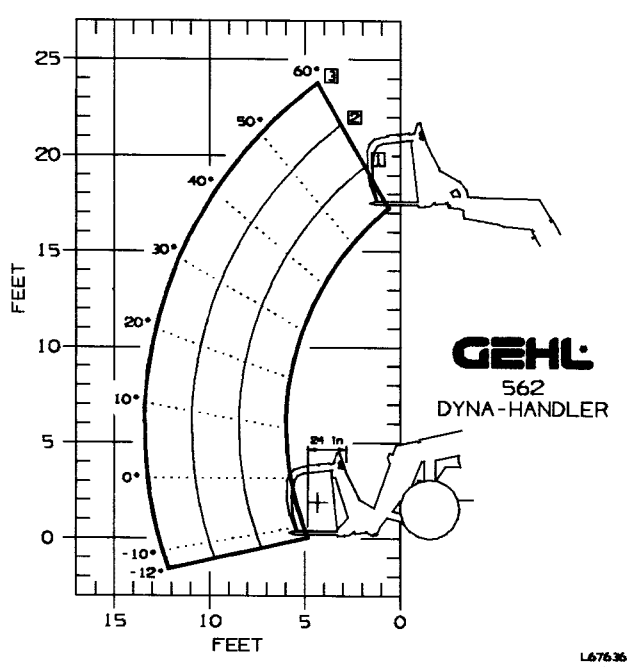


562
5 Ft. Winch Boom

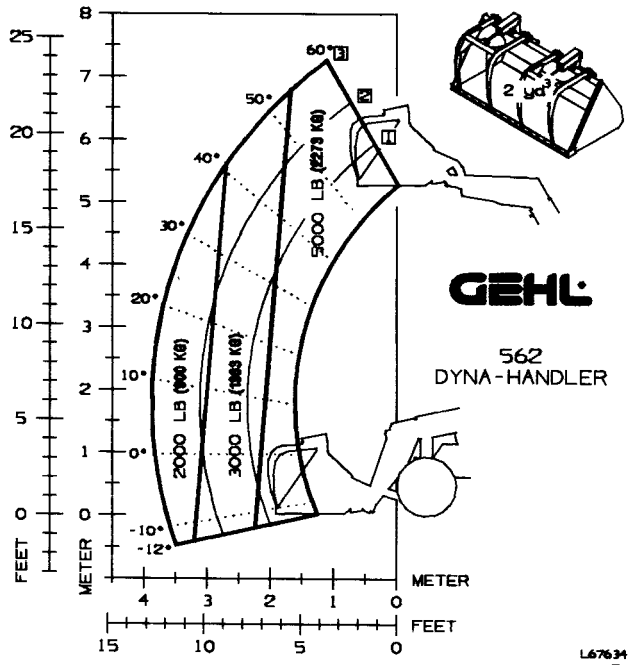


Load Zone Charts

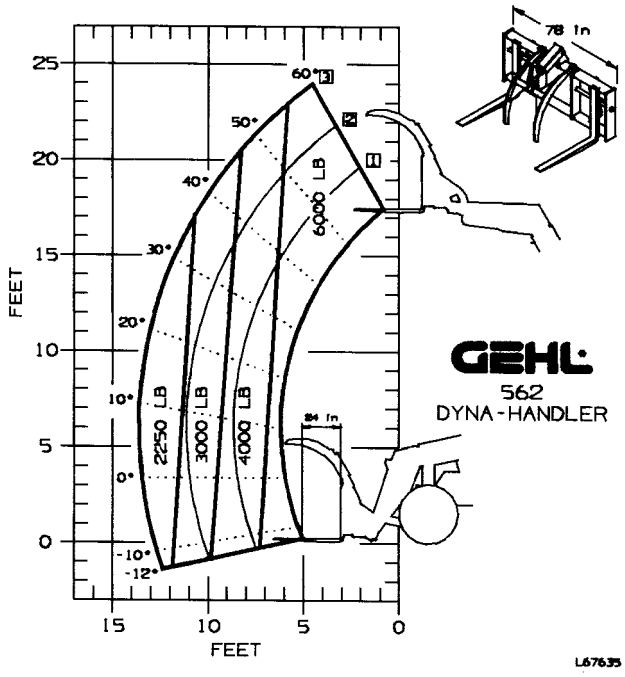
562
Bale Spear w/Grapple Carriage



562
2 Cu. Yd. Grapple Bucket



562
Log/Pipe w/Grapple Carriage



GEHL®

NEW CONSTRUCTION EQUIPMENT

562 DYNA-HANDLER®

WARRANTY

GEHL CONSTRUCTION DIVISION of the **GEHL COMPANY**, hereinafter referred to as GEHL, warrants new GEHL 562 Dyna-handler Telescopic Handler 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 CONSTRUCTION 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.

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, 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 and 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. Any of these limitations excluded by local law shall be deemed deleted from this warranty; all other terms will continue to apply.

⚠ WARNING ⚠

THIS OPERATOR'S MANUAL IS PROVIDED FOR OPERATOR USE

DO NOT REMOVE FROM THIS MACHINE

THANK YOU

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 BREAKDOWN.

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 Warning

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

GEHL®

GEHL Company 143 Water Street, P.O. Box 179, West Bend, WI 53095-0179

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