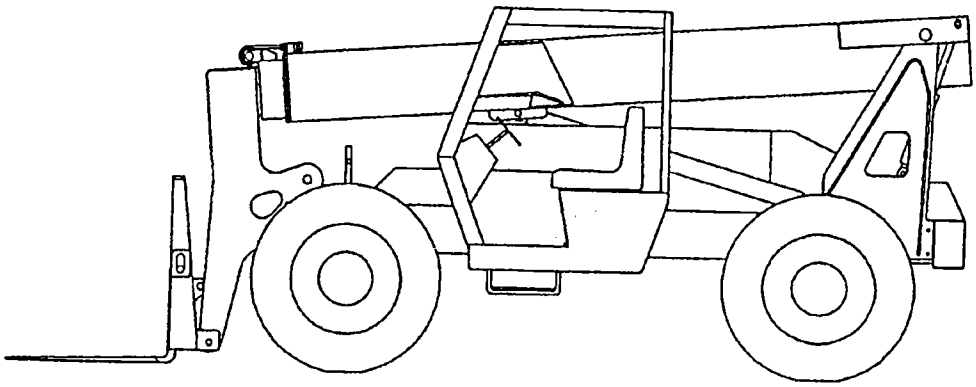
GEHL CONSTRUCTION

FormNo.
907336
Replaces
907010

883

DYNALIFT SERIES
Telescoping
Boom Forklift



OPERATOR MANUAL

Warranty

GEHL COMPANY

Industrial/Construction Equipment

GEHL CONSTRUCTION DIVISION of the **GEHL COMPANY,** hereinafter referred to as GEHL, warrants new GEHL 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 SERVICE 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 attachements; accident or other casualty.
6. Liability for incidental or consequential damages of any type, including, but not limited to lost profits or expenses of acquiring replacement equipment.

No agent, employee or representative of GEHL has any authority to bind GEHL to any warranty except as specifically set forth herein. Any of these limitations excluded by local law shall be deemed deleted from this warranty; all other terms will continue to apply.

All References To Monetary Values Are In U.S. Dollars
Discounts And Terms Are Subject To Change By the Comapany At Any Time

Effective Data: 1-1-92

Table of Contents

Chapter 1

INTRODUCTION

Your decision to purchase this piece of **GEHL** equipment was a good one. We are sure that your decision was strongly considered and that you are looking forward to many years of work from this machine.

We, as a Company, have invested a great deal of time and effort in developing our lines of agricultural and industrial equipment. The equipment you have purchased is built with a great deal of pride and designed to give you long life, efficient operation, durability and dependability.

This manual was developed specifically for the machine you have purchased. The information, contained within, is for your assistance in preparing, adjusting, maintaining and servicing your machine. More importantly, this manual provides an operating plan for safe and proper use of your machine. Major points of safe operation are detailed in the **SAFETY** chapter of this manual. Refer to the Table of Contents for an outline (by chapters) of this manual. Use the Index, located at back of this manual, for specific chapter and topic page number references.

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

Modern machinery has become more sophisticated and, with that in mind, 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.

Our extensive Dealership network stands by to provide you with any assistance you may require, including genuine **GEHL** service parts. All parts should be obtained from or ordered through you r **GEHL** Dealer. Give complete information about the part as well as the model number and the serial number of your machine. Record numbers, in the spaces provided, as a handy record for quick reference.

Numbers for this unit are on a plate located on the lower dash. "Right" and "left" are determined from a position standing behind the unit and facing the direction of travel. From this position, the Operator's Station is on the left side.

Typical Model & Serial Number Plate

Model No.
883

Serial No. (Fill In)

GEHL COMPANY
WEST BEND, WI 53095 U.S.A.

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.

Standard hardware torques appear in a chart at the end of the manual.

Throughout this manual, information is provided which is set in italic type and introduced by the word **NOTE: BE SURE to read carefully and comply with** the message or directive given. Following this information will improve your operating or maintenance efficiency, help to avoid costly breakdown or unnecessary damage and, extend your machine's life.

The GEHL Company, in cooperation with the American Society of Agricultural Engineers and Society of Automotive Engineers, has adopted 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 unit itself, you are reminded to BE ALERT! Your personal SAFETY is involved.

Chapter 2

SPECIFICATIONS

Lifting Capabilities:

Maximum Capacity	8000 lbs (3629 kg)
Maximum Height	480" (12,192 mm)
Maximum Lift Height Capacity	6000 lbs (2727 kg)
Maximum Forward Reach To Load Center	312" (7925mm)
Maximum Forward Reach Capacity	1500 lbs (680 kg)
Maximum Below Grade Reach	24" (61mm)

Dimensions:

Machine Weight	23,200 lbs (10,524 kg)
Overall Length (Less Forks)	216" (5486 mm)
Overall Height	92" (2337 mm)
Overall Width	96" (2438 mm)
Wheelbase	118" (2997 mm)
Grouind Clearance	16" (406 mm)
Outside Turn Radius	164" (4166 mm)
Frame Leveling - left or right	10°

Engine:

110 HP @ 2500 RPM, J.Deere 4 cylinder diesel; 239 inch^3 displacement.
110 HP @ 2500 RPM, Perkins 4 cylinder diesel; 243 inch^3 displacement.

Transmission:

3-speed Powershift	1st range, 3.6 mph (5.8 kph)
	2nd range, 7.0 mph (11.3kph)
	3rd range, 18.6 mph (29.9 kph)

Axles:

Heavy-duty planetary, double reduction; full time 4-wheel drive

Brakes:

Service Brakes - Four-wheel hydraulic disc type. Hydraulic booster master cylinder w/electric reserve in event of engine failure

Electrical System:

12 volt D.C. negative ground; circuit breaker protected; 78 amp alternator; 845 amp cold cranking power battery.

Steering:

Hydraulic full power; selective 4-wheel, 2-wheel and 4-wheel crab with dash mounted control.

Pump:

Single section gear type; 36.5 GPM (138.2 l/m) to main hydraulics. 3.5 GPM (13.25 l/m) to brakes.

Coolant & Fluid Capacities:

Engine Cooling System	4.3 Gallons (16.3 liter)
Hydraulic Tank (w/system)	47 Gallons (177.9 liter)
Fuel Tank	47 Gallons (177.9 liter)
Engine Oil (w/filter)	8 Quarts (7.6 liter)
Transmission Oil (w/filter & cooler)	6 Gallons (22.7 liter)
Transmission Cooler flow	19 GPM (71.9 l/m)
Hydraulic Cooler Flow	up to 37 GPM (140 l/m)
Axle Differential (2)	6.8 pints (3.22 liter) ea.
Axle Planetary Hubs (4)	2.5 pints (1.18 liter) ea.

Filtration:

Engine Lube Oil	Spin-on type w/safety bypass, 25 micron
Fuel	Dual stage, single element. Water separater on some models
Transmission	Spin-on cartridge type w/safety bypass, 55 micron
Air Cleaner	Dry, replaceable element
Hydraulic Suction Strainer	Full flow 100 micron
Hydraulic Filter Element	Full flow 10 micron w/safety bypass

Standard Equipment Features:

Dynattach quick attaching tool system
Full instrumentation including water temperature, fuel gauges; hourmeter; alternator, transmission temperature, oil and brake warning lights; park brake light, remote hydraulic pressure check points, anti-freeze protection (-30°F/-16.7°C)

Standard Safety Features:

Operator's overhead guard, brake lights, reverse warning horn, neutral start switch, seat belt, horn. Rear view mirror, machine level indicator, boom angle indicator, padded bucket seat. Safety cartridge type valves to prevent cylinder motion in the event of engine or hydraulic failure.

Attachment Options:

Masonary, framer, rotate carriages; 45° Rt./Lt. swing carriage, fork side shift, 6 ft. mast extension, truss boom; fork times (4 types), 1 cu. yd. light material handling bucket, 3000 lb winch, auger drive, outriggers 144" (3658 mm) wide when lowered.

Accessories Options:

All weather cab (with or without air conditioning), Autotroll boom control, light package, cold weather start kit; clutch cutout, optional tires, engine block heater, centrifugal precleaner, auxiliary hydraulics

Chapter 3

CHECKLISTS

PRE-DELIVERY

The following Checklist is an important reminder of valuable information and inspections which MUST be made before delivering the Telescoping Boom Forklift Truck to the Customer. Check off each item after prescribed action is taken.

Check that:

- ❑ NO parts of unit 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 and Electrolyte is at proper level and strength. (Batteries for domestic sales are filled at the factory.)
- ❑ Wheel lugs are tight and tires are properly inflated.
- ❑ 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 Fuels and Lubrication chapter of this manual.
- ❑ Hydraulic system reservoir, reserve brake reservoir, engine crankcase, engine coolant, axle carrier and planetaries are filled to the proper operating 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.
- ❑ Serial Number for this unit is recorded in space provided on this page and page 2.

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

Check that:

- ❑ All Engine monitors (lamps, meters, etc.) function properly.
- ❑ All accessories (operating lights, etc.) function properly.
- ❑ Listen for any abnormal noises or vibrations; if any are detected, determine their cause and repair as necessary.
- ❑ Boom, Dynattach® with attachment and frame leveling control all function properly.
- ❑ Foot Service Brake and Park Brake function properly.
- ❑ Cylinders, hoses and fittings do NOT leak when under pressure.

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

_____
Model # Forklift Serial # Engine Serial #

DELIVERY

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

- ❑ Give the Operator's Manual which is stored in the compartment on the lower Dash, to the Customer and instruct the Customer to be sure to read and completely understand its contents BEFORE operating the unit.
- ❑ Direct the Customer on how to use the Index of this manual as a quick page number locating guide.
- ❑ Explain and review with the Customer the **SAFETY** chapter of this manual.
- ❑ Explain and review with the Customer the Controls and Accessories chapter of this manual.
- ❑ Explain that regular lubrication is required for continued proper operation and long life. Review with the Customer the Fuels and Lubrication chapter of this manual.
- ❑ Explain and review with the Customer the Service chapter of this manual.
- ❑ Explain to the Customer the importance of his thorough understanding of and familiarity with the Forklift Truck Controls, Load Capacities/Reach relationships. Refer to the appropriate information in the Operation chapter.
- ❑ 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 to the company.

_____
Customer's Signature

_____
Date Delivered

(Dealer's File Copy - Remove at Perforation)

This Page Intentionally Blank

(Remove For Dealer's File Copy)

Chapter 3

CHECKLISTS

PRE-DELIVERY

The following Checklist is an important reminder of valuable information and inspections which MUST be made before delivering the Telescoping Boom Forklift Truck to the Customer. Check off each item after prescribed action is taken.

Check that:

- ❑ NO parts of unit 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 and Electrolyte is at proper level and strength. (Batteries for domestic sales are filled at the factory.)
- ❑ Wheel lugs are tight and tires properly inflated.
- ❑ Cylinders, hoses and fittings are NOT damaged, leaking orloosely 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 Fuels and Lubrication chapter of this manual.
- ❑ Hydraulic system reservoir, reserve brake reservoir, engine crankcase, engine coolant, axle carrier and planetaries are filled to the proper operating 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.
- ❑ Serial Number for this unit is recorded in space provided on this page and page 2.

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

Check that:

- ❑ All Engine monitors (lamps, meters, etc.) function properly
- ❑ All accessories (operating lights, etc.) function properly.
- ❑ Listen for any abnormal noises or vibrations; if any are detected, determine their cause and repair as necessary.
- ❑ Boom, Dynattach® with attachment and frame leveling control all function properly.
- ❑ Foot Service Brake and Park Brake function properly.
- ❑ Cylinders, hoses and fittings do NOT leak when under pressure.

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

_____

Dealership Name

_____

Dealer Representative's Name

_____

Date Checklist Filled-out

_____

Model # Forklift Serial # Engine Serial #

DELIVERY

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

- ❑ Give the Operator's Manual, which is stored in the compartment on the lower Dash, to the Customer and instruct the Customer to be sure to read and completely understand its contents BEFORE operating the unit.
- ❑ Direct the Customer on how to use the Index of this manual as a quick page number locating guide.
- ❑ Explain and review with the Customer the **SAFETY** chapter of this manual.
- ❑ Explain and review with the Customer the Controls & Accessories chapter of this manual.
- ❑ Explain that regular lubrication is required for continued proper operation and long life. Review with the Customer the Fuels and Lubrication chapter of this manual.
- ❑ Explain and review with the Customer the Service chapter of this manual.
- ❑ Explain to the Customer the importance of his thorough understanding of and familiarity with the Forklift Truck Controls, Load Capacities/Reach relationships. Refer to the appropriate information in the Operation chapter.
- ❑ 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 to the company.

_____

Customer's Signature

_____

Date Delivered

(Pages 5 & 6 Have Been Removed at Perforation)

Chapter 4

SAFETY

The above Safety Alert Symbol means **ATTENTION! BECOME 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 YOU ATTEMPT TO OPERATE THIS EQUIPMENT READ AND STUDY THE FOLLOWING SAFETY INFORMATION. IN ADDITION, MAKE 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 can NOT be guarded or shielded in order to assure proper operation. In addition, this Operator's Manual and Decals, on the machine, warn of further danger 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, could result in death

CAUTION

"CAUTION" indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. This word may also alert against unsafe practives.

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.

MANDATORY SAFETY SHUTDOWN PROCEDURE

BEFORE cleaning, adjusting, lubricating or servicing the unit:

1. Bring machine to full parking stop on level surface (NEVER park on a slope or hill side).
2. Fully retract the Boom and lower the Attachment to the ground.
3. Place controls in Neutral and set the Park Brake.
4. Idle Engine for gradual cooling.
5. Turn the Starter Keyswitch to OFF position and remove the Key (take the Key with you for security reasons).

NOTE: *When Engine is stopped, be sure the Keyswitch is in the OFF position. Loss of Battery power will result if left in ON position.*

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

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 Forklift Truck. These guidelines do NOT 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 Forklift Truck. 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 photographs, 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

SAFETY

(Continued)

their proper operating positions BEFORE starting the Forklift Truck Engine to operate the unit.

Any or all of the following element: the terrain, the Engine speed, the type of load being carried and placed, the abrupt movement of any Control Lever, affect the stability of the Forklift truck. **IF YOU ARE NOT CAREFUL WHILE OPERATING THE FORK LIFT TRUCK, ANY OF THE ABOVE FACTORS COULD CAUSE THE MACHINE TO TIP AND THROW YOU OUT OF THE OPERATOR'S STATION, WHICH MAY CAUSE SERIOUS BODILY INJURY OR DEATH!**

ALWAYS wear the Seat Belt provided to prevent you from being tossed from the machine. If you are in an overturn:

- Do NOT jump!
- Hold on tight!
-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 safety gear called by the job or working conditions. DO NOT wear loose or baggy clothing while operating or servicing the machine.

ALWAYS be aware of pinch point areas on the Forklift Truck such as wheels to Frame, Cylinders to Frame, Boom and Attachment to Frame, etc.

ALWAYS maintain safe clearance from electricity 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.

ALWAYS check the job site for terrain hazards, obstructions and people.

NEVER attempt to by-pass the keyswitch to start the Forklift Truck Engine. Use the jump-starting procedure detailed in the Service chapter, ONLY.

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 injuury or gangrene may result.

Do NOT exceed the Forklift Truck's rated operating capacity for the type of attachment being used.

Do NOT allow minors or any unqualified personnel to operate or be near the Forklift Truck unless properly supervised; this is strictly a single Seat, NO passenger machine!

Do NOT attempt to start the Engine or operate any Controls unless properly seated in the Operator's Seat!

Do NOT run the Forklift Truck Engine in an enclosed area without providing the proper ventilation for the exhaust. Exhaust gases contain carbon monozide, an odorless and deadly poison. 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 raised. ALWAYS lower the Boom and Attachment to the ground, shut off the Engine and engage the Parking Brake BEFORE leaving the Operator's Station.

Do NOT attempt to 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 Forklift Truck and the load it is carrying.

Do NOT turn quickly while traveling on a slope or operate the Forklift Truck beyond the grade and slope limits noted in the Operation chapter of the Operator's Manual.

Do NOT attempt to 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 lin servere 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!

Do NOT wear loose or baggy clothing while operating or servicing the machine.

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

To ensure continued safe operation, replace damaged or worn-out parts with genuine GEHL service parts, BEFORE attempting to operate this equipment.

Modifications, Nameplates, Markings And Capacities

Modifications and additions, which 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 Attachments MUST be marked to identify the Attachment(s), show the approximate weight of the Forklift Truck and Attachment combination, and the total capacity with Attachment(s) 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 the Forklift Truck.

Safety Guards And Warning Devices

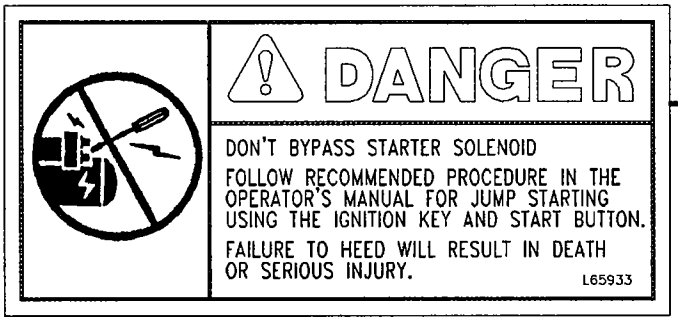
The Forklift Truck is fitted with an Overhead Guard in accordance with Industry Standards. It is intended to offer protection to the operator from falling objects, but cannot protect against every possible impact. Therefore, it should NOT be considered a substitute for good judgment and care in operating the machine.

The Forklift Truck is equipped with a Horn, Backup Alarm and a Side Mirror. The operator/user shall determine if operating conditions require the machine be equipped with additional sound-producing or visual devices (extra mirrors, blinking lights, etc.) and be responsible for providing and maintaining such devices.

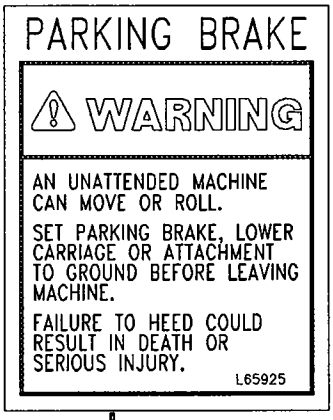
SAFETY

(Continued)

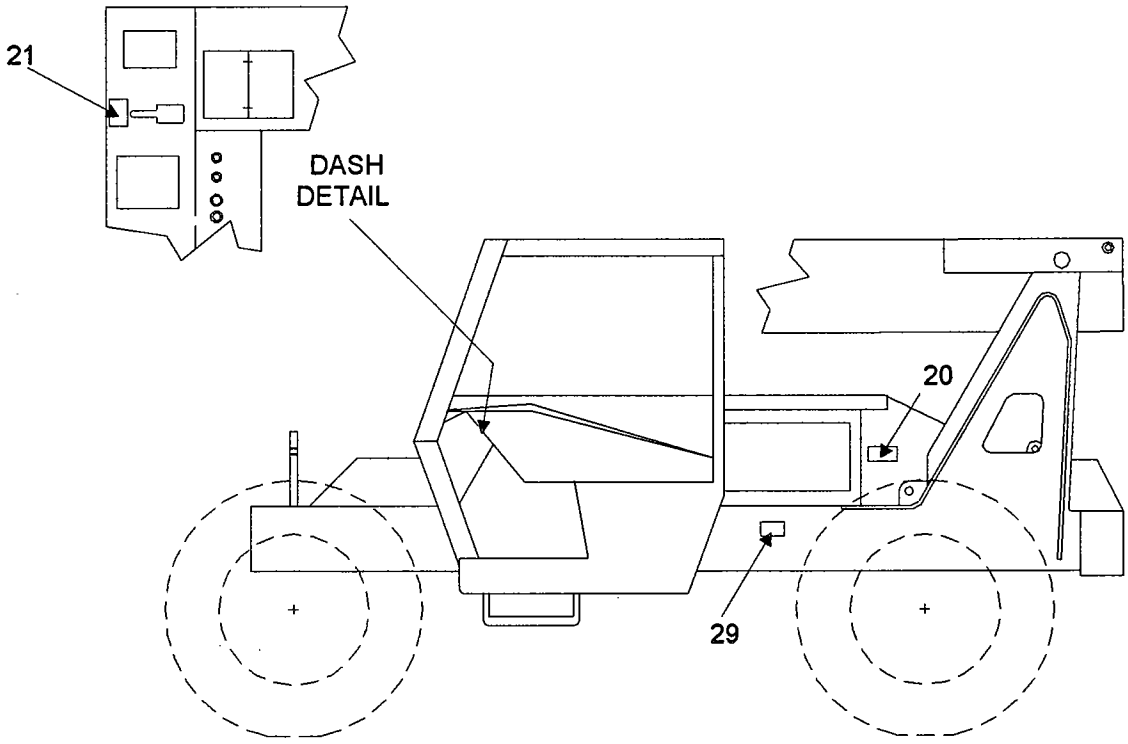
(20)



(29)

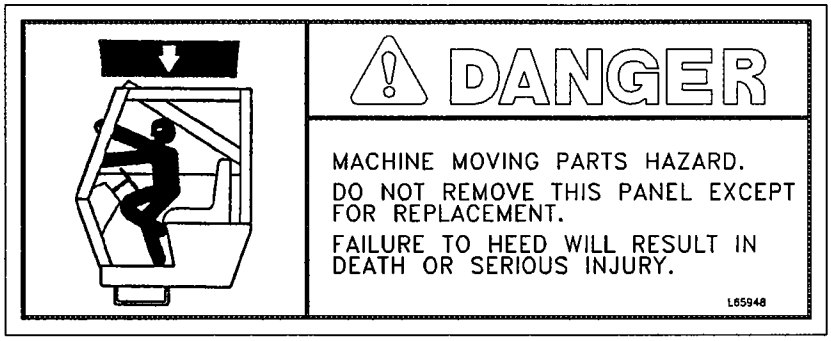


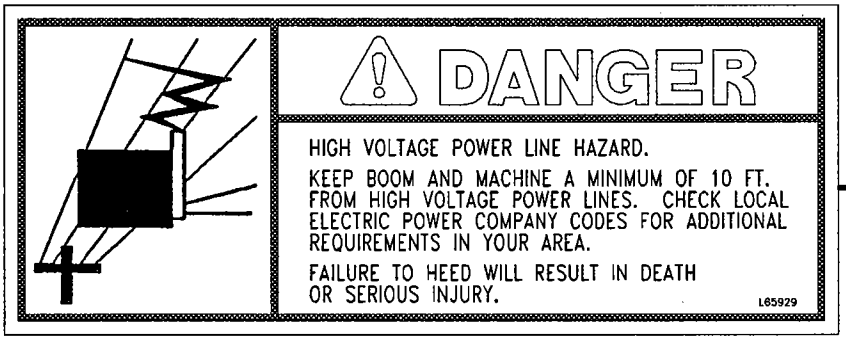
(21)

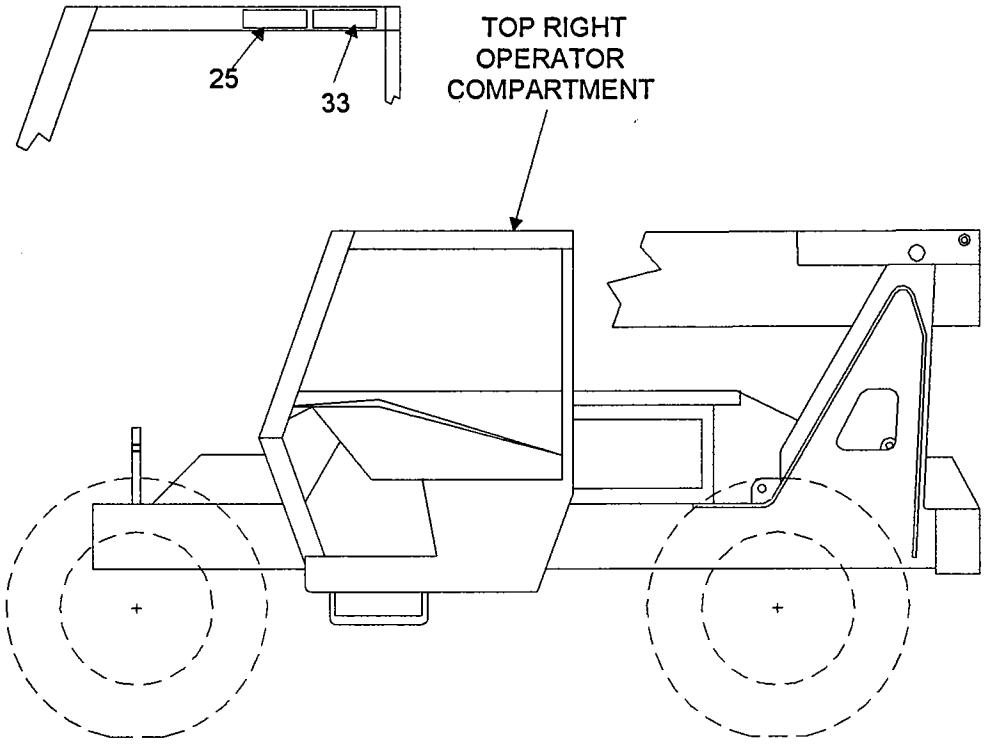


SAFETY

(Continued)

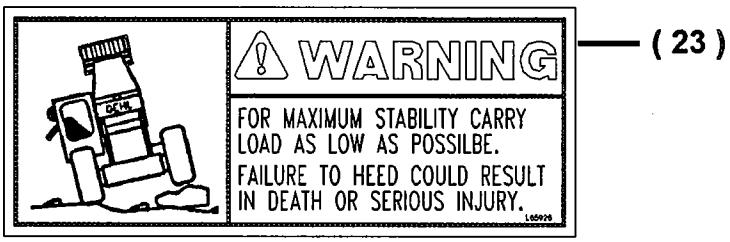






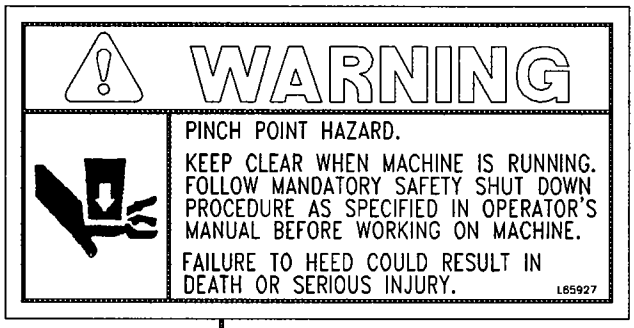
SAFETY

(Continued)



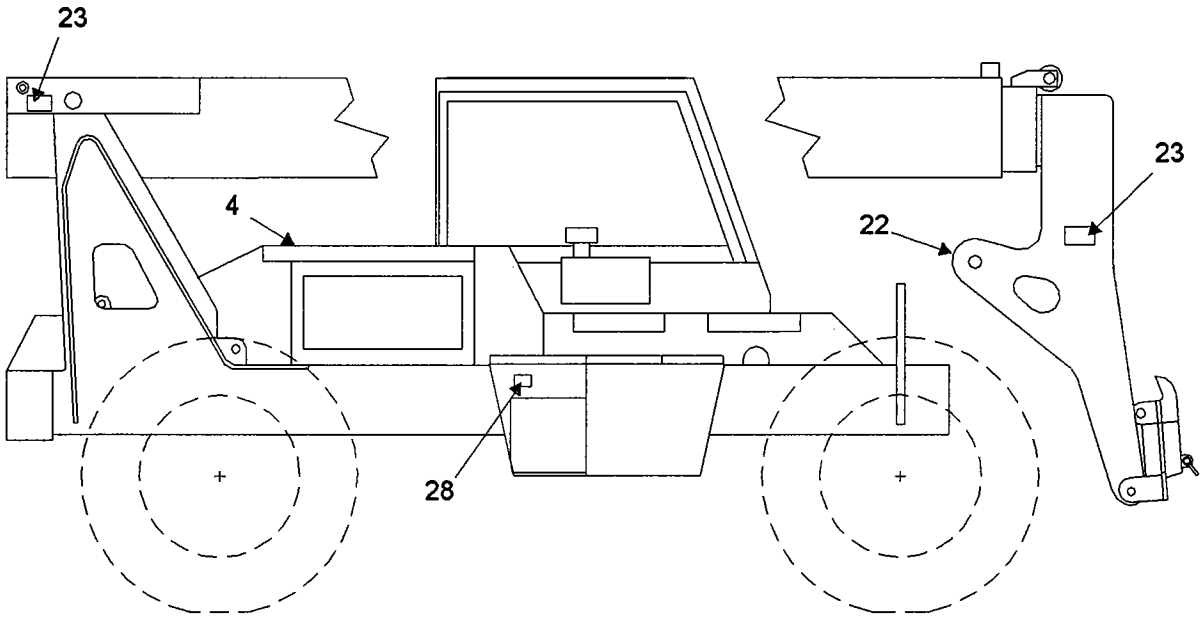
(23)

(28)



(23)

(4)



SAFETY

(Continued)

⚠ WARNING FOR MAXIMUM STABILITY CARRY LOAD AS LOW AS POSSIBLE. FAILURE TO HEED COULD RESULT IN DEATH OR SERIOUS INJURY. 093475 — (5)

⚠ 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.

L86042

(34)

(32)

⚠ 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

(26)

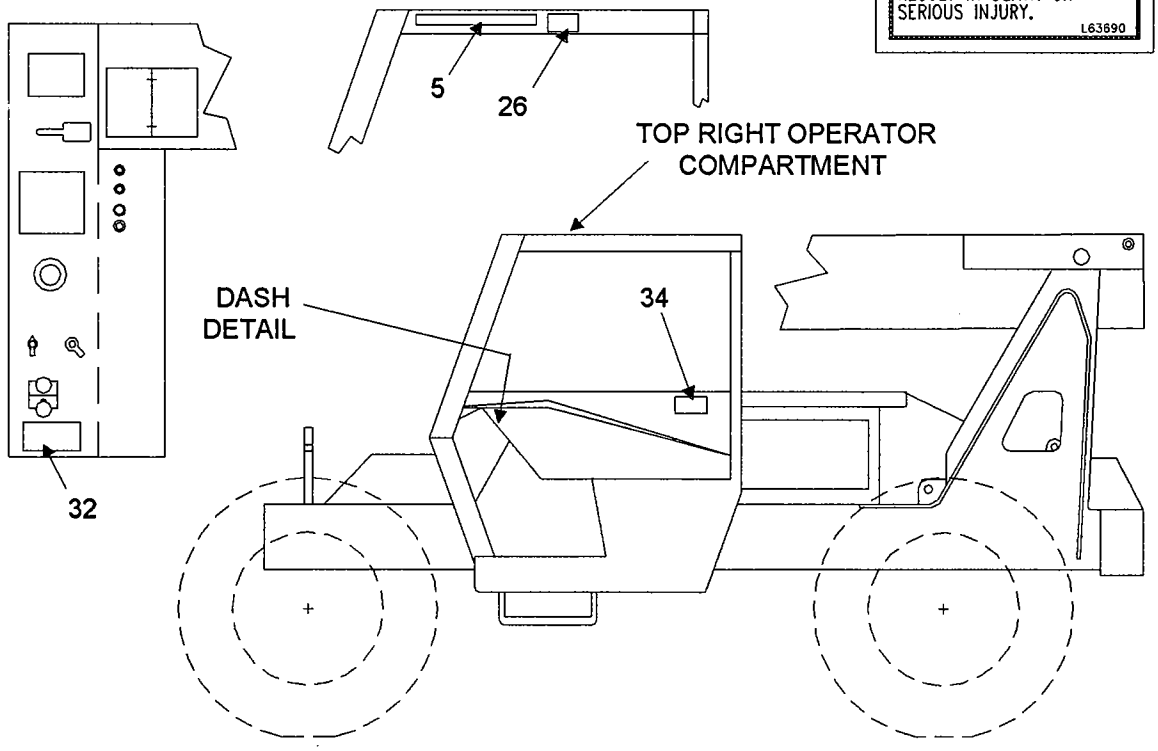
⚠ WARNING

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



SAFETY

(Continued)

⚠ 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

(16)

⚠ 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

(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

(24)

(28)

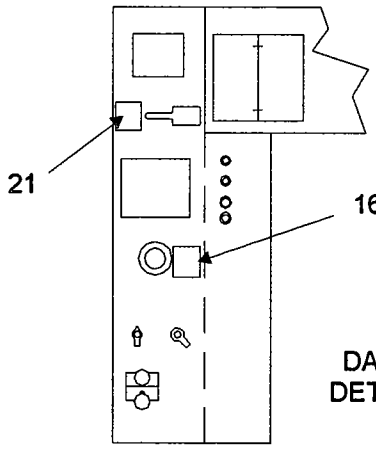
⚠ WARNING

RIDER INJURY HAZARD.

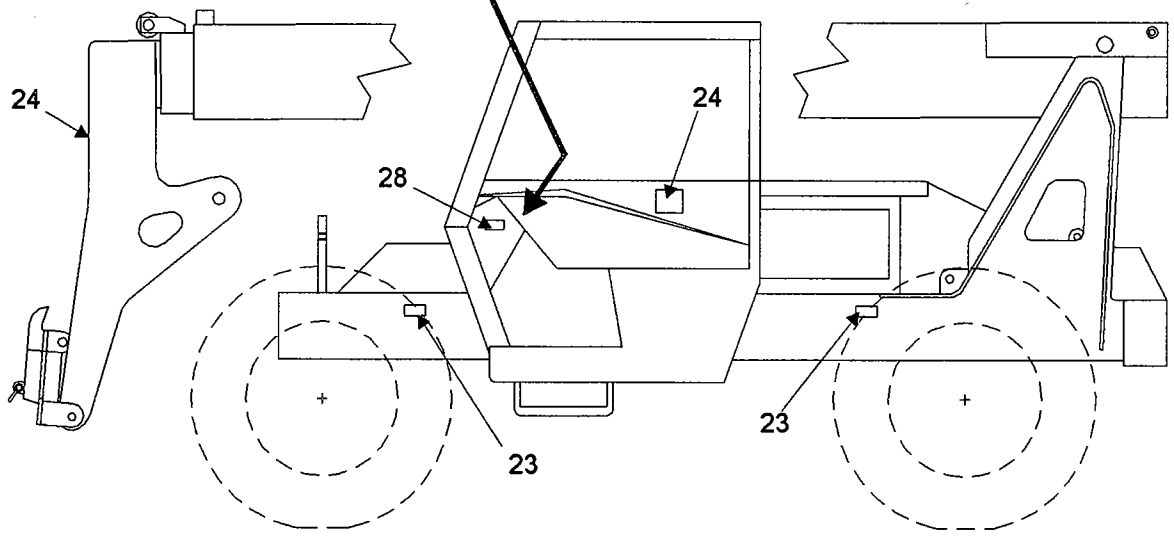
ABSOLUTELY NO RIDERS ALLOWED.

FAILURE TO HEED COULD RESULT IN DEATH OR SERIOUS INJURY.

L65932

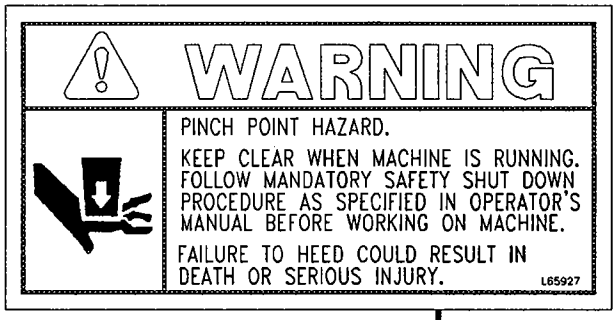


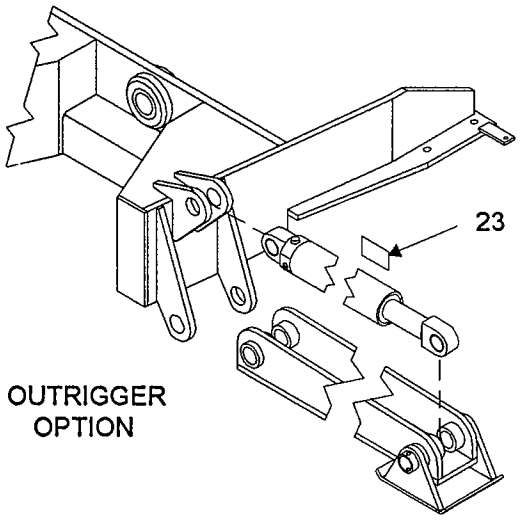
DASH DETAIL



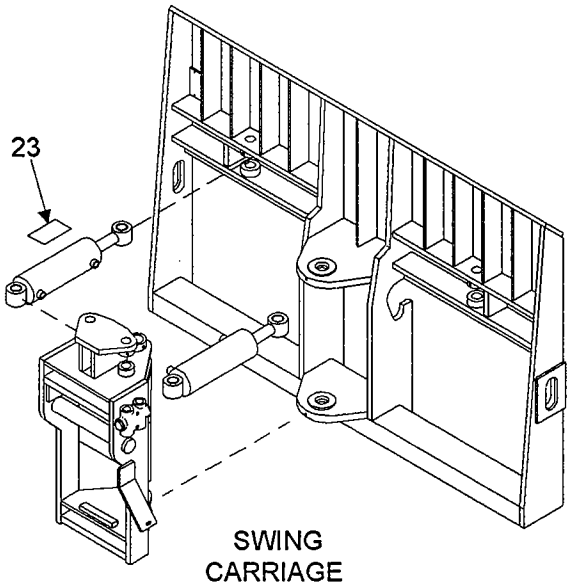
SAFETY

(Continued)

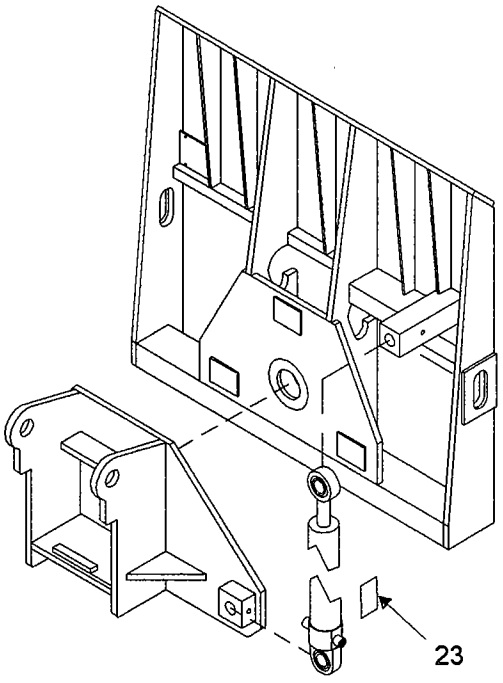




OUTRIGGER
OPTION



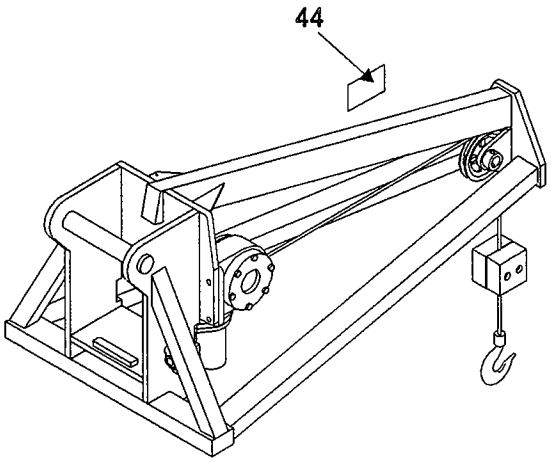
SWING
CARRIAGE



ROTATE
CARRIAGE

SAFETY

(Continued)



WINCH BOOM

⚠ WARNING

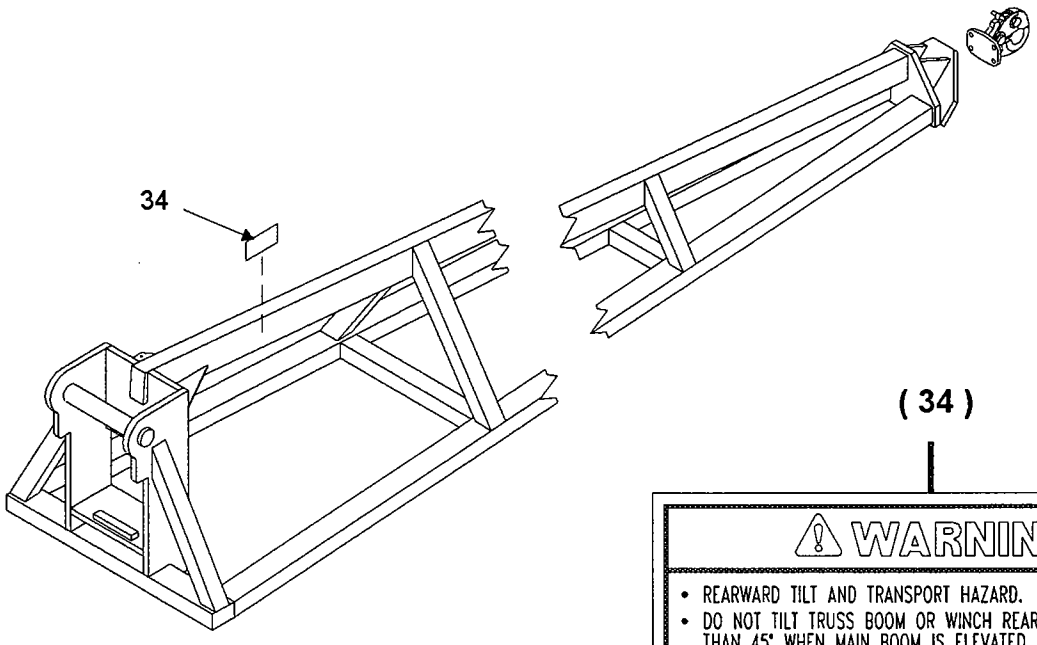
CABLE BREAKAGE HAZARD

DO NOT EXCEED 3000 LB. RATED WINCH CAPACITY AND DO NOT USE A DOUBLE BLOCK ARRANGEMENT. USE ONLY IN FACTORY SHIPPED CONFIGURATION WITH LOAD LIMITED TO RATED CAPACITY.

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

L65348

(44)



TRUSS BOOM

(34)

⚠ 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.

L66042

Chapter 5

CONTROLS, ATTACHMENTS AND ACCESSORIES

⚠ CAUTION

Become familiar with and know how to use ALL safety devices and controls on the Forklift Truck BEFORE attempting to operate it. Know how to stop the machine operation BEFORE attempting to operate it. This GEHL Forklift truck is designed and intended to be used ONLY when a mounted GEHL Company Attachment or a GEHL Company approved accessory or referral Attachment. the GEHL Company can NOT be responsible for operator safety if the Forklift Truck is used with an unapproved Attachment.

GUARDS AND SHIELDS

Whenever possible and without affecting Forklift Truck operation, Guards and Shields are used to protect potentially hazardous areas. In many places, Decals are also provided to warn of potential dangers and/or to display special operating procedures.

⚠ WARNING

Read and throughly understand ALL Safety Decals on the Forklift Truck BEFORE attempting to operate it. DO NOT attempt to operate the machine unless ALL factory installed Guards and Shields are properly secured in place.

DASH INDICATORS & SWITCHES (Fig. 1)

The front Dash area of the Operator's Station contains the following Indicators and Switches:

Starter Keyswitch

Off Position - 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 from the Keyswitch.

On or Run Position - 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.

Start Position - When the keyswitch is turned to the START position the electric Starter is energized. Release it as soon as the Engine starts (Key returns to the ON or RUN position).

NOTE: *The Key MUST always be returned to the OFF position between starting attempts.*

Circuit Breaker - The left hand 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 s3hut off. The right hand 15 Amp Breaker protects the Reserve Brake system.

Horn Push Button - With the Keyswitch ON, depress the Horn Button to activate warning sound.

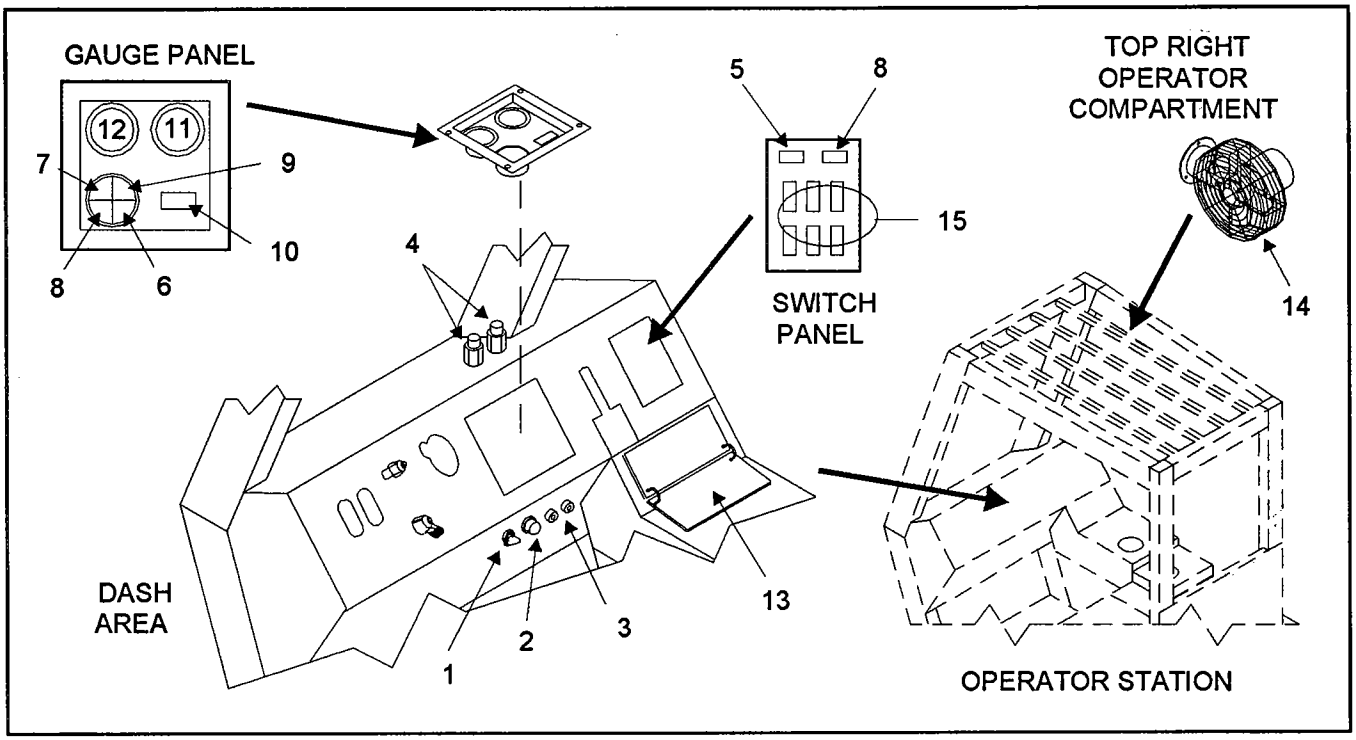
Park Brake ON - This lamp remains ON as long as the Park Brake Lever is engaged.

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.

NOTE: *If this Lamp comes on during normal operation, a problem may exist in the Transmission oil system. Stop the machine immediately and then investigate the cause of the problem!*

Alternator - Indicates the condition of the charging system. During normal operation, this Indicator should be OFF. If the charge rate is too high or too low, this Indicator will light.

Brake Failure - 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



1 - Starter Keyswitch
2 - Horn Button
3 - Circuit Breaker
4 - Hyd. Press. Test Ports
5 - Park Brake Light
6 - Transm. Oil Temp. Light
7 - Battery Light
8 - Brake Failure Light
9 - Eng. Oil Press.
10 - Hourmeter
11 - Coolant Temp. Gauge
12 - Fuel Level Gauge
13 - Load Zone Charts
14 - Defroster Fan Switch
15 - Heater/Lights Switches

Fig. 1 - Dash Position/Function Indicators & Switches

either system, the brake failure Lamp comes ON and a Buzzer sounds.

Failure in one line of the system does NOT affect the operation of the other system line. However, the **MANDATORY SAFETY SHUTDOWN PROCEDURE** should be followed and required repairs made immediately.

During normal operation, the Lamp should remain OFF.

Engine Oil Pressure - This 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.

NOTE: *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 chapter of this manual.

Coolant Temperature Gauge - Indicates Engine coolant temperature. Under normal operating conditions, this Gauge should indicate approximately 185°F (85°C).

Fuel Level Gauge - Indicates the amount of fuel remaining in the Fuel Tank.

Hydraulic Pressures Test Ports - 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 Attachments.

NOTE: *Items 14 and 15 referenced in Fig. 1 are control Switches for the following accessories used with the Cab enclosure Option.*

Heater - Provides circulating heated air throughout the Cab interior.

Head Lights/Work Lights - Provide illumination for forward travel and work operations.

Defroster - Prevents inside of front windshield from fogging up. Switch is located on overhead mounted fan.

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

Cold Start - Activates injection of ether agent for faster Engine start in cold weather..

Engine Preheat *(Perkins Engine only)* - Warms intake air to the Engine manifold.

TRAVEL CONTROLS - DASH & FLOOR AREA (Fig.2)

These controls are used to manuver the Forklift Truck around on the jobsite or for road travel. Decals on the Dash area provide graphic representation of the various control actions:

Parking Brake - Functions as both a parking brake and emergency brake. The parking 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 68 lbs. (300 N) is achieved.

The Parking 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 68 lb. (300 N) hand lever effort.

⚠ WARNING

Periodically check the Park Brake Tension and adjust, if required, to maintain adequate holding power. Always make sure the Park Brake Lever is off when resuming Forklift Truck operation.

Unattended machine hazard. Set Brake, lower Attachment to ground BEFORE leaving the pachine. An unattended machine can move or roll and cause death or serious injury to operator or bystanders.

Accelerator Pedal - Is right-foot operated and controls Engine RPM to match increase power requirements. Pushing down on the Pedal increases the RPM. Letting-up on the Pedal decreases RPM.

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 Forklift Truck in the direction of Wheel turn action.

Service Brake Pedal - These are outboard hydraulic disc-type Brakes on all four wheels. If the Brake Booster hydraulic oil should cease to flow or the Engine stop running, a Reserve Electric Motor Driven Pump provides backup Service Brake power to bring the Forklift truck to a safe stop.

NOTE: *Should the Engine stall or Brake Booster hydraulic oil cease to flow, depress the Service Brake Pedal. If the Reserve Brake system FAILS to operate, increase maximimum foot pressure on the Service Brake Pedal. Set the Park Brake and place the Transmission in Neutral.*

Transmission Clutch Dump Switch -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 Brake Pedal force to stop the Engine. In ON position, the clutch mechanism is disengaged but the Transmission remains in gear while applying Brake Pedal force.

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

Brake Fluid Reservoir - The brake fluid reservoir is located under the hinged seat mounting section. With rear bolts removed, thes section may be tilted foreard for accessibility.

⚠ WARNING

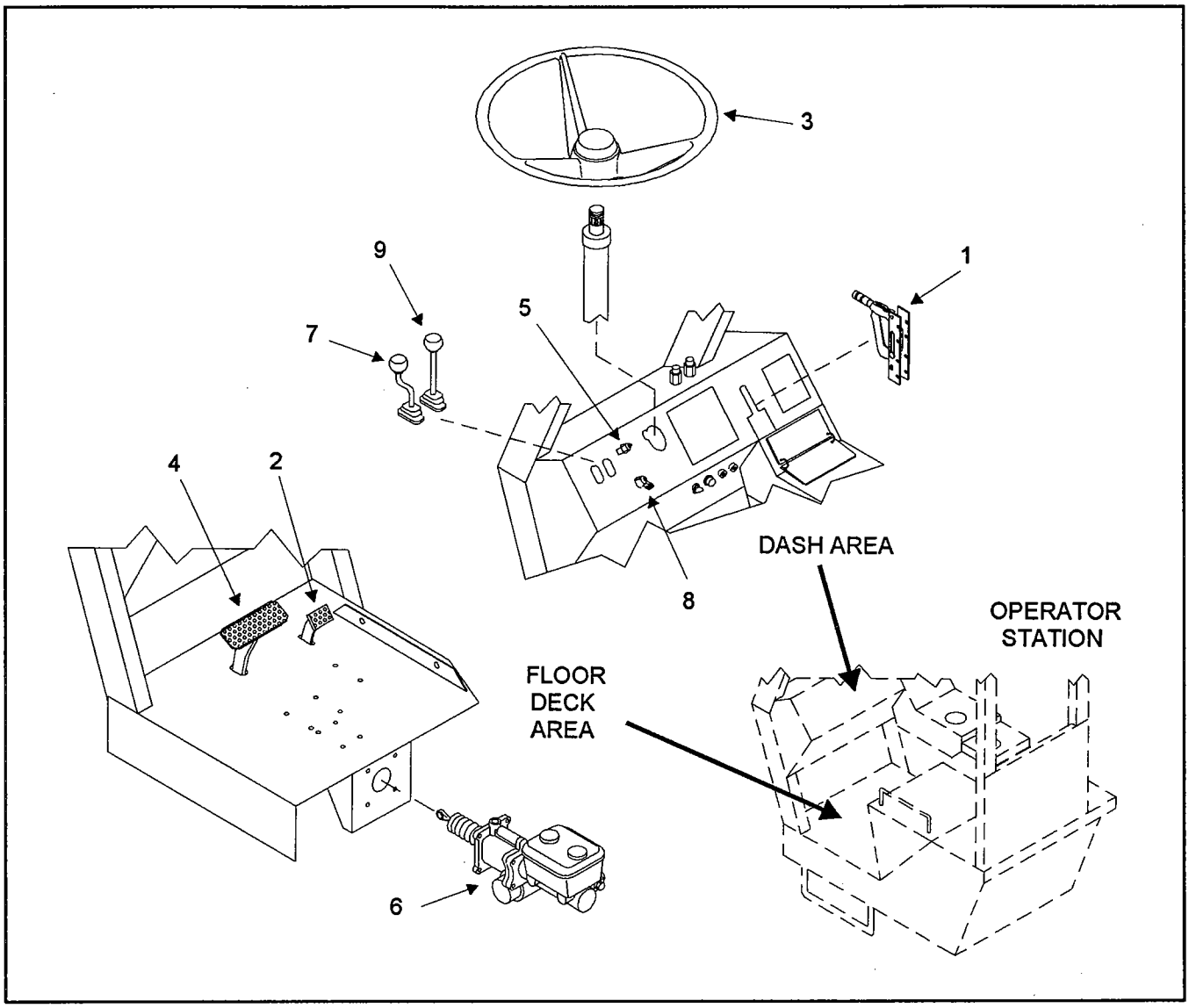
Use only DOT 3 fluid in this Reserve Brake Reservoir. Use of hydraulic oil type fluid will damage components.

Travel Direction Selector - Changes the direction of travel between forward or reverse. The Selector MUST be in N (NEUTRAL) position before the Engine will start.

F (FORWARD) - Forward or Up
N (NEUTRAL) -Center position
R (REVERSE) - Back or Down

NOTE: *Backup Alarm automatically sounds with 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 at too high a speed. Allow Engine RPM to slow before any shift down or directional change is attempted.*

Steering Mode Selector - All four wheels of the Forklift Truck are steerable. The operator may select "4-Wheel, 2-Wheel or 4- Wheel crab" steering modes.



1 - Park Brake Lever
2 - Accelerator Pedal
3 - Steering Wheel
4 - Service Brake Pedal
5 - Transm. Clutch Dump
6 - Brake fluid Reservoir
7 - Travel Direction Selector
8 - Steering Mode Selector
9 - Speed range Selector

Fig. 2 - Travel Controls & Indicators

Two Wheel Steering MUST be used while traveling at higher speeds such as on roads from one location to another. Four Wheel Steering is used for making tighter turns, usually on the jobsite.

Crab Steering provides angular movement to the right or left. This mode is used when a small amount of side shift is needed for picking or placing loads.

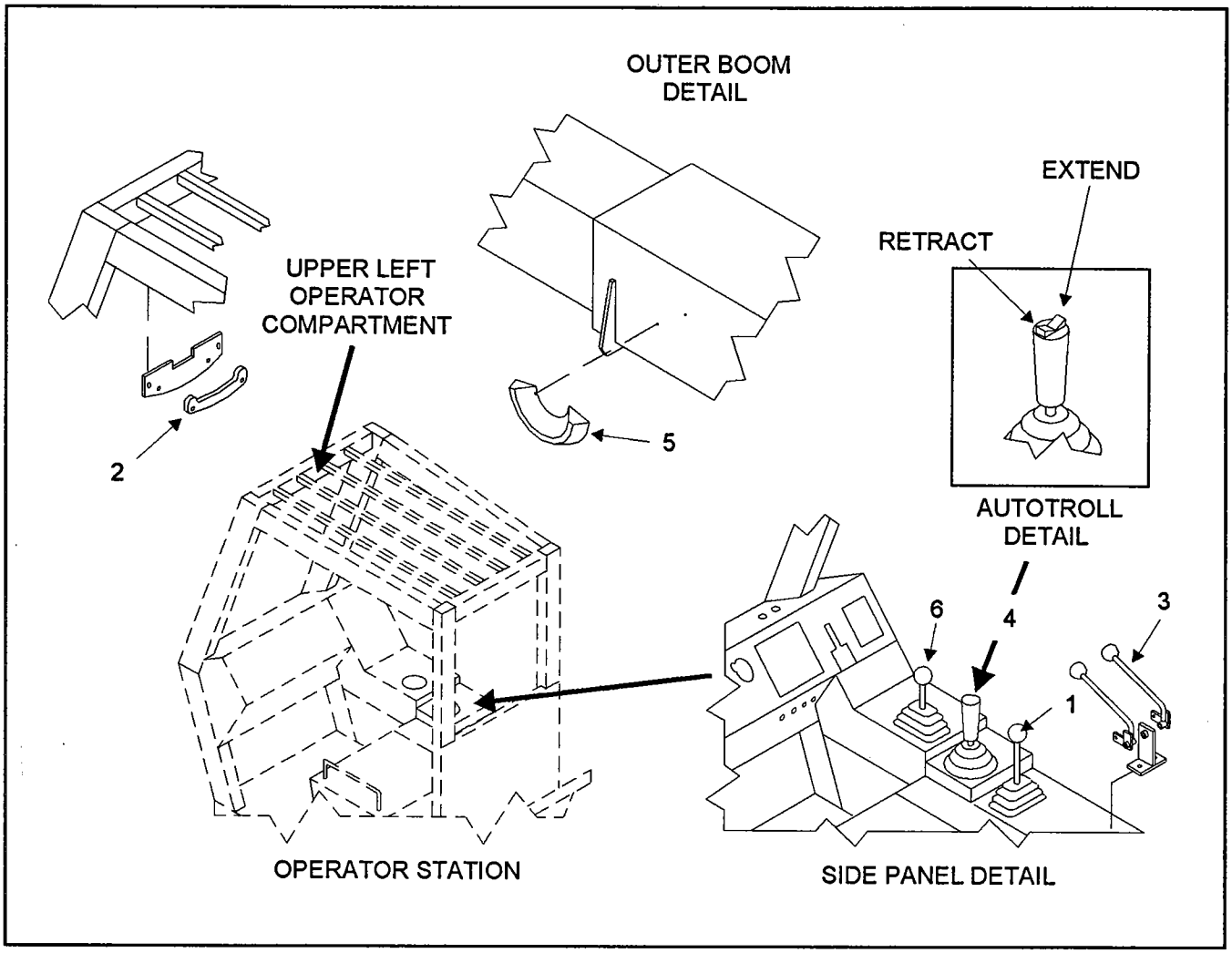
Any of the steering position modes can be used in forward or reverse travel. The operator should learn to anticipate changes in Forklift Truck movement if the Steering Selector mode MUST be changed.

⚠ CAUTION

Rear wheels are NOT self centering. Make sure all wheels are in a straight ahead position before changing the Selector mode.

Speed Range Selector - This Lever changes the Transmission speed between low and high.

3 (HIGH) - Forward or Up
2 (MEDIUM) - Center position
1 (LOW) - Back or Down



1 - Frame Sway Lever
2 - Bubble Indicator
3 - Outriggers Levers
4 - Boom Travel Lever
5 - Boom Angle Indicator
6 - Attachment Functions Lever

Fig. 3 - Boom Travel & Frame Sway Controls/Indicators

BOOM TRAVEL & FRAME STABLIZE CONTROLS/INDICATORS (Fig. 3)

These controls and indicators are used to position the Frame, Boom, and Attachment. Decals on the Side Panel provide graphic representation of the various control actions:

Frame Sway (Lever 1) - The Forklift Truck Frame may be tilted slowly 10° to the left or right to level the Frame and Boom in relation to the ground. Move the Lever to the left to tilt to the left. Move the Lever to the right to tilt to the right. The Bubble Indicator (on the upper left front Operator Compartment) shows when the frame is at level condition.

Bubble Indicator - 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 sway condition with the Boom raised or extended. Only level thye machine while at complete stop with the Boom fully retracted and the Attachment reaised just enough to clear the ground.

Outriggers Option (Lever 3) -Outriggers are used to provide greater stability with specific applications such as using the 6 Ft. Mast Attachment. Hydraulic control of Outriggers is operated with two Levers along the inside edge of the Seat in the Operator's Station.

Move the Right Hand Lever down to LOWER the RH Outrigger. Pull it up to RAISE the RH Outrigger. The Left Hand Lever performs the same function with the LH Outrigger.

⚠ WARNING

Make sure NO persons, equipment, etc. are in the area where the Outrigger Pads will be implanted.

DO NOT attempt to travel with the Outriggers extended under any circumstances.

Adequate clearance is required for the Outriggers in retracted position when tr4aveling through doorways or narrow pathways.

DO NOT attempt to use Outriggers as a hydraulic jack for maintenance or frame leveling or other similar uses.

Boom Travel (Lever 4) - The Forklift Truck has a hydraulic type Boom (with three telescopic sections). The sections extend by means of a hydraulic Cylinder and triple Chain system inside the Boom, sequenced for uniform extension of each section.

Pull the 4-position Joystick back to RAISE the Boom, push it forward to LOWER 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.

⚠ CAUTION

Use extreme caution when raising or extending the Boom. The Forklift Truck MUST be level. Loaded or empty, this machine can tip if it is 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 and/or extending capacities of this Forklift Truck. Serious machine damage or personal injury may result. Refer to the Load Chart(s) 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 Forklift Truck down following the MANDATORY SAFETY SHUTDOWN PROCEDURE. DO NOT attempt repairs. Call your GEHL dealer immediately for assistance.

AUTOTROLL™ Option - Automatically lowers the Boom as it extends to provide true horizontal movement of the Forks. On retraction, the Boom is automatically raised as it retracts to maintain true horizontal Fork movement.

AutoTroll performs equally well below or above grade to provide easy insertion or retraction of the Forks from the load.

To operate this function, first raise the load to the desired position by normal movement of the Joystick Control Handle.

To move the load or Forks forward horizontally, depress the right side of the Rocker Switch on top of the Joystick Handle. This activates the Microprocessor, Main Pump pressure and Extend Solenoid. Fork Movement will continue at factory pre-set speed of three (3) seconds per foot as long as the Extend side of the Rocker Switch is depressed.

To move the load or retract Forks horizontally, depress the left side of the Rocker Switch.

Releasing the Rocker Switch allows the operator to use the Forklift Truck in normal operation.

⚠ CAUTION

DO NOT depress Rocker Switch during manual operation.

NOTE: *If the amber malfunction light blinks (located on the inside front Operator Compartment upright) when starting to place load with the Boom all the way up and back, increase Engine RPM 200-300 RPM more.*

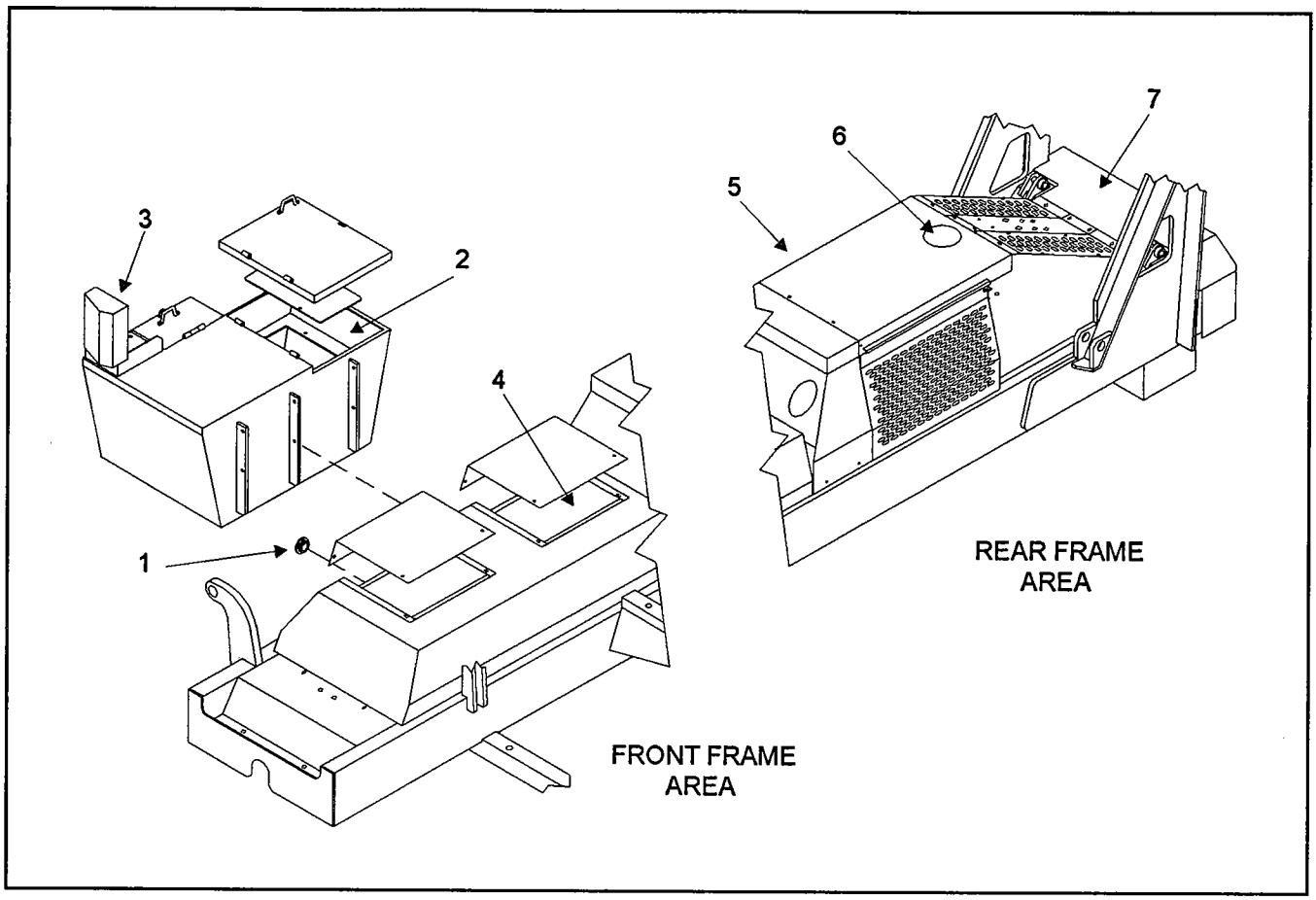
Boom Angle Indicator - Shows the angle of Boom elevation relative to the Frame parallel to the ground.

Attachment Functions (Lever 6) - The Boom inner section with an Attachment carrying device feature called DYNATACH®. This provides the operator with a convenient means of utilizing optional Attachment tools for this model of Forklift Truck. Refer to the Operation chapter for changing Attachments procedure.

This carrying device is self leveling. Once the operator tilts the Attachment 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.

Pull the Controller Handle back to RAISE the Fork tips. Push it forward to LOWER the Fork tips. For other Attachment options a 4-position Joystick is provided in place of the 2-position Controller.

Moving the Joystick forward tilts the Truss Boom DOWN. Moving it back tilts the Truss Boom UP. When a 4-Position Joystick is provided, moving the Joystick left positions the Rotating Carriage up to 12-1/2° to the LEFT. Move it to the right positions the Rotating Carriage up to 12-1/2° to the RIGHT. The function of this Attachment is to place loads onto or pickup from sloped surfaces.



1 - Hyd. Reservoir Level
2 - Battery Compartment
3 - Side Mirror
4 - Transm. Oil Dipstick
5 - Eng. Oil Dipstick
6 - Coolant Fill Cap
7 - Backup Alarm

Fig. 4 - Fluids & Vision Indicators

The same left/right Joystick action LOWERS and RAISES the Winch Attachment cable. It RAISES or LOWERS the 6 ft. Mast Carriage, which can be used to place loads at an additional 6 ft. lift height.

⚠ WARNING

The Truss Boom and Winch Attachments should ONLY be used to lift and place loands when the Forklift Truck is in a stationary position. DO NOT use to transport loads around the jobsite. So doing can cause the load to swing, resulting in either load dropping or machine tipover. Transport loads ONLY on the Forks.

DO NOT attempt to use the Rotating Carriage as a load leveling function. Always level the Frame prior to handling a load.

⚠ WARNING

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

DO NOT tilt the Truss Boom back more than 45° from horizontal.

Outriggers MUST be used with the 6 ft. Mast Attachment. Maximum load capacity is 6000 lbs. "pick and carry", and 4000 lbs. "raise" per Load Chart P/N L65874.

OTHER OPERATION INDICATORS (Fig.4)

The following indicators are for fluid level and operator rear vision:

Hydraulic Reservoir Oil Level - The Sight Gauge on the side of the Reservoir indicates the level of the hydraulic oil in the Reservoir. The Fill Cap is accessible by removing the Front Cover of the Front Hood Section.

Battery Compartment/Tool Box - The Battery compartment is just below the tool box section at the rear of the Fuel Tank. Remove the Bottom Panel of the tool box to check the Electrolyte level.

Side Mirror - Located on the front outside corner of the Fuel Tank/Battery Box compartment, the Side Mirror provides the operator with a rear view on the right hand side and rear area behind the Forklift Truck.

Transmission Oil Level - This Dipstick is located below the rear cover on the front section of the Main Hood.

Engine Oil Level - This Dipstick is located on the right (Perkins Engine) or left (J.Deere Engine) side of the of the mid section of the Main Hood.

Coolant Level - The Radiator Cap is 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 travel mode.

ATTACHMENTS

NOTE: *Additional attachments may be available; contact your GEHL Dealer for a complete list.*

Bucket - A 1 cu.yd. ($10m^3$ by 72" (1829mm) wide light material handling Bucket is available by stock Number 804618

Carriages - As listed in the Specifications chapter of this manual, several size Carriages for different purposes are available. Fork options must be ordered separate. Refer to the Operation chapter for mounting and removal information. To obtain the desired Carriage, order it by the stock number listed below:

Description	Stock Number
48" (1219mm) Masonry Type	804615
48" (1219mm) Rotate Type	804614
66" (1676mm) Framer's Type	804538
66" (1676mm) Rotate Type	804616
66" (1676mm) Swing Type, 45° Rt./Lt. Swing *Requires Outriggers*	804613
48" (1219mm) Hydraulic Fork Shift Type *Requires Auxiliary Hydraulics & Outriggers*	806547
Auger Drive w/ Mounting Adapter *Requires Auxiliary Hydraulics & Completing Auger*	806547
Completing Augers -	
9" (229mm) Dia. x 50" (1270mm) Long Auger	803555
12" (305mm) Dia. x 50" (1270mm) Long Auger	803556
18" (457mm) Dia. x 50" (1270mm) Long Auger	803557
24" (610mm) Dia. x 50" (1270mm) Long Auger	803699
14" (356mm) Long Auger Extension	803558

Fork Tines - The following choice of Fork Tines are available for Carriage attachments and must be ordered separate by stock number below:

Description	Stock Number
48" (1219mm) x 2" (51mm) x 2" (51mm) Block Type - *Requires 2 sets*	804602
48" (1219mm) x 2-1/4" (57mm) x 4" (102mm) Brick Type 9800 lb (4439 kg)	805333
48" (1219mm) x 2" (51mm) x 5" (127mm) PalletType 10,000 lb (4530 kg)	847282
60" (1524mm) x 2" (51mm) x 5" (127mm) Pallet Type 10,000 lb (4530 kg)	847283
60" (1524mm) x 6" (152mm) x 2-1/4" (57mm) Full Tapered 12,550 lb (5685 kg)	804485

Auxiliary Hydraulic Package - Provides auxiliary hydraulics with quick-disconnect fittings for operating hydraulic flow attachments such as Rotate Carriage and Winch. This package is available by stock number 805859.

Mast Extension - Used for adding 6 ft. (1.83m) to load placement height. It is available by stock number 804624.

Truss Boom - A 15 ft.(4.6m) Truss Boom is available by stock number 804604.

Winch - A 3000 lb.(1359kg) lift capacity Winch Assembly is available by stock number 804605.

ACCESSORIES

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 Forklift truck dealers.*

Outriggers - Used when required for lift applications requiring greater stability. It is available by stock number 804606.

AutoTroll Boom Travel - Provides true horizontal travel of Attachment when raised or lowered. It is available by stock number 805920. This MUST be factory installed.

All-Weather Cab (No Air Conditioning) - When desired or where operating conditions require, an all-weather Cab Enclosure can be obtained by stock number 804603. This package includes a heater/defroster, windshield wiper.

All-Weather Cab (With Air Conditioning) - Same as above but includes Air Conditioner Package. Order by stock number 804603.

Clutch Cutout - Used when desired for greater Engine acceleration and power to hydraulics without drive Axle power. It is available by stock number 804611.

Centrifugal Air Precleaner -Provides more efficient cleaning of intake air to the Engine manifold. It is available by stock number 806371.

Cold Weather Start Kit - When desired or where operating conditions require, a Cold Weather Start Kit is available by stock number 805358 (J.Deere Engine) or 806546 (Perkins Engine).

Engine Heater Kit - When desired or where operating conditions require, an Engine Block Heater is available by stock number 804619 (J.Deere Engine) or 804620 (Perkins Engine)

Fenders - A Fender package for all four wheels is available by Stock No. 805865.

Light Package - When desired or required a Light Package consisting of front and rear work lights can be obtained by stock number 804617.

Chapter 6

OPERATION & ADJUSTMENTS

GENERAL INFORMATION

⚠ DANGER

BEFORE operating the Forklift Truck on roads or highways, check local laws on use of lights, flags, licensing, slow moving vehicle emblem (SMV), ect.

⚠ CAUTION

BEFORE starting and operating the Forklift Truck, review and comply with ALL safety recommendations set forth in the SAFETY chapter of this manual and on the Decals located on the machine itself. Know how to STOP the Forklift Truck BEFORE starting it.

Start and operate this machine only from the Operator Seat. Also, BE SURE to fasten and properly adjust the Seat Belt.

Use proper grab handles, NOT the Steering Wheel or control levers as hand hold 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.

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:

1. Allow the Engine to idle for a few minutes after every cold start.
2. DO NOT idle Engine for long periods of time.
3. DO NOT operate the Engine at maximum power for long periods of time.
4. 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.

⚠ CAUTION

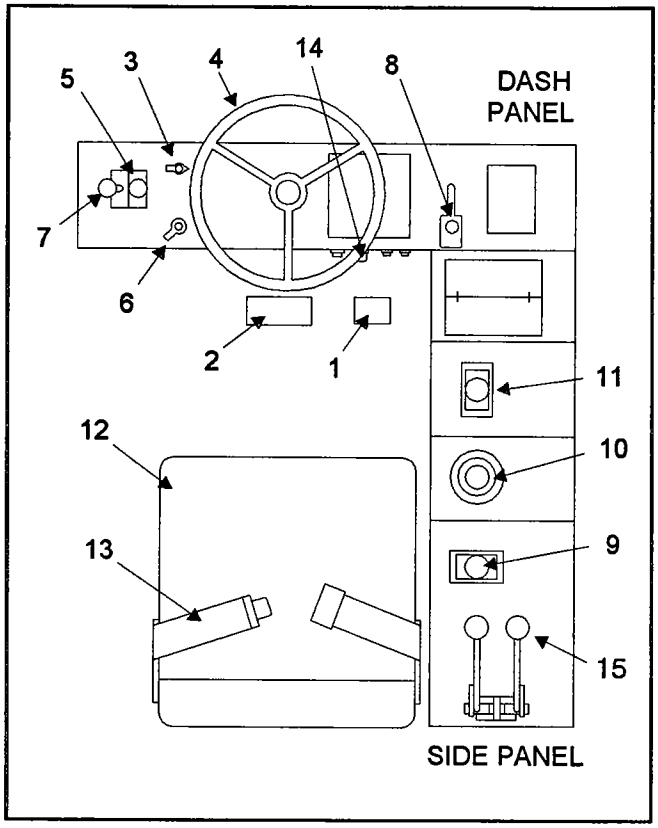
Follow manufacturer recommendations regarding use of proper lubricants, oil or

BEFORE STARTING ENGINE (Fig. 5)

Before starting the Engine and operating the Forklift Truck, refer to the "Controls & Safety Equipment" chapter and familiarize yourself with the various operating controls, Indicators and safety devices on the machine.

Take time to check the Forklift Truck 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 daily lubrication has been done.
3. Check the Service and Park Brakes.
4. Visually inspect for leaks, broken or malfunctioning parts. Make sure all caps, covers and safety shields are in place.
5. Check tires for cuts, bulges, nails, correct pressure, loose wheel nuts, etc.
6. 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.
7. Check clearances of ramps, doorways and passage ways. Check overhead clearances and if you will travel and place loads near power or telephone lines.



1 - Accelerator Pedal
2 - Brake Pedal
3 - Clutch Dump Switch
4 - Steering Wheel
5 - Speed Range Selector
6 - Steer Mode Switch
7 - Travel Direction Selector
8 - Parking Brake
9 - Sway Control
10 - Boom Travel Control
11 - Attach. Control
12 - Adjustable Seat
13 - Seat Belt
14 - Horn
15 - Outriggers Control

Fig. 5 - Operating Controls

If the Forklift Truck 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.

Starting the Engine

BEFORE mounting the operator's station, 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. Then proceed as follows:

⚠ 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 forklift Truck.

⚠ CAUTION

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

If any function, operation or control of the forklift Truck does NOT respond correctly, shut down the machine and DO NOT use until it has been made operational.

1. Make sure the floor of the operator's station and the foot controls are free of debris and mud. Adjust the seat and fasten the seat belt securely.

2. Place all controls in neutral. Make sure the Park Brake is ON. Depress the Service Brake Pedal. Turn the Keyswitch to ON and make sure that lights and gauges register.

3. Turn the Keyswitch to START. If the Keyswitch is released before the Engine starts, allow the Starting Motor to stop before attempting to start again.

NOTE: *Do NOT crank the starter for more than 30 seconds at a time or Starter Motor damage could result. If prevailing temperature is 40°F 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 engine fails to start on the first try or it dies out after only running a short time, turn the Keyswitch to OFF, wait at least two minutes and repeat above steps.

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 instruction in the Service chapter of this manual for safe jump-start procedure.

After the Forklift Truck starts and BEFORE beginning operation, perform the following:

4. Run the Engine at "idle" speed for about five minutes to allow it to warm up.

5. Check that the Indicator Lamps are OFF.

6. Check that the color of the exhaust gas is normal (it should be light grey).

7. Check that there are NO fuel, oil or Engine coolant leaks.

8. Check that there are NO abnormal noises or vibrations.

NOTE: *Avoid unnecessary iddling. Prolonged idle can cause crankcase oil dilution and incomplete fuel combustion. This can lead to premature Engine failure from gum deposits on internal Engine parts.*

Stopping the Forklift Truck

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

1. Bring the Forklift Truck to full parking stop on a level surface (NEVER park on a slope or hill side).
2. Fully retract the boom and lower the attachment to the ground.
3. Place controls in neutral and set the Park Brake.

NOTE: *The Parking Brake is NOT designed for, nor intended to be used as, the primary means of stopping forward or reverse movement of the Forklift Truck. The Service Brake is the primary means of stopping movement of this machine.*

4. Idle the Engine for gradual cooling.
5. Turn the Keyswitch to OFF and remove the key (take key with you for security reasons).

NOTE: *When the Engine is stopped, be sure the Keyswitch is in the OFF position. Loss of Battery power will result if left in ON position.*

6. Unlatch the Seat Belt and grasp the hand holds while climbing out of the operator's station.

FORKLIFT TRUCK TRAVEL

⚠ CAUTION

Operate the travel controls gradually and smoothly when starting, stopping, turning and reversing the Forklift Truck directions. Excessive speed can be hazardous. ALWAYS excercise caution and good judgement while operating the machine.

Selecting Travel Speed & Direction

With the Engine warmed up, proceed as follows:

1. Place the Speed Selector in the desired position and the Travel Selector in forward or reverse direction. Release the Park Brake, and move slowly while testing the steering and brakes. Stop and operate all Boom and Frame Sway controls checking for smooth response.
2. Apply the Brakes, stop the machine and move the Travel Selector to the opposite direction (forward or reverse).
3. Shifting to next higher gear may be done at any Engine RPM while the machine is in motion. Do NOT over speed the Engine when down shifting. Allow the machine to slow down before shifting to the next lower gear.

⚠ CAUTION

Twice daily, increase the Engine speed (fast idle) and extend and retract the Frame Sway Cylinder to the stroke limit. This removes any trapped air in the circuit. Trapped air can cause the Forklift Truck to lean to one side or the other.

Grade and Slope Precautions

The Forklift Truck complies with industry stability tests 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 Forklift Truck 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 Forklift Truck, and that are stable or safely arranged. When Attachments are used, extra care shall be taken in securing, manipulating, positioning and transporting the load.

Grade Limits (Fig. 6)

1. DO NOT travel on a grade or slope that exceeds 22% or 12.41° grade.
2. DO NOT place or retrieve loads on a slope or grade that exceeds 6% or 3.44° grade.
3. DO NOT travel on a side hill that exceeds 40% or 21.8° 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 MUST be maintained at the "carry" position with the boom fully retracted, and Attachment at minimum ground clearance.
4. Do NOT place or retrieve loads on a side hill with a slope or grade that exceeds 10% or 5.71° grade. Regardless of terrain or position of wheels, the **FRAME MUST BE LEVEL** as indicated by the Level Indicator.

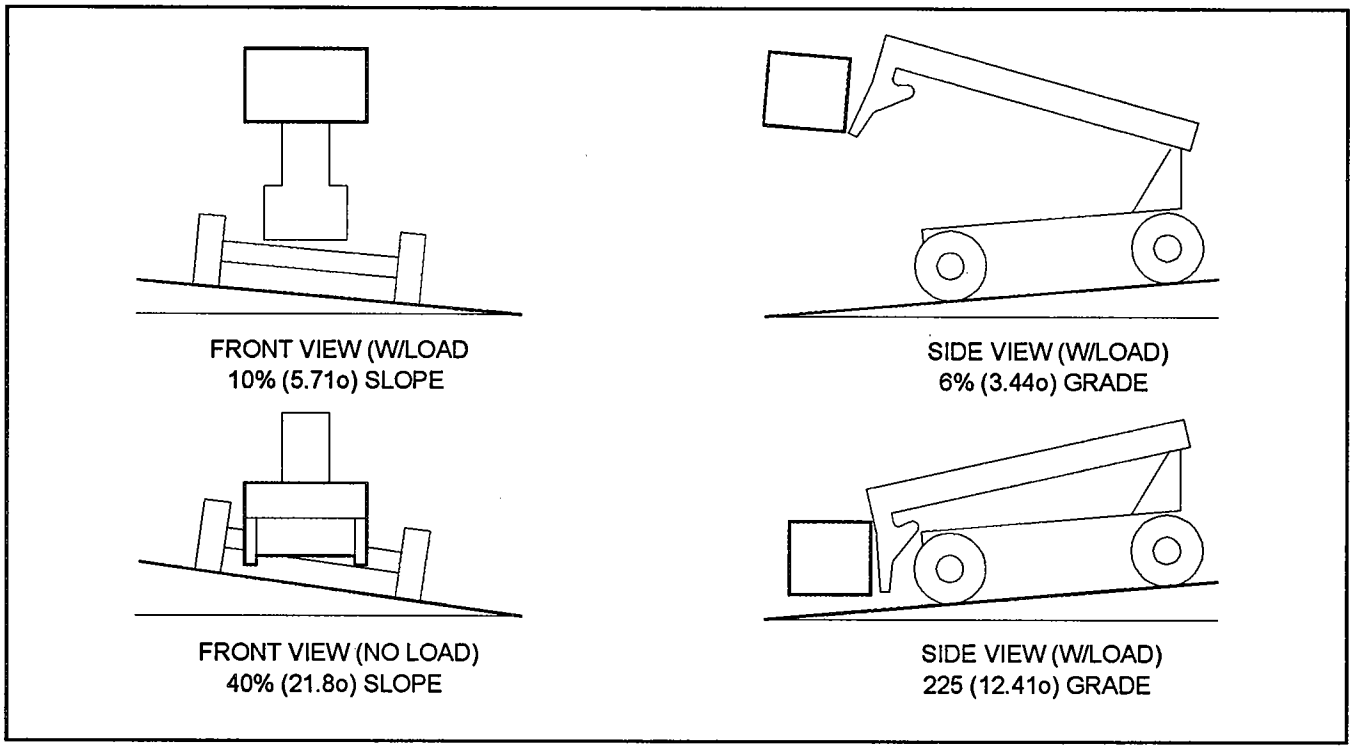


Fig. 6 - Grade & slope Limits

⚠ WARNING

DO NOT attempt to correct the frame level condition with the Boom raised or extended. Only level the Forklift Truck while at complete stop with the Boom fully retracted and the Attachment raised just enough to clear the ground.

When ascending or descending grades in excess of 5% or 2.8°, the Forklift Truck shall be driven with the load upgrade. Unloaded Forklift Truck should be operated on all forward grades with the load handling Attachment 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 (Fig. 7)

Know and understand the traffic flow patterns of your jobsite and also know all Forklift Truck hand signals for safety. Utilize signal men and make sure you can see the signal man 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.

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

Compacted dirt, Gravel, etc. - 12 ft.
Woodboard, concrete, etc. - 10 ft.

Permanent aisles, roadways or passageways, floors and ramps shall be defined in some fashion or marked. Permanent or

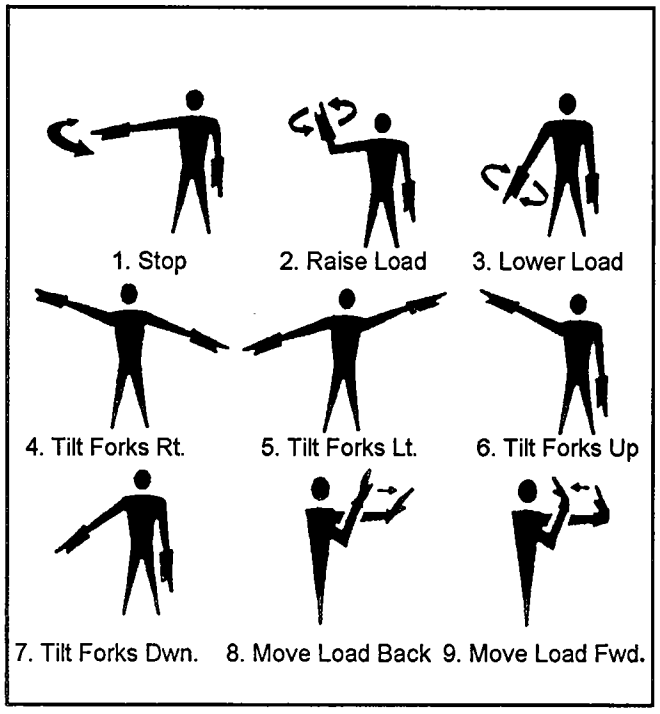


Fig. 7 - Safety Hand Signals

temporary protrusion of loads, equipment, material and construcion 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 Forklift Truck 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 Forklift Truck.

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

NOTE: *DO NOT lower Boom at high Engine RPM when Attachment is at maximum rearward tilt. Damage to Slave Cylinders may result.*

GENERAL LOAD HANDLING

The Forklift Truck is designed for use in applications utilizing a "Fork Type Carriage" as primary Attachment.

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

The Forklift Truck shall NOT be used to lift or carry personnel other than the operator, 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. 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!

⚠ CAUTION

Keep all body parts inside the Operator's Station while operating the Forklift Truck. BE SURE of clearance of the Attachment Bucket or Forks 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.

NEVER leave the Operator's Station without first lowering the attachment to the ground. Set the Park Brake, place controls in neutral, shut off Engine and remove the key. Do NOT park the Forklift Truck on a slope or hill side.

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.

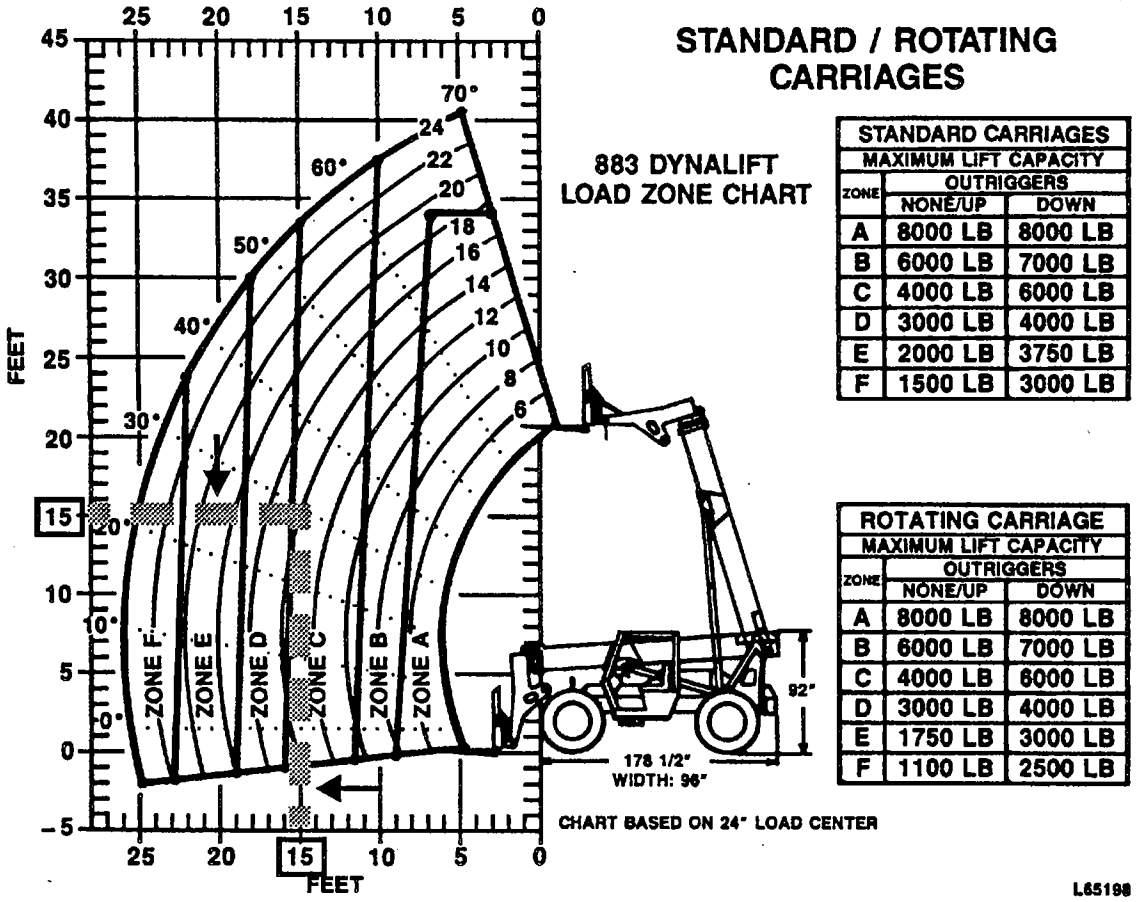
NEVER drive the machine up to someone standing in front of, beside or on top of a load.

Load Capacity and Reach (Fig. 8)

This machine has a Flip-Chart in the Operator's Station which provides, at a glance, the capacity limits at various positions of Attachment extension and elevation. A complete set of Load Zone Charts is reproduced at the end of this manual for reference. The following example illustrates proper use of the load charts for the Forklift Truck. Refer to the typical Fork Carriage Attachment chart example:

1. The operator, using a standard carriage attachment without Outriggers, MUST raise a 3000 lb load 15 feet high and can only get to within 15 feet of the load placement.

2. By projecting up the 15 foot vertical axis the intersection of a line drawn across from the 15 foot horizontal axis shows an intersection in the "C" (4000 lb) Zone. The load can be safely placed.



STANDARD CARRIAGES MAXIMUM LIFT CAPACITY		
ZONE	OUTRIGGERS NONE/UP	OUTRIGGERS DOWN
A	8000 LB	8000 LB
B	6000 LB	7000 LB
C	4000 LB	6000 LB
D	3000 LB	4000 LB
E	2000 LB	3750 LB
F	1500 LB	3000 LB

ROTATING CARRIAGE MAXIMUM LIFT CAPACITY		
ZONE	OUTRIGGERS NONE/UP	OUTRIGGERS DOWN
A	8000 LB	8000 LB
B	6000 LB	7000 LB
C	4000 LB	6000 LB
D	3000 LB	4000 LB
E	1750 LB	3000 LB
F	1100 LB	2500 LB

Fig. 8 - Typical Load Chart

⚠ CAUTION

NEVER exceed the rated operating capacity of the Forklift Truck as shown on the Capacity Decal.

CARRIAGE ATTACHMENT 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 each Fork. NEVER add extra unauthorized counterweights to this machine. Consider the additional weight of any attachment as part of the picking load capacity of the Forklift Truck.

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

⚠ CAUTION

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.

NEVER drive the machine up to some one standing in front of, beside, or on top of a load.

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.

⚠ CAUTION

NEVER travel with the Boom above the carry position (Attachment 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 Forklift Truck on a slope or grade that exceeds 22% or 12.41° of grade

Load Elevation And Placement

For ground level placement, make sure the area under the load and around the Forklift Truck 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 Forklift Truck 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 Forklift Truck 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 Forklift Truck.

⚠ WARNING

NEVER use Frame leveling to position an elevated load. Always lower the load to the ground and reposition the Forklift Truck.

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 Forklift Truck becomes less stable as load is raised higher.

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

SUSPENDED LOADS

DO NOT exceed the Forklift Truck 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 Forklift Truck 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.

⚠ WARNING

The Truss Boom and Winch Attachments should ONLY be used to lift and place loads when the Forklift Truck is in a stationary position. Do NOT use to transport loads around the jobsite. So doing can cause the load to swing, resulting in either load dropping or machine tipover. Transport loads ONLY

CHANGING ATTACHMENTS

The Forklift Truck Boom features the Dynattach® Carrier with a quick-release hookup and locking mechanism for mounting Attachments to the front of the Boom nose.

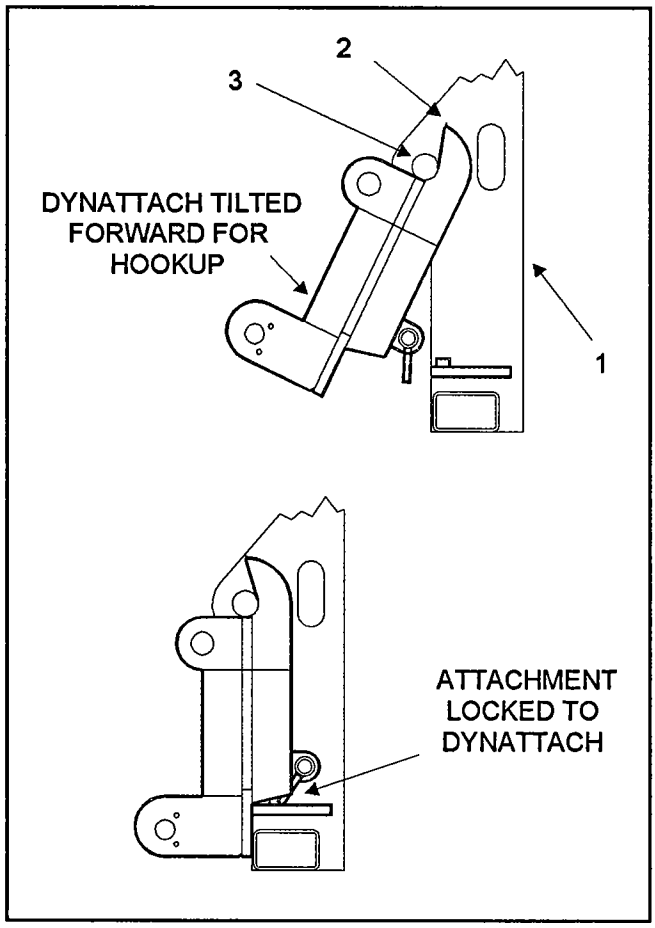
⚠ WARNING

Modifications or alternations of the Forklift Truck or the use of Attachments NOT authorized by GEHL Co. in writing can void warranty and cause machinedamage and/or serious personal injury or death.

Attaching (Fig. 9)

To pickup the Attachment proceed as follows:

1. Raise the Boom slightly and extend it 2 or 3 feet for better visibility and tilt the Dynattach forward.
2. Align the Dynattach squarely with the back of the Attachment.
3. Slowly extend the Dynattach and lower the Hooks under the Attachment Hookup Bar.
4. Tilt the Dynattach back so that the Lock Plate engages the Attachment. This secures the Attachment to the Dynattach.



1 - Attachment
2 - Hookup Ear
3 - Hookup Bar

Fig. 9 - Attaching Detail

5. With the Attachment locked into position, excercise the MANATORY SAFETY SHUTDOWN PROCEDURE (Safety chapter). For Attachments with auxiliary hydraulics, connect hoses to the quick-connect connectors on the Boom nose.

Detaching (Fig. 10)

To detach Attachment, proceed as follows:

1. Raise the Boom slightly and extend it 2 or 3 feet for better visibility. Lower the Boom until the Attachment is approximately 12" off the ground.

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

3. With the Forklift Truck Engine off, leave the operator's station. Manually raise the Lock Spring and flip the Lock Plate up and outward at least 180° so it is in position to re-lock on the next Attachment.

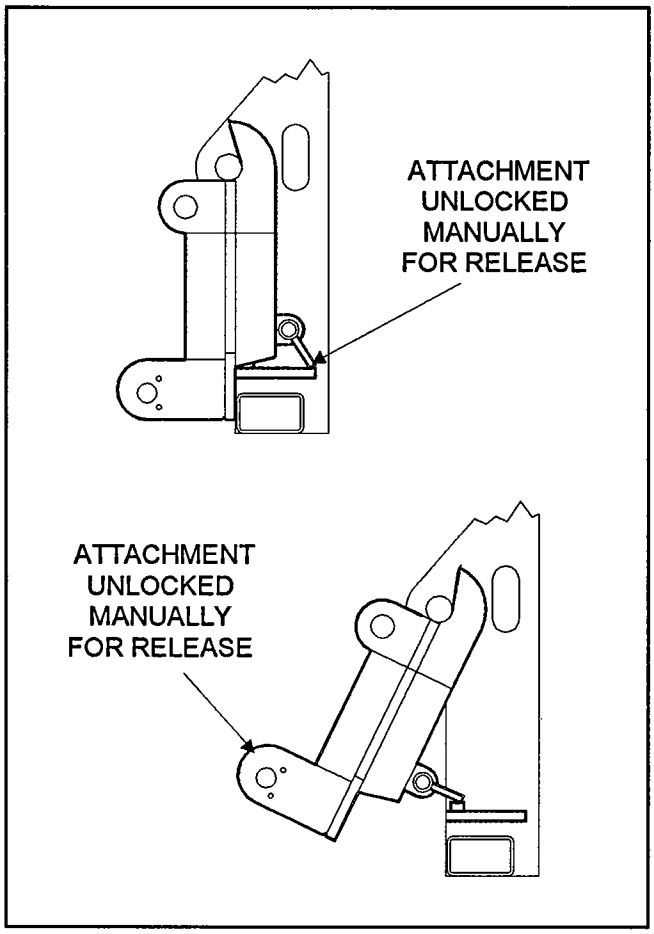


Fig.10 - Detaching Detail

4. Tilt the Dynattach forward to allow the Attachment to rollout, then lower the Boom so the Hook Ears clear the Hookup Bar on the Attachment.

NOTE: *One side of the Lock Plate has a bright red Decal to indicate the unlocked position.*

5. If the Attachment has auxiliary hydraulics, disconnect the hoses from the quick-disconnects on the Boom nose.

6. Start the Forklift Truck Engine and roll the Dynattach forward, then slowly back the Forklift Truck until the Attachment is free from the Boom nose.

TRANSPORTING BETWEEN JOBSITES

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

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

⚠ CAUTION

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.

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

Loading Forklift Truck Using Ramps(Fig.11)

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

1. 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 long.
4. Ramp width MUST be at least 1-1/2 times the tire width.
5. Block the front and rear of the tires on the truck or trailer (if so equipped, engage the parking brake).
6. Remove the Attachment from the Boom. Position the Forklift Truck (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. Slowly (at the lowest Engine speed possible) and carefully drive the Forklift Truck up the ramps.

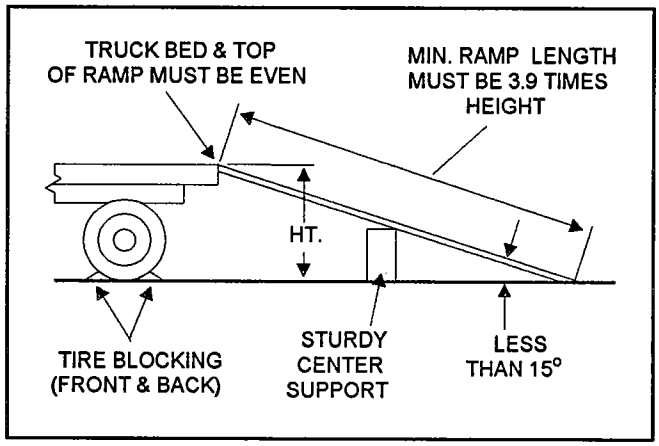


Fig. 11 - Ramp Placement

⚠ CAUTION

NEVER attempt to adjust travel direction (even slightly) while traveling on the ramps. Instead, back down off of the ramps and then re-align the Forklift Truck with the ramps.

Unloading Forklift Truck Using Ramps

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

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

8. If necessary, adjust the Forklift Truck so that the wheels are in line and centered with the ramps.
9. Slowly (at the lowest Engine speed possible) and carefully drive the Forklift Truck down the ramps.

THEFT DETERRENTS

THE CERTAINTY OF APPREHENSION IS A STRONG DETERRENT TO THIEVERY 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 same information to **GEHL** Co.

This Page Intentionally Blank

Chapter 7

FUELS & LUBRICATION

FUELS

Use grade No. 1D or No. 2D diesel fuel as defined by ASTM designation D975 for diesel fuels.

NOTE: *Use grade No. 2D fuel at ambient temperatures above freezing. Use No. 1D fuel at ambient temperatures below freezing, and for all temperature ranges at altitudes above 5000 ft. NEVER put additives in the fuel used in the Forklift Truck unless specificially recommended by your Engine dealer.*

Keep dirt, scale, water, etc. out of stored fuel. Do NOT store fuels for any extended periods of time. It is good practice to fill the Fuel Tank after completing work at the end of each day. This will reduce overnight condensation problems which will add to water in the fuel.

⚠ WARNING

ALWAYS shut off the Engine when filling the Fuel Tank. ALWAYS ground the fuel nozzle against the filler neck to avoid sparks.

NEVER fuel the Forklift Truck when smoking or near a fire or open flame. Avoid spilling fuel. If a spill occurs, wipe it up immediately.

NEVER add fuel when Engine is HOT!

LUBRICATION

NOTE: *Whenever service is performed on hydraulic components (valves, cylinders, hoses, etc.); radiators and hoses; fuel tanks and lines;* ***care must be taken to prevent discharging fluid onto the ground.*** *Catch and dispose of fluid per local waste disposal regulations.*

The Maintenance Log 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 prefenting excessive part wear and early failure.

⚠ CAUTION

NEVER attempt to lubricate or service the Forklift Truck while the Engine is running.

ALWAYS BE SURE to exercise the MANDATORY SAFETY SHUTDOWN PROCEURE (Safety chapter) BEFORE proceeding to lubricate or service the machine.

Lubricants

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

The following chart lists the locations, temperature ranges and types of recommended lubricants to be used when servicing this machine. Also refer to the separate Engine Manual provided for additional information regarding recommended Engine lubricants, quantities required and grades.

Hydraulic System Reservoir	
Mobil DTE® 15M ISO VG 46 MIL-L-2104D SAE 10W	
Axle Differential & Planetary Oils	
Above -20°F (7°C) Below 20°F (7°C)	MIL-L-2105C (80W) or HD Engine Oil (30W) Straight Mineral Gear Lube (80W) or HD Engine Oil (30W)
Transmission Oils	
Above -10°F Above -30°F	MobilFluid® 423 API-CD/SF SAE 10W Dexron®
Engine Oils	
SAE 10W-30	

(Continued)

Brake System	
Use only DOT-3 Brake Fluid	
All Grease Fittings	
Use No. 2 Lithium-Based Grease	
Replacement Filters	
J. Deere Engine	
Oil Filter Element Fuel Filter Element	Gehl P/N L94746 Gehl P/N L98978
Perkins Engine	
Oil Filter Element Fuel Filter Element	Gehl P/N L98601 Gehl P/N 078850
Transmission	
Oil Filter Element	Gehl P/N L94667
Do NOT use a substitute replacement as high pressure may cause filter to rupture	
Hydraulic Reservoir	
In-Tank Filter Element Sump Strainer	Gehl P/N L97489 Gehl P/N L62832
Air Cleaner	
Dry Element	Gehl P/N L120037

GREASE FITTING LOCATIONS

Refer to the following illustrations for fitting locations and greasing frequencies. Descriptions are keyed to reference numbers on the illustrations. 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/Outriggers (Fig. 12)

Grease Every 10 Hours (or daily)

1. Dynattach to Boom Nose Pins (2 ea.)
2. Foot Control Pedal Bearings (5 ea.)
3. Tilt Cylinder Pivot Pins (2 ea.)
4. Sway Cylinder Pivot Pins (2 ea.)
5. Lift Cylinder Pivot Pins (2 ea.)
6. Slave Cylinder Pivot Pins (2 ea.)
7. Boom To Frame Pivot Pins (2 ea.)
8. Axle To Frame Pivot Pins (1 per Axle)
9. Chain Sheaves (2 ea.)

Grease Every 50 Hours (or weekly)

10. Wheel Spindle Pins (4 ea. per Axle)
11. Extend Cylinder Pins (2 ea.)
12. Transmission Shift Linkage (2 ea.)
13. Top Rear Inner Boom Slide Pads (2 ea.)
14. Bottom Front Outer Boom Slide Pads (2 ea.)
15. Drive Shafts (3 per shaft)
16. Tie Rod Ends (2 per Axle)
17. Steer Cylinder Ends (4 per Axle)
18. Outrigger To Frame Pivot Pin (1 ea.)
19. Outrigger Arm & Pad Pivot Pins (2 ea.)
20. Outrigger Cylinder Pivot Pins (2 ea.)

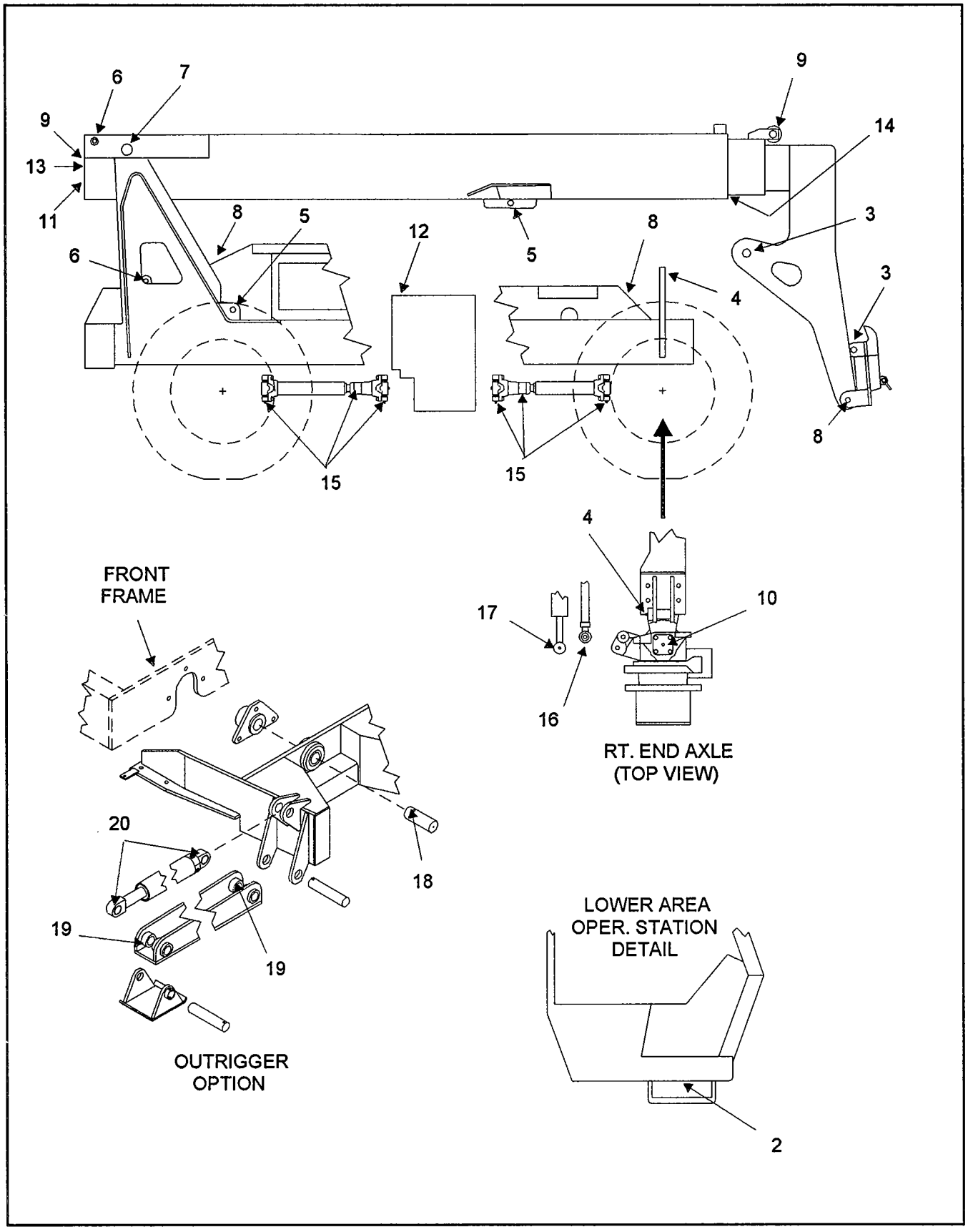


Fig. 12 - Grease Fittings, Basic Machine & Outriggers

Boom Attachments (Fig. 13)

Grease Every 50 Hours (or weekly)

21. Rotate Carriage Pivot Bearing (1 ea.)

22. Rotate Cyl. Pivot Pins (2 ea.)

23. Rotate Carriage Wear Pads (3 ea.)

24. Swing Cyl. Pivot Pins (2 ea.)

25. Swing Carriage Pivot Pins (2 ea.)

26. Mast Chain Sheave Pin (1 ea.)

27. Mast Carriage Side Shift Roller (4 ea.)

28. Mast Lift Chain (2 ea.)

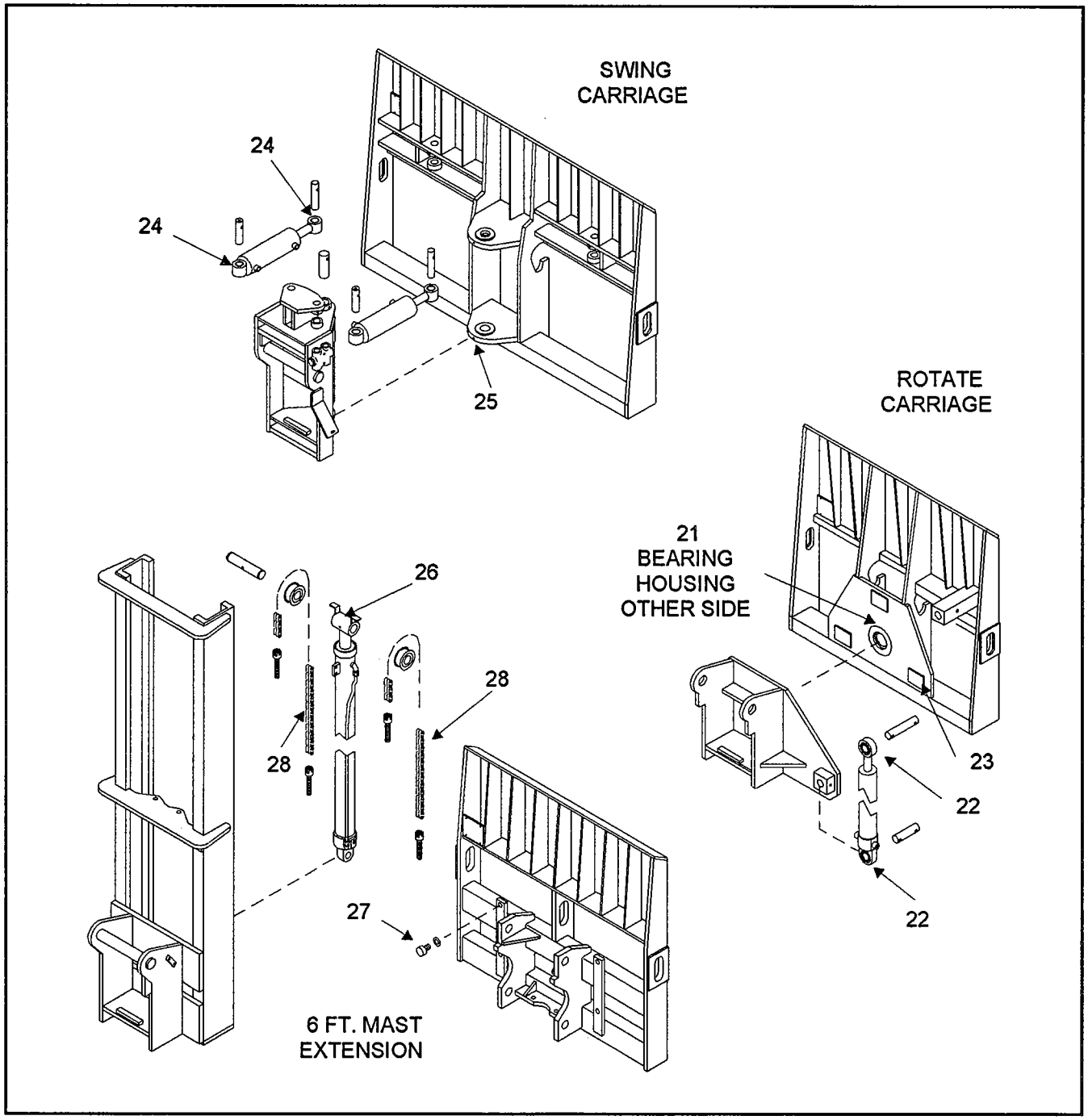


Fig. 13 - Grease Fittings, Attachments

Chapter 8

TROUBLESHOOTING GUIDE

The following Troubleshooting Guide lists potential problems, causes and remedies beyond the extent of loose, worn or missing parts. It was developed in consideration of the Forklift Truck being in otherwise good operating condition.

When a problem occurs, don't overlook simple causes. A malfunction could be caused by something as simple as low fluid level. After a mechanical failure has been corrected, be sure to locate the cause of the problem.

⚠ CAUTION

DO NOT attempt to Service or Repair Hydraulic components, electronic systems, Engine or Transmission, unless authorized to do so by your GEHL Dealer/Distributor. Any unauthorized Repair Will Void the Warranty.

PROBLEM	CAUSE	REMEDY
BOOM TRAVEL (Without AutoTroll Option)		
All cylinder forces reduced.	Engine output insufficient.	Refer to Engine manual.
	Worn or defective Hydraulic Pump.	Repair or replace Hydraulic Pump.
	Main Relief Valve defective.	Readjust pressure setting or replace Valve
	Insufficient hydraulic oil level.	Replenish oil supply.
	Improper hydraulic oil viscosity.	Allow for longer warm-up or drain and replace with proper viscosity oil.
	Suction Filter is clogged.	Clean or replace Suction Filter.
All Cylinders Inoperative.	Hydraulic Pump defective.	Replace Pump.
	Insufficient hydraulic oil level.	Replenish oil supply.
Extend or retract power insufficient.	Main Relief Valve pressure setting too low and/or defective.	Readjust pressure and/or replace Relief Valve.
	Hydraulic Cylinder seals defective.	Replace Cylinder seals.
	Defective Cylinder and/or Piston.	Replace Cylinder and/or Piston.
	Hydraulic pressure too low.	Pressure checks of Relief, Pump: readjust setting or replace.
	Too heavy a load.	Reduce load weight.

(Continued on Next Page)

PROBLEM	CAUSE	REMEDY
BOOM TRAVEL (Without AutoTroll Option)		
Bind, jerking, chatter during movement..	Shimming too tight or too loose, insufficient grease, foreign matter in pad tracking path.	Adjust Shims; clean and grease Pad tracking path.
Sloppy movement..	Slide Pads worn.	Re-Shim Pads or replace Pads
Oil leaking out of Boom.	Extend Cylinder leaking. Broken hose or loose fitting.	Replace seals. Replace hose(s); tighten fitting(s).
BOOM TRAVEL (With AutoTroll Option)		
NO movement in or out.	AutoTroll system 5 amp or 2 amp Fuse defective. Defective Solenoid.	Replace fuse. Replace Solenoid.
NO movement up or down.	Faulty Servo valve. Defective system Fuse.	Replace Valve. Replace Fuse.
Insufficient hydraulic system pressure.	Defective 2-way Pressure Solenoid Valve.	Replace Valve.
Malfunction Light ON continuous.	Defective Microprocessor. Bad connection to Sensors or Servo Valve.	Replace - CONTACT FACTORY. Repair.
Malfunction Light blinking; Forks out of line	Retract rate too fast; defective Microprocessor.	Replace - CONTACT FACTORY.

PROBLEM	CAUSE	REMEDY
	CONTROL (Main) VALVE	
Incapable of raising the load.	Internal oil leak at the spool.	Replace entire Valve assembly.
	Oil leaking at Relief Valve port.	Disassemble and clean or replace Relief Valve.
Load lowers when spool is shifted from neutral to raise position.	Load Check Valve clogged with dirt.	Disassemble and clean Load Check Valve assembly.
	Load Check Valve poppet or seat damaged.	Replace poppet and seat assembly.
Spool sticking or does NOT move.	Hydraulic oil contaminated.	Drain and replace with fresh oil.
	Valve clogged with dirt.	Remove dirt and clean assembly.
	Plunger cap filled with oil.	Replace seal on end of cap.
	Port piping joint tightened excessively.	Loosen and re-torque joint.
	Valve housing distorted from misalignment during mounting.	Loosen, realign and retighten mounting hardware.
	Foreign matter at spool internal stop.	Remove foreign matter or replace entire Valve assembly.
	Pressure too high.	Adjust pressure.
	Lever or link bent.	Remove and Straighten or replace
	Spool bent.	Replace entire Valve assembly.
	Return spring failing.	Replace spring.
	Return spring or cap misaligned.	Loosen, realign and retighten.
	System oil temperature distribution NOT uniform.	Allow sufficient warm-up time for entire system.

(Continued on next page)

PROBLEM	CAUSE	REMEDY
CONTROL (Main) VALVE		
Oil Leaking at seals.	Paint sticking at seal.	Remove and clean the seal.
	Back-pressure in Valve.	Replace hydraulic oil Filter.
	Dirt in seal.	Remove and clean the seal.
	Seal plate has loosened.	Replace entire Valve assembly.
	Seal broken or damaged.	Remove and replace seal.
Controls feel heavy.	Foreign matter in Control Valve spool.	Clean Control Valve
	Control linkage lacking lubrication.	Replace entire Valve assembly.
HYDRAULIC CYLINDERS		
Insufficent Hydraulic Cylinder power.	Relief Valve pressure setting decreased.	Readjust Relief Valve pressure setting.
	Hydraulic Cylinder internal oil leakage.	Replace Cylinder seals.
	Hydraulic Cylinder piston or rod defective.	Replace piston or rod.
	Control Valve internal oil leakage.	Replace entire Valve housing.
Hydraulic Cylinder external oil leakage.	Hydraulic Cylinder seals defective.	Replace Cylinder seals.
	Hydraulic Cylinder rod damaged.	Replace Cylinder rod.
Hydraulic Cylinder Piston does NOT move smoothly.	Air being taken into system.	Replenish oil and retighten suction connections.
PRIORITY FLOW DIVIDER VALVE		
NO flow thru priority or excess flow ports.	Piston is stuck and closing off flow.	Disassemble and remove foreign material to restore smooth function.
	Dirt is lodged in valve seat.	Clean Valve.
Flow control is unstable.	Pilot poppet seat is damaged.	Replace damaged parts.
	Pilot piston is sticking.	Disassemble, clean and/or remove surface flaw.
Load sensing relief pressure incorrect.	Parts worn.	Replace worn parts.
Oil leaks have developed.	Seats and/or O-rings are worn.	Replace defective or worn parts.
	Moving parts are stuck due to dirt.	Disassemble and check for flaws; clean and reassemble parts

PROBLEM	CAUSE	REMEDY
RELIEF VALVE		
Pressure does NOT rise at all.	Poppet is stuck and remains openl. Dirt is lodged in Valve seat.	Disassemble and remove foreign material to restore smooth function. Clean Valve.
Relief Valve function is unstable.	Pilot poppet seat is damaged. Pilot piston is sticking.	Replace damaged parts. Disassemble, clean and/or remove surface flaw..
Relief pressure incorrect.	Parts worn. Locknut and adjusting screw loose.	Replace worn parts. Readjust pressure and tighten locknut and screw.
Oil leaks have developed.	Seats and/or O-rings are worn. Moving parts are stuck due to dirt.	Replace defective or worn parts. Disassemble and check for flaws; clean and reassemble parts.
HYDRAULIC PUMP		
Pump does NOT discharge oil.	Insufficient hydraulic oil level. Suction Filter is clogged.	Replenish oil. Clean or replace filter..
Pump does NOT develop full pressure.	Pump internal leakage Pump taking in air. Main relief Valve pressure setting has dropped.	Replace Pump. Replenish oil and tighten suction connections. Adjust Valve.
Pump has become abnormally noisy.	Cavitation has developed due to collapsed suction hose. Air is being taken in due to loose suction hose connections or because of low oil level. Bubbles in hydraulic oil.	Clean Filter if contaminated. Drain and replace with proper viscosity oil. Retighten hose connections and/or replenish oil. Locate the cause of the bubbles and correct; replace oil.
Oil leaking from Pump.	Pump seal defective.	Replace seal and/or Pump.

PROBLEM	CAUSE	REMEDY
ELECTRICAL SYSTEM		
Starter will NOT turn.	Keyswitch is OFF.	Turn Keyswitch ON.
	Faulty wiring and/or terminations, or Circuit Breaker open.	Troubleshoot circuit and repair problem.
	Faulty Starter Switch.	Replace Switch.
	Battery NOT adequately charged	Recharge Battery.
Battery discharges and/or will NOT recharge.	Terminals or Cables are loose or Corroded, Battery is defective, and/or Alternator (or Regulator) is defective.	Clean the Battery terminals and Cables and retighten them or replace Battery; Alternator and Regulator can be checked by your dealer.
	Battery electrolyte level is low.	Replenish with distilled water.
	Alternator Belt defective and/or NOT properly tensioned.	Replace Belt and/or readjust tension.
Operating Lights, Horn, etc. DO NOT function	Circuit Breaker open.	Check for cause, correct and reset Circuit Breaker.
Alternator Lamp goes out before Engine starts.	Faulty Alternator.	Replace Alternator.
	Battery is NOT sufficiently charged.	Recharge Battery.
	Faulty Safety Relay.	Replace relay.
TRANSMISSION		
Low Clutch Pressure.	Low oil level.	Fill to proper level.
	Regulating Valve Spool Stuck open.	Clean Spool and Housing.
	Faulty Charge Pump.	Replace.
	Broken or worn Clutch Shaft or Piston seal rings.	Replace seal rings.
	Clutch Piston Bleed Valve stuck open.	Clean Bleed Valves.
Low Converter charging pump output.	Low oil level.	Fill to proper level.
	Suction Screen plugged.	Clean Suction Screen.
	Defective oil Pump.	Replace.

(Continued on next page)

PROBLEM	CAUSE	REMEDY
	TRANSMISSION	
Overheating.	Worn oil seal rings.	Requires rebuilding Converter assy.
	Excessive slipping of Torque Converter.	Use proper operating techniques.
	Worn Oil Pump.	Replace.
	Low oil level.	Fill to proper level.
Noisy Converter.	Worn oil pump.	Replace.
	Worn or damaged bearings.	Requires complete disassy. & repair.
Lack of Power.	Low Engine RPM at Converter stall.	Replace.
	See "overheating" checks.	See "overheating" checks.
	ENGINE (See also separate Engine Manual)	
Engine will NOT turn over.	Starter Motor defective or faulty wiring connections.	Replace Motor and/or repair wiring.
	Starter Motor has insufficient power to turn Engine over.	Battery is run down, starter is defective and/or wiring connections broken or loose.
	Engine is cold.	Activate glow plugs to pre-heat Perkins Engine. Use starting aid for JD Engine.
	Engine crankcase oil is too heavy.	Drain and replace crankcase oil with proper viscosity oil.
Engine Cranks-over but will NOT start.	Fuel tank is empty.	Replenish diesel fuel supply.
Engine cuts-out abruptly.	Ran out of fuel.	Replenish diesel fuel.
	Fuel Filter is clogged and/or air is trapped in the fuel system.	Clean or replace fuel filter and/or de-aerate fuel system.
Engine runs rough.	Battery is run down.	Recharge Battery; if problem continues check electrical system for cause of Battery drain.
Engine cuts-out abruptly.	Fuel filter is clogged and/or air is trapped in the fuel system.	Clean or replace fuel Filter and/or de-aerate fuel system.
	Air cleaner is clogged.	Clean or replace Air Cleaner Element.

PROBLEM	CAUSE	REMEDY
	AXLES	
Noise on drive.	Excessive Pinion to Ring Gear backlash.	Adjust.
	Worn Pinion and Ring Gear, or Pinion Bearings.	Replace.
	Loose Pinion Bearings.	Adjust.
	Excessive Pinion end play.	Adjust.
	Worn Differential Bearings.	Replace.
	Loose Differential Bearings.	Adjust.
	Excessive Ring Gear run-out.	Replace.
	Low lubricant level.	Replenish.
	Wrong or poor grade lubricant.	Rep lace.
	Bent Axle Housing.	Replace.
Noise on coast.	Axle noises heard on drive will usually be heard on coast, though not as loud.	Adjust or replace (see above)
	Pinion and Ring Gear too tight (audible when decelerating and dissappears when driving).	Adjust.
Intermittent noise.	Warped Ring Gear.	Replace.
	Loose Differential Case bolts.	Tighten.
Constant noise.	Flat spot on Pinion, Ring Gear teeth. or Bearings.	Replace.
	Worn Pinion Splines.	Replace.
	Worn Axle Shaft Dowel holes.	Replace.
	Worn Hub studs.	Replace.
	Bent axle shaft.	R eplace.
Noisy on turns.	Worn Differential Side Gears, Pinions, Spider, or Thrust Washers.	Replace.
	Worn Axle Shaft splines.	Replace.

Chapter 9

SERVICE & STORAGE

GENERAL INFORMATION

⚠ CAUTION

BEFORE proceeding to perform any Service routines on the Forklift Truck, or unless expressly instructed to the contrary, exercise the MANDATORY SAFETY SHUTDOWN PROCEDURE (Safety chapter). After service has been performed, BE SURE to restore all Guards, Shields and Covers to their original positions BEFORE resuming Forklift Truck 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 wall of the Operator's Station. Refer to the Lubrication chapter of this manual for lubrication information.*

Under extreme operating conditions more frequent service than the recommended intervals may be required. You must decide if your actual operation requires more frequent service based on your use.

This Service chapter details procedures to follow for making routine maintenance checks, adjustments and replacements. The majority of the procedures are also referred to in both the Troubleshooting and Maintenance Log chapters of this manual. For Engine related adjustments and servicing procedures, BE SURE to refer to the separate Engine Manual provided.

Precautions

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

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

NOTE: *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 Forklift Truck dealer.

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 area of power train componentry is suspected of faulty operation, contact your Gehl Forklift Truck dealer for further assistance.*

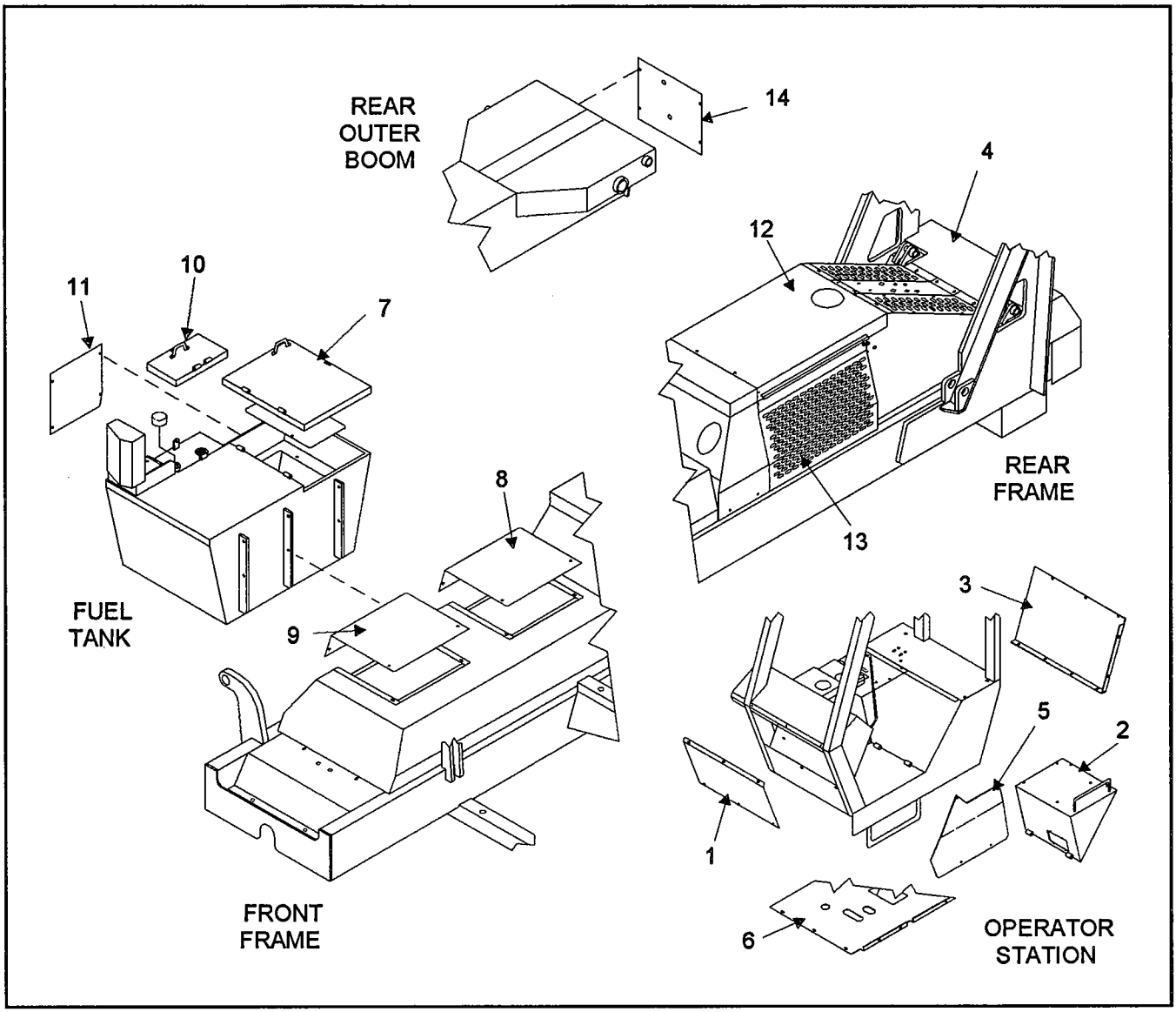
Hydraulic System Components

Valves, Pumps, Motors and Cylinders are also sophisticated assemblies which require special know-how and tools for servicing. All Cylinders are appropriety designed with particular strokes, diameters, checks and hose connection provisions unique to the Forklift Truck application requirements. A schematic (located in the Miscellaneious chapter) can be used as a guide for troubleshooting and service parts reference, as required.

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

Electrical Components

An Electrical system diagram is provided which includes instrumentation, electrical components and switch connections. The schematic (located at the end of this chapter)



1 - Dash Front Access
2 - Seat Panel (Access to Brake Valve, Master Cyl.)
3 - Rear Access Operator Station
4 - Rear Frame Access
(Tail Lights, Backup Alarm, Auxiliary Hydraulics)
5 - Side Mount Controls Access
6 - Foot Controls Access
7 - Tool Box, Battery Check
8 - Hydraulic Pump, Transmission Access
9 - Hydraulic Oil Reservoir & Fill cap
10 - Fuel Tank Fill cap
11 - Battery Removal Access
12 - Top Panel Radiator Check
13 - Lt. & Rt. Side Engine Access Panels
14 - Rear Boom Access

Fig. 14 - Access Covers, Guards, Hoods

can be used as a guide for troubleshooting and service parts 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. *Fig. 14* provides a reference as to components accessed in each particular area.

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 Forklift Truck.

Before starting inspection and repair, move the Forklift Truck 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. Disconnect the Battery and remove the Ignition Key. Remove only guards or covers that provide needed access. Wipe away excess grease and oil.

⚠ WARNING

Do NOT smoke or allow any open flames in the area while checking and/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.

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 proceeding to weld.

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.

Excessively worn or damaged parts can fail and cause injury or death. Replace any worn or damaged parts with genuine Gehl service parts.

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

NOTE: *NEVER leave guards off or access doors open when the Forklift Truck 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 and reconnect the Battery.

10 Hours or Daily

1. 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.

2. 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 Forklift Truck 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.

3. Check Engine Oil Level

With the Forklift Truck on level ground, and the Engine stopped for ten (10) 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 Fuels and Lubricants chapter for the type of oil to use.

4. Check Radiator Coolant Level

⚠ 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.

With the Forklift Truck on level ground, remove the Radiator Cap. Add clean soft water (summer) or 50/50 water and Anti-Freeze mixture (winter) if the coolant level is below the filler neck. Replace the Radiator Cap securely.

NOTE: *If the Engine is operated with a loose Radiator Cap, the pressure bypass will NOT work and the Engine will run HOT.*

5. Check Hydraulic Oil Level

Visually check the level of the hydraulic oil through the Sight Gauge. Check the hydraulic oil with the Boom lowered and completely retracted. If low, remove the Hood Access Cover to replenish oil through the Filler Cap. Re-check the level.

NOTE: *Be careful when removing the Reservoir Filler Cap so that NO dirt or other foreign matter enters the hydraulic system whil the Cap is removed. Do NOT OVERFILL.*

See the Fuels and Lubricants Chapter of this manual for recommended hydraulic oils.

6. Check Tire Inflation and Condition

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

When installing Tires on the Forklift Truck, 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 70 PSIG (483 kP).

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

⚠ WARNING

NEVER attempt to service Tires if the bead Lock Ring appears loose. Clear the area and call for professional Tire repair help.

7. Check Instrument 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 Sway Control and note the Angle Indicator movement.

8. 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 hoses or fitting connections leaking? Is the Engine exhaust color normal (light grey)?

9. Lubricate Daily Grease Points

Refer to the Fuels and Lubrication Chapter of this manual for Daily Grease Fitting locations and other related details.

50 Hours or Daily

NOTE: *The following service checks should be done at the beginning of each working week and in full conjunction with Daily Service.*

1. Check Air Filter Element

This Air Filter contains a single dry Element. Empty the Dust Cup and inspect the Element for holes or clogging. This Element is cleanable, but should be replaced after two cleanings, or after six months. This Element does NOT have a separate safety element so extreme care must be taken when cleaning or inspecting.

NOTE: *If operating in extremely dusty conditions the element should be checked daily.*

2. Check Axle Oil Levels (Fig. 15)

Differential

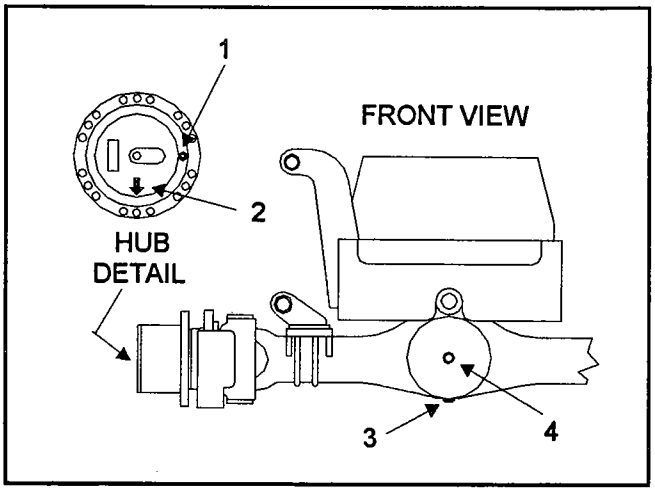
NOTE: *The Forklift Truck should be on a level surface for this procedure.*

Remove the oil level Check/Fill Plug (located on opposite side of Drive Shaft U-Joint). Oil should overflow the hole. If low, fill until oil overflows the hole. See the Fuels and 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 Forklift Truck.*

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. Repeat this procedure on the remaining Hubs. Follow oil specifications found in the Fuels and Lubricants Chapter of this manual.



1 - Hub Check/Fill & Drain Plug
2 - Hub Position Arrow
3 - Diff. Drain Plug
4 - Diff. Fill Plug

Fig. 15 - Axle Oil Plugs Location

3. Drain Fuel Filter

Remove the Drain Plug and allow fuel flow until clear fuel discharges from the outlet.

4. Check Wheel Nut Torque

Re-torque to 450 Ft-Lbs (610 Nm) if required.

5. Check Transmission Oil Level

Remove the Access Cover to the Transmission and Hydraulic Pump. Remove the Dipstick and check the oil level. Add oil as necessary to bring the level to the full mark. See Transmission Oils under Fuels and Lubricants chapter of this manual for proper oil type.

NOTE: *The Transmission should be warmed up before checking this oil. The Engine should be idling with the Park Brake on and the F-N-R Shift Control in neutral when checking the level.*

6. Check Park Brake Handle

Check the tension when pulled. Adjust if necessary to a pull of 68 lbs (300 N).

7. Check Battery Electrolyte and Connections

The Battery furnished on the Forklift Truck is a 12 volt, wet-cell Battery. The electrolyte level should be maintained to the level indicated on the Battery. The Battery is located under the Toolbox Compartment of the Fuel Tank assembly attached to the right side of the Frame.

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

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 build-up, disconnect the Cables and clean the terminals and clamps with the same alkaline solution.

⚠ WARNING

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 ruinning 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 1 U.S. Gallon (4 liters) of water.**
   b. **1 Pint (0.4 liters) of household ammonia in 1 U.S. Gallon (4 liters) of water**
5. **Acid from the Battery can damage the paint and metal surfaces of the machine. Avoid overfilling the Battery cells.**

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

After cleaning the top of the Battery, check the electrolyte level by removing the filler-vent caps. If the level is low, add clean soft water or distilled water. Fluid level is correct when the liquid covers the rings in the filler wells, or is a minimum of 1/4" above the plates.

NOTE: *Since water and electrolyte will NOT mix immediately, Do NOT add water in freezing weather unless the Battery is warm. If water is added, the engine should be run for a minimum of two (2) hours.*

Handling Battery Safely

⚠ WARNING

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

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

Jump Starting

If the Forklift Truck Battery becomes discharged or does NOT have enough power to start the Engine, use jumper cables and the following procedure to jump-start the Forklift Truck Engine.

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

⚠ WARNING

The ONLY safe method for jump-starting a discharged Battery is for TWO PEOPLE to carry-out the following process. 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 attempt to make the jumper cable connections 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 Forklift Truck if the Battery is frozen as this may cause it to rupture or explode.

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 Forklift Truck's Engine Block or Frame (ground) — NOT to the disabled Battery's 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 Forklift Truck. If it does NOT start immediately, start the jumper vehicle engine to avoid excessive drain on the booster battery.

7. After the Forklift Truck 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 Forklift Truck while making sure NOT to short the two cables together.

Allow sufficient time for the Forklift Truck Alternator to build-up a charge in the Battery before attempting to operate the machine or shut the Engine off. 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 cell(s) or troubleshoot the entire electrical system for possible short circuits or damaged wire insulation.*

8. Check Boom Leaf Chains (Fig. 16)

Inspect the Leaf Chains for wear and proper tension. Two of the Chains are on the top of the Boom. A third is accessible from inside the rear of the Boom. Run the Boom out slowly to inspect. Conditions to look for include cracked or broken plates, protruding or turned pins, excessive wear.

With a steel tape, measure 16 links of the strand that flexes over the Sheaves. When the distance measures 12.375" (314.3 mm), the chain should be discarded. Do NOT repair sections of a Chain. Replace the complete Chain.

Chain Anchors and Sheaves also require inspection for wear or broken fingers and worn flanges. If a Chain has been replaced, operate under load conditions and re-check the torque. Chains are adjusted by torquing the Anchors 30 ft-lb (40 N). Lubricate with 80/90 wt. oil.

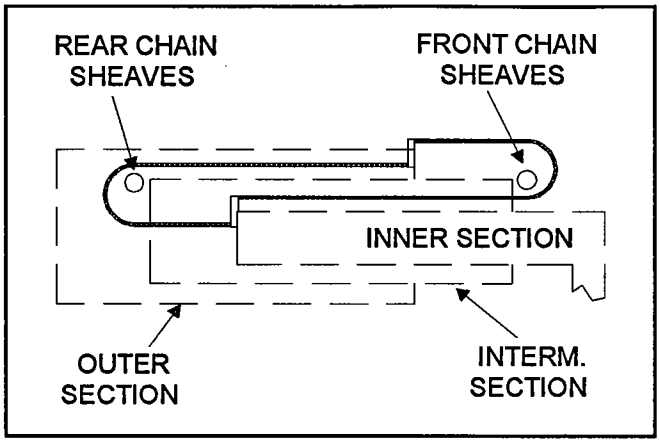


Fig. 16 - Chain Hookup Detail

9. Check Brake Reservoir Level

The Brake Booster Master Cylinder Reservoir is under the Seat compartment. This compartment panel tilts forward for access to the Reservoir. Remove the Reservoir Caps to check the level. If low, fill to proper level with hydraulic brake fluid (Type DOT 3) only.

10. Lubricate Weekly Grease Points

NOTE: *Weekly lube is to be done in conjunction with daily lube requirements of this chapter.*

Refer to the Fuels and Lubrication chapter of this manual for Weekly Grease Fitting locations and other related details.

Every 100 Hours

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

1. Change Fuel Filter (if required)

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 Forklift Truck 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.

⚠ WARNING

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

Escaping fuel, see a doctor familiar with this type of injury at once or gangrene may result.

⚠ CAUTION

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.

Fuel Bleeding Procedures

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.

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.

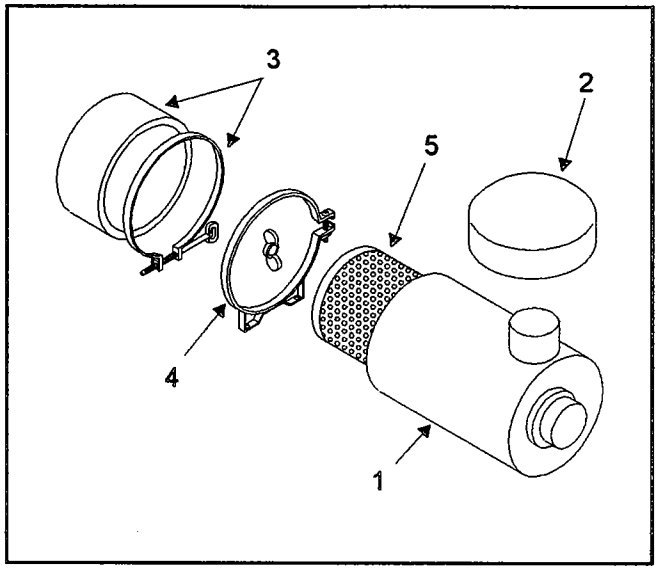
Diesel Injection Pump Timing

Whenever Injection Pump timing, or other pump service is indicated by abnormal Engine operation, contact your nearest Engine dealer.

2. Clean Air Cleaner Element (Fig. 17)

Completely wipe the outside of the Air Cleaner Body with a rag or cloth. Blow off excess dirt and dust with compressed air. Dissassemble as follows:

1. Loosen the Clamp Ring and remove the End Cap. Remove the Baffle. Wipe the End Cap and Baffle completely clean. Reassemble the End Cap.



1 - Body
2 - Inlet Cap
3 - Dust Cup & Clamp Ring
4 - Mount Band
5 - Element

Fig. 17 - Air Cleaner Assembly

2. Remove the Element Wing Bolt and the Element. Wipe the entire inside of the main Body and Inlet Cap Screen.

The Air Cleaner Element may be cleaned with LOW pressure compressed air or washed with water, if extremely dirty.

⚠ CAUTION

NEVER use an Element that is damaged. Severe Engine wear and eventual failure can result if dirt gets through a hole in the Element.

NOTE: *Do NOT blow air or water from the "outside to the inside" when cleaning the Element.*

If contaminants in the Element contain soot or oily deposits, it may be necessary to wash the Element. Two (2) ounces (56.7 g) of detergent soap mixed with a gallon of water makes a god soak/wash solution. Soak for 15 minutes or more and rinse with clear water. Remove excess water with low air pressure. The Element MUST dry at 70°F for a minimum of 48 hours before re-using.

NOTE: *Keep spare Elements on hand to eliminate down time. Order Gehl part number L120037.*

⚠ WARNING

NEVER use gasoline or solvent to clean the Air Cleaner Element or its subassemblies.

Make sure the clean Element has NO holes or ruptures. Placing a bright light inside the Element and inspecting the outside will show up any holes or tears. Discard the Element if holes or tears are evident.

Reassemble the Air Cleaner. Make sure the large O-Ring is in place between the End Cap and the Main Body.

3. Change Engine Oil and 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.

NOTE: *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. Spin tighten. Refill the crankcase with new oil. Follow specifications in the Fuels and 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.

Every 200 Hours

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

1. Change Transmission Oil Filter

NOTE: *The Transmission oil itself is to be changed at 600 hour intervals.*

1. Remove the Access Cover on the top of the Transmission Hood. Run the Forklift Truck so the Transmission oil is warmed up.

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.

NOTE: *Use only OEM Authorized oil Filter Elements for Transmission applications with this machine.*

2. Check Alternator/Fan Belt Tension

With thumb pressure, press the Belt down at the center of the longest span between pulleys and measure the deflection. It should be:

3/8" for Perkins Engine
5/8" to 1" for J.Deere Engine.

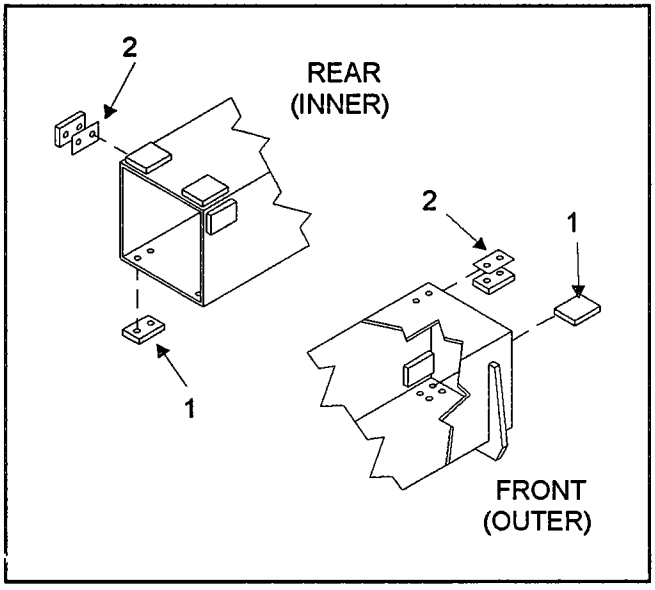
If the Belt shows wear or cuts, it should be replaced. Order replacement Belt from your Engine dealer. Refer to the Engine manual relative to proper Belt replacement and tension adjustment procedures.

3. Check Boom Slide Pad Wear/Clearance (Fig.18)

This Boom is equipped with special nylon low friction Slide Pads between the telescopic sections. 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.

Visually check for loose Pad bolts. The bolts are torqued to 30 ft-lb (134.5 N). If the bolts are re-torqued at any time, Locktite® must be re-applied to the bolts.

If the Boom starts to chatter under load, grease the Slide Pads and wipe off the excess.



1 - Slide Pad 2 - Shim

Fig. 18 - Slide Pad Detail

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

The clearance required between the Boom sections, should be checked every 200 hours and if necessary, adjusted by means of 1/16" (.062) or 1/8" (.125) Shims between the top and side Pads. Proper clearance allows the sections to track smoothly and evenly support the load. Clearance should be kept at 1/16" (.062).

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. Re-apply Loctite® to the bolts and re-torque to 30 ft-lbs (134.5 N). Bottom Slide Pads should be replaced when the thickness is worn down to 3/8".

Every 600 Hours

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

1. Change Transmission Oil

Operate the Forklift Truck long enough to warm up the Transmission oil, then proceed as follows:

1. Drain the Transmission and remove the Sump Screen. Clean the Screen with clean solvent and re-install using a new Gasket. Replace the Drain Plug.

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

2. Replace the oil Filter as shown in 200 Hour Service topics in this chapter. Remove the Transmission Breather Cap located at the opposite end of the Filter mount. Clean it with fresh solvent and re-install it.

3. Refill the Transmission with new oil as shown in the Fuels and Lubrication Chapter of this manual.

NOTE: *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.

2. Change Radiator Coolant

Drain, flush and refill the cooling system as follows:

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

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

⚠ CAUTION

Remove the Radiator Cap only when the Engine is cool, or painful burns could result.

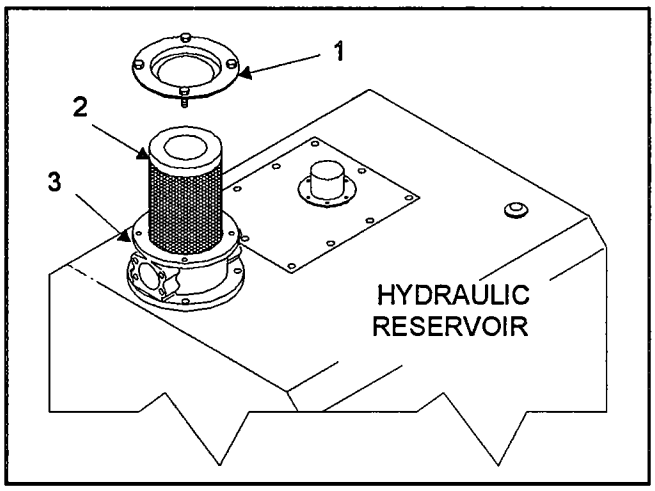
2. Open the Radiator Drain Cock. Remove the water jacket Drain Plug from the Engine block. The Engine oil Cooler MUST be drained also. When all coolant is drained, flush the system with clean fresh water. Allow the flush to drain completely.

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. When temperatures are above freezing, water only may be used. Add a summer coolant conditioner to the water to prevent rust and to lubricate the Water Pump.*

4. Inspect the Radiator Cap seal before installing it. Replace it if it appears defective. The pressure Cap and Engine Thermostat work in conjunction with each other to maintain proper Engine cooling.

NOTE: *Check the Engine Temperature Gauge, 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.*



1 - Filter Top
2 - Filter Element
3 - Filter Housing

Fig. 19 - Removing Reservoir Filter

3. Change Hydraulic Return Filter Element (Fig. 19)

The hydraulic system Reservoir Tank has the Return Filter mounted into the top. Remove the top cover of the Filter Housing Assembly. This provides access to the Filter Element. Remove and replace the Element and Gasket. Reinstall the top Cover on the Filter Housing.

⚠ CAUTION

When servicing the hydraulic system, the Boom should be in full ground contact.

4. Change Axle Differential & Planetary's Oil (Fig.20)

Differential

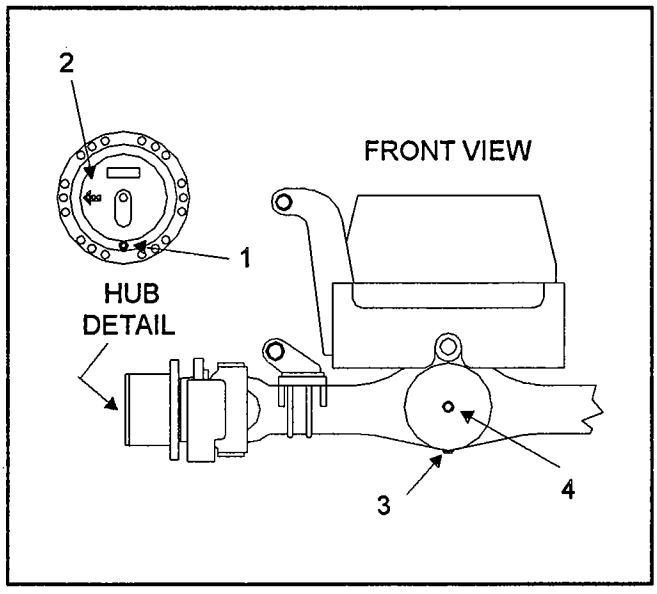
1. Remove the Drain Plug and drain out the old oil. Replace the Drain Plug.

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

2. Remove the Check/Fill Plug and fill the Differential with oil as specified in the Fuels and Lubrication Chapter. When the oil overflows the oil level/fill hole, replace the Plug. Repeat this procedure on the other Axle.

Axle Planetary Hubs

The Hubs have one Plug each used for draining and filling.



1 - Hub Drain/Fill Plug
2 - Hub Position Arrow
3 - Differential Drain Plug
4 - Differential Fill Plug

Fig. 20 - Axle Oil Plugs

1. Position the Wheel until the "arrow" points to the left. This positions the Drain Plug and allows the oil to drain out.

NOTE: *DO NOT discharge 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 Fuels and Lubrication Chapter. Re-install the Drain/Fill Plug. Repeat this procedure on the three remaining Hubs.

5. 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.

6. Check Hydraulic System Relief Pressures

Pressure settings for relief valves is pre-set at the factory. Two Test Ports are provided on the front of the Dash.

Before conducting any Test Port pressure checks, check the Engine RPM. Engine speed MUST be 950 to 1000 RPM at idle and 2400 maximum high idle RPM.

Steering Relief Pressure

Plug a 3000 PSIG (21 Bar) oil or liquid filled Gauge in the Main/Steering Test Port. Cramp the steering full to the right or left. The Gauge should read 2000 PSIG (14 Bar).

Check Main Relief Pressure

With the Gauge in the Main/Steering Test Port and the Boom extended, retract the Boom fully. The Gauge should read 2850 PSIG (20.0 Bar).

Priority System Pressure

With the Gauge in the Priority Test Port, apply foot pressure to the Brake Pedal. The Gauge should read 900 PSIG (6.3 Bar).

⚠ CAUTION

ALWAYS make sure all pressure is bled off, Gauge reading "zero", before moving it to another position.

Every 2000 Hours

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

1. Change Hydraulic Reservoir Oil and Strainer (Fig. 21)

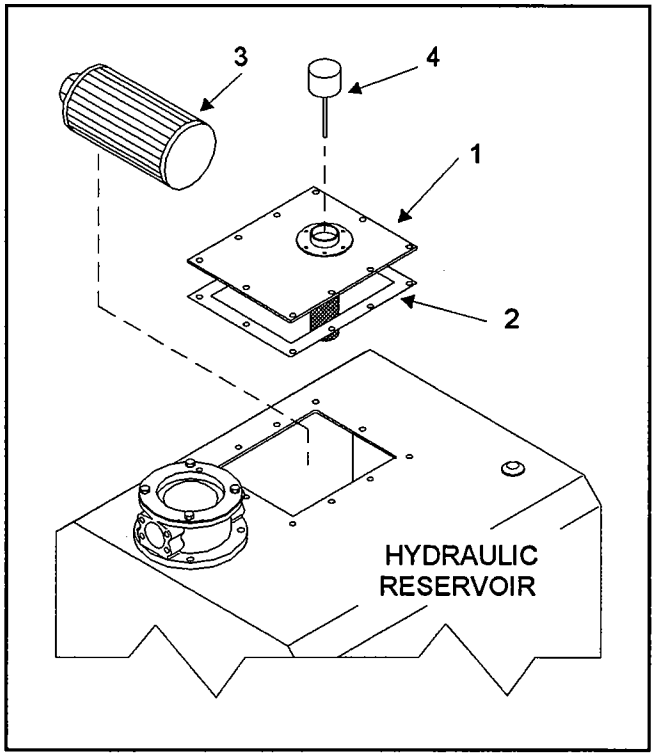
Clean all dirt and debris off the top of the Reservoir, especially around the removeable Access Cover. Use the following procedure:

1. Remove the Drain Plug and catch all oil in a clean drain pan. Wash or blow off all collected particles from the magnetic Drain Plug.

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

2. Remove the Top Access Cover and wash the inlet screen with clean solvent. Remove the sump filtering Strainer from the bottom inside of the Tank. 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 and wipe out any debris. Re-install all cleaned



1 - Access Cover w/Filter Screen
2 - Cover Gasket
3 - Sump Strainer
4 - Fill Cap/Dipstick

Fig. 21 - Hyd. Reservoir Strainer Removal

components and put the Top back on the Tank with a new Gasket. Clean the Filter/Breather Cap.

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

⚠ CAUTION

Test all hydraulic functions in an open area before resuming jobsite operation of the Forklift Truck.

STORAGE

If the Forklift Truck 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 Forklift Truck in storage:

1. Wash off the entire machine.
2. Lubricate ALL grease fittings as described in the Fuels and Lubrication chapter of this manual.
3. Change Engine oil as outlined in the Service 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 Forklift Truck 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.
7. Preferably, store the Forklift Truck inside where it will remain dry. If it MUST be stored outside, park it on lumber laid on flat, level ground or on a concrete slab and cover with a tarp.

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.

NOTE: *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 Forklift Truck is going to be returned to storage.*

After Storage

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

1. Change Engine oil and Filter to remove condensation or other residuals.
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 chapter of this manual.

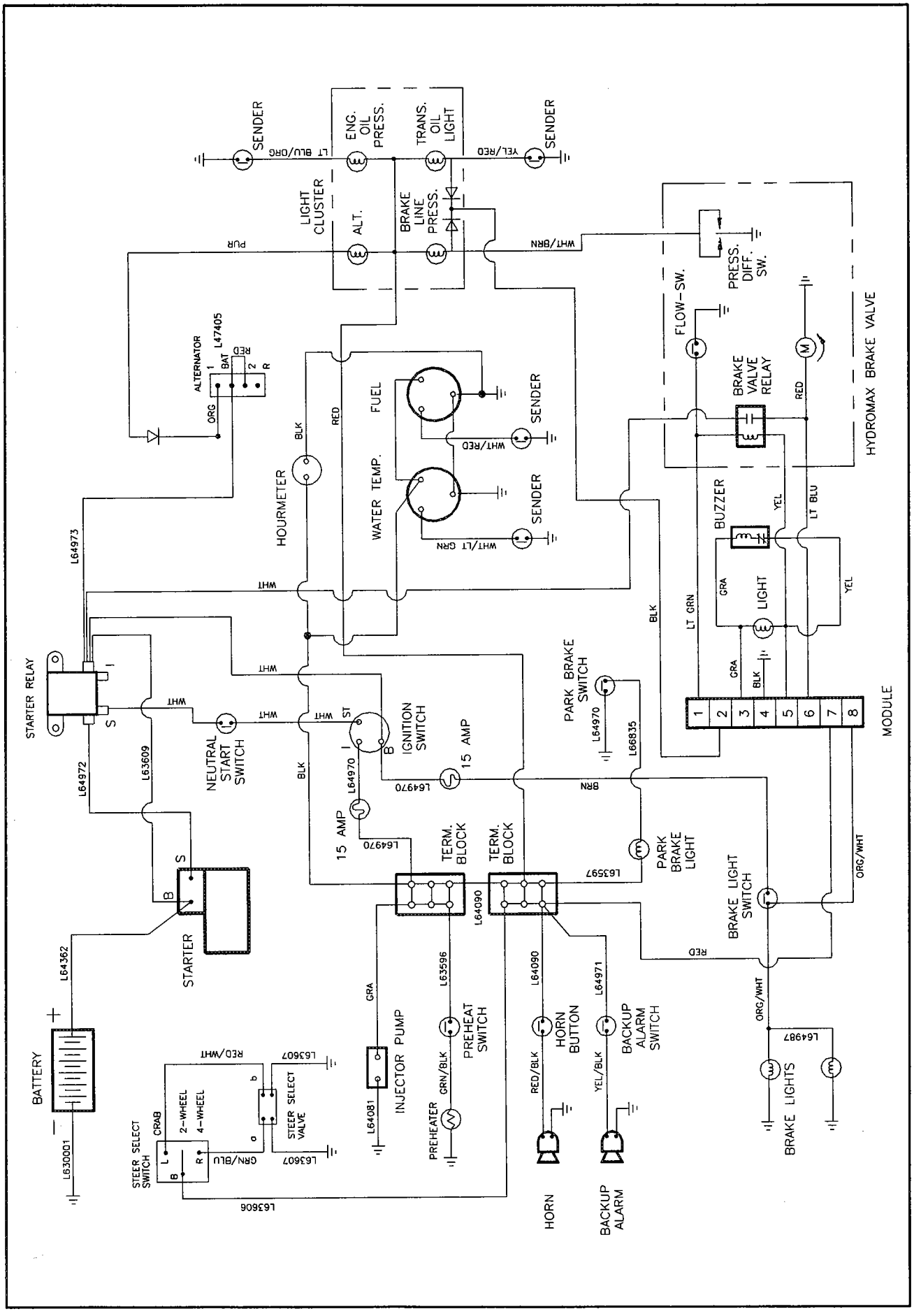


Fig. 22 - Wiring Diagram (883 with J. Deere Engine)

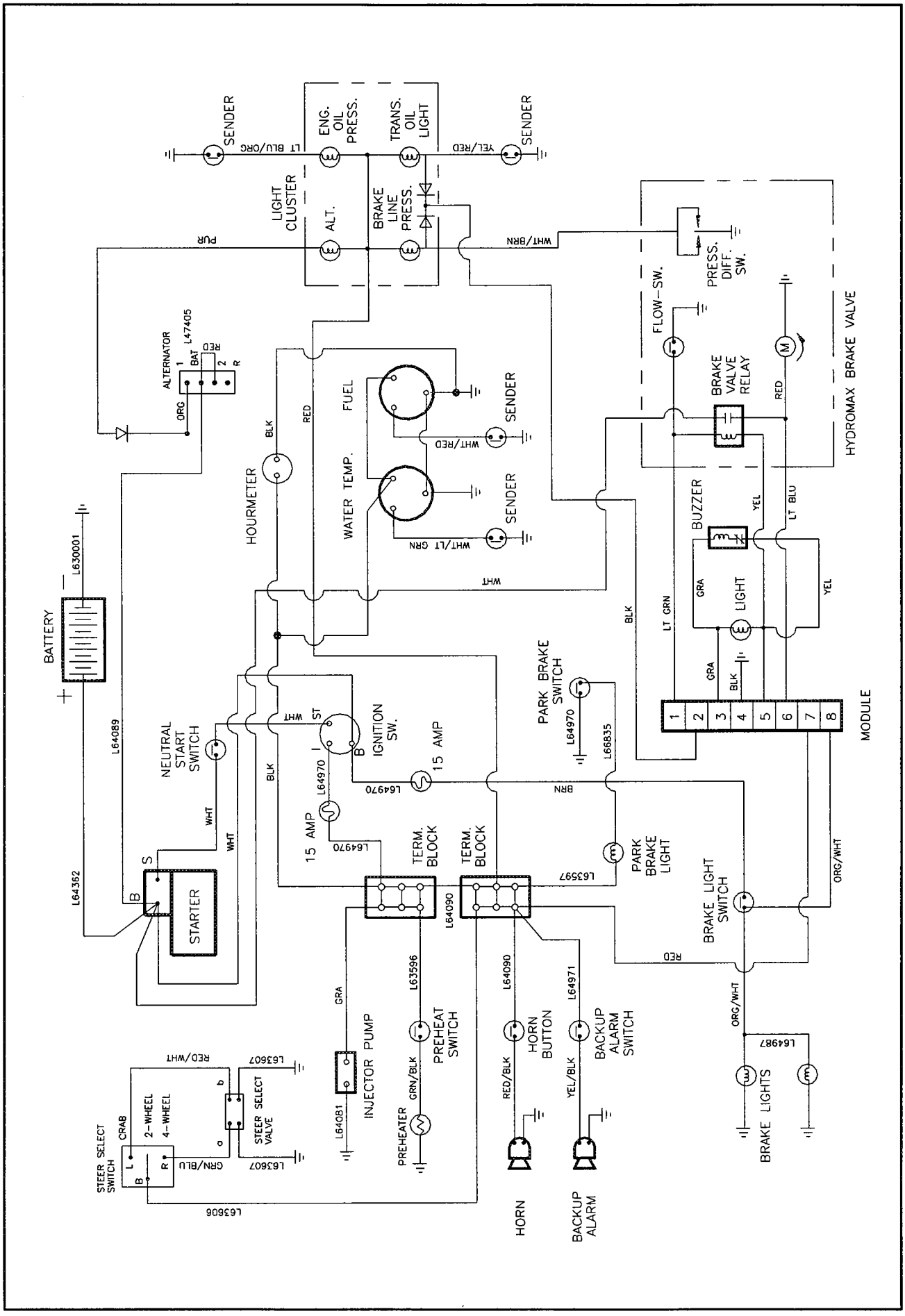


Fig. 23 - Wiring Diagram (883 with Perkins Engine)

Chapter 10

DECAL LOCATIONS

NEW DECAL APPLICATION

CAUTION

ALWAYS read and abide by the Safety Rules and information shown on Decals. If any Decal(s) become(s) damaged, unreadable or if the unit is repainted, the Decal(s) MUST be replaced. If repainting, MAKE SURE that ALL Decals which apply to your machine 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).

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

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 the following chart to order paint for refinishing.

Number	Quantity	Product
906213	1 gallon	Construction Yellow
906317	1 callon	Charcoal Grey
906323	1 quart	Charcoal Grey
L98622	1-12 oz	Construction Yellow
L98623	1-12 oz	Charcoal Grey
906214	6-12 oz	Construction Yellow
906318	6-12 oz	Charcoal Grey

DECAL LIST

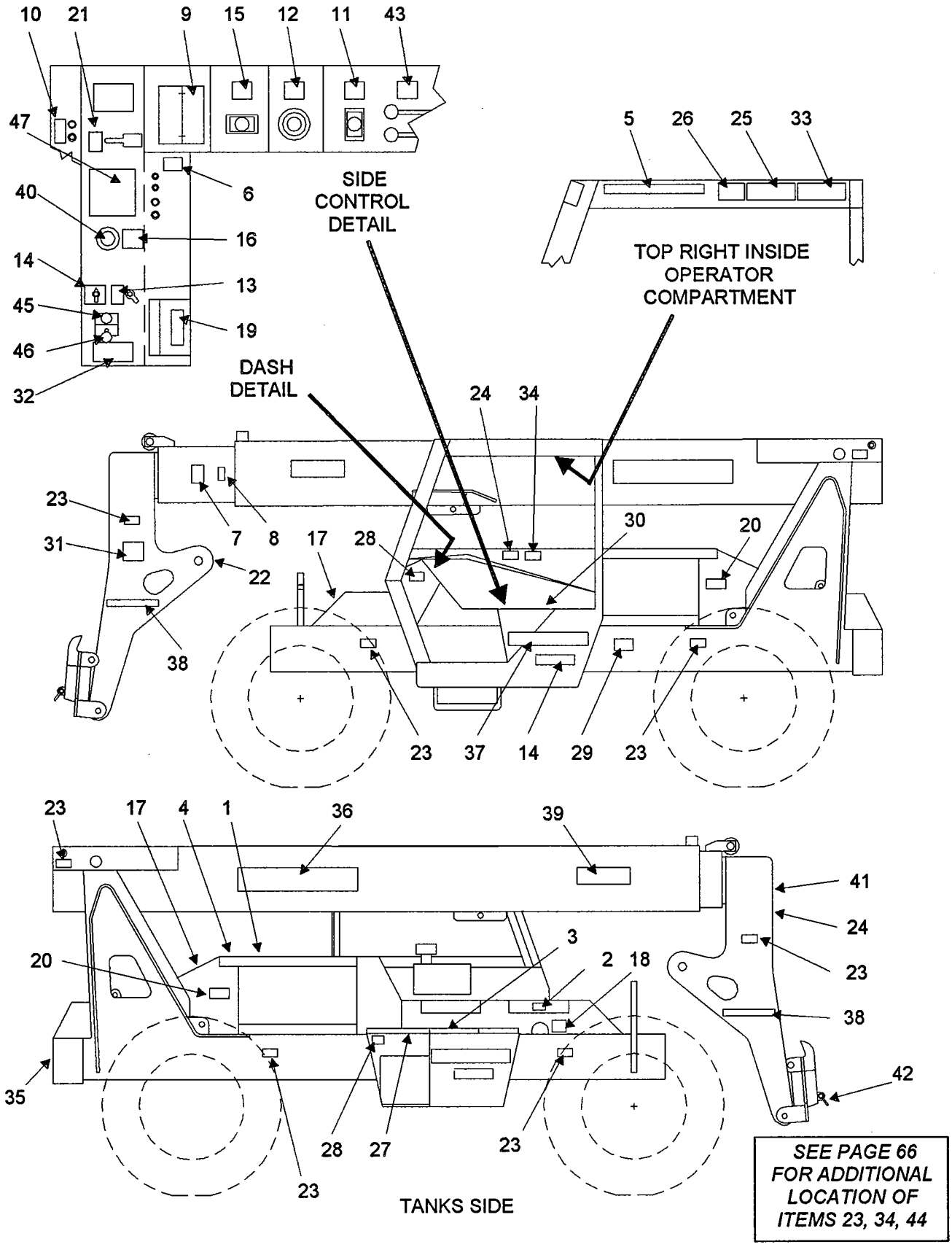
Decals may be purchased individually or in kit form.

Item	Part No.	Description
—	L98861	Decal Kit
01	056859	Anti-Freeze
02	072794	Hydraulic Oil Fill
03	072797	Diesel Fuel
04	072798	Coolant Under Pressure
05	093475	WARNING - Carry Load Low
06	094951	Made In U.S.A.
07		Boom Extend Markers (Operator Side)
	L62573	No. "6" Marker
	L62574	No. "8" Marker
	L62575	No. "10" Marker
	L62576	No. "12" Marker
	L62577	No. "14" Marker
	L62578	No. "16" Marker
	L62579	No. "18" Marker
	L62580	No. "20" Marker
	L62581	No. "22" Marker
	L62582	No. "24" Marker
08	L62583	Half Zone Marker (Operator Side)
09		Load Charts - Incl:
	L65198	Std/Rotate Carriage - 883
	L65207	Swing Carriage - 883
	L65438	Bucket - 883
	L65648	Winch - 883
	L65195	Truss Boom - 883
	L65594	6 Ft. Mast - 883
10	L64643	Hyd.Pressure Settings
11	L64810	Frame Level
12	L64812	Boom Control
13	L64814	Steer Select
14	L66611	"AutoTroll" (2 plcs)
15	L65208	Attachment Position
16	L65440	WARNING - Seat Belt
17	L65920	Grease Daily (2 plcs)
18	L65921	Hydraulic Oil Level
19	L65922	Operator Manual Inside
20	L65924	WARNING - Rotate Components
21	L65925	WARNING - Park Brake
22	L65926	WARNING - Carry Load Low
23[a]	L65927	WARNING - Pinch Point (10 plcs)
24	L65928	DANGER - Personnel Lift (2 plcs)
25	L65929	DANGER - High Voltage
26	L65930	WARNING - Machine Level
27	L65931	Maint./Lube Chart (inside cover)
28	L65932	WARNING - No riders
29	L65933	DANGER - Jump Start
0	L65934	Brake Fluid Level (Seat Mount Panel)
31	L65937	Dynattach Diagram
32	L63690	WARNINGS - Operator
33	L65948	DANGER - Panel In Place
34[c]	L66042	WARNING - Truss Boom Tilt Back (2 ea.)
35	L66565	"Gehl" 4.5 in.
36	L66567	"Gehl" 8.0 in. (2 plcs)
37	L66568	"Dynalift" (2 plcs)
38	L66569	"Dynattach" 1.12 in. (2 plcs)
39	L66579	"883" (2 plcs)
40	L66582	"Gehl" 2.0 in.Dia.
41	L66584	"Gehl" 2.0 in.
42	L66613	Dynattach Unlock Red Strip
43	L65138	Outrigger Control
44[b]	L65348	WARNING -Winch
45	L60936	F-N-R Shift
46	L64945	1-2-3 Shift
47	L65923	WARNING - Brake Failure
48	L68084	Filter Chart (inside cover)

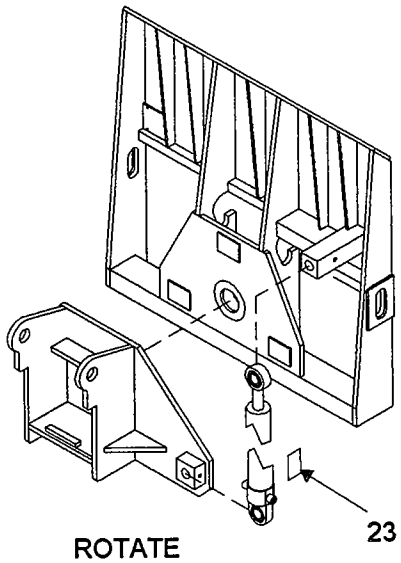
a *2 ea. qty. of P/N L65927 mounted on Outriggers, Swing Carr. & Rotate Carr. Attachments (Page 68).*

b *1 ea. qty. of P/N L65348 mounted on Winch Attachment ({age 68).*

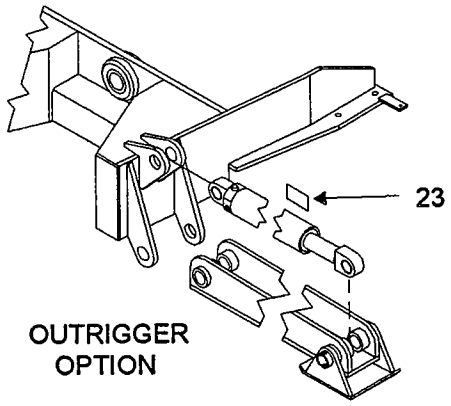
c *1 ea. qty. of P/N L66042 mounted on Truss Boom Attachment (Page 68).*



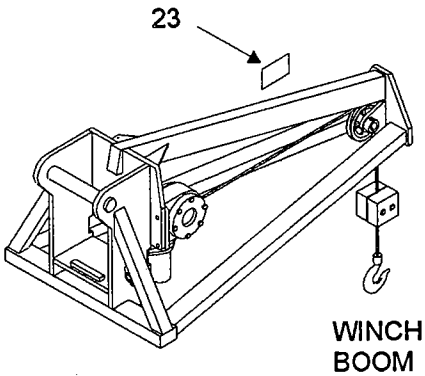
SEE PAGE 66 FOR ADDITIONAL LOCATION OF ITEMS 23, 34, 44



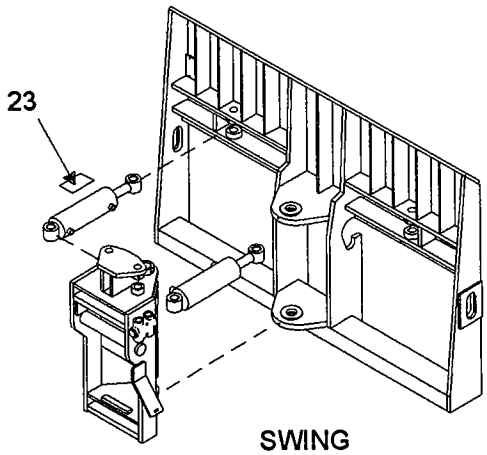
ROTATE
CARRIAGE



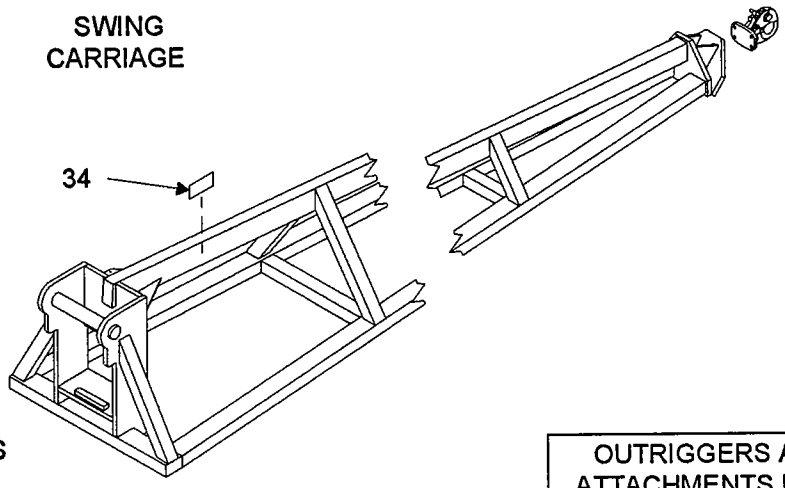
OUTRIGGER
OPTION



WINCH
BOOM



SWING
CARRIAGE



TRUSS
BOOM

OUTRIGGERS AND BOOM
ATTACHMENTS LOCATIONS

Chapter 11

MAINTENANCE LOG

The following Maintenance Log is developed to match the Operator Service guide decal on the right inside panel of the Operator's Station. Under extreme conditions more frequent service than the recommended intervals may be required. You must decide if your actual operation requires more frequent service based on your use.

Services are grouped for hourly intervals except the 10 Hour (or Daily) services. Recording 10 Hour (or Daily services would be impractical.

SERVICE EVERY 50 HOURS	
COMPONENT and SERVICE REQUIRED	**PROCEDURE and/or CHAPTER TOPIC REFERENCE (Check Page No. in Index)**
Check Battery Electrolyte & Connections.	Refer to details in **Service** chapter.
Check Air Filter Element	Refer to details in **Service** chapter.
Check Axle Differential & Planetary Oil Levels.	Refer to details in **Service** chapter.
Drain Fuel Filter.	Refer to details in **Service** chapter.
Check Wheel Nut Torque.	Refer to details in **Service** chapter.
Check & Lube Boom Chains.	Refer to details in **Service** chapter.
Re-torque Boom slide Pads.	Refer to details in **Service** chapter.
Check Park Brake.	Refer to details in **Service** chapter.
Check Brake Reservoir Level.	Refer to details in **Service** chapter.
AFTER FIRST 50 HOURS ONLY:	Refer to details in **Service** chapter.
Change Engine Oil & Filter.	Refer to details in **Service** chapter.
Change Transmission Oil and Filter.	Refer to details in **Service** chapter.
Change Axle differential & Planetary Oils.	Refer to details in **Service** chapter.

Record Hourmeter Reading (if applicable) or Date After Service is Completed							

SERVICE EVERY 100 HOURS	
COMPONENT and SERVICE REQUIRED	**PROCEDURE and/or CHAPTER TOPIC REFERENCE (Check Page No. in Index)**
Check Engine Oil and Filter.	Refer to details in **Service** chapter.
Change Fuel Filter (if required).	Refer to details in **Service** chapter.
Clean Air Cleaner Element (if required).	Refer to details in **Service** chapter.

Record Hourmeter Reading (if applicable) or Date After Service is Completed							

SERVICE EVERY 200 HOURS	
COMPONENT and SERVICE REQUIRED	**PROCEDURE and/or CHAPTER TOPIC REFERENCE (Check Page No. in Index)**
Check Fan Belt.	Refer to details in **Service** chapter.
Change Transmission Filter.	Refer to details in **Service** chapter.
Check Boom Slide Pad Wear; Add Shims or Replace slide Pads as Necessary.	Refer to details in **Service** chapter.

Record Hourmeter Reading (if applicable) or Date After Service is Completed							

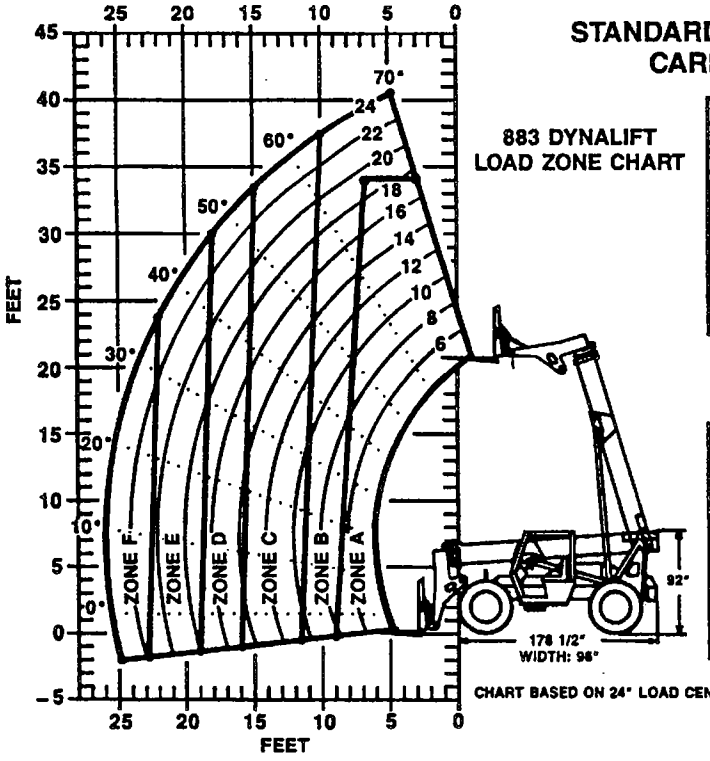
SERVICE EVERY 600 HOURS	
COMPONENT and SERVICE REQUIRED	**PROCEDURE and/or CHAPTER TOPIC REFERENCE (Check Page No. in Index)**
Change Transmission Oil and Filter.	Refer to details in **Service** chapter.
Change radiator Coolant.	Refer to details in **Service** chapter.
Change Hydraulic System Return filter element.	Refer to details in **Service** chapter.
Change Axle Differential and Planetary Oils.	Refer to details in **Service** chapter.
Check Exhaust system Security.	Refer to details in **Service** chapter.
Check Hydraulic Main, Steering & Priority Relief Valve Setting.	Refer to details in **Service** chapter.

Record Hourmeter Reading (if applicable) or Date After Service is Completed							

SERVICE EVERY 2000 HOURS	
COMPONENT and SERVICE REQUIRED	**PROCEDURE and/or CHAPTER TOPIC REFERENCE (Check Page No. in Index)**
Change Hydraulic Oil.	Refer to details in **Service** chapter.
Clean (change if required) Sump Strainer.	Refer to details in **Service** chapter.

Record Hourmeter Reading (if applicable) or Date After Service is Completed							

LOAD ZONE CHARTS



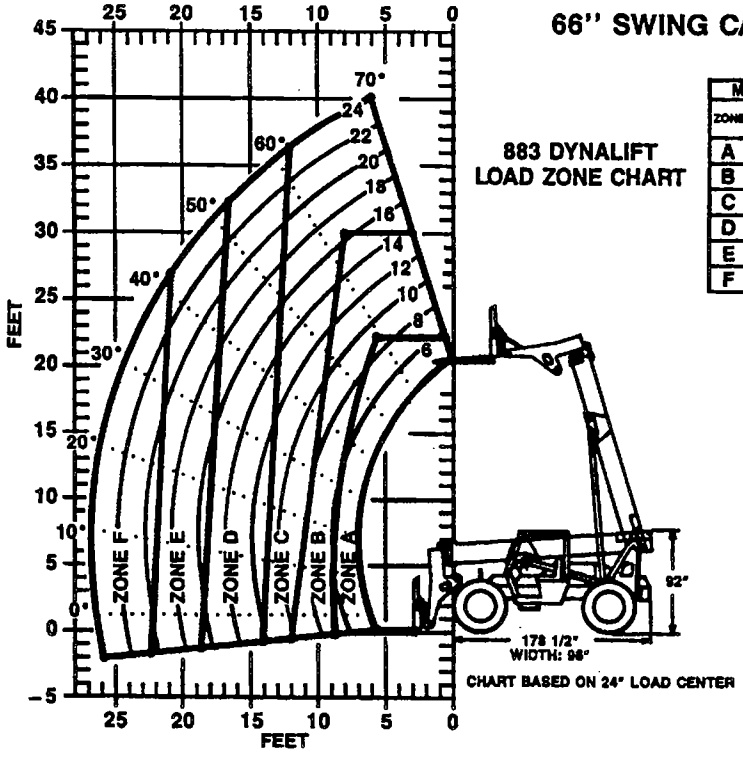
STANDARD / ROTATING CARRIAGES

883 DYNALIFT
LOAD ZONE CHART

STANDARD CARRIAGES		
MAXIMUM LIFT CAPACITY		
ZONE	OUTRIGGERS	
	NONE/UP	DOWN
A	8000 LB	8000 LB
B	6000 LB	7000 LB
C	4000 LB	6000 LB
D	3000 LB	4000 LB
E	2000 LB	3750 LB
F	1500 LB	3000 LB

ROTATING CARRIAGE		
MAXIMUM LIFT CAPACITY		
ZONE	OUTRIGGERS	
	NONE/UP	DOWN
A	8000 LB	8000 LB
B	6000 LB	7000 LB
C	4000 LB	6000 LB
D	3000 LB	4000 LB
E	1750 LB	3000 LB
F	1100 LB	2500 LB

L65198



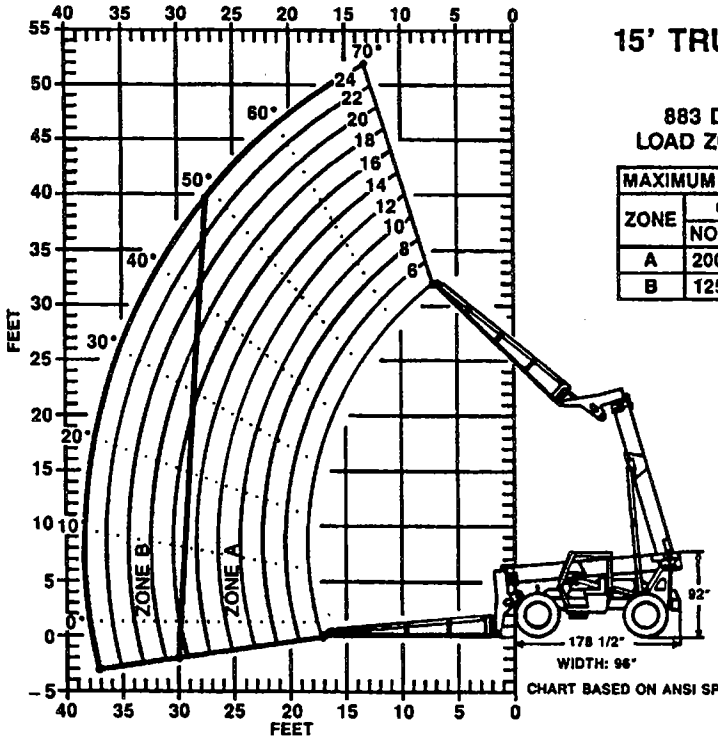
66'' SWING CARRIAGE

883 DYNALIFT
LOAD ZONE CHART

MAXIMUM LIFT CAPACITY		
ZONE	OUTRIGGERS	
	UP	DOWN
A	8000 LB	8000 LB
B	6000 LB	6000 LB
C	5000 LB	5000 LB
D	3000 LB	3000 LB
E	2000 LB	2000 LB
F	1250 LB	1250 LB

L65207

LOAD ZONE CHARTS



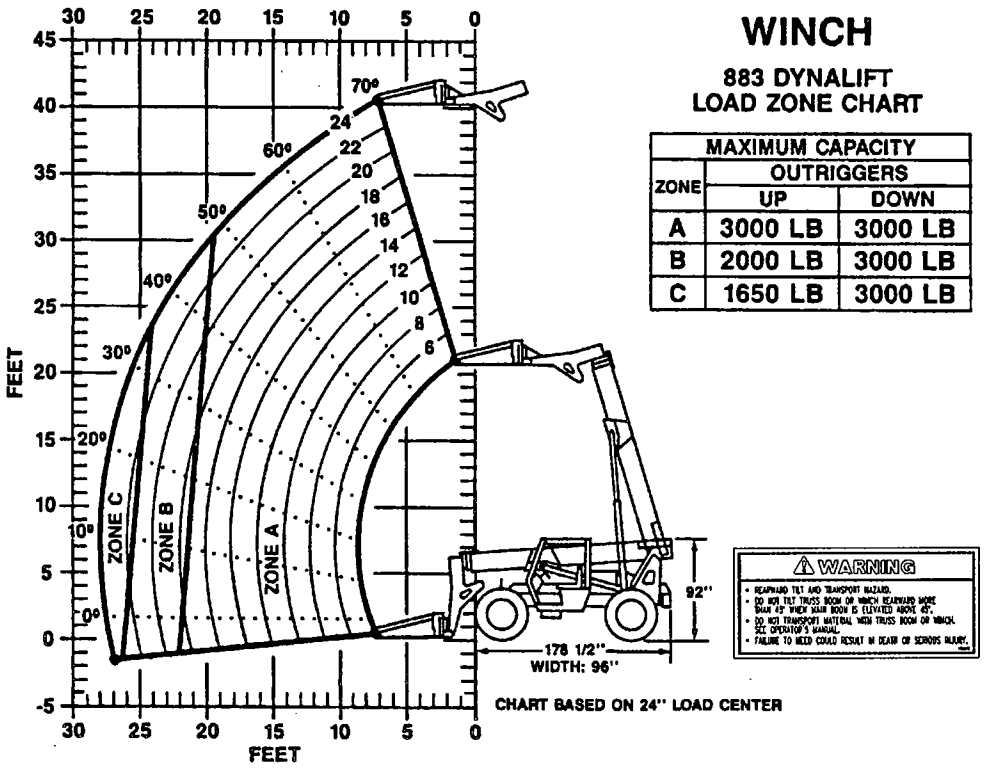
15' TRUSS BOOM

883 DYNALIFT
LOAD ZONE CHART

MAXIMUM LIFT CAPACITY		
ZONE	OUTRIGGERS	
	NONE/UP	DOWN
A	2000 LB	2000 LB
B	1250 LB	2000 LB

CHART BASED ON ANSI SPEC. B56.6—1987

L65195



WINCH

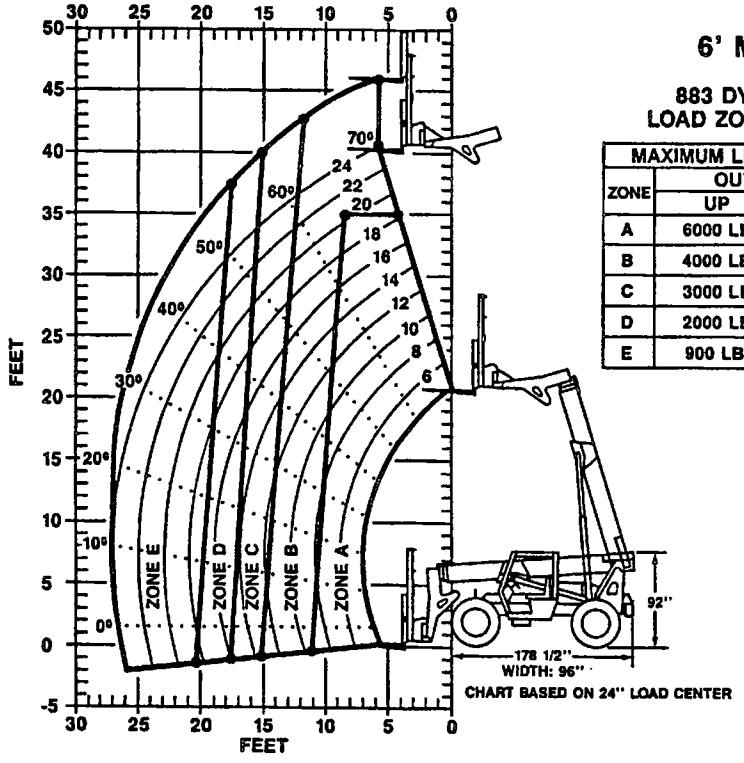
883 DYNALIFT
LOAD ZONE CHART

MAXIMUM CAPACITY		
ZONE	OUTRIGGERS	
	UP	DOWN
A	3000 LB	3000 LB
B	2000 LB	3000 LB
C	1650 LB	3000 LB

CHART BASED ON 24" LOAD CENTER

L65648

LOAD ZONE CHARTS

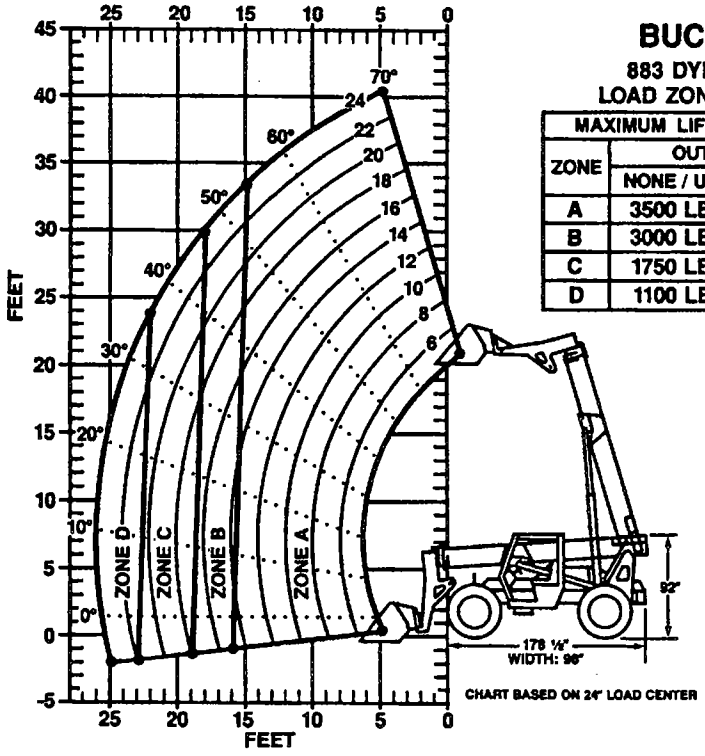


6' MAST

883 DYNALIFT
LOAD ZONE CHART

ZONE	MAXIMUM LIFT CAPACITY OUTRIGGERS UP	DOWN
A	6000 LB	6000 LB
B	4000 LB	4000 LB
C	3000 LB	4000 LB
D	2000 LB	3000 LB
E	900 LB	2000 LB

L65594



BUCKET

883 DYNALIFT
LOAD ZONE CHART

ZONE	MAXIMUM LIFT CAPACITY OUTRIGGERS NONE / UP	DOWN
A	3500 LB	3500 LB
B	3000 LB	3500 LB
C	1750 LB	3000 LB
D	1100 LB	2500 LB

L65438

A

B

C

D

E

F

G

H

I

J

Torque Specifications

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

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

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) multiply lb-ft x 1.355 or lb-in value x 0.113./

THIS MAUAL SHALL BE PROPERLY STORED IN THE OPERATOR STATION OF THE MACHINE AT ALL TIMES. IF PAGES ARE MISSING OR DAMAGED, NOTIFY THE DEALER OR GEHL COMPANY IMMEDIATELY.

GEHL®

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

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.

Form No. 907336/Issued 795

Printed in USA