

Form No.
908149
English

GE 652 Wheeled Excavator



OPERATOR'S MANUAL

GEHL[®]

GEHL Warranty

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

GEHL WARRANTY SERVICE INCLUDES:

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

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

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

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

TABLE OF CONTENTS

Chapter	Description	Page
	INTERNATIONAL SYMBOLS	Inside Front Cover
1	GENERAL INFORMATION	
	Introduction	1-1
	Machine Identification	1-2
	Specifications	1-3
	Engine	1-3
	Hydraulic System	1-3
	Undercarriage and Slewing System	1-3
	Dozer Blade	1-3
	Bucket (standard)	1-3
	Noise Level	1-3
	General Specifications	1-4
	Dimensions	1-5
	Lifting Capacity	1-6
	Checklists	1-8
2	SAFETY INFORMATION	
	General Safety Information	2-1
	Safety Symbols and Terminology	2-1
	Safety Reminders	2-1
	Fire Prevention	2-3
	Decal Locations	2-4
	Decals	2-6
3	OPERATION	
	General Information	3-1
	Operator Controls	3-1
	Outer Cab Layout	3-2
	Inner Cab Layout	3-2
	Controls Console Layout	3-3
	Fuse Panel	3-3
	Travel Controls	3-4
	Excavating Controls	3-5
	Console Controls	3-5
	Operator's Seat Adjustment Controls	3-7
	Ventilation	3-7
	Cab Latches	3-8
	Storage and Tools	3-8
	Machine Operation	3-9
	Checklist Before Operation	3-9
	Starting/Stopping the Engine	3-9
	Moving The Excavator	3-10
	Mandatory Shutdown Procedure	3-10
	Earthmoving	3-11
	Digging	3-11
	Grading	3-11
	Operating on Slopes	3-11
	Excavator Boom Slewing	3-12
	Hydraulic Attachments	3-12

TABLE OF CONTENTS (continued)

Chapter	Description	Page
	Transporting	3-13
	Locking Devices	3-13
	Loading Machine for Transport	3-14
	Lifting the Machine	3-14
	Towing the Machine	3-15
4	MAINTENANCE	
	General Information	4-1
	Care and Servicing	4-1
	Maintenance Safety	4-1
	Maintenance Schedule	4-3
	Lubrication	4-6
	Lubrication Points	4-6
	Recommended Lubricants	4-7
	Engine	4-7
	Checking Engine Oil	4-7
	Changing Engine Oil & Filter	4-8
	Air Cleaner Service	4-8
	Fuel System	4-9
	Filling the Fuel Tank	4-9
	Fuel Filter	4-9
	Purging Air from Fuel System	4-9
	Coolant System	4-10
	Checking Coolant Level	4-10
	Electrical System	4-10
	Fuses	4-10
	Battery	4-10
	Using a Booster Battery (Jump Starting)	4-11
	Hydraulic System	4-12
	Checking Hydraulic Oil Level	4-12
	Changing Hydraulic Oil	4-12
	Wheel/Drive System	4-14
	Changing Wheel Gear Oil	4-14
	Changing Front or Rear Axle Oil	4-14
	Changing Wheel/Tire	4-14
	Changing Tire/Rim	4-14
5	TROUBLESHOOTING	
	General Information	5-1
	Engine	5-2
	Indicator Lights	5-2
	Seals & Hoses	5-2
	Travelling Gear	5-3
	Bucket, Boom and Dozer Blade	5-3

GENERAL INFORMATION

INTRODUCTION

The information in this Operator's Manual was written to give the owner/operator assistance in preparing, adjusting, maintaining and servicing the Wheeled Excavator. More importantly, this manual provides an operating plan for safe and proper use of the machine. Major points of safe operation are detailed in Chapter 2—Safety Information.

The GEHL® Company asks that you read and understand the contents of this manual COMPLETELY and become familiar with your new machine BEFORE attempting to operate it. Consult your GEHL Dealer to obtain extra manuals, or manuals in other languages.

Throughout this manual, information is provided which is set in *italic* type and introduced by the word **NOTE** or **IMPORTANT**. Be sure to read carefully and comply with the message. Following this information will improve your operating and maintenance efficiency, help you to avoid breakdown and damage, and extend the machine's life.

Do not use this machine for any application or purpose other than those described in this manual. If the machine is to be used with special attachments or equipment other than those approved by Gehl, consult your GEHL Dealer. Any person making unauthorized modifications is responsible for the consequences.

The use of this equipment is subject to certain hazards that cannot be eliminated by mechanical means, but only by exercising intelligence, care and common sense. Such hazards include, but are not limited to, hillside operation, overloading, instability of the load, poor maintenance and using the equipment for a purpose for which it is not intended or designed.

It is essential to have competent and careful operators, who are not physically or mentally impaired, and who are thoroughly trained in the safe operation of the equipment and the handling of loads. It is recommended that the operator be capable of obtaining a valid motor vehicle operator's license.

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

Our Dealer network stands by to provide you with any assistance you may require, including genuine GEHL service parts. All service parts should be obtained from your GEHL Dealer. Give complete information about the part and include the model and serial number of your machine. Record the serial number in the space provided on this page, as a handy reference.

Purchased From: _____

Date of Purchase: _____

Model No.: _____

Serial No.: _____

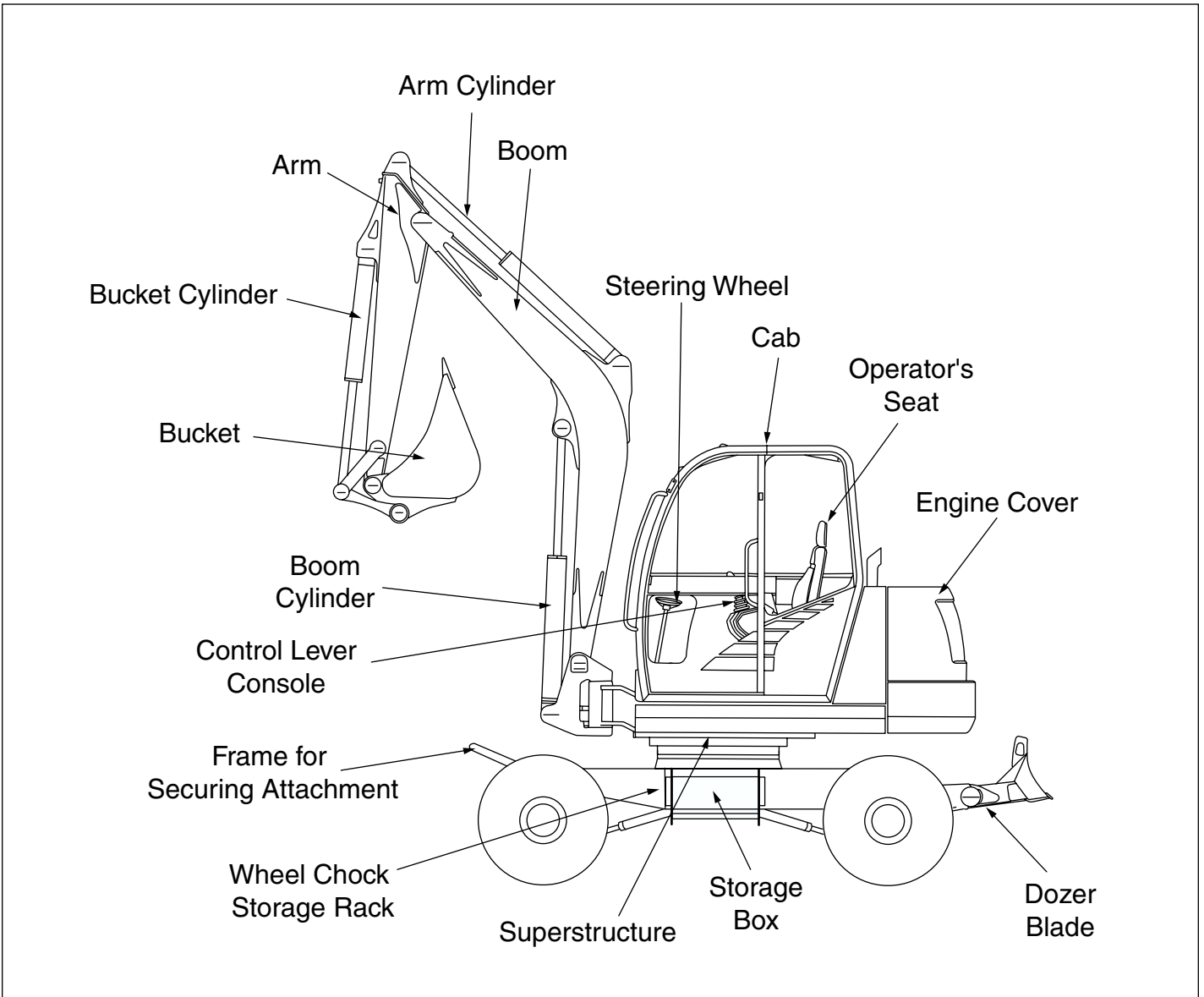
SERIAL NUMBER LOCATION

The serial plate is located on the front of the frame..

NOTE: All references to Left-hand or Right-hand are determined from sitting in the operator's seat and facing forward.

IMPORTANT! *Keep these instructions with the machine for future reference.
If the machine changes ownership, be sure this manual accompanies the equipment.*

MACHINE IDENTIFICATION



SPECIFICATIONS

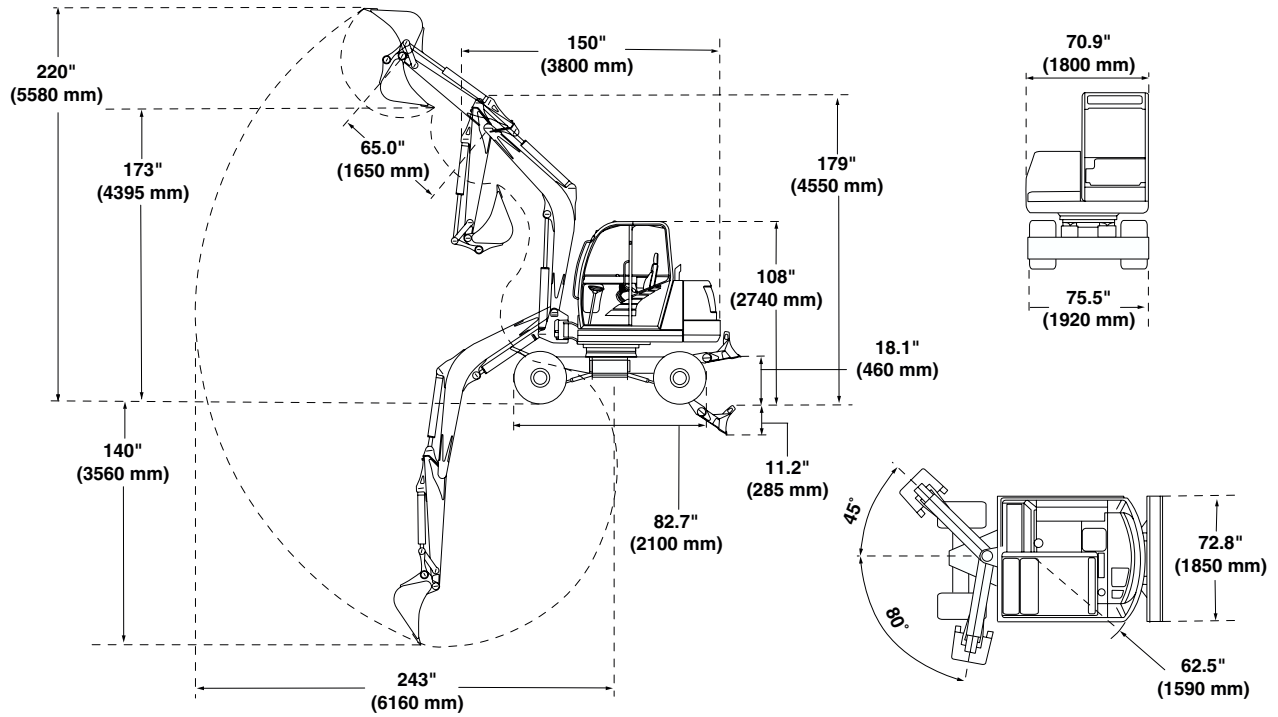
ENGINE	
Make	Yanmar
Model	4TNE98-NSR-Diesel
Type	4-Cyl. Water-Cooled
Displacement	202 cu. in. (3318 cc)
Rated Power Output	64 hp (47.5 kW) @ 2300 rpm
Battery	12V (88 Ah)
Fuel Tank	19.8 gal. (75 L)
HYDRAULIC SYSTEM	
Pumps	Double Variable Flow & One Gear Pump
Flow Rate	0-17 gpm (64 L/min) 0-17 gpm (64 L/min) 13 gpm (48 L/min)
Working Hydraulic Pressure	3562 psi (245 bar)
Swing System Pressure	2616 psi (180 bar)
Oil Cooler	Standard
Hydraulic Tank	31.7 gal. (120 L)
UNDERCARRIAGE & SLEWING SYSTEM	
Travel Speed-Dual	4.3 mph (7.0 km/h) 12.4 mph (20 km/h)
Steering	Hydraulic Power Steering
Front/Rear Axle	Pivoting Steering/Fixed
Front Axle Swing	8°
Turning Angle	36°
Tire Size, Dual Wheels	7.50R15
Tire Ply Rating	12
Tire Pressure	108.77 psi (7.5 bar)
Turning Radius (mm)	208.6" (5300)
Wheel Base (mm)	82 in. (2100)
Wheel Spacing (mm)	63 in. (1600)
Ground Clearance	11 in. (270 mm)
Slew Speed	10 rpm
DOZER BLADE	
Width	72.8 in. (1850 mm)
Height	17 in. (425 mm)
Maximum Lift Above Ground	18.1 in. (460 mm)
Below Ground	11.2 in. (285 mm)
BUCKET (STANDARD)	
Width	19.7 in. (500 mm)
Capacity	4.5 cu. ft. (0.13 m³)
NOISE LEVEL	
Sound Power	98 dB(A)
Sound Pressure	75 dB(A)

SPECIFICATIONS (continued)

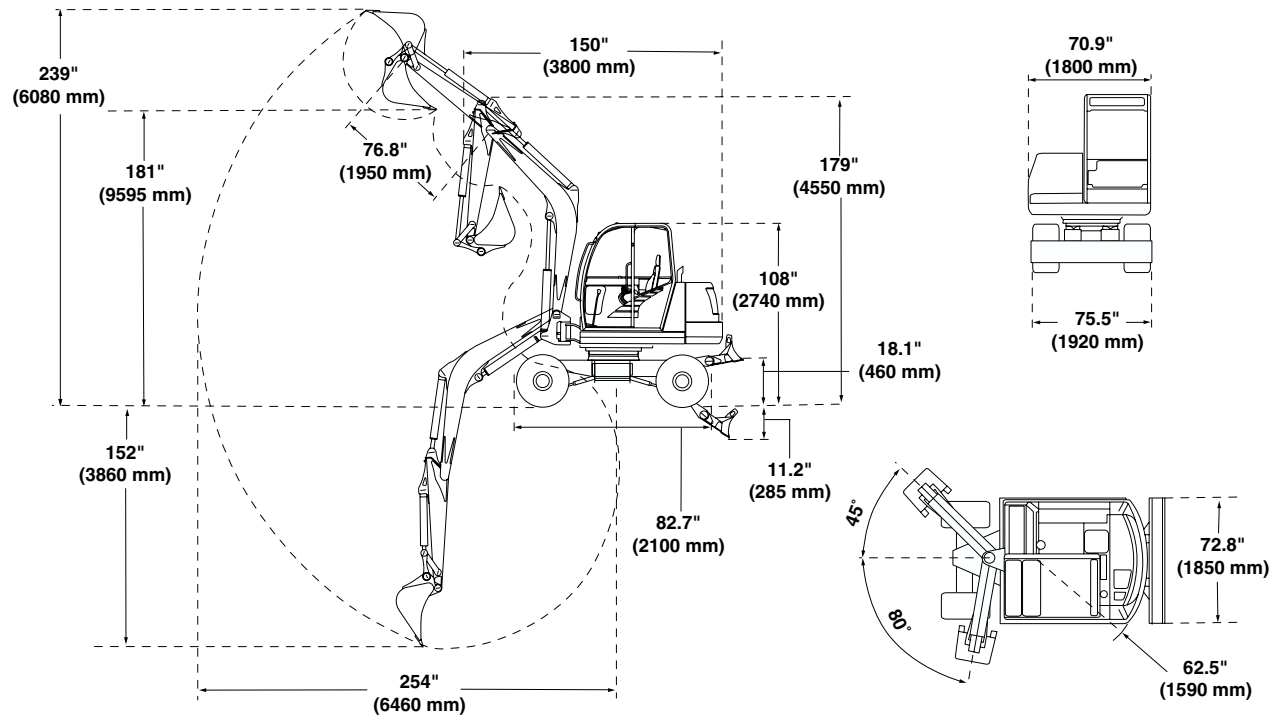
GENERAL SPECIFICATIONS

Operating Weight w/Cab (SAE)	13,134 lbs. (5970 kg)
Height	108 in. (2740 mm)
Width	77.4 in. (1965 mm)
Length	150 in. (3800 mm)
Max. Digging Depth w/Std. Arm	140 in. (3560 mm)
Max. Digging Depth w/Long Arm	152 in. (3860 mm)
Max. Digging Height w/Std. Arm	232 in. (5880 mm)
Max. Digging Height w/Long Arm	240 in. (6080 mm)
Max. Boom Height w/Std. Arm	179 in. (4550 mm)
Max. Boom Height w/Long Arm	173 in. (4395 mm)
Max. Digging Radius w/Std. Arm	243 in. (6160 mm)
Max. Digging Radius w/Long Arm	254 in. (6460 mm)
Bucket Dig Force	8095 lbs. (36.7 kN)
Min. Tail Swing Radius	62.6 in. (1590 mm)
Min. Front Swing Radius	75.6 in. (1920 mm)
Swing Angle-Right/Left	80° / 45°
Standard Arm	65.0 in. (1650 mm)
Optional Long Arm	76.8 in. (1950 mm)

Model GE 652 (standard arm)



Model GE 652 (optional long arm)

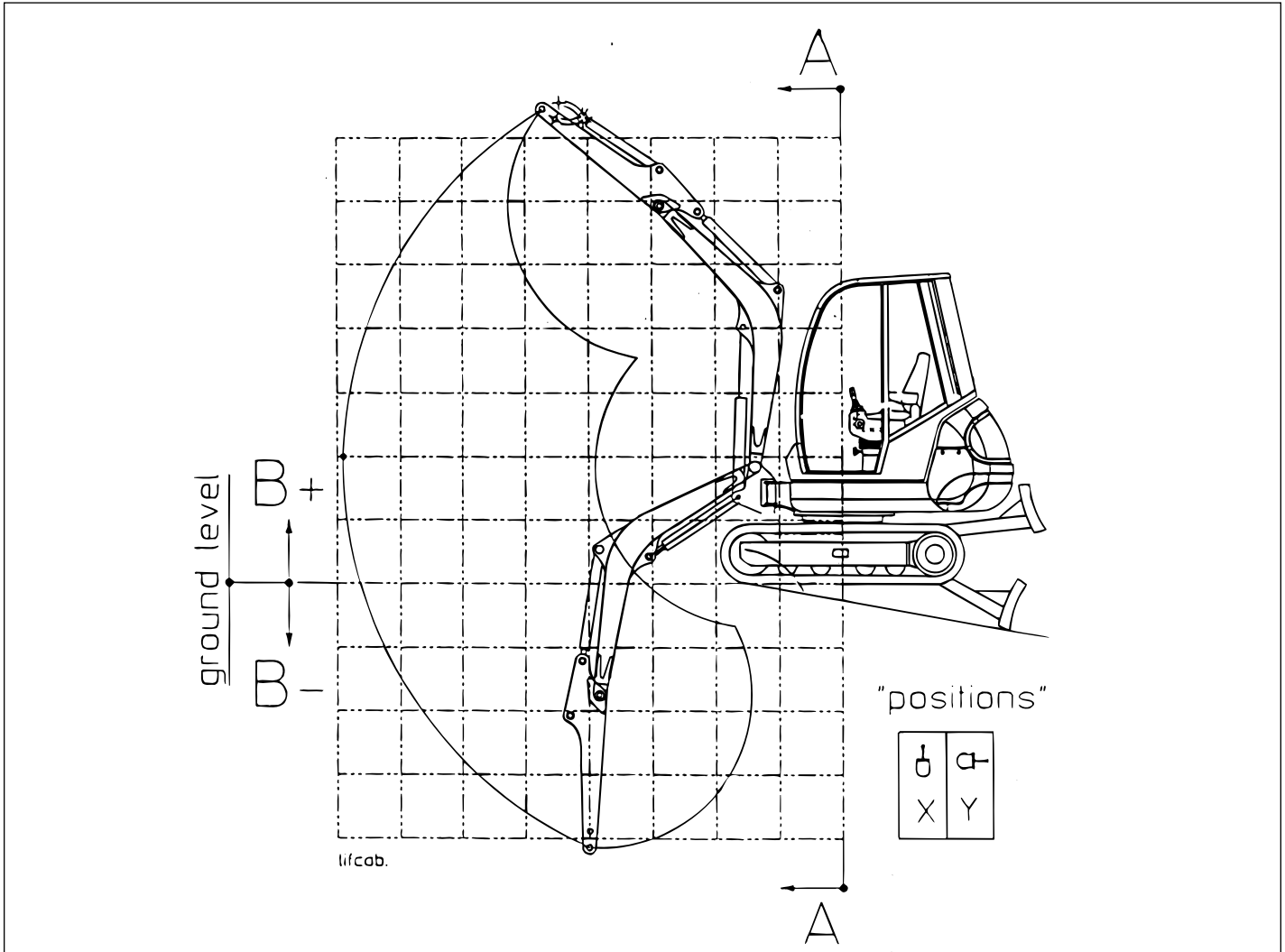


Lifting Capacity

- A Reach, swing line center to the hole of the stick
- B Load hook height above/below ground
- X Arm and wheels are parallel; the dozer blade supports the excavator
- Y Arm and wheels are at a right angle; the dozer blade does not support the excavator

IMPORTANT: The ratings do not exceed 87% of hydraulic lifting capacity and 75% of tipping load.

Figures (lifting capacity) are shown in lb (av) and kg.



		X		Y		X		Y		X		Y		X		Y	
Position		MAX.				4.0M				3.0M				2.0M			
B	A	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg
	2m	2756	1250	1367.1	620	2844.45	1290	1742	790	3804	1725	2844	1290	2025	1750	xx	
	1m	2844	1290	1146.6	520	3704	1680	1654	750	5226	2370	2492	1130				
	0m	2701	1225	1146.6	520	3781.58	1715	1544	700	5336	2420	2161	980	9085	4120	3704	1680
	-1m	2580	1170	1168.65	530	3440	1560	1433	650	4939	2240	2161	980	8743	3965	4079	1850
	-2m	2778	1260	1433.25	650	2778.3	1260	1433	650	4344	1970	2293	1040	7420	3365	4190	1900

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CHECKLISTS

Pre-Delivery Checklist

The following checklist is an important reminder of valuable information and inspections which **MUST** be made before delivering the machine to the customer. Check off each item after prescribed action is taken.

✓ CHECK THAT:

- Unit has **NOT** 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. Make sure cable connections are tight.
- Cylinders, hoses and fittings are not damaged, leaking or loosely connected.
- Filters are not damaged, leaking or loosely secured.
- Machine is properly lubricated and no grease fittings are missing or damaged.
- Hydraulic system reservoir, engine crankcase and drive axles are filled to their proper levels.
- All adjustments are made to comply with settings given in *Chapter 4–Maintenance* of this manual.
- All guards, shields and decals are in place and secured.
- Model and serial numbers for this unit are recorded in the space provided on this page and on page 1-1.

IMPORTANT: Start the engine and test run the unit while checking that all controls operate properly.

✓ CHECK THAT:

- Drive controls and boom/arm/bucket/swing/pivot controls operate properly and are not damaged or binding.
- Drive controls are properly adjusted for a correct neutral position.
- The parking and service brakes, along with the blocking devices, are automatically activated with unit stationary (no pilot control pressure).
- All hydraulic functions are **NOT** operational with the left-hand control console in the pivoted rearward position.

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

Dealership Name

Dealer Representative Name

Date Checklist Filled Out

Model & Serial Number

Delivery Checklist

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

✓ EXPLAIN:

- The Safety Information and Operation chapters of this manual, regarding the safe operation of this machine.
- The Maintenance and Troubleshooting chapters for information regarding the proper maintenance of this machine. Explain that regular lubrication and maintenance is required for continued safe operation and long machine life.
- Give the Operator's Manual to the customer and instruct the customer to read and completely understand the contents before operating the unit.
- Explain that the customer **MUST** consult the engine manual (provided) for related specifications, operating adjustments and maintenance instructions.
- Completely fill out the Owner's Registration, including customer's signature and return it to the Gehl Company.

Customer's Signature

Date Delivered

Retain for Customer's Records

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SAFETY INFORMATION

GENERAL SAFETY INFORMATION

Safety Symbols & Terminology



The GEHL® Company, in cooperation with the Society of Automotive Engineers, has adopted this Safety Alert Symbol to pinpoint precautions which, if NOT properly followed, can create a safety hazard. This 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 on the machine.

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

The Gehl Company always considers the operator’s safety when designing its machinery, and guards exposed moving parts for the operator’s protection. However, some areas cannot be guarded or shielded in order to assure proper operation.

The following safety words and symbols are used throughout the manual and on the machine to warn of dangerous situations.

DANGER

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

WARNING

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

CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. May also alert against unsafe practices.

Safety Reminders

- Some illustrations in this manual may show doors, guards and shields open or removed for illustrative purposes only. **BE SURE** all doors, guards and shields are in their proper operating positions **BEFORE** starting the engine to operate the machine.
- To ensure safe operation, replace damaged or worn-out parts with genuine Gehl service parts.
- Gehl units are designed and intended to be used **ONLY** with Gehl Company attachments or approved referral attachments. The Gehl Company cannot be responsible for operator safety if the unit is used with non-approved attachments.
- The terrain, engine speed, load carried, and abrupt control movements can affect machine stability. **If misused, any of the above factors can cause the machine to tip, throwing the operator forward or out of the unit, causing death of serious injury.** Therefore, **ALWAYS** wear the seatbelt when operating the equipment. Operate the controls smoothly and gradually at an appropriate engine speed that matches the operating conditions.
- * **DO NOT** raise or lower a loaded bucket suddenly. Abrupt movements under load can cause serious instability.
- **NEVER** attempt to bypass the keyswitch to start the engine. Use only the jump-starting procedure detailed in the *Maintenance* chapter of this manual.
- **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 and cause serious injury. If any fluid is injected into your skin, see a doctor at once. Injected fluid **MUST** be surgically removed by a doctor or gangrene may result.
- Do not operate too close to an excavation or ditch. **BE SURE** that the surrounding ground has adequate strength to support the weight of the machine and the load.
- **DO NOT** smoke or have any spark producing equipment in the area while filling the fuel tank or while working on the fuel or hydraulic systems.

Safety Reminders (continued)

- When driving on or across roads, the machine must be equipped according to the road/traffic laws, and these laws must be observed.
- Adapt working speed to local visibility.
- The driving speed must be adapted to the road and ground conditions.
- Particular attention is required when working on slopes. Angle of inclination of machine for all directions of travel: for brief operation (2-3 minutes)—maximum of 30°; for continuous operation—maximum of 25°.
- Unauthorized personnel must not start-up the machine.
- No one but the operator must be on the machine when in use. PASSENGERS PROHIBITED!
- Use the towing bracket provided for towing the machine.
- The operating area, steps, and grips must be free of oil, dirt, ice and unsecured objects.
- The proper working condition of the lighting system must be checked before and while working in darkness.
- Always keep the windshield and windows clean. Poor visibility can cause accidents.
- Operate the machine from the operator's seat only. Wear seatbelt that is provided.
- Control the machine cautiously and gradually until you are fully familiar with all the controls and handling.
- Pay attention to all machines and movements of machines in the working area.
- Personnel must not be in the working area. Never operate equipment above people.
- Always wear appropriate protective clothing: hard hat, work gloves, strong work shoes, reflective clothing.
- Be sure you have sufficient knowledge of the working area; location of utility lines (water, gas, electric, etc.) and load-bearing capacity of the ground.
- Before working in the area of utility lines, contact the proper authority to determine the measures required for safety.
- Never dig underneath the machine. Support walls properly when excavating or working in, or close to, trenches.
- Never drive long distances with the working equipment fully raised. Lowering the working equipment produces improved visibility and improved weight distribution.
- Never drive across the incline on sloping ground. Extreme caution is required when working across an incline or changing direction.
- Never use the weight of the machine to obtain more force when excavating. There is a risk overturning.
- Before starting up the machine or setting it in motion, warn any personnel in the area.
- Attach a clearly visible, legible DO NOT OPERATE sign when repair and adjustments are being performed on the machine.
- Unless necessary for servicing the engine, the engine hood must not be opened while the engine is running.
- Be familiar with the machine safety devices.
- The machine is not to be used to lift equipment or transport personnel.
- The excavator arm is not a ramming tool. Never attempt to use the working equipment to drive piles or similar items into the ground, or to flatten the ground.
- Never excavate while the machine is travelling. Never move the machine to dig. Never slew with lowered working equipment and never move the machine when the working equipment is resting on the ground.
- Be sure the SMV emblem is visible from the rear. Always use hazard warning lights. Use turn signals when turning.
- Maintain safe clearance from electric power lines and avoid contact with any electrically charged conductor. Contact the "Diggers Hotline" for utility line locations BEFORE starting to dig.
- If the machine is to be used where overhead hazards exist, it must be equipped with additional protection—a FOPS and a front guard. Contact your dealer for this (optional) equipment.
- Face the machine when entering or leaving the cab. Maintain 3-point contact with steps and handrails. Never jump off the machine, or attempt to mount or dismount a moving machine.
- ALWAYS wear safety glasses with side shields when striking metal against metal. It is recommended that a softer (chip-resistant) material be used to cushion the blow.
- Tire mounting, repair and replacements should ONLY be attempted by a qualified tire manufacturer's representative, or by properly trained personnel following the tire manufacturer's instructions. If you do not have such instructions, contact your tire dealer or Gehl Company.

- Inflating or servicing tires can be dangerous. Whenever possible, trained personnel should be called to service and/or mount tires. To avoid possible death or serious injury, follow the safety precautions below:
 - BE SURE the rim is clean and free of rust.
 - Lubricate both the tire beads and rim flanges with a soap solution. DO NOT use oil or grease.
 - Use a clip-on tire chuck with a remote hose and gauge which allows you to stand clear of the tire while inflating it.
 - Do not place your fingers on the tire bead or rim during inflation.
 - NEVER inflate beyond 35 PSI (240 kPa) to seat the beads. If the beads have not seated by the time the pressure reaches 35 PSI, deflate the assembly, reposition the tire on the rim, relubricate both parts and reinflate it. Inflation pressure beyond 35 PSI with unseated beads may break the bead or rim with explosive force sufficient to cause death or serious injury.
 - After seating the beads, adjust the inflation pressure to the recommended operating pressure listed.
 - DO NOT weld, braze, or otherwise attempt to repair and use a damaged rim.

Fire Prevention

The machine has several components that operate at high temperature under normal operating conditions, primarily the engine and exhaust systems. Also, the electrical system, if not properly maintained or is damaged, can arc or produce sparks. These conditions make it extremely important to avoid conditions where explosive dust or gasses can be ignited by arcs, sparks or heat.

The machine must be cleaned on a regular basis to avoid the buildup of flammable debris such as leaves, straw, etc. Accumulated debris, particularly in the engine compartment, poses a fire hazard.

The muffler system gets hot during operation. For this reason, it is extremely important not to operate the machine in an area where explosive dust or gasses can contact the hot exhaust.

- Do not use the machine where explosive gasses or dust can be ignited by arcs, sparks, hot components or exhaust gasses.
- The operator cab, engine compartment and engine cooling system must be inspected every day and cleaned if necessary to remove any flammable debris.
- Check all electrical wiring and connections for damage. Keep the battery terminals clean and tight. Repair or replace any damaged parts.
- Check fuel and hydraulic tubes, hoses and fittings for damage and leakage. Tighten or replace any parts that show leakage. Always clean fluid spills.
- Always clean the machine before performing any welding. Cover rubber hoses, battery and all other flammable parts. Keep a fire extinguisher near the machine when welding.
- Stop the engine and let it cool before adding fuel.

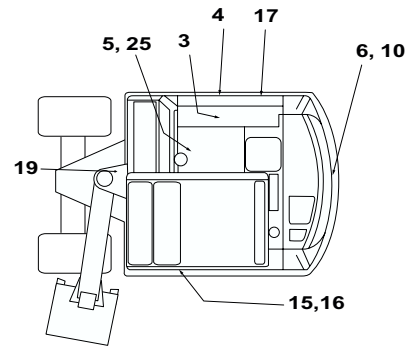
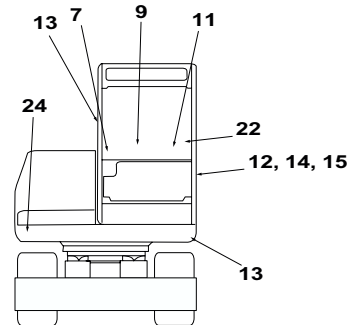
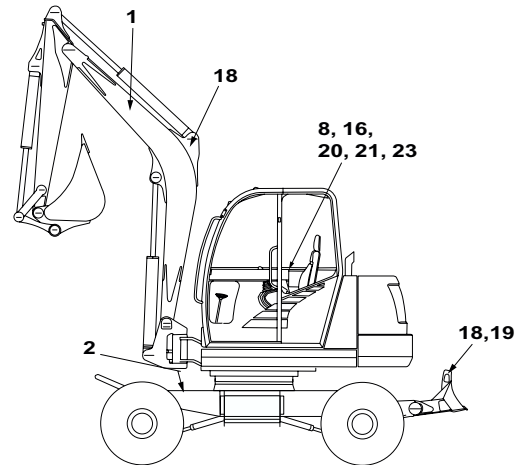
Mandatory Safety Shutdown Procedure

Before leaving the machine:

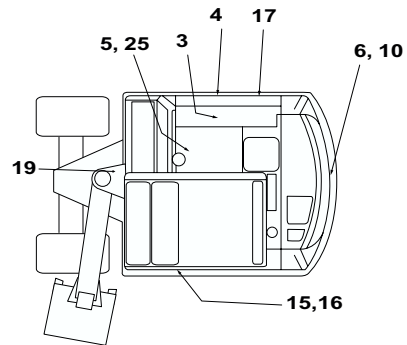
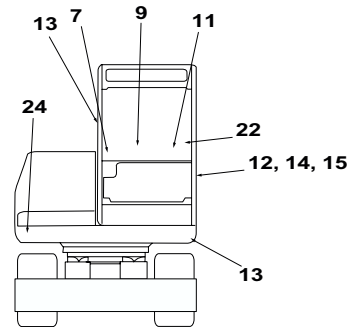
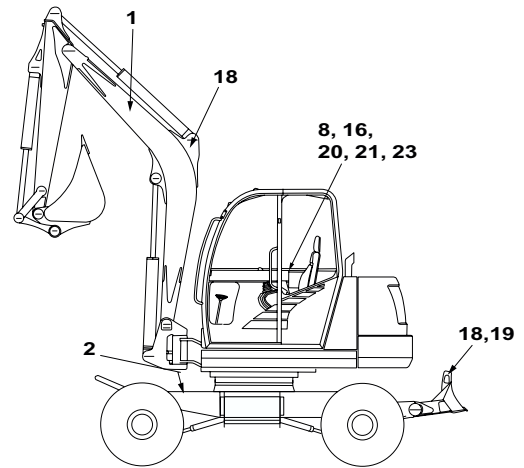
1. Lower the working equipment to the ground and support it securely.
2. Reduce throttle and turn off the engine.
3. Lock out controls by raising left control console.
4. Remove the ignition key and take it with you.

DECAL LOCATIONS

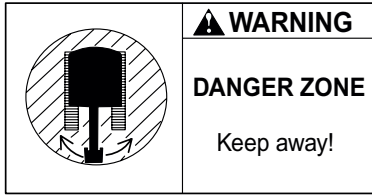
1. **WARNING: Danger zone. Keep away! (both sides of the boom)**
2. **Serial number plate**
3. **Hydraulic Oil**
4. **WARNING--Hydraulic reservoir under pressure**
5. **Diesel Fuel**
6. **WARNING: Do not open when engine is running**
7. **Lower boom, raise boom, close bucket, open bucket (on windshield)**
8. **Lower dozer blade, raise dozer blade**
9. **Travel, forward/reverse (on windshield)**
10. **SMV Emblem. For driving on the road.**
11. **Bucket arm out, bucket arm in, superstructure left, superstructure right, boom left, boom right (on windshield)**
12. **Engine cover release latch**
13. **Nameplate**
14. **Warning. TO AVOID INJURY: Read the Operator's Manual before using the machine. Be sure all user's are instructed on safe use and maintenance. Service the machine per the manual. Contact dealer (or manufacturer) for information and service parts.**
15. **Valve cover release latch**
16. **Throttle speed**
17. **Hydraulic breaker**
18. **Lifting point for lifting the excavator (left and right on boom and dozer blade)**
19. **Tie down point (left and right on dozer blade and chassis)**



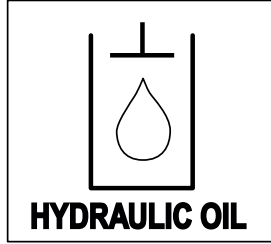
20. **WARNING: TO AVOID INJURY:**
 Load and transport unit properly. Inspect job-site for hazards.
 Operate only from operator's seat. Fasten seat-belt.
 Keep people out of DANGER ZONE.
 Operate within stability limit of machine. **DO NOT OVERLOAD.** Use only approved attachments.
21. **WARNING: Mandatory Safety Shutdown Procedure:**
 1. Lower all equipment to ground.
 2. Reduce throttle; shut off engine.
 3. Lock out controls before exiting.
 4. Remove key and take it with you.
22. **WARNING: TO AVOID INJURY:** Always hold handle when closing front window. When opening window, be sure to lock both sides.
23. **WARNING: TO AVOID INJURY OR DEATH:**
 Before driving on the road **ALWAYS**
- secure the bucket & work tool
 - lock the swing bracket
 - lock the dozer blade
 - lock the turntable
 - unlock the axle pivot, and
 - lock out the joystick controls
- (Refer to the Operator's Manual)
 Also mount an SMV emblem and turn on the hazard lights per local law.
24. Lubrication hours
25. **IMPORTANT! DO NOT** shift transmission if machine is moving or damage will result. Shift transmission only when machine is stopped.



DECALS



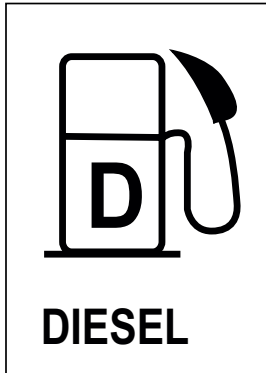
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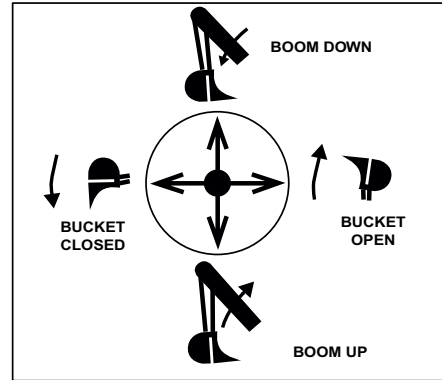
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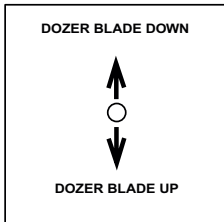
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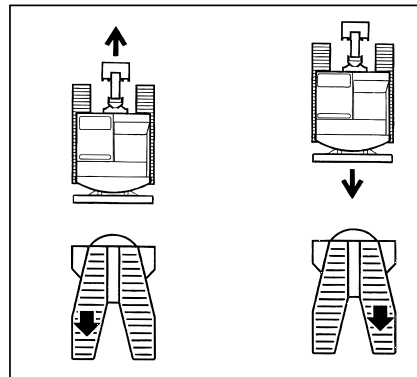
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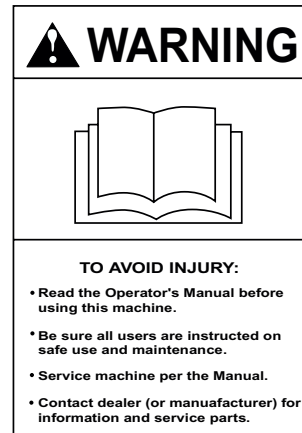
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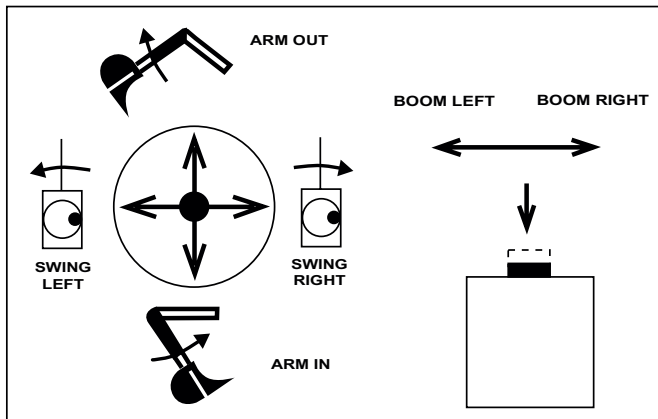
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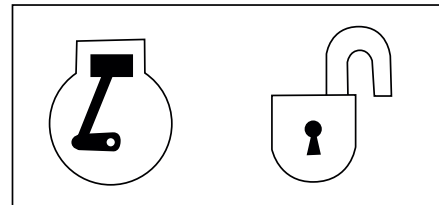
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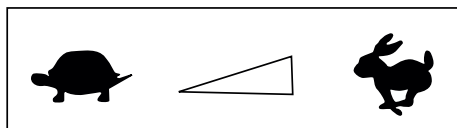
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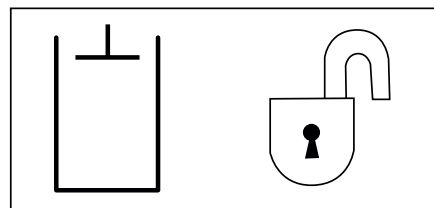
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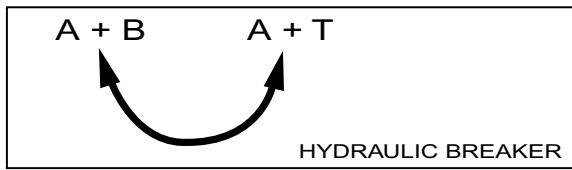
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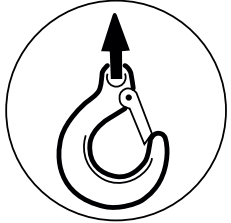
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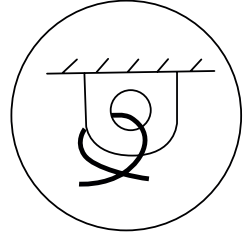
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1.	2.	<p>WARNING</p> <p>TO AVOID INJURY:</p> <ol style="list-style-type: none"> 1. Load and transport unit properly. Inspect job-site for hazards. 2. Operate only from operator's seat. Fasten seatbelt. 3. Keep people out of DANGER ZONE. 4. Operate within stability limit of machine. DO NOT OVERLOAD. Use only approved attachments.
3.	4.	

20

1.	2.	<p>WARNING</p> <p>MANDATORY SAFETY SHUTDOWN PROCEDURE:</p> <ol style="list-style-type: none"> 1. Lower all equipment to ground. 2. Reduce throttle; shut off engine. 3. Lock out controls before exiting. 4. Remove key and take it with you.
3.	4.	

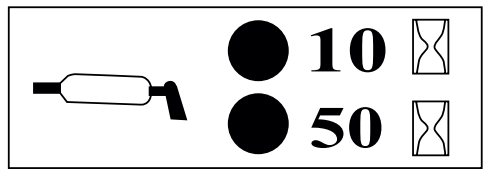
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	<p>WARNING</p> <p>TO AVOID INJURY:</p> <ul style="list-style-type: none"> • ALWAYS hold handle when closing front window. • When opening window be sure to lock both sides
--	--

22

<p>WARNING</p> <p>TO AVOID INJURY OR DEATH</p> <p>Before driving on road ALWAYS</p> <ul style="list-style-type: none"> • secure the bucket & work tool • lock the swing bracket • lock the dozer blade • lock the turntable • unlock the axle pivot, and lock out the joystick controls (Refer to the Operator's Manual.) <p>Also, mount an SMV emblem and turn on lights per local law.</p>
--

23



24

<p>IMPORTANT</p> <p>DO NOT shift transmission if machine is moving or damage will result. Shift transmission only when machine is stopped!</p>

25

OPERATION

GENERAL INFORMATION

WARNING

Be sure you are familiar with all safety devices and controls before operating the machine. Know how to stop before starting. This GEHL® Company machine is designed for use only with GEHL® Company approved accessories or referral attachments. The GEHL® Company cannot be responsible for the consequence if the unit is used with non-approved attachments.

WARNING

Instructions are necessary before operating the machine. Read and understand this entire manual. Follow warnings and instructions for operation and maintenance. Check for correct function after adjustments or maintenance. Failure to follow instructions can result in injury or death.

WARNING

Read and thoroughly understand all safety decals before operating the machine. DO NOT operate the machine unless all factory installed guards and shields are in place.

Guards & Shields

Whenever possible, guards and shields are used to protect potentially hazardous areas on the machine. In many places, decals are also provided to warn of potential hazards and/or to display special operating procedures (see *Decal Locations* in Chapter 2).

The operator's seat left-hand console must be raised in order to exit the cab. In the raised position, the left-hand console locks out all hydraulic functions of the machine (Figure 3-1).

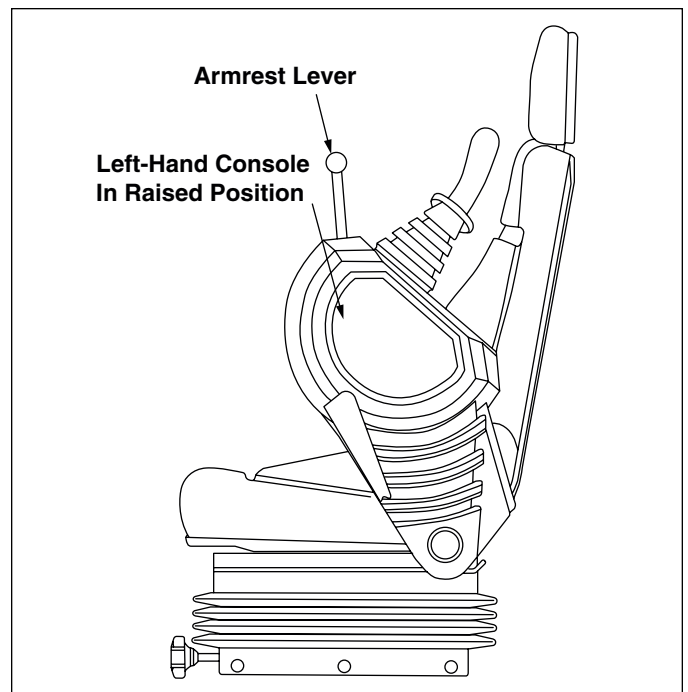
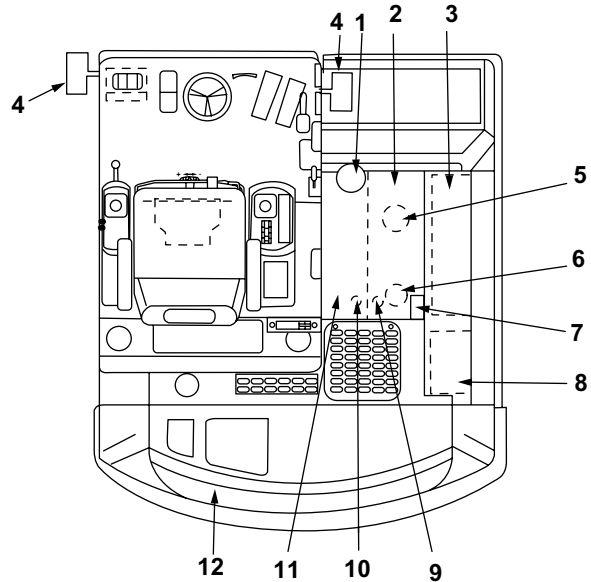


Figure 3-1. Left-Hand Console Raised

OPERATOR CONTROLS

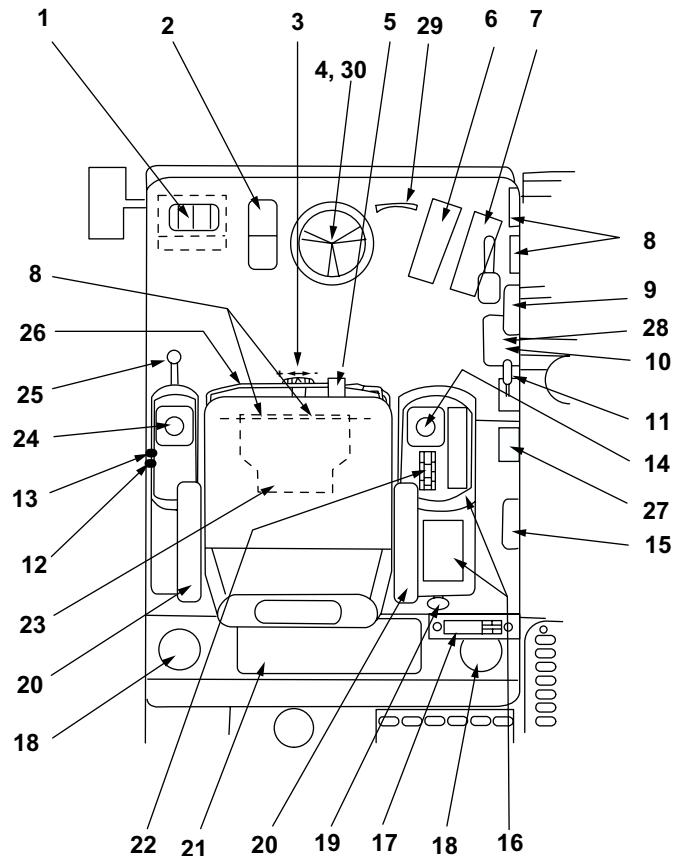
Outer Cab Layout

1. Fuel Filler
2. Hydraulic Reservoir
3. Hydraulic Valves
4. Mirrors
5. Hydraulic Oil Filler
6. Hydraulic Oil Filter
7. Hydraulic Oil Sight Gauge
8. Battery
9. Hydraulic Reservoir Drain
10. Fuel Tank Drain
11. Fuel Tank
12. Engine Cover



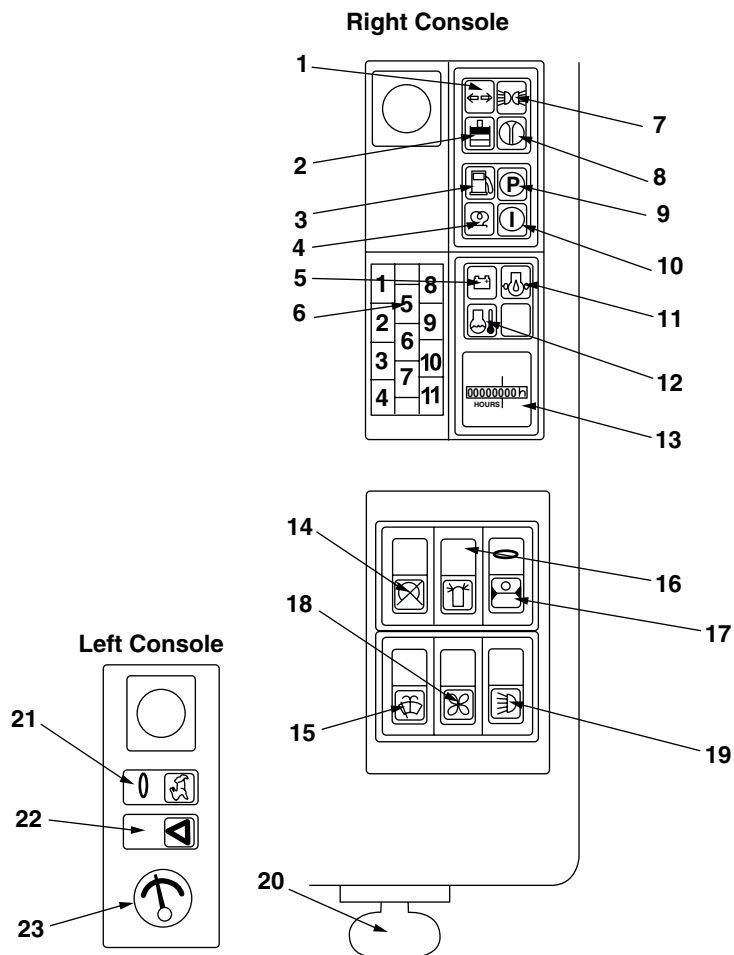
Inner Cab Layout

1. Auxiliary Hydraulics Pedal
2. Drive Axle Brakes with Lockout
3. Seat Suspension Adjustment Lever
4. Steering Wheel
5. Seat Adjustment Lever
6. Drive Pedal-Forward
7. Drive Pedal-Reverse
8. Ventilation Controls
9. Cab Light
10. Windshield Washer Reservoir
11. Throttle Lever
12. Hydraulic Valve Cover Latch Lever
13. Engine Cover Latch Lever
14. Right-Hand Control Lever for Boom and Bucket Cylinders
15. Ashtray
16. Console Controls (see next page)
17. Radio (optional)
18. Stereo Speaker
19. Ignition Key Switch
20. Armrest
21. Storage Shelf
22. Fuse Panel (see next page)
23. Heater
24. Left-Hand Control Lever for Rotating/Slewing Bucket Arm; Control Button for Boom Swing when used with Auxiliary Hydraulics Pedal (#1)
25. Armrest Lever (for folding back the armrest, which disables the hydraulic controls)
26. Seat and Console Adjustment Lever
27. Parking Brake
28. Dozer Blade Control Lever
29. Cab Rotating Locking Pin
30. Horn Button



Controls Console Layout

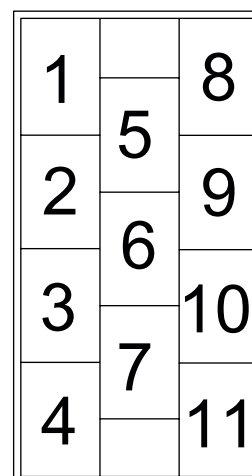
1. Hazard Flasher Indicator
2. Hydraulic Filter Indicator
3. Low Fuel Indicator
4. Glow Plug Indicator
5. Battery Voltage Indicator
6. Fuse Panel (see below)
7. Side Light Indicator
8. Engine Air Filter Indicator
9. Parking Brake Indicator
10. Accumulator Valve Indicator
11. Engine Oil Pressure Indicator
12. Coolant Temperature Indicator
13. Hourmeter
14. Working Hydraulic Deactivate Switch
15. Windshield Wiper/Washer Switch
16. Rotating Beacon Switch (optional)
17. Axle Pivot Lock Switch
18. Heater Switch
19. Boom Work Light Switch
20. Ignition Key Switch
21. Two-speed Transmission Switch
22. Hazard Flasher Switch
23. Fuel Gauge
24. Turn Signal Switch (on steering column)
25. Headlight/Running Light Switch (on steering column)



Fuse Panel

1. Rear Left and Right Front Side Light (7.5 Amp)
2. Rear Right and Front Left Side Light (7.5 Amp)
3. Position Light, Control Lamp for Lights (10 Amp)
4. Low Beam (7.5 Amp)
5. Stop Solenoid (Engine), Hazard Flasher, Socket (15 Amp)
6. Turning Lights, Cab Lighting, Radio (15 Amp)
7. Horn, Fuel Gauge, Flasher, Windshield Washer/Wiper (15 Amp)
8. Heater, Work Light, Instrument Panel Lighting (15 Amp)
9. Brake Lights, Gear Valve (15 Amp)
10. Relay for Stop Solenoid (30 Amp)
11. Control Light For: Restricted Air and Hydraulic Filters, Parking Brake, Accumulator Pressure, Low Fuel and Charge Indicator, Oil Pressure, Coolant Temperature Warning Light with Buzzer, Valve for Axle Locking, Safety Solenoid

NOTE: The main fuse (50 Amp) for the ignition and glow plugs is located in the relay box.



OPERATOR CONTROLS (continued)

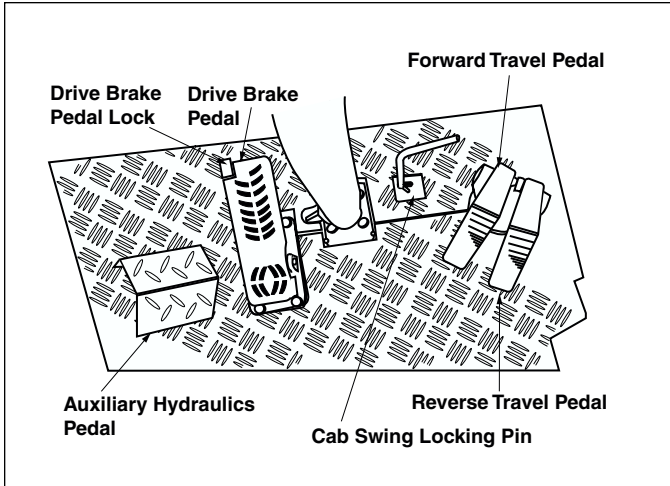


Figure 3-2. Foot Controls

⚠ WARNING

Excessive speed and quick control movements without regard for conditions and circumstances is hazardous and could cause an accident.

Travel Controls

DRIVE BRAKE PEDAL

The drive brake is activated by depressing the the pedal (Figure 3-2). Push the pedal all the way down to engage the drive brake lock. Depressing the pedal lock releases the brake lock.

PARKING BRAKE

The parking brake is located next to the right console (Figure 3-4). Pushing the control fully forward engages the parking brake which locks the axle swing cylinders. The parking brake indicator on the right console will light when the parking brake is engaged. Pull up on the control collar and move the control fully rearward to disengage the parking brake.

FORWARD TRAVEL

Release the drive brake lock by pushing fully down on the brake pedal and releasing. Press the Forward Drive pedal down to move the machine forward.

REVERSE TRAVEL

Release the drive brake lock by pushing fully down on the brake pedal and releasing. Press the Reverse Drive pedal down to move the machine rearward.

STEERING WHEEL

Use the steering wheel to turn the machine. Turn signal and headlight switches are located on the right side of the steering column. The horn button is in the center of the steering wheel.

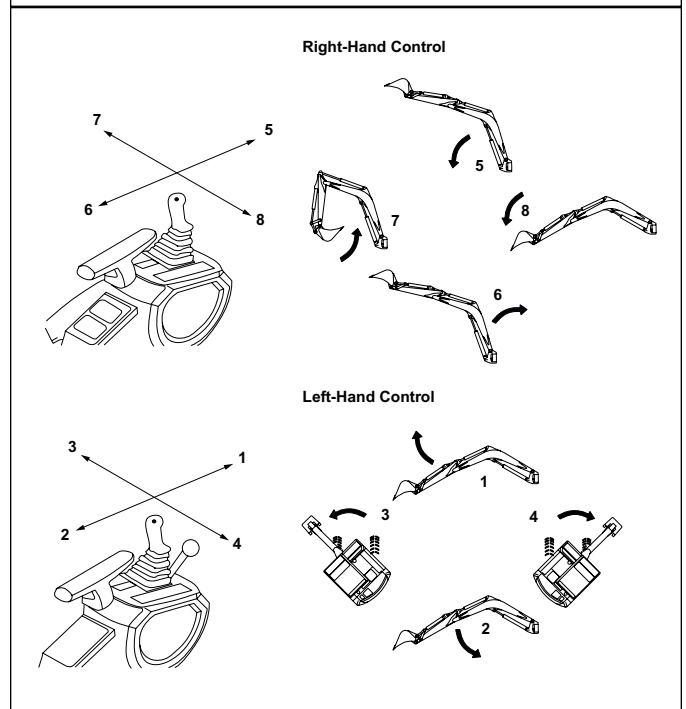
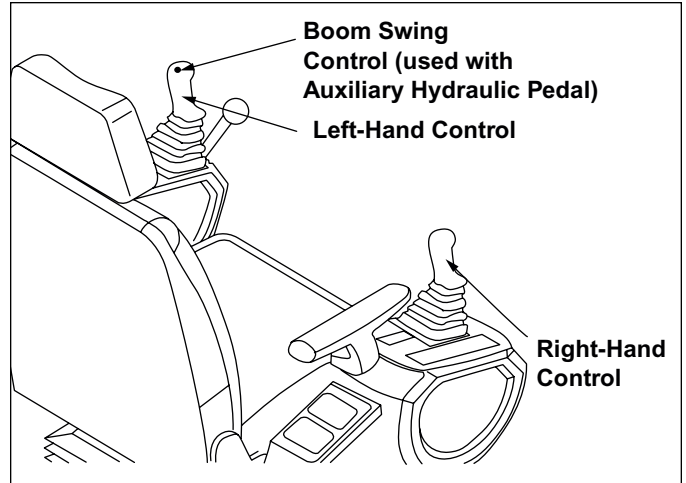


Figure 3-3. Boom and Bucket Controls

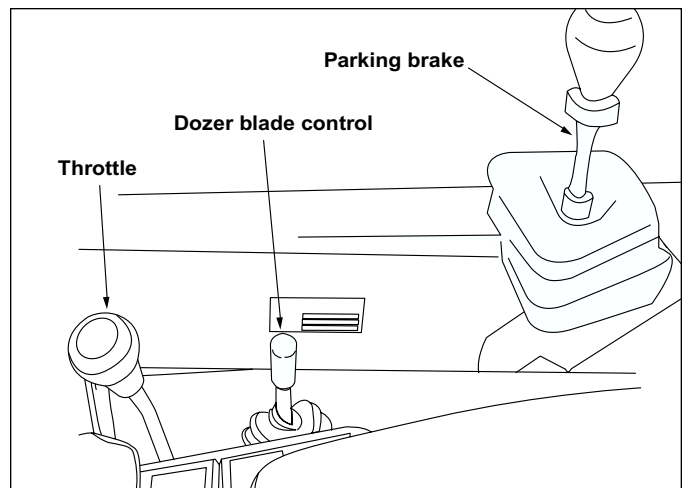


Figure 3-4. Throttle, Dozer Control, Parking Brake

Excavating Controls

The boom and bucket are controlled by the right- and left-hand levers on the seat consoles (Figure 3-3).

The superstructure or “house” is slewed (swung) by moving the left-hand lever to the left or right (Figure 3-3).

The boom can be slewed (swung) without moving the cab by pressing the auxiliary hydraulics pedal left or right (Figure 3-5) while pressing the boom swing button on the left-hand control lever.

The boom and bucket are moved using the right-hand control lever (Figure 3-3).

LEFT-HAND CONTROL LEVER (FIGURE 3-3)

1. Move the left-hand lever forward to move bucket arm away from the machine.
2. Move the left-hand lever to the rear to move the arm towards the machine.
3. Move the left-hand lever to the left to slew superstructure to the left.
4. Move the left-hand lever to the right to slew superstructure to the right.

RIGHT-HAND CONTROL LEVER (FIGURE 3-3)

5. Move the right-hand lever forward to lower the boom.
6. Move the right-hand lever to the rear to raise the boom.
7. Move the right-hand lever to the left to close the bucket (bucket moves up and towards the boom).
8. Move the right-hand lever to the right to open the bucket (bucket moves down and away from the boom).

AUXILIARY HYDRAULICS PEDAL (FIGURE 3-5)

Lift the protective shield, then depress the pedal left or right while depressing the button located on top of the left-hand control lever to slew only the bucket (superstructure will remain stationary).

DOZER BLADE CONTROL (FIGURE 3-4)

The dozer blade is raised and lowered by the dozer lever (Figure 3-4). Push the lever forward to lower the blade; pull the lever to the rear to raise the dozer blade.

Console Controls (Illustration on page 3-3)

1. HAZARD FLASHER INDICATOR

Indicator is lit when hazard flashers are on.

2. HYDRAULIC OIL FILTER INDICATOR

Indicator light comes on when hydraulic oil filter requires replacement.

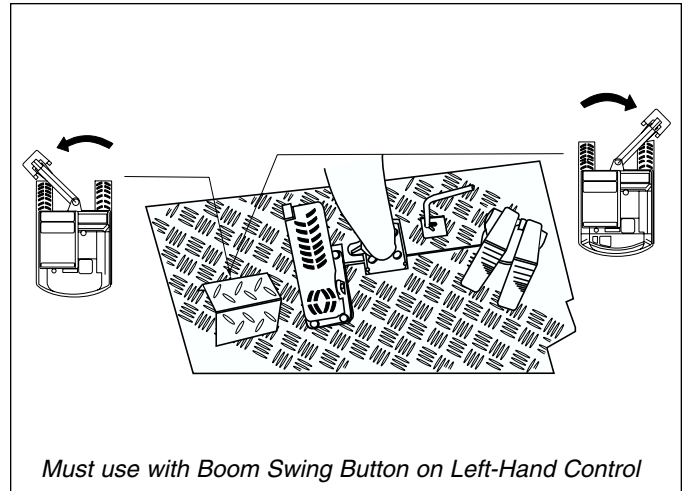


Figure 3-5. Auxiliary Hydraulics Pedal

3. LOW FUEL INDICATOR

Indicator light comes on when fuel level is too low.

4. GLOW PLUG INDICATOR

Indicator light comes on when the ignition key is turned on. Indicator will go out when glow plugs have heated sufficiently to start the engine.

5. BATTERY VOLTAGE INDICATOR

Indicator light comes on when battery voltage is too low.

6. FUSE BOX

Contains circuit fuses.

7. SIDE LIGHT INDICATOR

Indicator light comes on when side light is on.

8. ENGINE AIR FILTER INDICATOR

Indicator light comes on when engine air filter requires servicing.

9. PARKING BRAKE INDICATOR

Indicator light comes on when parking brake is engaged.

10. ACCUMULATOR VALVE INDICATOR

Indicator light comes on when hydraulic pressure is released.

11. ENGINE OIL PRESSURE INDICATOR

During normal operation, this indicator light should remain off. The indicator will light if the engine oil pressure drops too low. If this occurs, shut off the engine IMMEDIATELY and determine the cause of the pressure drop.

12. COOLANT TEMPERATURE INDICATOR

Indicator light comes on when coolant temperature is too high.

13. HOURMETER

Indicates total operating hours of the machine. Use the hourmeter to record maintenance performed in the log *Chapter 4—Maintenance*.

OPERATOR CONTROLS (continued)

Console Controls (Illustration on page 3-3)

14. WORKING HYDRAULICS SWITCH

Pressing this switch deactivates the working hydraulics and engages the swing brake.

NOTE: Working hydraulics switch must be activated for driving on the road.

15. WINDSHIELD WIPER SWITCH

Pushing the switch to the first position turns the windshield wiper on. Pushing and holding the switch in the second position activates the washer fluid pump.

16. ROTATING BEACON (OPTIONAL) SWITCH

Pushing the switch activates the optional rotating beacon.

17. AXLE PIVOT LOCK SWITCH

Pushing the switch locks the front axle swing cylinders.

WARNING

Do not drive with the axle pivot lock switch engaged or the machine could overturn.

18. HEATER FAN SPEED CONTROL SWITCH

This switch controls the fan speed.

19. BOOM WORK LIGHT SWITCH

Turns the boom work light on and off.

20. IGNITION KEYSWITCH

With the key in the OFF (vertical) position, power from the battery is disconnected to the controls and console (except for hazard flashers and interior cab light). This is the only position that the key can be inserted or removed from the switch.

With the key turned one position clockwise (RUN) from the vertical position, power from the battery is supplied to all controls and electrical circuits.

With the key turned fully clockwise (START) and held in position, the electric starter energizes and starts the engine when the glow plug indicator goes out. Release the key after the engine starts.

NOTE: The key must always be returned to the OFF position between attempts to start the engine in order to activate the glow plug system.

21. TWO-SPEED TRANSMISSION CONTROL SWITCH

Move the switch to HIGH (“Rabbit” symbol) to engage higher travel gear. Only move this switch with the machine fully stopped. DO NOT move switch while machine is in motion.

IMPORTANT: DO NOT change transmission speed while machine is in motion or damage to the transmission will occur.

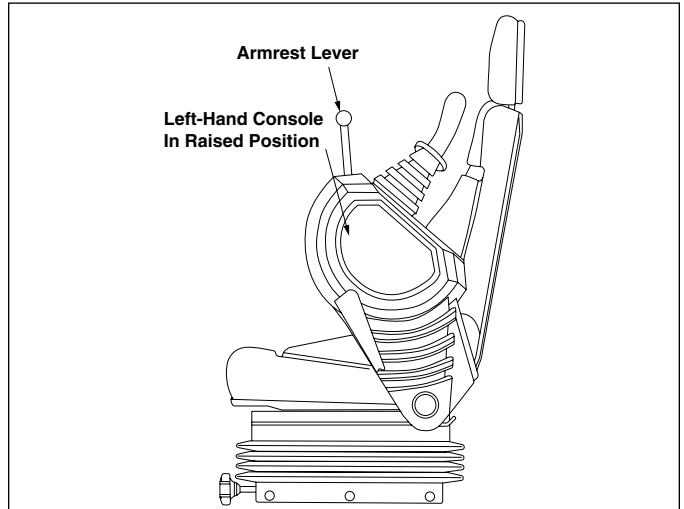


Figure 3-6. Operator's Seat with Left-Hand Console Raised

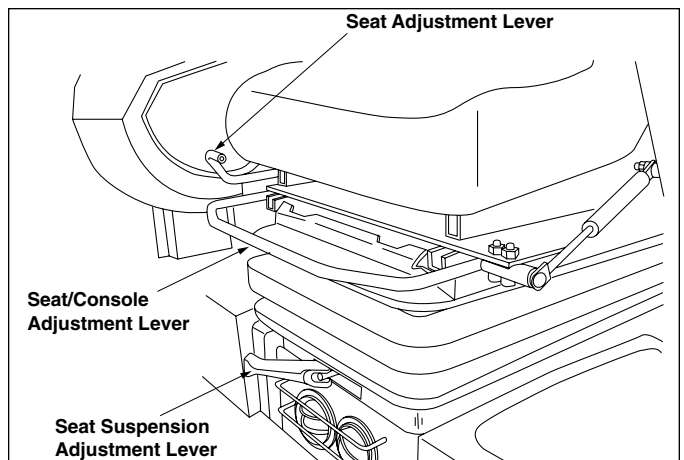


Figure 3-7. Operator's Seat Adjustment Controls

22. EMERGENCY FLASHER SWITCH

Turn the switch on to engage the emergency flashers.

23. FUEL GAUGE

Indicates fuel level.

24. TURN SIGNAL SWITCH

The turn signal switch is located on the right side of the steering column.

25. HEADLIGHT/SIDE LIGHT SWITCH

The headlight switch is located on the right side of the steering column. This switch also controls the side light, which can be mounted on top of the boom arm. The switch has three positions; the first position operates the low beam and side light; the second position operates the high beam, and the third position operates the parking lights.

NOTE: The operator's seat left-hand console must be raised in order to exit the cab. In the raised position, the left-hand console locks out all hydraulic functions of the machine (Figure 3-6).

Operator's Seat Adjustment Controls

SEAT SUSPENSION ADJUSTMENT LEVER

Turn the lever (Figure 3-7) to adjust the seat suspension for the operator's weight. An indicator on the front of the seat base shows the weight adjustment.

SEAT/CONSOLE ADJUSTMENT LEVER

The seat/console lever (Figure 3-7) allows the operator to move the seat and console forward or rearward as a unit.

SEAT ADJUSTMENT LEVER

The seat adjustment lever (Figure 3-7) allows the operator to move the seat only (without console) forward or rearward.

Ventilation

WINDSHIELD

The windshield can be opened for ventilation. Turn the two latches (Figure 3-8) located at the upper corners of the windshield. Grasp the handles and pull the windshield up until latches lock in position.

To close the windshield, turn the latches and then lower the windshield until the latches lock in position.

WARNING

When opening front window, be sure to lock both latches. When closing front window, keep hands on handle and away from path of window.

SIDE WINDOW

The side window can be opened for ventilation. Squeeze the latch located on the window, then slide window to desired position and release latch.

VENTS

There are two side vents located underneath the side window. Open the slats and rotate the vents for better ventilation and to defrost the windows.

HEATER CONTROL VALVE

There is a ball valve located in the engine compartment (Figure 3-9) that controls the flow of coolant to the heater. Turn the ball valve to the open position to allow heat into the cab.

Cab Latches

CAB DOOR LATCH

When fully opened, the cab door will lock in position to the side of the cab. To release the latch, push the black knob located on the hinge side of the door jamb.

ENGINE AND HYDRAULIC VALVE COVER LATCHES

The engine cover and hydraulic valve cover latches are locat-

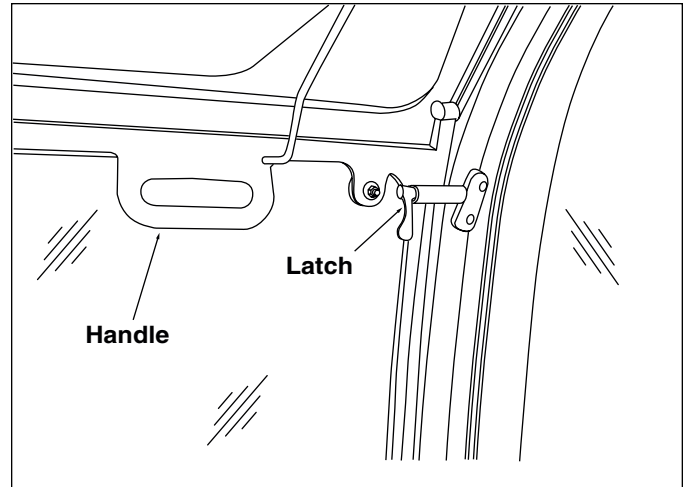


Figure 3-8. Windshield

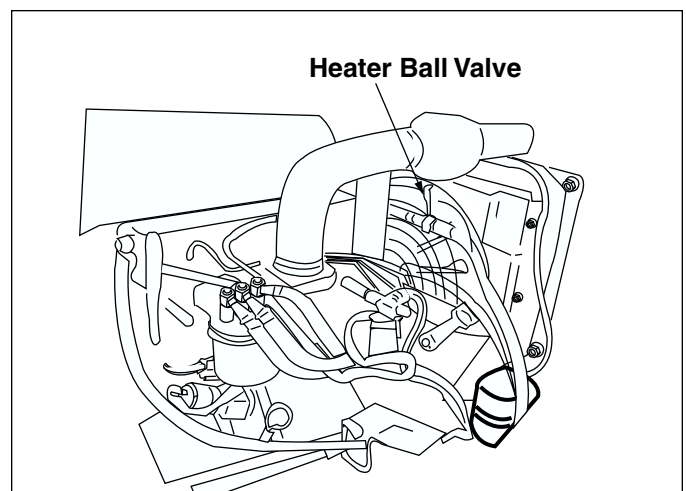


Figure 3-9. Heater Ball Valve in Engine Compartment

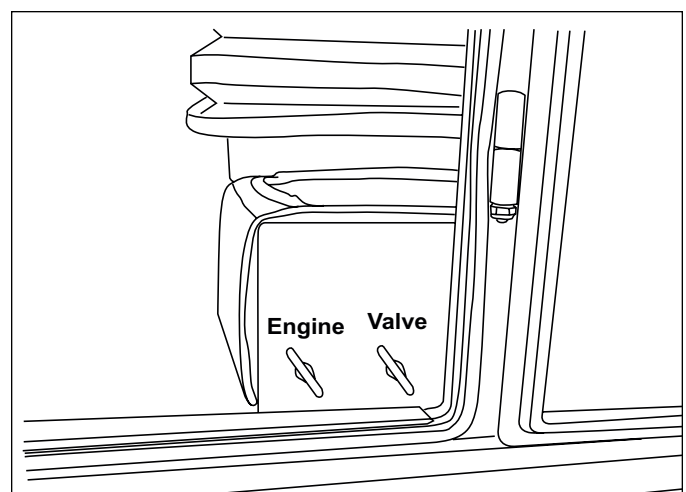


Figure 3-10. Engine and Valve Cover Latches

ed just inside the door next to the operator's seat (Figure 3-10).

To unlock a cover, pull the respective latch handle. The cover can then be opened.

STORAGE AND TOOLS

Storage Compartments

Behind Operator Seat

A tool kit and first aid kit are located in this storage compartment. The tool kit includes the following:

- Hammer
- Socket wrench handle
- 24mm socket
- 22mm socket wrench
- Grease gun
- Open end wrenches; 10mm, 13mm, 17mm, 22mm, 27mm, 36mm
- Allen wrenches (3)
- Phillips head screwdriver (1)
- Flat-blade screwdriver (2)

Left Side Operator Seat

This compartment contains foldable safety triangle and the following manuals:

- Operator's Manual
- Engine Manual
- Maintenance Manual
- Parts Manual
- Safety Manual

Machine Left/Right Side Under Cab Steps

A storage box is located underneath the steps on each side of the machine. The left-side storage box contains:

- Side light w/wire harness for boom
- Locking link and pin w/clips for boom slew
- Two locking pins w/clips for dozer blade

Machine Rear Frame

The cylinder lock sleeve is located on the top of the rear frame. See *Locking/Securing the Machine* in this section.

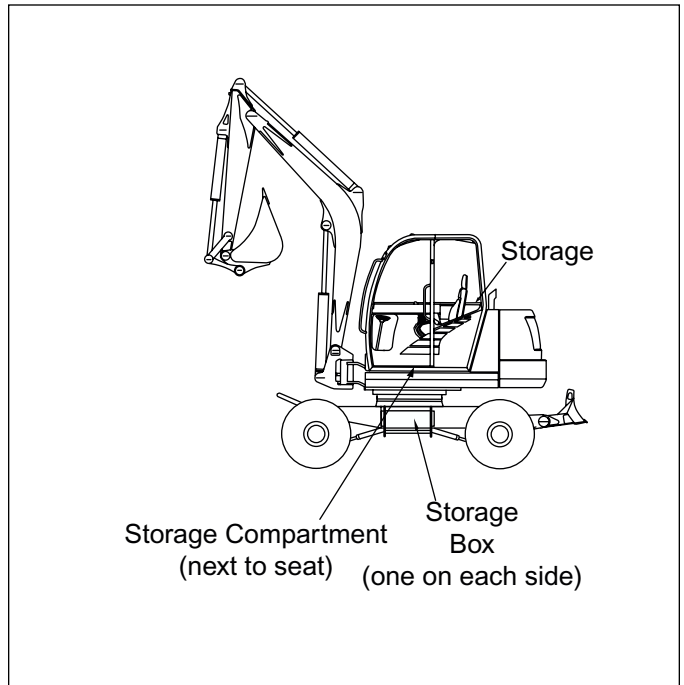


Figure 3-11. Storage Compartments

MACHINE OPERATION

WARNING

Instructions are necessary before operating or servicing the machine. Read this entire manual and all decals on the machine. Follow all warnings and instructions. Failure to follow all instructions can cause injury or death.

Checklist Before Operation

Check the following items before each day of operation:

- Seat belt and mounting hardware.
- Decals. Replace as required.
- Air cleaner and intake hoses.
- Engine coolant level and system for leaks.
- Clean engine area of any flammable materials.
- Check engine oil level and fill if required.
- Check hydraulic system for leaks and check hydraulic fluid level.

IMPORTANT: See the list of recommended lubricants in Chapter 4—Maintenance for proper grade of engine oil and hydraulic oil. Only use oils specified on the list or serious damage could occur.

- Check all pivot points for proper operation.
- Check tires for damage or low pressure.
- Check for broken and loose parts, and repair.
- Check fuel level.

IMPORTANT: Never operate machine until fuel tank is completely empty. If this occurs, the fuel system will have to be bled of air. Always fill tank after use.

WARNING

Do not use ether with glow plugs (preheat) systems. Explosion can result, which can cause injury or damage.

Starting/Stopping the Engine

SAFETY DEVICES

All hydraulic functions are inoperable with the operator's seat left-hand console in the raised position.

NORMAL STARTING/STOPPING PROCEDURE

1. Adjust the operator's seat to desired settings.
2. Be sure all levers and controls are in neutral positions.
3. Insert ignition key into switch and turn clockwise to the first position. Indicators for oil pressure and battery voltage will light.
4. Turn the key fully clockwise and hold in position until glow plug indicator goes out (approximately 10 seconds when engine is cold).
5. When engine starts, release the key.
6. Allow engine to warm-up for approximately 5 minutes to warm the hydraulic fluid.
7. Turn the key fully counterclockwise to turn the engine off.

IMPORTANT: Do not engage the starter motor for longer than 10 seconds at each starting attempt. If the engine does not start, wait 30 seconds, turn the key fully off, then attempt to start the engine again.

WARNING

When an engine is running in an enclosed area, fresh air must be added to avoid concentration of exhaust fumes. If the machine is stationary, vent the exhaust outside. Exhaust fumes contain odorless, invisible gases which can kill without warning.

Engines have hot parts and hot exhaust gas. Keep flammable materials away from engine.

Do not use machine in atmosphere containing explosive gasses.

MACHINE OPERATION (continued)

Starting/Stopping the Engine (continued)

IMPORTANT: Indicator lamps must go out when engine starts. If they do not, turn off the engine IMMEDIATELY until cause has been determined and corrected.

COLD WEATHER STARTING PROCEDURE

1. Install an engine heater.
2. Be sure engine oil is correct type and viscosity for the ambient temperature.
3. Be sure battery is fully charged.
4. Push the throttle lever (Figure 3-12) fully forward.
5. Follow all steps under Normal Starting/Stopping Procedure on previous page.
6. As the engine warms up and engine speed increases, move the throttle lever to the idling position.

NEW MACHINE BREAK-IN PROCEDURE

A new machine requires careful operation during the first 100 hours to properly break-in various parts. If the machine is subjected to hard use during the break-in period, the performance and service life will be reduced.

Perform the following when operating a new machine:

- After starting, let the engine idle for 5 minutes so all the components can warm-up.
- Avoid operation with heavy loads or at high speeds.
- Avoid sudden starting and stopping or abrupt motions.

Moving the Excavator

IMPORTANT! When moving the machine for use (other than transporting), make sure all locking devices are disengaged. See page 13.

1. Set the travel speed range using the transmission switch on the left console (Figure 3-13):
Low Speed Maximum = 4.3 mph (7.0 km/h)
High Speed Maximum = 12.4 mph (20 km/h)

IMPORTANT: When steering the machine, do not continue turning the steering wheel past the wheel stops. Turning the wheel further will cause the hydraulic oil to bypass the relief valve possibly resulting in overheating and damage to the machine.

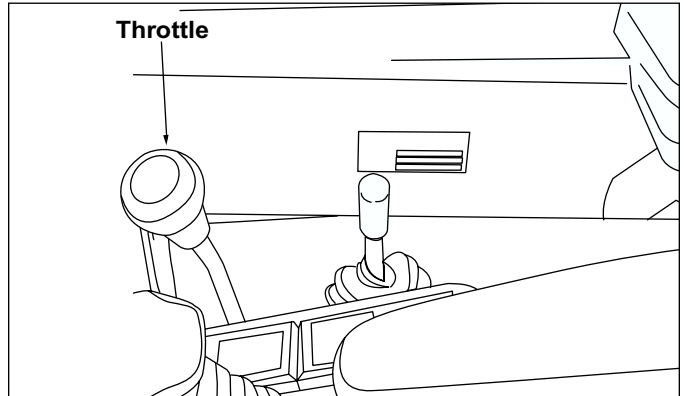


Figure 3-12. Throttle Lever

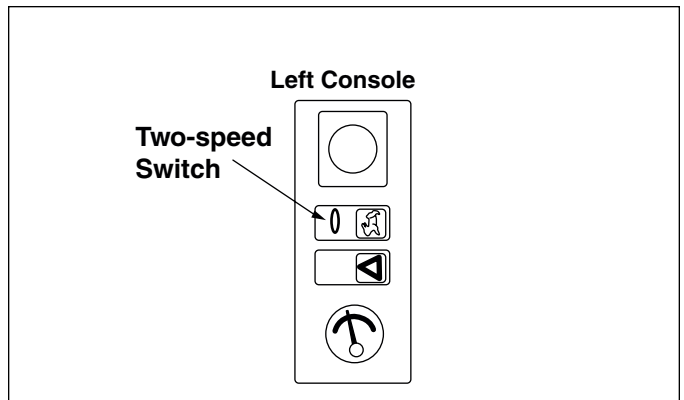


Figure 3-13. Transmission Switch on Left Console

IMPORTANT: Do not shift transmission while machine is in motion or damage to the transmission will occur.

2. Disengage the parking and drive brakes.
3. Depress the the forward or reverse drive pedal while moving the throttle to the desired speed setting.

NOTE: If the superstructure has been rotated 180° (dozer blade at the front), travel pedals will work in the opposite manner. Depressing forward pedal will cause the machine to travel in reverse and depressing reverse pedal will move the machine forward.

4. To stop, release the drive pedal and depress the brake pedal.

Mandatory Safety Shutdown Procedure

Before leaving the machine:

1. Lower the working equipment to the ground and support it securely.
2. Reduce throttle and turn off the engine.
3. Lock out controls by raising left control console.
4. Remove the ignition key and take it with you.

EARTHMOVING

Digging

OPTIMAL STABILITY WHEN DIGGING

- Use the dozer blade to support the excavator on the ground.
- Never dig under the machine. Support the walls properly when excavating or working close to trenches.
- To obtain maximum digging performance, avoid fully extending the excavator arm. Excavate using long, flat pulling movements of the arm (Figure 3-14).

WARNING

Always ensure adequate stability when working near trenches. Be aware of conditions that could cause the earth to collapse resulting in risk of injury or death.

Grading

- The boom must be fully raised and the bucket tilted in (up) when grading.
- When grading, the material may be pushed away to the front or the side.
- Raise the dozer blade slightly if excessive resistance occurs.

Operating on Slopes

WARNING

Do not travel up or across a slope steeper than 15°. Do not travel down a slope steeper than 25°. Keep boom centered while travelling.

Keep attachments as low as possible when travelling on slopes or rough terrain.

Operating on a slope is inherently dangerous. It is recommended to level the work area as shown in Figure 3-15. If this is not possible, use the following guidelines.

- When going down a slope, control the speed with the drive pedals and the the throttle lever.
- When going down grades that exceed 15°, put the machine in the position shown in Figure 3-16. Run the engine at medium to full throttle to ensure proper steering..
- Operate as slowly as possible and avoid sudden changes in direction.

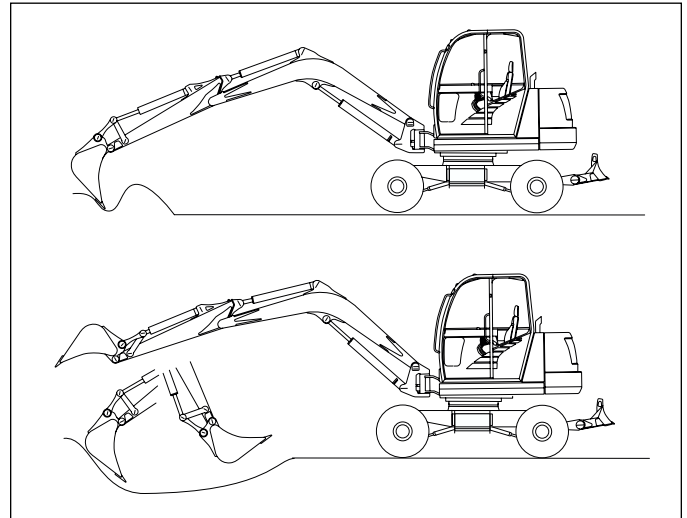


Figure 3-14. Proper Excavating

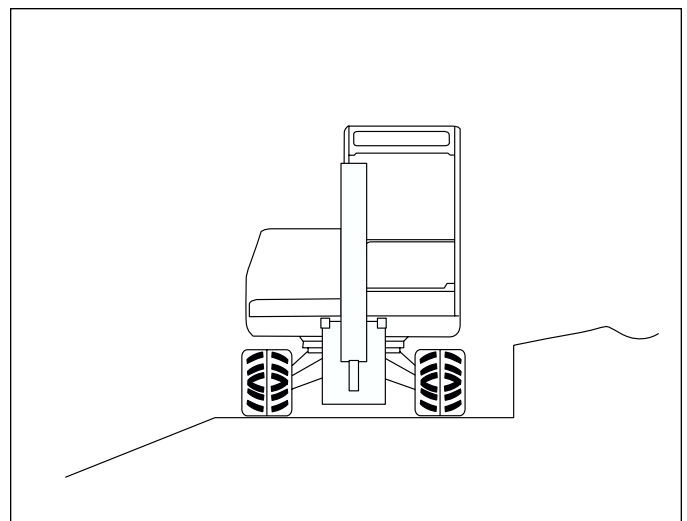


Figure 3-15. Levelling the Work Site on a Slope

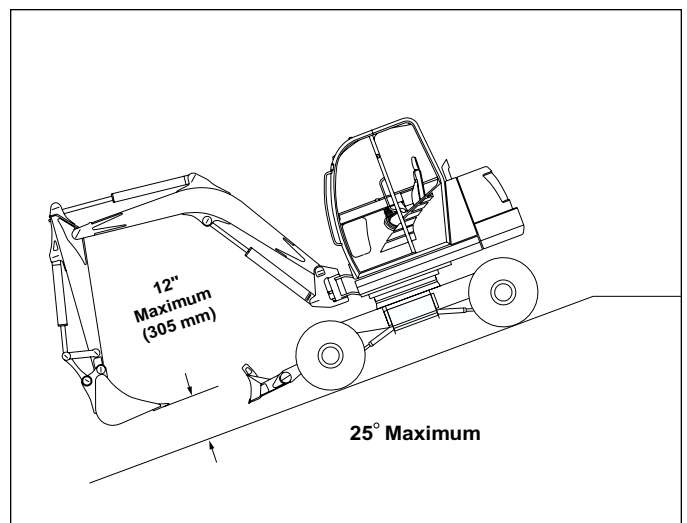


Figure 3-16. Travelling on a Slope Exceeding 15°

EARTHMOVING (continued)

Operating on Slopes (continued)

- Avoid travelling over objects such as rocks, trees, stumps, etc.
- Slow down the work cycle. Take your time.
- Avoid working with the machine positioned across the slope. Position the machine with the blade downhill and lowered.
- Avoid swinging or extending the bucket farther than necessary in a downhill direction. When you must swing the bucket downhill, keep the boom low and skid the bucket along the ground.
- When working with the bucket on the uphill side, keep the bucket as close to the ground as possible. Unload far enough away from the trench or hole to prevent the possibility of a cave-in..

IMPORTANT: Never operate machine until fuel tank is completely empty. If this occurs, the fuel system will have to be bled of air. Always fill tank after use.

Excavator Boom Slewing

WARNING

Always ensure adequate stability when working with the machine, particularly when working with equipment slewed to the side. Changing the working equipment alters the stability (weight) of the machine.

The excavator boom can be slewed 45° to the right and 80° to the left from the front position. This allows excavation of trenches along walls, fences, etc.

WARNING

The excavator is not designed or equipped to be used for lifting or to be fitted with lifting attachments.

Hydraulic Attachments

The excavator boom is equipped with auxiliary hydraulic lines to be used with optional attachments. A ball valve for activating these hydraulic lines is located under the valve cover. See your dealer for attachments available for use with your machine.

WARNING

This GEHL® Company machine is designed for use only with GEHL® Company approved accessories or referral attachments. The GEHL® Company cannot be responsible for the consequences if the unit is used with non-approved attachments.

TRANSPORTING

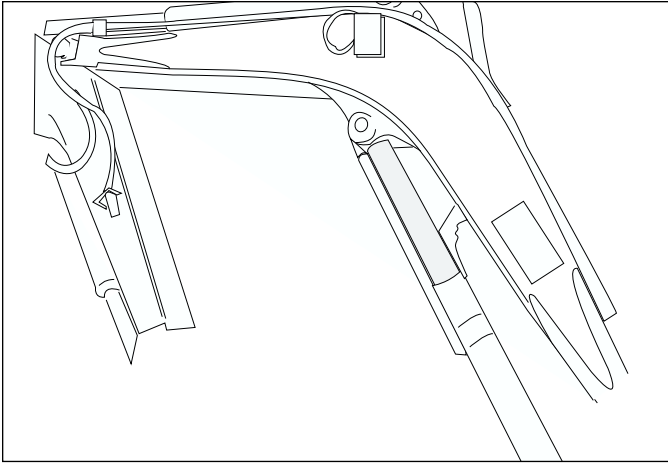


Figure 3-17. Boom Cylinder Safety Tube

LOCKING DEVICES

The following locking devices are provided for securing the machine components during towing or transport.

- Boom cylinder safety tube
- Dozer blade locking pins w/clip (Qty. 2)
- Boom swing strap and pin w/locking pins
- Cab swing locking pin
- Wheel chocks (Qty. 2)

IMPORTANT! When moving the machine for use (other than transporting), make sure all locking devices are disengaged

Boom Cylinder Safety Tube

The boom cylinder safety tube is stored on the top of the rear frame, above the dozer blade. To secure the boom in position, place the tube on the boom cylinder rod as shown in Figure 3-17.

Dozer Blade Locking Pins

The dozer blade locking pins w/clips are located in the storage box underneath the left side step.

Place a pin through each side of the dozer blade and frame and secure it with the clip as shown in Figure 3-18.

Boom Swing Strap

The swing safety strap pins and locking pins are located in the storage box underneath the left side step.

Align the locking tab on the left side of the cab with the locking tab on the frame. Secure the cab with the strap and locking pins as shown in Figure 3-19.

Cab Locking Pin

The cab swing locking pin is located on the cab floor next to the steering column (Figure 3-20). To lock the cab in the forward position, position the cab straight ahead, and then lift and turn the pin, then lower it until it engages the locking hole in the frame.

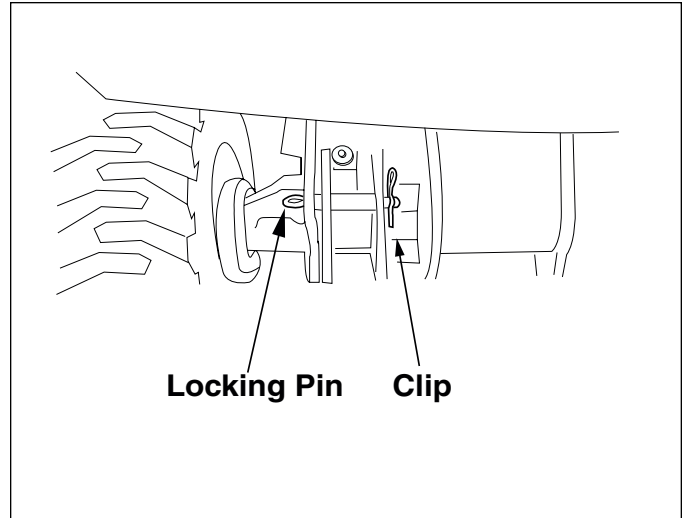


Figure 3-18. Dozer Blade Locking Pin w/Clip

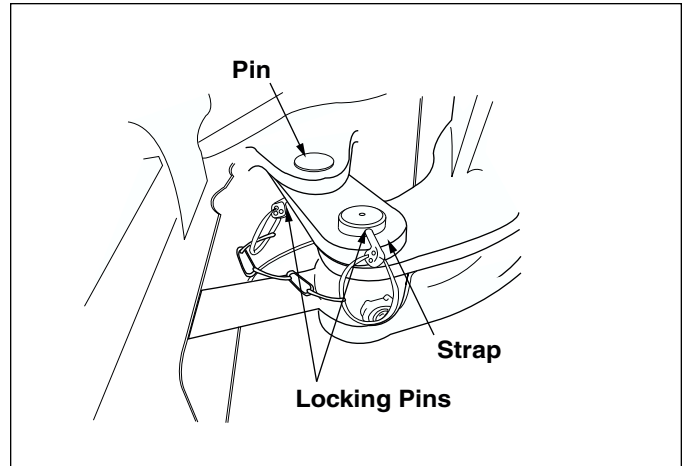


Figure 3-19. Boom Swing Strap and Pin w/Locking Pins

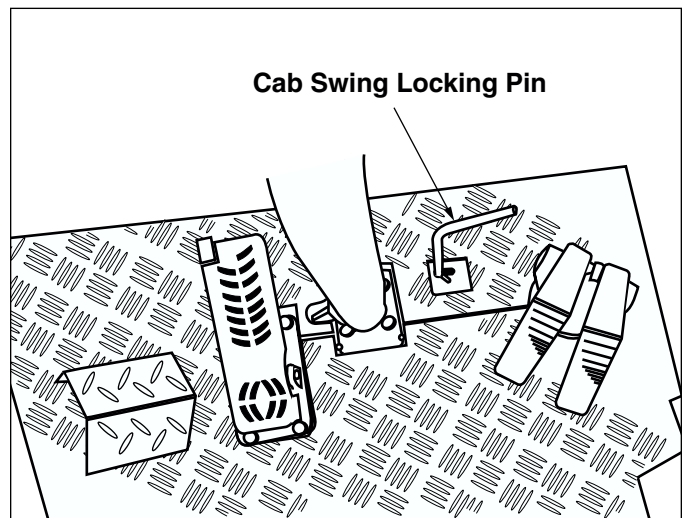


Figure 3-20. Cab Locking Pin

TRANSPORTING (continued)

LOCKING DEVICES (continued)

Wheel Chocks

Wheel chocks are stored in front of the left side steps. Use the wheel chocks to secure the wheels when parked on a slope or when transporting as shown in Figure 3-21.

Loading Machine for Transport

- Use only transport machines that are in proper working order and are approved for use on public roads.
- When using ramps to load machine onto the transport machine:
 - Do not exceed an incline of 18°.
 - Ramp width must be at least 1½ times the width of the tires.
 - Clean dirt, mud, ice and snow from the ramps and tires.
- Use metal loading ramps with a slip-resistant surface.

NOTE: *The ends of the ramps should be beveled to prevent damage to the tires (Figure 3-21).*

- Attach ramps securely to the transport machine to prevent them from slipping off during loading.
- Load the machine on solid, even ground.
- When loading, apply the transport machine parking brake and chock the wheels.
- Determine the direction of movement (blade facing forward) before moving the machine onto the ramps.
- After the machine is on the transport machine, lower the dozer blade and the bucket onto the loading surface (Figure 3-21). Turn off the engine.
- Lock the cab.
- Place chocks under machine tires and secure machine to prevent slipping, overturning and moving on the transport machine.
- Use the points on the excavator indicated by decals for tie down.

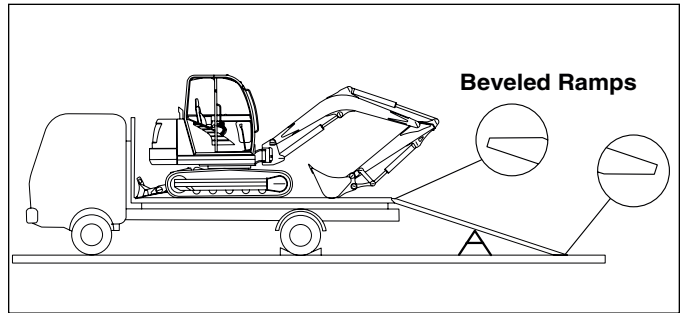


Figure 3-21. Transporting the Machine

Lifting the Machine

WARNING

Use lifting device with sufficient capacity for the weight of the machine plus any attachments.

Maintain center of gravity and balance when lifting.

Do not swing boom or cab.

Never lift machine with operator aboard.

- Secure the lifting fixture sling to the lifting points on the machine (Figure 3-22).
- Install spreader bar above the cab to prevent lifting fixture from rubbing on the machine.
- Do not exceed rated load capacity.

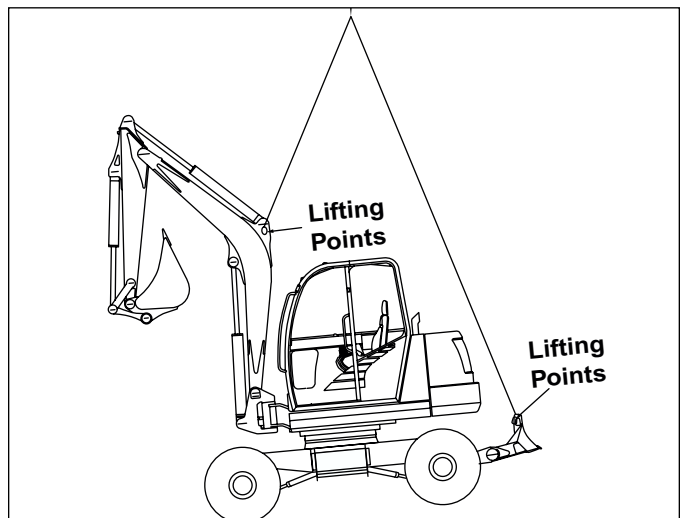


Figure 3-22. Machine Lifting Points

Road Driving

- The excavator has to be equipped for road driving according to the local highway code and laws.
- Install the SMV emblem on the rear of the machine, as required.
- The driving speed must be adapted to the road, visibility and environment conditions.
- During darkness, the arm side light must be installed.
- Engage the following locking devices:
 - Boom cylinder safety tube
 - Dozer blade locking pins (Qty. 2)
 - Boom swing strap and pin
 - Cab locking pin
 - Working Hydraulics Deactivate Switch
- Release the axle pivot lock
- Release the parking brake and drive brake.
- Position the two-speed transmission switch in the proper gear position.

Towing the Machine

IMPORTANT: Tow the excavator only if it is absolutely necessary and there is no other way of transporting it. Avoid towing long distances. Use only the towing bracket for towing. Maximum capacity of the towing bracket is 1-1/2 times the weight of the excavator.

1. Engage the following locking devices:
 - Boom cylinder safety tube
 - Dozer blade locking pins (Qty. 2)
 - Boom swing cab strap and pin
 - Cab locking pin
 - Working Hydraulics Deactivate Switch
2. Secure the shackle and locking pin to the towing bracket as shown in Figure 3-23.
3. See Figure 3-24. Release the parking brake.
4. See Figure 3-25. Loosen the locking nut and nut, then turn the threaded rod until the brake remains open.
5. Open the ball valve located over the hydraulic motor so that the oil circuit is open.
6. Tow only at low (walking) speed.

IMPORTANT: The hydraulic cooling system is not functioning when engine is off. Towing at higher speeds could cause damage to the hydraulic system.

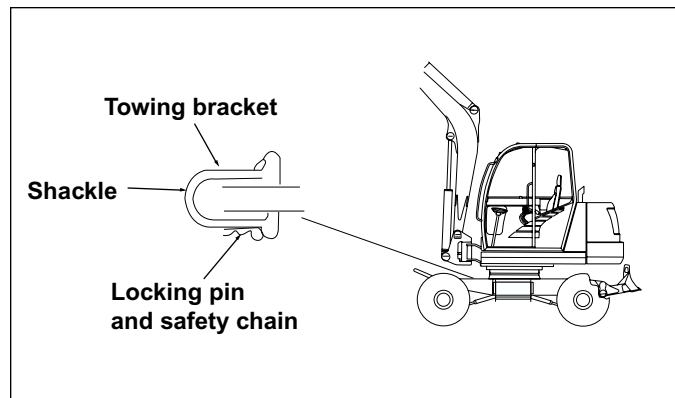


Figure 3-23. Towing Bracket

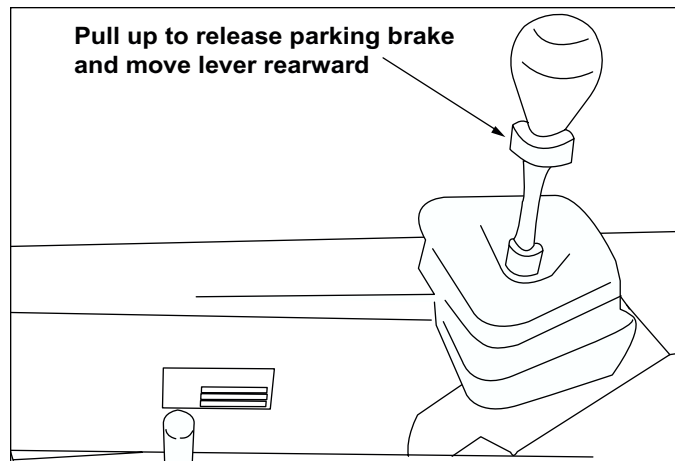


Figure 3-24. Releasing the Parking Brake for Towing

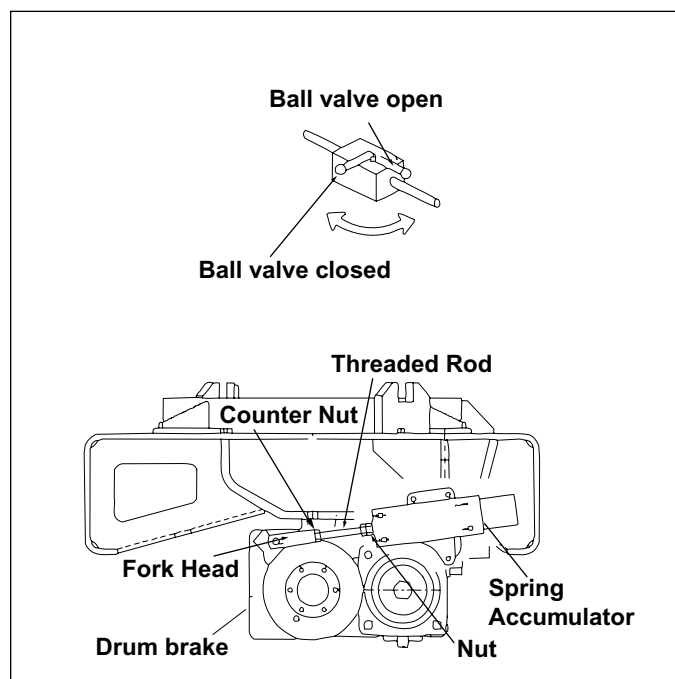


Figure 3-25. Preparing the Brake for Towing

IMPORTANT: Do not shift the transmission if the machine is moving or damage to the transmission will occur. Only shift transmission when machine is stopped.

MAINTENANCE

GENERAL INFORMATION

WARNING

Instructions are necessary before operating and servicing the machine. Read and understand this entire manual. Follow warnings and instructions for operation and maintenance. Check for correct function after adjustments or maintenance. Failure to follow instructions can result in injury or death.

WARNING

Be sure you are familiar with all safety devices and controls before operating or servicing the machine. Know how to stop before starting. This GEHL® Company machine is designed for use only with GEHL® Company approved accessories or referral attachments. The GEHL® Company cannot be responsible for the consequences if the unit is used with non-approved attachments.

WARNING

Read and thoroughly understand all safety decals before operating the machine. DO NOT operate the machine unless all factory installed guards and shields are in place.

WARNING

Hydraulic reservoir is under pressure. Avoid contact with leaking hydraulic fluid or diesel fuel under pressure. It can penetrate the skin or eyes.

WARNING

Tire mounting, repair and replacements should ONLY be attempted by a qualified tire manufacturer's representative, or by properly trained personnel following the tire manufacturer's instructions. If you do not have such instructions, contact your tire dealer or Gehl Company.

Care and Servicing

- Care and servicing have a significant influence on the readiness for operation and service life of the machine.
- For additional servicing work regarding the engine, see the engine manual provided with the machine.
- Use of lubricants that do not correspond to the manufacturer's recommendations may invalidate warranty claims.
- More frequent servicing, other than the recommended intervals, may be required under extreme operating conditions.
- Always dispose of waste lubricating oils according to local regulations or take to a recycling center for proper disposal. DO NOT pour fluids onto the ground or down a drain.

Maintenance Safety

- Never service the machine without reading the applicable instructions.
- Always lower bucket and dozer blade to the ground before performing any maintenance.
- Use correct procedures to lift and support the machine. Always lift the blade fully before installing jackstands.
- Cleaning and maintenance are required daily.
- Keep engine cover and hydraulic valve cover closed except for service. Close and latch covers before operating the machine.
- Be sure to have area properly ventilated when grinding or welding parts. Wear a dust mask.
- Vent exhaust to outside when engine must be run for service. Exhaust system must be tightly sealed. Exhaust fumes can kill without warning.
- Never modify equipment or add attachments not approved by Gehl Company.
- Stop engine and let cool, then clean engine of any flammable materials before checking fluid levels.

GENERAL INFORMATION (continued)

Maintenance Safety (continued)

- Never service or adjust machine with the engine running unless service procedure calls for the engine to be running.
- Avoid contact with leaking hydraulic fluid or diesel fuel under pressure. It can penetrate the skin or eyes. 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 and cause serious injury. If any fluid is injected into your skin, see a doctor at once. Injected fluid MUST be surgically removed by a doctor or gangrene may result.
- The operating pressure settings of the hydraulic system should only be set by trained, qualified personnel. If malfunctions are caused by unauthorized alteration of operating pressure settings, all warranty responsibilities on the part of the manufacturer are automatically invalidated.
- Never fill fuel tank with engine running, while smoking or when near open flame.
- Keep body, jewelry and clothing away from moving parts, electrical contacts, hot parts and exhaust.
- Wear eye protection when servicing the machine.
- Lead acid batteries produce flammable and explosive gas. Keep arcs, sparks, flames and lighted tobacco away from batteries.
- Batteries contain acid, which burns eyes and skin on contact. Wear protective clothing. If acid contacts body, flush well with water. For eye contact, flush well with water and get immediate medical attention.
- Inflating or servicing tires can be dangerous. Whenever possible, trained personnel should be called to service and/or mount tires. To avoid possible death or serious injury, follow the safety precautions below:
 - BE SURE the rim is clean and free of rust.
 - Lubricate both the tire beads and rim flanges with a soap solution. DO NOT use oil or grease.
 - Use a clip-on tire chuck with a remote hose and gauge which allows you to stand clear of the tire while inflating it.
 - Do not place your fingers on the tire bead or rim during inflation.
 - NEVER inflate beyond 35 PSI (240 kPa) to seat the beads. If the beads have not seated by the time the pressure reaches 35 PSI, deflate the assembly, reposition the tire on the rim, relubricate both parts and reinflate it. Inflation pressure beyond 35 PSI with unseated beads may break the bead or rim with explosive force sufficient to cause death or serious injury.
 - After seating the beads, adjust the inflation pressure to the recommended operating pressure listed.
 - DO NOT weld, braze, or otherwise attempt to repair and use a damaged rim.

MAINTENANCE SCHEDULE

IMPORTANT: Maintenance work must be done at regular intervals. Failure to perform scheduled maintenance work will result in excessive wear and early machine failures. The following service schedule is a recommended guide for servicing the machine.

Engine							
Service Activity	Daily	Weekly	Every 50 Hours	Every 125-250 Hours	Every 500 Hours	Every 1000 Hours	Annually
Check air filter	✓				✓		✓
Check engine oil level	✓						
Check fuel level	✓						
Check for leakage	✓						
Perform visual check	✓						
Check coolant level	✓						
Check engine mounting bolts		✓					
Check V-belt condition and tension		✓					
Clean radiator fins		✓					
Check fuel filter		✓					
Check exhaust system			✓				
Change engine oil and filter			✓*	✓			✓
Change fuel filter				✓			✓
Check engine speed regulation				✓			
Check valve clearance					✓		
Check cooling system and hoses					✓		
Check electrical connections					✓		
Check glow plug system					✓		
Check coolant thermostat					✓		
Check alternator & starter						✓	
Clean fuel tank						✓	
Check water pump						✓	

* First change only.

MAINTENANCE SCHEDULE (continued)

Hydraulic System							
Service Activity	Daily	Weekly	Every 50 Hours	Every 125-250 Hours	Every 500 Hours	Every 1000 Hours	Annually
Check hydraulic oil level	✓						
Check system for leakage	✓						
Check hydraulic pump bolts		✓					
Clean cooler fins		✓					
Change filter		✓*					
Change hydraulic oil		✓*			✓		✓
Check filter				✓			
Check hydraulic oil				✓		✓	✓
Check primary & secondary pressure relief valves					✓		
Check breather filter & filling strainer						✓	

Electrical System							
Service Activity	Daily	Weekly	Every 50 Hours	Every 125-250 Hours	Every 500 Hours	Every 1000 Hours	Annually
Check indicator lights	✓						
Check system function		✓					
Check connections			✓				
Check lights	✓						

Axles							
Service Activity	Daily	Weekly	Every 50 Hours	Every 125-250 Hours	Every 500 Hours	Every 1000 Hours	Annually
Check tires after work shift	✓						
Check wheel lug nuts		✓					
Check bearing play of wheels and axle bolts			✓				
Check brakes	✓						
Check brake linings						✓	✓
Check for leakage		✓					
Change final drive gear oil					✓*	✓	✓

* First change only.

Slewing Gear Ring

Service Activity	Daily	Weekly	Every 50 Hours	Every 125-250 Hours	Every 500 Hours	Every 1000 Hours	Annually
Change gear ring					✓		
Check bearing system		✓					✓

Cab

Service Activity	Daily	Weekly	Every 50 Hours	Every 125-250 Hours	Every 500 Hours	Every 1000 Hours	Annually
Check fan	✓						
Check function	✓						
Check heating circuit for leaks	✓						
Check seals	✓						
Check windshield wiper system		✓					

Bucket Arm, Boom & Dozer Blade

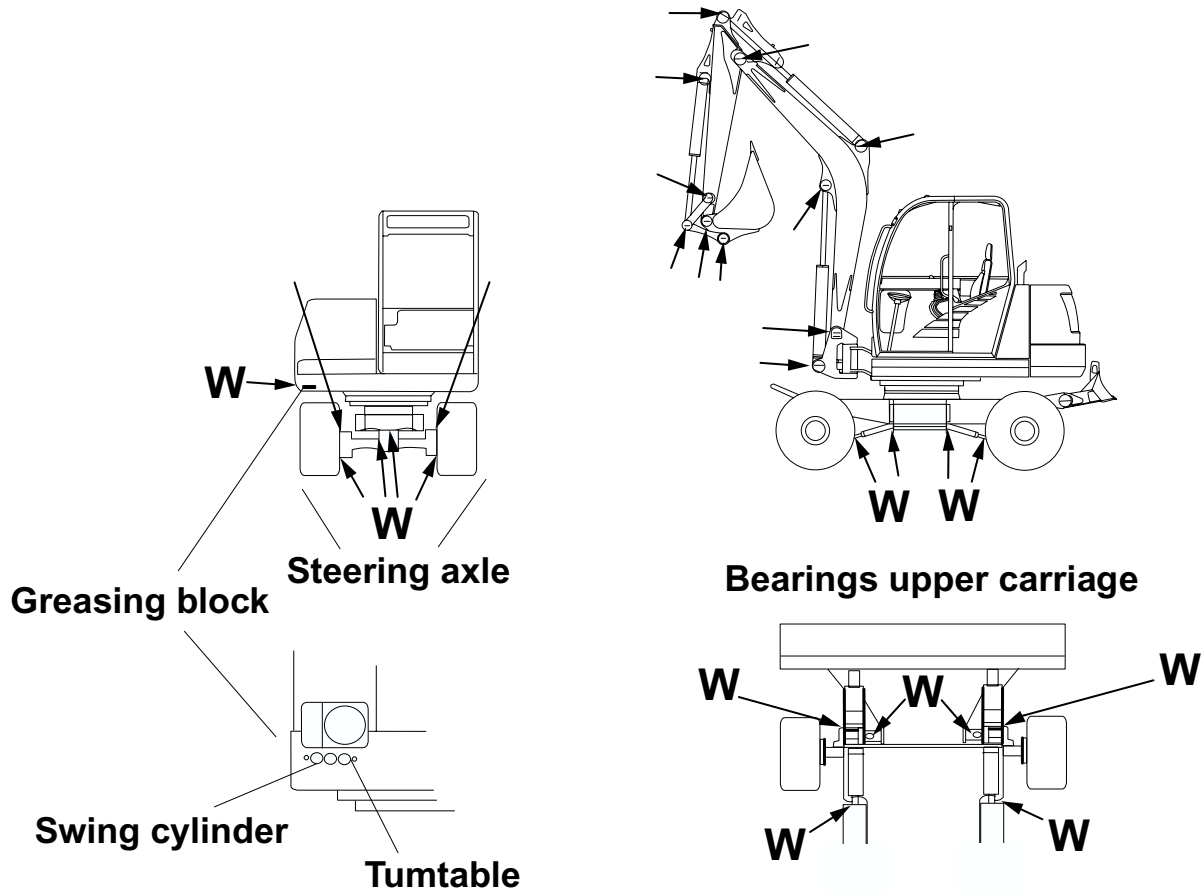
Service Activity	Daily	Weekly	Every 50 Hours	Every 125-250 Hours	Every 500 Hours	Every 1000 Hours	Annually
Lubricate all points	✓						
Check bucket teeth for wear	✓						
Check pin fastening	✓						
Check hydraulic line connections	✓						
Check piston rods	✓						
Check hydraulic cylinder under load						✓	
Check bearing play				✓			

LUBRICATION

Lubrication Points

Green Caps—lubricate weekly (points marked with a “W”)

Blue Caps—lubricate daily



Recommended Lubricants

ENGINE OIL

A diesel engine oil conforming to SAE grade 10W 30 or 15W 40, and API classification CD (or higher, e.g., CH-4), such as BP Vanellus MG 15W 40, BP Vanellus C-Extra 10W 30, or Chevron Delo 400 15W 40

HYDRAULIC OIL

A hydraulic oil with anti-wear, anti-foam, and anti-oxidation additives that conforms to ISO Viscosity Grade 46, such as, Mobil DTE 15M, Amoco Rykon 46, or BP Energol HLP-HD 46.

SLEWING RING

A heavy-duty lithium complex grease with 3% molybdenumdisulfide, such as Chevron RPM Heavy Duty Grease No. 2, Mobilgrease Moly 52, or BP Energrease Moly EP2.

DRIVE AXLES

An EP grade gear oil that conforms to API GL 5, such as Chevron Delo Gear 80W 90 or BP Transgear 80W 90

SLEWING GEAR UNIT

An EP grade gear oil that conforms to API GL 5, such as Chevron Delo Gear 80W 90 or BP Transgear 80W 90

EXCAVATOR ARM

A heavy-duty lithium complex grease with 3% molybdenumdisulfide, such as Chevron RPM Heavy Duty Grease No. 2, Mobilgrease Moly 52, or BP Energrease Moly EP2.

ALL LUBRICATION POINTS

A heavy-duty lithium complex grease with 3% molybdenumdisulfide, such as Chevron RPM Heavy Duty Grease No. 2, Mobilgrease Moly 52, or BP Energrease Moly EP2.

RANGES OF APPLICATIONS

From -13°F to +104°F (-25°C to +40°C)
outside temperature

NOTE: All listed greases are suitable for -13°F to +104°F (-25°C to +40°C).

ENGINE

NOTE: Be sure to read the engine manual supplied with this machine.

Checking Engine Oil Level

IMPORTANT: See the lubricant list for engine oil grade. Only use engine oil specified, or of equivalent quality and grade, or damage to the engine could occur.

The machine must be on a level surface and the engine turned off.

1. Run the engine until it is at operating temperature, then turn the engine off.
2. Pull the engine cover latch lever (Figure 4-1) and raise the engine cover.
3. Check the engine oil level using the dipstick located on rear of the engine (Figure 4-2).
4. Add oil if required.

NOTE: The marks on the dipstick indicate the minimum and maximum oil levels.

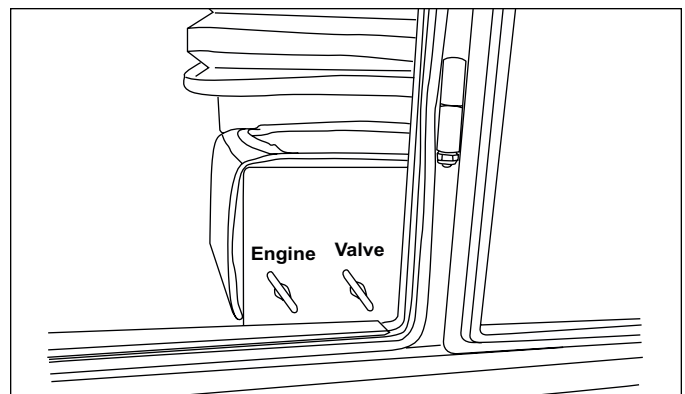


Figure 4-1. Engine Cover Latch Lever

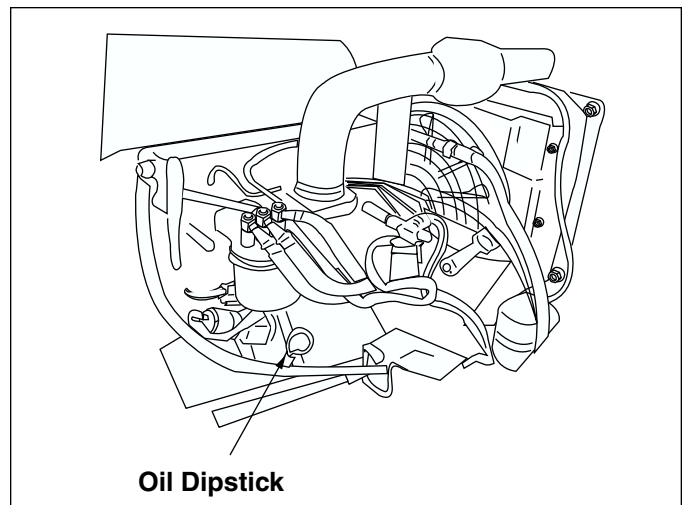


Figure 4-2. Engine Oil Dipstick

ENGINE (continued)

Changing Engine Oil & Filter

1. Place the machine on a level surface. Run the engine until it is at operating temperature, then turn the engine off.
2. Pull the engine cover latch lever (Figure 4-1) and raise the engine cover.
3. Remove the drain plug from the oil pan underneath the engine and allow oil to drain into a container.
4. Remove the oil filter using a filter wrench.
5. Clean the filter housing surface. Put a film of clean oil on the filter gasket. Install the new filter with gasket and hand tighten.
6. Reinstall the drain plug.
7. Remove the oil fill cap from the engine (Figure 4-3). Pour in new oil. Crankcase capacity is 6.1 qts. (5.7 L). Reinstall oil fill cap.
8. Start the engine and let it run for several minutes. Stop the engine and check for leaks at the oil filter and oil drain plug.
9. Check the oil level again and add oil if necessary.

Air Cleaner Service

1. The air cleaner is located under the hydraulic valve cover. Pull the valve cover latch lever (Figure 4-1) and raise the cover.
2. Loosen the air cleaner cover bolt (Figure 4-4) to remove the air cleaner cover and gasket.
3. Remove the wingnut (Figure 4-5) and remove air cleaner element.
4. Clean air cleaner element with compressed air 30 psi (200 kPa) (Figure 4-5.)
5. Reinstall air cleaner element, wingnut, gasket, and air cleaner cover. Tighten cover bolt.
6. Close cover.

IMPORTANT: Do not knock the element against solid object to remove dust. The element may become distorted and damaged.

Do not operate engine without the air cleaner element installed or damage to the engine could occur.

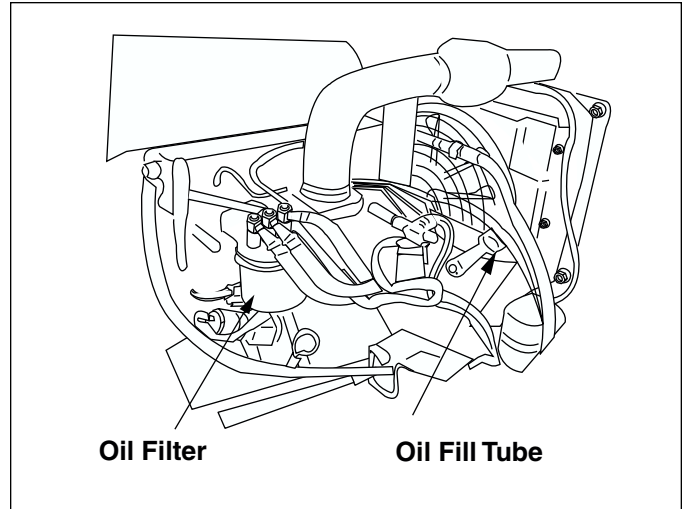


Figure 4-3. Engine Oil Fill and Filter

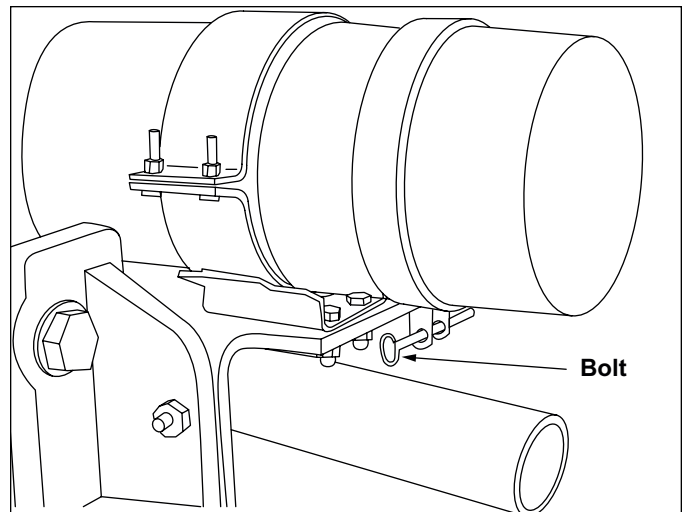


Figure 4-4. Engine Air Filter

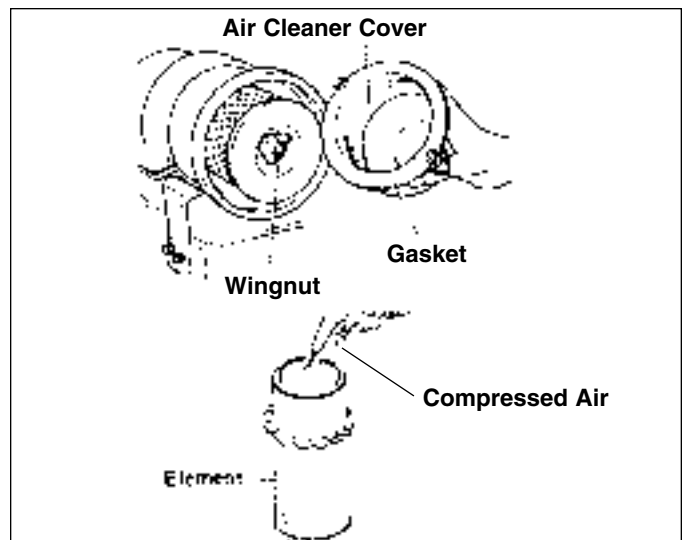


Figure 4-5. Servicing Engine Air Filter

FUEL SYSTEM

Filling the Fuel Tank

WARNING

Stop and cool the engine before adding fuel. **NO SMOKING!** Failure to obey warnings can cause an explosion or fire.

The fuel level in the tank is indicated by the fuel gauge on the console (Figure 4-6).

NOTE: When the fuel level reaches 2.5 gal. (10 L) the low fuel indicator light (Figure 4-6) will come on to alert the operator.

To fill the tank, remove the fuel filler cover located on top of the hydraulic valve cover. Fill using diesel fuel with a cetane rating of over 45. Re-install fuel cap.

IMPORTANT: Never operate machine until fuel tank is completely empty. If this occurs, the fuel system will have to be bled of air. Always fill tank after use.

WARNING

Always clean up spilled fuel or oil. Keep heat, flames, sparks or lighted tobacco away from fuel and oil. Failure to use care around combustibles can cause explosion or fire, which can result in injury or death.

Fuel Filter

Unscrew the clear plastic housing (Figure 4-7) to change the filter element and clean dirt from the housing. Clean around the filter housing. Put oil on the seal of the new filter element. Install the fuel filter and hand tighten.

The fuel system must be purged of air after changing the fuel filter, or if the fuel tank has been run dry.

Purging Air from the Fuel System

1. Turn the fuel filter valve (Figure 4-7) to the open position (vertical).
2. While operating the priming lever on the fuel injector pump, loosen the air bleeding screw (A, Figure 4-8) on the fuel filter. When fuel starts flowing from the bleeder screw (A) without any air, tighten the bleeder screw (A).
3. Repeat step 2 for bleeder screws B, C, D and E (Figure 4-8).

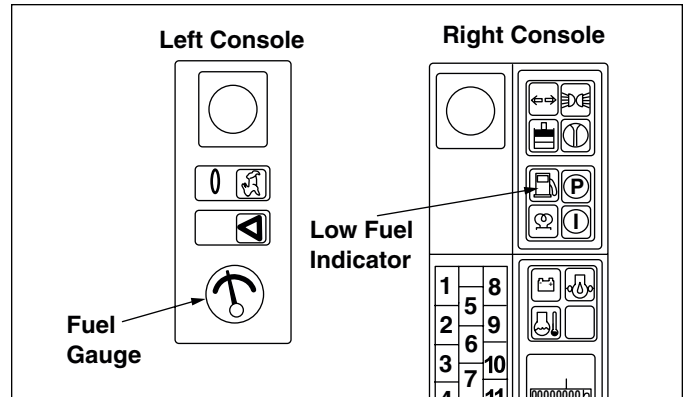


Figure 4-6. Fuel Gauge and Low Fuel Indicator

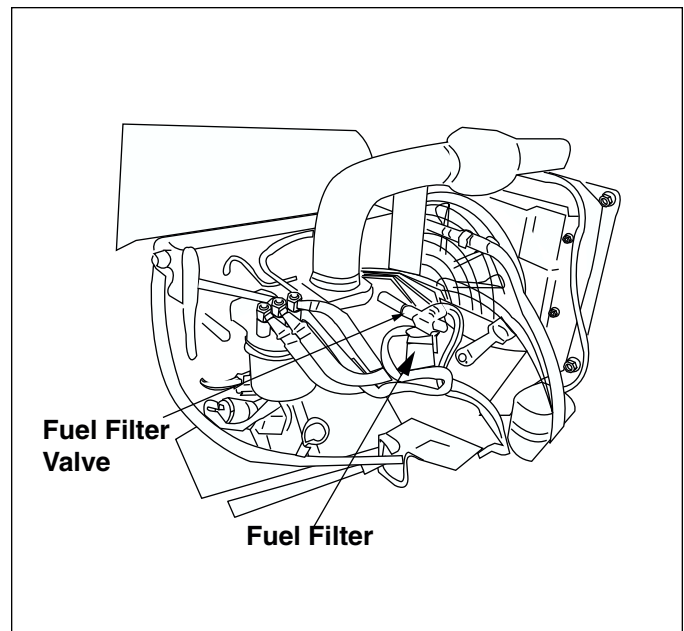


Figure 4-7. Fuel Filter

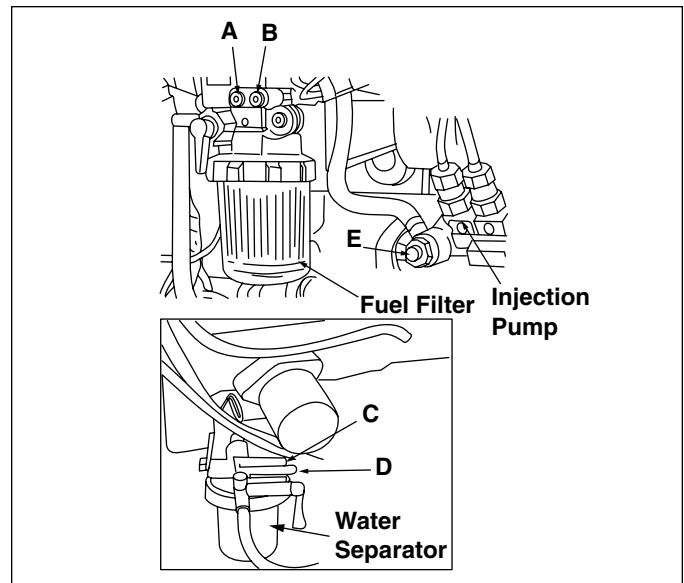


Figure 4-8. Bleeding Air from Fuel System

COOLANT SYSTEM

Checking Coolant Level

1. Pull the engine cover latch lever (Figure 4-1) and raise the engine cover.
2. Check the coolant level in the expansion reservoir (Figure 4-9).
3. If low, slowly remove cap and fill reservoir to FULL line.

WARNING

Engine must be cold. Be careful to avoid burns when removing the cap. Keep face away from cap. Cover cap with a cloth, turn cap slowly to release pressure.

Refer to the engine manual for correct coolant mixture for your engine.

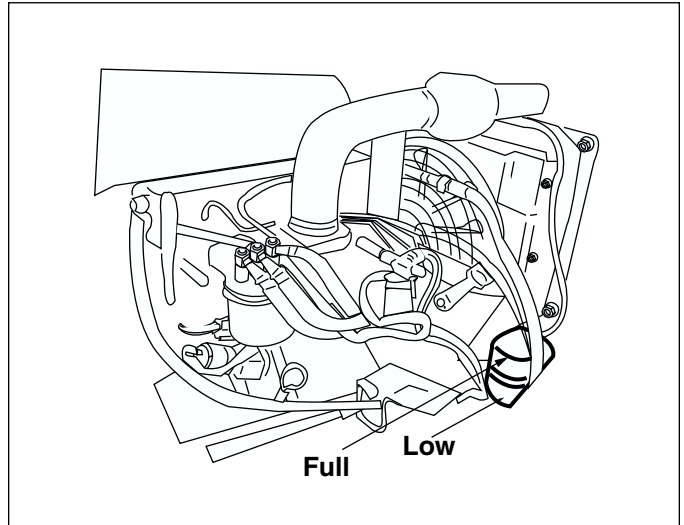


Figure 4-9. Checking Coolant Level

ELECTRICAL SYSTEM

Fuses

The fuse panel is located on the right arm console (Figure 4-10).

To replace a fuse, remove the panel cover and pull the old fuse from the socket. Install a new fuse and re-install the fuse panel cover.

Refer to page 3-3 in Chapter 3 for fuse identification.

Battery

WARNING

Batteries contain acid, which burns eyes and skin on contact. Wear safety goggles and protective clothing to keep acid off body.

In case of acid contact, wash immediately with water for several minutes. In case of eye contact, get medical attention immediately.

The battery is located under the hydraulic valve cover. To access the battery, pull the cover latch lever (Figure 4-1) and open the cover.

The battery cables must be clean and tight. Remove any acid or corrosion from the battery and cables using a sodium bicarbonate and water solution. Cover the battery terminals and cable ends with battery saver grease.

The battery is maintenance-free and requires no other service.

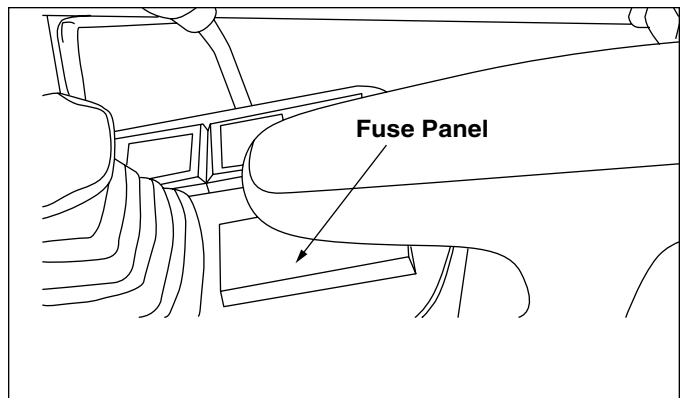


Figure 4-10. Fuse Panel

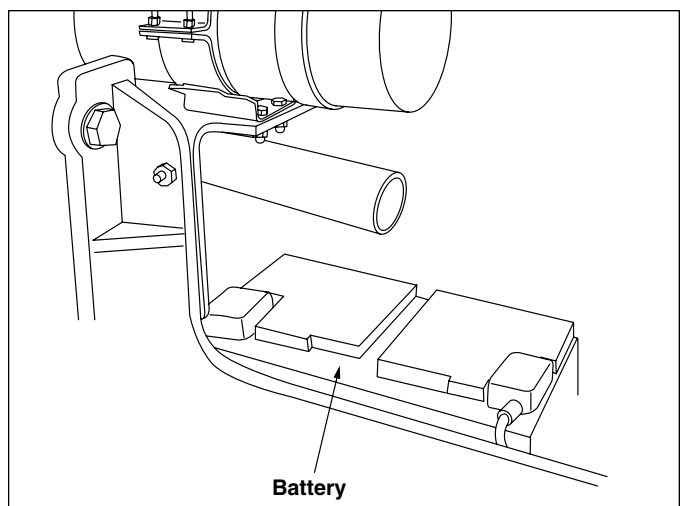


Figure 4-11. Battery

WARNING

Keep arcs, sparks, flames and lighted tobacco away from batteries. When jump starting from booster battery, make final connection (negative) at engine frame.

DO NOT jump start or charge a frozen battery. Warm battery to 60°F (16°C) before connecting to a charger. Unplug charger before connecting or disconnecting cables to battery.

Battery gas can explode and cause serious injury.

IMPORTANT: When jump starting from another machine, be sure the second machine is not running while using the glow plugs. High voltage spikes from a running machine can burn out the glow plugs.

IMPORTANT: Damage to the alternator can occur if:

- ***Engine is operated with battery cables disconnected.***
- ***Battery cables are connected when using a fast charger or when welding on the machine. Remove both cables from the battery.***
- ***Extra battery cables (booster cables) are incorrectly connected.***

Be very careful when jump starting the machine. Booster battery must be 12 volt.

1. Turn ignition key to the off position.
2. Pull the hydraulic valve cover latch lever (Figure 4-1) and open the cover.
3. Connect one end of the cable to the positive (+) terminal on the booster battery. Connect the other end of the same cable to the positive (+) terminal on the machine battery.
4. Connect one end of the second cable to the negative (-) terminal on the booster battery. Connect the other end of the same cable to the machine frame.
5. Start the machine engine. Once the engine is running, remove the cable connected to the frame first. Disconnect the other cable from the machine battery positive (+) terminal.

HYDRAULIC SYSTEM

WARNING

Hydraulic oil reservoir is under pressure. Avoid contact with leaking hydraulic fluid under pressure. It can penetrate the skin or eyes and cause severe injury.

Checking Hydraulic Oil Level

1. Position the machine on a level surface.
2. Fully extend the bucket and boom as shown (Figure 4-12). Lower bucket and dozer blade to the ground. Turn off the machine.
3. Pull the hydraulic valve cover latch lever (Figure 4-1) and open the cover to expose the hydraulic oil level indicator (Figure 4-12).
4. Check the hydraulic oil level indicator (Figure 4-12). Oil level should be between black and red marks on sight glass. If hydraulic oil is required, proceed to step 5.
5. Remove access panel located above hydraulic oil reservoir (Figure 4-13) to expose the hydraulic oil filler cap.
6. Slowly open the cap to relieve pressure (Figure 4-14).
7. Add hydraulic oil until oil level is between red and black marks on indicator (Figure 4-12).
8. Re-install hydraulic reservoir cap and tighten securely.
9. Start engine and let idle for a few minutes.
10. Check hydraulic functions. Recheck hydraulic oil level.
11. Reinstall access panel.

Changing Hydraulic Oil

1. Position the machine on a level surface.
2. Fully extend the bucket and boom. Lower bucket and dozer blade to the ground (Figure 4-12). Turn off the machine.
3. Remove access panel located above hydraulic oil reservoir (Figure 4-13) to expose the hydraulic oil filler cap.
4. Slowly open the cap to relieve pressure (Figure 4-14). Remove cap and clean strainer of any debris.
5. Open the drain plug (Figure 4-15) and drain oil into a suitable container. Re-install drain plug and tighten securely.

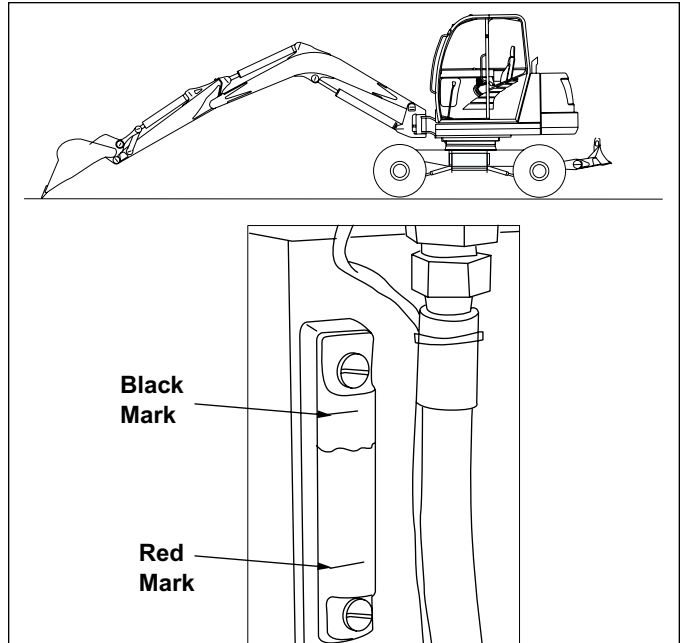


Figure 4-12. Checking Hydraulic Oil Level

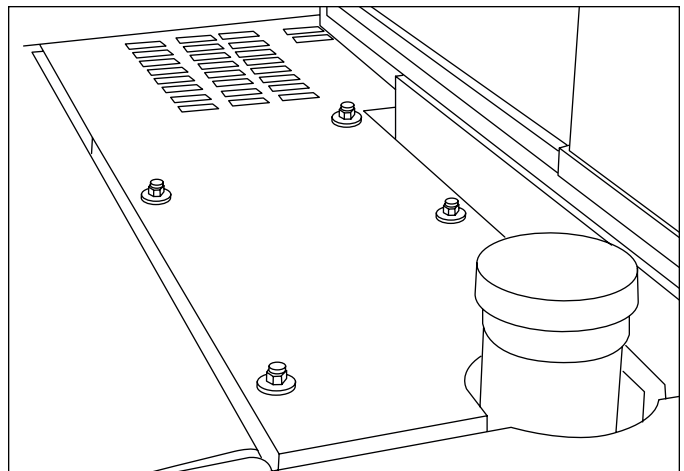


Figure 4-13. Hydraulic Oil Cap Access Panel

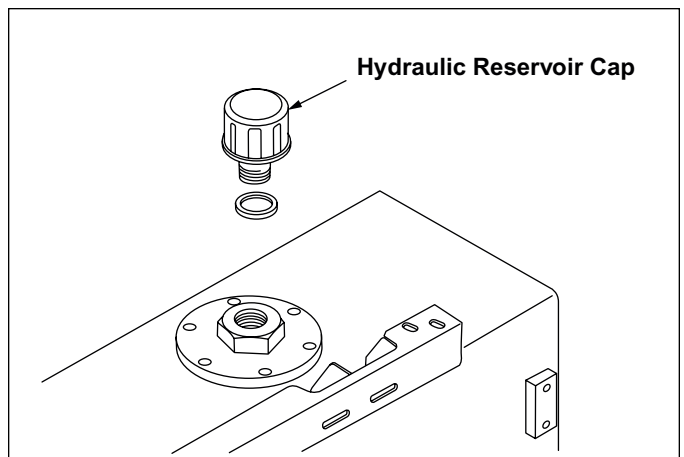


Figure 4-14. Hydraulic Oil Reservoir Cap

IMPORTANT: Always dispose of hydraulic fluids according to local regulations or take to a recycling center for proper disposal. DO NOT pour fluids onto the ground or down a drain.

6. Remove four bolts and filter cover (Figure 4-15). Remove and discard old filter. Put clean hydraulic fluid on the filter gasket and install gasket and new filter into reservoir.
7. Re-install filter cover and bolts.
8. Fill tank with hydraulic oil until oil level is between red and black marks on indicator (Figure 4-12).
9. Re-install hydraulic tank cap and tighten securely.
10. Start engine and let idle for a few minutes.
11. Check hydraulic functions. Re-check hydraulic oil level.
12. Re-install access panel.

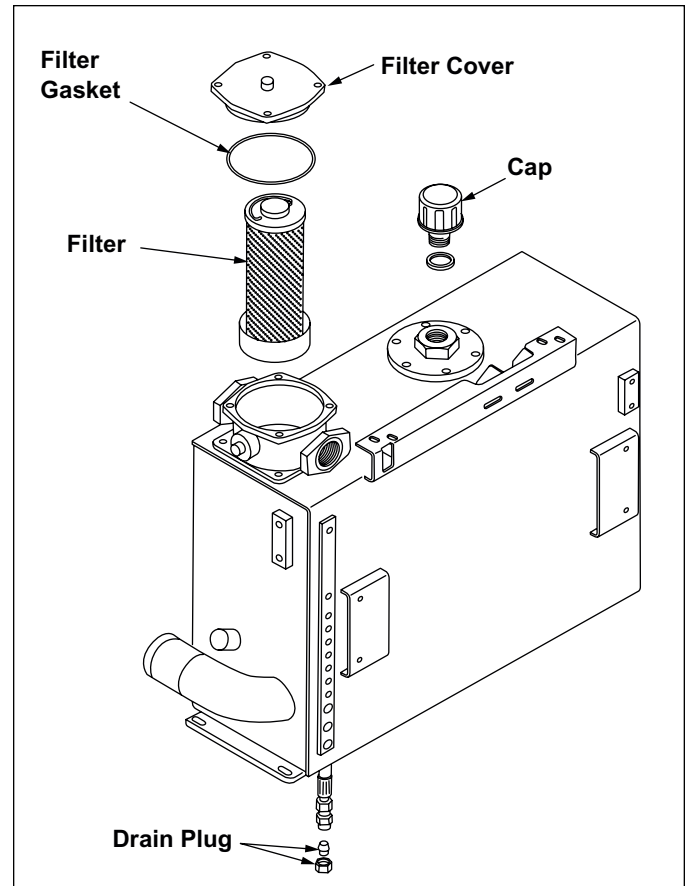


Figure 4-15. Hydraulic Oil Tank

FINAL DRIVE WHEELS/DRIVE SYSTEM

Changing Wheel Gear Oil

1. Position the machine on a level surface with wheel drain plug positioned as shown in POSITION 1, Figure 4-16. Turn off the engine.
2. Open the plug and drain oil into a suitable container. Re-install plug.
3. Start the engine and move the machine slightly until check plug is positioned as shown in POSITION 2, Figure 4-16. Turn off the engine.
4. Remove both screw plugs. Pour fresh Gearoil EP 80W 90 API GL 5 into the top hole until oil starts to run out of the bottom hole.
5. Re-install both plugs securely.
6. Repeat steps 1 - 5 for the other wheels.

Changing Front/Rear Axle Oil

1. Position the machine on a level surface. Turn off the engine.
2. Remove the drain and filler plugs on axle and drain oil into a suitable container.
3. Re-install drain plug and tighten properly.
4. Refill with fresh Gearoil EP 80W 90 API GL 5 until oil starts to run out of filler opening.
5. Re-install the filler plug.

IMPORTANT: Always dispose of oil according to local regulations or take to a recycling center for proper disposal. DO NOT pour fluids onto the ground or down a drain.

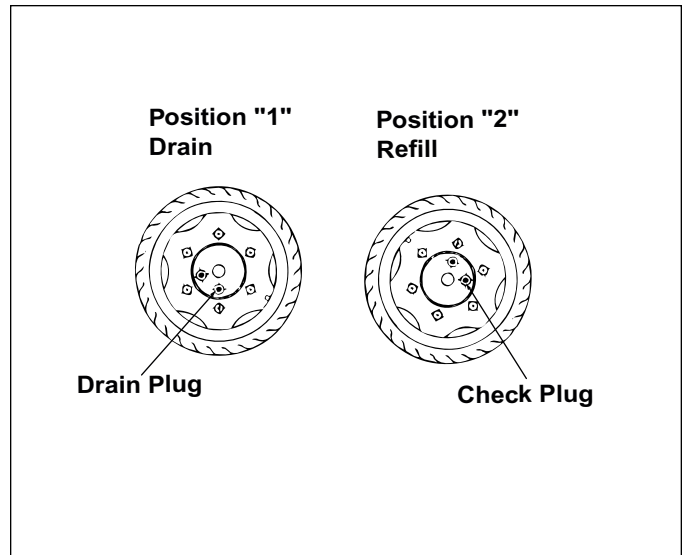


Figure 4-16 Changing Final Drive Oil

Changing a Wheel/Tire

1. Position the machine on a level surface.
2. Use the bucket and dozer blade to lift the unit up until the wheel/tire is just clear of the ground. Turn off the engine.
3. Remove the wheel as required. Repair or replace the tire. Reinstall wheel. Tighten lug nuts to 190 ft. lbs. (260 Nm)
7. Start the engine. Lower the unit to the ground.

WARNING

Tire mounting, repair and replacements should **ONLY** be attempted by a qualified tire manufacturer's representative, or by properly trained personnel following the tire manufacturer's instructions. If you do not have such instructions, contact your tire dealer or Gehl Company.

TROUBLESHOOTING

GENERAL INFORMATION

WARNING

Be sure you are familiar with all safety devices and controls before operating or servicing the machine. Know how to stop before starting. This GEHL® Company machine is designed for use only with GEHL® Company approved accessories or referral attachments. The GEHL® Company cannot be responsible for operator safety if the unit is used with non-approved attachments.

WARNING

Instructions are necessary before operating and servicing the machine. Read and understand this entire manual. Follow warnings and instructions for operation and maintenance. Check for correct function after adjustments or maintenance. Failure to follow instructions can result in injury or death.

WARNING

Read and thoroughly understand all safety decals before operating the machine. **DO NOT** operate the machine unless all factory installed guards and shields are in place.

WARNING

Hydraulic reservoir is under pressure. Avoid contact with leaking hydraulic fluid or diesel fuel under pressure. It can penetrate the skin or eyes.

ENGINE

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Engine will not start.	No fuel.	Add fuel to tank; bleed fuel system.
	Battery power insufficient.	Charge battery or replace if necessary.
	Fuel filter contaminated.	Clean fuel filter.
	Glow plug system not working.	Replace glow plug system. Contact authorized dealer.
Insufficient engine power.	Fuel line leakage.	Replace fuel line.
	Air filter contaminated.	Clean air filter.
	Engine not at operating temperature.	Warm up the engine.
	Engine overheated.	Check cooling system.

INDICATOR LAMPS

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Engine oil pressure indicator light comes on during operation.	Engine oil pressure too low.	Stop engine immediately. Check oil level and add oil if necessary. If oil level is correct, oil pump may be inoperative.
	Engine oil level too low.	Add oil.
Water temperature display light comes on during operation.	Coolant level too low.	Add coolant.
	Fan blades rotate too slowly.	Adjust V-belt tension.
	Air filter contaminated.	Clean air filter.
Battery voltage light comes on during operation.	Alternator not charging properly.	Adjust V-belt tension.
Fuel light comes on.	Low fuel.	Add fuel.

SEALS & HOSES

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Oil or fuel leakage under engine.	Loose hose connections.	Tighten hose connections.
	Seals or hoses damaged.	Change seals or hoses and check engine oil level. Add engine oil if required.
Oil leakage from hydraulic system.	Loose hose fittings.	Tighten hose fittings. Check hydraulic oil level. Add hydraulic oil if required.
	Seals, hoses or lines damaged.	Change seals, hoses and/or lines.




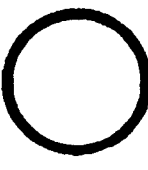



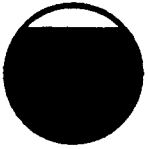
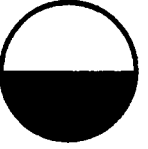
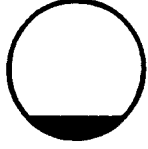
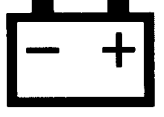

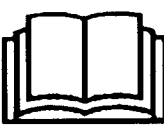
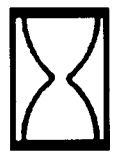



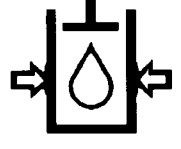
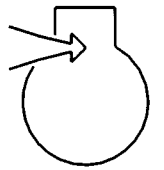



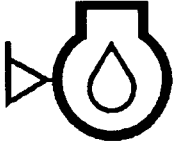

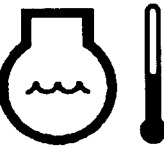



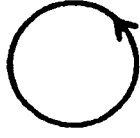
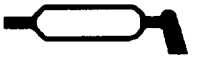
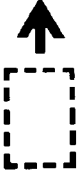
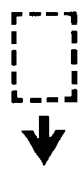

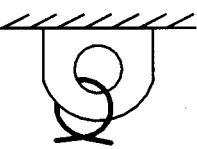






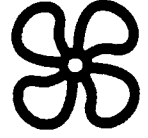

TRAVELLING GEAR

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Machine will not travel in any direction.	Foreign body jammed in wheel.	Remove foreign body.
	Transmission not operative.	Repair transmission. Contact authorized dealer.
Machine will not travel straight ahead.	Foreign body jammed in wheel(s).	Remove foreign body.
	Tire pressure unequal.	Adjust tire pressure.
	Travel valves damaged.	Repair/replace valves. Contact authorized dealer.

BUCKET, BOOM AND DOZER BLADE

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Slewing chassis is difficult or impossible.	Swing brake does not release.	Contact authorized dealer.
	Insufficient lubrication.	Lubricate slewing ring hose connections.
	Slewing motor not operating.	Contact authorized dealer.
Equipment does not work, or works only at a low performance level.	Insufficient hydraulic oil.	Fill hydraulic oil reservoir.
	Insufficient engine power.	Contact authorized dealer.
	Drive coupling or pump damaged.	Contact authorized dealer.
	Relief valves set too low.	Contact authorized dealer.
	Hydraulic cylinder damaged.	Contact authorized dealer.
	Control valves damaged.	Contact authorized dealer.
Hydraulic cylinders lower too quickly.	Seals contaminated or damaged.	Contact authorized dealer.
	Heavy leakage at control spools.	Contact authorized dealer.
	Secondary relief valve damaged.	Contact authorized dealer.
Hydraulic lines overheat.	Hydraulic oil filter blocked.	Clean or replace filter.
	Insufficient hydraulic oil in reservoir.	Fill hydraulic oil reservoir.
	Secondary relief valve set too low.	Contact authorized dealer.
	Cooling system blocked.	Clean oil cooler.

INTERNATIONAL SYMBOLS

					
Engine Start	Engine Stop	Power On	Power Off	Work Light	Hazard Flasher
					
Horn	Volume - Full	Volume - Half Full	Volume - Empty	Battery Charge	Fuse
					
Read Operator's Manual	Engine Hourmeter	Diesel Fuel	Hydraulic Reservoir	Parking Brake	Hydraulic Oil Pressure
					
Engine Air Filter	Glow Plug	Engine Oil	Engine Oil Pressure	Engine Oil Level	Engine Oil Temperature
					
Engine Coolant	Hydraulic Oil Temperature	Control Handles	Clockwise Rotation	Counterclockwise Rotation	Grease Lubrication Point
					
Machine Travel - Forward	Machine Travel - Reverse	Seatbelt - Lap Only	Tie-Down	Fast	Slow
					
Rotating Beacon	Turn Signals	Lift Point	Windshield Wiper/Washer	Circulating Fan	Alert



Gehl Company 143 Water Street, P.O. Box 179, West Bend, WI 53095-0179 U.S.A.

California Proposition 65 Warnings

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

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