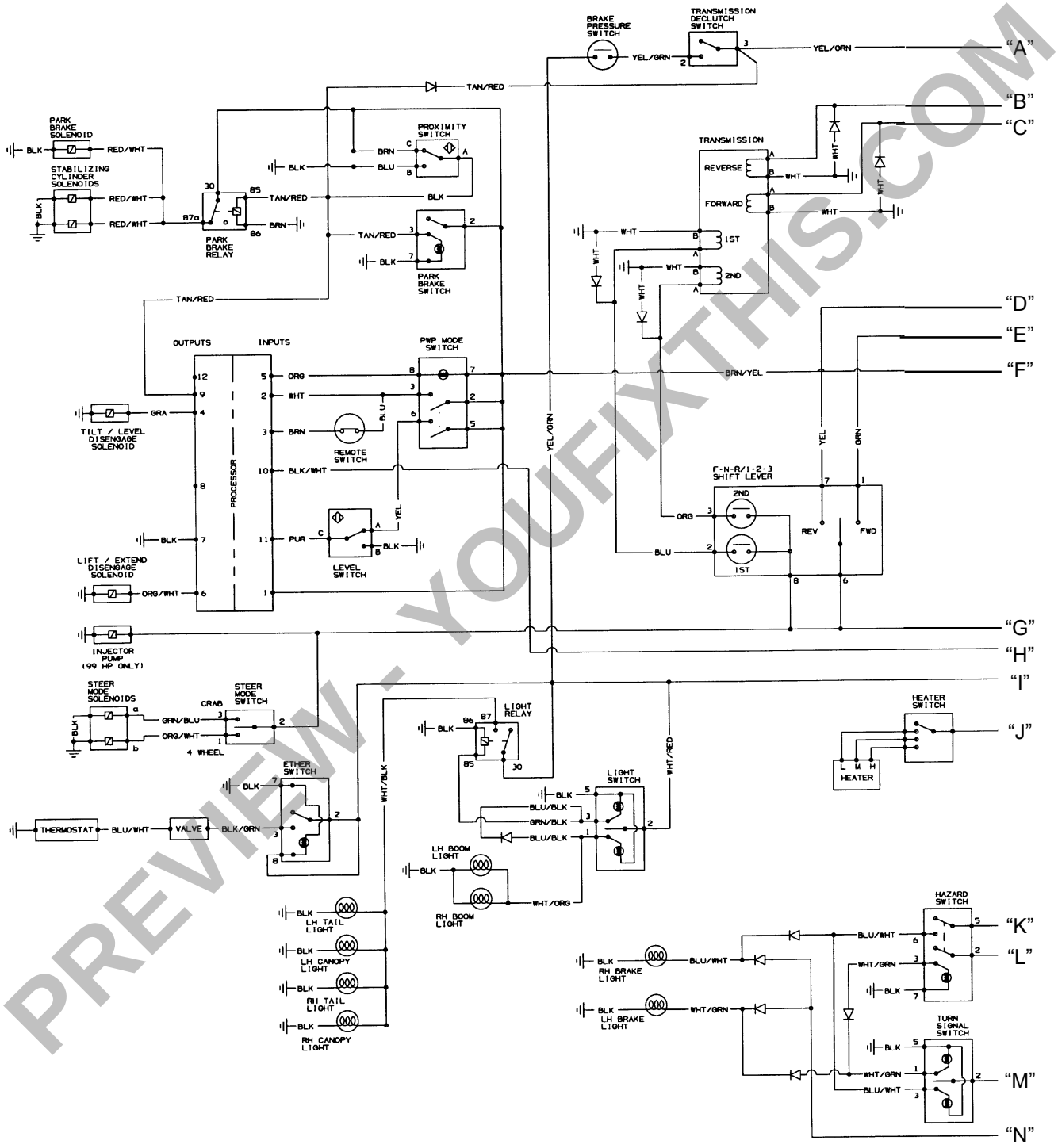
Electrical Schematic

with Dual Joystick Control

(continued on next page)



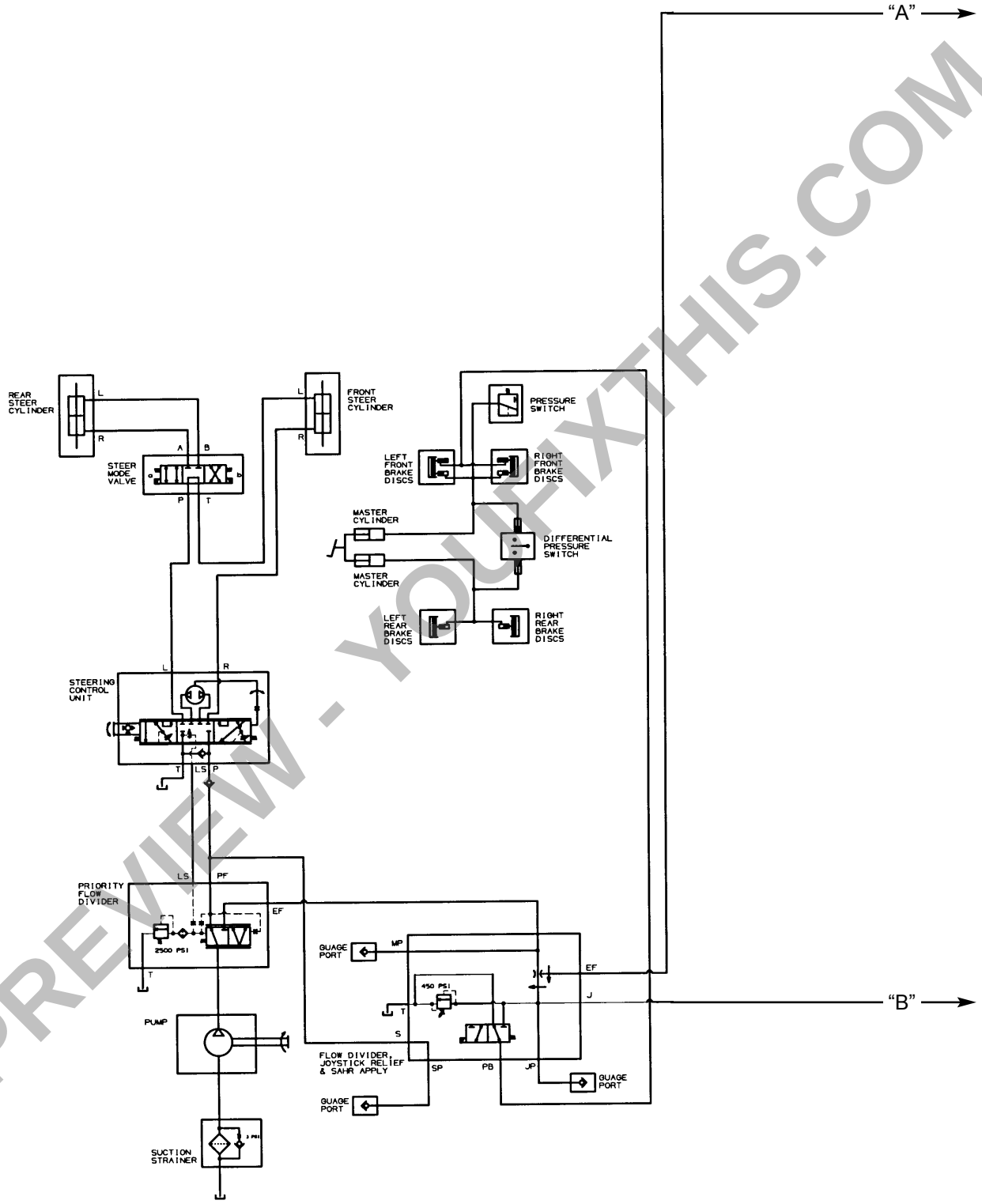
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Hydraulic Schematic w/o PWP

with Dual Joystick Control

(continued on next page)



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Torque Specifications

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

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

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

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

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Engine Coolant Temperature

There are two coolant temperature features: High Coolant Temperature WARNING, and High Coolant Temperature SHUTDOWN.

At the High Coolant Temperature WARNING set-point, the warning lamp in the engine override switch will flash and a slow engine power derate will begin. But if the coolant temperature drops below the High Coolant Temperature WARNING set-point, the power will increase slowly until the engine is back to full power. The lamp will continue to flash until the power has returned to normal even if the fault condition has been corrected and the recovery is in process.

At the High Coolant Temperature SHUTDOWN set-point, the lamp in the engine override switch will light continously, and a fast engine power derate will begin. If the coolant temperature does not drop below the SHUTDOWN set-point within 30 seconds, the engine will shut down. Howerver, if the coolant temperature drops below the High Coolant Temperature SHUTDOWN set-point within 30 seconds, then the power derate speed will revert to the High Coolant Temperature WARNING speed of reaction.

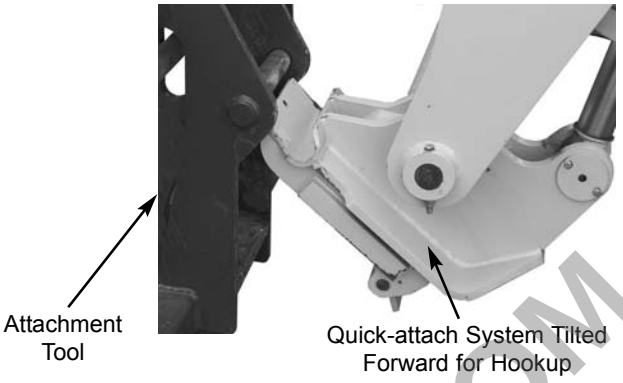
PARKING BRAKE

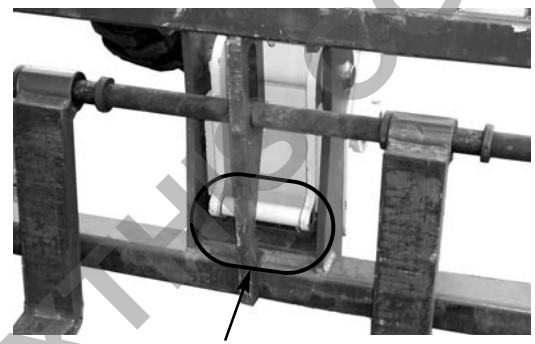
NOTE: *The parking brake mechanism within the front axle is NOT designed for, OR intended to be used as, the primary means of stopping movement of the machine. Hydraulic braking provided through the service brakes within the axles is the primary means for stopping movement. The axle-by-axle split brake system is the secondary means of stopping movement.*

The proper sequence for correct machine operation is to always engage the parking brake switch before shutting off the engine; and to disengage the parking brake ONLY after the engine is running. In an EMERGENCY, if it becomes necessary to STOP movement, activate the parking brake switch to "ON."

CHANGING ATTACHMENT TOOLS

The Telescopic Handler boom nose will accept Quick-attach System Gehl attachment tools. The Quick-attach System has a quick-release hookup and locking mechanism for mounting framing-type or masonry-type attachment tools to the boom nose.





Quick-attach System Attaching Detail

Attaching

To pick up the attachment tool proceed as follows:

1. Raise the boom slightly and extend it 2 to 3 feet (600 to 900 mm) for better visibility and tilt the Quick-attach System forward.
2. Align the Quick-attach System squarely with the back of the attachment tool.
3. Slowly extend the Quick-attach System and lower the hooks under the attachment tool hookup bar.
4. Tilt the Quick-attach System back so that the lock plate engages the attachment tool. This secures the attachment tool to the quick-attach system.
5. For an attachment tool with auxiliary hydraulics, connect hoses to the quick-disconnect connectors on the boom nose.

Detaching

To detach attachment tool, proceed as follows:

1. Raise the boom slightly and extend it 2 to 3 feet (600 to 900 mm) for better visibility. Lower the boom until the attachment tool is approximately 12" (0.3 m) off the ground.

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PWP SYSTEM OPERATIONAL TROUBLESHOOTING

Problem	Possible Cause	Remedy
PWP System mode lamp flashes when switch is turned “ON.” Parking brake did not engage when the PWP System switch is turned “ON.” Carriage tilt and auxiliary functions continue operating when the PWP System switch is turned “ON.” Transmission does not remain de-clutched when shifted into “FORWARD or REVERSE” when the PWP switch is “ON.”	PWP System not activated.	With PWP System switch “ON,” apply service brakes for two seconds until PWP mode lamp is on continously.
Boom control functions do not operate.	Machine is not level. Remote PWP System switch is de-activated. Remote PWP System switch is not plugged into the connector at the end of the boom. PWP System level sensor unplugged or faulty.	Level the machine. Activate the remote PWP System switch. Plug in and engage the remote PWP System switch. Contact your Gehl dealer for assistance.
PWP System mode lamp flashes when switch is turned “OFF.” Parking brake lamp stays “ON” when PWP System switch is turned “OFF.”	PWP System is not de-activated.	With engine running, apply service brakes for two seconds until PWP mode lamp goes off.

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Chapter 2

SPECIFICATIONS

Lifting Performance

Maximum lift capacity:

RS8-44	8000 lbs. (3628 kg)
RS8-42	8000 lbs. (3628 kg)
RS6-42	6600 lbs. (2994 kg)

Maximum lift height:

RS8-44	44’ (13.4 m)
RS8-42	42’ (12.8 m)
RS6-42	42’ (12.8 m)

Capacity at maximum lift height:

RS8-44	
Outriggers up	7000 lbs. (3175 kg)
Outriggers down	8000 lbs. (3628 kg)
RS8-42	
Outriggers up	7000 lbs. (3175 kg)
Outriggers down	8000 lbs. (3628 kg)
RS6-42	
Outriggers up	6600 lbs. (2994 kg)
Outriggers down	6600 lbs. (2994 kg)

Max. forward reach to load center:

RS8-44	30’ 5” (9.3 m)
RS8-42	28’ 3” (8.6 m)
RS6-42	28’ 3” (8.6 m)

Capacity at maximum forward reach:

RS8-44	
Outriggers up	1000 lbs. (454 kg)
Outriggers down	3000 lbs. (1360 kg)
RS8-42	
Outriggers up	1000 lbs. (454 kg)
Outriggers down	3000 lbs. (1360 kg)
RS6-42	
Outriggers up	1000 lbs. (454 kg)
Outriggers down	3000 lbs. (1360 kg)

Maximum below grade reach:

RS8-44	16” (406.4 mm)
RS8-42	14” (355.6 mm)
RS6-42	14” (355.6 mm)

Frame Leveling:

10^{O} left/10^{O} right

General Dimensions

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

Recommended tire type:
13.00 x 24 12-ply
13.00 x 24/12 PR, foam filled

Overall length, less forks:

RS8-44	19’ 10” (6.04 m)
RS8-42	19’ 1” (5.81 m)
RS6-42	19’ 1” (5.81 m)

Overall width:
8’ (2.4 m)

Overall height:
7’-8” (2.34 m)

Ground clearance: 16” (406.4 mm)
Wheel base: 9’-11 1/2” (3.03 m)
Outside turn radius: 13’-8” (4.2 m)

Machine weight:

RS8-44	23,500 lbs. (10,659 kg)
RS8-42	23,350 lbs. (10,591 kg)
RS6-42	22,000 lbs. (9,979 kg)

Instrumentation

Gauges: Fuel level, hourmeter and coolant temperature

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

Visual indicators:
Boom angle, frame angle

Steering System

Steer Valve: Fixed displacement rotary
Displacement/Rev: 17.9 cu. in. (293 cc)
System pressure: 2500 psi (172 bar)
Steer cylinders: 1 per axle
Steer mode valve:
3-position, 4-way solenoid with dash-mounted switch actuation
Steer modes: 2-wheel, 4-wheel, crab

Braking System

Service brakes: Oil-immersed inboard hydraulic wet-disc type; seperate front and rear systems;
Manual foot pedal actuation

Parking brake: Spring-applied, hydraulic-release disc-type in front axle

Actuation is electric switch with engine running, automatic with engine off.

Electrical System

Type: 12-volt, negative ground
Battery: 950 cold cranking amps
Circuit protection: Fuse panel
Backup alarm: 107 dB(A)
Horn: 111 dB(A)

Standard on all models:
Brake lights, rear backup light, neutral start switch

Alternator: 65-amp

Service Capacities

Cooling System:
4.3 gallons (16.3 L)
50/50 mixture

Anti-freeze protection: -34^{O}F (-31^{O}C)
Pressure cap: 10 psi (69 kPa)
Fuel tank: 47 gallons (178 L)
Hydraulic tank & system:
47 gallons (178 L)
Hydraulic Cooler Flow:
19 gpm (72 L/min)
Transmission & cooler: 24 qts. (22.7 L)

Axles:
Differentials (2): 9.6 qts. (9 L) ea.
Hubs (4): 0.6 qts. (0.5 L) ea.

Transmission

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

Travel Speeds:

1st gear:	3.3 mph (5.31 km/h)
2nd gear:	7.3 mph (11.75 km/h)
3rd gear:	18.8 mph (30.25 km/h)

Axles (front and rear)

Type: Dana
Drive/steer, open differential, double-reduction planetary, full-time four-wheel drive
Overall ratio: 22.67:1

Engine

Common to all options:
In-line 4-cycle, 4-cylinder, direct injection diesel fuel system, in-line fuel filter w/water trap, positive pressure lubrication, liquid pressurized cooling system, 18” (457 mm) blower fan, dry single-element air cleaner, spin-on oil filter, 65-amp alternator.

Turbocharged aspiration *(RS6 only)*:
John Deere 4045T
276 cu. in. (4523 cc) displacement
99 hp (74 kW) @ 2500 rpm
Oil capacity: 14 qts. (13.3 L)

Turbocharged aspiration:
John Deere 4045T
276 cu. in. (4523 cc) displacement
115 hp (86 kW) @ 2500 rpm
Oil capacity: 14 qts. (13.3 L)

Hydraulic System

Type: Open-center
Pump: Single-section gear type

Displacement / revolution:
3.72 cu. in. (61 cc)

Flow @ 2500 RPM:
40 gpm (151 L/min)

Main relief pressure:
3000 psi (207 bar)
Steer relief pressure:
2500 psi (172 bar)

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

Hydraulic strainer:
In-tank suction, 100-micron media, replaceable element
Rated flow: 100 gpm (379 L/min)
By-pass pressure: 3 psi (21 kPa)

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Chapter 10

MAINTENANCE

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

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

MAINTENANCE INTERVAL CHART

SERVICE PROCEDURE	Every 10 Hours (or Daily)	Every 50 Hours (or Weekly)	First 100 Hours	Every 250 Hours (or Quarterly)
Checking Fuel Tank Level	●			
Checking Engine Oil Level	●			
Checking Radiator Coolant Level	●			
Checking Transmission Oil Level	●			
Checking Hydraulic Oil Level	●			
Checking Brake Reservoir Level	●			
Checking Tire Pressures	●			
Checking Wheel Nut Torque	●1,2			
Checking Instruments Operation	●			
Checking General Machine Operation and Condition	●			
Checking Personnel Work Platform Safety System	●			
Lubricate Grease Points		●		
Checking Fuel Filter (Drain Water If Required)		●		
Changing Engine Oil and Filter			●2	
Changing Transmission Oil and Filter			●2	
Changing Hydraulic Oil Filter			●2	
Checking Axle Oil Levels				●
Changing Fuel Filter				●
Changing Engine Oil and Filter				●
Checking Battery				●

1 - On new machines or when a wheel has been removed, until 450 ft.-lbs. (610 Nm) is maintained.
2 - Only New Machines.

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Chapter 6

OPERATION AND ADJUSTMENTS

GENERAL INFORMATION

CAUTION

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

ENGINE BREAK-IN

A new engine does not require extensive "break-in." However, for the first 100 hours of operation, follow these guidelines: Allow the engine to idle for a few minutes after every cold start. DO NOT idle the engine for long periods of time. DO NOT operate the engine at maximum power for long periods of time. Check the oil level frequently and replenish as necessary with the oil specified in the engine manual.

John Deere engines use a "break-in" oil for the first 100 hours of operation. After the first 100 hours of operation, change the oil and replace the oil filter. Consult the LUBRICATION chapter for the type and grade of oil to use. Refer to the SERVICE AND STORAGE chapter for the proper service intervals.

PRESTART INSPECTION

It is the operator's responsibility to inspect the machine before the start of each workday. Every prestart inspection must include more than simply checking the fuel and oil levels. It is a good practice to personally inspect any machine you are assigned to use, even though it has already been put into service by other personnel.

The most efficient method of checking a machine is by conducting a "Walk-Around Inspection."

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

BEFORE STARTING ENGINE

Before starting the engine and running the machine, refer to the Indicators and Controls chapter and become familiar with the various operating controls, indicators and safety features.

STARTING THE ENGINE

WARNING

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

The following procedure is recommended for starting the engine:

1. Carefully step up and grasp the hand holds to step into the operator's compartment.
2. Adjust the seat and fasten the seatbelt.
3. Check that all controls are in their "neutral" positions, except the parking brake switch, which should be in the "ON" position.
4. Turn the key switch to "ON" position and press the start button. If the button is released before the engine starts, turn the key switch to "OFF" position, and allow the starter to stop before attempting to start again.

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

6. After the engine starts, allow a sufficient warm-up time before attempting to operate the controls.
7. Check that indicators are in normal condition.
8. Check that there are no fuel, oil or engine coolant leaks, and no abnormal noises or vibrations.

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