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1. DIMENSIONS

Dimensions

	153 Yanmar 3TNE68ENSR	***153*** Yanmar 3TNE74ENSR2	***153*** Yanmar 3TNV76-SNS
Starting with Serial No.	**AB00440**	**AC00304**	**AE00001**
Dimensions (H x W x L)	7' 9-3/4" x 3' 3" x 8' 10-3/8" (2380 x 990 x 2700 mm)	7' 9-3/4" x 3' 3" x 8' 10-3/8" (2380 x 990 x 2700 mm)	7' 9-3/4" x 3' 3" x 8' 10-3/8" (2380 x 990 x 2700 mm)
Axle Distance	48-1/4" x 63-1/4" (1223 x 1605 mm)	48-1/4" x 63-1/4" (1223 x 1605 mm)	48-1/4" x 63-1/4" (1223 x 1605 mm)
Transport Length	12' 6" (3810 mm)	12' 6" (3810 mm)	12' 6" (3810 mm)
Boom Swing Angle (Left/Right)	80°/45°	80°/45°	80°/45°
Minimum Front Boom Swing Radius	5' 1-1/4" (1555 mm)	5' 1-1/4" (1555 mm)	5' 1-1/4" (1555 mm)
Tilt Angle Uppercarriage	N/A	N/A	N/A
Maximum Ground Clearance	7.9" (200 mm)	7.9" (200 mm)	7.9" (200 mm)
Undercarriage Width	3' 3" x 4' 3-1/4" (990—1300 mm)	3' 3" x 4' 3-1/4" (990—1300 mm)	3' 3" x 4' 3-1/4" (990—1300 mm)
Track Width (Standard)	9" (230 mm)	9" (230 mm)	9" (230 mm)
Maximum Dump Height (Standard)	8' 4-1/4" (2545 mm)	8' 4-1/4" (2545 mm)	8' 4-1/4" (2545 mm)
Maximum Dump Height with Optional Long Dipper Arm	8' 9" (2665 mm)	8' 9" (2665 mm)	8' 9" (2665 mm)
Maximum Dig Height (Standard)	11' 6" (3500 mm)	11' 6" (3500 mm)	11' 6" (3500 mm)
Maximum Dig Height with Optional Long Dipper Arm	11' 10-1/2" (3620 mm)	11' 10-1/2" (3620 mm)	11' 10-1/2" (3620 mm)
Maximum Dig Radius (Standard)	12' 4-1/2" (3770 mm)	12' 4-1/2" (3770 mm)	12' 4-1/2" (3770 mm)
Maximum Vertical Dig Depth (Standard)	4' 10-3/4" (1490 mm)	4' 10-3/4" (1490 mm)	4' 10-3/4" (1490 mm)
Maximum Dig Depth (Standard)	7' 2" (2185 mm)	7' 2" (2185 mm)	7' 2" (2185 mm)
Minimum Tail Swing Radius	3' 9-3/4" (1160 mm)	3' 9-3/4" (1160 mm)	3' 9-3/4" (1160 mm)
Dozer Blade Dimensions (W x H) (Standard)	3' 3" x 10" (990 x 260 mm)	3' 3" x 10" (990 x 260 mm)	3' 3" x 10" (990 x 260 mm)
Dozer Blade Maximum Lift ... Ground (Above/Below)	10"/9" (260 mm/230 mm)	10"/9" (260 mm/230 mm)	10"/9" (260 mm/230 mm)
Track Rollers/Guide Rollers (Number Per Side)	3 pcs.	3 pcs.	3 pcs.
Operation Weight with Cab	3759 lbs. (1705 kg)	3759 lbs. (1705 kg)	3759 lbs. (1705 kg)
Operation Weight with Canopy	3583 lbs. (1625 kg)	3583 lbs. (1625 kg)	3583 lbs. (1625 kg)
Ground Pressure (Standard)	3.8 psi (0.27 kg/cm²)	3.8 psi (0.27 kg/cm²)	3.8 psi (0.27 kg/cm²)
Gradability	30°/58%	30°/58%	30°/58%
Noise Level (LWA)	93 dB (A)	93 dB (A)	93 dB (A)
Noise Level (LPA)	77 dB (A)	77 dB (A)	77 dB (A)
Travel Speed (Drive)	1.7—3.5 mph (2,8—5,6 km/h)	1.7—3.5 mph (2,8—5,6 km/h)	1.7—3.5 mph (2,8—5,6 km/h)
Tear-Out Force Per Bucket Tooth	252 psi (1735 kPa)	252 psi (1735 kPa)	252 psi (1735 kPa)
Maximum Dipper Arm Tear-Out Force (Standard)	150 psi (1038 kPa)	150 psi (1038 kPa)	150 psi (1038 kPa)
Uppercarriage Slew (Swivel) Speed	10 rpm	10 rpm	10 rpm

Explanation:

O = Optional

N = Not Available/Not Applicable

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1. MAINTENANCE SCHEDULE Gehl 153—223

Servicing activity component	Every 10 h (daily)	Every 50 h (weekly)	Every 250 h (6 months)	Every 500 h (12 months)	Every 1000 h (18 months)	Annually
ENGINE						
Oil Level	O					
Fuel Level	O					
Leakage	O					
Visual Check	O					
Air Filter	O/X			<>		<>
Seating of Mounting Bolts		O				
Coolant	O					
Engine Speed Regulation			O			
Exhaust System			O			
Engine Oil	O	<>(1)	<>			<>
Oil Filter		<>(1)	<>			<>
V-Belt: Condition and Tension		O				
Cooler Fins		X				
Valve Clearance		O			O	
Alternator, Starter					O	
Fuel Tank					X	
Water Pump					O	
Fuel Filter		O	<>			<>
Cooling System and Hoses				O		
Electrical Connections				O		
Glow Plug System				O		
Coolant Thermostat				O		
Battery Fluid		O				

O - Check
X - Clean
<> - Change/Replace
<> (1) - Change/Replace the first time

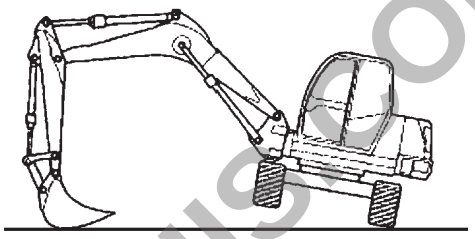
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10. **UNDERCARRIAGE**

> CHECK AND ADJUST TRACK TENSION

1. Position the machine on a level surface.
2. Use the bucket and dozer blade to lift the unit up until the tracks are clear of the ground as shown. Turn off the engine.
3. Measure the clearance at the center of the track frame. Deflection should be between 0.6—0.8" (15—20 mm).
4. Using a grease gun, pump grease into the fitting unitl the track is properly tensioned.



NOTE: A grease gun is supplied with machine tool kit.

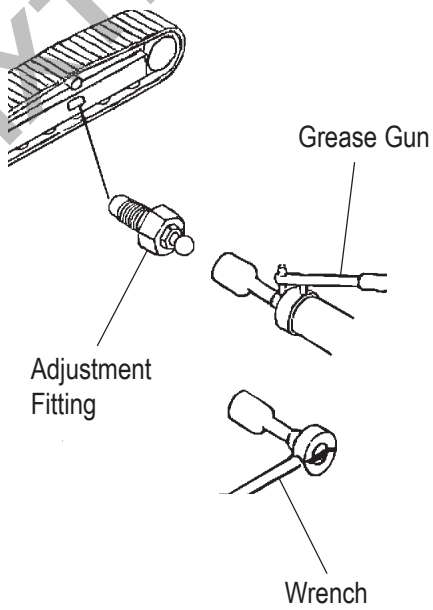
IMPORTANT!

Do not over-tension the track. If the track is too tight, loosen the grease fitting to relieve pressure.

WARNING!

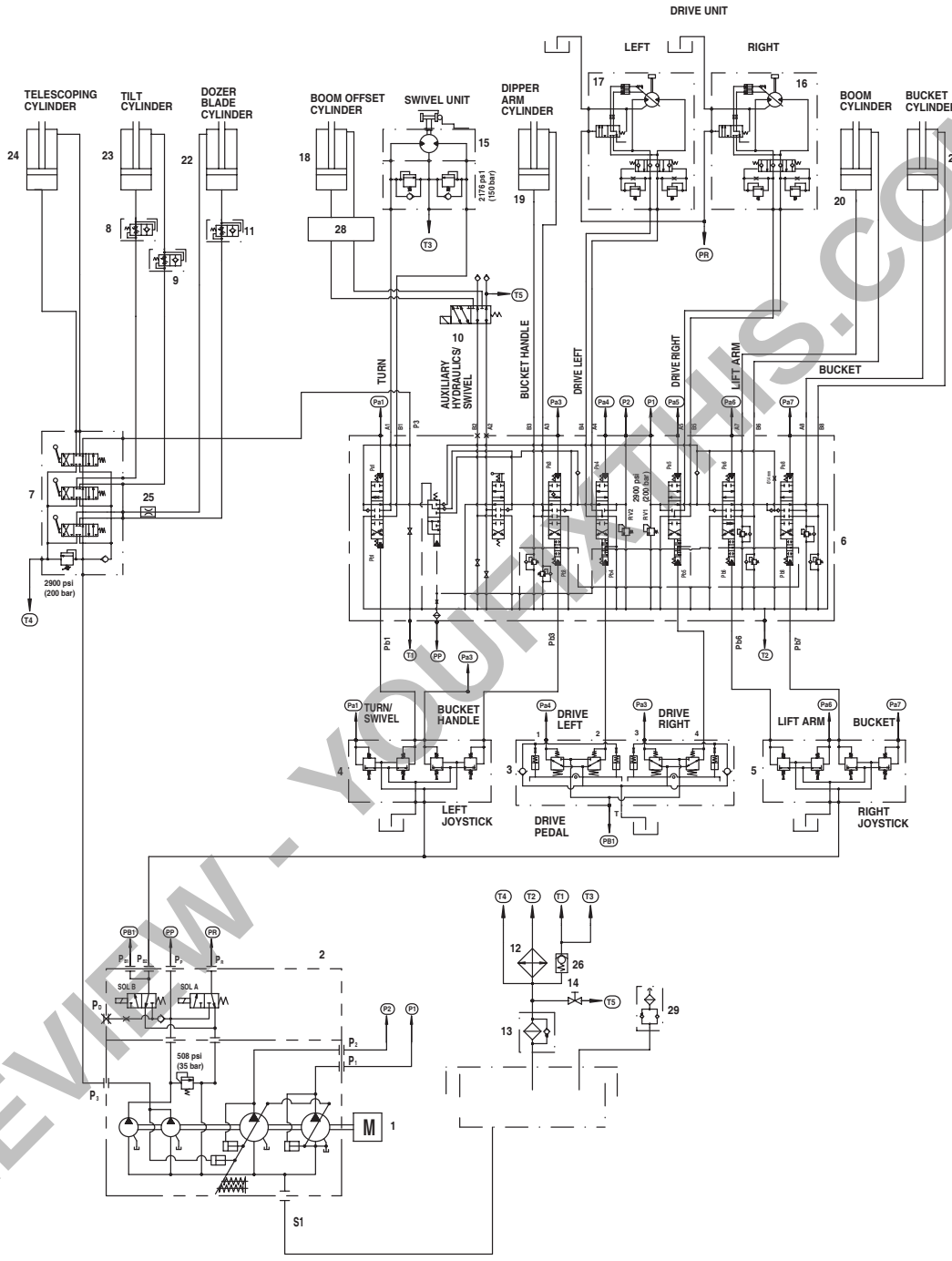
Do not loosen grease fitting more than two turns or the grease fitting could be ejected under pressure and cause injury.

5. Repeat steps 3 and 4 for the right side track.
6. Start the engine. Lower the unit to the ground.



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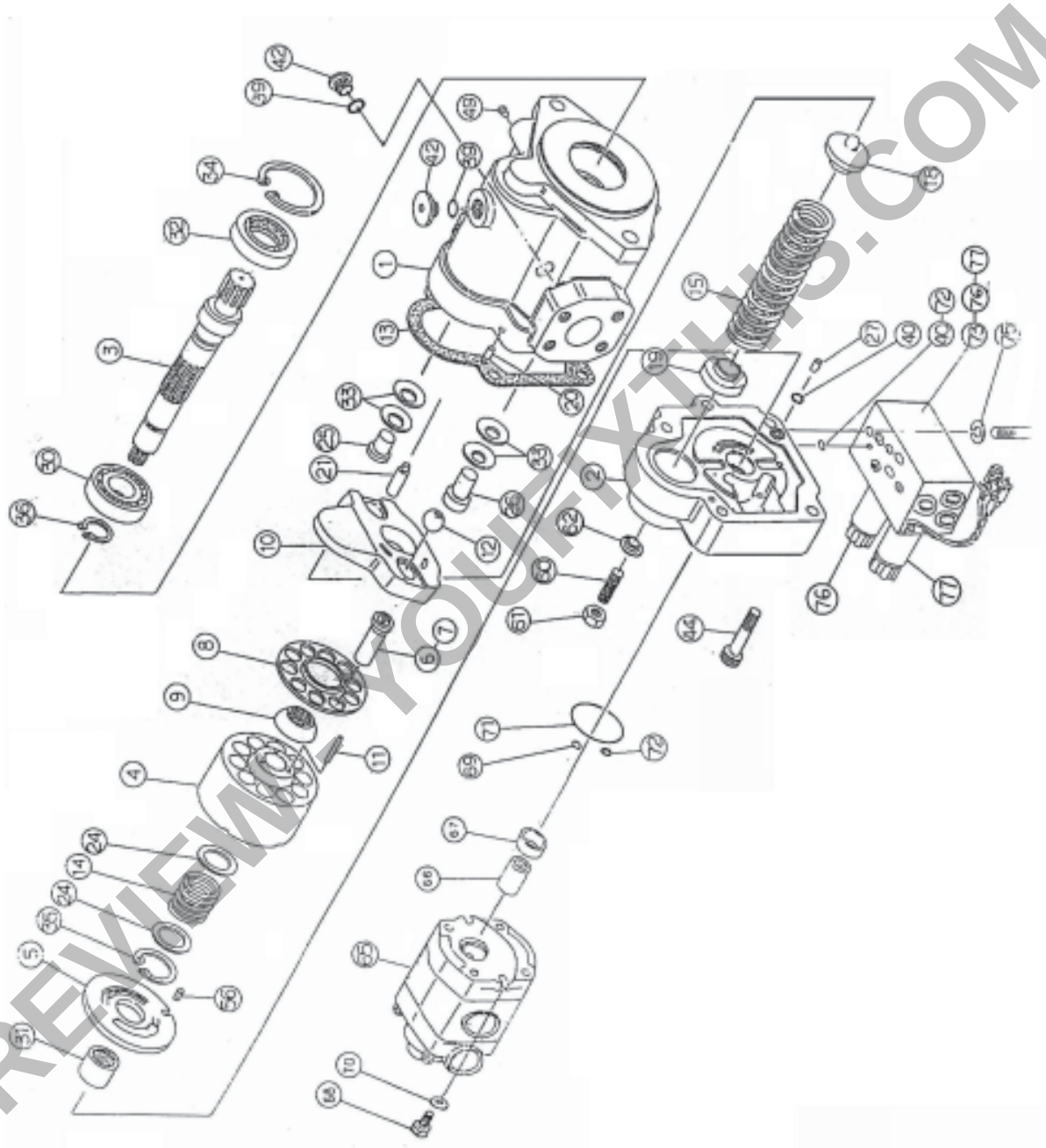
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Exploded View—Double Axial and Gear Pump 153/193/223



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Electrical Diagram Legend (Starting with Serial No. AC01876)

Name	Description
AB1	Stop Soleniod
B2	Horn
B3	Fuel Level Sensor
F1	Lights Arm, Cab
F2	12V/30 Cab
F3	Rotating Beacon
F4	Plug Socket
F5	Res
F6	Windshield Wiper
F7	12V/15 Cab
F8	Light Switch
F9	High Speed Valve
F10	Valves
F11	Heating Fan, Horn
FG	Main Fuse
G1	Alternator
H3	Arm Light
H12	Preheat Light
H13	Load Control Light
H14	Engine Temperature Light
H15	Engine Oil Pressure Light
H16	Air Filter Restriction Light
H17	Hydraulic Oil Filter Restriction Light
H18	Overload Warning Light
H19	Interior Cab Lighting
H20	Cab Roof Light, Front
H21	Cab Roof Light, Rear
H22	Rotating Beacon
K2	Glow Plug Relay (10 second)
K4	Start Relay
K5	Engine Stop Timer Soleniod
K6	Engine Stop Soleniod
M1	Heater Fan
M5	Starter Motor
M6	Windshield Wiper
M7	Windshield Washer

Name	Description
R1	Preheating
S2	Water Temperature Switch
S4	Air Filter Restriction Switch
S5	Engine Oil Pressure Switch
S6	3rd Hydraulic Circuit Button
S7	Boom Swing/Extend Hydraulics Button
S8	3rd Hydraulic Circuit Button
S10.1	Right Safety Switch
S10.2	Left Safety Switch
S11	High Gear Switch
S12	Overload Warning System Pressure Switch
S14	Hydraulic Oil Filter Restriction Switch
S15	Windshield Washer System
S16	Heater Fan Switch
S17	High Gear Switch
S18	Roof Light Switch
S19	Front/Side Light Switch
S20	Ignition Switch
S21	Rotating Beacon Switch
S22	Overload Warning System Switch
S23	Roof Light Switch
X0	Cigarette Lighter
X1	Main Connector, Engine Wiring Harness
X2	Main Connector, Engine Wiring Harness
X4	Engine Relay
X5	Alternator Load Control
X6	Alternator Main (Positive)
X9	Starter Main (Positive)
X10	Starter Soleniod
X17	Main Connector, Arm Rest Wiring Harness
X18	Ground
X19	Plug Socket
X26	Horn Button Connector
X27	Anti-Theft Device Connector
X28	Cab Connector
X29	Instrument Panel Connector
Y2	Boom Swing/Extend Hydraulic Valve
Y3	3rd Hydraulic Circuit
Y4	3rd Hydraulic Circuit
Y5	Safety Valve
Y6	High Speed Valve

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7. TIGHTENING TORQUES

Tightening Torques for Hydraulic Joints and Dry Assembling

Metric hose joints for hydraulic assembling

Light Version (DKOL)				
DN	RA	Screw	Tool	Torque
05	6L	M12 x 1,5	SW 14	11 lb-ft. (15 Nm)
06	8L	M14 x 1,5	SW 17	15 lb-ft. (20 Nm)
08	10L	M16 x 1,5	SW 19	30 lb-ft. (40 Nm)
10	12L	M18 x 1,5	SW 22	37 lb-ft. (50 Nm)
12	15L	M22 x 1,5	SW 27	55 lb-ft. (75 Nm)
16	18L	M26 x 1,5	SW 32	63 lb-ft. (85 Nm)
20	22L	M30 x 2	SW 36	74 lb-ft. (100 Nm)
25	28L	M36 x 2	SW 41	133 lb-ft. (180 Nm)
32	35L	M45 x 2	SW 55	162 lb-ft. (220 Nm)

Heavy Type (DKOS)				
DN	RA	Screw	Tool	Torque
05	8S	M16 x 1,5	SW 19	30 lb-ft. (40 Nm)
06	10S	M18 x 1,5	SW 22	37 lb-ft. (50 Nm)
08	12S	M20 x 1,5	SW 24	44 lb-ft. (60 Nm)
10	14S	M22 x 1,5	SW 27	55 lb-ft. (75 Nm)
12	16S	M24 x 1,5	SW 30	66 lb-ft. (90 Nm)
16	20S	M30 x 2	SW 36	74 lb-ft. (100 Nm)
20	25S	M36 x 2	SW 41	133 lb-ft. (180 Nm)
25	30S	M42 x 2	SW 50	199 lb-ft. (270 Nm)
32	38S	M52 x 2	SW 60	295 lb-ft. (400 Nm)

Surface galvanic coated and dry (O-ring oiled). Tolerance torque -10 %

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CHAPTER **B**:

Maintenance

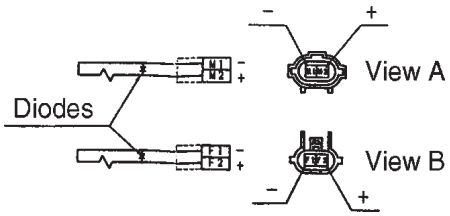
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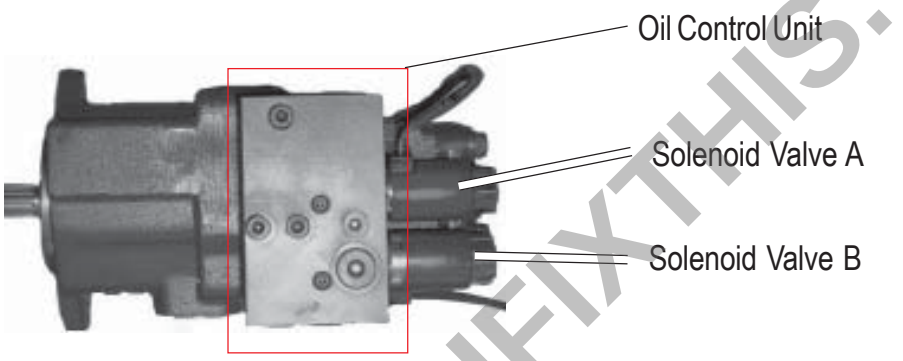
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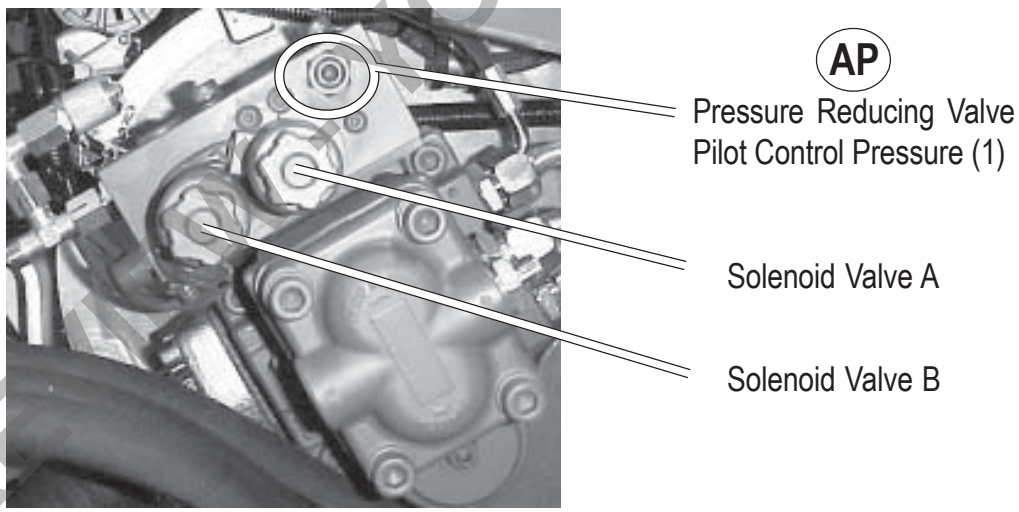
Oil Control Unit Cable Assignment:



Solenoid Valve Arrangement



Pilot Control System—Pressure Adjustment Points

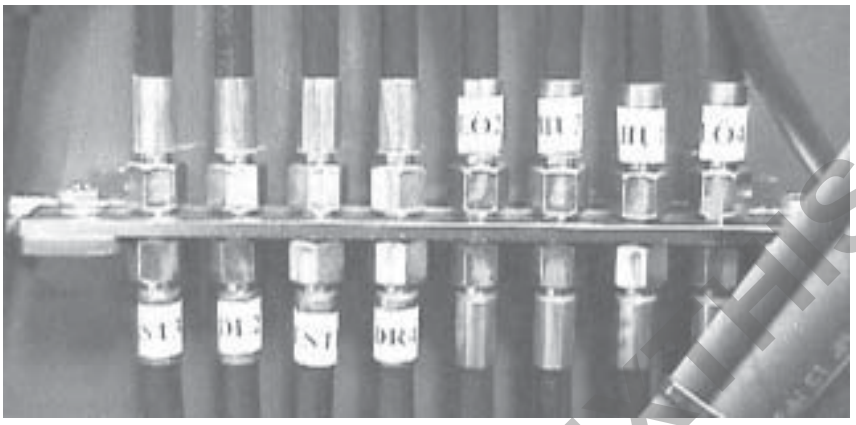


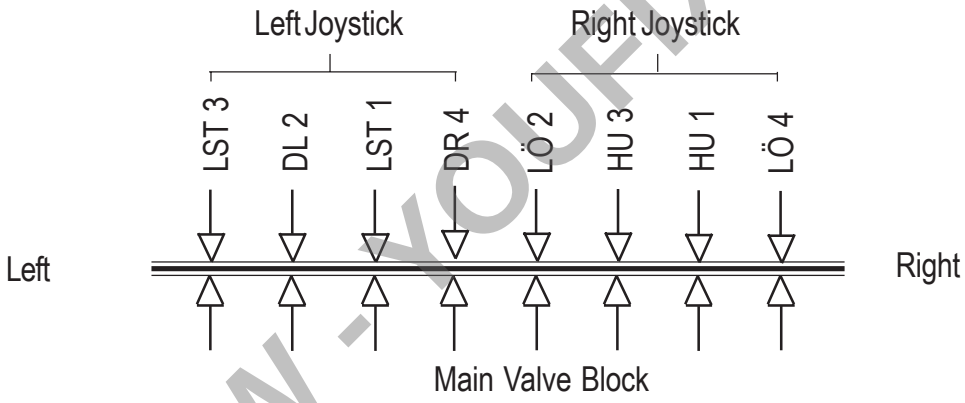
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12. PANEL— PILOT CONTROL HOSES 153—223

Collector Strip Port Assignment





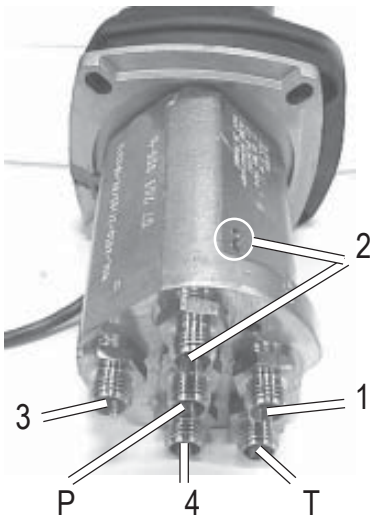
Left Joystick

LST 3 Dipper Arm -> Joystick Position 3
LST 1 Dipper Arm -> Joystick Position 1
DL 2 Turning Left -> Joystick Position 2
DR 4 Turning Right -> Joystick Position 4

Right Joystick

HU 3 Boom -> Joystick Position 3
HU 1 Boom -> Joystick Position 1
LÖ 4 Bucket-> Joystick Position 4
LÖ 2 Bucket-> Joystick Position 2

Joystick Positions Left/Right



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