CATERPILLAR®

Service Manual

Models
TH336C, TH337C, TH406C, TH407C, TH414C, TH514C, TH417C

S/N MJR00150 & After, S/N THM00150 & After,
S/N DJB00150 & After, S/N SXJ00150 & After,
S/N GAT00150 & After, S/N RCH00150 & After,
S/N MLH00150 & After, S/N JJT00150 & After,
S/N KEK00150 & After, S/N RWW00150 & After,
S/N MWC00150 & After, S/N KKW00150 & After,
S/N RRJ00150 & After, S/N RRW00150 & After

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2.5.1 Capacities

Engine Crankcase Oil	
Capacity with Filter Change	
74.5 kW	8,5 liter (9.0 quart)
75 kW	8,0 liter (8.5 quart)
92.6 kW & 106 kW	8,8 liter (9.3 quart)
93.1 kW	9,5 liter (10.0 quart)
Fuel Tank	
Capacity	150 liter (39.6 gallon)
Cooling System	
System Capacity	
75 kW &	16,0 liter (16.9 quart)
74.5 kW, 92.6 kW, 93.1 kW & 106 kW	25,0 liter (26.4 quart)
Transmission System	
Capacity with Filter Change	14 liters (14.8 quarts)
Transmission Drop Box	
Capacity	2,75 liter (2.9 quart)
Hydraulic System	
System Capacity	
TH336C, TH337C, TH406C & TH407C	135 liter (35.7 gallon)
TH414C, TH514C & TH417C	145 liter (38.3 gallon)
Reservoir Capacity to Full Mark	90 liter (23.8 gallon)
Auxiliary Hydraulic Circuit Max Flow	80 lpm (21.1 gpm)
Axles	
Differential Housing Capacity - Front Axle	
TH336C, TH337C, TH406C & TH407C	10,5 liter (11.1 quart)
TH414C, TH514C & TH417C	11,5 liter (12.2 quart)
Differential Housing Capacity - Rear Axle	11,5 liter (12.2 quart)
Friction Modifier (197-0017) - Front Axle Differential	0,35 liter (0.37 quart)
Wheel End Capacity	
TH336C, TH337C, TH406C & TH407C	0,8 liter (0.8 quart)
TH414C	0,9 liter (1.0 quart)
TH514C & TH417C	1,5 liter (1.5 quart)
Air Conditioning System (if equipped)	
System Capacity	1,35 kg (3.0 lb)

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5.9 AXLE ASSEMBLY AND DRIVE SHAFT TROUBLESHOOTING

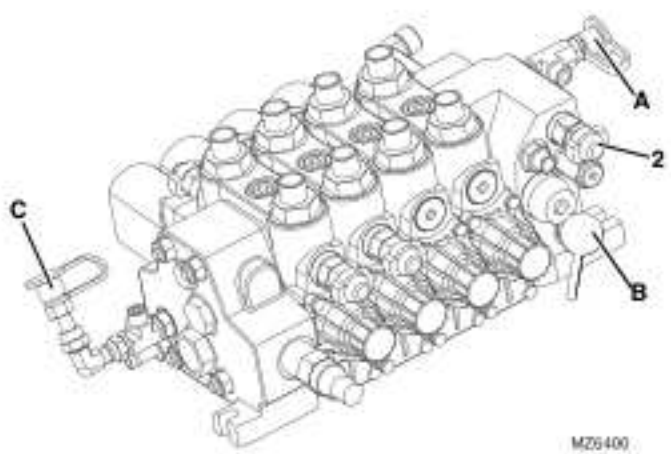
Problem	Possible Causes	Remedy
1. Excessive axle noise while driving.	1. Oil level too low.	1. Fill oil to correct level. Refer to Section 2.5, "Fluids and Lubricant Capacities."
	2. Axle and/or wheel end housings filled with incorrect oil or oil level low.	2. Drain axle and/or wheel end housings and fill to correct level. Refer to Section 2.5, "Fluids and Lubricant Capacities."
	3. Incorrect alignment of ring and pinion gears.	3. Correct alignment by adding or removing shims as needed.
	4. Incorrect pinion (input) shaft bearing preload.	4. Correct bearing preload by adding or removing shims as needed.
	5. Worn or damaged bearings.	5. Replace bearings as needed.
	6. Worn or broken gear teeth.	6. Replace gears as needed.
	7. Contamination in the axle.	7. Drain axle and/or wheel end housings and fill to correct level. Refer to Section 2.5, "Fluids and Lubricant Capacities."
	8. Axle housing damaged.	8. Replace damaged parts.
2. Intermittent noise when traveling.	1. Universal joint(s) worn or damaged.	1. Repair or replace universal joints as needed.
	2. Differential ring and/or pinion gears damaged.	2. Determine cause and repair as needed.
3. Vibration or intermittent noise when traveling.	1. Drive shaft universal joint assembly(ies) incorrectly tightened.	1. Tighten capscrews to correct torque.
	2. Drive shaft universal joint(s) worn or damaged.	2. Repair or replace universal joints as needed.
	3. Drive shaft(s) damaged/ unbalanced.	3. Replace drive shaft(s) as needed.

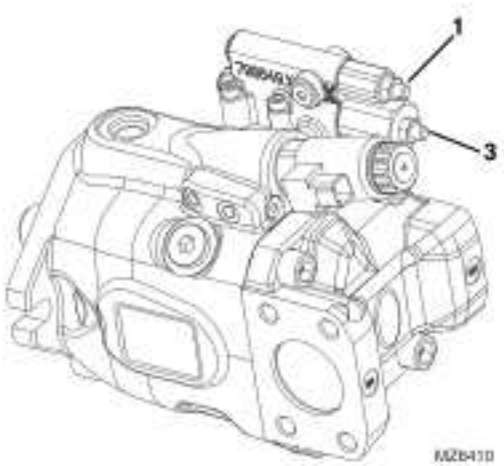
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c. Pressure Specifications

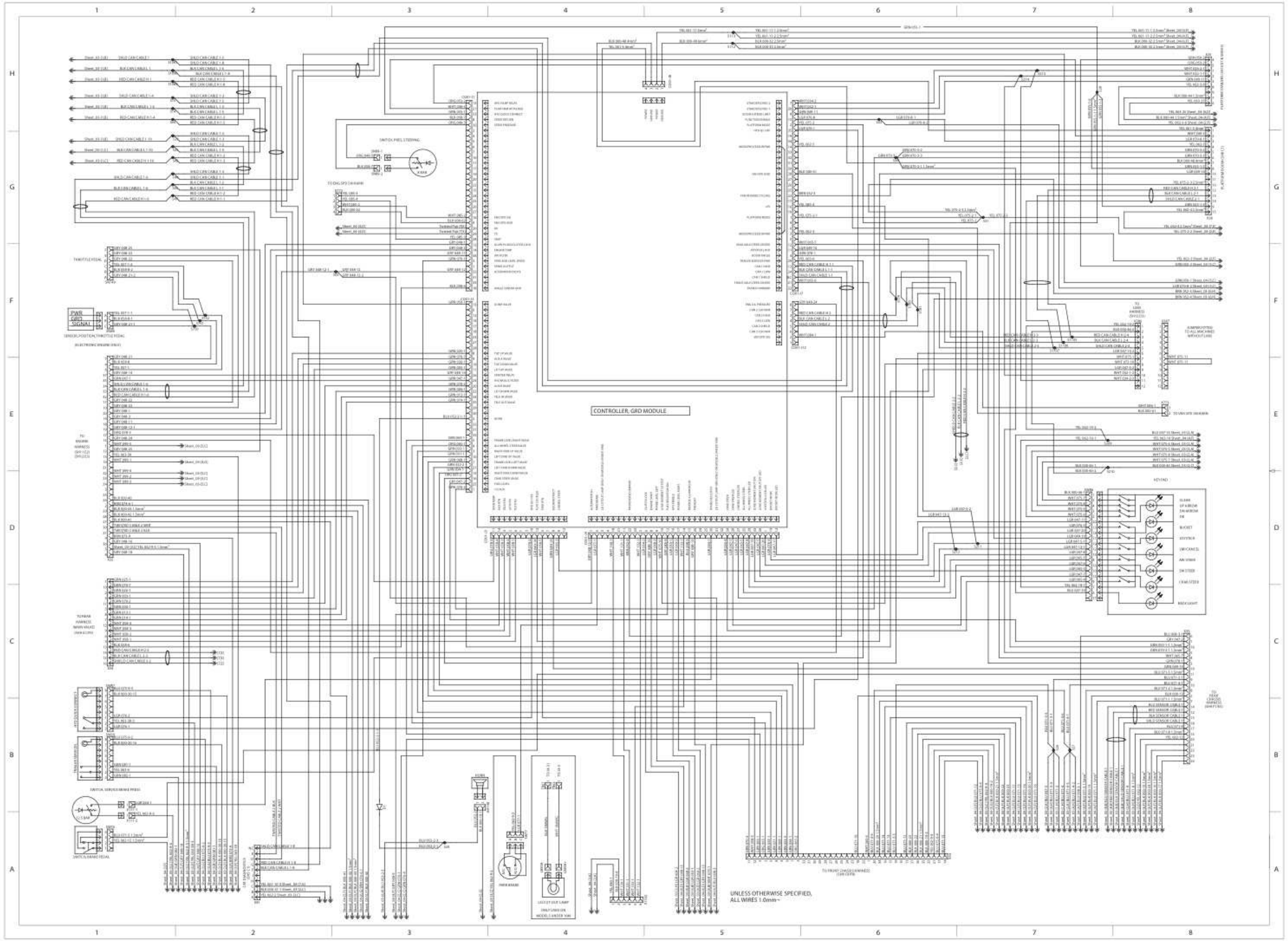
	Hydraulic Circuit	Test Port	Procedure	Adjustment Location	Pressure Range
1	Steer Pressure	LS1 (**A**)	Connect gauge to LS1 port, select 2 wheel steer, run engine at high idle, turn steering wheel one direction to lock. Hold and check pressure. Note: Do not operate any other function while checking pressure.	N/A	168-178 Bar 2467-2582 psi
2	Pump Margin	LS1 (**A**)& P (**B**)	Connect one gauge to LS1 port, and connect one gauge to P port, select 2 wheel steer, run engine at high idle, turn steering wheel one direction to lock. Hold and check pressure. The margin pressure is the difference between the pressures measured at the LS1 Port and the P Port.	1	18,5-23,5 Bar 269-340.8 PSI
3	Load Sense	LS1 (**A**)	Connect gauge to LS1 port, level boom and bottom boom retract.	2	225-235 Bar 3263-3408 PSI
4	Maximum Pump Pressure	P (**B**)	Connect gauge to P port, level boom and bottom boom retract.	3	245-255 Bar 3553-3698 PSI
5	Stand-By Pressure	P (**B**)	Connect gauge to P port, check pressure at Low idle with no function.	N/A	15-35 Bar 218- 508 PSI
6	Pilot Pressure	PR (**C**)	Connect gauge to PR port, check pressure with no function.	N/A	25-30 Bar (362-435 PSI)
7	Auxiliary Pressure	Auxiliary Port	Connect gauge to Auxiliary Coupling, check pressure at coupling.	N/A	215 Bar 3118 PSI

Note: *All pressure check are to be performed at High Idle unless noted.*





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Electrical Schematic
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