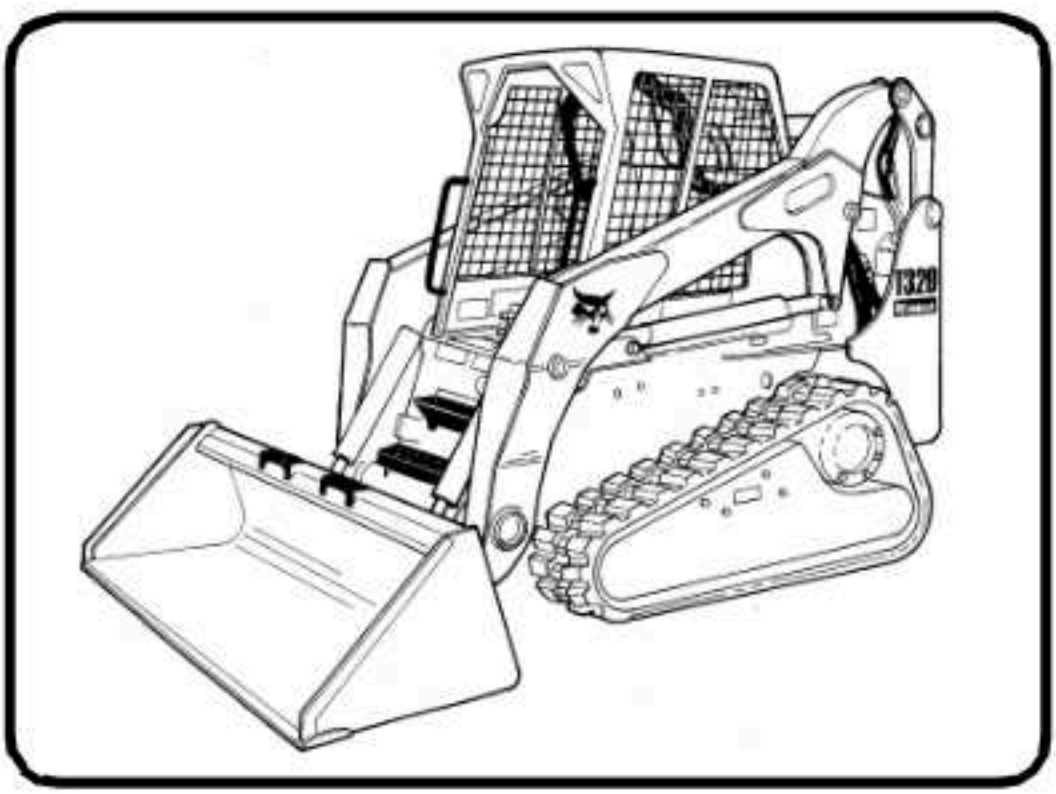
Bobcat

Service Manual
T320 Compact Track Loader

S/N A7MP11001 - A7MP59999



EQUIPPED WITH BOBCAT INTERLOCK CONTROL SYSTEM (BICS)

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Troubleshooting

The following troubleshooting chart is provided for assistance in locating and correcting BICS system problems. It is recommended that these procedures be done by authorized Bobcat Service Personnel only.

⚠ WARNING

Check for correct function after adjustments, repairs or service. Failure to make correct repairs or adjustments can cause injury or death.

W-2004-1285

PROBLEM	CAUSE
Indicator light does not come ON when seat bar is lowered.	1, 2, 3, 4, 5

KEY TO CORRECT THE CAUSE
1. Check sensor wire connection.
2. Use the BICS sensor tester MEL1428 with seat bar adapter MEL1567 to check sensor and controller.
3. Check for loose hardware.
4. Check keyed bushing to make sure magnet collar rotates with seat bar.
5. Check magnet collar magnets for contamination such as metal particles.

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Specifications (Cont'd)

All dimensions are given in inches. Respective metric dimensions are given in millimeters enclosed by parentheses.

Crankshaft

Crankshaft Alignment - Allowable Limit	0.00079 in. (0,02 mm)
Crankpin O.D.	2.0857 - 2.0862 in. (52,977 - 52,990 mm)
Crankshaft Journal O.D.	2.9518 - 2.9548 in. (74,977 - 74,990 mm)
Oil Clearance Between Crankshaft Journal And Crankshaft Bearing	0.0007 - 0.0024 in. (0,018 - 0,062 mm)
Allowable Limit	0.0079 in (0,20 mm)
Oil Clearance Between Crank Pin And Pin Bearing	0.0007 - 0.0020 in. (0,018 - 0,051 mm)
Allowable Limit	0.0079 in (0,20 mm)
Crankshaft Side Clearance	0.0059 - 0.0122 in. (0,015 - 0,31 mm)
Allowable Limit	0.0197 in (0,50 mm)

Oil Pump

Engine Oil Pressure - At Idle Speed	14 PSI (0,97 bar)
Allowable Limit	7 PSI (0,49 bar)
Engine Oil Pressure - At Rated Speed	28 - 56 PSI (1,96 - 3,92 bar)
Allowable Limit	21.3 PSI (1,471 bar)
Engine Oil Pressure Switch Working Pressure	5.6 - 8.4 PSI (0,39 - 0,58 bar)
Clearance Between Inner Rotor And Outer Rotor	0.0016 - 0.0063 in. (0,04 - 0,16 mm)
Allowable Limit	0.0118 in. (0,3 mm)
Clearance Between Outer Rotor And Pump Body	0.0039 - 0.0072 in. (0,100 - 0,184 mm)
Allowable Limit	0.0118 in. (0,3 mm)
Clearance Between Rotor And Cover	0.0010 - 0.0030 in. (0,025 - 0,075 mm)
Allowable Limit	0.0089 in. (0,225 mm)
Relief Valve Working Pressure	129 PSI (8,89 bar)

Thermostat

Thermostat Valve Opening Temperature	166.1 - 173.3°F (74.5 - 78.5°C)
Temperature At Which Thermostat Completely Opens	194°F (90°C)

Intake Air Heater

Intake Air Heater Resistance (at cold occasion)	Approximately 0.3Ω

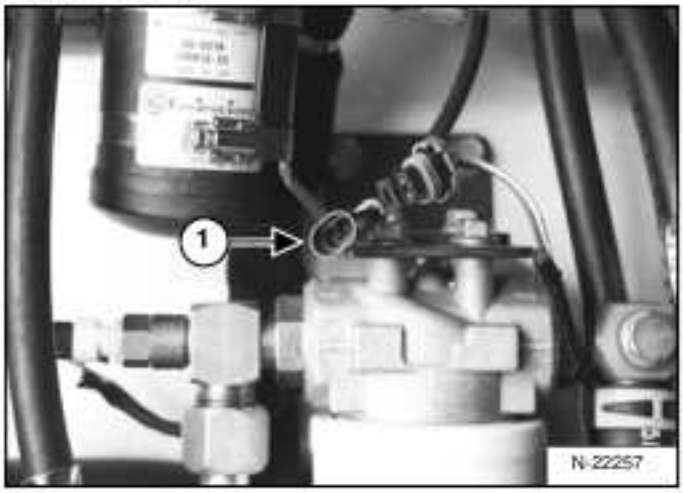
Turbocharger Compressor Shaft

Axial Clearance	0.0022 - 0.0041 in. (0,057 - 0,103 mm)
Allowable Limit	0.0047 in. (0,12 mm)

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Electrical System (Cont'd)

Figure 80-30-12



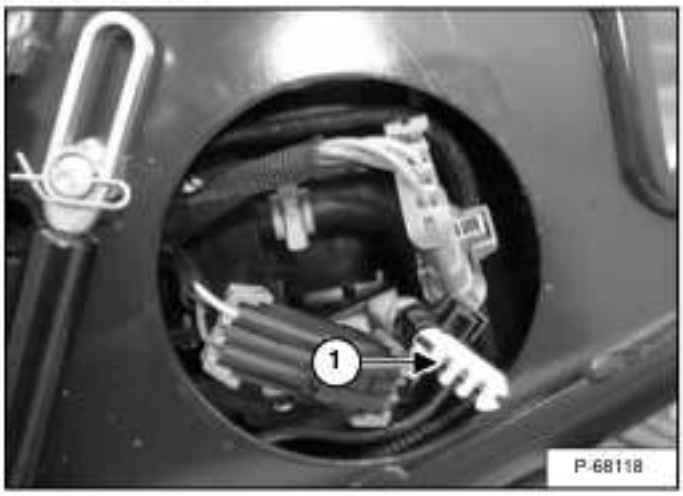
If there is voltage at the harness, check the resistance at the pressure switch (Item 1) **[Figure 80-30-12]**.

If there is no resistance value, check for low refrigerant level. (See Reclamation And Charging With Recovery / Charging Unit on Page 80-40-2.)

If a resistance value is seen, the pressure switch is good.

Reconnect the loader harness to the pressure switch.

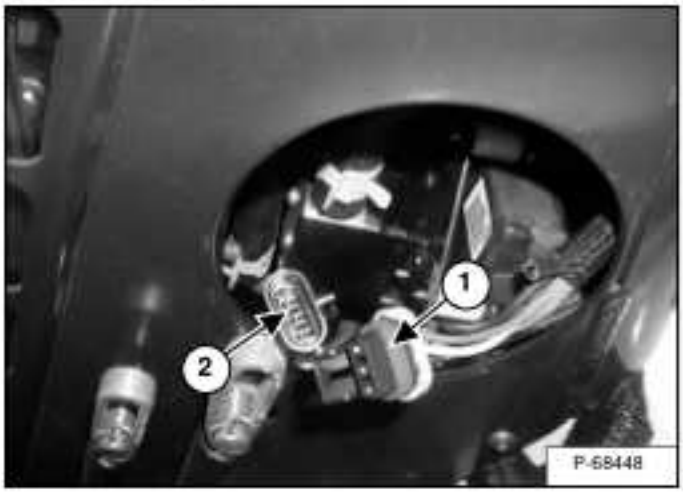
Figure 80-30-13



Remove the operator cab, left side access cover.

Disconnect the thermostat wiring connector (Item 1 **[Figure 80-30-13]** from the loader wiring harness.

Figure 80-30-14



Check the loader harness (Item 1) **[Figure 80-30-14]** for voltage. The voltage should be 12 volts.

If there is no voltage at the wiring harness, check the harness for broken wires.

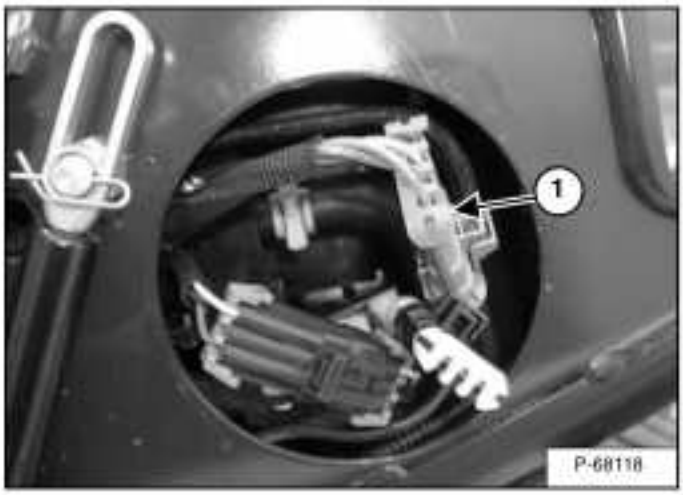
If there is voltage at the wiring harness, check the thermostat (Item 2) **[Figure 80-30-14]** for resistance.

The resistance value of the thermostat should be 10 Ohms at 68° F (20° C).

If there is no resistance value, replace the thermostat. (See Removal And Installation on Page 80-90-1.)

If there is a resistance value, check the blower.

Figure 80-30-15



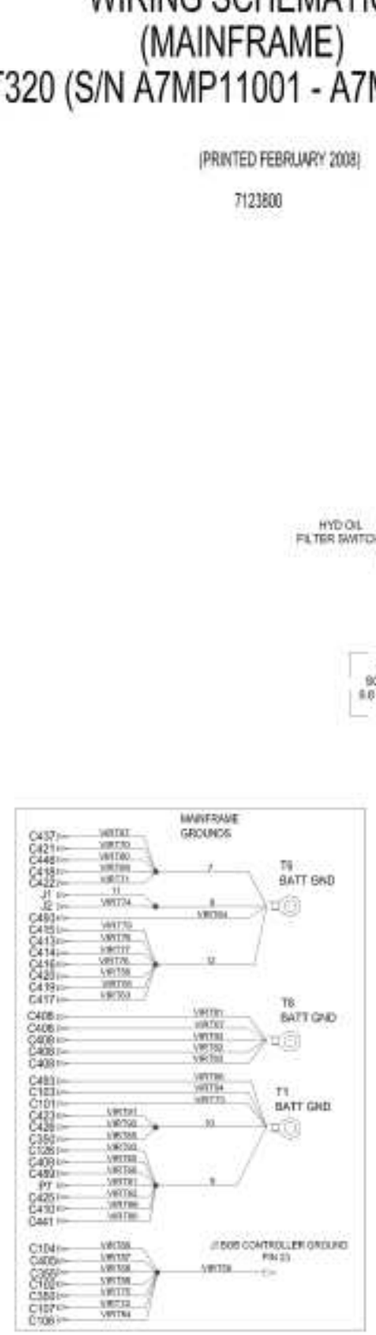
Disconnect the blower wiring connector (Item 1) **[Figure 80-30-15]** from the loader wiring harness.

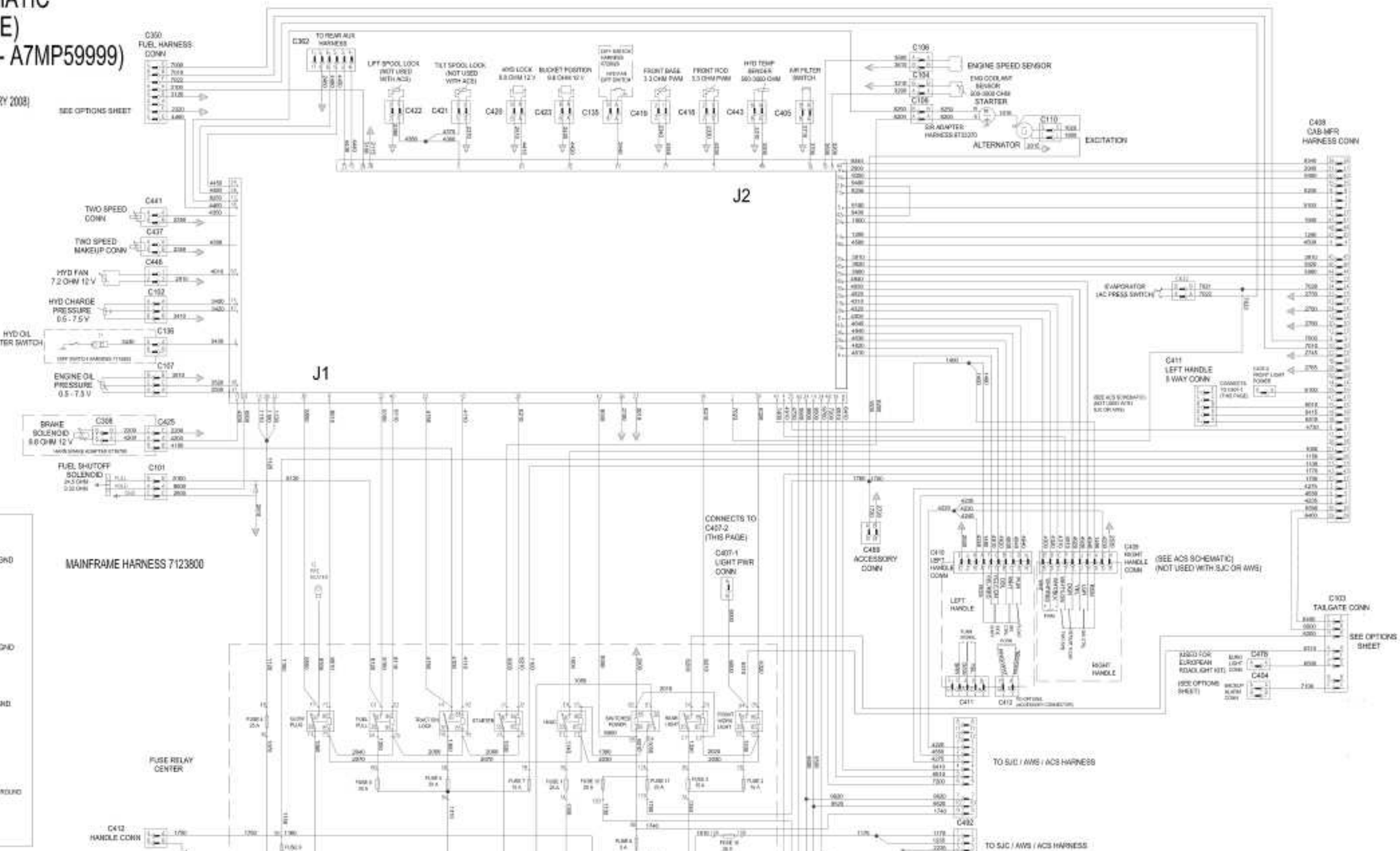
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WIRING SCHEMATIC
(MAINFRAME)
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