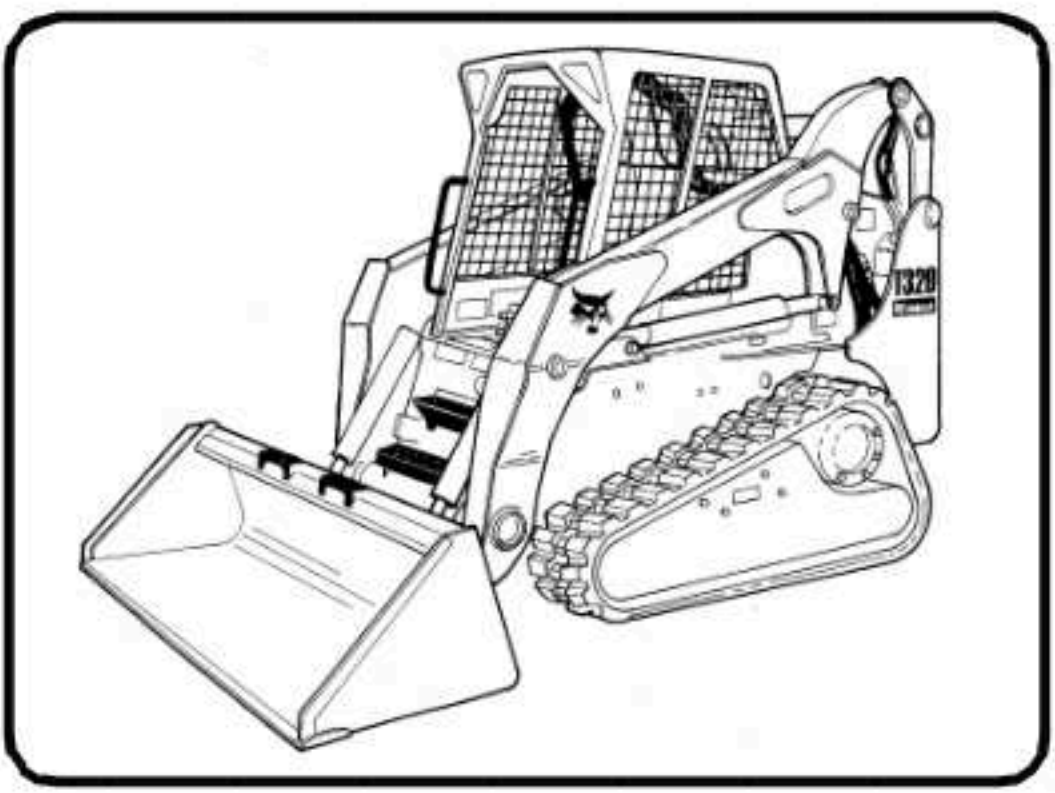
Bobcat®

Service Manual
T320 Compact Track Loader

S/N A7MP60001 & Above
S/N AAKZ11001 & Above



EQUIPPED WITH BOBCAT INTERLOCK CONTROL SYSTEM (BICS™)

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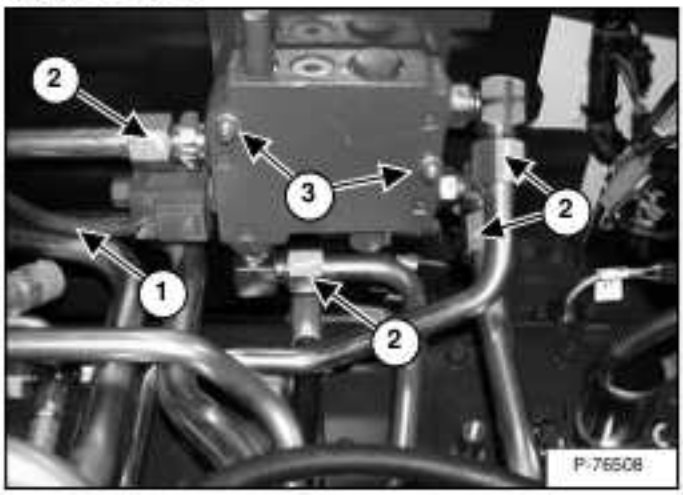
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Removal And Installation

Figure 20-110-4



Disconnect the electrical harness (Item 1) **[Figure 20-110-4]**.

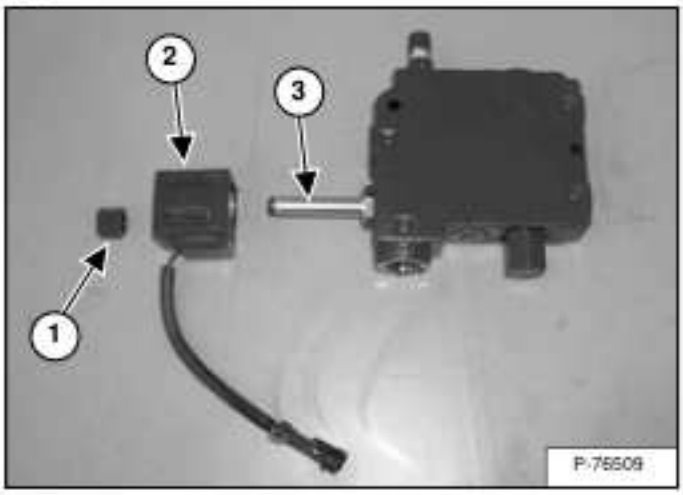
Disconnect and cap the four tubelines (Item 2) **[Figure 20-110-4]**.

Remove the mounting bolts (Item 3) **[Figure 20-110-4]** from the bucket position valve.

Disassembly And Assembly

Remove the four tubeline fittings from the bucket position valve.

Figure 20-110-5

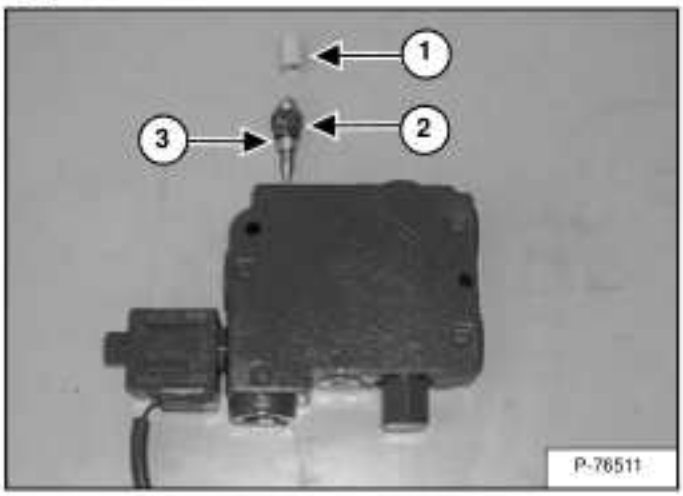


Remove the solenoid nut (Item 1), the solenoid (Item 2), and the solenoid stem (Item 3) **[Figure 20-110-5]** from the bucket position valve.

Installation: Tighten the nut to 60 in.-lb. (6,78 N•m) torque.

Installation: Put oil on O-rings and back-up washers, tighten the solenoid stem to 30 - 35 ft.-lb. (40,8 - 47,6 N•m) torque.

Figure 20-110-6



Remove the cap (Item 1), the flow adjustment valve (Item 2), and the O-ring (Item 3) **[Figure 20-110-6]**.

NOTE: Always install new O-rings before any parts are installed into the valve. Check the parts for wear or damage and replace as needed.

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Specifications (Cont'd)

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

Timing Gear

Timing Gear Backlash	
Crank Gear - Idler Gear	0.0019 - 0.0076 in. (0,049 - 0,193 mm)
Allowable Limit	0.0087 in. (0,22 mm)
Idler Gear - Cam Gear	0.0019 - 0.0074 in. (0,049 - 0,189 mm)
Allowable Limit	0.0087 in. (0,22 mm)
Idle Gear - Injection Pump Gear	0.0012 - 0.0065 in. (0,030 - 0,165 mm)
Allowable Limit	0.0087 in. (0,22 mm)
Clearance Between Idle Gear Shaft And Idle Gear Bushing	0.0020 - 0.0036 in. (0,05 - 0,091 mm)
Allowable Limit	0.0039 in. (0,10 mm)
Idle Gear Bushing I.D.	1.7726 - 1.7736 in. (45,025 - 45,050 mm)
Idle Gear Shaft O.D.	1.7700 - 1.7707 in. (44,959 - 44,975 mm)
Idle Gear Side Clearance	0.0059 - 0.0118 in. (0,15 - 0,30 mm)
Allowable Limit	0.0354 in. (0,9 mm)

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TROUBLESHOOTING

Blower Motor Does Not Operate

Possible Cause	Inspection	Solution
1. Blown fuse.	Inspect the fuse / wiring.	Replace fuse / repair wiring.
2. Broken wiring or bad connection.	Check the fan motor ground and connectors.	Repair the wiring or connector.
3. Fan motor malfunction.	Check the lead wires form the motor with a circuit tester.	Replace Motor.
4. Resistor malfunction.	Check resistor using a circuit tester.	Replace Resistor.
5. Fan motor switch malfunction.	Check power into and out of the fan switch.	Replace Fan Switch.

Blower Motor Operates Normally, But Air Flow Is Insufficient

Possible Cause	Inspection	Solution
1. Evaporator inlet obstruction.	Check evaporator for plugging.	Remove obstruction and clean evaporator fins with air or water.
2. Air leak.	Check to make sure air hoses are properly hooked to Louvers, and air ducts.	Repair of adjust.
3. Defective thermo. switch (frozen evaporator).	Check thermostat using a circuit tester.	Replace thermostat.
4. Plugged cab filters	Check cab filter condition.	Clean or replace filters.

Insufficient Cooling Although Air Flow And Compressor Operation Are Normal

Possible Cause	Inspection	Solution
1. System low on refrigerant.	The high side pressure will be low and bubbles may be present in sight glass on receive drier.	Repair any leaks and recharge the refrigerant to the correct level.
2. Excessive refrigerant.	The high pressure side pressure will be high.	Use refrigerant recovery equipment to capture excess refrigerant. Charge to the correct refrigerant level.

The Compressor Does Not Operate At All Or Operates Improperly

Possible Cause	Inspection	Solution
1. Loose drive belt.	The belt is vibrating or oscillating.	Adjust tension.
2. Internal compressor malfunction.	The compressor is locked up and the belt slips.	Replace compressor.
	Magnetic clutch related	
3. Low battery voltage.	Clutch slips.	Recharge the battery.
4. Faulty coil.	Clutch slips.	Replace the magnetic clutch.
5. Oil on the clutch surface.	Clutch slips.	Replace or clean the clutch surface.
6. Open coil.	Clutch does not engage and there is no reading when a circuit tester is connected between the coil and terminals.	Replace clutch.
7. Broken wiring or poor ground.	Clutch will not engage. Inspect the ground and connections.	Repair.
8. Wiring harness components.	Test the conductance of the pressure switch, thermostat, Relay, etc.	Check operation / thermostat LED status.

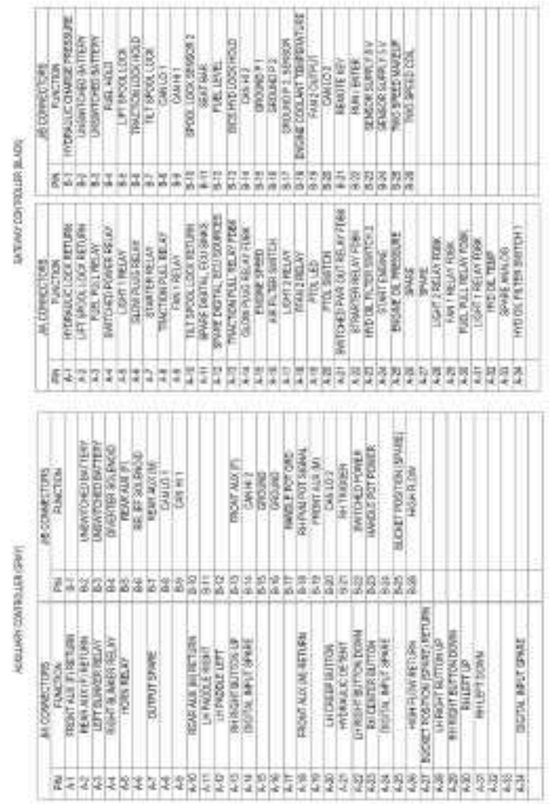
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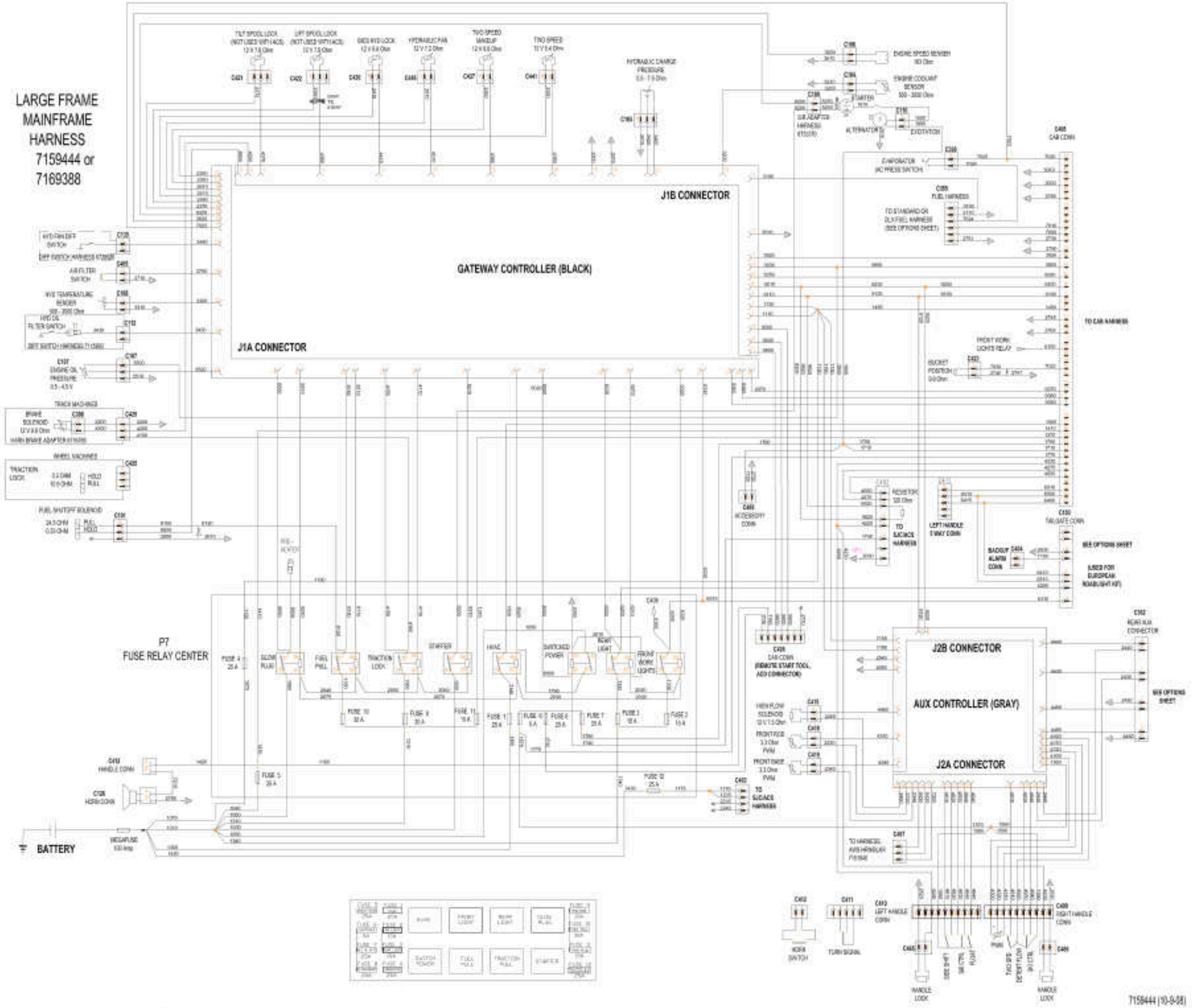
WIRING SCHEMATIC (MAINFRAME) T320 (S/N A7MP60001 AND ABOVE)

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