331
331E
334

Bobcat®

Service Manual

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(G Series)



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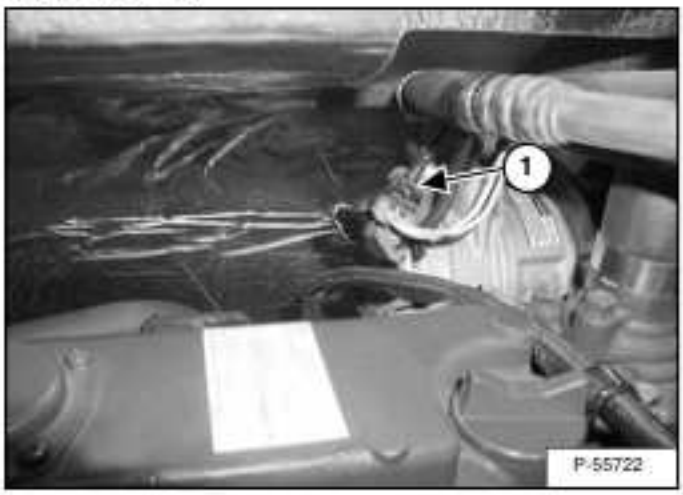
Troubleshooting The Travel Circuit

TROUBLESHOOTING THE TRAVEL CIRCUIT		
PROBLEM	**CAUSE**	**CORRECTION**
Travel system inoperable.	Lever linkage incorrectly adjusted.	Readjust.
	Track tension too tight.	Readjust.
	Defective pump.	Check, repair or replace.
	Travel motor counter balance spool sticking.	Repair or replace.
	Travel motor internal leakage excessive.	Repair or replace.
	Travel motor defective.	Repair or replace.
	Travel motor gears defective.	Repair or replace.
	Swivel joint defective.	Repair or replace.
	Main relief valve pressure too low.	Readjust or replace.
Travel power.	Track tension too tight.	Readjust.
	Main relief valve pressure too low.	Readjust or replace.
	Swivel joint leaking.	Repair or replace.
	Travel motor counterbalance spool sticking.	Repair or replace.
	Lever linkage incorrectly adjusted.	Readjust.
Speed too slow.	Swivel joint internal leakage excessive.	Repair or replace.
	Control valve internal leakage excessive.	Repair or replace.
	Low pump pressure.	Check, repair or replace.
	Travel motor internal leakage excessive.	Repair or replace.
Travel motor seal leakage.	Return line filter plugged.	Inspect, clean or replace.
Machine not running straight.	Lever linkage incorrectly adjusted.	Readjust.
	Track tension not equal.	Readjust.
	Pump output not equal.	Repair or replace.
	Travel motor internal leakage not equal.	Repair or replace.
	Travel motor counterbalance spool sticking.	Repair or replace.
	Main relief valve pressure set too low.	Repair or replace.
	Swivel joint internal leakage excessive.	Repair or replace.
	Control valve internal leakage not equal.	Repair or replace.
Machine will not hold on slope or while digging.	Travel motor counterbalance valve leakage excessive.	Repair or replace.
	Hose damage.	Replace.
Blade drops while machine is moving.	Lever linkage unaligned.	Readjust.
	Cylinder internal leakage excessive.	Repair or replace.
	Control valve internal leakage excessive.	Repair or replace.
	Swivel joint internal leakage from travel motor pressure circuit into blade cylinder circuit.	Repair or replace.
High/low gear shift inoperative (2-speed).	Lever linkage unaligned.	Readjust.
	Control valve defective.	Replace.
	Low pressure to 2-speed valve.	Readjust.

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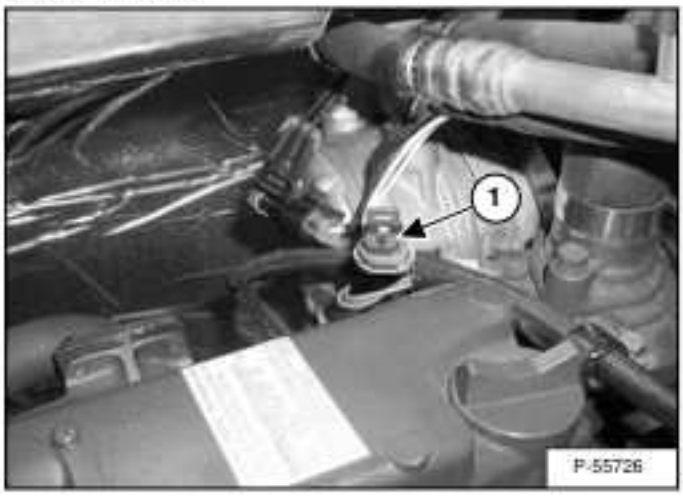
Checking The Electrical System (Cont'd)

Figure 70-80-24



Disconnect the wire harness (Item 1) from the pressure switch (Item 2) **[Figure 70-80-24]**.

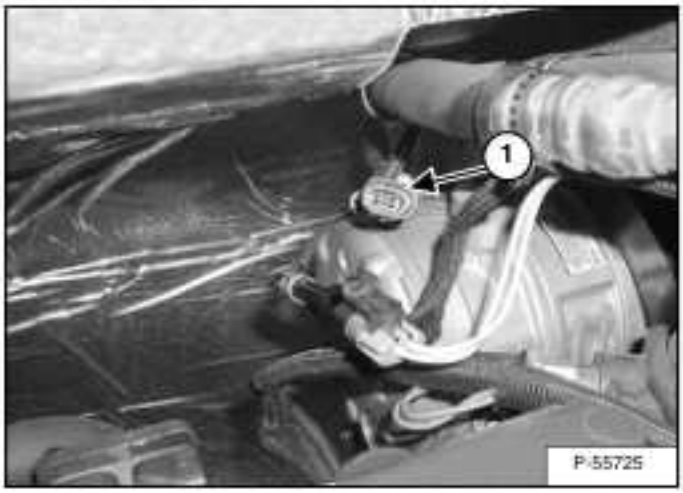
Figure 70-80-25



Using a multimeter check the wiring harness (Item 1) **[Figure 70-80-25]** for voltage.

The voltage should be approximately 12 volts.

Figure 70-80-26



If there is voltage at the harness, check the resistance at the pressure switch (Item 1) **[Figure 70-80-26]**.

If there is no resistance value, check for low or high refrigerant levels in the system. (See GENERAL AIR CONDITIONING SERVICE GUIDELINES on Page 70-90-1.)

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

If there is no voltage at the wiring harness check the harness for broken wires. If there are no broken wires, reconnect the wire harness to the pressure switch.

Remove the floormat and floor plate. (See FLOOR MAT AND FLOOR PLATE on Page 40-110-1.)

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

Cylinders

Cylinder Bore I.D. (Standard)	3.425 to 3.426 (87,00 to 87,02)
Allowable Limit (Standard)	+0.006 (+0,15)
Cylinder Bore I.D. (Oversize)	3.435 to 3.436 (87,25 to 87,27)
Allowable Limit (Oversize)	+0.006 (+0,15)

Piston Rings

Ring Gap (Top)	0.008 to 0.0138 (0,20 to 0,35)
Ring Gap (2nd Ring)	0.0138 to 0.0197 (0,35 to 0,50)
Ring Gap (Oil Ring)	0.0079 to 0.0157 (0,20 to 0,40)
Allowable Limit (All Rings)	0.05 (1,25)
Side Clearance of Ring Groove:	
2nd Ring	0.0020 to 0.0035 (0,050 to 0,090)
Allowable Limit	0.008 (0,20)
Oil Ring	0.0012 to 0.0028 (0,03 to 0,07)
Allowable Limit	0.006 (0,15)

Pistons

Piston Pin Bore	0.984 to 0.985 (25,0 to 25,013)
Allowable Limit	0.986 (25,05)

Connecting Rods

Piston Pin O.D.	0.984 to 0.985 (25,0 to 25,011)
Small End Bushing I.D.	0.985 to 0.986 (25,025 to 25,04)
Clearance Between Piston Pin & Small End Bushing	0.0006 to 0.0015 (0,014 to 0,038)
Connecting Rod Alignment Allowable Limit	0.002 (0,05)

Oil Pump

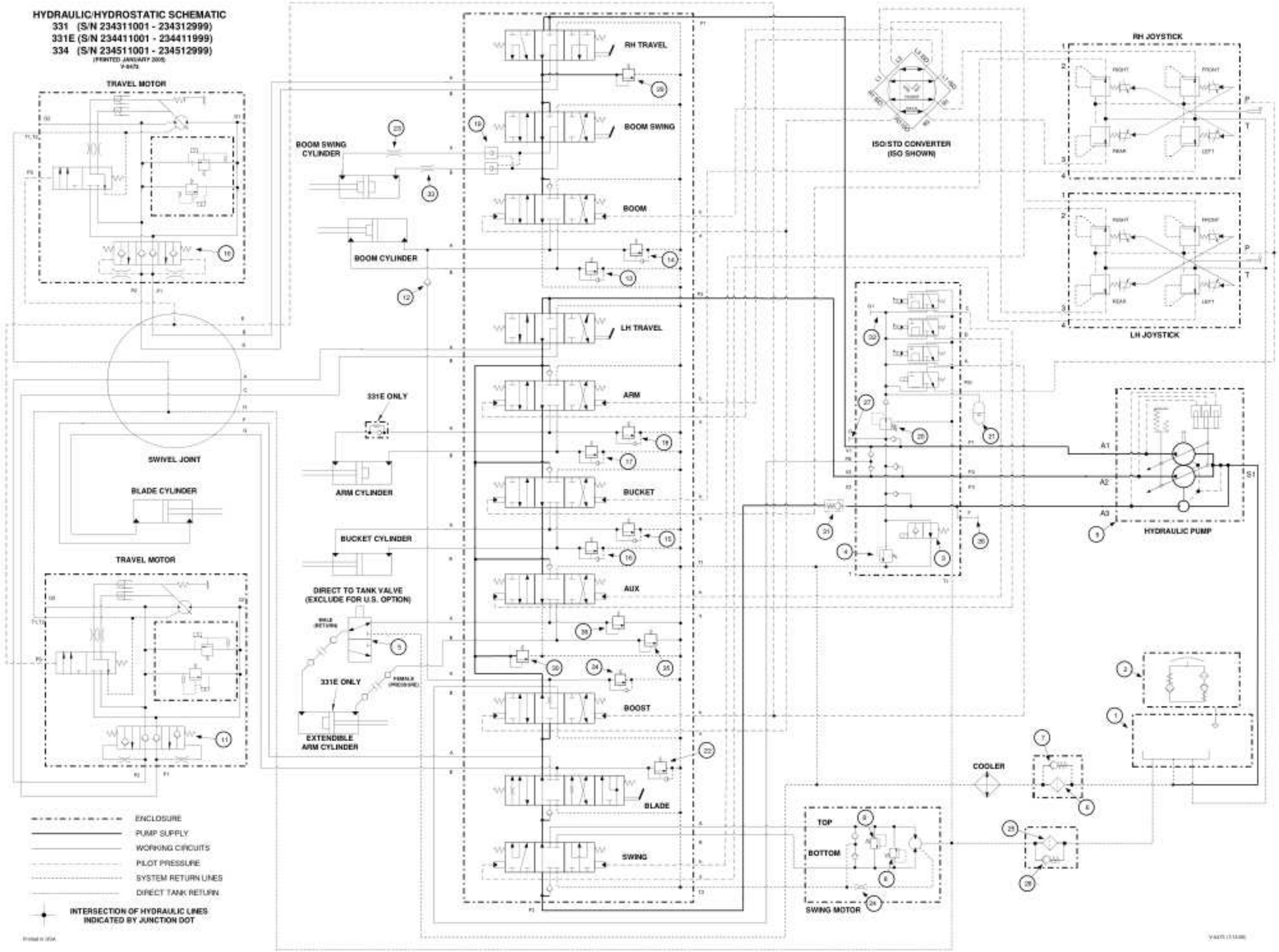
Oil Pressure at Rated RPM	43 to 64 PSI (2,94 to 4,4 bar)
Allowable Limit	36 PSI (2,5 bar)
Idle Speed Allowable Limit	7 PSI (0,48 bar)
Clearance Between Inner Rotor & Outer Rotor	0.0012 to 0.0055 (0,03 to 0,14)
Clearance Between Outer Rotor & Pump Body	0.0043 to 0.0075 (0,11 to 0,19)
End Clearance Between Inner Rotor & Cover	0.0041 to 0.0059 (0,105 to 0,15)
Allowable Limit	0.008 (0,2)

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HYDRAULIC/HYDROSTATIC SCHEMATIC

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