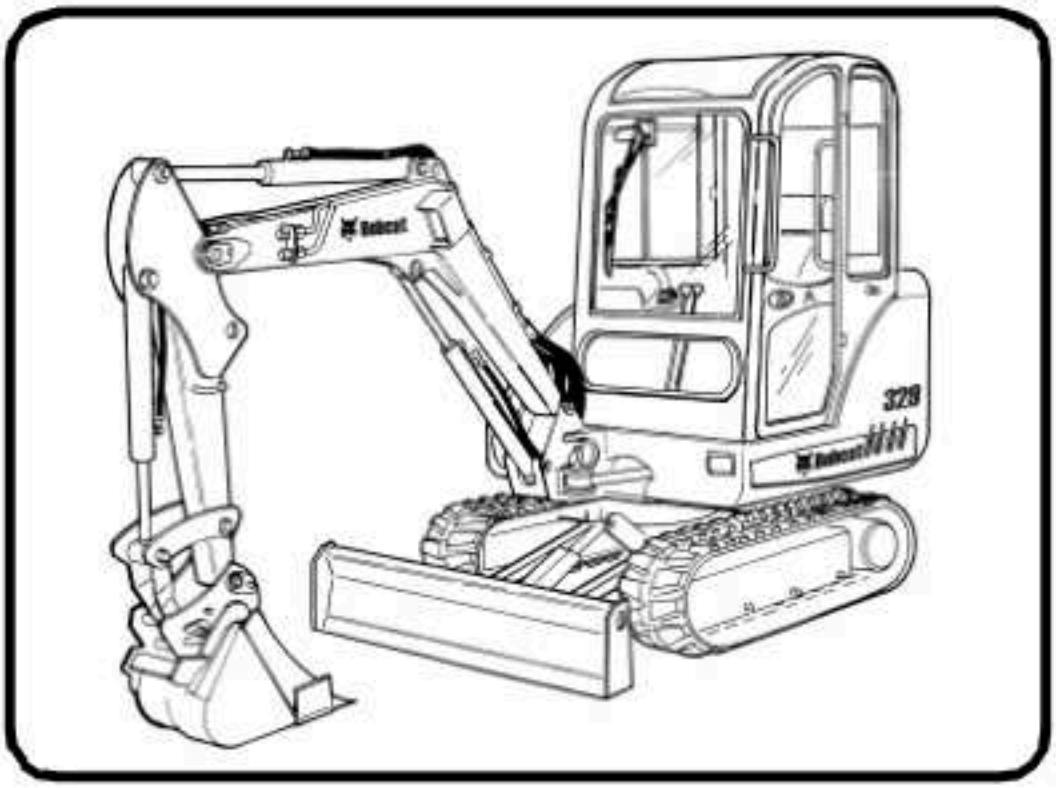
Bobcat®

Service Manual
329 Compact Excavator

S/N A2PG11001 & Above



Ingersoll Rand
Compact Vehicle Technologies

6904771 (11-06)

Printed in U.S.A.

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Troubleshooting The Swing (Upperstructure Slew) Circuit

TROUBLESHOOTING THE SWING (UPPERSTRUCTURE SLEW) CIRCUIT		
PROBLEM	**CAUSE**	**CORRECTION**
Slew not operating	Control console raised	Lower control console.
	Control console lock out switch incorrectly adjusted or defective	Readjust or replace
	Slew lock pin engaged	Disengage lock pin
	Joystick manifold pressure reducing valve defective	Repair or replace
	Slew motor gear defective	Repair or replace
	Joystick internal leakage excessive	Repair or replace
	Slew motor defective	Repair or replace
Slew force	Main relief valve set too low	Readjust or replace
	Slew motor relief valve pressure too low	Readjust or replace
Slew speed too low	Pump flow low	Check, repair or replace
	Blocked or restricted line to slew motor	Replace
	Joystick internal leakage excessive	Repair or replace
	Control valve internal leakage excessive	Repair or replace
	Slew motor internal leakage excessive	Repair or replace
Slew over run excessive	Control valve spool sticking	Repair or replace
	Joystick spool sticking	Repair or replace
	Slew motor relief valve set too low	Repair or replace
	Slew motor internal leakage excessive	Repair or replace
Slew motor seal leakage	Case drain line plugged	Replace

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Specifications (Cont'd)

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

Valve Springs

Free Length	1.642-1.661 (41,7-42,2)
Allowable Limit	1.622 (41,2)
Fitted Length	1.378 (35,0)
Compress to Fitted Length	26.4 lb. (117,6 N)
Allowable Limit	22.5 lb. (100,0 N)
Inclination Allowable Limit	0.039 (1,0)

Valve Timing

Intake Valve (Open)	9 degrees B.T.D.C.
(Close)	45 degrees A.B.D.C.
Exhaust Valve (Open)	50 degrees B.B.D.C.
(Close)	12 degrees A.T.D.C.

Rocker Arms

O.D. of Rocker Arm Shaft	0.5501-0.5506 (13,97-13,98)
I.D. of Rocker Arm	0.5512-0.5519 (14,0-14,02)
Clearance Between Rocker Arm & Shaft	0.0006-0.0018 (0,02-0,05)
Allowable Limit	0.004 (0,1)

Camshaft

Journal O.D.	1.572-1.573 (39,93-39,95)
Cylinder Block Bore I.D.	1.575-1.576 (40,0-40,025)
Oil Clearance	0.002-0.0036 (0,05-0,091)
Allowable Limit	0.006 (0,15)
Alignment Allowable Limit	0.0004(0,01)
Cam Lobe Height	1.335 (33,9)
Allowable Limit	1.333 (33,85)
End Clearance	0.0028-0.0087 (0,07-0,22)
Allowable Limit	0.012 (0,3)

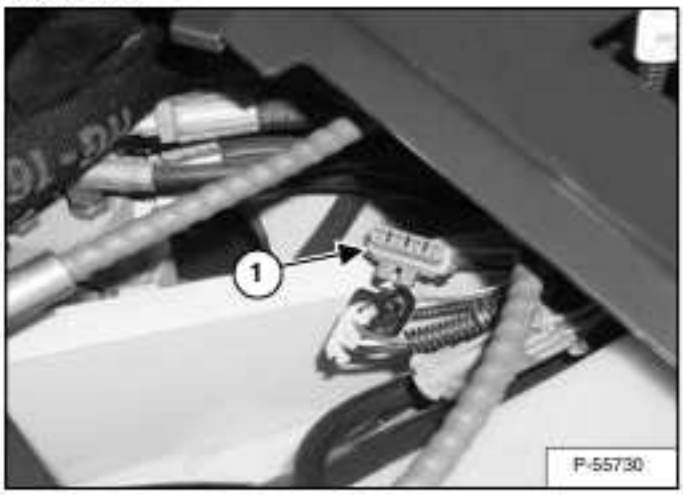
Tappet

Clearance Between Tappet & Guide	0.0008-0.0024 (0,02-0,062)
Allowable Limit	0.0028 (0,07)
Tappet O.D.	0.943-0.944 (23,96-23,98)
Tappet Guide I.D.	0.945-0.946 (24,0-24,021)

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Electrical System (Cont'd)

Figure 70-30-5



Check the wire harness (Item 1) **[Figure 70-30-5]** for voltage to the blower fan.

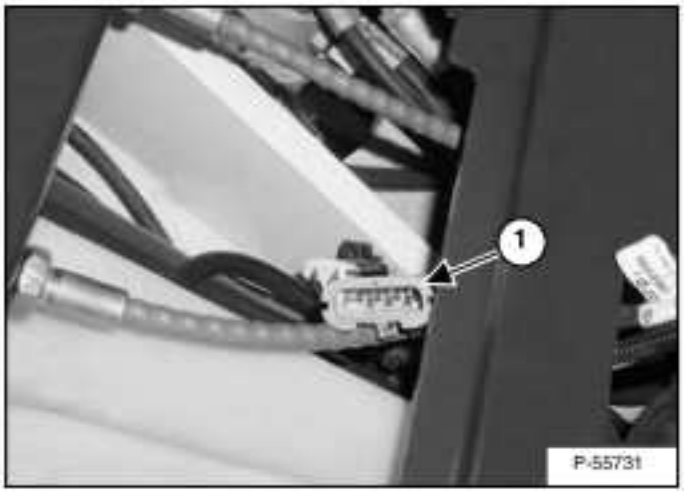
In the cab, place the blower switch in position 1. Check for voltage at the harness connector (Item 1) **[Figure 70-30-5]**, Pin 3. (YELLOW wire # 5000). The voltage should be 12 volts.

In the cab, place the blower switch in position 2. Check for voltage at the harness connector (Item 1) **[Figure 70-30-5]**, Pin 2. (RED wire # 1200). The voltage should be 12 volts.

In the cab, place the blower switch in position 3. Check for voltage at the harness connector (Item 1) **[Figure 70-30-5]**, Pin 1. (ORANGE wire # 1010). The voltage should be 12 volts.

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

Figure 70-30-6



If there is voltage at the wiring harness, check the resistance to the blower fan at the thermostat/blower fan wiring connector (Item 1) **[Figure 70-30-6]**.

Check the resistance between Pin 4 (BLACK wire # 2200) and Pin 3 (YELLOW wire # 5000).

Check the resistance between Pin 4 (BLACK wire # 2200) and Pin 2 (RED wire # 1200).

Check the resistance between Pin 4 (BLACK wire # 2200) and Pin 1 (ORANGE wire # 1010).

If there is no resistance value at any of these pins, replace the blower fan. (See BLOWER FAN (EARLIER MODELS) on Page 70-60-1.)

If there is resistance value at any of the pins, check the climate controls at the control panel inside the Excavator cab.

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WIRING SCHEMATIC

329 (S/N A2PG11001 AND ABOVE)

(PRINTED NOVEMBER 2006)
V-0843

CONTROL MODULE
CONNECTORS J1-J6

RIGHT HAND CONSOLE
HARNESS 6810761

LH CONSOLE
HARNESS
T103874

ENGINE HARNESS
7125893

V-0843 (10-13-06)

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