SEN00373-16

Shop Manual

HYDRAULIC
EXCAVATOR

PC800 -8
PC800LC-8
PC800SE-8
PC850 -8
PC850SE-8

SERIAL NUMBERS	PC800-	50001	and up
	PC800LC-	50001	
	PC800SE-	50001	
	PC850-	10001	
	PC850SE-	10001	

ecot3

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Specifications

Backhoe specification
PC800-8

Machine model				PC800-8
Serial number				50001 and up
Bucket capacity			m^3	3.1
Weight of machine			kg	75,000
Performance	Working ranges	Max. digging depth	mm	8,600
		Max. vertical wall depth	mm	5,575
		Max. digging reach	mm	13,740
		Max. reach at ground level	mm	13,460
		Max. digging height	mm	11,840
		Max. dumping height	mm	8,145
	Max. digging force		kN {kg}	333.4 {34,000}
	Swing speed		rpm	6.8
	Swing max. slope angle		deg.	16
	Travel speed		km/h	Lo : 2.8, Hi : 4.2
	Gradeability		deg.	35
	Ground pressure (standard triple grouser shoe width: 710 mm)		kPa {kg/cm^2}	105.1 {1.07}
Dimensions	Overall length		mm	14,405
	Overall width		mm	4,335
	Overall width of track (when increasing)		mm	3,490 (4,285)
	Overall height		mm	4,660
	Overall height to top of cab		mm	4,000
	Ground clearance of counterweight		mm	1,560
	Min. ground clearance		mm	840
	Tail swing radius		mm	4,400
	Min. swing radius of work equipment		mm	6,060
	Height of work equipment at min. swing radius		mm	10,855
	Length of track on ground		mm	4,500
	Track gauge (when increasing)		mm	2,780 (3,500)
	Height of machine cab		mm	3,670

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Failure code [DHPFKB] R Pump P. Sensor S/C

Action code	Failure code	Trouble	R Pump P. Sensor S/C (Pump controller system)
—	**DHPFKB**		
Contents of trouble	• Signal voltage from the front pump pressure sensor is below 0.3 V or above 4.42 V.		
Action of controller	• Fixes travel speed to Lo. • Continues controls, assuming pressure to be constant {350 kg/cm²}. • Even if cause of failure disappears, system does not reset itself until starting switch is turned OFF.		
Problem that appears on machine	• Front pump pressure cannot be monitored. • Travel speed and work equipment speed do not rise.		
Related information	• Input from the rear pump pressure sensor (pressure) can be checked in the monitoring function. (Code No. **01101**: Rear pump pressure) • Method of reproducing failure code: Turn starting switch ON or start engine.		

	Cause		Standard value in normal state/Remarks on troubleshooting		
Possible causes and standard value in normal state	1	Sensor power supply system defective	If failure code [**DA25KP**] is displayed, carry out troubleshooting for it first.		
	2	Rear pump pressure sensor defective (Internal defect)	★Turn the engine starting switch OFF for the preparations, and turn to ON or keep the engine running during the troubleshooting.		
			P26		Voltage
			Between (3) – (1)	Power supply	4.5 – 5.5 V
			Between (2) – (1)	Signal	0.5 – 4.5 V
			The pressure sensor voltage is measured with the wiring harness connected. Accordingly, if the voltage is abnormal, check the wiring harness and controller, too, for another cause of the trouble, and then judge.		
	3	Disconnection of wiring harness (Disconnection or defective contact with connector)	★Turn the engine starting switch OFF for the preparations, and hold it in the OFF position during the troubleshooting.		
			Between wiring harness between CP01 (female) (2) – P26 (female) (2) – P26 grounding	Resistance	Min. 1 MΩ
	4	Short-circuiting of wiring harness (Contact with 24 V circuit)	★Turn the engine starting switch OFF for the preparations, and hold it in the ON position during the troubleshooting.		
			Between wiring harness between CP01 (female) (22) – J21 – P26 (female) (3) and grounding	Voltage	Max. 1 V
			Between wiring harness between CP01 (female) (2) – P26 (female) (2) and grounding	Voltage	Max. 1 V
	5	Pump controller defective	★If causes 1 – 4 are not detected, pump may be defective. (Since trouble is in system, troubleshooting cannot be carried out.)		

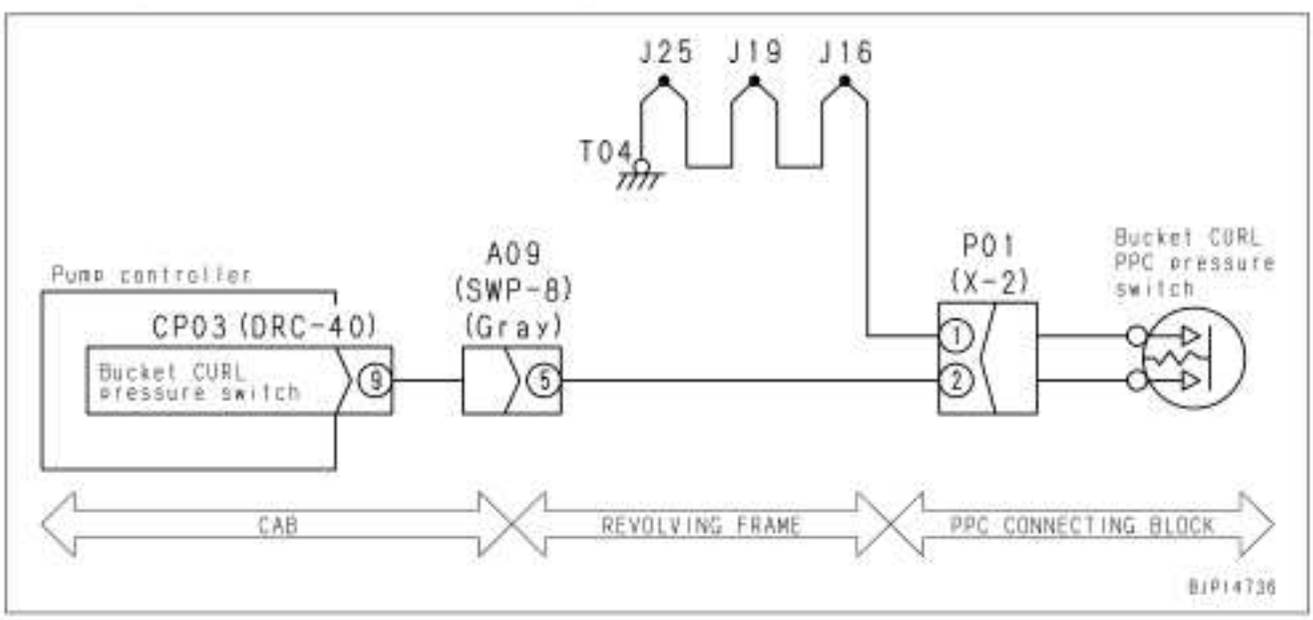
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E-22 "Bucket CURL" is not correctly displayed in monitor function

Failure phenomenon	• "Bucket CURL" is not correctly displayed in monitor function	"Bucket CURL" is not correctly displayed in the monitor function (special function) on the machine monitor.
Relative information	• Monitoring code: **01901** (Pressure switch 2)	

	Cause		Standard value in normalcy and references for troubleshooting			
Possible causes and standard value in normal state	1	Bucket CURL PPC hydraulic switch fault (Internal disconnection and short-circuiting)	★Turn the engine starting switch OFF for the preparations, and keep the engine running during the troubleshooting.			
			P01 (male)	R.H. work equipment control lever	Resistance	
			Between (1) – (2)	NEUTRAL	Min. 1 MΩ	
				Bucket CURL	Max. 1 Ω	
	2	Disconnection of wiring harness (Disconnection or defective contact with connector)	★Turn the engine starting switch OFF for the preparations, and hold it in the OFF position during the troubleshooting.			
			Wiring harness between CP03 (female) (9) – P01 (female) (2)		Resistance	Max. 1 Ω
			Wiring harness between P01 (female) (1) – J16 – J19 – J25 – chassis ground		Resistance	Max. 1 Ω
	3	Grounding fault of wiring harness (Contact with grounding (GND) circuit)	★Turn the engine starting switch OFF for the preparations, and hold it in the OFF position during the troubleshooting.			
			Wiring harness between CP03 (female) (9) – P01 (female) (2) and chassis ground		Resistance	Min. 1 MΩ
	4	Short-circuiting of wiring harness (Contact with 24 V circuit)	★Turn the engine starting switch OFF for the preparations, and hold it in the ON position during the troubleshooting.			
			Wiring harness between CP03 (female) (9) – P01 (female) (2) and chassis ground		Voltage	Max. 1 V
	5	Defective pump controller	★Turn the engine starting switch OFF for the preparations, and start the engine during the troubleshooting.			
			CP03	R.H. work equipment control lever	Voltage	
			Between (9) – chassis ground	NEUTRAL	20 – 30 V	
				Bucket CURL	Max. 1 V	

Circuit diagram related to bucket CURL PPC hydraulic switch

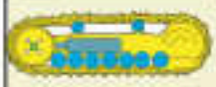


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UNDERCARRIAGE INSPECTION

(Program form No.: **********)

KUC

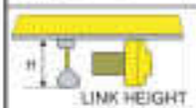
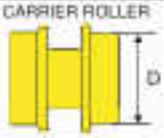
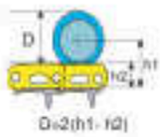


Komatsu Undercarriage Inspection

Customer name:

Address:

Model	PC800-8	Serial#	Equip#	Work Order No	
Location		SMR		Wet, AR, HD or Dry	DRY
Soil condition		Dealer		Shoe width (mm)	
Working condition		Inspector		Shoe type	DOUBLE
Insp.Date(yyyy/mm/dd)				Wear type	NORMAL

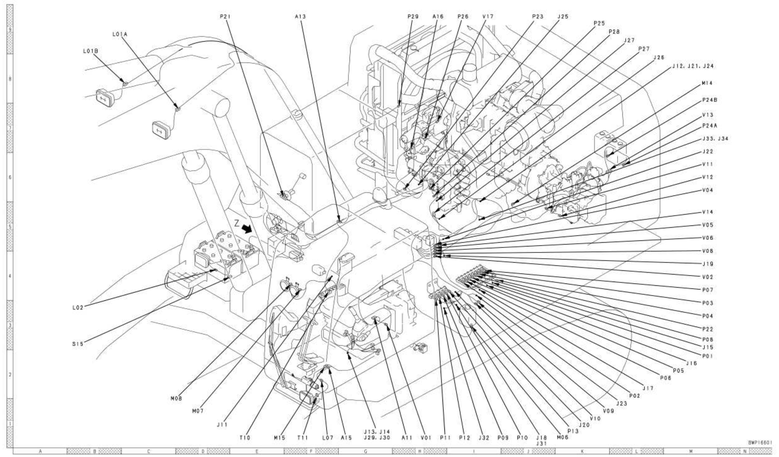
			New	100% Wear	Measured mm	Wear %	SMR New	SMR Rebuilt	Hours on Parts:	Comments/Observation
LINK PITCH 	R	LH	1042.4	1054.4						
		RH	1042.4	1054.4						
	M	LH	260.60	263.60						
		RH	260.60	263.60						
 LINK HEIGHT	H	LH	156.0	143.0						
		RH	156.0	143.0						
BUSHING 	D	LH	87.5	82.5			New	Turned		
		RH	87.5	82.5			New	Turned		
GROUSER HIGHT 	H	LH	50.0	25.0						
		RH	50.0	25.0						
CARRIER ROLLER 	Front	LH	175.0	155.0						
		RH	175.0	155.0						
	Rear	LH	175.0	155.0						
		RH	175.0	155.0						
IDLER 	Front	LH	22.5	28.5						
		RH	22.5	28.5						
	Rear	LH	22.5	28.5						
		RH	22.5	28.5						
TRACK ROLLER  D=2(h1- h2)	1	LH	255.0	243.0						
	2	LH	255.0	243.0						
	3	LH	255.0	243.0						
	4	LH	255.0	243.0						
	5	LH	255.0	243.0						
	6	LH	255.0	243.0						
	7	LH	255.0	243.0						
	8	LH	255.0	243.0						
	9	LH	255.0	243.0						
	10	LH	255.0	243.0						
	1	RH	255.0	243.0						
	2	RH	255.0	243.0						
	3	RH	255.0	243.0						
	4	RH	255.0	243.0						
	5	RH	255.0	243.0						
	6	RH	255.0	243.0						
	7	RH	255.0	243.0						
	8	RH	255.0	243.0						
	9	RH	255.0	243.0						
	10	RH	255.0	243.0						
SPROCKET 	H	LH	0.0	6.0						
		RH	0.0	6.0						

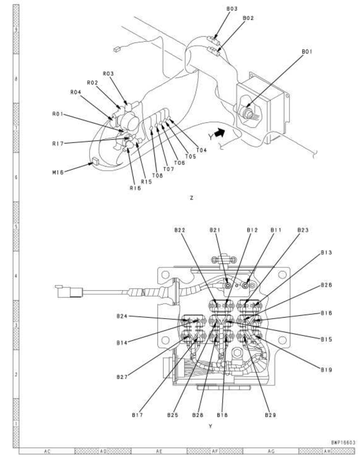
Remarks:

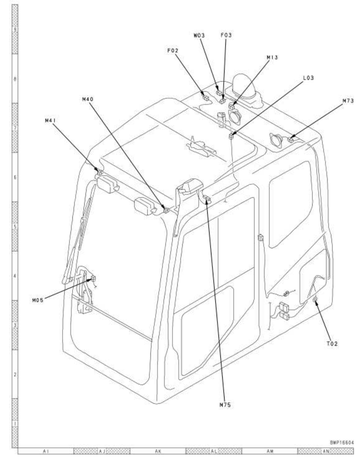
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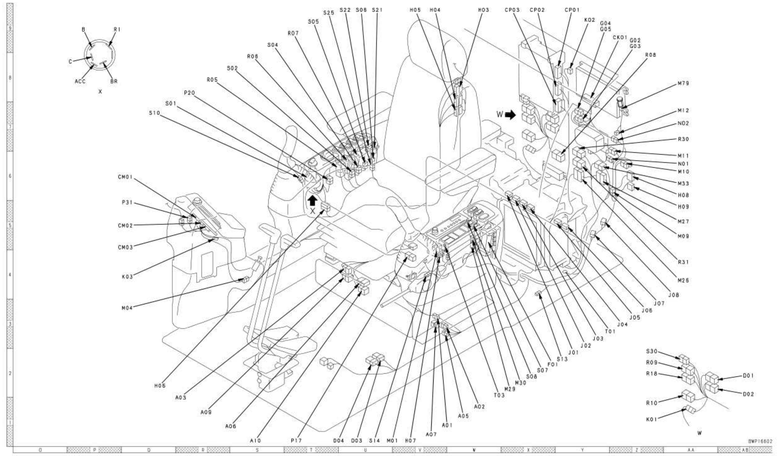
Connector list and sterogram

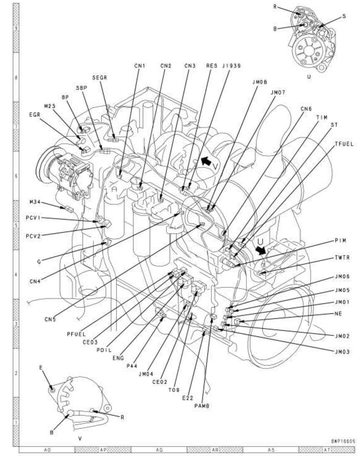
Connector No.	Model	Number of pins	Component name	Address of stereogram
A01	X	4	Intermediate connector (Power supply line)	W-1
A02	X	4	Intermediate connector (GND, battery relay terminal BR)	W-1
A03	DT (Gray)	12	Intermediate connector (Fuel control dial, CAN)	R-2
A05	DT (Green)	12	Intermediate connector (Solenoid system)	W-1
A06	DT (Green)	12	Intermediate connector (Pressure sensor)	S-1
A07	SWP	16	Intermediate connector (Heater system, pressure switch system)	V-1
A09	SWP	8	Intermediate connector (Pressure switch system)	R-1
A10	DT	6	Intermediate connector (Circuit breaker)	S-1
A11	DT (Black)	12	Intermediate connector (L/S, pump EPC system)	H-1
A13	DT	2	Intermediate connector (Working lamp)	F-9
A15	X	1	Intermediate connector (Flashlight)	G-1
A16	SWP	2	Intermediate connector (Fan reverse solenoid)	H-9
B01	HD30	21	Intermediate connector (Circuit breaker)	AH-8
B02	DT	1	Intermediate connector (Circuit breaker)	AG-9
B03	DT	1	Intermediate connector (Circuit breaker)	AF-9
B11	Terminal	1	Circuit breaker 1	AG-5
B12	Terminal	1	Circuit breaker 2	AG-5
B13	Terminal	1	Circuit breaker 3	AH-4
B14	Terminal	1	Circuit breaker 4	AD-3
B15	Terminal	1	Circuit breaker 5	AH-3
B16	Terminal	1	Circuit breaker 6	AH-3
B17	Terminal	1	Circuit breaker 7	AE-1
B18	Terminal	1	Circuit breaker 8	AF-1
B19	Terminal	1	Circuit breaker 9	AH-2
B21	Terminal	1	Circuit breaker 1	AF-5
B22	Terminal	1	Circuit breaker 2	AE-5
B23	Terminal	1	Circuit breaker 3	AH-5
B24	Terminal	1	Circuit breaker 4	AD-3
B25	Terminal	1	Circuit breaker 5	AE-1
B26	Terminal	1	Circuit breaker 6	AH-4
B27	Terminal	1	Circuit breaker 7	AD-2
B28	Terminal	1	Circuit breaker 8	AF-1
B29	Terminal	1	Circuit breaker 9	AG-1
BP	DT	2	Bypass valve	AO-8
CE02	DRC	50	Engine controller	AQ-2
CE03	DTP	4	Engine controller	AP-3
CH01	DRC	40	KOMTRAX	Z-9
CM01	070	12	Machine monitor	C-6
CM02	040	20	Machine monitor	C-5
CM03	040	16	Machine monitor	C-5
CN1	DT	2	Injector #1	AQ-8
CN2	DT	2	Injector #5	AQ-8
CN3	DT	2	Injector #3	AR-8
CN4	DT	2	Injector #6	AQ-4
CN5	DT	2	Injector #2	AC-6
CN6	DT	2	Injector #4	AT-7
CP01	DRC	24	Pump controller	Y-9
CP02	DRC	40	Pump controller	X-9
CP03	DRC	40	Pump controller	X-9
D01	SWP	8	Diode array	AB-2
D02	SWP	8	Diode array	AB-2
D03	SWP	8	Diode array	U-1
D04	SWP	8	Diode array	U-1
E22	DT	6	Intermediate connector (Starting motor)	AR-2
EGR	DT	2	EGR valve	AO-7
ENG	DRC	60	Engine controller	AP-2
F01	—	20	Fuse box	X-2
F02	SWP	2	Intermediate connector (Rotary lamp)	AK-9
F03	DT	2	Rotary lamp	AL-9
G	SUMITOMO	3	G sensor	AO-4
G02	X	1	Test connector (female)	Z-9
G03	X	1	Test connector (male)	Z-9
G04	X	1	Test connector (female)	Y-9
G05	X	1	Test connector (male)	Y-9
H03	S	16	Intermediate connector (Machine monitor)	W-9
H04	S	16	Intermediate connector (Machine monitor)	V-9
H05	S	12	Intermediate connector (Machine monitor)	V-9
H06	S090	20	Right console upper wiring harness	Q-2
H07	M	1	Intermediate connector (Radio ground)	V-1
H08	M	8	Intermediate connector (Speaker)	AA-6
H09	S	8	Intermediate connector (Lighting)	AA-5
J01	J (Black)	20	Junction connector	Y-2
J02	J (Black)	20	Junction connector	Y-3
J03	J (Pink)	20	Junction connector	Y-3
J04	J (Orange)	20	Junction connector	Z-3
J05	J (Pink)	20	Junction connector	Z-3
J06	J (Orange)	20	Junction connector	Z-3
J07	J (Black)	20	Junction connector	Z-3
J08	J (Pink)	20	Junction connector	AA-4
J1939	DT	3	CAN connector	AR-8
J11	—		Terminal block	D-1
J12	—		Terminal block	M-8
J13	—		Terminal block	G-1
J14	—		Terminal block	G-1
J15	—		Terminal block	M-3
J16	—		Terminal block	M-2
J17	—		Terminal block	L-2
J18	—		Terminal block	J-1
J19	—		Terminal block	M-4
J20	—		Terminal block	K-1
J21	—		Terminal block	M-8
J22	—		Terminal block	M-7
J23	—		Terminal block	L-1
J24	—		Terminal block	M-8
J25	—		Terminal block	K-9
J26	—		Terminal block	L-8
J27	—		Terminal block	L-9
J29	—		Terminal block	G-1
J30	—		Terminal block	G-1
J31	—		Terminal block	J-1
J32	—		Terminal block	I-1
J33	—		Terminal block	M-7
J34	—		Terminal block	N-7
JM01	—		Terminal block	AT-3
JM02	—		Terminal block	AT-3
JM03	—		Terminal block	AT-2
JM04	—		Terminal block	AQ-2
JM05	—		Terminal block	AT-4
JM06	—		Terminal block	AT-4
JM07	—		Terminal block	AS-8
JM08	—		Terminal block	AS-8
K01	M	2	Resistor (27 Ω)	Z-1
K02	DT	3	CAN terminal resistor	Y-9
K03	DT	3	CAN terminal resistor	Q-4
L01A	DT	2	Working lamp	B-9
L01B	DT	2	Working lamp	B-9
L02	DT	2	Right headlamp	B-3
L03	M	2	Room lamp	AN-8
L07	DT	2	Flashlight	F-1
M01	PA	9	Radio	V-1
M04	YAZAKI	2	Cigarette lighter	Q-3
M05	M	6	Wiper motor	AI-4
M06	KES	2	Window washer	K-1
M07	090	2	Horn (High tone)	D-1
M08	090	2	Horn (Low tone)	D-2
M09	M	2	Optional power supply	AA-5
M10	M	2	Optional power supply (2)	AA-6
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P06	X	2	Boom raise pressure switch	L-2
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P08	X	2	Arm out pressure switch	M-3
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T02	Terminal	1	Cab ground	AN-3
T03	Terminal	1	Radio ground	W-2
T04	Terminal	1	Revolving frame ground	AF-7
T05	Terminal	1	Revolving frame ground	AF-6
T06	Terminal	1	Revolving frame ground	AE-6
T07	Terminal	1	Revolving frame ground	AE-6
T08	Terminal	1	Revolving frame ground	AE-6
T09	Terminal	1	Engine body ground	AQ-2
T10	Terminal	1	Revolving frame ground	E-1
T11	Terminal	1	Revolving frame ground	F-1
V01	DT	2	PPC oil pressure lock solenoid	H-1
V02	DT	2	Straight travel solenoid	M-4
V04	DT	2	Travel speed selector solenoid	M-6
V05	DT	2	Swing holding brake solenoid	M-5
V06	DT	2	Boom head 2-stage safety valve solenoid	M-5
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V09	DT	2	Boom shockless control solenoid (Raise side)	K-1
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V12	DT	2	Main pump (R) EPC solenoid	M-6
V13	DT	2	Fan pump EPC solenoid	M-7
V14	DT	2	Swing priority solenoid	M-5
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BR	Terminal	1	Starting switch terminal BR	P-8
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