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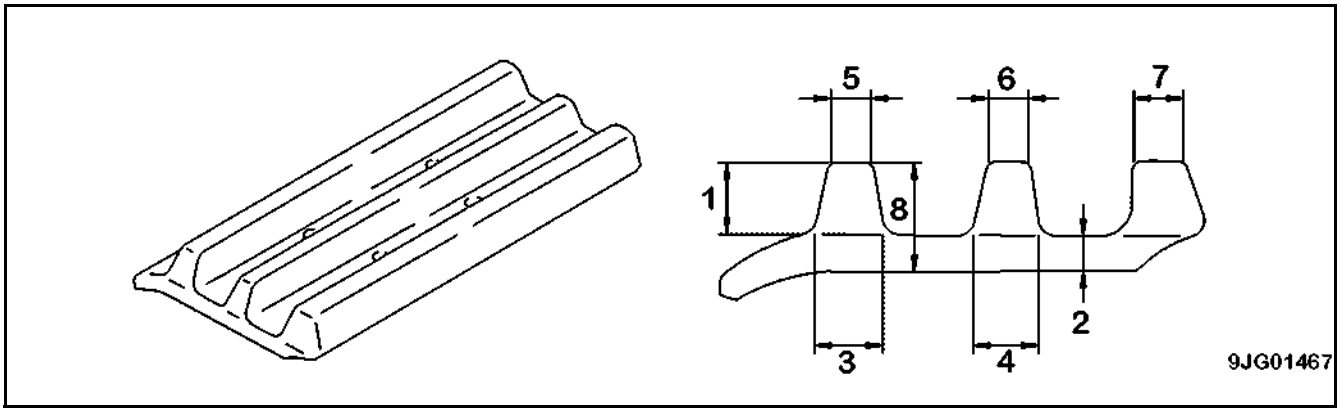
Machine model				PC400LC-8		
Serial number				A88001 and up		
Engine	Performance	Model Type		SAA6D125E-5 4-cycle, water-cooled, in-line, vertical, direct injection, with turbocharger and aftercooler		
		No. of cylinders - bore x stroke	mm	6-125x150		
		Piston displacement	cc	11.045		
		Flywheel horsepower	kW/rpm {HP/rpm}	257/1,900 (345/1,900)		
		Max. torque	Nm/rpm {kgm/rpm}	1,383/1,400 {141/1,400}		
		Max. speed at no load	rpm	1,930		
		Min. speed at no load	rpm	1,000		
		Min. fuel consumption	g/kWh {g/HPh}	203 {149}		
	Starting motor Alternator Battery			24V, 7.5 kW 24V, 50A 12V, 110 Ah x 2		
	Radiator core type			Alminum wave type, 4 rows		
Undercarriage	Carrier roller			2 on each side		
	Track roller			8 on each side		
	Track shoe			Assembly-type triple grouser, 49 on each side		
Hydraulic system	Hydraulic pump	Type x No.		HPV160+160(190), variable displacement, piston type x 2		
		Delivery	L/min	345 x 2		
		Set pressure	MPa {kg/cm^2}	37.8 {380}		
	Control valve	Type x No. Control method		6-spool type + 1-spool type x 1 Hydraulic		
	Hydraulic motor	Travel motor		KMV200ADT-2, Variable displacement, piston type (with brake valve, parking brake): x 2		
		Swing motor		KMF230ABE-5, Fixed displacement piston type (with safety valve, holding brake, reverse rotation preventive valve): x 1		
Hydraulic system	Hydraulic cylinder			Boom (*1)	Arm (*1), (*2)	Bucket
		Type		Double-acting piston	Double-acting piston	Double-acting piston
		Inside diameter of cylinder	mm	160	185	160
		Diameter of piston rod	mm	110	120	110
		Stroke	mm	1,570	1,820	1,270
		Max. distance between pins	mm	3,830	4,325	3,140
		Min. distance between pins	mm	2,260	2,505	1,870
	Hydraulic tank Hydraulic filter Hydraulic cooler			Closed box type Tank return side CF40-1 (Air cooled)		

TRIPLE GROUSER SHOE

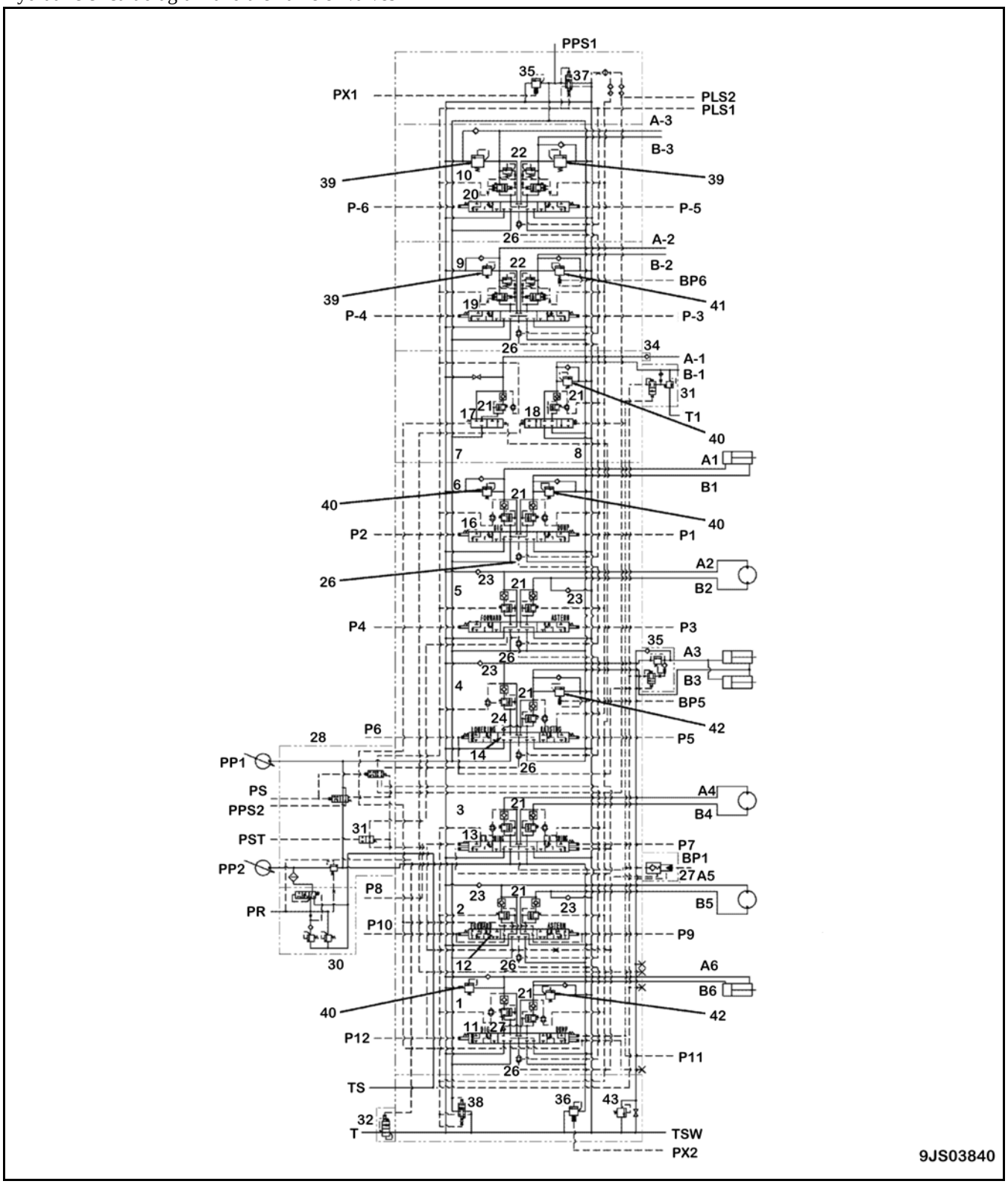


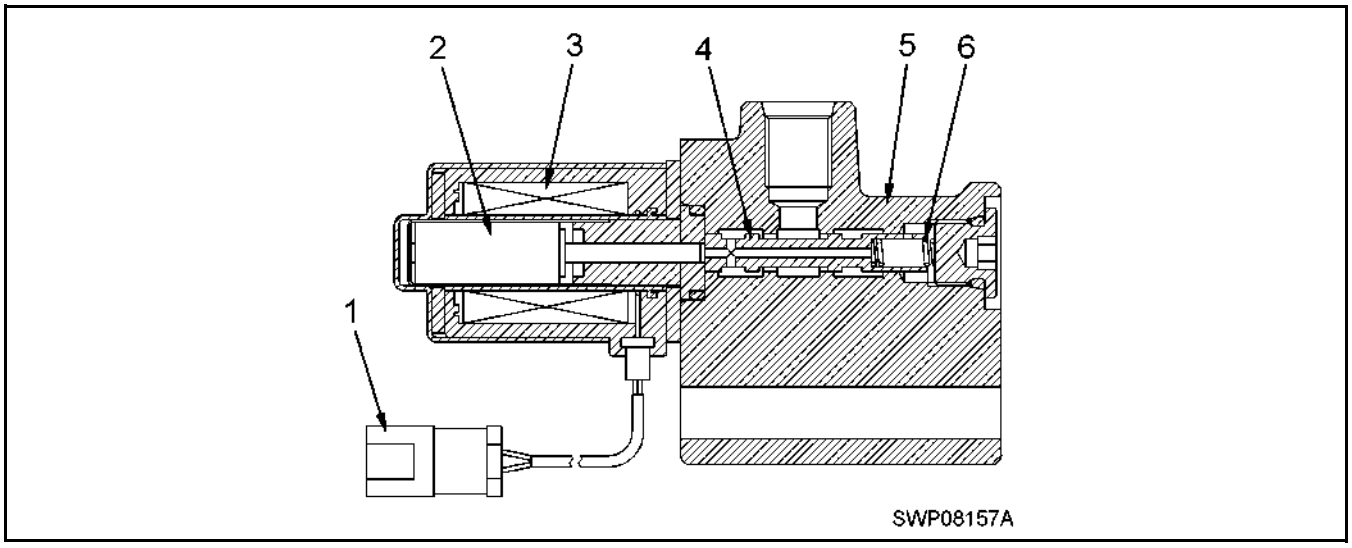
Unit: mm

No.	Check item	Criteria		Remedy
1	Height	Standard size	Repair limit	Build-up welding for rebuilding or replace
		37	22	
2	Thickness	13		
3	Length at of base	33		
4		27		
5	Length at tip	25.5		
6		17.5		
7		23.5		
8	Thickness	Standard size	Repair limit	
		50	35	

FUNCTIONS AND OPERATION BY VALVE

Hydraulic circuit diagram and the name of valves



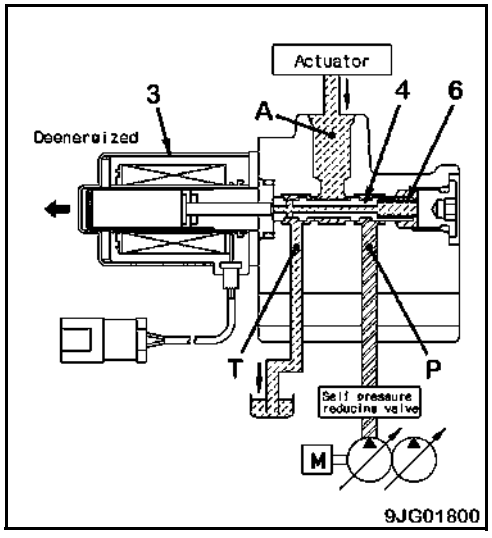


1. Connector
2. Moving core
3. Coil
4. Spool
5. Block
6. Spring

Operation

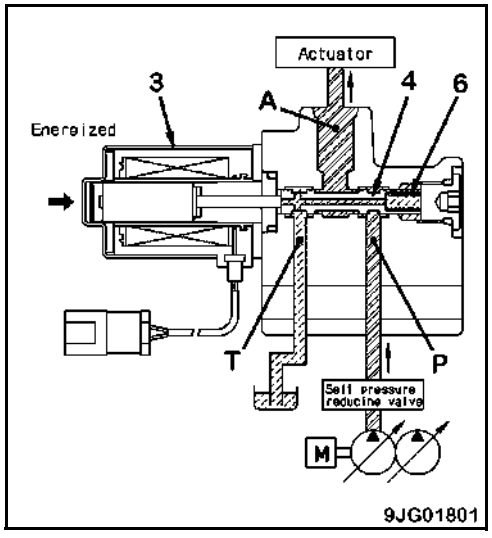
When solenoid is de-energized

- Since the signal current does not flow from the controller, solenoid (3) is de-energized. For this reason, spool (4) is pushed to the left by spring (6). By this operation, the pass from port (P) to port (A) is closed and the pressurized oil from the main pump does not flow into the actuator. At this time, the oil from the actuator is drained through ports (A) and (T) into the tank.



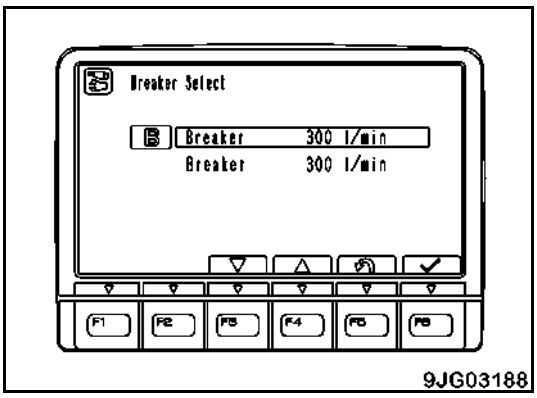
When solenoid is energized

- The signal current flows from the controller to solenoid (3), and the latter is energized. Accordingly, spool (4) is pressed against to the right side. By this operation, the pressurized oil from the main pump flows through port (P) and spool (4) to port (A), then flows into the actuator. At the same time, port (T) closes and stops the oil from flowing to the tank.



1. Breaker setting selection screen.
   - On this screen, you can allocate one of two set flow rates as a flow rate in breaker mode.
   - The B symbol is displayed before items specified to breaker mode.
   - ★ The defaults of both flow rates are 230 L/min.

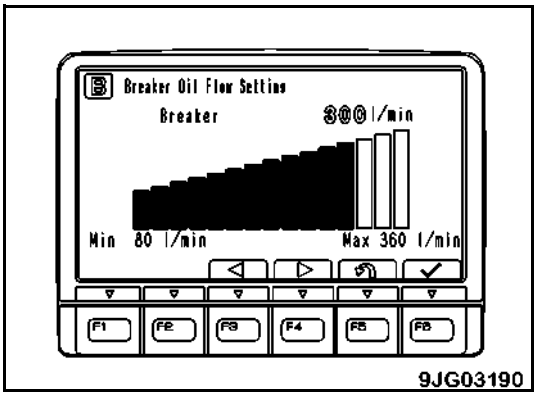
   F3: Selects (highlights) an item one down.
   F4: Selects (highlights) an item one up.
   F5: Returns to the breaker setting menu screen.
   F6: Specifies the selected (highlighted) item as a flow rate in breaker mode.



2. Breaker flow rate setting screen.
   - On this screen, you can specify a flow rate.
   - The B symbol is displayed before items specified to breaker mode.

   F3: Selects (highlights) an item one down.
   F4: Selects (highlights) an item one up.
   F5: Returns to the breaker setting menu screen.
   F6: Switches to the flow rate level setting screen for the selected (highlighted) item.
   - On the flow rate level setting screen, change the set flow rate.

   F3: Decreases the flow rate.
   F4: Increases the flow rate.
   F5: Returns to the flow rate setting screen without changing the flow rate.
   F6: Returns to the flow rate setting screen after specifying the flow rate.

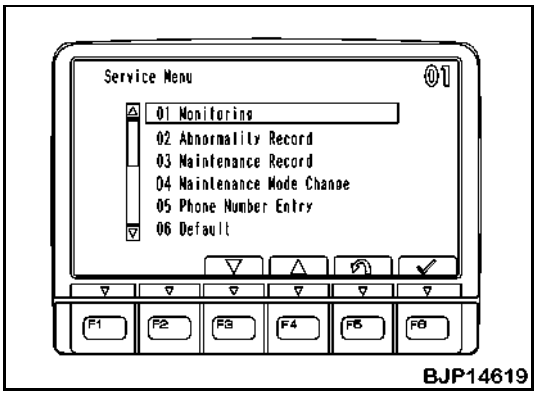


Flow level	Flow rate (L/min)	Remarks
15	360	
14	340	
13	320	
12	300	Default
11	280	
10	260	
9	240	
8	220	
7	200	
6	180	
5	160	
4	140	
3	120	
2	100	
1	80	

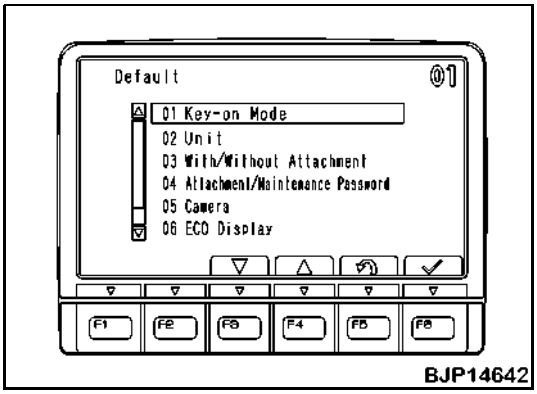
DEFAULT (ECO DISPLAY)

Check or change various settings related to the machine monitor and machine by "Default". The ECO (economy) display setting function is used to set the display of the ECO gauge and energy saving guidance.

1. Selecting menu.
   Select “Default” on the “Service Menu” screen.

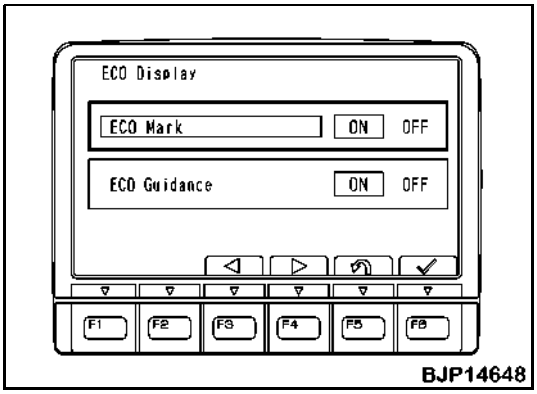


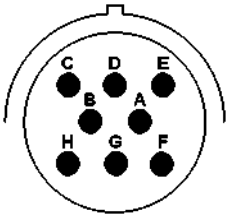
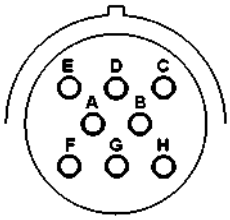
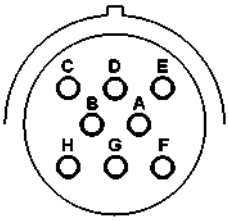
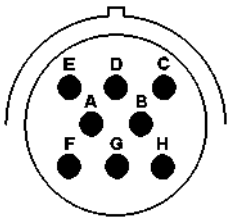
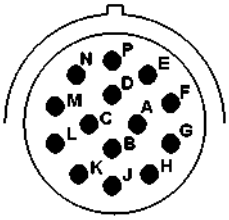
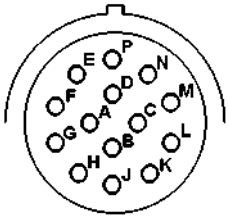
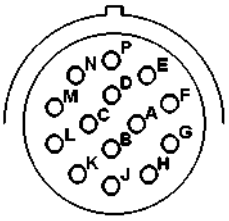
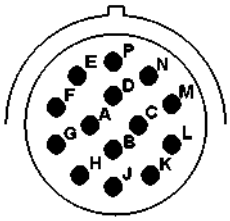
2. Selecting sub menu.
   After the “Default” screen is displayed, select “ECO Display” with the function switches or numeral input switches.
   ★ Select this item similarly to an item on the “Service Menu” screen.



3. Selecting display setting.
   After the “ECO Display” screen is displayed, select the setting with the function switches.
   - ON: Display ECO
   - OFF: Do not display ECO
   - [F3]: Move to left item
   - [F4]: Move to right item
   - [F5]: Cancel setting before confirmation and return to "Default" screen
   - [F6]: Confirm selection in each line

   ★ After confirming the setting of the upper and lower lines with [F6], return to the "Default" screen with [F5], and the setting is effective.
   ★ If ECO display is turned ON, ECO is displayed when the screen changes to the ordinary screen. Even if the energy saving guidance is turned ON, however, it is not displayed if the condition for display is not satisfied on the ordinary screen.



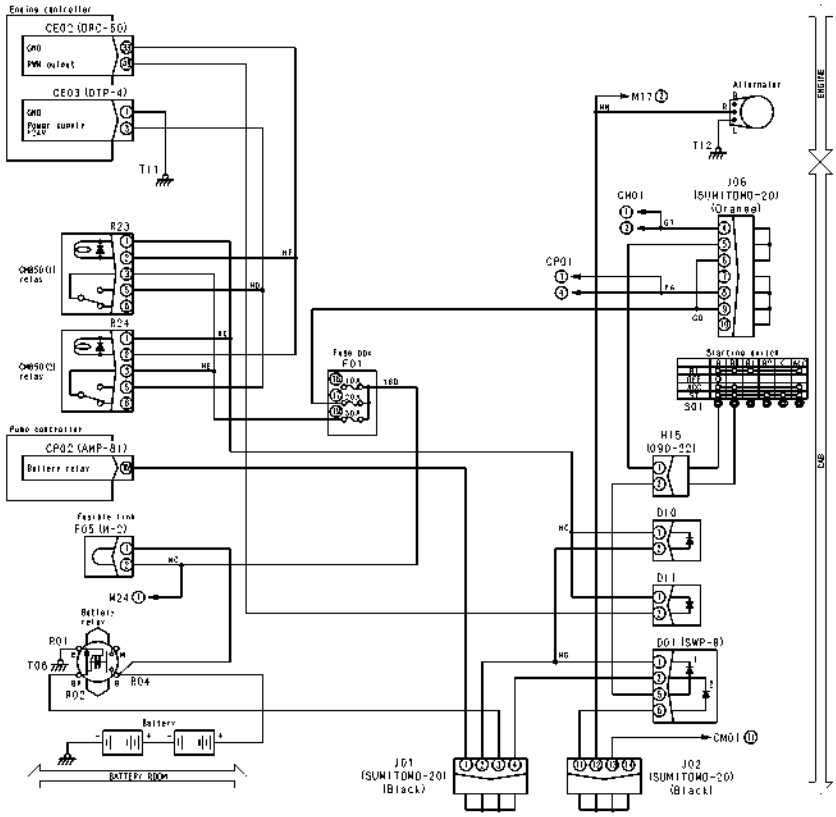
Type (shell size code)	HD30 Series connector		
	Body (plug)	Body (receptacle)	T-adapter Part Number
18-8 (1)	Pin (male terminal)	Pin (female terminal)	799-601-9210
	 BWP05001	 BWP05002	
	Part number: 08191-11201, 08191-11202 08191-11205, 08191-11206	Part number: 08191-14101, 08191-14102 08191-14105, 08191-14106	
	Pin (female terminal)	Pin (male terminal)	799-601-9210
	 BWP05003	 BWP05004	
	Part number: 08191-11201, 08191-12202 08191-11205, 08191-12206	Part number: 08191-13101, 08191-13102 08191-13105, 08191-13106	
18-14 (2)	Pin (male terminal)	Pin (female terminal)	799-601-9220
	 BWP05005	 BWP05006	
	Part number: 08191-21201, 08191-12202 08191-21205, 08191-12206	Part number: 08191-24101, 08191-24102 08191-24105, 08191-24106	
	Pin (female terminal)	Pin (male terminal)	799-601-9220
	 BWP05007	 BWP05008	
	Part number: 08191-22201, 08191-22202 08191-22205, 08191-22206	Part number: 08191-23101, 08191-23102 08191-23105, 08191-23106	

CA153 - CHARGE AIR TEMPERATURE SENSOR HIGH ERROR

Action code	Failure code	Trouble	Charge air temperature sensor high error (Engine controller system)
E15	**CA153**		
Contents of trouble	• Temperature signal circuit of boost pressure, temperature sensor detected high voltage.		
Action of controller	• Fixes charge temperature value and continues operation.		
Problem that appears on machine	• Exhaust gas becomes white. • Engine protection function based on boost temperature does not work		
Related information	• Method of reproducing failure code: Turn starting switch ON.		

	Cause		Standard value in normal state/Remarks on troubleshooting		
Possible causes and standard value in normal state	1	Defective boost pressure, temperature sensor [temperature signal system]	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.		
			TIM (male)	Resistance	
			Between (A) – (B)	0.18 – 160 kΩ	
	2	Disconnection in wiring harness (Disconnection in wiring or defective contact in connector)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.		
			Wiring harness between CE01 (female) (23) – TIM (female) (A)	Resistance	Max. 10 Ω
			Wiring harness between CE01 (female) (47) – TIM (female) (B)	Resistance	Max. 10 Ω
	3	Short circuit in wiring harness (with another wiring harness)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.		
			Between CE01 (female) (23) – each of CE01 (female) pins (With all wiring harness connectors disconnected)	Resistance	Min. 100 kΩ
	4	Defective wiring harness connector	Connecting parts between boost pressure, temperature sensor – engine wiring harness – engine controller may be defective. Check them directly. • Looseness of connector, breakage of lock, or breakage of seal • Corrosion, bend, breakage, push-in, or expansion of pin • Moisture or dirt in connector or defective insulation		
	5	Defective engine controller	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.		
			CE01 (female)	Resistance	
			Between (23) – (47)	0.18 – 160 kΩ	

Circuit diagram related to engine controller power supply



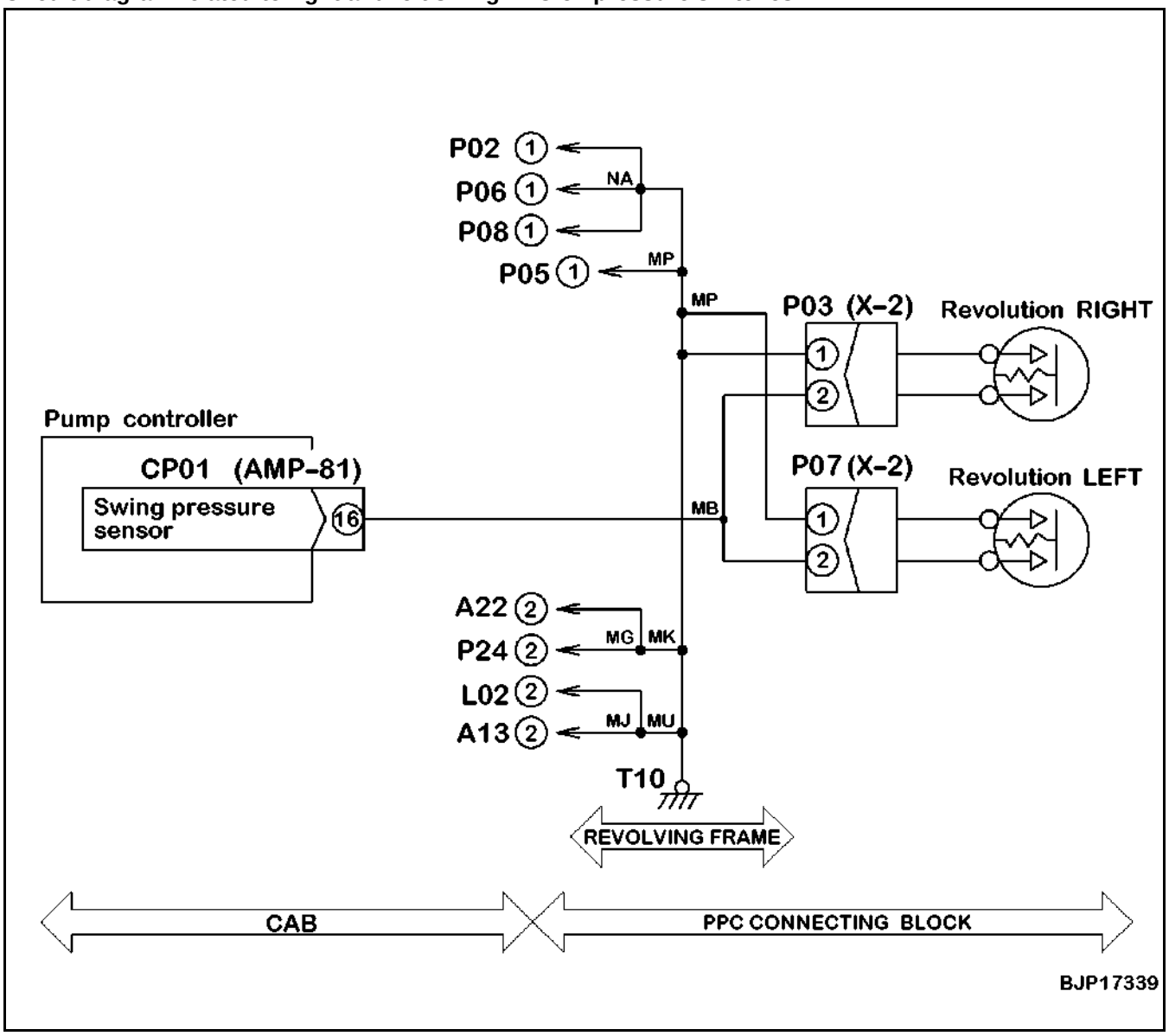
BJP17308

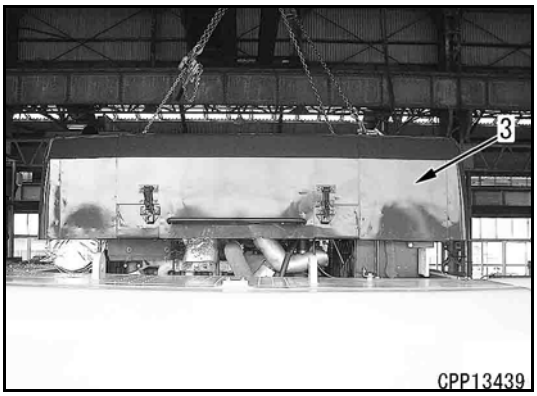
DY20KA - WIPER WORKING ABNORMALITY

Action code	Failure code	Trouble	Wiper working abnormality (Pump controller system)
—	**DY20KA**		
Contents of trouble	• When windshield wiper works, W signal of working ends is not input.		
Action of monitor panel	• Turns working output to wiper motor OFF. • If cause of failure disappears, system resets itself.		
Problem that appears on machine	• Wiper motor does not work.		
Related information	• Condition of W contact signal of wiper working area can be checked with monitoring function. (Code: 02204 switch 5) • Method of reproducing failure code: Turn starting switch ON + Set wiper switch to INT or ON.		

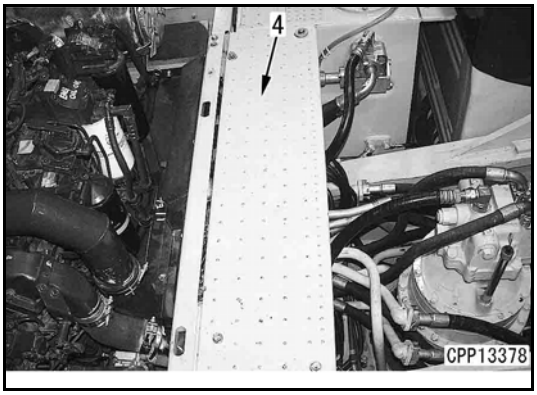
	Cause		Standard value in normal state/Remarks on troubleshooting			
Possible causes and standard value in normal state	1	Defective wiper motor (Internal disconnection)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.			
			M05 (female)	Wiper blade	Resistance	
			Between (6) – (5)	Operating range top	Max. 1 Ω	
				Other than operating range top	Min. 1 MΩ	
			Between (1) – (3)	All range	Max. 20 Ω	
	2	Disconnection in wiring harness (Disconnection in wiring or defective contact in connector)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.			
			Wiring harness between CP01 (female) (56) – M05 (male) (6)		Resistance	Max. 1 Ω
			Wiring harness between M05 (female) (5) – J04 – chassis ground (T05, T06)		Resistance	Max. 1 Ω
			Wiring harness between CP02 (female) (114) – M05 (male) (1)		Resistance	Max. 1 Ω
			Wiring harness between CP02 (female) (119) – M05 (male) (3)		Resistance	Max. 1 Ω
	3	Defective pump controller	★ Prepare with starting switch OFF, then turn starting switch ON and carry out troubleshooting.			
			CP01 (female)	Wiper blade	Resistance	
			Between (56) – chassis ground	Operating range top	Max. 1 Ω	
				Other than operating range top	Min. 1 MΩ	
			Between (114) – (119)	All range	Max. 20 Ω	

Circuit diagram related to right and left swing PPC oil pressure switches

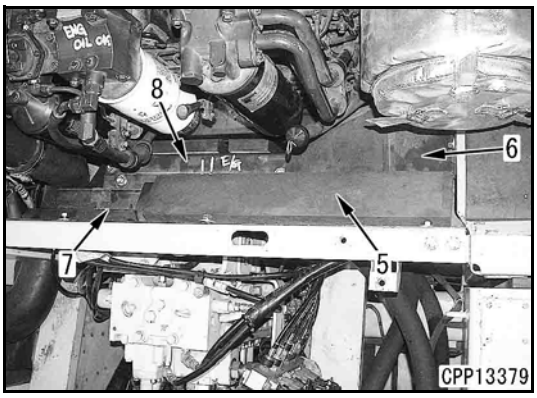




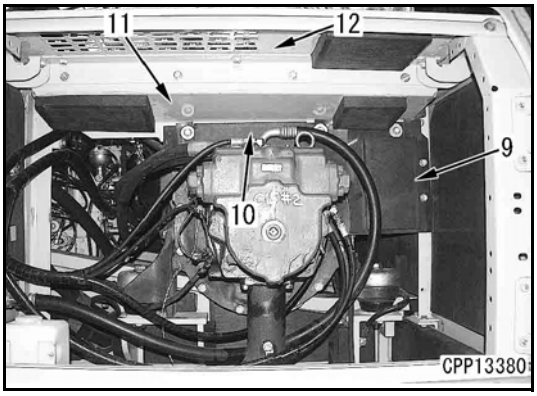
6. Remove floor cover (4) on the control valve.
   ★ Remove cover (4) to remove the following covers (5) through (8).



7. Remove covers (5), (6), (7) and (8).
   ★ After removal, place the floor cover to original position and temporarily tighten the bolt.

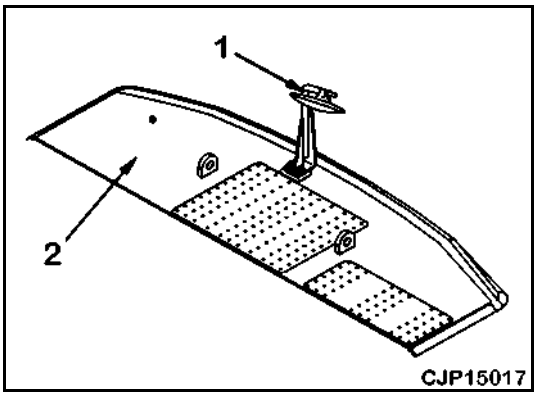


8. Open the cover beside the pump and remove covers (9), (10) and (11) on the pump side and the floor cover (12) on the pump.
   ★ Remove in the order of (9) to (12).

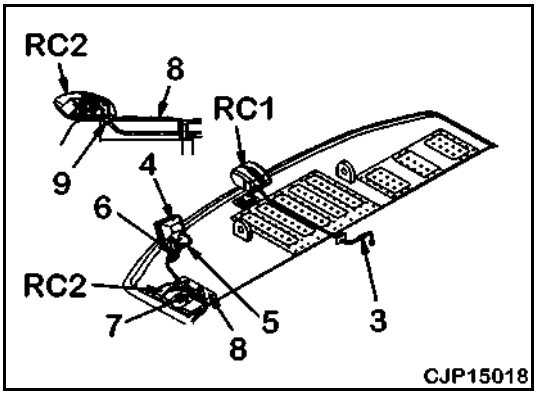


COUNTERWEIGHT

Removal



1. Remove the accessories on the counterweight according to the following procedure.
   (Mirror specification)
   i. Remove mirror (1).
   ii. Sling counterweight assembly (2).
   (1-rear camera specification)
   i. Disconnect connector A40 (3) of camera 1 (RC1).
   ii. Disconnect connector CN-L09 (5) and wiring harness clamps (6) and (7) from rear working lamp (4).
   iii. Sling counterweight assembly (2).
   (2-rear camera specification)
   i. Disconnect connector A40 (3) of camera 1 (RC1).
   ii. Disconnect connector CN-L09 (5) and wiring harness clamps (6) and (7) from rear working lamp (4). (If equipped).
   iii. Remove cover (8).
   iv. Disconnect coaxial cable connector (9) of camera 2 (RC2).



2. Open engine inspection cover at the counterweight side.
   ★ Because the handle of the cover touches the counterweight.
3. Set eyebolt [1] to counterweight assembly (2).
4. Remove 4 mounting bolts (10). [*1]