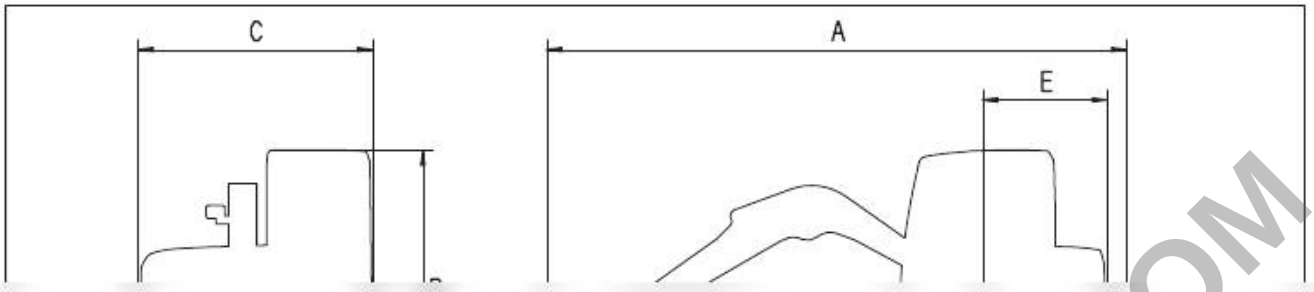
SPECIFICATION DIMENSIONS DRAWING

PC78US-6

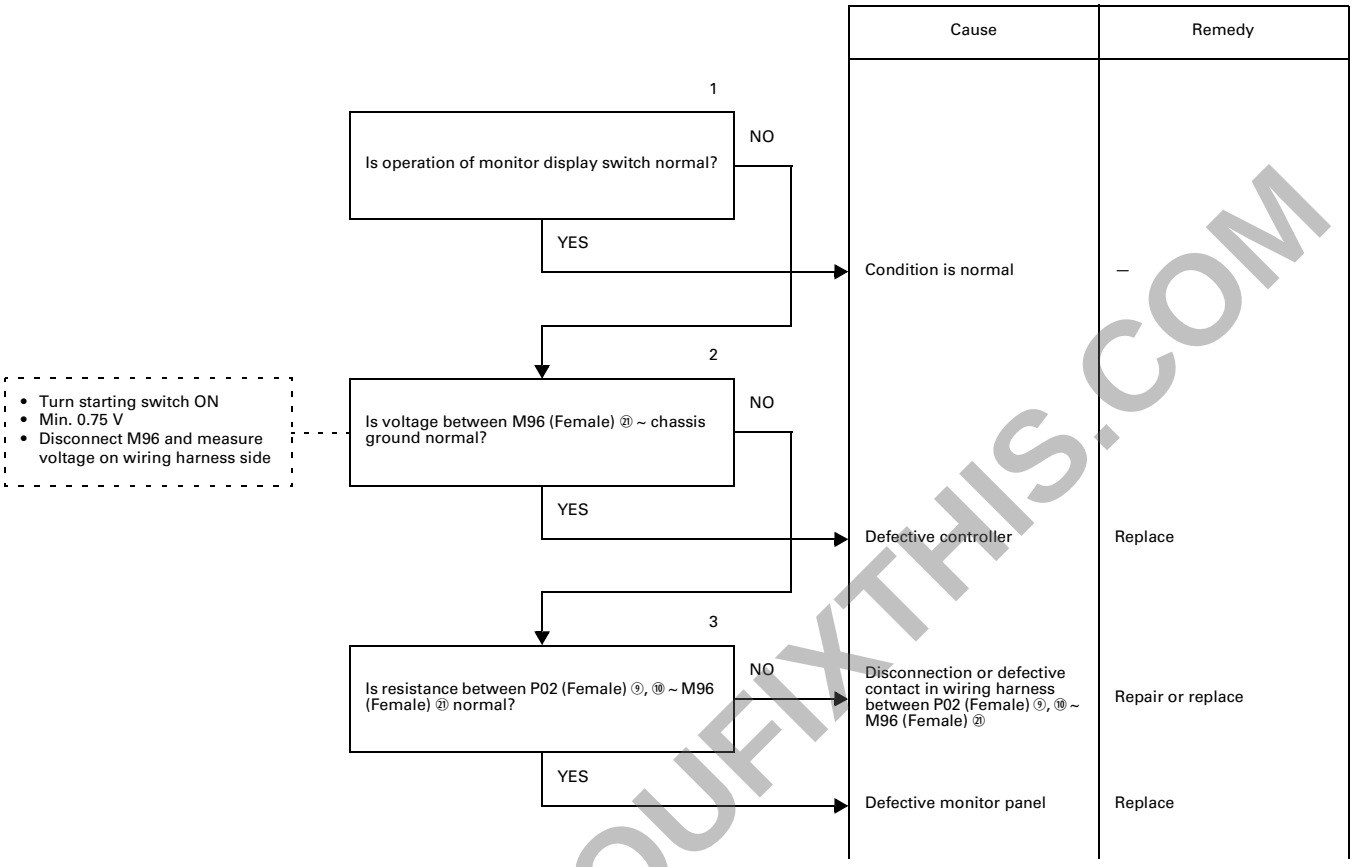


Blurred on purpose. The manual you buy has this page in full quality.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

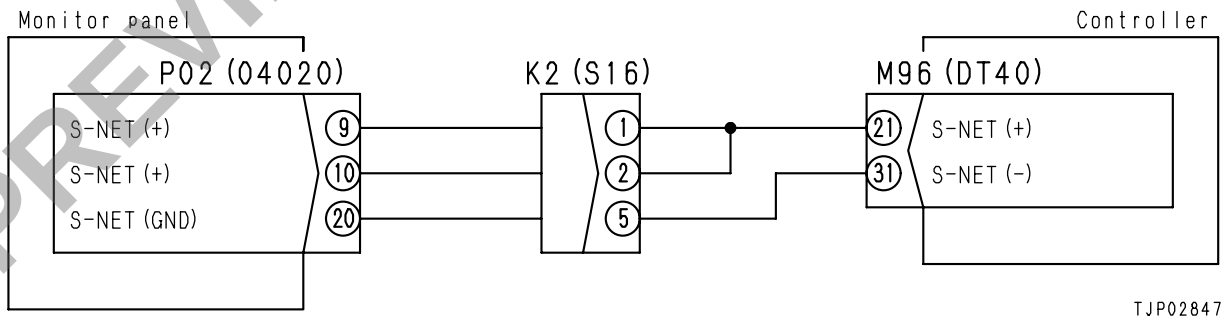
N-1 Defective communication



※ If the communication becomes defective, the following troubles occur.

- The working mode cannot be changed.
- The travel speed cannot be changed with the panel switches.
- The monitor lamp does not light up when the one-touch slow-down mechanism is turned on.
- Normal figures are not displayed on the display and service meter unit.
- A mode cannot be selected.

N-1 Electrical circuit diagram of each system



PREVIEW - YOUFIXTHIS.COM

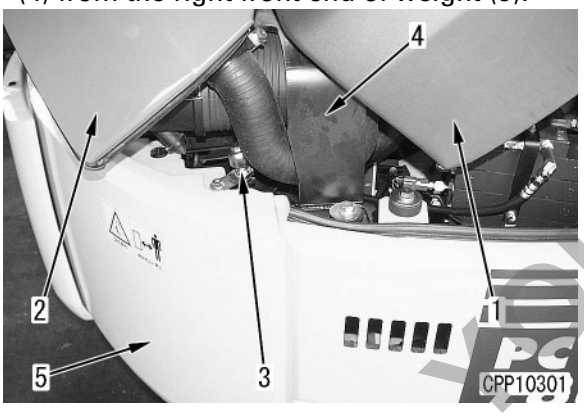
Download full manual at youfixthis.com

COUNTERWEIGHT ASSEMBLY

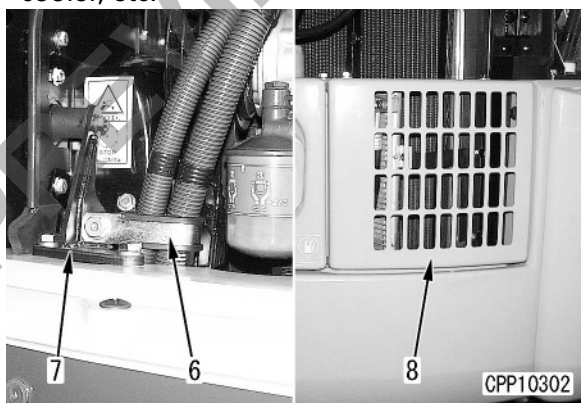
REMOVAL

★ Stop the machine on a level place and set the upper structure in parallel with the track, then swing to the right about 20 degrees (since the mounting bolts are above the track) and lower the work equipment to the ground and stop the engine.

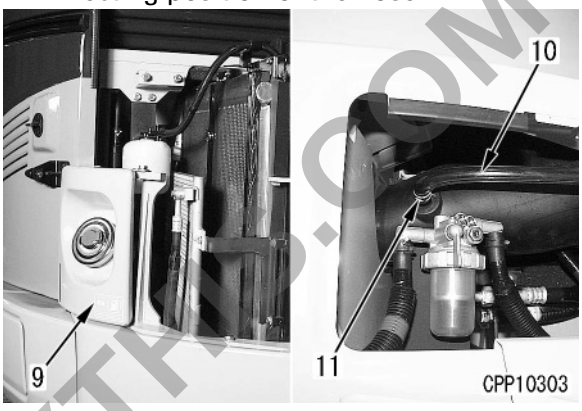
1. Remove cover (1) from the top of the hydraulic tank.
2. Remove engine cover (2).
3. Remove the bracket of damper case breather (3).
4. Remove 2 mounting bolts of air cleaner bracket (4) from the right front end of weight (5).



5. Remove the bolt of air conditioner hose clamp.
6. Remove radiator support bracket (7) from the weight.
7. Remove air inlet cover (8) of the radiator, oil cooler, etc.



8. Remove fuel filler mounting cover (9) of the fuel tank.
9. Remove clamp (11) and float gauge hose (10). Loosen the clamp of the hose connected to the fuel filler tube on the back side of the fuel filler mounting cover, then remove the tube and cover together.
   ★ When removing the float gauge hose, check that the fuel level is below the connecting position of the hose.



10. Using sling (1), hang weight (5) temporarily and remove the 3 weight mounting bolts.
11. Lift off weight assembly (5). ※1

kg Counterweight assembly: **1,170 kg**

(With auxiliary weight)



INSTALLATION

- Carry out installation in the reverse order to removal.

※1

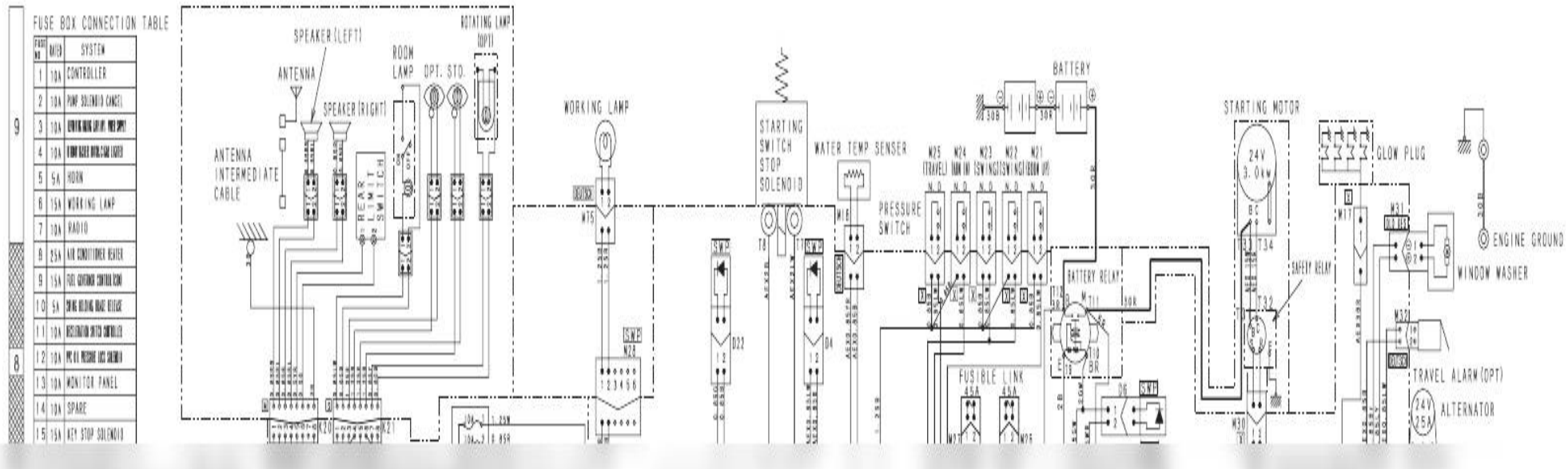
kg Weight mounting bolt:
1,150 ~ 1,1440 Nm{118 ~ 147 kgm}

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

ELECTRICAL CIRCUIT DIAGRAM

PC78US-6 Serial No.: 4001 – 5500 (1/2)



Blurred on purpose. The manual you buy has this page in full quality.

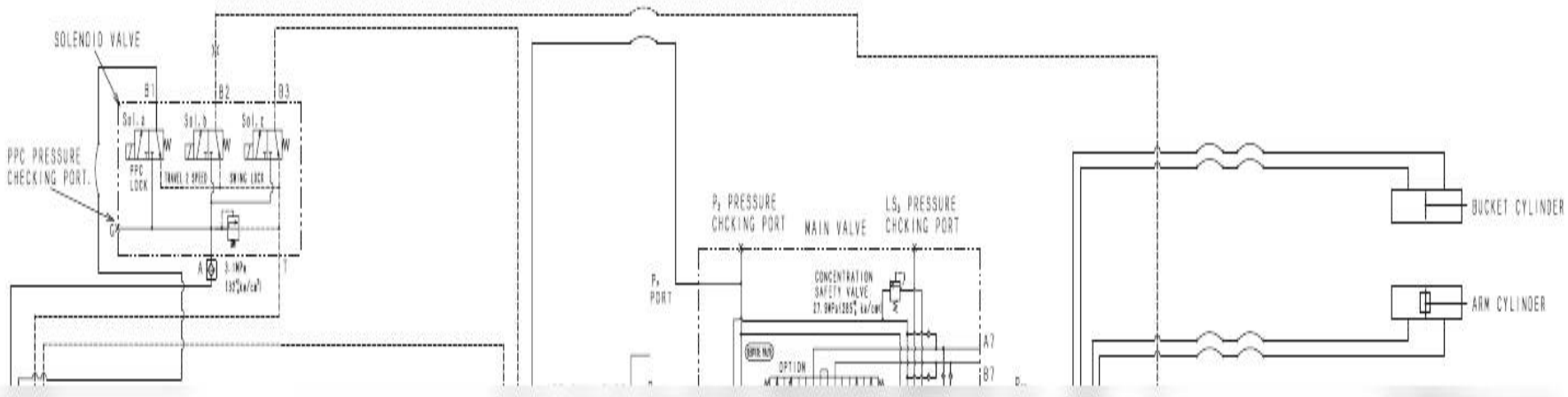
PREVIEW YOUFIXTHIS.COM

Download full manual at youfixthis.com

HYDRAULIC CIRCUIT DIAGRAM

PC78US-6 (Blade-less specification)

*1. Serial No.: 4001 – 4248 *3. Serial No.: 4001 – 5500
*2. Serial No.: 4249 and up *4. Serial No.: 5501 and up



Blurred on purpose. The manual you buy has this page in full quality.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

CONTENTS

No. of page

01 GENERAL 01-1

10 STRUCTURE AND FUNCTION, MAINTENANCE STANDARD . . 10-1

20 TESTING AND ADJUSTING 20-1

30 DISASSEMBLY AND ASSEMBLY 30-1

50 OTHER SPECIFICATIONS (PC78US-6 For Norway) 50-1

90 OTHERS 90-1

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Mark	Page	Revision number	Mark	Page	Revision number	Mark	Page	Revision number	Mark	Page	Revision number	Mark	Page	Revision number
	10-127			10-150	(6)		20-113	(1)		20-218-8	(7)		20-259	(1)
	10-127-1	(5)		10-151	(5)		20-114	(7)		20-218-9	(7)		20-260	(1)
	10-127-2	(5)		10-151-1	(6)		20-115	(7)		20-218-10	(7)		20-301	(1)
	10-128			10-151-2	(6)		20-115-1	(7)		20-218-11	(7)		20-302	(1)
	10-129	(5)		10-151-3	(6)		20-116	(7)		20-218-12	(7)		20-325	(7)
	10-130			10-152	(5)		20-117	(5)		20-218-14	(7)		20-326	(7)
	10-131	(5)		10-153			20-118	(5)		20-218-15	(7)		20-328	(7)
	10-132	(6)		10-154	(6)		20-119	(7)		20-218-16	(7)		20-329	(7)
	10-133	(6)		10-155			20-120	(7)		20-220	(1)		20-330	(7)
	10-133-1	(6)		10-156	(6)		20-121	(1)		20-221	(1)		20-331	(7)
	10-133-2	(6)		10-156-1	(5)		20-122	(5)		20-222	(1)		20-332	(4)
	10-133-3	(6)	●	10-157	(9)		20-123	(5)		20-223	(1)		20-333	(7)
	10-133-4	(6)		10-158			20-124	(7)		20-224	(1)		20-334	(7)
	10-133-5	(6)		10-158-1	(5)		20-125	(5)		20-225	(1)		20-334-1	(7)
	10-133-6	(6)		10-159			20-126	(1)		20-226	(1)		20-334-2	(7)
	10-134	(6)		10-160	(6)		20-127	(1)		20-227	(1)		20-335	(7)
	10-134-1	(6)		10-161			20-128	(1)		20-228	(1)		20-336	(7)
	10-134-2	(6)					20-129	(5)		20-229	(1)		20-336-1	(7)
	10-134-3	(6)		20-1	(1)		20-130	(1)		20-230	(1)		20-336-2	(7)
	10-134-4	(6)		20-2	(7)		20-131	(1)		20-231	(1)		20-337	(7)
	10-134-5	(6)		20-2-1	(7)		20-132	(1)		20-232	(1)		20-338	(7)
	10-134-6	(6)		20-3	(5)		20-133	(1)		20-233	(1)		20-339	(6)
	10-135	(6)		20-4	(5)		20-134	(1)		20-234	(1)		20-340	(7)
	10-136			20-5	(5)		20-135	(2)		20-235	(1)		20-341	(7)
	10-137	(5)		20-6	(5)		20-136	(7)		20-236	(1)		20-342	(7)
	10-138			20-7	(7)		20-137	(5)		20-237	(1)		20-343	(7)
	10-139	(5)		20-8	(5)		20-138	(5)		20-238	(1)		20-344	(7)
●	10-140	(9)		20-9	(5)		20-201	(7)		20-239	(1)		20-345	(7)
	10-141			20-10	(5)		20-202	(1)		20-240	(1)		20-346	(7)
	10-142			20-11	(7)		20-203	(2)		20-241	(1)		20-347	(7)
	10-142-1	(5)		20-12	(5)		20-204	(2)		20-242	(1)		20-348	(7)
	10-143	(5)		20-13	(7)		20-205	(1)		20-244	(5)		20-349	(7)
	10-144	(6)		20-14	(7)		20-206	(2)		20-245	(4)		20-349-1	(7)
	10-144-1	(6)		20-15	(7)		20-207	(4)		20-245-1	(5)		20-349-2	(7)
	10-144-2	(6)		20-16	(7)		20-208	(1)		20-245-2	(5)		20-351	(5)
	10-145	(6)		20-17	(5)		20-209	(1)		20-246	(5)		20-352	(1)
	10-146	(6)		20-101	(7)		20-210	(2)		20-247	(1)		20-354	(5)
	10-146-1	(6)		20-102	(7)		20-211	(2)		20-248	(7)		20-355	(5)
	10-146-2	(6)		20-103	(7)		20-212	(1)		20-248-1	(7)		20-355-1	(5)
	10-146-3	(5)		20-104	(7)		20-214	(7)		20-249	(1)		20-355-2	(5)
	10-146-4	(5)		20-105	(1)		20-215	(7)		20-250	(7)		20-356	(5)
	10-146-5	(5)		20-106	(7)		20-215-1	(7)		20-251	(7)		20-357	(7)
	10-146-6	(5)		20-106-1	(7)		20-215-2	(7)		20-252	(7)		20-358	(7)
	10-146-7	(5)		20-106-2	(7)		20-216	(7)		20-252-1	(7)		20-358-1	(5)
	10-146-8	(5)		20-107	(7)		20-217	(7)		20-253	(5)		20-358-2	(7)
	10-146-9	(5)		20-108	(1)		20-218	(7)		20-254	(5)		20-358-3	(7)
	10-146-10	(5)		20-109	(7)		20-218-2	(7)		20-255	(5)		20-358-4	(7)
	10-146-11	(5)		20-110	(7)		20-218-3	(7)		20-255-1	(7)		20-358-5	(7)
	10-147			20-111	(7)		20-218-4	(7)		20-255-2	(7)		20-358-6	(7)
	10-148			20-111-1	(7)		20-218-5	(7)		20-255-3	(7)		20-358-7	(7)
	10-149			20-112	(7)		20-218-6	(7)		20-256	(5)		20-359	(5)

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Unit: kg

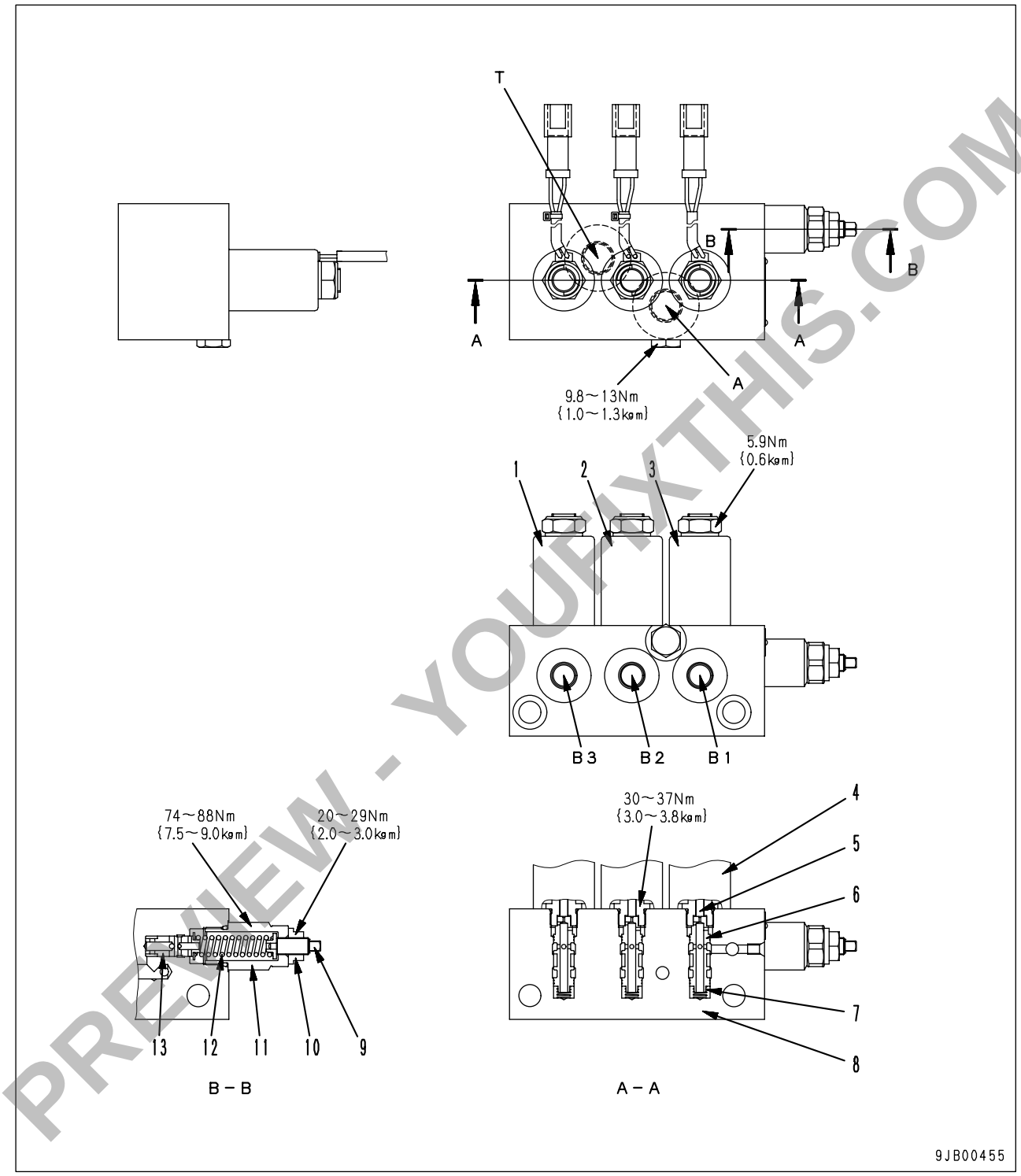
PC78US-6		PC78UU-6		
Blade-less specification	Blade specification	—		
5501 and up		23501 and up		
401	404	404		
300	300	300		
30	30	30		
7	7	7		
64	67	67		
29	29	29		
6.3	6.3	6.3		
5.2	5.2	5.2		
930	930	930		
260	260	260		
18	18	18		
8.3	8.3	8.3		
75	75	75		
56	58	60		
950	800	800		
22	22	22		
104	104	104		
47	47	47		
16	17	17		
1,067 [1,048]	1,142 [1,123]	1,142 [1,123]		
704	779	779		
54 x 2	54 x 2	54 x 2		
39 x 2	39 x 2	39 x 2		
3.4 x 2	3.4 x 2	3.4 x 2		
13 x 10	13 x 10	13 x 10		
81 x 2	81 x 2	81 x 2		
19 x 2	19 x 2	19 x 2		

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

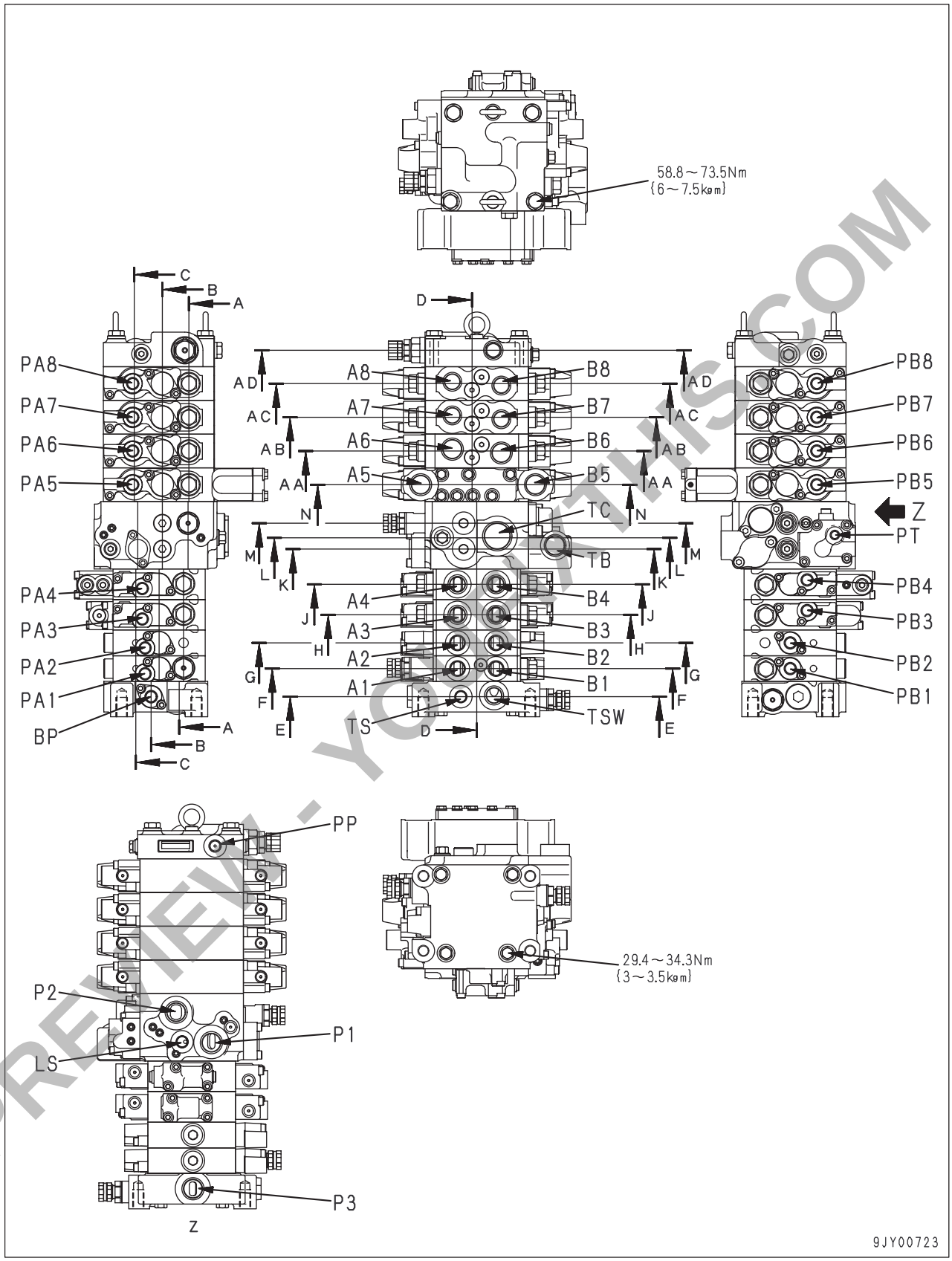
SOLENOID VALVE

PC78US-6



PREVIEW - YOUFIXTHIS.COM

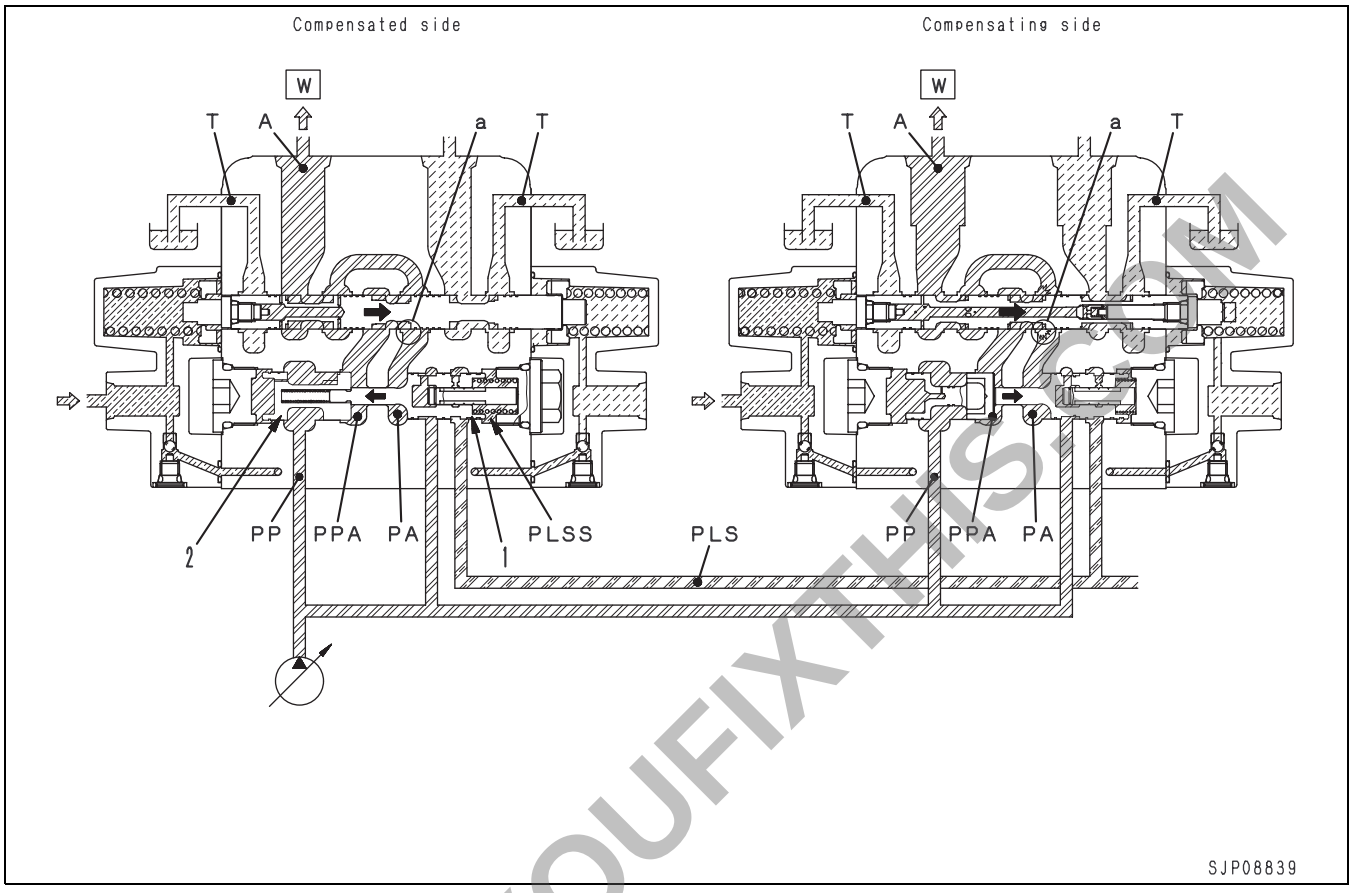
Download full manual at youfixthis.com



(PC78US-6 with blade and 1 service valve)

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

Pressure compensation valve



Function

- During compound operations, if the load pressure on either actuator becomes lower than the other actuator and the oil flow is about to increase, compensation is made. [When this happens, the other actuator being used for compound operation (right side) is at a high load than the actuator on this side (left side).]

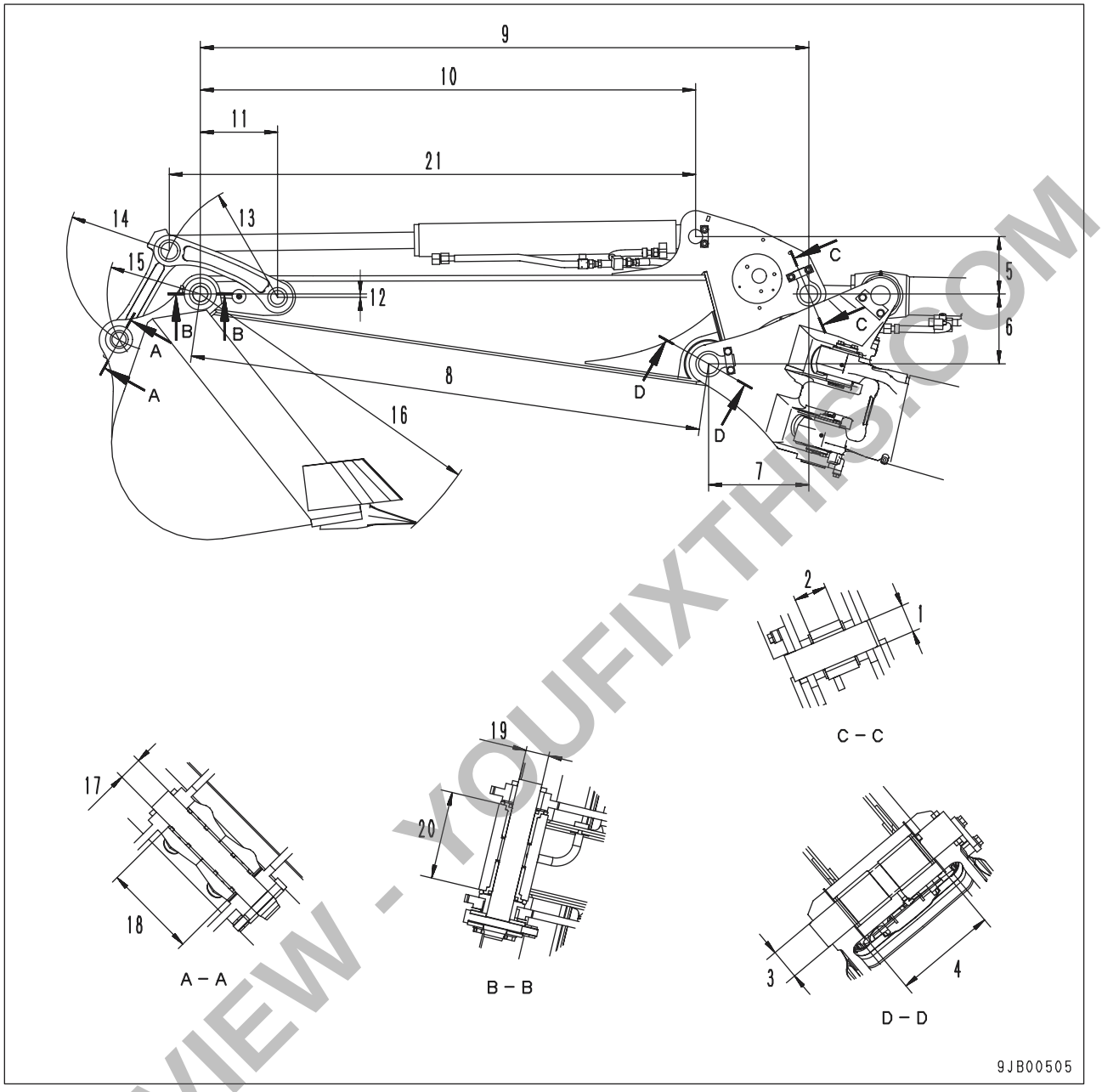
Operation

- When the load pressure on the other actuator (right side) becomes higher during compound operations, the oil flow in actuator circuit A on this side (left side) starts increasing.
- When this happens, the LS pressure PLS on the other actuator acts on spring chamber PLSS, and reducing valve (1) and flow control valve (2) are pushed to the left.
- Flow control valve (2) throttles the area of opening between pump circuit PP and spool upstream PPA to cause a pressure loss between PP and PPA.
- Flow control valve (2) and reducing valve (1) are balanced in a position where the difference between PLS and PA acting on both ends of reducing valve (1) and the pressure loss made between PP and PPA on the sides of flow control valve (2) will be the same.
- In this way, the pressure difference between upstream pressure PPA and downstream pressure PA of both spools used during compound operations is the same, so the pump flow is divided in proportion to the area of opening of notch (a) of each spool.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PC78UU-6



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

5. Reset function

1) Input signal (potentiometer mount angle) reset function

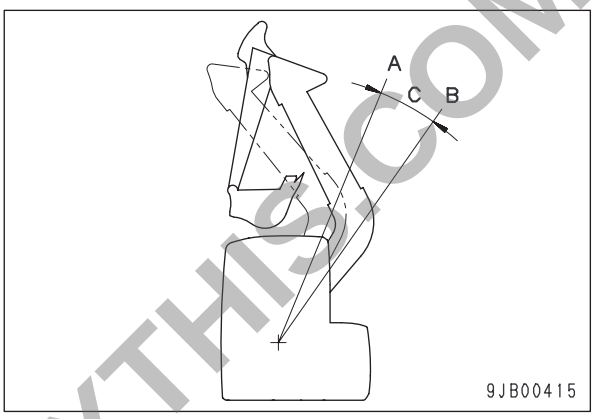
- If a potentiometer is mounted at an inappropriate angle in its replacement or replacement of work equipment, error in input signal can result due to an error in the mounting angle.
  This reset function allows you to correct the error through a single switch operation without measuring the output voltage level or resorting to fine adjustment of the potentiometer.
- For the correction, enter the input reset signal while maintaining the boom up, arm retract and offset right at the stroke end. The computer will determine the difference between the angle (A) computed based upon actual output voltage from respective potentiometers and the specified angle (B) on the computer (mounting error). The difference will be stored in memory as the "compensation value (C)".

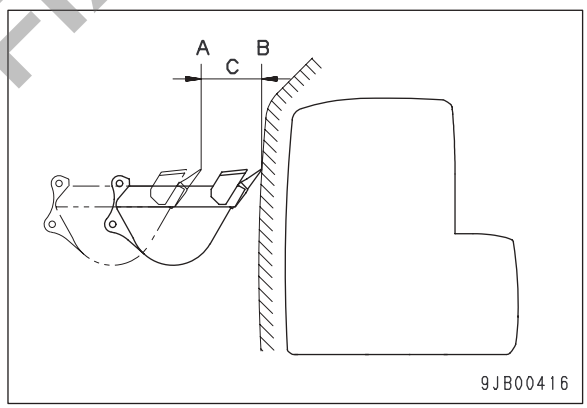
2) Automatic fore-and-aft stop position reset function

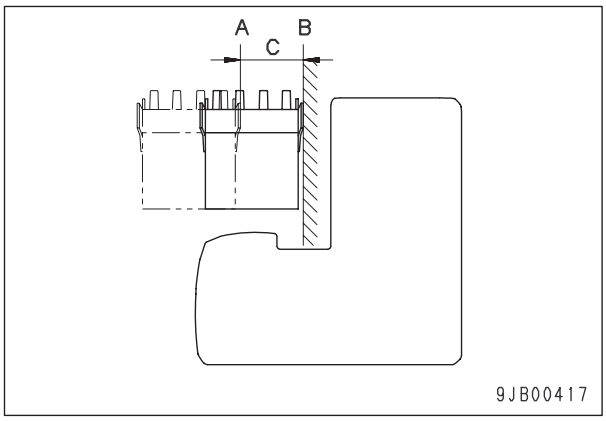
- When an error has resulted in the automatic cab fore stop position from errors in measuring the work equipment size (used in the bucket position calculation) or computer calculation error, this function allows you to correct it in a single switch operation.
- For the correction, stop the bucket in the specified position, then enter the automatic fore-and-aft stop position reset signal. With this function, it will reference the actual output voltage from respective potentiometers, will calculate the difference (calculation error) between the computed value (A) and the standard value (B) and stores it in memory as the "compensation value (C)".

3) Automatic left-and-right stop position reset function

- When an error has resulted in the automatic side stop position of the cab from errors in measuring the work equipment size (used in the bucket position calculation) or computer calculation error, this function allows you to correct it in a single switch operation.
- This function can also be used for correcting the stop position when an optional narrower or wider bucket is used.
- For the correction, stop the bucket in the specified position, then enter the automatic left-and-right stop position reset signal. With this function, it will reference the actual output voltage from respective potentiometers, will calculate the difference (calculation error) between the computed value (A) and the standard value (B) and stores it in memory as the "compensation value (C)".







PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

System	Component Name	Connector No.	Inspection Method	Criteria	Measurement Conditions
Controller	Offset angle potentiometer signal	M95	Measurement of voltage	If the condition is within the range shown in the table below, it is normal Between (14) – (21): 3.20 – 4.20 V	1) Turn starting switch OFF. 2) Insert T-adapter. 3) Turn starting switch ON. 4) Move right offset to stroke end.
	Swing holding brake clear solenoid	M97	Measurement of resistance	If the condition is within the range shown in the table below, it is normal When swing holding brake clear switch is OFF (When normal): Between (7) ~ (13): 20 – 30 V When swing holding brake clear switch is ON (When cleared): Between (7) ~ (13): Max. 1 V	1) Turn starting switch OFF. 2) Disconnect connector. 3) Insert T-adapter. 4) Turn starting switch ON. 5) Swing or move arm in.
Four systems	Boom angle potentiometer	M29 (Male)	Measurement of resistance	If the condition is within the range shown in the table below, it is normal Between (C) – (B): 0.2 – 7 kΩ Between (B) – (A): 0.2 – 7 kΩ Between (C) – (A): 4 – 6 kΩ	1) Turn starting switch OFF. 2) Disconnect connector. 3) Insert T-adapter.
	Arm angle potentiometer	M72 (Male)	Measurement of resistance	If the condition is within the range shown in the table below, it is normal Between (A) – (B): 0.2 – 7 kΩ Between (B) – (C): 0.2 – 7 kΩ Between (A) – (C): 4 – 6 kΩ	1) Turn starting switch OFF. 2) Disconnect connector. 3) Insert T-adapter.
	Offset angle potentiometer	M71 (Male)	Measurement of resistance	If the condition is within the range shown in the table below, it is normal Between (C) – (B): 0.2 – 7 kΩ Between (B) – (A): 0.2 – 7 kΩ Between (C) – (A): 4 – 6 kΩ	1) Turn starting switch OFF. 2) Disconnect connector. 3) Insert T-adapter.
	Boom RAISE stop EPC valve	M11 (Male)	Measurement of resistance	If the condition is within the range shown in the table below, it is normal Between M11 (male) (1) – (2): 5 – 25 Ω Between M11 (male) (1), (2) – chassis ground: Min. 1 MΩ	1) Turn starting switch OFF. 2) Disconnect connector. 3) Insert T-adapter.
	Arm IN stop EPC solenoid	M12 (Male)	Measurement of resistance	If the condition is within the range shown in the table below, it is normal Between M12 (male) (1) – (2): 5 – 25 Ω Between M12 (male) (1), (2) – chassis ground: Min. 1 MΩ	1) Turn starting switch OFF. 2) Disconnect connector. 3) Insert T-adapter.
	Left offset stop EPC solenoid	M10 (Male)	Measurement of resistance	If the condition is within the range shown in the table below, it is normal Between M10 (male) (1) – (2): 5 – 25 Ω Between M10 (male) (1), (2) – chassis ground: Min. 1 MΩ	1) Turn starting switch OFF. 2) Disconnect connector. 3) Insert T-adapter.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

BLEEDING AIR FROM HYDRAULIC CIRCUIT

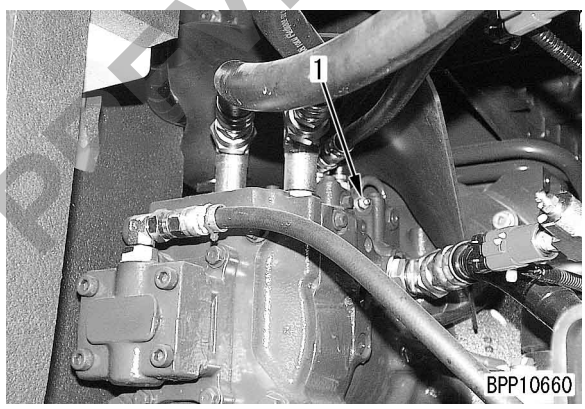
Contents of work and procedures for bleeding air

Air bleeding item / Contents of work	Procedure for Bleeding Air								
	1	—	2	3	4	5	6	7	8
	Bleeding air from pump	Starting engine	Bleeding air from circuit between pump and hydraulic tank	Bleeding air from LS circuit	Bleeding air from cylinders	Bleeding air from swing motor	Bleeding air from travel motor	Bleeding air from swing PPC circuit	Starting operation
• Replacing hydraulic oil • Cleaning strainer	○	▶○	▶○	▶○	▶○	▶○ Note)	▶○ Note)		▶○
• Replacing return filter element		○		▶○					▶○
• Replacing or repairing pump • Removing suction pipe	○	▶○	▶○	▶○	▶○				▶○
• Replacing or repairing control valve		○			▶○			▶○	▶○
• Replacing cylinder • Removing cylinder piping		○			▶○				▶○
• Replacing swing motor • Removing swing motor piping		○				▶○			▶○
• Replacing travel motor and swivel • Removing travel motor and swivel		○					▶○		▶○
• Replacing or removing swing PPC circuit parts (Swing PPC valve, piping, pressure switch, etc.)		○						▶○	▶○

Note: Bleed air from the swing motor and travel motor only after the oil in the motor case is drained.

1. Bleeding air from pump
   ★ If the pump is operated without filling pump case with hydraulic oil, it is heated abnormally and may be broken soon. Accordingly, bleed all air from the pump before operating the pump.
   1) Loosen air bleeder (1) installed to the drain port and check that oil oozes out.
   2) After bleeding air, tighten the air bleeder.

N·m Bleeder: 7.8 ~ 9.8 Nm {0.8 ~ 1.0 kgm}

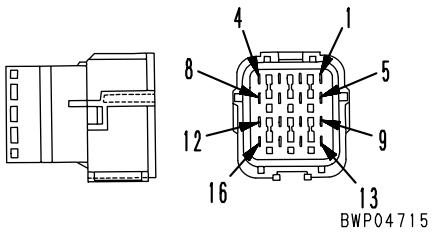
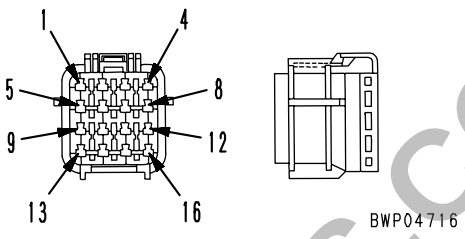


2. Bleeding air between pump and hydraulic tanks.
   ★ If the pump is operated without bleeding air from the circuit between the pump and hydraulic tank, it is heated abnormally and may be broken soon. Accordingly, bleed all air.
   1) Run the engine at medium speed (approx. 1,650 rpm)
   2) Operate the work equipment slowly for about 5 minutes to bleed air.

3. Bleeding air from LS circuit
   ★ Bleed air only after the hoses of the pump, valve, and LS circuit are replaced.
   ★ If air is not bled from the LS circuit, the work equipment may malfunction.
   1) Loosen air bleeder (2) installed to the LS port of the pump.
   2) Run the engine at low idling for 2 minutes.
   3) Operate the bucket (dump and curl bucket to the stroke ends) for about 2 minutes.
   4) After bleeding air, tighten air bleeder (2).

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Number of Pins	SWP-Type Connector		
	Male (Female Housing)	Female (Male Housing)	T-adapter Part Number
16			799-601-7320
	Part Number: 08055-11681	Part Number: 08055-11691	
—	Terminal part number: • Wire size: 0.85 • Grommet: black • Quantity: 20 pieces	Terminal part number: • Wire size: 0.85 • Grommet: black • Quantity: 20 pieces	—
—	Terminal part number: • Wire size: 1.25 • Grommet: red • Quantity: 20 pieces	Terminal part number: • Wire size: 1.25 • Grommet: red • Quantity: 20 pieces	—

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

HOW TO READ FLOW OF TROUBLESHOOTING

1. Classification of diagnosis code Nos.

Diagnosis Code No.	Objective System of Diagnosis
N—OO	Communication system
E—OO	Electric system of controller (Governor control system)
C—OO	Electric system of controller (Pump control system)
F—OO	Controller (Input signal system)
H—OO	Hydraulic and mechanical systems
M—OO	Monitor panel

2. How to read troubleshooting (method) for each failure mode

   1) Title column
   In the title column of the troubleshooting, the troubleshooting code, service code, and failure mode (trouble) are entered.
   2) Classification of cases
   If the troubleshooting method for a failure mode (a trouble) varies with the machine model, component, phenomenon, the failure mode (the trouble) is classified further (This work is called classification of cases), execute an applicable one. (See (2) in the example.) If the cases are not classified, start troubleshooting from the first of the failure mode.
   3) How to carry out troubleshooting

      - Perform checking or measurement in the first step ▭(YES/NO). Then, select either branch of YES and NO and go to the next step ▭. (Note: The "No." at the right shoulder of each ▭ is the reference No. It is not the No. of the step.)
      - If the branch of YES or NO is connected directly to the Cause column, take the remedy shown in the Remedy column. (See D in the example.)
      - Under the ▭, the method of inspection, measurement, judgment, etc. are shown. If the result is matched to the criterion, question, etc., take the branch of YES. If not, take the branch of NO.
      - Under the ▭, preparation work for inspection and measurement and criterion are also shown. If your neglect the preparation work or take a wrong method of operation or handling, you may have a wrong judgment or may damage the devices. Accordingly, read well before starting inspection and measurement, then carry out the work in the correct order.

   4) General precautions
   The general precautions for troubleshooting of each failure mode (trouble) are marked with ★ under the title (See (4) in the example).

   The precautions marked with ★ are not shown in the ▭. Be sure to take them when performing the inspections in the ▭.
   5) Diagnostic tools
   For the diagnostic tools necessary for troubleshooting, see TESTING AND ADJUSTING, Diagnostic tools list. Prepare them before starting the work.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Normal Condition	Action Taken by Controller When Trouble Occurs	Problems on Machine
Between M97 pin 16 ~ chassis ground: Min. 1 MΩ Between M20 pin 1 ~ solenoid body: Min. 1 MΩ Resistance of M20 EPC solenoid (With switch directed down): 3 ~ 15 Ω	When trouble is detected, TVC-EPC solenoid output is stopped.	Current does not flow in TVC-EPC solenoid. Accordingly, if load is large, engine speed may lower to stall.
Resistance between M97 pin 16 ~ M20 pin 1: Max. 1 MΩ Resistance of M20 EPC solenoid: 3 ~ 15 Ω Resistance between M20 pin 2 ~ M97 pin 23: Max. 1 Ω		
Between M97 pin 7 ~ chassis ground: Min. 1 MΩ Between M14 pin 2 ~ solenoid body: Min. 1 MΩ Resistance of M14 solenoid: 35 ~ 80 Ω	When trouble is detected, swing holding brake reset solenoid output is stopped.	Since motor brake is not released, machine does not swing.
Resistance between M97 pin 7 ~ M14 pin 2: Max. 1 Ω Resistance of M14 solenoid: 35 ~ 80 Ω Resistance between M14 pin 1 ~ M97 pin 3 (With switch directed down): Max. 1 Ω		
Between M97 pin 27 ~ chassis ground: Min. 1 MΩ Between M15 pin 2 ~ solenoid body: Min. 1 MΩ Resistance of M15 solenoid: 35 ~ 80 Ω	When trouble is detected, 2nd travel speed selection solenoid output is stopped.	When speed selector switch pedal is operated, travel speed does not change. (It is kept at 1st gear.)
Resistance between M97 pin 27 ~ M15 pin 2: Max. 1 MΩ Resistance of M15 solenoid: 35 ~ 80 Ω Resistance between M15 pin 1 ~ M97 pin 3: Max. 1 Ω		
Resistance between M96 pin 40 ~ M16 pin 1: Max. 1 Ω Resistance of M16 sensor: 500 ~ 1,000 Ω Resistance between M16 pin 2 ~ M96 pin 39: Max. 1 Ω	When trouble is detected, constant current flows in TVC-EPC solenoid (600 mA). Working mode cannot be changed. Engine governor control is limited to operation of fuel control dial.	Since constant current (600 mA) is output to TVC-EPC solenoid, work equipment speed and travel speed are low. If engine speed is low, engine may stall.
Boom angle sensor voltage for monitoring At boom RAISE end: 0.6 V	When potentiometer is corrected, "_____" is displayed and initial values are selected. If machine is operated without normal correction, it is controlled with initial values.	Boom RAISE end cushion does not work. Stop position for interference prevention is wrong. Displayed depth is wrong.
Arm angle sensor voltage for monitoring Standard arm Long arm At IN end: 0.7 V 0.7 V At OUT end: 4.1 V 3.7 V		Arm IN end cushion does not work. Stop position for interference prevention is wrong. Displayed depth is wrong.
Offset angle sensor voltage for monitoring At RIGHT end: 1.3 V At LEFT end: 3.7 V		Offset end cushion does not work. Stop position for interference prevention is wrong. Displayed depth is wrong.
When interference prevention is corrected, "000" is displayed, then "S-1" (Side correction) is displayed.	When interference prevention is corrected, "– – –" is displayed and initial values are selected. If machine is operated without normal correction, it is controlled with initial values.	Stop position for interference prevention is wrong.
When interference prevention is corrected, "000" is displayed, then "– – –" (Finish of correction) is displayed.		
In depth display correction position (1), "000" is displayed, then "d-1" is displayed. In depth display correction position (2), "000" is displayed, then "– – –" (Finish of correction) is displayed.	When interference prevention is corrected, "– – –" is displayed and initial values are selected. If machine is operated without normal correction, it is controlled with initial values.	Displayed depth is wrong.
Resistance between M95 pin 22, M29 pin C, M71 pin C, M72 pin A ~ chassis ground: Min. 1 MΩ	Boom RAISE, arm IN, and offset LEFT EPC outputs are stopped.	Boom RAISE, arm IN, and offset LEFT operations cannot be executed. (They can be executed if emergency work equipment operation switch is turned ON, however.)

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

C-34 Offset end cushion does not work at all or normally (Only PC78UU-6)

★ Check that the offset angle sensor voltage input is normal by monitoring code 1031.
(Standard value: At right end; 1.3 V, At left end; 3.7 V)
★ Check that the offset left EPC current output is normal by monitoring code 1053.
★ Check installation of the offset angle sensor for abnormality.

	Cause	Remedy
1		

PREVIEW - YOUFIXTHIS.COM
Blurred on purpose. The manual you buy has this page in full quality.
Download full manual at youfixthis.com

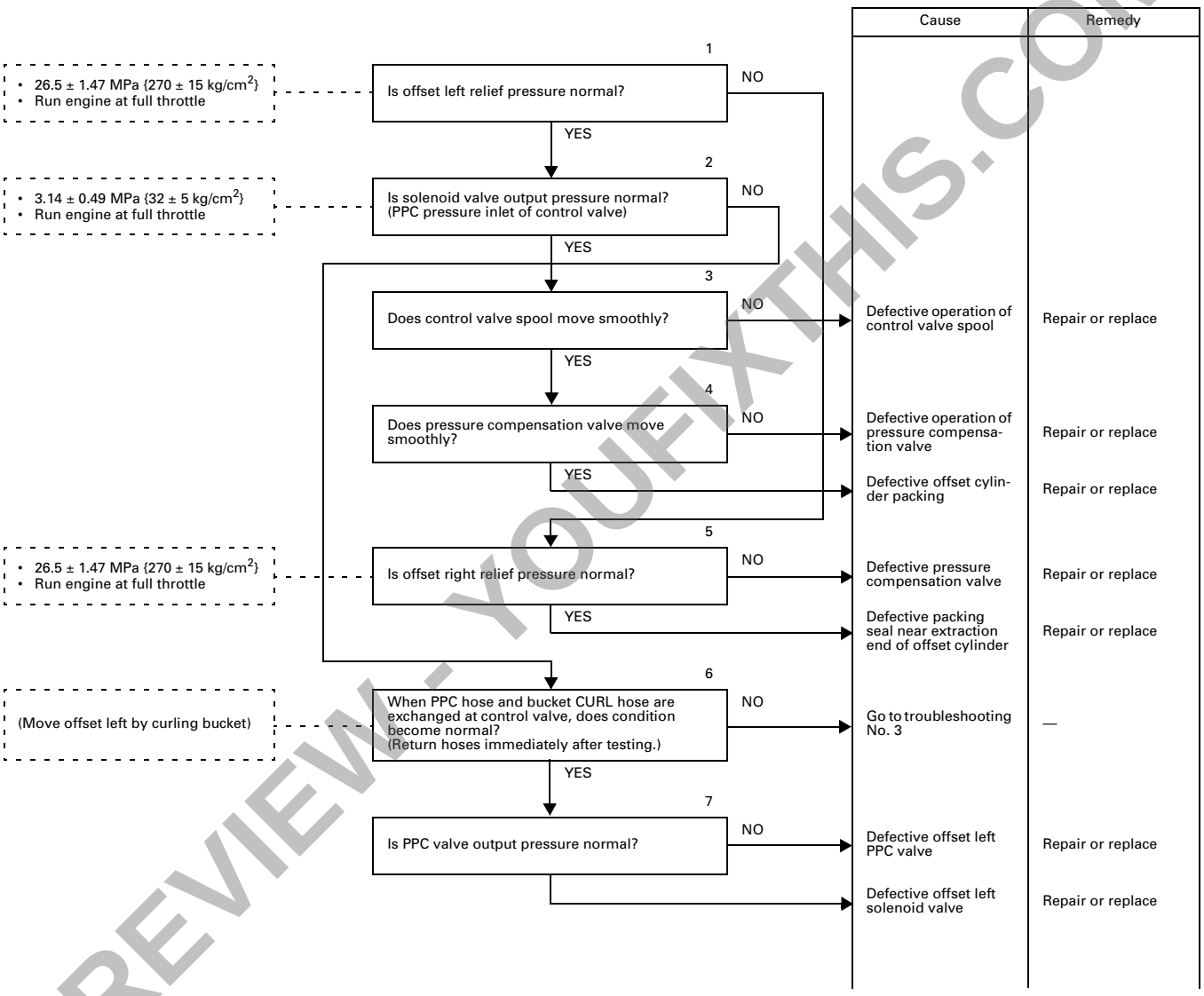
H-10 Offset speed or power is low (other work equipment is normal) (Only PC78UU-6)

a) Offset left speed or power is low

★ Relieve the offset left actuator in a position at which the interference prevention system does not detect the work equipment.

★ When the offset speed is low, if the result of troubleshooting No. 1 is "NO", take actions against the relief pressure and carry out troubleshooting No. 2.

★ Check that the emergency pump drive switch is turned OFF.



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

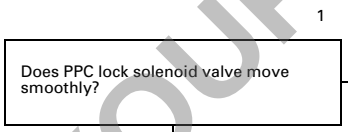
H-46 Monitor panel displays error code and boom RAISE, arm IN, and offset LEFT operations stop just before interference (Only PC78UU-6)

★ Check that any water is not in the potentiometer connectors (M29, M71, M72) of the boom, arm, and offset.

Cause	Remedy
Malfunction of solenoid valve	Repair or replace

H-47 Machine does not stop boom RAISE, arm IN, and offset LEFT operations automatically but interferes (Only PC78UU-6)

★ If this trouble occurs, the trouble in H-46 occurs, too.



Cause	Remedy
Malfunction of PPC lock solenoid valve (It does not return)	Repair or replace
Defective controller	Replace

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

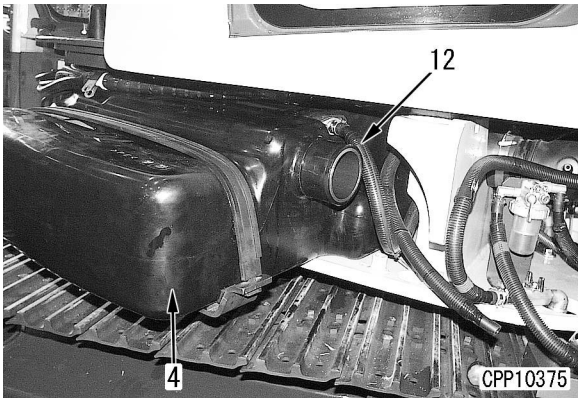
Component	Symbol		Part No.	Part Name	Necessity	Qty.	New/ remodel	Sketch	Nature of work, remarks
Removal of work equipment and first boom assembly	V	1	790-441-1802	Remover	■	1			Pulling out of boom foot pin
			• 790-441-1810	• Sleeve		1			
			• 792-900-1530	• Screw		1			
			• 790-270-1110	• Adapter		1			
			• 01803-13034	• Nut		1			
			• 01643-33080	• Washer		1			
			790-101-4000	Puller (490kN{50ton})	■	1			
			790-101-1102	Pump	■	1			
Removal of second boom assembly		2	791-735-1123	Sleeve	■	1			Pulling out of second boom pin and offset bracket pin
			790-438-1110	Screw	■	1			
			791-735-2110	Adapter	■	1			
			790-101-2540	Washer	■	1			
			791-112-1180	Nut	■	1			
			790-101-2102	Puller (294kN{30ton})	■	1			
			790-101-1102	Pump	■	1			
Removal of second boom assembly and arm cylinder assembly		3	790-201-2850	Spacer	■	1			Pulling out of arm cylinder trunnion pin
			791-535-1170	Plug	■	1			
			791-520-4140	Screw	■	1			
			790-101-2420	Adapter	■	1			
			790-101-2540	Washer	■	1			
			791-112-1180	Nut	■	1			
			790-101-2102	Puller (294kN{30ton})	■	1			
			790-101-1102	Pump	■	1			
Collection and reproduction of new Freon gas	X		799-703-1200	Service tool kit	■	1			Collection and supply of air conditioner gas
			799-703-1110	Vacuum pump (220V)	■	1			
			799-733-1120	Vacuum pump (240V)	■	1			
			799-703-1400	Gas leak tester	■	1			

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

11. Pull out fuel tank (4) and remove the clamp and tank air bleed hose (12), then remove the fuel tank.
    ★ The fuel tank air bleed hose is installed to the following machines.

    PC78US-6 Serial No. 4904 and up
    PC78UU-6 Serial No. 22789 and up



INSTALLATION

- Carry out installation in the reverse order to removal.

※1
Nut of tank band:
5.9 ± 0.49 Nm {0.6 ± 0.05 kgm}

CONTROLLER ASSEMBLY

REMOVAL

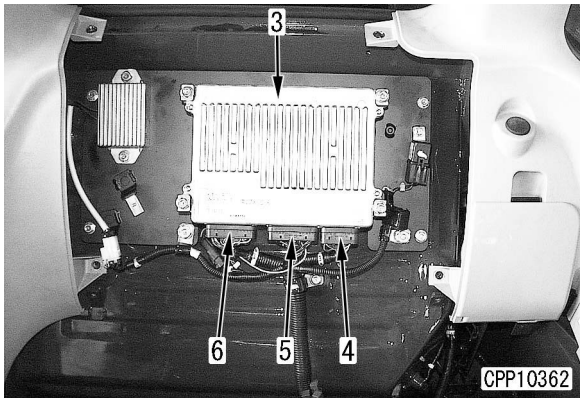
1. Remove 4 bolt caps (2) of cover (1) at the rear of the operator's seat.

2. Remove the 4 bolts and cover (1).



3. Loosen the mounting bolts and remove connectors (4), (5), and (6) of controller (3).

4. Remove the 4 mounting bolts and controller assembly (3).



INSTALLATION

- Carry out installation in the reverse order to removal.

★ Do not tighten the mounting bolts of connectors too strongly.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Machine model					PC78US-6
Serial Number					4809 – 5500
Hydraulic system	Work equipment cylinder	Boom cylinder	Type		Reciprocating piston
			Inside diameter of cylinder	mm	ø 115
			Diameter of piston rod	mm	ø 65
			Stroke	mm	858
			Max. distance between pins	mm	2,143
			Min. distance between pins	mm	1,285
		Arm cylinder	Type		Reciprocating piston
			Inside diameter of cylinder	mm	ø 100
			Diameter of piston rod	mm	ø 60
			Stroke	mm	865
			Max. distance between pins	mm	2,193
			Min. distance between pins	mm	1,328
		Bucket cylinder	Type		Reciprocating piston
			Inside diameter of cylinder	mm	ø 90
			Diameter of piston rod	mm	ø 55
			Stroke	mm	710
			Max. distance between pins	mm	1,765
			Min. distance between pins	mm	1,055
		Blade cylinder	Type		Reciprocating piston
			Inside diameter of cylinder	mm	ø 130
			Diameter of piston rod	mm	ø 65
			Stroke	mm	130
			Max. distance between pins	mm	679
			Min. distance between pins	mm	549

PREVIEW - YOUFIXTHIS.COM

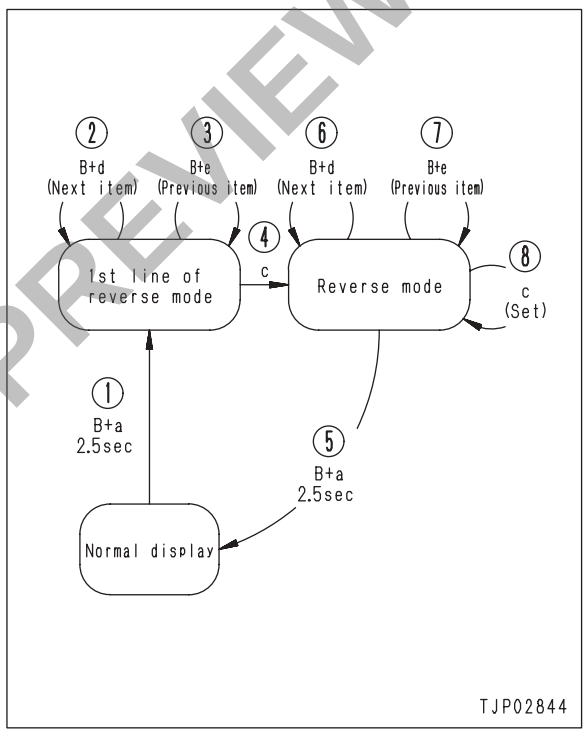
Download full manual at youfixthis.com

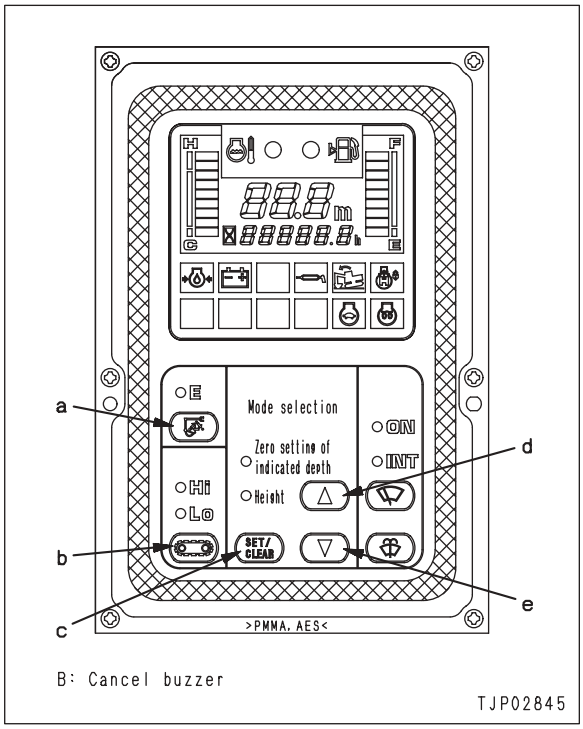
Procedure for correcting angle sensor, preventing interference, and setting depth display to 0
Back mode (When SP monitor is used)

Table 1 Method of selecting back mode and ordinary display

	Mode Code (Note 3)	Back Mode					
			01	02			
		Emergency Trouble (Note 4)	These modes are set to 2 levels (Note 8)				Error Memory Deletion
			Error Memory Display	Monitoring	Next item (Note 6)	Previous item (Note 6)	
	PC78US-6		○	○	–	–	○
B	Buzzer cancel		○	○	○	○	○
a	Working mode selection						
b	Travel						
c	SET/CLEAR		○	○			
d	Model selection (△)				○		
e	Model selection (▽)					○	
	Wiper selection						
	Washer						
	Continuous operation time (SEC)		2.5				5 (Note 1)

Note 1) Limited to 5 seconds after the power is turned ON.
Note 3) Displayed on the service meter unit.
Note 4) A flag from the controller is a trigger.
Note 6) Used to save monitoring error.
Note 8) Select with Buzzer cancel + Working mode selection. Select next or previous items with Buzzer cancel + △ / ▽ . Enter each mode with the SET/CLEAR switch.
* Since the switches "c, d, and e" are not indicated on the panel of model US, operate the same parts as the panel of model UU.





PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 25 of 785 pages

The full manual includes:

- All 785 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

Komatsu PC78US-6, PC78UU-6 Shop Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual