

GROUP 4 MECHATRONICS SYSTEM

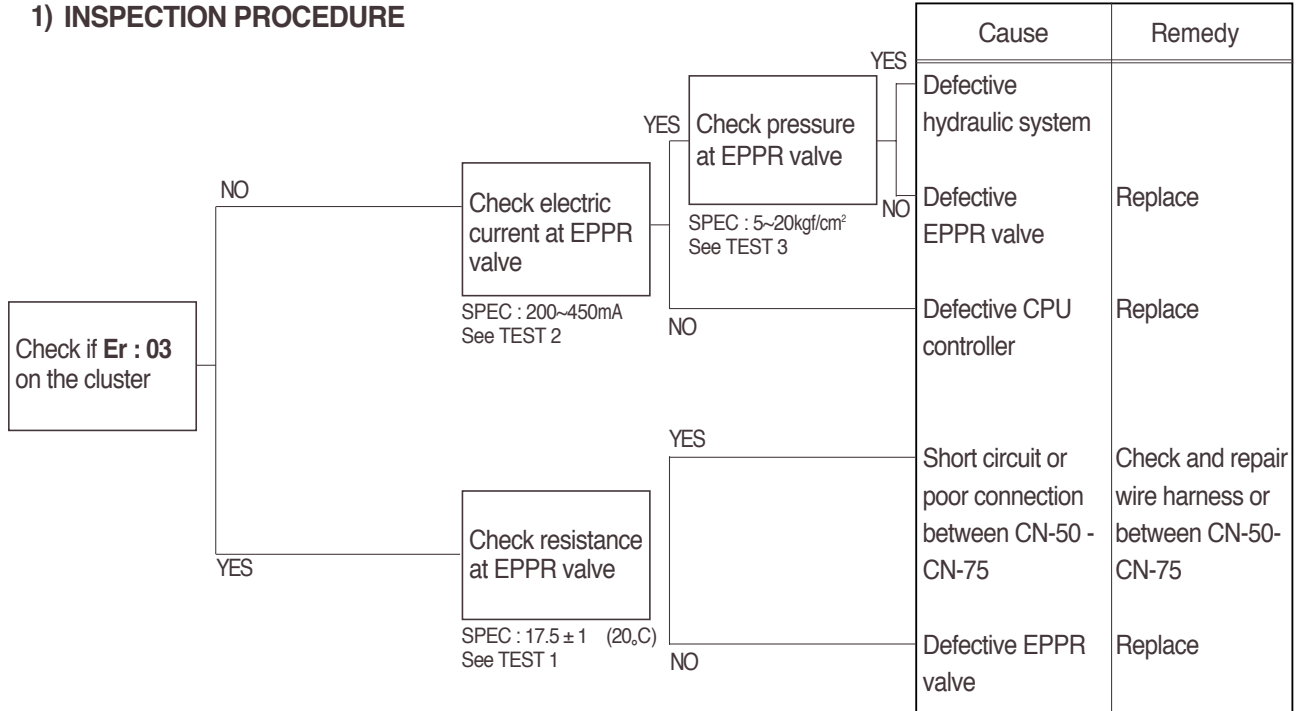
1. ALL ACTUATORS SPEED ARE SLOW

Boom, Arm, Bucket, Swing and travel speed are slow, but engine speed is good.

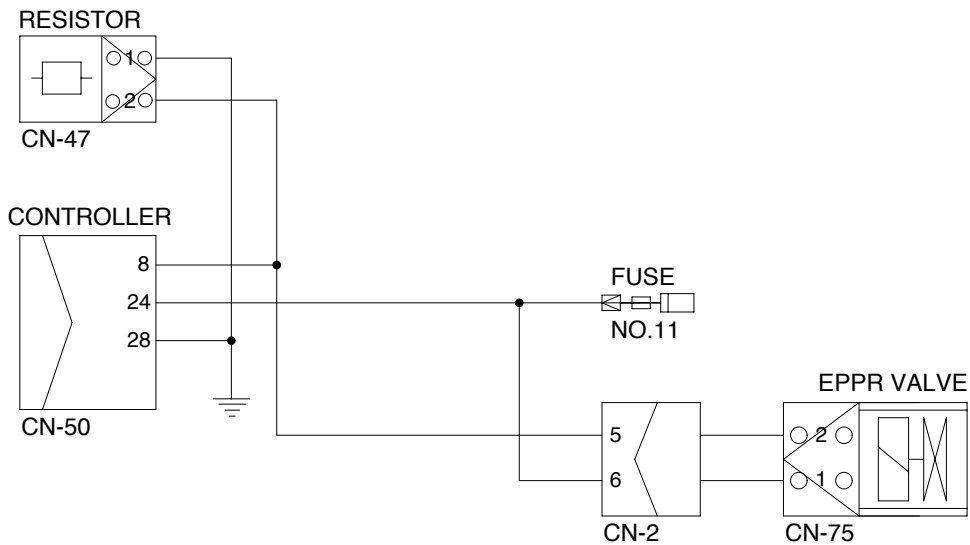
Spec : H-mode 1950 ± 50rpm S-mode 1850 ± 50rpm

Before carrying out below procedure, check all the related connectors are properly inserted.

1) INSPECTION PROCEDURE



Wiring diagram



36076MS01

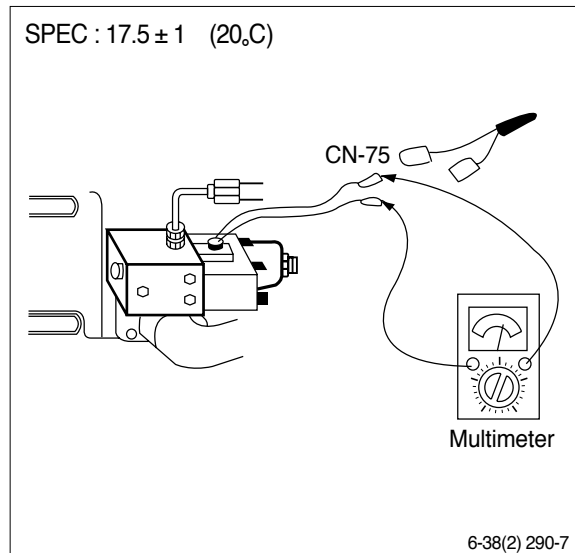
2) TEST PROCEDURE

- (1) **Test 1** : Check resistance at connector CN-75.

Starting key OFF.

Disconnect connector CN-75 from EPPR valve at main hydraulic pump.

Check resistance between 2 lines as figure.



- (2) **Test 2** : Check electric current at EPPR valve.

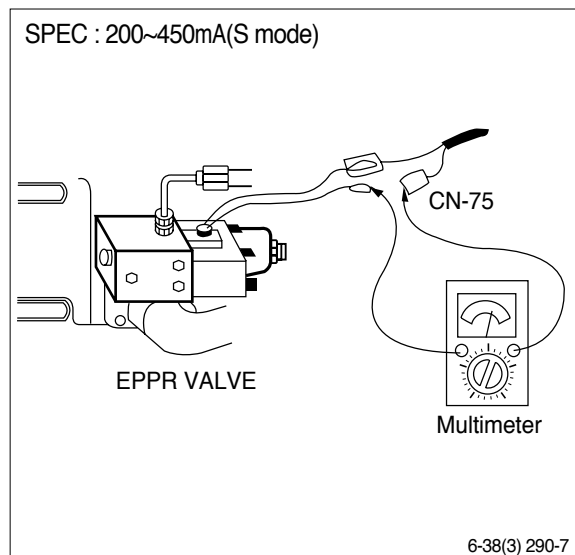
Install multimeter as figure.

Start engine.

Set the accel dial at "10"(MAX)

Set S-mode and cancel auto decel mode.

If tachometer show approx 1850 ± 50 rpm, check electric current.



- (3) **Test 3** : Check pressure at EPPR valve.

Remove plug and connect pressure gauge as figure.

- Gauge capacity : 0 to 40~50kgf/cm²
(0 to 570~710psi)

Start engine.

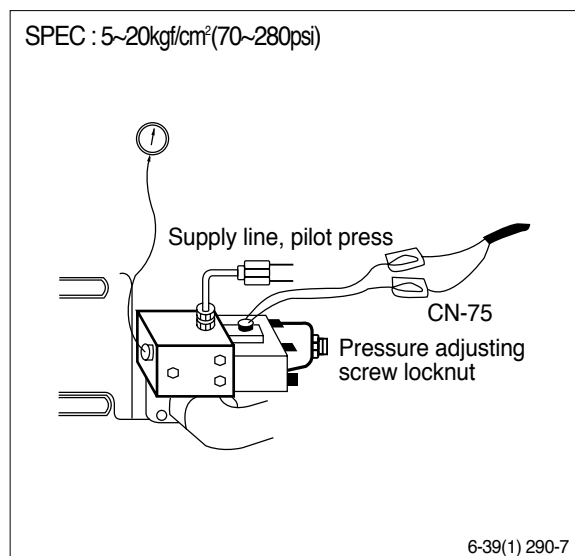
Set the accel dial at "10"(Max).

Set S-mode and cancel auto decel mode.

If tachometer show approx 1850 ± 50 rpm, check pressure.

If pressure is not correct, adjust it.

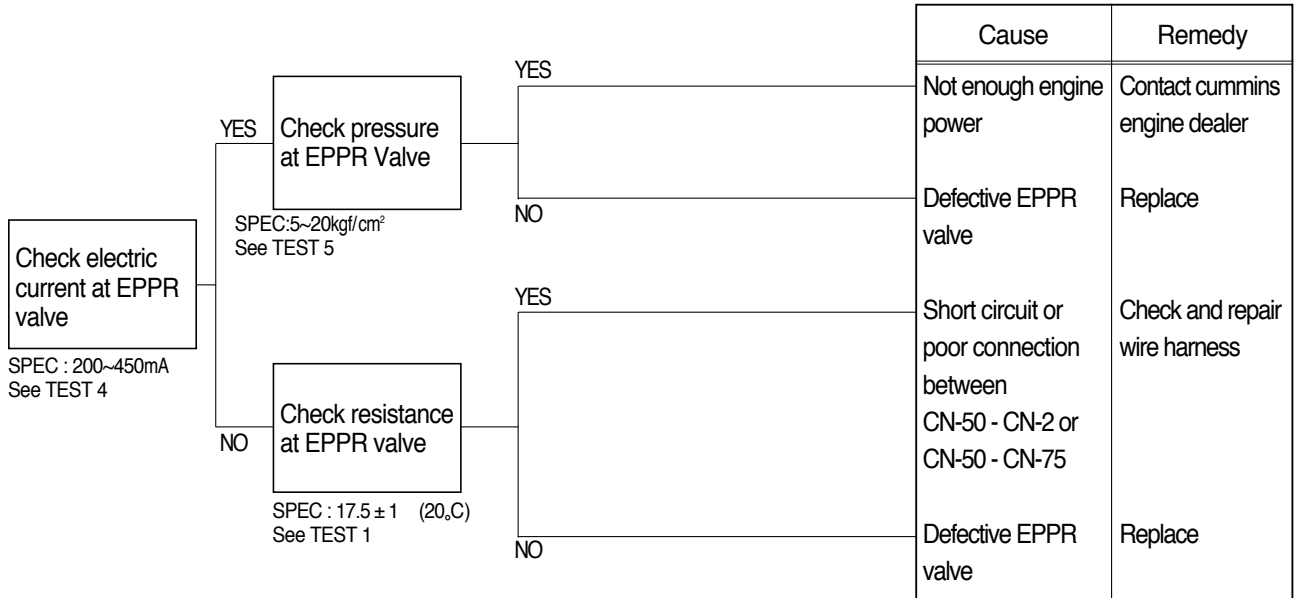
After adjust, test the machine.



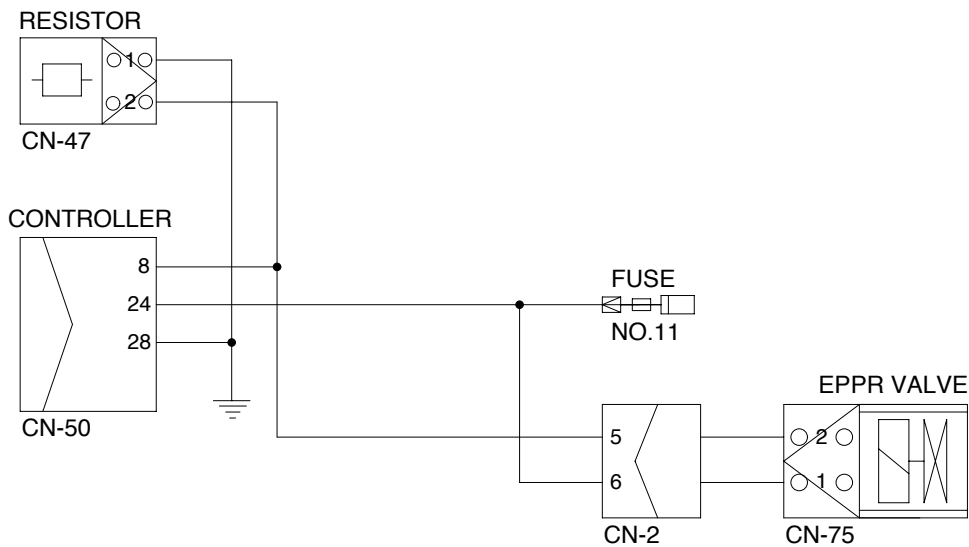
2. ENGINE STALL

Before carrying out below procedure, check all the related connectors are properly inserted.

1) INSPECTION PROCEDURE



Wiring diagram



36076MS01

2) TEST PROCEDURE

(1) **Test 4** : Check electric current at EPPR valve at S-mode

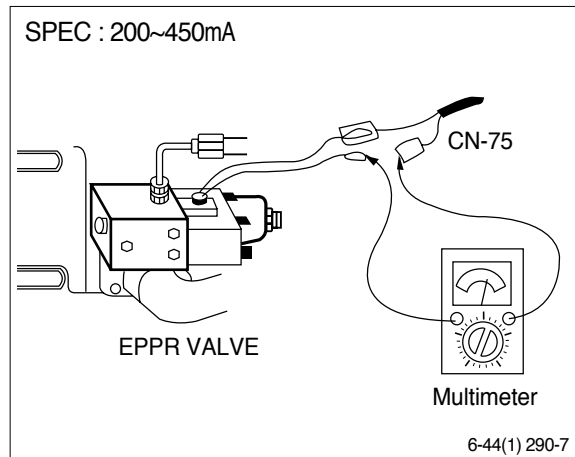
Install multimeter as figure.

Start engine.

Set the accel dial at "10"(max)

Set S-mode with 1850 ± 50 rpm.

Check electric current.



(2) **Test 5** : Check pressure at EPPR valve at S-mode

Connect pressure gauge at EPPR valve.

Start engine.

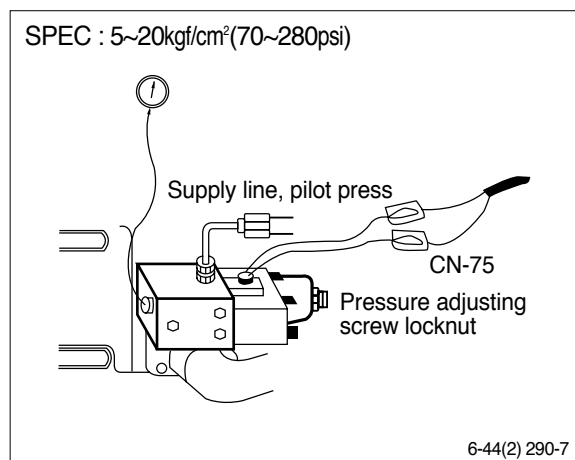
Set the accel dial at "10"(max)

Set S-mode with 1850 ± 50 rpm.

Operate bucket lever completely push or pull.

Hold arm lever at the end of stroke.

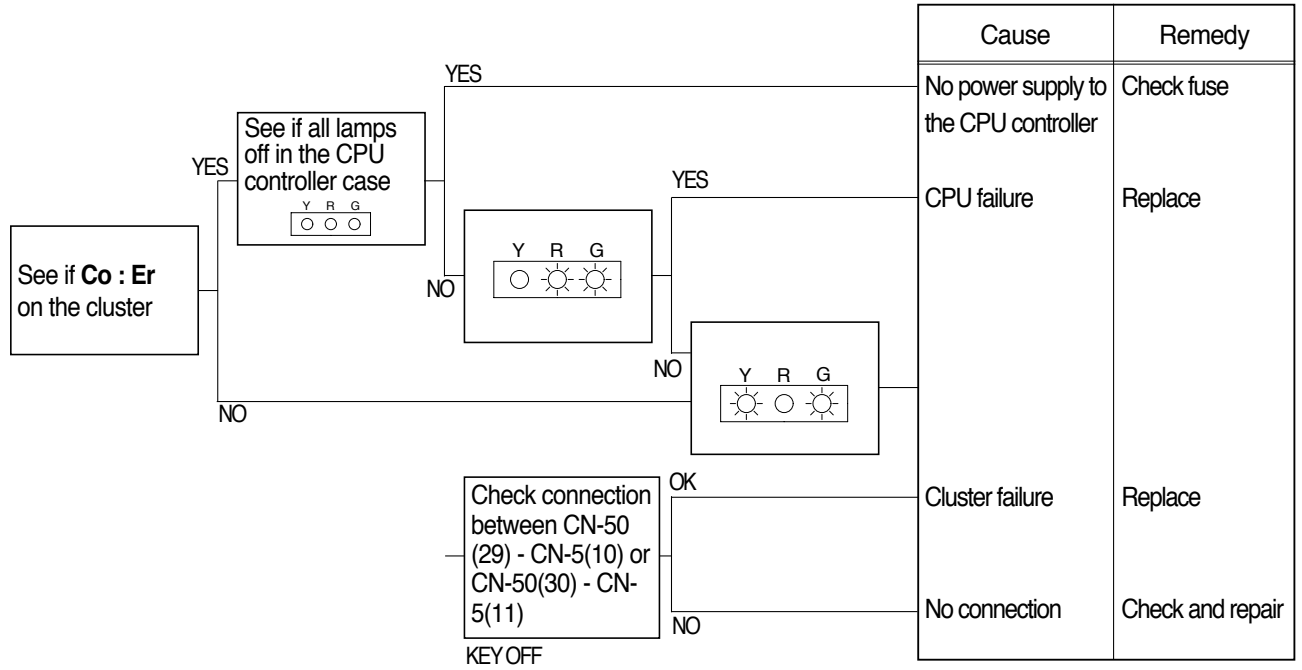
Check pressure at relief position.



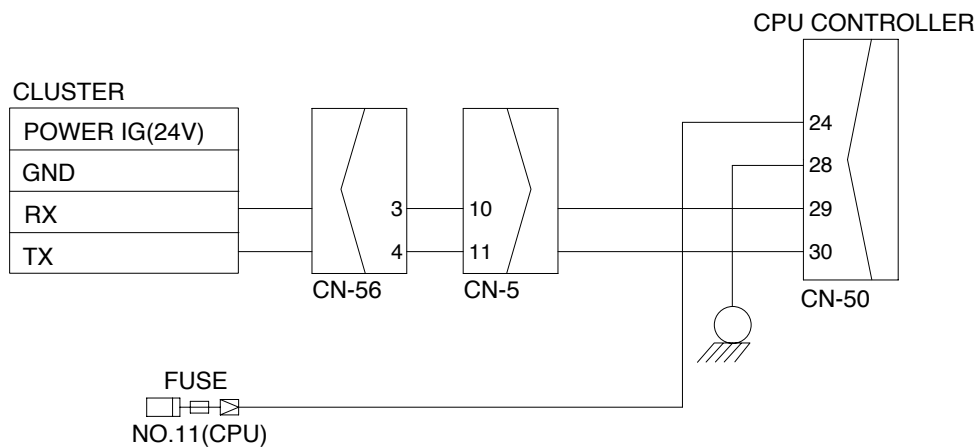
3. MALFUNCTION OF CLUSTER OR MODE SELECTION SYSTEM

Before carrying out below procedure, check all the related connectors are properly inserted.

1) INSPECTION PROCEDURE



Wiring diagram



36072MS02

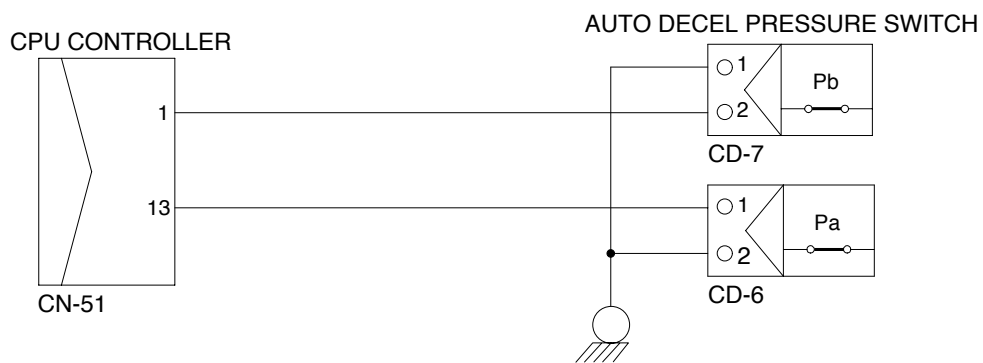
4. AUTO DECEL SYSTEM DOES NOT WORK

Before carrying out below procedure, check all the related connectors are properly inserted.

1) INSPECTION PROCEDURE

		Cause	Remedy
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Check voltage between CN-51 (1)-GND and CN-51(13)-GND </div> <p>SPEC : Actuator operating : 4~5V Actuator stop : 0~1V See TEST 6 See TEST 7</p>	YES	Defective CPU controller	Replace
	NO	Short circuit or poor connection between CN-51(1), (13)- pressure switches	Replace or repair
	NO	Defective auto decel pressure switch	Replace

Wiring diagram



29076MS10

2) TEST PROCEDURE

- (1) **Test 6** : Check voltage at CN-51(1) and ground.

Prepare 1 piece of thin sharp pin, steel or copper.

Starting key ON.

Insert prepared pin to rear side of connectors : One pin to (1) of CN-51.

Check voltage as figure.

- (2) **Test 7** : Check voltage at CN-51(13) and ground.

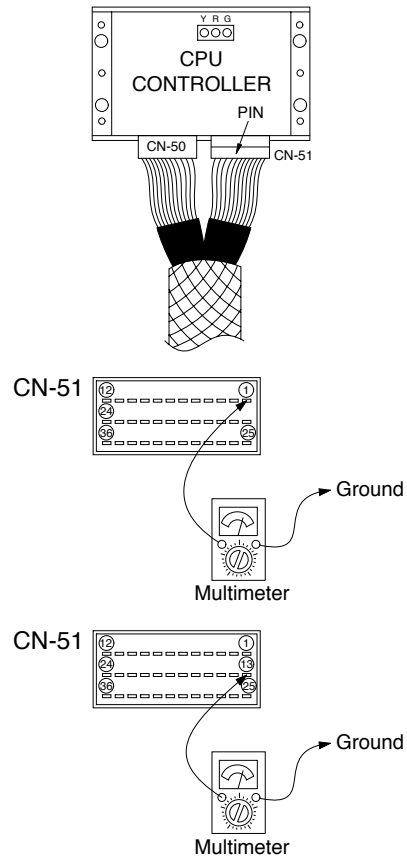
Prepare 1 piece of thin sharp pin, steel or copper

Starting key ON.

Insert prepared pin to rear side of connectors : One pin to (13) of CN-51

Check voltage as figure.

SPEC : Actuator stop : 4~5V
Actuator operating : 0~1V

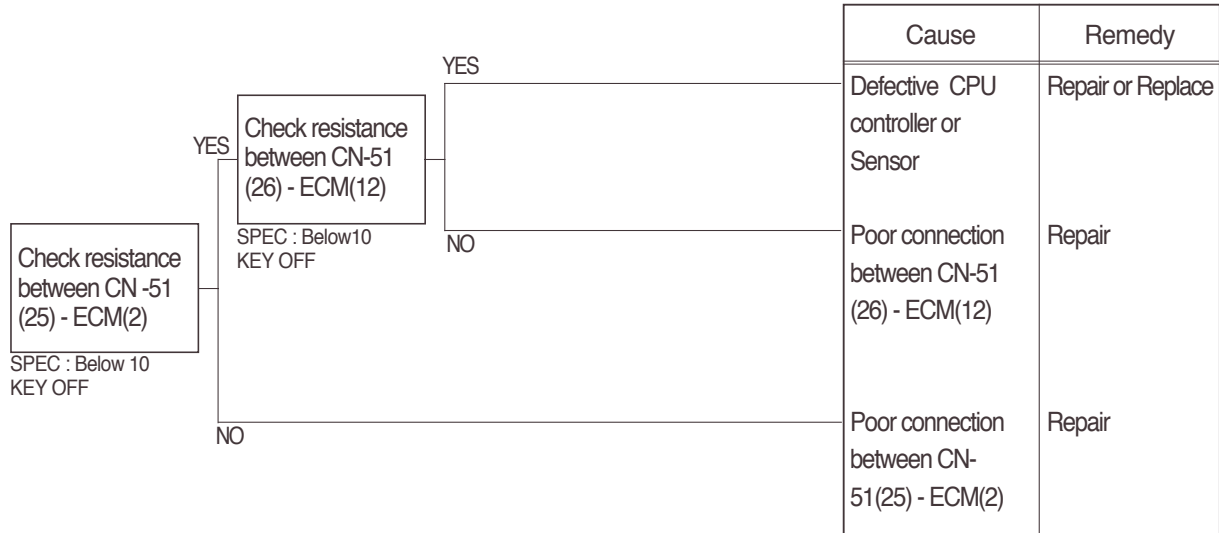


29076MS11

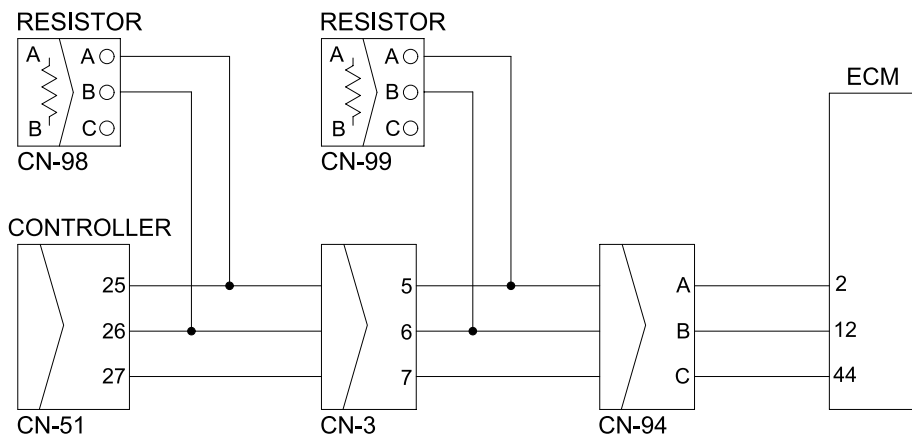
5. MALFUNCTION OF WARMING UP

Before carrying out below procedure, check all the related connectors are properly inserted.

1) INSPECTION PROCEDURE



Wiring diagram

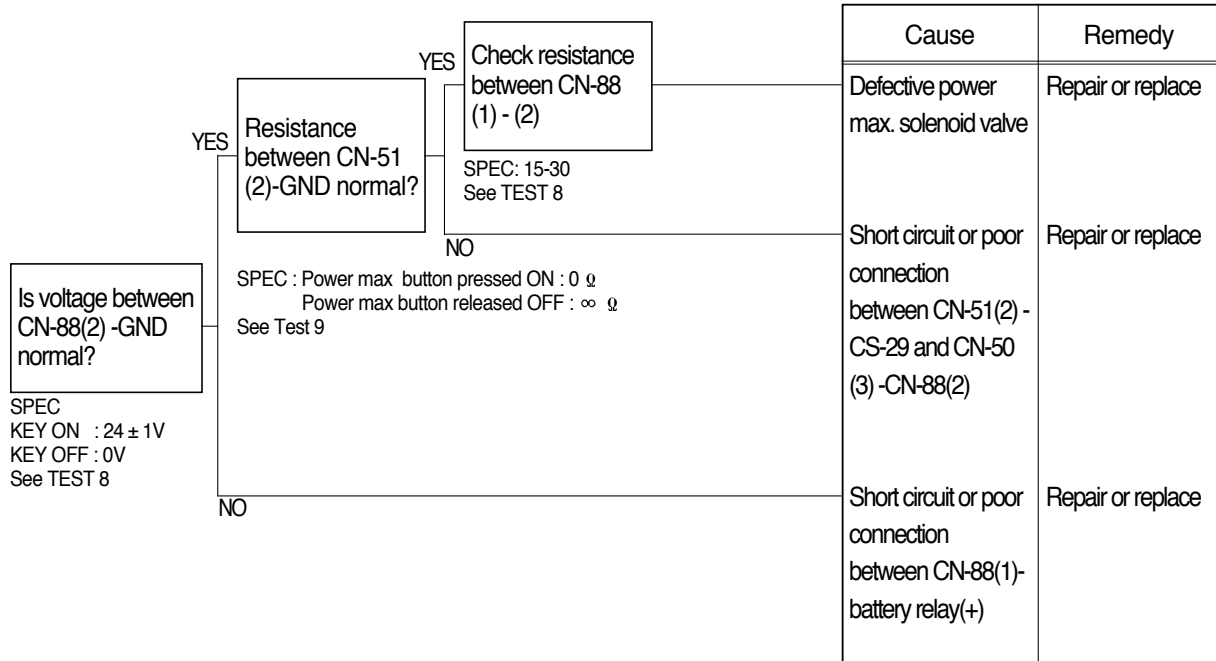


36076MS03

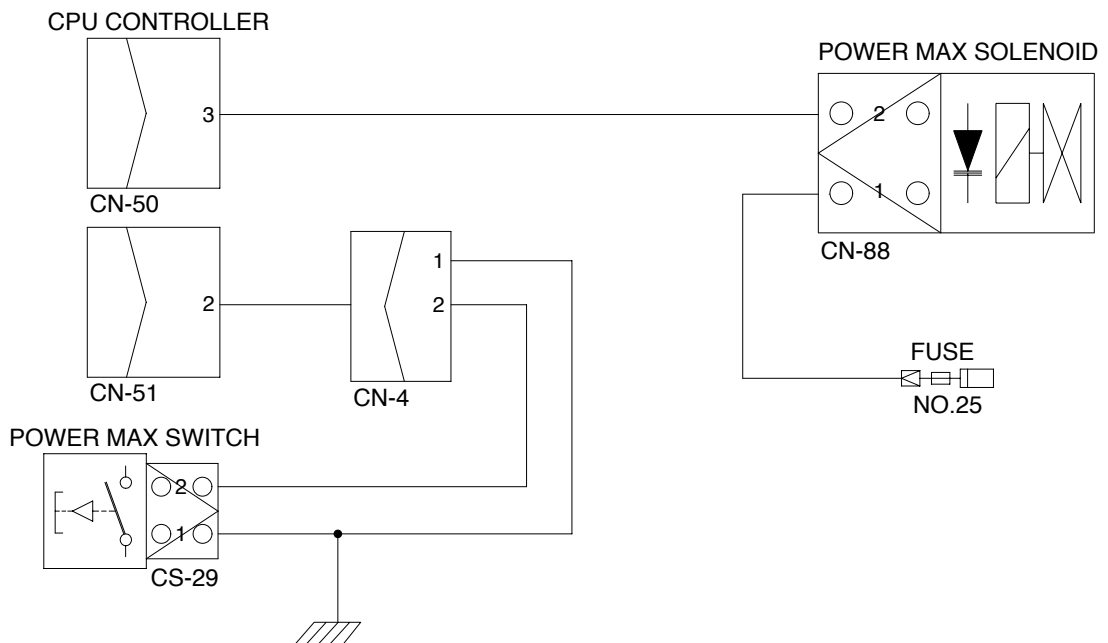
6. MALFUNCTION OF POWER MAX

Before carrying out below procedure, check all the related connectors are properly inserted.

1) INSPECTION PROCEDURE



Wiring diagram



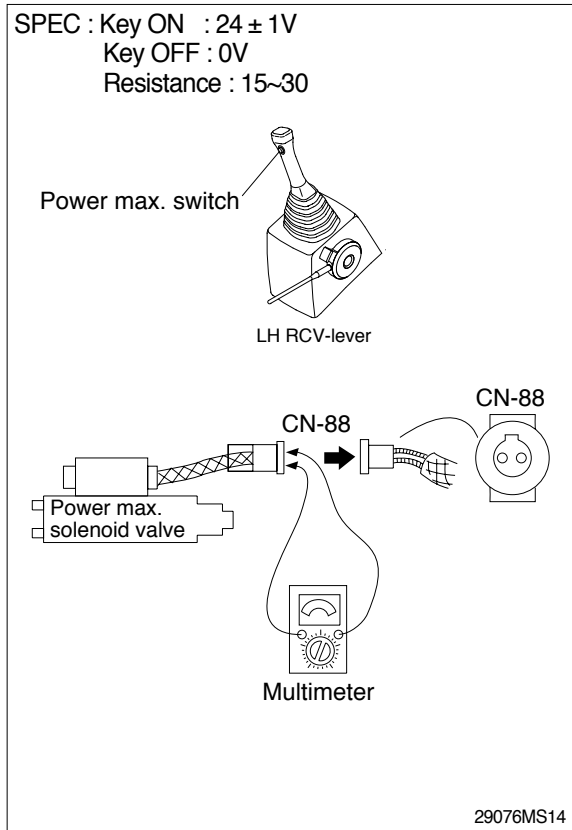
2) TEST PROCEDURE

- (1) **Test 8:** Check voltage between connector CN-88 - GND.

Start key ON.

Disconnect connector CN-88 from power max solenoid valve.

Check voltage as figure.



- (2) **Test 9:** Check resistance between connector CN-51(2)-GND.

Starting key OFF.

Remove CPU controller and disconnect connector CN-51 from CPU controller.

Check resistance as figure.

