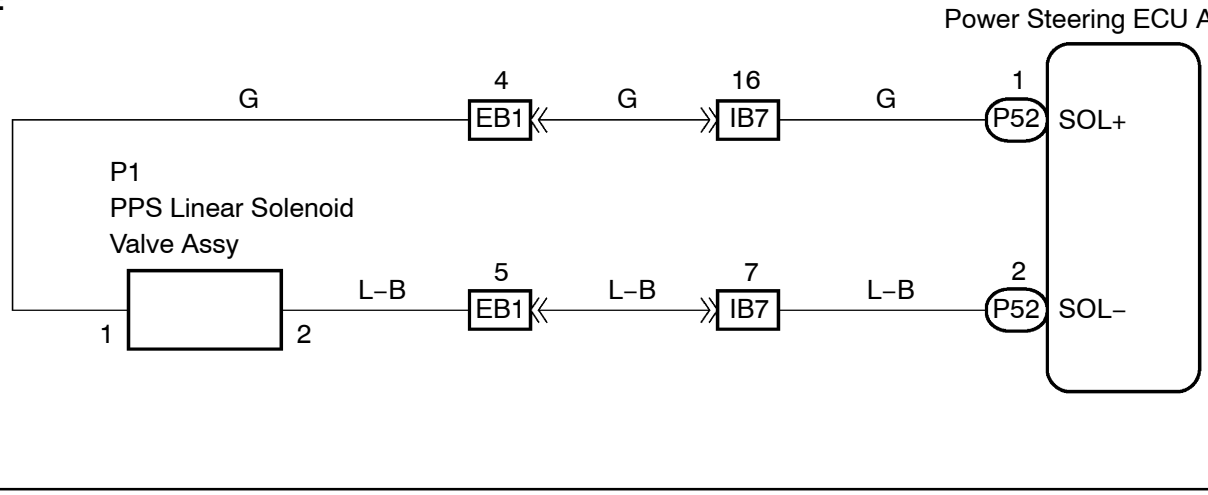
PPS LINEAR SOLENOID CIRCUIT

CIRCUIT DESCRIPTION

This circuit supplies electric power to the PPS linear solenoid valve assy.
The power steering ECU assy controls the output current to the PPS linear solenoid valve assy in accordance with vehicle speed, adjusting the amount of power steering assist.
As vehicle speed increases, the current to the solenoid decreases.

WIRING DIAGRAM

LHD:



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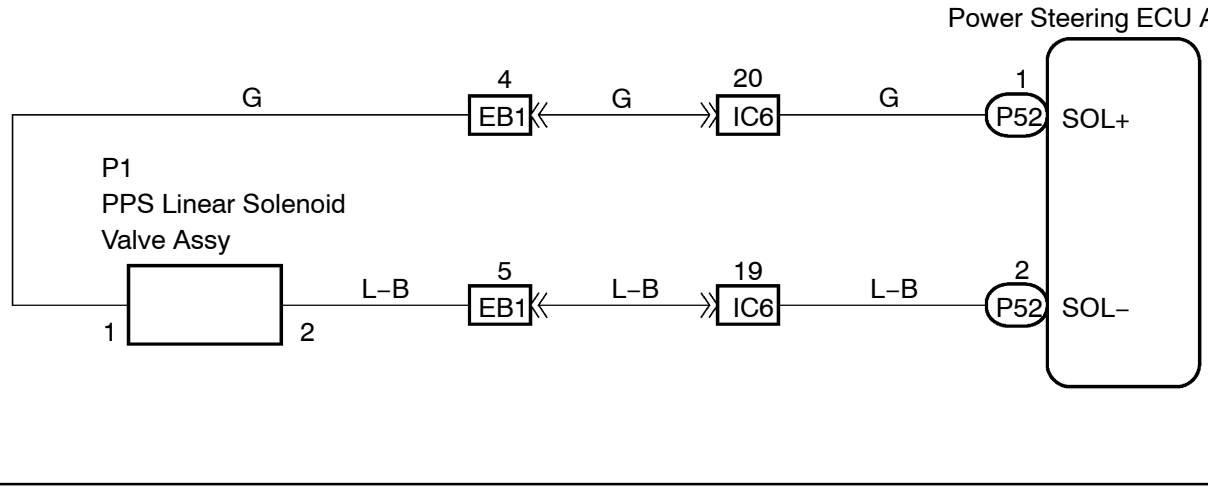
RHD:



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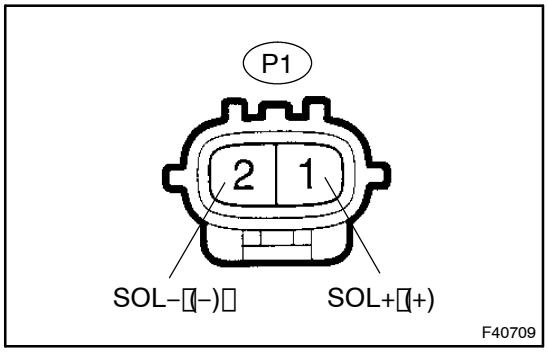
1	INSPECT PPS LINEAR SOLENOID VALVE ASSY



(a) CHECK RESISTANCE OF SOLENOID

(1) Disconnect the connector from the PPS linear solenoid valve assy.

(2) Measure the resistance according to the value(s) in the table below.

Standard:

Tester Connection	Condition	Specified Condition
P1–1 (SOL+) – P1–2 (SOL–)	Always	6 to 11 Ω (–40 to 150°C)

(b) CHECK OPERATION OF SOLENOID

(1) Connect the battery positive terminal to solenoid valve terminal 1 (SOL+) and the negative terminal to terminal 2 (SOL–).

(2) Check that the solenoid makes a clicking sound.

OK:

The PPS linear solenoid valve assy makes a click sound.

HINT:

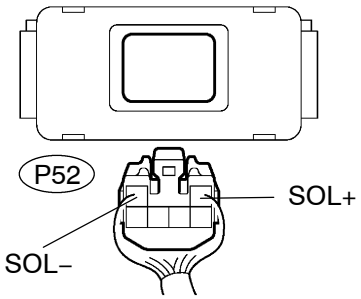
- Do not apply voltage for more than 30 seconds to avoid burnout of the solenoid.
- If repeating this step, wait until the solenoid cools down enough to be touched by hand.

NG → **REPLACE RACK & PINION POWER STEERING GEAR ASSY (SEE PAGE 51–23)**

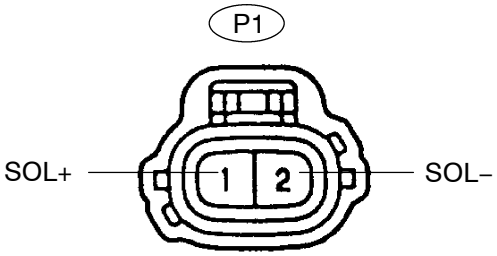
OK

2	CHECK HARNESS AND CONNECTOR(POWER STEERING ECU ASSY – PPS LINEAR SOLENOID VALVE ASSY)

Power Steering ECU Assy:



PPS Linear Solenoid Valve Assy:



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(a) Disconnect the connector from the power steering ECU assy.

(b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester Connection	Condition	Specified Condition
P52–1 (SOL+) – P1–1 (SOL+)	Always	Below 1 Ω
P52–2 (SOL–) – P1–2 (SOL–)	Always	Below 1 Ω
P52–1 (SOL+) – Body ground	Always	10 kΩ or higher
P52–2 (SOL–) – Body ground	Always	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

REPLACE POWER STEERING ECU ASSY (SEE PAGE 51–40, 51–42)