DTC	78 (4)	FUEL PUMP SYSTEM MALFUNCTION (SHORT)

CIRCUIT DESCRIPTION

DTC 78 (4) is output when the PCV1 has a malfunction. The PCV1 on the right side of the supply pump controls that the supply pump so that it feeds fuel to the common rail.

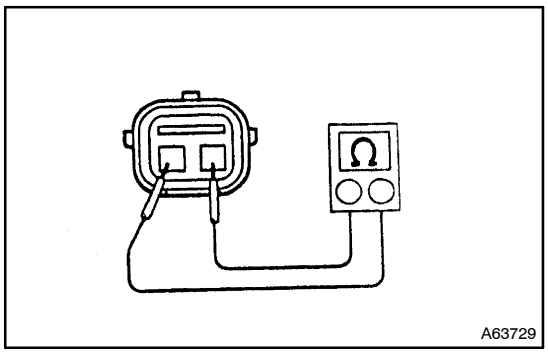
DTC No.	DTC Detection Condition	Trouble Area
78 (4)	Short in PCV1 circuit	• Short in PCV1 circuit • PCV1 (built in supply pump) • ECM

WIRING DIAGRAM

Refer to 78 (2) on page 05–157.

INSPECTION PROCEDURE

1	CHECK SUCTION CONTROL VALVE NO. 1

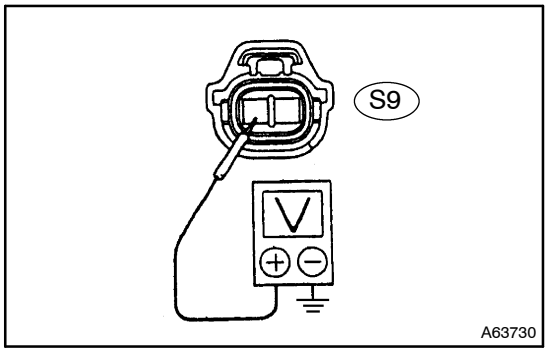


(a) Disconnect the S9 valve connector from the right side of the injection pump.
(b) Measure the resistance between the terminals of the suction control valve No. 1.
Standard: 2.5 – 3.5 Ω

NG → **REPLACE SUPPLY PUMP (See page 11–163)**

OK

2	CHECK PCV1 POWER SOURCE

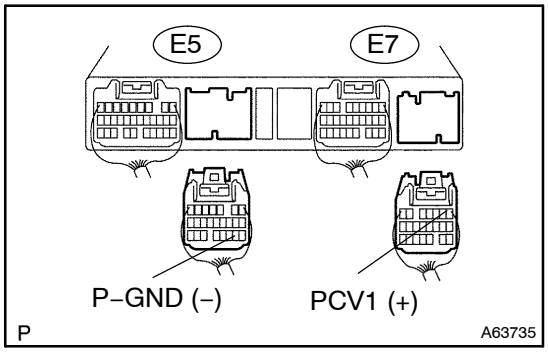


(a) Disconnect the S9 valve connector.
(b) Measure the voltage between terminal 1 of the S9 valve connector and the body ground.
Standard: 19 V or more

NG → **Go to step 5**

OK

3	CHECK SHORT FOR PCV1 CIRCUIT

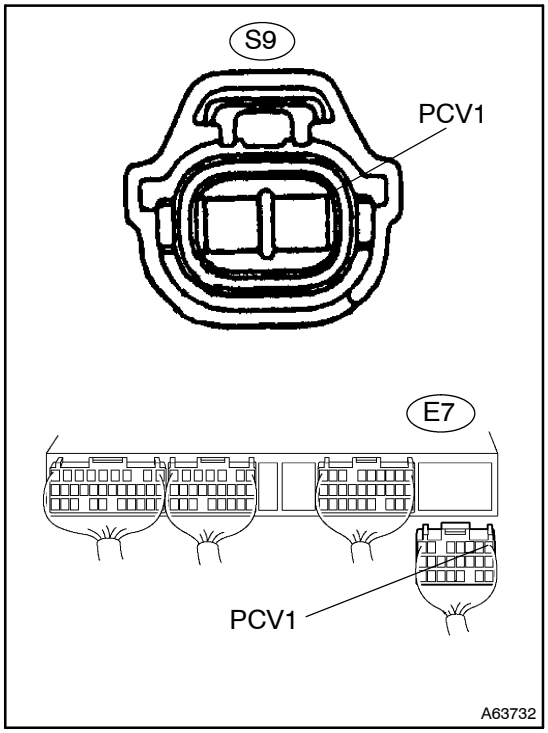


(a) Disconnect the S9 valve connector.
(b) Disconnect the E5 and E7 ECM connectors.
(c) Turn the ignition switch ON.
(d) Measure the voltage between terminals PCV1 and P–GND of the E5 and E7 ECM connector.
Standard: Approx. 1 V

OK → **REPLACE ECM**

NG

4	CHECK WIRE HARNESS (ECM ⇔ SUCTION CONTROL VALVE NO. 1)



(a) Disconnect the S9 valve connector.
(b) Disconnect the E7 ECM connector.
(c) Measure the resistance between terminal PCV1 of the E7 ECM side connector and terminal 1 of the S9 valve connector.
Standard: 2 Ω or less

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

OK

5	CHECK PCV RELAY

NG → **REPLACE PCV RELAY**

OK

CHECK AND REPLACE WIRE HARNESS FROM PCV RELAY TO BATTERY