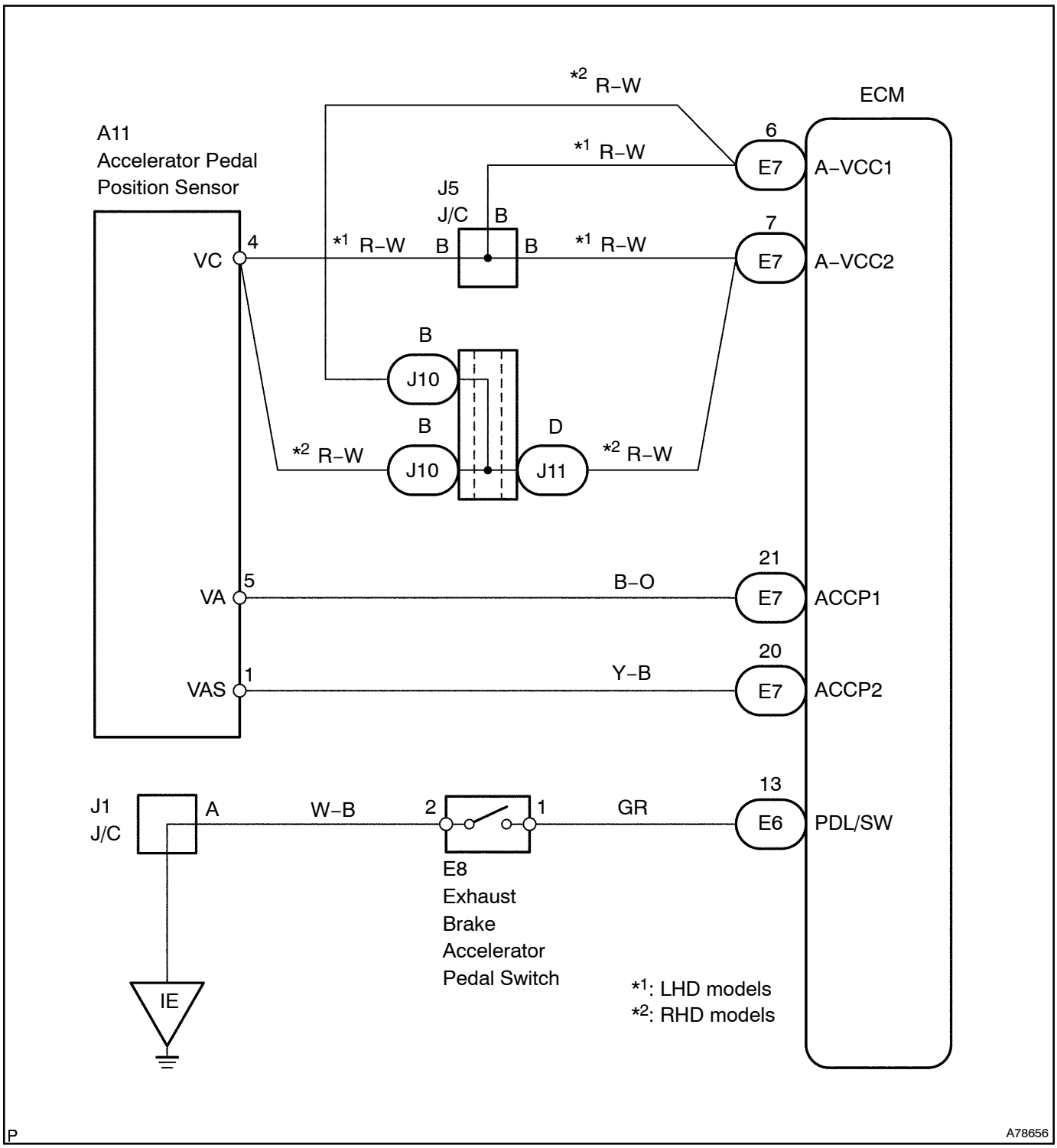
DTC	19 (1)	ACCEL. POSITION SENSOR CIRCUIT (OPEN/SHORT)

CIRCUIT DESCRIPTION

The accelerator pedal position sensor is mounted in the accelerator pedal and detects the accelerator pedal opening angle. When the accelerator pedal is fully closed, a voltage of approximately 0.8 V is applied to terminals ACCP1 and ACCP2 of the ECM. The voltage applied to terminals ACCP1, ACCP2 of the ECM increases in proportion to the opening angle of the accelerator pedal and becomes approximately 3.8 V when the accelerator pedal is fully opened. The ECM judges the vehicle driving conditions from these signals input from terminals ACCP1 and ACCP2 and uses them as one of the conditions to control the injection volume and diesel throttle valve position. This system has 2–way accelerator pedal position sensor and accelerator pedal closed position switch for fail–safe.

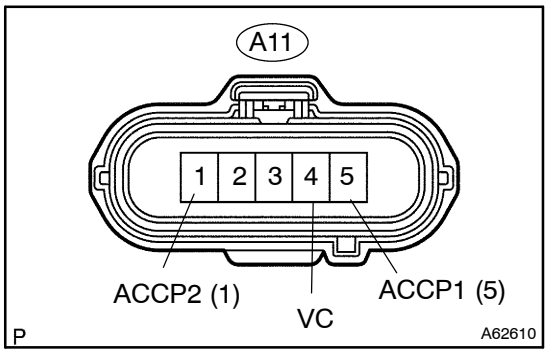
DTC No.	DTC Detection Condition	Trouble Area
19 (1)	Condition (a) or (b) continues 1 sec. or more (e) ACCP1 ≦ 0.6V (f) ACCP1 ≧ 4.6V	• Open or short in accelerator pedal position sensor circuit • Accelerator pedal position sensor • ECM
	Condition (a) or (b) continues 1 sec. or more (a) ACCP2 ≦ 0.6V (b) ACCP2 ≧ 4.6V	

WIRING DIAGRAM



INSPECTION PROCEDURE

1 CHECK ACCELERATOR LINK ASSY (VOLTAGE)



(a) Disconnect the A11 accelerator pedal position sensor connector.
(b) Turn the ignition switch ON.
(c) Check the voltage between the terminals of the A11 accelerator pedal position sensor connector.

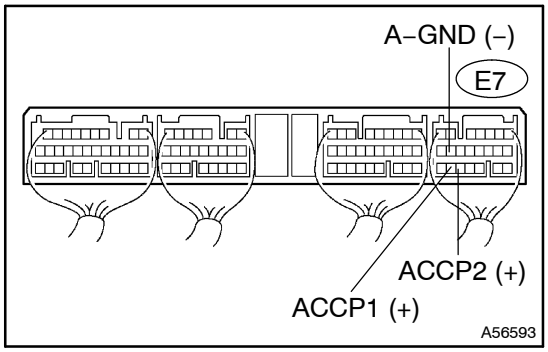
Voltage:

Terminal (Positive terminal ⇔ Negative terminal)	Voltage
VC (4) ⇔ A–GND	4.5 – 5.5 V

NG → **Go to step ****

OK

2 CHECK ECM (VOLTAGE)



(a) Connect the A11 accelerator pedal sensor connector.
(b) Turn the ignition switch ON.
(c) Check the voltage between the terminals of the E7 ECM connector.

Voltage:

Accelerator Pedal	Symbols (Terminal No.)	Voltage
Fully closed	ACCP1 (E7–21) ⇔ A–GND (E7–14)	0.7 – 1.0 V
	ACCP2 (E7–20) ⇔ A–GND (E7–14)	0.7 – 1.0 V
Fully open	ACCP1 (E7–21) ⇔ A–GND (E7–14)	3.7 – 4.0 V
	ACCP2 (E7–20) ⇔ A–GND (E4–17)	3.7 – 4.0 V

OK → **CHECK AND REPLACE ECM (See page 01–27)**

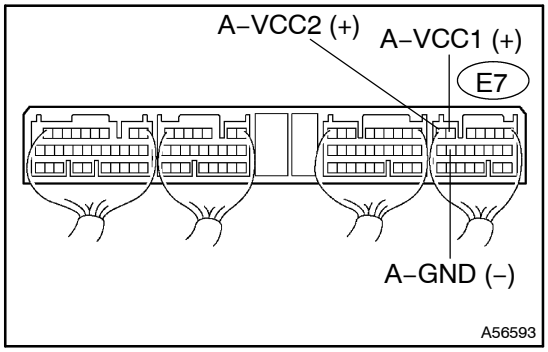
NG

3 CHECK WIRE HARNESS (ECM ⇔ ACCELERATOR PEDAL POSITION SENSOR) (See page 01–27)

OK → **REPLACE ACCELERATOR LINK ASSY**

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

4	CHECK ECM (VOLTAGE)



(a) Turn the ignition switch ON.
(b) Check the voltage between the terminals of the E7 ECM connector.

Voltage:

Symbols (Terminal No.)	Voltage
A–VCC1 (E7–6), A–VCC2 (E7–7) ⇔ A–GND (E7–14)	4.5 – 5.5 V

NG → CHECK ECM (See page 01–27)

OK

5	CHECK WIRE HARNESS (ECU ⇔ ACCELERATOR PEDAL POSITION SENSOR) (See page 01–27)

NG → REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

REPAIR OR REPLACE ECM