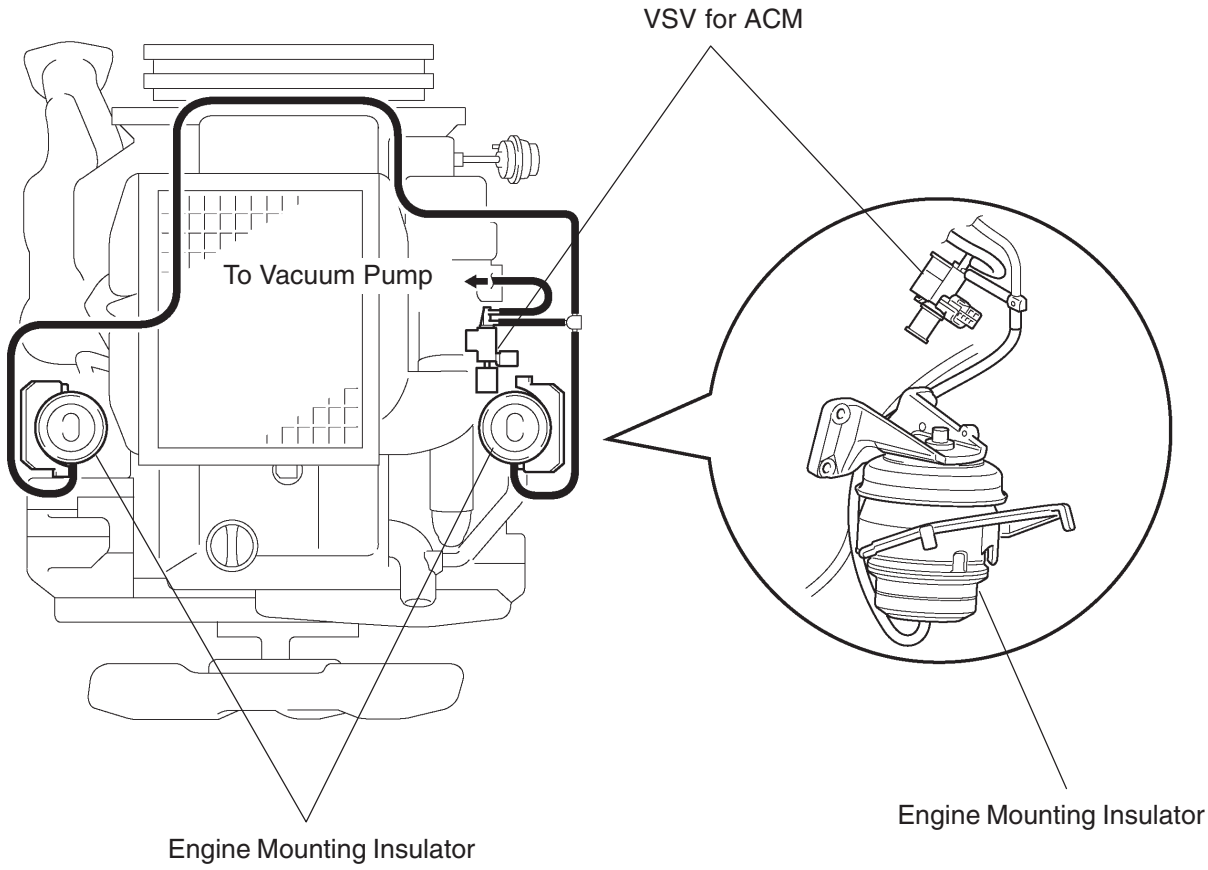
ACTIVE CONTROL ENGINE MOUNT

LOCATION

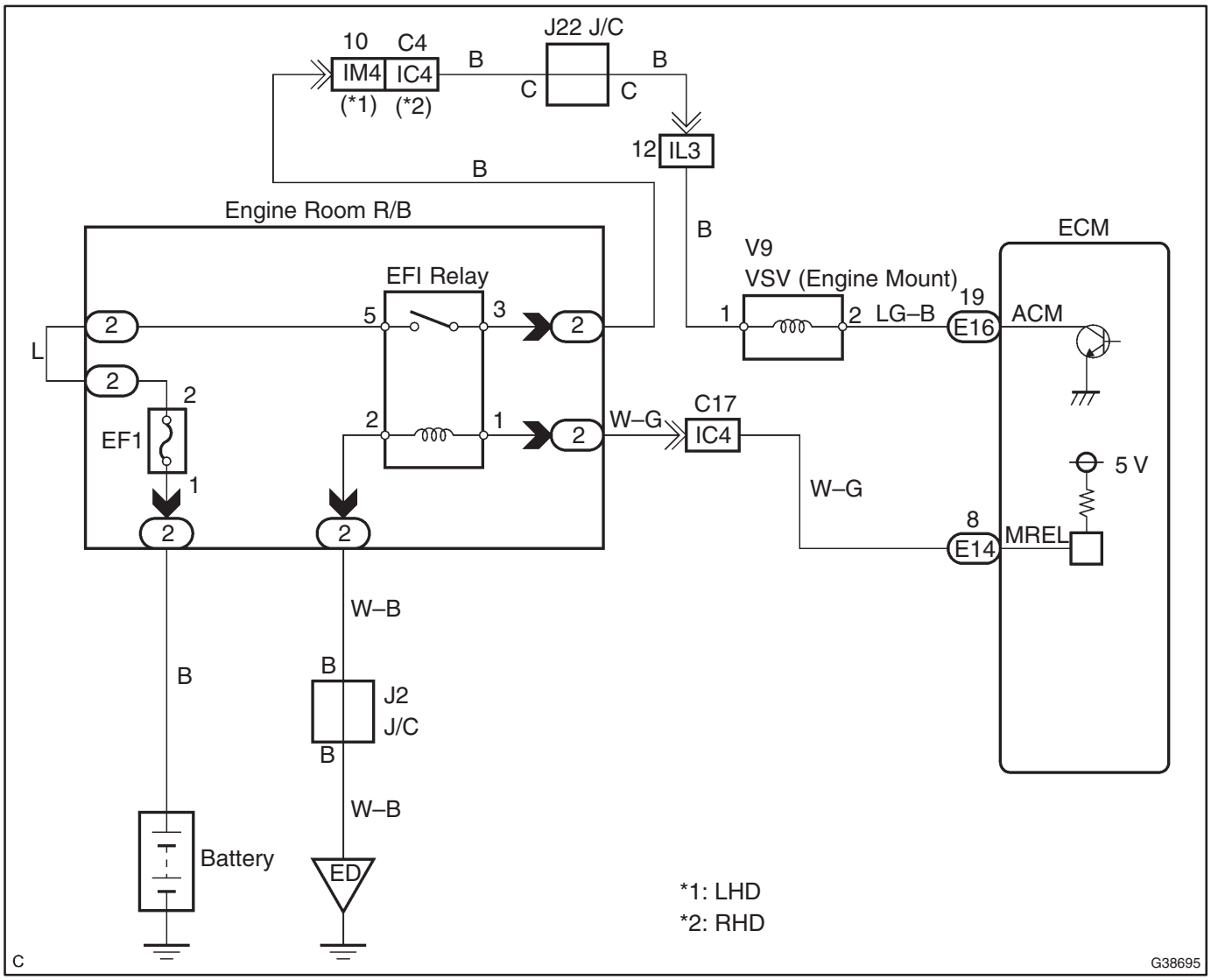


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CIRCUIT DESCRIPTION

The Active Control Engine Mount (ACM) system decreases engine vibration at low engine speed using the VSV for ACM. The VSV is controlled by a pulse signal transmitted to the VSV from the ECM. The frequency of this pulse signal is matched to the engine speed to decrease engine vibration.

WIRING DIAGRAM



INSPECTION PROCEDURE

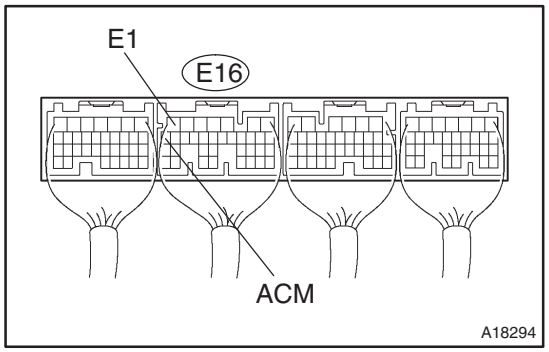
1 CHECK VACUUM

(a) Check if the vacuum hose cap is missing.
(b) If the hose is damaged, replace the vacuum hose assembly.
(c) Check the air and vacuum hoses for looseness, disconnection and blockage.

NG → **REPAIR OR REPLACE VACUUM HOSES**

OK

2 INSPECT ECM (ACM VOLTAGE)



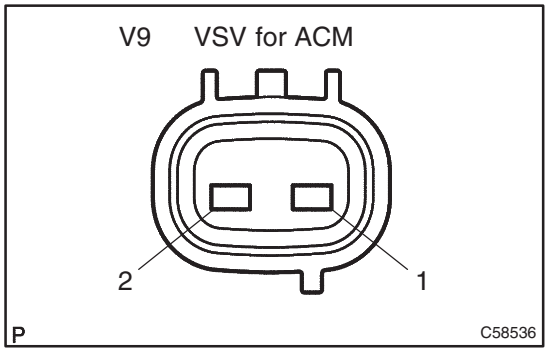
(a) Warm up engine to normal operating temperature.
(b) Measure the voltage between terminals ACM and E1 of the E16 ECM connector.
Standard:

Tester Connection	Specified Condition
E16–19 (ACM) – E16–7 (E1)	9 to 14 V

NG → **CHECK AND REPLACE VACUUM SOURCE AND HOSES**

OK

3 INSPECT VSV FOR ACM

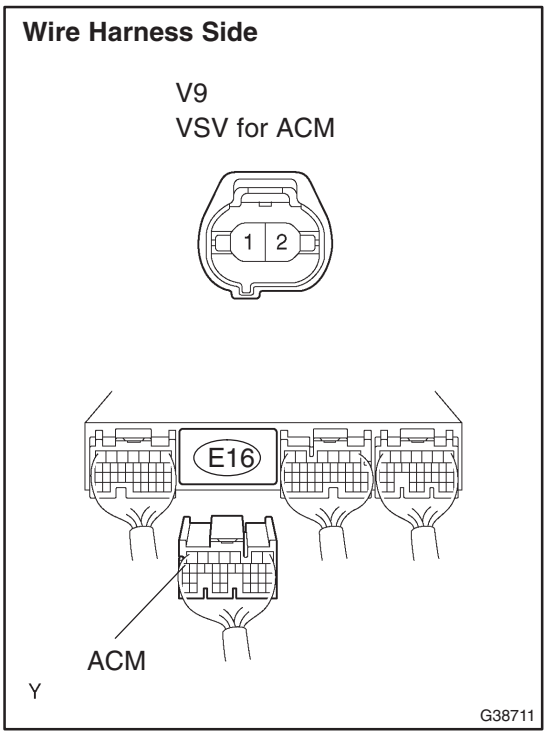


(a) Disconnect the V9 VSV connector.
(b) Measure the resistance between the terminals 1 and 2.
Standard: 37 to 44 Ω at 20°C (68°F)

OK → **Go to step 5**

NG

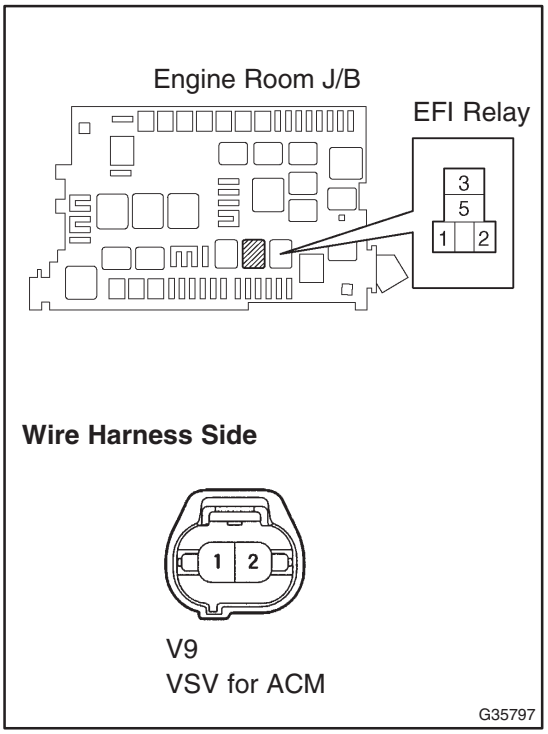
4 CHECK WIRE HARNESS



(a) Check the wire harness between the VSV and ECM.
(1) Disconnect the V9 VSV connector.
(2) Disconnect the E16 ECM connector.
(3) Check the resistance of the wire harness side connectors.

Standard:

Tester Connection	Specified Condition
V9–2 – E16–19 (ACM)	Below 1 Ω
V9–2 or E16–19 (ACM) – Body ground	10 kΩ or higher



(b) Check the wire harness between the VSV and EFI relay.
(1) Disconnect the V9 VSV connector.
(2) Remove the EFI relay from the engine room J/B.
(3) Check the resistance of the wire harness side connectors.

Standard:

Tester Connection	Specified Condition
V9–1 (VSV for ACM) – J/B EFI relay terminal 3	Below 1 Ω

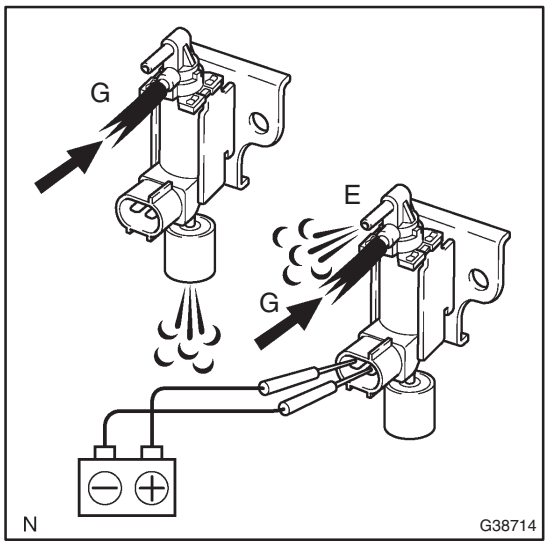
NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

REPLACE ECM (See Pub. No. RM990E, page 10–34)

NOTICE:
After replacing the ECM, allow for ECM learning start the engine and idle it until it is fully warmed up.

5 INSPECT VSV FOR ACM

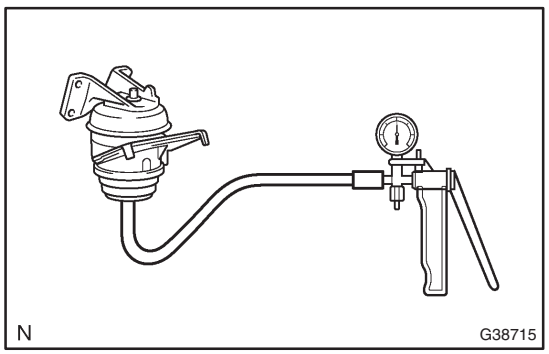


(a) Remove the VSV.
(b) Check operation of the VSV when battery positive voltage is applied to the terminals of the VSV connector.
Battery positive voltage is not applied:
The air from pipe G is flowing out through filter.
Battery positive voltage is applied:
The air from pipe F is flowing out through pipes E and H.

NG → **REPLACE VSV FOR ACM**

OK

6 INSPECT ENGINE MOUNTING INSULATOR FRONT



(a) Disconnect the vacuum hose from the front engine mount insulator.
(b) Using MITYVAC (Hand–held Vacuum Pump), apply a vacuum of 80 kPa (600 mmHg, 25 in.Hg) and wait for 1 minute.
(c) Make sure there is no needle movement on the MITY-VAC.
(d) Check that there is no fluid leakage caused by a broken lower diaphragm.

NG → **REPLACE ENGINE MOUNTING INSULATOR FRONT**

OK

SYSTEM OK