

| | | |
|------------|------------------|----------------------------|
| DTC | P1416/58* | SCV Control Circuit |
|------------|------------------|----------------------------|

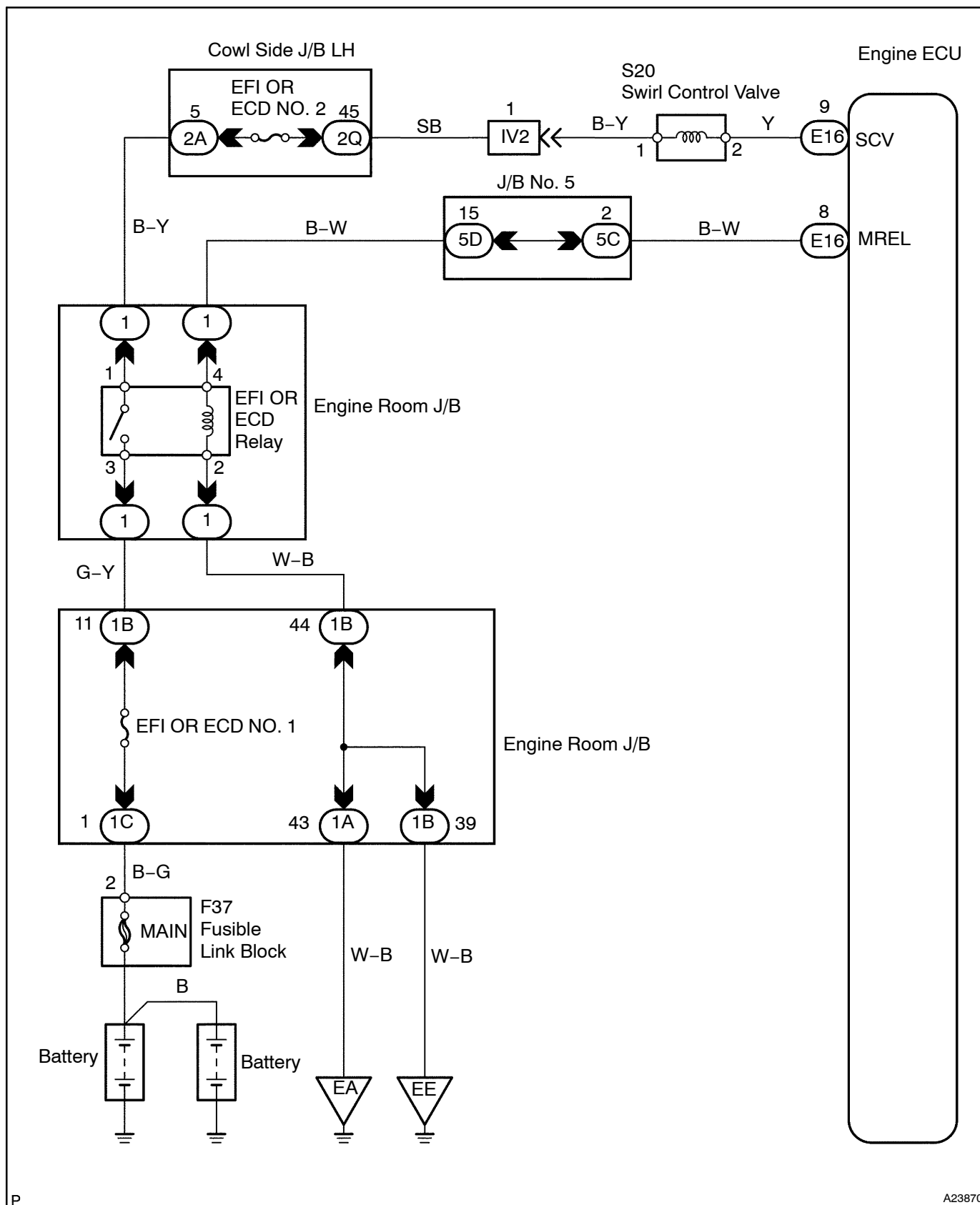
HINT:

*: Only for Europe

CIRCUIT DESCRIPTION

| DTC No. | DTC Detection Condition | Trouble Area |
|----------|---|---|
| P1416/58 | Condition that intake air volume is at standard value or less for 15 sec. is detected 3 times | <ul style="list-style-type: none">• SCV valve• VSV for SCV• Air flow meter• Vacuum hose• Engine ECU |

WIRING DIAGRAM



P

A23870

INSPECTION PROCEDURE**When using intelligent tester II:**

| | |
|---|---|
| 1 | Check connection of vacuum hose. |
|---|---|

| | |
|----|---------------------------|
| NG | Repair or replace. |
|----|---------------------------|

| |
|----|
| OK |
|----|

| | |
|---|---|
| 2 | Check vacuum between SCV and VSV for SCV at 900 rpm. |
|---|---|

PREPARATION:

- (a) Using a 3-way connector, connect a vacuum gauge to the hose between the VSV and SCV.
 (b) Warm up the engine to above 80°C (176°F).

CHECK:

Check the vacuum at 900 rpm.

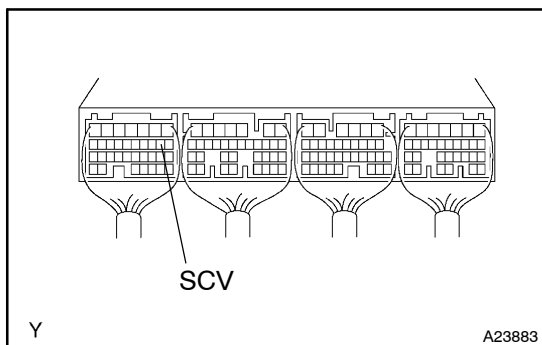
RESULT:

| Type | Vacuum |
|------|--|
| I | 0 kPa (0 mmHg, 0 in.Hg) to 50 kPa (375 mmHg, 14.8 in.Hg) |
| II | Above 50 kPa (375 mmHg, 14.8 in.Hg) |

| | |
|---------|----------------------|
| Type II | Go to step 7. |
|---------|----------------------|

| |
|--------|
| Type I |
|--------|

3 Check voltage between terminal SCV of engine ECU connector and body ground.



PREPARATION:

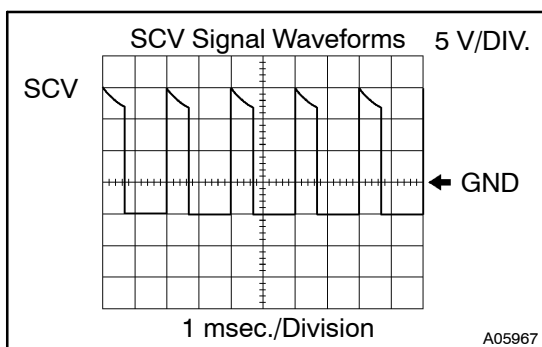
- Remove the glove compartment door.
- Turn the ignition switch ON.

CHECK:

Measure the voltage between terminal SCV of the engine ECU connector and body ground.

OK:

Voltage: 9 to 14 V



Reference: INSPECTION USING OSCILLOSCOPE

While the SCV system is ON (engine speed 900 rpm), check the waveform between terminals SCV and E1 of the engine ECU connector.

HINT:

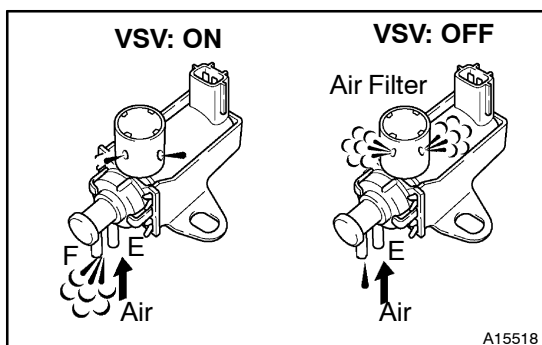
The correct waveform is as shown.

NG

Go to step 5.

OK

4 Check operation of VSV for SCV.



PREPARATION:

- Disconnect the vacuum hoses from the VSV.
- Connect the intelligent tester II to the DLC3.
- Turn the ignition switch ON and push the intelligent tester II main switch ON.
- Select the Active Test mode on the intelligent tester II.

CHECK:

Check the operation of the VSV when it is operated by the intelligent tester II.

OK:

VSV ON:

Air from port E flows out through port F.

VSV OFF:

Air from port E flows out through air filter.

OK

Go to step 7.

NG

5 Check VSV for SCV (See Pub No. RM896E, page ED-10).

NG

Replace VSV.

OK

6 Check for open and short in harness and connector between VSV and engine ECU, and VSV and EFI OR ECD relay (See page IN-19).

NG

Repair or replace harness or connector.

OK

7 Check SCV assembly (See Pub No. RM896E, page ED-7).

NG

Replace SCV assembly.

OK

Check and replace engine ECU (See page IN-19).

When not using intelligent tester II:

1 Check connection of vacuum hose.

NG

Repair or replace.

OK

2 Check vacuum between SCV and VSV for SCV at 900 rpm.

PREPARATION:

- (a) Using a 3-way connector, connect a vacuum gauge to the hose between the VSV and SCV.
(b) Warm up the engine to above 80°C (176°F).

CHECK:

Check the vacuum at 900 rpm.

RESULT:

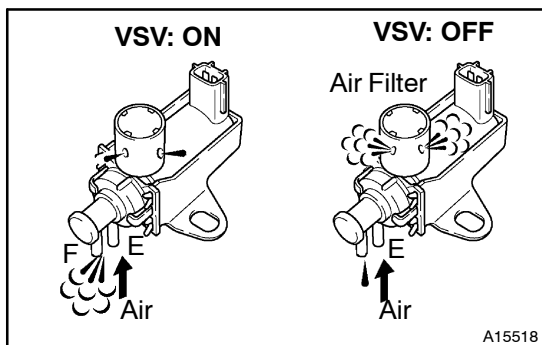
| Type | Vacuum |
|------|--|
| I | 0 kPa (0 mmHg, 0 in.Hg) to 50 kPa (375 mmHg, 14.8 in.Hg) |
| II | Above 50 kPa (375 mmHg, 14.8 in.Hg) |

Type II

Go to step 6.

Type I

3 Check operation of VSV.



PREPARATION:

- Remove the glove compartment door.
- Disconnect the S20 connector from the engine ECU.
- Turn the ignition switch ON.

CHECK:

Check the VSV operation.

- Connect between terminal SCV of the engine ECU connector and body ground (ON).
- Disconnect between terminal SCV of the engine ECU connector and body ground (OFF).

OK:

VSV ON:

Air from port E flows out through port F.

VSV OFF:

Air from port E flows out through air filter.

OK

Go to step 6.

NG

4 Check VSV for SCV (See Pub No. RM896E, page ED-10).

NG

Replace VSV.

OK

5 Check for open and short in harness and connector between VSV and engine ECU, and VSV and EFI OR ECD relay (See page IN-19).

NG

Repair or replace harness or connector.

OK

| | |
|---|---|
| 6 | Check SCV assembly (See Pub No. RM896E, page ED-7). |
|---|---|

NG

Replace SCV assembly.

OK

Check and replace engine ECU (See page IN-19).