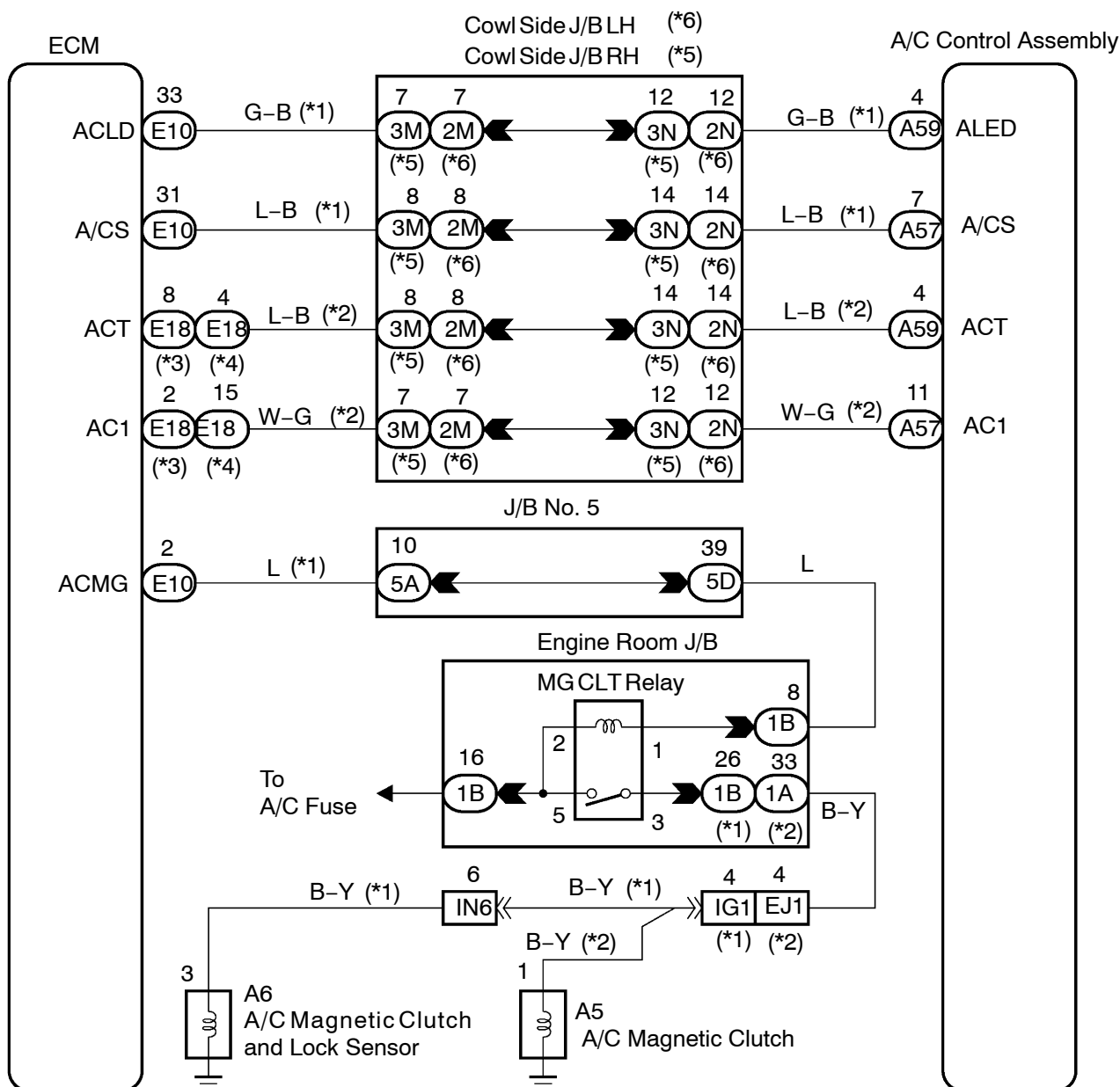


Compressor Circuit

CIRCUIT DESCRIPTION

The A/C amplifier outputs the magnetic clutch ON signal from terminal AC1, AC/S to the engine (and ECT) ECU. When the engine (and ECT) ECU receives this signal, it sends a signal from terminal ACMG and switches the A/C magnetic clutch relay ON, thus turning on the A/C magnetic clutch.

WIRING DIAGRAM



*1: 2UZ -FE

*2: 1HD -FTE

*3: 1HD -FTE Europe

*4: 1HD -FTE Except Europe

*5: LHD

*6: RHD

INSPECTION PROCEDURE

HINT:

In case of using the hand-held tester, start the inspection from step 1 and in case of not using the hand-held tester start step 2.

1	Read value of hand-held tester.
---	--

PREPARATION:

- (a) Connect the hand-held tester to the DLC3.
- (b) Turn the ignition switch ON and push the hand-held tester main SW ON.

CHECK:

Select the item "A/C SIG" in the DATA LIST and read its value displayed on the hand-held tester.

OK:

Item	Measurement Item/ Display (Range)	Normal condition	Diagnostic code
A/C SIG	A/C SW Status/ ON or OFF	<ul style="list-style-type: none"> • A/C SW Push: ON • A/C SW Release: OFF 	←

HINT:

Check with the engine running.

NG

Go to step 6.

OK

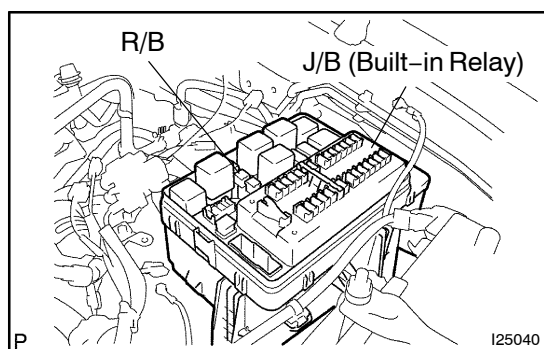
2	Check magnetic clutch relay.
---	-------------------------------------

CHECK:

Check the magnetic clutch relay ([See page AC-20](#)).

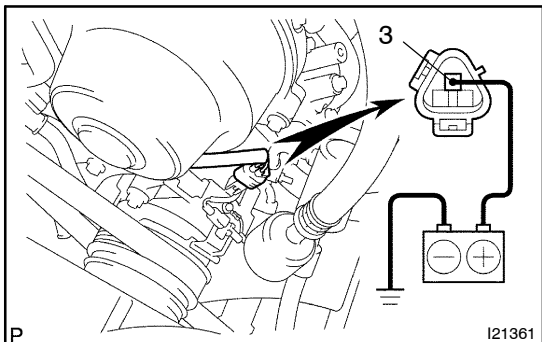
HINT:

The magnetic clutch relay is built in the engine room J/B. Also the relay is constructed with a R/B that is in the J/B as unit. To disconnect the wireharness connecting with R/B is impossible. If the relay has a malfunction, replace it with J/B assembly wireharness together.



NG Replace engine room J/B.

OK

3 Check A/C magnetic clutch.**PREPARATION:**

Disconnect magnetic clutch connector.

CHECK:

Connect positive (+) lead connected to battery to magnetic clutch connector terminal 3.

OK:

Magnetic clutch is energized.

NG Repair A/C magnetic clutch.

OK

In case of using hand –held tester (Go to step 4)
In case of not using hand –held tester (Go to step 5)

4 Read value of hand –held tester.**PREPARATION:**

(a) Connect the hand –held tester to the DLC3.

(b) Turn the ignition switch ON and push the hand –held tester main SW ON.

CHECK:

Select the item "A/C MAG CLUTCH" in the DATA LIST and read its value displayed on the hand –held tester.

OK:

Item	Measurement Item/ Display (Range)	Normal condition	Diagnostic Note
A/C MAG CLUTCH	A/C magnet clutch Status/ ON or OFF	<ul style="list-style-type: none"> • A/C SW Push: ON • A/C SW Release: OFF 	←

HINT:

Check with the engine running.

NG

Repair or replace harness or connector.

OK

- | | |
|----------|---|
| 5 | Check harness and connector between magnetic clutch and battery
(See page IN-38). |
|----------|---|

NG

Repair or replace harness or connector.

OK

Proceed to next circuit inspection shown on problem symptoms table ([See page DI-1238](#)).

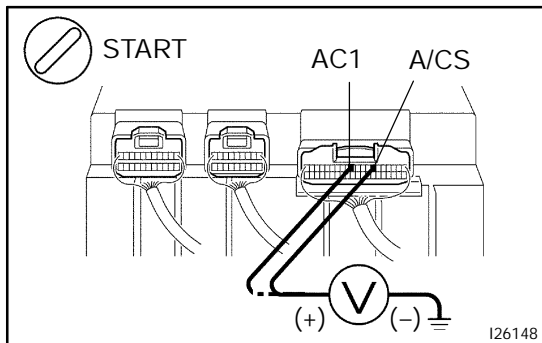
- | | |
|----------|--|
| 6 | Check harness and connector between A/C amplifier and engine (and ECT) ECU
(See page IN-38). |
|----------|--|

NG

Repair or replace harness or connector.

OK

- 7** Check voltage between terminal AC1 ^{*1}, A/CS ^{*2} of A/C amplifier connector and body ground.

**PREPARATION:**

- (a) Remove A/C amplifier with connector still connected.
 (b) Start the engine and push AUTO switch.

CHECK:

Check the voltage between terminal AC1 ^{*1}, A/CS ^{*2} of A/C amplifier connector and body ground when magnetic clutch is ON and OFF by A/C switch.

*1: Except 2UZ-FE

*2: 2UZ-FE

OK:

Switch operation	Tester connection	Specified condition
ON	AC1 - Body ground	1.3 - 2.6 V
OFF	AC1 - Body ground	3.7 - 4.5 V
ON	A/CS - Body ground	10 - 14 V
OFF	A/CS - Body ground	Below 1.0 V

NG**Check and replace A/C amplifier.****OK****Repair or replace harness or connector.**