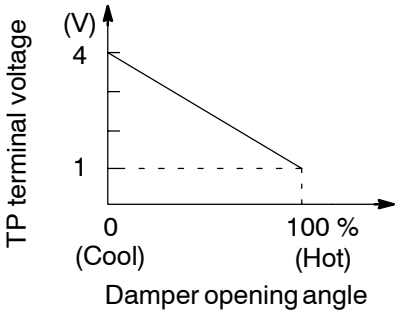
DIAR4–01

DTC	3 1, 41	Front Air Mix Damper Position Sensor Circuit

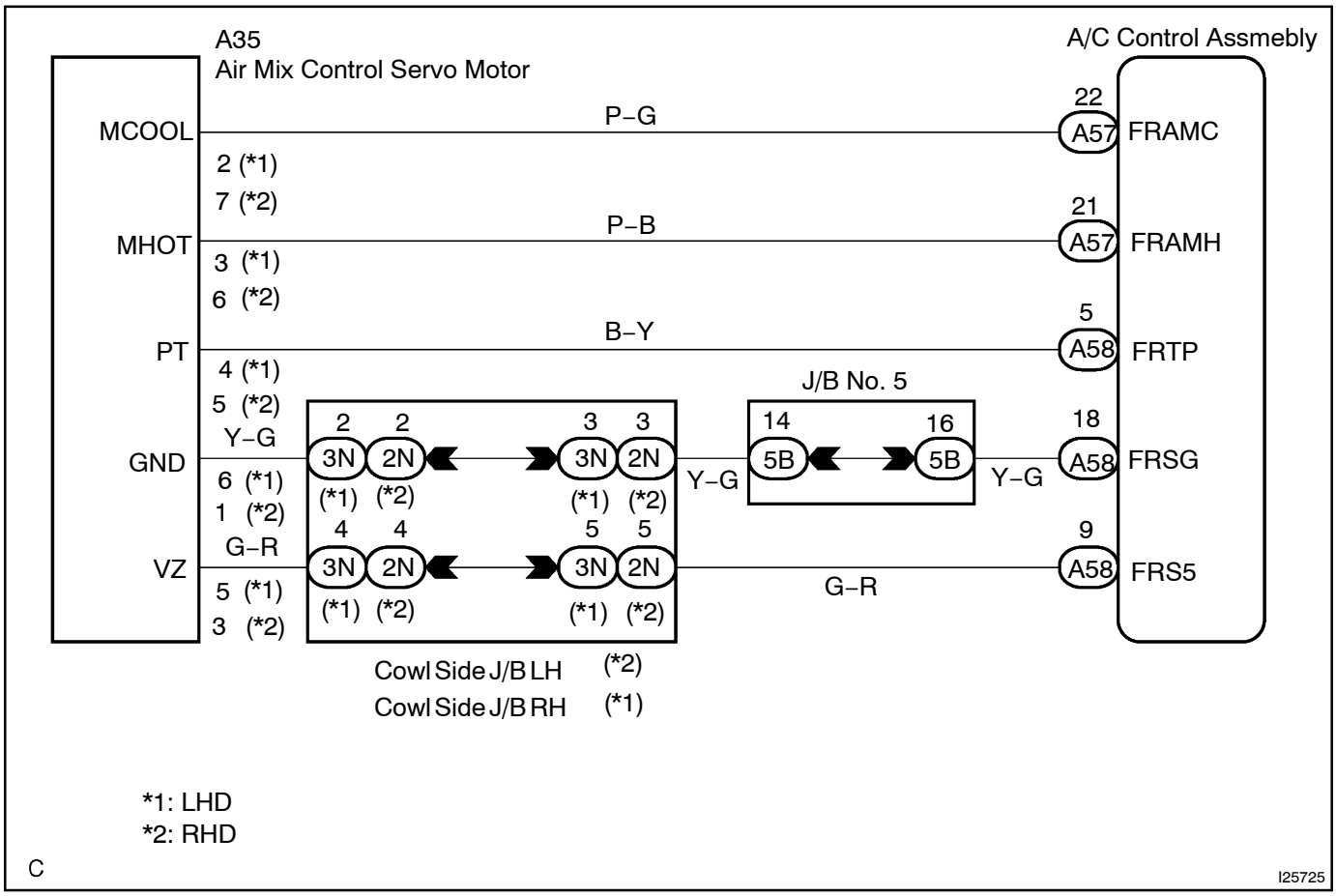
CIRCUIT DESCRIPTION



This sensor detects the position of the front air mix damper and sends the appropriate signals to the A/C amplifier.
The position sensor is built into the front air mix servomotor.

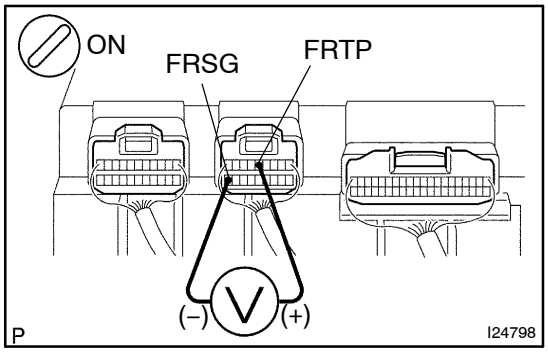
DTC No.	Detection Item	Trouble Area
31	Short to ground or to power source circuit in front air mix damper position sensor circuit	• Front air mix damper position sensor • Harness or connector between front air mix damper position sensor and A/C amplifier • A/C amplifier
41	Front air mix damper position sensor value does not change even if A/C amplifier operates front air mix damper control servomotor	

WIRING DIAGRAM



INSPECTION PROCEDURE

1	Check voltage between terminals FRTP and FRSG of A/C amplifier connector.



PREPARATION:

Remove A/C amplifier with connectors still connected.

CHECK:

(a) Turn ignition switch to ON.

(b) Change the set temperature to activate the front air mix servomotor, and measure the voltage between terminals FRTP and FRSG of A/C amplifier connector every time the set temperature is changed.

OK:

Set Temperature	Voltage
Max. cool	3.5 – 4.5 V
Max. hot	0.5 – 1.5 V

HINT:

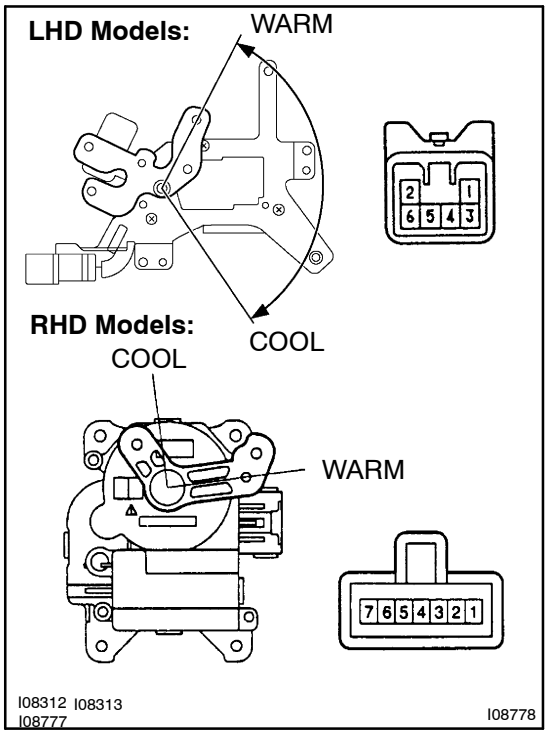
As the set temperature increases, the voltage decreases.

NG → **Go to step 2.**

Ok

Proceed to next circuit inspection shown on problem symptoms table (See page DI–1238). However, if DTC 3 1 or 4 1 is displayed, check and replace A/C amplifier.

2	Check front air mix damper position sensor.



PREPARATION:
Remove front air mix servomotor.

CHECK:
Measure resistance between terminals 4 (5) and 6 (1) of front air mix damper control servomotor connector.
( ): RHD Models

OK:

Resistance : 4.2 – 7.8 kΩ

CHECK:
While operating front air mix servomotor, follow the procedure on page DI–1279 and measure resistance between terminals 4 (5) and 6 (1) of front air mix damper control servomotor connector.
( ): RHD Models

OK:

Position	Resistance
Max. COOL	3.6 – 6.8 kΩ
Max. WARM	0.5 – 1.1 kΩ

HINT:
As the front air mix servomotor moves from cool side to warm side, the resistance decreases.

NG → **Replace front air mix servomotor.**

OK

3	Check harness and connector between front air mix damper position sensor and A/C amplifier (See page IN–38).

NG → **Repair or replace harness or connector.**

OK

Check and replace A/C amplifier.