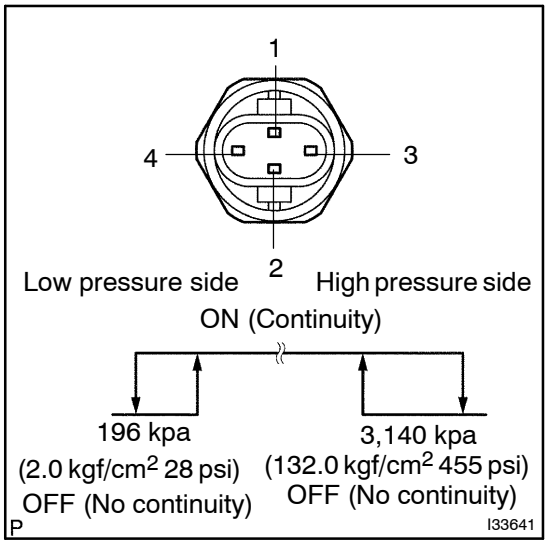
550RO–01

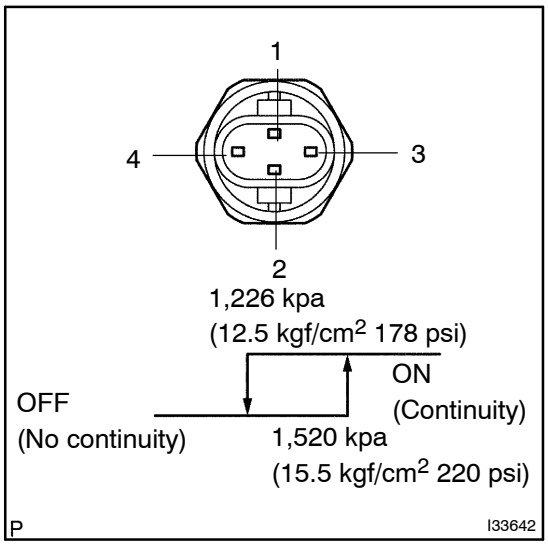
ON–VEHICLE INSPECTION



1. DUAL A/C:
INSPECT PRESSURE SWITCH NO. 1

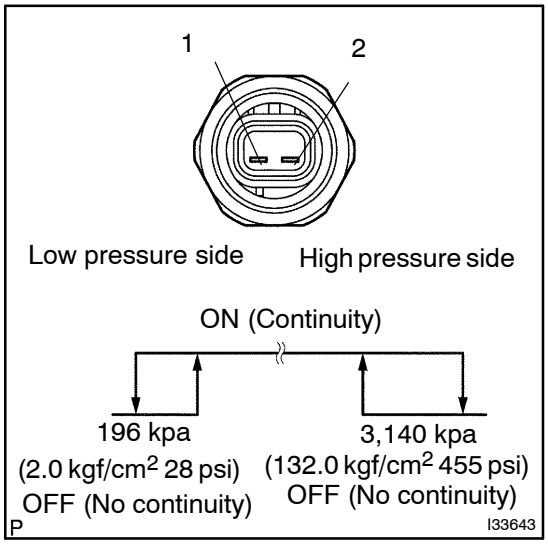
(a) Magnetic clutch control:
Inspect pressure switch operation.
(1) Set on the manifold gauge set.
(2) Connect the positive (+) lead from the ohmmeter to terminal 2 and the negative (–) lead to terminal 1.
(3) Check continuity between terminals when refrigerant pressure is changed, as shown in the illustration.

If operation is not as specified, replace the pressure switch.



(b) Cooling fan control:
Inspect pressure switch operation.
(1) Connect the positive (+) lead from the ohmmeter to terminal 4 and the negative (–) lead to terminal 3.
(2) Check continuity between terminals when refrigerant pressure is changed, as shown in the illustration.

If operation is not as specified, replace the pressure switch.



2. SINGL A/C:
INSPECT PRESSURE SWITCH NO. 1

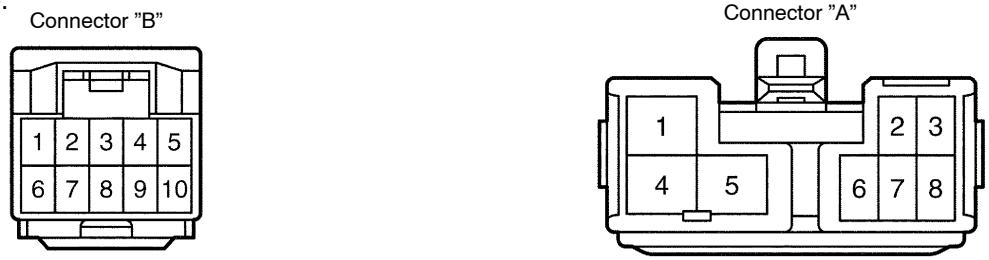
(a) Magnetic clutch control:
Inspect pressure switch operation.
(1) Set on the manifold gauge set.
(2) Connect the positive (+) lead from the ohmmeter to terminal 2 and the negative (–) lead to terminal 1.
(3) Check continuity between terminals when refrigerant pressure is changed, as shown in the illustration.

If operation is not as specified, replace the pressure switch.

3. INSPECT HEATER CONTROL & ACCESSORY ASSY

(a) Disconnect the connector from heater control & accessory assy and inspect the connector on wire harness side, as shown in the chart.

Wire Harness Side:

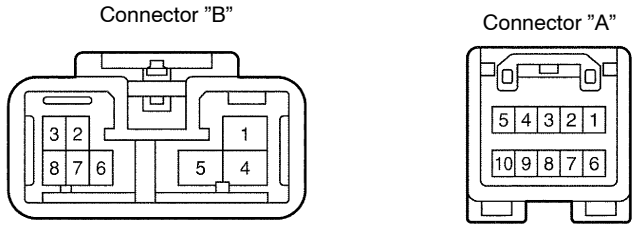


Symbols (Terminal No.)	Condition	Specified condition
IG ⇔ GND (B7 ⇔ B10)	Ignition switch: LOCK → ON	0 → 10 – 14 V
GND ⇔ Body ground (B10 ⇔ Body ground)	Always	Continuity

If circuit is not as specified, try replacing the heater control & accessory assy with a new one. If the circuit is not as specified, inspect the circuits connected to the other parts.

(b) Connect the connector to heater control & accessory assy and inspect wire harness side connector from the back side, as shown in the chart.

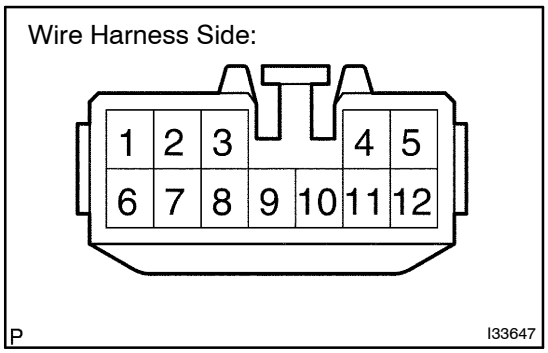
From Back Side:



Symbols (Terminal No.)	Condition	Specified condition
REC ⇔ GND (A3 ⇔ A10)	Ignition switch: ON R/F switch: OFF → ON	0 → 10 – 14 V
FRS ⇔ GND (A4 ⇔ A10)	Ignition switch: ON R/F switch: ON → OFF	0 → 10 – 14 V
ILL– ⇔ Body ground (A5 ⇔ Body ground)	Always	Continuity
A/C ⇔ GND (A6 ⇔ A10)	Ignition switch: ON A/C switch: OFF → ON	0 → 10 – 14 V
R/DEF ⇔ GND (A9 ⇔ A10)	Ignition switch: ON R/F switch: OFF → ON	0 → 10 – 14 V
E ⇔ Body ground (B1 ⇔ Body ground)	Always	Continuity
ILL+ ⇔ E (B2 ⇔ B1)	Ignition switch: ON Turn light control switch: OFF → ON	0 → 10 – 14 V
ILL– ⇔ Body ground (B3 ⇔ Body ground)	Always	Continuity

Symbols (Terminal No.)	Condition	Specified condition
HI ⇔ E (B4 ⇔ B1)	Ignition switch: ON Turn blower dial: OFF → HI	No continuity → Continuity
M2 ⇔ E (B5 ⇔ B1)	Ignition switch: ON Turn blower dial: OFF → M2	No continuity → Continuity
M1 ⇔ E (B6 ⇔ B1)	Ignition switch: ON Turn blower dial: OFF → M1	No continuity → Continuity
C1 ⇔ E (B8 ⇔ B1)	Ignition switch: ON Turn blower dial: OFF → LO	No continuity → Continuity

If circuit is not as specified, try replacing the heater control & accessory assy with a new one. If circuit is not as specified, inspect the circuits connected to other parts.

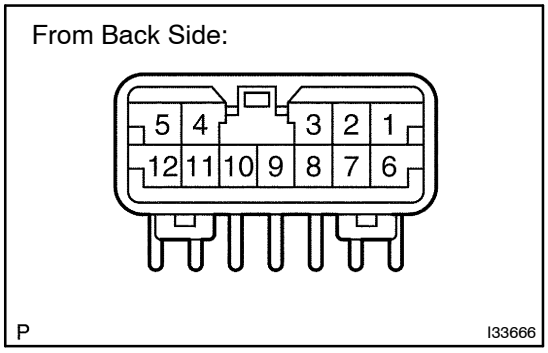


4. INSPECT AIR CONDITIONING AMPLIFIER ASSY (1KD–FTV)

(a) Disconnect the connector from the air conditioning amplifier assy and inspect the connector on wire harness side, as shown in the chart.

Symbols (Terminal No.)	Condition	Specified condition
GND ⇔ Body ground (5 ⇔ Body ground)	Always	Continuity

If circuit is as specified, try replacing the air conditioning amplifier assy with a new one. If circuit is not as specified, inspect the circuits connected to the other parts.

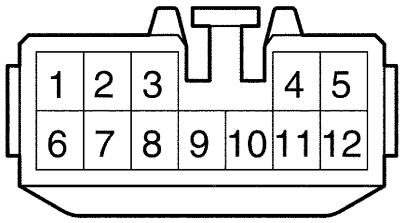


(b) Connect the connector to air conditioning amplifier assy and inspect wire harness side connector from the back side, as shown in the chart.

Symbols (Terminal No.)	Condition	Specified condition
AC1 ⇔ GND (1 ⇔ 5)	Ignition switch: ON A/C switch: OFF → ON	10 – 14 V → 0 V
PRS ⇔ GND (2 ⇔ 5)	Refrigerant pressure 196 – 1,340 kpa → less than 196 or more than 1,340 kpa	10 – 14 V → 0 V
TE ⇔ SG (3 ⇔ 12)	Evaporator temp.: 25 °C (77 °F)	0.4 – 0.8 V
IGN ⇔ GND (4 ⇔ 5)	Turn wheel slowly	Pulse generation
ACT ⇔ GND (6 ⇔ 5)	Magnetic clutch: OFF → ON	0 → Below 1 V
A/C ⇔ GND (7 ⇔ 5)	Ignition switch: ON A/C switch: OFF → ON	0 → 10 – 14 V
LED ⇔ GND (9 ⇔ 5)	Ignition switch: ON A/C switch: OFF → ON	0 → Below 1 V
LOCK ⇔ GND (10 ⇔ 5)	Magnetic clutch: OFF → ON	Pulse generation
MGC ⇔ GND (11 ⇔ 5)	Ignition switch: ON A/C switch: OFF → ON	10 – 14 V → Below 1 V
SG ⇔ Body ground (12 ⇔ Body ground)	Always	Continuity

If circuit is not as specified, try to replace the air conditioning amplifier assy with a new one. If circuit is not as specified, inspect the circuits connected to other parts.

Wire Harness Side:



P I33647

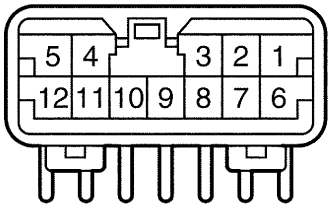
5. INSPECT AIR CONDITIONING AMPLIFIER ASSY (Except 1KD–FTV)

(a) Disconnect the connector from the air conditioning amplifier assy and inspect the connector on wire harness side, as shown in the chart.

Symbols (Terminal No.)	Condition	Specified condition
IG ⇔ GND (3 ⇔ 5)	Ignition switch: LOCK → ON	0 → 10 – 14 V
GND ⇔ Body ground (5 ⇔ Body ground)	Always	Continuity

If circuit is not as specified, try replacing the air conditioning amplifier assy with a new one. If circuit is not as specified, inspect the circuits connected to other parts.

From Back Side:



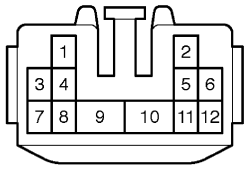
P I33666

(b) Connect the connector to air conditioning amplifier assy and inspect wire harness side connector from the back side, as shown in the chart.

Symbols (Terminal No.)	Condition	Specified condition
AC1 ⇔ GND (1 ⇔ 5)	Ignition switch: ON A/C switch: OFF → ON	10 – 14 V → 0 V
PRS ⇔ GND (2 ⇔ 5)	Refrigerant pressure 196 – 1,340 kpa → less than 196 or more than 1,340 kpa	10 – 14 V → 0 V
COOL ⇔ GND (4 ⇔ 5)	Ignition switch: ON Cool box switch: OFF → ON (After 82 seconds)	10 – 14 V → Below 1 V
ACT ⇔ GND (6 ⇔ 5)	Magnetic clutch: OFF → ON	0 V → Below 1 V
A/C ⇔ GND (7 ⇔ 5)	Ignition switch: ON A/C switch: OFF → ON	0 V → 10 – 14 V
TE ⇔ SG (8 ⇔ 12)	Evaporator temp.: 25 °C (77 °F)	0.8 – 1.2 V
Rr MGOFF ⇔ GND (9 ⇔ 5)	Ignition switch: ON Rear A/C switch: OFF → ON	10 – 14 V → Below 1 V
FrMGV ⇔ GND (10 ⇔ 5)	Ignition switch: ON A/C switch: OFF → ON	10 – 14 V → Below 1 V
MGC ⇔ GND (11 ⇔ 5)	Ignition switch: ON A/C switch: OFF → ON	10 – 14 V → Below 1 V
SG ⇔ Body ground (12 ⇔ Body ground)	Always	Continuity

If circuit is not as specified, try to replace the air conditioning amplifier assy with a new one. If circuit is not as specified, inspect the circuits connected to other parts.

Wire Harness Side:



N I34265

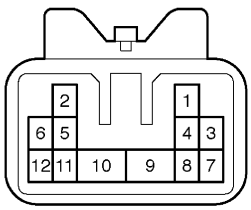
6. INSPECT REAR COOLER AMPLIFIER ASSY

(a) Disconnect the connector from the rear cooler amplifier assy and inspect the connector on wire harness side, as shown in the chart.

Symbols (Terminal No.)	Condition	Specified condition
IG ⇔ GND (1 ⇔ 8)	Ignition switch: LOCK → ON	0 → 10 – 14 V
GND ⇔ Body ground (8 ⇔ Body ground)	Always	Continuity

If circuit is not as specified, try replacing the rear cooler amplifier assy with a new one. If circuit is not as specified, inspect the circuits connected to other parts.

From Back Side:



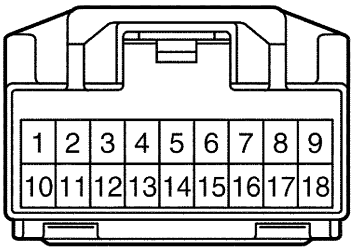
N I34266

(b) Connect the connector to rear cooler amplifier assy and inspect wire harness side connector from the back side, as shown in the chart.

Symbols (Terminal No.)	Condition	Specified condition
RrTE ⇔ SG (2 ⇔ 12)	Rear evaporator temp.: 25 °C (77 °F)	1.5 kΩ
RrMGOFF ⇔ GND (3 ⇔ 4)	Ignition switch: ON A/C switch: OFF → ON	0 → Below 1 V
RrHTR ⇔ GND (5 ⇔ 4)	Rear blower switch: OFF → ON	0 → Below 1 V
RrMGV ⇔ GND (8 ⇔ 4)	Ignition switch: ON Rear cooler switch: OFF → ON	10 – 14 V → Below 1 V
SG ⇔ Body ground (10 ⇔ Body ground)	Always	Continuity

If circuit is not as specified, try to replace the rear cooler amplifier assy with a new one. If the circuit is not as specified, inspect the circuits connected to other parts.

Wire Harness Side:



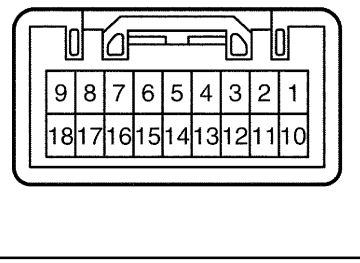
7. INSPECT HEATER AMPLIFIER ASSY (VISCOUS HEATER)

(a) Disconnect the connector from the heater amplifier assy and inspect the connector on wire harness side, as shown in the chart.

Symbols (Terminal No.)	Condition	Specified condition
IG ⇔ GND (1 ⇔ 15)	Ignition switch: LOCK → ACC	0 → 10 – 14 V
+B ⇔ GND (9 ⇔ 15)	Always	10 – 14 V
GND ⇔ Body ground (15 ⇔ Body ground)	Always	Continuity

If circuit is not as specified, try replacing the heater amplifier assy with a new one. If the circuit is not as specified, inspect the circuits connected to the other parts.

From Back Side:

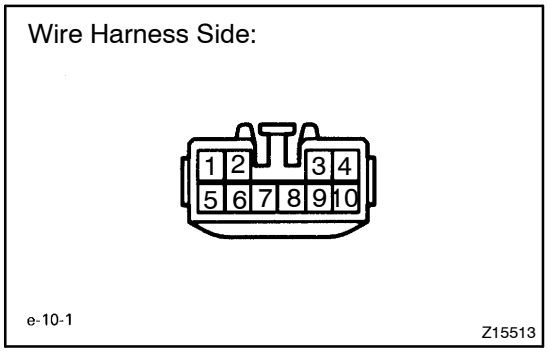


(b) Connect the connector to heater amplifier assy and inspect wire harness side connector from the back side, as shown in the chart.

Symbols (Terminal No.)	Condition	Specified condition
BLW ⇔ GND (2 ⇔ 15)	Ignition switch: ON Blower switch: OFF → LO	0 → 10 – 14 V
TW ⇔ GND (4 ⇔ 15)	Ignition switch: ON	Pulse generation
PTC1 ⇔ GND (6 ⇔ 15)	Engine speed: Above 650 rpm Ambient temp.: Below 10 °C (50 °F) Set temp.: MAX HOT Water temp.: Below 65 °C (149 °F)	10 – 14 V
PTC2 ⇔ GND (7 ⇔ 15)	Engine speed: Above 650 rpm Ambient temp.: Below 10 °C (50 °F) Set temp.: MAX HOT Water temp.: Below 65 °C (149 °F)	10 – 14 V
PTC3 ⇔ GND (8 ⇔ 15)	Engine speed: Above 650 rpm Ambient temp.: Below 10 °C (50 °F) Set temp.: MAX HOT Water temp.: Below 65 °C (149 °F)	10 – 14 V
HED ⇔ GND (10 ⇔ 15)	Ignition switch: ON Turn light control switch: OFF → ON	0 → Below 1 V
IGN ⇔ GND (11 ⇔ 15)	Turn wheel slowly	Pulse generation

Symbols (Terminal No.)	Condition	Specified condition
ACT ⇔ GND (12 ⇔ 15)	Engine speed: Above 650 rpm Ambient temp.: Below 10 °C (50 °F) Set temp.: MAX HOT Water temp.: Below 65 °C (149 °F)	10 – 14 V
VSW ⇔ GND (13 ⇔ 15)	Ignition switch: ON Power heater switch: OFF → ON	10 – 14 V → Below 1 V
ALT ⇔ GND (14 ⇔ 15)	Start engine	Pulse generation
VHC ⇔ GND (17 ⇔ 15)	Start engine Power heater switch: OFF → ON	Below 1 V → 10 – 14 V
VMC ⇔ GND (18 ⇔ 15)	Start engine Power heater switch: OFF → ON	Below 1 V → 10 – 14 V

If circuit is not as specified, try to replace the heater amplifier assy with a new one. If the circuit is not as specified, inspect the circuits connected to the other parts.

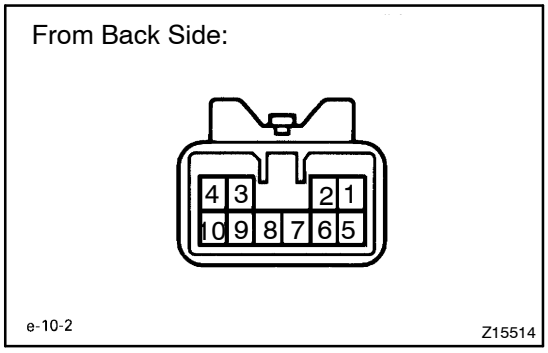


8. INSPECT COOL BOX AMPLIFIER ASSY

(a) Disconnect the connector from the cool box amplifier assy and inspect the connector on wire harness side, as shown in the chart.

Symbols (Terminal No.)	Condition	Specified condition
+B ⇔ GND (8 ⇔ 6)	Always	10 – 14 V
IG ⇔ GND (2 ⇔ 6)	Ignition switch: LOCK → ON	0 → 10 – 14 V
GND ⇔ Body ground (6 ⇔ Body ground)	Always	Continuity

If circuit is not as specified, try replacing the cool box amplifier assy with a new one. If the circuit is not as specified, inspect the circuits connected to the other parts.



(b) Connect the connector to cool box amplifier assy and inspect wire harness side connector from the back side, as shown in the chart.

Symbols (Terminal No.)	Condition	Specified condition
ILL ⇔ GND (3 ⇔ 4)	Ignition switch: ON Turn light control switch: OFF → ON	0 → Below 1 V
SW ⇔ SG (5 ⇔ 10)	Ignition switch: ON Cool box switch: OFF → LO	0 → Below 1 V
TE ⇔ SG (6 ⇔ 10)	Cool box evaporator temp.: 25 °C (77 °F)	1.5 kΩ
LED ⇔ GND (7 ⇔ 4)	Ignition switch: ON Turn light control switch: OFF → ON	0 → Below 4 V
CBT ⇔ GND (8 ⇔ 4)	Cool box evaporator temp.: 25 °C (77 °F)	0 → Below 1 V
BLW ⇔ GND (9 ⇔ 4)	Ignition switch: ON Cool box switch: OFF → LO	0 → Below 1 V
SG ⇔ Body ground (10 ⇔ Body ground)	Always	Continuity

If circuit is not as specified, try to replace the cool box amplifier assy with a new one. If the circuit is not as specified, inspect the circuits connected to the other parts.