
AIR CONDITIONER

AIR CONDITIONING SYSTEM

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AIR CONDITIONING SYSTEM

FUNCTION CHECK

1. Cooling performance check

- (1) Attach the air conditioner tool set to the vehicle.
- (2) Set the vehicle in the following conditions. [*1]

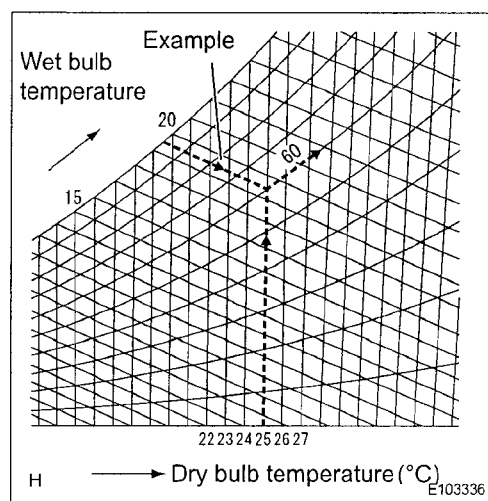
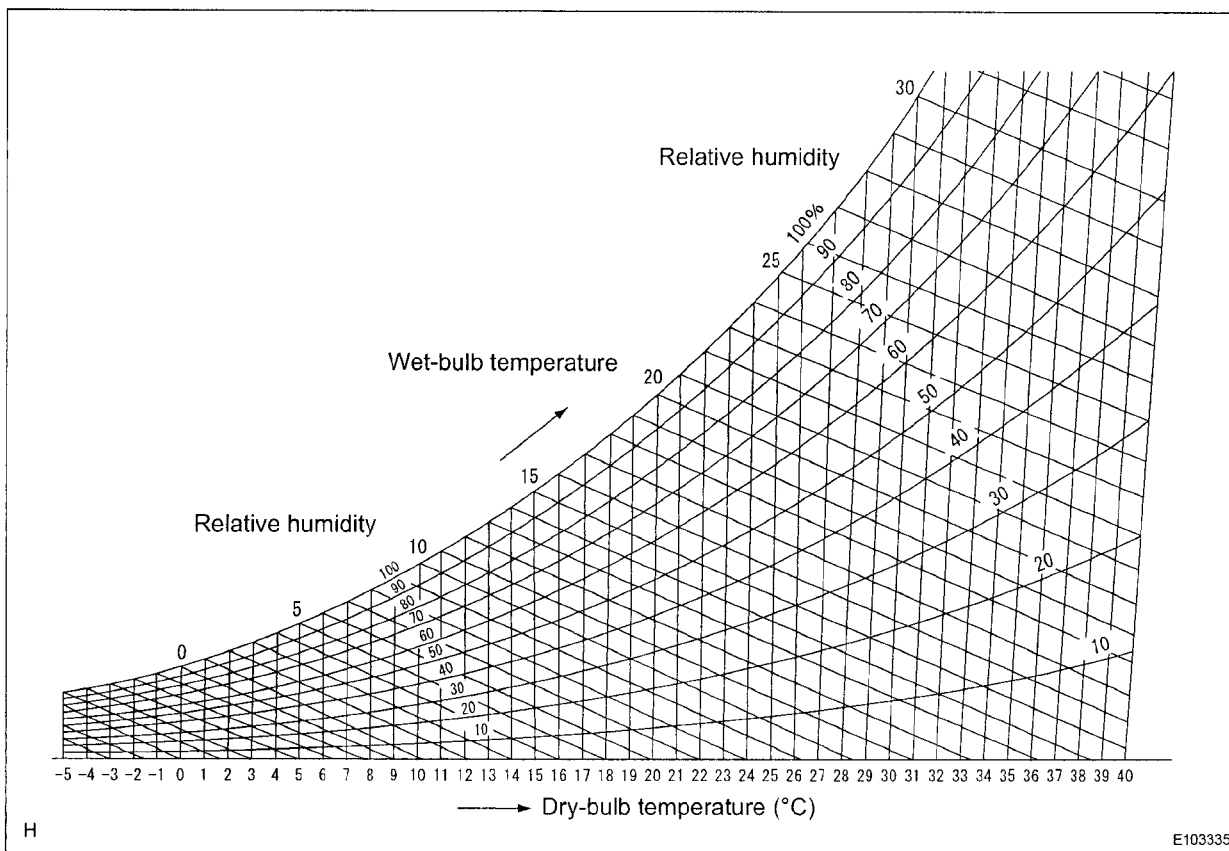
Item	Condition
Vehicle	The vehicle stops in the shade.
Door	Fully open
A/C switch	ON
Number of engine revolutions	1500 rpm
Inside/outside air selector damper position	RECIRC
Blowout hole damper position	FACE
Set temperature	MAX COOL
Blower speed	HI
Air conditioner inlet temperature *2	30 - 35 °C
Condenser pressure (gage high-pressure side) *3	1.37 - 1.57 MPa (14 - 16 kgf/cm ²)

<HINT>

*2 Unless the inlet air temperature is in a range of 30 to 35 °C, the correct test result will not be obtained. If the temperature is too low, therefore, postpone the test.

*3 If the condenser pressure (gage high-pressure side) is high, decrease the pressure by splashing water to the condenser. Conversely, if the pressure is too low, increase it by putting a cover in front of the condenser.

- (3) Put a wet- and dry-bulb thermometer (necessary for measuring humidity), and insert the bulb of the thermometer into the center of the outlet for measurement.
- (4) Operate the air conditioner in condition [*1] and stabilize the temperature at the inlet (approx. 5 to 6 minutes).
- (5) Measure the dry-bulb temperature and wet-bulb temperature at the inlet and the temperature at the outlet.
- (6) Calculate the relative humidity by applying the dry- and wet-bulb temperatures at the inlet to the air-line diagram.

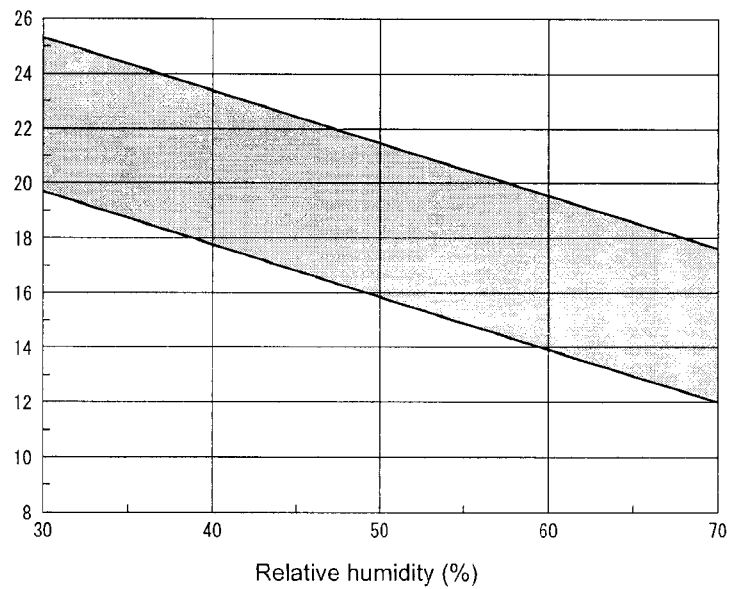


(a) As an example of how to calculate the relative humidity, take a case where the dry-bulb temperature of the thermometer placed at the air inlet is 25 °C and the wet-bulb temperature is 19.5 °C. In this case, the intersection of the dotted lines in the diagram is the relative humidity, which stands at 60%.

- (7) Check the cooling performance by applying the difference between the measured inlet temperature and outlet temperature and the relative humidity to the standard performance table.

52

Temperature difference
between inlet and outlet
(°C)

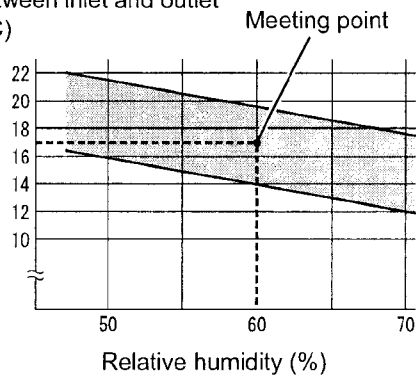


H

E103337

Reference: The difference between the measured temperatures and the relative humidity must be in the shaded area in the diagram.

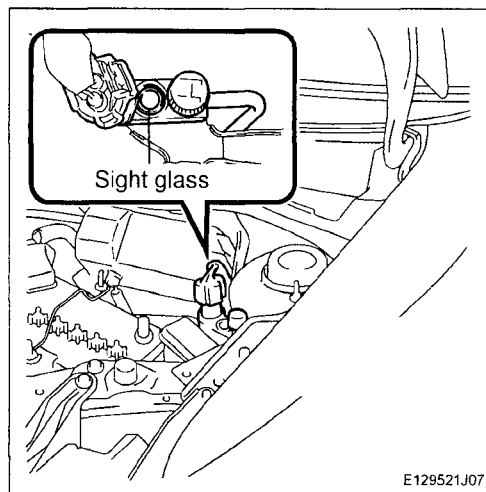
Temperature difference
between inlet and outlet
(°C)



H

E103338

(a) An example of how to calculate the cooling performance is shown by using the standard performance table. In this case, the difference between the dry-bulb temperature at the inlet and that at the outlet is 17 °C and the relative humidity is 60%.



2. Coolant gas pressure check

(1) Coolant quantity check (left-hand drive car only)

(a) Check the sight glass of the cooler refrigerant liquid pipe A.

(b) Set the vehicle in the following conditions. [*1]

Item	Condition
Door	Fully open
Set temperature indication	MAX COOL
Engine revolution	1500 rpm
Blower speed	HI
A/C	ON

(c) Check the sight glass in state [*1].

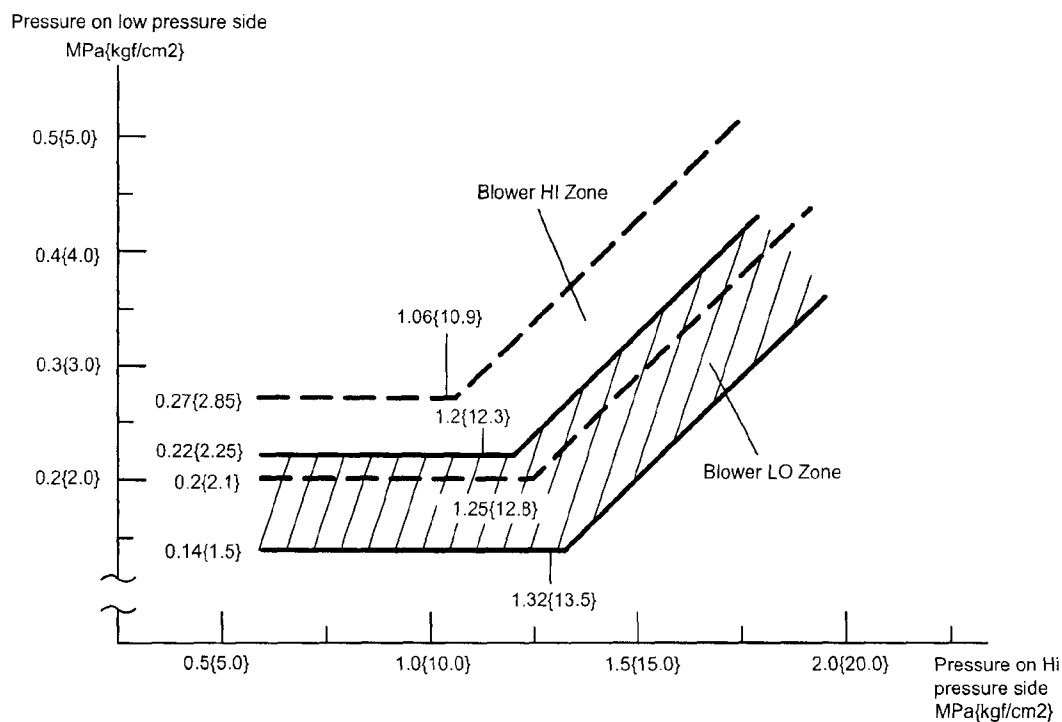
Symptom	Coolant quantity	Action
Bubbles are in the sight glass.	Insufficient	> Check if gas leaks, and repair if necessary. > Inject coolant gas until there is no bubble in the sight glass.
No bubbles are in the sight glass.	None, insufficient, too much	Refer to (*2) and (*3).
No temperature difference between compressor inlet and outlet (*2)	Empty or almost empty	> Check if gas leaks, and repair if necessary. > Inject coolant until there is no bubble in the sight glass.
Considerable temperature difference between compressor inlet and outlet (*3)	Appropriate or too much	Refer to (*4) and (*5).
The coolant gas in the sight glass remains transparent immediately after the air conditioner is turned off (*4).	Too much	> Discharge the coolant gas. > Discharge the air and inject new coolant gas of appropriate quantity.
The coolant gas bubbles and then becomes transparent immediately after the air condition is turned off (*5).	Appropriate	-

<HINT>

If the room temperature is higher than the normal, bubbles in the sight glass are considered normal if cooling is sufficient.

(2) Coolant Pressure Check with Gage

Gauge readings (Reference)



P

E100247J01

(a) Attach the air conditioner tool set.

(b) Set the vehicle in the following condition [*2].

Item	Condition
Engine	After warming up
Door	Fully open
A/C	ON
Engine revolution	1500 rpm
Inside air selector switch	RECIRC
Set temperature indication	MAX COOL
Blower speed	HI
Air conditioner inlet temperature	30 °C - 35 °C

(c) Check the value of the gage in state [*2].

Specified value: 0.15 - 0.25 MPa (1.5 - 2.5 kgf/cm²)

(low-pressure side)

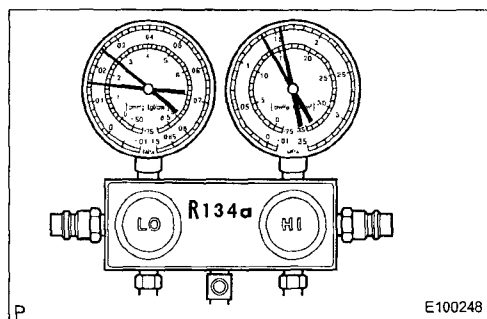
1.37 - 1.57 MPa (14 - 16 kgf/cm²)

(high-pressure side)

<HINT>

The Specified value indicates when the normal quantity of coolant gas is filled.

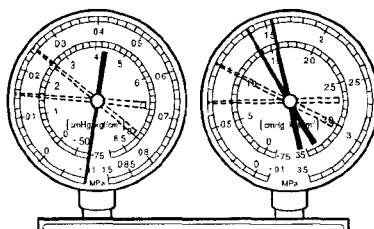
(d) Check the value of the gage in state [*2].



P

E100248

Condition : it gets cooler or it does not periodically



P

E100249J02

52

Measuring result

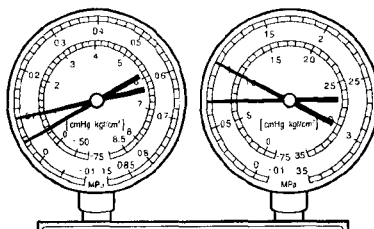
Symptom	Cause	Diagnosis	Action
The pressure at the low-pressure becomes vacuum or normal during operation.	The water content that has entered the cooling system freezes at the expansion valve and the coolant does not circulate temporarily, but the normal state is restored after the ice melts.	> The cooler drier is in a saturated state. > The water content of the cooling system freezes at the expansion valve, hindering circulation of the coolant gas.	1. Replace the cooler drier. 2. Eliminate the water content in the cycle by repeatedly discharging the air. 3. Inject new coolant gas in appropriate quantity.

<HINT>

The gage pointer indicates that water content mixes in the cooling system.

(e) Check the value of the gage in state [*2].

Condition: The air conditioner does not cool efficiently.



E100250J02

Measuring result

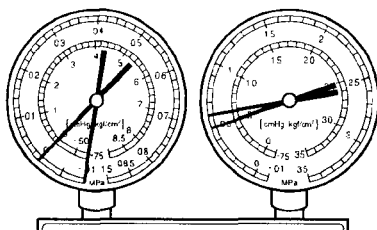
Symptom	Cause	Diagnosis	Action
> Pressure at both the low- and high-pressure sides is low. > The cooling performance is not sufficient.	Gas leaks from somewhere of the cooling system.	> The coolant gas is insufficient in quantity. > Coolant gas leaks.	> Check for leakage of coolant gas, and repair if necessary. > Inject new coolant gas in appropriate quantity. > Check and repair the location where the coolant gas leaks if the indication of the pressure meter is close to 0 when the pressure meter is connected to the gage, and create vacuum.

<HINT>

The gage pointer indicates a case where the air conditioner does not cool efficiently.

(f) Check the value of the gage in state [*2].

Condition: The air conditioner does not cool efficiently.



P

E100251J01

Measuring result

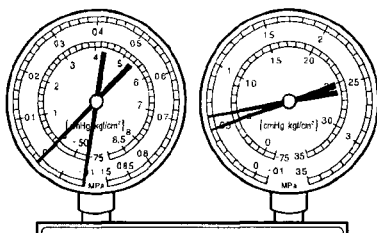
Symptom	Cause	Diagnosis	Action
> Pressure at both the low- and high-pressure sides is low. > Mist is created on a pipe that connects the cooler condenser to the A/C unit.	Flow of the coolant is hindered by the dust inside the cooler condenser.	Clogging of cooler condenser core	Replace the cooler condenser core.

<HINT>

The gage pointer indicates a case where the coolant gas is not effective.

(g)Check the value of the gage in state [*2].

Condition: Periodically cools



P

E100252J01

Measuring result

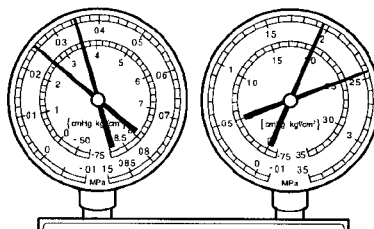
Symptom	Cause	Diagnosis	Action
> Vacuum is indicated as the pressure at the low-pressure side and an extremely low pressure is indicated at the high-pressure side. > Mist or dew is seen on the pipe before and after the cooler condenser core or cooler expansion valve.	> Flow of the coolant gas is hindered by the dust or water content inside the cooling system. > Flow of the coolant gas is hindered by coolant gas leakage from the cooler expansion valve.	The coolant gas does not circulate.	1. Check the cooler expansion valve. 2. Remove the dust from the cooler expansion valve by using an air gun. 3. Replace the cooler condenser core. 4. After creating vacuum, inject new coolant gas in appropriate quantity. 5. If the coolant gas leaks from the cooler expansion valve, replace the valve.

<HINT>

The gage pointer indicates a case where the coolant gas does not circulate.

(h)Check the value of the gage in state [*2].

Condition: The air conditioner does not cool efficiently.



E100253J01

Measuring result

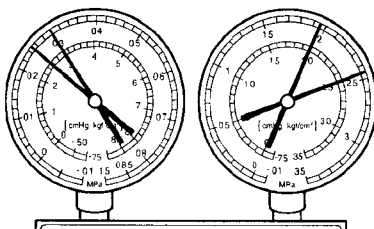
Symptom	Cause	Diagnosis	Action
> Pressure at the high-/low-pressure side is too high.	> Too much coolant > Cooling the cooler condenser core is insufficient.	> Too much coolant > Cooling the cooler condenser core is not good.	1. Clean the cooler condenser core fin. 2. Check the operation of the condenser fan motor. 3. If 1 and 2 are normal, check the quantity of the coolant and inject coolant in appropriate quantity.

<HINT>

The gage pointer indicates a case where too much coolant gas is charged or cooling of the cooler condenser core is insufficient.

(i) Check the value of the gage in state [*2].

Condition: Insufficient cooling



NOTE: These gage indications are shown when the refrigeration system has been opened and the refrigerant charged without vacuum purging.

E100254J01

Measuring result

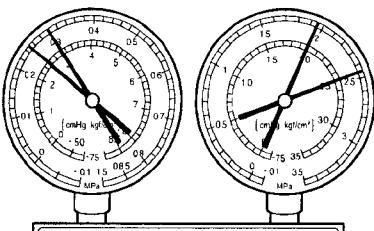
Symptom	Cause	Diagnosis	Action
> Pressure at low-/high-pressure side is too high. > The low-pressure pipe is too hot to touch.	Air is mixed in the cooling system.	> Air is mixed in the cooling system. > Vacuum is not sufficiently created.	1. Check if the compressor oil is not dirty or sufficient. 2. Inject new coolant gas after creating vacuum.

<HINT>

The gage pointer indicates a case where air is mixed in the cooling system.

(j) Check the value of the gage in state [*2].

Condition: The air conditioner does not cool efficiently.



E100255J01

Measuring result

Symptom	Cause	Diagnosis	Action
> Pressure at the high-/low-pressure side is too high. > Mist or dew is created at the low-pressure side.	Trouble of cooler expansion valve	> Too much or too little cooling of low-pressure pipe > Cooler expansion valve is opened too much.	Replace the cooler expansion valve.

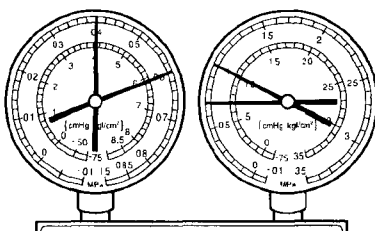
<HINT>

The gage pointer indicates a case where the cooler expansion valve is inappropriate.

(k) Check the value of the gage in state [*2].

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Condition: Dose not cool



P

E100256J01

Measuring result

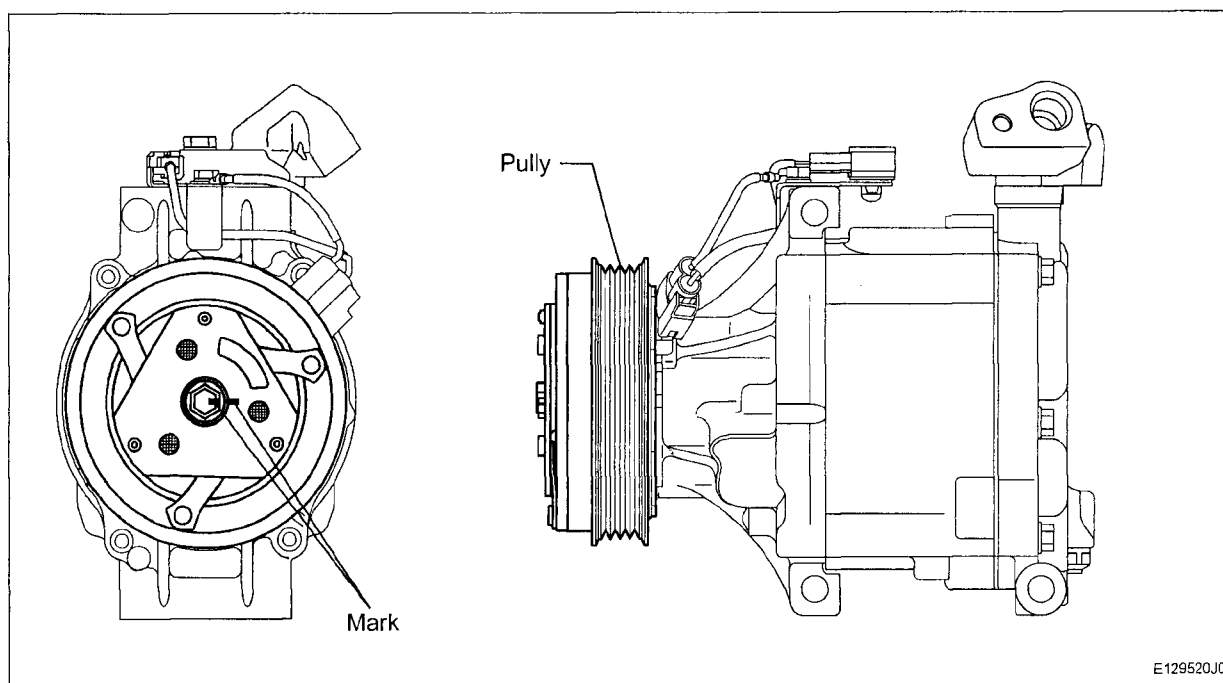
Symptom	Cause	Diagnosis	Action
> Pressure at low-/high-pressure side is too high. > Pressure at the high-pressure side is too low.	Leakage in cooler compressor	> Insufficient compression > Leakage from valve or damage to sliding part	Repair or replace the cooler compressor.

<HINT>

The gage pointer indicates that compression of the cooler compressor is insufficient.

3. Compressor with magnet clutch assembly

(1) Mark the compressor with magnet clutch assembly at the position shown in the diagram.



E129520J02

(2) Start the engine and check if both the mark of the compressor with magnet clutch assembly and pulley rotate.

4. Cooler condenser assembly check

- (1) If the fins of the cooler condenser assembly are dirty, wash them with water and dry them with compressor air.

<CAUTION>

Do not damage the fins of the cooler condenser assembly.

- (2) If the fins of the cooler condenser assembly bend, straighten them up with a screwdriver or pliers.

5. Coolant gas leakage check

- (1) Using a halogen leakage detector, check the joints of the pipes for gas leakage.

- (2) If gas is leaked from a joint of the pipes, check the tightening torque of the joint.

PART LAYOUT

RHD :

52

Engine room relay block assembly

- HEATER fuse
- MGC fuse
- MGC relay

Cooler compressor assembly

Cooler condenser assembly

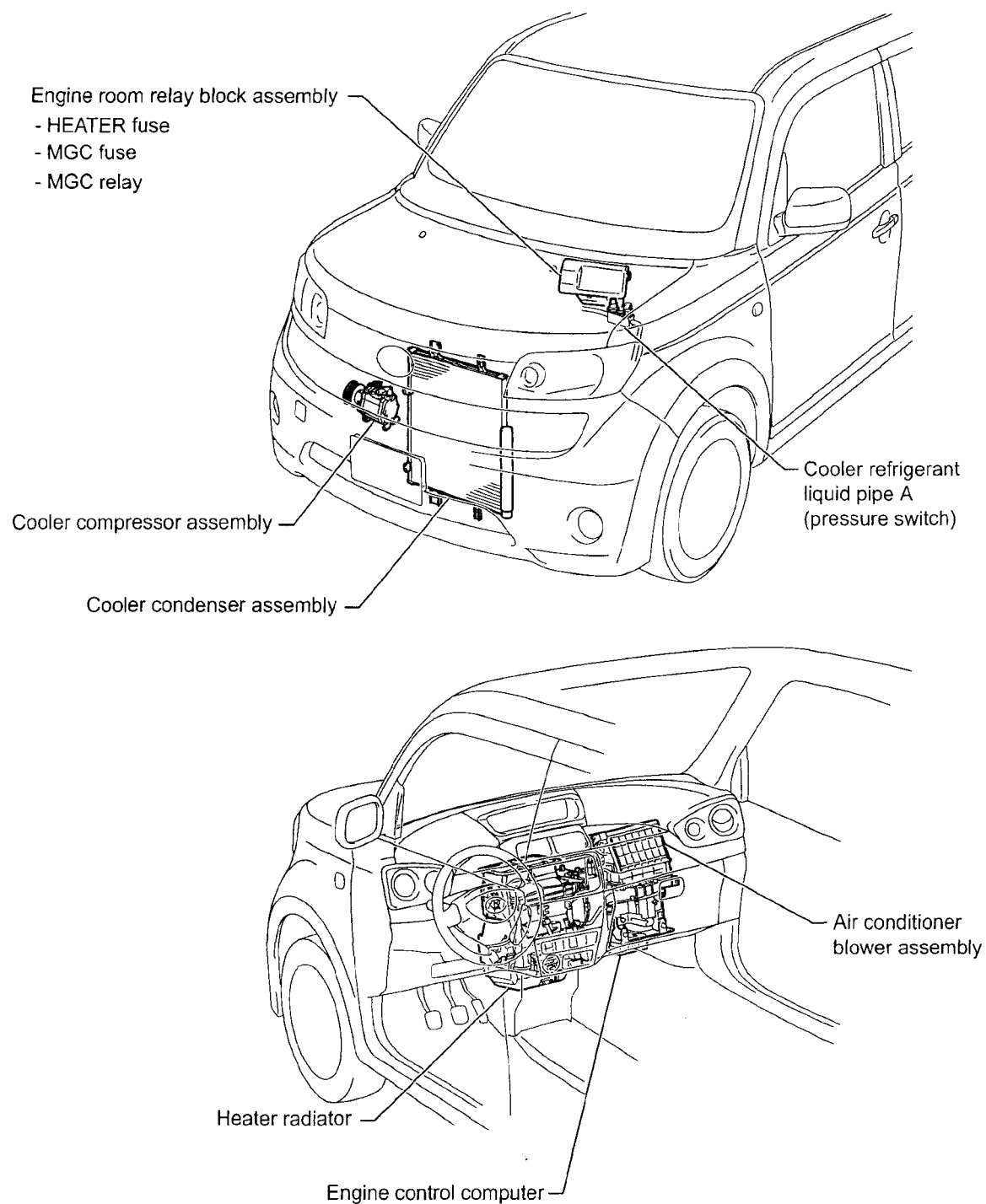
Cooler refrigerant
liquid pipe A
(pressure switch)

Engine control computer

Blower motor assembly
(Blower motor)

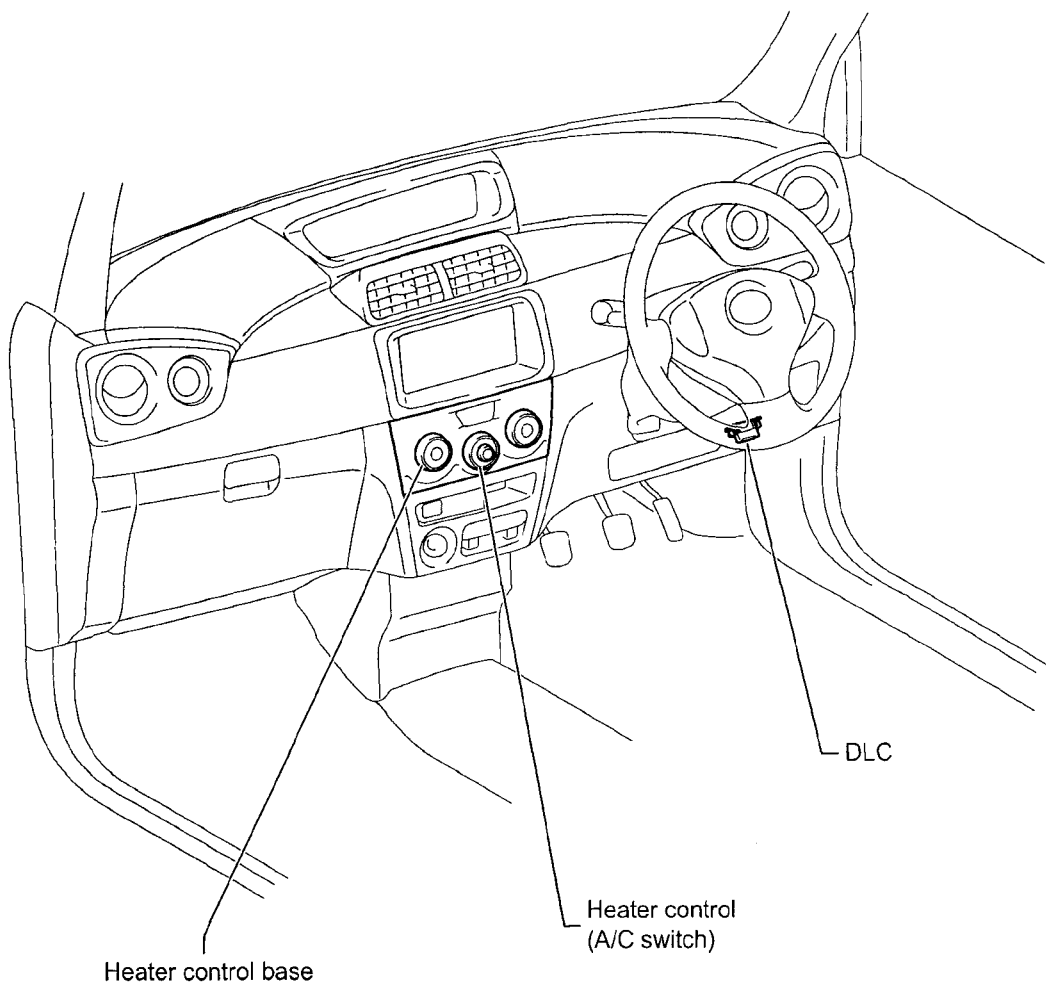
Air conditioner radiator assembly

LHD :

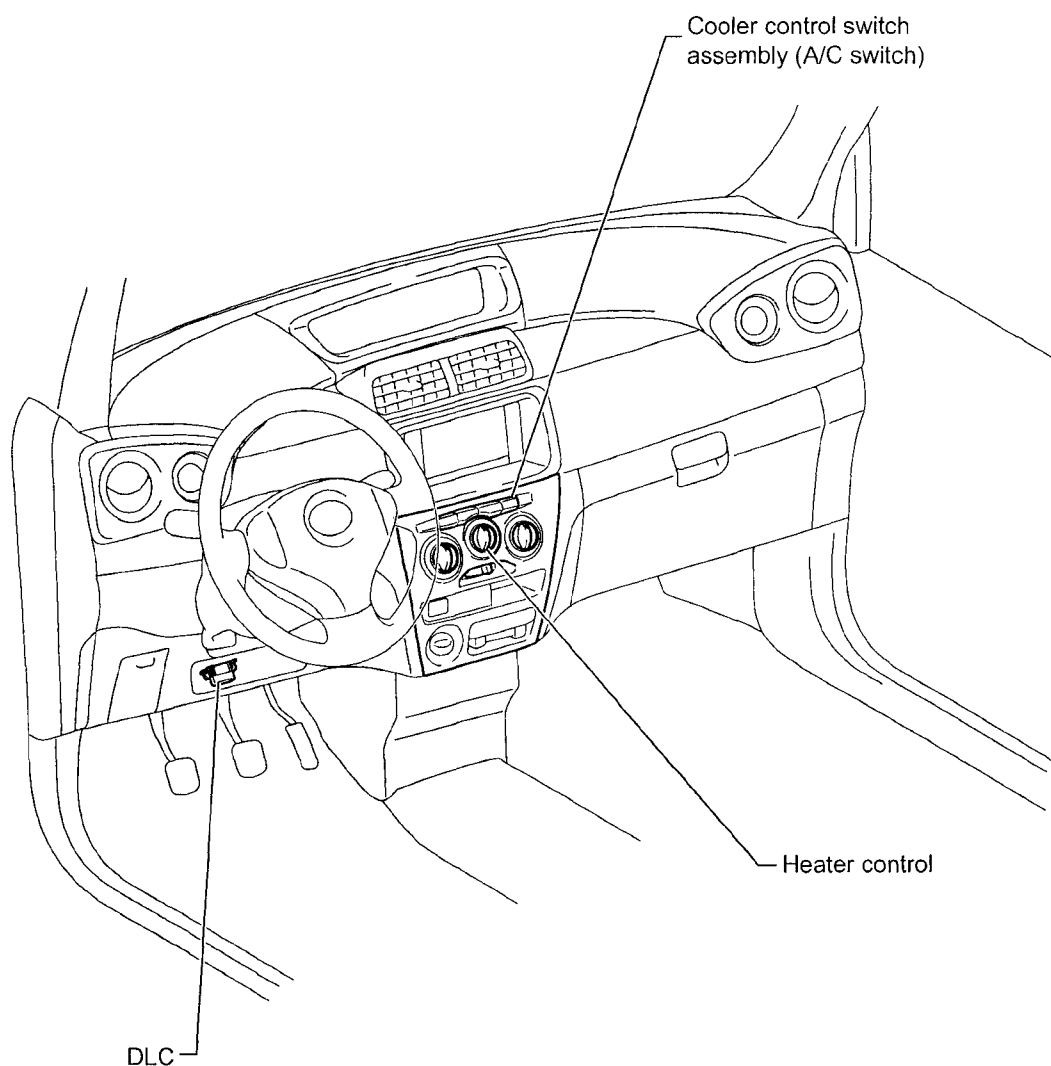


RHD:

52



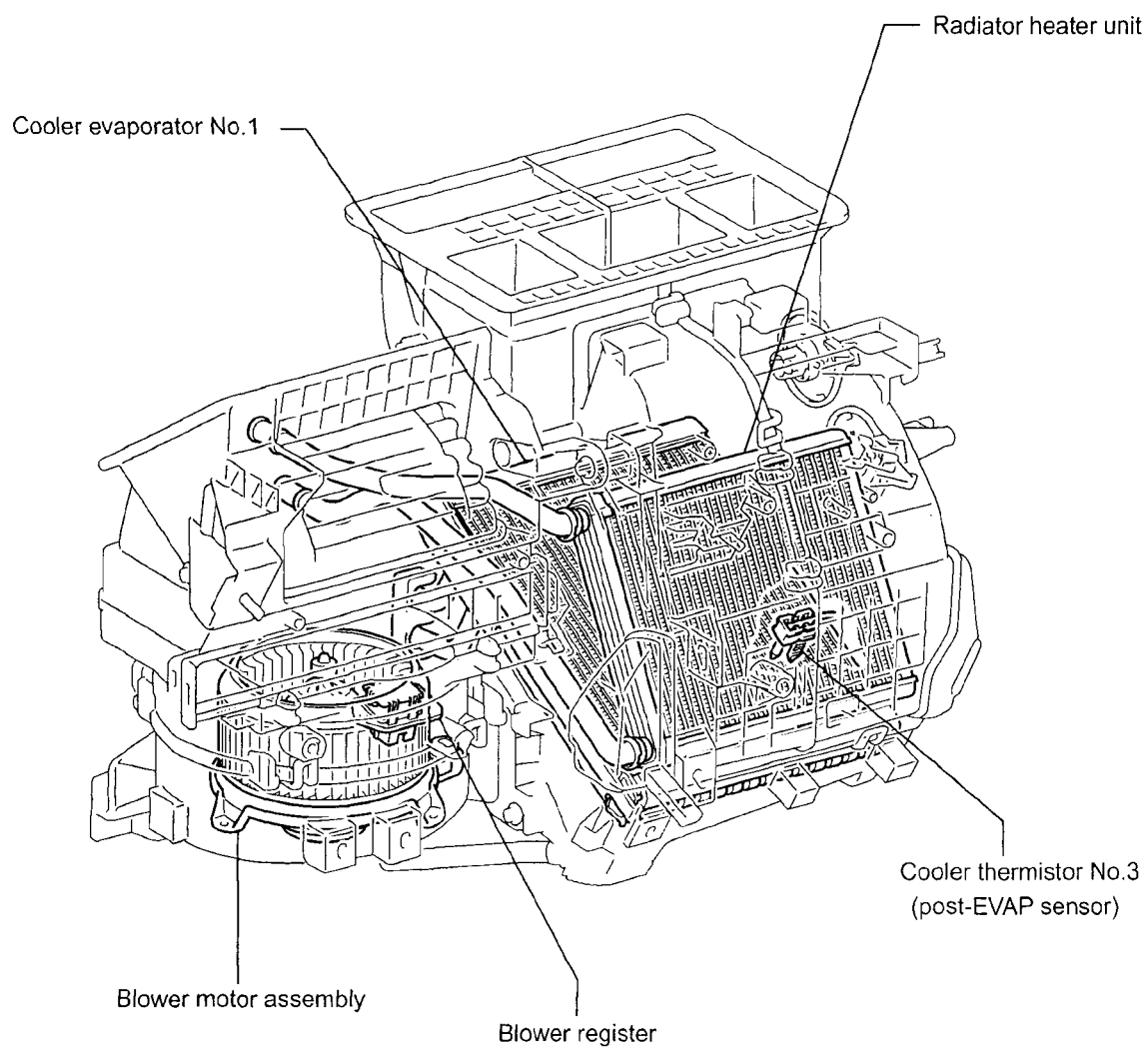
LHD:



52

RHD:

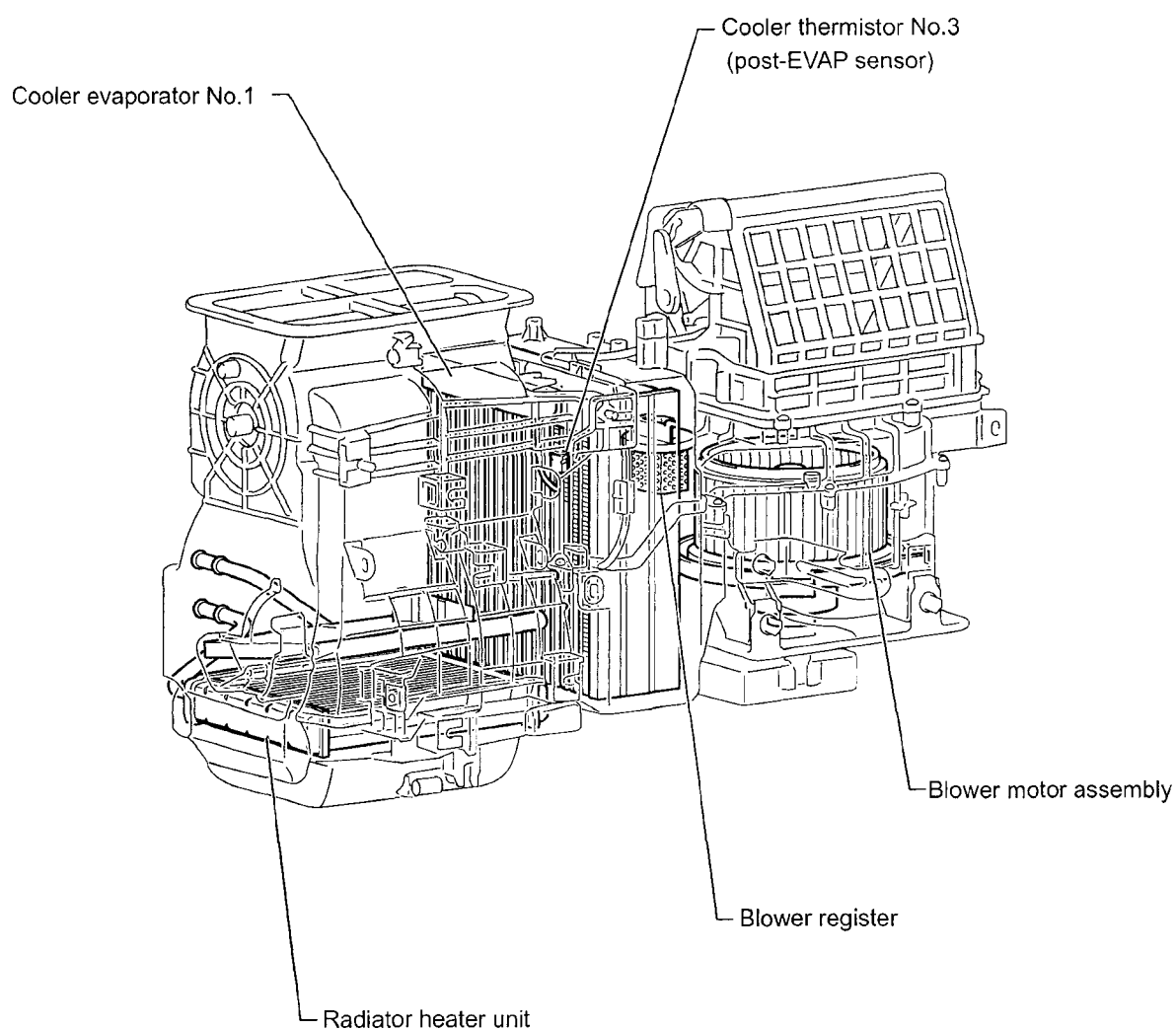
52



E129531J02

LHD:

52



LIST OF DIAGNOSTIC TROUBLE CODE

Diagnostic trouble code	Diagnostic item	Check part	Code memory	Refer to page
P0535/44	A/C evaporation temperature sensor signal system	Cooler thermistor No. 3 (sensor after evaporation) Wire harness and connector (thermistor assembly (sensor after evaporation) - engine control computer) Engine control computer	-	52-24

52

LIST BY SYMPTOM

Manual air conditioner

Symptom	Part to be checked	Refer to page
The A/C system does not operate at all.	Fuse check (IG1/BACK)	-
	Engine control computer	52-23
	Wire harness and connector	-
The blower motor (with fan) does not revolve.	Fuse check (HEATER)	-
	Heater blower motor relay assembly	52-180
	Blower motor assembly check	52-146
	Heater control check	-
	Wire harness and connector	-
The blower motor (with fan) does not change the speed.	Blower register check	-
	Blower motor assembly	52-146
	Heater control check	-
	Wire harness and connector	-
The room temperature does not drop (cool down).	Injected coolant gas quantity check	-
	Coolant gas pressure check	-
	Cooler thermistor No. 3 (sensor after evaporation) check	-
	Cooler refrigerant liquid pipe A (pressure switch) check	-
	Compressor assembly check	<\$attribute31
	Cooler expansion valve check	-
	Engine control computer	52-23
The compressor does not turn ON.	Fuse check (MGC)	-
	Magnet clutch relay	52-181
	Coolant gas pressure check	-
	Compressor assembly check	<\$attribute31
	Cooler refrigerant liquid pipe A (pressure switch) check	-
	Cooler thermistor No. 3 (sensor after evaporation) check	-
	Engine control computer	52-23

FUNCTION DESCRIPTION

1. Diagnosis function

(1) Function of diagnostic tool DS-II

- (a) The heater and air conditioner system (engine control computer) can check the items shown in the table below by connecting diagnostic tool DS-II.

Check	Description
Diagnostic trouble code	Diagnostic trouble codes can be read or erased.
Data list	ECU data can be checked, recorded, and reproduced.

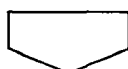
TROUBLESHOOTING PROCEDURES

1 PUTTING THE CAR IN THE GARAGE



2 INQUIRY AND PHENOMENON CHECK

(See page 52-20)



3 PRE-CHECK

- (1) Check the battery voltage by using the tester.
Specified value: 11 - 14 V
- (2) Referring to the part layout and circuit diagram, check items that can be visually inspected, such as blown fuse, wire harness break, short circuit, and faulty contact of the connector.



4 DIAGNOSTIC TROUBLE CODE CHECK BY DS-II.

(See page 52-21)

- (1) Diagnostic trouble code check
 - (a) Record the diagnostic trouble code.
 - (2) Diagnostic trouble code erase
 - (3) Diagnostic trouble code recheck
 - (a) Reproduce the trouble phenomenon based on the recorded diagnostic trouble code and check if the code is output again.
- <HINT>
See "diagnostic trouble code list" (52-17) if the diagnostic trouble code is output.



CODE IS OUTPUT (TO STEP 7).



NO CODE IS OUTPUT AND THE PHENOMENON CAN NOT BE CHECKED OR REPRODUCED [TO TROUBLE SIMULATION (See page 01-30)].



NO CODE IS OUTPUT BUT THE PHENOMENON CAN BE CHECKED AND REPRODUCED (TO STEP 5).

5 LIST BY SYMPTOM

(See page 52-17)



FALLS UNDER THE DESCRIBED SYMPTOM (TO STEP 7).



DOES NOT FALL UNDER THE DESCRIBED SYMPTOM (TO STEP 6).

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6 BASED ON THE TROUBLE PHENOMENON, PERFORM TROUBLESHOOTING FOLLOWING THE PROCEDURES BELOW.

- (1) DATA LIST / ACTIVE TEST (See page 52-23)
 - (a) Data List (DS-II)
- (2) ECU terminal sequence (See page 52-23)



7 ADJUSTMENT, REPAIR OR REPLACEMENT



8 CHECK TEST



END

INQUIRY SHEET

Air Conditioning System Check Sheet

Date Vehicle Brought In
/ /

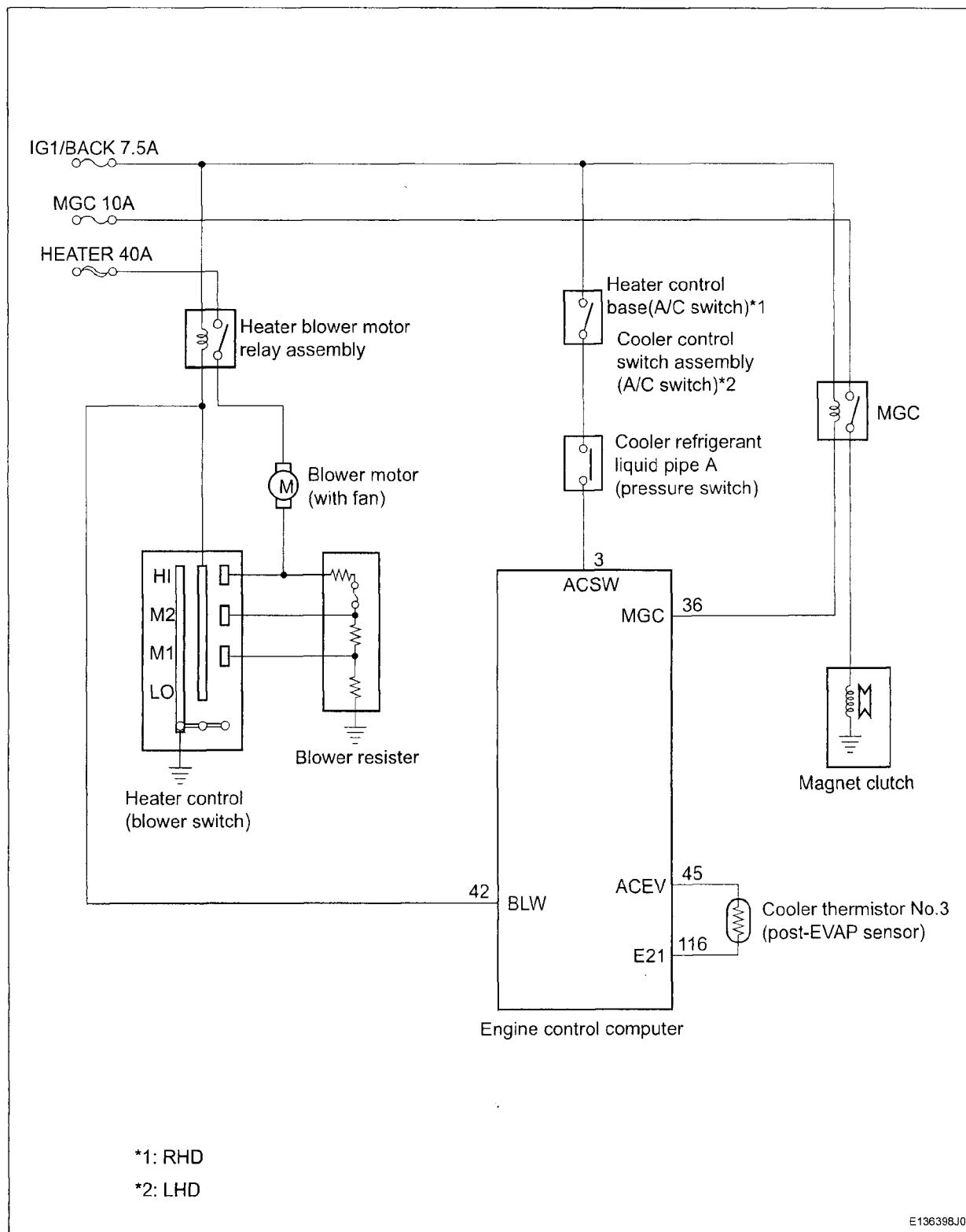
Customer's Name		License Plate No.	First Registration Year
		Model	VIN
Written by	Inspector's Name	Engine Type	Odometer Reading km
Description of Symptoms			
Date Problem First Occured		Date Time	
Frequency Problem Occurs		Constant Occasional (___ times per day , ___ times per month)	
Conditions (Method of use and results)			
Weather	☐ Clear ☐ Cloudy ☐ Rainy ☐ Snowy ☐ Others ()		Air Temperature Approx. ()°C
Road	City Suburb Highway Others ()		☐ Paved ☐ Unpaved
DTC Inspection		First Time	
		Second Time	
Problem Symptoms	Wind Volume Control Poor	☐ Blower motor does not operate ☐ Blower motor speed does not change Always at high, medium, or low speed	
	Temperature Control Poor	☐ Room temperature does not decrease ☐ Room temperature does not increase ☐ Slow response	
	Suction Port Control Poor	☐ No circulation between entering ambient air and room air Always room air / Always ambient air	
	Blower Exit Control Poor	☐ Blower port does does not allow air to pass ☐ Does not enter the desired mode	
	Others		

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DIAGNOSTIC TROUBLE CODE CHECK/ERASE

1. Diagnostic trouble code check (reading by DS-II)
 - (1) Connect DS-II to DLC under IG OFF status.
 - (2) Turn IG on.
 - (3) Display [OBD] to [EFI] screen in accordance with the instruction on the screen of DS-II, and select [DTC].
 - (4) Check the diagnostic trouble code.
2. Erasing diagnostic trouble code memory (by DS-II)
 - (1) Connect DS-II to DLC under IG OFF status.
 - (2) Turn IG on.
 - (3) Display [OBD] to [EFI] screen in accordance with the instruction on the screen of DS-II, and select [DTC].
 - (4) Select [Clear] from the display to erase the data.

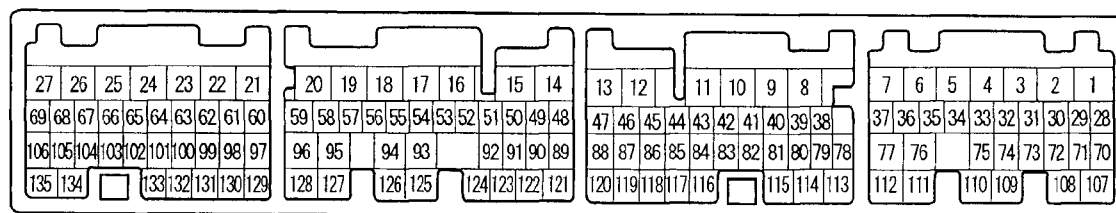
CIRCUIT DIAGRAM



ECU TERMINAL SEQUENCE

1. Engine control computer

52



Connector A

Connector B

Connector C

Connector D

G101189J01

(1) Terminal sequence

Connector C

Terminal number (terminal symbol)	Input/output	Item	Measuring condition	Reference
42 (BLW) ↔ 116 (E21)	Input	Voltage	IG ON and blower switch OFF → other than OFF	11 - 14 V → 0 V
45 (ACEV) ↔ 116 (E21)	Input	Voltage	IG ON, evaporator atmospheric temperature: 15 °C	1.4 V - 1.8 V
116 (E21) ↔ body earth	-	Electrical continuity	Always	With electrical continuity

Connector D

Terminal number (terminal symbol)	Input/output	Item	Measuring condition	Reference
3 (ACSW) ↔ body earth	Input	Voltage	IG ON, blower ON, A/C switch OFF → ON	0 V → 11 - 14 V
36 (MGC) ↔ body earth	Input	Voltage	IG ON, blower ON, A/C switch OFF → ON	11 - 14 V → 0 V

ECU DATA MONITOR / ACTIVE TEST

1. Data List (DS-II)

<CAUTION>

- > The value of the Data List significantly varies due to small measurement error, difference in the measuring environment, deterioration of the vehicle with age and so on and it is difficult to indicate the clear Specified value (criteria). Therefore, the value in the range of the reference value may not be accepted.
- > Delicate and subtle phenomena, such as breathing and rough idle, must be comprehensively judged from all the items on the Data List, by collecting and comparing data under the same condition of the vehicle of the same model.

- (1) Using DS-II, display the [Data List] screen of E.F.I. in accordance with the instruction on the screen, and check the computer data.

[EFI Data List]

Item name [Item symbol]	Item description	Check condition	Reference value	Major items to be checked in case of error
Air conditioner signal [A/C]	Input signal of A/C switch (ON signal) is displayed.	A/C switch OFF → ON	OFF → ON	-

DTC	P0535/44	A/C EVAPORATOR TEMPERATURE SENSOR SIGNAL SYSTEM
-----	----------	---

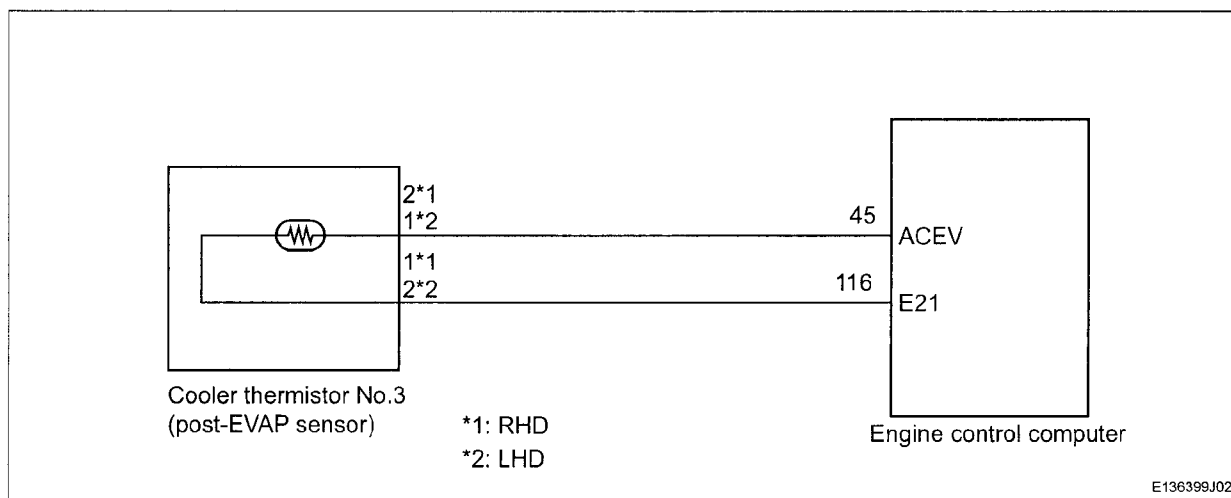
Circuit description

Cooler thermistor No. 3 (sensor after evaporation) is attached at the evaporator of the air conditioner unit, and detects the cooling temperature that has passed through the evaporator and controls the air conditioner. The resistance of cooler thermistor No. 3 changes with the cooling temperature that has passed through the evaporator. The lower the cooling temperature is, the higher the resistance. Conversely, the higher the cooling temperature is, the lower the resistance. The engine control computer outputs a voltage (5 V) to cooler thermistor No. 3 (sensor after evaporation) and reads changes in the voltage which are brought by changes in the resistance of the thermistor.

52

DTC No. SAE/EFI	DTC detection condition 1. Diagnosis condition 2. Error state	Check part
P0535/44	1. None 2. Opening (breaking) or short-circuiting cooler thermistor No. 3 (sensor after evaporation) circuit	> Cooler thermistor No. 3 (sensor after evaporation) > Wire harness and connector (between cooler thermistor No. 3 (sensor after evaporation) and engine control computer) > Engine control computer

Circuit Diagram

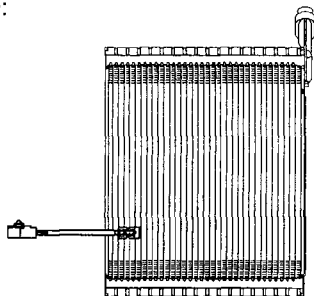


Check Procedure

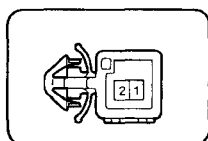
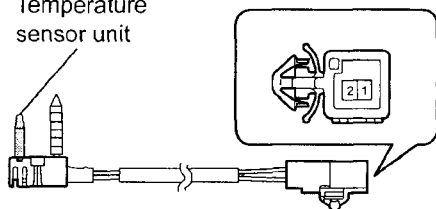
1	COOLER THERMISTOR NO. 3 UNIT CHECK (SENSOR AFTER EVAPORATION)
---	---

- (1) Disconnect the connector of the cooler thermistor No. 3 (sensor after evaporation).

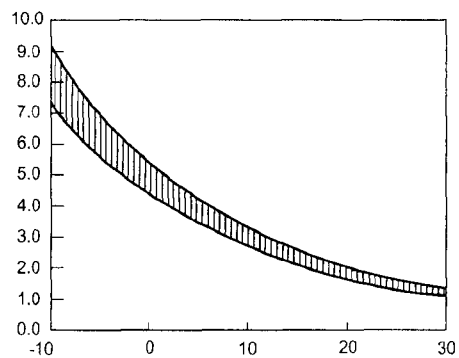
RHD:



Temperature sensor unit



Resistance(k Ω)



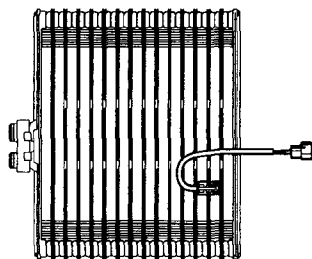
H

Temperature(°C)

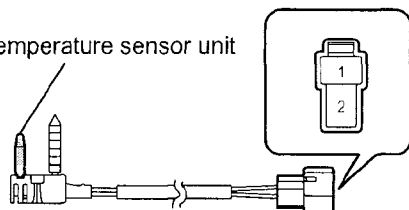
E103710J04

- (2) Measure the resistance between the connector terminals 1 and 2 of cooler thermistor No. 3 (sensor after evaporation) using the tester.

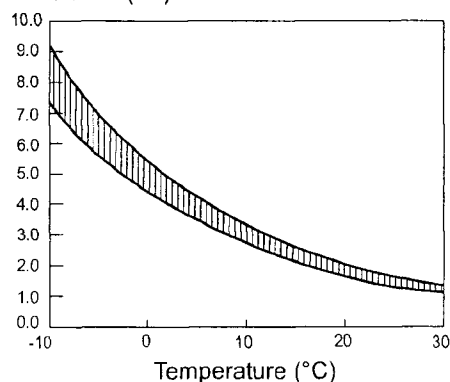
LHD:



Temperature sensor unit



Resistance (kΩ)



E145820J01

OK

Specified value:

Temperature	Specified value
-10 °C	7.30 - 9.10 kΩ
-5 °C	5.65 - 6.95 kΩ
0 °C	4.40 - 5.35 kΩ
5 °C	3.40 - 4.15 kΩ
10 °C	2.70 - 3.25 kΩ
15 °C	2.14 - 2.58 kΩ
20 °C	1.71 - 2.05 kΩ
25 °C	1.38 - 1.64 kΩ
30 °C	1.11 - 1.32 kΩ

<CAUTION>

- > Touching the temperature sensor makes it impossible to make a correct judgment because of the influence of the body temperature. Therefore, hold the connector side when the sensor is checked.
- > Before checking the sensor, make sure that it gets used to the ambient temperature.

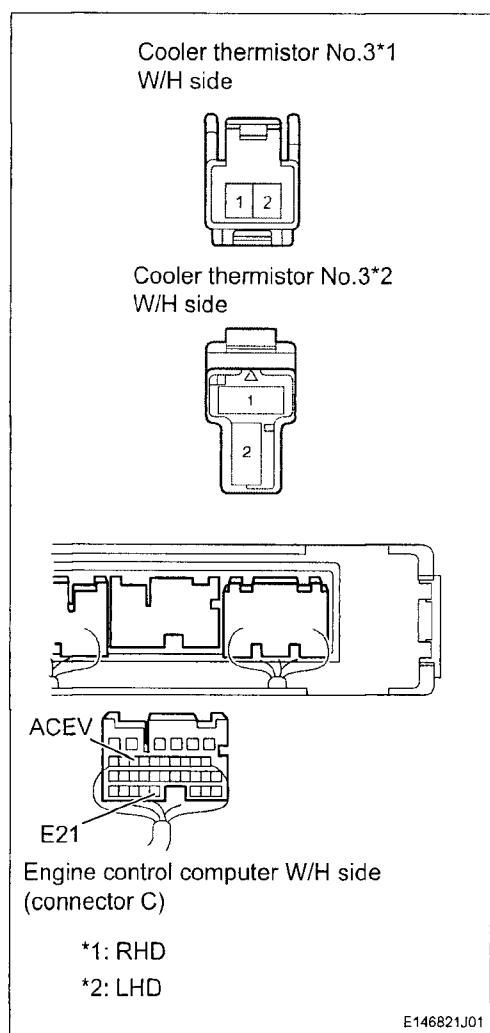
NG

COOLER THERMISTOR NO. 3 (SENSOR AFTER EVAPORATION) REPLACEMENT

2

WIRE HARNESS AND CONNECTOR CHECK (BETWEEN COOLER THERMISTOR NO. 3 (SENSOR AFTER EVAPORATION) AND ENGINE CONTROL COMPUTER)

- (1) Disconnect connector C of the engine control computer.



- (2) Check the continuity and short circuit with GND between the vehicle harness and each connector using the tester (See page 52-23 for the terminal sequence).

Measuring points

RHD

Engine control Computer side Terminal number (terminal symbol)	Cooler thermistor No. 3 (Sensor after evaporation) side Terminal number
45 (ACEV)	2
116 (E21)	1

Reference: There must be electrical continuity between terminals and no terminal must be short-circuited with GND.

Measuring points

LHD

Engine control Computer side Terminal number (terminal symbol)	Cooler thermistor No. 3 (Sensor after evaporation) side Terminal number
45 (ACEV)	1
116 (E21)	2

Reference: There must be electrical continuity between terminals and no terminal must be short-circuited with GND.

NG

REPAIR OR REPLACEMENT OF THE WIRE HARNESS OR THE CONNECTOR

OK

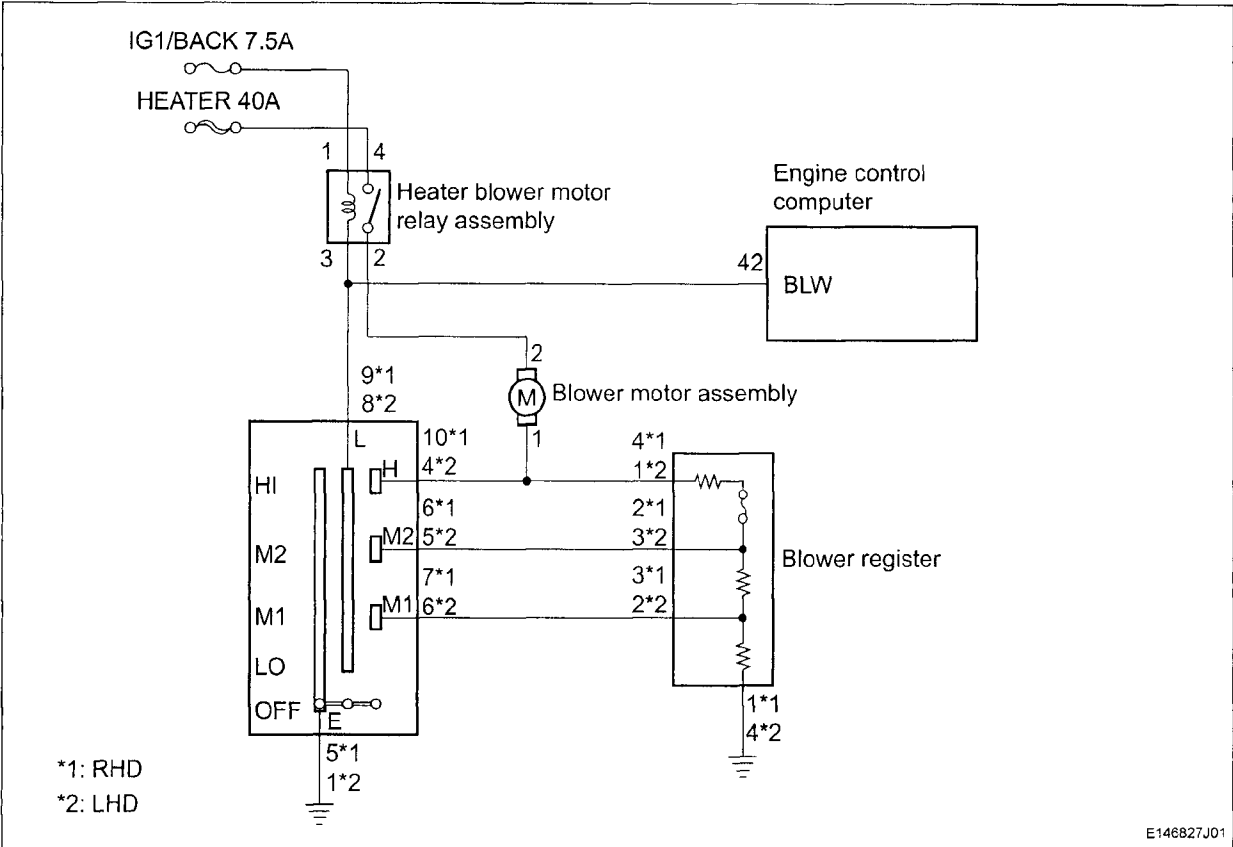
ENGINE CONTROL COMPUTER CHECK AND REPLACEMENT

BLOWER MOTOR CIRCUIT

Circuit description

If the heater control (blower switch) is turned from OFF → other than OFF, the heater blower motor relay assembly turns ON and the blower motor (with fan) is powered and revolves. The speed of the blower motor is changed by operating the heater control (blower switch) to change between earth ↔ blower register circuit.

Circuit Diagram



52

Check Procedure

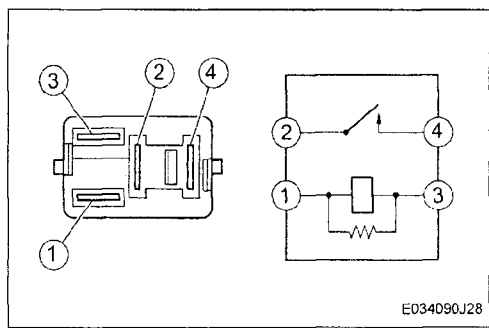
1 FUSE UNIT CHECK (IG1/BACK, HEATER)

- (1) Check the fuse (IG1/BACK 7.5 A) of the fuse block assembly.
- (2) Check the fusible link block assembly (HEATER 40 A) of the engine room relay block.

NG FUSE REPLACEMENT

OK

2 HEATER BLOWER MOTOR RELAY ASSEMBLY UNIT CHECK



- (1) Check the continuity between the terminals of the connector using the tester.

Reference

Measuring terminal	Reference
Terminal 1 ↔ Terminal 3	With electrical continuity
Terminal 4 ↔ Terminal 2	Without electrical continuity

- (2) Check the continuity between terminals 4 and 2 when the battery voltage is applied between connector terminals 1 and 3.

Reference: With electrical continuity

NG

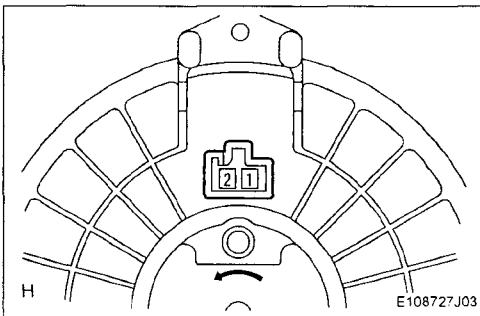
HEATER BLOWER MOTOR RELAY ASSEMBLY REPLACEMENT

OK

3 BLOWER MOTOR ASSEMBLY UNIT CHECK

52

- (1) Operation check
 - (a) Make sure that the motor revolves to the direction of the arrow shown in the diagram without abnormal sound when the plus terminal of the battery is connected to connector terminal 2 and the minus terminal of the battery is connected to terminal 1.
- (2) Current value measurement
 - (a) Measure the current value when the motor revolves without load using the tester.
Specified value: 1.8 A and below



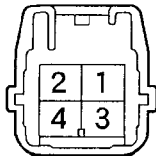
OK

BLOWER MOTOR ASSEMBLY REPLACEMENT

NG

4 BLOWER REGISTER UNIT CHECK

RHD:



- (1) RHD
 - (a) Disconnect the connector of the blower register.
 - (b) Check the resistance between each terminal of the blower register using the tester.
Specified value:

Measuring terminal	Specified value
Terminal 4 ↔ Terminal 1	3.36 +/- 0.24 Ω
Terminal 4 ↔ Terminal 3	1.56 +/- 0.11 Ω
Terminal 4 ↔ Terminal 2	0.56 +/- 0.04 Ω

<HINT>

With temperature fuse between terminals 4 and 2

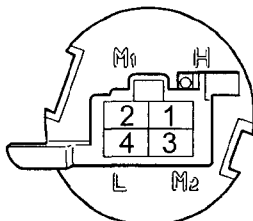
- (2) LHD
 - (a) Disconnect the connector of the blower register.
 - (b) Check the resistance between each terminal of the blower register using the tester.
Specified value:

Measuring terminal	Specified value
Terminal 1 ↔ Terminal 4	3.12 +/- 0.22 Ω
Terminal 1 ↔ Terminal 2	1.32 +/- 0.09 Ω
Terminal 1 ↔ Terminal 3	0.5 +/- 0.04 Ω

<HINT>

With temperature fuse between terminals 1 and 3

LHD:

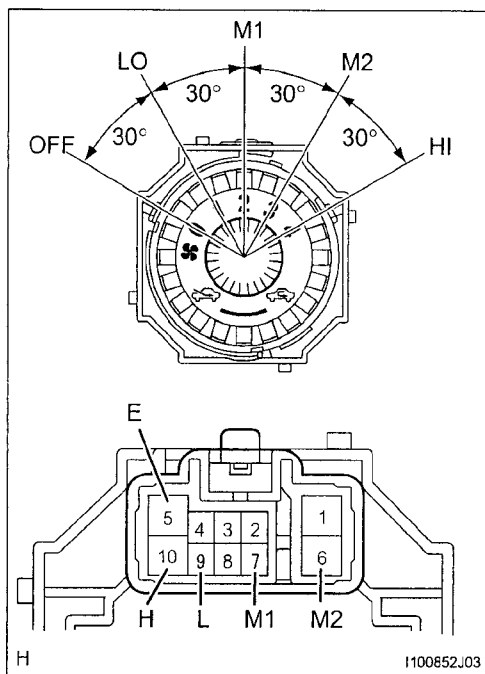


NG

BLOWER REGISTER REPLACEMENT

OK

5 HEATER CONTROL UNIT CHECK (BLOWER SWITCH)



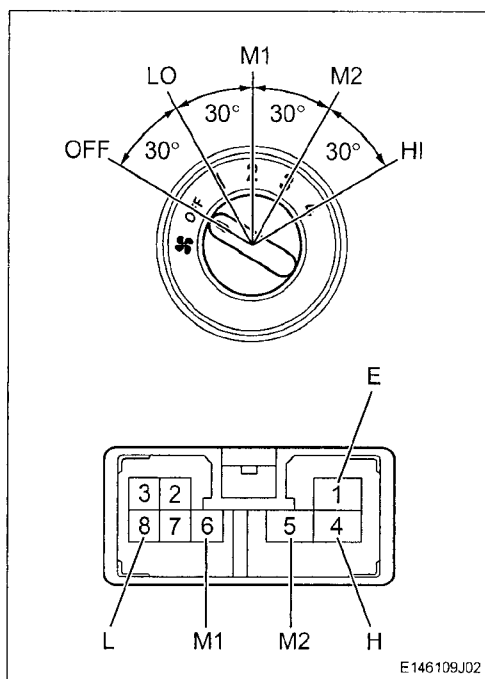
(1) RHD

- (a) Check the continuity between the terminals of the connectors of the heater control using the tester.

Reference

Switch	Terminal number (terminal name)	Reference
OFF	Each terminal ↔ 5 (E)	Without electrical continuity
LO	9 (L) ↔ 5 (E)	With electrical continuity
LO ↔ M1	9 (L) ↔ 5 (E) ↔ 7 (M1)	With electrical continuity
M1	9 (L) ↔ 5 (E) ↔ 7 (M1)	With electrical continuity
M1 ↔ M2	9 (L) ↔ 5 (E) ↔ 7 (M1) ↔ 6 (M2)	With electrical continuity
M2	9 (L) ↔ 5 (E) ↔ 6 (M2)	With electrical continuity
M2 ↔ HI	9 (L) ↔ 5 (E) ↔ 6 (M2) ↔ 10 (H)	With electrical continuity
HI	9 (L) ↔ 5 (E) ↔ 10 (H)	With electrical continuity

52



(2) LHD

- (a) Check the continuity between the terminals of the connectors of the heater control using the tester.

Reference

Switch	Terminal number (terminal name)	Reference
OFF	Each terminal ↔ 1 (E)	Without electrical continuity
LO	8 (L) ↔ 1 (E)	With electrical continuity
LO ↔ M1	8 (L) ↔ 1 (E) ↔ 6 (M1)	With electrical continuity
M1	8 (L) ↔ 1 (E) ↔ 6 (M1)	With electrical continuity
M1 ↔ M2	8 (L) ↔ 1 (E) ↔ 6 (M1) ↔ 5 (M2)	With electrical continuity
M2	8 (L) ↔ 1 (E) ↔ 5 (M2)	With electrical continuity
M2 ↔ HI	8 (L) ↔ 1 (E) ↔ 5 (M2) ↔ 4 (H)	With electrical continuity
HI	8 (L) ↔ 1 (E) ↔ 4 (H)	With electrical continuity

NG

HEATER CONTROL REPLACEMENT

OK

REPAIR OR REPLACEMENT OF THE WIRE HARNESS OR THE CONNECTOR

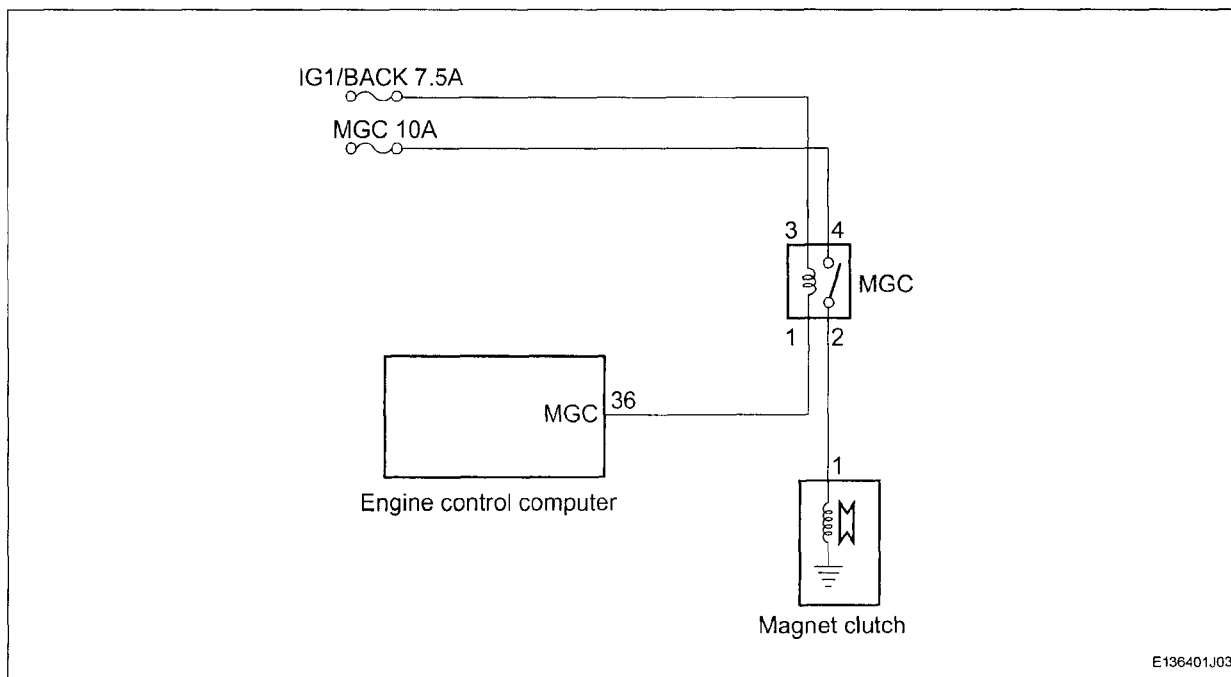
52

COMPRESSOR CIRCUIT

Circuit description

An air conditioner switch ON signal is sent from the heater control base to the engine control computer. The engine control computer receives the ON signal and turns ON the magnet clutch relay.

Circuit Diagram



Check Procedure

1

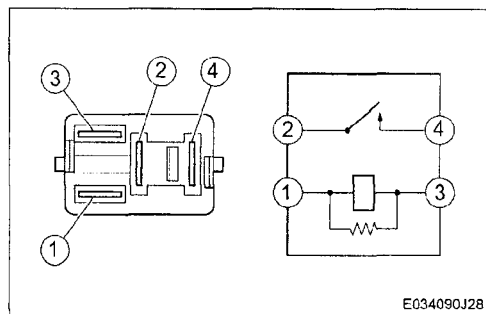
FUSE UNIT CHECK (IG1/BACK, MGC)

NG

FUSE REPLACEMENT

OK

2 MAGNET CLUTCH RELAY UNIT CHECK



- (1) Check the continuity between terminals of the connector using the tester.

Reference: Between terminals 1 and 3 with electrical continuity

Between terminals 4 and 2 without electrical continuity

- (2) Check the continuity between terminals 4 and 2 using the tester when the battery voltage is applied between terminals 1 and 3 of the connector.

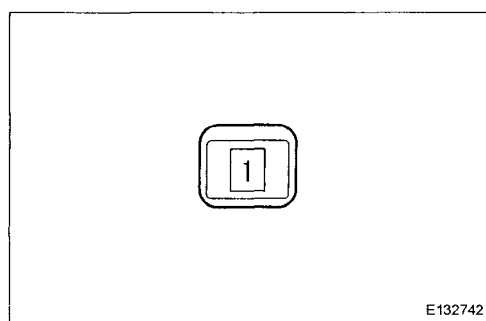
Reference: Between terminals 4 and 2 with electrical continuity

NG

MAGNET CLUTCH RELAY REPLACEMENT

OK

3 MAGNET CLUTCH ASSEMBLY UNIT CHECK



- (1) Operation check

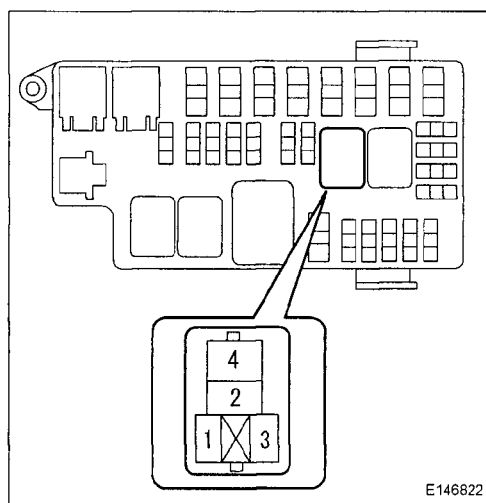
- (a) Make sure that an operation sound is issued and the magnet clutch hub and magnet clutch rotor are locked when the plus terminal of the battery is connected to a connector terminal of the magnet clutch assembly.

NG

MAGNET CLUTCH ASSEMBLY REPLACEMENT

OK

4 WIRE HARNESS OR CONNECTOR CHECK (BETWEEN BATTERY AND MAGNET CLUTCH RELAY)



- (1) Remove the magnet clutch relay from the relay block.

- (2) Measure the voltage between terminal 4 of the engine room relay block and body earth using the tester.

Specified value: 11 - 14 V

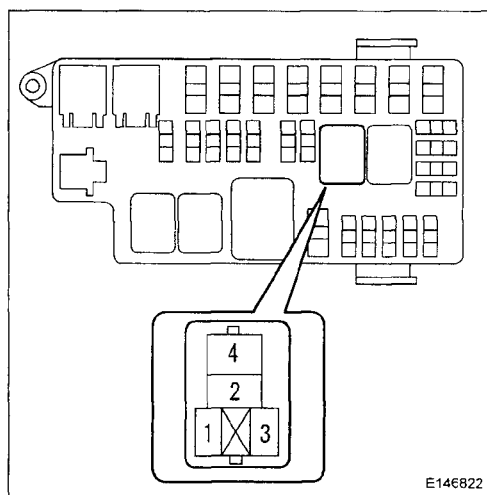
NG

REPAIR OR REPLACEMENT OF THE WIRE HARNESS OR THE CONNECTOR

OK

5 WIRE HARNESS OR CONNECTOR CHECK (BETWEEN MAGNET CLUTCH RELAY AND BODY EARTH)

52



- (1) Check the continuity between terminal 2 of the engine room relay block and body earth using the tester.

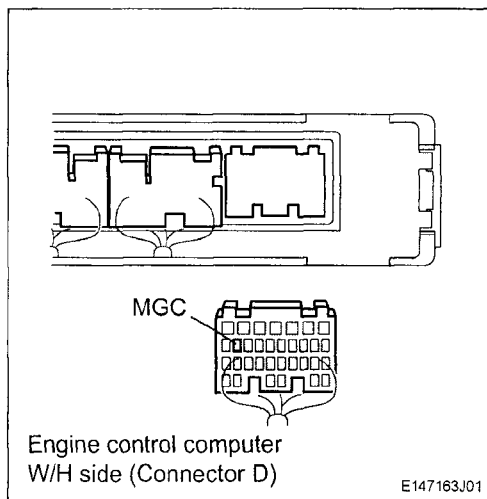
Reference: With electrical continuity

NG

REPAIR OR REPLACEMENT OF THE WIRE HARNESS OR THE CONNECTOR

OK

6 WIRE HARNESS OR CONNECTOR CHECK (BETWEEN THE IG SWITCH AND ENGINE CONTROL COMPUTER)



- (1) Disconnect connector D of the engine control computer.
 (2) Turn IG on.
 (3) Measure the voltage between the connector 36 (MGC) terminal of the vehicle wire harness of the engine control computer and body earth terminal using the tester.

Specified value: 11 - 14 V

NG

REPAIR OR REPLACEMENT OF THE WIRE HARNESS OR THE CONNECTOR

OK

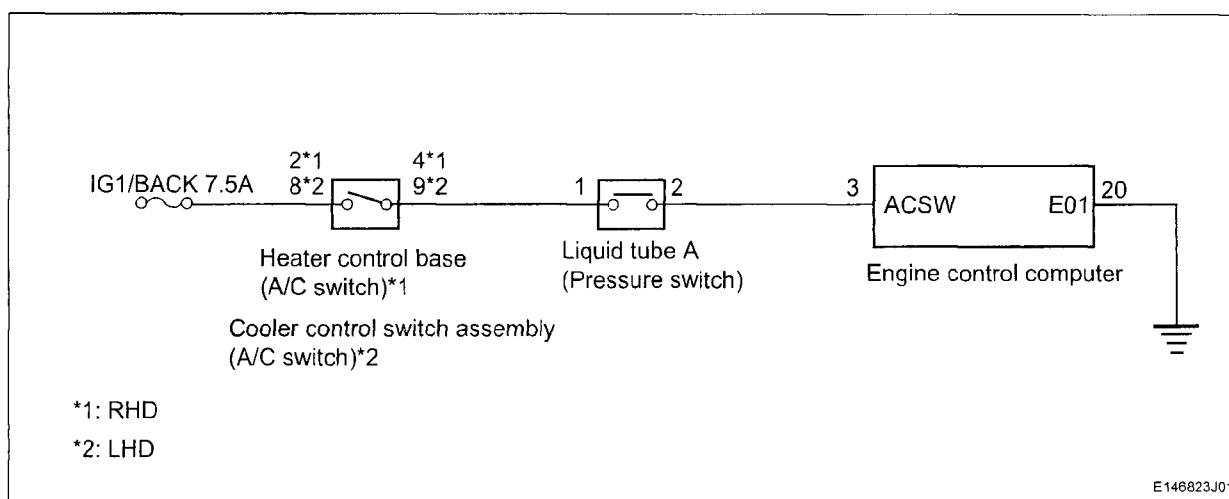
ENGINE CONTROL COMPUTER CHECK AND REPLACEMENT

PRESSURE SWITCH CIRCUIT

Circuit description

A pressure switch is attached to the high-pressure piping block to detect an abnormality of the coolant pressure. If the coolant pressure is abnormal, the pressure switch sends a switch OFF signal to the engine control computer. The engine control computer, receiving the signal, stops control of the cooler compressor.

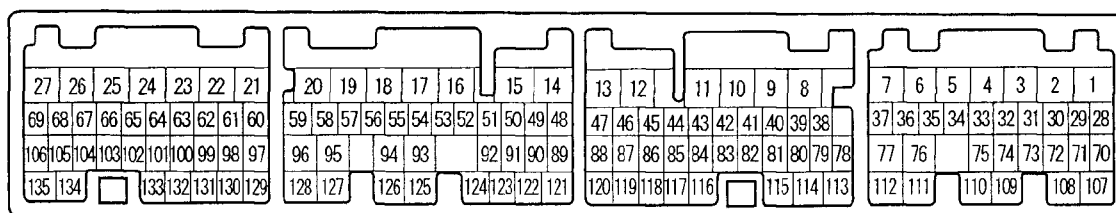
Circuit Diagram



Check Procedure

1 ENGINE CONTROL COMPUTER UNIT CHECK

(1) Turn IG ON.



Connector A

Connector B

Connector C

Connector D

G101189J01

- (2) Measure the voltage between connector 3 (ACSW) terminal of the engine control computer and terminal 20 (E01), with the heater control base A/C switch ON, using the tester.

Specified value:

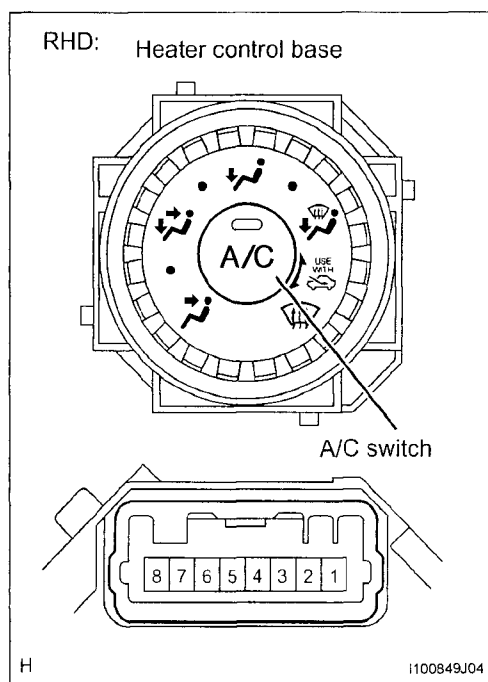
Measuring condition	Specified value
When coolant pressure is normal	11 - 14V
Coolant pressure: 0.19 MPa {2.0 kgf/cm ² } and below, or Coolant pressure: 3.14 MPa {32 kgf/cm ² } and above	1 V and below

OK

TO RELATED CIRCUIT CHECK SHOWN IN THE LIST BY SYMPTOM

NG

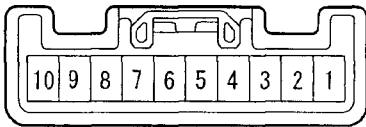
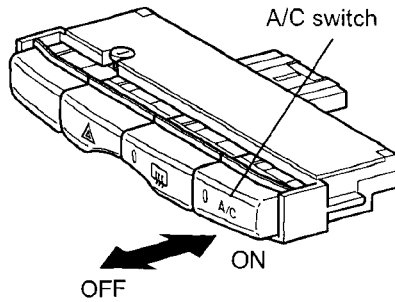
2 HEATER CONTROL BASE (RHD) OR COOLER CONTROL SWITCH ASSEMBLY (LHD) UNIT CHECK



- (1) Check the continuity between the terminals of the connector using the tester.

LHD:

Cooler control switch assembly



E146819J01

OK

Reference

RHD (heater control base)

Terminal number (terminal name)	Measuring condition	Electrical continuity
2 ↔ 4	A/C switch ON	With
2 ↔ 4	A/C switch OFF	None

LHD (cooler control switch assembly)

Terminal number (terminal name)	Measuring condition	Electrical continuity
8 ↔ 9	A/C switch ON	With
8 ↔ 9	A/C switch OFF	None

NG

HEATER CONTROL BASE (RHD) OR COOLER CONTROL SWITCH ASSEMBLY (LHD) REPLACEMENT

52

3

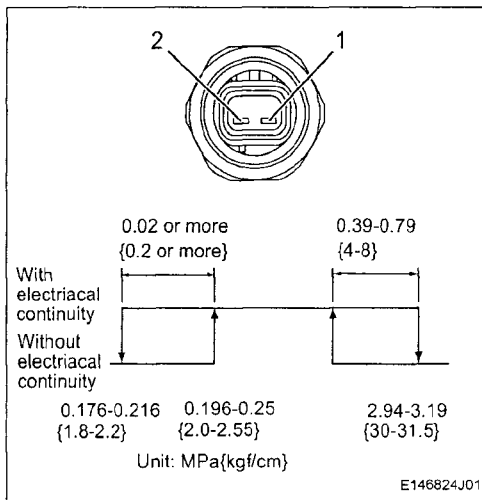
COOLER REFRIGERANT LIQUID PIPE A UNIT CHECK (PRESSURE SWITCH)

- (1) Disconnect the connector of the pressure switch.
- (2) High-/low-pressure sides conductivity check
 - (a) Check the continuity between connector terminals 1 and 2 using the tester.

Reference: As shown in the diagram, depending on the coolant pressure

NG

COOLER REFRIGERANT LIQUID PIPE A REPLACEMENT



E146824J01

OK

4

WIRE HARNESS OR CONNECTOR CHECK (BETWEEN IG SWITCH AND PRESSURE SWITCH)

- (1) Disconnect the connector of the pressure switch.

52

Pressure switch
W/H side connector



E146825J01

- (2) Measure the voltage and short circuit with GND between the body earth and connector terminal 1 of the vehicle wire harness of the pressure switch, with the IG switch and A/C switch ON, using the tester.

Reference: 11 - 14 V, not short-circuited with GND

NG

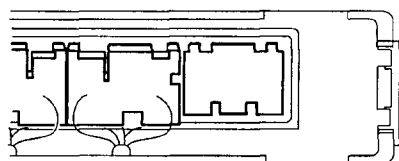
REPAIR OR REPLACEMENT OF THE WIRE HARNESS
OR THE CONNECTOR

OK

5

WIRE HARNESS OR CONNECTOR CHECK (BETWEEN THE ENGINE CONTROL COMPUTER AND
PRESSURE SWITCH)

Pressure switch W/H side connector



ACSW

Engine control computer
W/H side connector (connector D)

E146826J01

- (1) Disconnect connector D of the engine control computer.
- (2) Check the continuity and short circuit with GND between the connector terminals of the vehicle wire harness.

Measuring points

Engine control computer side Terminal number (terminal symbol)	Pressure switch side Terminal number
3 (ACSW)	2

Reference: There must be electrical continuity between terminals
and no terminal must be short-circuited with GND.

NG

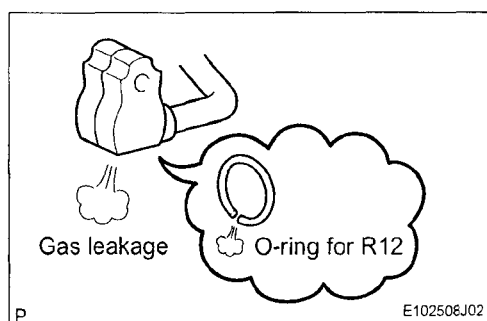
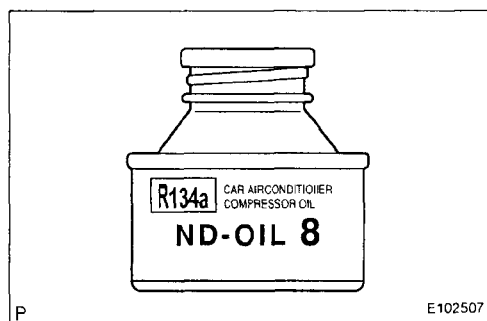
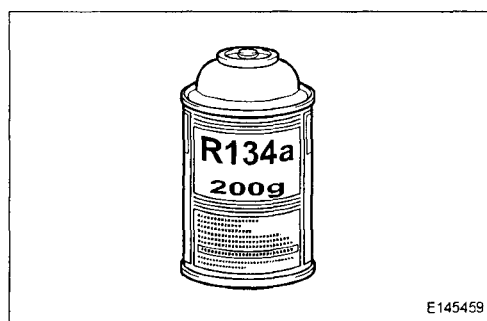
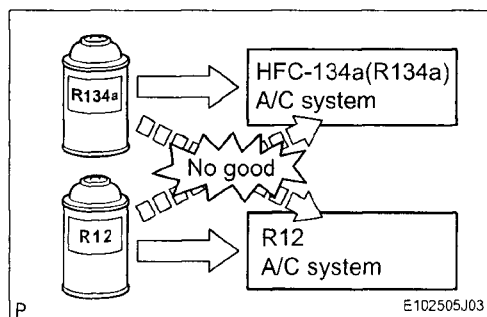
REPAIR OR REPLACEMENT OF THE WIRE HARNESS
OR THE CONNECTOR

OK

ENGINE CONTROL COMPUTER CHECK AND REPLACEMENT

REFRIGERANT HFC-134A [R134A]

PRECAUTION



1. Notes on refrigerant HFC-134a (R134a)

(1) Compatibility

- (a) The components constituting the refrigerant cycle and compressor oil do not have compatibility between the system of HFC-134a (R134a) and the conventional R12 system.

52

(2) About refrigerant HFC-134a (R134a)

- (a) Be sure to use HFC-134a (R134a) as the refrigerant.

<CAUTION>

- > The refrigerant is innocuous and harmless if it is correctly handled, but it may turn into harmful gas under a high-temperature condition such as where it is placed in the neighborhood of fire, heater, and cigarette.
- > Sufficiently ventilate the work place and do not handle the refrigerant in a closed space.
- > Do not check gas leakage by using a halide torch leak tester.

<HINT>

Accidental replenishing of the refrigerant is prevented by using a manifold gage dedicated to HFC-134a (R134a).

(3) About compressor oil

- (a) Be sure to use ND-OIL8 as the compressor oil.

<HINT>

If the compressor oil for R12 is used for a system of HFC-134a (R134a), the compressor may be locked by faulty lubrication and the refrigerant gas may leak because of expansion of rubber parts. Conversely, if the compressor oil for HFC-134a (R134a) is used for a system of R12, the durability of the A/C system drops.

- (b) The compressor oil for HFC-134a (R134a) is good at absorbing moisture. When the A/C components are removed, therefore, immediately shut them off from atmosphere by using a plug or vinyl tape.

- (c) Do not allow the compressor oil for HFC-134a (R134a) to scatter as it may affect acryl resin.

(4) About O-ring

- (a) Be sure to use an O-ring for HFC-134a (R134a).

<HINT>

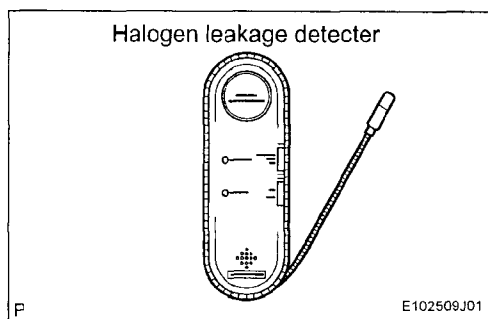
The O-ring for HFC-134a (R134a) is different from the O-ring for R12 in materials and size. If it is incorrectly used, gas leakage may occur.

(5) Notes on work to create vacuum

- (a) To create vacuum, attach a solenoid valve adapter to the vacuum pump for R12.

<HINT>

If vacuum is created without using a solenoid valve adapter and the system is left, the oil (for R12) in the vacuum pump may flow in the reverse direction into the system of HFC-134a (R134a).



(6) About refrigerant gas leakage check

(a) Use a halogen leak detector to check leakage of the refrigerant gas.

<HINT>

- > The conventional halide torch leak tester can not be used because HFC-134a (R134a) does not contain chlorine.
- > The conventional electric gas leak tester may not be able to detect gas leakage due to its low sensitivity because the molecule of HFC-134a (R134a) is smaller than that of R12.

(b) Check leakage of the refrigerant gas with the IG switch OFF.

<HINT>

- > If the refrigerant gas is checked for leakage while the engine is running, the leaked gas is diluted by the wind of the fan and blower, which makes it difficult to be detected.
- > If refrigerant gas leakage is checked while the cooler is operating, the pressure of the refrigerant in the cooler unit drops, making it difficult for gas to leak.
- > If refrigerant gas leakage is checked by using an electric gas leak tester while the cooler is operating, the tester reacts to an abrupt change in humidity that is caused by the humid air from the drain hose (especially, a high-sensitivity tester supporting HFC-134a (R134a) is likely to react) and malfunctions.

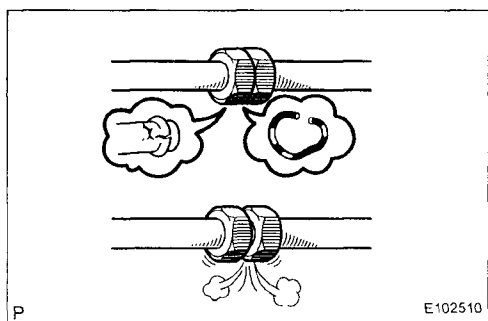
2. Notes on removal and installation

(1) In case refrigerant gas gets in your eye

- (a) Do not wipe the eye with handkerchief.
- (b) Go to see an ophthalmologist.

(2) Notes on handling refrigerant gas (service can)

- (a) Do not heat the service can. If the service can is directly heated or put in hot water, the pressure inside the can rises, which may cause the can to explode. To warm the service can, use warm water of 40 °C and below.
- (b) Do not drop or hit the service can.
- (c) Do not open the high-pressure valve of the manifold gauge while the engine is running. If the valve is opened, high-pressure gas flows into the service can and this may cause the can to explode.
- (d) Do not handle the service can near your face. Be sure to wear protective glasses.



(3) Installation of pipe

(a) Be sure to use a new O-ring.

<HINT>

- > Be sure to use an O-ring for HFC-134a (R134a).
- > When removing the O-ring, use a soft object, such as a toothpick, so as not to damage the pipe.

(b) Apply a sufficient amount of compressor oil (ND-OIL8) to the O-ring.

(c) Naturally route the hose pipe. Do not twist or bend it.

(d) If a foreign particle such as yarn collects on the O-ring, the refrigerant gas may leak. Do not wear gloves when handling the O-ring.

(e) To replace the pipe with a new one, replenish compressor oil in the following quantity.

Parts to be replaced	Pipe / hose
Compressor oil quantity	5 cc (per pipe)

ADJUSTMENT

1. Discharging refrigerant HFC-134a (R134a)

- (1) Turn ON the A/C switch.
- (2) Activate the cooler compressor for five to six minutes while the engine is running at 1000 r/min, circulate cooling cycle as well as the refrigerant to collect the compressor oil remaining at each functional part to the cooler compressor as much as possible.
- (3) Stop the engine.
- (4) Collect chlorofluorocarbon, connect a regenerator, and extract the refrigerant gas.
<CAUTION>
Collect chlorofluorocarbon and handle the regenerator correctly by referring to the manual.

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2. Replenishing refrigerant HFC-134a (R134a)

- (1) Create vacuum by using a vacuum pump.
- (2) Replenish refrigerant HFC-134a (R134a).
Specified value: 350 +/- 30 g
<CAUTION>
The cooler compressor may be burnt if it is activated without refrigerant because lubrication is insufficient. Therefore, never activate the cooler compressor before replenishing refrigerant.
<HINT>
To reuse the refrigerant gas that has been collected, prepare a service can in advance for replenishment because approx. 90 % of the refrigerant gas has been collected by the regenerator when chlorofluorocarbon has been collected.

3. Warming up engine

- <CAUTION>
After replenishing the refrigerant, warm up the engine for 2 minutes or more at 2000 r/min and below.

4. Refrigerant gas leakage check

- (1) After replenishing the refrigerant gas, check leakage of the refrigerant gas by using a halogen leak detector.

REFRIGERANT LINE

PARTS LOCATION

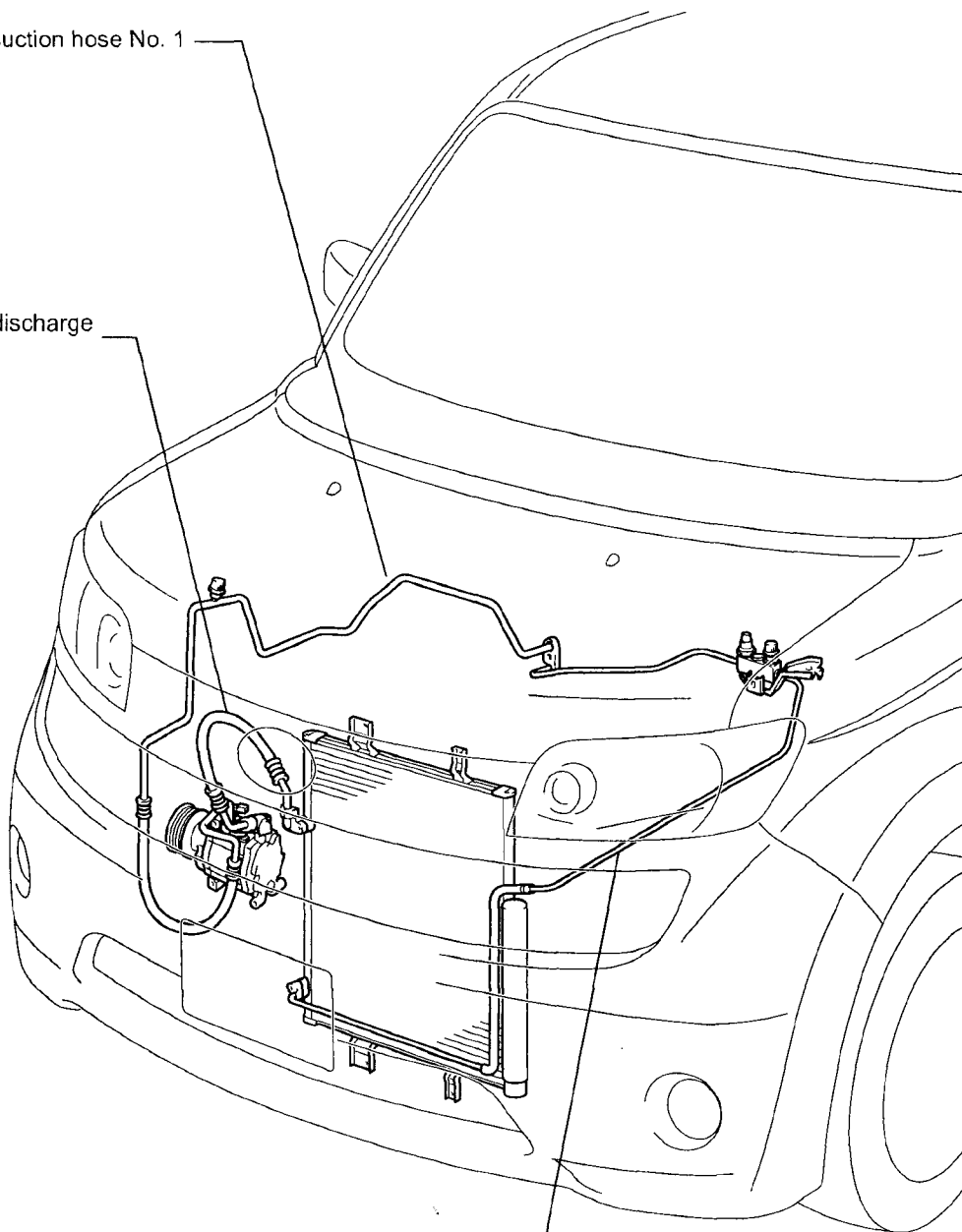
RHD :

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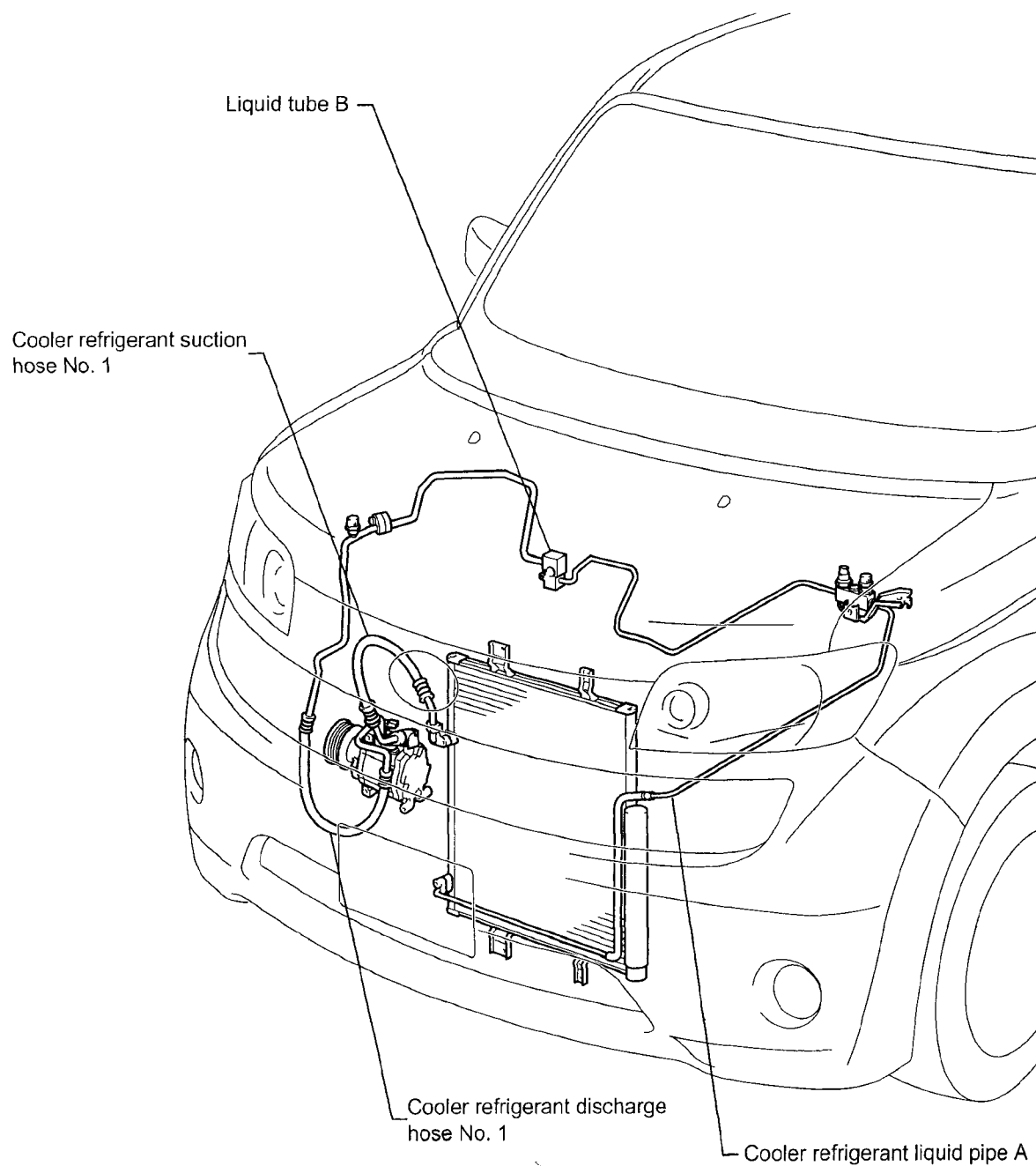
Cooler refrigerant suction hose No. 1

Cooler refrigerant discharge
hose No. 1

Cooler refrigerant liquid pipe A



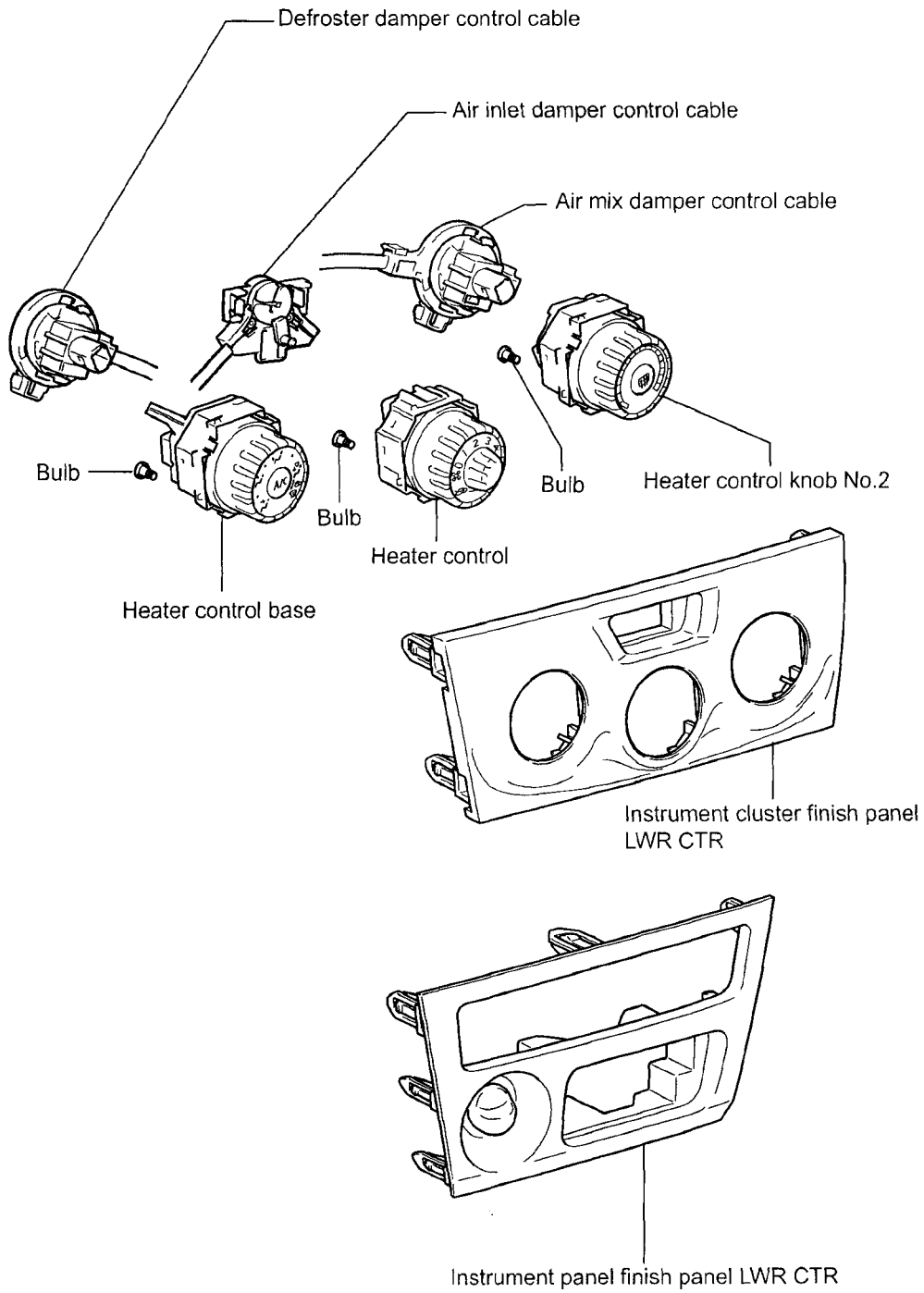
LHD:



AIR CONDITIONER PANEL (RHD)

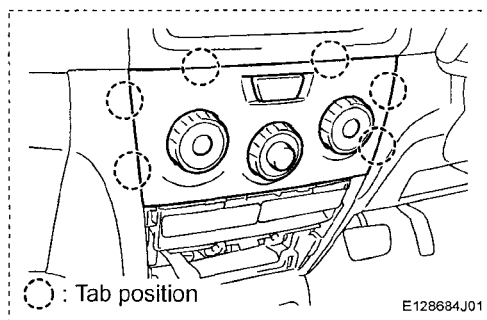
COMPONENTS

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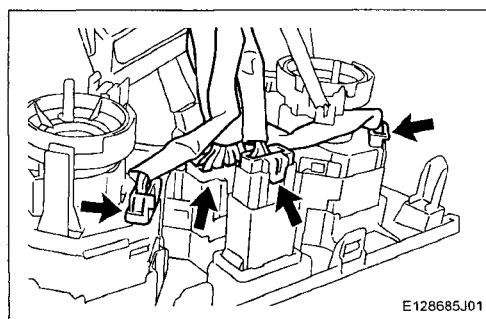
REMOVAL

1. Battery minus terminal disconnection
2. Instrument panel box CTR removal (See page 78-17)
3. Front ash receptacle assembly removal (See page 78-17)
4. Instrument panel finish panel LWR CTR removal (See page 78-17)

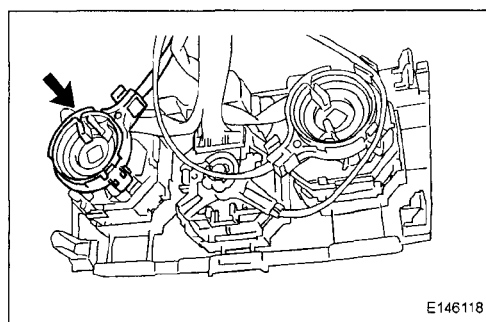


5. Instrument cluster finish panel LWR CTR removal
 - (1) Remove the fittings of the tabs in six locations and remove the instrument cluster finish panel LWR CTR.

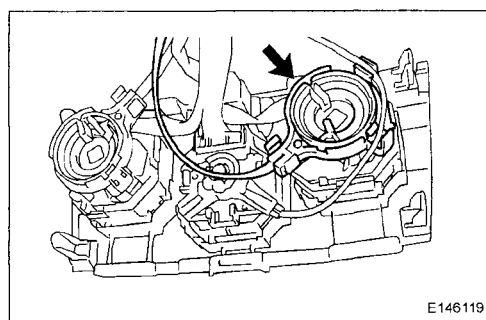
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- (2) Disconnect the connectors in four locations.

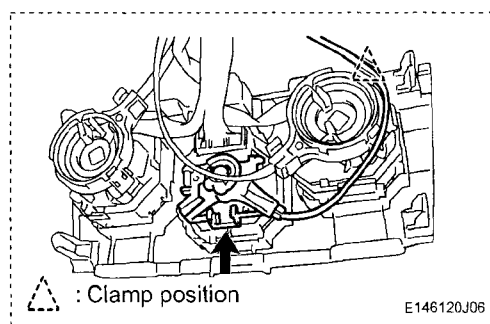


6. Air mix damper control cable disconnection
 - (1) Remove two tab fittings and disconnect the air mix damper control cable.



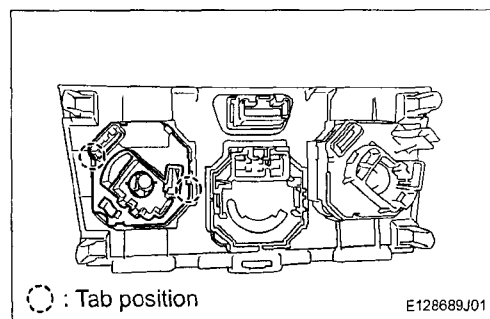
7. Defroster damper control cable disconnection
 - (1) Remove the fittings of the tabs in two locations and disconnect the defroster damper control cable.

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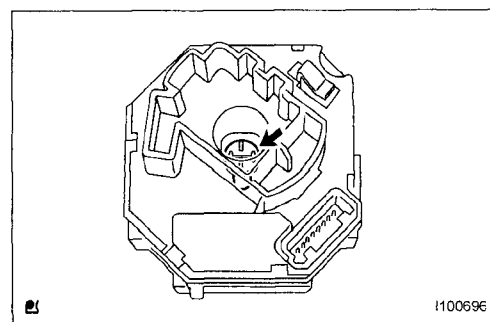


8. Air inlet damper control cable disconnection
 - (1) Remove the air inlet damper control cable from the clamp.
 - (2) Remove the fittings of the tabs in two locations and disconnect the air inlet damper control cable.

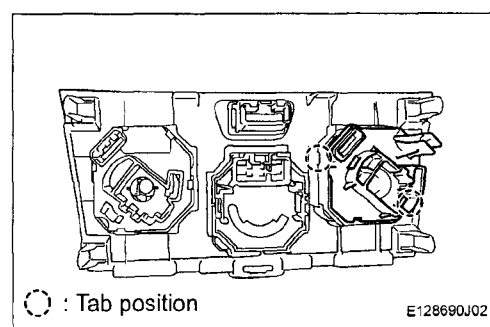
DISASSEMBLY



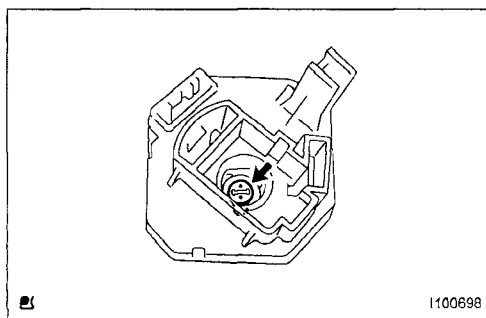
1. Heater control knob No. 2 removal
 - (1) Remove the fittings of the tabs in two locations and remove heater control knob No. 2.



- (2) Remove the bulb.

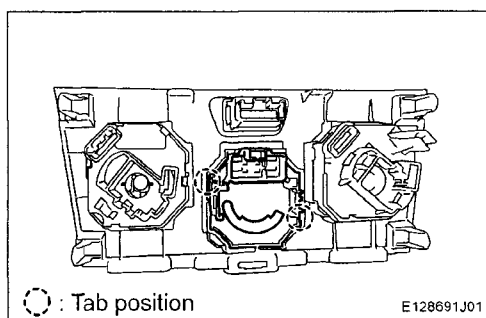


2. Heater control base removal
 - (1) Remove the fittings of the tabs in two locations and remove the heater control base.



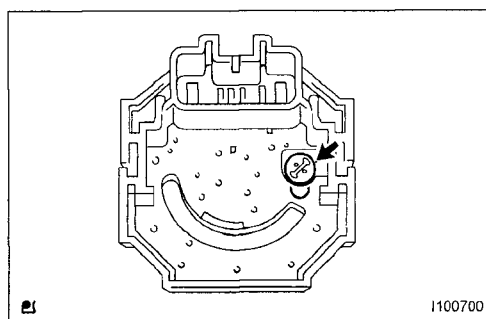
(2) Remove the bulb.

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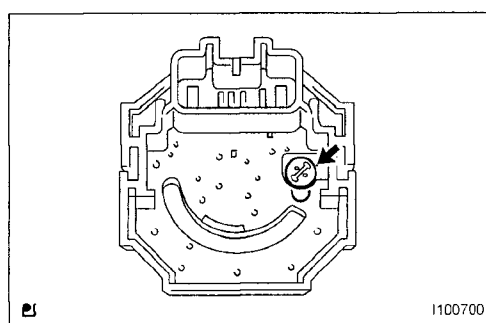
3. Heater control removal

(1) Remove the fittings of the tabs in two locations and remove the heater control.



(2) Remove the bulb.

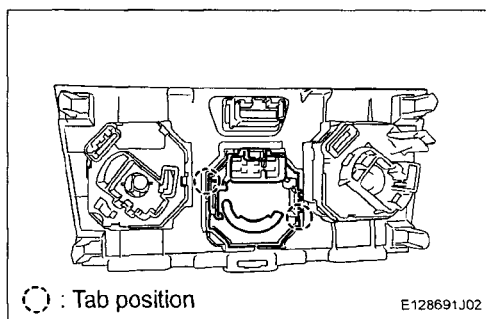
REASSEMBLY



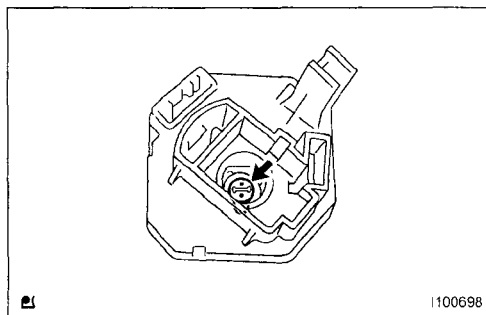
1. Heater control installation

(1) Attach the bulb.

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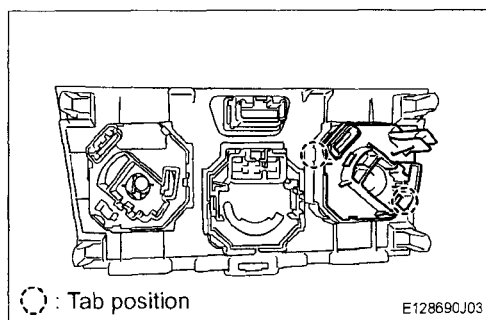


(2) Fit two tabs and attach the heater control.

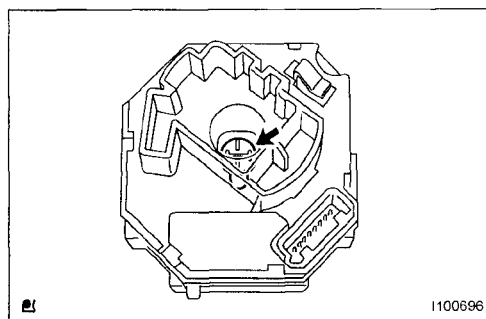


2. Heater control base installation

(1) Attach the bulb.

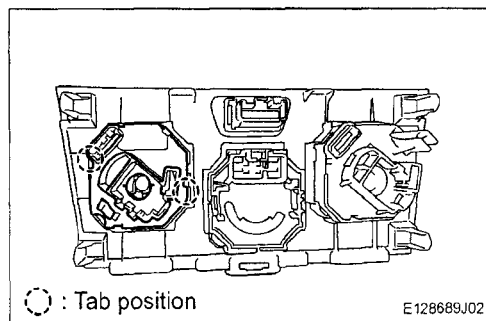


(2) Fit two tabs and attach the heater control base.



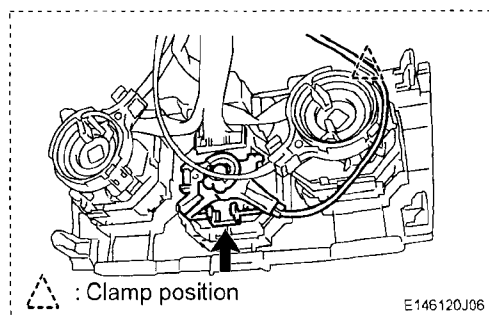
3. Heater control knob No. 2 installation

(1) Attach the bulb.



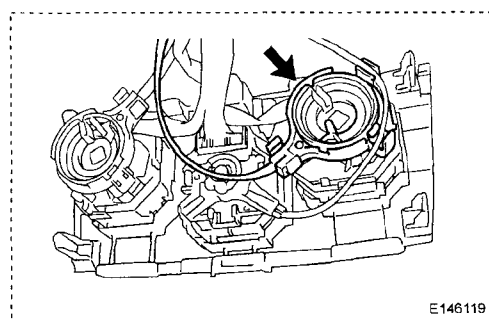
(2) Fit two tabs and attach heater control knob No. 2.

INSTALLATION

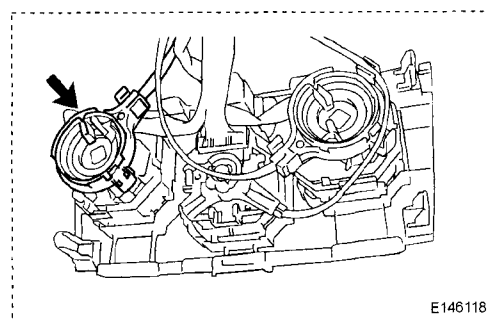


1. Air inlet damper control cable connection
 - (1) Fit two tabs and connect the air inlet damper control cable.
 - (2) Fix the air inlet damper control cable to the clamp.

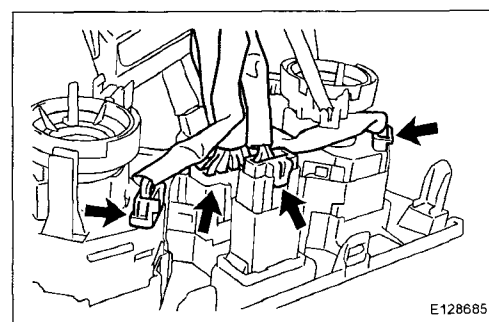
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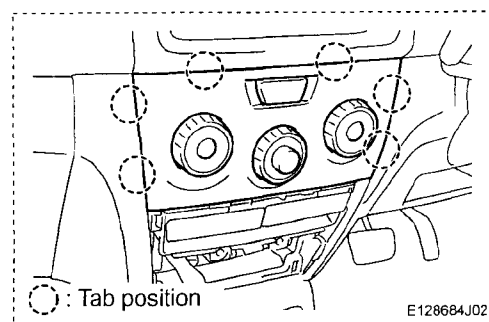
2. Defroster damper control cable connection
 - (1) Fit two tabs and connect the defroster damper control cable.



3. Air mix damper control cable connection
 - (1) Fit two tabs and connect the air mix damper control cable.



4. Instrument cluster finish panel LWR CTR installation
 - (1) Connect the connectors in four locations.



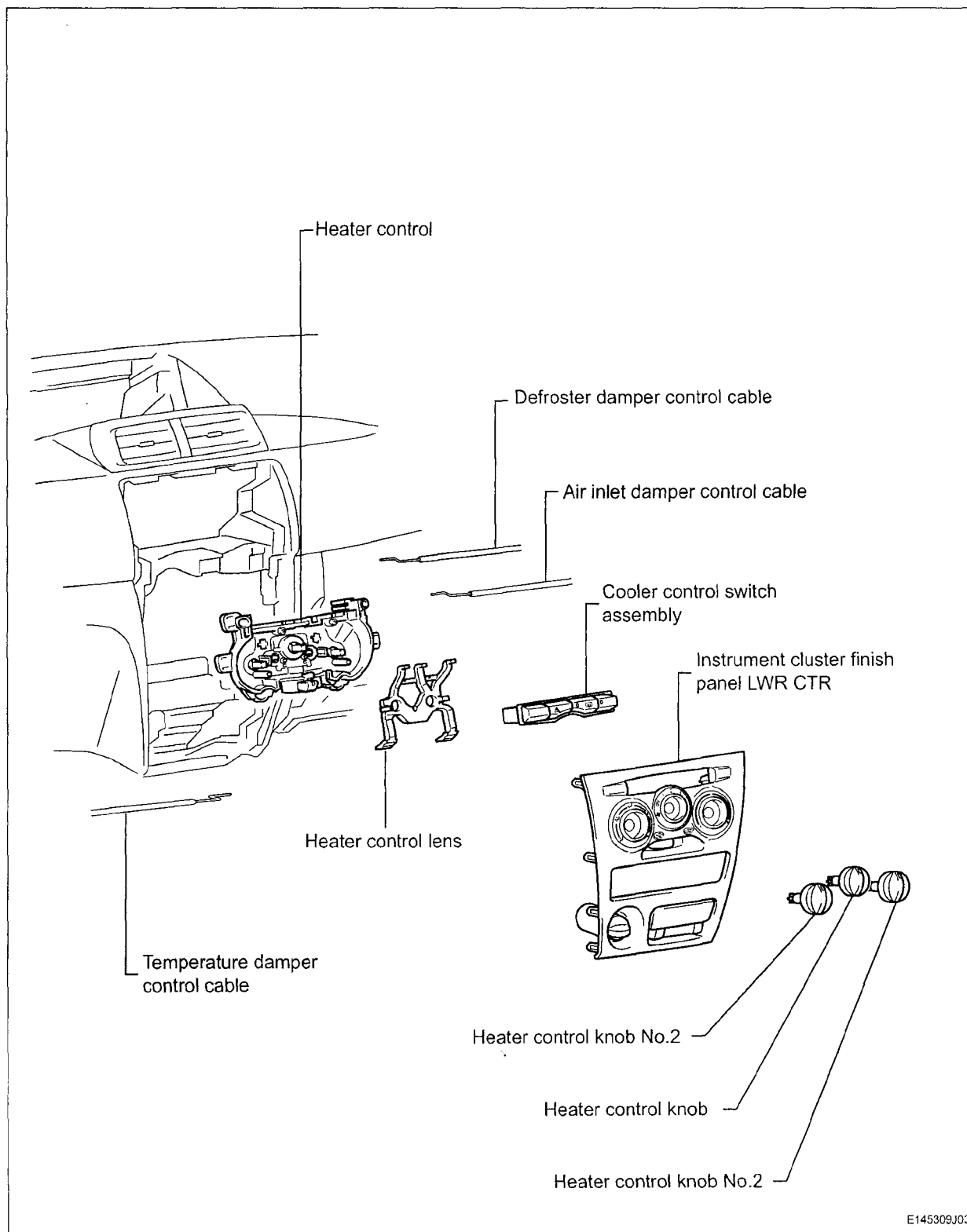
- (2) Fit six tabs and attach the instrument cluster finish panel LWR CTR.

5. Instrument panel finish panel LWR CTR installation (See page 78-35)
6. Instrument panel box CTR installation (See page 78-34)
7. Front ash receptacle assembly installation (See page 78-34)
8. Battery minus terminal installation
Specified value: $T=6.4\text{N}\cdot\text{m}$ {65kgf*cm}

AIR CONDITIONER PANEL (LHD)

COMPONENTS

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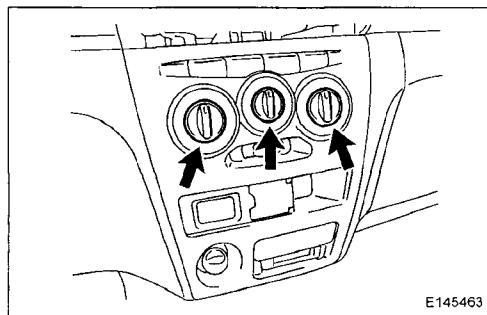


REMOVAL

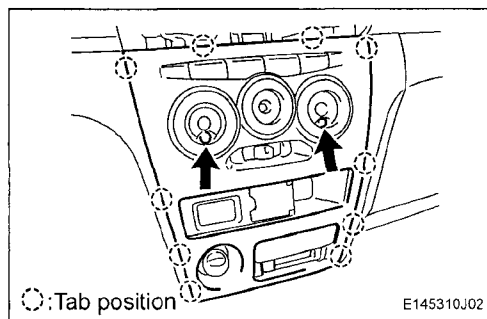
1. Battery minus terminal disconnection
2. Glove compartment door OUT removal (See page 78-15)
3. Instrument panel box CTR removal (See page 78-17)
4. Front ash receptacle assembly removal (See page 78-17)

5. Instrument cluster finish panel LWR CTR removal

- (1) Remove the heater control knob.
- (2) Remove two heater control knobs No. 2.

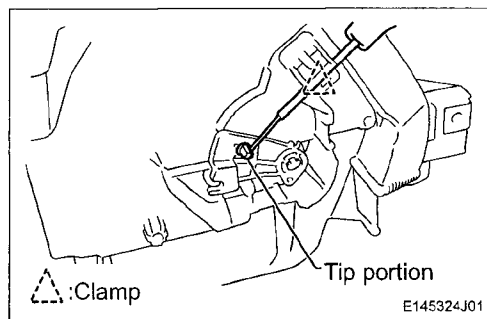


- (3) Remove two screws and the fittings of the tabs in ten locations, and remove the instrument cluster finish panel LWR CTR.

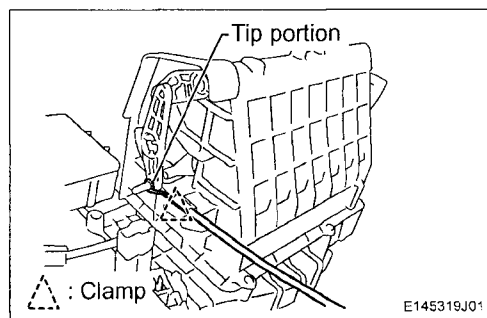


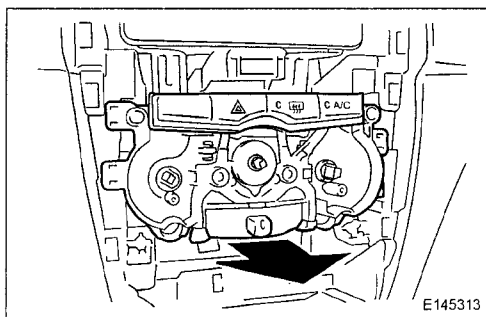
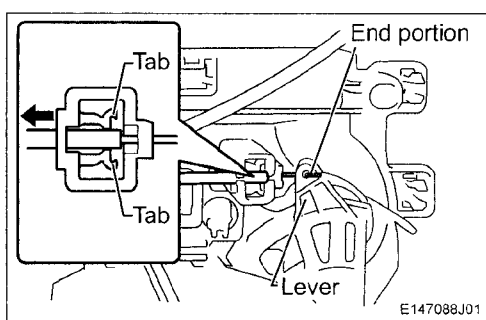
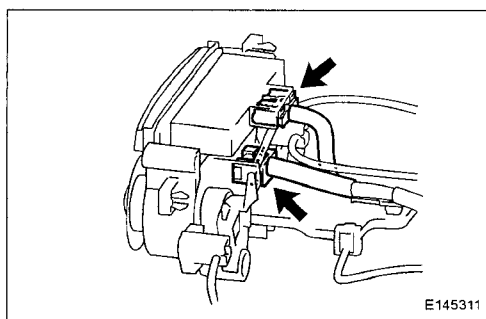
6. Heater control removal

- (1) Remove the temperature damper control cable from the clamp and disconnect the front end from the air mix control lever.



- (2) Remove the air inlet damper control cable from the clamp and disconnect the front end from the air inlet control lever.





- (3) Disconnect the connector of the cooler control switch assembly.
- (4) Disconnect the connector of the heater control.

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- (5) Disconnect the defroster damper control cable from the clamp, and disconnect the end portion from the lever.

Tool: For straight snap ring pliers shaft {KTC (SOP-171) or equivalent}

Tool: Front-end claw set, straight type $\phi 1.5$ {KTC (SPC-0110) or equivalent}

<HINT>

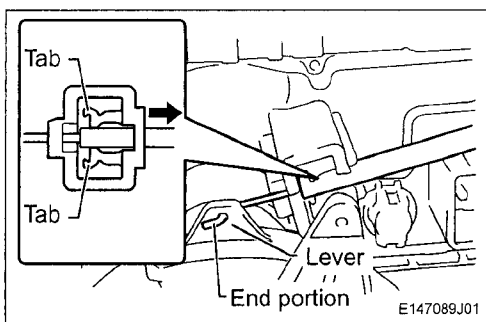
Expand the tabs of the heater control in two locations with snap ring pliers and remove the defroster damper control cable from the tab by pulling it in the direction of the arrow.

<CAUTION>

If the tab that fixes the defroster damper control cable is extended by applying too much force to it, the fixing power may be weakened and the cable may not be able to be fixed again. Therefore, be sure to use snap ring pliers.

- (6) Remove the heater control.

DISASSEMBLY



1. Temperature damper control cable disconnection

- (1) Disconnect the temperature control cable from the clamp and remove the end portion from the lever.

Tool: For straight snap ring pliers shaft {KTC (SOP-171) or equivalent}

Tool: Front-end claw set, straight type $\phi 1.5$ {KTC (SPC-0110) or equivalent}

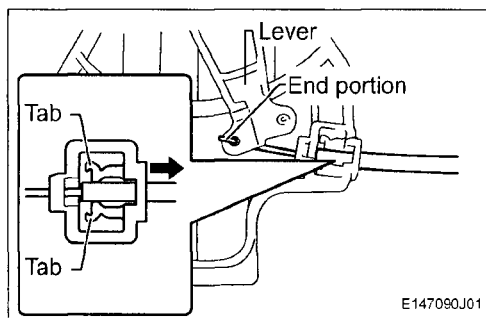
<HINT>

Expand the tabs of the heater control in two locations with snap ring pliers and remove the temperature damper control cable from the tab by pulling it in the direction of the arrow.

<CAUTION>

If the tab that fixes the temperature damper control cable is extended by applying too much force to it, the fixing power may be weakened and the cable may not be able to be fixed again. Therefore, be sure to use snap ring pliers.

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2. Air inlet damper control cable disconnection

- (1) Disconnect the air inlet control cable from the clamp and remove the end portion from the lever.

Tool: For straight snap ring pliers shaft {KTC (SOP-171) or equivalent}

Tool: Front-end claw set, straight type $\phi 1.5$ {KTC (SPC-0110) or equivalent}

<HINT>

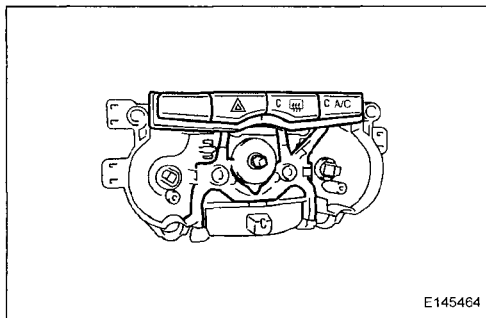
Expand the tabs of the heater control in two locations with snap ring pliers and remove the air inlet damper control cable from the tab by pulling it in the direction of the arrow.

<CAUTION>

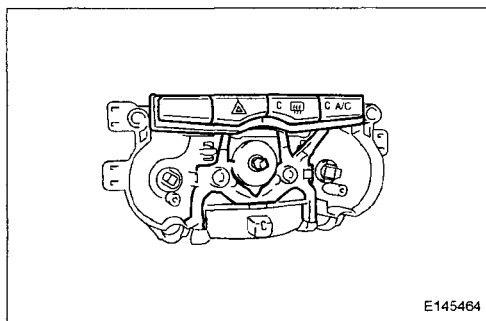
If the tab that fixes the air inlet damper control cable is extended by applying too much force to it, the fixing power may be weakened and the cable may not be able to be fixed again. Therefore, be sure to use snap ring pliers.

3. Cooler control switch assembly removal

- (1) Remove the cooler control switch assembly and heater control lens from the heater control.

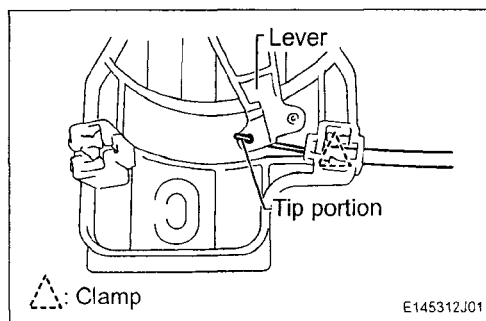


REASSEMBLY



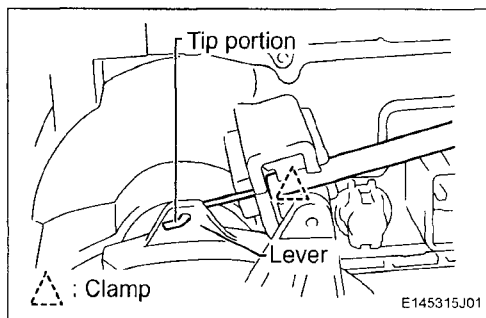
1. Cooler control switch assembly installation

- (1) Attach the cooler control switch assembly and heater control lens to the heater control.



2. Air inlet damper control cable connection

- (1) Connect the end portion of the air inlet damper control cable to the lever and fix the cable to the clamp.

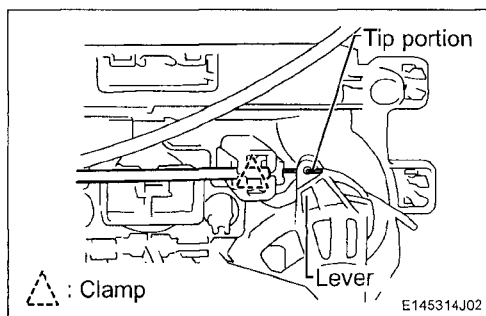


3. Temperature damper control cable connection

- (1) Connect the end portion of the temperature damper control cable to the lever and fix the cable to the clamp.

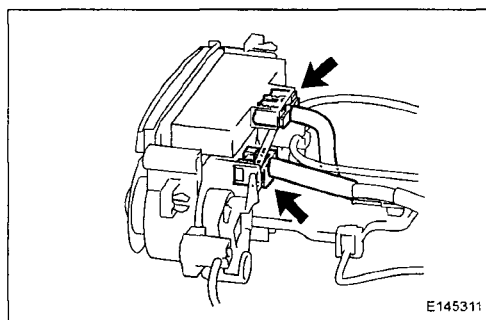
52

INSTALLATION

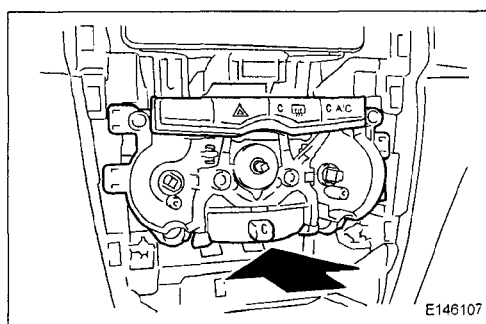


1. Heater control installation

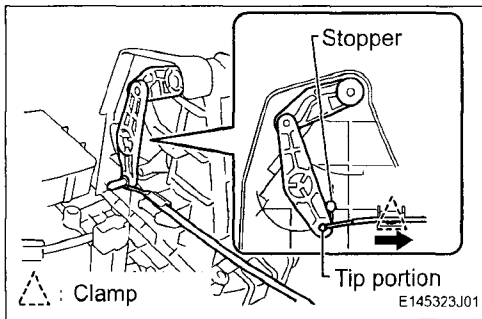
- (1) Connect the end portion of the defroster damper control cable to the lever and fix the cable to the clamp.



- (2) Connect the connector to the heater control.
- (3) Connect the connector to the cooler control switch assembly.



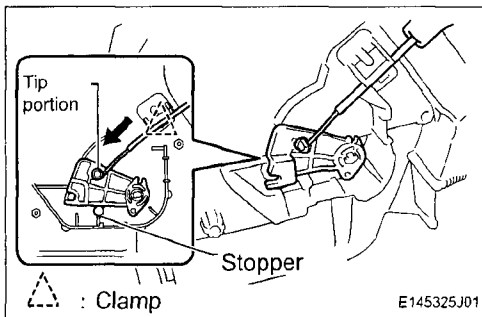
- (4) Attach the heater control.



- (5) Connect the front end of the air inlet damper control cable to the air inlet control lever and fix it to the clamp.

<HINT>

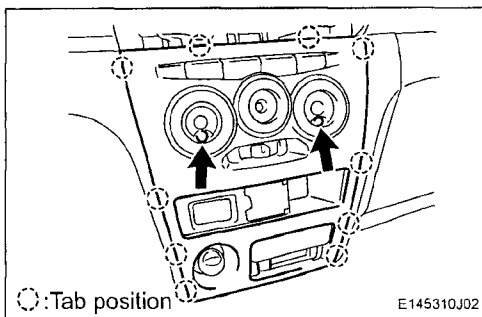
- > Contact the cable to the air inlet control lever stopper.
- > Fix the air inlet damper control cable to the clamp by pushing it in the direction of the arrow while contacting the air inlet control lever to the stopper.



- (6) Connect the front end of the temperature damper control cable to the air mix control lever and fix it to the clamp.

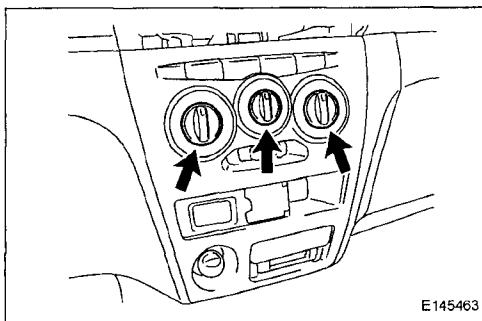
<HINT>

- > Contact the air mix control lever to the stopper.
- > Fix the temperature damper control cable to the clamp by pushing it in the direction of the arrow while contacting the air mix control lever to the stopper.



2. Instrument cluster finish panel LWR CTR installation

- (1) Fit ten tabs and attach the instrument cluster finish panel LWR CTR with two screws.

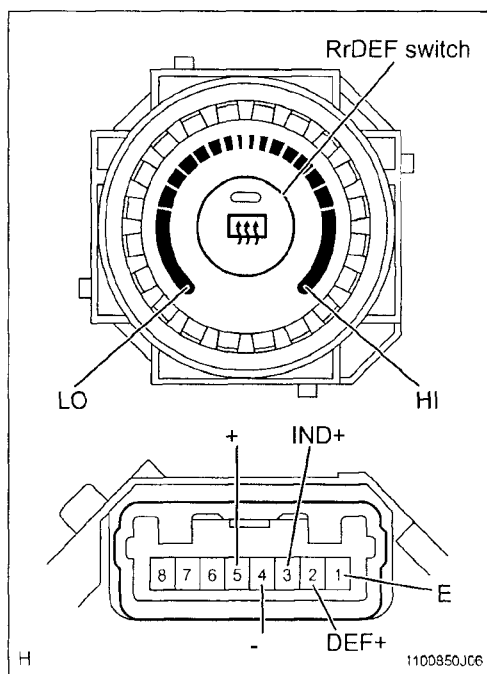


- (2) Attach the heater control knob.
(3) Attach two heater control knobs No. 2.

3. Instrument panel box CTR installation (See page 78-34)
4. Front ash receptacle assembly installation (See page 78-34)
5. Glove compartment door OUT installation (See page 78-37)
6. Battery minus terminal installation
Specified value: $T=6.4\text{N}\cdot\text{m}$ {65kgf*cm}

HEATER CONTROL KNOB No. 2 (RHD)

INSPECTION



1. Heater control knob No. 2 check

(1) Continuity check

- (a) Check the continuity between the terminals of the connector using the tester.

Reference

Terminal number (terminal name)	Measuring condition	Electrical continuity
1 (E) ↔ 2 (DEF+)	Rr DEF switch ON	With
1 (E) ↔ 2 (DEF+)	Rr DEF switch OFF	None
4 (-) ↔ 5 (+)	Always	With

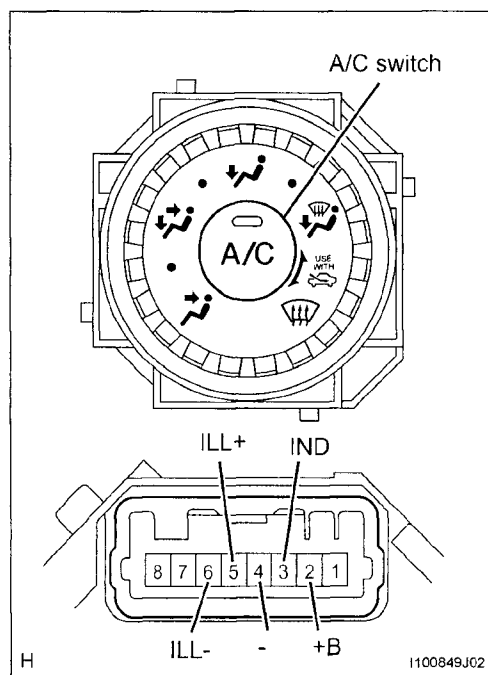
(2) Illumination check

- (a) With the plus terminal of the battery connected to terminal 3 (IND+) of the connector and the minus terminal of the battery connected to terminal 1 (E), check if the indicator lights when the Rr DEF switch is turned ON.

HEATER CONTROL BASE (RHD)

INSPECTION

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1. Heater control base check

(1) Continuity check

- (a) Check the continuity between the terminals of the connector using the tester.

Reference

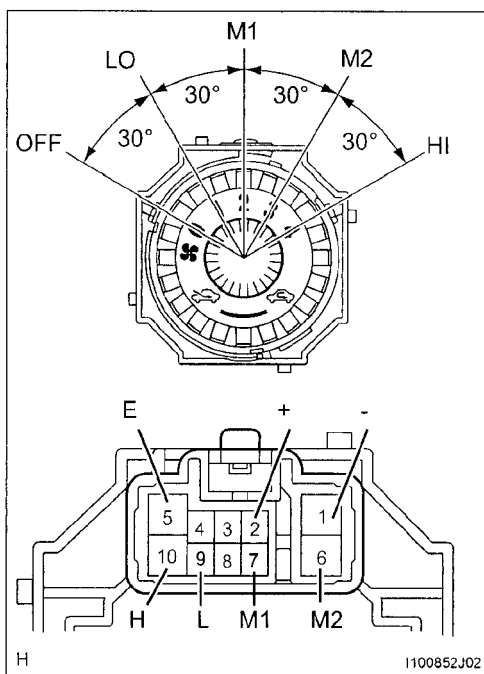
Terminal number (terminal name)	Measuring condition	Electrical continuity
2 (+B) ↔ 4 (-)	A/C switch ON	With
2 (+B) ↔ 4 (-)	A/C switch OFF	None
5 (ILL+) ↔ 6 (ILL-)	Always	With

(2) Illumination check

- (a) With the plus terminal of the battery connected to terminal 2 (+B) of the connector and the minus terminal of the battery connected to terminal 3 (IND), check if the illumination lights when the A/C switch is turned ON.

HEATER CONTROL (RHD)

INSPECTION



1. Heater control check

(1) Continuity check

(a) Check the continuity between the terminals of the connector using the tester.

Reference

Switch	Terminal number (terminal name)	Electrical continuity
OFF	Each terminal ↔ 5 (E)	None
LO	9 (L) ↔ 5 (E)	With
LO ↔ M1	9 (L) ↔ 5 (E) ↔ 7 (M-M1)	With
M1	9 (L) ↔ 5 (E) ↔ 7 (M-M1)	With
M1 ↔ M2	9 (L) ↔ 5 (E) ↔ 7 (M-M1) ↔ 6 (M2)	With
M2	9 (L) ↔ 5 (E) ↔ 6 (M2)	With
M2 ↔ HI	9 (L) ↔ 5 (E) ↔ 6 (M2) ↔ 10 (H)	With
HI	9 (L) ↔ 5 (E) ↔ 10 (H)	With

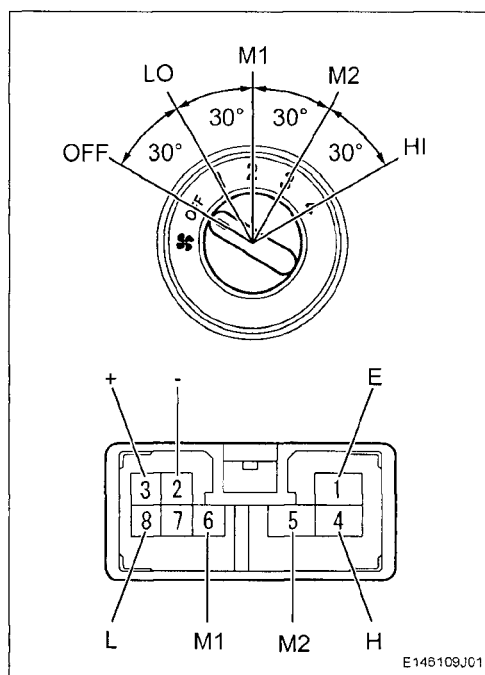
(2) Illumination check

(a) With the plus terminal of the battery connected to terminal 2 (+) of the connector and the minus terminal of the battery connected to terminal 1 (-), check if the illumination lights.

HEATER CONTROL (LHD)

INSPECTION

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1. Heater control check

(1) Continuity check

(a) Check electrical continuity between terminals of the connector by using a tester.

Reference

Switch	Terminal number (terminal name)	Electrical continuity
OFF	Each terminal ↔ 1 (E)	None
LO	8 (L) ↔ 1 (E)	With
LO ↔ M1	8 (L) ↔ 1 (E) ↔ 6 (M1)	With
M1	8 (L) ↔ 1 (E) ↔ 6 (M1)	With
M1 ↔ M2	8 (L) ↔ 1 (E) ↔ 6 (M1) ↔ 5 (M2)	With
M2	8 (L) ↔ 1 (E) ↔ 5 (M2)	With
M2 ↔ HI	8 (L) ↔ 1 (E) ↔ 5 (M2) ↔ 4 (H)	With
HI	8 (L) ↔ 1 (E) ↔ 4 (H)	With

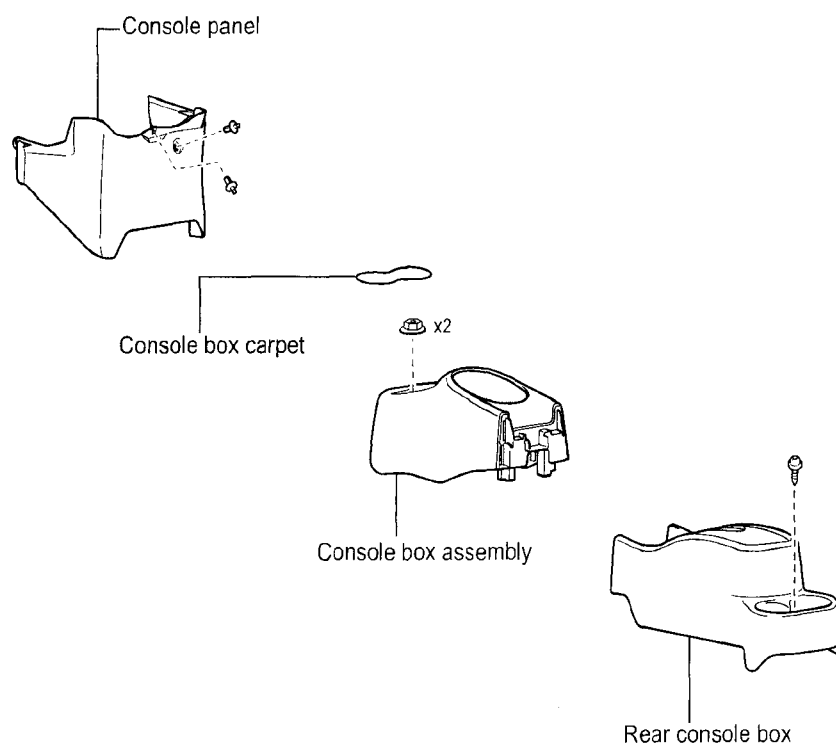
(2) Illumination check

(a) With the plus terminal of the battery connected to terminal 3 (+) of the connector and the minus terminal of the battery connected to terminal 2 (-), check if the illumination lights.

AIR CONDITIONER RADIATOR ASSEMBLY (RHD)

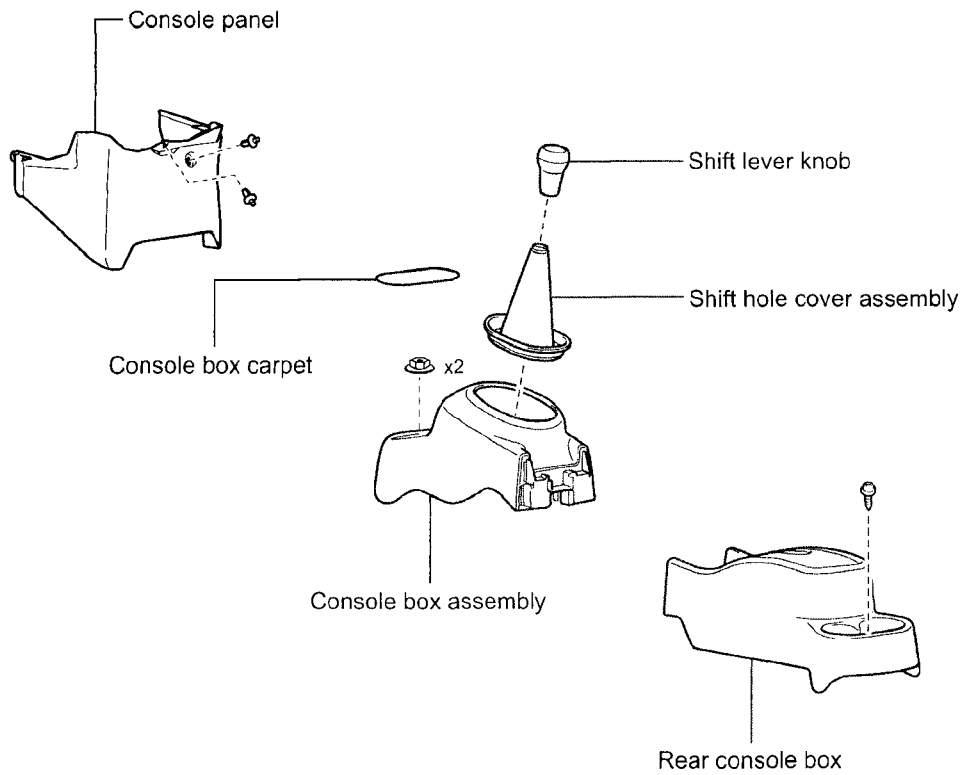
COMPONENTS

for Automatic Transaxle:

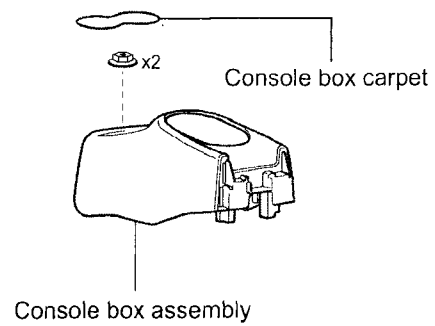


for Manual transaxle:

52

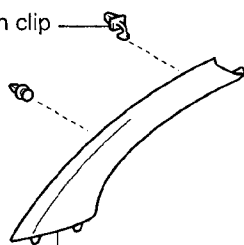


FF:



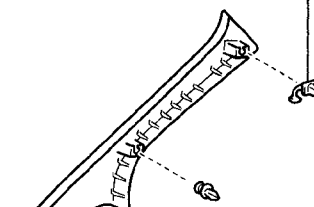
with Curtain shield airbag:

- Front pillar garnish clip

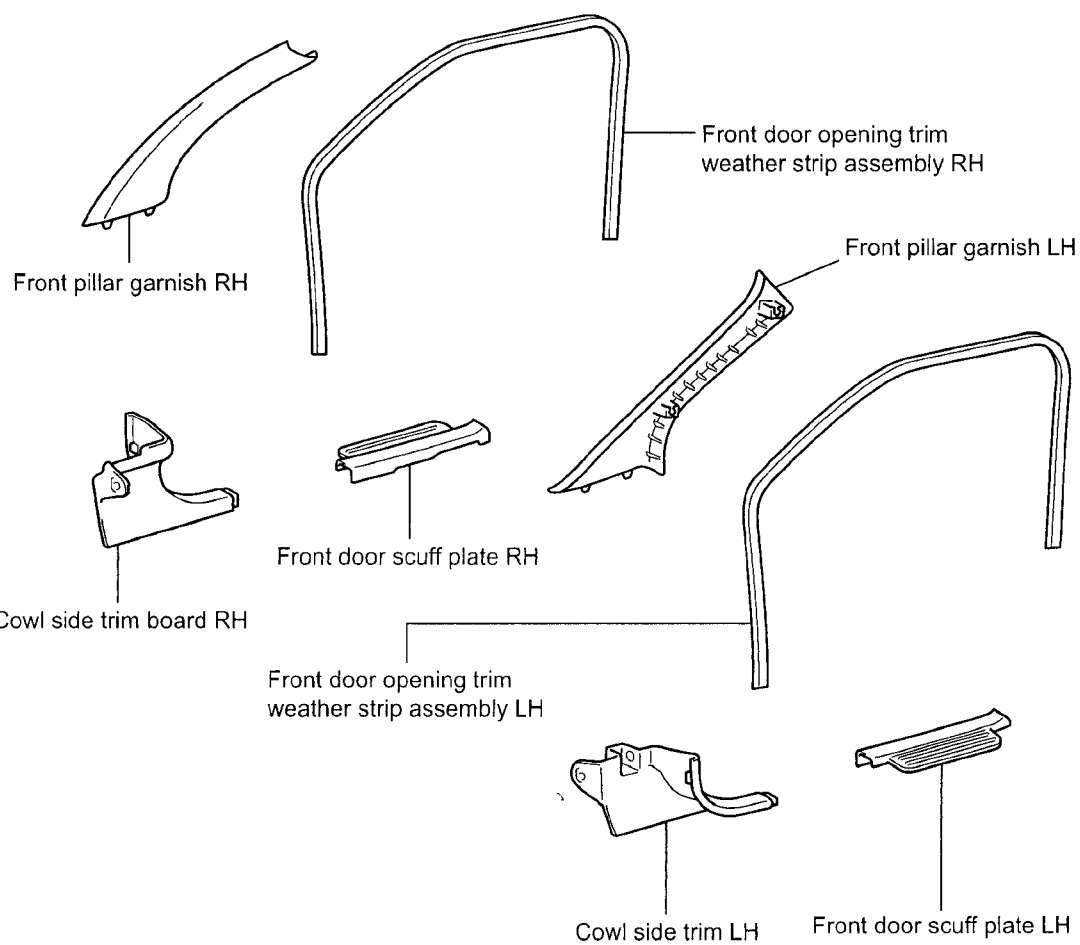


Front pillar garnish RH

- Front pillar garnish clip

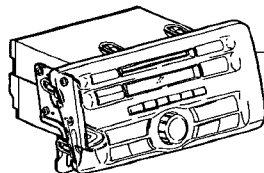


Front pillar garnish LH



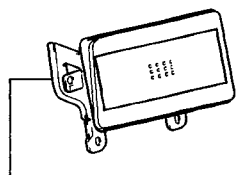
- Non-reusable part

with Radio receiver:

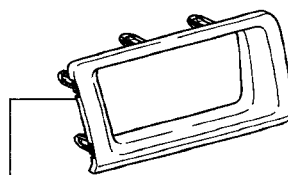


Stereo component tuner assembly

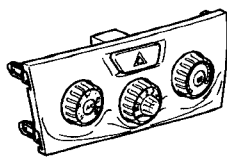
without Radio receiver:



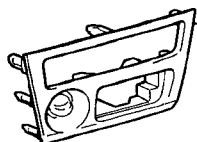
Radio tuner opening cover



Instrument panel cluster
finish panel CTR



Instrument cluster
finish panel LWR CTR



Instrument panel
finish panel LWR CTR



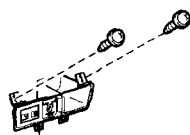
Front ash receptacle
assembly



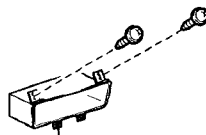
Instrument panel box CTR

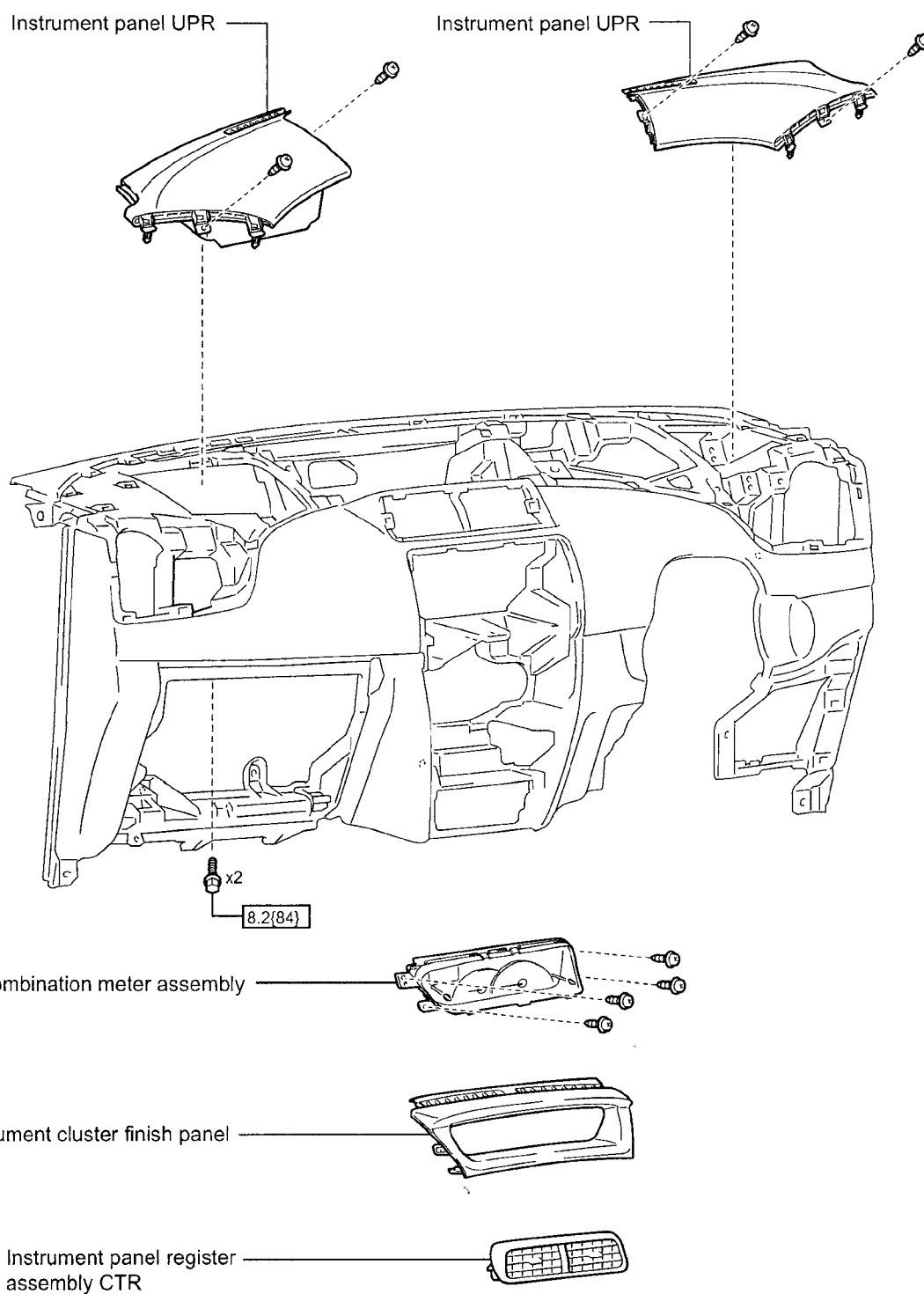
with Airbag cut off switch:

without Airbag cut off switch:



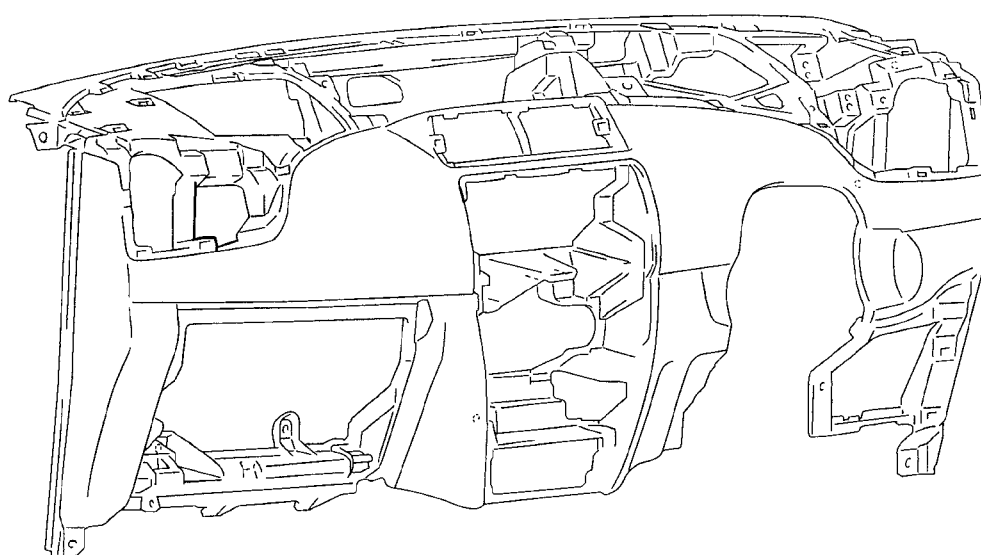
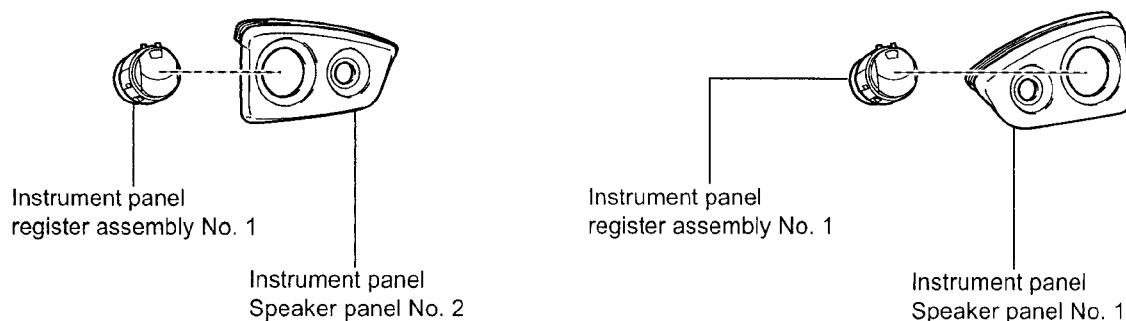
Instrument panel
center box



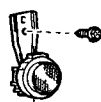


N*m (kgf*cm) : Specified torque

52

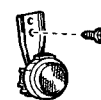


with 6-speakers:

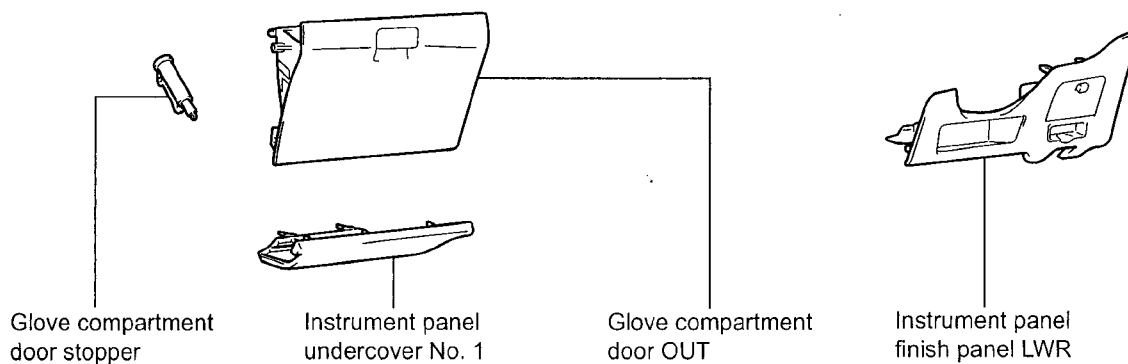


Speaker assembly FR No. 2

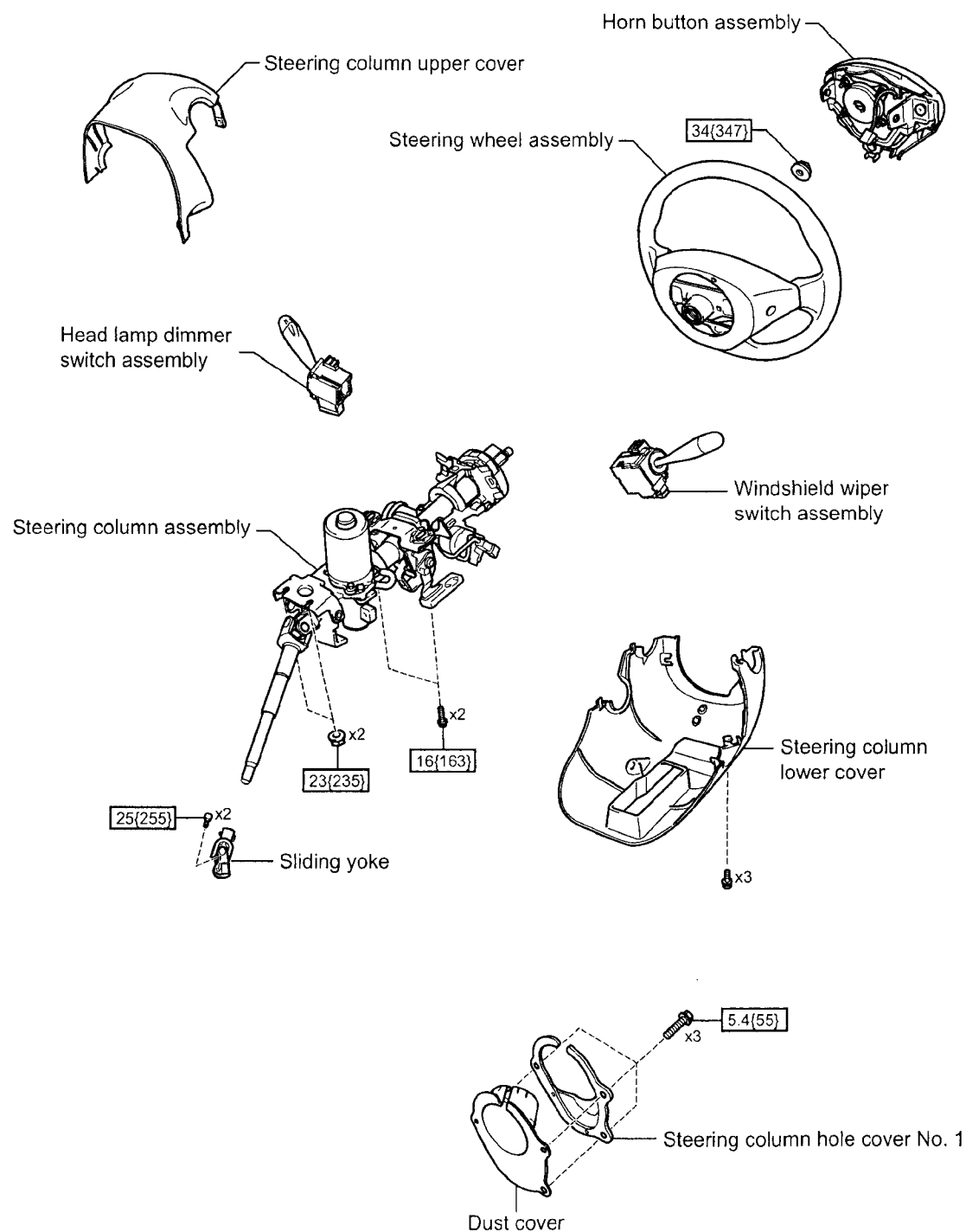
with 6-speakers:



Speaker assembly FR No. 2



except Europe:

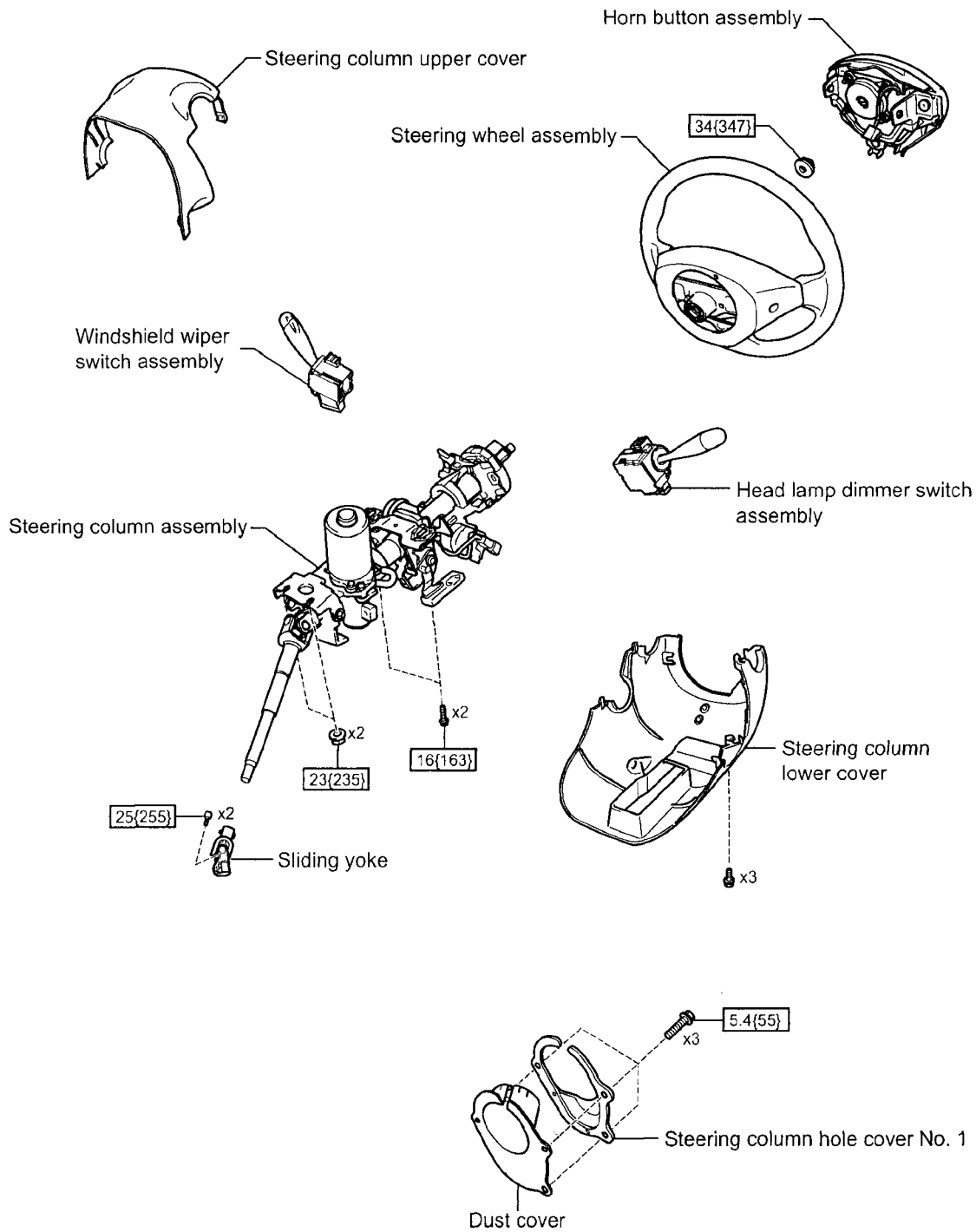


52

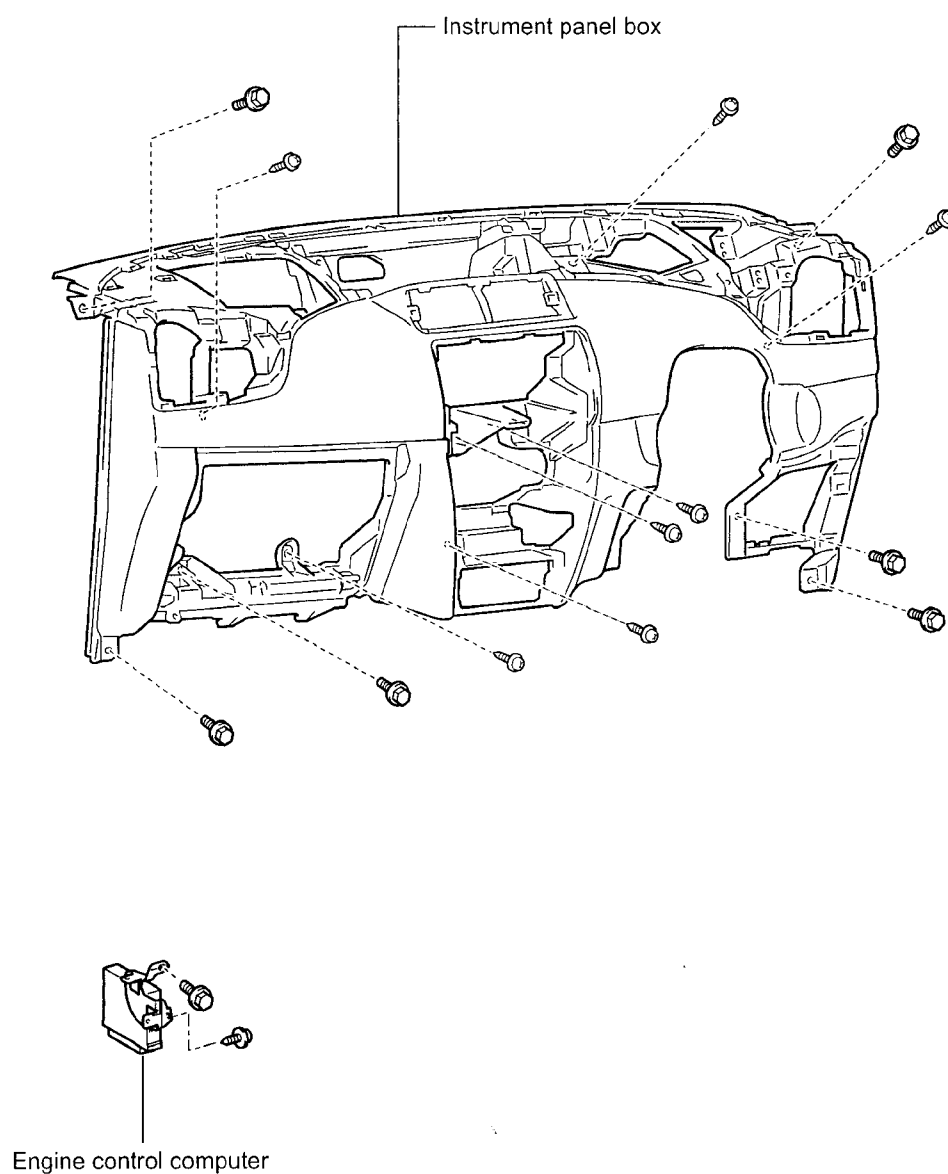
$\text{N}\cdot\text{m}$ { $\text{kgf}\cdot\text{cm}$ } : Specified torque

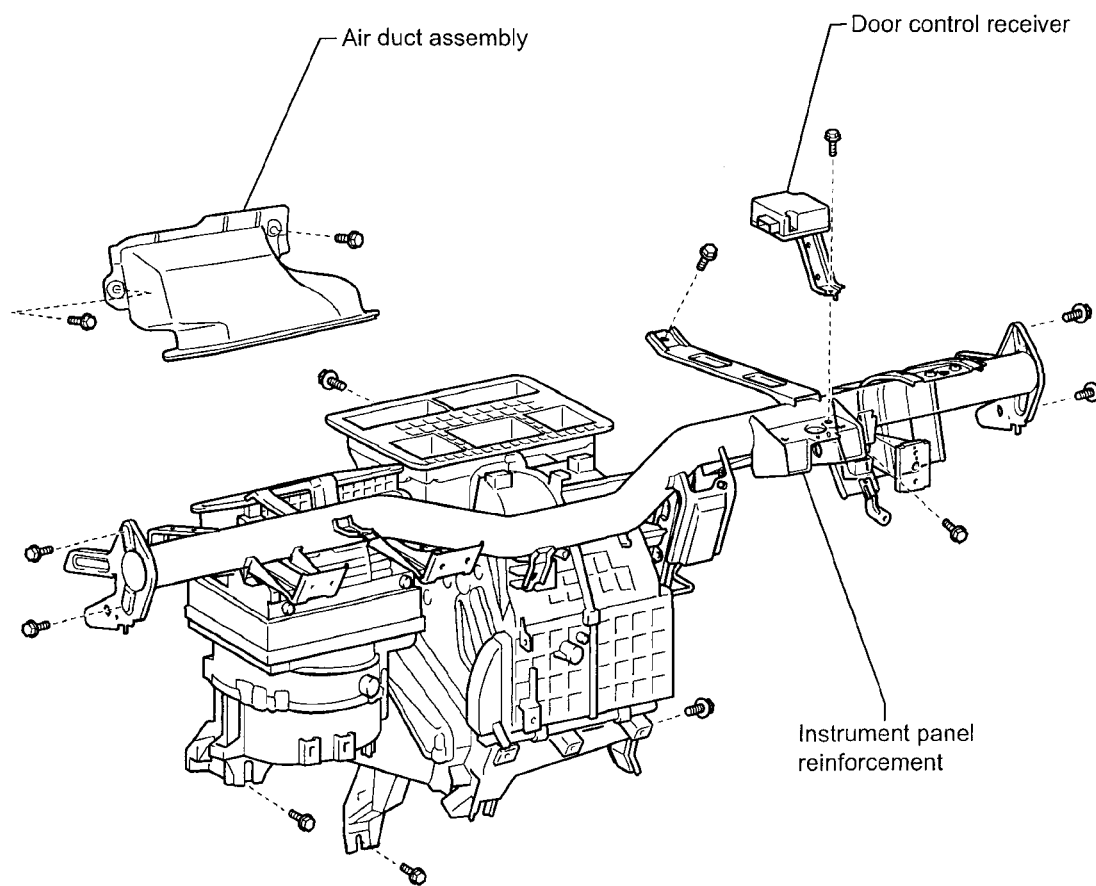
for Europe:

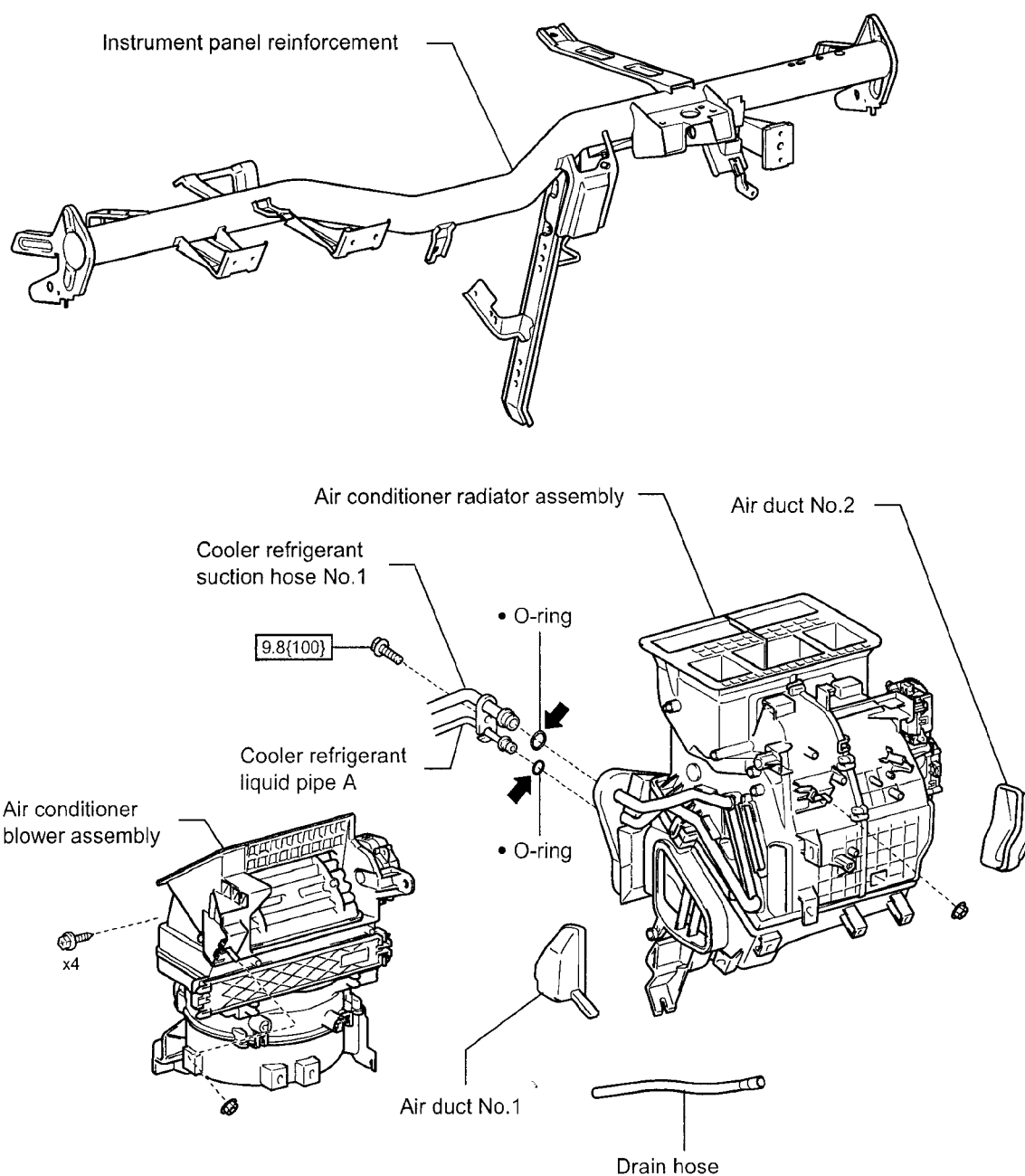
52



N*m {kgf*cm} : Specified torque



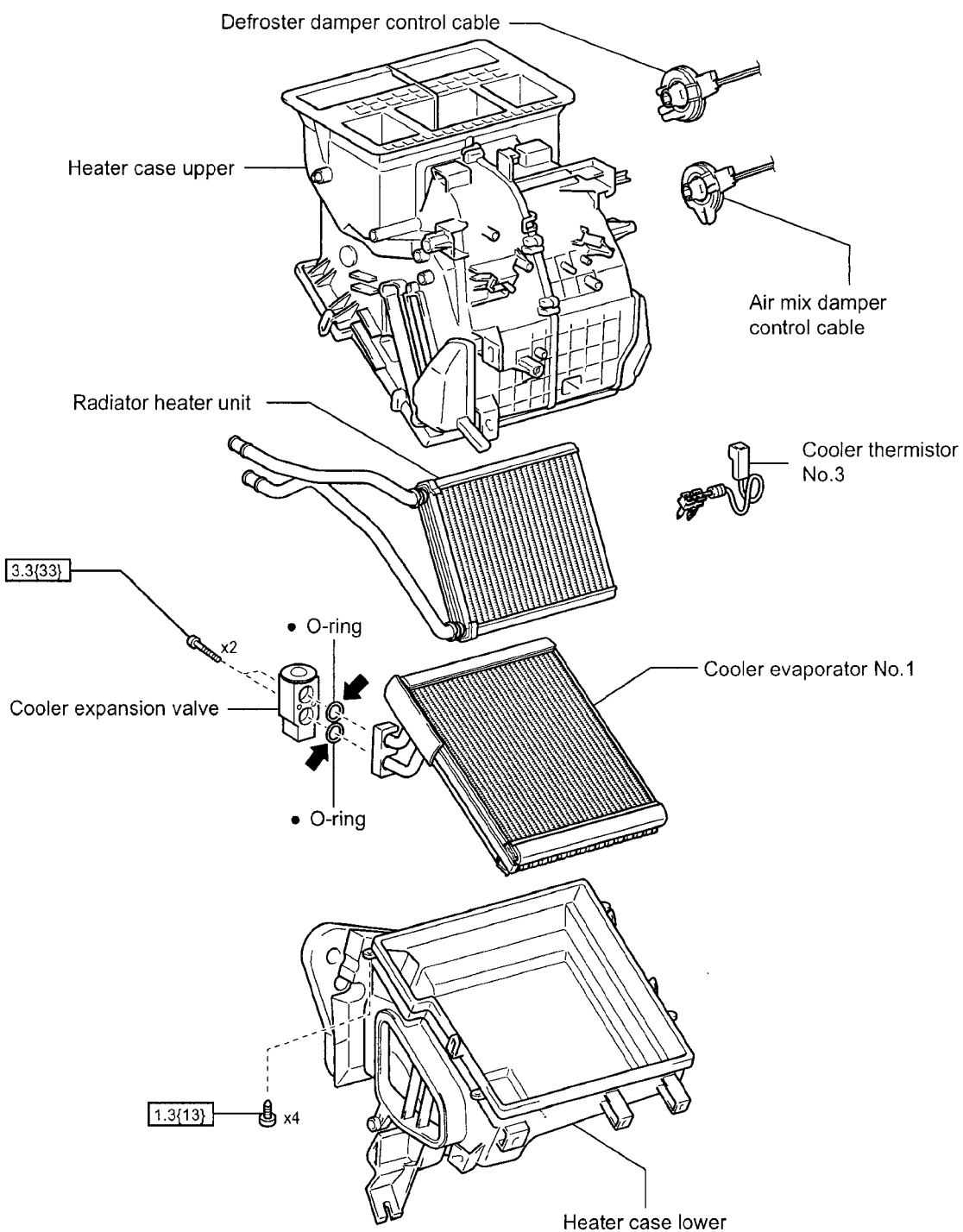




$\boxed{\text{N}\cdot\text{m}\{\text{kgf}\cdot\text{cm}\}}$: Specified torque

• Non-reusable part

◀ Apply compressor oil ND-OIL8



[N*m (kgf*cm)] : Specified torque

• Non-reusable part

◀ Apply compressor oil ND-OIL 8

REMOVAL

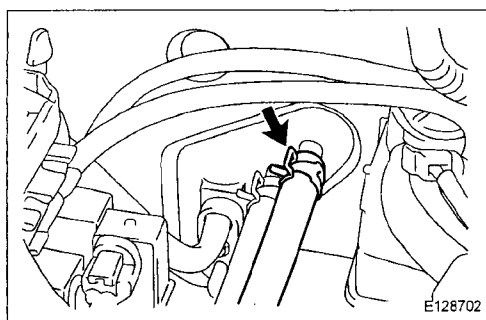
<WARNING>

This maintenance work may affect the SRS air bag system. Before starting the work, be sure to check the notes on the SRS air bag system.

(See page 55-214)

1. Refrigerant HFC-134a (R134a) evacuate (with Air conditioning system) (See page 52-40)
2. Battery minus terminal disconnection
3. Cooling fluid drainage (See page 12-6)
4. Glove compartment door OUT removal (See page 78-15)
5. Glove compartment door stopper removal (See page 78-15)
6. Instrument panel undercover No. 1 removal (See page 78-15)
7. Console panel removal (See page 78-15)
8. Shift lever knob removal (for Manual transmission) (See page 78-16)
9. Console box carpet removal (4WD) (See page 78-16)
10. Console box carpet removal (FF) (See page 78-16)
11. Rear console box removal (See page 78-16)
12. Console box assembly removal (4WD) (See page 78-16)
13. Console box assembly removal (FF) (See page 78-16)
14. Instrument panel box CTR removal (See page 78-17)
15. Front ash receptacle assembly removal (See page 78-17)
16. Instrument panel finish panel LWR CTR removal (See page 78-17)
17. Instrument cluster finish panel LWR CTR removal (See page 52-44)
18. Air mix damper control cable disconnection (See page 52-44)
19. Defroster damper control cable disconnection (See page 52-44)
20. Air inlet damper control cable disconnection (See page 52-45)
21. Instrument panel center box removal (with Air bag cutoff switch) (See page 78-18)
22. Instrument panel center box removal (without Air bag cutoff switch) (See page 78-18)
23. Instrument cluster finish panel CTR removal (See page 78-18)
24. Radio tuner opening cover removal (without Radio receiver) (See page 78-19)
25. Stereo component tuner assembly removal (with Radio receiver) (See page 64-27)
26. Instrument panel speaker panel No. 1 removal (See page 78-19)
27. Instrument panel speaker panel No. 2 removal (See page 78-19)
28. Speaker assembly FR No. 2 removal (6-speaker vehicle) (See page 78-19)
29. Instrument cluster finish panel removal (See page 78-19)
30. Combination meter assembly removal (See page 63-39)
31. Front door scuff plate RH removal (See page 83-14)
32. Front door scuff plate LH removal (See page 83-14)
33. Cowl side trim board RH removal (See page 83-15)
34. Cowl side trim LH removal (See page 83-15)
35. Front door opening trim weather strip assembly RH removal (See page 83-18)
36. Front door opening trim weather strip assembly LH removal (See page 83-19)
37. Front pillar garnish RH removal (without Curtain shield airbag) (See page 83-21)
38. Front pillar garnish LH removal (without Curtain shield airbag) (See page 83-22)
39. Front pillar garnish RH removal (with Curtain shield airbag) (See page 83-22)
40. Front pillar garnish LH removal (with Curtain shield airbag) (See page 83-23)
41. Instrument panel UPR removal (RH) (See page 78-20)
42. Instrument panel UPR removal (LH) (See page 78-20)
43. Instrument panel finish panel LWR removal (See page 78-22)

44. Bonnet (hood) lock control lever disconnection (See page 78-22)
45. Horn button assembly removal (See page 55-218)
46. Steering wheel assembly removal (See page 48-5)
47. Steering column lower cover removal (See page 48-5)
48. Upper Cover of Steering Column removal (See page 48-5)
49. Head lamp dimmer switch assembly removal (See page 60-60)
50. Window shield wiper switch assembly removal (See page 161-28)
51. Steering column hole cover No. 1 removal (See page 48-6)
52. Sliding yoke removal (See page 48-6)
53. Steering column assembly removal (See page 48-7)
54. Engine control computer removal (See page 78-22)
55. Instrument panel removal (See page 78-23)

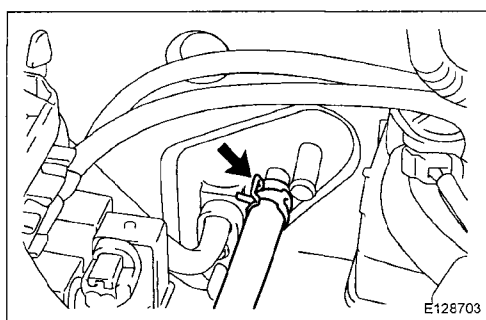


56. Heater inlet water hose disconnection

- (1) Loosen the heater water hose clip and disconnect the heater inlet water hose.

<CAUTION>

Wind vinyl tape around the fitting of the heater inlet water hose that has been disconnected, and that of the unit to prevent penetration of dust, water or suchlike.

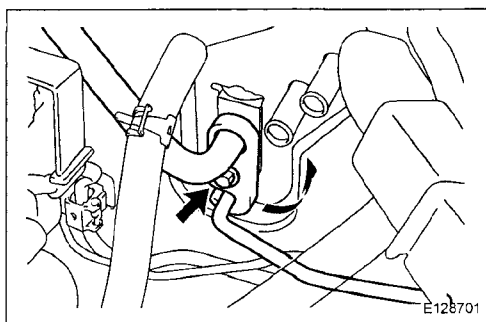


57. Heater outlet water hose removal

- (1) Loosen the heater water hose clip and disconnect the heater outlet water hose.

<CAUTION>

Wind vinyl tape around the fitting of the heater outlet water hose that has been disconnected, and that of the unit to prevent penetration of dust, water or suchlike.



58. Cooler refrigerant suction hose No. 1 disconnection (with Air conditioning system)

- (1) Remove the bolt and turn the hook connector counterclockwise.
- (2) Disconnect the cooler refrigerant suction hose No. 1.
- (3) Remove the O-ring from the cooler refrigerant suction hose No. 1.

<CAUTION>

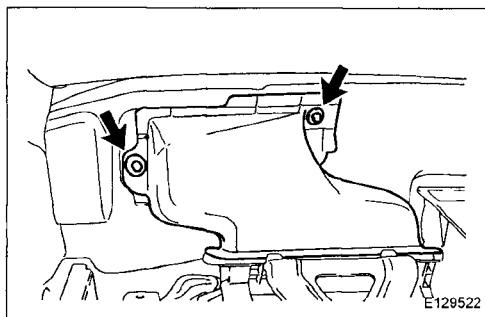
Wind vinyl tape around the fitting of the cooler refrigerant suction hose No. 1 that has been disconnected, and that of the unit to prevent penetration of dust, water or suchlike.

59. Cooler refrigerant liquid pipe A disconnection (with Air conditioning system)

- (1) Disconnect cooler refrigerant liquid pipe A.
- (2) Remove the O-ring from cooler refrigerant liquid pipe A.

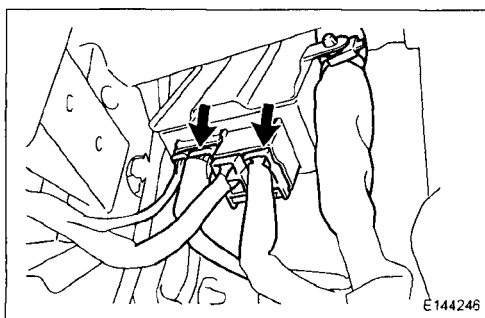
<CAUTION>

Wind vinyl tape around the fitting of the cooler refrigerant liquid pipe A that has been disconnected, and that of the unit to prevent penetration of dust, water or suchlike.



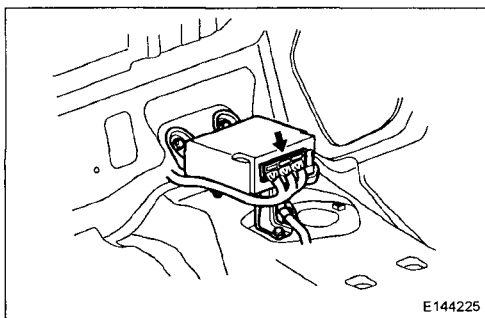
60. Air duct removal

- (1) Remove two bolts and remove the air duct.



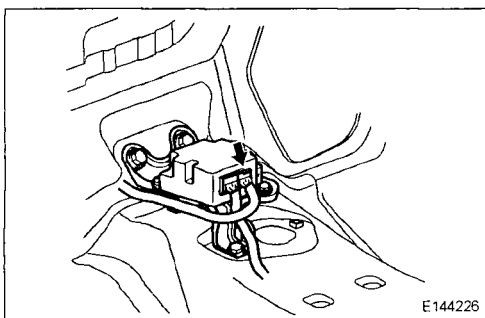
61. Power steering computer assembly disconnection

- (1) Disconnect the connector of the power steering computer assembly.



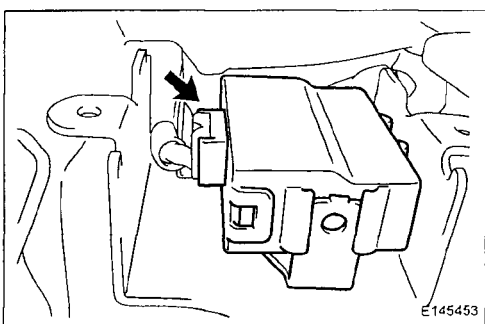
62. Airbag computer assembly disconnection (with Side and curtain shield airbag)

- (1) Disconnect the connector of the air bag computer assembly.



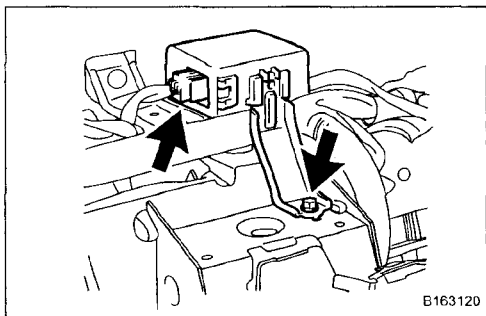
63. Airbag computer assembly disconnection (without Side and curtain shield airbag)

- (1) Disconnect the connector of the air bag computer assembly.



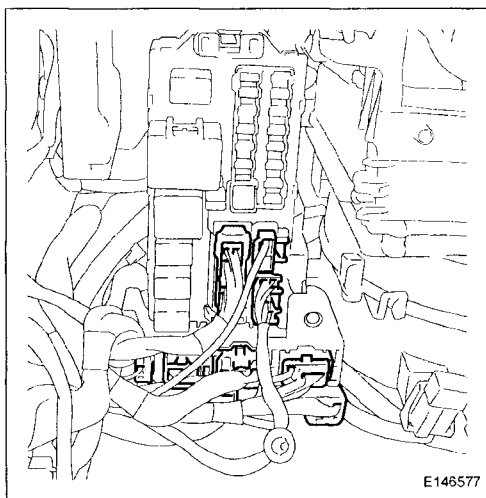
64. Immobilizer code computer disconnection

- (1) Disconnect the connector of the immobilizer code computer.



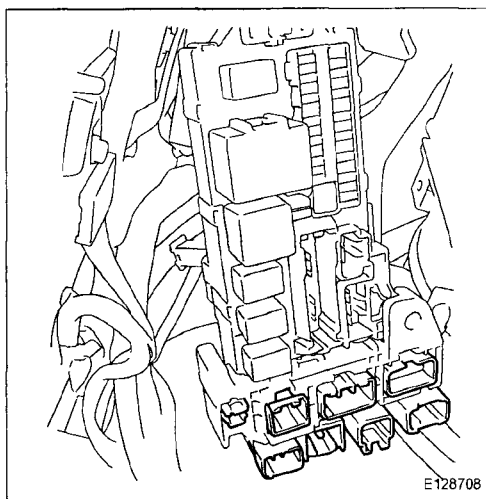
65. Door control receiver removal

- (1) Disconnect the connector of the door control receiver.
- (2) Remove the bolt and remove the door control receiver.



66. Fuse block assembly removal

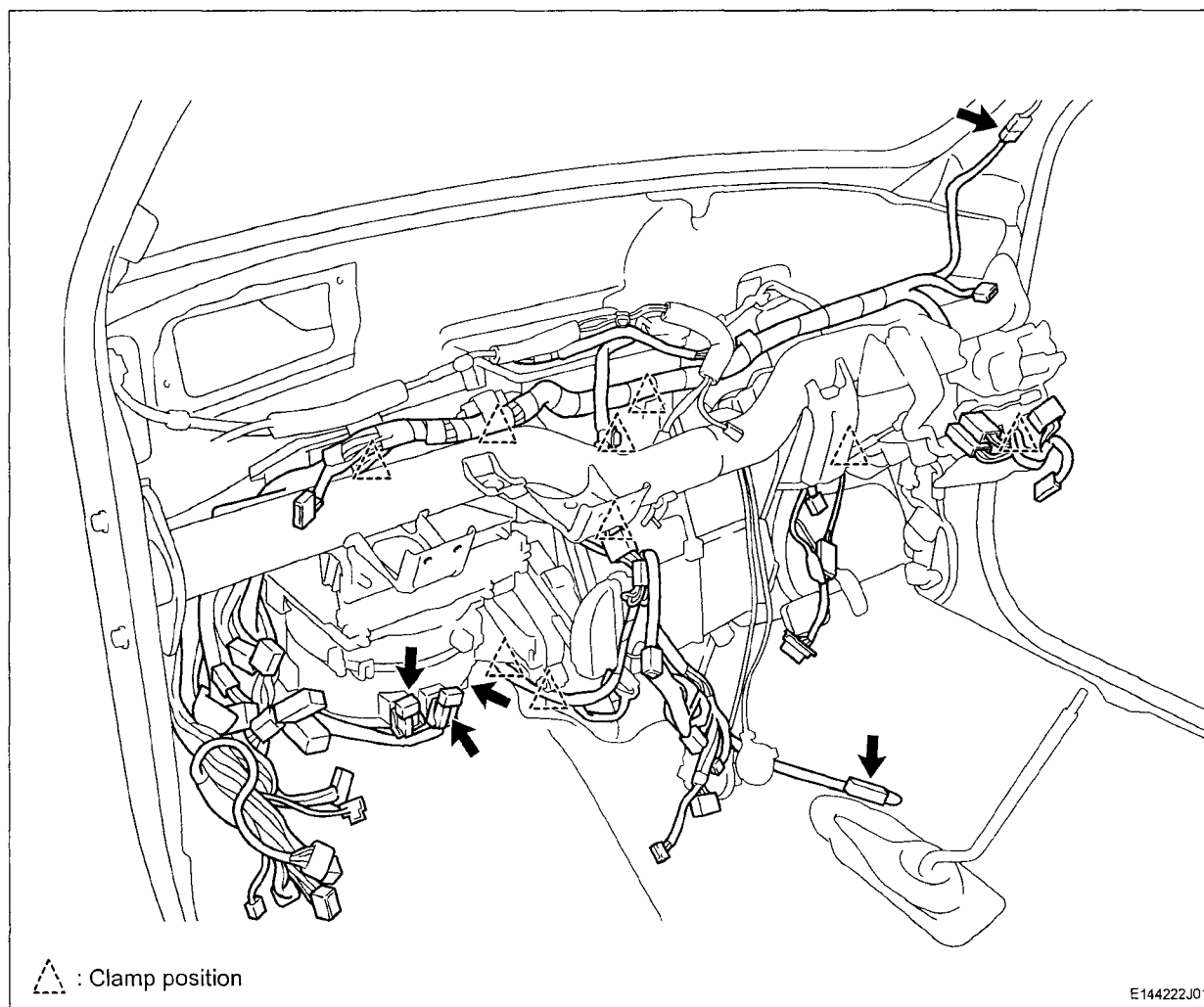
- (1) Disconnect each connector of the fuse block assembly.



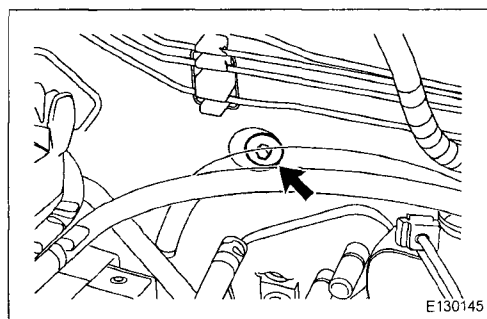
- (2) Disconnect the connector from the connector holder.
- (3) Remove a tab fitting and remove the fuse block assembly.

67. Instrument panel reinforcement removal

- (1) Disconnect each clamp and connector and remove the wire harness.



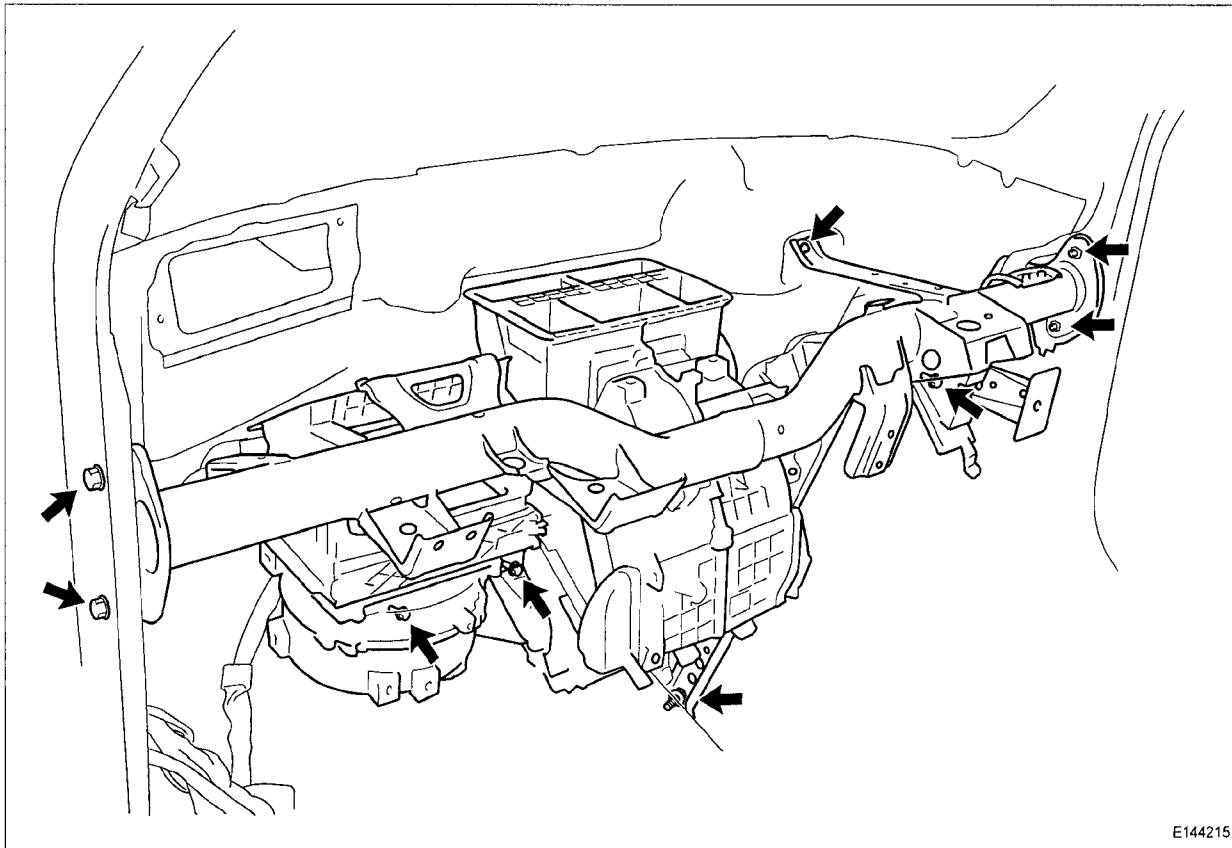
(2) Remove the bolt in the engine room.



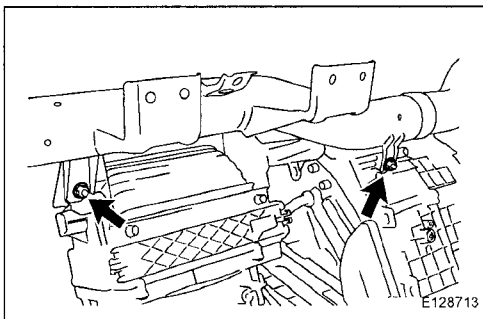
(3) Disconnect cooler unit drain hose No. 1.

(4) Remove nine bolts and then set of the instrument panel reinforcement and the air conditioner unit assembly.

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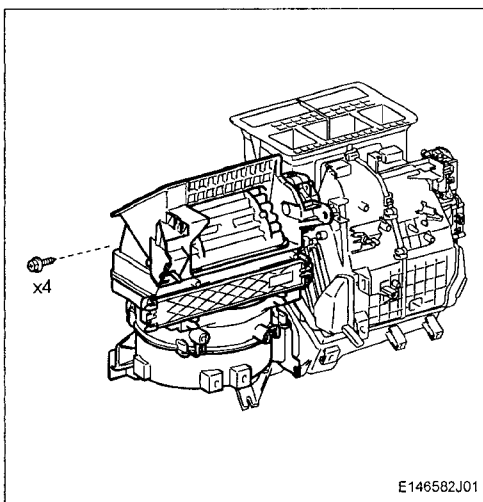


(5) Remove two nuts and then the air conditioner unit assembly.

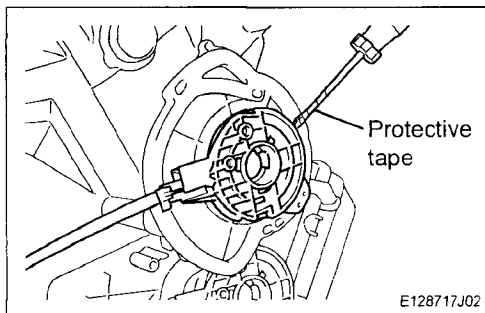


68. Air conditioner blower assembly removal

(1) Remove four screws and then the air conditioner blower assembly.

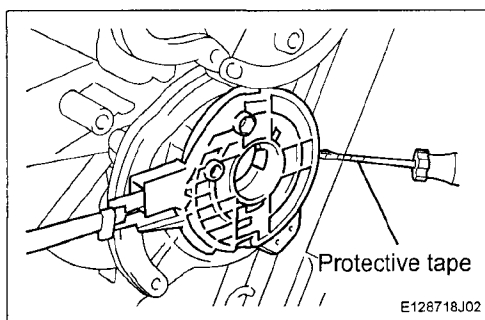


DISASSEMBLY



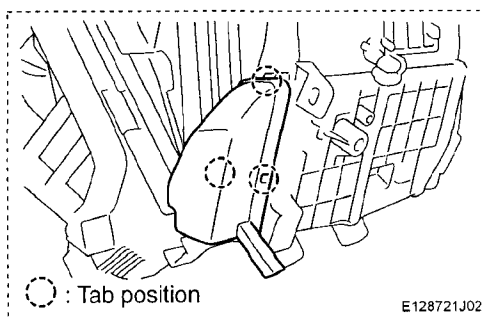
1. Defroster damper control cable removal

- (1) Use a flathead screwdriver wrapped with a protective tape to remove the fittings of tab and remove the defroster damper control cable.



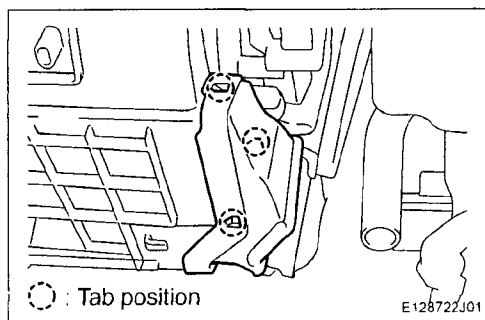
2. Air mix damper control cable removal

- (1) Use a flathead screwdriver wrapped with a protective tape to remove the fittings of tab and remove the air mix damper control cable.



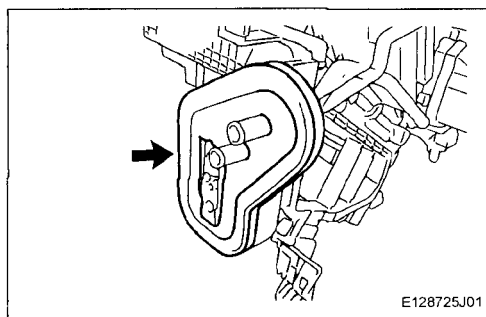
3. Air duct No. 1 removal

- (1) Remove the fittings of the tabs in three locations and remove air duct No. 1.

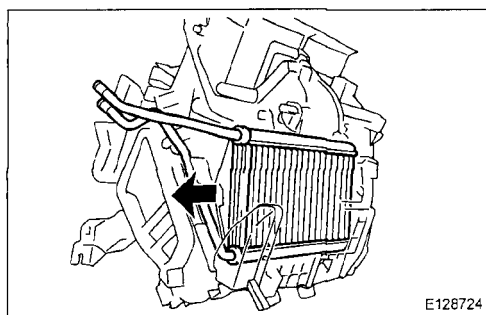


4. Air duct No. 2 removal

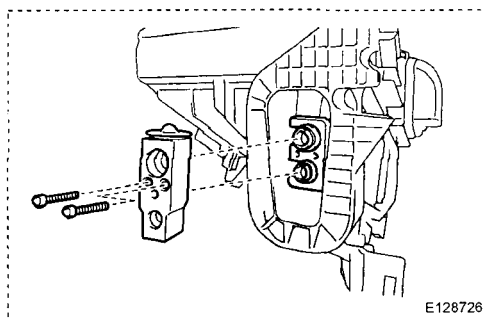
- Remove the fittings of the tabs in three locations and remove air duct No. 2.



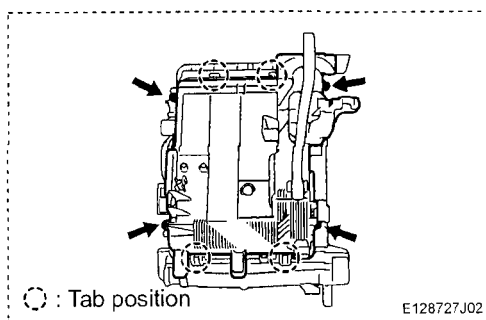
5. Cooler plate removal
 - (1) Remove the cooler plate.



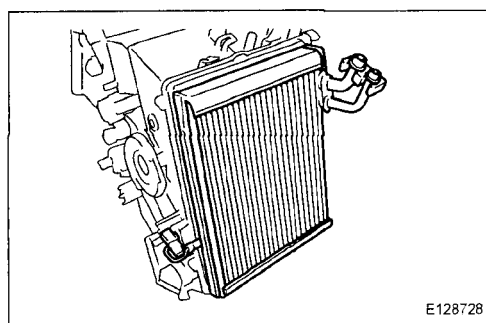
6. Radiator heater unit removal
 - (1) Remove the radiator heater unit from the air conditioner radiator assembly.



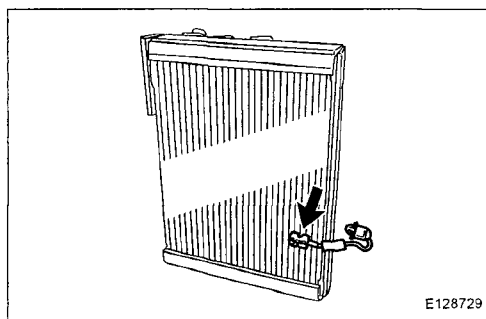
7. Cooler expansion valve removal (with Air conditioning system)
 - (1) Use a two-side, 4 mm hexagon wrench to remove two hexagon bolts and remove the cooler expansion valve.
 - (2) Remove two O-rings from cooler evaporator No. 1.



8. Cooler evaporator No. 1 removal (with Air conditioning system)
 - (1) Remove four screws.
 - (2) Remove the fittings of the tabs in four locations and remove the heater case lower.



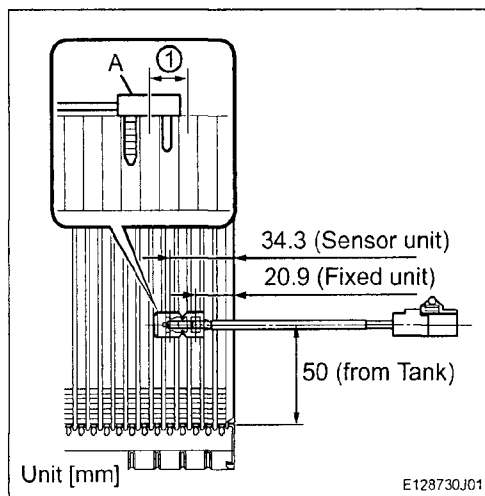
- (3) Remove set of cooler thermistor No. 3 and cooler evaporator No. 1.



9. Cooler thermistor No. 3 removal (with Air conditioning system)
 - (1) Remove cooler thermistor No. 3 from cooler evaporator No. 1.

52

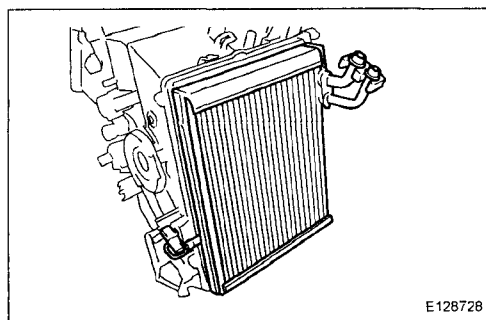
REASSEMBLY



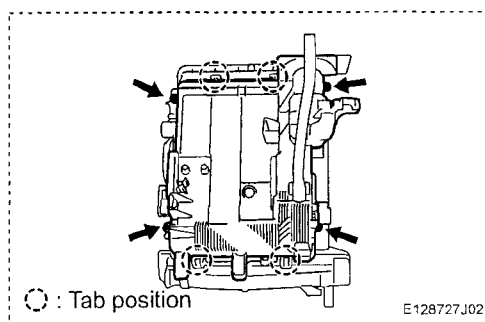
1. Cooler thermistor No. 3 installation (with Air conditioning system)
 - (1) Attach new cooler thermistor No. 3 at the position shown in the diagram.

<CAUTION>

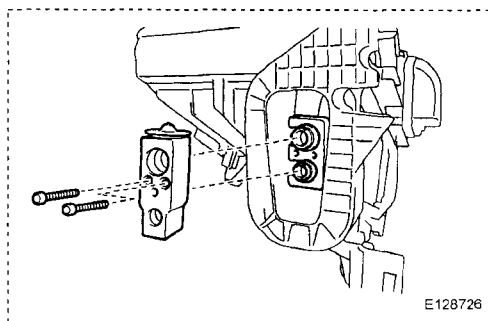
 - > Insert the thermistor only once; otherwise, the holding force of the thermistor will drop.
 - > Insert the thermistor to the evaporator at a position one row next to the existing trace of insertion (at the left or the right) (in a range of <1>).
 - > After inserting the thermistor, do not apply excessive force to the lead wire.
 - > Insert the thermistor straight until the edge of resin case A contacts the edge of the evaporator.



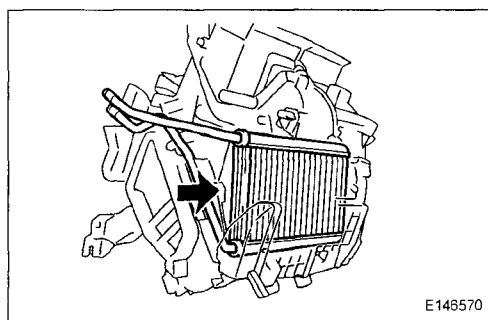
2. Cooler evaporator No. 1 installation (with Air conditioning system)
 - (1) Attach set of cooler thermistor No. 3 and cooler evaporator No. 1.



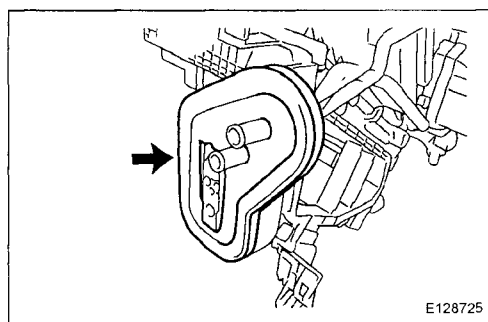
- (2) Fit four tabs and attach the heater case lower.
 - (3) Use four screws to attach cooler evaporator No. 1.



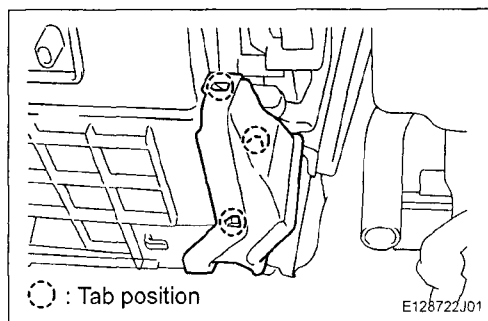
3. Cooler expansion valve installation (with Air conditioning system)
 - (1) Apply a sufficient amount of compressor oil (ND-OIL8) to two new O-rings and the fitting of the cooler expansion valve.
 - (2) Attach two O-rings to cooler evaporator No. 1.
 - <CAUTION>
Do not allow dust to collect on the O-rings and O-ring sealing.
 - (3) Attach the cooler expansion valve to cooler evaporator No. 1.
 - (4) Use a two-side, 4-mm hexagon wrench to attach the cooler expansion valve with two hexagon bolts.
Specified value: $T=3.3N \cdot m$ {33kgf*cm}



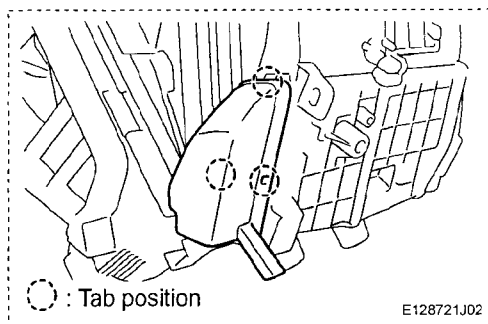
4. Radiator heater unit installation
 - (1) Attach the radiator heater unit to the air conditioner radiator assembly.



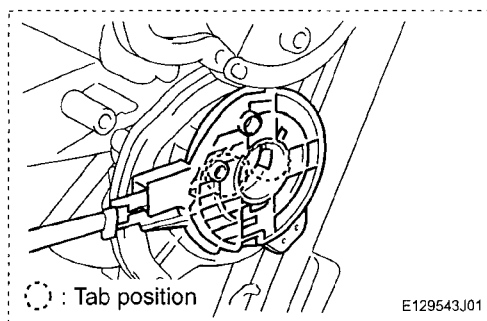
5. Cooler plate installation
 - (1) Insert and attach the cooler plate.



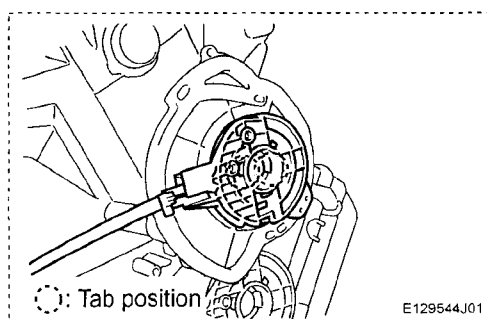
6. Air duct No. 2 installation
 - (1) Fit three tabs and attach air duct No. 2.



7. Air duct No. 1 installation
 - (1) Fit three tabs and attach air duct No. 1.

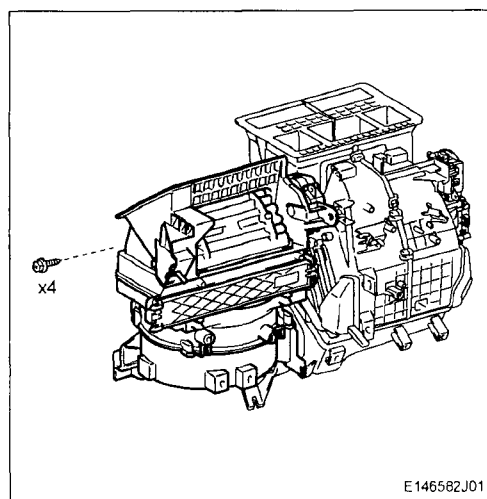


8. Air mix damper control cable installation
 - (1) Fit the tab and attach the air mix damper control cable.

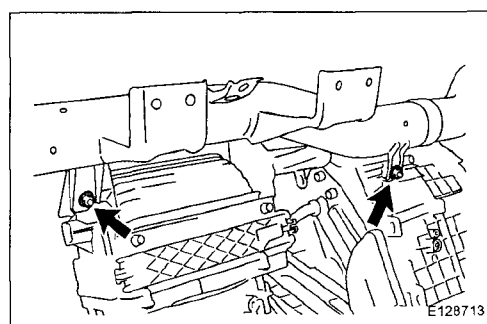


9. Defroster damper control cable installation
 - (1) Fit the tab and attach the defroster damper control cable.

INSTALLATION

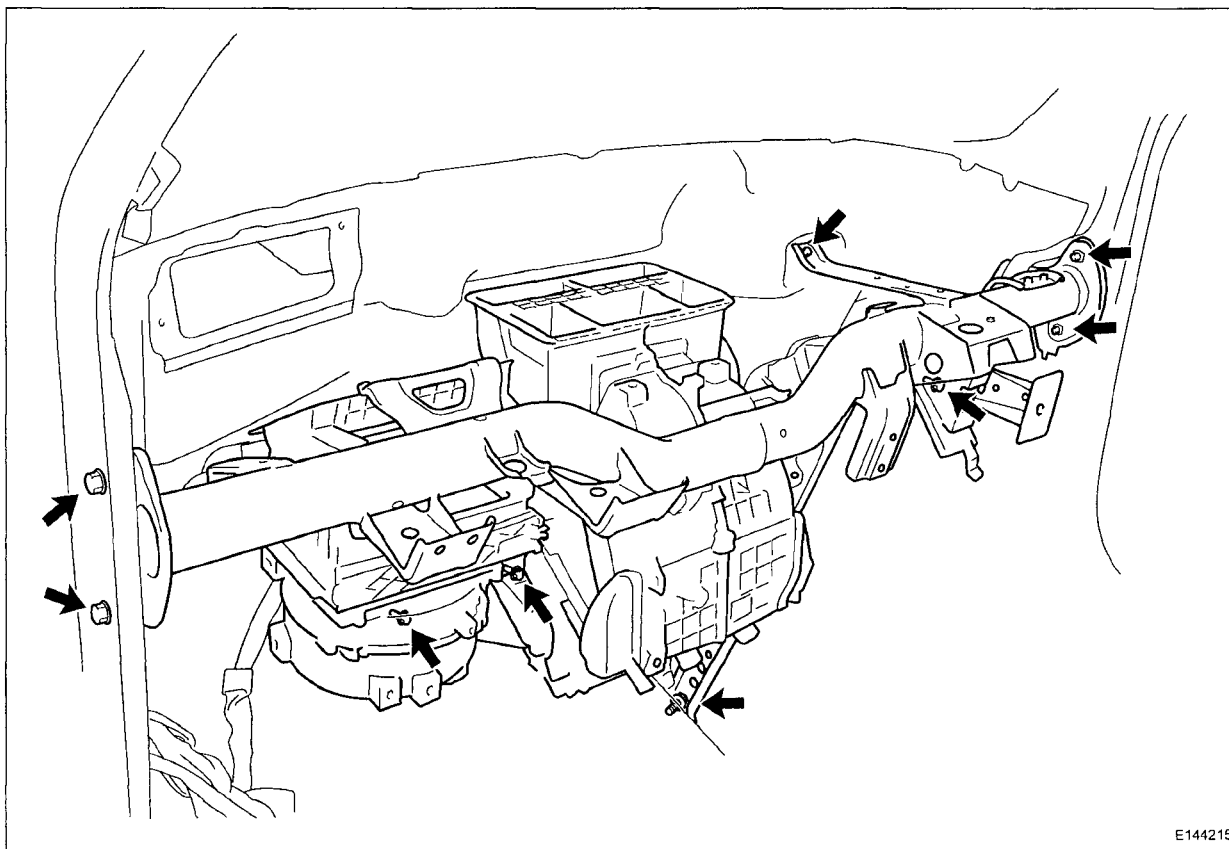


1. Air conditioner blower assembly installation
 - (1) Use four screws to attach the air conditioner blower assembly.



2. Instrument panel reinforcement installation
 - (1) Use two nuts to attach the air conditioner unit assembly to the instrument panel reinforcement.
 - (2) Use nine bolts to attach the instrument panel reinforcement and air conditioner unit assembly.

52



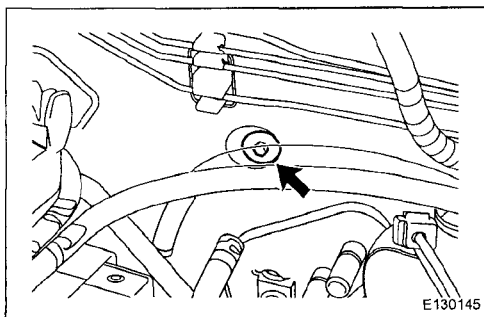
- (3) Connect cooler unit drain hose No. 1.

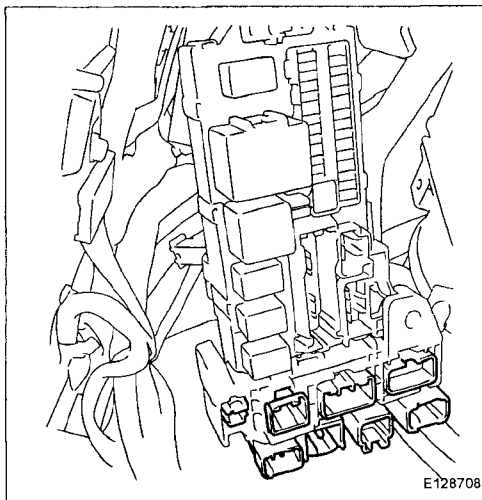
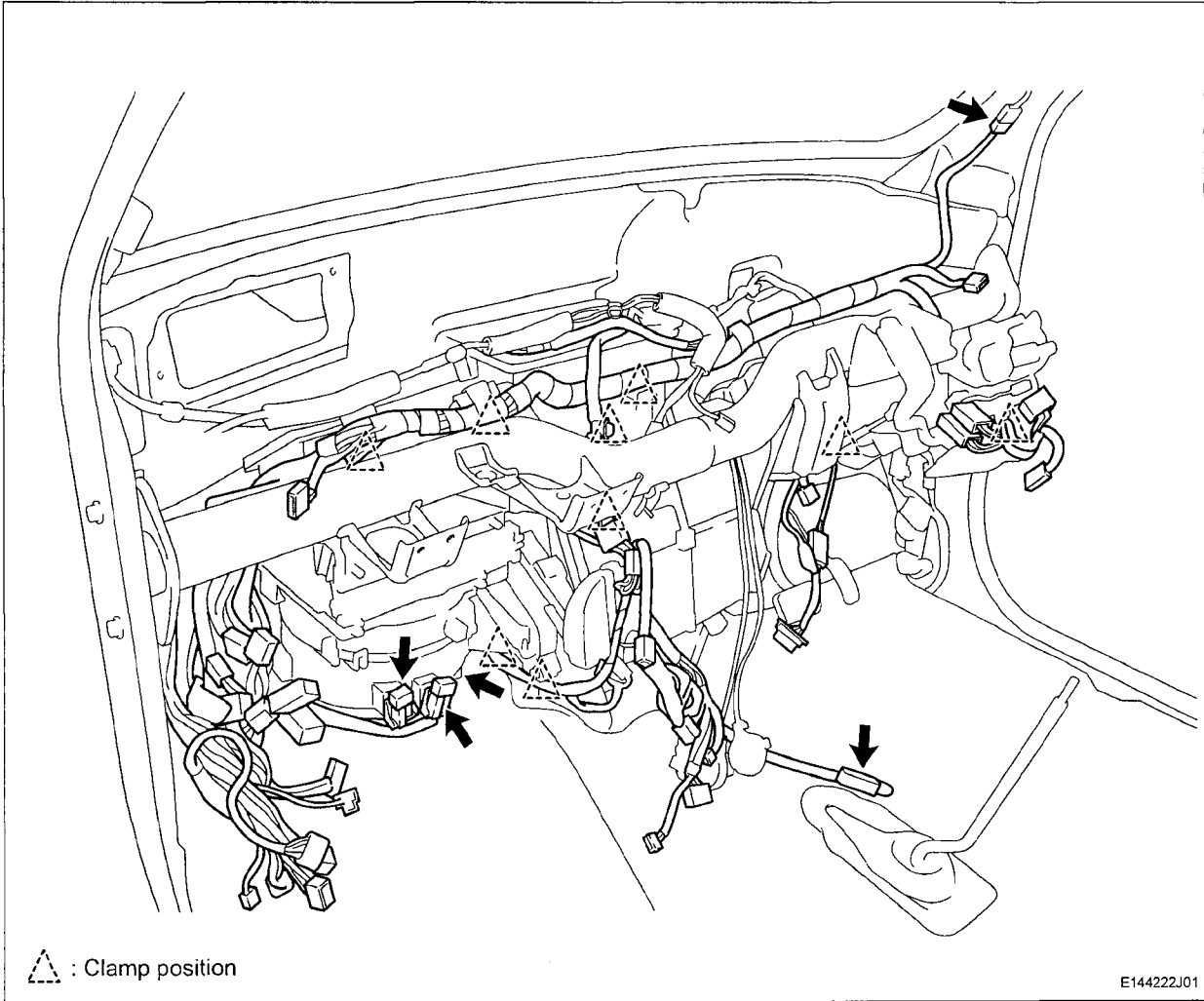
<CAUTION>

Do not attach the drain hose twisted.

- (4) Attach the bolt in the engine room.

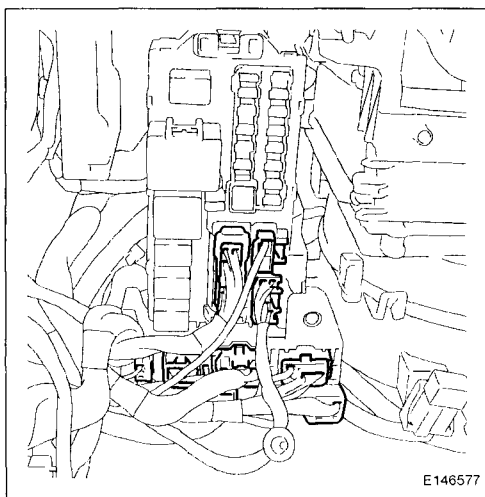
- (5) Connect each clamp and connector and attach the wire harness.



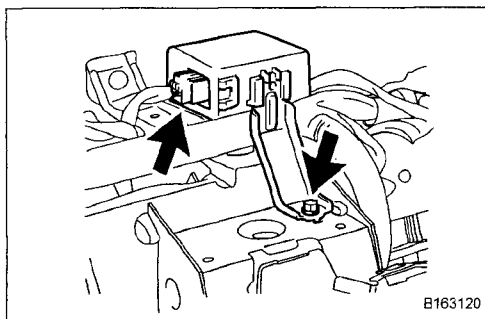


3. Fuse block assembly installation

- (1) Fit the tab and attach the fuse block assembly.
- (2) Connect the connector to the connector holder.

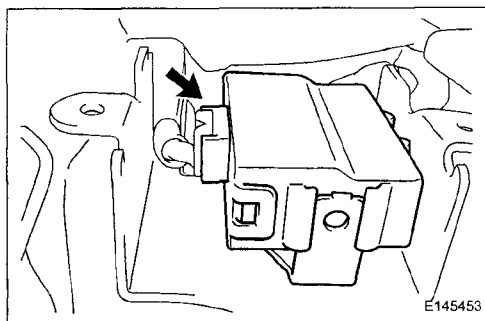


(3) Connect each connector to the fuse block assembly.



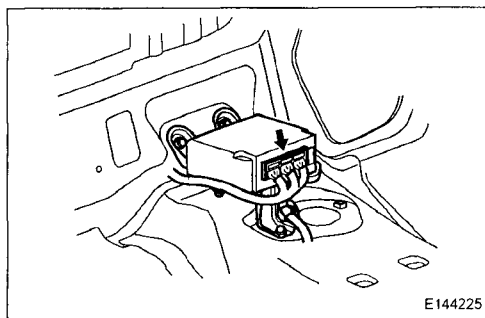
4. Door control receiver connection

- (1) Attach the door control receiver to the reinforcement with a bolt.
- (2) Connect the connector to the door control receiver.



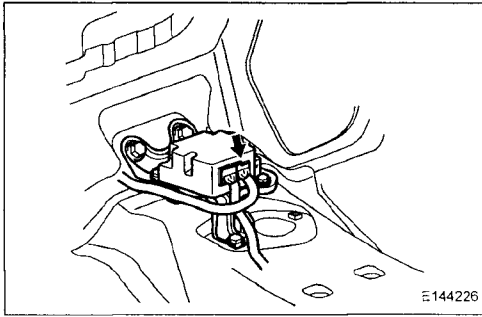
5. Immobilizer code computer connection

- (1) Connect the connector to the immobilizer code computer.



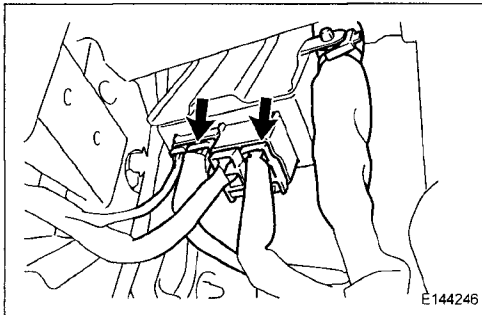
6. Airbag computer assembly connection (with Side and curtain shield airbag)

- (1) Connect the connector to the air bag computer assembly.



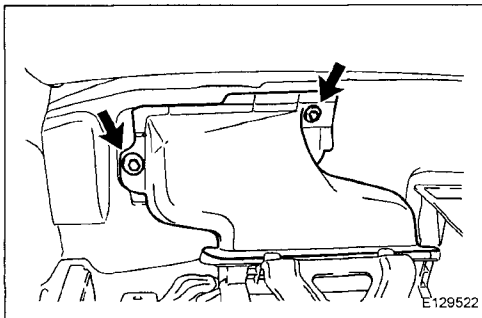
7. Airbag computer assembly installation (without Side and curtain shield airbag)

- (1) Connect the connector to the air bag computer assembly.



8. Power steering computer assembly connection

- (1) Connect the connector to the power steering computer.



9. Air duct installation

- (1) Attach the air duct with two bolts.

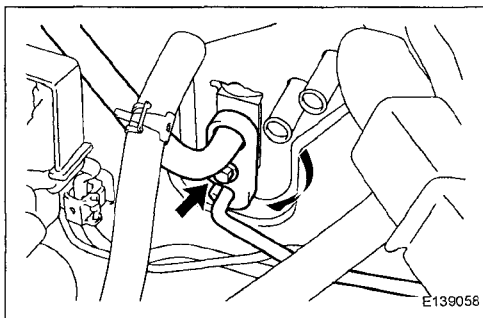
10. Cooler refrigerant liquid pipe A installation (with Air conditioning system)

- (1) Remove the vinyl tape that is wrapped around the fitting of the cooler refrigerant liquid pipe A and unit.
- (2) Apply a sufficient amount of compressor oil (ND-OIL8) to a new O-ring and the fitting of the cooler refrigerant liquid pipe A.
- (3) Attach the O-ring to the cooler refrigerant liquid pipe A.
<CAUTION>
Do not allow dust to collect on the O-rings and O-ring sealing.
- (4) Connect cooler refrigerant liquid pipe A to the unit (push in the pipe until the seal hole securely fits in the axis of the tube joint).

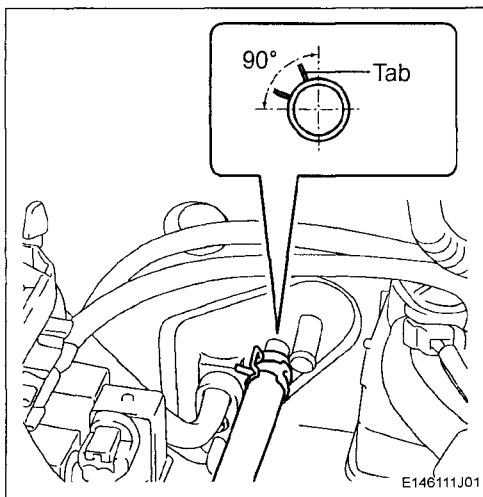
11. Cooler refrigerant suction hose No. 1 installation (with Air conditioning system)

- (1) Remove the vinyl tape that is wrapped around the fitting of cooler refrigerant suction hose No. 1 and unit.
- (2) Apply a sufficient amount of compressor oil (ND-OIL8) to a new O-ring and the fitting of the cooler refrigerant suction hose No. 1.
- (3) Attach the O-ring to the cooler refrigerant suction hose No. 1.
<CAUTION>
Do not allow dust to collect on the O-rings and O-ring sealing.
- (4) Push in the hose until the seal hole securely fits in the axis of the tube joint.

52

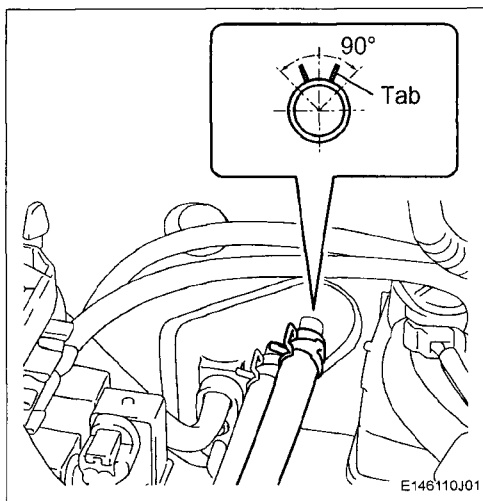


- (5) Rotate the hook connect to the tightening position and tighten the connector with a bolt.
Specified value: $T=9.8\text{N}\cdot\text{m}$ {100kgf*cm}



12. Heater outlet water hose installation

- (1) Connect the heater outlet water hose and attach the heater water hose clip.
<CAUTION>
Do not apply excessive force to the heater outlet water hose.
<HINT>
Attach the heater water hose clip as shown in the diagram.



13. Heater inlet water hose installation

- (1) Connect the heater inlet water hose and attach the heater water hose clip.
<CAUTION>
Do not apply excessive force to the heater inlet water hose.
<HINT>
Attach the heater water hose clip as shown in the diagram.

14. Instrument panel installation (See page 78-29)
15. Engine control computer installation (See page 78-30)
16. Steering column assembly installation (See page 48-9)
17. Sliding yoke installation (See page 48-10)
18. Check the front tire for going straight (See page 48-10)
19. Steering column hole cover No. 1 installation (See page 48-10)
20. Windshield wiper switch assembly installation (See page 61-28)
21. Head lamp dimmer switch assembly installation (See page 60-61)
22. Steering column upper cover installation (See page 48-10)
23. Steering column lower cover installation (See page 48-11)
24. Steering wheel assembly installation (See page 48-11)
25. Check position of steering wheel
26. Horn button assembly installation (See page 55-219)
27. Bonnet (hood) lock control lever installation (See page 78-30)
28. Instrument panel finish panel LWR installation (See page 78-31)
29. Instrument panel UPR installation (RH) (See page 78-31)
30. Instrument panel UPR installation (LH) (See page 78-32)
31. Front pillar garnish RH installation (without Curtain shield airbag) (See page 83-30)
32. Front pillar garnish LH installation (without Curtain shield airbag) (See page 83-31)
33. Front pillar garnish RH installation (with Curtain shield airbag) (See page 83-31)
34. Front pillar garnish LH installation (with Curtain shield airbag) (See page 83-32)
35. Front door opening trim weather strip assembly RH installation (See page 83-35)
36. Front door opening trim weather strip assembly LH installation (See page 83-35)
37. Cowl side trim board RH installation (See page 83-38)
38. Cowl side trim LH installation (See page 83-39)
39. Front door scuff plate RH installation (See page 83-39)
40. Front door scuff plate LH installation (See page 83-39)
41. Combination meter assembly installation (See page 63-40)
42. Instrument cluster finish panel installation (See page 78-33)
43. Speaker assembly FR No. 2 installation (with 6-speakers) (See page 78-33)
44. Instrument panel speaker panel No. 1 installation (See page 78-33)
45. Instrument panel speaker panel No. 2 installation (See page 78-33)
46. Radio tuner opening cover installation (without Radio receiver) (See page 78-33)
47. Stereo component tuner assembly installation (with Radio receiver) (See page 64-28)
48. Instrument cluster finish panel CTR installation (See page 78-34)
49. Instrument panel center box installation (with Air bag cutoff switch) (See page 78-34)
50. Instrument panel center box installation (without Air bag cutoff switch) (See page 78-34)
51. Air inlet damper control cable connection (See page 52-48)
52. Defroster damper control cable connection (See page 52-48)
53. Air mix damper control cable connection (See page 52-48)
54. Instrument cluster finish panel LWR CTR installation (See page 78-34)
55. Instrument panel finish panel LWR CTR installation (See page 78-35)
56. Instrument panel box CTR installation (See page 78-34)
57. Front ash receptacle assembly installation (See page 78-34)
58. Console box assembly installation (4WD) (See page 78-35)
59. Console box assembly installation (FF) (See page 78-35)
60. Rear console box installation (See page 78-36)
61. Console box carpet installation (4WD) (See page 78-36)

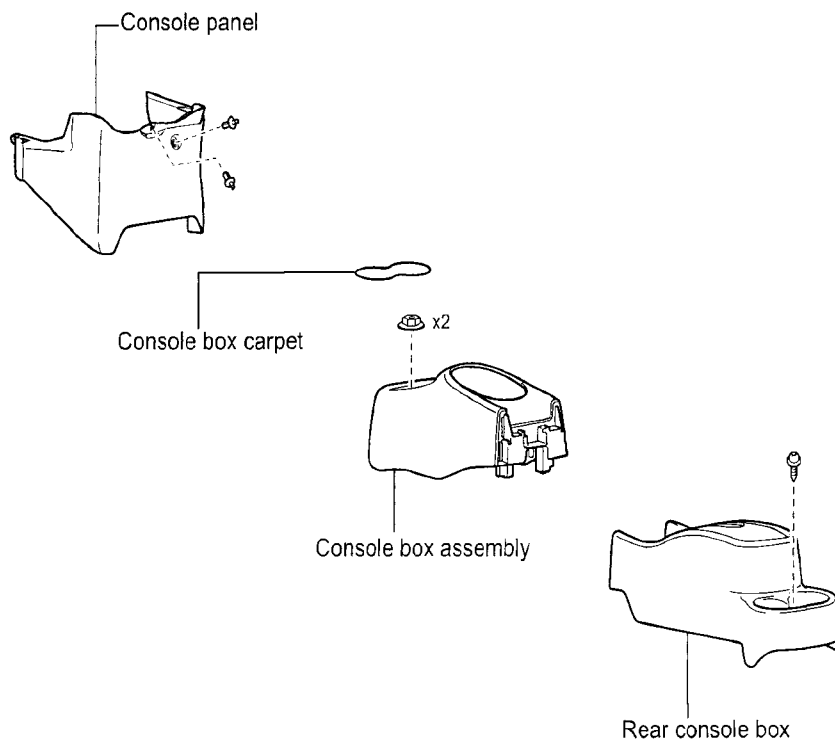
- 62. Console box carpet installation (FF) (See page 78-36)
- 63. Shift lever knob installation (for Manual transaxle) (See page 78-36)
- 64. Console panel installation (See page 78-36)
- 65. Instrument panel undercover No. 1 installation (See page 78-37)
- 66. Glove compartment door stopper installation (See page 78-37)
- 67. Glove compartment door OUT installation (See page 78-37)
- 68. Battery minus terminal connection
Specified value: $T=6.4\text{N}\cdot\text{m}$ {65kgf*cm}
- 69. Cooling fluid replenishment (See page 12-6)
- 70. Warming up engine
- 71. Cooling fluid leakage check (See page 12-6)
- 72. Refrigerant HFC-134a (R134a) filling(with Air conditioning system) (See page 52-40)
- 73. Refrigerant gas leakage check (with Air conditioning system) (See page 52-40)
- 74. Airbag warning lamp check (See page 55-1)
- 75. Initialization of steering zero-point correction signal (See page 48-11)
- 76. Steering zero-point correction (See page 48-11)

AIR CONDITIONER BLOWER ASSEMBLY (RHD)

COMPORNENTS

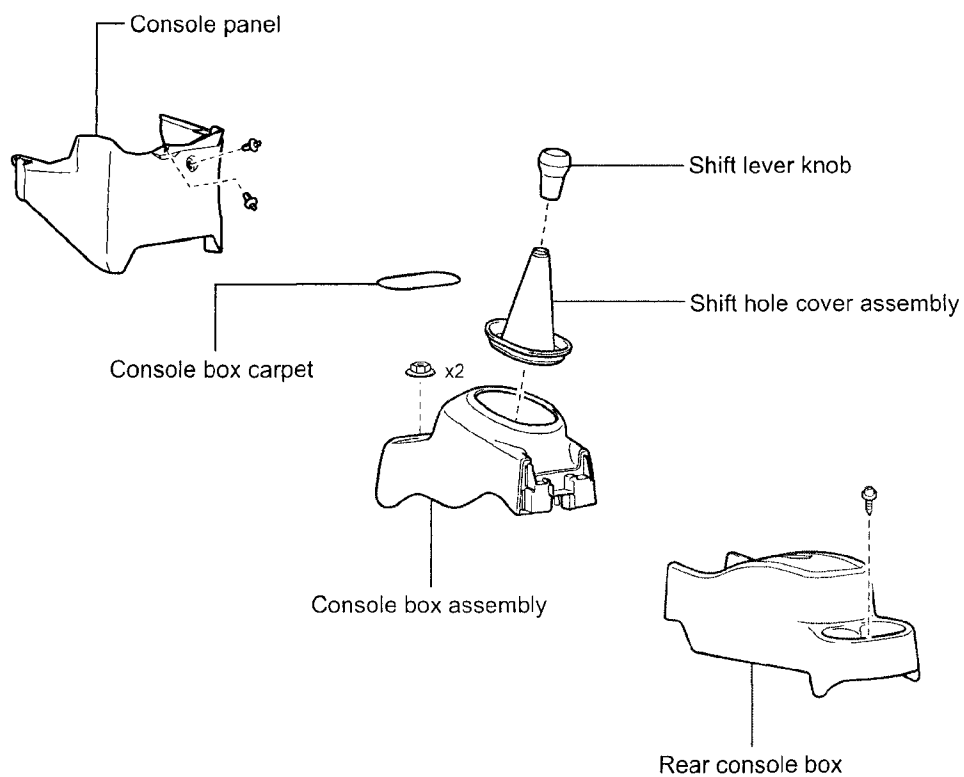
for Automatic Transaxle:

52

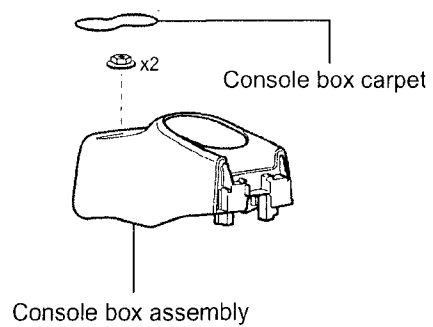


for Manual transaxle:

52

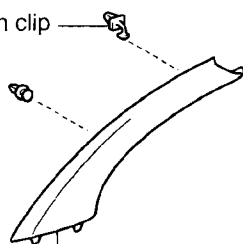


FF:



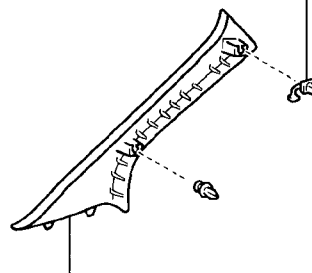
with Curtain shield airbag:

- Front pillar garnish clip

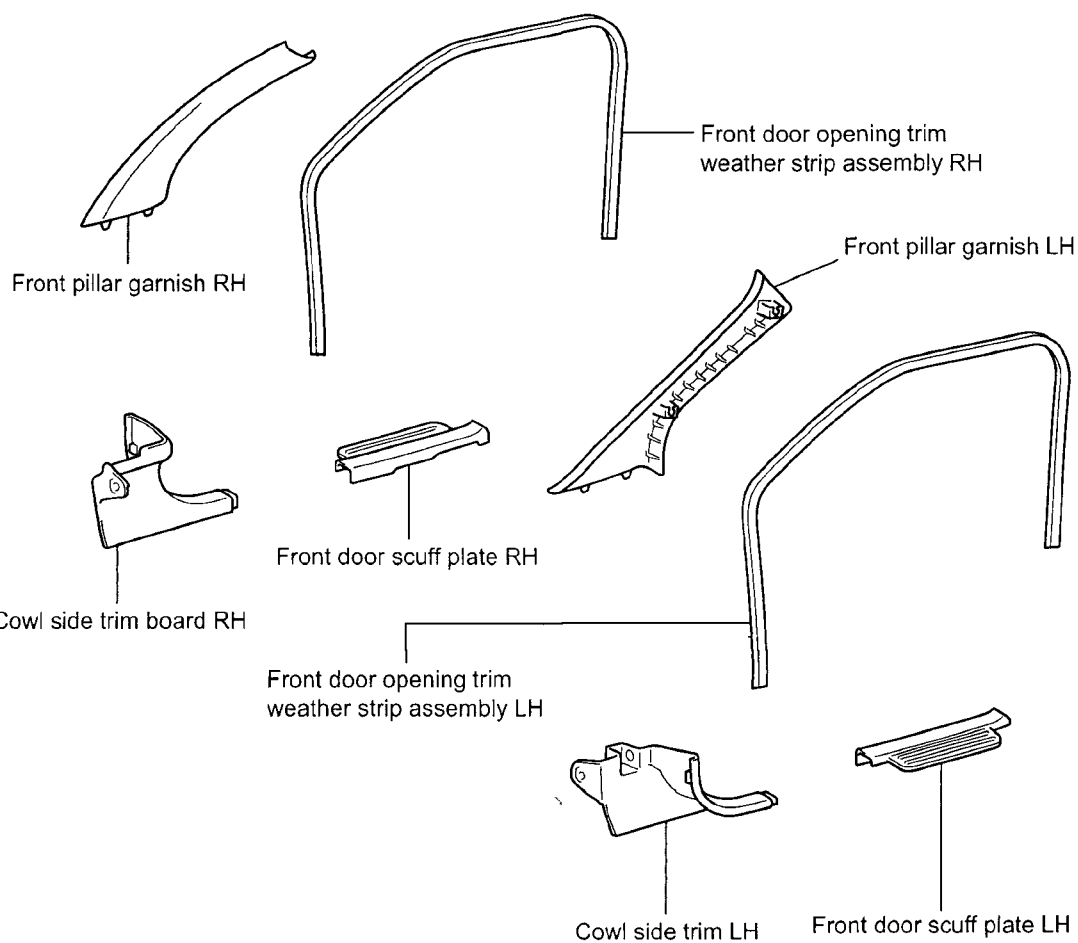


Front pillar garnish RH

- Front pillar garnish clip

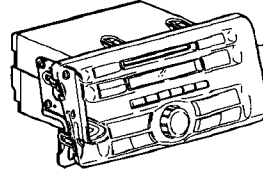


Front pillar garnish LH



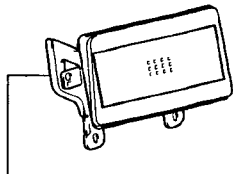
- Non-reusable part

with Radio receiver:

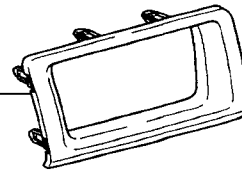


Stereo component tuner assembly

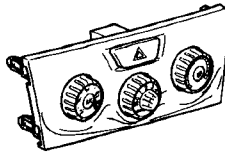
without Radio receiver:



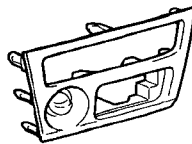
Radio tuner opening cover



Instrument panel cluster
finish panel CTR



Instrument cluster
finish panel LWR CTR



Instrument panel
finish panel LWR CTR



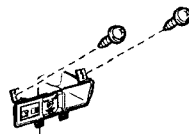
Front ash receptacle
assembly



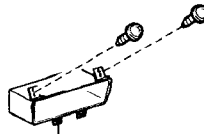
Instrument panel box CTR

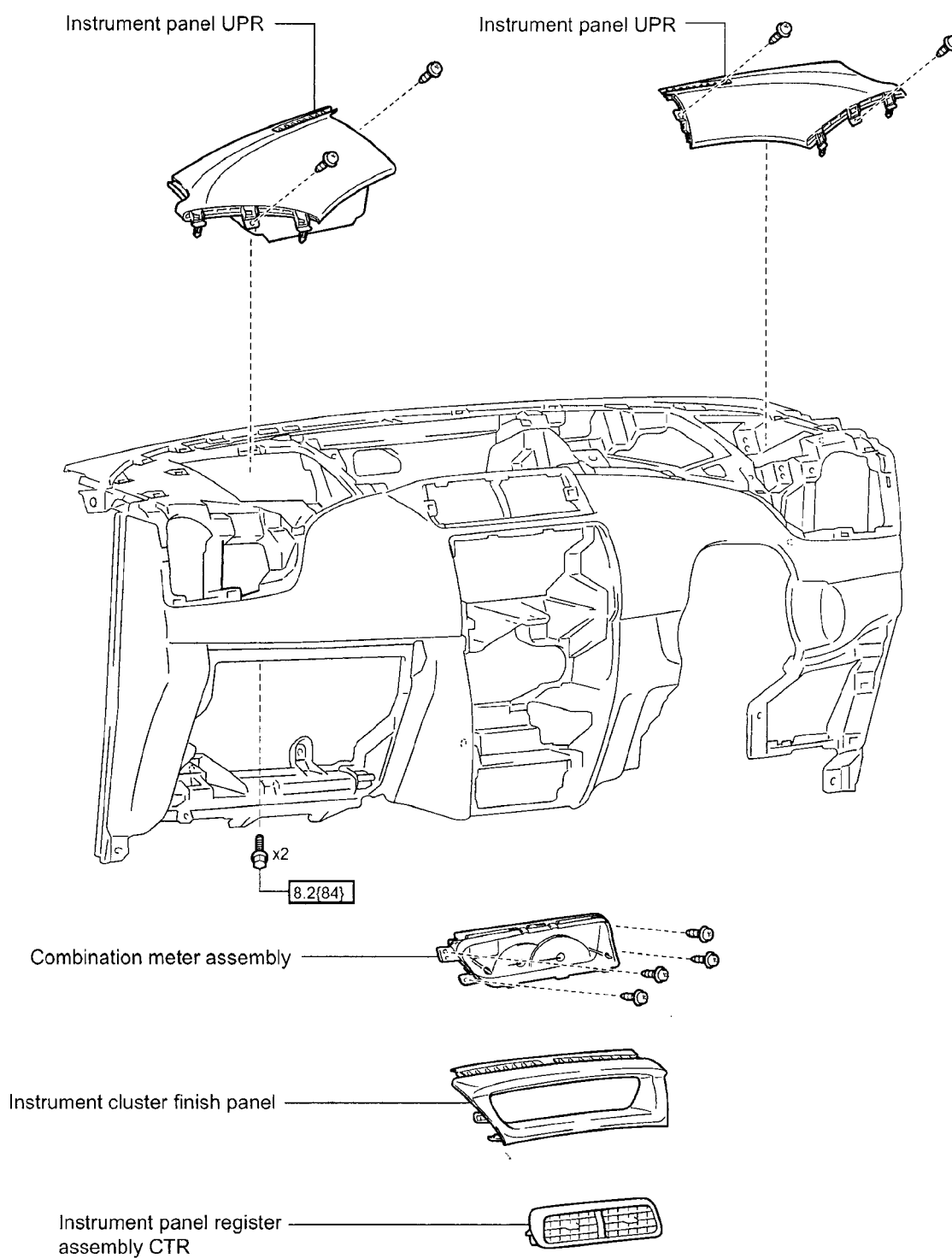
with Airbag cut off switch:

without Airbag cut off switch:



Instrument panel
center box





N*m (kgf*cm) : Specified torque

52

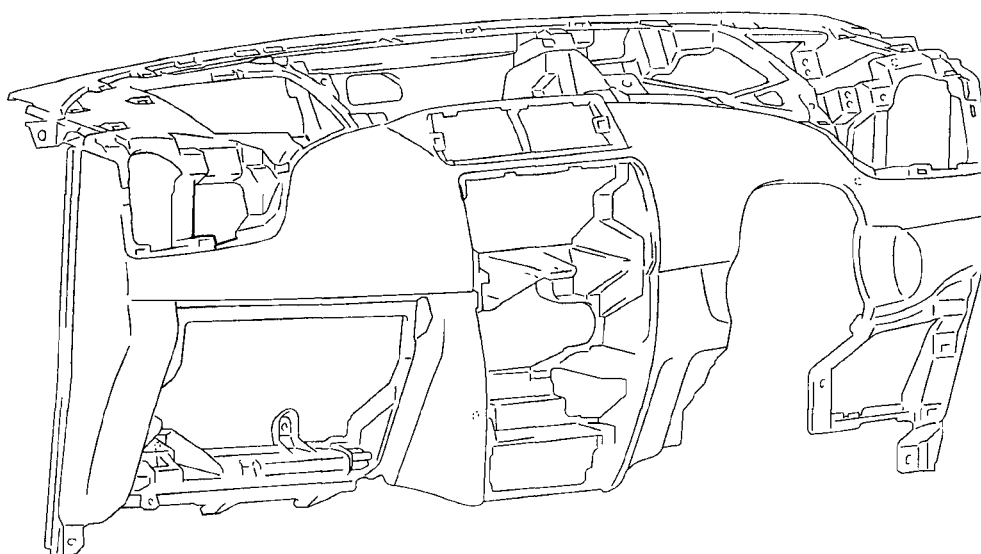


Instrument panel
register assembly No. 1

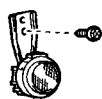
Instrument panel
Speaker panel No. 2

Instrument panel
register assembly No. 1

Instrument panel
Speaker panel No. 1

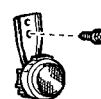


with 6-speakers:

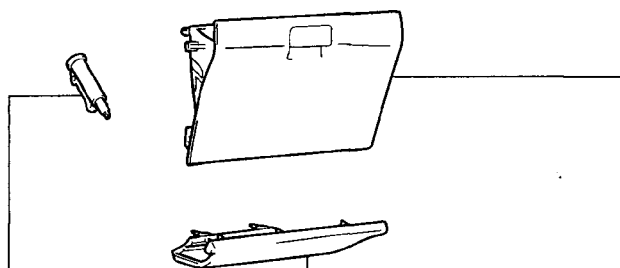


Speaker assembly FR No. 2

with 6-speakers:



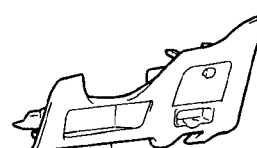
Speaker assembly FR No. 2



Glove compartment
door stopper

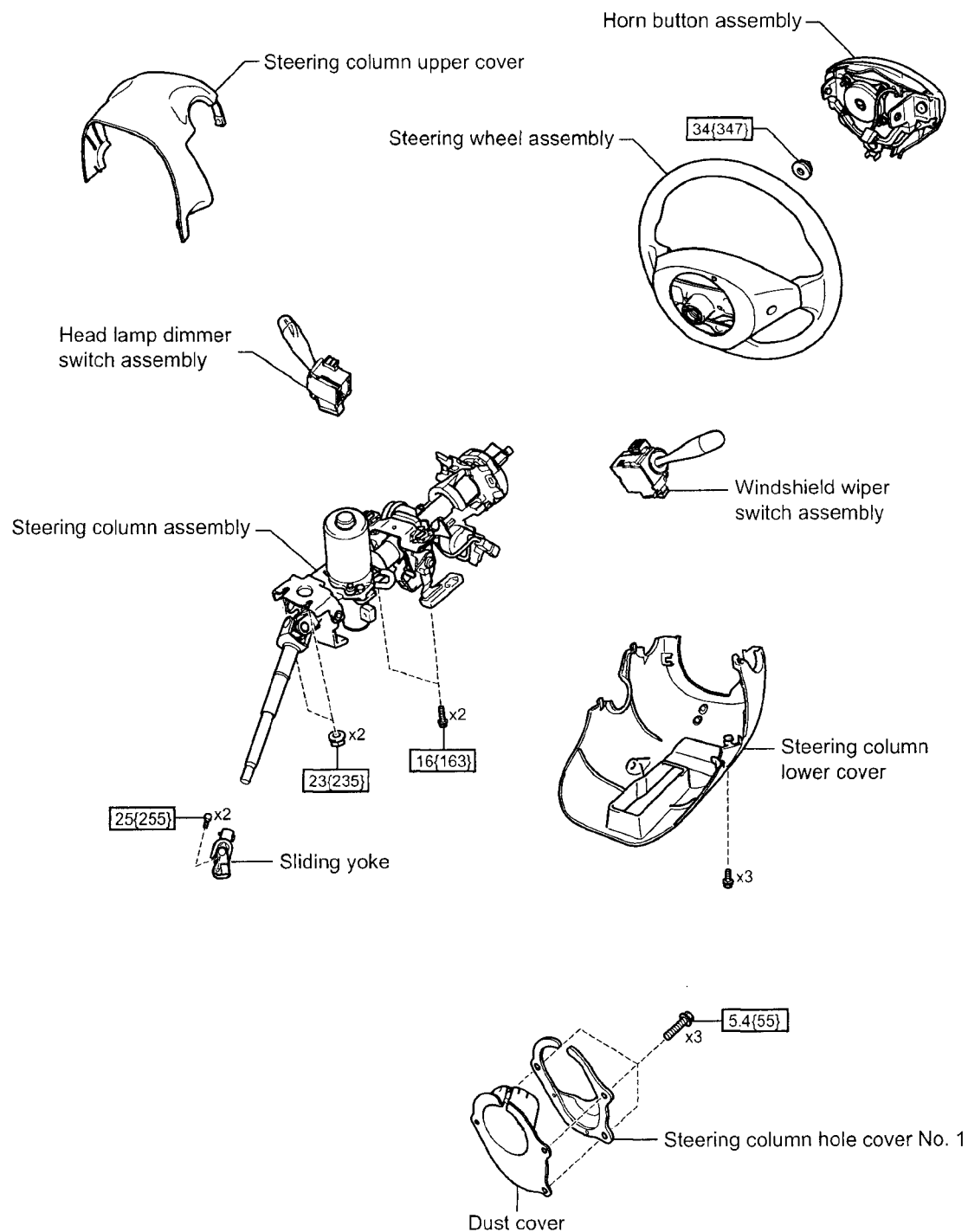
Instrument panel
undercover No. 1

Glove compartment
door OUT



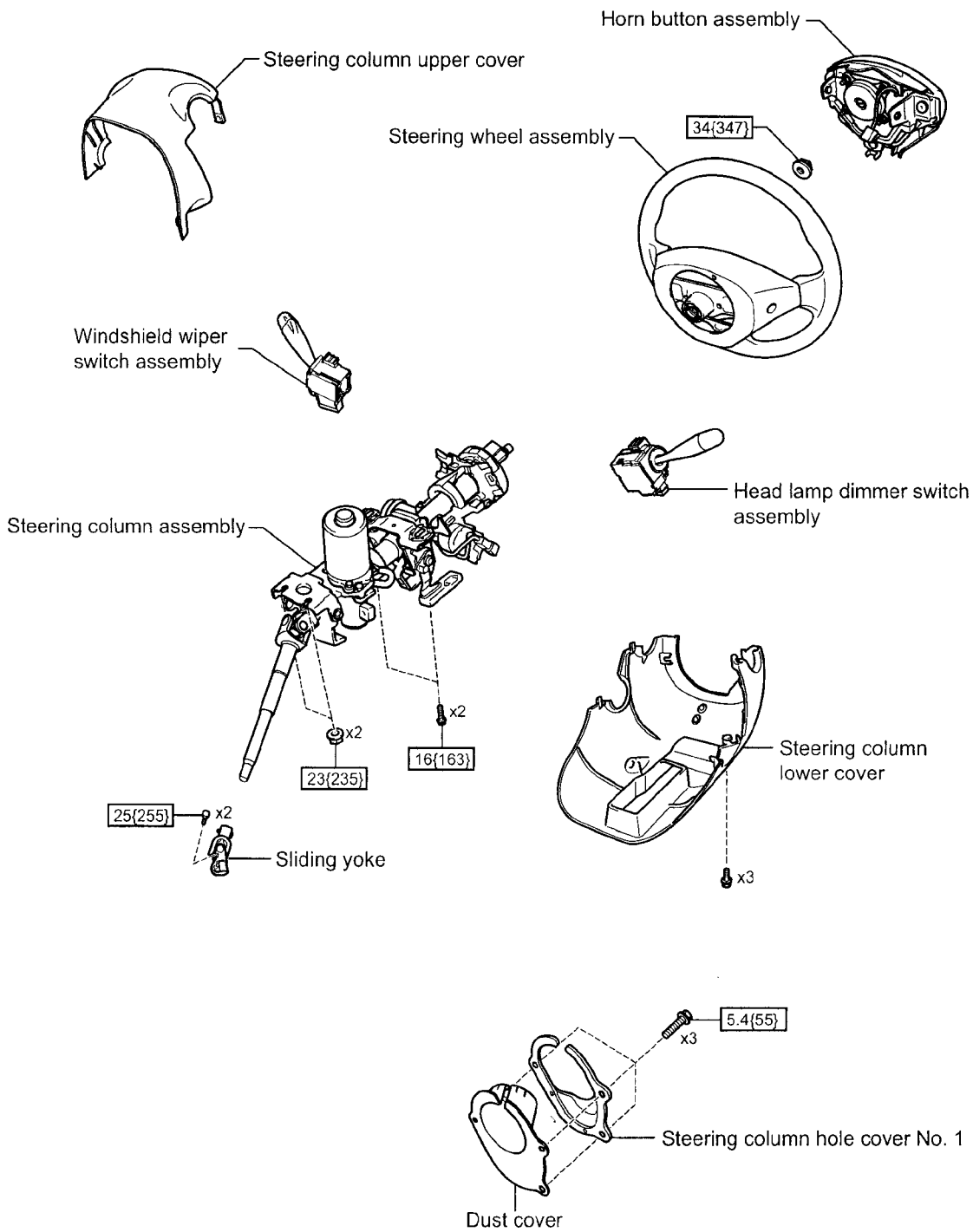
Instrument panel
finish panel LWR

except Europe:

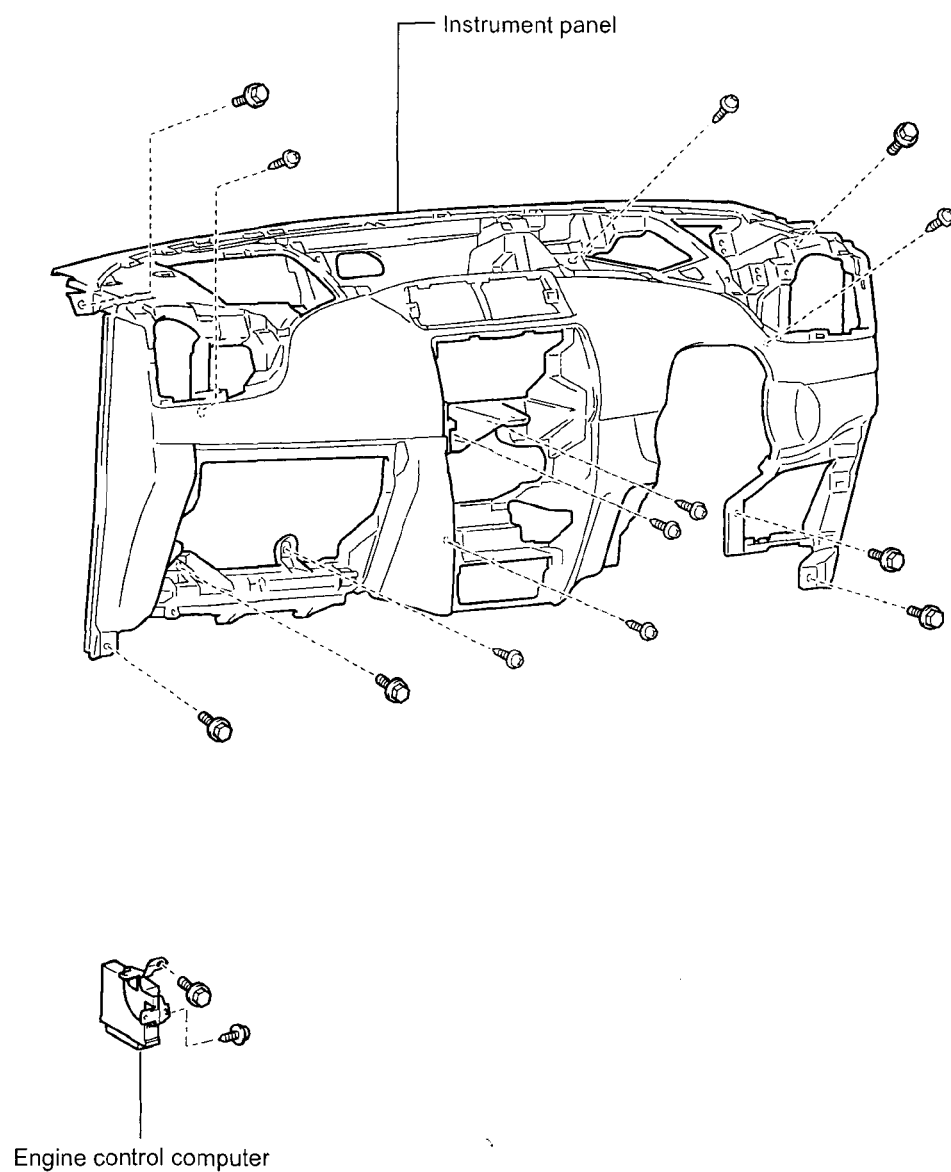


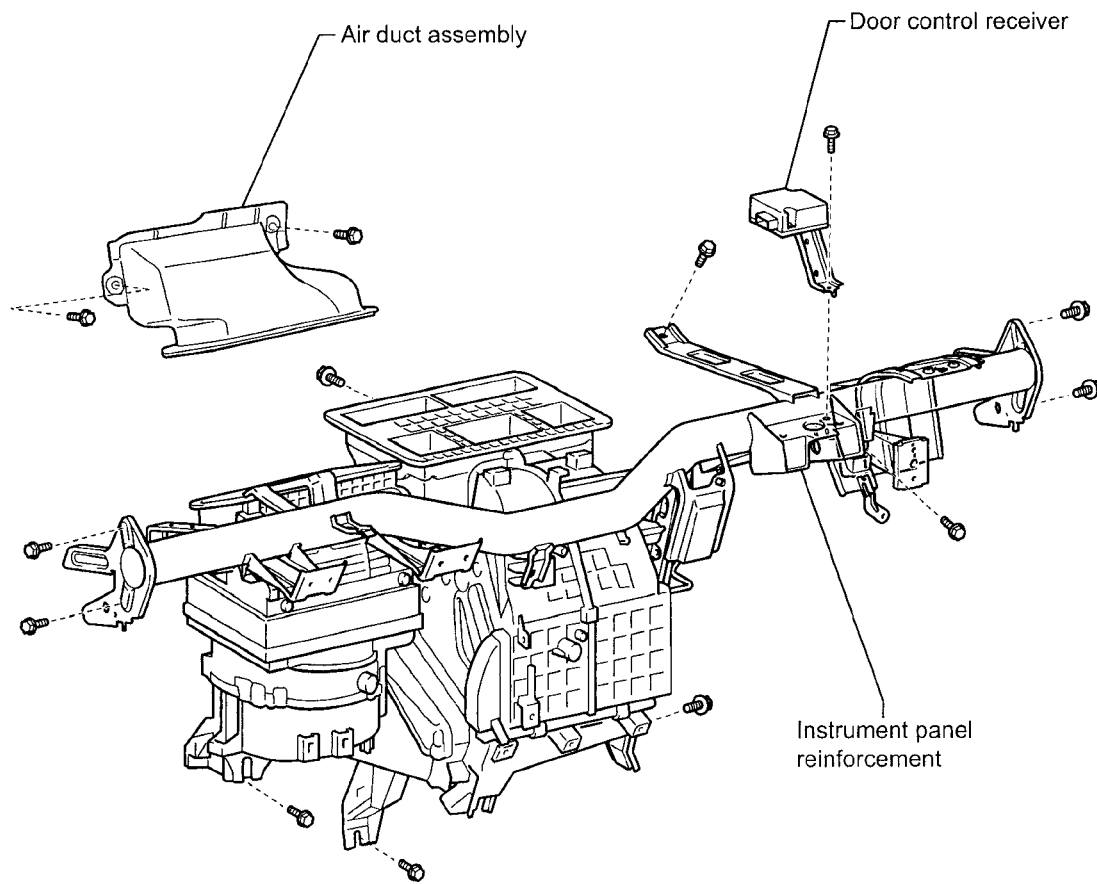
$\text{N}\cdot\text{m}$ { $\text{kgf}\cdot\text{cm}$ } : Specified torque

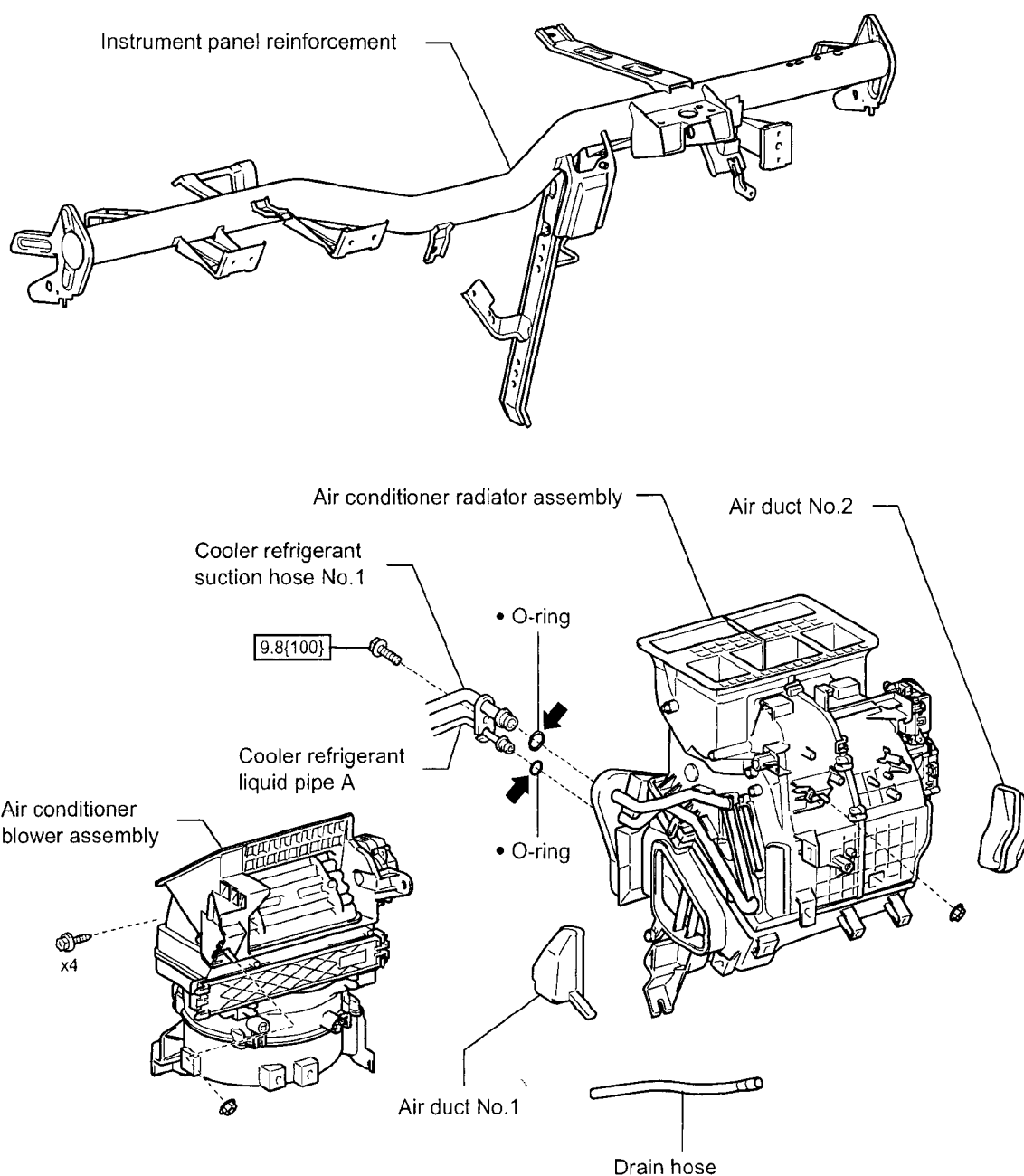
for Europe:



[N*m {kgf*cm}] : Specified torque



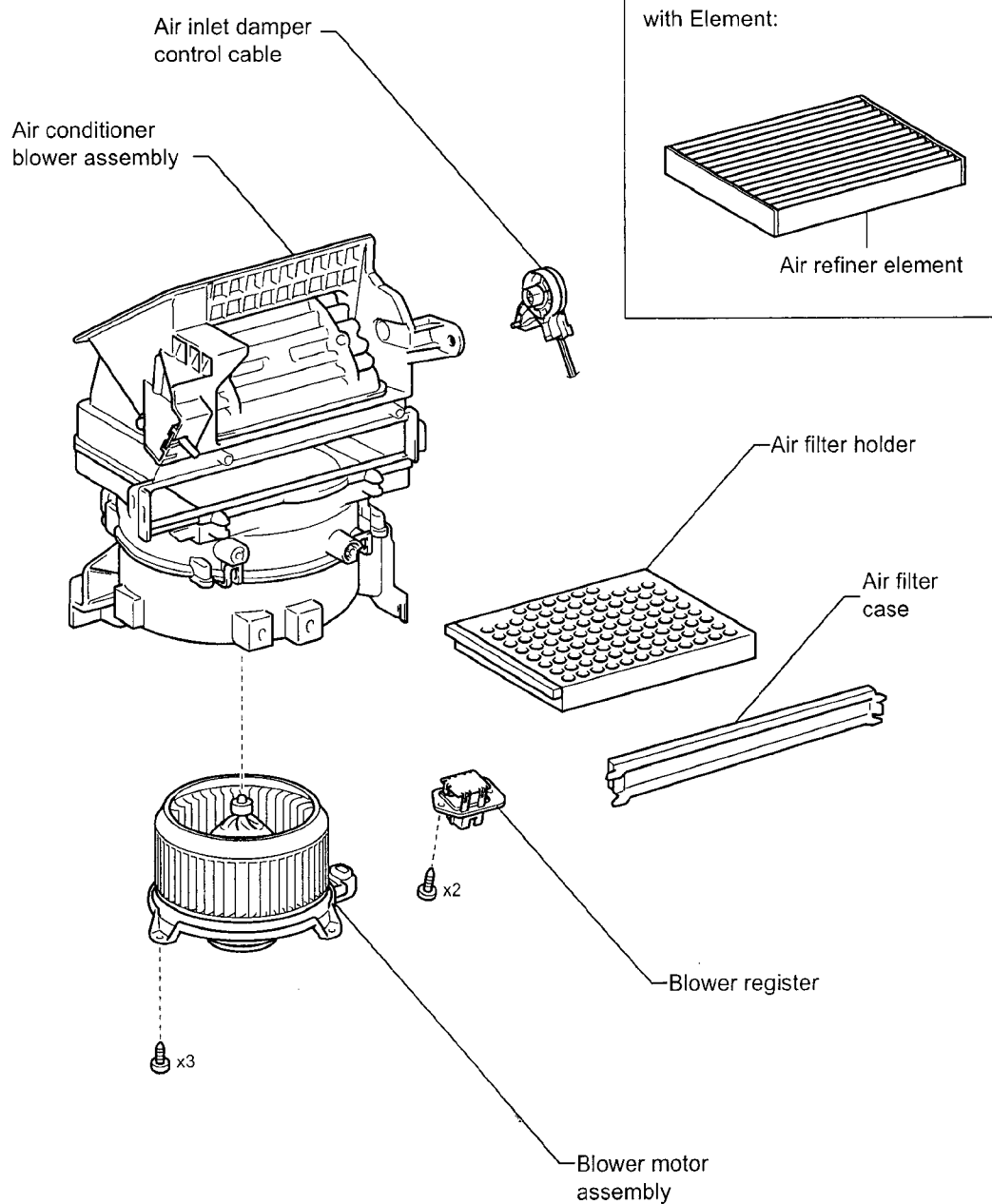




[N*m{kgf*cm}] : Specified torque

• Non-reusable part

← Apply compressor oil ND-OIL8



REMOVAL

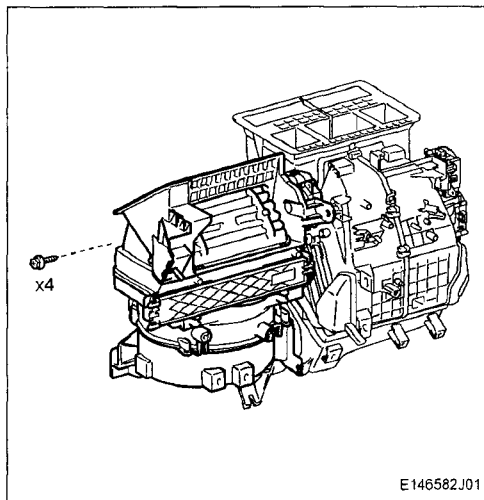
<WARNING>

This maintenance work may affect the SRS air bag system. Before starting the work, be sure to check the notes on the SRS air bag system.

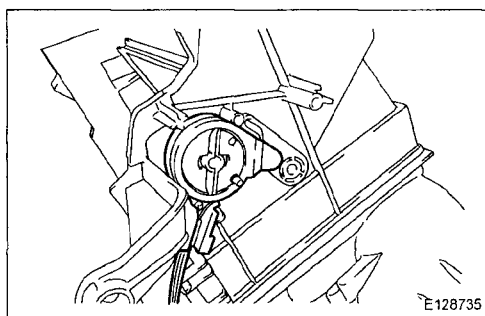
(See page 55-214)

1. Refrigerant HFC-134a (R134a) evacuate (with air conditioner) (See page 52-40)
2. Battery minus terminal disconnection
3. Cooling fluid drainage (See page 12-6)
4. Glove compartment door OUT removal (See page 78-15)
5. Glove compartment door stopper removal (See page 78-15)
6. Instrument panel undercover No. 1 removal (See page 78-15)
7. Console panel removal (See page 78-15)
8. Shift lever knob removal (manual transmission car) (See page 78-16)
9. Console box carpet removal (4WD) (See page 78-16)
10. Console box carpet removal (2WD) (See page 78-16)
11. Rear console box removal (See page 78-16)
12. Console box assembly removal (4WD) (See page 78-16)
13. Console box assembly removal (2WD) (See page 78-16)
14. Instrument panel box CTR removal (See page 78-17)
15. Front ash receptacle assembly removal (See page 78-17)
16. Instrument panel finish panel LWR CTR removal (See page 78-17)
17. Instrument cluster finish panel LWR CTR removal (See page 52-44)
18. Air mix damper control cable disconnection (See page 52-44)
19. Defroster damper control cable disconnection (See page 52-44)
20. Air inlet damper control cable disconnection (See page 52-45)
21. Instrument panel center box removal (with an air bag cutoff switch) (See page 78-18)
22. Instrument panel center box removal (without an air bag cutoff switch) (See page 78-18)
23. Instrument cluster finish panel CTR removal (See page 78-18)
24. Radio tuner opening cover removal (without audio) (See page 78-19)
25. Stereo component tuner assembly removal (with audio) (See page 64-27)
26. Instrument panel speaker panel No. 1 removal (See page 78-19)
27. Instrument panel speaker panel No. 2 removal (See page 78-19)
28. Speaker assembly FR No. 2 removal (6-speaker vehicle) (See page 78-19)
29. Instrument cluster finish panel removal (See page 78-19)
30. Combination meter assembly removal (See page 63-39)
31. Front door scuff plate RH removal (See page 83-14)
32. Front door scuff plate LH removal (See page 83-14)
33. Cowl side trim board RH removal (See page 83-15)
34. Cowl side trim LH removal (See page 83-15)
35. Front door opening trim weather strip assembly RH removal (See page 83-18)
36. Front door opening trim weather strip assembly LH removal (See page 83-19)
37. Front pillar garnish RH removal (without curtain shield air bags) (See page 83-21)
38. Front pillar garnish LH removal (without curtain shield air bags) (See page 83-22)
39. Front pillar garnish RH removal (with curtain shield air bags) (See page 83-22)
40. Front pillar garnish LH removal (with curtain shield air bags) (See page 83-23)
41. Instrument panel UPR removal (RH side) (See page 78-20)
42. Instrument panel UPR removal (LH side) (See page 78-20)
43. Instrument panel finish panel LWR removal (See page 78-22)

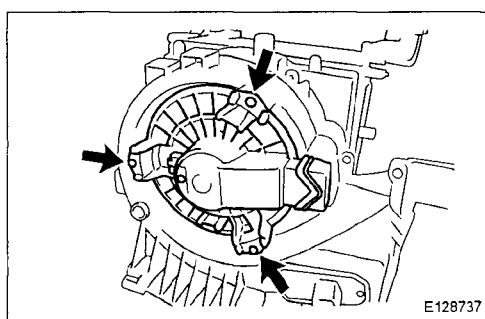
44. Bonnet (hood) lock control lever disconnection (See page 78-22)
45. Horn button assembly removal (See page 55-218)
46. Steering wheel assembly removal (See page 48-5)
47. Steering column lower cover removal (See page 48-5)
48. Upper cover of steering column removal (See page 48-5)
49. Head lamp dimmer switch assembly removal (See page 60-60)
50. Window shield wiper switch assembly removal (See page 61-28)
51. Steering column hole cover No. 1 removal (See page 48-6)
52. Sliding yoke removal (See page 48-6)
53. Steering column assembly removal (See page 48-7)
54. Engine control computer rem(See page 78-22)
55. Instrument panel removal (See page 78-23)
56. Heater inlet water hose disconnection (See page 52-73)
57. Heater outlet water hose disconnection (See page 52-73)
58. Cooler refrigerant suction hose No. 1 disconnection (with air conditioner) (See page 52-73)
59. Cooler refrigerant liquid pipe A disconnection (with air conditioner) (See page 52-73)
60. Air duct removal (See page 52-74)
61. Power steering computer assembly disconnection (See page 52-74)
62. Airbag computer assembly disconnection (with side air bags) (See page 52-74)
63. Airbag computer assembly disconnection (without side air bags) (See page 52-74)
64. Immobilizer code computer disconnection (See page 52-74)
65. Door control receiver removal (See page 62-53)
66. Fuse block assembly removal (See page 52-75)
67. Instrument panel reinforcement removal (See page 52-75)
68. Air conditioner blower assembly removal
(1) Remove four screws and then the air conditioner blower assembly.



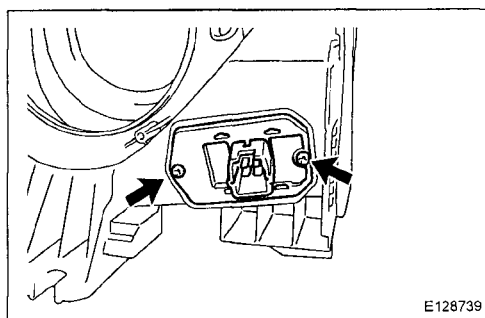
DISASSEMBLY



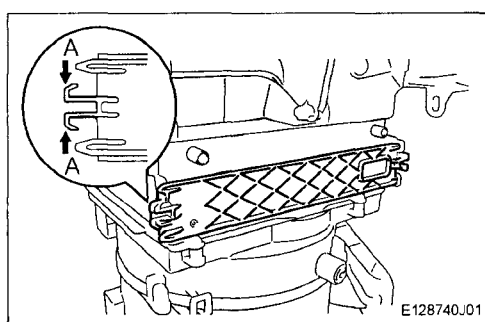
1. Air inlet damper control cable disconnection
 - (1) Remove the fittings of the tabs in three locations and remove the air inlet damper control cable.



2. Blower motor assembly removal
 - (1) Remove three screws and then the blower motor assembly.

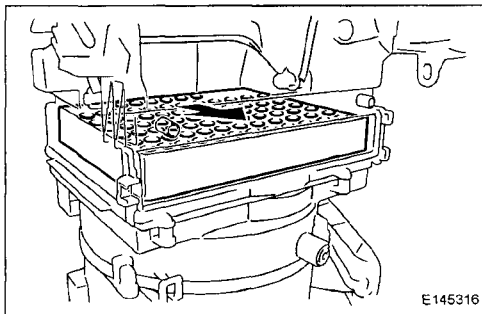


3. Blower register removal
 - (1) Remove two screws and remove the blower register.

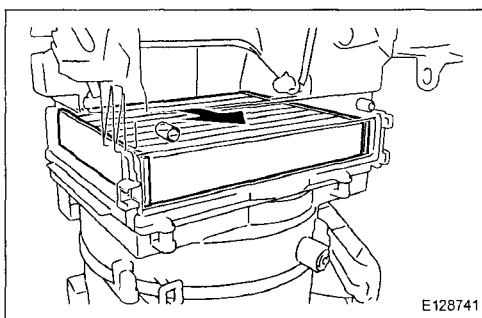


4. Air filter case removal
 - (1) Remove the fitting of the tab by holding part A and remove the air filter case.

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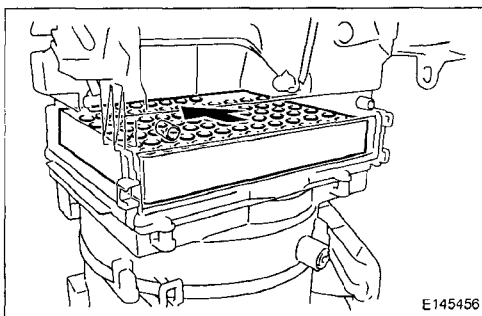


5. Air filter holder removal (element non-installed car)
 - (1) Remove the air filter holder from the air conditioner blower assembly.

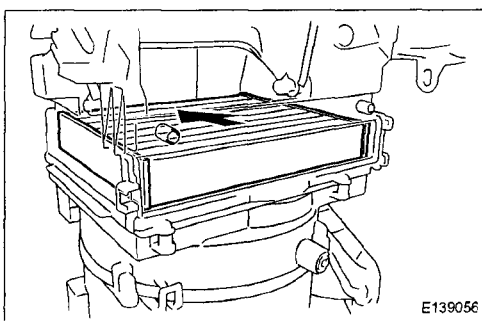


6. Air refiner element removal (element installed car)
 - (1) Remove the air refiner element from the air conditioner blower assembly.

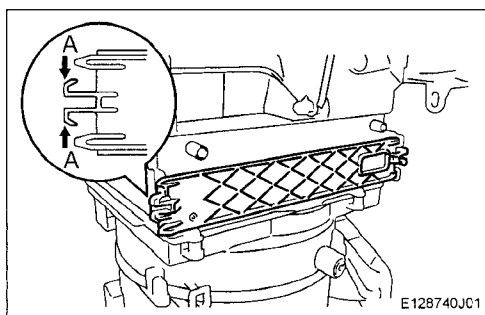
REASSEMBLY



1. Air filter holder installation (element non-installed car)
 - (1) Attach the air filter holder to the air conditioner blower assembly.



2. Air refiner element installation (element installed car)
 - (1) Attach the air refiner element to the air conditioner blower assembly.
 <CAUTION>
 Attach the air refiner element while checking the UP mark.

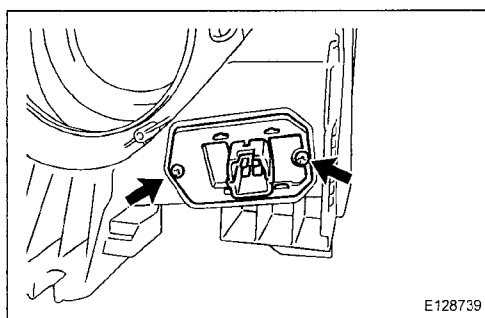


3. Air filter case installation

- (1) Fit the tab and attach the air filter case.

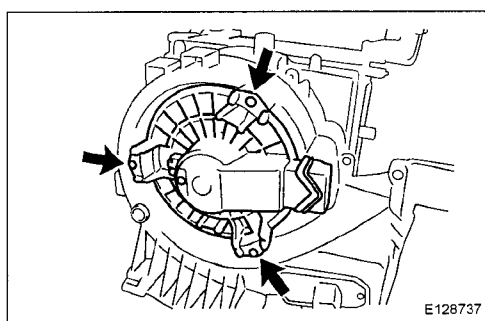
<CAUTION>

Attach the air refiner element while checking the UP mark.



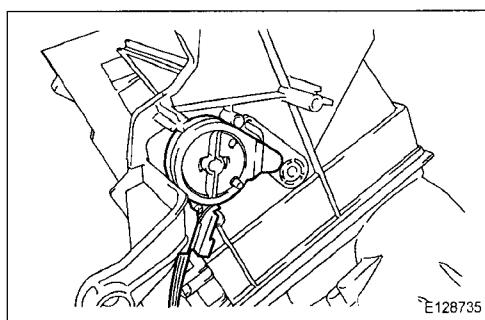
4. Blower register installation

- (1) Use two screws to attach the blower register.



5. Blower motor assembly installation

- (1) Use three screws to attach the blower motor assembly.

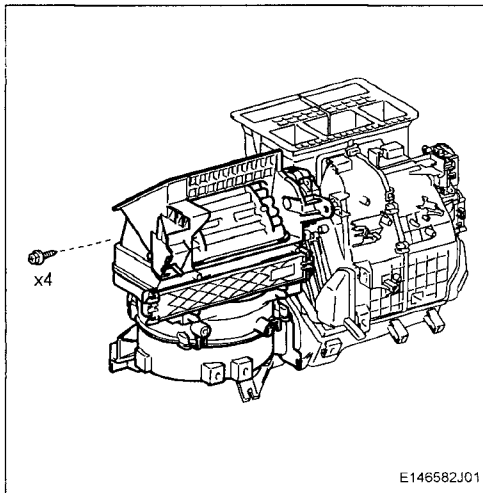


6. Air inlet damper control cable installation

- (1) Fit the tab in three locations and attach the air inlet damper control cable.

INSTALLATION

52



1. Air conditioner blower assembly installation
 - (1) Use four screws to attach the air conditioner blower assembly.

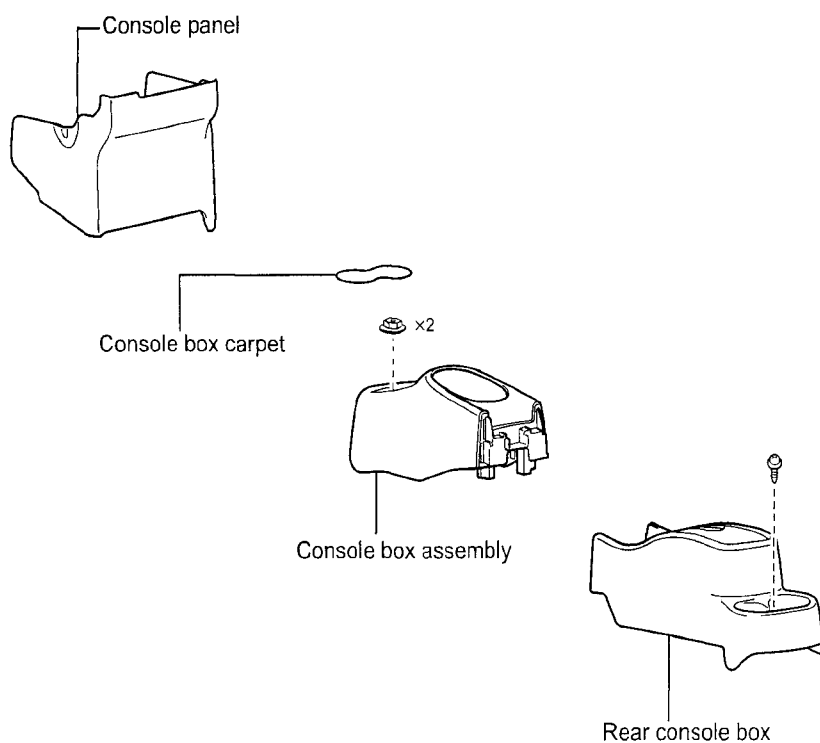
2. Instrument panel reinforcement installation (See page 52-82)
3. Fuse block assembly installation (See page 52-84)
4. Door control receiver connection (See page 62-53)
5. Immobilizer code computer connection (See page 52-85)
6. Airbag computer assembly connection (with side air bags) (See page 52-85)
7. Airbag computer assembly connection (without side air bags) (See page 52-86)
8. Power steering computer assembly connection (See page 52-86)
9. Air duct installation (See page 52-86)
10. Cooler refrigerant liquid pipe A connection (See page 52-86)
11. Cooler refrigerant suction hose No. 1 connection (See page 52-86)
12. Heater outlet water hose connection (See page 52-87)
13. Heater inlet water hose connection (See page 52-87)
14. Instrument panel installation (See page 78-29)
15. Engine control computer installation (See page 78-30)
16. Steering column assembly installation (See page 48-9)
17. Sliding yoke installation (See page 48-10)
18. Check the front tire for going straight (See page 48-10)
19. Steering column hole cover No. 1 installation (See page 48-10)
20. Windshield wiper switch assembly installation (See page 61-28)
21. Head lamp dimmer switch assembly installation (See page 60-61)
22. Steering column upper cover installation (See page 48-10)
23. Steering column lower cover installation (See page 48-11)
24. Steering wheel assembly installation (See page 48-11)
25. Check position of steering wheel
26. Horn button assembly installation (See page 55-219)
27. Bonnet (hood) lock control lever connection (See page 78-30)
28. Instrument panel finish panel LWR installation (See page 78-31)
29. Instrument panel UPR installation (RH side) (See page 78-31)
30. Instrument panel UPR installation (LH side) (See page 78-32)
31. Front pillar garnish RH installation (without curtain shield air bags) (See page 83-30)
32. Front pillar garnish LH installation (without curtain shield air bags) (See page 83-31)
33. Front pillar garnish RH installation (with curtain shield air bags) (See page 83-31)

34. Front pillar garnish LH installation (with curtain shield air bags) (See page 83-32)
35. Front door opening trim weather strip assembly RH installation (See page 83-35)
36. Front door opening trim weather strip assembly LH installation (See page 83-35)
37. Cowl side trim board RH installation (See page 83-38)
38. Cowl side trim LH installation (See page 83-39)
39. Front door scuff plate RH installation (See page 83-39)
40. Front door scuff plate LH installation (See page 83-39)
41. Combination meter assembly installation (See page 63-40)
42. Instrument cluster finish panel installation (See page 78-33)
43. Speaker assembly FR No. 2 installation (6-speaker vehicle) (See page 78-33)
44. Instrument panel speaker panel No. 1 installation (See page 78-33)
45. Instrument panel speaker panel No. 2 installation (See page 78-33)
46. Radio tuner opening cover installation (without audio) (See page 78-33)
47. Stereo component tuner assembly installation (with audio) (See page 64-28)
48. Instrument cluster finish panel CTR installation (See page 78-34)
49. Instrument panel center box installation (with an air bag cutoff switch) (See page 78-18)
50. Instrument panel center box installation (without an air bag cutoff switch) (See page 78-34)
51. Air inlet damper control cable connection (See page 52-48)
52. Defroster damper control cable connection (See page 52-48)
53. Air mix damper control cable connection (See page 52-48)
54. Instrument cluster finish panel LWR CTR installation (See page 78-34)
55. Instrument panel finish panel LWR CTR installation (See page 78-35)
56. Instrument panel box CTR installation (See page 78-34)
57. Front ash receptacle assembly installation (See page 78-34)
58. Console box assembly installation (4WD) (See page 78-35)
59. Console box assembly installation (2WD) (See page 78-35)
60. Rear console box installation (See page 78-36)
61. Console box carpet installation (4WD) (See page 78-36)
62. Console box carpet installation (2WD) (See page 78-36)
63. Shift lever knob installation (manual transmission vehicle) (See page 78-36)
64. Console panel installation (See page 78-36)
65. Instrument panel undercover No. 1 installation (See page 78-37)
66. Glove compartment door stopper installation (See page 78-37)
67. Glove compartment door OUT installation (See page 78-37)
68. Battery minus terminal connection
Specified value: $T=6.4N \cdot m$ {65kgf*cm}
69. Coolant fluid replenishment (See page 12-6)
70. Warm-up engine
71. Cooling fluid leakage check (See page 12-6)
72. Refrigerant HFC-134a (R134a) filling (with air conditioner) (See page 52-40)
73. Refrigerant gas leakage check (with air conditioner) (See page 52-40)
74. Airbag warning lamp check (See page 55-1)
75. Initialization of steering zero-point correction signal (See page 48-11)
76. Steering zero-point correction (See page 48-11)

AIR CONDITIONER BLOWER ASSEMBLY (LHD)

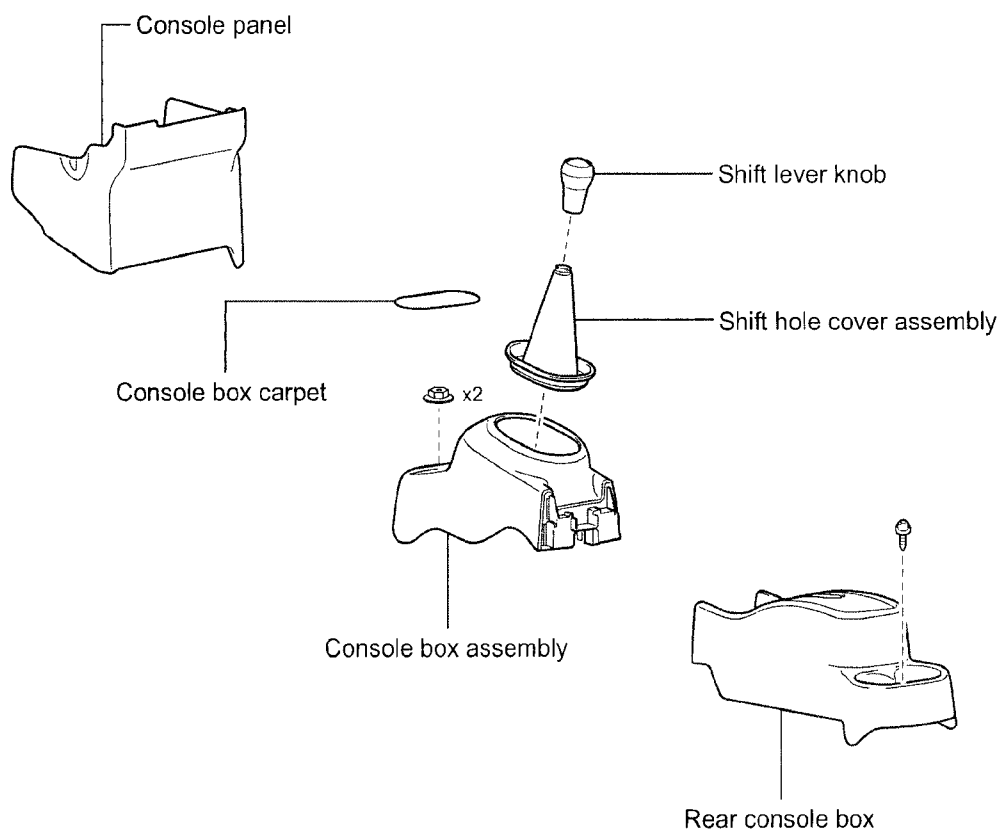
COMPORNENTS

for Automatic transaxle:

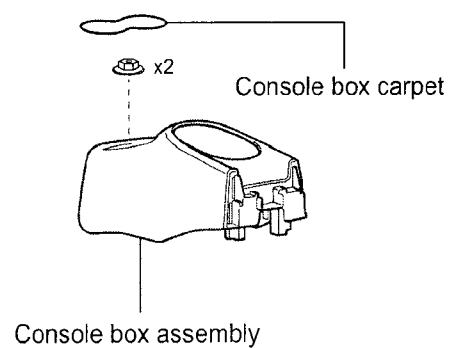


for Manual transaxle:

52

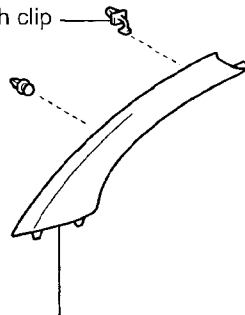


FF:



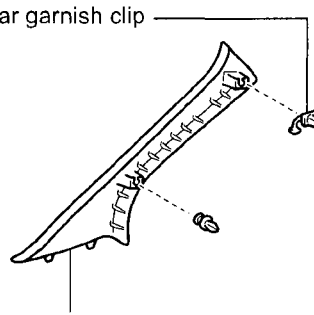
with Curtain shield airbag:

• Front pillar garnish clip

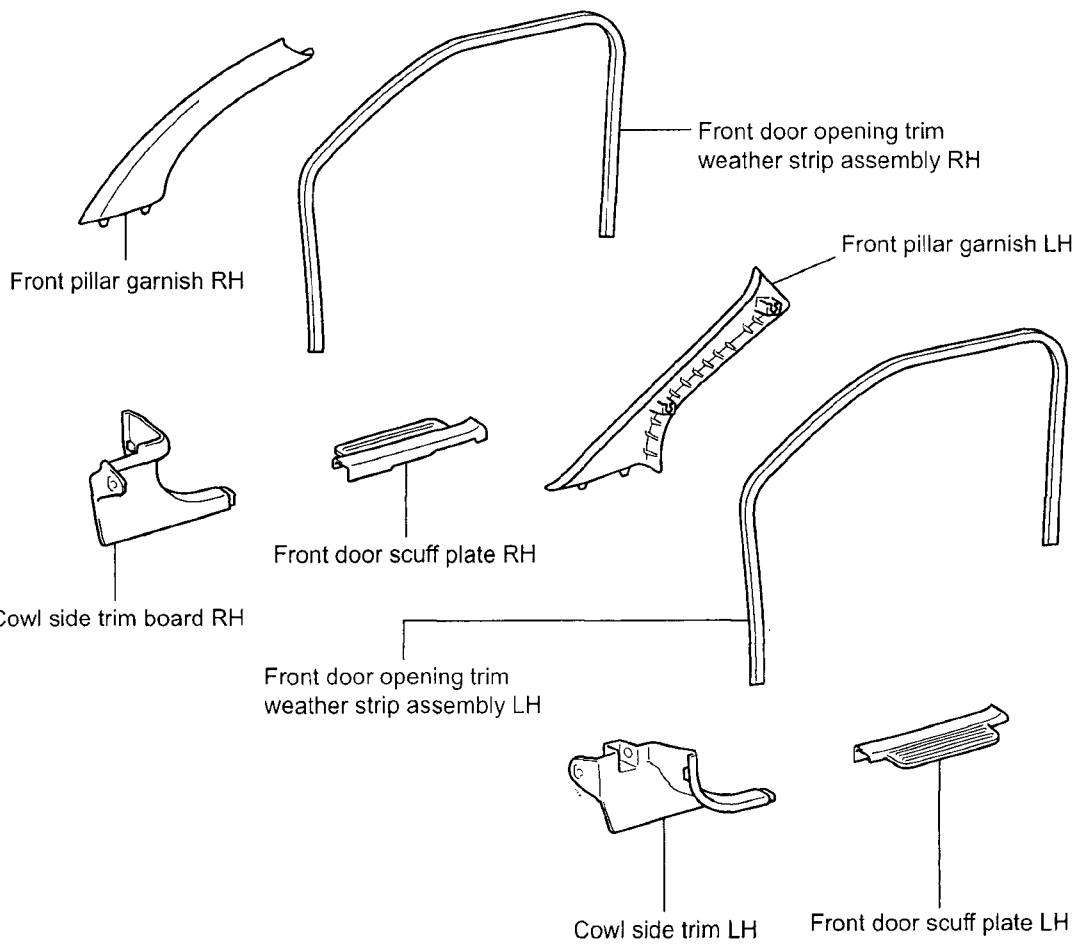


Front pillar garnish RH

• Front pillar garnish clip

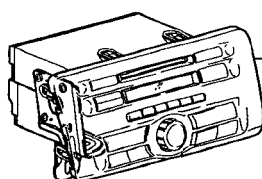


Front pillar garnish LH



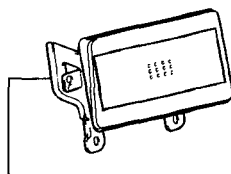
• Non-reusable part

with Radio receiver:

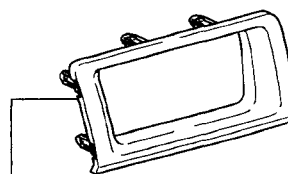


Stereo component tuner assembly

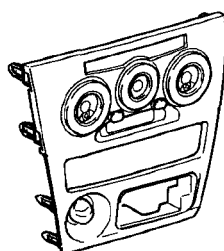
without Radio receiver:



Radio tuner opening cover



Instrument panel cluster
finish panel CTR



Instrument cluster
finish panel LWR CTR



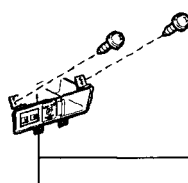
Front ash receptacle
assembly



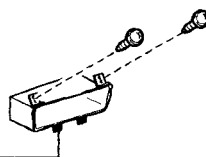
Instrument panel box CTR

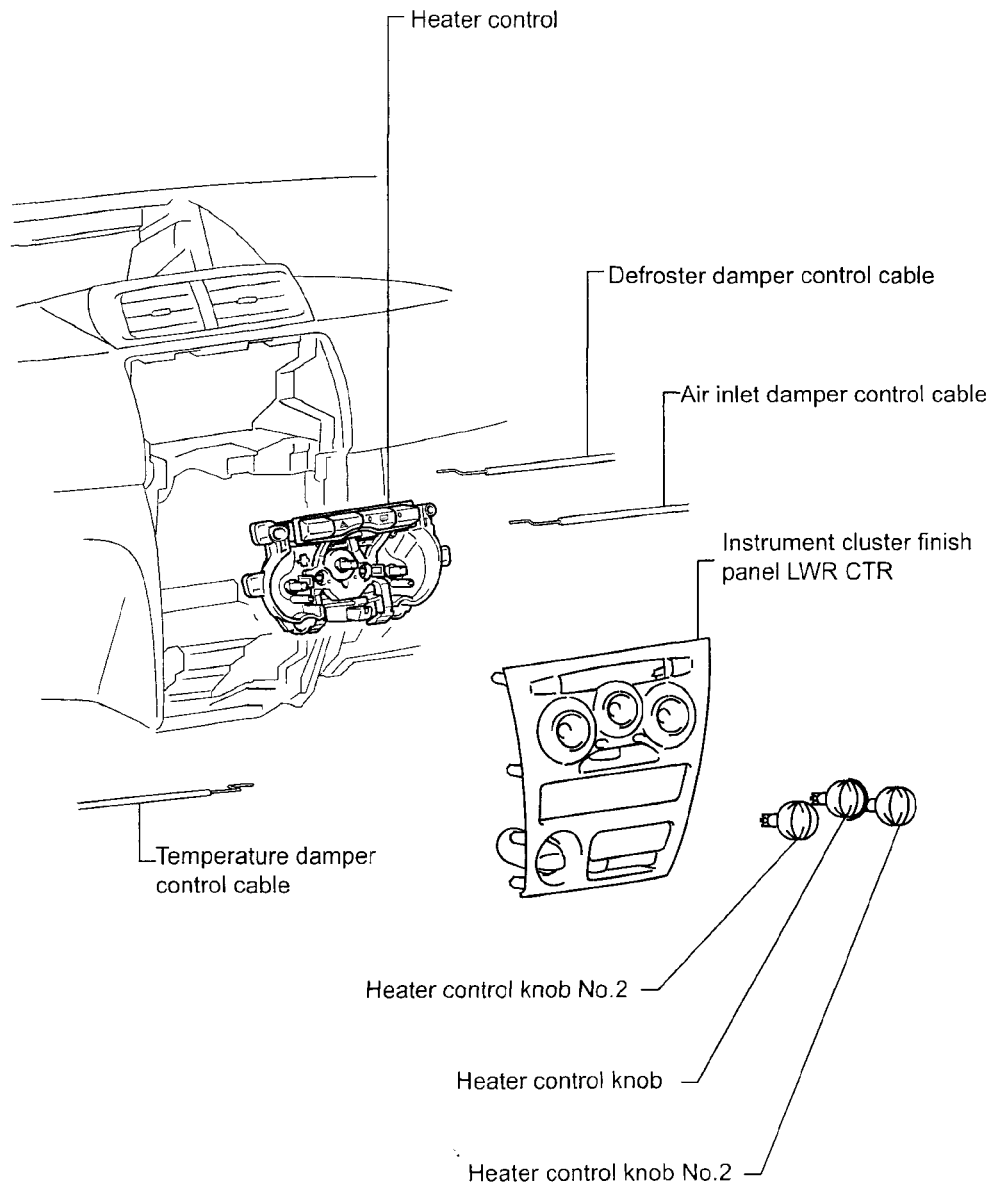
with Airbag cut off switch:

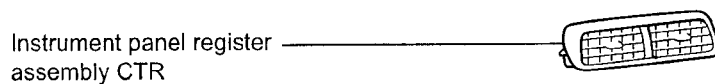
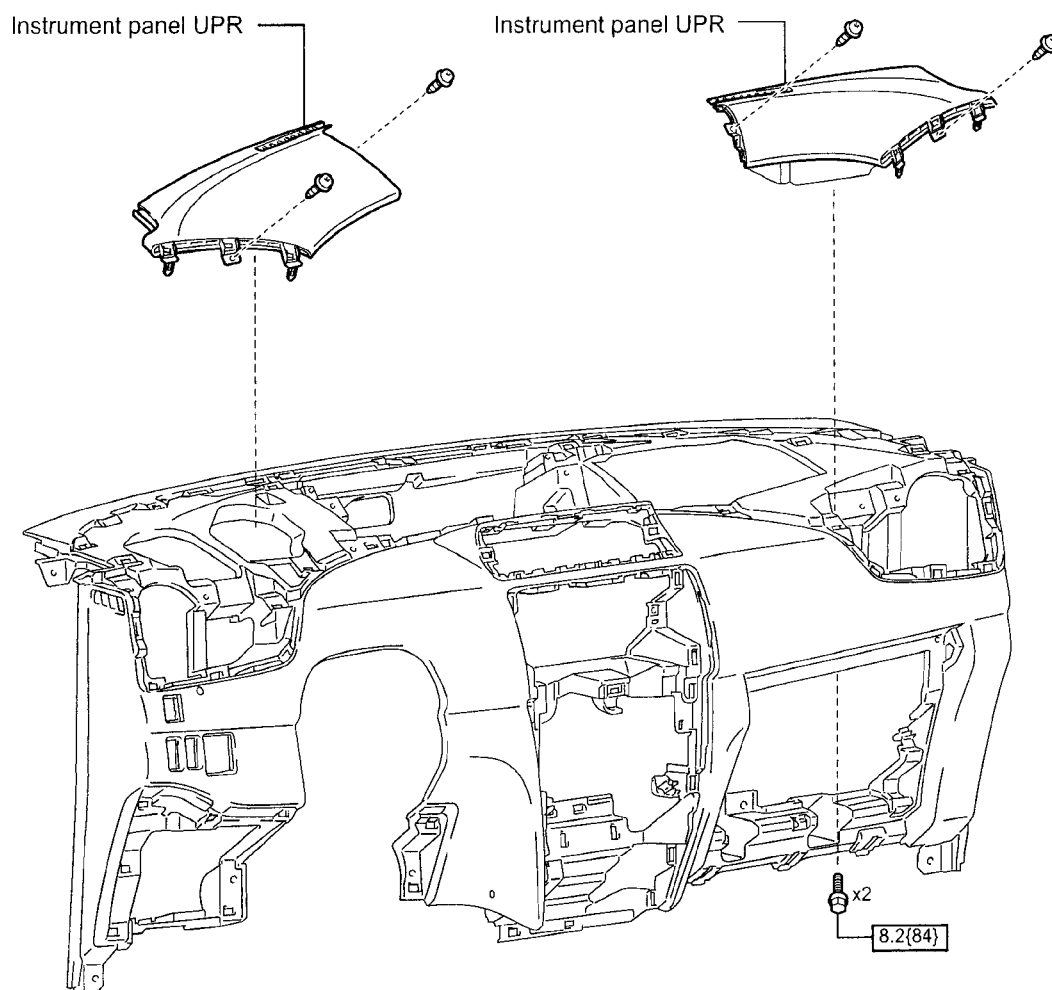
without Airbag cut off switch:



Instrument panel
center box

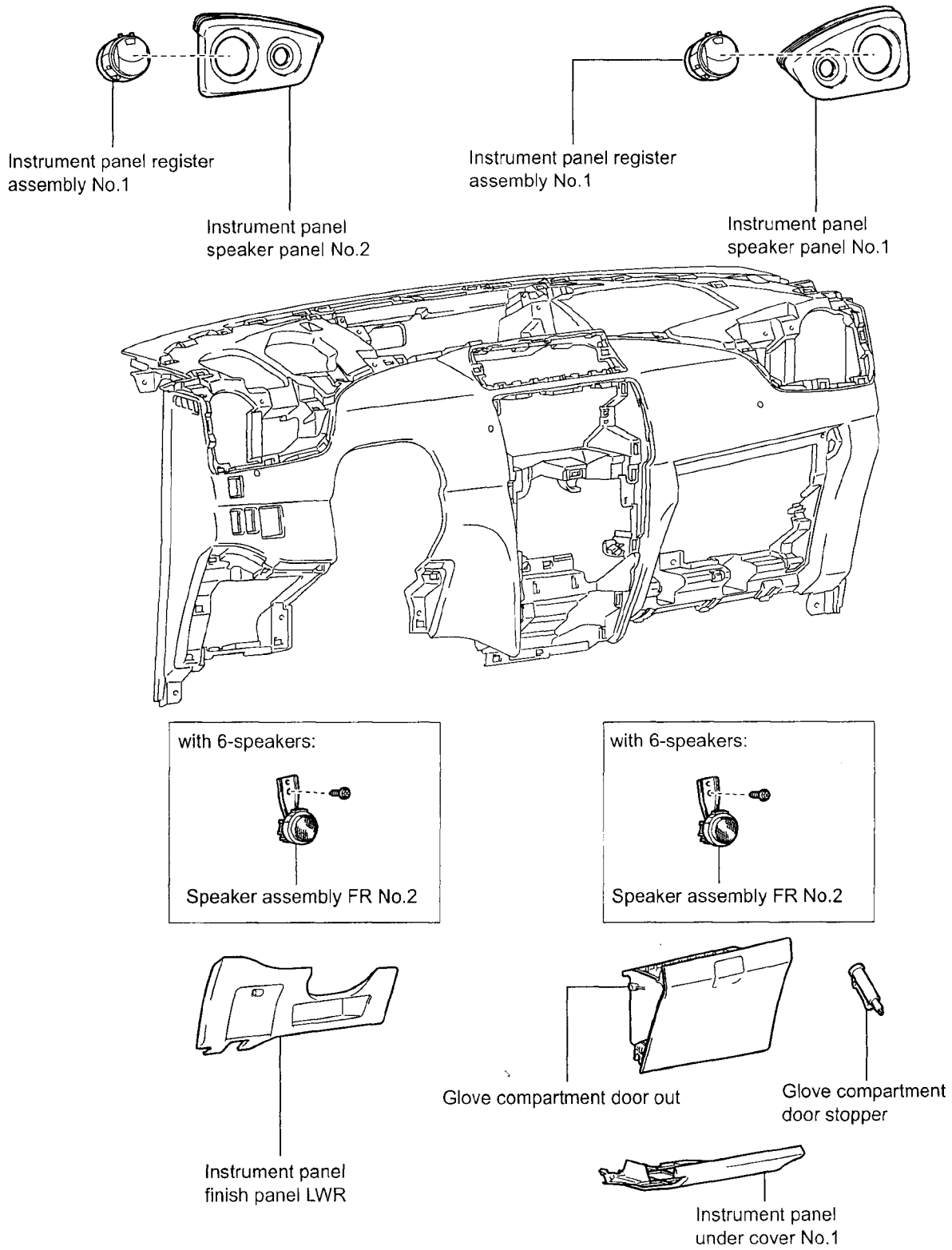


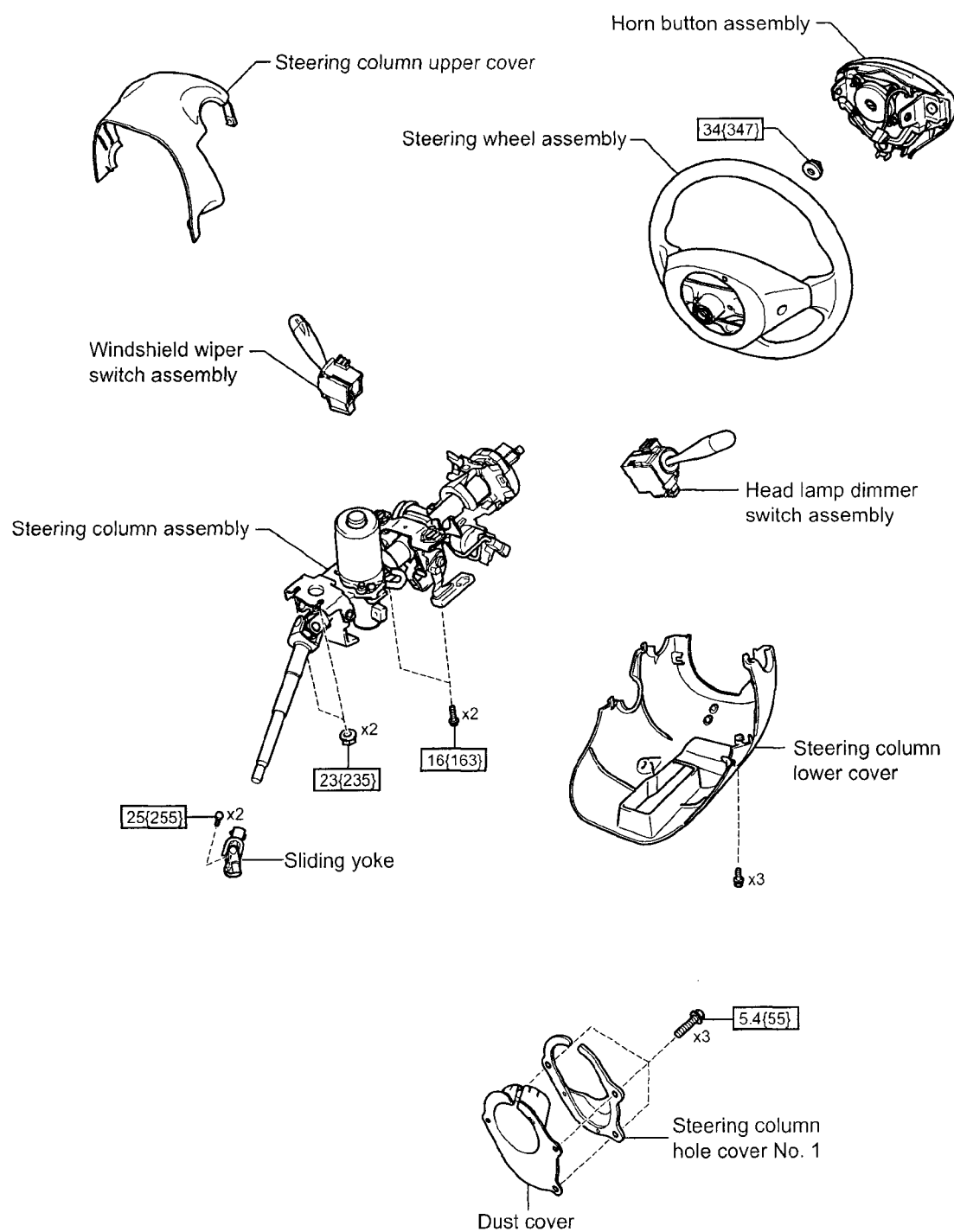




N*m (kgf*cm) : Specified torque

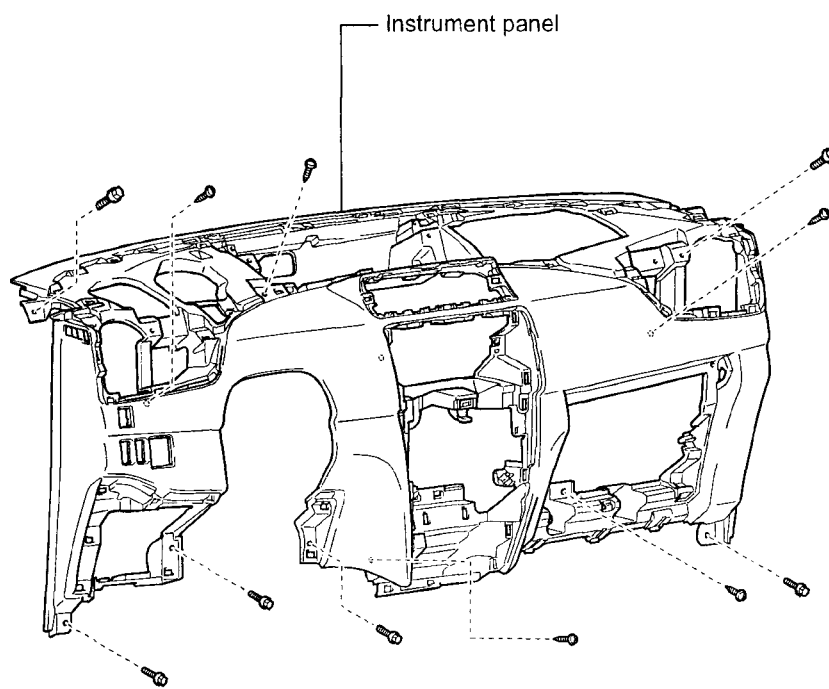
52

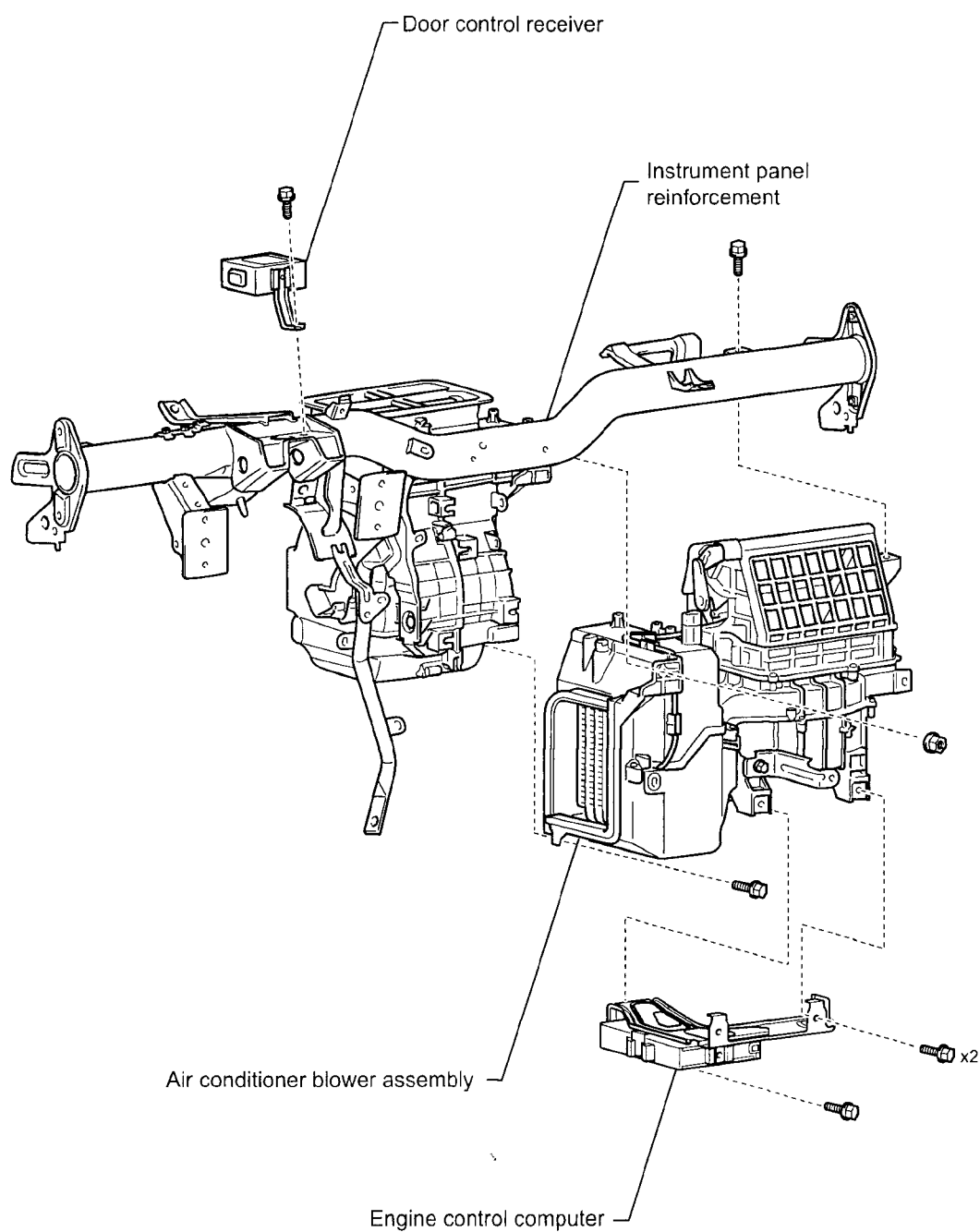




N*m {kgf*cm} : Specified torque

52

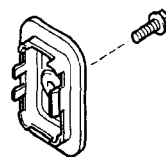




Air conditioner blower assembly

• O-ring

without Air conditioning system:



Cooler cover No.1

Liquid tube B

9.8[100]

Cooler cover No.1

Cooler cover No.2

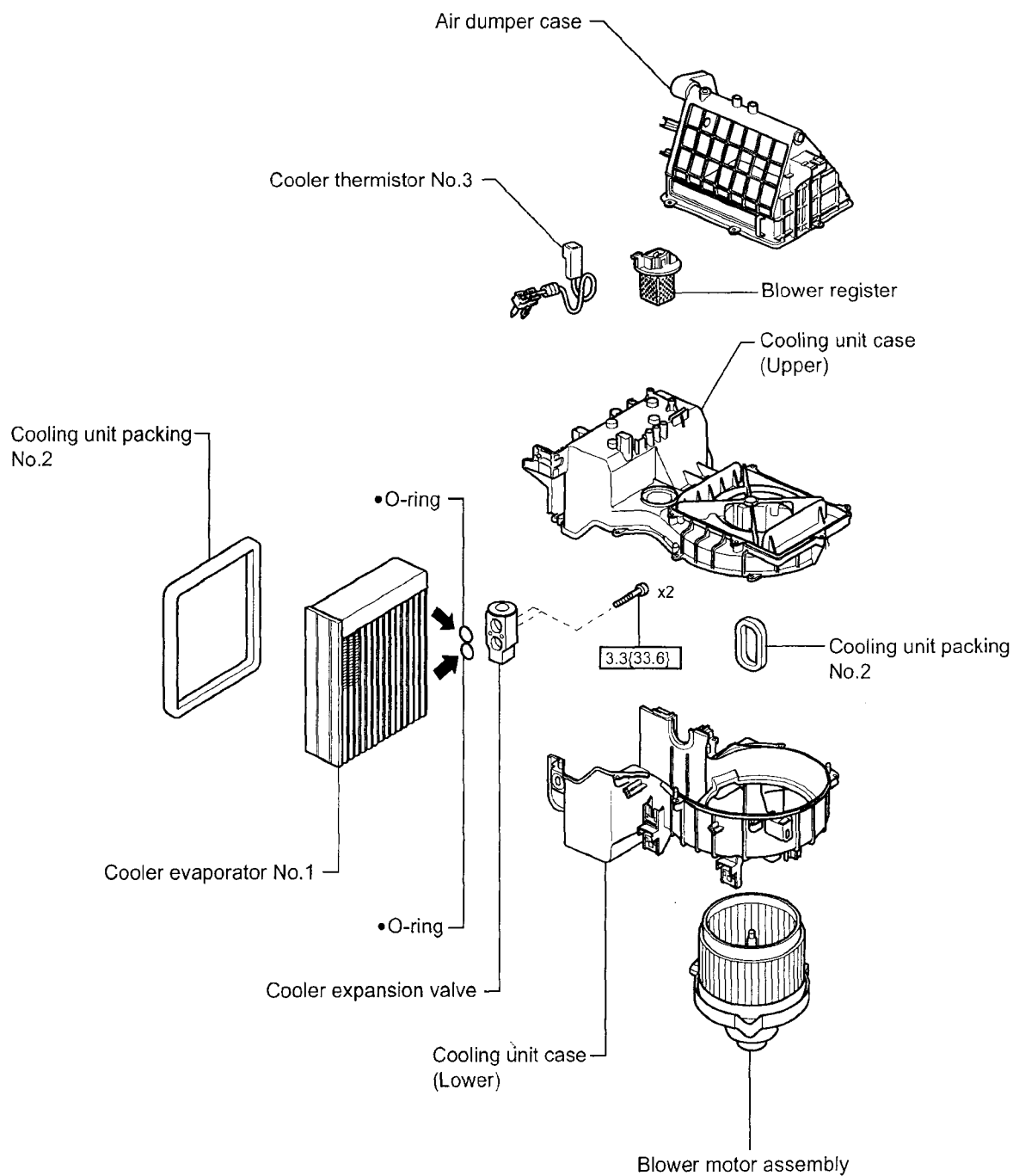
Cooler unit drain hose No.1

[N*m (kgf*cm)] : Specified torque

• Non-reusable part

← Apply compressor oil ND-01L8

E145452J02



[N*m (kgf*cm)] : Specified torque

• Non-reusable part

◀ Apply compressor oil ND-OIL8

REMOVAL

<WARNING>

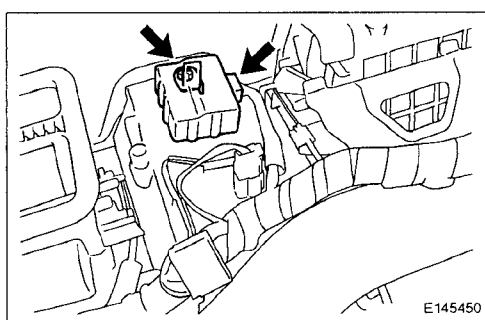
This maintenance work may affect the SRS air bag system. Before starting the work, be sure to check the notes on the SRS air bag system.

(See page 55-214)

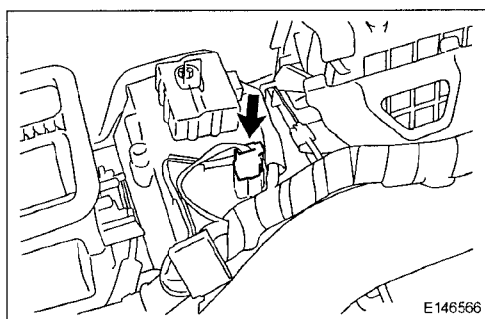
52

1. Refrigerant HFC-134a (R134a) discharging (with Air conditioning system) (See page 52-40)
2. Battery minus terminal disconnection
3. Cooling Fluid Drainage (See page 12-6)
4. Glove compartment door OUT removal (See page 78-15)
5. Glove compartment door stopper removal (See page 78-15)
6. Instrument panel undercover No. 1 removal (See page 78-15)
7. Console panel removal (See page 78-15)
8. Shift lever knob removal (for Manual transaxle) (See page 78-16)
9. Console box carpet removal (4WD) (See page 78-16)
10. Console box carpet removal (FF) (See page 78-16)
11. Rear console box removal (See page 78-16)
12. Console box assembly removal (4WD) (See page 78-16)
13. Front console box removal (FF) (See page 78-16)
14. Instrument panel box CTR removal (See page 78-17)
15. Front ash receptacle assembly removal (See page 78-17)
16. Instrument finish panel LWR CTR removal (See page 52-51)
17. Instrument panel center box removal (with Air bag cutoff switch) (See page 78-18)
18. Instrument panel center box removal (without Air bag cutoff switch) (See page 78-18)
19. Heater control removal (See page 52-51)
20. Instrument cluster finish panel CTR removal (See page 78-18)
21. Radio tuner opening cover removal (See page 78-19)
22. Stereo component tuner assembly removal (See page 64-27)
23. Instrument panel speaker panel No. 1 removal (See page 78-19)
24. Instrument panel speaker panel No. 2 removal (See page 78-19)
25. Speaker assembly FR No. 2 removal (with 6-speakers)(See page 78-19)
26. Instrument cluster finish panel removal (See page 78-19)
27. Combination meter assembly removal (See page 63-39)
28. Front door scuff plate RH removal (See page 83-14)
29. Front door scuff plate LH removal (See page 83-14)
30. Cowl side trim board RH removal (See page 83-15)
31. Cowl side trim LH removal (See page 83-15)
32. Front door opening trim weather strip assembly RH removal (See page 83-18)
33. Front door opening trim weather strip assembly LH removal (See page 83-19)
34. Front pillar garnish RH removal (without Curtain shield airbag) (See page 83-21)
35. Front pillar garnish LH removal (without Curtain shield airbag) (See page 83-22)
36. Front pillar garnish RH removal (with Curtain shield airbag) (See page 83-22)
37. Front pillar garnish LH removal (with Curtain shield airbag) (See page 83-23)
38. Instrument panel UPR removal (RH) (See page 78-20)
39. Instrument panel UPR removal (LH) (See page 78-20)
40. Instrument panel finish panel LWR removal (See page 78-22)
41. Bonnet (hood) lock control lever disconnection (See page 78-22)
42. Horn button assembly removal (See page 55-218)
43. Steering wheel assembly removal (See page 48-14)

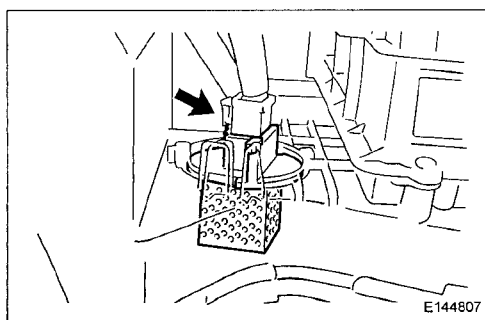
44. Steering column lower cover removal (See page 48-14)
45. Steering column upper cover removal (See page 48-14)
46. Head lamp dimmer switch assembly removal (See page 60-60)
47. Windshield wiper switch assembly removal (See page 61-28)
48. Steering column hole cover No. 1 removal (See page 48-15)
49. Sliding yoke removal (See page 48-15)
50. Steering column assembly removal (See page 48-15)
51. Instrument panel removal (See page 78-23)
52. Engine control computer removal (See page 06-166)
53. Cooler pipe grommet removal (See page 52-164)
54. Liquid tube B removal (with Air conditioning system) (See page 52-164)
55. Cooler cover No. 1 removal (without Air conditioning system) (See page 52-165)



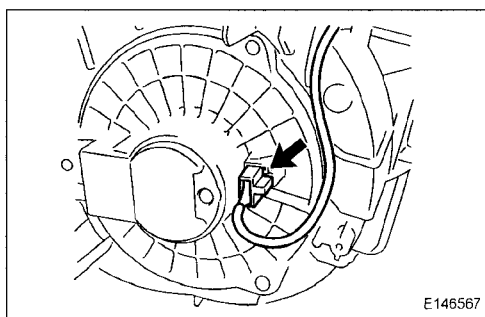
56. Immobilizer code computer removal
 - (1) Disconnect the connector of the immobilizer code computer.
 - (2) Remove the screw and remove the immobilizer code computer.



57. Cooler thermistor No. 3 disconnection
 - (1) Disconnect the connector of cooler thermistor No. 3.

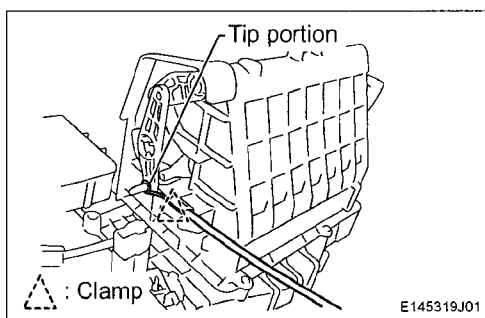


58. Blower register disconnection
 - (1) Disconnect the connector of the blower register.



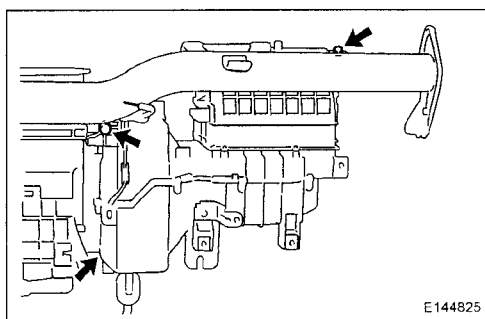
59. Blower motor assembly disconnection

- (1) Disconnect the connector of the blower motor assembly.



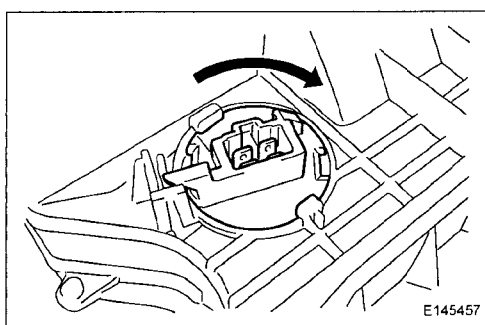
60. Air conditioner blower assembly removal

- (1) Disconnect the air inlet damper control cable from the clamp, and disconnect the end portion from the cooler control lever.
- (2) Remove the clamp of the instrument wire in two locations.



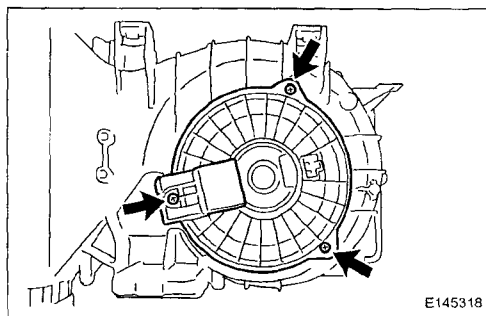
- (3) Remove two bolts and nuts, and then the air conditioner blower assembly from the instrument panel reinforcement.

DISASSEMBLY



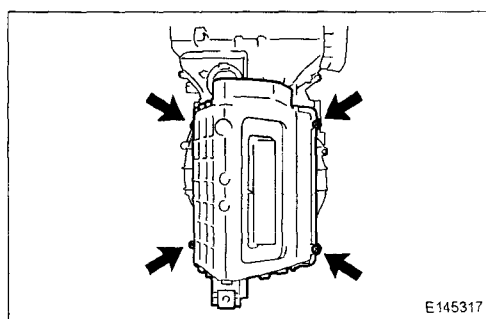
1. Blower register removal

- (1) Remove the fitting of the tab and remove the blower register by rotating it clockwise.



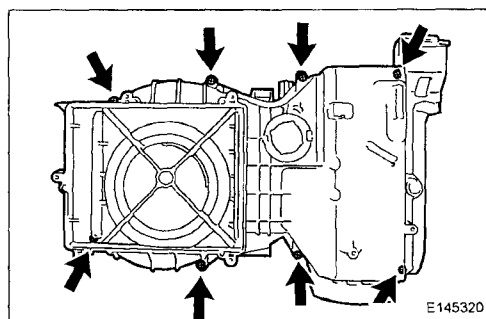
2. Blower motor assembly removal

- (1) Remove three screws and remove the blower motor assembly.



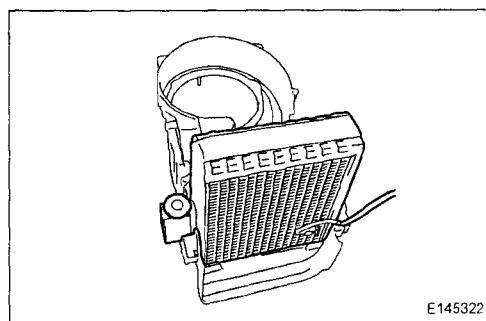
3. Air damper case removal

- (1) Remove four screws and remove the air damper case.



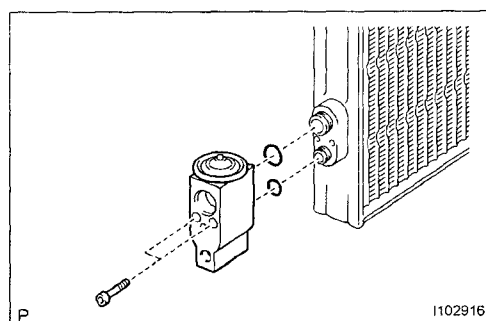
4. Cooling unit case removal (Upper)

- (1) Remove eight screws and remove the cooling unit case (upper).



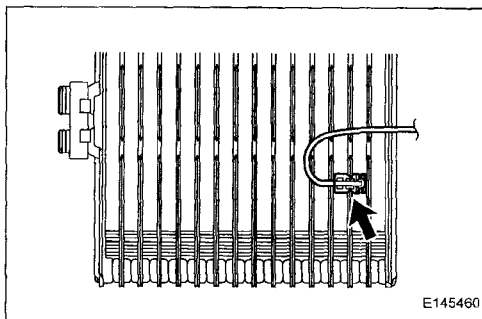
5. Cooler evaporator No. 1 removal (with Air conditioning system)

- (1) Remove evaporator No. 1 from the cooling unit case (Lower).



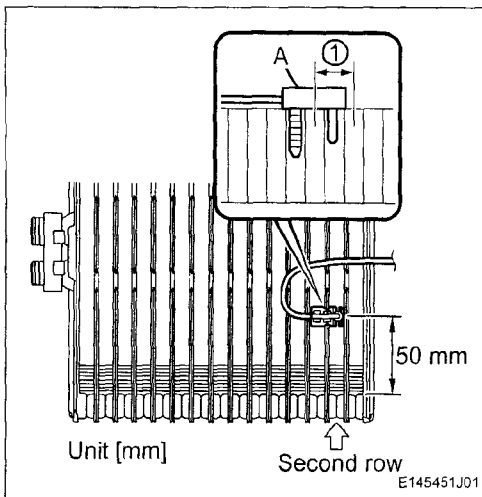
6. Cooler expansion valve removal (with Air conditioning system)

- (1) Use a two-side, 4 mm hexagon wrench to remove two hexagon bolts and remove the cooler expansion valve.
(2) Remove two O-rings from the cooler evaporator.

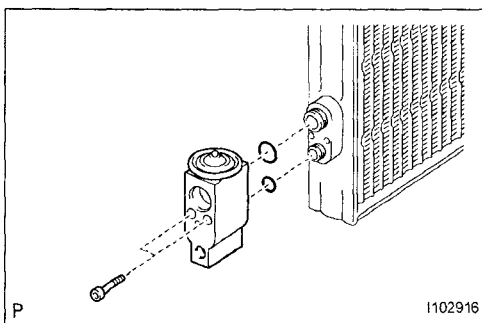


7. Cooler thermistor No. 3 removal (with Air conditioning system)
 - (1) Remove cooler thermistor No. 3 from the evaporator.

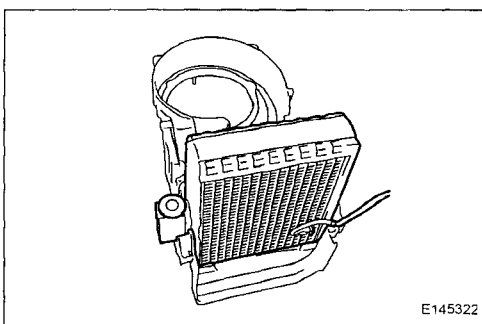
REASSEMBLY



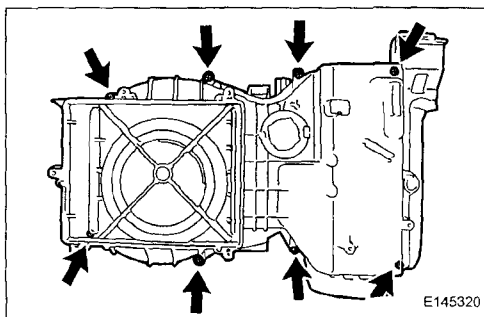
1. Cooler thermistor No. 3 installation (with Air conditioning system)
 - (1) Attach cooler thermistor No. 3 to the evaporator.
 - <CAUTION>
 - > Insert the thermistor only once; otherwise, the holding force of the thermistor will drop.
 - > Insert the thermistor to the evaporator at a position one row next to the existing trace of insertion (at the left or the right) (in a range of <1>).
 - > After inserting the thermistor, do not apply excessive force to the lead wire.
 - > Insert the thermistor straight until the edge of resin case A contacts the edge of the evaporator.



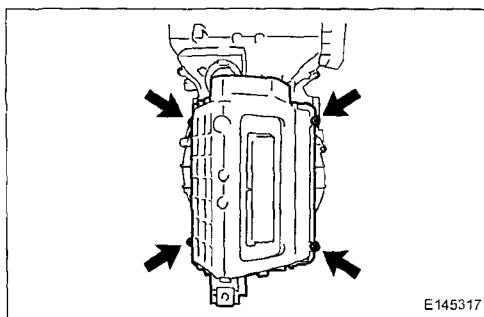
2. Cooler expansion valve installation (with Air conditioning system)
 - (1) Apply a sufficient amount of compressor oil (ND-OIL8) to two new O-rings and the fitting of the cooler expansion valve.
 - (2) Attach two O-rings to cooler evaporator No. 1.
 - <CAUTION>
 Do not allow dust to collect on the O-rings and O-ring sealing.
 - (3) Attach the cooler expansion valve to cooler evaporator No. 1.
 - (4) Use a two-side, 4 mm hexagon wrench to attach the cooler expansion valve with two hexagon bolts.
 - Specified value: $T=3.3N \cdot m$ {33kgf*cm}



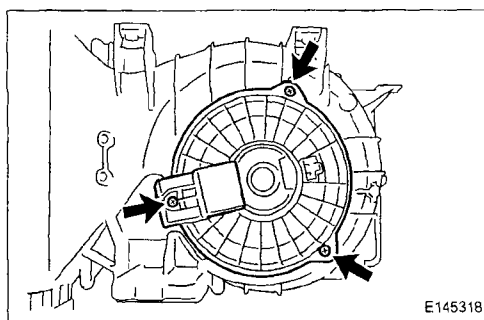
3. Cooler evaporator No. 1 installation (with Air conditioning system)
 - (1) Attach evaporator No. 1 to the cooling unit case (Lower).



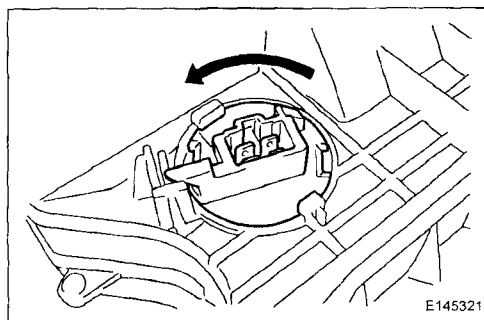
4. Cooler unit case installation
 - (1) Use eight screws to attach the cooler unit case.



5. Air damper case installation
 - (1) Use four screws to attach the air damper case.



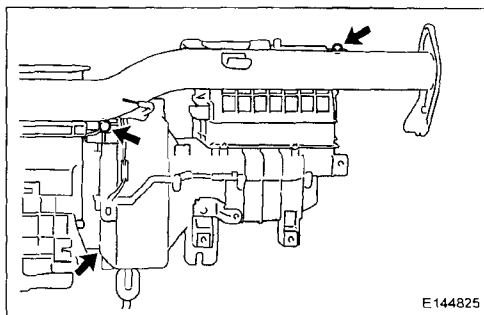
6. Blower motor assembly installation
 - (1) Use three screws to attach the blower motor assembly.



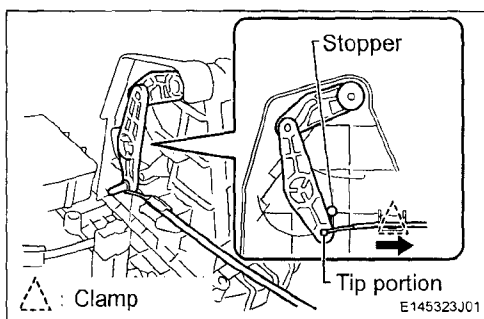
7. Blower register installation
 - (1) Rotate the blower register counterclockwise until it hits the stopper, and attach it.

INSTALLATION

52



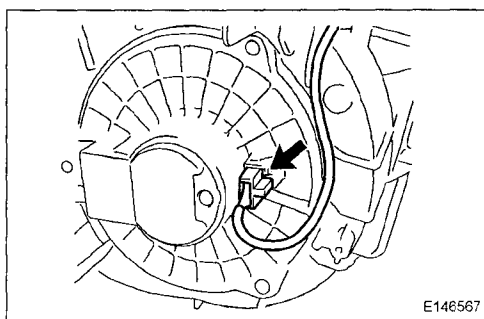
1. Air conditioner blower assembly installation
 - (1) Attach the air conditioner blower assembly to the instrument panel reinforcement with two bolts and nuts.
 - (2) Attach the clamp of the instrument wire in two locations.



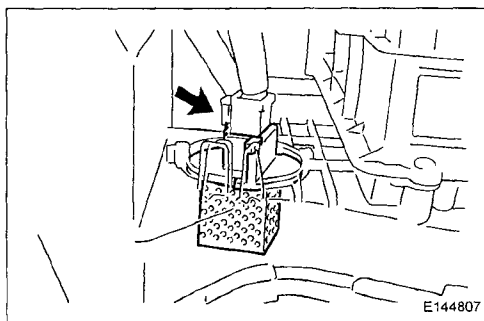
- (3) Connect the air inlet damper control cable and fix it to the clamp.

<HINT>

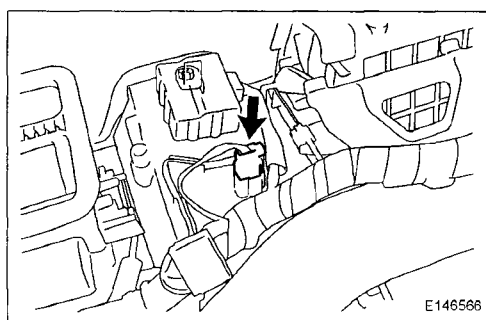
 - > Contact the cable to the air inlet control lever stopper.
 - > Fix the air inlet damper control cable to the clamp by pushing it in the direction of the arrow while contacting the air inlet control lever to the stopper.



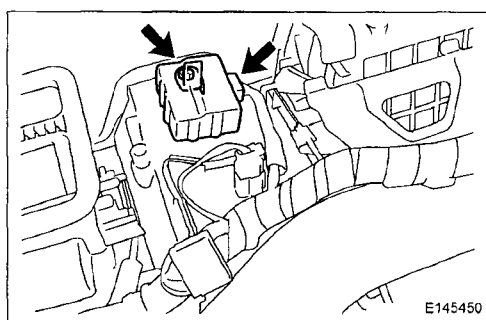
2. Blower motor assembly connection
 - (1) Connect the connector of the blower motor assembly.



3. Blower register connection
 - (1) Connect the connector of the blower register.



4. Cooler thermistor No. 3 connection
 - (1) Connect the connector of cooler thermistor No. 3.



5. Immobilizer code computer connection
 - (1) Use a screw to attach the immobilizer code computer.
 - (2) Connect the connector of the immobilizer code computer.

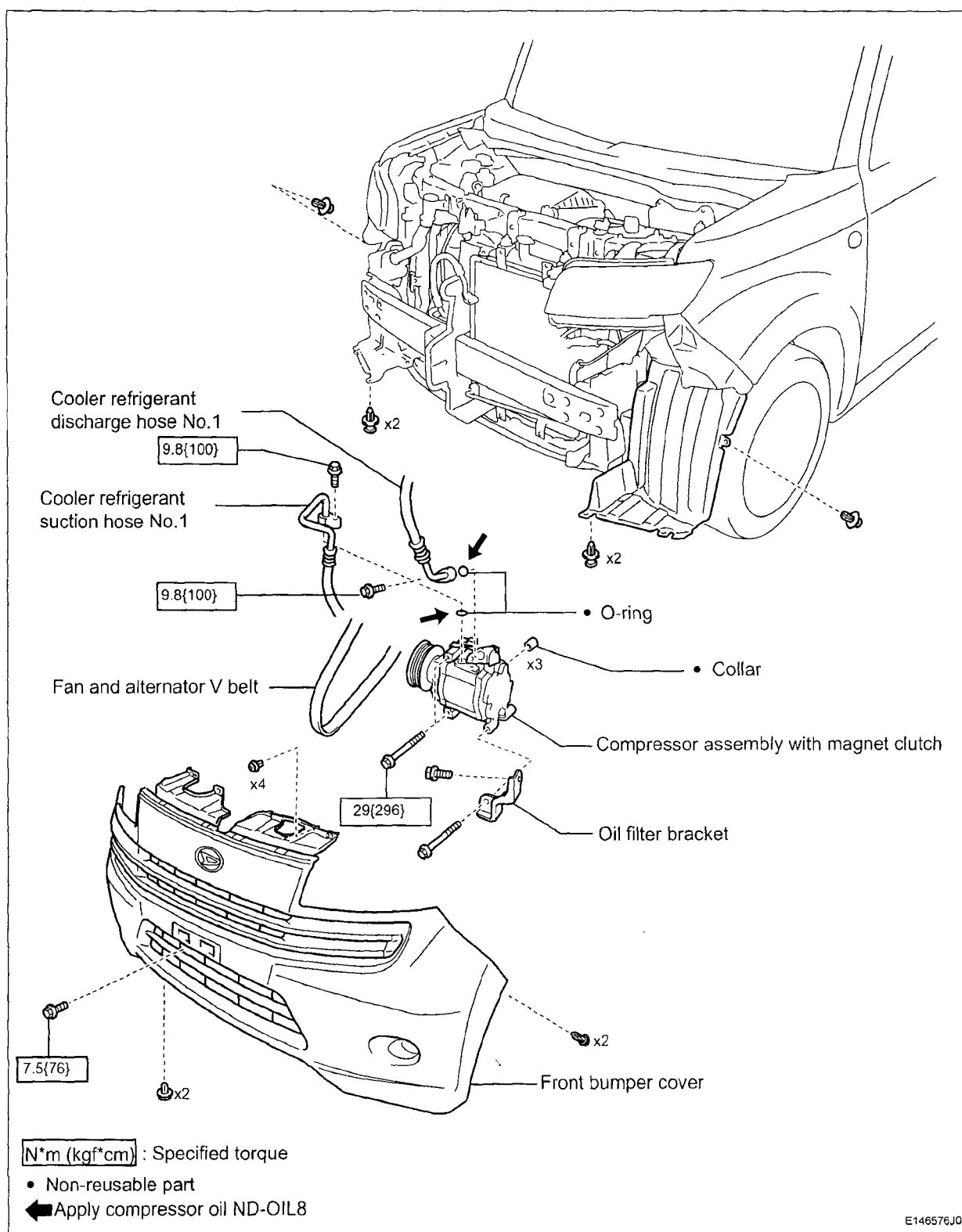
6. Liquid tube B installation (with Air conditioning system) (See page 52-176)
7. Cooler cover No. 1 installation (without Air conditioning system) (See page 52-177)
8. Cooler pipe grommet installation (See page 52-177)
9. Engine control computer installation (See page 06-167)
10. Instrument panel installation (See page 78-29)
11. Steering column assembly installation (See page 48-18)
12. Sliding yoke installation (See page 48-18)
13. Check the front tire for going straight (See page 48-18)
14. Steering column hole cover No. 1 installation (See page 48-18)
15. Windshield wiper switch assembly installation (See page 61-28)
16. Head lamp dimmer switch assembly installation (See page 60-61)
17. Steering column upper cover installation (See page 48-19)
18. Steering column lower cover installation (See page 48-20)
19. Steering wheel assembly installation (See page 48-20)
20. Check position of steering wheel
21. Horn button assembly installation (See page 55-219)
22. Bonnet (hood) lock control lever installation (See page 78-30)
23. Instrument panel finish panel LWR installation (See page 78-31)
24. Instrument panel UPR installation (RH) (See page 78-31)
25. Instrument panel UPR installation (LH) (See page 78-32)
26. Front pillar garnish RH installation (without Curtain shield airbag) (See page 83-30)
27. Front pillar garnish LH installation (without Curtain shield airbag) (See page 83-31)
28. Front pillar garnish RH installation (with Curtain shield airbag) (See page 83-31)
29. Front pillar garnish LH installation (with Curtain shield airbag) (See page 83-32)
30. Front door opening trim weather strip assembly RH installation (See page 83-35)
31. Front door opening trim weather strip assembly LH installation (See page 83-35)
32. Cowl side trim board RH installation (See page 83-38)
33. Cowl side trim LH installation (See page 83-39)
34. Front door scuff plate RH installation (See page 83-39)

35. Front door scuff plate LH installation (See page 83-39)
36. Combination meter assembly installation (See page 63-40)
37. Instrument cluster finish panel installation (See page 78-33)
38. Speaker assembly FR No. 2 installation (with 6-speakers) (See page 78-33)
39. Instrument panel speaker panel No. 1 installation (See page 78-33)
40. Instrument panel speaker panel No. 2 installation (See page 78-33)
41. Radio tuner opening cover installation (without Radio receiver) (See page 78-33)
42. Stereo component tuner assembly installation (with Radio receiver) (See page 64-28)
43. Instrument cluster finish panel CTR installation (See page 78-34)
44. Heater control installation (See page 52-55)
45. Instrument panel center box installation (with Air bag cutoff switch) (See page 78-34)
46. Instrument panel center box installation (without Air bag cutoff switch) (See page 78-34)
47. Instrument panel finish panel LWR CTR installation (RHD) (See page 52-55)
48. Instrument panel box CTR installation (See page 78-34)
49. Front ash receptacle assembly installation (See page 78-34)
50. Console box assembly installation (4WD) (See page 78-35)
51. Console box assembly installation (FF) (See page 78-35)
52. Rear console box installation (See page 78-36)
53. Console box carpet installation (4WD) (See page 78-36)
54. Console box carpet installation (FF) (See page 78-36)
55. Shift lever knob installation (for Manual transaxle) (See page 78-36)
56. Console panel installation (See page 78-37)
57. Instrument panel undercover No. 1 installation (See page 78-37)
58. Glove compartment door stopper installation (See page 78-37)
59. Glove compartment door OUT installation (See page 78-37)
60. Battery minus terminal connection
Specified value: $T=6.4N \cdot m$ {65kgf*cm}
61. Cooling Fluid Replenishing (See page 12-6)
62. Warming up engine
63. Cooling Fluid Leakage Check (See page 12-6)
64. Refrigerant HFC-134a (R134a) replenishing (with Air conditioning system) (See page 52-40)
65. Air bag warning lamp check (See page 52-40)
66. Air bag warning lamp check (See page 55-1)
67. Initialization of steering zero-point correction signal (See page 48-20)
68. Steering zero-point correction (See page 48-20)

COMPRESSOR ASSEMBLY WITH MAGNET CLUTCH

COMPONENTS

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REMOVAL

1. Check before removing compressor assembly with magnet clutch

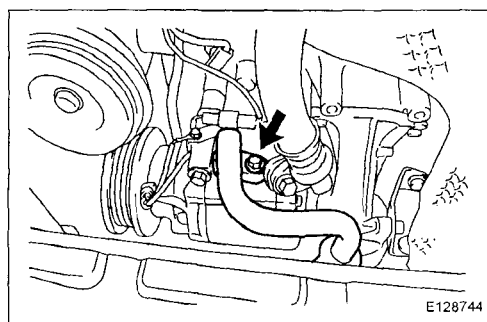
(1) Operate the air conditioner in the following condition.

Condition	Description
Number of engine revolutions	Idling
Operate time	3 minutes or more
A/C switch	ON
Blower level	HI
Set temperature	MAX COLD

<CAUTION>

If the air conditioner can not operate because the compressor is locked, it does not have to be operated.

2. Discharging refrigerant HFC-134a (R134a) (See page 52-40)
3. Battery minus terminal disconnection
4. Front bumper cover removal (See page 82-5)
5. Fan and alternator V belt removal (See page 07-6)



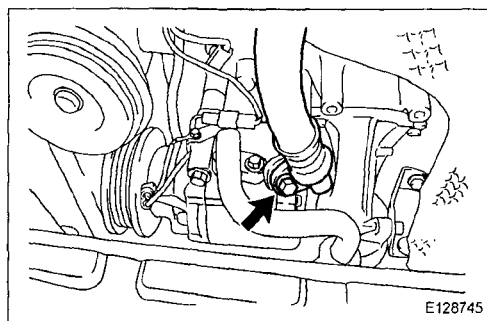
6. Cooler refrigerant suction hose No. 1 disconnection

(1) Remove the bolt and disconnect cooler refrigerant suction hose No. 1.

(2) Remove the O-ring from cooler refrigerant suction hose No. 1.

<CAUTION>

Wind vinyl tape around the joint of cooler refrigerant suction hose No. 1 that has been disconnected and the compressor assembly with magnet clutch to prevent penetration of dust or water.



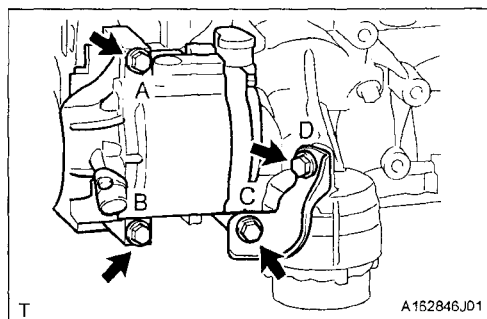
7. Cooler refrigerant discharge hose No. 1 disconnection

(1) Remove the bolt and disconnect cooler refrigerant discharge hose No. 1.

(2) Remove the O-ring from cooler refrigerant discharge hose No. 1.

<CAUTION>

Wind vinyl tape around the joint of cooler refrigerant discharge hose No. 1 that has been disconnected and the compressor assembly with magnet clutch to prevent penetration of dust or water.

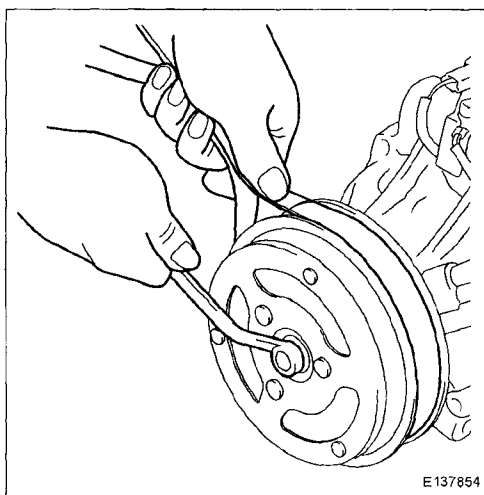


8. Compressor assembly with magnet clutch removal

(1) Disconnect the lead wire connector.

(2) Remove bolts (C) and (D), and then the oil filter bracket.

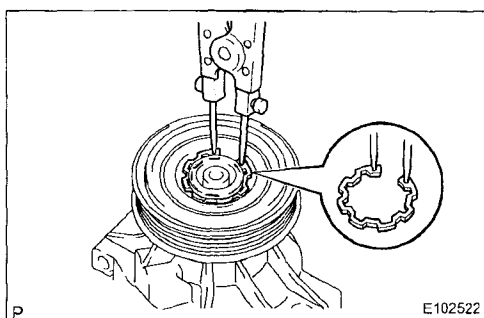
(3) Remove bolts (A) and (B), and then the compressor assembly with magnet clutch.



9. Magnet clutch assembly removal

- (1) Supply power to the magnet clutch assembly and fix the hub and rotor.
- (2) Wind the V belt around the pulley and securely hold the belt with your hand.
- (3) Remove the bolt from the magnet clutch hub.
- (4) Remove the magnet clutch hub and magnet clutch washer (the number of washers is not determined because the washer is for adjustment).

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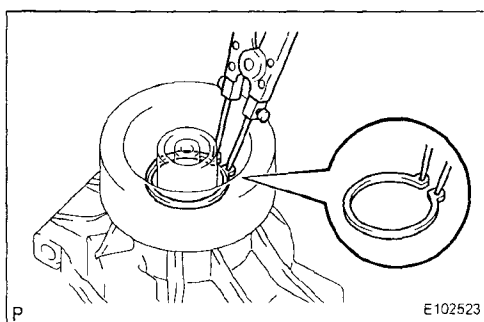
- (5) Using snap ring pliers, remove the snap ring from the compressor assembly with magnet clutch.

Tool: For straight snap ring pliers shaft {KTC (SOP-171) or equivalent}

<CAUTION>

Take care not to damage the seal cover of the bearing when removing the snap ring.

- (6) Remove the magnet clutch rotor.
- (7) Remove the screw and disconnect the lead wire clamp and connector.



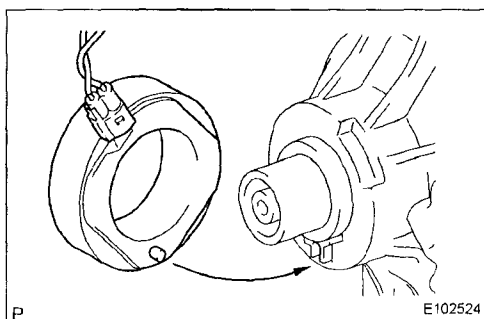
- (8) Using snap ring pliers, remove the snap ring and remove the magnet clutch stator.

Tool: For straight snap ring pliers shaft {KTC (SOP-171) or equivalent}

<CAUTION>

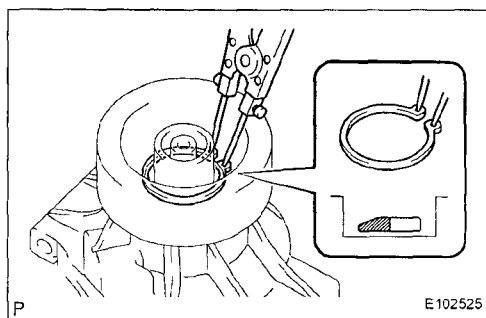
Exercise care not to damage the seal cover of the bearing when removing the snap ring.

INSTALLATION



1. Magnet clutch assembly installation

- (1) Attach the magnet clutch stator to the cooler compressor assembly in the location shown in the diagram.



- (2) Using snap ring pliers, attach a new snap ring with its round side facing up.

Tool: For straight snap ring pliers shaft {KTC (SOP-171) or equivalent}

<CAUTION>

Take care not to damage the seal cover of the bearing when attaching the snap ring.

- (3) Connect the connector and attach the clamp with a screw.
- (4) Attach the magnet clutch rotor.
- (5) Using snap ring pliers, attach a new snap ring with its round side facing up.

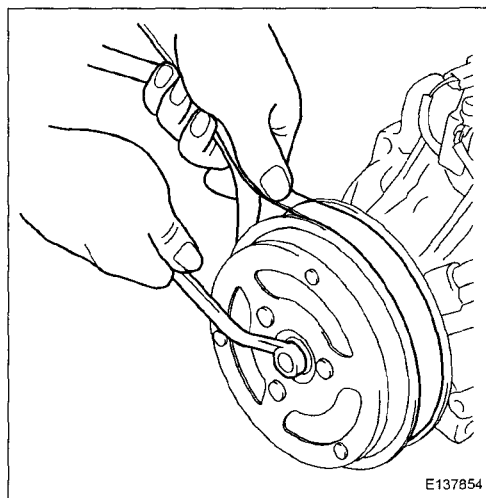
Tool: For straight snap ring pliers shaft {KTC (SOP-171) or equivalent}

<CAUTION>

Take care not to damage the seal cover of the bearing when attaching the snap ring.

- (6) Attach the magnet clutch hub.
- (7) Temporarily tighten the bolt of the magnet clutch assembly.
- (8) Supply power to the magnet clutch assembly and fix the hub and rotor.
- (9) Wind the V belt around the pulley and securely hold the belt with your hand.
- (10) Securely tighten the bolt of the magnet clutch assembly.

Specified value: $T=13N \cdot m$ {135kgf*cm}



2. Magnet clutch air gap check

- (1) Set a dial gage at right angles to the magnet clutch hub.
- (2) Connect the plus terminal of the battery to magnet clutch connector terminal 1 and the minus terminal to the earth wire and measure the air gap when the magnet clutch is turned ON and OFF.
Specified value: 0.15-0.40mm
- (3) In case of the value other than the standard value, remove the magnet clutch hub and adjust it with a magnet clutch washer.

3. Compressor oil quantity check

- (1) To replace the cooler compressor assembly with a new one, gradually discharge the inert gas from the service valve and then discharge the following oil from the new cooler compressor assembly.

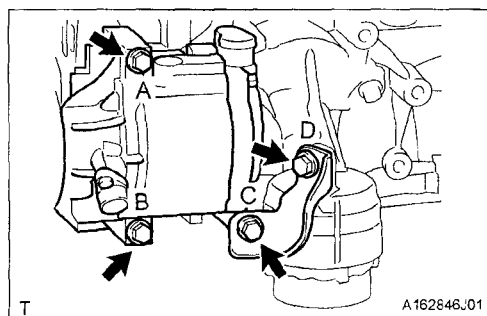
<HINT>

It is easier to discharge oil from the compressor assembly while rotating the shaft.

Specified value: (Quantity of oil in new cooler compressor assembly: 70 +/- 10 ml) - (Oil remaining in removed cooler compressor assembly) = (Oil to be discharged when replacing cooler compressor assembly)

<CAUTION>

- > Because compressor oil remains in the pipes of the vehicle, the oil quantity increases and hinders thermal exchange of the cooling cycle, resulting in inefficient cooling, if the new cooler compressor assembly is attached without discharging oil from it.[8945]If the quantity of the oil remaining in the cooler compressor assembly that has been removed is small, check leakage of oil.
- > If the volume of oil remaining in the removed cooler compressor assembly is too small, check for oil leakage.
- > Be sure to use ND-OIL 8 as the compressor oil.



4. Compressor assembly with magnet clutch installation

- (1) Temporarily tighten and attach the compressor assembly with magnet clutch and oil filter bracket with four bolts.

<HINT>

Attach bolts (A), (B), and (C) through collar.

- (2) Securely tighten bolts (A), (B), and (C) to attach the compressor assembly with magnet clutch.

Specified value: $T=29N \cdot m$ {296kgf*cm}

<HINT>

Tighten bolts (A), (B), and (C) in that order.

- (3) Securely tighten bolt (D).
- (4) Connect the lead wire connector.

5. Cooler refrigerant discharge hose No. 1 installation

- (1) Remove the vinyl tape that has been wound around the joint of cooler refrigerant discharge hose No. 1 and compressor assembly with magnet clutch.

- (2) Apply a sufficient amount of compressor oil (ND-OIL8) to a new O-ring and the joint of the compressor assembly with magnet clutch.

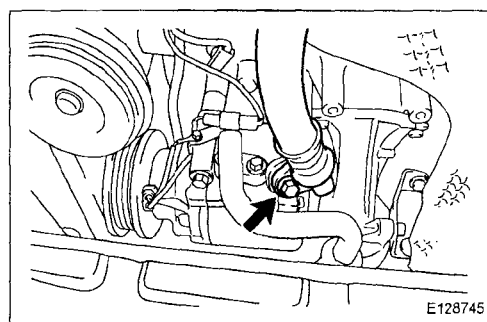
- (3) Attach the O-ring to cooler refrigerant discharge hose No. 1.

<CAUTION>

Make sure that no dust collects on the O-ring and O-ring sealing.

- (4) Use a bolt to attach cooler refrigerant discharge hose No. 1.

Specified value: $T=9.8N \cdot m$ {100kgf*cm}



6. Cooler refrigerant suction hose No. 1 installation

- (1) Cooler refrigerant suction hose No. 1 installation

- (2) Apply a sufficient amount of compressor oil (ND-OIL8) to the new O-ring and the fitting of the cooler compressor assembly.

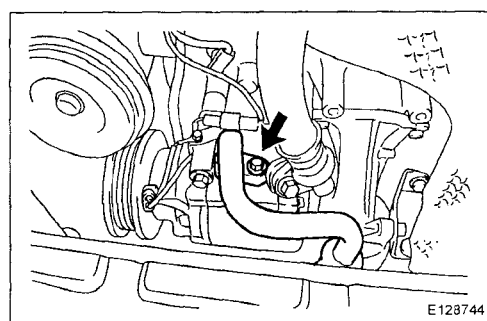
- (3) Attach the O-ring to cooler refrigerant suction hose No. 1.

<CAUTION>

Make sure that no dust collects on the O-ring and O-ring sealing.

- (4) Use a bolt to attach cooler refrigerant suction hose No. 1 with a bolt.

Specified value: $T=9.8N \cdot m$ {100kgf*cm}



7. Fan and alternator V belt installation (See page 07-6)

8. Fan and alternator V belt adjustment (See page 07-7)

9. Front bumper cover installation (See page 82-15)

10. Battery minus terminal connection

Specified value: $T=6.4N \cdot m$ {65kgf*cm}

11. Refrigerant HFC-134a (R134a) filling (See page 52-40)

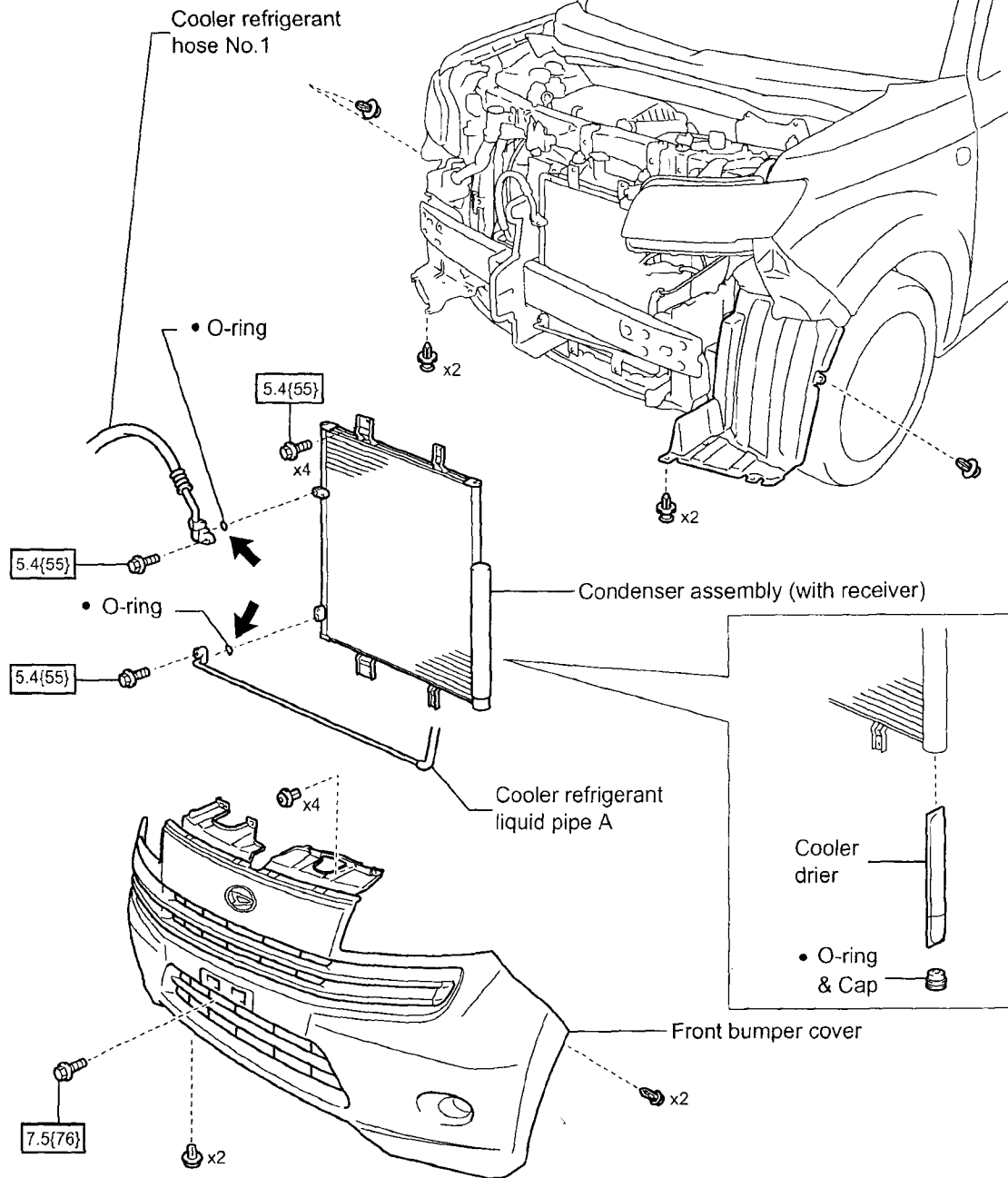
12. Warming up engine

13. Refrigerant gas leakage check (See page 52-40)

COOLER CONDENSER ASSEMBLY

COMPONENTS

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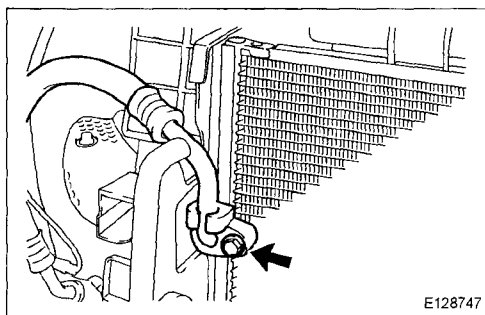
[N*m (kgf*cm)] : Specified torque

• Non-reusable part

➡ Apply compressor oil ND-01L8

REMOVAL

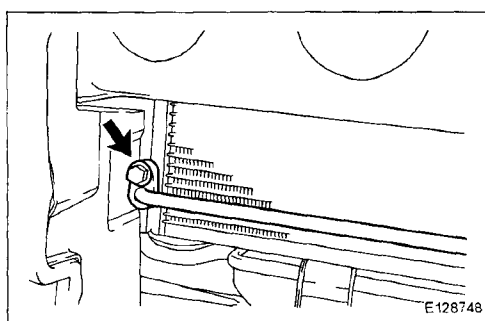
1. Refrigerant HFC-134a (R134a) evacuate (See page 52-40)
2. Front bumper cover removal (See page 82-5)



3. Cooler refrigerant discharge hose No. 1 removal
 - (1) Remove the bolt and disconnect cooler refrigerant discharge hose No. 1.
 - (2) Remove the O-ring from cooler refrigerant discharge hose No. 1.

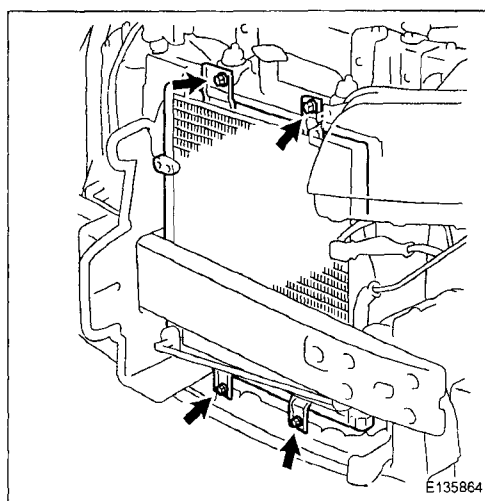
<CAUTION>
Wind vinyl tape around the fitting of cooler refrigerant discharge hose No. 1 that has been disconnected and that of the cooler condenser assembly to prevent penetration of dust-water or suchlike.

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4. Cooler refrigerant liquid pipe A removal
 - (1) Remove the bolt and disconnect cooler refrigerant liquid pipe A.
 - (2) Remove the O-ring from cooler refrigerant liquid pipe A.

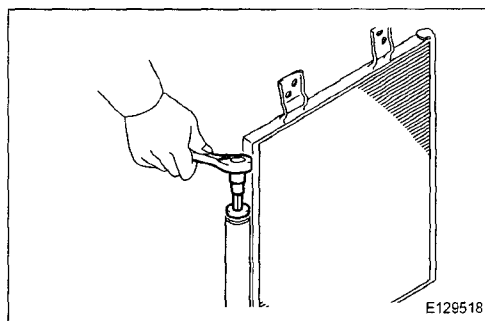
<CAUTION>
Wind vinyl tape around the fitting of cooler refrigerant liquid pipe A that has been disconnected and that of the condenser assembly (with receiver) to prevent penetration of dust-water or suchlike.



5. Condenser assembly (with receiver) removal
 - (1) Remove four bolts and remove the condenser assembly (with receiver) from the vehicle.

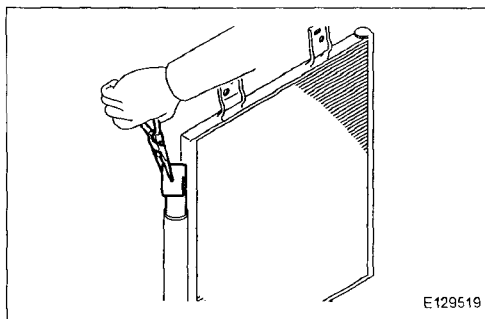
<CAUTION>
Take care not to damage the condenser assembly (with receiver) and radiator assembly when removing the condenser assembly.

DISASSEMBLY



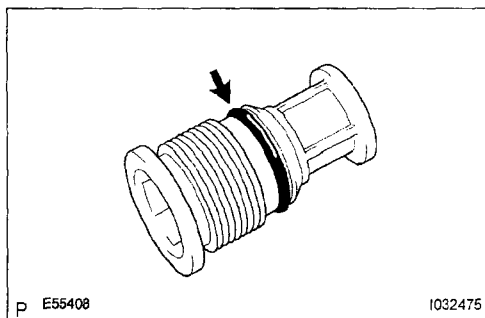
1. Cooler drier removal
 - (1) Using a straight hexagon wrench 14, remove the cap from the modulator.

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- (2) Using pliers, remove the cooler drier.

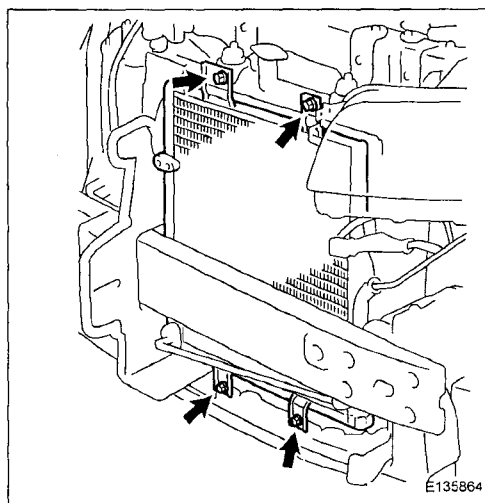
REASSEMBLY



1. Cooler drier installation
 - (1) Apply a sufficient amount of compressor oil (ND-OIL8) to the O-ring of the cap.
 - (2) Use a straight hexagon wrench 14 to attach the cap to the cooler condenser assembly.

Specified value: $T=2.9\text{N}\cdot\text{m}$ {30kgf*cm}

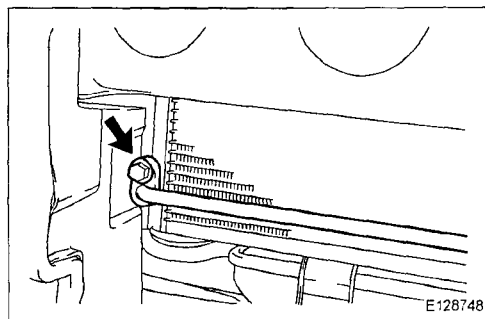
INSTALLATION



1. Condenser assembly (with Receiver) installation
 - (1) Use four bolts to attach the condenser assembly (with receiver) to the vehicle.

Specified value: $T=5.4\text{N}\cdot\text{m}$ {55kgf*cm}

<CAUTION>
Take care not to damage the condenser assembly (with receiver) and radiator assembly when removing the condenser assembly.

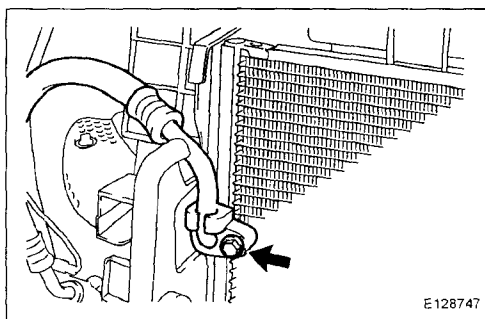


2. Cooler refrigerant liquid pipe A installation
 - (1) Remove the vinyl tape that is wrapped around the fitting of the cooler refrigerant liquid pipe A and cooler condenser.
 - (2) Apply a sufficient amount of compressor oil (ND-OIL8) to the new O-ring and the fitting of the cooler refrigerant liquid pipe A.
 - (3) Attach the O-ring to the cooler refrigerant liquid pipe A.

<CAUTION>
Make sure that no dust collects on the O-ring and O-ring sealing.

 - (4) Use a bolt to attach cooler refrigerant liquid pipe A.

Specified value: $T=5.4\text{N}\cdot\text{m}$ {55kgf*cm}



3. Cooler refrigerant discharge hose No. 1 installation

- (1) Remove the vinyl tape that is wrapped around the fitting of the cooler refrigerant discharge hose No. 1 and the condenser assembly (with receiver).
- (2) Apply a sufficient amount of compressor oil (ND-OIL8) to the new O-ring and the fitting of the cooler refrigerant discharge hose No. 1.
- (3) Attach the O-ring to cooler refrigerant discharge hose No. 1.
<CAUTION>
Make sure that no dust collects on the O-ring and O-ring sealing.
- (4) Use a bolt to attach cooler refrigerant discharge hose No. 1.
Specified value: $T=5.4N \cdot m$ {55kgf*cm}

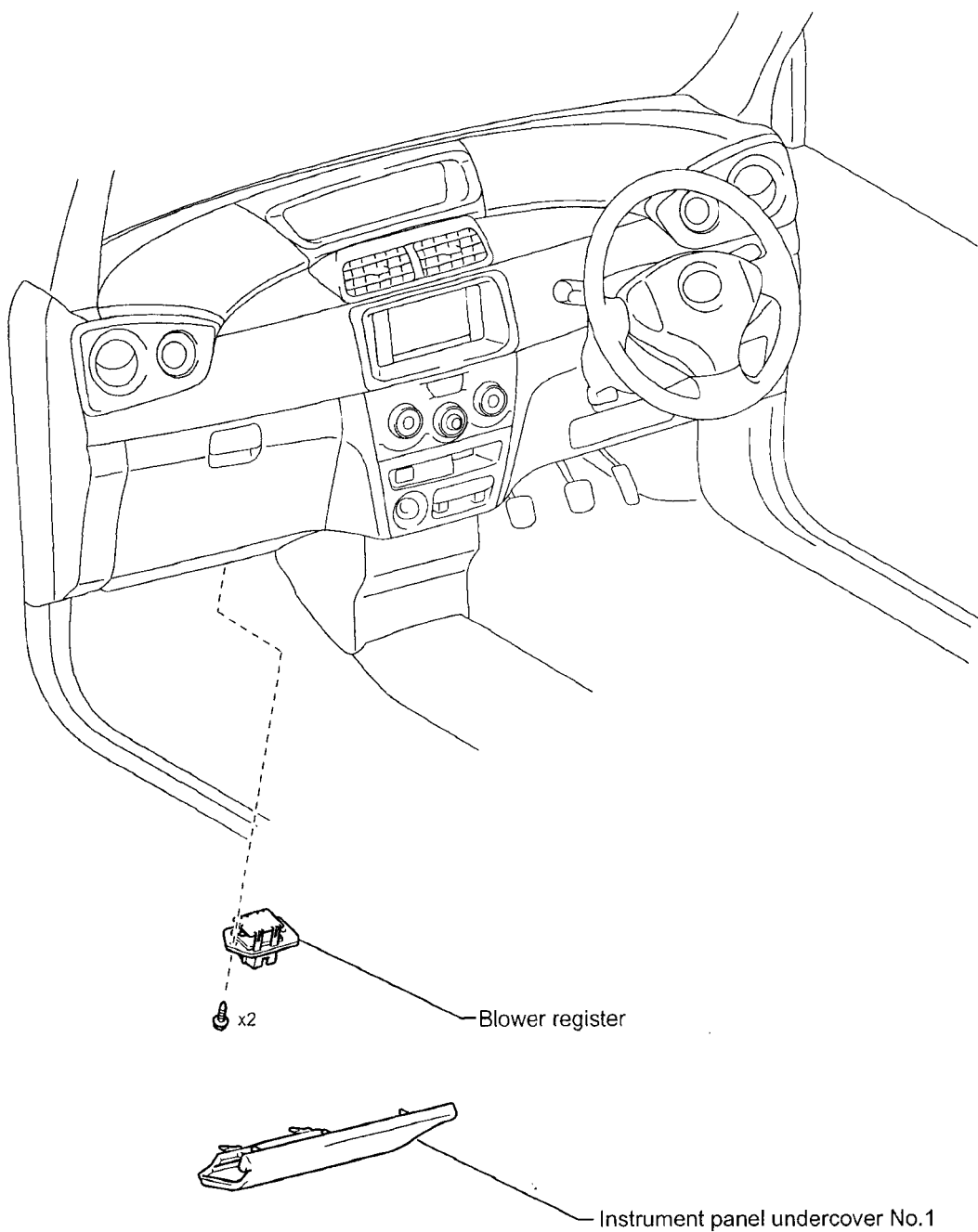
52

4. Front bumper cover installation (See page 82-15)
5. Refrigerant HFC-134a (R134a) filling (See page 52-40)
6. Warming up engine
7. Refrigerant gas leakage check (See page 52-40)

BLOWER REGISTER (RHD)

COMPONENTS

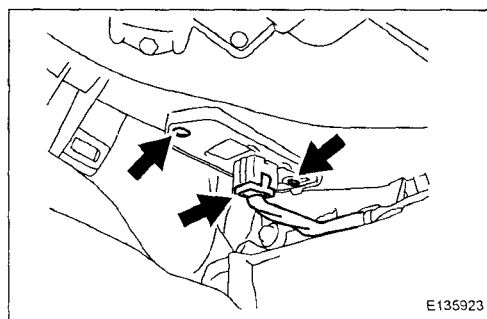
52



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REMOVAL

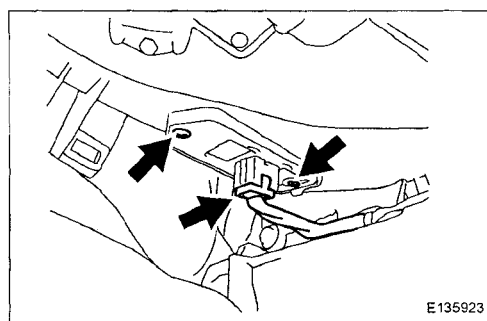
1. Battery minus terminal disconnection
2. Instrument panel undercover No. 1 removal (See page 78-15)



3. Blower register removal
 - (1) Disconnect the connector.
 - (2) Remove two screws and remove the blower register.

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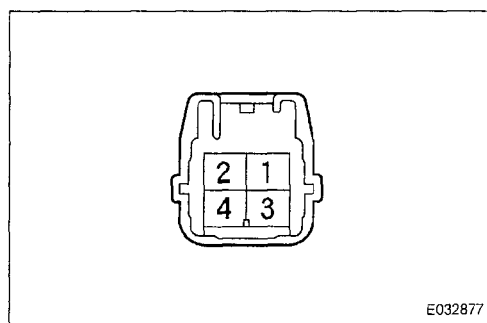
INSTALLATION



1. Blower register installation
 - (1) Use two screws to attach the blower register.
 - (2) Connect the connector.

2. Instrument panel undercover No. 1 installation (See page 78-37)
3. Battery minus terminal connection
Specified value: $T=6.4\text{N}\cdot\text{m}$ {65kgf*cm}

INSPECTION



1. Blower register check
 - (1) Resistance check
 - (a) Measure the resistance between terminals of the connector using the tester.

Specified value

Terminal number	Specified value
1 ↔ 4	3.36 +/- 0.24 Ω
3 ↔ 4	1.56 +/- 0.11 Ω
2 ↔ 4	0.56 +/- 0.04 Ω

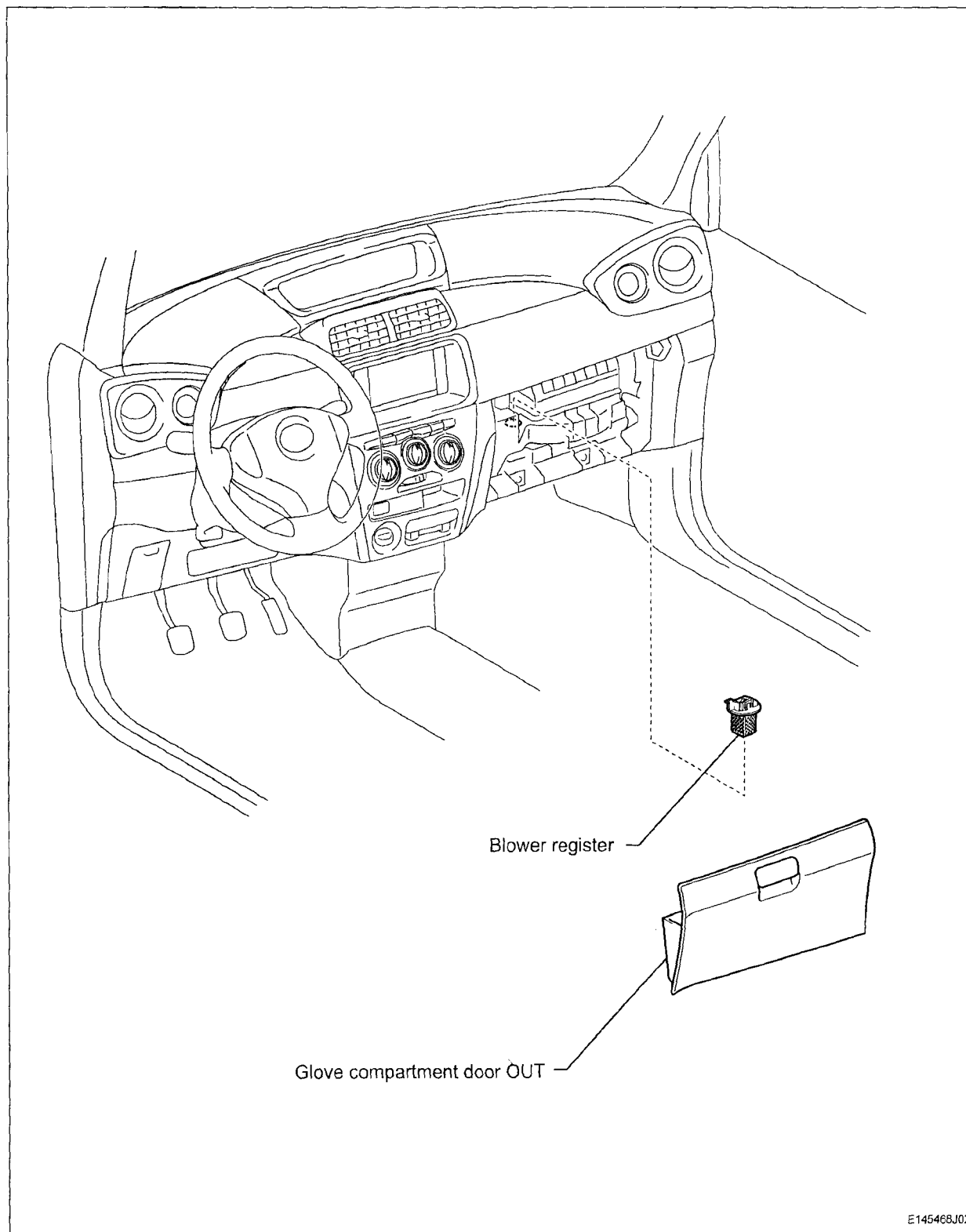
<HINT>

With temperature fuse between terminals 2 and 4

BLOWER REGISTER (LHD)

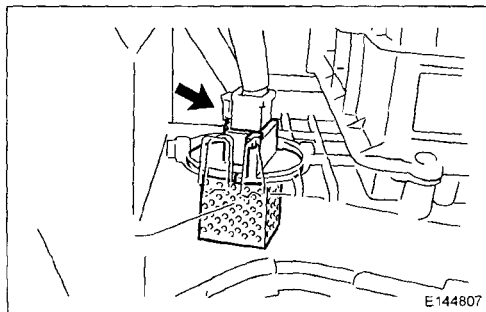
COMPONENTS

52

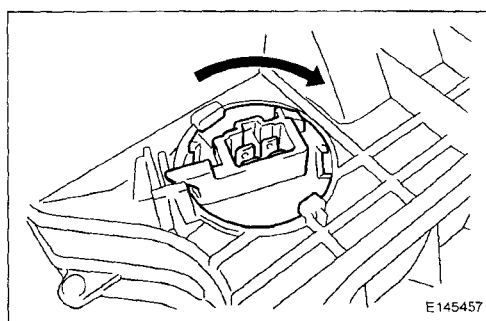


REMOVAL

1. Battery minus terminal disconnection
2. Glove compartment door OUT removal (See page 78-15)



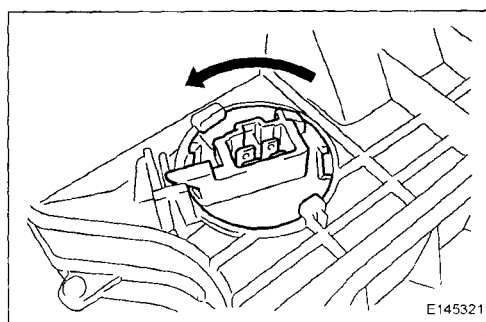
3. Blower register removal
 - (1) Disconnect the connector of the blower register.



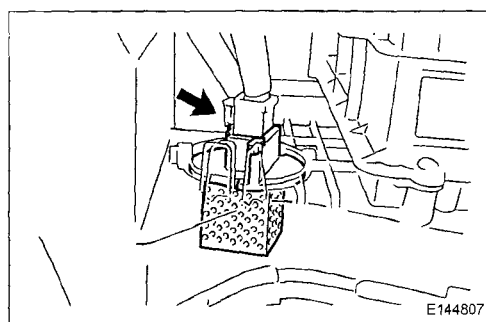
- (2) Remove the fitting of the tab and remove the blower register by rotating it clockwise.

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INSTALLATION



1. Blower register installation
 - (1) Rotate the blower register counterclockwise until it hits the stopper, and attach it.

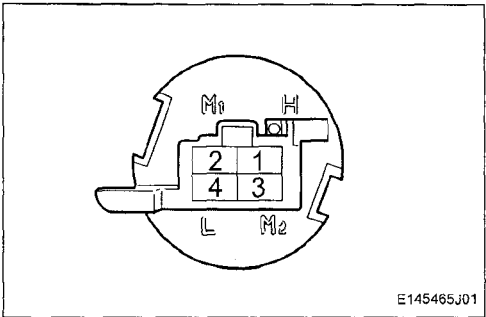


- (2) Connect the connector of the blower register.

2. Glove compartment door OUT installation (See page 78-37)
3. Battery minus terminal connection
Specified value: $T=6.4N \cdot m$ {65kgf*cm}

INSPECTION

52



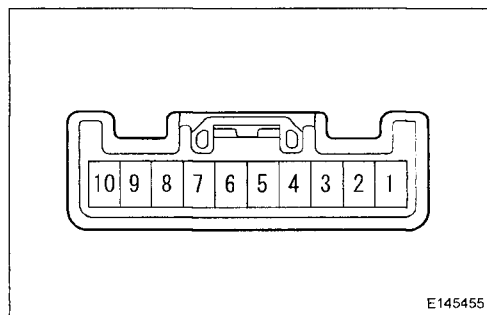
- 1. Blower register check
 - (1) Resistance check
 - (a) Measure the resistance between terminals of the connector using the tester.
 - Specified value:

Terminal number	Specified value
1 ↔ 4	3.12 +/- 0.22 Ω
1 ↔ 2	1.32 +/- 0.09 Ω
1 ↔ 3	0.5 +/- 0.04 Ω

<HINT>
With temperature fuse between terminals 1 and 3

COOLER CONTROL SWITCH ASSEMBLY (LHD)

INSPECTION



1. Cooler control switch assembly check

(1) Continuity check

(a) Check the continuity between the terminals of the connector using the tester.

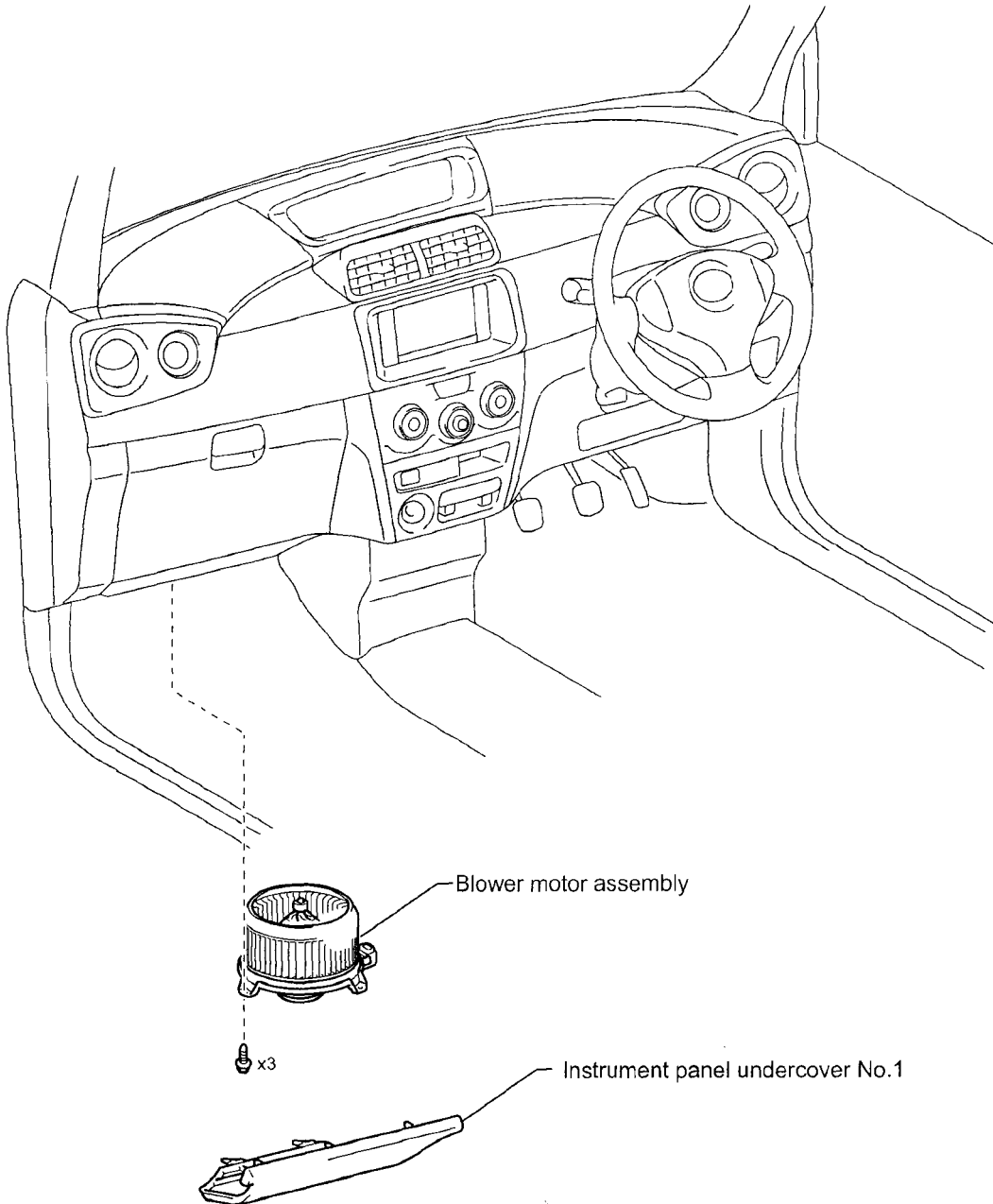
Reference

Terminal number	Measuring condition	Electrical continuity
8 ↔ 9	A/C switch ON	With
8 ↔ 9	A/C switch OFF	None

BLOWER MOTOR ASSEMBLY (RHD)

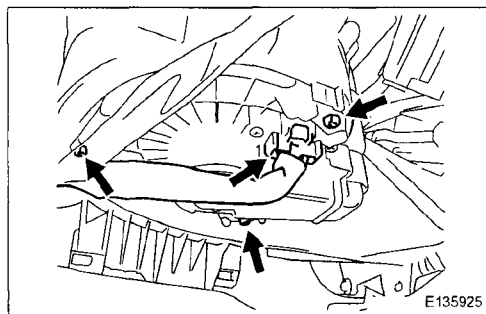
COMPONENTS

52



REMOVAL

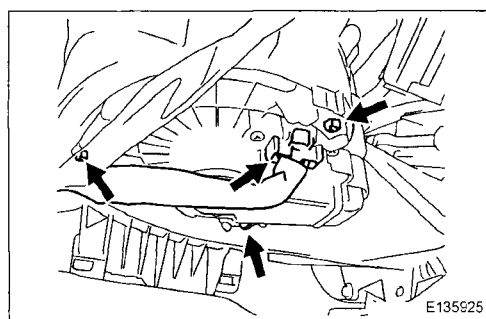
1. Battery minus terminal disconnection
2. Instrument panel undercover No. 1 removal (See page 78-15)



3. Blower motor assembly removal
 - (1) Disconnect the connector of the blower motor assembly.
 - (2) Remove three screws and then the blower motor assembly.

52

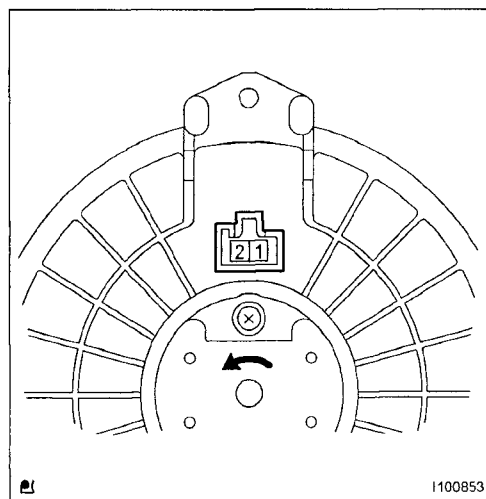
INSTALLATION



1. Blower motor assembly installation
 - (1) Use three screws to attach the blower motor assembly.
 - (2) Connect the connector of the blower motor assembly.

2. Instrument panel undercover No. 1 installation (See page 78-37)
3. Battery minus terminal connection
Specified value: $T=6.4N \cdot m$ {65kgf*cm}

INSPECTION

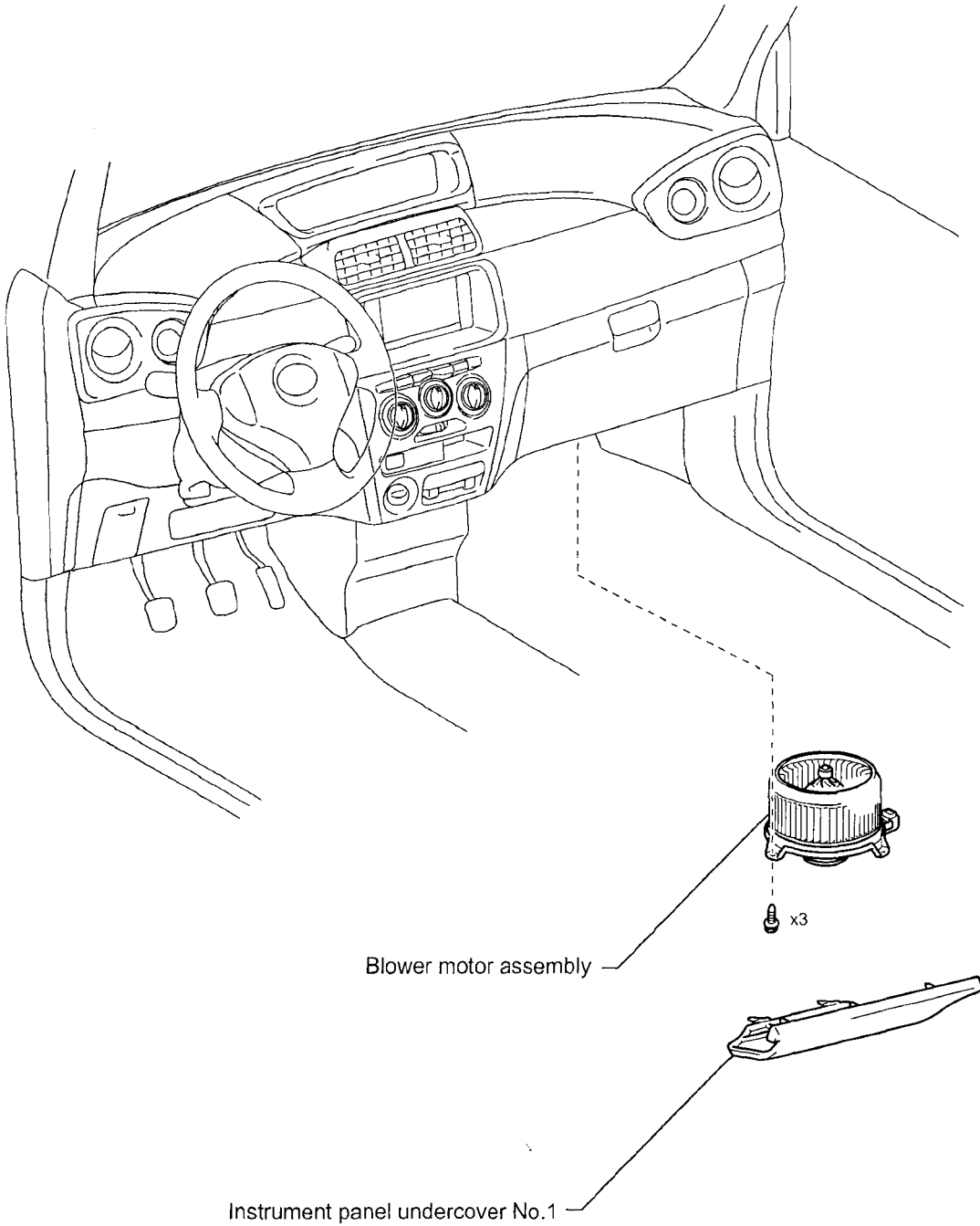


1. Blower motor assembly check
 - (1) Operation check
 - (a) Make sure that the motor revolves to the direction of the arrow shown in the diagram without abnormal sound when the plus terminal of the battery is connected to connector terminal 2 and the minus terminal of the battery is connected to terminal 1.
 - (2) Current value measurement
 - (a) Measure the current while the motor is revolving without load using the test.
Specified value: 18.3 +/- 1.8 A and below

BLOWER MOTOR ASSEMBLY (LHD)

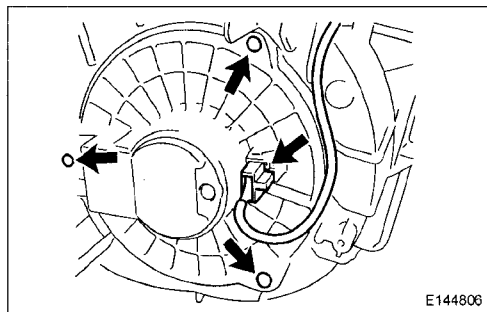
COMPONENTS

52



REMOVAL

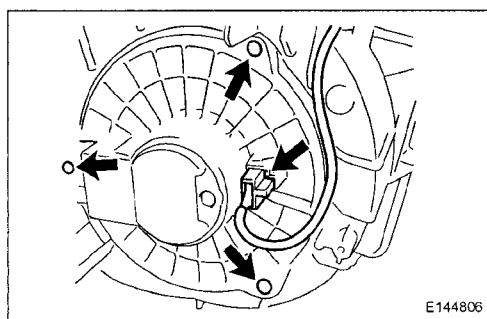
1. Battery minus terminal disconnection
2. Instrument panel undercover No. 1 removal (See page 78-15)
3. Engine control computer removal (See page 06-166)



4. Blower motor assembly removal
 - (1) Disconnect the connector of the blower motor assembly.
 - (2) Remove three screws and then the blower motor assembly.

52

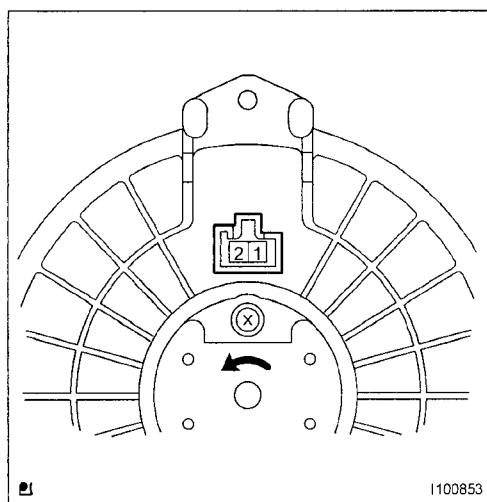
INSTALLATION



1. Blower motor assembly installation
 - (1) Use three screws to attach the blower motor assembly.
 - (2) Connect the connector of the blower motor assembly.

2. Engine control computer removal (See page 06-167)
3. Instrument panel undercover No. 1 installation (See page 78-37)
4. Battery minus terminal connection
Specified value: $T=6.4\text{N}\cdot\text{m}$ {65kgf*cm}

INSPECTION

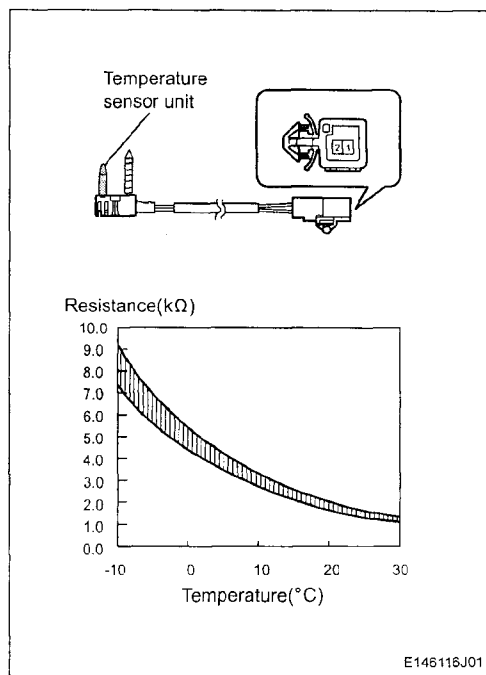


1. Blower motor assembly check
 - (1) Operation check
 - (a) Make sure that the motor revolves to the direction of the arrow shown in the diagram without abnormal sound when the plus terminal of the battery is connected to connector terminal 2 and the minus terminal of the battery is connected to terminal 1.
 - (2) Current value measurement
 - (a) Measure the current while the motor is revolving without load using the test.
Specified value: 18.3 +/- 1.8 A and below

COOLER THERMISTOR No. 3

INSPECTION

52



1. Cooler thermistor No. 3 check (RHD)

(1) Cooler thermistor No. 3 resistance check

<CAUTION>

Check cooler thermistor No. 3 while it is attached to cooler evaporator No. 1.

(a) Measure the resistance between connector terminals 1 and 2 using the tester.

Specified value

Temperature	Specified value
-10 °C	7.30 - 9.10 kΩ
-5 °C	5.65 - 6.95 kΩ
0 °C	4.40 - 5.35 kΩ
5 °C	3.40 - 4.15 kΩ
10 °C	2.70 - 3.25 kΩ
15 °C	2.14 - 2.58 kΩ
20 °C	1.71 - 2.05 kΩ
25 °C	1.38 - 1.64 kΩ
30 °C	1.11 - 1.32 kΩ

<HINT>

- > Touching the temperature sensor makes it impossible to make a correct judgment because of the influence of the body temperature. Therefore, hold the connector side when the sensor is checked.
- > Before checking the sensor, make sure that it gets used to the ambient temperature.

2. Cooler thermistor No. 3 removal (LHD)

(1) Cooler thermistor No. 3 resistance check

<CAUTION>

Check cooler thermistor No. 3 while it is attached to cooler evaporator No. 1.

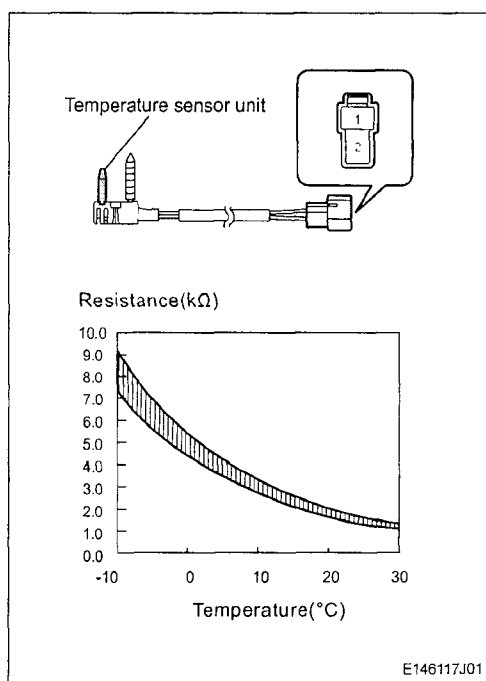
(a) Measure the resistance between connector terminals 1 and 2 using the tester.

Specified value

Temperature	Specified value
-10 °C	7.30 - 9.10 kΩ
-5 °C	5.65 - 6.95 kΩ
0 °C	4.40 - 5.35 kΩ
5 °C	3.40 - 4.15 kΩ
10 °C	2.70 - 3.25 kΩ
15 °C	2.14 - 2.58 kΩ
20 °C	1.71 - 2.05 kΩ
25 °C	1.38 - 1.64 kΩ
30 °C	1.11 - 1.32 kΩ

<HINT>

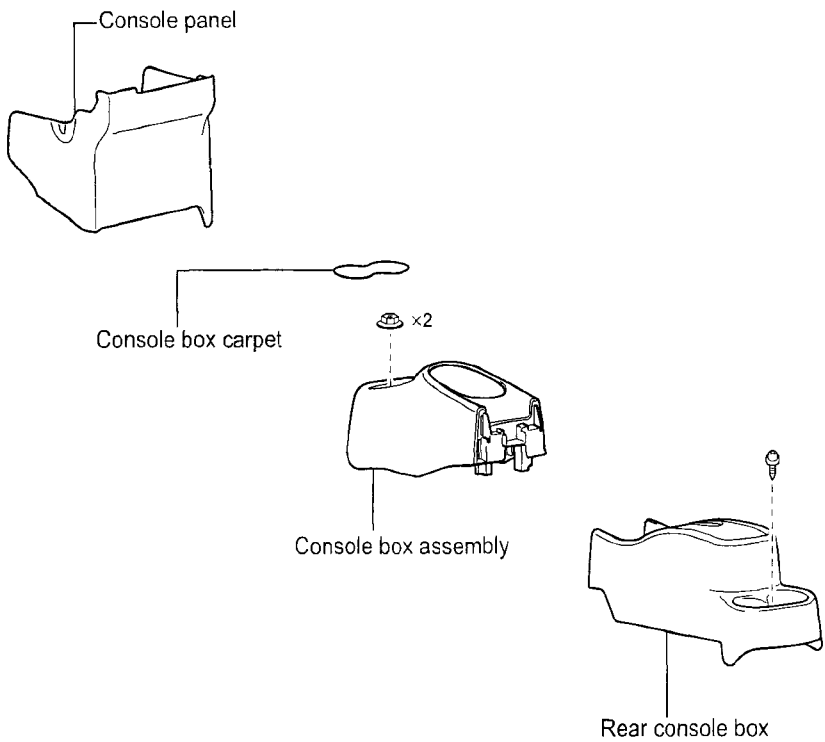
- > Touching the temperature sensor makes it impossible to make a correct judgment because of the influence of the body temperature. Therefore, hold the connector side when the sensor is checked.
- > Before checking the sensor, make sure that it gets used to the ambient temperature.



HEATER RADIATOR (LHD)
COMPONENTS

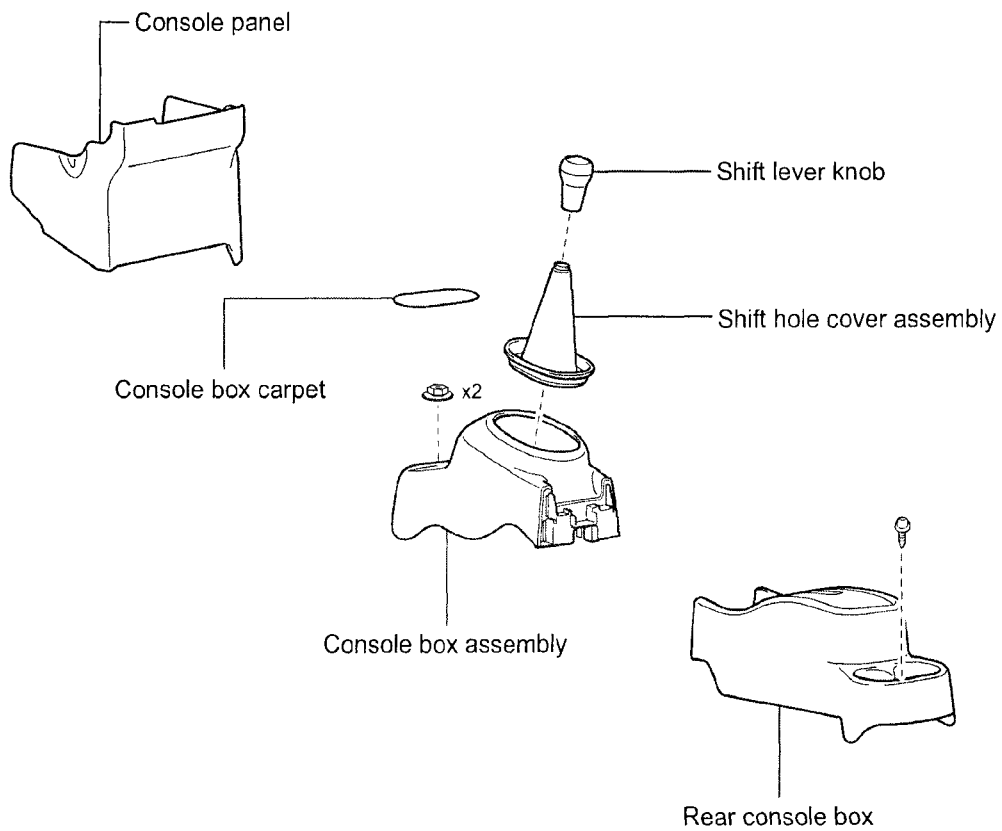
for Automatic transaxle:

52

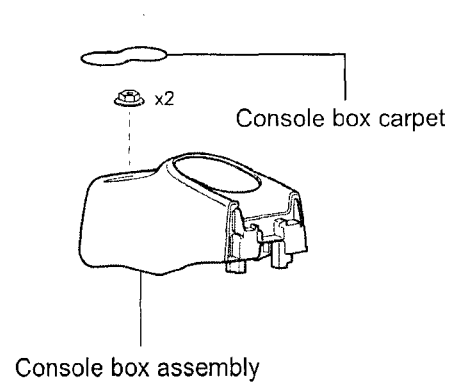


for Manual transaxle:

52

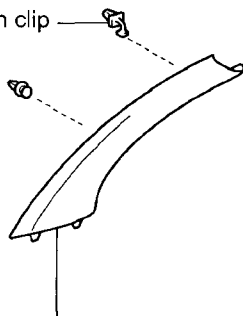


FF:



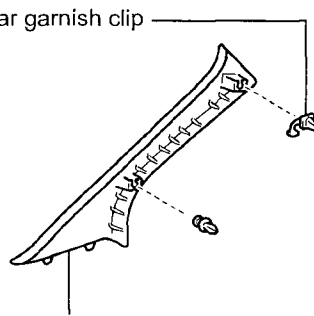
with Curtain shield airbag:

- Front pillar garnish clip

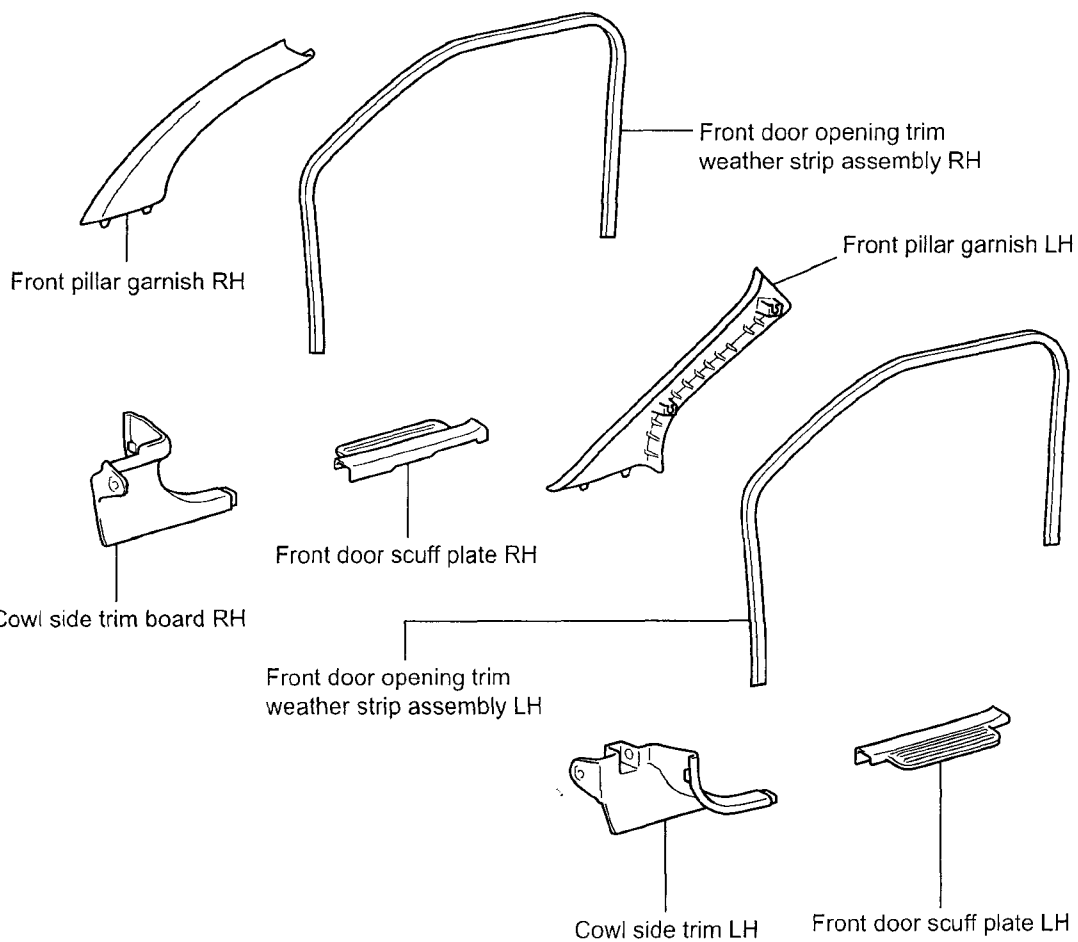


Front pillar garnish RH

- Front pillar garnish clip

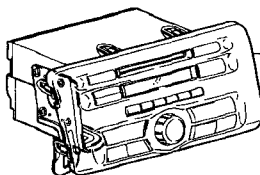


Front pillar garnish LH



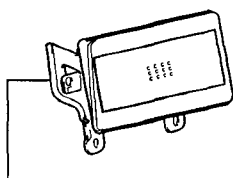
- Non-reusable part

with Radio receiver:

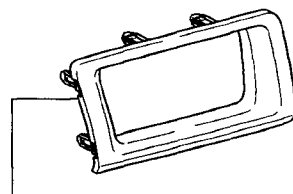


Stereo component tuner assembly

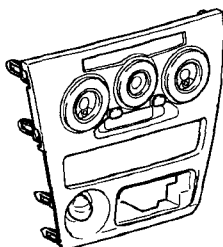
without Radio receiver:



Radio tuner opening cover



Instrument panel cluster
finish panel CTR



Instrument cluster
finish panel LWR CTR



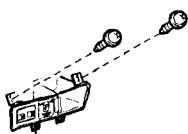
Front ash receptacle
assembly



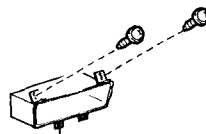
Instrument panel box CTR

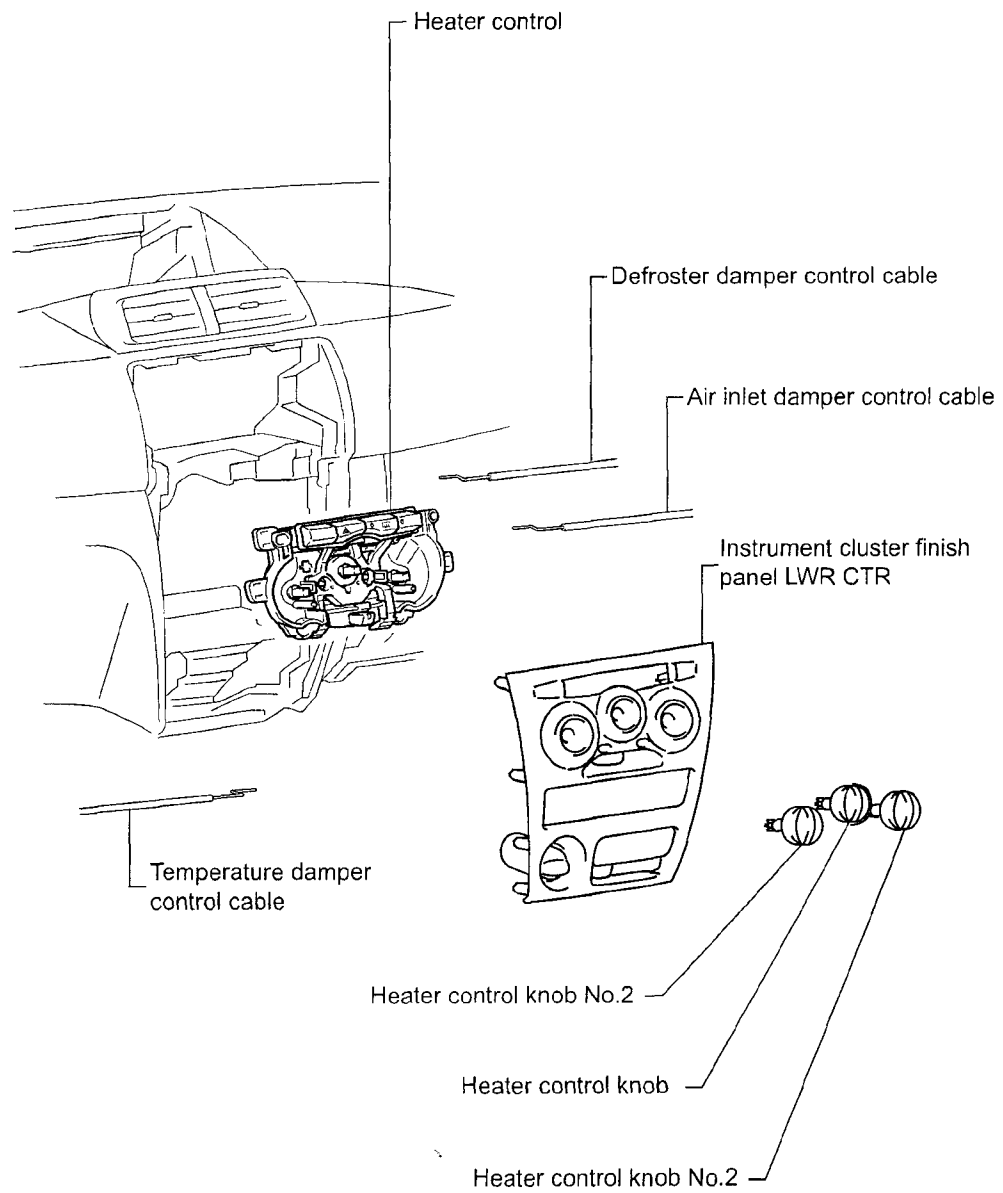
with Airbag cut off switch:

without Airbag cut off switch:

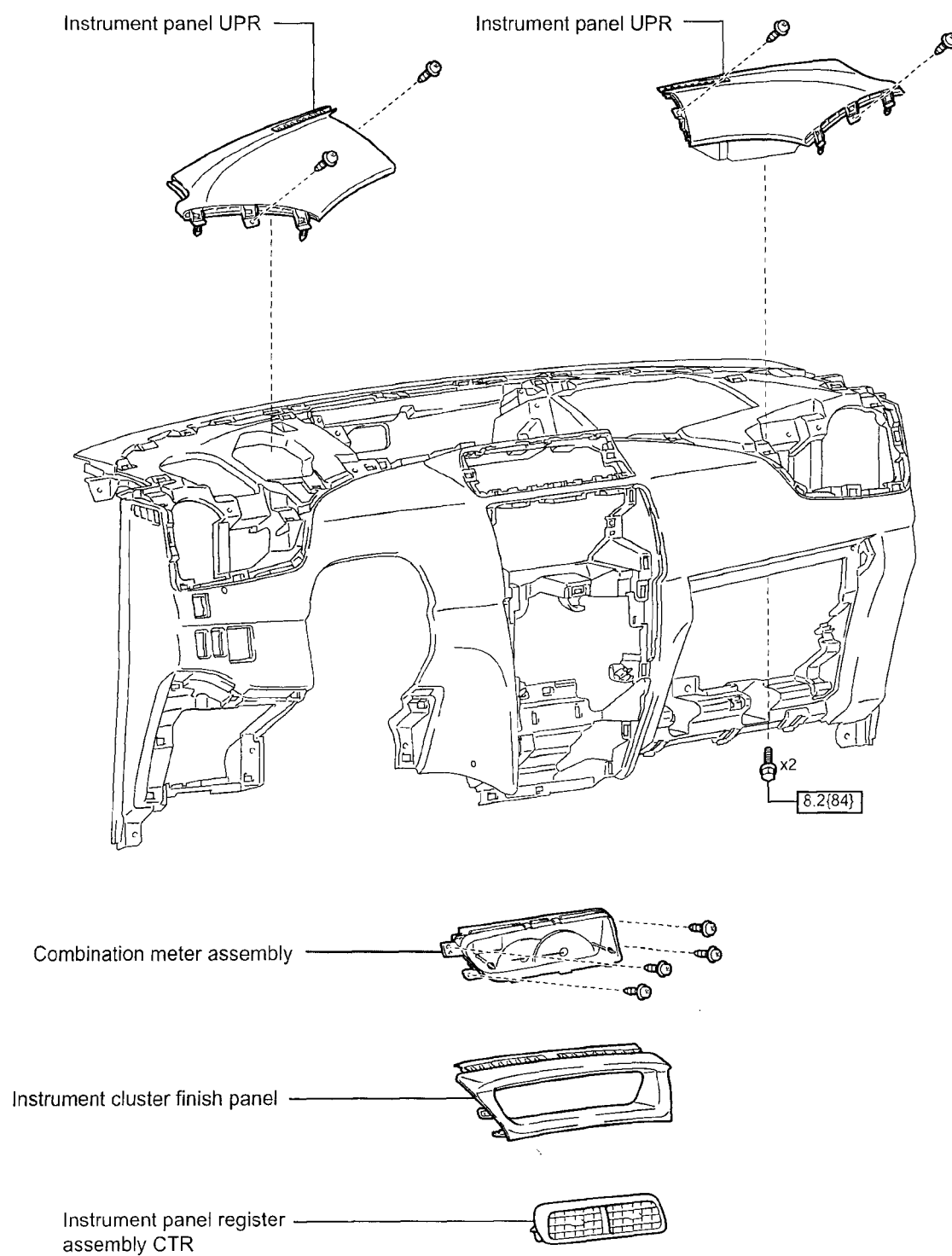


Instrument panel
center box

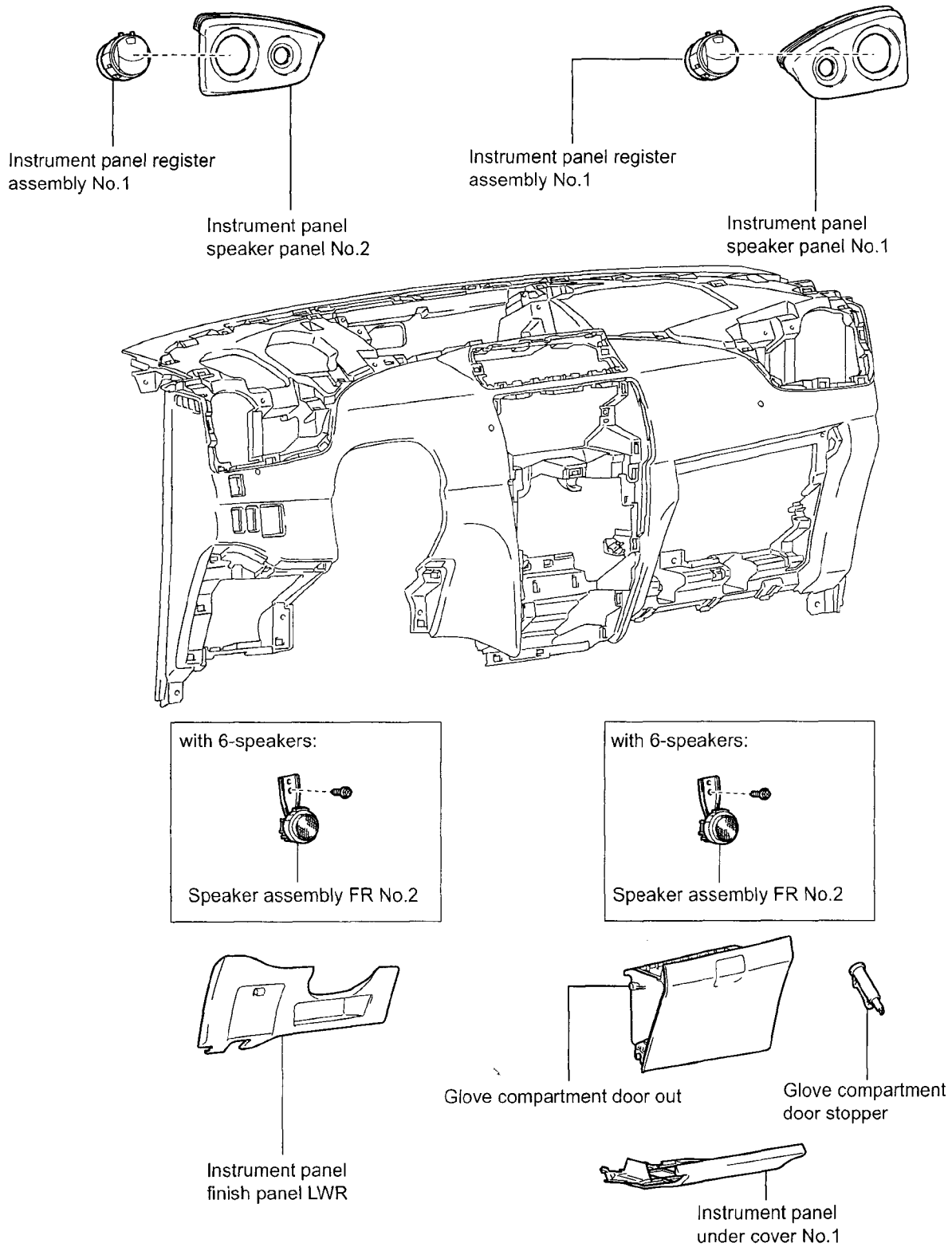


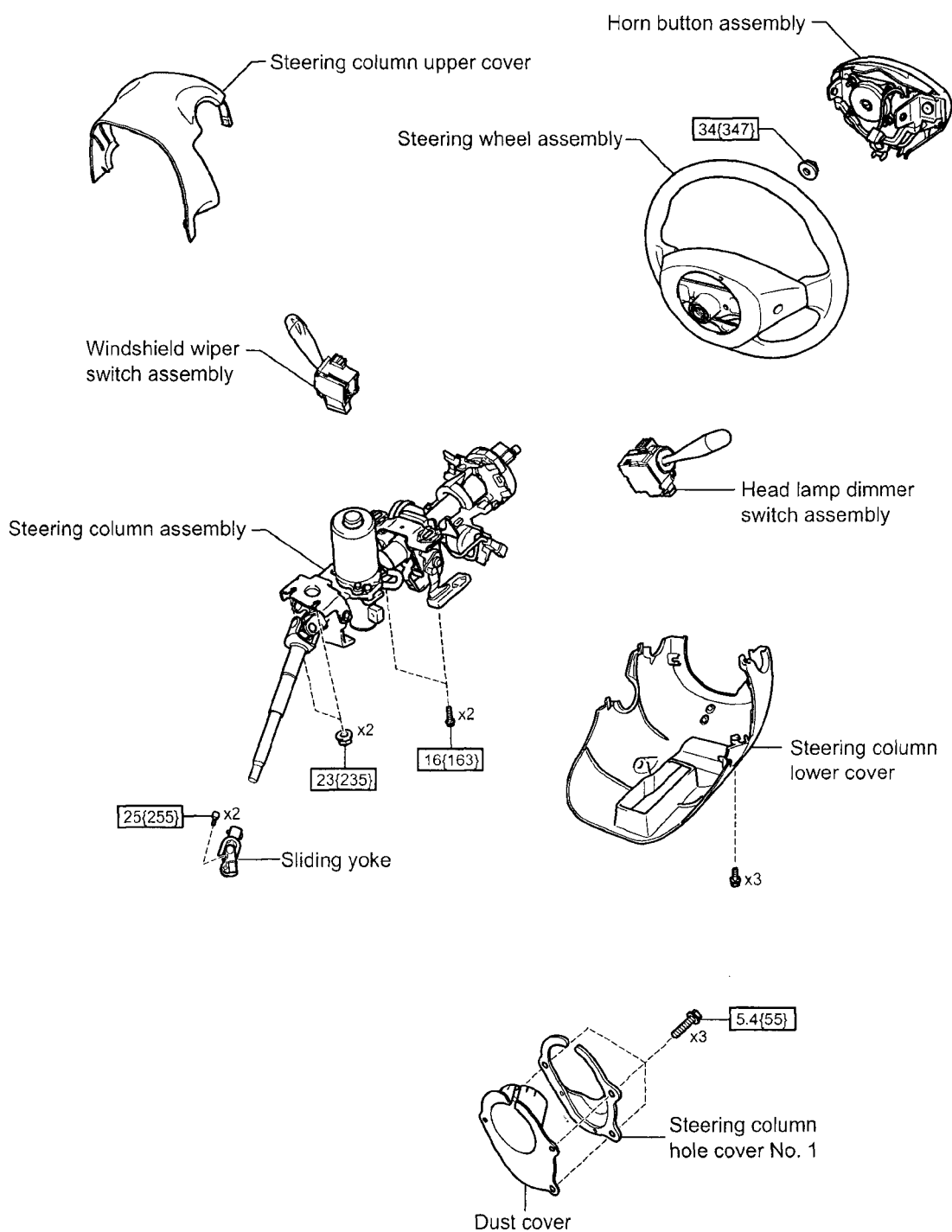


52

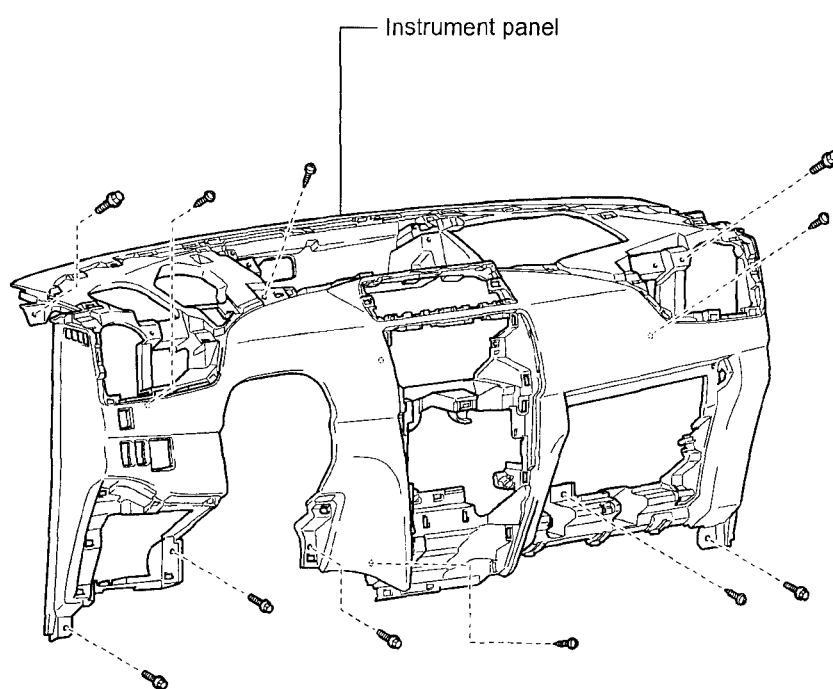


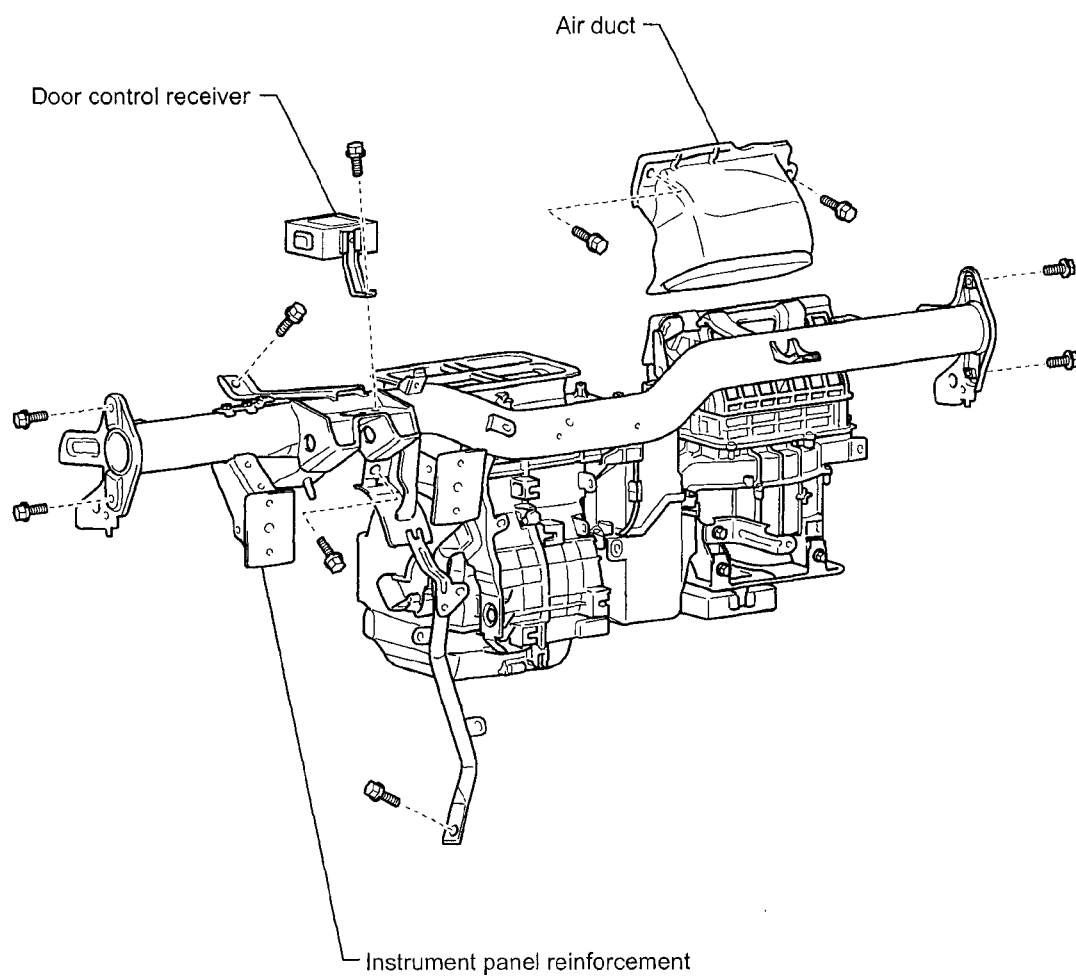
$\boxed{\text{N}^*\text{m (kgf}^*\text{cm)}}$: Specified torque

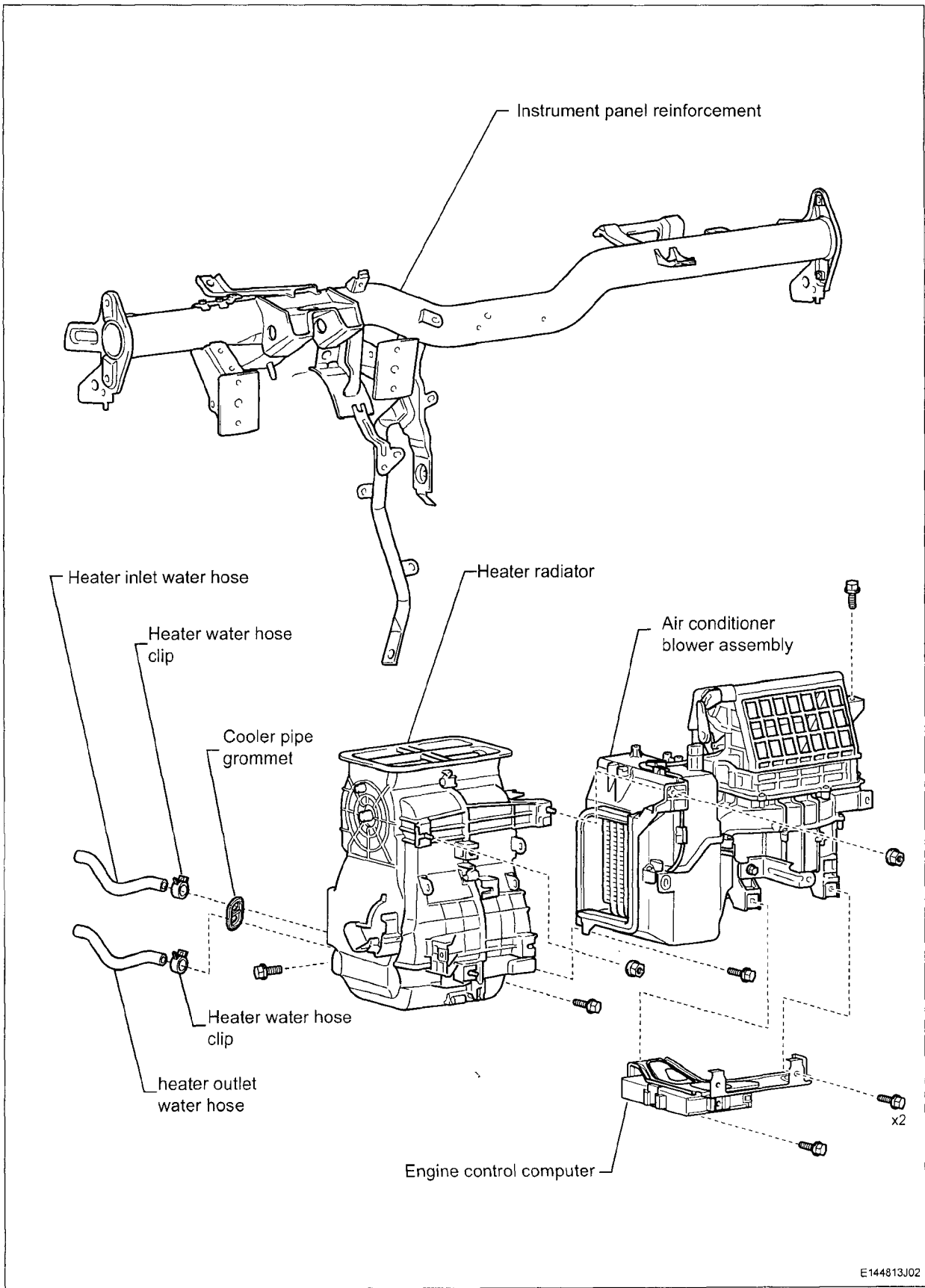




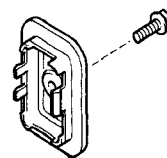
N*m {kgf*cm} : Specified torque







without Air conditioning system:



Cooler cover No.1

Air conditioner blower assembly

• O-ring

Liquid tube B

9.8{100}

Cooler cover No.1

Cooler cover No.2

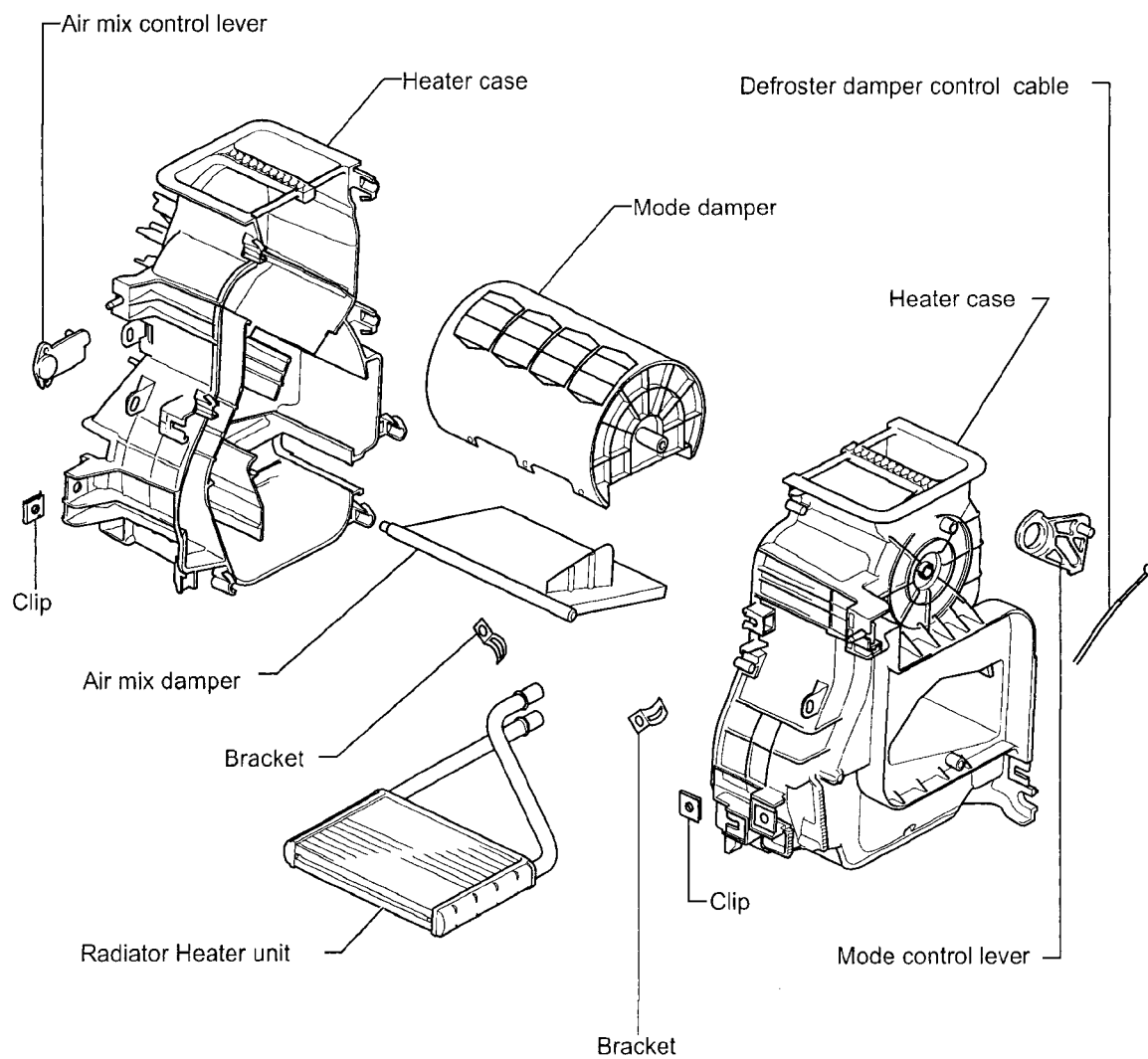
Cooler unit drain hose No.1

N*m (kgf*cm) : Specified torque

• Non-reusable part

← Apply compressor oil ND-01L8

E145452J02



REMOVAL

<WARNING>

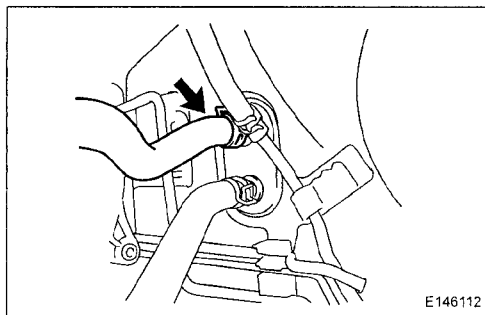
This maintenance work may affect the SRS air bag system. Before starting the work, be sure to check the notes on the SRS air bag system.

(See page)

52

1. Refrigerant HFC-134a (R134a) evacuate (with Air conditioning system) (See page 52-40)
2. Battery minus terminal disconnection
3. Cooling fluid drainage (See page 12-6)
4. Glove compartment door OUT removal (See page 78-15)
5. Glove compartment door stopper removal (See page 78-15)
6. Instrument panel undercover No. 1 removal (See page 78-15)
7. Console panel removal (See page 78-15)
8. Shift lever knob removal (for Manual transaxle) (See page 78-16)
9. Console box carpet removal (4WD) (See page 78-16)
10. Console box carpet removal (FF) (See page 78-16)
11. Rear console box removal (See page 78-16)
12. Console box assembly removal (4WD) (See page 78-16)
13. Console box assembly removal (FF) (See page 78-16)
14. Instrument panel box CTR removal (See page 78-17)
15. Front ash receptacle assembly removal (See page 78-17)
16. Instrument cluster finish panel LWR CTR removal (See page 52-51)
17. Instrument panel center box removal (with Air bag cutoff switch) (See page 78-18)
18. Instrument panel center box removal (without Air bag cutoff switch) (See page 78-34)
19. Heater control removal (See page 52-51)
20. Instrument cluster finish panel CTR removal (See page 78-18)
21. Radio tuner opening cover removal (without Radio receiver) (See page 78-19)
22. Stereo component tuner assembly removal (with Radio receiver) (See page 64-27)
23. Instrument panel speaker panel No. 1 removal (See page 78-19)
24. Instrument panel speaker panel No. 2 removal (See page 78-19)
25. Speaker assembly FR No. 2 removal (with 6-speakers) (See page 78-19)
26. Instrument cluster finish panel removal (See page 78-19)
27. Combination meter assembly removal (See page 63-39)
28. Front door scuff plate RH removal (See page 83-14)
29. Front door scuff plate LH removal (See page 83-14)
30. Cowl side trim board RH removal (See page 83-15)
31. Cowl side trim LH removal (See page 83-15)
32. Front door opening trim weather strip assembly RH removal (See page 83-18)
33. Front door opening trim weather strip assembly LH removal (See page 83-19)
34. Front pillar garnish RH removal (without Curtain shield airbag) (See page 83-21)
35. Front pillar garnish LH removal (without Curtain shield airbag) (See page 83-22)
36. Front pillar garnish RH removal (with Curtain shield airbag) (See page 83-22)
37. Front pillar garnish LH removal (with Curtain shield airbag) (See page 83-23)
38. Instrument panel UPR removal (RH) (See page 78-20)
39. Instrument panel UPR removal (LH) (See page 78-20)
40. Instrument panel finish panel LWR removal (See page 78-22)
41. Bonnet (hood) lock control lever disconnection (See page 78-22)
42. Horn button assembly removal (See page 55-218)
43. Steering wheel assembly removal (See page 48-14)

- 44. Steering column lower cover removal (See page 48-14)
- 45. Upper cover of steering column removal (See page 48-14)
- 46. Head lamp dimmer switch assembly removal (See page 60-60)
- 47. Window shield wiper switch assembly removal (See page 61-28)
- 48. Steering column hole cover No. 1 removal (See page 48-15)
- 49. Sliding yoke removal (See page 48-15)
- 50. Steering column assembly removal (See page 48-15)
- 51. Instrument panel removal (See page 78-23)
- 52. Engine control computer removal (See page 06-166)

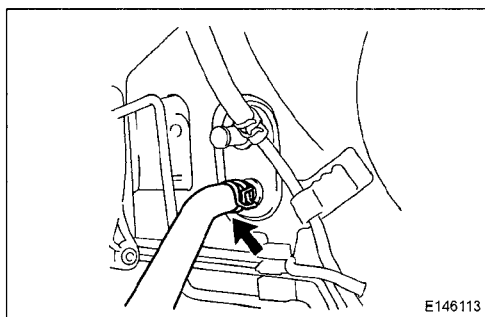


53. Heater inlet water hose disconnection

- (1) Shift the heater water hose clip and disconnect the heater inlet water hose.

<CAUTION>

Wind vinyl tape around the fitting of the heater inlet water hose that has been disconnected, and that of the unit to prevent penetration of dust, water or suchlike.



54. Heater outlet water hose disconnection

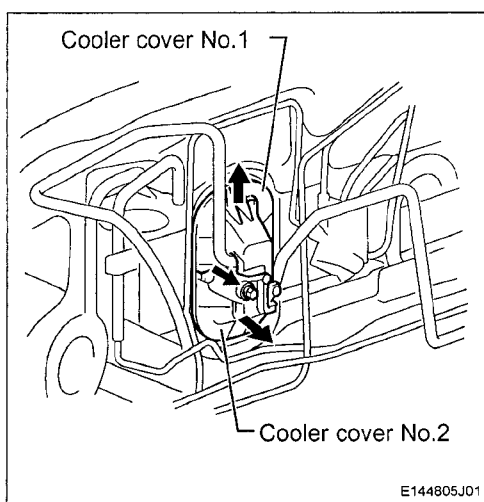
- (1) Shift the heater water hose clip and disconnect the heater outlet water hose.

<CAUTION>

Wind vinyl tape around the fitting of the heater outlet water hose that has been disconnected, and that of the unit to prevent penetration of dust, water or suchlike.

55. Cooler pipe grommet removal

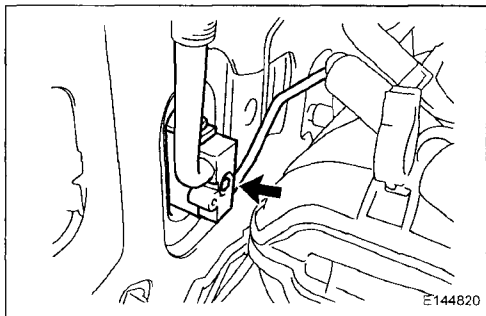
- (1) Remove the cooler pipe grommet from the vehicle.



56. Liquid tube B removal (with Air conditioning system)

- (1) Remove the bolt and remove cooler cover No. 2.
- (2) Remove cooler cover No. 1 by pushing it upward.

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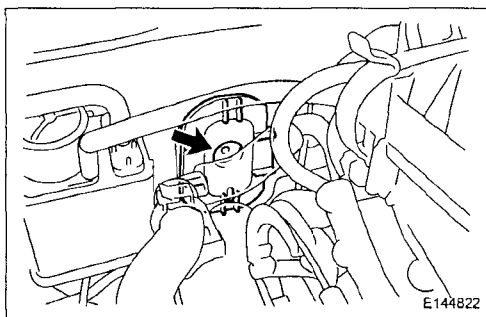


(3) Remove the bolt and remove liquid tube B.

(4) Remove the O-ring from liquid tube B.

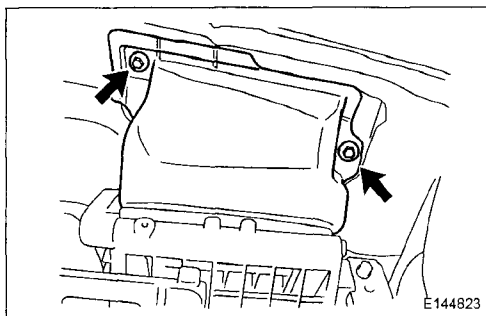
<CAUTION>

Wind vinyl tape around the fitting of the liquid tube B that has been disconnected and that of the unit to prevent penetration of dust, water or suchlike.



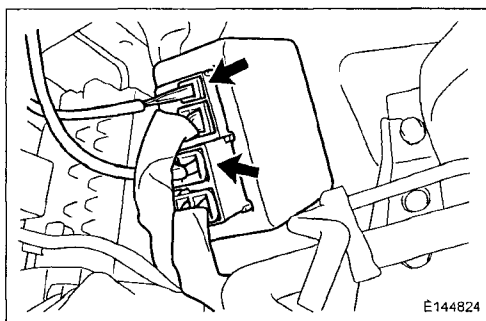
57. Cooler cover No. 1 removal (without Air conditioning system)

(1) Remove the screw and remove cooler cover No. 1.



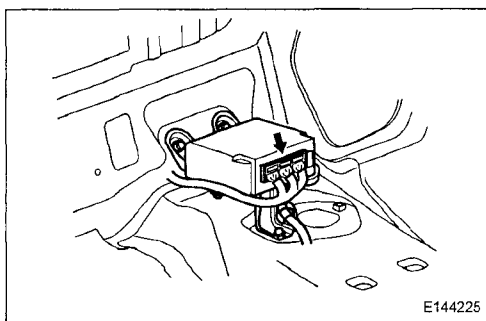
58. Air duct removal

(1) Remove two bolts and remove the air duct.



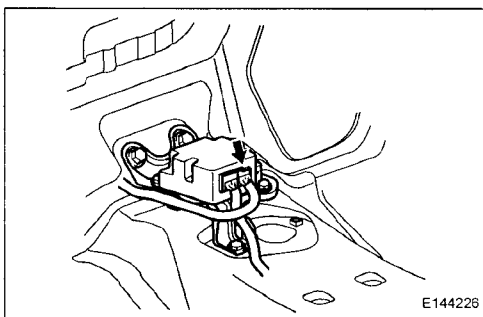
59. Power steering computer disconnection

(1) Disconnect the connector of the power steering computer.

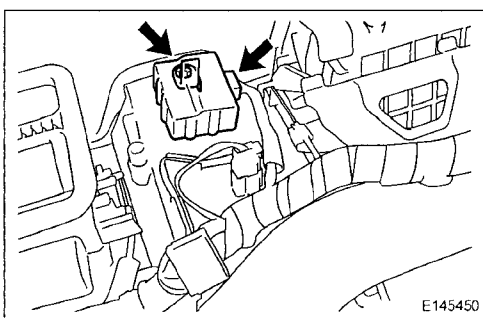


60. Air bag computer assembly disconnection (with Side airbag)

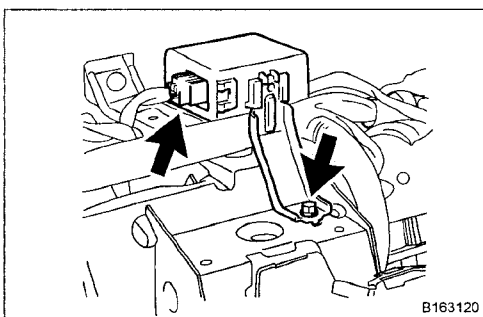
(1) Disconnect the connector of the air bag computer assembly.



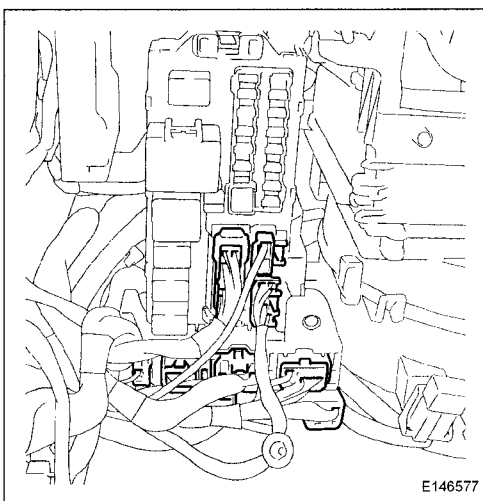
61. Air bag computer assembly disconnection (without Side airbag)
Disconnect the connector of the air bag computer assembly.



62. Immobilizer code computer removal
(1) Disconnect the connector of the immobilizer code computer.
(2) Remove the screw and then the immobilizer code computer.

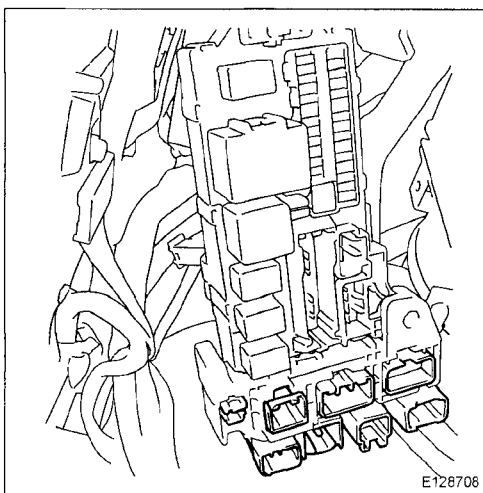


63. Door control receiver removal
(1) Disconnect the connector of the door control receiver.
(2) Remove the bolt and remove the door control receiver.



64. Fuse block assembly removal
(1) Disconnect each connector of the fuse block assembly.

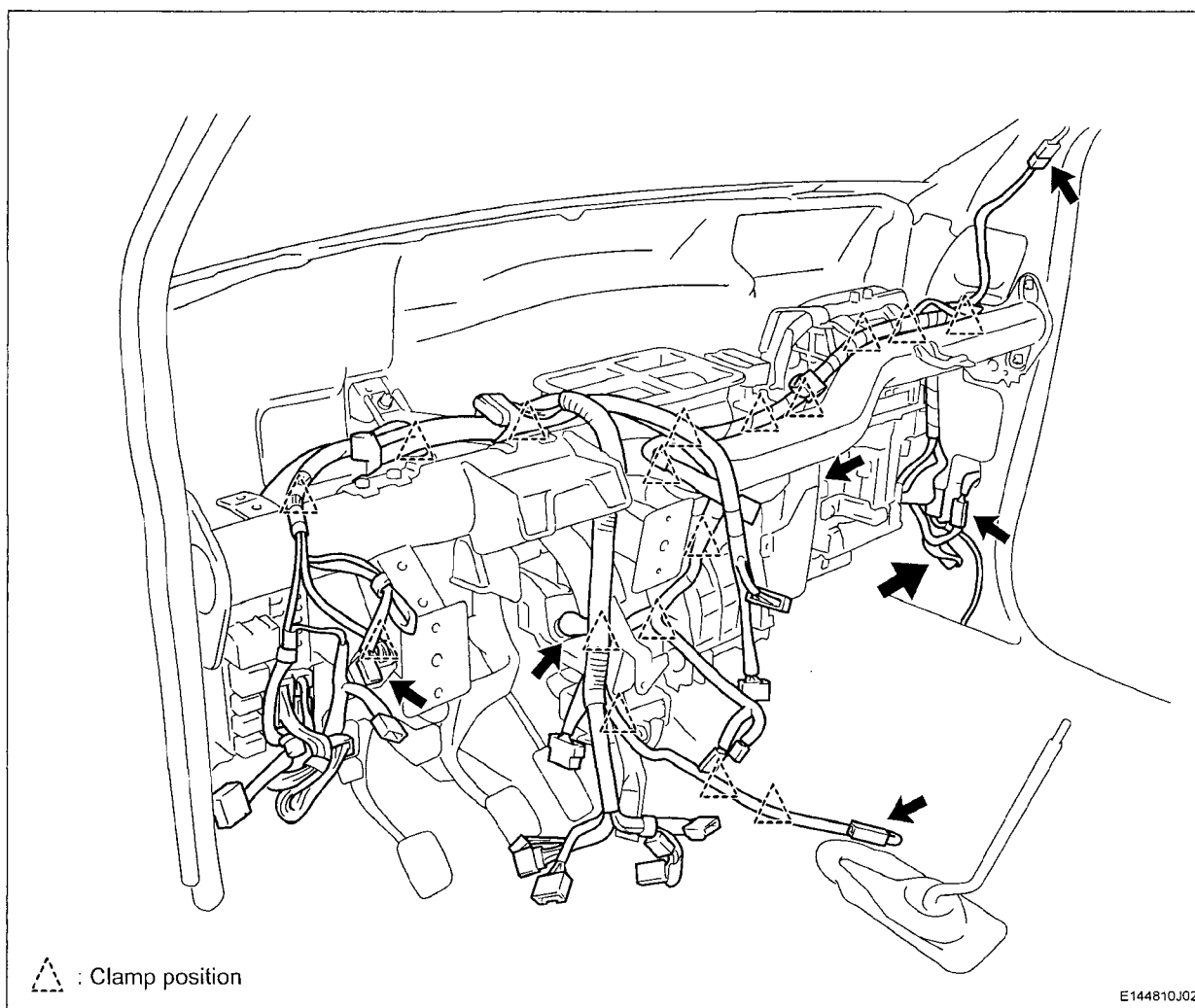
52



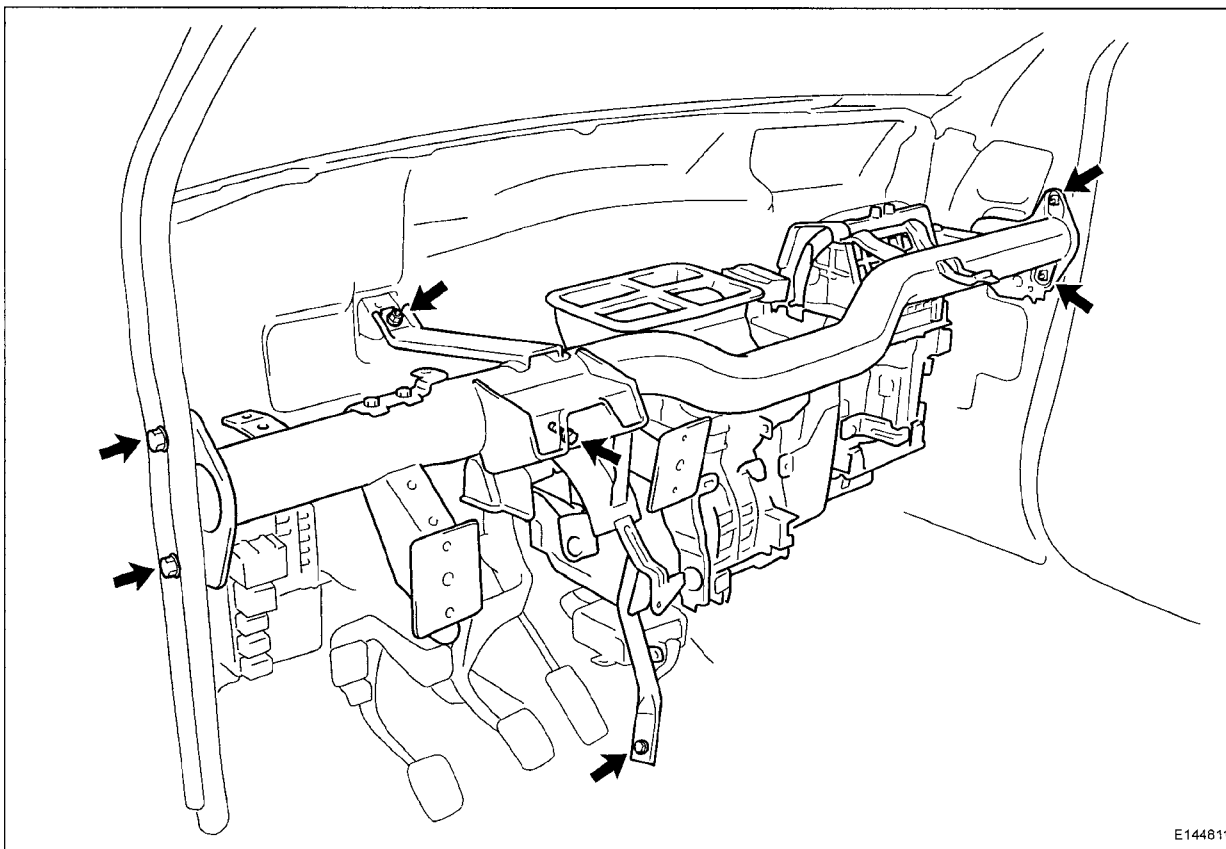
- (2) Disconnect the connector from the connector holder.
- (3) Remove a tab fitting and remove the fuse block assembly.

65. Instrument panel reinforcement removal

- (1) Disconnect each clamp and connector, and remove the instrument wire.

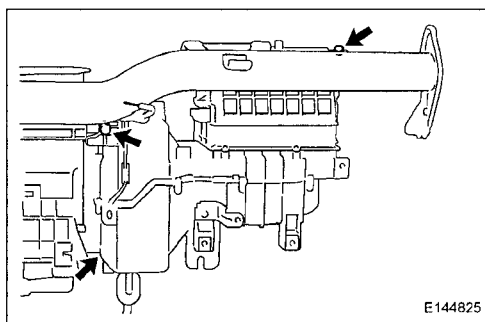


- (2) Disconnect cooler unit drain hose No. 1.
- (3) Remove seven bolts and remove set of instrument panel reinforcement, heater radiator, and air conditioner blower assembly.



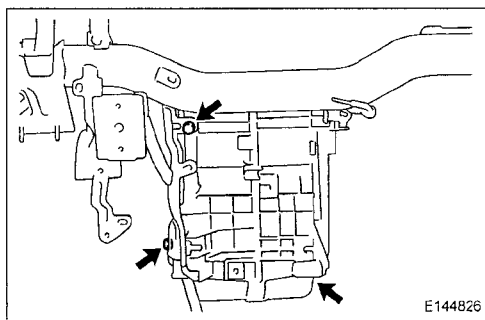
66. Air conditioner blower assembly removal

- (1) Remove two bolts and nuts, and then the air conditioner blower assembly from the instrument panel reinforcement.



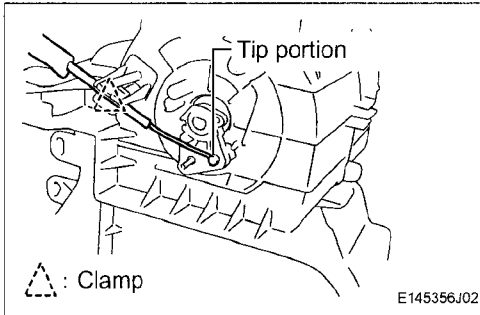
67. Heater radiator removal

- (1) Remove two bolts and nuts, and then the heater radiator from the instrument panel reinforcement.



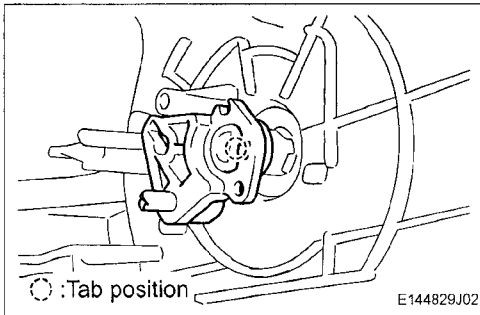
DISASSEMBLY

52

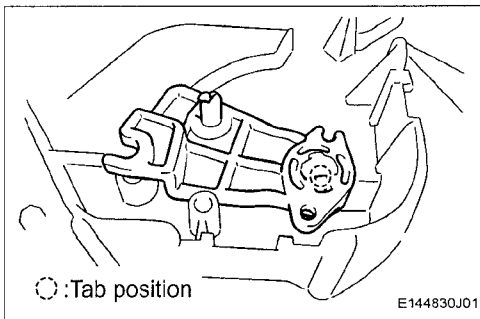


1. Mode control lever removal

- (1) Remove the defroster damper control cable from the clamp and disconnect the cable from the heater radiator.

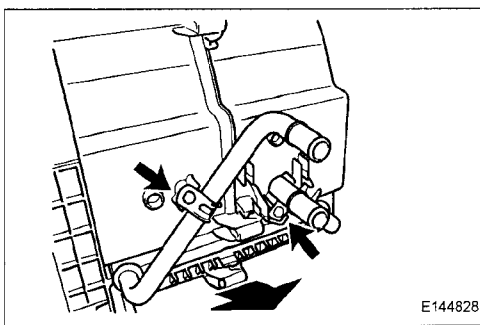


- (2) Remove the mode control lever.



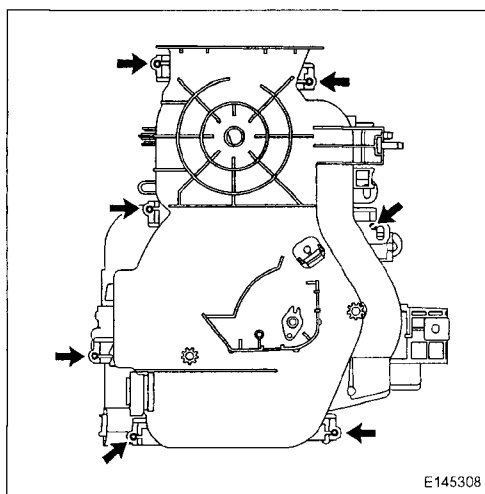
2. Air mix control lever removal

- (1) Remove a tab fitting and then the air mix control lever.



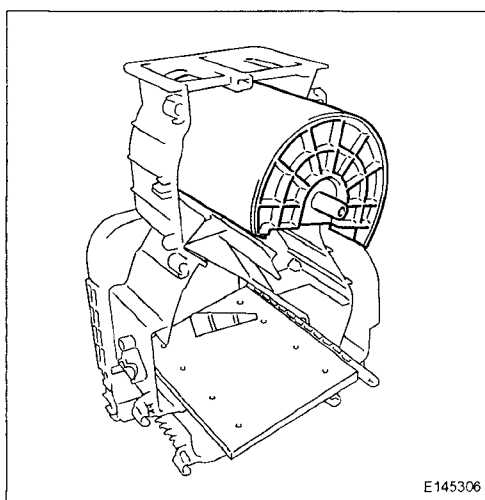
3. Radiator heater unit removal

- (1) Remove the screw and remove the bracket.
- (2) Remove the radiator heater unit.



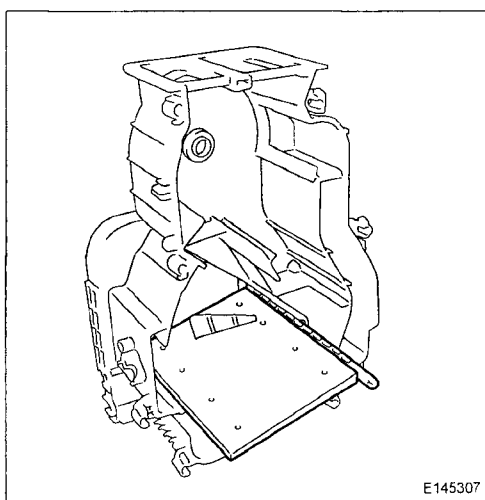
4. Heater case removal

- (1) Remove seven screws and remove the heater case.



5. Mode damper removal

- (1) Remove the mode damper.

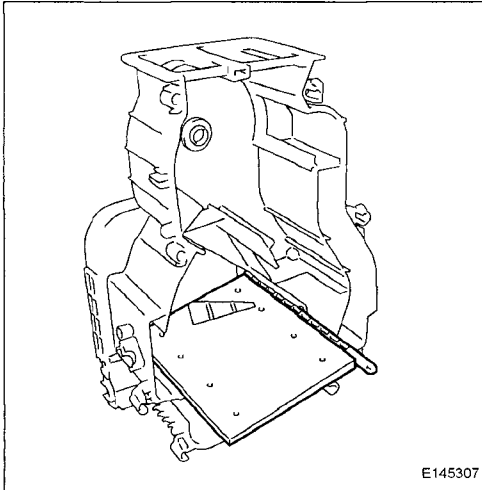


6. Air mix damper removal

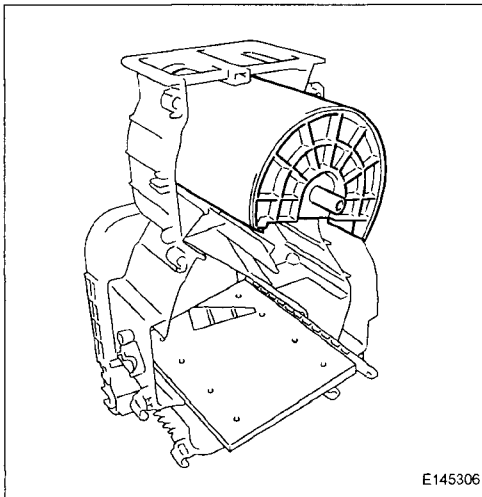
- (1) Remove the air mix damper.

REASSEMBLY

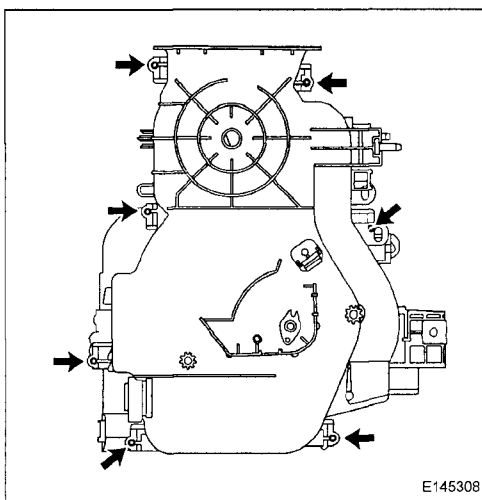
52



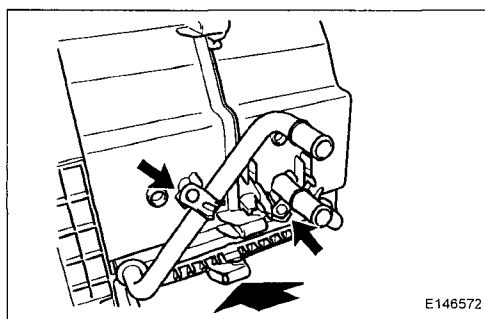
1. Air mix damper installation
 - (1) Attach the air mix damper.



2. Mode damper installation
 - (1) Attach the mode damper.

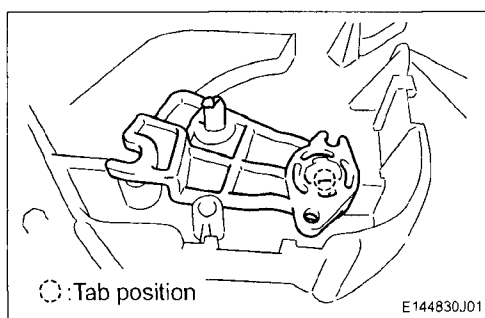


3. Heater case installation
 - (1) Use seven screws to attach the heater case.



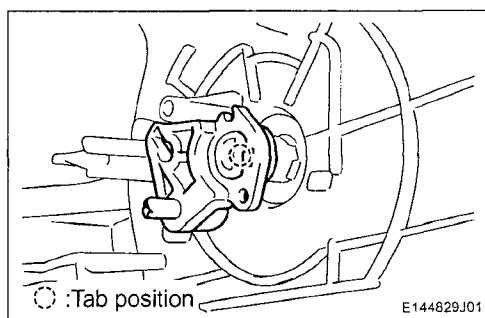
4. Heater radiator installation

- (1) Attach the heater radiator to the heater case by inserting the radiator into the case.
- (2) Use a screw to attach the bracket.



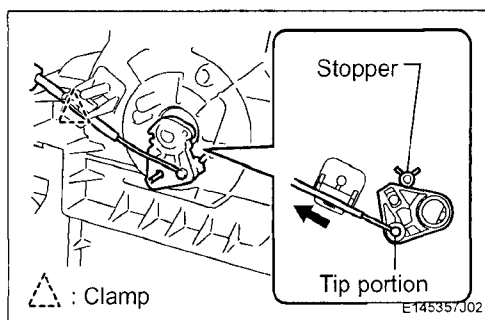
5. Air mix control lever installation

- (1) Fit the tab and attach the air mix control lever.



6. Mode control lever installation

- (1) Fit the tab and attach the mode control lever.



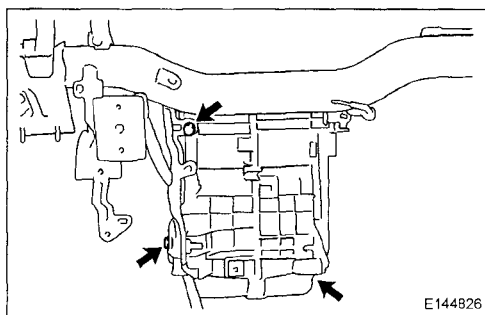
- (2) Connect the front end of the defroster damper control cable to the mode control lever and fix it to the clamp.

<HINT>

- > Contact the mode control lever to the stopper.
- > Fix the defroster damper control cable to the clamp by pushing it in the direction of the arrow while contacting the mode control lever to the stopper.

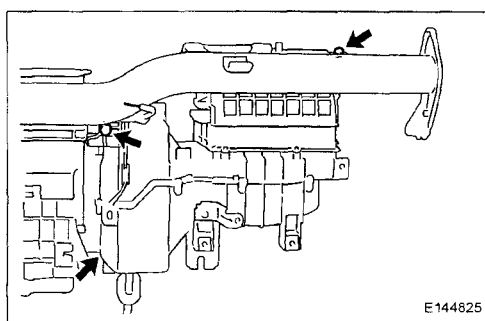
INSTALLATION

52



E144826

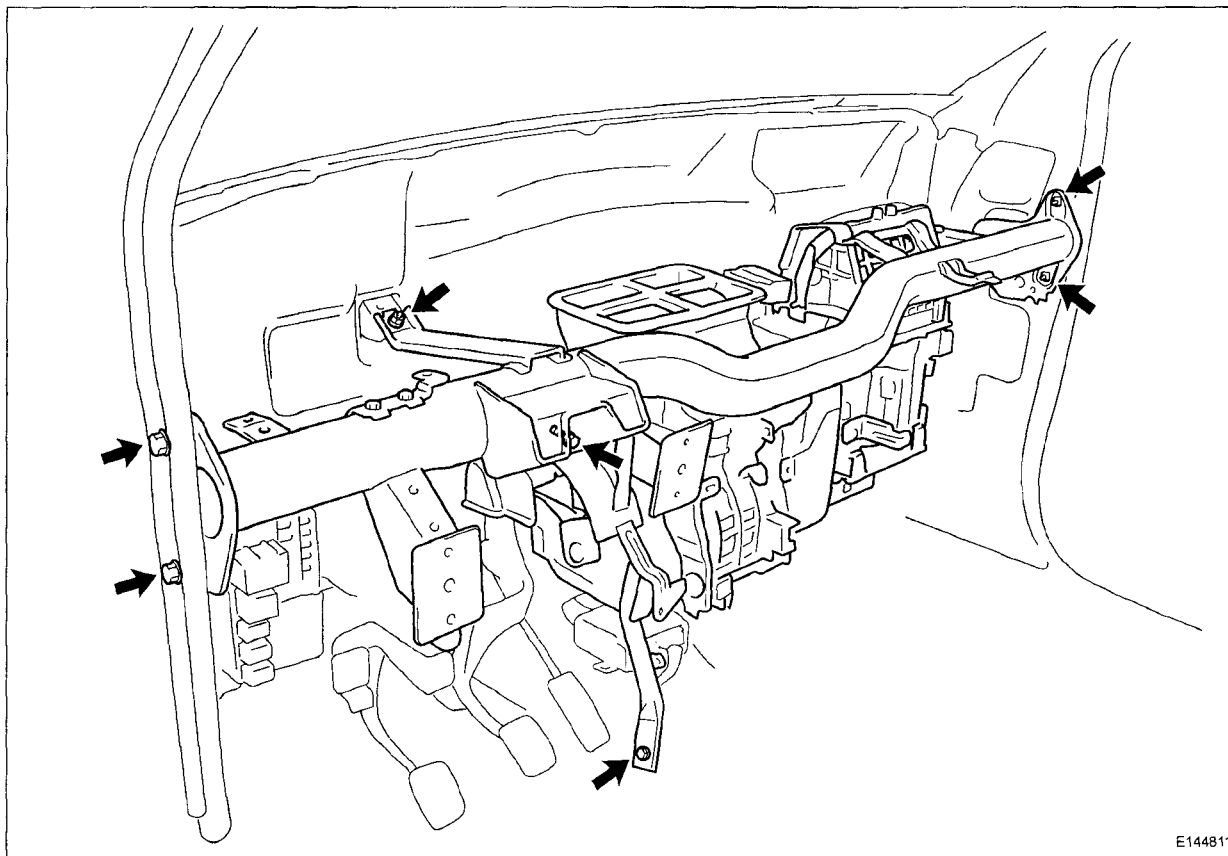
1. Heater radiator installation
(1) Attach the heater radiator to the instrument panel reinforcement with two bolts and nuts.



E144825

2. Air conditioner blower assembly installation
(1) Attach the air conditioner blower assembly to the instrument panel reinforcement with two bolts and nuts.

3. Instrument panel reinforcement installation
(1) Use seven bolts to attach the instrument panel reinforcement.



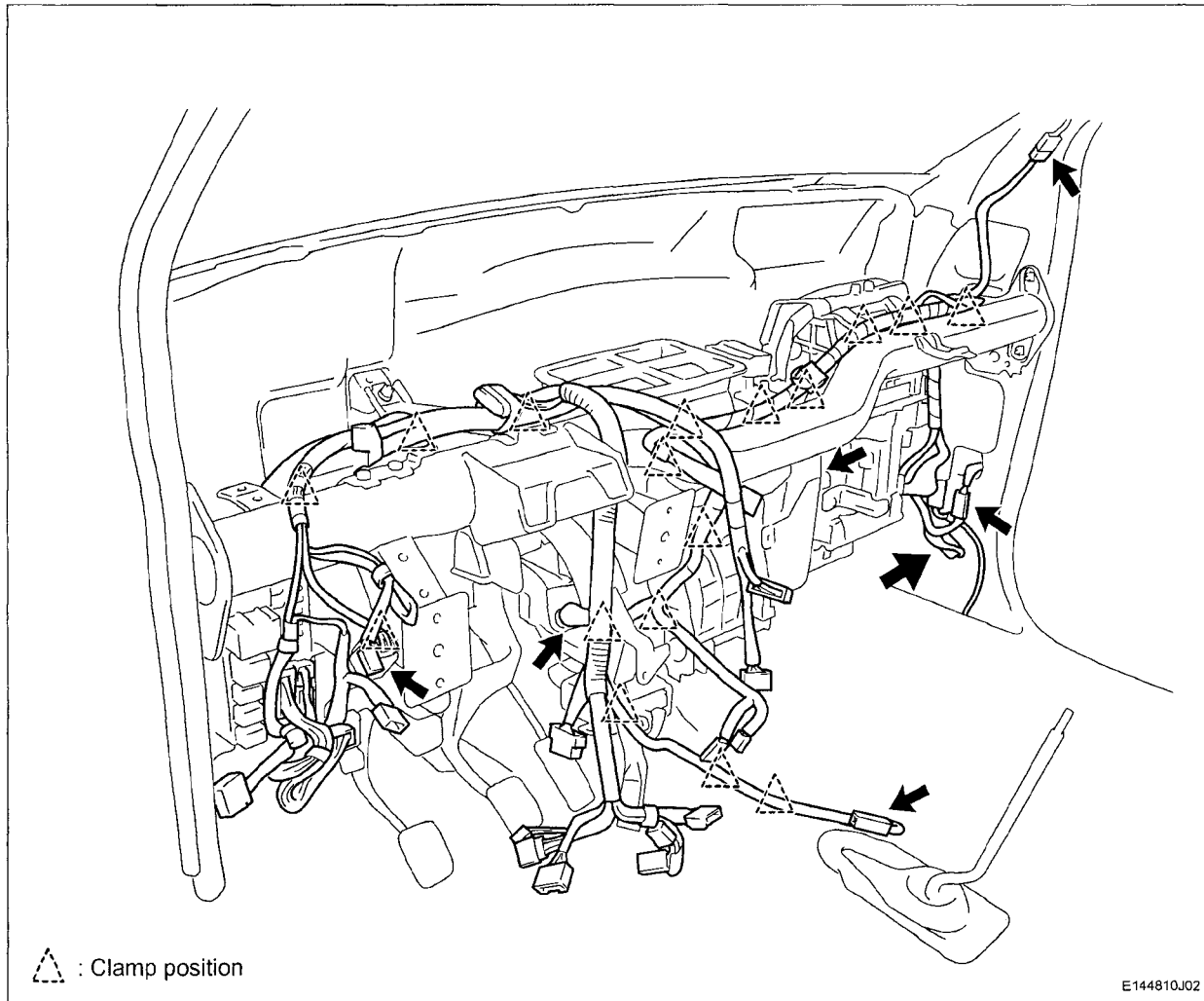
E144811

- (2) Connect cooler unit drain hose No. 1.

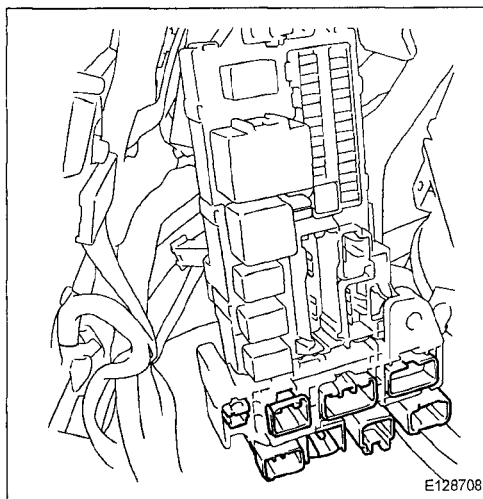
<CAUTION>

Do not attach the drain hose twisted.

- (3) Connect each clamp and connector and attach the instrument wire.

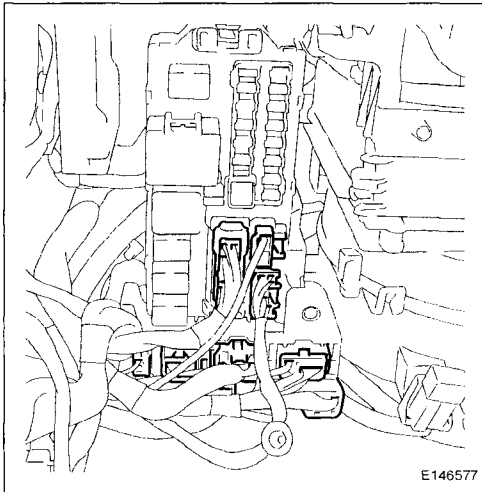


52

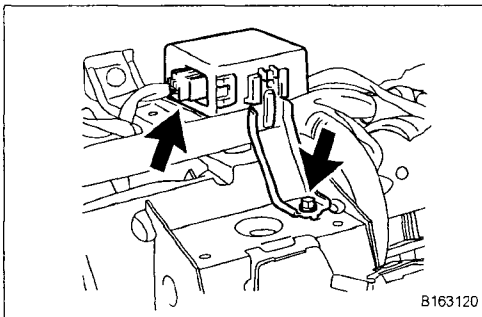


4. Fuse block assembly installation

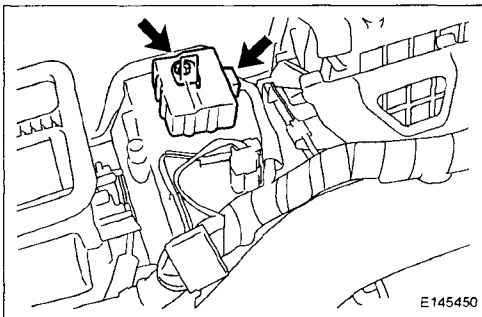
- (1) Attach each connector to the connector holder of the connector of the fuse block assembly.



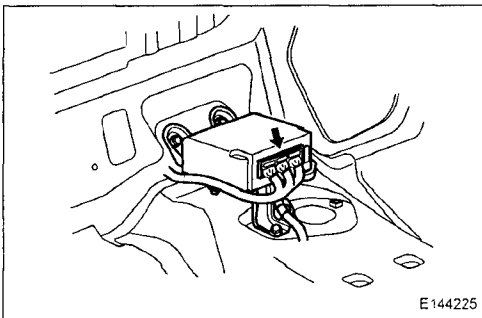
- (2) Connect the connector of the fuse block assembly.



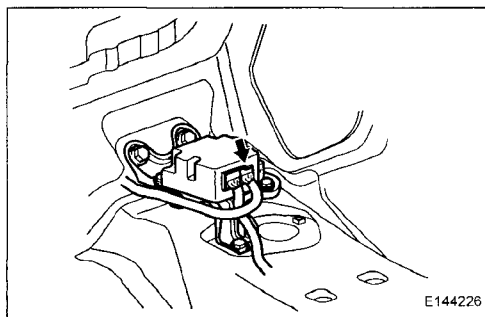
5. Door control receiver installation
 - (1) Use a bolt to attach the door control receiver to the instrument panel reinforcement.
 - (2) Connect the connector.



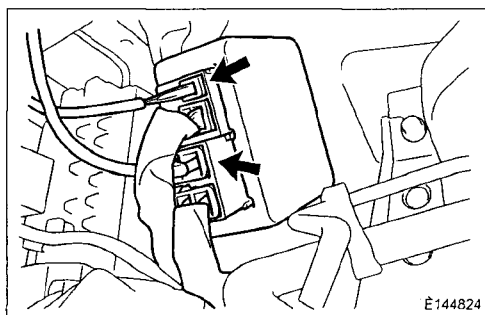
6. Immobilizer code computer installation
 - (1) Use a screw to attach the immobilizer code computer.
 - (2) Connect the connector of the immobilizer code computer.



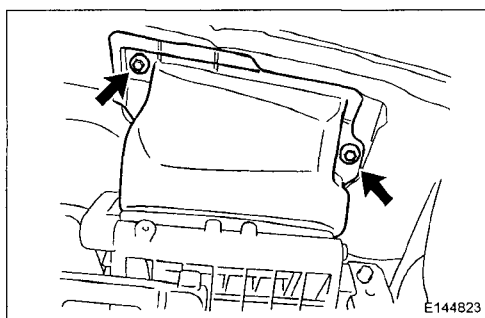
7. Air bag computer assembly installation (with Side airbag)
 - (1) Connect the connector of the air bag computer assembly.



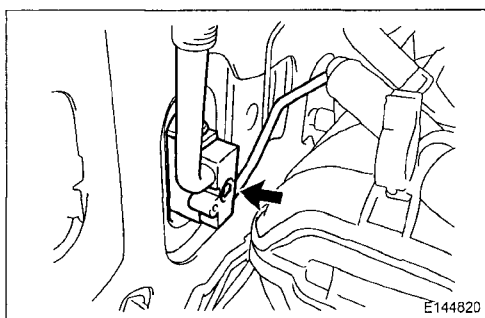
8. Air bag computer assembly installation (without Side airbag)
- (1) Connect the connector of the air bag computer assembly.



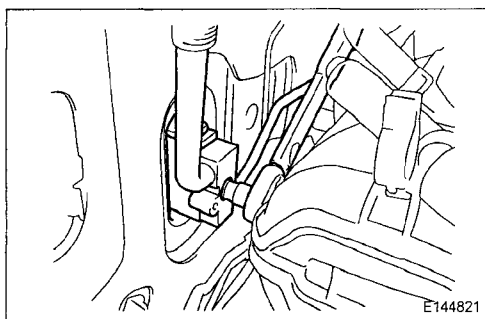
9. Power steering computer installation
- (1) Connect the connector of the power steering computer.



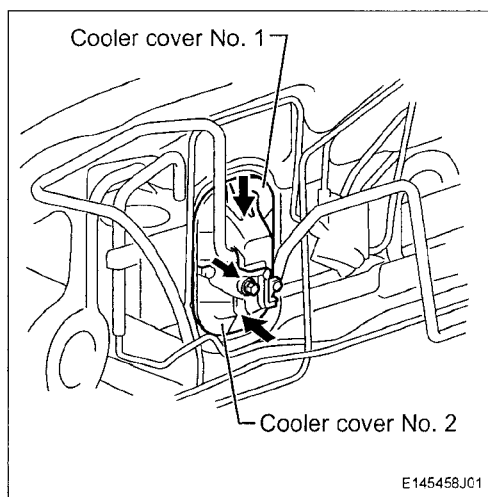
10. Air duct installation
- (1) Attach the air duct with two bolts.



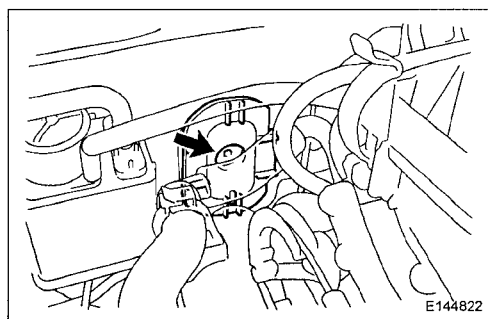
11. Liquid tube B installation (with Air conditioning system)
- (1) Remove the vinyl tape that is wrapped around the fitting of liquid pipe B and unit.
 - (2) Apply a sufficient amount of compressor oil (ND-OIL8) to the new O-ring and the fitting of liquid pipe B.
 - (3) Attach the O-ring to liquid pipe B.
- <CAUTION>
Do not allow dust to collect on the O-rings and O-ring sealing.



- (4) Use a bolt to attach liquid pipe B.
- Tool: Ratcheted preset torque wrench
{Tonichi (QL25N-MH) or equivalent}
Specified value: $T=9.8\text{N}\cdot\text{m}$ {100kgf*cm}



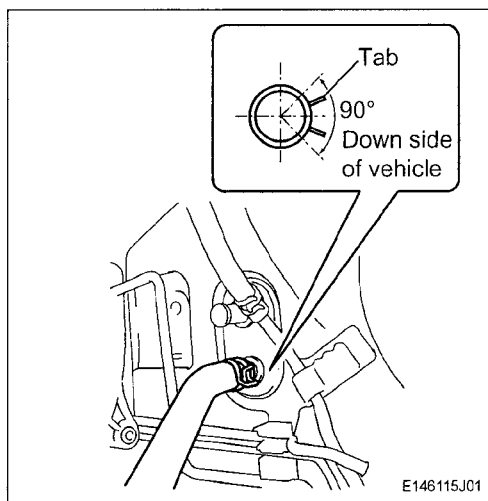
- (5) Attach cooler cover No. 1 by pushing it down.
- (6) Use a bolt to attach cooler cover No. 2.



12. Cooler cover No. 1 installation (without Air conditioning system)
- (1) Use a screw to attach cooler cover No. 1.

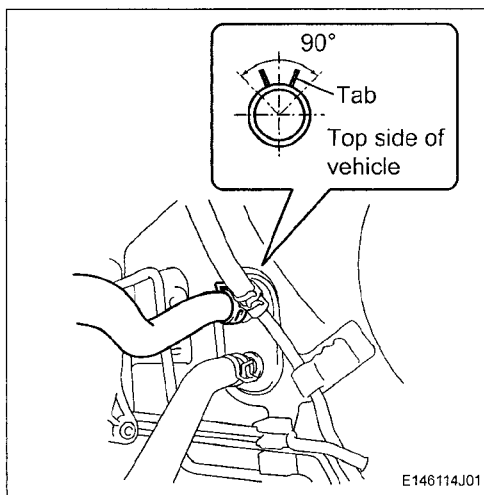
13. Cooler pipe grommet installation

- (1) Attach the cooler pipe grommet to the vehicle.



14. Heater outlet water hose installation

- (1) Connect the heater outlet water hose and attach the heater water hose clip.
- <CAUTION>
Do not apply excessive force to the heater outlet water hose.
- <HINT>
Attach the heater water hose clip as shown in the diagram.



15. Heater inlet water hose installation

- (1) Connect the heater inlet water hose and attach the heater water hose clip.

<CAUTION>

Do not apply excessive force to the heater inlet water hose.

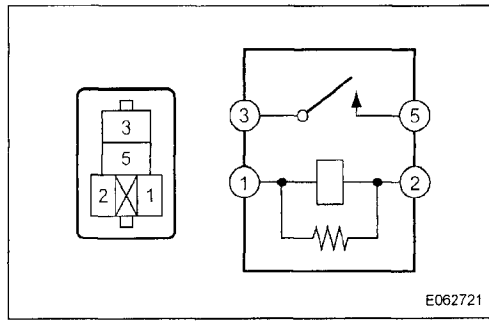
<HINT>

Attach the heater water hose clip as shown in the diagram.

16. Engine control computer installation (See page 06-167)
17. Instrument panel installation (See page 78-29)
18. Steering column assembly installation (See page 48-18)
19. Sliding yoke installation (See page 48-18)
20. Check the front tire for going straight (See page 48-18)
21. Steering column hole cover No. 1 installation (See page 48-18)
22. Windshield wiper switch assembly installation (See page 61-28)
23. Head lamp dimmer switch assembly installation (See page 60-61)
24. Steering column upper cover installation (See page 48-19)
25. Steering column lower cover installation (See page 48-20)
26. Steering wheel assembly installation (See page 48-20)
27. Check position of steering wheel
28. Horn button assembly installation (See page 55-219)
29. Bonnet (hood) lock control lever installation (See page 78-30)
30. Instrument panel finish panel LWR installation (See page 78-31)
31. Instrument panel UPR installation (RH) (See page 78-31)
32. Instrument panel UPR installation (LH) (See page 78-32)
33. Front pillar garnish RH installation (without Curtain shield airbag) (See page 83-30)
34. Front pillar garnish LH installation (without Curtain shield airbag) (See page 83-31)
35. Front pillar garnish RH installation (with Curtain shield airbag) (See page 83-31)
36. Front pillar garnish LH installation (with Curtain shield airbag) (See page 83-32)
37. Front door opening trim weather strip assembly RH installation (See page 83-35)
38. Front door opening trim weather strip assembly LH installation (See page 83-35)
39. Cowl side trim board RH installation (See page 83-38)
40. Cowl side trim LH installation (See page 83-39)
41. Front door scuff plate RH installation (See page 83-39)
42. Front door scuff plate LH installation (See page 83-39)
43. Combination meter assembly installation (See page 63-40)
44. Instrument cluster finish panel installation (See page 78-33)
45. Speaker assembly FR No. 2 installation (with 6-speakers) (See page 78-33)
46. Instrument panel speaker panel No. 1 installation (See page 78-33)
47. Instrument panel speaker panel No. 2 installation (See page 78-33)
48. Radio tuner opening cover installation (without Radio receiver) (See page 78-33)

49. Stereo component tuner assembly installation (with Radio receiver) (See page 64-28)
50. Instrument cluster finish panel CTR installation (See page 78-34)
51. Heater control installation (See page 52-54)
52. Instrument panel center box installation (with Air bag cutoff switch) (See page 78-34)
53. Instrument panel center box installation (without Air bag cutoff switch) (See page 78-34)
54. Instrument panel finish panel LWR CTR installation (See page 52-55)
55. Instrument panel box CTR installation (See page 78-34)
56. Front ash receptacle assembly installation (See page 78-34)
57. Console box assembly installation (4WD) (See page 78-35)
58. Console box assembly installation (FF) (See page 78-35)
59. Rear console box installation (See page 78-36)
60. Console box carpet installation (4WD) (See page 78-36)
61. Console box carpet installation (FF) (See page 78-36)
62. Shift lever knob installation (for Manual transaxle) (See page 78-36)
63. Console panel installation (See page 78-37)
64. Instrument panel undercover No. 1 installation (See page 78-37)
65. Glove compartment door stopper installation (See page 78-37)
66. Glove compartment door OUT installation (See page 78-37)
67. Battery minus terminal connection
Specified value: $T=6.4N \cdot m$ {65kgf*cm}
68. Cooling fluid replenishment (See page 12-6)
69. Warming up engine
70. Cooling fluid leakage check (See page 12-6)
71. Refrigerant HFC-134a (R134a) filling (with Air conditioning system) (See page 52-40)
72. Refrigerant gas leakage check (with Air conditioning system) (See page 52-40)
73. Airbag warning lamp check (See page 55-1)
74. Initialization of steering zero-point correction signal (See page 48-20)
75. Steering zero-point correction (See page 48-20)

HEATER BLOWER MOTOR RELAY ASSEMBLY
INSPECTION



1. Heater blower motor relay assembly check
 - (1) Heater blower motor relay assembly conductivity check
 - (a) Check the continuity between the terminals of the connector using the tester.

Reference

Between terminals	Reference
1 ↔ 2	With electrical continuity
3 ↔ 5	Without electrical continuity

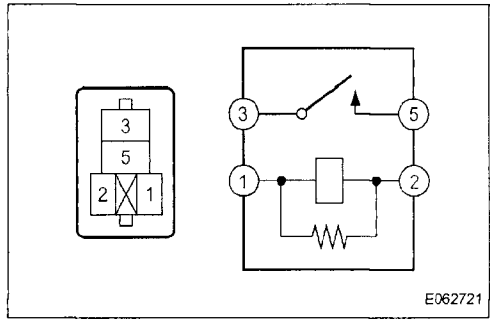
- (b) Check the continuity between terminals 3 and 5 when the battery voltage is applied between terminals 1 and 2 using the tester.

Reference

Between terminals	Reference
3 ↔ 5	With electrical continuity

MAGNET CLUTCH RELAY
INSPECTION

52



- 1. Magnet clutch relay check
 - (1) Magnet clutch relay conductivity check
 - (a) Check the continuity between terminals of the connector using the tester.

Between terminals	Reference
1 ↔ 2	With electrical continuity
3 ↔ 5	Without electrical continuity

- (b) Check the continuity between terminals 3 and 5 when the battery voltage is applied between terminals 1 and 2 using the tester.

Between terminals	Reference
3 ↔ 5	With electrical continuity