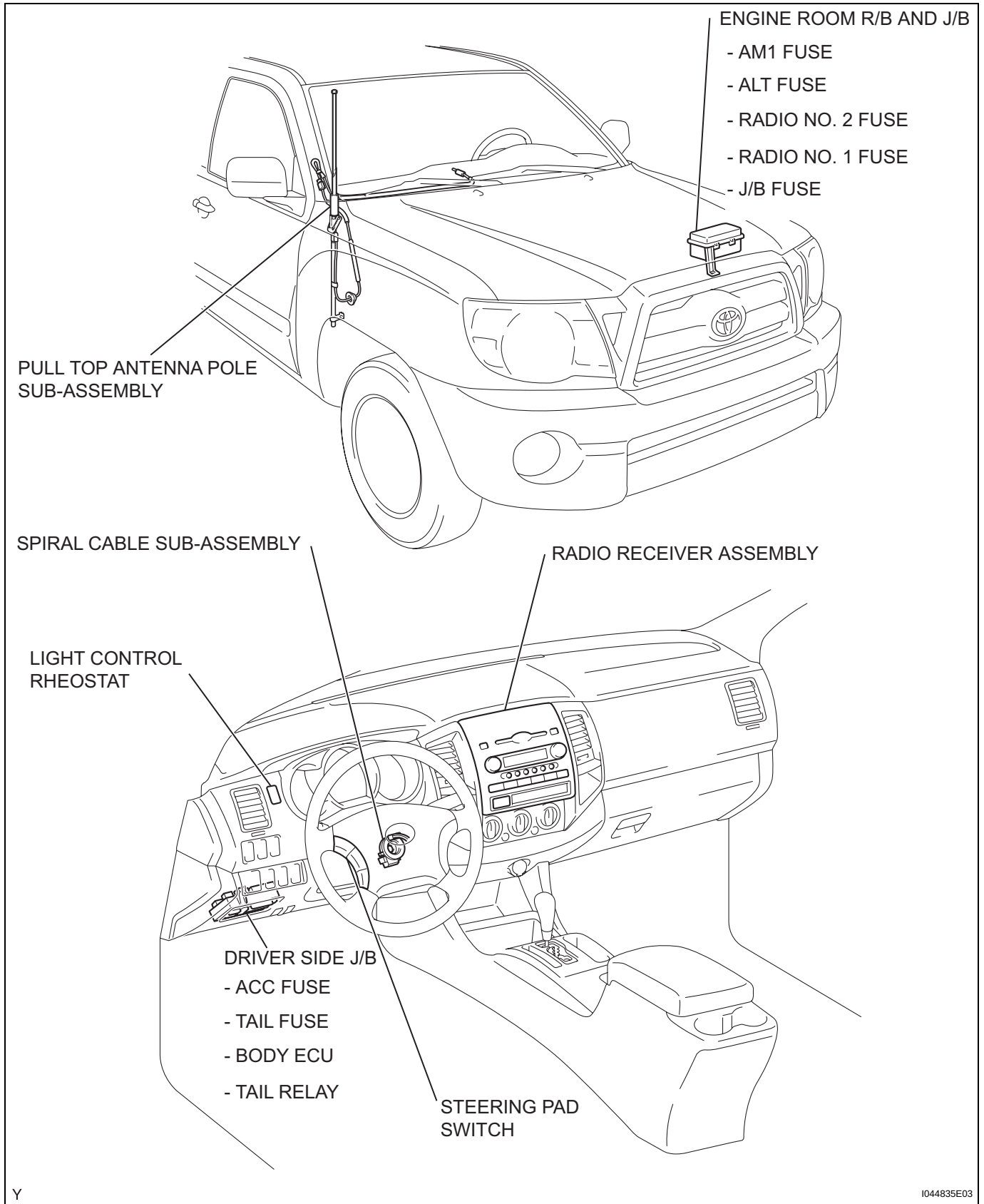
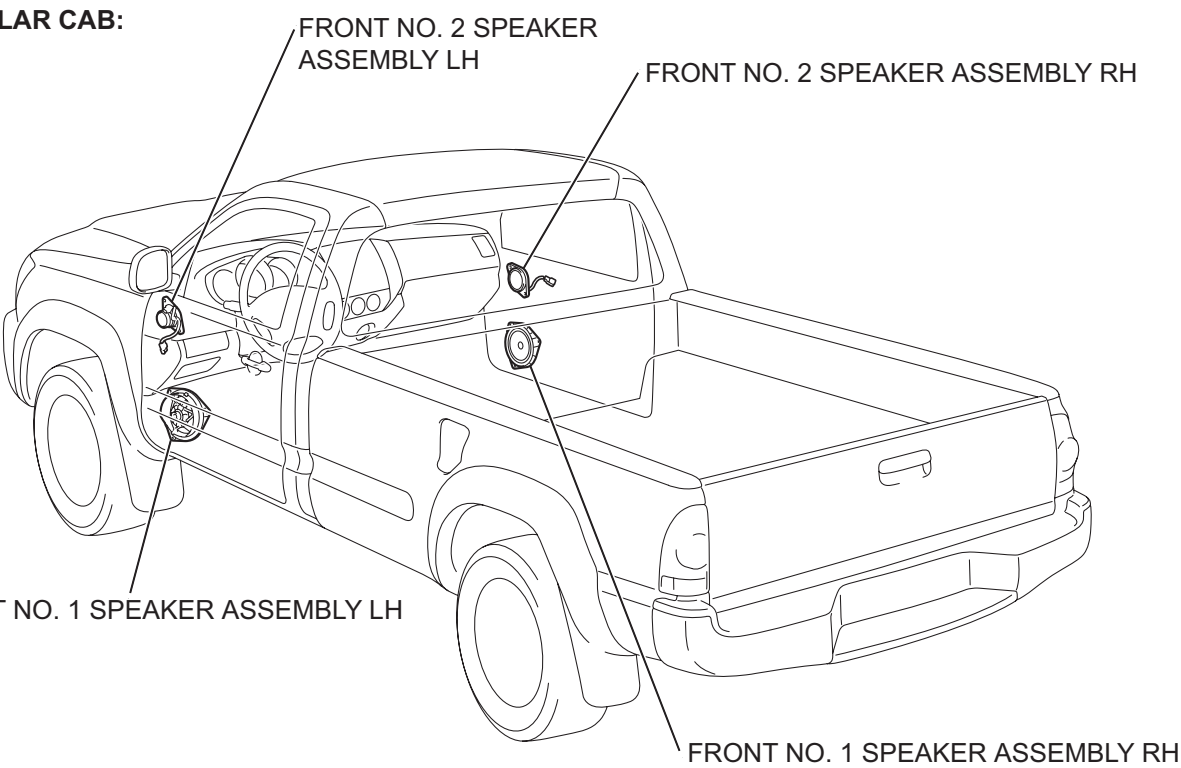


AUDIO AND VISUAL SYSTEM

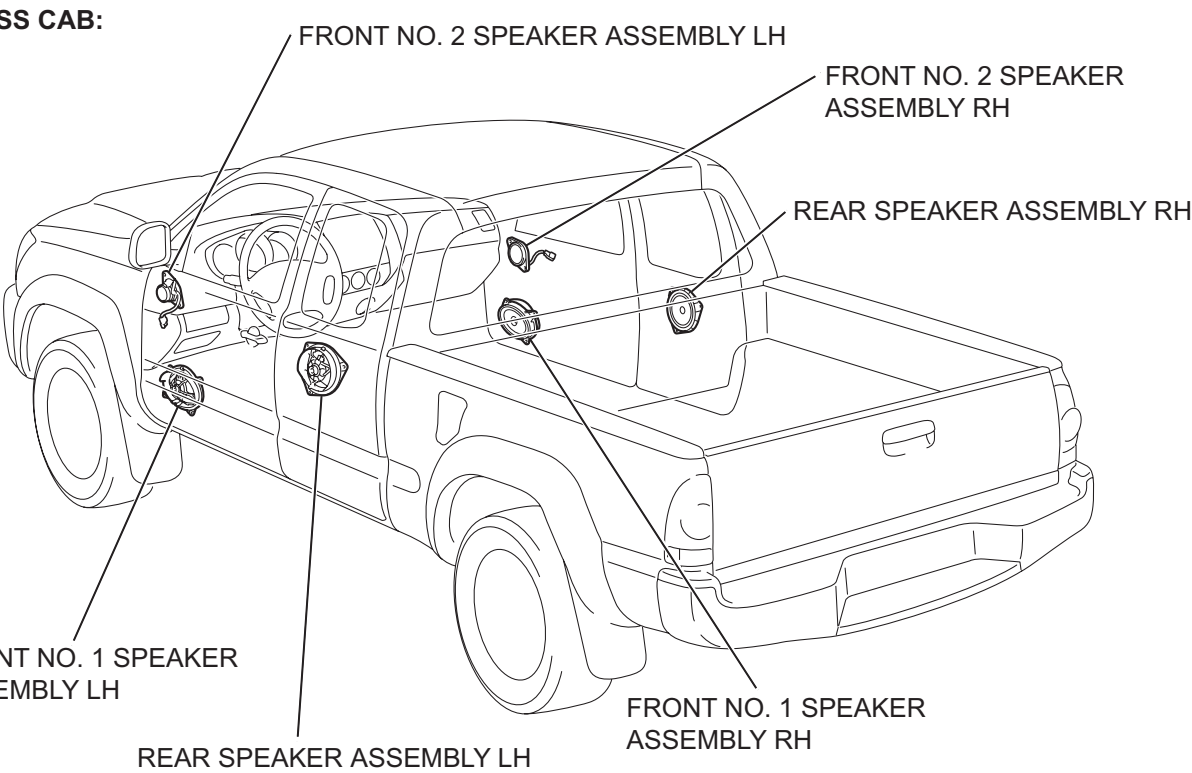
PARTS LOCATION



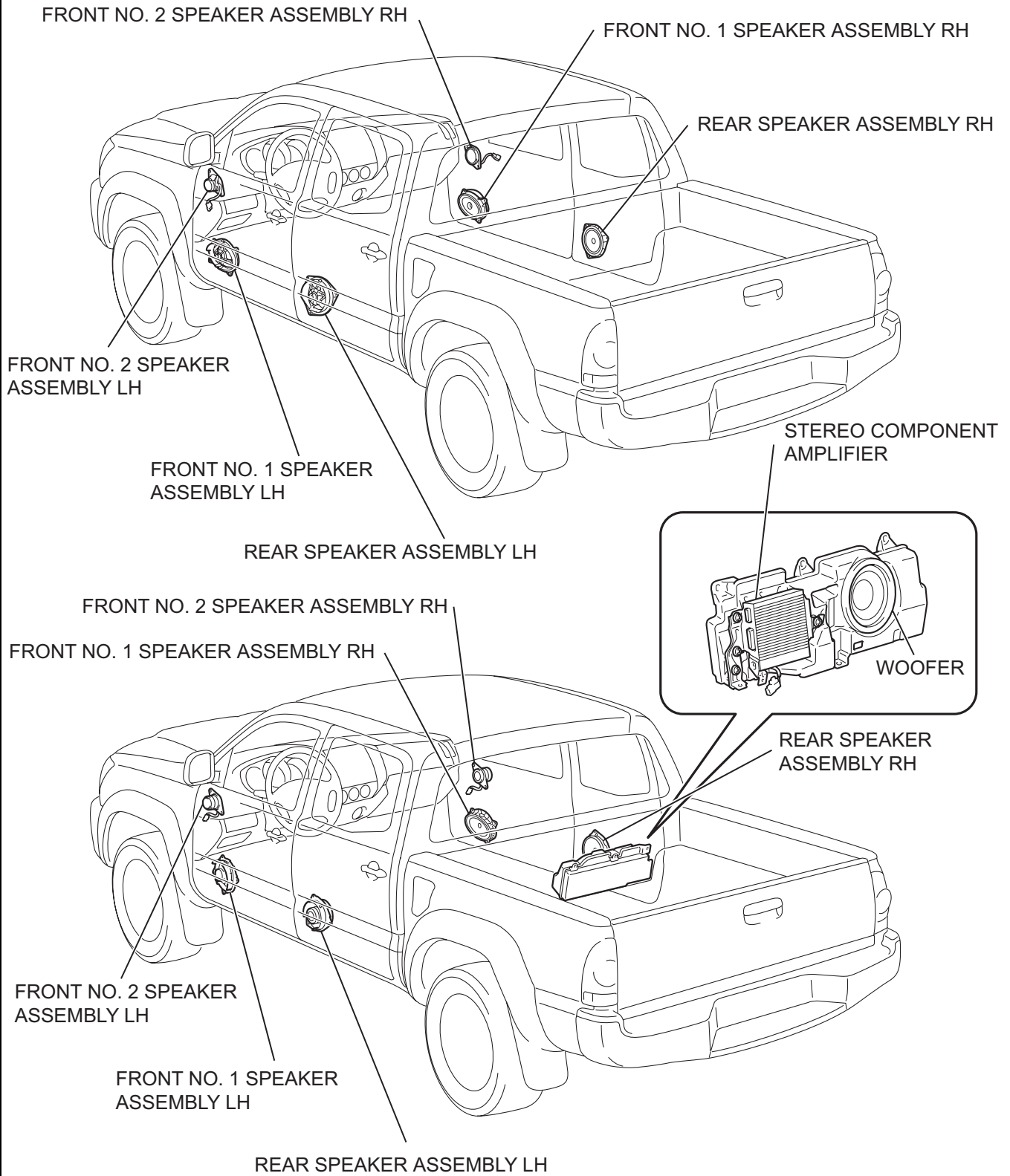
REGULAR CAB:



ACCESS CAB:



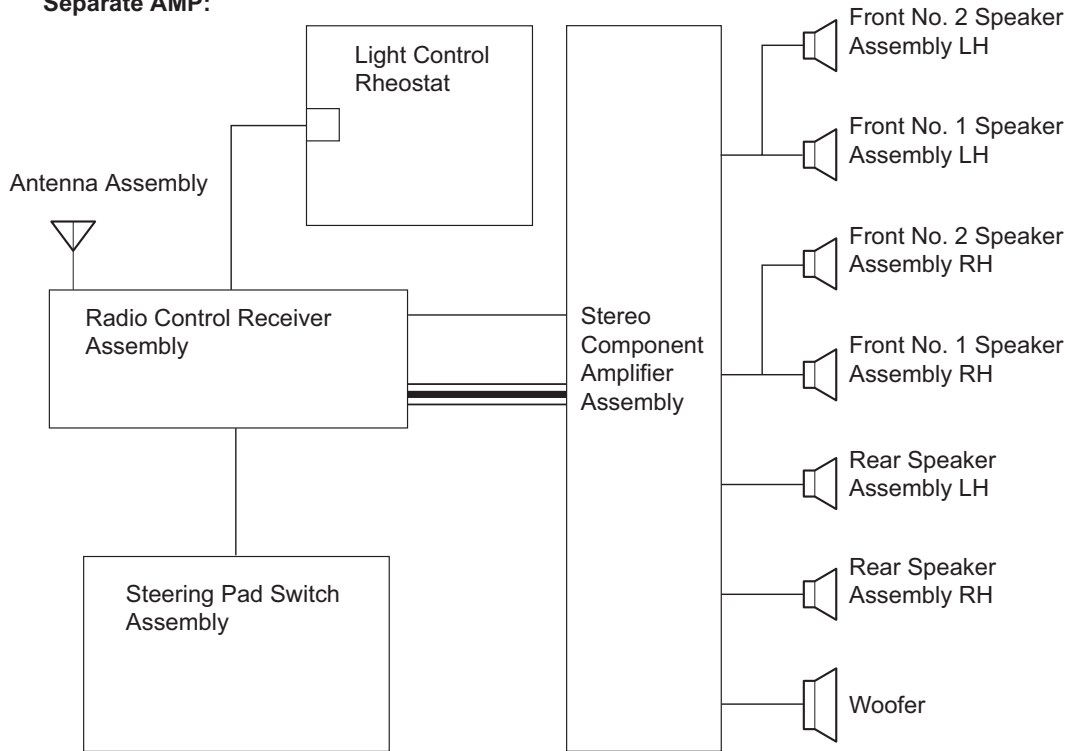
AV

DOUBLE CAB:

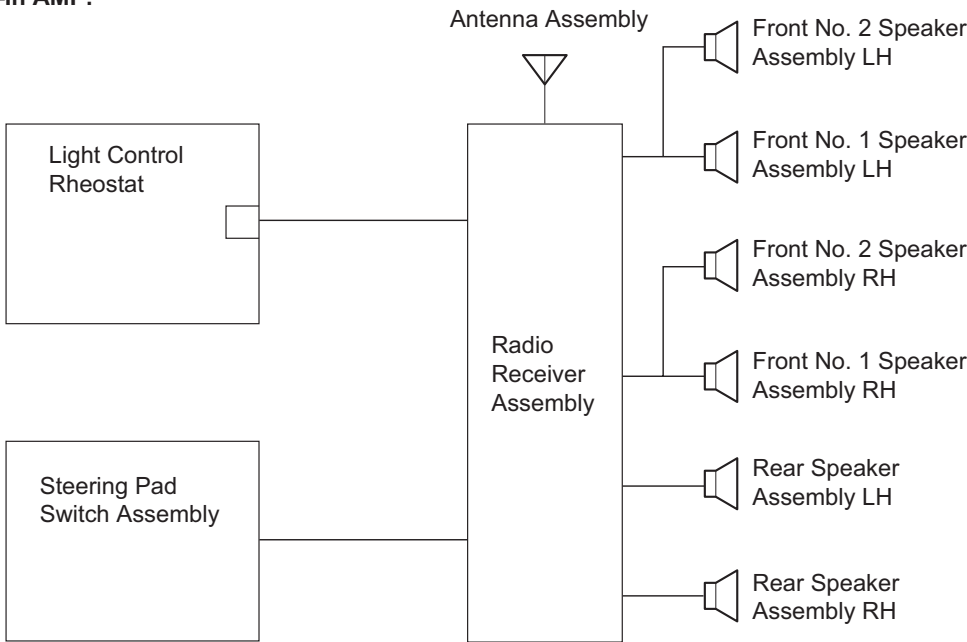
SYSTEM DIAGRAM

AV

Separate AMP:



Built-In AMP:



== : AVC-LAN

SYSTEM DESCRIPTION

1. COMPACT DISC PLAYER

- (a) Compact Disc (hereafter called CD) players use a laser beam pick-up to read the digital signals recorded on CDs and reproduce analog signals of the music etc. 4.7 in. (12 cm) and 3.2 in. (8 cm) discs are available for the CD player.

HINT:

Never disassemble or apply oil to any part of the player unit. Do not insert any objects other than discs into the CD player.

NOTICE:

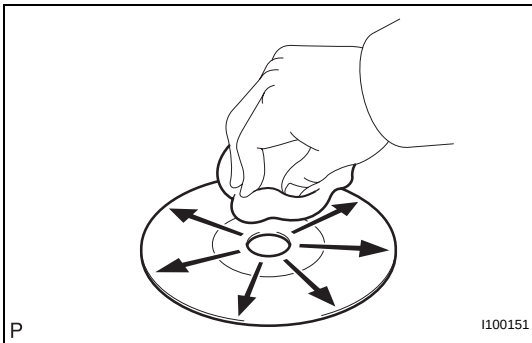
CD players use an invisible laser beam which could cause hazardous radiation exposure. Be sure to operate the player correctly as instructed.

2. MAINTENANCE CD Player/Disc Cleaning

- (a) If the disc gets dirty, clean the disc by wiping the surface from the center to the outside, in a radial direction, with a soft cloth as shown in the illustration.

NOTICE:

Do not use a conventional record cleaner or anti-static preservative.



P

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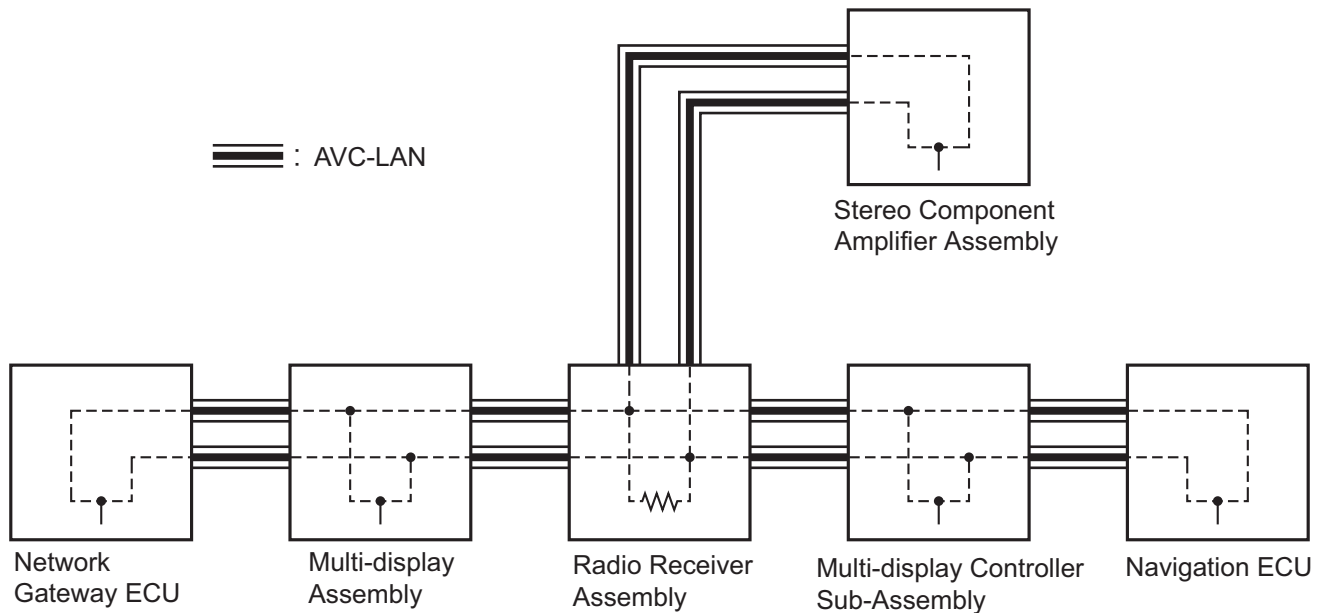
AV

3. OUTLINE OF AVC-LAN

(a) What is AVC-LAN?

AVC-LAN is an abbreviation for Audio Visual Communication-Local Area Network. This is a unified standard co-developed by 6 audio manufacturers associated with Toyota Motor Corporation. The unified standard includes signals, such as audio, visual and signals for switch indication and communication.

Example:



N

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(b) Objectives

Recent development in car audio systems has been rapid and functions have been changed drastically. The conventional system has been switched to a multi-media type such as the navigation system. At the same time customers want to upgrade their audio systems. This is the factor that lies behind this standardization.

The concrete objectives are explained below.

- (1) When products of different manufacturers are combined together, malfunctions such as sound failure can occur. This problem can be solved by the standardization of signals.
- (2) Various types of after market products are available.

- (3) In general, new products developed by particular manufacturers could not be used due to a lack of compatibility with other manufacturer's products. By developing this new standard, users can enjoy a range of compatible products from different manufacturers.

HINT:

- When a +B short or GND short is detected in the AVC-LAN circuit, communication stops, and the audio system does not function.
- When the audio system is not equipped with a navigation system, the audio head unit is the master unit. When the audio system is equipped with a navigation system, the multi-display is the master unit.
- The radio receiver assembly is equipped with a resistor (60 to 80 Ω) for communication.
- All car audio systems using AVC-LAN circuits have diagnostic functions.
- Each unit has its own specified number called a physical address (three-digit number). Numbers are also allotted to each function, which are called logical addresses (two-digit number).

AV

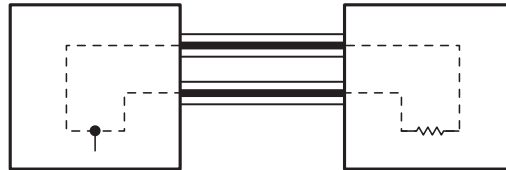
4. COMMUNICATION SYSTEM

- (a) Components in the audio system communicate with each other through the AVC-LAN. (Radio receiver with CD changer control function)
- (b) When a short circuit or circuit breakdown occurs in the AVC-LAN circuit, the audio system does not operate normally due to the communication cutoff.

5. DIAGNOSTIC FUNCTION

- (a) The audio system has a diagnostic function (the diagnostic result is displayed on the LCD of the radio receiver assembly). (Radio receiver with CD changer control function)
- (b) The component code (physical address), or three-digit number (in hexadecimal) is set for each component comprising AVC-LAN.
- (c) The logical address, or two-digit number (in hexadecimal) is set for each function and component unit in each component.

AVC-LAN:

Stereo Component
Amplifier AssemblyRadio Receiver
Assembly
 : AVC-LAN

Y

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6. DIAGNOSTIC TROUBLE CODE CHART

Terms	Description
Physical address	Three-digit code (shown in hexadecimal) which is given to each component comprising AVC-LAN. Corresponding to the function, individual symbols are specified.
Logical address	Two-digit code (shown in hexadecimal) which is given to each function comprising inner system of AVC-LAN.

HINT:

Titles for each unit are stated in the following order:
physical address (part name).

(a) 190 (RADIO RECEIVER ASSEMBLY)

Logical address: 01 (Communication control)

DTC	Diagnosis Item	Diagnostic Content	Troubleshooting
D5 *1	Registered Component Disconnected	Component shown by sub code is or was disconnected from system with ignition switch in ACC or ON. Communication with component shown by sub code is not ensured when engine is started.	- Check harness for power supply system of component shown by sub code. - Check harness for communication system of component shown by sub code.
D6 *1	Absence of Master	Component in which this code is recorded was disconnected from system or master component with ignition switch in ACC or ON.	- Check harness for power supply system of radio receiver assembly. - Check harness for communication system of radio receiver assembly.
D7 *5	Connection Check Error	Component in which this code is recorded was disconnected from system or master component with ignition switch in ACC or ON.	- Check harness for power supply system of radio receiver assembly. - Check harness for communication system of radio receiver assembly.
D8 *2	No Response to Connection Check	Component shown by sub code is or was disconnected from system after engine start.	- Check harness for power supply system of component shown by sub code. - Check harness for communication system of component shown by sub code.

DTC	Diagnosis Item	Diagnostic Content	Troubleshooting
D9 *1	Last Mode Error	Audio or visual component operated before engine stop is or was disconnected with ignition switch in ACC or ON.	- Check harness for power supply system of component shown by sub code. - Check harness for communication system of component shown by sub code.
DA	No Response to ON/OFF Instruction	No response is identified when changing mode (audio and visual mode change). Sound and picture do not change by button operation.	- Check harness for power supply system of component shown by sub code. - Check harness for communication system of component shown by sub code. - If error occurs again, replace component shown by sub code.
DB *1	Mode Status Error	Dual alarm is detected.	- Check harness for power supply system of component shown by sub code. - Check harness for communication system of component shown by sub code.
DC *3	Transmission Error	Transmission to component shown by sub code has failed. (Detecting this DTC does not necessarily mean actual failure.)	If same sub code is recorded in other component, check harness for power supply and communication systems of all components shown by code. (If not, delete DTC and recheck.)
DD *4	Master Reset (Momentary Interruption)	After engine was started, master component was disconnected from system.	- Check harness for power supply system of radio receiver assembly. - Check harness for communication system of radio receiver assembly. - If this error occurs frequently, replace radio receiver assembly.
DE *4	Slave Reset (Momentary Interruption)	After engine was started, component shown by sub code was disconnected from system.	- Check harness for power supply system of component shown by sub code. - Check harness for communication system of component shown by sub code.
DF *4	Master Error	Due to defective condition of component with display, master function is switched to audio equipment.	- Check harness for power supply system of radio receiver assembly. - Check harness for communication system of radio receiver assembly.
E0 *1	Registration Completion Instruction Error	Registration completion instruction command from master cannot be received.	Since this DTC is provided for engineering purposes, it may be set when no actual failure exists.
E1 *1	Voice Processing Device ON Error	Amp device records that amp output does not function even while source device is operating.	- Check harness for power supply system of radio receiver assembly. - Check harness for communication system of radio receiver assembly.
E2	ON/OFF Instruction Parameter Error	Error occurs in ON/OFF controlling command from master component.	Replace radio receiver assembly.

DTC	Diagnosis Item	Diagnostic Content	Troubleshooting
E3 *1	Registration Request Transmission	Registration request command is output from component shown by sub code. Receiving connection check instruction, Registration request command is output from sub-master component.	Since this DTC is provided for engineering purposes, it may be set when no actual failure exists.
E4 *1	Multiple Frame Abort	Multiple frame transmission is aborted.	Since this DTC is provided for engineering purposes, it may be set when no actual failure exists.
22	RAM Error	Abnormal condition of RAM is detected.	Replace radio receiver assembly.

HINT:

- *1: This DTC may be recorded depending on the battery condition or engine start voltage even if no failure is detected.
- *2: If the power connector is disconnected after the engine starts, this DTC is recorded after 180 seconds.
- *3: This DTC may be stored if the ignition key is turned to the START position again when the engine is already running.
- *4: This DTC may be stored if the ignition key is held in the START position for one minute or more before returning to the ON position.
- *5: The DTC is stored 210 seconds after the master component power supply connector is disconnected with the ignition switch in ACC or IG.

Logical address: 62 (CD player)

DTC	Diagnosis Item	Diagnostic Content	Troubleshooting
42	No Disc Readout	Disc cannot be read.	- Inspect CD - Replace radio receiver assembly
44	CD player Error	Error is detected in CD player.	Replace radio receiver assembly
45	EJECT Error	Disc cannot be ejected.	Replace radio receiver assembly
46	Disc has scratches on the reverse surface	CD has dirt or scratches on reverse side.	- Inspect CD - If same code is detected, replace radio receiver assembly

Logical address: 63 (In-dash CD player)

DTC	Diagnosis Item	Diagnostic Content	Troubleshooting
42	No Disc Readout	Disc cannot be read.	- Inspect CD - Replace radio receiver assembly
44	CD player Error	Error is detected in CD player.	Replace radio receiver assembly
45	EJECT Error	Disc cannot be ejected.	Replace radio receiver assembly
46	Disc has scratches on the reverse surface	CD has dirt or scratches on reverse side.	- Inspect CD - If same code is detected, replace radio receiver assembly
51	Elevator Error	Mechanical error occurred during elevator operation.	Replace radio receiver assembly
52	Clamp Error	Error occurs on clamp	Replace radio receiver assembly

(b) 440 (STEREO COMPONENT AMPLIFIER ASSEMBLY)

Logical address: 01 (Communication control)

DTC	Diagnosis Item	Diagnostic Content	Troubleshooting
D6 *1	Absence of Master	Component in which this code is recorded was disconnected from system with ignition switch in ACC or ON. Alternatively radio receiver assembly was disconnected when this code was recorded.	- Check harness for power supply system of radio receiver assembly. - Check harness for power supply system of stereo component amplifier assembly. - Check harness for communication system of stereo component amplifier assembly.
D7	Communication Check Error	Component in which this code is recorded is or was disconnected from system after engine start. Alternatively radio receiver assembly was disconnected when this code was recorded.	- Check harness for power supply system of radio receiver assembly. - Check harness for power supply system of stereo component amplifier assembly. - Check harness for communication system of stereo component amplifier assembly.
DC *2	Transmission Error	Transmission to component shown by sub code has failed. (Detecting this DTC does not necessarily mean actual failure.)	If same sub code is recorded in other component, check harness for power supply and communication systems of all components shown by code. (If not, delete DTC and recheck.)
DD *3	Master Reset (Momentary Interruption)	After engine was started, master component was disconnected from system.	- Check harness for power supply system of radio receiver assembly. - Check harness for power supply system of stereo component amplifier assembly. - Check harness for communication system of stereo component amplifier assembly. - If this error occurs frequently, replace radio receiver assembly.
DD *4	Master Error	Due to defective condition of component with display, master function is switched to audio equipment. Error occurs in communication between sub-master (audio) and master component.	- Check harness for power supply of radio receiver assembly. - Check harness for communication system of stereo component amplifier assembly. - Check harness for communication system between multi-display assembly and sub-master component.
E0 *1	Registration Completion Instruction Error	Registration completion instruction command from master cannot be received.	Since this DTC is provided for engineering purposes, it may be set when no actual failure exists.
E1 *1	Audio processor ON Error	While source device is operating, amp output stops.	- Check harness for power supply system of radio receiver assembly. - Check harness for communication system of radio receiver assembly.

DTC	Diagnosis Item	Diagnostic Content	Troubleshooting
E2	ON/OFF Instruction Parameter Error	Error occurs in ON/OFF controlling command from master component.	Replace radio receiver assembly.
E3 *1	Registration Request Transmission	Registration request command is output from slave component.	Since this DTC is provided for engineering purposes, it may be set when no actual failure exists.

AV

HINT:

- *1: This DTC may be recorded depending on the battery condition or engine start voltage even if no failure is detected.
- *2: This DTC may be stored if the ignition key is turned to the START position again when the engine is already running.
- *3: This DTC may be stored if the ignition key is held in the START position for one minute or more before returning to the ON position.
- *4: If the device is reported as not existing during verification, check the power source circuit and AVC-LAN circuit for the device.

HOW TO PROCEED WITH TROUBLESHOOTING

1 VEHICLE BROUGHT TO WORKSHOP

NEXT

2 CUSTOMER PROBLEM ANALYSIS

- (a) Interview and confirm the trouble.
 - (1) Confirm the symptom of the trouble.

NEXT

3 BASIC INSPECTION

- (a) Conduct basic inspection.
 - (1) Check the battery voltage.
Standard:
11 to 14 V
- (b) Check the power supply to the radio receiver assembly.
 - (1) Turn the ignition switch to the ACC position.
 - (2) Check whether or not the display appears on the radio receiver assembly.

Result	Proceed To
Display appears	A
Display does not appears	B

B

PROCEED TO PROBLEM SYMPTOMS TABLE

A

4 DTC CHECK

A

DTC OUTPUT (Go to step 5)

B

DTC NOT OUTPUT (Go to step 6)

5 DTC CHART

NEXT

GO TO STEP 7

6	PROBLEM SYMPTOMS TABLE
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NEXT

7	CIRCUIT INSPECTION AND PART INSPECTION
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NEXT

8	IDENTIFICATION OF PROBLEM
---	---------------------------

NEXT

9	CONFIRMATION TEST
---	-------------------

NEXT

END

AV

IDENTIFICATION OF NOISE SOURCE

1. Radio Description

(a) Radio frequency band

(1) The radio wave bands used in radio broadcasting are as follows:

Frequency	30 kHz	300 kHz	3 MHz	30 MHz	300 MHz
Designation	LF	MF	HF	VHF	
Radio Wave		AM ↔		FM ↔	
Modulation	Amplitude modulation			Frequency modulation	

LF: Low frequency

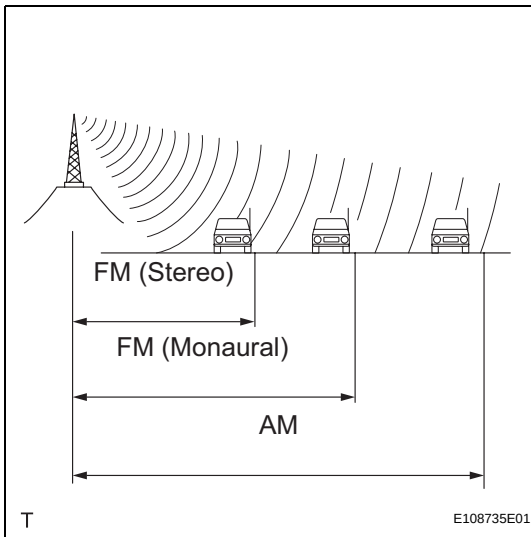
MF: Medium frequency

HF: High frequency

VHF: Very high frequency

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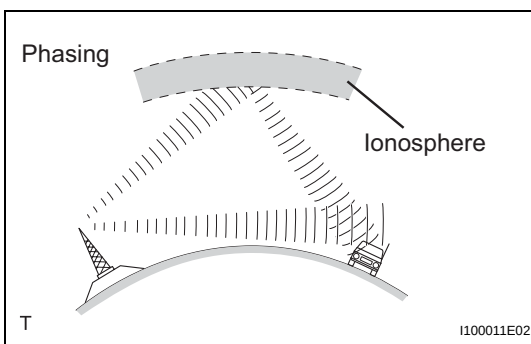
(b) Service area

(1) There is a great difference in the size of the service areas for AM and FM broadcasting. Sometimes an FM stereo broadcast cannot be received even though AM can be received very clearly. FM stereo has a smaller service area, and it also picks up static and other types of interference (noise) easily.

(c) Radio reception problems

HINT:

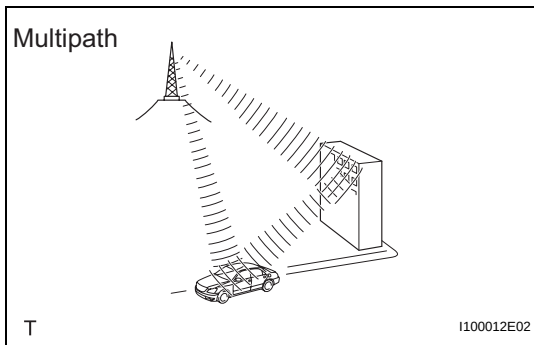
Besides the problem of static, there are other problems, such as phasing, multipath and fade-out. These problems are caused not by electrical noise but by the nature of the radio waves themselves.



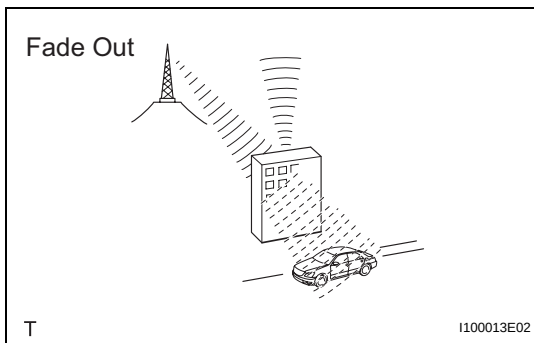
(1) Phasing

Besides electrical interference, AM broadcasts are also susceptible to other types of interference, especially at night. This is because AM radio waves bounce off the ionosphere at night. These radio waves then interfere with the signals that reach the vehicle's antenna directly from the same transmitter. This type of interference is called phasing.

AV



- (2) Multipath
Interference caused by reflection of radio waves against obstructions is called multipath. Multipath occurs when radio signals emitted from the broadcast transmitter antenna are reflected against tall buildings or mountains and interfere with other signals which are received directly.



- (3) Fade-out
FM radio waves tend to be reflected against obstructions such as tall buildings or mountains because FM frequency is higher than AM. For this reason, FM signals often seem to gradually disappear or fade away as the vehicle goes behind those obstructions. This phenomenon is called fade-out.
- (d) Noise problem
It is very important for technicians to clearly understand a customer's complaint about noise. Use the following table to diagnose the phenomena.

Radio Wave	Condition in Which Noise Occurs	Probable Cause
AM	Noise occurs in a specified area	Strong possibility of foreign noise
	Noise occurs when listening to faint broadcasting	The same program may be broadcasted from some local stations. If the program is the same, one of those may be tuned in.
	Noise occurs only at night	Strong possibility of an interfering beat from a distant broadcast.
FM	Noise occurs at a specific place while driving	Strong possibility of multipath noise and phasing noise caused by changes of FM frequency.

HINT:

If the condition when the noise occurs is not described above, find out the cause based on the reception problems. Refer to the description about multipath and phasing mentioned previously.

- (e) Identify the conditions under which the noise occurs, and check the noise filter on the relevant part.

Conditions under Which Noise Occurs	Noise Type
Noise increases when the accelerator pedal is depressed, but stops when the engine is stopped.	Generator noise
Noise occurs during A/C or heater operation.	Blower motor noise
Noise occurs when the vehicle accelerates rapidly on an unpaved road or after the ignition switch is turned on.	Fuel pump noise
Noise occurs when the horn switch is pressed and released or when pressed and held.	Horn noise
Quiet noise occurs while the engine is running, but stops when the engine is stopped.	Ignition noise
Noise occurs synchronously with the blink of the turn signal.	Flasher noise
Noise occurs during window washer operation.	Washer noise
Noise occurs while the engine is running, and continues even after the engine is stopped.	Engine coolant temperature sensor noise

Conditions under Which Noise Occurs	Noise Type
Noise occurs during wiper operation.	Wiper noise
Noise occurs when the brake pedal is depressed.	Stop light switch noise
Others	Start electricity stored on the vehicle

Reference:

- First ensure that the noise is not coming from the outside. Failure to do so makes noise source detection difficult and may lead to a misdiagnosis.
- Noise should be removed in descending order of loudness.
- Tuning the radio so that no station is received makes the noise more noticeable, making recognition of the phenomenon easier.

PROBLEM SYMPTOMS TABLE

HINT:

Inspect the fuse and relay before confirming the suspected area as shown in the table below.

Radio receiver assembly

AV

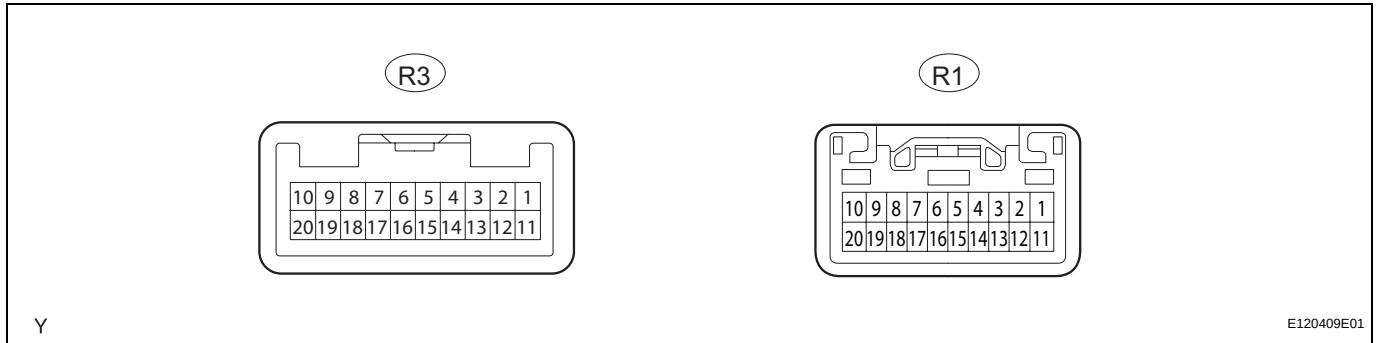
Symptom	Suspected area	See page
Pressing power switch does not start system	1. Power source circuit (radio receiver assembly)	AV-64
	2. Radio receiver assembly	AV-69
Radio receiver cannot be dimmed at night	1. Illumination circuit	AV-40
	2. Radio receiver assembly	AV-69
No sound can be heard (Separate amplifier)	1. Power source circuit (radio receiver assembly)	AV-64
	2. Power source circuit (stereo component amplifier assembly)	AV-66
	3. AMP sound signal circuit	AV-58
	4. Speaker circuit	AV-47
	5. AVC-LAN circuit	AV-62
	6. AMP mute signal circuit	AV-56
	7. Stereo component amplifier assembly	AV-90
	8. Radio receiver assembly	AV-69
No sound can be heard (Build-in amplifier)	1. Power source circuit (radio receiver assembly)	AV-64
	2. Speaker circuit	AV-47
	3. Radio receiver assembly	AV-69
Sound quality is bad in all modes (volume is too low) (Separate amplifier)	1. Power source circuit (radio receiver assembly)	AV-64
	2. Power source circuit (stereo component amplifier assembly)	AV-66
	3. Speaker circuit	AV-47
	4. AMP sound signal circuit	AV-58
	5. Sound quality is bad in all modes (volume is too low)	AV-28
Sound quality is bad in all modes (volume is too low) Built-in amplifier	1. Power source circuit (radio receiver assembly)	AV-64
	2. Speaker circuit	AV-47
	3. Sound quality is bad in all modes (volume is too low)	AV-28
Noise occurs	Noise occurs	AV-27
Radio broadcast cannot be received (bad reception)	Radio broadcast cannot be received (bad reception)	AV-35
CD cannot be inserted or is ejected immediately after insertion	1. Power source circuit (radio receiver assembly)	AV-64
	2. CD cannot be inserted or is ejected immediately after insertion	AV-31
CD cannot be eject	1. Power source circuit (radio receiver assembly)	AV-64
	2. CD cannot be ejected	AV-30
Sound quality is bad only when playing CD (volume is too low)	Sound quality is bad only when playing CD (volume is too low)	AV-29
CD sound skips	CD sound skips	AV-33

Steering pad switch

Symptom	Suspected area	See page
Audio system cannot be operated with steering pad switch	1. Steering pad switch circuit	AV-37
	2. Radio receiver assembly	AV-69

TERMINALS OF ECU

1. RADIO RECEIVER ASSEMBLY (SEPARATE AMPLIFIER)



Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specification
SWG (R3-6) - Body ground	W-R - Body ground	Steering pad switch ground	Always	Below 1 Ω
SW1 (R3-7) - GND (R1-20)	V-W - BR	Steering pad switch signal	Steering pad switch not operating	4 V or more
			Seek+ switch pushed	Approx. 0.5 V
			Seek- switch pushed	Approx. 0.9 V
			VOL+ switch pushed	Approx. 2.0 V
SW2 (R3-8) - GND (R1-20)	Y-B - BR	Steering pad switch signal	VOL- switch pushed	Approx. 3.4 V
			Steering pad switch not operating	4 V or more
B (R1-1) - GND (R1-20)	L-Y - BR	Battery	MODE switch pushed	Below 2.5 V
TX+ (R1-5) - GND (R1-20)	O - BR	AVC-LAN communication signal	Always	10 to 14 V
MUTE (R1-7) - GND (R1-20)	V - BR	Mute signal	Ignition switch ACC	2 to 3 V
			Audio system is playing	Above 3.5 V
R+ (R1-8) - GND (R1-20)	B - BR	Sound signal (Right)	Audio system is playing	Below 1 V
L+ (R1-9) - GND (R1-20)	R - BR	Sound signal (Left)	Audio system is playing	Waveform synchronized with sounds is output.
SGND (R1-10) - Body ground	Shielded - Body ground	Shielded ground	Audio system is playing	Waveform synchronized with sounds is output.
ACC (R1-11) - GND (R1-20)	GR - BR	Accessory (ON)	Always	Below 1 Ω
			Ignition switch OFF	Below 1 V
TX- (R1-15) - GND (R1-20)	R-W - BR	AVC-LAN communication signal	Ignition switch ON	10 to 14 V
R- (R1-18) - GND (R1-20)	W - BR	Sound signal (Right)	Ignition switch ACC	2 to 3 V
L- (R1-19) - GND (R1-20)	G - BR	Sound signal (Left)	Audio system is playing	Waveform synchronized with sounds is output
GND (R1-20) - Body ground	BR - Body ground	Ground	Audio system is playing	Waveform synchronized with sounds is output
			Always	Below 1 Ω

2. RADIO RECEIVER ASSEMBLY (BUILT-IN AMPLIFIER)

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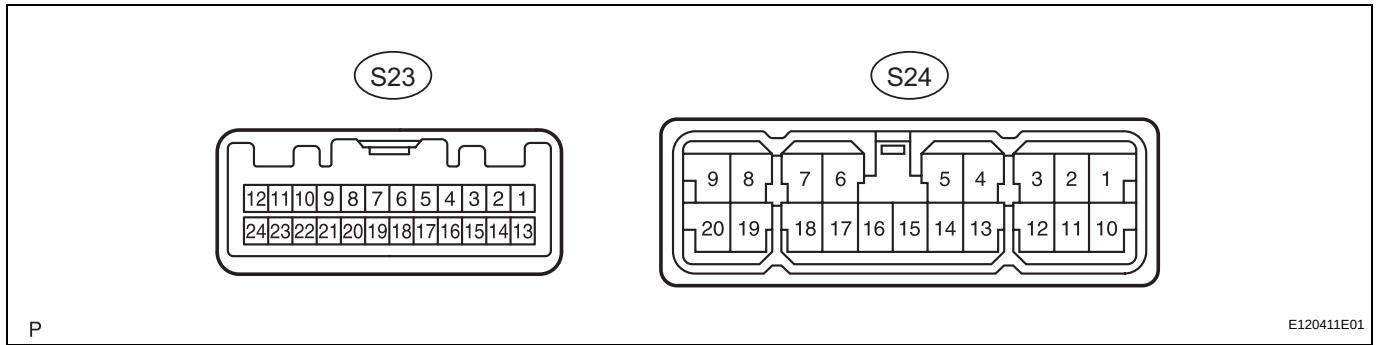


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Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specification
SWG (R3-6) - Body ground	W-R - Body ground	Steering pad switch ground	Always	Below 1 Ω
SW1 (R3-7) - GND (R1-7)	V-W - BR	Steering pad switch signal	Steering pad switch not operating	4 V or more
			Seek+ switch pushed	Approx. 0.5 V
			Seek- switch pushed	Approx. 0.9 V
			VOL+ switch pushed	Approx. 2.0 V
			VOL- switch pushed	Approx. 3.4 V
SW2 (R3-8) - GND (R1-7)	Y-B - BR	Steering pad switch signal	Steering pad switch not operating	4 V or more
			MODE switch pushed	Below 2.5 V
FR+ (R1-1) - GND (R1-7)	LG - BR	Sound signal (Front right)	Audio system is playing	Waveform synchronized with sounds is output
FL+ (R1-2) - GND (R1-7)	P - BR	Sound signal (Front left)	Audio system is playing	Waveform synchronized with sounds is output
ACC (R1-3) - GND (R1-7)	GR - BR	Accessory (ON)	Ignition switch OFF	Below 1 V
			Ignition switch ON	10 to 14 V
B (R1-4) - GND (R1-7)	L-Y - BR	Battery	Always	10 to 14 V
FR- (R1-5) - GND (R1-7)	L - BR	Sound signal (Front right)	Audio system is playing	Waveform synchronized with sounds is output.
FL- (R1-6) - GND (R1-7)	V - BR	Sound signal (Front left)	Audio system is playing	Waveform synchronized with sounds is output.
GND (R1-7) - Body ground	BR - Body ground	Ground	Always	Below 1 Ω
RR+ (R2-1) - GND (R1-7)	R - BR	Sound signal (Rear right)	Audio system is playing	Waveform synchronized with sounds is output.
RL+ (R2-2) - GND (R1-7)	B - BR	Sound signal (Rear left)	Audio system is playing	Waveform synchronized with sounds is output.
RR- (R2-3) - GND (R1-7)	W - BR	Sound signal (Rear right)	Audio system is playing	Waveform synchronized with sounds is output.
RL- (R2-6) - GND (R1-7)	Y - BR	Sound signal (Rear left)	Audio system is playing	Waveform synchronized with sounds is output.

3. STEREO COMPONENT AMPLIFIER ASSEMBLY

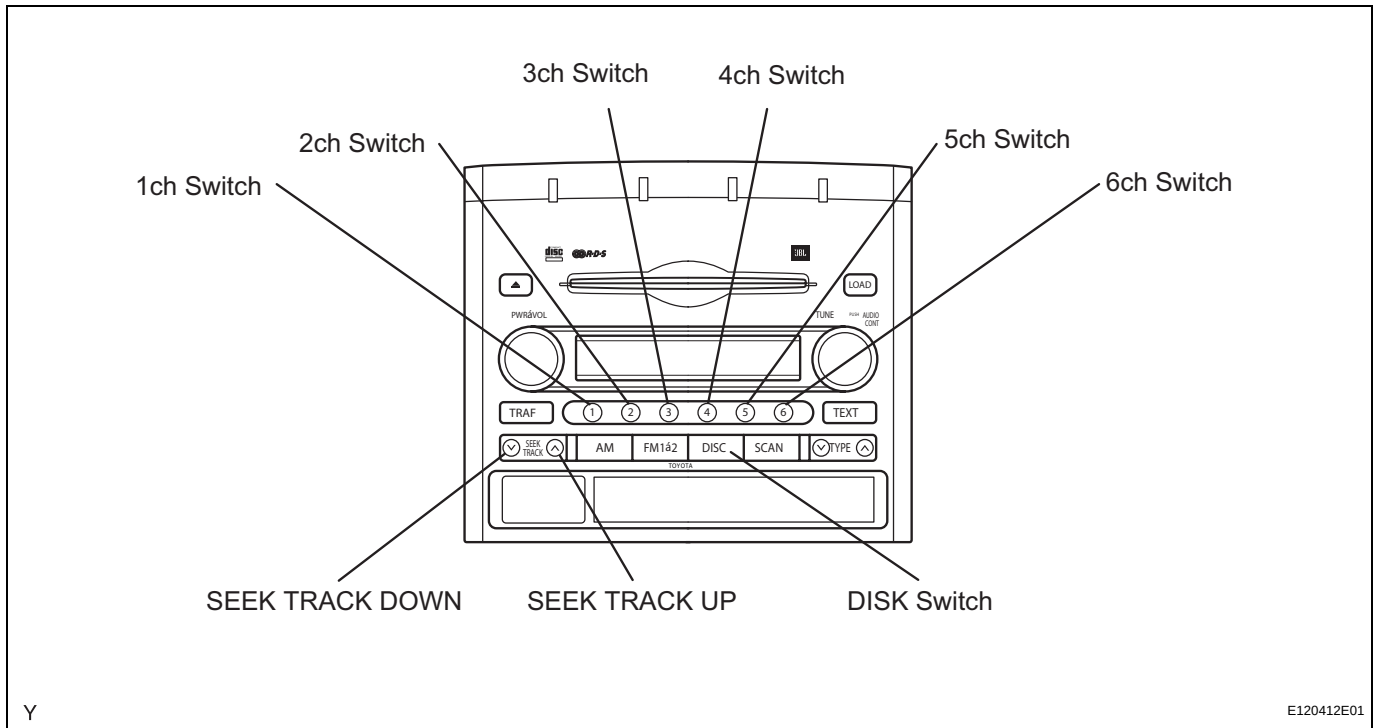


Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
+B (S24-1) - GND (S24-15)	W-L - BR	Battery	Always	10 to 14 V
WFR+ (S24-3) - GND (S24-15)	L-B - BR	Sound signal (Woofer)	Audio system is playing	Waveform synchronized with sounds is output
WFL+ (S24-2) - GND (S24-15)	BR - BR	Sound signal (Woofer)	Audio system is playing	Waveform synchronized with sounds is output
RL+ (S24-4) - GND (S24-15)	B - BR	Sound signal (Rear left)	Audio system is playing	Waveform synchronized with sounds is output
RR+ (S24-5) - GND (S24-15)	R - BR	Sound signal (Rear right)	Audio system is playing	Waveform synchronized with sounds is output
FL+ (S24-6) - GND (S24-15)	P - BR	Sound signal (Front left)	Audio system is playing	Waveform synchronized with sounds is output
FR+ (S24-7) - GND (S24-15)	LG - BR	Sound signal (Front right)	Audio system is playing	Waveform synchronized with sounds is output
+B2 (S24-10) - GND (S24-15)	W-L - BR	Battery	Always	10 to 14 V
WFR- (S24-12) - GND (S24-15)	L-R - BR	Sound signal (Woofer)	Audio system is playing	Waveform synchronized with sounds is output
WFL- (S24-11) - GND (S24-15)	G-W - BR	Sound signal (Woofer)	Audio system is playing	Waveform synchronized with sounds is output
RL- (S24-13) - GND (S24-15)	Y - BR	Sound signal (Rear left)	Audio system is playing	Waveform synchronized with sounds is output
RR- (S24-14) - GND (S24-15)	W - BR	Sound signal (Rear right)	Audio system is playing	Waveform synchronized with sounds is output
GND (S24-15) - Body ground	BR - Body ground	Ground	Always	Below 1 Ω
E (S24-16) - Body ground	BR - Body ground	Ground	Always	Below 1 Ω
FL- (S24-17) - GND (S24-15)	V - BR	Sound signal (Front left)	Audio system is playing	Waveform synchronized with sounds is output
FR- (S24-18) - GND (S24-15)	L - BR	Sound signal (Front right)	Audio system is playing	Waveform synchronized with sounds is output
MUTE (S23-1) - GND (S24-15)	V - BR	Mute signal from radio receiver	Audio system is playing	Above 3.5 V
			Audio system is changing	Below 1 V
L- (S23-2) - GND (S24-15)	G - BR	Sound signal (Left)	Audio system is playing	Waveform synchronized with sounds is output
L+ (S23-3) - GND (S24-15)	R - BR	Sound signal (Left)	Audio system is playing	Waveform synchronized with sounds is output
R- (S23-4) - GND (S24-15)	W - BR	Sound signal (Right)	Audio system is playing	Waveform synchronized with sounds is output
R+ (S23-5) - GND (S24-15)	B - BR	Sound signal (Right)	Audio system is playing	Waveform synchronized with sounds is output
SGND (S23-6) - Body ground	Shield - Body ground	Shielded ground	Always	Below 1 Ω
TX- (S23-7) - GND (S24-15)	R-W - BR	AVC-LAN communication signal	Ignition switch ACC	2 to 3 V
TX+ (S23-8) - GND (S24-15)	O - BR	AVC-LAN communication signal	Ignition switch ACC	2 to 3 V

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
ACC (S23-12) - GND (S23-15)	GR - BR	Accessory (ON)	Ignition switch OFF	Below 1 V
			Ignition switch ON	10 to 14 V

DTC CHECK / CLEAR

1. DIAGNOSTIC CHECK



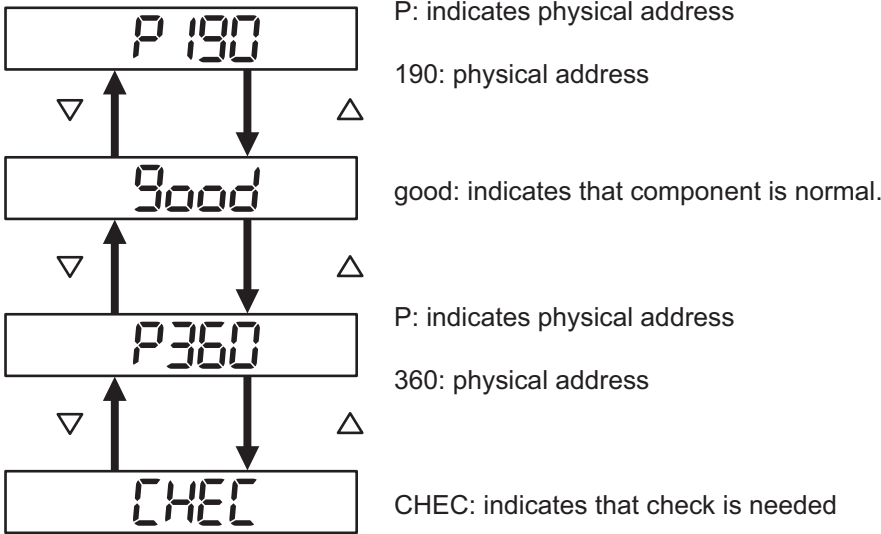
- (a) Start diagnostic mode (All elements come on during SW check mode).
 - (1) Turn off the audio system and turn the ignition switch to the ACC position. While pressing the preset switches 1ch and 6ch at the same time, press the DISC switch 3 times.
 - (2) Reference:
 - When the system enters diagnostic mode, a beep sound is emitted 3 times and all the elements come on during SW check mode.
 - It takes approximately 40 seconds to complete the check.
 - Turn on all the elements in the LCD.
 - When pressing the switch, confirm that a beep sound is emitted.
- (b) Service check screen.
 - (1) Press the SEEK TRACK UP switch to enter the service check screen.
 - (2) In service check mode, the system check and the diagnostic memory check are performed, and the check results are displayed by component codes in ascending order (physical address).

Terms	Description
Component code (Physical address)	Three-digit code (in hexadecimal) given to each device comprising AVC-LAN. Corresponding to its function, individual symbol provided.
Logical address	Two-digit code (in hexadecimal) given to each function and device unit in each device comprising AVC-LAN.

Code No. (physical address) List

Code No. physical address	Equipment Name
190	Radio receiver assembly (Audio head unit)
440	Stereo component amplifier assembly

- (c) Finish diagnostic mode.
 - (1) Press the DISC switch for 2 seconds or more, or turn the ignition switch off.
- (d) Service check mode result display (for checking the current and the past system conditions).
 - (1) Press the SEEK TRACK UP/DOWN switch to see the check result of each component.



△ : SEEK TRACK UP
▽ : SEEK TRACK DOWN

The illustration shows the case that the system has 2 components with the codes 190 and 360, and that one of them (code 360) requires a check.
The check result is displayed by a component code in ascending order. The component device code is displayed first, and then the check result follows.

The illustration shows the case that the system has 2 components with the codes 190 and 360, and that one of them (code 360) requires a check.
The check result is displayed by a component code in ascending order. The component device code is displayed first, and then the check result follows.

(2) Check the result display.

Display	Original Language	Description	Action to be Taken
good	Good (normal)	No DTCs are detected in either system check mode nor diagnostic memory mode.	-
NCON	No connection	The system recognized the component when it was registered, but the component gives no response to the diagnostic mode ON request.	Check the power source circuit and the communication circuit of the component indicated by the component code (physical address).
ECHN	Exchange	One or more DTCs for Exchange are detected in either system check mode or diagnostic memory mode.	Go to detailed information mode to check the trouble area, referring to the DTC list.
CHEC	Check	When no DTCs are detected for Exchange, one or more DTCs for Check are detected in either system check mode or diagnostic memory mode.	Go to detailed information mode to check the trouble area, referring to the DTC list.
OLD	Old version	Old DTC application is identified and DTC is detected in either system check mode or diagnostic memory mode.	-
NRES	No response	The device gives no response to any one of system check mode ON request, system check result request or diagnostic memory request.	Check the power source circuit and the communication circuit of the component indicated by the component code (physical address).

AV

(3) To perform the service check again, press the preset switch 1 ch.

(e) Detailed information mode (when displaying the DTC for a troubled component)

(1) With CHEC or ECHN being displayed, press the preset switch 2ch to go to detailed information mode.

- (2) Press the SEEK TRACK UP/DOWN switch to display the system check result (SYS) and diagnostic memory response (CODE).

AV

Service Check Mode

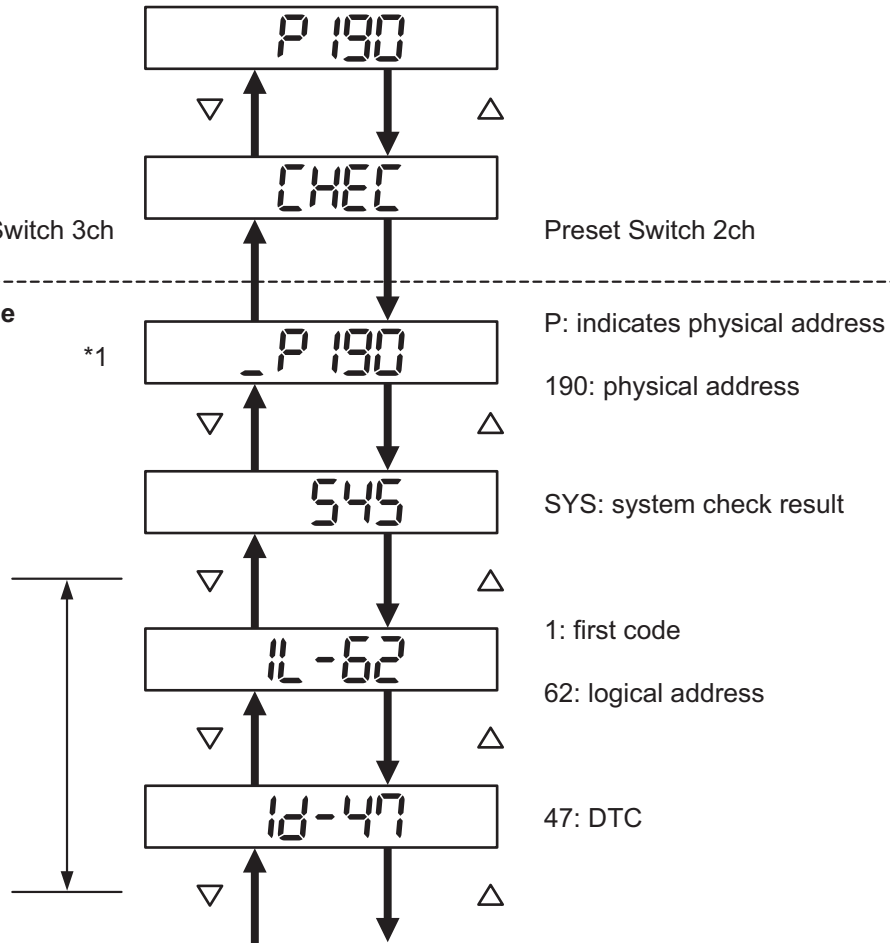
Detailed Information Mode

Detailed Information
of first code
is displayed

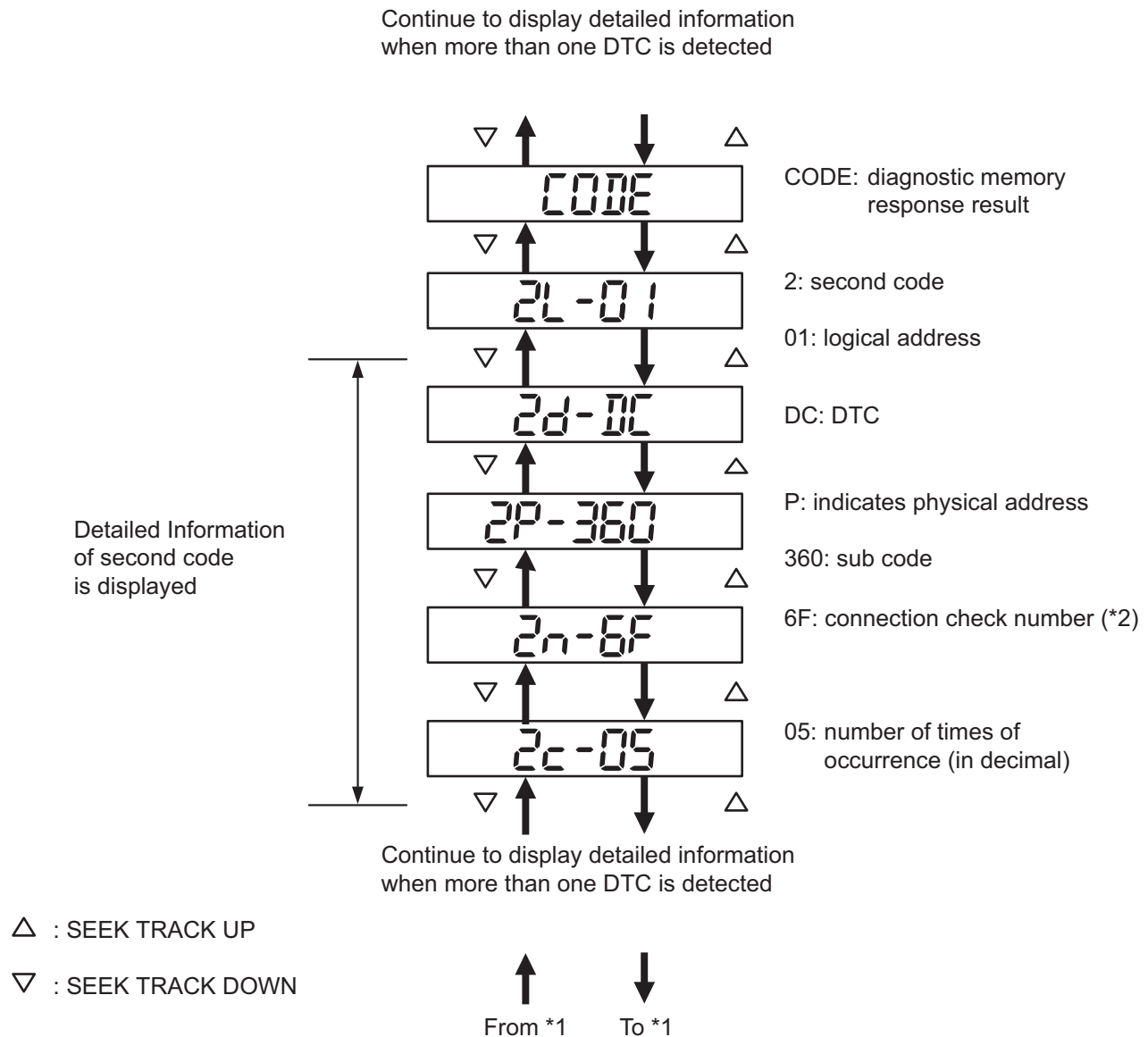
Preset Switch 3ch

Preset Switch 2ch

*1



Continue to display detailed information
when more than one DTC is detected



The illustration shows the case that the component with the code 190 has DTC 47 and DC as a result of the system check and the diagnostic memory response.

The detailed information mode shows the system check result first, then the diagnostic memory response result follows. (*2): As for the DTCs that do not have any sub codes, no sub code is displayed.

The illustration shows the case that the component with the code 190 has DTC 47 and DC as a result of the system check and the diagnostic memory response.

The detailed information mode shows the system check result first, then the diagnostic memory response result follows. (*2): As for the DTCs that do not have any sub codes, no sub code is displayed.

(3) Displayed items in detailed information mode

Division Code for DTC display	Description	The order of detailed information displayed when the TUNE UP switch is pressed. (The order is reversed when the TUNE DOWN switch is pressed.)
SYS	System check result is displayed.	Logical address → DTC
CODE	Diagnostic memory check result is displayed.	Logical address → DTC → Sub code → Connection confirmation number → The number of times of occurrence

(4) Check the trouble area referring to the DTC list.

(5) To return to the service check mode, press the preset switch 3ch.

2. DTC CLEAR

(a) Clearing an individual DTC memory (when clearing the memory of the DTC detected in the past individually)

(1) Press the preset switch 5ch for 2 seconds or more while ECHN is displayed in service check mode or detailed information mode.

HINT:

- A beep sound is emitted once when the DTC memory is completely cleared.
- When the DTC memory is cleared, only the component code (physical address) is displayed for the target component.
- To check DTCs, press the preset switch 1ch and perform the service check again.

(b) Clearing all the DTC memories (when clearing all the memories of DTCs detected in the past)

(1) Start diagnostic mode after repairing the trouble area.

(2) Press the preset switch 5ch for 2 seconds or more (CLR is displayed at this time).

HINT:

- A beep sound is emitted once when the DTC memories are completely cleared.
- When the DTC memories for all the components are cleared, only the component codes (physical address) are displayed.

(3) Press the preset switch 1ch to perform the service check again, and check that no DTCs are displayed for any component codes (physical address).

(c) Finish diagnostic mode

(1) Press DISC for 2 seconds or more, or turn the ignition switch off.

Noise Occurs

1

CHECK SPEAKER INSTALLATION

- (a) Check the speaker installation condition.
 (1) Check that each speaker is securely installed.

OK:

The malfunction disappears.

HINT:

The radio is equipped with a noise prevention system that blocks excessively loud noise. If such noise occurs, check that all wiring is proper and that the antenna installation part ground and noise-prevention equipment are installed.

Conditions under Which Noise Occurs	Noise Type
Noise increases when accelerator pedal is depressed, but stops when engine is stopped.	Generator noise
Noise occurs during A/C or heater operation.	Blower motor noise
Noise occurs when vehicle accelerates rapidly on unpaved road or after ignition switch is turned on.	Fuel pump noise
Noise occurs when horn switch is pressed and released or when pressed and held.	Horn noise
Quiet noise occurs while engine is running, but stops when engine is stopped.	Ignition noise
Noise occurs synchronously with blink of turn signal.	Flasher noise
Noise occurs during window washer operation.	Washer noise
Noise occurs while engine is running, and continues even after engine is stopped.	Water temperature sensor noise
Noise occurs during wiper operation.	Wiper noise
Noise occurs when brake pedal is depressed.	Stop light switch noise
Others	Static electricity stored on vehicle

HINT:

- Identify the conditions under which the noise occurs, and check the noise filter on the relevant part.
- First ensure that the noise is not coming from outside. Failure to do so makes noise source detection difficult and may lead to a misdiagnosis.
- Noise should be removed in descending order of loudness.

NG

INSTALL SPEAKER PROPERLY

OK

IDENTIFY NOISE SOURCE

AV

Sound Quality is Bad in All Modes

AV

1 ADJUST SOUND QUALITY

- (a) Adjust the sound quality.
 - (1) Operate the radio receiver assembly to adjust the sound quality.
- OK:
Malfunction disappears.

OK SYSTEM IS OK

NG

2 REPLACE STEREO COMPONENT AMPLIFIER ASSEMBLY

- (a) Replace the stereo component amplifier assembly and recheck.
- OK:
The malfunction disappears.

NG REPLACE RADIO RECEIVER ASSEMBLY

OK

SYSTEM IS OK

Sound Quality is Bad Only when CD is Played (Volume is Too Low)**1****OPERATION USING ANOTHER CD**

(a) Replace the CD with another one and recheck.

(1) Check the installation of the radio receiver assembly.

OK:

The malfunction disappears.

NG

REPLACE RADIO RECEIVER ASSEMBLY

OK

CD IS FAULTY

AV

CD cannot be Ejected**1****CHECK OPERATION**

(a) Press EJECT and check operation.

- (1) Press the CD EJECT switch of the radio receiver assembly for 2 seconds or more to see if the CD is ejected.

OK:

The CD is ejected.

HINT:

If the CD is not ejected, bring the vehicle in for repair.
Do not attempt to remove the CD by force.

NG

REPLACE RADIO RECEIVER ASSEMBLY

OK

2**OPERATION USING ANOTHER CD**

(a) Replace the CD with another and recheck.

- (1) Replace the CD with another normal one to see whether the same trouble occurs again.

OK:

The malfunction disappears.

NG

REPLACE RADIO RECEIVER ASSEMBLY

OK

CD IS FAULTY

CD cannot be Inserted or is Ejected Right After Insertion**1 CHECK CD**

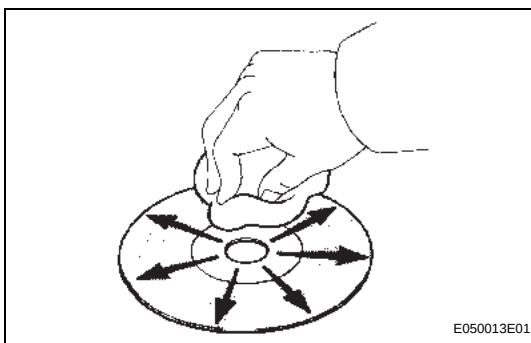
- (a) Check whether a normal CD is inserted.
- (1) Make sure that the CD is a normal audio CD, and that there is no deformation, flaw, stain, burr or other defect on the CD.

OK:**A normal audio CD is inserted.****HINT:**

- Translucent or oddly-shaped CDs cannot be played.
- Computer CD-ROMs (even those with music) and CD-R discs cannot be played.
- Playing an 8 cm CD does not require an adapter.

NG**CD IS FAULTY****OK****2 CHECK WHETHER CD IS INSERTED PROPERLY**

- (a) Check whether the CD is inserted properly.
- (1) Check whether or not the CD is inserted upside down.

OK:**Not upside down.****NG****INSERT CD PROPERLY****OK****3 CLEAN CD**

- (a) Clean the disc.
- (1) If the disc gets dirty, clean the disc by wiping the surface from the center to the outside, in a radial direction, with a soft cloth as shown in the illustration.

OK:**The malfunction disappears.****NOTICE:****Do not use a conventional record cleaner or anti-static preservative.****OK:****Not upside down.****OK****CD WAS DIRTY****NG**

4

OPERATION USING ANOTHER CD

- (a) Replace the CD with another and recheck.
- (1) Replace the CD with another normal one to see whether the same trouble occurs again.

OK:
The malfunction disappears.

NG

REPLACE RADIO RECEIVER ASSEMBLY

OK

CD IS FAULTY

AV

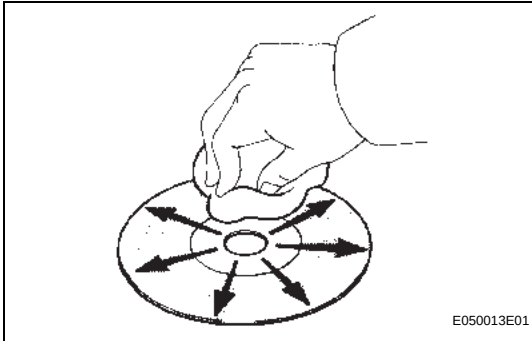
CD Sound Skips

HINT:

The sound may skip when driving on an unpaved road.

AV

1 CLEAN CD



(a) Clean the disc.

- (1) If the disc gets dirty, clean the disc by wiping the surface from the center to the outside, in a radial direction, with a soft cloth as shown in the illustration.

NOTICE:

Do not use a conventional record cleaner or anti-static preservative.

OK:

The malfunction disappears.

NG

CD WAS DIRTY

OK

2 OPERATION USING ANOTHER CD

(a) Replace the CD with another and recheck.

- (1) Replace the CD with another normal one to see whether the same trouble occurs again.

OK:

The malfunction disappears.

NG

CD IS FAULTY

OK

3 CHECK RADIO RECEIVER INSTALLATION

(a) Check the radio receiver assembly installation condition.

- (1) Check that the radio receiver assembly is installed properly.

OK:

Installed properly.

NG

INSTALL RADIO RECEIVER PROPERLY

OK

4 CHECK WHETHER RAPID TEMPERATURE CHANGE OCCURRED IN CABIN

(a) Check whether or not a rapid temperature change occurred in the cabin.

OK:

A rapid temperature change occurred.

HINT:

A rapid temperature change creates condensation inside the CD player, which may prevent CDs from being played.

NG

REPLACE RADIO RECEIVER ASSEMBLY

AV

OK

CONDENSATION DUE TO TEMPERATURE CHANGE (LET IT SIT FOR A WHILE BEFORE USING)

Radio Broadcast cannot be Received (Bad Reception)

1 CHECK WHETHER RADIO AUTO-SEARCH FUNCTIONS PROPERLY

- (a) Check whether the radio auto-search functions properly.
 (1) Perform the auto-search of the radio and check that it functions normally.

OK:

The radio auto-search functions properly.

OK

REPLACE RADIO RECEIVER ASSEMBLY

NG

2 CHECK OPTIONAL COMPONENTS

- (a) Check the optional component (sun shade film, telephone antenna, etc.).
 (1) Check whether or not any optional component, such as the sunshade film and the telephone antenna, is installed.

OK:

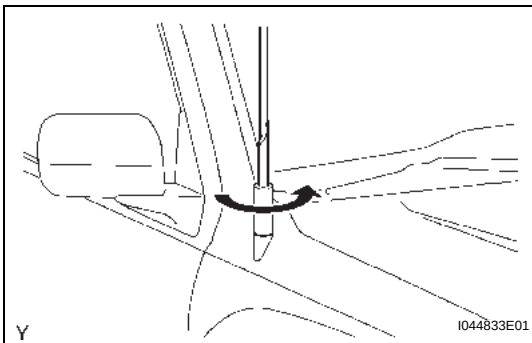
An optional component is installed.

OK

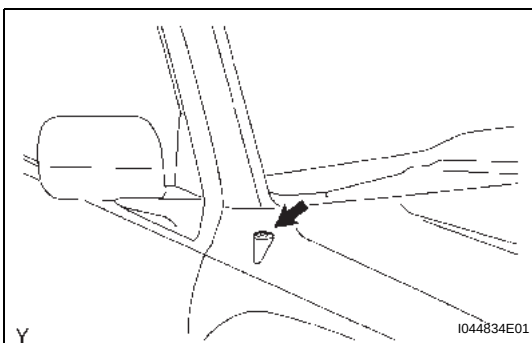
EFFECT FROM OPTIONAL COMPONENTS

NG

3 CHECK ANTENNA FOR NOISE PRODUCTION



- (a) Check for noise with the antenna.
 (1) Remove the pull top antenna pole sub-assembly by turning it in the direction of the arrow as shown in the illustration.
 (2) With the ignition switch ON (ACC), turn on the radio and choose the AM mode.



- (3) Place the tip of a screwdriver on the antenna of the antenna assembly, and check that noise is heard from the speaker. Noise occurs.

OK:

Noise occurs.

OK

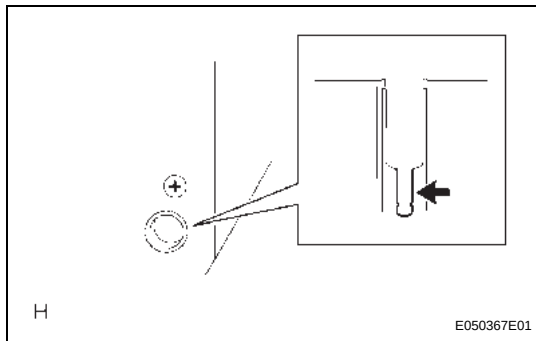
REPLACE PULL TOP ANTENNA POLE SUB-ASSEMBLY

NG

4

INSPECT RADIO RECEIVER ASSEMBLY (ANTENNA)

AV



- (a) Prepare for the check.
 - (1) Remove the antenna plug of the radio receiver assembly.
- (b) Check for noise.
 - (1) With the radio receiver assembly connector connected, turn the ignition switch to ACC.
 - (2) Turn on the radio and choose the AM mode.
 - (3) Place a flat-head screwdriver or metal such as a thin wire on the antenna jack of the radio receiver assembly and check that noise is heard from the speaker.

OK:

Noise occurs.

NG

REPLACE RADIO RECEIVER ASSEMBLY

OK

REPLACE ANTENNA CORD SUB-ASSEMBLY

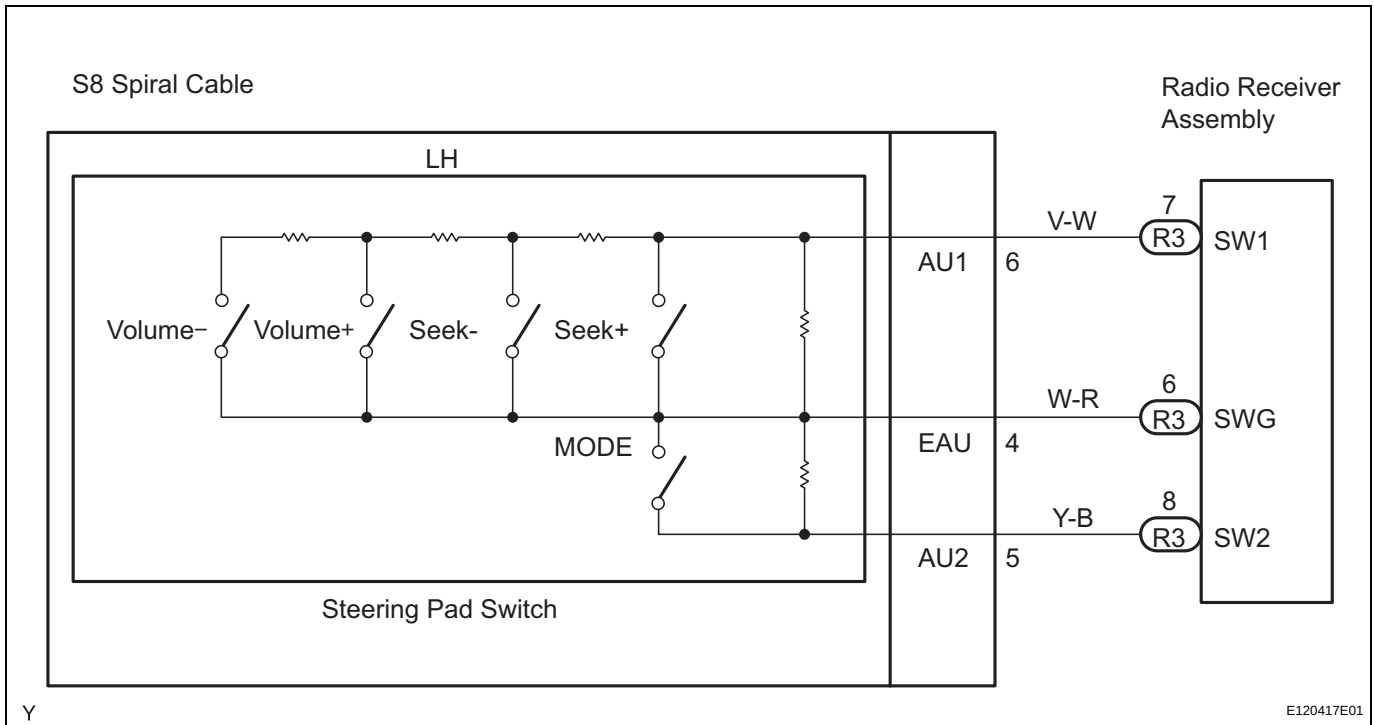
Steering Pad Switch Circuit

DESCRIPTION

This circuit sends an operation signal from the steering pad switch to the radio receiver assembly. If there is an open in the circuit, the audio system cannot be operated by the steering pad switch. If there is a short in the circuit, the same condition as that when the switch is continuously depressed occurs.

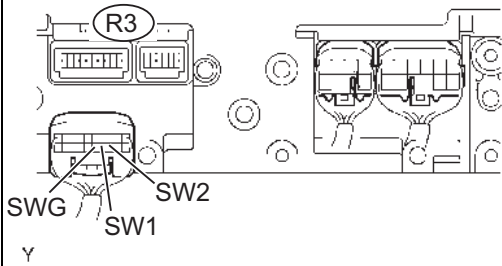
Therefore, the radio receiver assembly cannot be operated by the steering pad switch, and also the radio receiver assembly itself does not function.

WIRING DIAGRAM

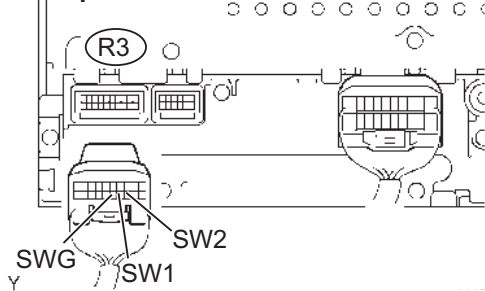


1 INSPECT RADIO RECEIVER ASSEMBLY

Built-in AMP:



Separate AMP:



- (a) Disconnect the R3 radio receiver assembly connector.
(b) Measure the resistance.

Standard

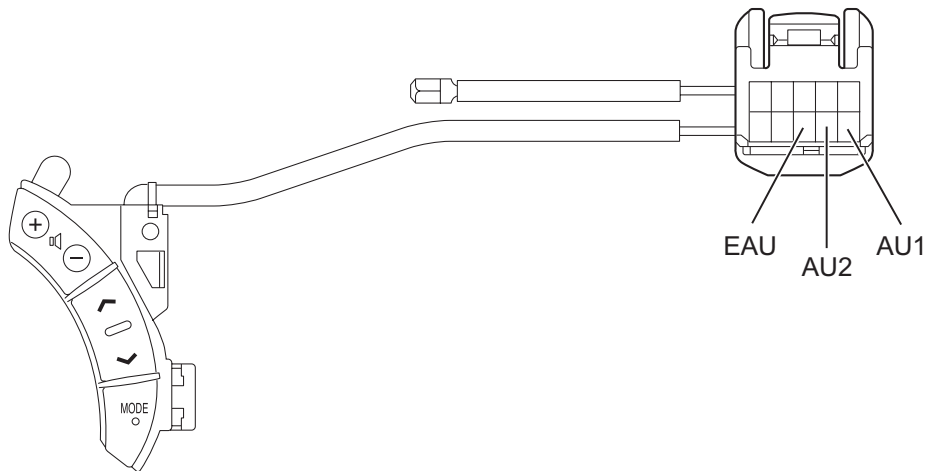
Tester Connection	Condition	Specified Condition
SW1 (R3-7) - SWG (R3-6)	No switch is pushed	Approx. 100 k Ω
SW1 (R3-7) - SWG (R3-6)	SEEK+ switch is pushed	Approx. 0 Ω
SW1 (R3-7) - SWG (R3-6)	SEEK- switch is pushed	Approx. 0.3 k Ω
SW1 (R3-7) - SWG (R3-6)	VOL+ switch is pushed	Approx. 1 k Ω
SW1 (R3-7) - SWG (R3-6)	VOL- switch is pushed	Approx. 3.1 k Ω
SW2 (R3-8) - SWG (R3-6)	No switch is pushed	Approx. 100 k Ω
SW2 (R3-8) - SWG (R3-6)	MODE switch is pushed	Approx. 0 Ω

OK

**PROCEED TO NEXT CIRCUIT INSPECTION
SHOWN IN PROBLEM SYMPTOMS TABLE**

NG

2 INSPECT STEERING PAD SWITCH LH (AU1, AU2, EAU)



- (a) Disconnect the steering pad switch LH connector.
(b) Measure the resistance.

Standard

Tester Connection	Condition	Specified Condition
AU1 - EAU	No switch is pushed	Approx. 100 k Ω
AU1 - EAU	SEEK+ switch is pushed	Approx. 0 Ω
AU1 - EAU	SEEK- switch is pushed	Approx. 0.3 k Ω

Tester Connection	Condition	Specified Condition
AU1 - EAU	VOL+ switch is pushed	Approx. 1 k Ω
AU1 - EAU	VOL- switch is pushed	Approx. 3.1 k Ω
AU2 - EAU	No switch is pushed	Approx. 100 k Ω
AU2 - EAU	MODE switch is pushed	Approx. 0 Ω

NG

REPLACE STEERING PAD SWITCH LH

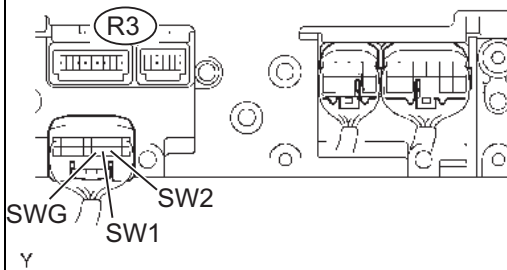
AV

OK

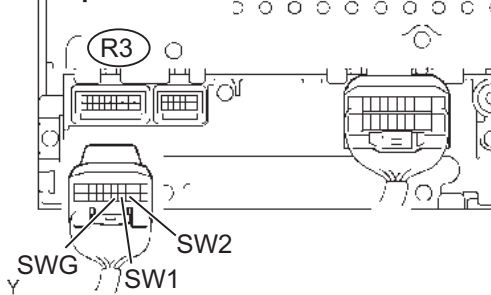
3

CHECK HARNESS AND CONNECTOR (SPIRAL CABLE SUB-ASSEMBLY - RADIO RECEIVER ASSEMBLY)

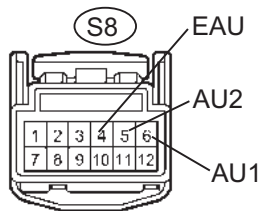
Built-in AMP:



Separate AMP:



Spiral Cable Side:



- Disconnect the S8 spiral cable sub-assembly connector.
- Disconnect the R3 radio receiver assembly connector.
- Check the resistance.

Standard

Tester Connection	Specified Condition
SW1 (R3-7) - AU1 (S8-6)	Below 1 Ω
SW2 (R3-8) - AU2 (S8-5)	Below 1 Ω
SWG (R3-6) - EAU (S8-4)	Below 1 Ω
SW1 (R3-7) - Body ground	10 k Ω or higher
SW2 (R3-8) - Body ground	10 k Ω or higher
SWG (R3-6) - Body ground	10 k Ω or higher

NG

REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

REPLACE SPIRAL CABLE SUB-ASSEMBLY

Illumination Circuit

DESCRIPTION

Power is supplied to the radio receiver and steering pad switch illumination when the light control switch is in the TAIL or HEAD position.

AV

The intensity of the radio receiver and steering pad switch illumination can be adjusted by the light control rheostat.

AV



1 SYSTEM CHECK

- (a) Turn the light control switch to the TAIL or HEAD position.

Check whether other displays and indicators such as the A/C switch indicator come on.

OK:

Other displays and indicators come on.

NG

GO TO LIGHTING SYSTEM

OK

2 CHECK SYMPTOMS

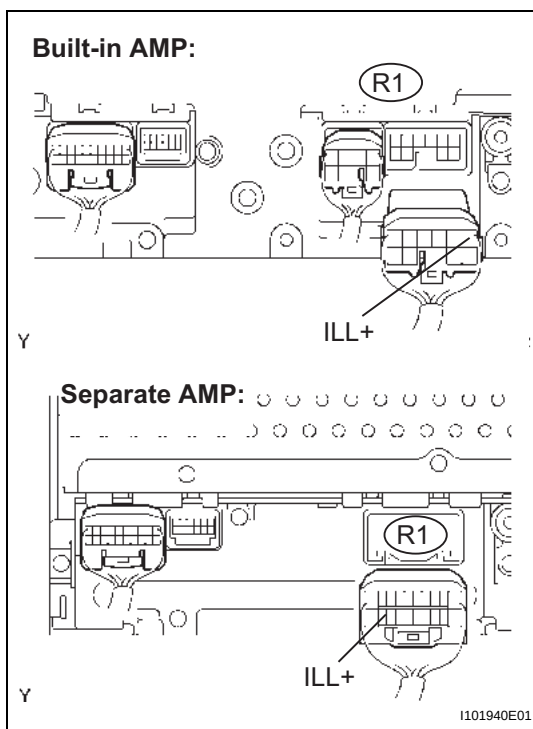
- (a) Check the symptom.
 (1) Check whether the illumination for the radio receiver assembly or steering pad switch comes on.

Symptom	Proceed To
Illumination for radio receiver assembly does not come on.	A
Illumination for steering pad switch does not come on.	B

B

Go to step 5

A

3 CHECK RADIO RECEIVER ASSEMBLY

- (a) Disconnect the R1 radio receiver assembly connector.
 (b) Turn the light control switch to the TAIL or HEAD position.
 (c) Measure the voltage.

Standard:

Built-in AMP

Tester Connection	Light control switch TAIL	Specified Condition
ILL+ (R1-10) - Body ground	Light control switch TAIL	10 to 14 V

Standard:

Separate AMP

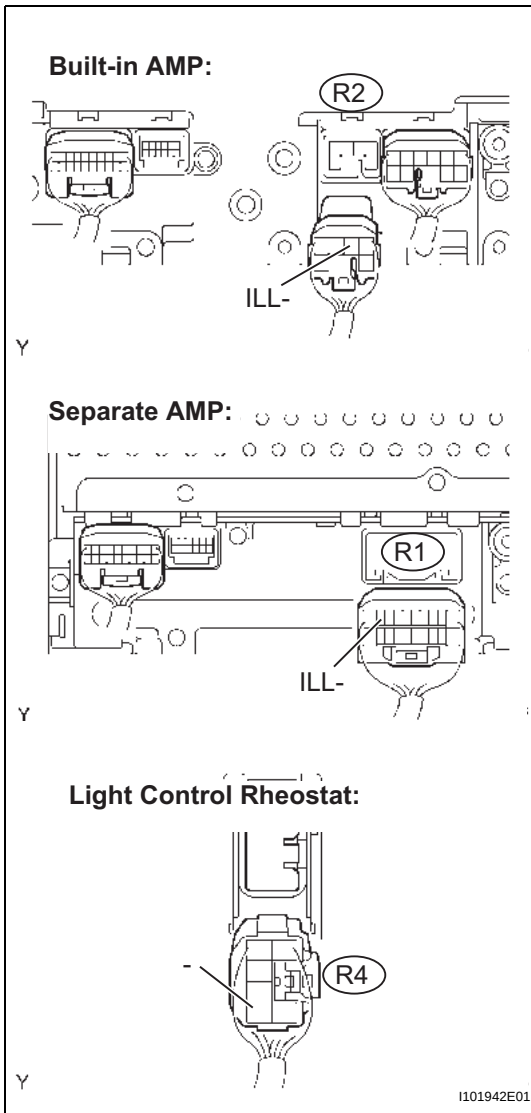
Tester Connection	Light control switch TAIL	Specified Condition
ILL+ (R1-2) - Body ground	Light control switch TAIL	10 to 14 V

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

4

CHECK HARNESS AND CONNECTOR (RADIO RECEIVER ASSEMBLY - LIGHT CONTROL RHEOSTAT)

- (a) Disconnect the R2 or R1 radio receiver assembly connector and R4 light control rheostat connector.
(b) Measure the resistance.

Standard:**Built-in AMP**

Tester Connection	Specified Condition
ILL- (R2-5) - - (R4-3)	Below 1Ω
ILL- (R2-5) - Body ground	10 kΩ or higher

Standard:**Separate AMP**

Tester Connection	Specified Condition
ILL- (R1-12) - - (R4-3)	Below 1Ω
ILL- (R1-2) - Body ground	10 kΩ or higher

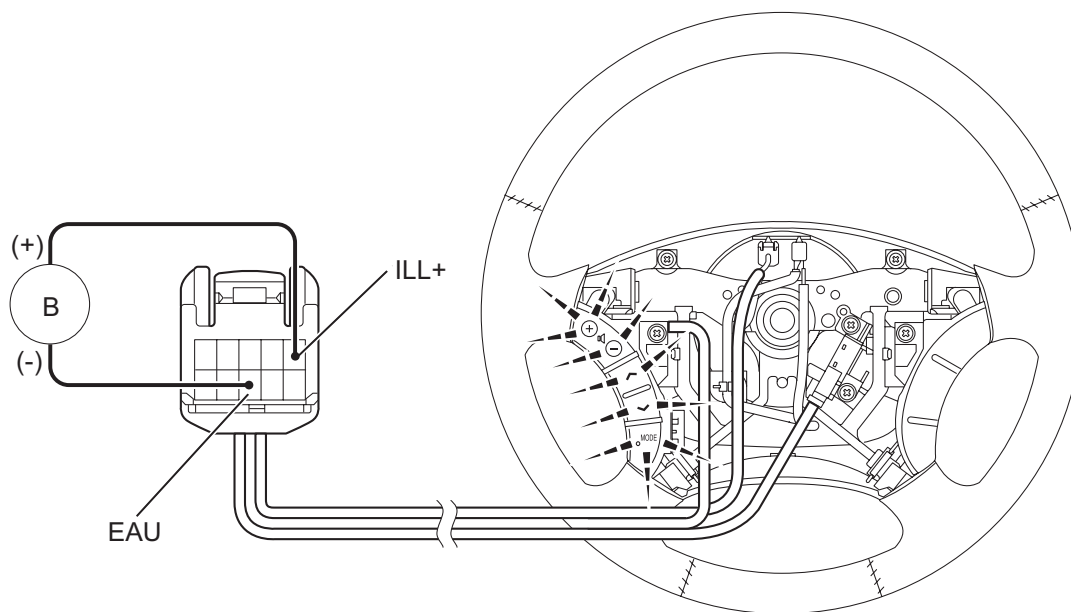
NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

AV

5 INSPECT STEERING PAD SWITCH LH**AV**

Y

E120420E01

NOTICE:

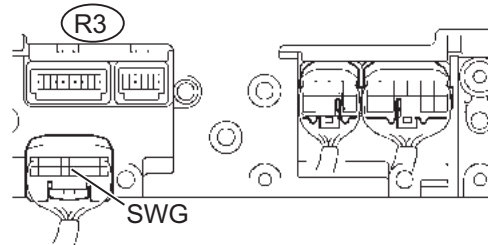
The vehicle is equipped with the SRS (Supplemental Restraint System) such as airbags. Before servicing (including removal or installation of parts), be sure to read the precautionary notice for the SRS.

- (a) Disconnect the steering pad switch assembly connector.
- (b) Connect the positive (+) lead to terminal ILL+ and the negative (-) lead to terminal EAU of the steering pad switch assembly connector.
- (c) Check the illumination for the steering pad switch assembly.

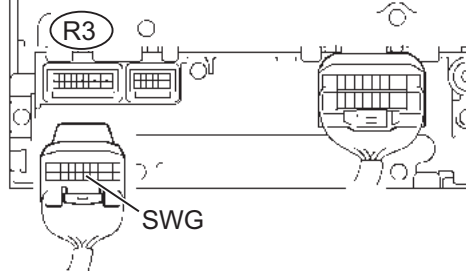
OK:

Illumination for the steering pad switch assembly comes on.

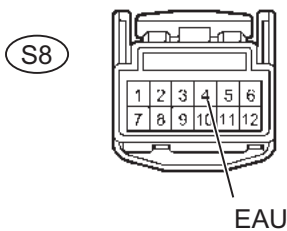
NG**REPLACE STEERING PAD SWITCH LH****OK**

6**CHECK HARNESS AND CONNECTOR (SPIRAL CABLE SUB-ASSEMBLY - RADIO RECEIVER ASSEMBLY)****Built-in AMP:**

Y

Separate AMP:

Y

Spiral Cable Side:

H

I101943E01

- (a) Disconnect the R3 radio receiver assembly connector.
- (b) Disconnect the S8 spiral cable sub-assembly connector.
- (c) Measure the resistance.

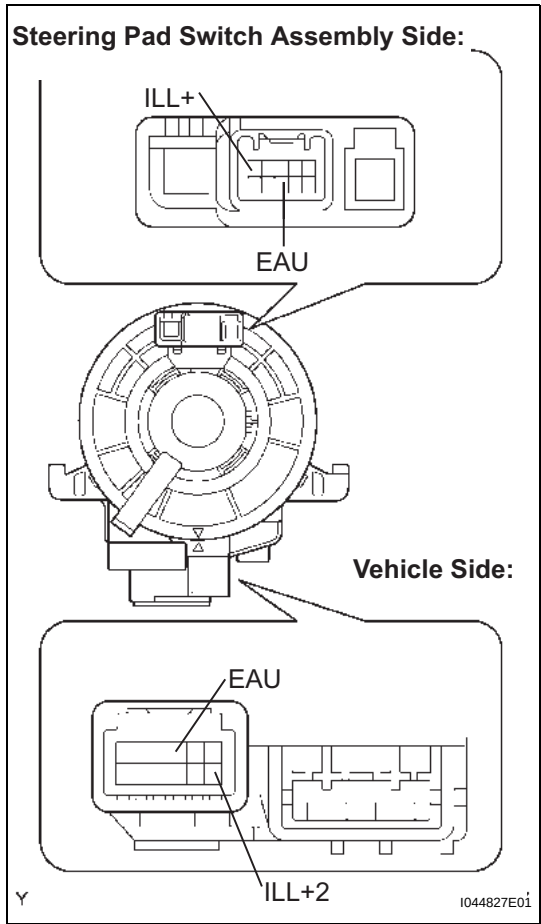
Standard

Tester Connection	Specified Condition
SWG (R3-6) - EAU (S8-4)	Below 1 Ω

NG**REPAIR OR REPLACE HARNESS OR CONNECTOR****OK****AV**

7INSPECT SPIRAL CABLE SUB-ASSEMBLY

AV



- (a) Disconnect the spiral cable sub-assembly connector.
- (b) Check the resistance.

Standard

Tester Connection	Specified Condition
EAU - EAU	Below 1 Ω
ILL+ - ILL+2	Below 1 Ω

NG

REPLACE SPIRAL CABLE SUB-ASSEMBLY

OK

REPAIR OR REPLACE HARNESS AND CONNECTOR (SPIRAL CABLE SUB-ASSEMBLY - DRIVER SIDE J/B)

Speaker Circuit

DESCRIPTION

Sound signals that have been amplified by the stereo component amplifier or radio receiver assembly (built-in amp) are sent to the speakers from the stereo component amplifier assembly or radio receiver assembly through this circuit.

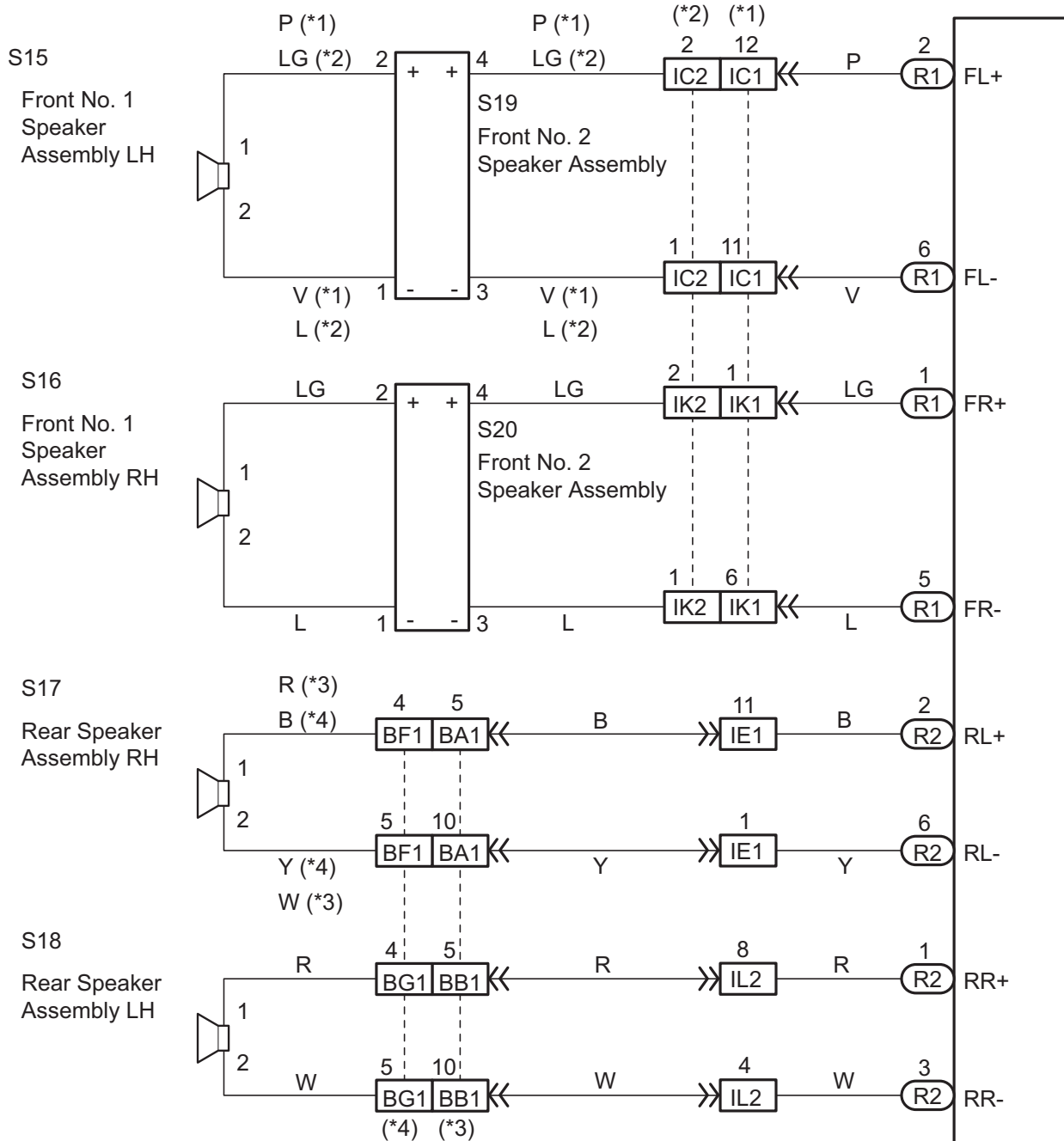
If there is a short in this circuit, the stereo component amplifier assembly detects it and stops the output to the speakers.

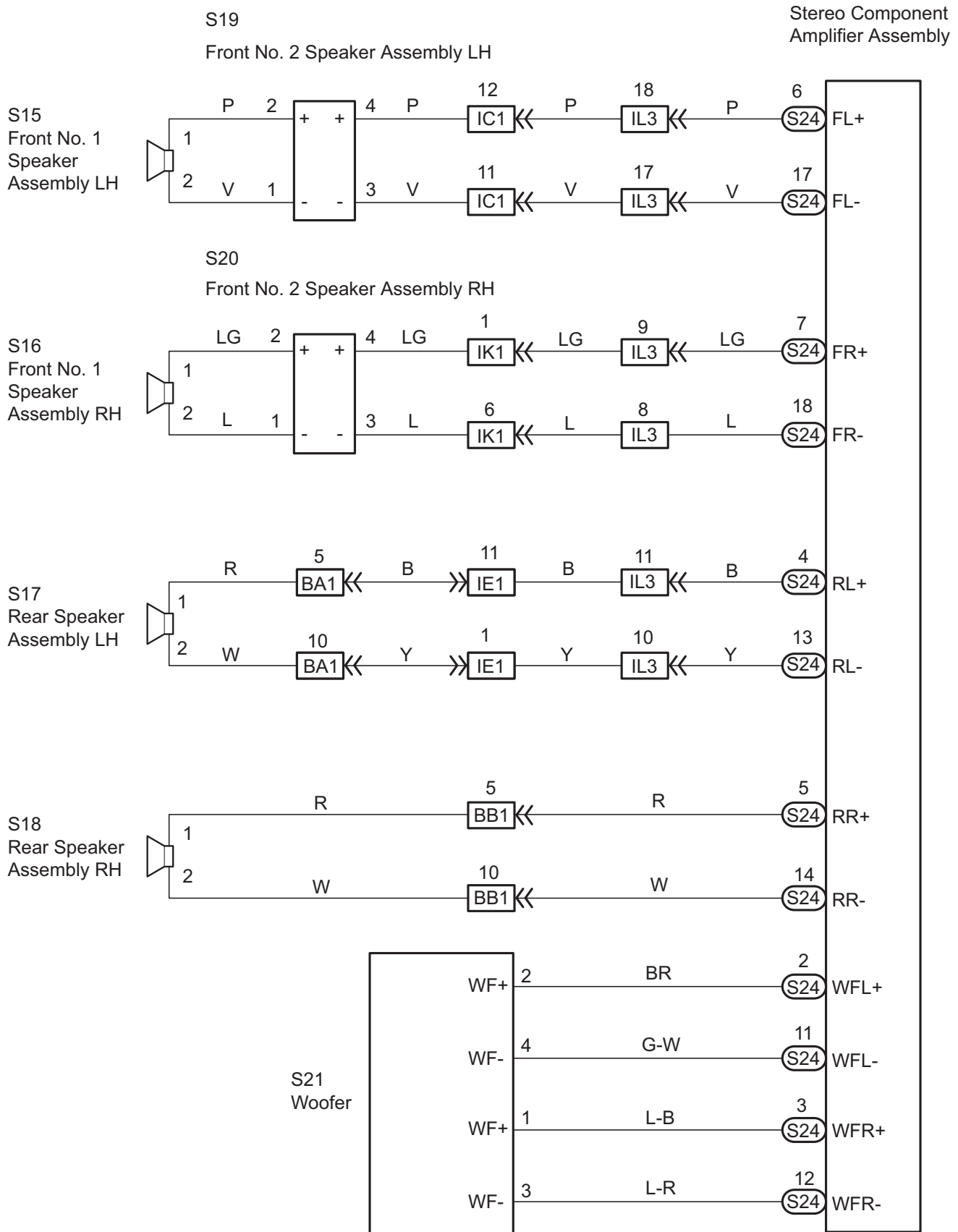
Thus sound cannot be heard from the speakers even if there is no malfunction in the stereo component amplifier assembly or speakers.

WIRING DIAGRAM

Built-in AMP:

Radio Receiver Assembly



Separate AMP:

AV

1

SYSTEM CHECK

AV

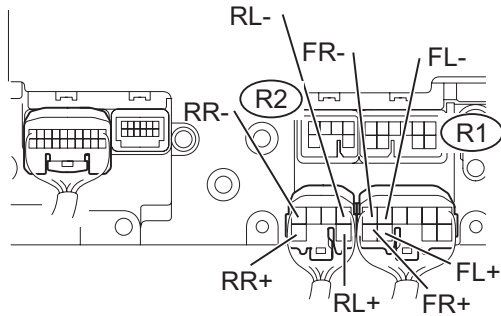
- (a) Check the system.
- (1) Check whether the stereo component amplifier assembly is a built-in type or a separate type.

Amplifier Type	Proceed To
Built-in AMP	A
Separate AMP	B

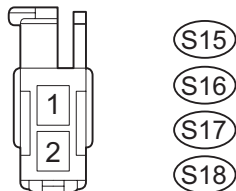
A

B

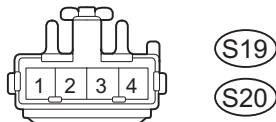
Go to step 6

2**CHECK HARNESS AND CONNECTOR (RADIO RECEIVER ASSEMBLY - SPEAKER ASSEMBLY)**

Connector Front View:
(Front No. 1 Speaker Assembly)
(Rear Speaker Assembly)



Connector Front View:
(Front No. 2 Speaker Assembly)



Y

I101945E02

OK

- Disconnect the R2 and R1 radio receiver assembly connectors.
- Disconnect the speaker connectors.
- Check the resistance.

Standard

Tester Connection	Specified Condition
FL+ (R1-2) - S19-4	Below 1Ω
FL- (R1-6) - S19-3	Below 1Ω
FR+ (R1-1) - S20-4	Below 1Ω
FR- (R1-5) - S20-3	Below 1Ω
S19-1 - S15-2	Below 1Ω
S19-2 - S15-1	Below 1Ω
S20-1 - S16-2	Below 1Ω
S20-2 - S16-1	Below 1Ω
RL+ (R2-2) - S17-1	Below 1Ω
RL- (R2-6) - S17-2	Below 1Ω
RR+ (R2-1) - S18-1	Below 1Ω
RR- (R2-3) - S18-2	Below 1Ω
FL+ (R1-2) - Body ground	10 kΩ or higher
FL- (R1-6) - Body ground	10 kΩ or higher
FR+ (R1-1) - Body ground	10 kΩ or higher
FR- (R1-5) - Body ground	10 kΩ or higher
RL+ (R2-2) - Body ground	10 kΩ or higher
RL- (R2-6) - Body ground	10 kΩ or higher
RR+ (R2-1) - Body ground	10 kΩ or higher
RR- (R2-3) - Body ground	10 kΩ or higher

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

3**INSPECT FRONT NO. 1 SPEAKER ASSEMBLY**

- Measure the resistance between the terminals of the speaker.

NOTICE:

The speaker should not be removed for checking.

Standard:

Approximately 4 Ω

AV

NG

**REPLACE FRONT NO. 1 SPEAKER
ASSEMBLY**

OK

AV

4

INSPECT FRONT NO. 2 SPEAKER ASSEMBLY

- (a) Check that the malfunction disappears when another speaker in good condition is installed.

OK:**The malfunction disappears.****HINT:**

- Connect all the connectors to the speakers.
- When there is a possibility that either the left or right front speaker is defective, inspect by interchanging the left one and the right one.

NG

**REPLACE FRONT NO. 2 SPEAKER
ASSEMBLY**

OK

5

INSPECT REAR SPEAKER ASSEMBLY

- (a) Measure the resistance between the terminals of the speaker.

NOTICE:**The speaker should not be removed for checking.****Standard:****Approximately 4 Ω**

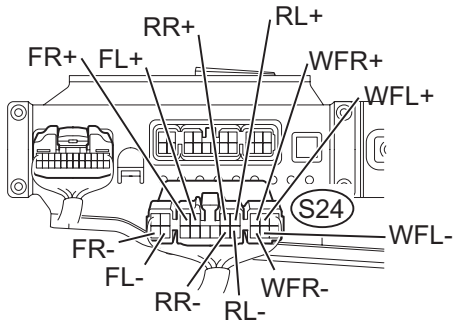
NG

REPLACE REAR SPEAKER ASSEMBLY

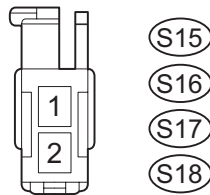
OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

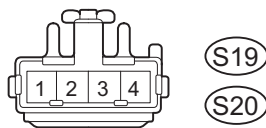
6

CHECK HARNESS AND CONNECTOR (STEREO COMPONENT AMPLIFIER ASSEMBLY - SPEAKER ASSEMBLY)

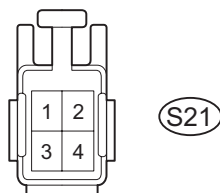
Connector Front View:
(Front No. 1 Speaker Assembly)
(Rear Speaker Assembly)



Connector Front View:
(Front No. 2 Speaker Assembly)



Connector Front View:
(Woofer)



- (a) Disconnect the S24 connectors from the stereo component amplifier assembly and speakers.
- (b) Measure the resistance.

Standard

Tester Connection	Specified Condition
FL+ (S24-6) - S19-4	Below 1Ω
FL- (S24-17) - S19-3	Below 1Ω
FR+ (S24-7) - S20-4	Below 1Ω
FR- (S24-18) - S20-3	Below 1Ω
S19-1 - S15-2	Below 1Ω
S19-2 - S15-1	Below 1Ω
S20-1 - S16-2	Below 1Ω
S20-2 - S16-1	Below 1Ω
RL+ (S24-4) - S17-1	Below 1Ω
RL- (S24-13) - S17-2	Below 1Ω
RR+ (S24-5) - S18-1	Below 1Ω
RR- (S24-14) - S18-2	Below 1Ω
FL+ (S24-6) - Body ground	10 kΩ or higher
FL- (S24-17) - Body ground	10 kΩ or higher
FR+ (S24-7) - Body ground	10 kΩ or higher
FR- (S24-18) - Body ground	10 kΩ or higher
RL+ (S24-4) - Body ground	10 kΩ or higher
RL- (S24-12) - Body ground	10 kΩ or higher
RR+ (S24-5) - Body ground	10 kΩ or higher
RR- (S24-14) - Body ground	10 kΩ or higher
WFL+ (S24-2) - Body ground	10 kΩ or higher
WFL- (S24-11) - Body ground	10 kΩ or higher
WFR+ (S24-3) - Body ground	10 kΩ or higher
WFR- (S24-12) - Body ground	10 kΩ or higher

NG

REPAIR OR REPLACE HARNESS AND CONNECTOR

AV

OK

7 INSPECT FRONT NO. 1 SPEAKER ASSEMBLY

AV

- (a) Measure the resistance between the terminals of the speaker.

NOTICE:**The speaker should not be removed for checking.****Standard:****Approximately 4 Ω**

NG

REPLACE FRONT NO. 1 SPEAKER ASSEMBLY

OK

8 INSPECT FRONT NO. 2 SPEAKER ASSEMBLY

- (a) Check that the malfunction disappears when another speaker in good condition is installed.

OK:**The malfunction disappears.****HINT:**

- Connect all the connectors to the speakers.
- When there is a possibility that either the left or right front speaker is defective, inspect by interchanging the left one and the right one.

NG

REPLACE FRONT NO. 2 SPEAKER ASSEMBLY

OK

9 INSPECT REAR SPEAKER ASSEMBLY

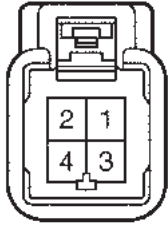
- (a) Measure the resistance between the terminals of the speaker.

NOTICE:**The speaker should not be removed for checking.****Standard:****Approximately 4 Ω**

NG

REPLACE REAR SPEAKER ASSEMBLY

OK

10 INSPECT NO. 1 SPEAKER ASSEMBLY WITH BOX**Woofer:**

(a) Measure the resistance.

NOTICE:**The speaker should not be removed for checking.
Standard**

Tester Connection	Specified Condition
1 - 3	2 Ω
2 - 4	2 Ω

NG**REPLACE NO. 1 SPEAKER ASSEMBLY
WITH BOX****OK****PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE****AV**

AMP Mute Signal Circuit (from Radio Receiver Assembly)

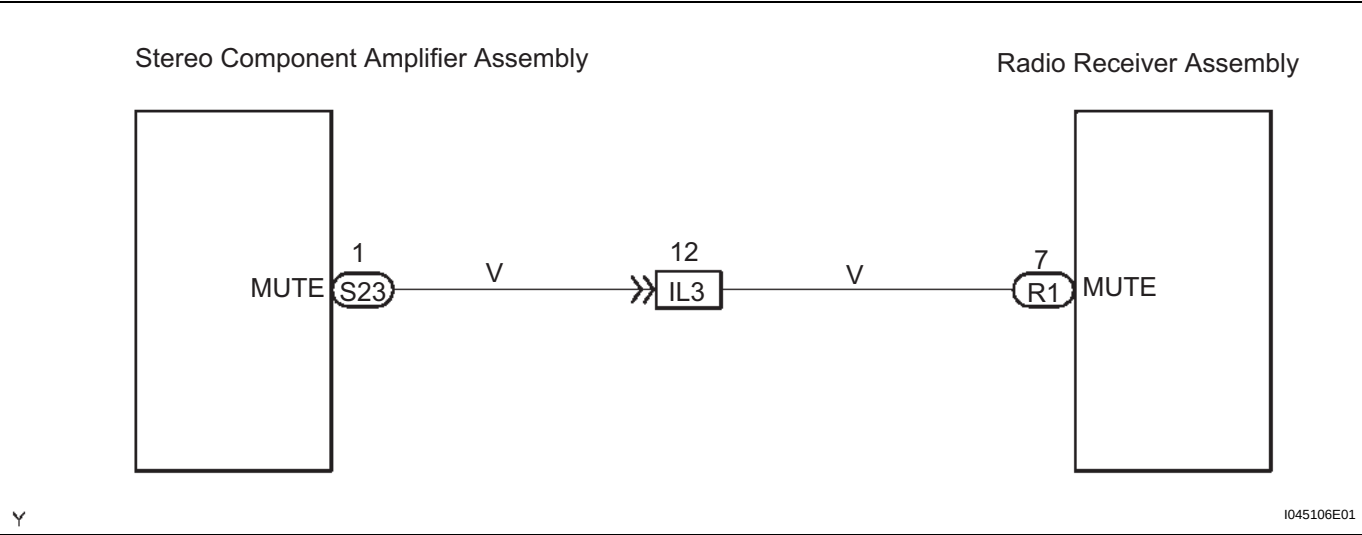
DESCRIPTION

This circuit sends a signal to the stereo component amplifier to mute the noise. Because of that, the noise produced while changing the sound source ceases.

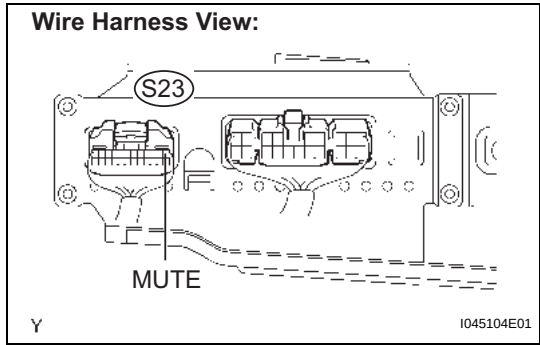
If there is an open in the circuit, noise can be heard from the speaker when changing the sound source.

If there is a short in the circuit, even though the stereo component amplifier assembly is normal, no sound or only extremely quiet sound is produced.

WIRING DIAGRAM



1 INSPECT STEREO COMPONENT AMPLIFIER ASSEMBLY



(a) Measure the voltage.

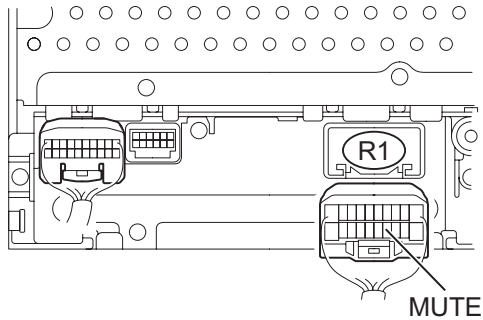
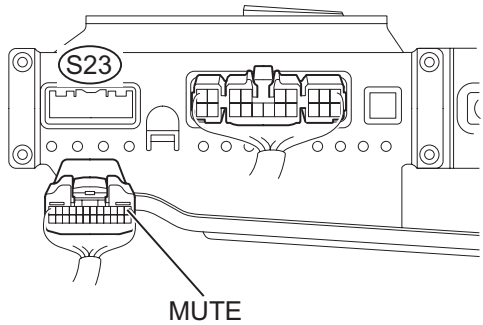
Standard

Tester Connection	Condition	Specified Condition
MUTE (S23-1) - Body ground	Turn ignition switch to ACC, Audio system is playing → Changing	Above 3.5 V → Below 1 V

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

NG

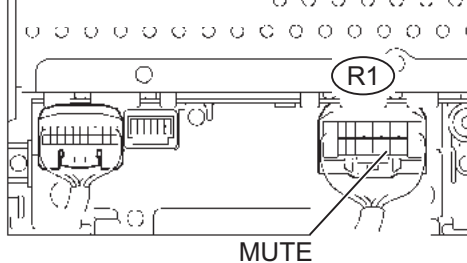
2**CHECK HARNESS AND CONNECTOR (RADIO RECEIVER - STEREO COMPONENT AMPLIFIER)****Radio Receiver Assembly
Wire Harness View:****Stereo Component Amplifier Assembly
Wire Harness View:****OK**

- (a) Disconnect the R1 radio receiver assembly connector and S23 stereo component amplifier assembly connector.

- (b) Check the resistance.

Standard

Tester Connection	Condition	Specified Condition
MUTE (R1-7) - MUTE (S23-1)	Always	Below 1 Ω
MUTE (R1-7) - Body ground	Always	10 k Ω or higher

NG**REPAIR OR REPLACE HARNESS OR CONNECTOR****3****INSPECT RADIO RECEIVER ASSEMBLY****Wire Harness View:****OK**

- (a) Reconnect the R1 stereo component amplifier assembly connector.
- (b) Turn the ignition switch to the ACC position.
- (c) Measure the voltage.

Standard

Tester Connection	Condition	Specified Condition
MUTE (R1-7) - Body ground	Turn ignition switch to ACC	3.5 V or higher

NG**REPAIR OR REPLACE STEREO COMPONENT AMPLIFIER ASSEMBLY****REPLACE RADIO RECEIVER ASSEMBLY****AV**

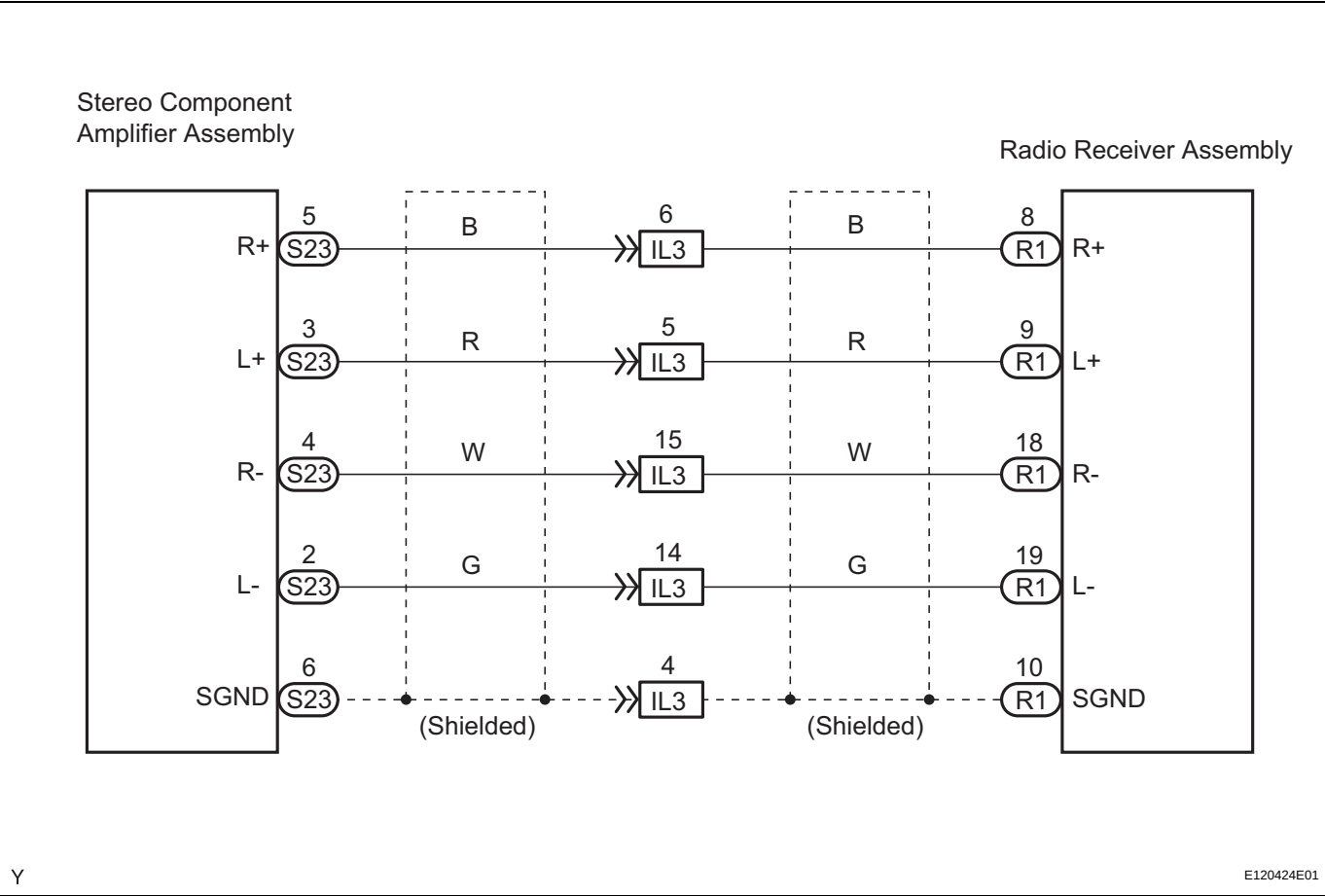
AMP Sound Signal Circuit

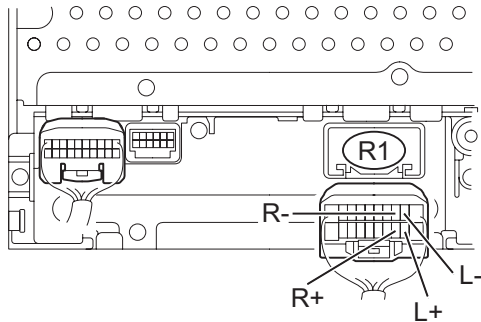
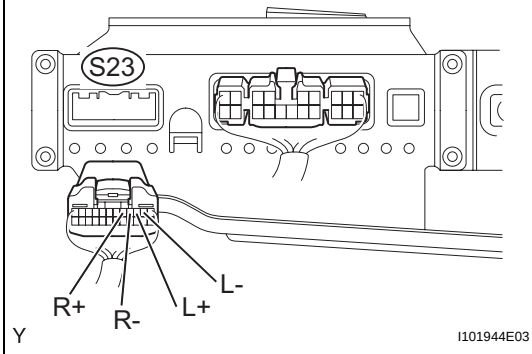
DESCRIPTION

The radio receiver assembly sends sound signals to the stereo component amplifier assembly through this circuit. Sound signals that have been sent are amplified by the stereo component amplifier assembly, and then sent to the speakers.

If there is an open or short in the circuit, sound cannot be heard from the speakers even if there is no malfunction in the stereo component amplifier assembly or speakers.

WIRING DIAGRAM



1**CHECK HARNESS AND CONNECTOR (RADIO RECEIVER - STEREO COMPONENT AMPLIFIER)****Radio Receiver Assembly
Wire Harness View:****Stereo Component Amplifier Assembly
Wire Harness View:**

- (a) Disconnect the R1 radio receiver assembly connector and S23 stereo component amplifier assembly connector.

- (b) Check the resistance.

Standard

Tester Connection	Specified Condition
L+ (S23-3) - L+ (R1-9)	Below 1 Ω
L- (S23-2) - L- (R1-19)	Below 1 Ω
R+ (S23-5) - R+ (R1-8)	Below 1 Ω
R- (S23-4) - R- (R1-18)	Below 1 Ω
L+ (S23-3) - Body ground	10 k Ω or higher
L- (S23-2) - Body ground	10 k Ω or higher
R+ (S23-5) - Body ground	10 k Ω or higher
R- (S23-4) - Body ground	10 k Ω or higher

NG**REPAIR OR REPLACE HARNESS OR
CONNECTOR****OK****PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE****AV**

Sound Signal Circuit between Radio Receiver and Stereo Component Amplifier

DESCRIPTION

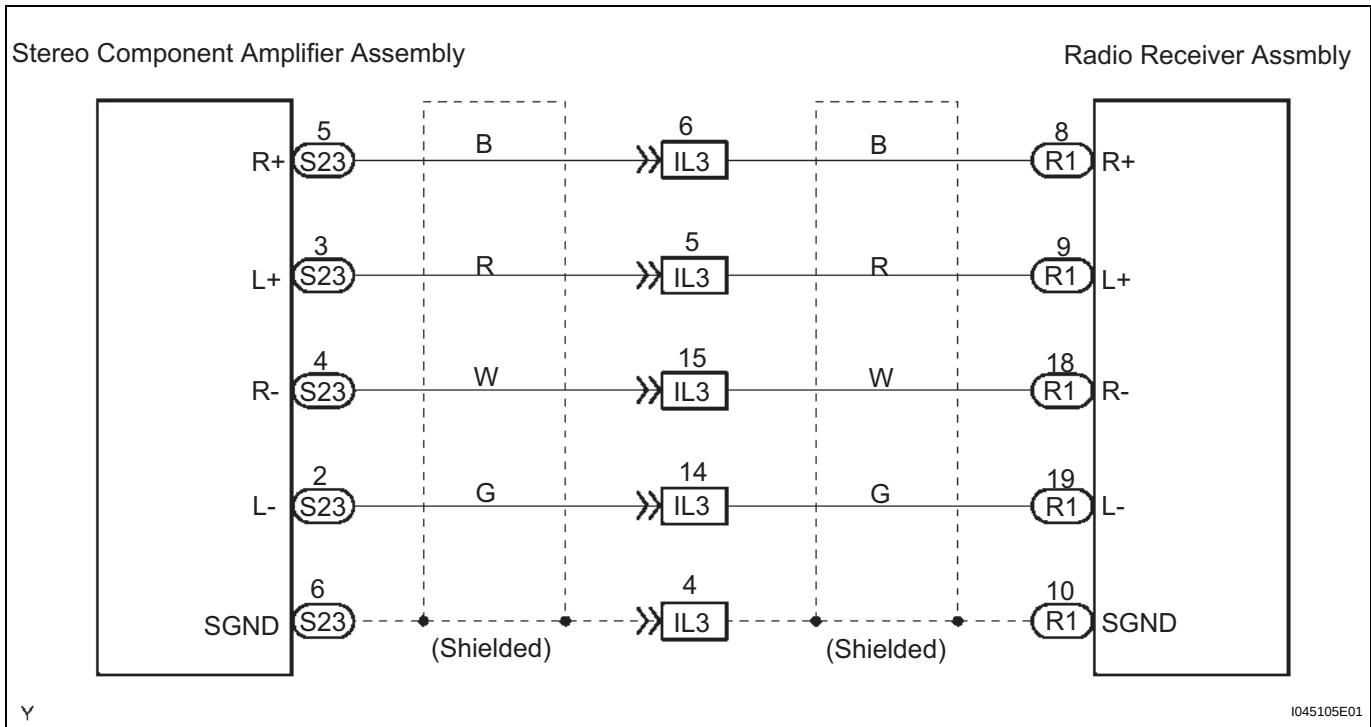
AV

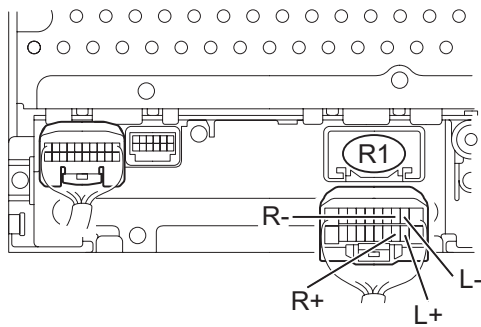
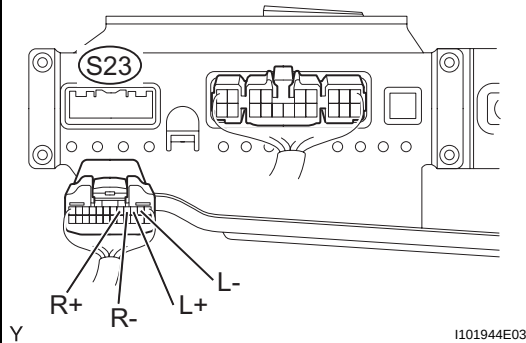
The radio receiver assembly sends sound signals to the stereo component amplifier assembly through this circuit.

Sound signals that have been sent are amplified by the stereo component amplifier assembly, and then sent to the speakers.

If there is an open or short in the circuit, sound cannot be heard from the speakers even if there is no malfunction in the stereo component amplifier assembly or speakers.

WIRING DIAGRAM



1**CHECK HARNESS AND CONNECTOR****Radio Receiver Assembly
Wire Harness View:****Stereo Component Amplifier Assembly
Wire Harness View:**

I101944E03

- (a) Disconnect the R1 radio receiver assembly connector and S23 stereo component amplifier assembly connector.

- (b) Check the resistance.

Standard resistance

Tester Connection	Specified Condition
L+ (S23-3) - L+ (R1-9)	Below 1 Ω
L- (S23-2) - L- (R1-19)	Below 1 Ω
R+ (S23-5) - R+ (R1-8)	Below 1 Ω
R- (S23-4) - R- (R1-18)	Below 1 Ω
L+ (S23-3) - Body ground	10 k Ω or higher
L- (S23-2) - Body ground	10 k Ω or higher
R+ (S23-5) - Body ground	10 k Ω or higher
R- (S23-4) - Body ground	10 k Ω or higher

NG**REPAIR OR REPLACE HARNESS OR
CONNECTOR****OK****PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE****AV**

AVC-LAN Circuit

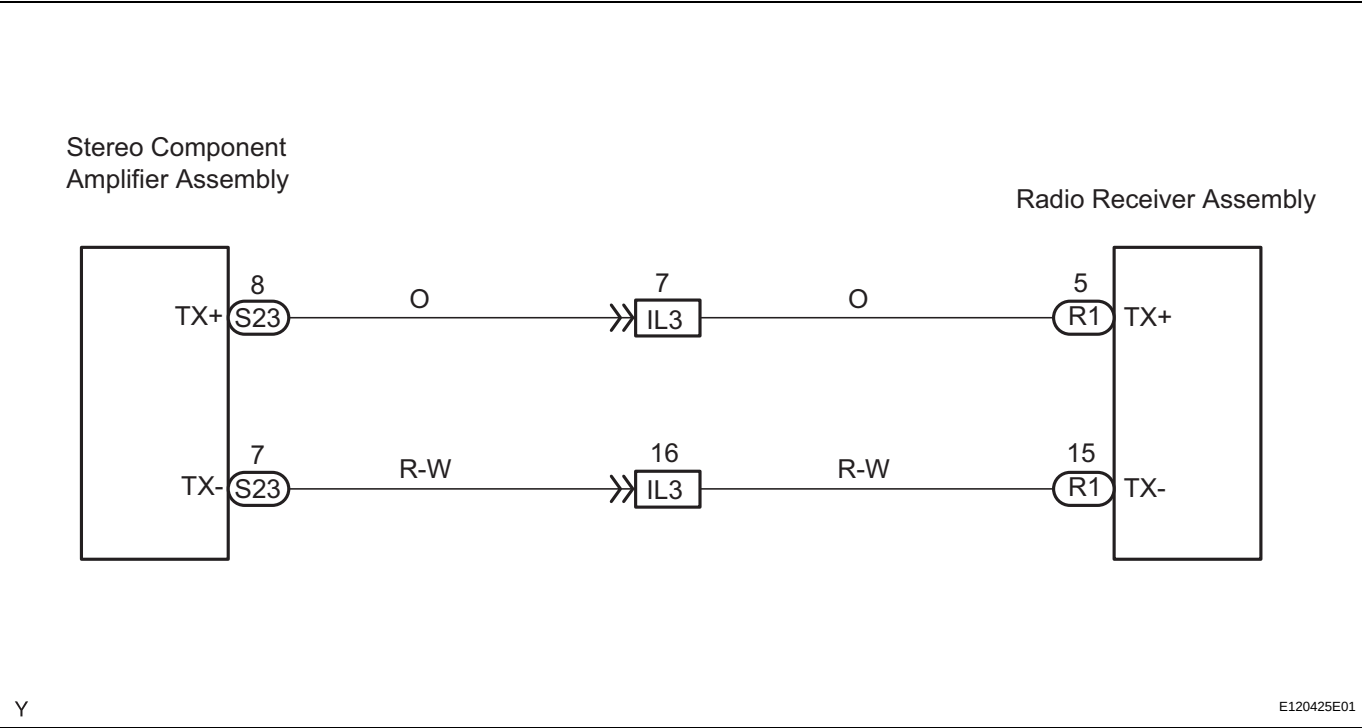
DESCRIPTION

All audio system units that are connected to the AVC-LAN (communication bus) use it as the communication line by which they transmit switch signals.

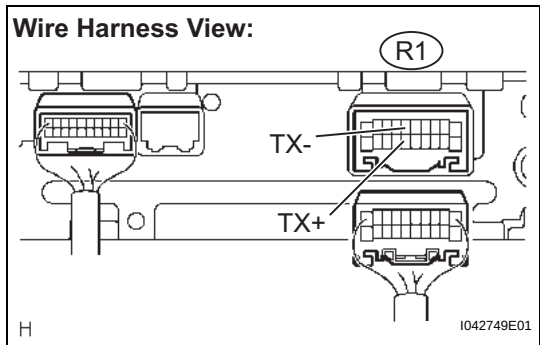
When a +B short or GND short occurs in the AVC- LAN, the audio system fails to function normally, due to the discontinuation of communication.

In the AVC-LAN, the radio receiver assembly is the main communication center and has the correct resistance necessary for transmitting communication signals.

WIRING DIAGRAM



1 INSPECT RADIO RECEIVER ASSEMBLY



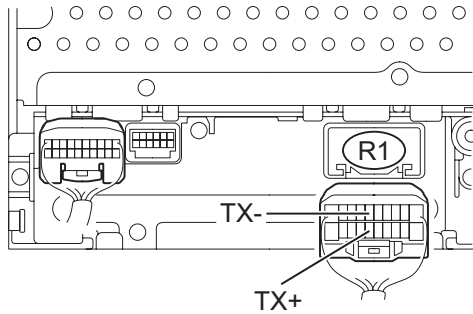
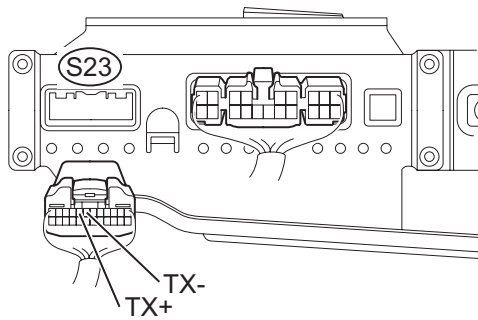
- (a) Disconnect the R1 radio receiver assembly connector.
- (b) Measure the resistance.

Standard

Tester Connection	Condition	Specified Condition
TX+ (R1-5) - TX (R1-15)	Always	60 to 80 Ω

NG REPLACE RADIO RECEIVER ASSEMBLY

OK

2**CHECK HARNESS AND CONNECTOR (RADIO RECEIVER - STEREO COMPONENT AMPLIFIER)****Radio Receiver Assembly
Wire Harness View:****Stereo Component Amplifier Assembly
Wire Harness View:**

Y

I101944E04

- (a) Disconnect the R1 radio receiver assembly connector and S23 stereo component amplifier assembly connector.

- (b) Check the resistance.

Standard

Tester Connection	Specified Condition
TX+ (S23-8) - TX+ (R1-15)	Below 1 Ω
TX+ (S23-7) - TX- (R1-15)	Below 1 Ω
TX+ (R1-5) - Body ground	10 k Ω or higher
TX+ (R1-5) - Body ground	10 k Ω or higher

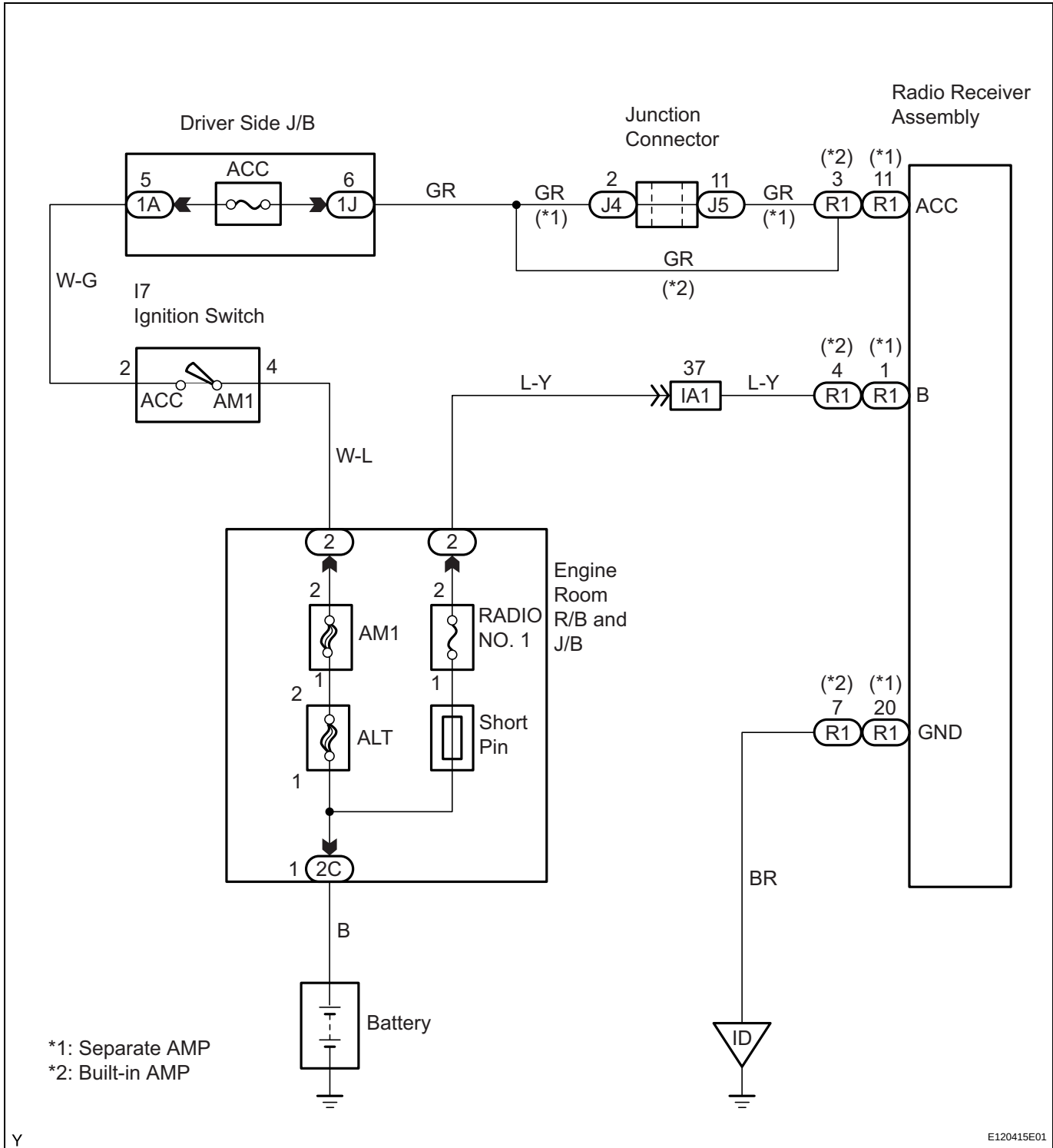
NG**REPAIR OR REPLACE HARNESS OR
CONNECTOR****OK****3****REPLACE STEREO COMPONENT AMPLIFIER ASSEMBLY****NG****REPLACE RADIO RECEIVER ASSEMBLY****OK****END****AV**

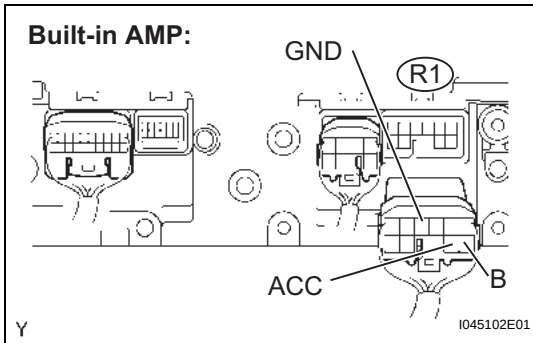
Radio Receiver Power Source Circuit

DESCRIPTION

This circuit provides power to the radio receiver assembly.

AV WIRING DIAGRAM



1 INSPECT RADIO RECEIVER ASSEMBLY

(a) Check the resistance.

Standard:**Built-in AMP**

Tester Connection	Condition	Specified Condition
GND (R1-7) - Body ground	Constant	Below 1Ω

Standard:**Separate AMP**

Tester Connection	Condition	Specified Condition
GND (R1-20) - Body ground	Constant	Below 1Ω

(b) Turn the ignition switch to the ACC position.

(c) Measure the voltage.

Standard:**Built-in AMP**

Tester Connection	Condition	Specified Condition
B (R1-4) - GND (R1-7)	Constant	10 to 14 V
ACC (R1-3) - GND (R1-7)	Ignition switch ACC or ON	10 to 14 V

Standard:**Separate AMP**

Tester Connection	Condition	Specified Condition
B (R1-1) - GND (R1-20)	Constant	Below 1Ω
ACC (R1-11) - GND (R1-20)	Ignition switch ACC or ON	10 to 14 V

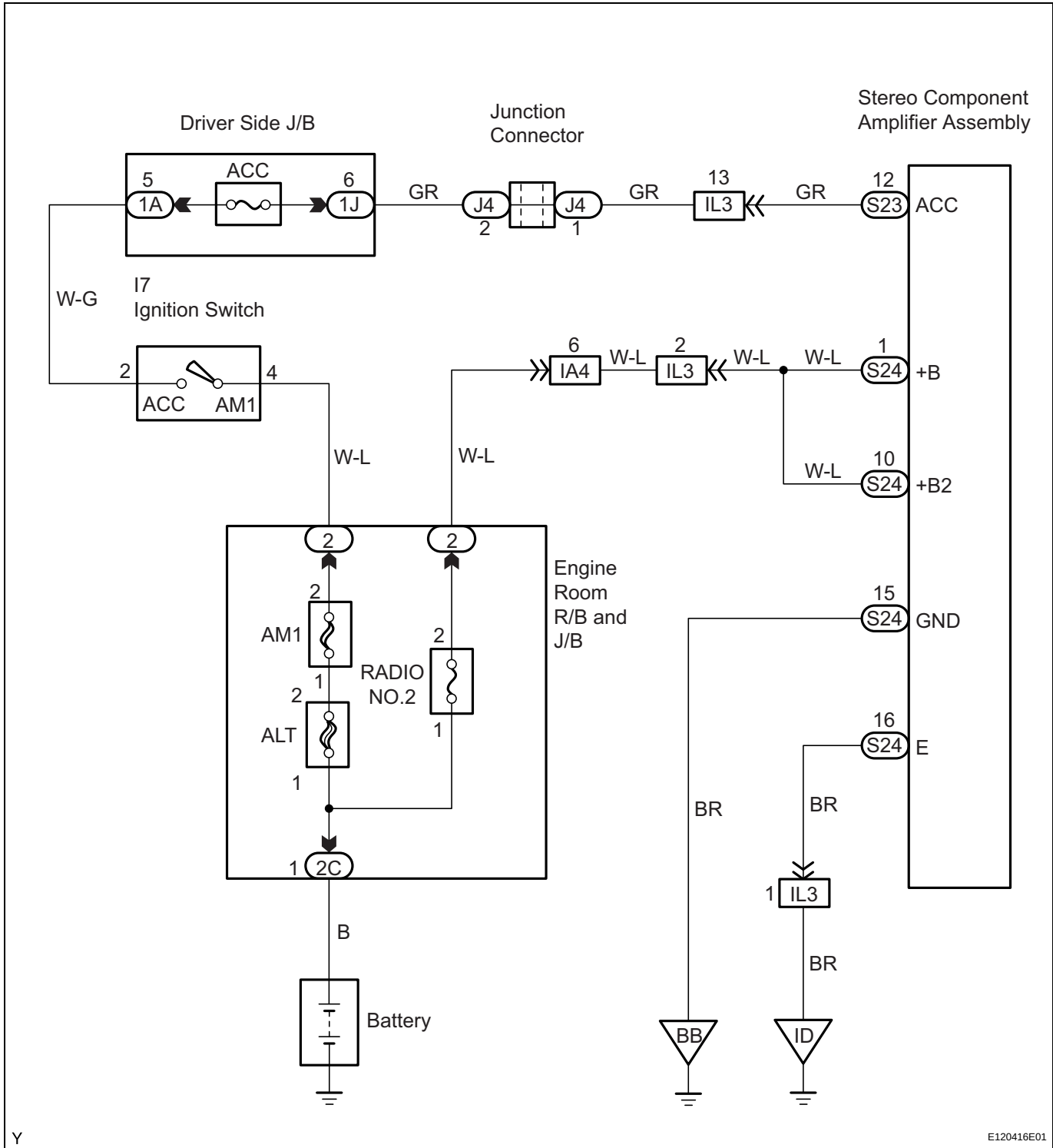
NG**REPAIR OR REPLACE HARNESS OR CONNECTOR****OK****PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE****AV**

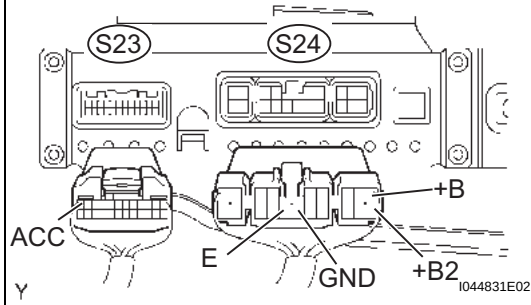
Stereo Component Amplifier Power Source Circuit

DESCRIPTION

This circuit provides power to the stereo component amplifier assembly.

AV WIRING DIAGRAM



1 INSPECT STEREO COMPONENT AMPLIFIER ASSEMBLY**Wire Harness View:**

- (a) Disconnect the S23 and S24 stereo component amplifier assembly connectors.
- (b) Check the resistance.

Standard

Tester Connection	Condition	Specified Condition
E (S24-16) - Body ground	Always	Below 1 Ω
GND (S24-15) - Body ground	Always	Below 1 Ω

- (c) Turn the ignition switch to the ACC position.
- (d) Measure the voltage.

Standard

Tester Connection	Condition	Specified Condition
B+ (S24-1) - GND (S24-15)	Always	10 to 14 V
+B2 (S24-10) - GND (S24-15)	Always	10 to 14 V
ACC (S23-12) - GND (S24-15)	Ignition switch ACC	10 to 14 V

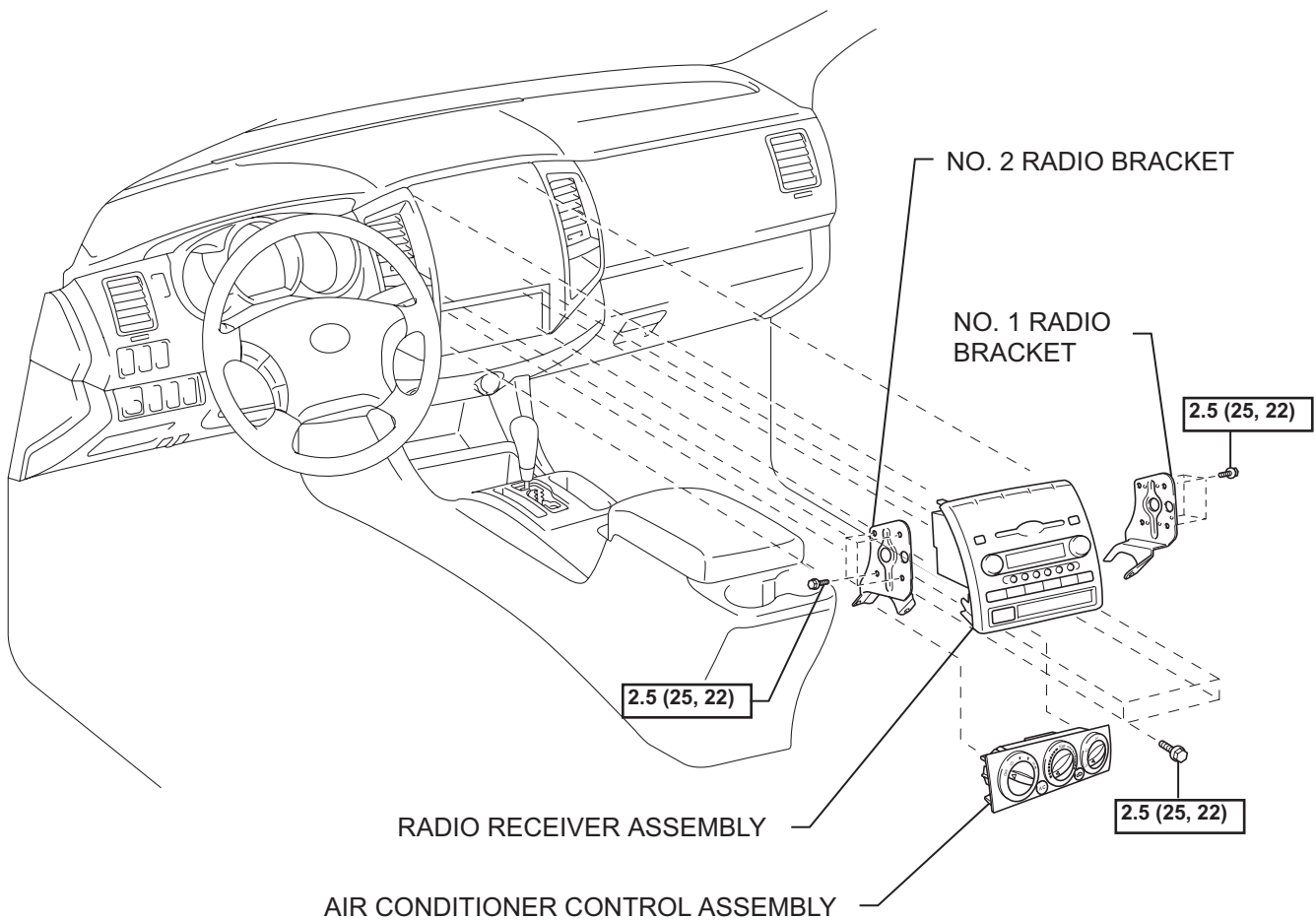
NG

REPAIR OR REPLACE HARNESS OR CONNECTOR (STEREO COMPONENT AMPLIFIER ASSEMBLY - BATTERY OR BODY GROUND)

OK**PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE****AV**

RADIO RECEIVER COMPONENTS

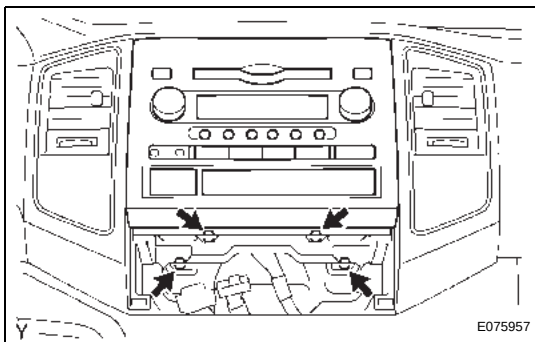
AV



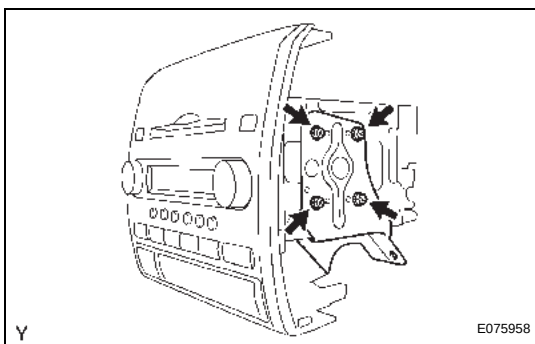
$\text{N}\cdot\text{m}$ ($\text{kgf}\cdot\text{cm}$, $\text{ft}\cdot\text{lbf}$) : Specified torque

REMOVAL

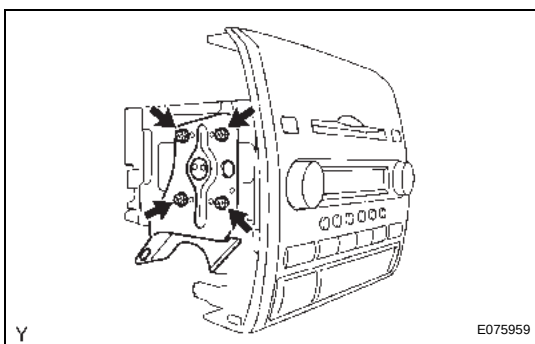
1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
2. **REMOVE AIR CONDITIONING CONTROL ASSEMBLY**
(See page [AC-90](#))
3. **REMOVE RADIO RECEIVER ASSEMBLY**
 - (a) Remove the 4 bolts.
 - (b) Disconnect the connector and remove the radio receiver assembly with bracket.



4. **REMOVE NO. 1 RADIO BRACKET**
 - (a) Remove the 4 bolts and the No.1 radio bracket.

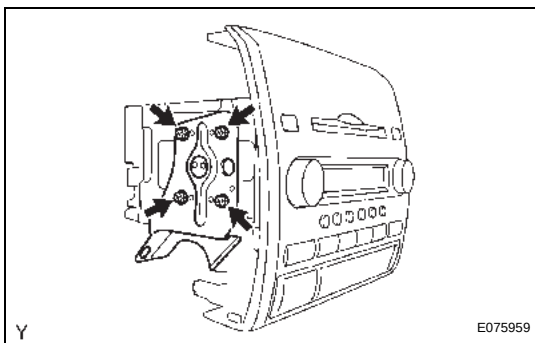


5. **REMOVE NO. 2 RADIO BRACKET**
 - (a) Remove the 4 bolts and the No. 2 radio bracket.

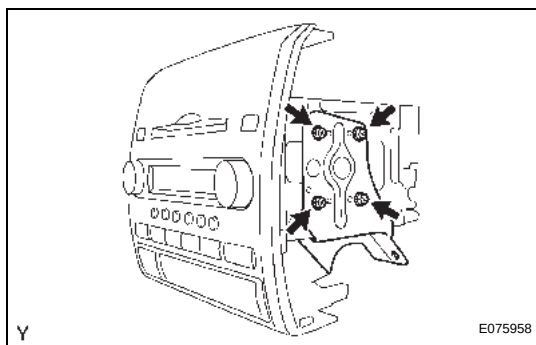


INSTALLATION

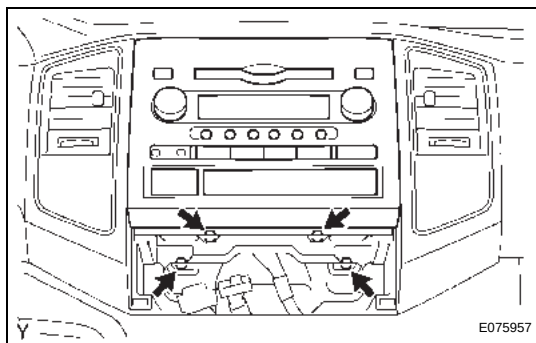
1. **INSTALL NO. 2 RADIO BRACKET**
 - (a) Install the No. 2 radio bracket with the 4 bolts.
Torque: 2.5 N*m (25 kgf*cm, 22 in.*lbf)



AV

**2. INSTALL NO. 1 RADIO BRACKET**

- (a) Install the No. 1 radio bracket with the 4 bolts.
Torque: 2.5 N*m (25 kgf*cm, 22 in.*lbf)

**3. INSTALL RADIO RECEIVER ASSEMBLY**

- (a) Connect the connector.
(b) Install the radio receiver assembly with bracket with the 4 bolts.
Torque: 2.5 N*m (25 kgf*cm, 22 in.*lbf)

4. INSTALL AIR CONDITIONING CONTROL ASSEMBLY
(See page [AC-96](#))**5. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**
Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)

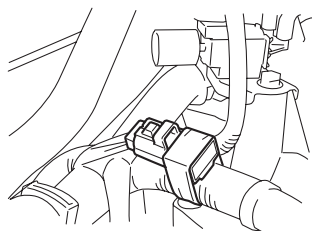
RADIO SETTING CONDENSER (for 1GR-FE)

COMPONENTS

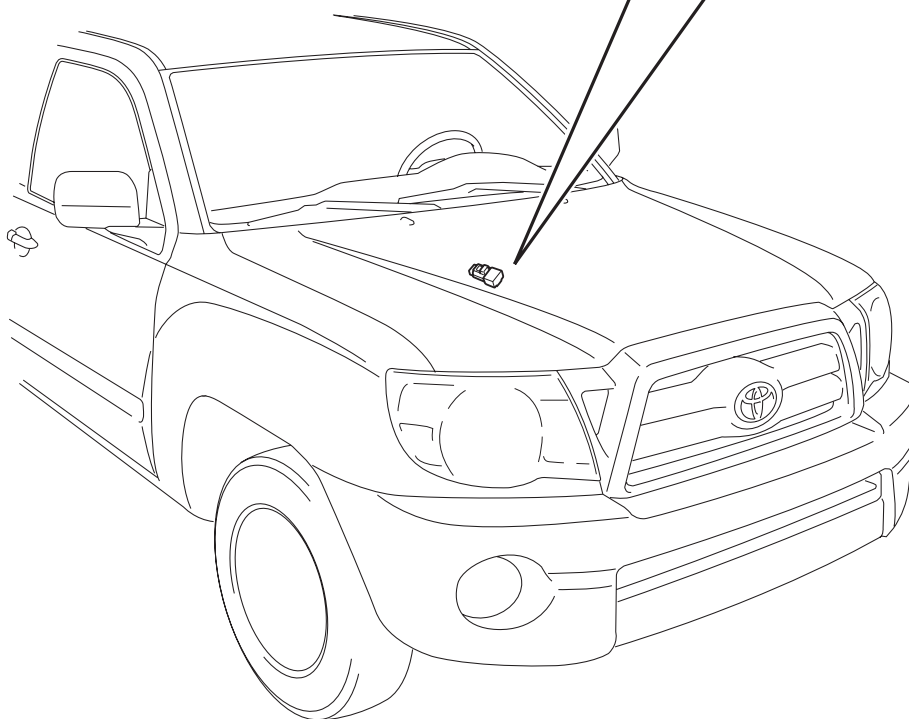
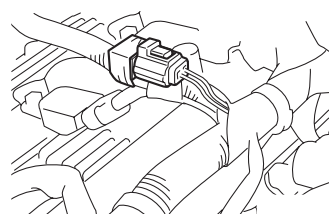
AV

RADIO SETTING CONDENSER

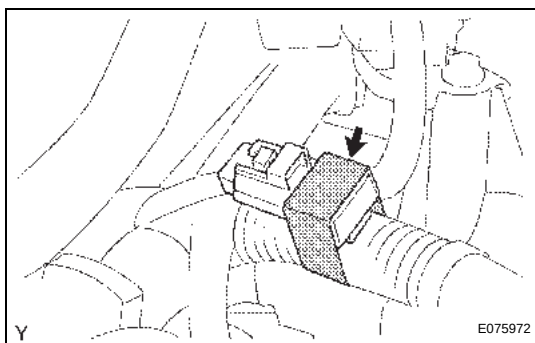
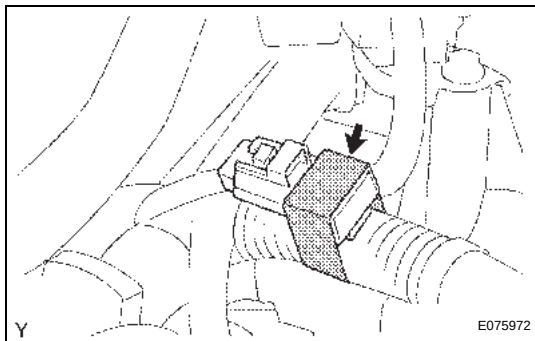
ENGINE TYPE: 1GR-FE



ENGINE TYPE: 2TR-FE



AV



REMOVAL

1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL
2. REMOVE V-BANK COVER (See page [ES-414](#))
3. REMOVE AIR CLEANER ASSEMBLY (See page [ES-415](#))
4. REMOVE RADIO SETTING CONDENSER
 - (a) Disconnect the connector.
 - (b) Remove the tape and the radio setting condenser.

INSTALLATION

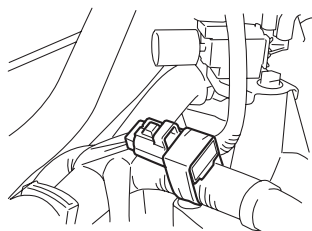
1. INSTALL RADIO SETTING CONDENSER
 - (a) Disconnect the connector.
 - (b) Wind new vinyl tape around the hose and install the radio setting condenser.
2. INSTALL AIR CLEANER ASSEMBLY (See page [ES-416](#))
3. INSTALL V-BANK COVER (See page [ES-416](#))
4. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL
Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)

RADIO SETTING CONDENSER (for 2TR-FE)

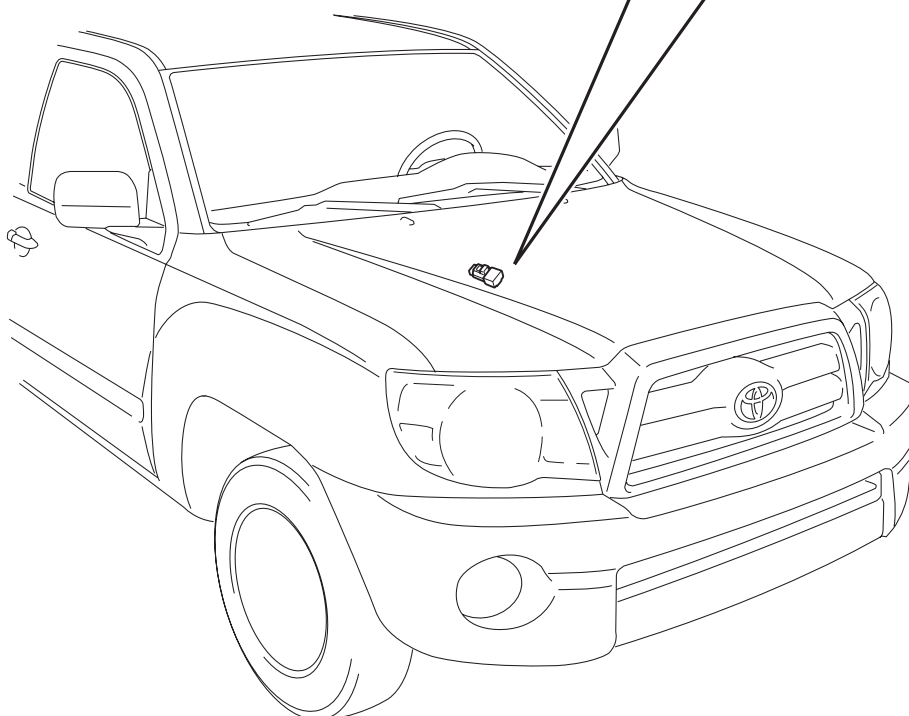
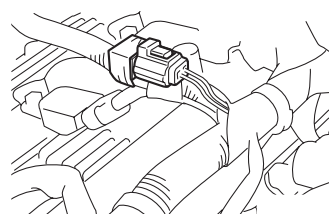
COMPONENTS

RADIO SETTING CONDENSER

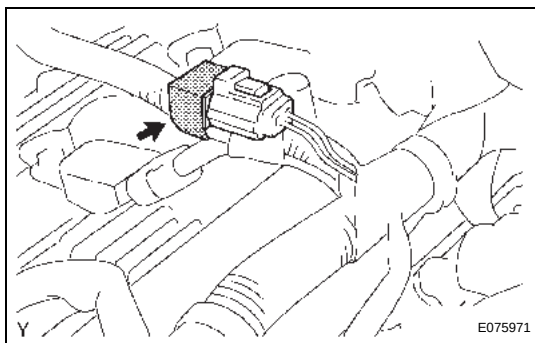
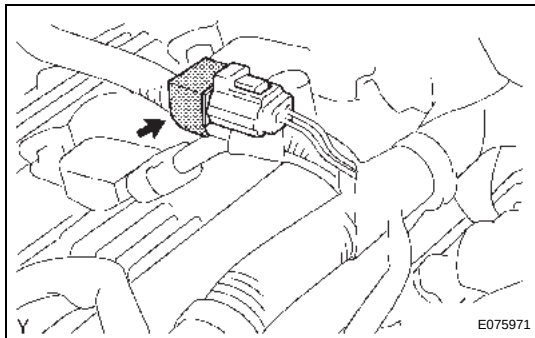
ENGINE TYPE: 1GR-FE



ENGINE TYPE: 2TR-FE

**AV**

AV



REMOVAL

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
2. **REMOVE AIR CLEANER ASSEMBLY** (See page [ES-452](#))
3. **REMOVE RADIO SETTING CONDENSER**
 - (a) Disconnect the connector.
 - (b) Remove the tape and the radio setting condenser.

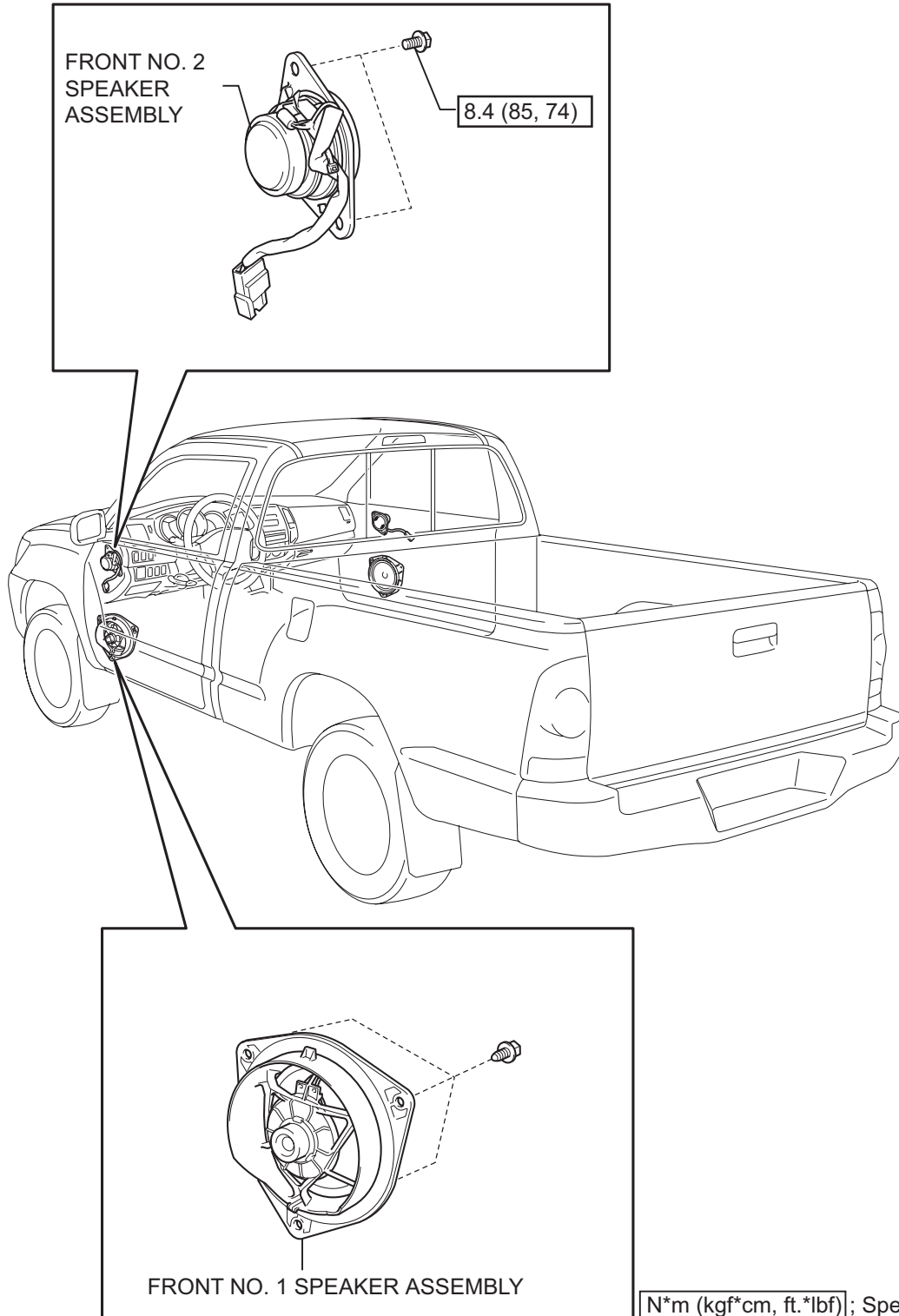
INSTALLATION

1. **INSTALL RADIO SETTING CONDENSER**
 - (a) Disconnect the connector.
 - (b) Remove the tape and the radio setting condenser.
2. **INSTALL AIR CLEANER ASSEMBLY** (See page [ES-455](#))
3. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**
Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)

FRONT NO. 1 SPEAKER (for Regular Cab)

COMPONENTS

REGULAR CAB:

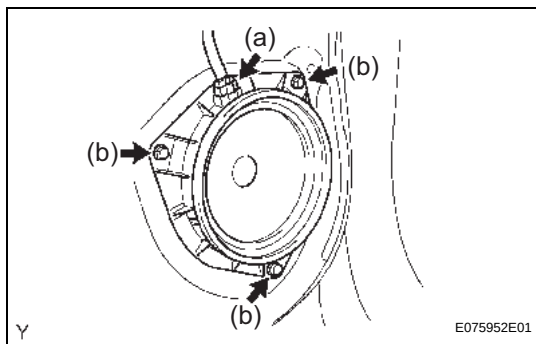


REMOVAL

HINT:

- Use the same procedures for the RH and LH sides.
- The procedures listed below are for the LH side.

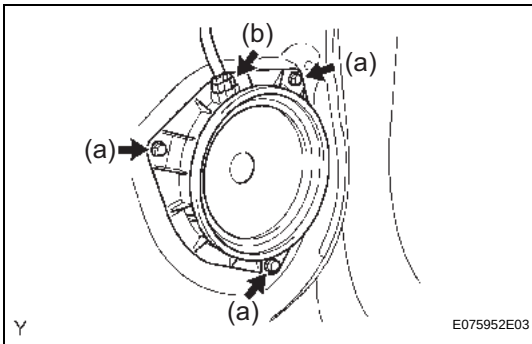
1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
2. **REMOVE FRONT DOOR WINDOW REGULATOR HANDLE ASSEMBLY** (See page [ED-34](#))
3. **REMOVE FRONT DOOR LOWER FRAME BRACKET GARNISH LH** (See page [ED-34](#))
4. **REMOVE FRONT DOOR TRIM PANEL ASSEMBLY LH** (See page [ED-35](#))
5. **REMOVE FRONT NO. 1 SPEAKER ASSEMBLY**
 - (a) Disconnect the connector.
 - (b) Remove the 3 screws and the front No. 1 speaker assembly.



INSTALLATION

HINT:

- Use the same procedures for the RH and LH sides.
- The procedures listed below are for the LH side.



1. INSTALL FRONT NO. 1 SPEAKER ASSEMBLY

- (a) Install the front No. 1 speaker assembly with the 3 screws.
- (b) Connect the connector.

2. INSTALL FRONT DOOR TRIM PANEL ASSEMBLY LH (See page [ED-48](#))

3. INSTALL FRONT DOOR LOWER FRAME BRACKET GARNISH LH (See page [ED-49](#))

4. INSTALL FRONT DOOR WINDOW REGULATOR HANDLE ASSEMBLY (See page [ED-49](#))

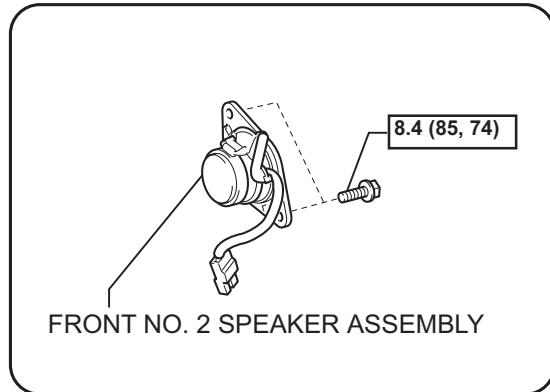
5. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)

FRONT NO. 1 SPEAKER (except Regular Cab)

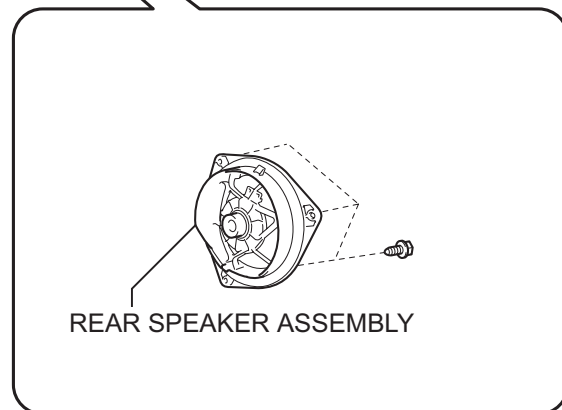
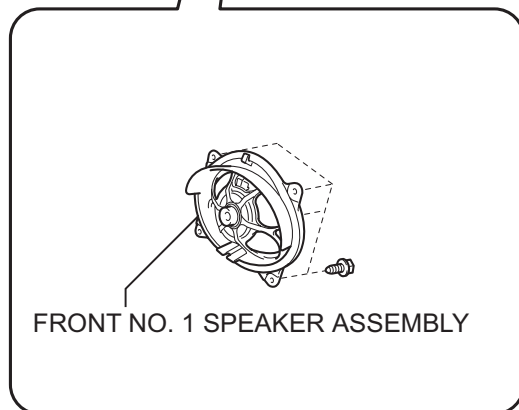
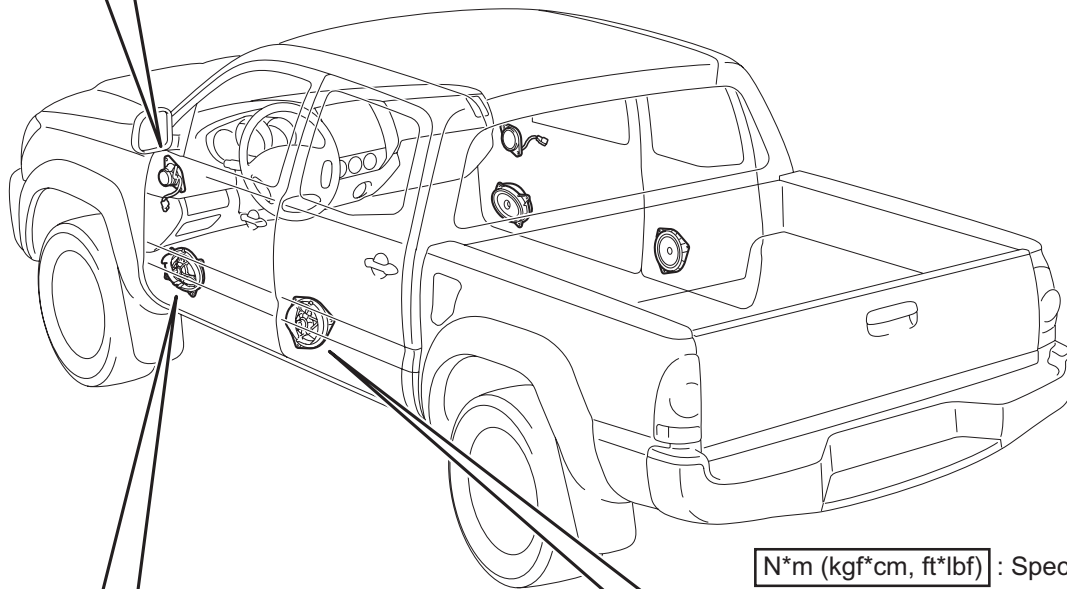
COMPONENTS

AV



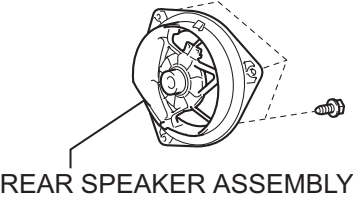
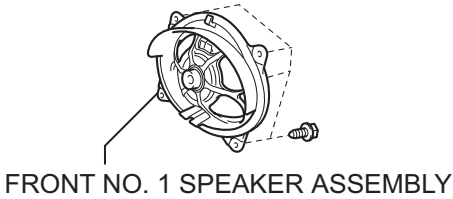
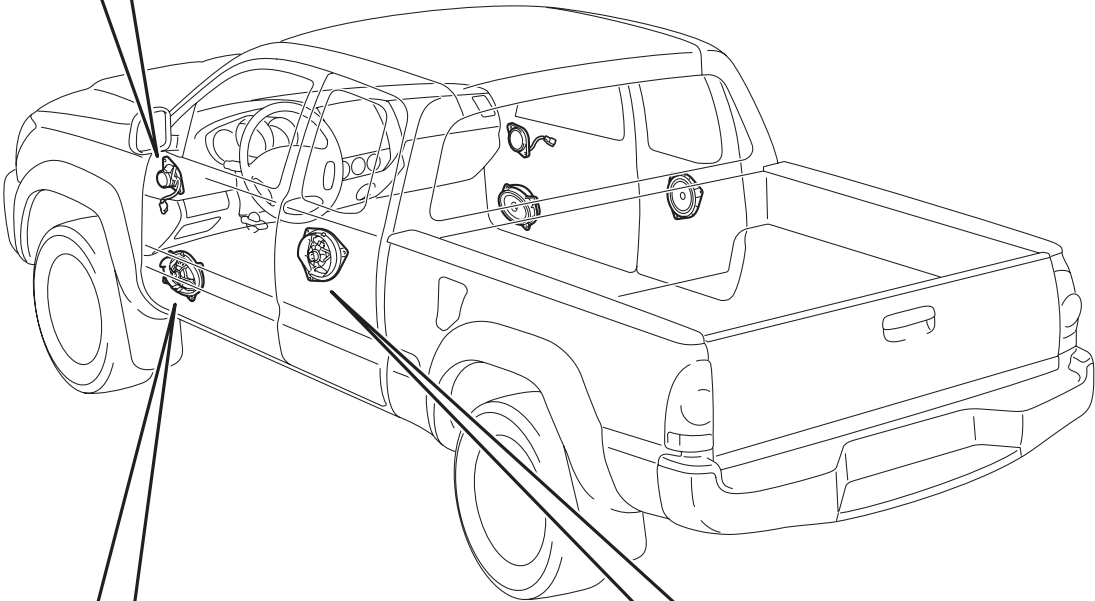
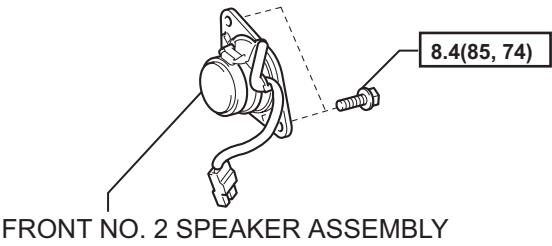
DOUBLE CAB:

DOUBLE CAB — PREMIUM VERSION:



AV

ACCESS CAB:



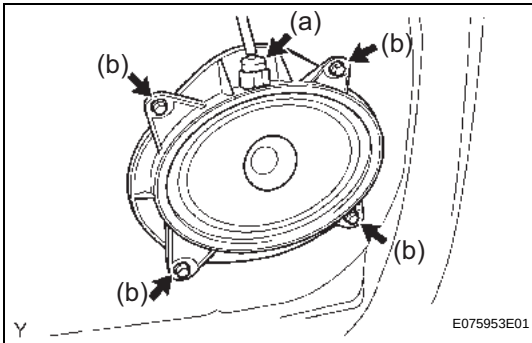
N*m (kgf*cm, ft*lbf) : Specified torque

REMOVAL

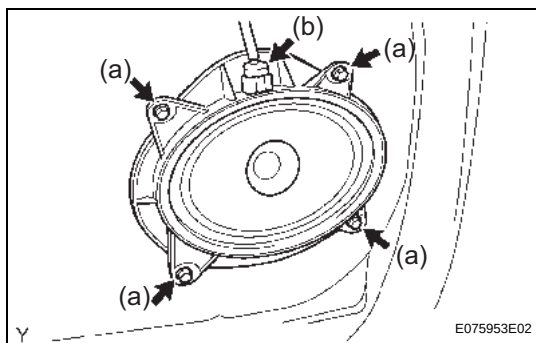
HINT:

- Use the same procedures for the RH and LH sides.
- The procedures listed below are for the LH side.

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
2. **REMOVE FRONT DOOR WINDOW REGULATOR HANDLE ASSEMBLY (w/o Power Door Lock)** (See page [ED-34](#))
3. **REMOVE POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY (w/ Power Door Lock)** (See page [ED-13](#))
4. **REMOVE FRONT DOOR LOWER FRAME BRACKET GARNISH LH** (See page [ED-34](#))
5. **REMOVE FRONT DOOR TRIM PANEL ASSEMBLY LH** (See page [ED-35](#))
6. **REMOVE FRONT NO. 1 SPEAKER ASSEMBLY**
 - (a) Disconnect the connector.
 - (b) Remove the 4 screws and the front No. 1 speaker assembly.



AV



INSTALLATION

HINT:

- Use the same procedures for the RH and LH sides.
- The procedures listed below are for the LH side.

1. INSTALL FRONT NO. 1 SPEAKER ASSEMBLY

- (a) Install the front No. 1 speaker assembly with the 4 screws.
- (b) Connect the connector.

2. INSTALL FRONT DOOR TRIM PANEL ASSEMBLY LH (See page [ED-48](#))

3. INSTALL FRONT DOOR LOWER FRAME BRACKET GARNISH LH (See page [ED-49](#))

4. INSTALL POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY (w/ Power Door Lock) (See page [ED-30](#))

5. INSTALL FRONT DOOR WINDOW REGULATOR HANDLE ASSEMBLY (w/o Power Door Lock) (See page [ED-49](#))

6. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

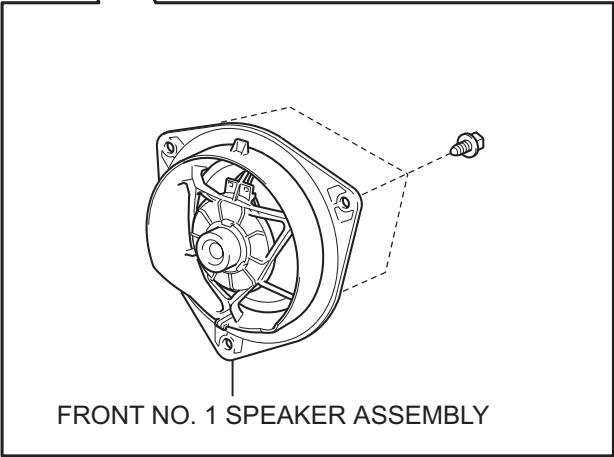
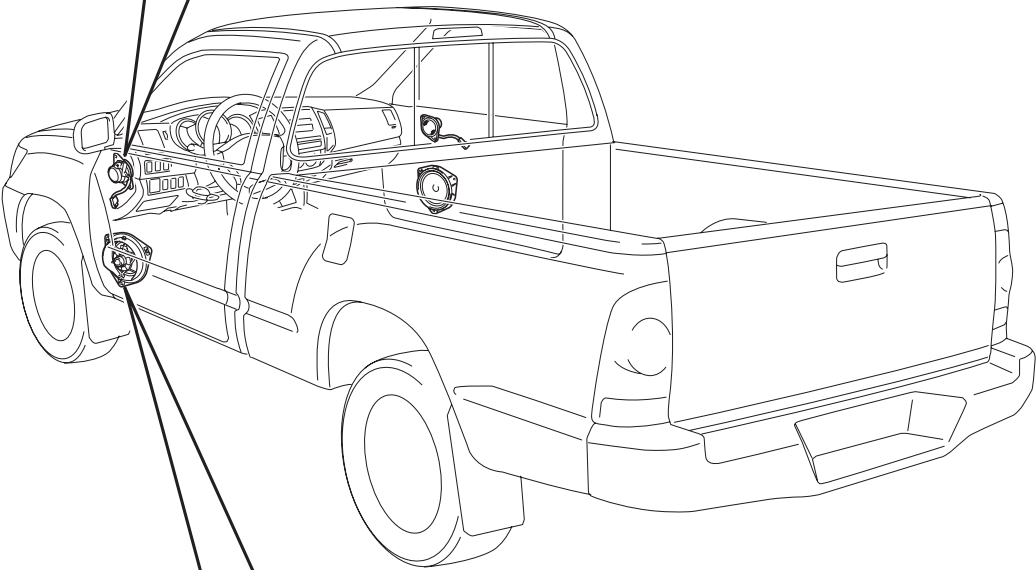
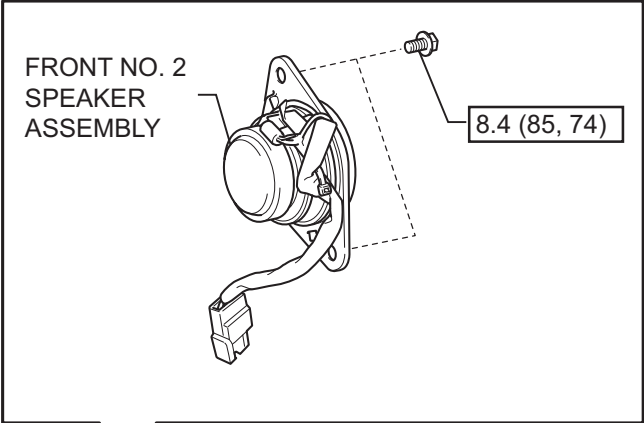
Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)

FRONT NO. 2 SPEAKER

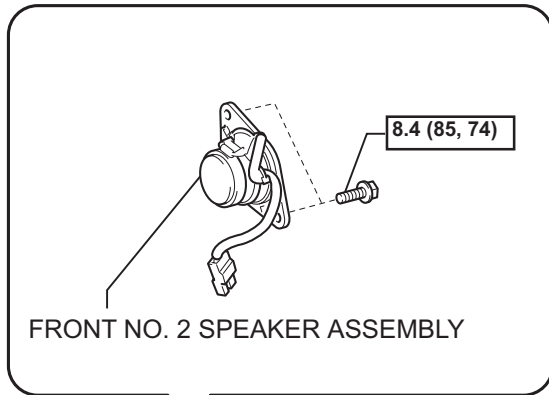
COMPONENTS

REGULAR CAB:

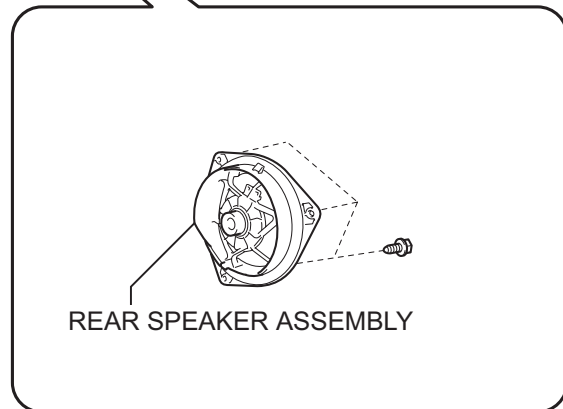
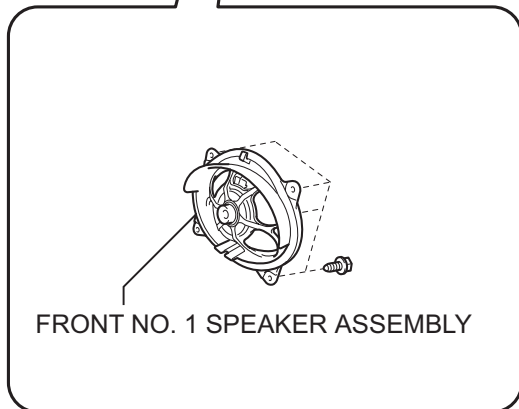
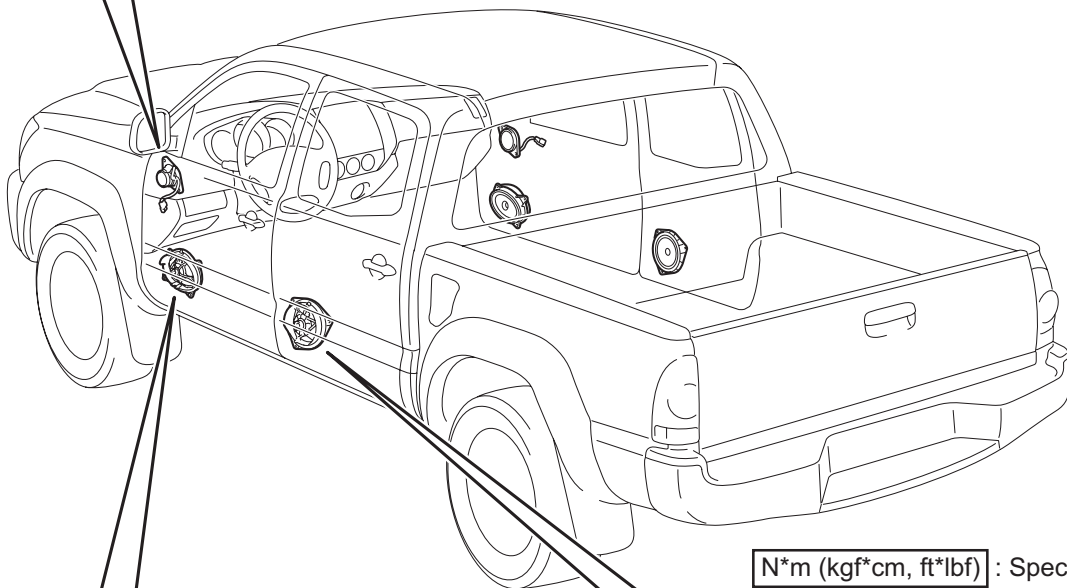
AV



N*m (kgf*cm, ft.*lbf); Specified torque

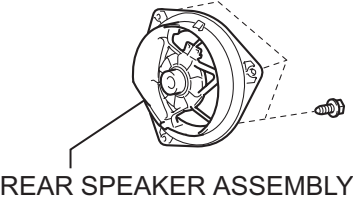
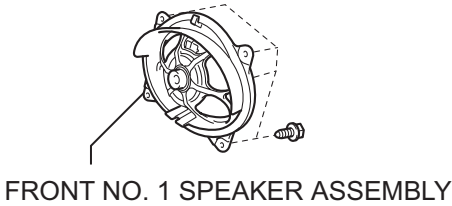
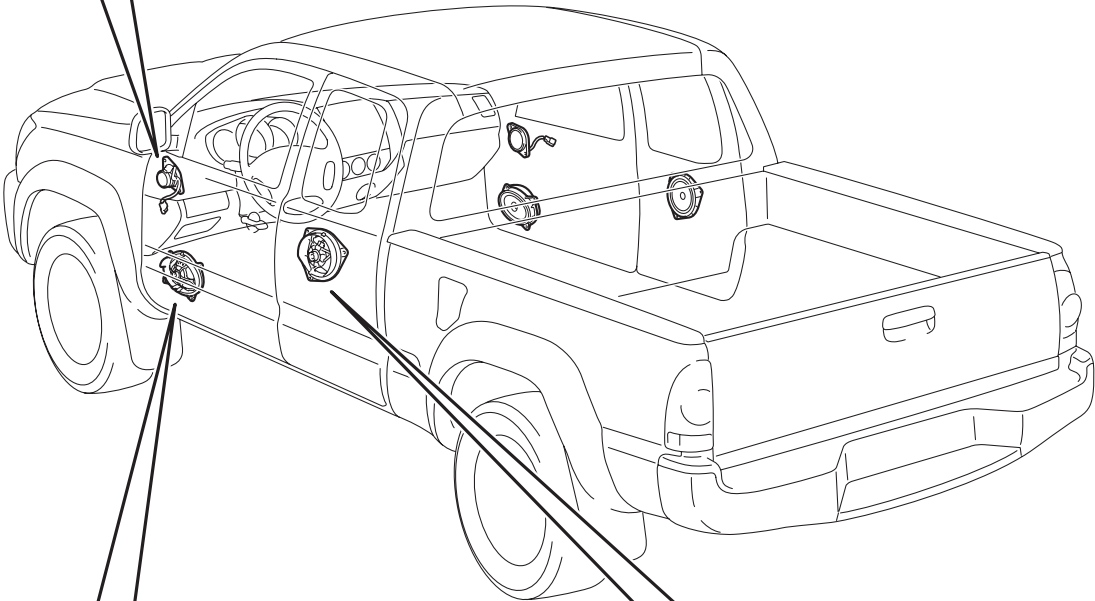
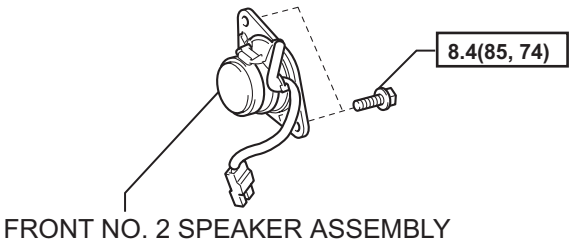


DOUBLE CAB:
DOUBLE CAB — PREMIUM VERSION:



AV

ACCESS CAB:



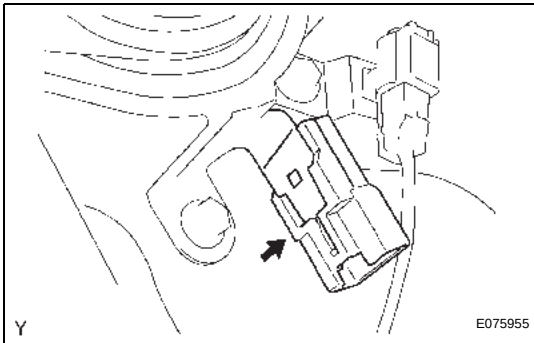
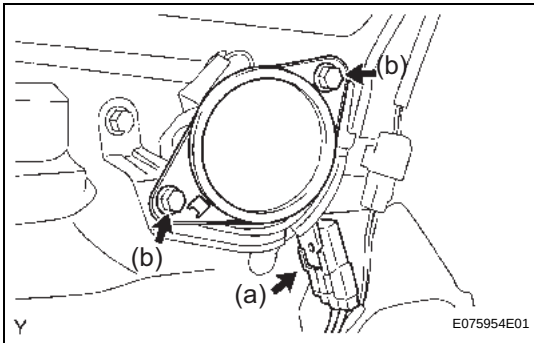
N*m (kgf*cm, ft*lbf) : Specified torque

REMOVAL

HINT:

- Use the same procedures for the RH and LH sides.
- The procedures listed below are for the LH side.

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
2. **REMOVE FRONT DOOR WINDOW REGULATOR HANDLE ASSEMBLY (w/o Power Door Lock) (See page [ED-34](#))**
3. **REMOVE POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY (w/ Power Door Lock) (See page [ED-13](#))**
4. **REMOVE FRONT DOOR LOWER FRAME BRACKET GARNISH LH (See page [ED-34](#))**
5. **REMOVE FRONT DOOR TRIM PANEL ASSEMBLY LH (See page [ED-35](#))**
6. **REMOVE FRONT NO. 2 SPEAKER ASSEMBLY**
 - (a) Disconnect the connector.
 - (b) Remove the 2 bolts.



- (c) Disengage the claw and remove the front No. 2 speaker assembly.

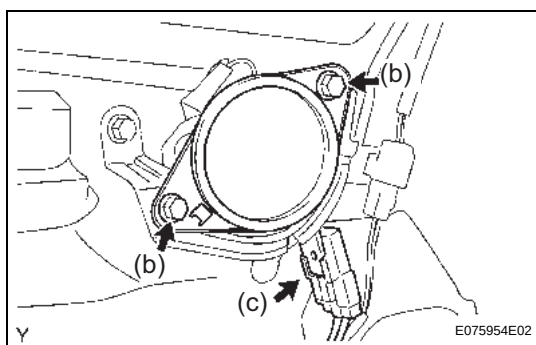
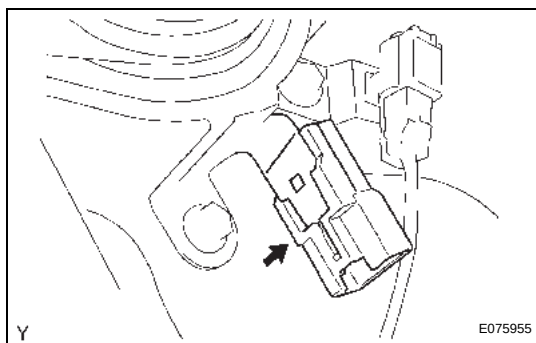
INSTALLATION

HINT:

- Use the same procedures for the RH and LH sides.
- The procedures listed below are for the LH side.

1. INSTALL FRONT NO. 2 SPEAKER ASSEMBLY

- (a) Engage the claw.



- (b) Install the front No. 2 speaker assembly with the 2 bolts.

Torque: 8.4 N*m (85 kgf*cm, 74 in.*lbf)

- (c) Connect the connector.

2. INSTALL FRONT DOOR TRIM PANEL ASSEMBLY LH (See page [ED-48](#))

3. INSTALL FRONT DOOR LOWER FRAME BRACKET GARNISH LH (See page [ED-49](#))

4. INSTALL POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY (w/ Power Door Lock) (See page [ED-30](#))

5. INSTALL FRONT DOOR WINDOW REGULATOR HANDLE ASSEMBLY (w/o Power Door Lock) (See page [ED-49](#))

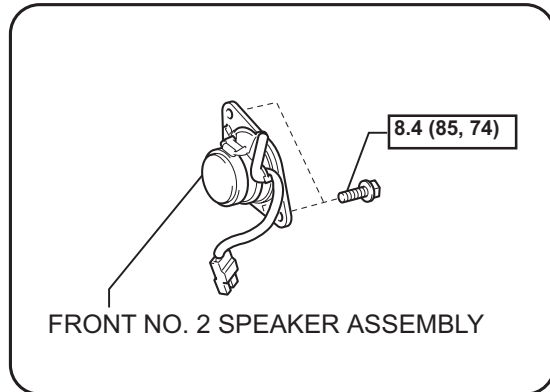
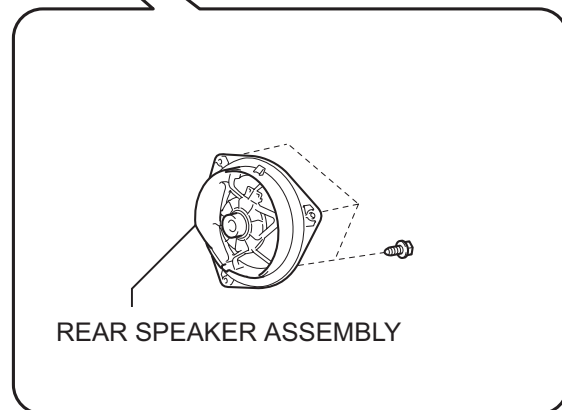
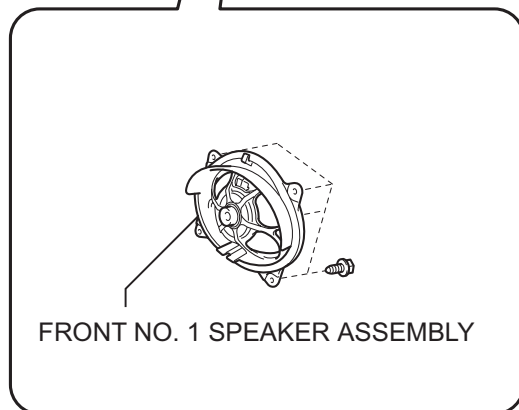
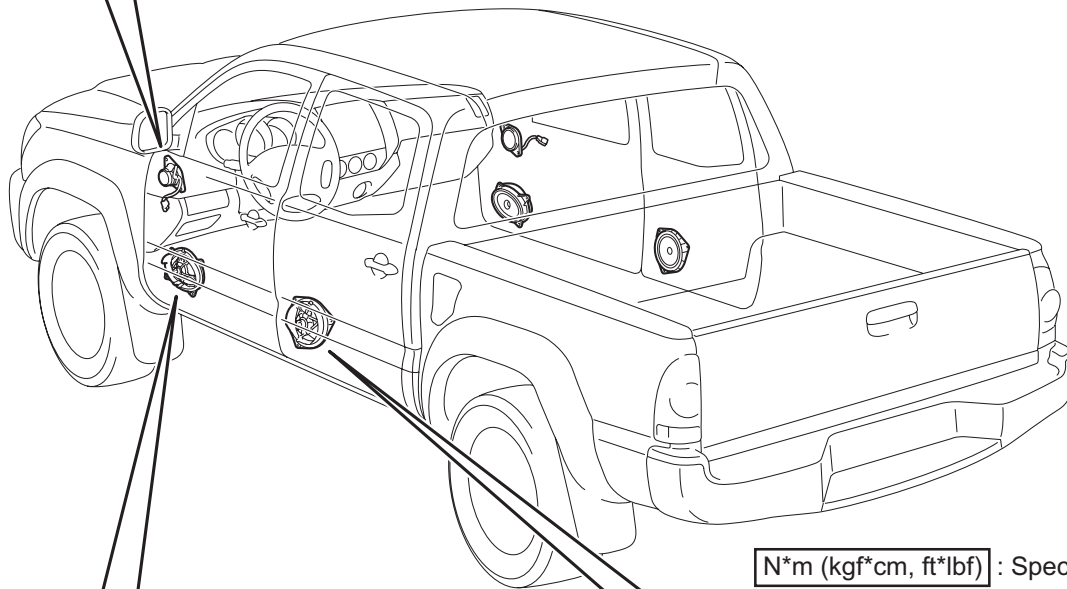
6. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)

REAR SPEAKER (for Double Cab)

COMPONENTS

AV

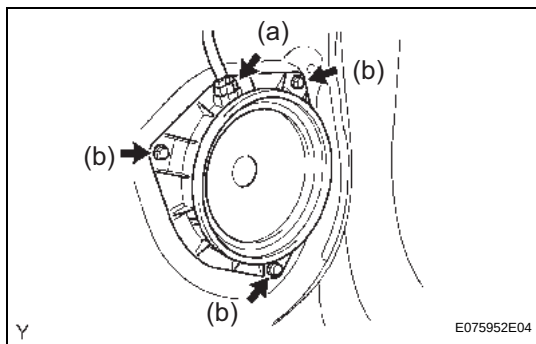
**DOUBLE CAB:****DOUBLE CAB — PREMIUM VERSION:**

REMOVAL

HINT:

- Use the same procedures for the RH and LH sides.
- The procedures listed below are for the LH side.

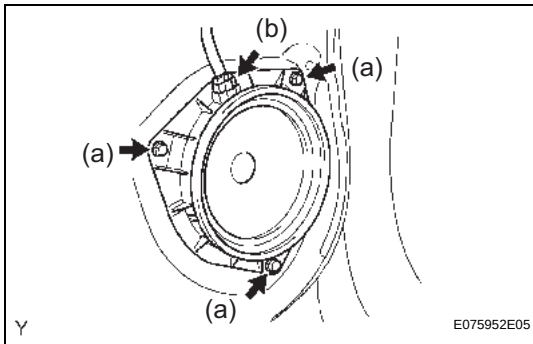
1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
2. **REMOVE REAR POWER WINDOW REGULATOR SWITCH ASSEMBLY** (See page [ED-68](#))
3. **REMOVE REAR DOOR TRIM PANEL ASSEMBLY LH** (See page [ED-68](#))
4. **REMOVE REAR DOOR INSIDE HANDLE SUB-ASSEMBLY LH** (See page [ED-69](#))
5. **REMOVE REAR SPEAKER ASSEMBLY**
 - (a) Disconnect the connector.
 - (b) Remove the 3 screws and the rear speaker assembly.



INSTALLATION

HINT:

- Use the same procedures for the RH and LH sides.
- The procedures listed below are for the LH side.



1. INSTALL REAR SPEAKER ASSEMBLY

- (a) Install the rear speaker assembly with the 3 screws.
- (b) Connect the connector.

2. INSTALL REAR DOOR INSIDE HANDLE SUB-ASSEMBLY LH (See page [ED-80](#))

3. INSTALL REAR DOOR TRIM PANEL ASSEMBLY LH (See page [ED-81](#))

4. INSTALL REAR POWER WINDOW REGULATOR SWITCH ASSEMBLY (See page [ED-81](#))

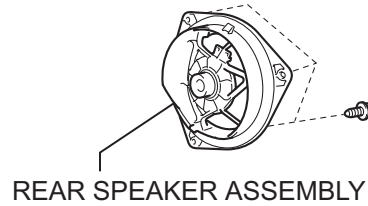
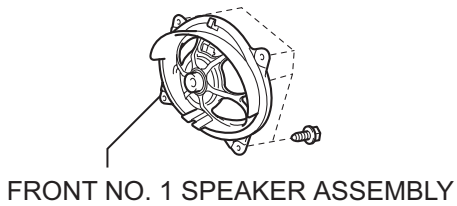
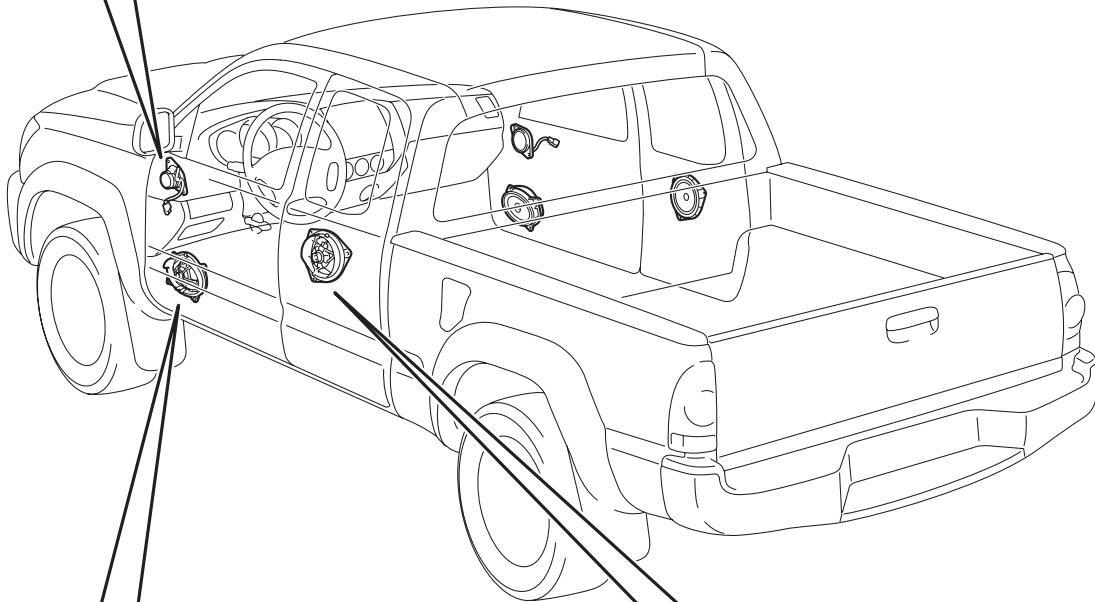
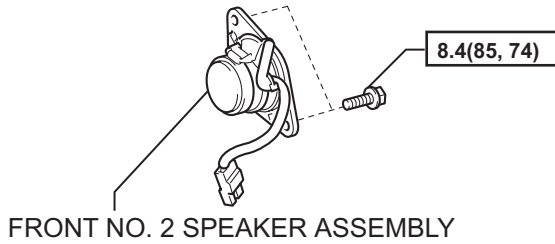
5. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)

REAR SPEAKER (for Access Cab)

COMPONENTS

ACCESS CAB:



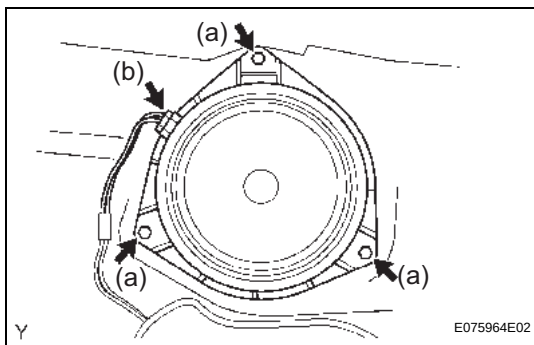
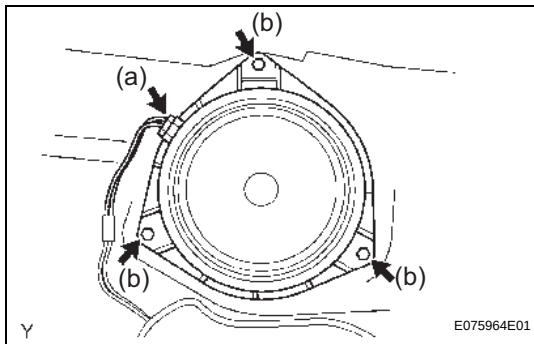
N*m (kgf*cm, ft*lb) : Specified torque

REMOVAL

HINT:

- Use the same procedures for the RH and LH sides.
- The procedures listed below are for the LH side.

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
2. **REMOVE LAP BELT OUTER ANCHOR COVER** (See page [ED-53](#))
3. **REMOVE REAR DOOR TRIM BOARD SUB-ASSEMBLY LH** (See page [ED-53](#))
4. **REMOVE REAR ACCESS PANEL WEATHERSTRIP LH** (See page [ED-53](#))
5. **REMOVE REAR SPEAKER ASSEMBLY**
 - (a) Disconnect the connector.
 - (b) Remove the 3 screws and the rear speaker assembly.



INSTALLATION

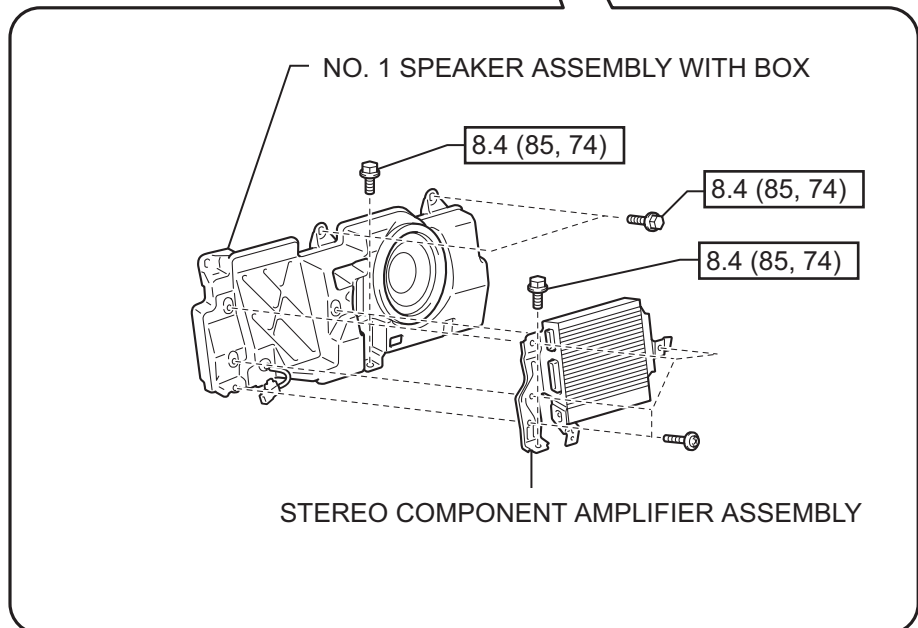
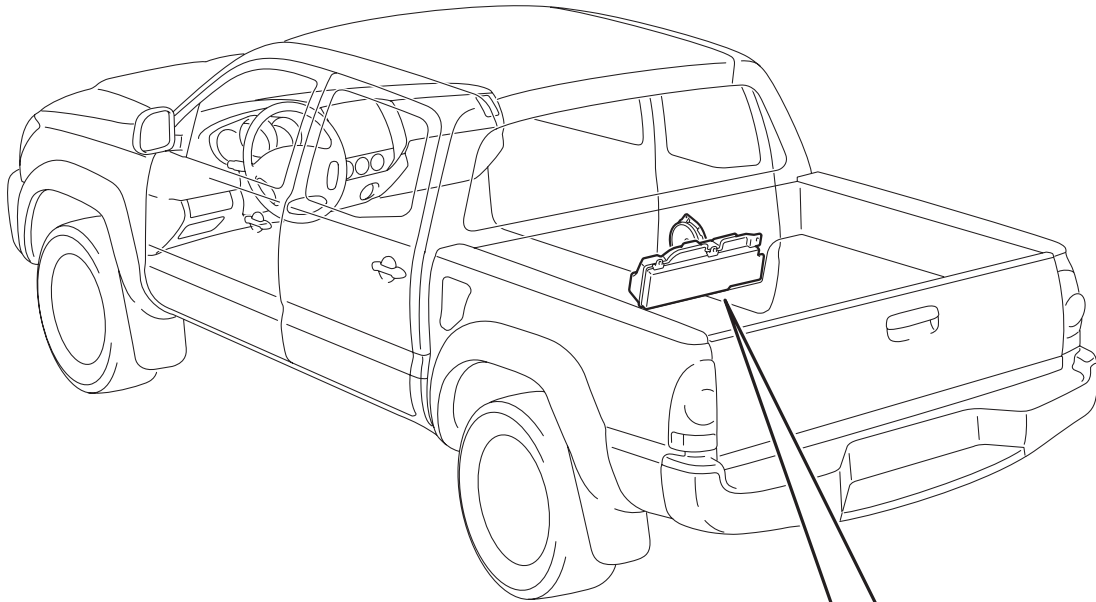
1. **INSTALL REAR SPEAKER ASSEMBLY**
 - (a) Install the rear speaker assembly with the 3 screws.
 - (b) Connect the connector.
2. **INSTALL REAR ACCESS PANEL WEATHERSTRIP LH** (See page [ED-64](#))
3. **INSTALL REAR DOOR TRIM BOARD SUB-ASSEMBLY** (See page [ED-63](#))
4. **INSTALL LAP BELT OUTER ANCHOR COVER** (See page [ED-63](#))
5. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**
Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)

NO. 1 SPEAKER WITH BOX

COMPONENTS

DOUBULE CAB — PREMIUM VERSION:

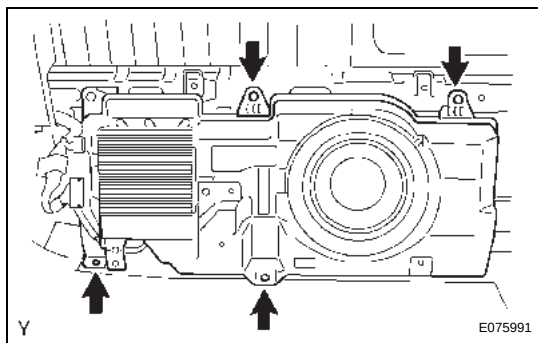
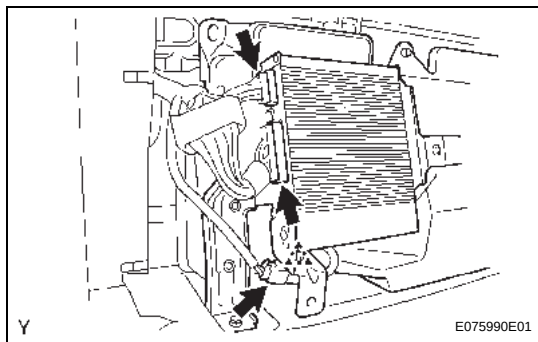
AV



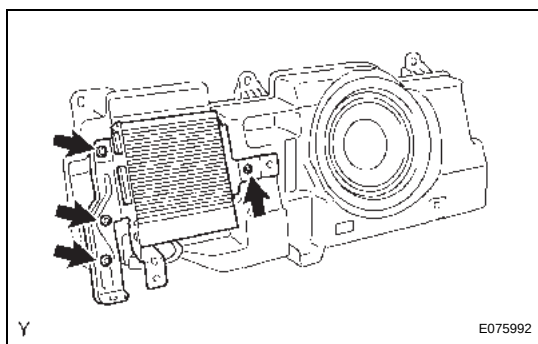
$\boxed{\text{N*m (kgf*cm, ft.*lbf)}}$; Specified torque

REMOVAL

1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL
2. REMOVE REAR SEATBACK ASSEMBLY RH (See page [SE-82](#))
3. REMOVE REAR SEATBACK ASSEMBLY LH (See page [SE-71](#))
4. REMOVE LUGGAGE COMPARTMENT SIDE TRAY (See page [IR-16](#))
5. REMOVE NO. 1 SPEAKER ASSEMBLY WITH BOX
 - (a) Disconnect the 3 connectors.
 - (b) Remove the clamp.



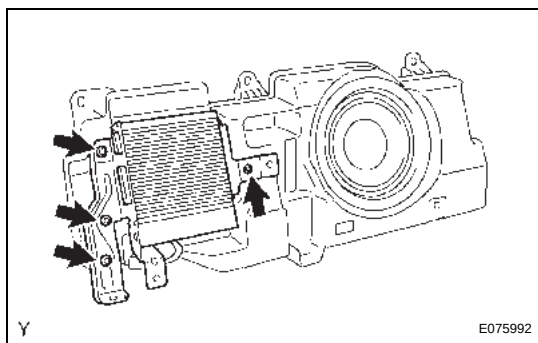
- (c) Remove the 4 bolts and the No. 1 speaker assembly with box.

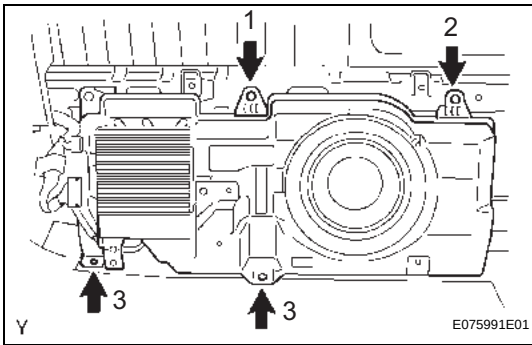


6. REMOVE STEREO COMPONENT AMPLIFIER ASSEMBLY
 - (a) Using a torx socket wrench T20, remove the 4 screws and the stereo component amplifier assembly.

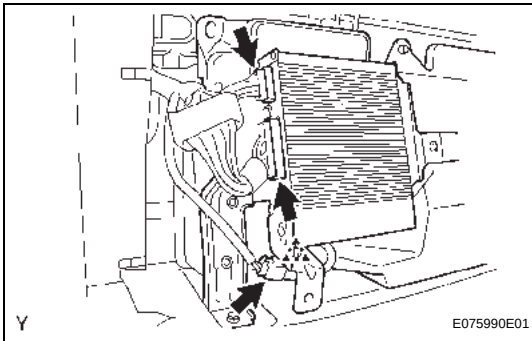
INSTALLATION

1. INSTALL STEREO COMPONENT AMPLIFIER ASSEMBLY
 - (a) Using a torx socket wrench T20, install the 4 screws and the stereo component amplifier assembly.





- 2. INSTALL NO. 1 SPEAKER ASSEMBLY WITH BOX**
(a) Install the No. 1 speaker assembly with box with the 4 bolts.
Torque: 8.4 N*m (85 kgf*cm, 74 in.*lbf)
NOTICE:
Install the bolts in the order shown in the illustration.

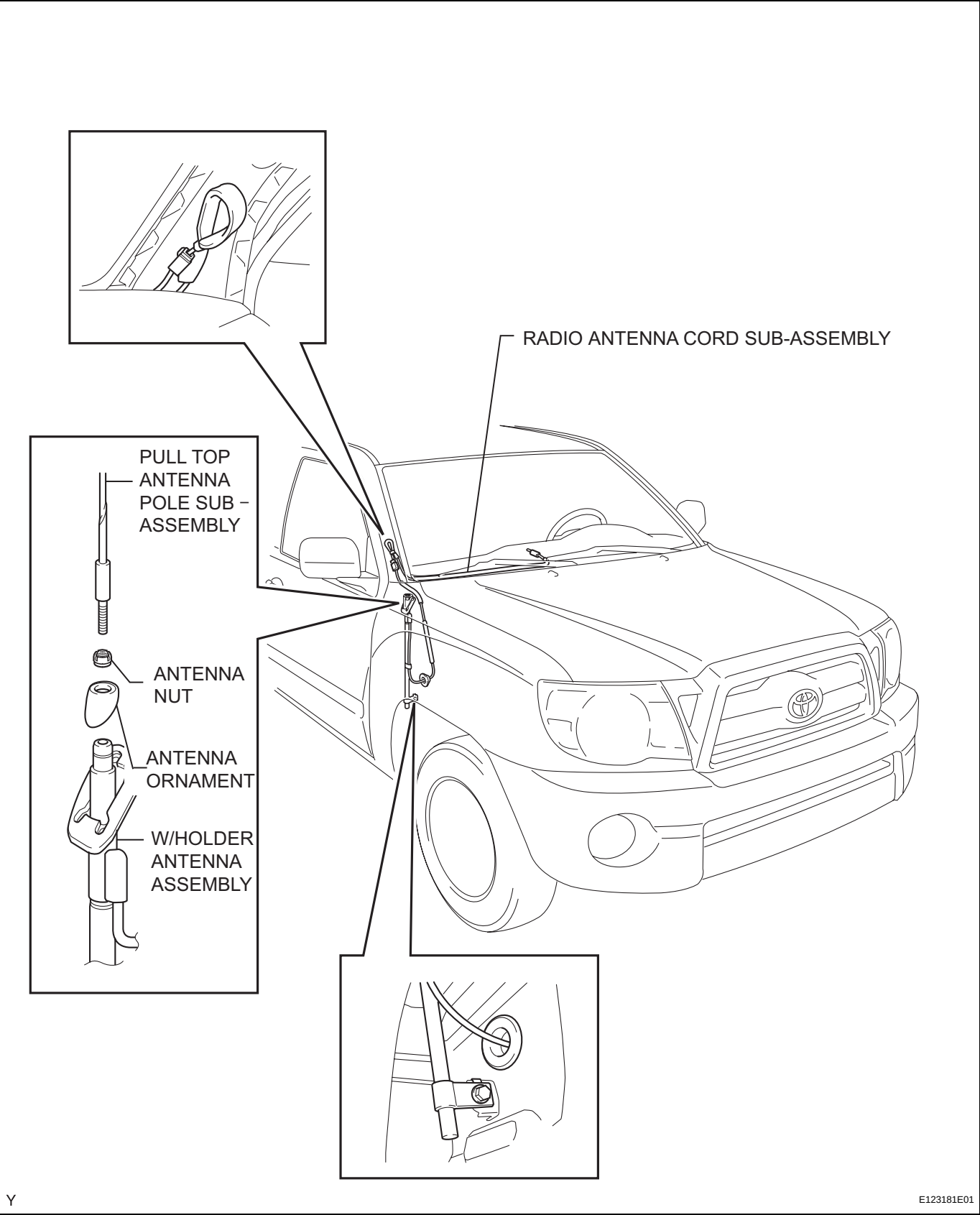


- (b) Connect the connector.
(c) Install the clamp.
- 3. INSTALL LUGGAGE COMPARTMENT SIDE TRAY**
(See page [IR-26](#))
- 4. INSTALL REAR SEATBACK ASSEMBLY LH** (See page [SE-77](#))
- 5. INSTALL REAR SEATBACK ASSEMBLY RH** (See page [SE-90](#))
- 6. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**
Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)

RADIO ANTENNA CORD

COMPONENTS

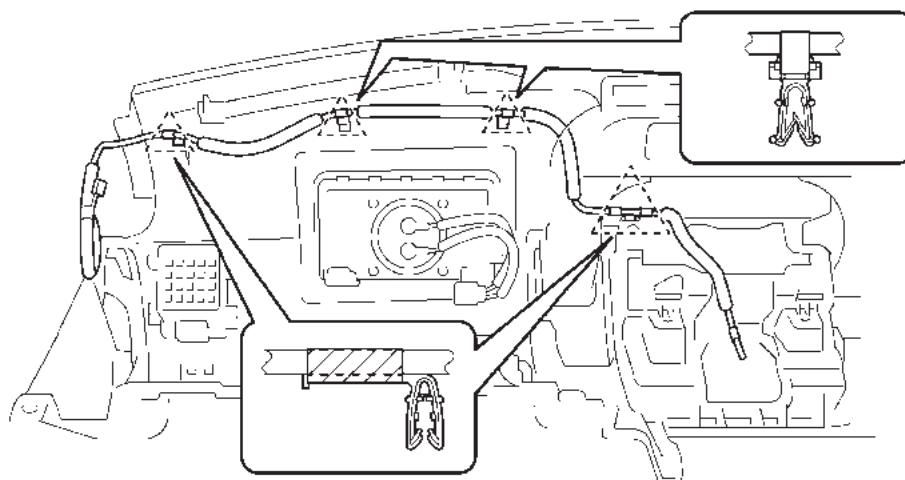
AV



REMOVAL

1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL
2. REMOVE FRONT FLOOR FOOTREST (See page [IR-1](#))
3. REMOVE FRONT DOOR SCUFF PLATE LH (See page [IR-12](#))
4. REMOVE FRONT DOOR SCUFF PLATE RH (See page [IR-12](#))
5. REMOVE COWL SIDE TRIM BOARD LH (See page [IR-12](#))
6. REMOVE COWL SIDE TRIM BOARD RH (See page [IR-12](#))
7. SEPARATE FRONT DOOR OPENING TRIM WEATHERSTRIP LH (See page [IR-13](#))
8. SEPARATE FRONT DOOR OPENING TRIM WEATHERSTRIP RH (See page [IR-13](#))
9. REMOVE FRONT PILLAR GARNISH LH (See page [IR-13](#))
10. REMOVE FRONT PILLAR GARNISH RH (See page [IR-14](#))
11. REMOVE INSTRUMENT PANEL UNDER TRAY (for Pedal Type Parking Brake) (See page [IP-9](#))
12. REMOVE INSTRUMENT PANEL HOLE COVER (for Lever Type Parking Brake) (See page [IP-9](#))
13. REMOVE CONSOLE UPPER REAR PANEL SUB-ASSEMBLY (for Automatic Transmission on Separate Seat Type) (See page [IP-9](#))
14. REMOVE CONSOLE UPPER REAR PANEL SUB-ASSEMBLY (for Manual Transmission on Separate Seat Type) (See page [IP-9](#))
15. REMOVE REAR CONSOLE BOX ASSEMBLY (for Separate Seat Type) (See page [IP-10](#))
16. REMOVE INSTRUMENT PANEL CUP HOLDER TRAY (for Automatic Transmission on Separate Seat Type) (See page [IP-10](#))
17. REMOVE FRONT CONSOLE BOX (for Automatic Transmission on Separate Seat Type) (See page [IP-10](#))
18. REMOVE FRONT CONSOLE BOX (for Manual Transmission on Separate Seat Type) (See page [IP-11](#))
19. REMOVE FRONT CONSOLE BOX (for Automatic Transmission on Bench Seat Type) (See page [IP-11](#))
20. REMOVE FRONT CONSOLE BOX (for Manual Transmission on Bench Seat Type) (See page [IP-11](#))

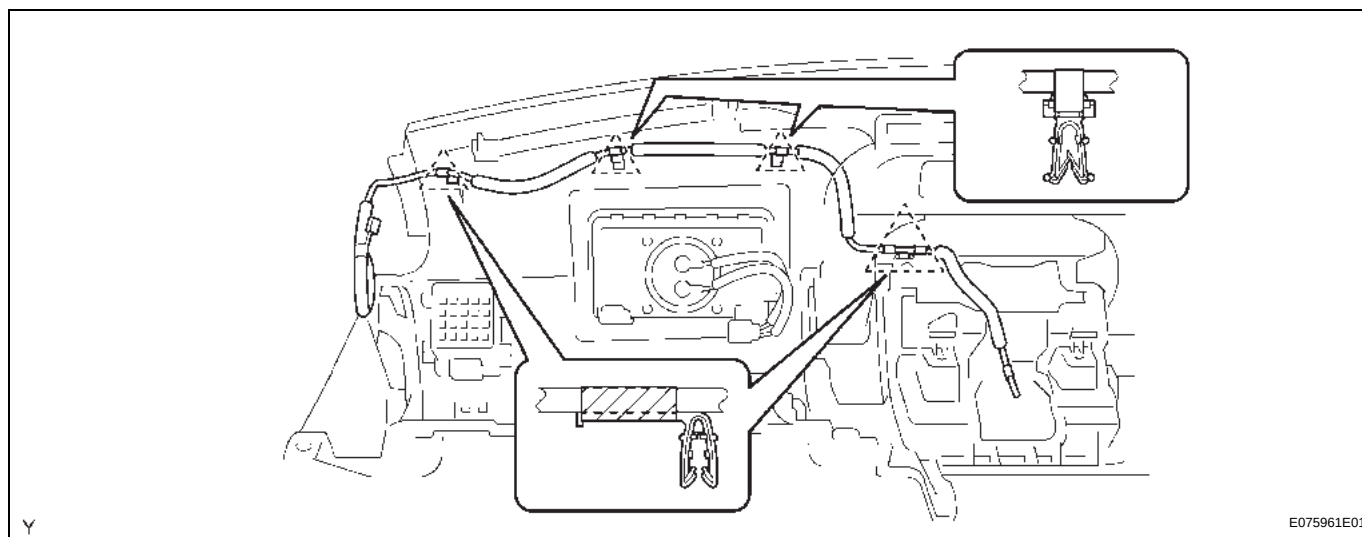
21. REMOVE AIR CONDITIONER CONTROL ASSEMBLY (See page [AC-90](#))
22. REMOVE RADIO RECEIVER ASSEMBLY (See page [AV-69](#))
23. SEPARATE HOOD LOCK CONTROL LEVER SUB-ASSEMBLY (See page [ED-3](#))
24. REMOVE NO. 1 LOWER INSTRUMENT PANEL FINISH PANEL (See page [IP-12](#))
25. REMOVE INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY (See page [IP-12](#))
26. REMOVE COMBINATION METER ASSEMBLY (See page [ME-63](#))
27. REMOVE INSTRUMENT CLUSTER CENTER FINISH PANEL SUB-ASSEMBLY (See page [IP-13](#))
28. REMOVE GLOVE COMPARTMENT DOOR ASSEMBLY (See page [IP-13](#))
29. REMOVE INSTRUMENT PANEL LOWER FINISH PANEL SUB-ASSEMBLY RH (See page [IP-14](#))
30. REMOVE LOWER INSTRUMENT PANEL LH (See page [IP-14](#))
31. REMOVE INSTRUMENT LOWER COVER SUB-ASSEMBLY (See page [IP-14](#))
32. REMOVE INSTRUMENT SIDE PANEL RH (See page [IP-14](#))
33. DISCONNECT PASSENGER AIRBAG CONNECTOR (See page [RS-576](#))
34. REMOVE INSTRUMENT PANEL PASSENGER AIRBAG ASSEMBLY (See page [IP-14](#))
35. REMOVE INSTRUMENT PANEL SUB-ASSEMBLY
36. REMOVE RADIO ANTENNA CORD SUB-ASSEMBLY



- (a) Disengage the 4 claws and remove the radio antenna cord sub-assembly.

INSTALLATION

1. INSTALL RADIO ANTENNA CORD SUB-ASSEMBLY



(a) Engage the 4 claws and install the Radio antenna cord.

2. INSTALL INSTRUMENT PANEL SUB-ASSEMBLY
3. INSTALL INSTRUMENT PANEL PASSENGER AIRBAG ASSEMBLY (See page [IP-18](#))
4. CONNECT PASSENGER AIRBAG CONNECTOR (See page [RS-577](#))
5. INSTALL INSTRUMENT SIDE PANEL RH (See page [IP-20](#))
6. INSTALL INSTRUMENT LOWER COVER SUB-ASSEMBLY (See page [IP-20](#))
7. INSTALL LOWER INSTRUMENT PANEL LH (See page [IP-20](#))
8. INSTALL INSTRUMENT PANEL LOWER FINISH PANEL SUB-ASSEMBLY RH (See page [IP-20](#))
9. INSTALL GLOVE COMPARTMENT DOOR ASSEMBLY (See page [IP-20](#))
10. INSTALL CENTER INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY (See page [IP-21](#))
11. INSTALL COMBINATION METER ASSEMBLY (See page [ME-65](#))
12. INSTALL INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY (See page [IP-21](#))
13. INSTALL NO. 1 LOWER INSTRUMENT PANEL FINISH PANEL (See page [IP-22](#))
14. INSTALL HOOD LOCK CONTROL LEVER SUB-ASSEMBLY (See page [ED-8](#))
15. INSTALL RADIO RECEIVER ASSEMBLY (See page [AV-70](#))

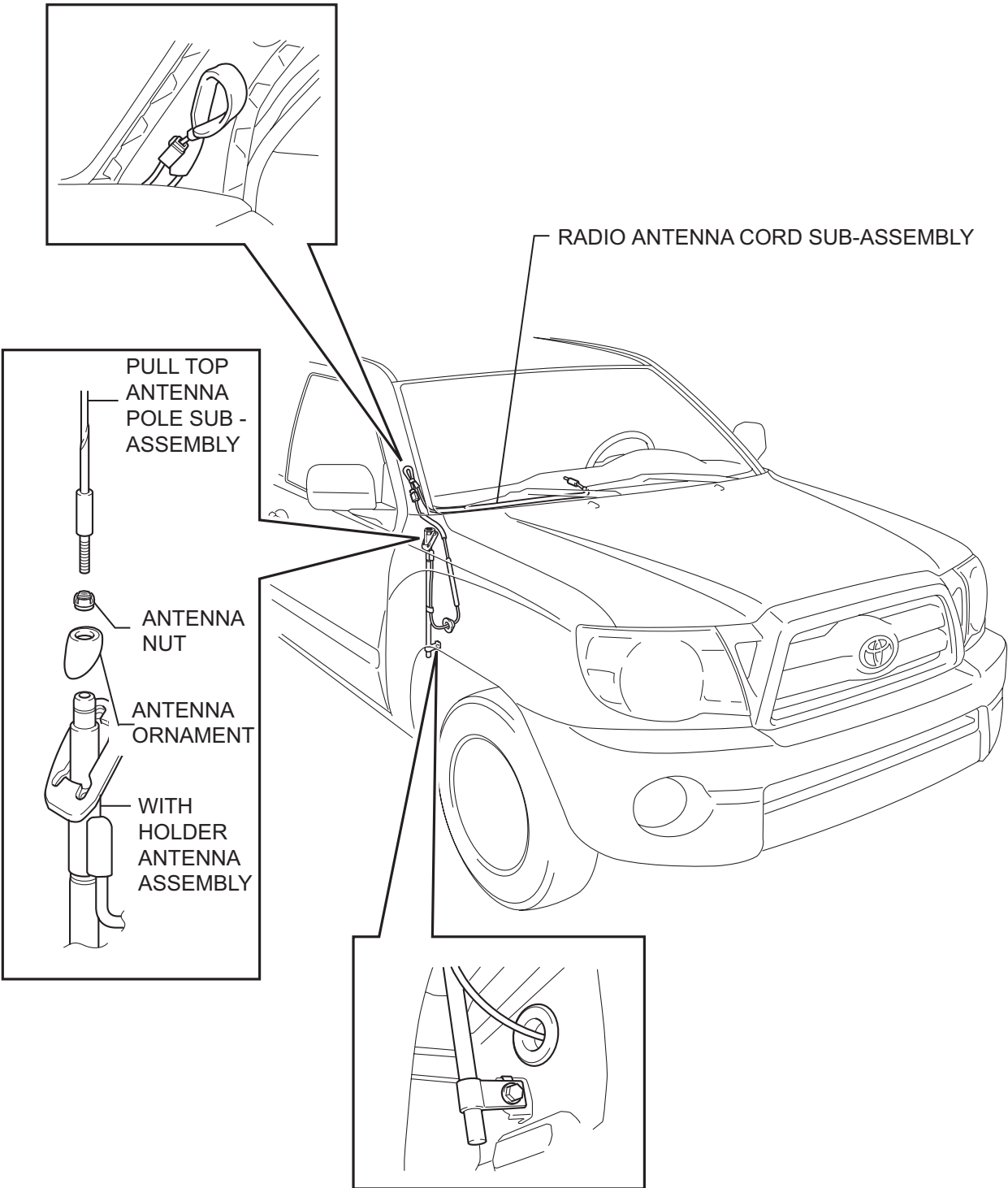
16. INSTALL AIR CONDITIONING CONTROL ASSEMBLY (See page [AC-96](#))
17. INSTALL FRONT CONSOLE BOX (for Manual Transmission on Bench Seat Type) (See page [IP-22](#))
18. INSTALL FRONT CONSOLE BOX (for Automatic Transmission on Bench Seat Type) (See page [IP-23](#))
19. INSTALL FRONT CONSOLE BOX (for Manual Transmission on Separate Seat Type) (See page [IP-23](#))
20. INSTALL FRONT CONSOLE BOX (for Automatic Transmission on Separate Seat Type) (See page [IP-24](#))
21. INSTALL INSTRUMENT PANEL CUP HOLDER TRAY (for Automatic Transmission on Separate Seat Type) (See page [IP-24](#))
22. INSTALL REAR CONSOLE BOX ASSEMBLY (for Separate Seat Type) (See page [IP-24](#))
23. INSTALL CONSOLE UPPER REAR PANEL SUB-ASSEMBLY (for Manual Transmission on Separate Seat Type) (See page [IP-25](#))
24. INSTALL CONSOLE UPPER REAR PANEL SUB-ASSEMBLY (for Automatic Transmission on Separate Seat Type) (See page [IP-25](#))
25. INSTALL INSTRUMENT PANEL HOLE COVER (for Lever Type Parking Brake) (See page [IP-25](#))
26. INSTALL INSTRUMENT PANEL UNDER TRAY (for Pedal Type Parking Brake) (See page [IP-25](#))
27. INSTALL FRONT PILLAR GARNISH RH (See page [IR-52](#))
28. INSTALL FRONT PILLAR GARNISH LH (See page [IR-51](#))
29. INSTALL FRONT DOOR OPENING TRIM WEATHERSTRIP RH (See page [IR-29](#))
30. INSTALL FRONT DOOR OPENING TRIM WEATHERSTRIP LH (See page [IR-28](#))
31. INSTALL COWL SIDE TRIM BOARD RH (See page [IR-52](#))
32. INSTALL COWL SIDE TRIM BOARD LH (See page [IR-52](#))
33. INSTALL FRONT DOOR SCUFF PLATE RH (See page [IR-52](#))
34. INSTALL FRONT DOOR SCUFF PLATE LH (See page [IR-52](#))
35. INSTALL FRONT FLOOR FOOTREST (See page [IR-1](#))

**36. CONNECT CABLE TO NEGATIVE BATTERY
TERMINAL****Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)**

RADIO ANTENNA HOLDER

COMPONENTS

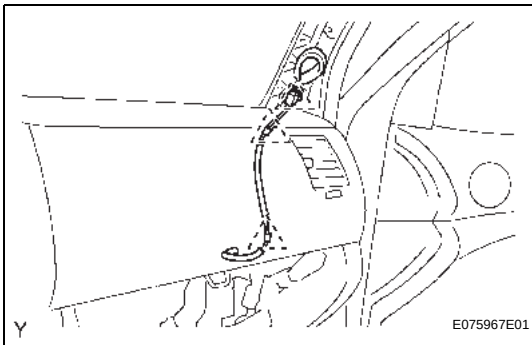
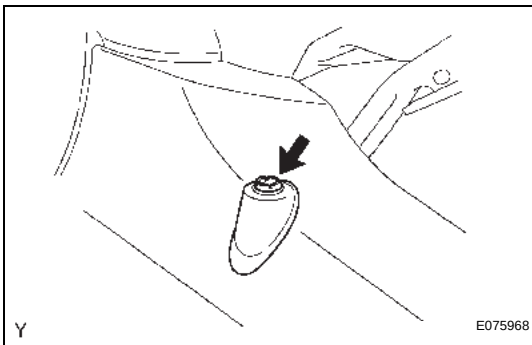
AV



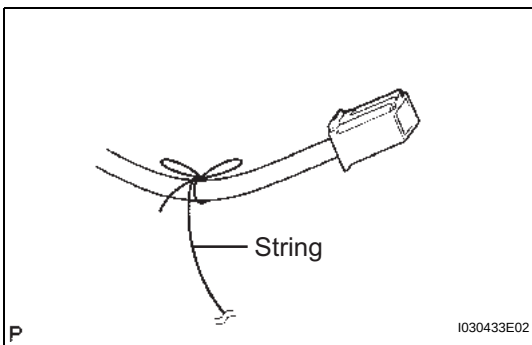
REMOVAL

1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL
2. REMOVE GLOVE COMPARTMENT DOOR ASSEMBLY (See page [IP-13](#))
3. REMOVE INSTRUMENT PANEL LOWER FINISH PANEL SUB-ASSEMBLY RH (See page [IP-14](#))
4. REMOVE ASSIST GRIP SUB-ASSEMBLY (See page [IR-18](#))
5. REMOVE FRONT PILLAR GARNISH RH (See page [IR-14](#))
6. REMOVE PULL TOP ANTENNA POLE SUB - ASSEMBLY (See page [AV-102](#))
7. REMOVE ANTENNA ORNAMENT
 - (a) Remove the nut and the antenna ornament.

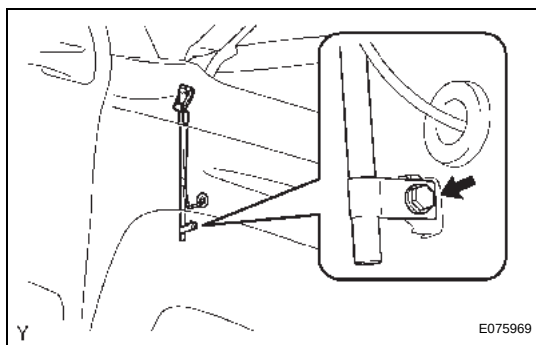
AV



8. REMOVE WITH HOLDER ANTENNA ASSEMBLY
 - (a) Disconnect the connector and remove the 3 clamps.



- (b) Tie a piece of string to the tip of the cable of the with holder antenna assembly.
HINT:
Use a string that is longer than the antenna assembly (with holder).



- (c) Remove the bolt and the with holder antenna assembly.

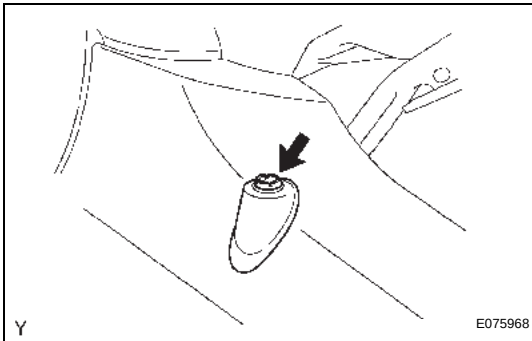
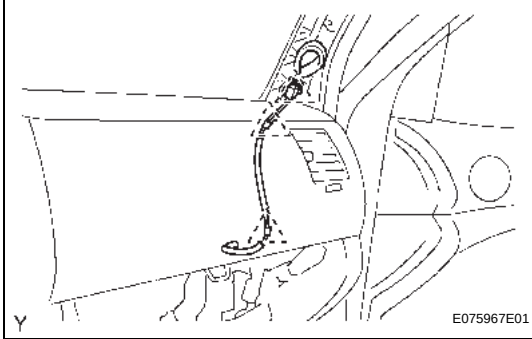
NOTICE:

Leave the string inside the pillar for the installation of a new antenna.

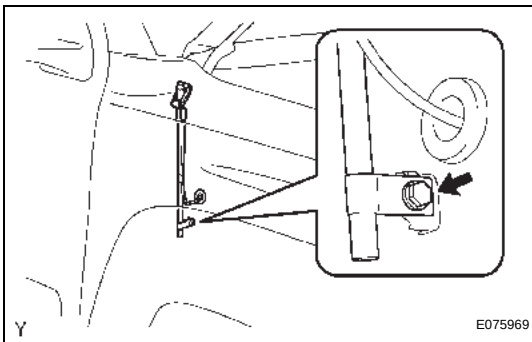
INSTALLATION

1. INSTALL WITH HOLDER ANTENNA ASSEMBLY

- (a) Tie the string inside the pillar to the new antenna assembly (with holder).
- (b) Using the string, fit the antenna assembly (with holder) into the pillar.
- (c) Connect the connector and install the 3 clamps.



- (d) Install the antenna ornament with the nut.



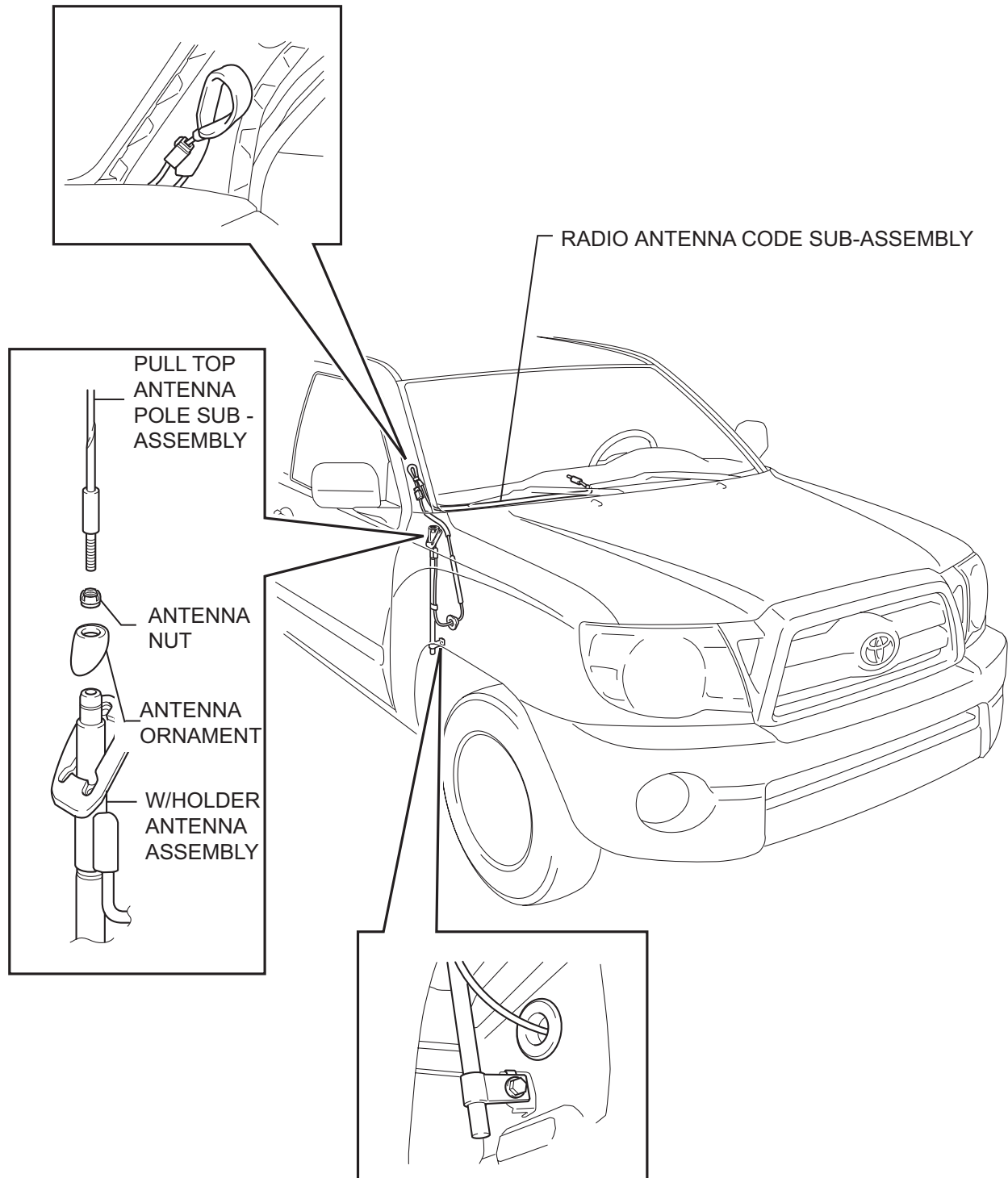
- (e) Install the with holder antenna assembly with the bolt.

2. **INSTALL PULL TOP ANTENNA POLE SUB - ASSEMBLY** (See page [AV-102](#))
3. **INSTALL FRONT PILLAR GARNISH RH** (See page [IR-28](#))
4. **INSTALL ASSIST GRIP SUB-ASSEMBLY** (See page [IR-23](#))
5. **INSTALL INSTRUMENT PANEL LOWER FINISH PANEL SUB-ASSEMBLY RH** (See page [IP-20](#))
6. **INSTALL GLOVE COMPARTMENT DOOR ASSEMBLY** (See page [IP-20](#))
7. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**
Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)

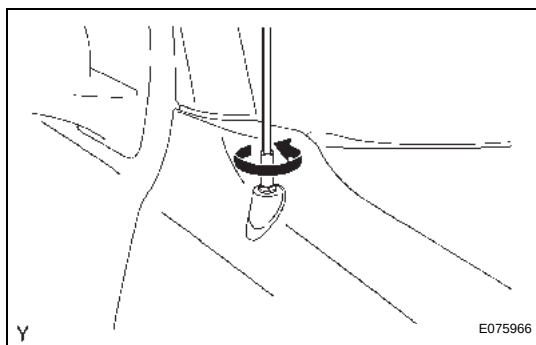
RADIO ANTENNA POLE

COMPONENTS

AV



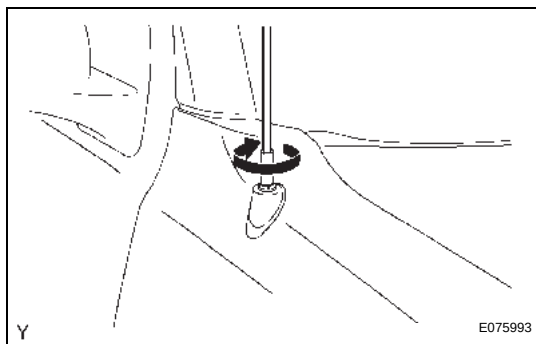
AV



REMOVAL

1. REMOVE PULL TOP ANTENNA POLE SUB - ASSEMBLY

- (a) Remove the pull top antenna pole sub-assembly by turning it counterclockwise.



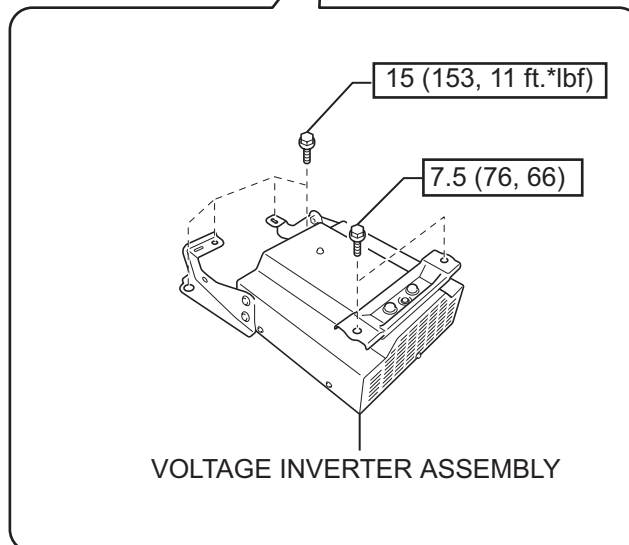
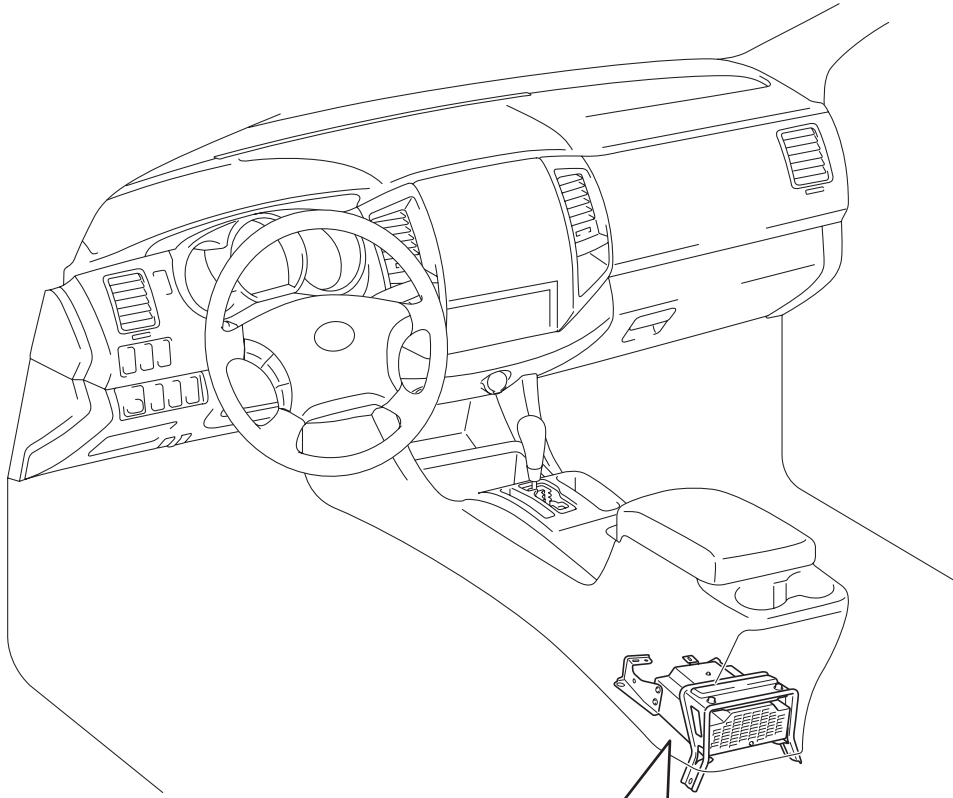
INSTALLATION

1. INSTALL PULL TOP ANTENNA POLE SUB - ASSEMBLY

- (a) Install the pull top antenna pole sub-assembly by turning it clockwise.

VOLTAGE INVERTER COMPONENTS

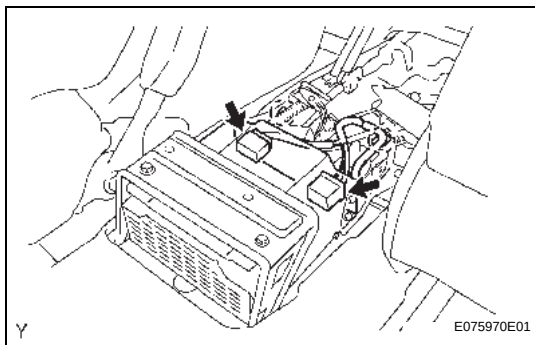
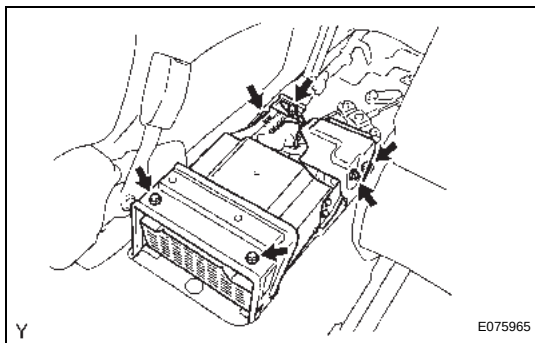
AV



N*m (kgf*cm, ft.*lbf) ; Specified torque

REMOVAL

1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL
2. REMOVE CONSOLE UPPER REAR PANEL SUB-ASSEMBLY (See page [IP-9](#))
3. REMOVE REAR CONSOLE BOX ASSEMBLY (See page [IP-10](#))
4. REMOVE VOLTAGE INVERTER ASSEMBLY
 - (a) Remove the 6 bolts.

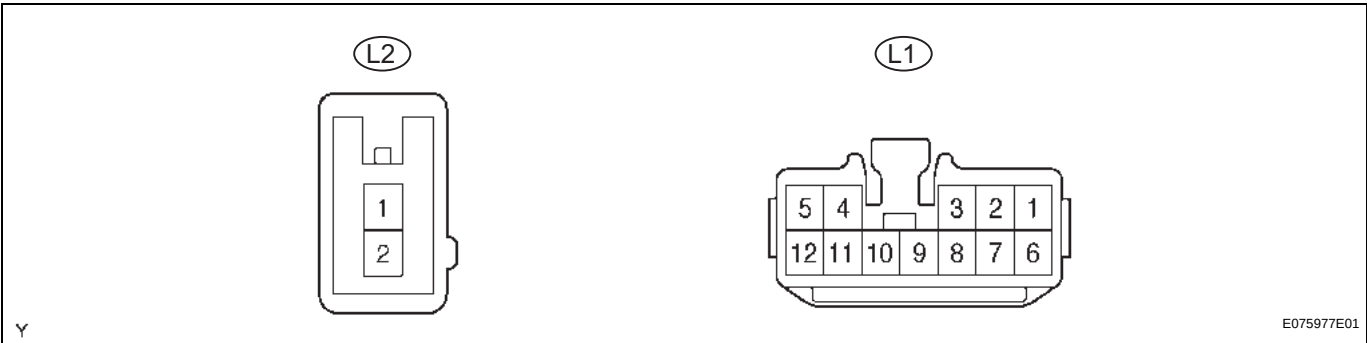


- (b) Disconnect the 2 connectors and remove the 2 wire harness clamps.

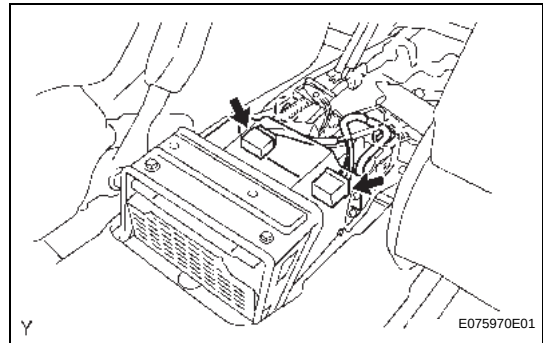
INSPECTION

1. INSPECT VOLTAGE INVERTER ASSEMBLY

AV



Tester Connection	Condition	Specified Condition
+B(L2-2)-PGND(L2-1)	IG switch ON	10 to 14V
AC1(L1-5)-PGND(L2-1)	IG switch ON, main switch ON	Pulse generation
P/T(L1-1)-Body Ground	Always	Below 1 Ω
AC2(L1-11)-PGND(L2-1)	IG switch ON, main switch ON	Pulse generation

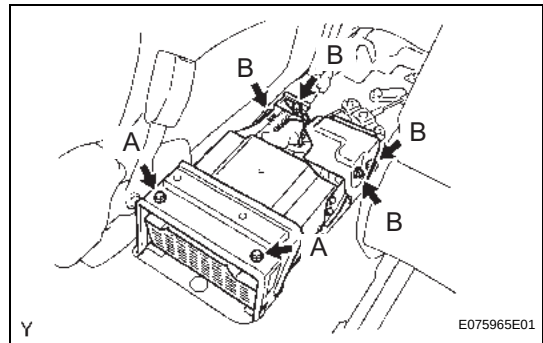


INSTALLATION

1. INSTALL VOLTAGE INVERTER ASSEMBLY

- (a) Connect the 2 connectors and install the 2 wire harness clamps.

- (b) Install the 6 bolts.
Torque: 7.5 N*m (76 kgf*cm, 66 in.*lbf) for bolt A
Torque: 15 N*m (153 kgf*cm, 11 ft.*lbf) for bolt B

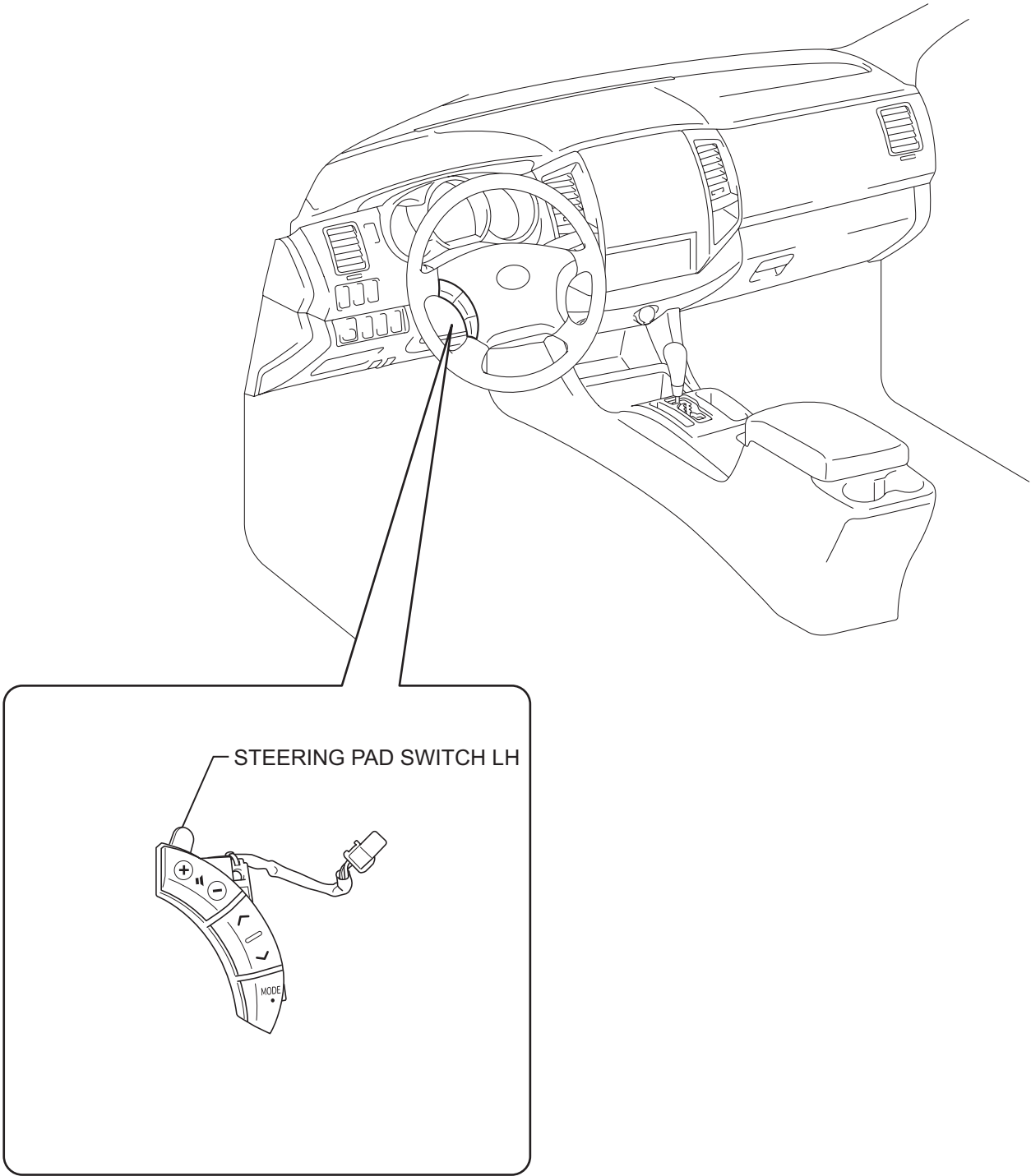


2. INSTALL REAR CONSOLE BOX ASSEMBLY (See page [IP-24](#))
3. INSTALL CONSOLE UPPER REAR PANEL SUB-ASSEMBLY (See page [IP-25](#))
4. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL
Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)

STEERING PAD SWITCH

COMPONENTS

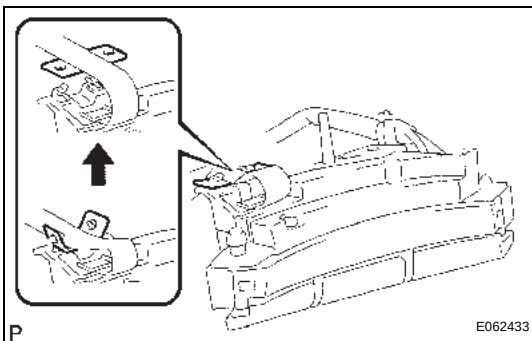
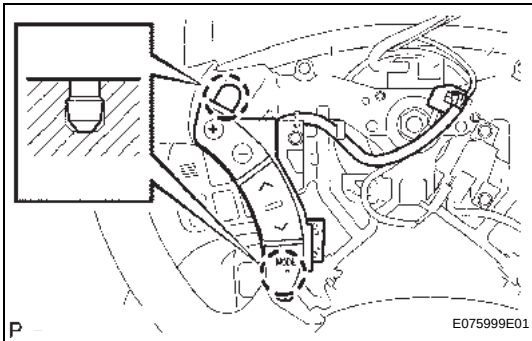
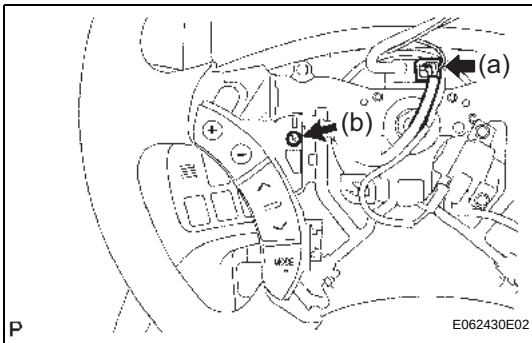
AV



REMOVAL

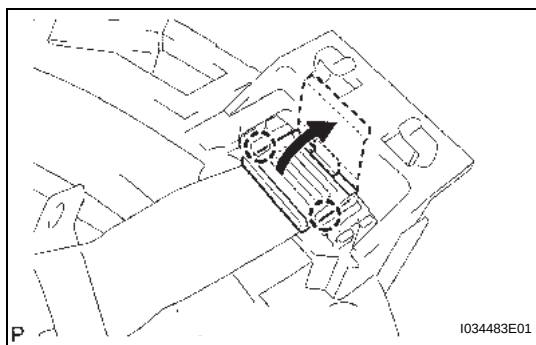
1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
Wait for 90 seconds after disconnecting the cable to prevent the airbag working.
2. **REMOVE NO. 2 LOWER STEERING WHEEL COVER**
(See page [SR-9](#))
3. **REMOVE NO. 3 LOWER STEERING WHEEL COVER**
(See page [SR-9](#))
4. **REMOVE HORN BUTTON ASSEMBLY** (See page [RS-558](#))
5. **REMOVE STEERING PAD SWITCH LH**
 - (a) Disconnect the connector.
 - (b) Remove the screw.

AV

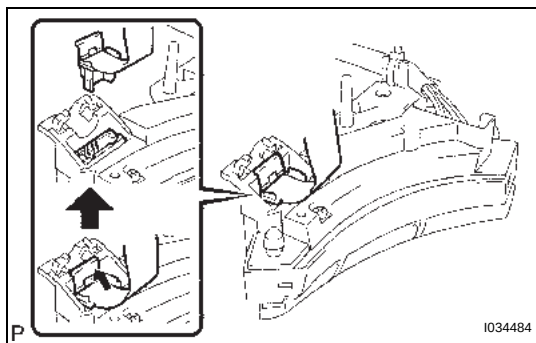


- (c) Disengage the 2 pins and remove the steering pad switch LH.
- (d) Release the tab of the steering pad switch cable from the steering pad switch LH as shown in the illustration.

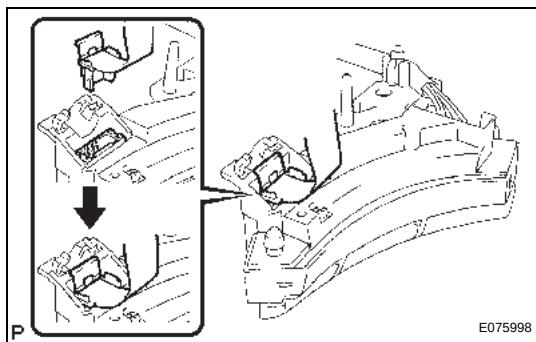
AV



- (e) Disengage the 2 claws and open the latch on the top of the connector as shown in the illustration.



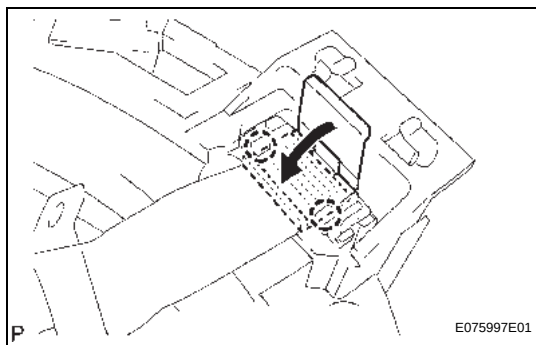
- (f) Pull out the connector while pinching the latch with fingers and disconnect the steering pad switch cable from the steering pad switch LH.



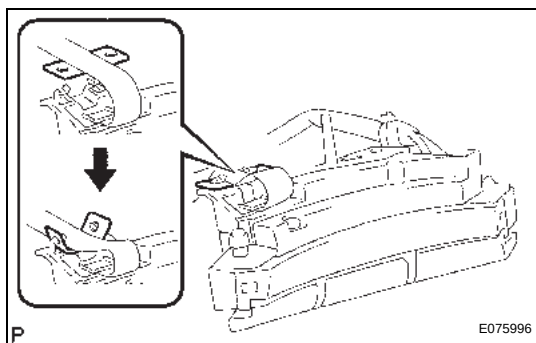
INSTALLATION

1. INSTALL STEERING PAD SWITCH LH

- (a) Install the steering pad switch cable onto the steering pad switch LH while holding the connector cover.

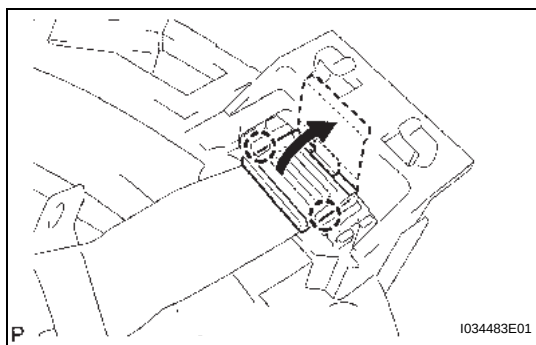


- (b) Hold the connector cover down to engage the 2 claws as shown in the illustration.

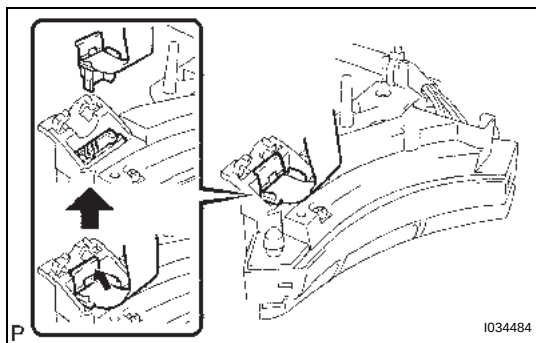


- (c) Install the tab of the steering pad switch cable onto the steering pad switch LH as shown in the illustration.

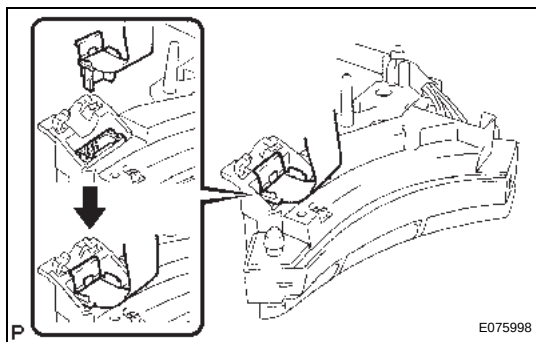
AV



- (e) Disengage the 2 claws and open the latch on the top of the connector as shown in the illustration.



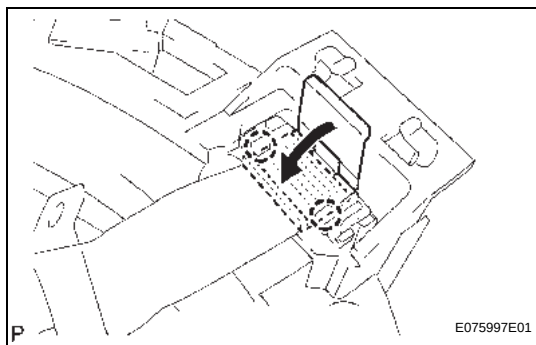
- (f) Pull out the connector while pinching the latch with fingers and disconnect the steering pad switch cable from the steering pad switch LH.



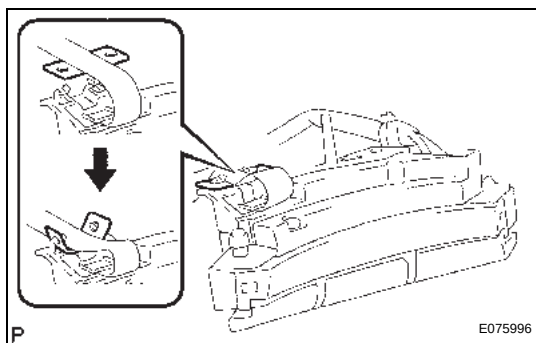
INSTALLATION

1. INSTALL STEERING PAD SWITCH LH

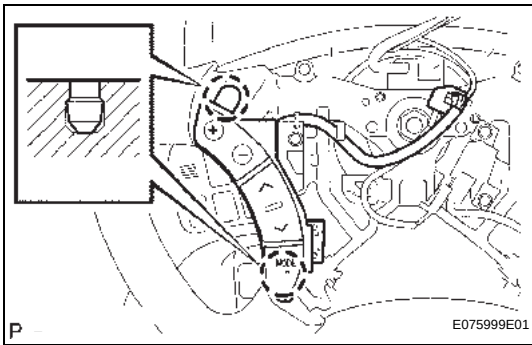
- (a) Install the steering pad switch cable onto the steering pad switch LH while holding the connector cover.



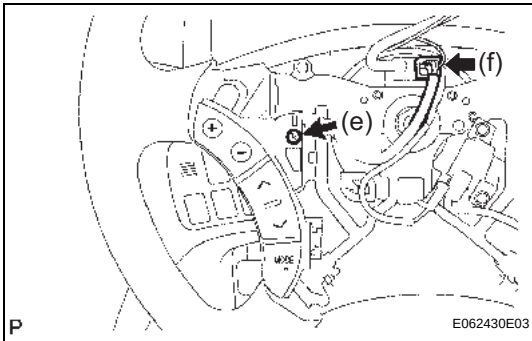
- (b) Hold the connector cover down to engage the 2 claws as shown in the illustration.



- (c) Install the tab of the steering pad switch cable onto the steering pad switch LH as shown in the illustration.



- (d) Engage the 2 pins and install the steering pad switch LH.



- (e) Install the screw.
(f) Connect the connector.

2. **INSTALL HORN BUTTON ASSEMBLY** (See page [RS-558](#))
3. **INSTALL NO. 3 LOWER STEERING WHEEL COVER** (See page [SR-18](#))
4. **INSTALL NO. 2 LOWER STEERING WHEEL COVER** (See page [SR-18](#))
5. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**
Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)
6. **INSPECT HORN BUTTON ASSEMBLY** (See page [RS-557](#))
7. **INSPECT SRS WARNING LIGHT** (See page [SR-18](#))