AUDIO AND VISUAL SYSTEM

PRECAUTION

1. INITIALIZATION

NOTICE:
When disconnecting the negative (-) battery terminal, initialize the following systems after the terminal is reconnected.

System Name	See procedure
Power Window Control	IN-29
Sliding Roof System	

2. EXPRESSIONS OF IGNITION SWITCH

The type of ignition switch used on this model differs according to the specifications of the vehicle.
The expressions listed in the table below are used in this section.

Switch Type / Expression	Ignition Switch (position)	Engine Switch (condition)
Ignition Switch off	LOCK	Off
Ignition Switch on (IG)	ON	On (IG)
Ignition Switch on (ACC)	ACC	On (ACC)
Engine Start	START	Start

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3. HANDLING AND OPERATIONAL PRECAUTIONS

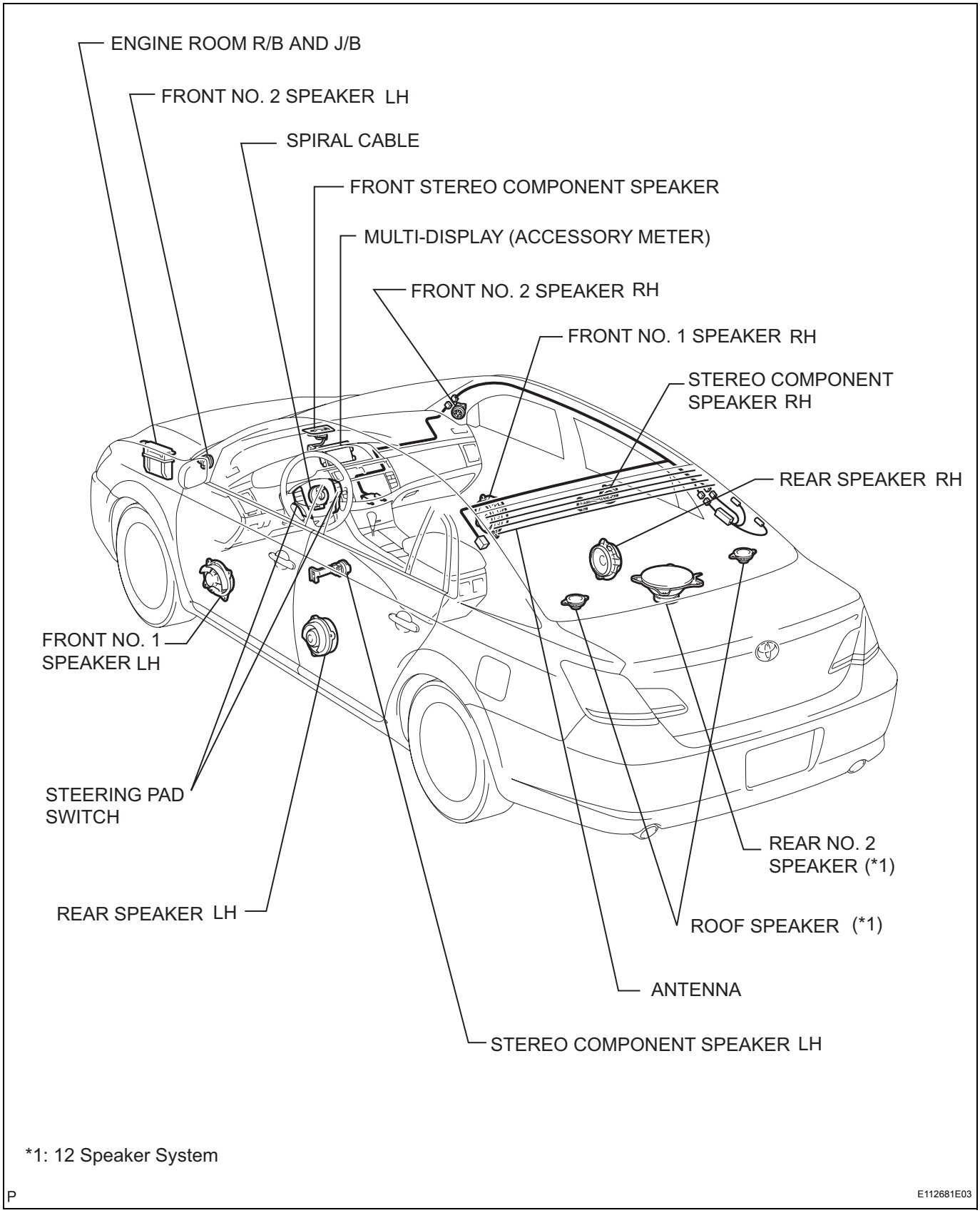
(a) Explain to the customer that when the negative terminal is disconnected from the battery, the AM/FM channel presets in the radio receiver are cleared. If necessary, make a note of the recorded channel information before the negative terminal is disconnected, then reset the information after the negative terminal is reconnected.

(b) The removal / installation of the radio receiver or tape player should be performed after all cassette tapes and audio CDs are ejected from the radio receiver or tape player.
HINT:
If a cassette tape, audio CD, or map disc cannot be ejected due to a malfunction in the radio receiver, do not attempt to remove it forcefully. Bring the vehicle to a repair center.

(c) Fasten the ground bolt securely when the antenna cord is removed or installed.
HINT:
Failure to fasten the ground bolt securely causes noise when receiving radio waves.

(d) Do not touch the cone paper of the speaker.

PARTS LOCATION



*1: 12 Speaker System

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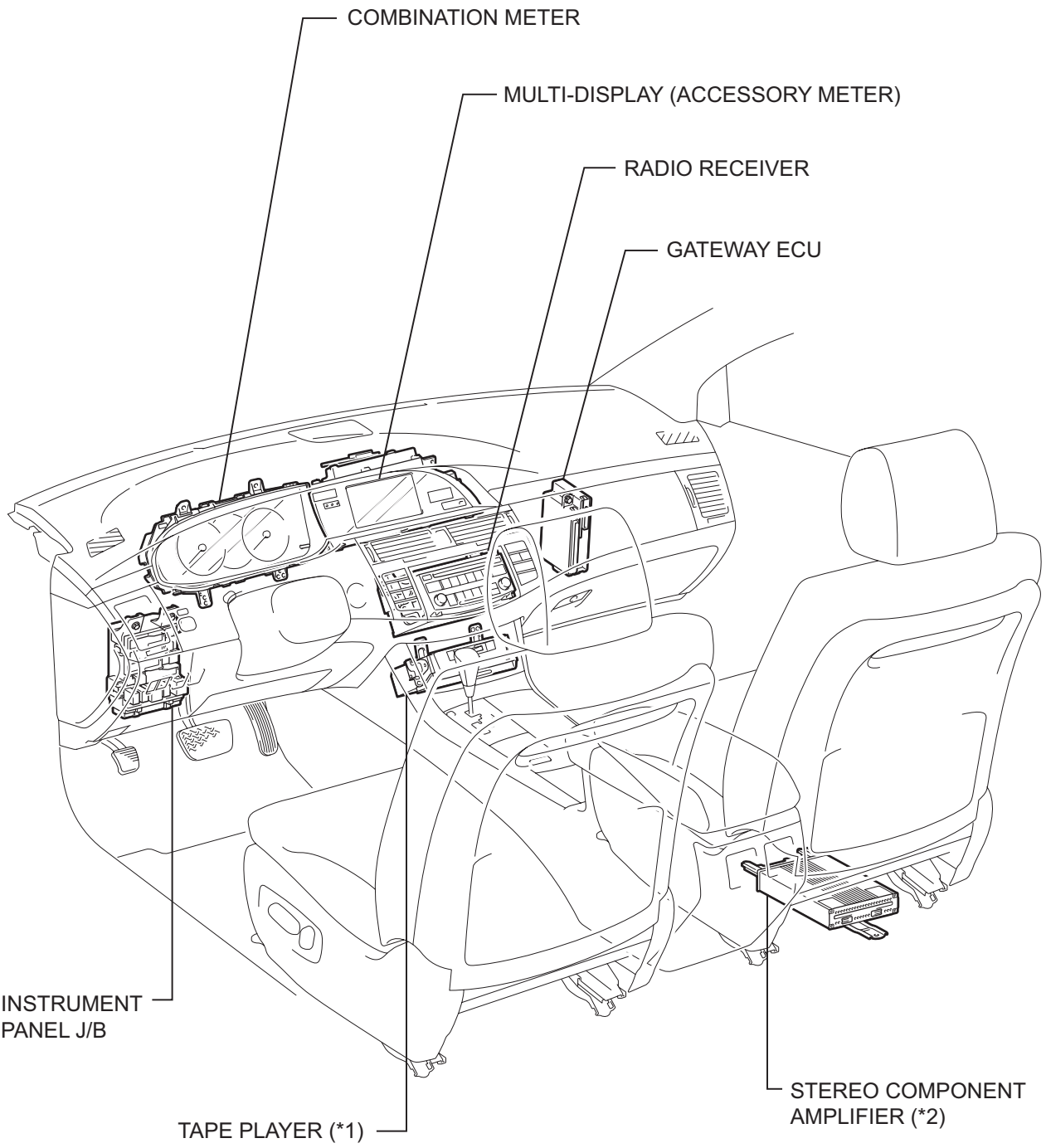
AV



*1: with Tape Player

*2: 12 Speaker System

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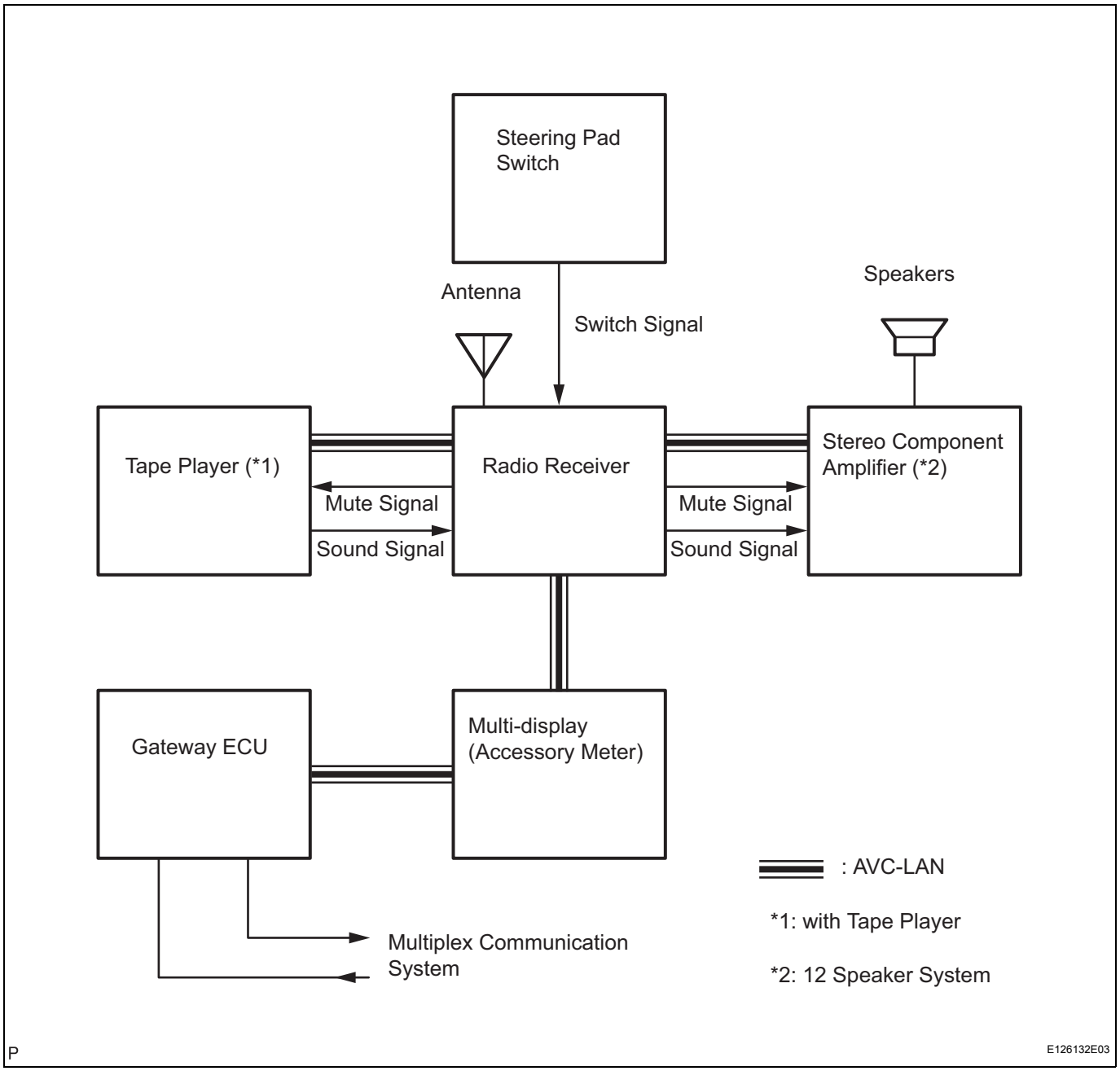
SYSTEM DIAGRAM



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SYSTEM DESCRIPTION

1. DISC PLAYER OUTLINE

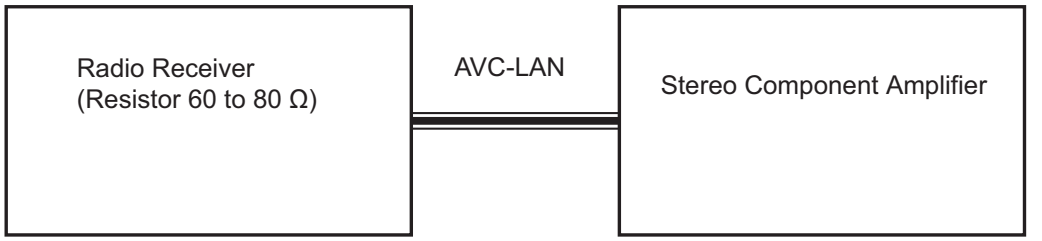
(a) A compact disc player or digital versatile disc player uses a laser pickup to read digital signals recorded on compact discs (CDs). By converting the digital signals to analog, music and other things can be played.

CAUTION:
Do not look directly at the laser pickup because the CD player uses an invisible laser beam. Be sure to operate the player only as instructed.
NOTICE:
- **Do not disassemble any part of the CD player.**
- **Do not apply oil to the CD player.**
- **Do not insert anything but a CD into the CD player.**

2. AVC-LAN DESCRIPTION

(a) What is AVC-LAN?

Example:



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AVC-LAN, an abbreviation for "Audio Visual Communication Local Area Network", is a united standard developed by the manufacturers in affiliation with Toyota Motor Corporation. This standard pertains to audio and visual signals as well as switch and communication signals.

(b) Purpose:
Recently, car audio systems have rapidly developed and the functions have vastly changed. The conventional car audio system is being integrated with multi-media interfaces similar to those in navigation systems. At the same time, customers are demanding higher quality from their audio systems. This is merely an overview of the standardization background. The specific purposes are as follows:

(1) To solve sound problems, etc., caused by using components of different manufacturers through signal standardization.

(2) To allow each manufacturer to concentrate on developing products they do best. From this, reasonably priced products can be produced.
HINT:
- If a short to +B or short to ground is detected in the AVC-LAN circuit, communication is interrupted and the audio system will stop functioning.
- If an audio system is equipped with a navigation system, the multi-display unit acts as the master unit. If the navigation system is not equipped, the audio head unit acts as the master unit instead. If the radio and navigation assembly is equipped, it is the master unit.
- The radio receiver provides resistance to make communication possible.
- The car audio system with an AVC-LAN circuit has a diagnostic function.
- Each component has a specified number (3-digit) called a physical address. Each function has a number (2-digit) called a logical address.

3. COMMUNICATION SYSTEM OUTLINE

(a) Components of the audio system communicate with each other via the AVC-LAN.

(b) The master component of the AVC-LAN is a radio receiver with a 60 to 80 Ω resistor. This is essential for communication.

(c) If a short circuit or open circuit occurs in the AVC-LAN circuit, communication is interrupted and the audio system will stop functioning.

4. DIAGNOSTIC FUNCTION OUTLINE

(a) The audio system has a diagnostic function (the result is indicated on the master unit).

(b) A 3-digit hexadecimal component code (physical address) is allocated to each component on the AVC-LAN. Using this code, the component in the diagnostic function can be displayed.

HOW TO PROCEED WITH TROUBLESHOOTING

1	**VEHICLE BROUGHT TO WORKSHOP**

NEXT

2	**INSPECT BATTERY VOLTAGE**

Standard voltage:
11 to 14 V
If the voltage is below 11 V, recharge or replace the battery before proceeding.

NEXT

AV

3	**INSPECT COMMUNICATION FUNCTION OF LARGE-SCALE MULTIPLEX COMMUNICATION SYSTEM (BEAN)**

(a) Using the intelligent tester, check if the Multiplex Communication System (MPX) is functioning normally.
Result

Result	Proceed to
MPX DTC is not output	A
MPX DTC is output	B

B → **Go to MULTIPLEX COMMUNICATION SYSTEM**

A

4	**BASIC INSPECTION**

(a) Turn the ignition switch on (IG).
(b) Check whether or not the radio receiver and multi-display (accessory meter) turn on.
Result

Result	Proceed to
Radio receiver and multi-display (accessory meter) turn on	A
Radio receiver and multi-display (accessory meter) do not turn on	B

B → **Go to step 7**

A

5	CHECK FOR DTC

(a) Check for DTCs and note any codes that are output.
(b) Delete the DTCs.
(c) Recheck by simulating the operation indicated by the DTC.
HINT:
- If the system cannot enter the diagnosis mode, inspect each AVC-LAN communication signal and repair or replace the problem parts.
- Even if the malfunction symptom is not confirmed, check the DTCs. This is because the system stores past DTCs.
- Check and clear past DTCs. Then check for DTCs.

Result

Result	Proceed to
DTC is output again	A
DTC is not output	B

B → **Go to step 7**

A

6	DIAGNOSTIC TROUBLE CODE CHART

Find the output code on the diagnostic trouble code chart (See page AV-25).

NEXT

Go to step 9

7	PROBLEM SYMPTOMS TABLE

Refer to the problem symptoms table (See page AV-11).

Result

Result	Proceed to
Fault is not listed in problem symptoms table	A
Fault is listed in problem symptoms table	B

B → **Go to step 9**

A

8	OVERALL ANALYSIS AND TROUBLESHOOTING

(a) Terminals of ECU (See page AV-13).

AV

NEXT

9	**ADJUST, REPAIR OR REPLACE**

NEXT

10	**CONFIRMATION TEST**

NEXT

END

IDENTIFICATION OF NOISE SOURCE

1. Radio Description

(a) Radio frequency band

(1) Radio broadcasts use the radio frequency bands shown in the table below.

Frequency	30 kHz	300 kHz	30 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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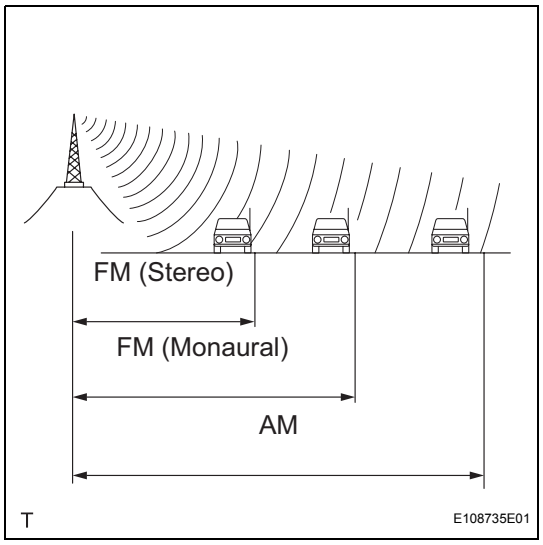


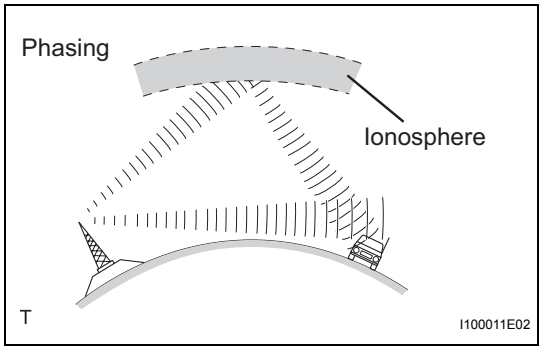
(b) Service area

(1) The service areas of AM and FM broadcasts are vastly different. Sometimes an AM broadcast can be received very clearly but an FM stereo cannot. FM stereo has the smallest service area, and is prone to pick up static and other types of interference such as noise.

(c) Radio reception problems

HINT:

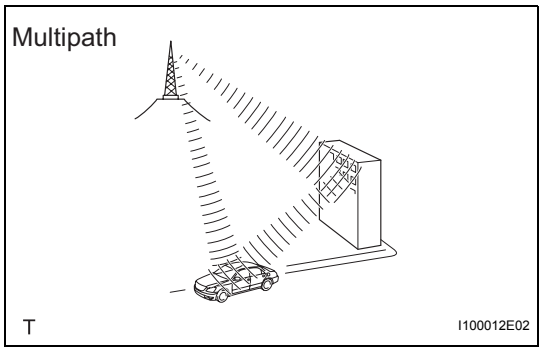
In addition to static, other problems such as "phasing", "multipath", and "fade out" exist. These problems are not caused by electrical noise, but by the radio signal propagation method itself.



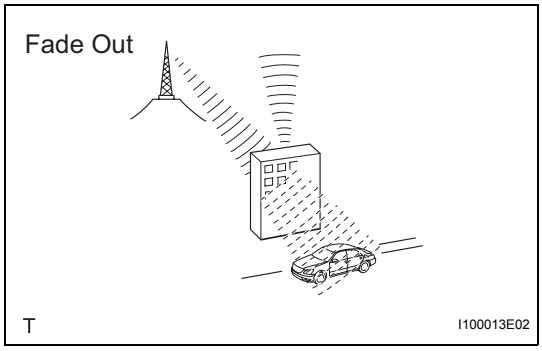
(1) Phasing

AM broadcasts are susceptible to electrical interference and another kind of interference called phasing. Occurring only at night, phasing is the interference created when a vehicle receives 2 radio wave signals from the same transmitter. One signal is reflected off the ionosphere and the other signal is received directly from the transmitter.

AV



(2) Multipath
Multipath is a type of interference created when a vehicle receives 2 radio wave signals from the same transmitter. One signal is reflected off buildings or mountains and the other signal is received directly from the transmitter.



(3) Fade out
Fade out is caused by objects (buildings, mountains, and other large obstacles) that deflect away part of a signal, resulting in a weaker signal when the object is between the transmitter and vehicle. High frequency radio waves, such as FM broadcasts, are easily deflected by obstructions. Low frequency radio waves, such as AM broadcasts, are much more difficult to deflect.

(d) Noise problem
Technicians must have a clear understanding about each customer's noise complaint. Use the following table to diagnose noise problems.

Radio Frequency	Noise Occurrence Condition	Presumable Cause
AM	Noise occurs in a specified area	Foreign noise
AM	Noise occurs when listening to an intermittent broadcast	An identical program transmitted from multiple towers can cause noise where the signals overlap
AM	Noise occurs only at night	Music beat from a distant broadcast
FM	Noise occurs while driving in a specified area	Multipath or phasing noise resulting from a change in FM frequency

HINT:
If the noise does not match the examples above, refer to the descriptions about phasing and multipath.

PROBLEM SYMPTOMS TABLE

HINT:

- Before performing verification listed in the table below, check the fuse and relay.
- Methods used to verify the cause of the problem are listed in order of probability in the suspected area column.

Audio function:

Symptom	Suspected area	See page
Pressing power switch does not turn on system.	1. "Pressing Power Switch does not Turn on System"	AV-72
	2. Multi-display Power Source Circuit	AV-151
	3. Radio Receiver Power Source Circuit	AV-147
	4. Multi-display	IP-8
	5. Radio Receiver	AV-159
Panel switch does not function.	1. Steering Pad Switch Circuit	AV-88
	2. Radio Receiver	AV-159
No sound can be heard from speakers.	1. "No Sound can be Heard from Speakers"	AV-73
	2. Mute Signal Circuit between Radio Receiver and Stereo Component Amplifier (*1)	AV-114
	3. Sound Signal Circuit between Radio Receiver and Stereo Component Amplifier (*1)	AV-109
	4. Speaker Circuit	AV-100
	5. Stereo Component Amplifier Power Source Circuit (*1)	AV-149
	6. Stereo Component Amplifier (*1)	AV-166
	7. Radio Receiver	AV-159
Radio broadcast cannot be received or poor reception.	"Radio Broadcast cannot be Received or Poor Reception"	AV-82
CD cannot be inserted / played or CD is ejected right after insertion.	1. "CD cannot be Inserted / Played or CD is Ejected Right After Insertion"	AV-78
	2. Radio Receiver Power Source Circuit	AV-147
	3. Radio Receiver	AV-159
CD cannot be ejected.	1. "CD cannot be Ejected"	AV-77
	2. Radio Receiver Power Source Circuit	AV-147
	3. Radio Receiver	AV-159
Noise occurs.	1. "Noise Occurs"	AV-70
	2. Mute Signal Circuit between Radio Receiver and Stereo Component Amplifier (*1)	AV-114
	3. Stereo Component Amplifier Power Source Circuit (*1)	AV-149
	4. Stereo Component Amplifier (*1)	AV-166
	5. Radio Receiver	AV-159
CD sound skips.	1. "CD Sound Skips"	AV-80
	2. Radio Receiver	AV-159
Poor sound quality in all modes (low volume).	1. "Poor Sound Quality in All Modes (Low Volume)"	AV-87
	2. Mute Signal Circuit between Radio Receiver and Stereo Component Amplifier (*1)	AV-114
	3. Stereo Component Amplifier Power Source Circuit (*1)	AV-149
	4. Radio Receiver Power Source Circuit	AV-147
	5. Stereo Component Amplifier (*1)	AV-166
	6. Radio Receiver	AV-159

*1: 12 Speaker

Tape player function:

Symptom	Suspected area	See page
No sound can be heard from speakers (tape player) (*1)	1. Mute Signal Circuit between Radio Receiver and Tape Player	AV-116
	2. Sound Signal Circuit between Radio Receiver and Tape Player	AV-111
	3. Tape Player Power Source Circuit	AV-155
	4. Tape Player	AV-196
	5. Radio Receiver	AV-159
Cassette tape cannot be inserted or played. (*1)	1. "Cassette Tape cannot be Inserted or Played"	AV-76
	2. Tape Player	AV-196
Cassette tape cannot be ejected. (*1)	1. "Cassette Tape cannot be Ejected"	AV-75
	2. Tape Player	AV-196
Sound quality is bad only when playing tape. (*1)	"Sound Quality is Bad Only when Playing Tape"	AV-85
Tape is tangled due to incorrect tape speed or auto-reverse malfunction. (*1)	"Tape is Tangled due to Incorrect Tape Speed or Auto-Reverse Malfunction"	AV-86

*1: Tape Player

Steering pad switch function:

AV

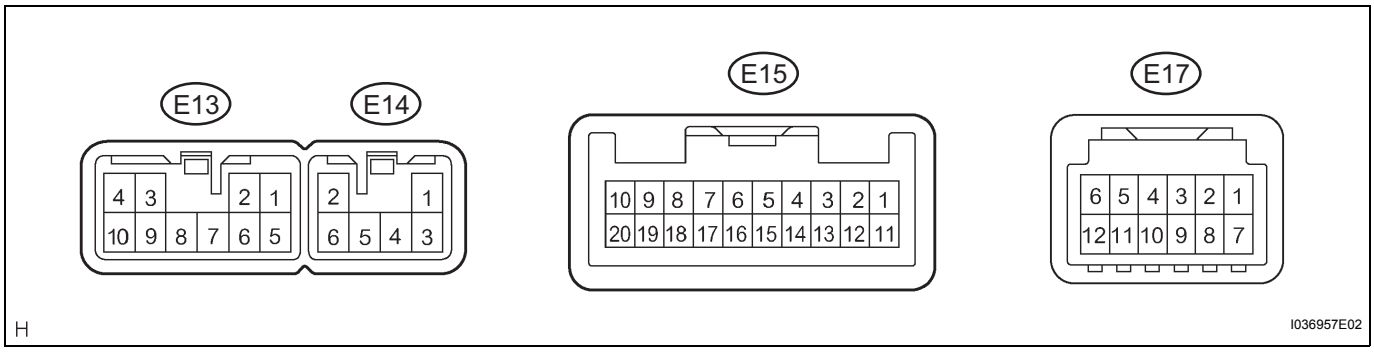
Symptom	Suspected area	See page
The system cannot be operated by the steering pad switch.	1. Steering Pad Switch Circuit	AV-88
	2. Radio Receiver	AV-159
Illumination for steering pad switch does not come on when light control switch is turned to TAIL or HEAD.	Illumination circuit	AV-92

Others:

Symptom	Suspected area	See page
Radio receiver does not illuminate at night (when the light control switch is turned to TAIL or HEAD).	Illumination circuit	AV-92

TERMINALS OF ECU

1. RADIO RECEIVER (9 SPEAKER)

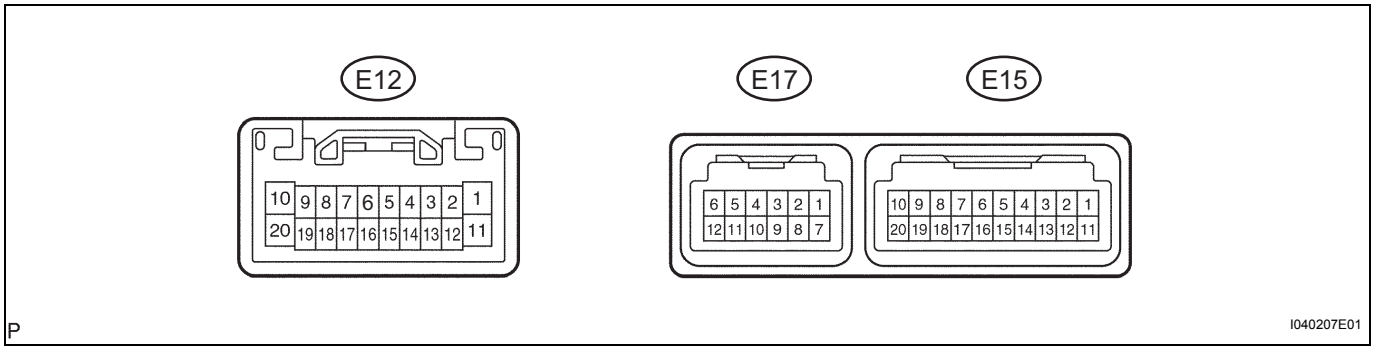


Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specification
FR+ (E13-1) - GND (E13-7)	LG - BR	Sound signal (Front Right)	Audio system is playing	A waveform synchronized with sounds is output
FL+ (E13-2) - GND (E13-7)	P - BR	Sound signal (Front Left)	Audio system is playing	A waveform synchronized with sounds is output
ACC (E13-3) - GND (E13-7)	Y - BR	Accessory (ON)	Turn ignition switch off → on (ACC)	Below 1 V → 10 to 14 V
B (E13-4) - GND (E13-7)	R - BR	Battery	Always	10 to 14 V
FR- (E13-5) - GND (E13-7)	L - BR	Sound signal (Front Right)	Audio system is playing	A waveform synchronized with sounds is output
FL- (E13-6) - GND (E13-7)	V - BR	Sound signal (Front Left)	Audio system is playing	A waveform synchronized with sounds is output
GND (E13-7) - Body ground	BR - Body ground	Ground	Always	Below 1 V
ANT (E13-8) - GND (E13-7)	B - BR	Power source of antenna	Radio is ON	10 to 14 V
ILL+ (E13-10) - GND (E13-7)	G - BR	Illumination signal	Light control switch OFF → TAIL or ON	Below 1 V → 10 to 14 V
RR+ (E14-1) - GND (E13-7)	R - BR	Sound signal (Rear Right)	Audio system is playing	A waveform synchronized with sounds is output
RL+ (E14-2) - GND (E13-7)	Y - BR	Sound signal (Rear Left)	Audio system is playing	A waveform synchronized with sounds is output
RR- (E14-3) - GND (E13-7)	W - BR	Sound signal (Rear Right)	Audio system is playing	A waveform synchronized with sounds is output
ILL- (E14-5) - GND (E13-7)	LG - BR	Illumination signal	Light control switch OFF → TAIL or ON	Below 1 V → Pulse generation
RL- (E14-6) - GND (E13-7)	B - BR	Sound signal (Rear Left)	Audio system is playing	A waveform synchronized with sounds is output
TX+ (E15-9) - GND (E13-7)	Y - BR	AVC-LAN communication signal	Turn ignition switch on (ACC)	2 to 3 V
TX- (E15-10) - GND (E13-7)	B - BR	AVC-LAN communication signal	Turn ignition switch on (ACC)	2 to 3 V
GND (E15-6) -Body ground	B - Body ground	Steering pad switch ground	Always	Below 1 V
1CH (E15-7) - GND (E13-7)	O - BR	Steering pad switch signal	Steering pad switch not operated → SEEK+ switch pushed → SEEK- switch pushed → VOL+ switch pushed → VOL- switch pushed	4 V or more → Approx 0.5 V → Approx 0.9 V → Approx 2.0 V → Approx 3.4 V
2CH (E15-8) - GND (E13-7)	V - BR	Steering pad switch signal	Steering pad switch not operated → MODE switch pushed	4 V or more → Approx 2.5 V
CSLD (E17-1) - Body ground	Shielded - Body ground	Ground	Always	Below 1 V

AV

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specification
CDR+ (E17-2) - GND (E13-7)	W - BR	Sound signal (Right)	Tape player is playing	A waveform synchronized with sounds is output
CDR- (E17-3) - GND (E13-7)	B - BR	Sound signal (Right)	Tape player is playing	A waveform synchronized with sounds is output
CDL+ (E17-4) - GND (E13-7)	G - BR	Sound signal (Left)	Tape player is playing	A waveform synchronized with sounds is output
CDL- (E17-5) - GND (E13-7)	R - BR	Sound signal (Left)	Tape player is playing	A waveform synchronized with sounds is output
MUTE (E17-6) - GND (E13-7)	W - BR	Mute signal	Audio system is playing → Changing mode	Above 3.5 V → Below 1 V
TXM+ (E17-9) - GND (E13-7)	R - BR	AVC-LAN communication signal	Turn ignition switch on (ACC)	2 to 3 V
TXM- (E17-10) - GND (E13-7)	W - BR	AVC-LAN communication signal	Turn ignition switch on (ACC)	2 to 3 V

2. RADIO RECEIVER (12 SPEAKER)

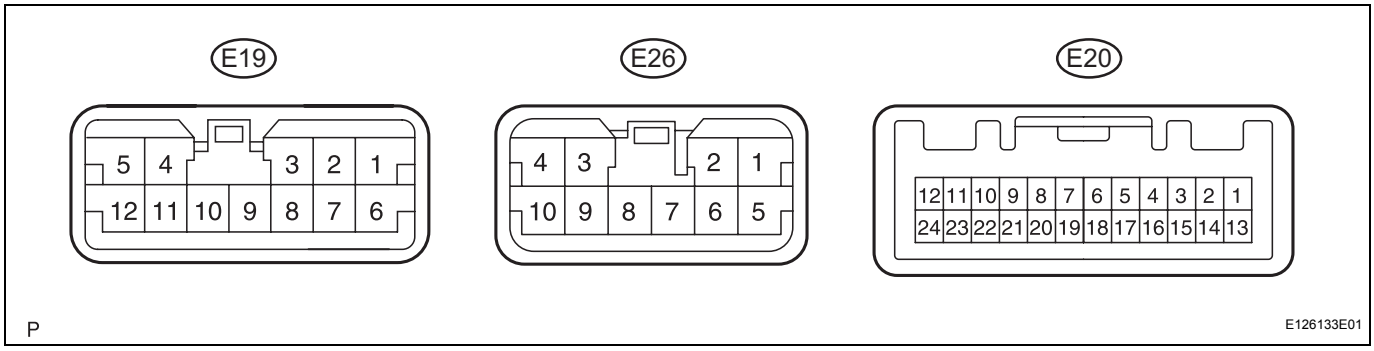


Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specification
B (E12-1) - GND (E12-20)	R - BR	Battery	Always	10 to 14 V
ILL+ (E12-2) - GND (E12-20)	G - BR	Illumination signal	Light control switch OFF → TAIL or ON	Below 1.0 V → 10 to 14 V
ATX+ (E12-5) - GND (E12-20)	Y - BR	AVC-LAN communication signal	Turn ignition switch on (ACC)	2 to 3 V
MUTE (E12-7) - GND (E12-20)	R - BR	Mute signal	Audio system is playing → Changing mode	Above 3.5 V → Below 1 V
R+ (E12-8) - GND (E12-20)	R - BR	Sound signal (Right)	Audio system is playing	A waveform synchronized with sounds is output
L+ (E12-9) - GND (E12-20)	B - BR	Sound signal (Left)	Audio system is playing	A waveform synchronized with sounds is output
SLD (E12-10) - Body ground	Shielded - Body ground	Ground	Always	Below 1 V
ACC (E12-11) - GND (E12-20)	Y - BR	Accessory (ON)	Turn ignition switch off → on (ACC)	Below 1 V → 10 to 14 V
ILL- (E12-12) - GND (E12-20)	LG - BR	Illumination signal	Light control switch OFF → TAIL or ON	Below 1.0 V → Pulse generation
ANT (E12-13) - GND (E12-20)	B - BR	Antenna	Radio is ON	10 to 14 V
ATX- (E12-15) - GND (E12-20)	BR - BR	AVC-LAN communication signal	Turn ignition switch on (ACC)	2 to 3 V
R- (E12-18) - GND (E12-20)	G - BR	Sound signal (Right)	Audio system is playing	A waveform synchronized with sounds is output
L- (E12-19) - GND (E12-20)	W - BR	Sound signal (Left)	Audio system is playing	A waveform synchronized with sounds is output
GND (E12-20) - Body ground	BR - Body ground	Ground	Always	Below 1 V
TX+ (E15-9) - GND (E12-20)	Y - BR	AVC-LAN communication signal	Turn ignition switch on (ACC)	2 to 3 V
TX- (E15-10) - GND (E12-20)	B - BR	AVC-LAN communication signal	Turn ignition switch on (ACC)	2 to 3 V

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specification
GND (E15-6) -Body ground	B - Body ground	Steering pad switch ground	Always	Below 1 V
1CH (E15-7) - GND (E12-20)	O - BR	Steering pad switch signal	Steering pad switch not operated → SEEK+ switch pushed → SEEK- switch pushed → VOL+ switch pushed → VOL- switch pushed	4 V or more → Approx 0.5 V → Approx 0.9 V → Approx 2.0 V → Approx 3.4 V
2CH (E15-8) - GND (E12-20)	V - BR	Steering pad switch signal	Steering pad switch not operated → MODE switch pushed	4 V or more → Approx 2.5 V
CSLD (E17-1) - Body ground	Shielded - Body ground	Ground	Always	Below 1 V
CDR+ (E17-2) - GND (E12-20)	W - BR	Sound signal (Right)	Tape player is playing	A waveform synchronized with sounds is output
CDR- (E17-3) - GND (E12-20)	B - BR	Sound signal (Right)	Tape player is playing	A waveform synchronized with sounds is output
CDL+ (E17-4) - GND (E12-20)	G - BR	Sound signal (Left)	Tape player is playing	A waveform synchronized with sounds is output
CDL- (E17-5) - GND (E12-20)	R - BR	Sound signal (Left)	Tape player is playing	A waveform synchronized with sounds is output
MUTE (E17-6) - GND (E12-20)	W - BR	Mute signal	Audio system is playing → Changing mode	Above 3.5 V → Below 1 V
TXM+ (E17-9) - GND (E12-20)	R - BR	AVC-LAN communication signal	Turn ignition switch on (ACC)	2 to 3 V
TXM- (E17-10) - GND (E12-20)	W - BR	AVC-LAN communication signal	Turn ignition switch on (ACC)	2 to 3 V

AV

3. STEREO COMPONENT AMPLIFIER (12 SPEAKER)

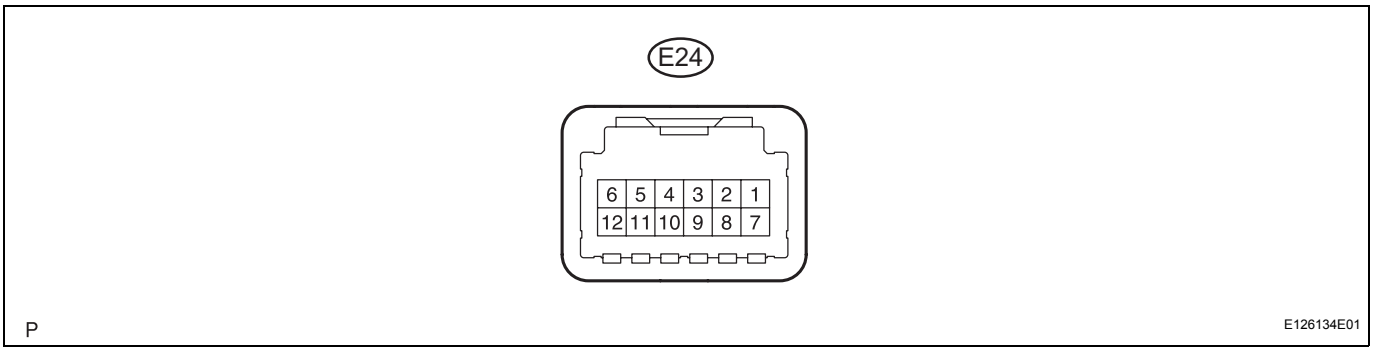


Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specification
FL- (E19-1) - GND (E19-6)	V - W-B	Sound signal (Front Right)	Audio system is playing	A waveform synchronized with sounds is output
FL+ (E19-2) - GND (E19-6)	P - W-B	Sound signal (Front Left)	Audio system is playing	A waveform synchronized with sounds is output
FR- (E19-3) - GND (E19-6)	L - W-B	Sound signal (Front Right)	Audio system is playing	A waveform synchronized with sounds is output
SL+ (E19-4) - GND (E19-6)	LG - W-B	Sound signal (Surround Left)	Audio system is playing	A waveform synchronized with sounds is output
WF1+ (E19-5) - GND (E19-6)	GR - W-B	Sound signal (Woofer)	Audio system is playing	A waveform synchronized with sounds is output
GND (E19-6) - Body ground	W-B - Body ground	Ground	Always	Below 1 V
GND2 (E19-7) - Body ground	W-B - Body ground	Ground	Always	Below 1 V
FR+ (E19-9) - GND (E19-6)	LG - W-B	Sound signal (Front Right)	Audio system is playing	A waveform synchronized with sounds is output
SL- (E19-10) - GND (E19-6)	L - W-B	Sound signal (Surround Left)	Audio system is playing	A waveform synchronized with sounds is output

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specification
WF1- (E19-12) - GND (E19-6)	W - W-B	Sound signal (Woofer)	Audio system is playing	A waveform synchronized with sounds is output
MUTE (E20-1) - GND (E19-6)	R - W-B	Mute signal	Audio system is playing → Changing mode	Above 3.5 V → Below 1 V
L- (E20-2) - GND (E19-6)	W - W-B	Sound signal from radio receiver (Left)	Audio system is playing	A waveform synchronized with sounds is output
L+ (E20-3) - GND (E19-6)	B - W-B	Sound signal from radio receiver (Left)	Audio system is playing	A waveform synchronized with sounds is output
R- (E20-4) - GND (E19-6)	G - W-B	Sound signal from radio receiver (Right)	Audio system is playing	A waveform synchronized with sounds is output
R+ (E20-5) - GND (E19-6)	R - W-B	Sound signal from radio receiver (Right)	Audio system is playing	A waveform synchronized with sounds is output
TX- (E20-7) - GND (E19-6)	BR - W-B	AVC-LAN communication signal	Turn ignition switch on (ACC)	2 to 3 V
TX+ (E20-8) - GND (E19-6)	Y - W-B	AVC-LAN communication signal	Turn ignition switch on (ACC)	2 to 3 V
ACC (E20-12) - GND (E19-6)	Y - W-B	Accessory (ON)	Turn ignition switch off → on (ACC)	Below 1 V → 10 to 14 V
+B (E26-1) - GND (E19-6)	L - W-B	Battery	Always	10 to 14 V
SR+ (E26-2) - GND (E19-6)	BR - W-B	Sound signal (Surround Right)	Audio system is playing	A waveform synchronized with sounds is output
RL+ (E26-3) - GND (E19-6)	Y - W-B	Sound signal (Rear Left)	Audio system is playing	A waveform synchronized with sounds is output
RR- (E26-4) - GND (E19-6)	W - W-B	Sound signal (Rear Right)	Audio system is playing	A waveform synchronized with sounds is output
+B2 (E26-5) - GND (E19-6)	L - W-B	Battery	Always	10 to 14 V
SR- (E26-6) - GND (E19-6)	G - W-B	Sound signal (Surround Right)	Audio system is playing	A waveform synchronized with sounds is output
CTR- (E26-7) - GND (E19-6)	B - W-B	Sound signal (Center)	Audio system is playing	A waveform synchronized with sounds is output
CTR+ (E26-8) - GND (E19-6)	Y - W-B	Sound signal (Center)	Audio system is playing	A waveform synchronized with sounds is output
RL- (E26-9) - GND (E19-6)	B - W-B	Sound signal (Rear Right)	Audio system is playing	A waveform synchronized with sounds is output
RR+ (E26-10) - GND (E19-6)	R - W-B	Sound signal (Rear Right)	Audio system is playing	A waveform synchronized with sounds is output

AV

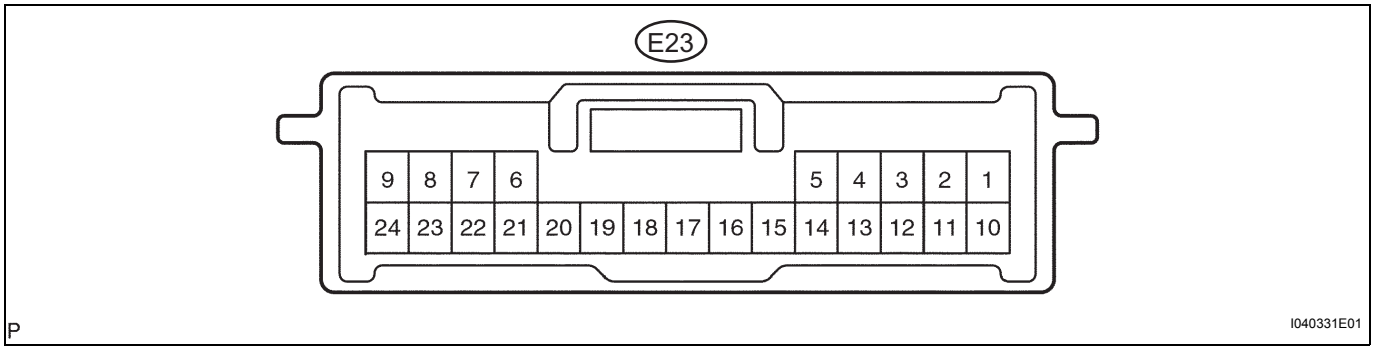
4. TAPE PLAYER



Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specification
SG1 (E24-1) - Body ground	Shielded - Body ground	Ground	Always	Below 1 V
R+ (E24-2) - GND5 (E24-7)	W - W-B	Sound signal (Right)	Tape player is playing	A waveform synchronized with sounds is output
R- (E24-3) - GND5 (E24-7)	B - W-B	Sound signal (Right)	Tape player is playing	A waveform synchronized with sounds is output

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specification
L+ (E24-4) - GND5 (E24-7)	G - W-B	Sound signal (Left)	Tape player is playing	A waveform synchronized with sounds is output
L- (E24-5) - GND5 (E24-7)	R - W-B	Sound signal (Left)	Tape player is playing	A waveform synchronized with sounds is output
LMUT (E24-6) - GND5 (E24-7)	W - W-B	Mute signal	Audio system is playing → Changing mode	Above 3.5 V → Below 1 V
GND5 (E24-7) - Body ground	W-B - Body ground	Ground	Always	Below 1 V
TX+ (E24-9) - GND5 (E24-7)	R - W-B	AVC-LAN communication signal	Turn ignition switch on (ACC)	2 to 3 V
TX- (E24-10) - GND5 (E24-7)	W - W-B	AVC-LAN communication signal	Turn ignition switch on (ACC)	2 to 3 V
ACC1 (E24-11) - GND5 (E24-7)	Y - W-B	Accessory (ON)	Turn ignition switch off → on (ACC)	Below 1 V → 10 to 14 V
+B (E24-12) - GND5 (E24-7)	R - W-B	Battery	Always	10 to 14 V

5. GATEWAY ECU



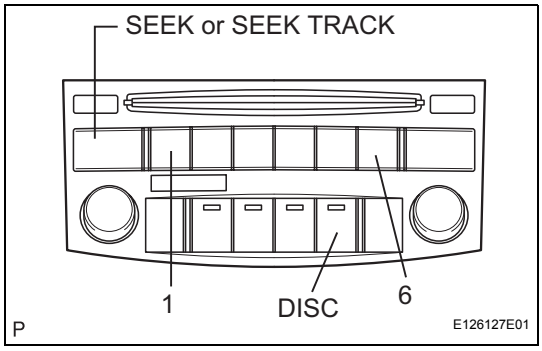
Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specification
IG (E23-1) - GND (E23-24)	W - W-B	Ignition switch on (IG)	Always	10 to 14 V
ACC (E23-2) - GND (E23-24)	R - W-B	Accessory (ON)	Turn ignition switch off → on (ACC)	Below 1 V → 10 to 14 V
GTX+ (E23-6) - GND (E23-24)	BR - W-B	AVC-LAN communication signal	Turn ignition switch on (ACC)	2 to 3 V
BATT (E23-10) - GND (E23-24)	B - W-B	Battery	Always	10 to 14 V
GTX- (E23-21) - GND (E23-24)	R - W-B	AVC-LAN communication signal	Turn ignition switch on (ACC)	2 to 3 V
GND (E23-24) - Body ground	W-B - Body ground	Ground	Always	Below 1 V

6. MULTI-DISPLAY (ACCESSORY METER) (See page ME-20)

AV

DTC CHECK / CLEAR

HINT:
If the system cannot enter the diagnosis mode, inspect all AVC-LAN communication signals and repair or replace problem parts.
(See page AV-119)



1. STARTING DIAGNOSTIC MODE

(a) Turn the ignition switch on (ACC).
(b) Turn off the audio system.
(c) While pressing the preset switches "1" and "6" at the same time, press the "DISC" 3 times.
HINT:
- When the system enters the diagnostic mode, a beep sound is emitted 3 times and all the elements come on during the SW check mode.
- It takes approximately 40 seconds to complete the check.
- Turn all the elements in the LCD on.
- When pressing the switch, confirm a beep sound is emitted.
- Press the "SEEK TRACK UP" switch to enter the "System Check Screen".

2. FINISHING DIAGNOSTIC MODE

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

3. CHECK DTC

HINT:
Illustrations may differ from the actual vehicle depending on the device setting and options. Therefore, some detailed areas may not be shown exactly the same as on the actual vehicle.

(a) Reference:
In the system check mode, the system check and the diagnostic memory check are performed, and the check results are displayed in ascending order of the component codes (physical address).

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

(b) Service check result display.

Display	Original Language	Meaning	Action to be taken
GOOD	Good (normal)	No DTCs are detected in both "System Check Mode" and "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).

Display	Original Language	Meaning	Action to be taken
ECHn	Exchange	One or more DTCs for "Exchange" are detected in either "System Check Mode" or "Diagnostic Memory Mode".	Go to the 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 the 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" and "Diagnostic Memory Request".	Check the power source circuit and the communication circuit of the component indicated by the component code (physical address).

(c) Device name and physical address.

Physical address No.	Name
190	Radio receiver
440	Stereo component amplifier
1C6	Gateway ECU
1D4	Multi-display (Accessory meter)
320	Tape player

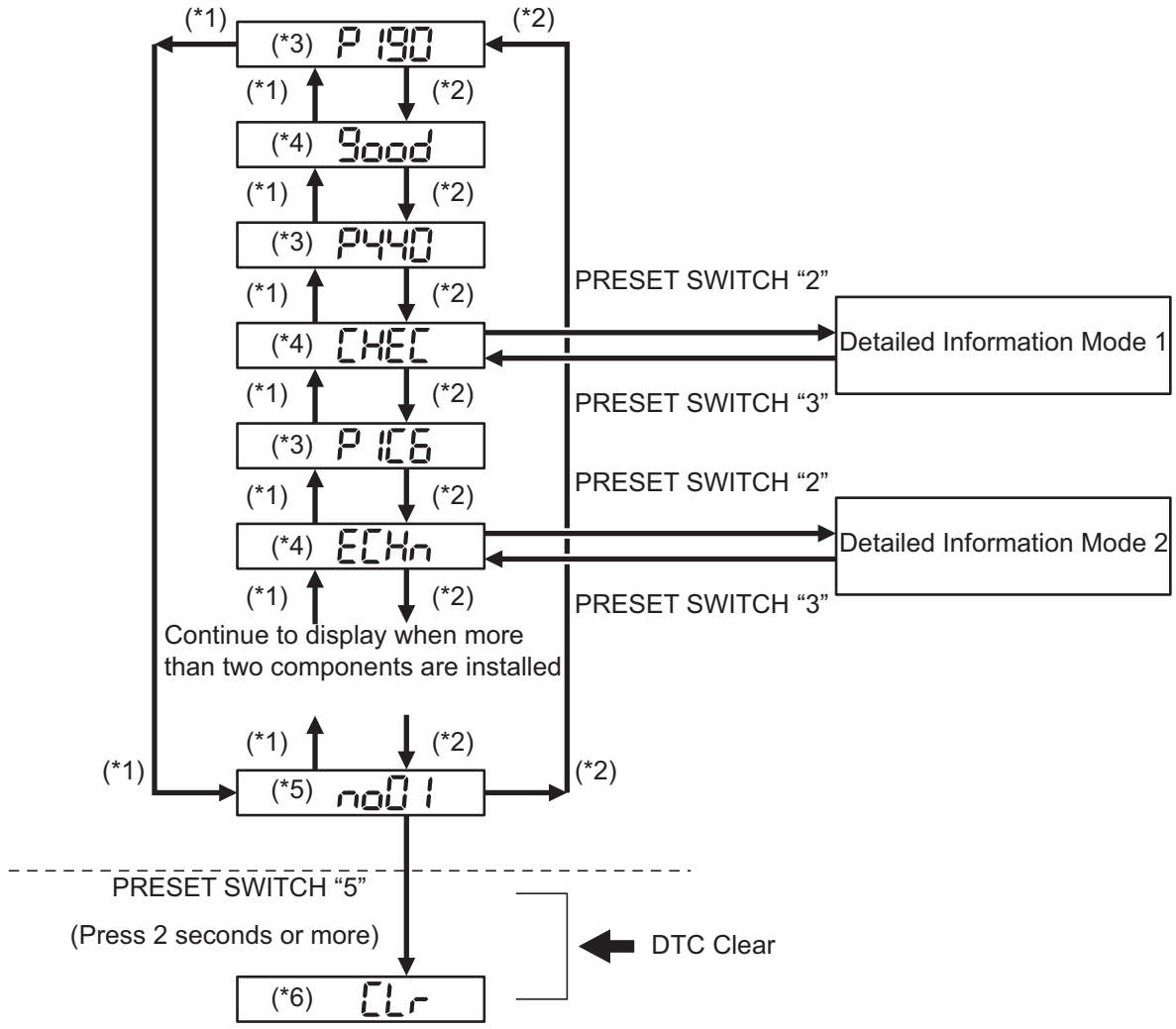
(d) Service check mode.

(1) Press the "SEEK TRACK" switch to see the check result of each component.

(2) The component code (physical address) is displayed first, and then the check result follows.
HINT:
- If all check results are "good", the system judges that no DTC exists.
- If the preset switch "1" is pressed in the service check mode, service check is performed again.
- This illustration is only an example and may differ in cases such as for each option part and output DTCs.

AV

Service Check Mode:



*1: SEEK TRACK DOWN

*2: SEEK TRACK UP

*3: P...Indicates physical address

190/440/1C6...Physical address

*4: Result

*5: Up-to-date connection check number

*6: Memory clear

P

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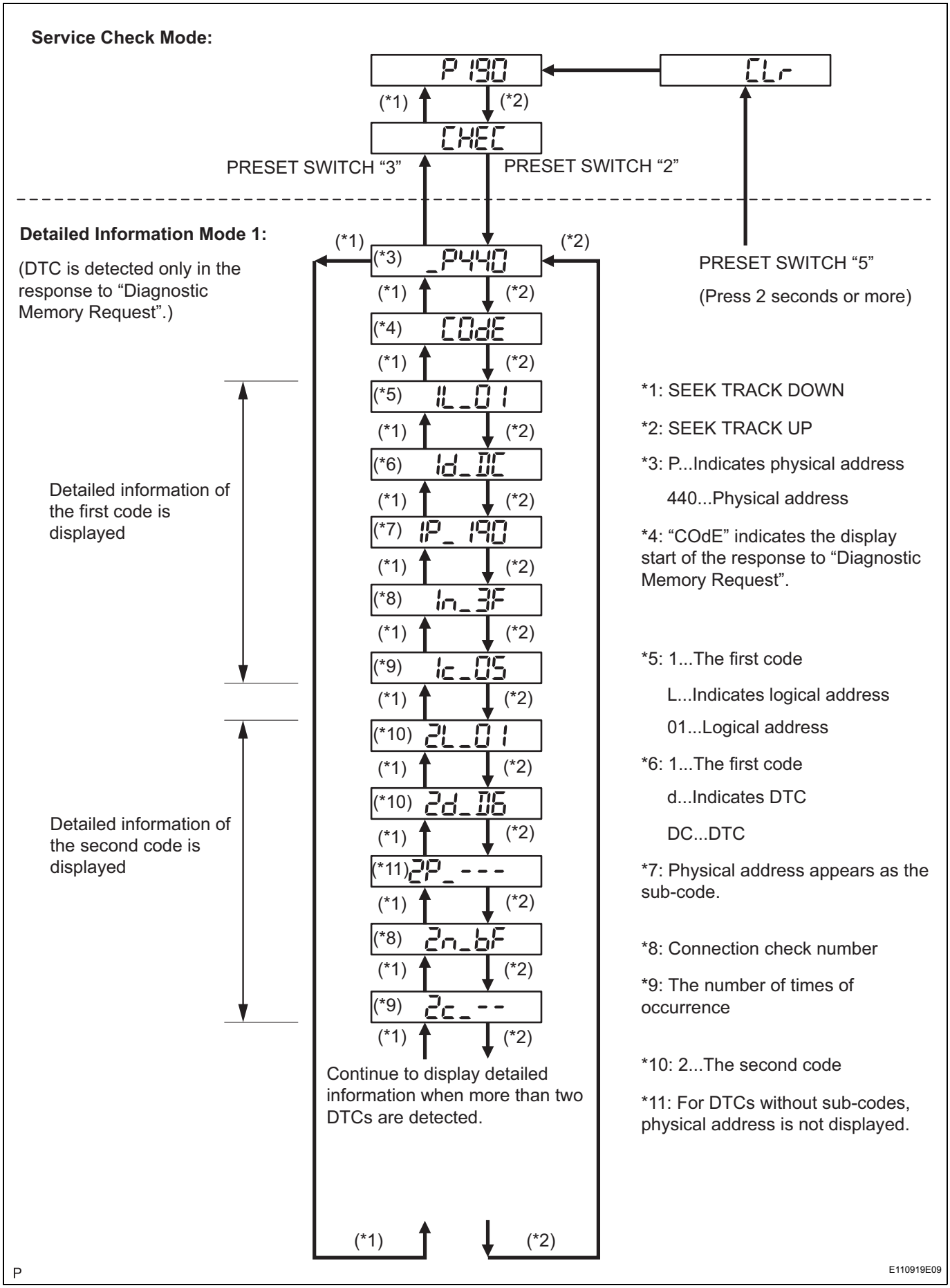
(e) Detailed information mode 1
HINT:

- "Detailed information mode 1" is displayed when there is no response to "System Check Result Request" and DTC is detected only in "Diagnostic Memory Request".
- The component device code (physical address) is displayed first, and then the check result follows.

- This illustration is only an example and may differ in cases such as for each option part and output DTCs.

(1) Press the preset switch "2" to go to the "Detailed Information Mode 1".
(2) Press the "SEEK TRACK" switch to display the physical address and DTC of the component.
(3) Press the preset switch "3" to go to the "Service Check Mode".
(4) Distinguish between the displays of the responses to "System Check Result Request" and "Diagnostic Memory Request". In order to distinguish the information detected in "System Check Mode" and "Diagnostic Memory Mode" in "ECHn", "CHEC", and "old" in "Detailed Information Mode 1", refer to the following:
    - "SyS" is displayed before the detailed codes detected as a result of "System Check Result Request" are displayed.
    - "COdE" is displayed before the detailed codes detected as a result of "Diagnostic Memory Request" are displayed.

    HINT:
    - The response to "System Check Result Request" is the current information given from each ECU as a result of the system check.
    - The response to "Diagnostic Memory Request" contains the information received from each ECU or stored in each ECU in the past.
    - The response to "Diagnostic Memory Request" is the output DTCs as a result of the diagnostic memory check or the DTCs received from each ECU.
    - "System Check Result Request (SyS)" is displayed first, and then the logical address and DTC appear in order.
    - "Diagnostic Memory Request (COdE)" is displayed first, and then the logical address, DTC, sub-code, connection check number, and the number of occurrence appear in order.


Service Check Mode:
P190
CLr
(*1)
(*2)
CHEC
PRESET SWITCH "3"
PRESET SWITCH "2"
Detailed Information Mode 1:
(DTC is detected only in the response to "Diagnostic Memory Request".)
(*3) _P440
PRESET SWITCH "5"
(Press 2 seconds or more)
(*4) COdE
(*5) 1L_01
(*6) 1d_DC
(*7) 1P_190
(*8) 1n_3F
(*9) 1c_05
(*10) 2L_01
(*10) 2d_D6
(*11) 2P_---
(*8) 2n_bF
(*9) 2c_--
Detailed information of the first code is displayed
Detailed information of the second code is displayed
Continue to display detailed information when more than two DTCs are detected.
*1: SEEK TRACK DOWN
*2: SEEK TRACK UP
*3: P...Indicates physical address
440...Physical address
*4: "COdE" indicates the display start of the response to "Diagnostic Memory Request".
*5: 1...The first code
L...Indicates logical address
01...Logical address
*6: 1...The first code
d...Indicates DTC
DC...DTC
*7: Physical address appears as the sub-code.
*8: Connection check number
*9: The number of times of occurrence
*10: 2...The second code
*11: For DTCs without sub-codes, physical address is not displayed.
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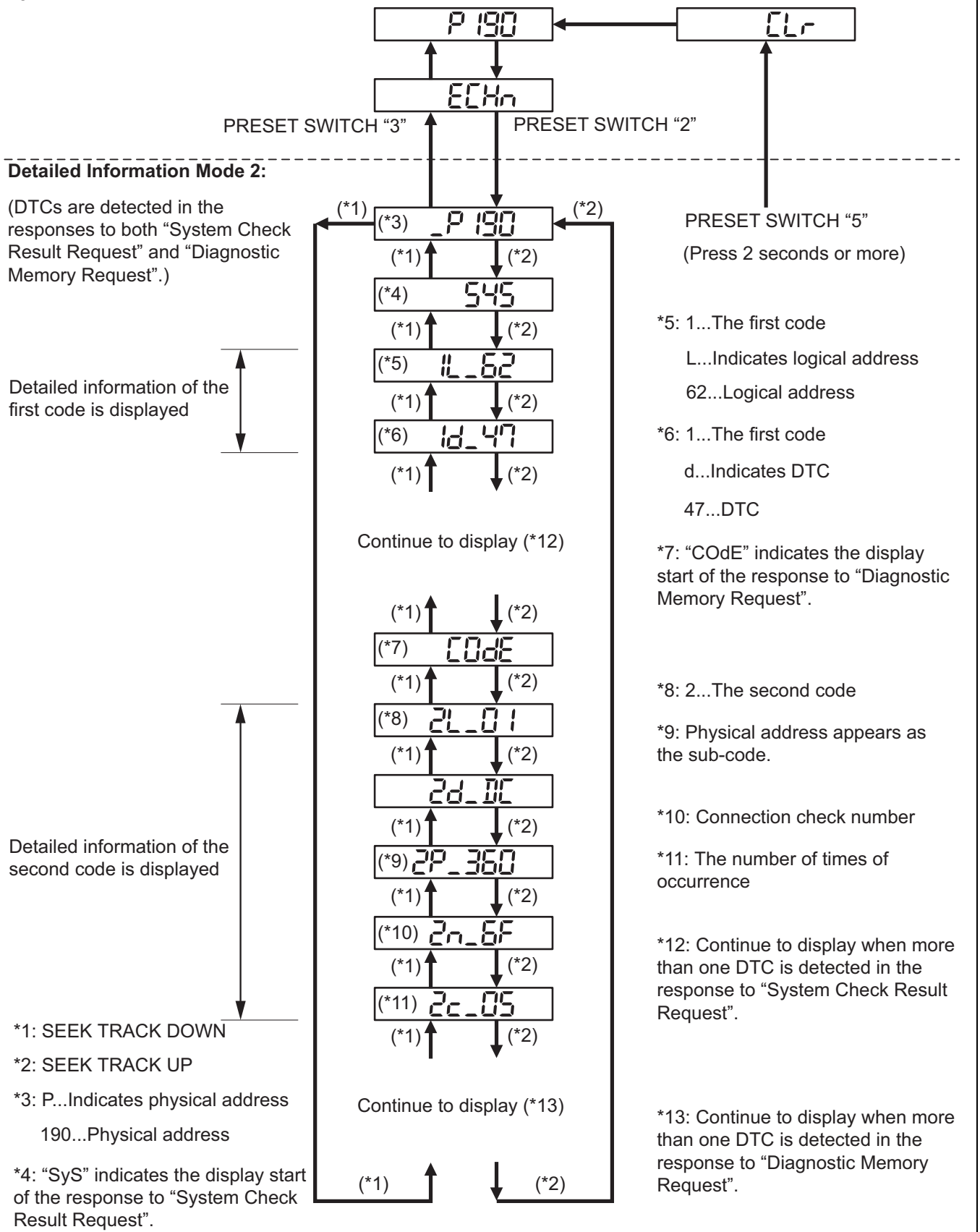
(f) Detailed information mode 2
HINT:
- "Detailed information mode 2" is displayed when DTCs are detected in the responses to both "System Check Result Request" and "Diagnostic Memory Request".
- The component device code (physical address) is displayed first, and then the check result follows.
- This illustration is only an example and may differ in cases such as for each option part and output DTCs.

(1) Press the preset switch "2" to go to the "Detailed Information Mode 2".
(2) Press the "SEEK TRACK" switch to display the physical address and DTC of the component.
(3) Press the preset switch "3" to go to the "Service Check Mode".
(4) Distinguish between the displays of the responses to "System Check Result Request" and "Diagnostic Memory Request". In order to distinguish the information detected in "System Check Mode" and "Diagnostic Memory Mode" in "ECHn", "CHEC", and "old" in "Detailed Information Mode 2", refer to the following:
- "SyS" is displayed before the detailed codes detected as a result of "System Check Result Request" are displayed.
- "COdE" is displayed before the detailed codes detected as a result of "Diagnostic Memory Request" are displayed.
HINT:
- The response to "System Check Result Request" is the current information given from each ECU as a result of the system check.
- The response to "Diagnostic Memory Request" contains the information received from each ECU or stored in each ECU in the past.
- The response to "Diagnostic Memory Request" is the output DTCs as a result of the diagnostic memory check or the DTCs received from each ECU.
- "System Check Result Request (SyS)" is displayed first, and then the logical address and DTC appear in order.
- "Diagnostic Memory Request (COdE)" is displayed first, and then the logical address, DTC, sub-code, connection check number, and the number of occurrence appear in order.

System Check Mode:



AV

P

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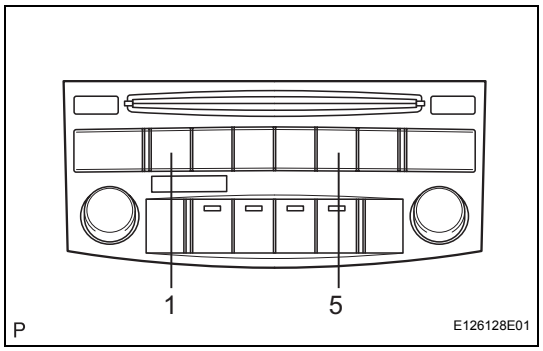


4. DTC CLEAR/RECHECK

(a) Clearing all DTC Memory (when clearing all the memory of the DTCs previously detected).
  (1) When the preset switch "5" is pressed for 2 seconds or more during "Service Check Mode", the DTCs for all components are cleared. ("CLr" is displayed at this time.)
  HINT:
  - A beep sound is emitted once when the DTC memory is completely cleared.
  - When the DTC memory for all the components is cleared, only the component codes (physical address) are displayed.
  - After the DTC memory is cleared, the "Service Check Mode" is restored.

(b) Clearing Individual DTC Memory (when clearing the memory of the DTC previously detected individually).
  (1) When the preset switch "5" is pressed for 2 seconds or more during "Detailed Information Mode 1" or "Detailed Information Mode 2", the DTCs for the target component are cleared.
  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 target component.
  - After the DTC memory is cleared, the "Service Check Mode" is restored.
  - To check DTCs, press the preset switch "1" and perform the system check again.

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

DIAGNOSTIC TROUBLE CODE CHART

COMMUNICATION DIAGNOSIS

DTC No.	Detection Item	Trouble Area	See page
01-21	ROM Error	Radio receiver	AV-29
01-22	RAM Error	Radio receiver	AV-29
01-D5	Absence of Registration Unit	1. Power source circuit of the component shown by the sub-code 2. AVC-LAN circuit between the radio receiver and the component shown by the sub-code 3. Component shown by the sub-code	AV-30
01-D6	No Master	1. Radio receiver power source circuit 2. Power source circuit of the component which has stored this code 3. AVC-LAN circuit between the radio receiver and the component which has stored this code 4. Component which has stored this code 5. Radio receiver	AV-32
01-D7	Connection Check Error	1. Radio receiver power source circuit 2. Power source circuit of the component which has stored this code 3. AVC-LAN circuit between the radio receiver and the component which has stored this code 4. Component which has stored this code 5. Radio receiver	AV-32
01-D8	No Response for Connection Check	1. Power source circuit of the component shown by the sub-code 2. AVC-LAN circuit between the radio receiver and the component shown by the sub-code 3. Component shown by the sub-code	AV-30
01-D9	Last Mode Error	1. Power source circuit of the component shown by the sub-code 2. AVC-LAN circuit between the radio receiver and the component shown by the sub-code 3. Component shown by the sub-code	AV-30
01-DA	No Response Against ON / OFF Command	1. Power source circuit of the component shown by the sub-code 2. AVC-LAN circuit between the radio receiver and the component shown by the sub-code 3. Component shown by the sub-code	AV-30

DTC No.	Detection Item	Trouble Area	See page
01-DB	Mode Status Error	1. Power source circuit of the component shown by the sub-code 2. AVC-LAN circuit between the radio receiver and the component shown by the sub-code 3. Component shown by the sub-code	AV-30
01-DC	Transmission Error	If the same sub-code is recorded in other components, check harness for power supply and communication system of all components shown by code.	AV-38
01-DD	Master Reset	1. Radio receiver power source circuit 2. AVC-LAN circuit between the radio receiver and the component which has stored this code 3. Radio receiver 4. Component which has stored this code	AV-41
01-DE	Slave Reset	1. Power source circuit of the component shown by the sub-code 2. AVC-LAN circuit between the radio receiver and the component shown by the sub-code 3. Component shown by the sub-code	AV-30
01-DF	Master Error	1. Radio receiver power source circuit 2. AVC-LAN circuit between the radio receiver and the component which has stored this code 3. Radio receiver 4. Component which has stored this code	AV-47
01-E0	Registration Complete Indication Error	-	AV-53
01-E1	Voice Processing Device ON Error	1. Radio receiver power source circuit 2. AVC-LAN circuit between the radio receiver and the component which has stored this code 3. Radio receiver 4. Component which has stored this code	AV-41
01-E2	ON / OFF Indication Parameter Error	Radio receiver	AV-54
01-E3	Registration Demand Transmission	-	AV-53
01-E4	Multiple Frame Incomplete	-	AV-53

CASSETTE PLAYER

DTC No.	Detection Item	Trouble Area	See page
61-10	Belt Cut	Tape player	AV-55
61-40	Mechanical Error of Media	1. Cassette tape 2. Tape player	AV-56
61-41	Eject Error	1. Cassette tape 2. Tape player	AV-56
61-42	Tape Tangling	1. Cassette tape 2. Tape player	AV-56
61-43	Head Dirt	Tape player	AV-58

DTC No.	Detection Item	Trouble Area	See page
61-44	Device Power Supply Problem	Tape player	AV-59

CD PLAYER

DTC No.	Detection Item	Trouble Area	See page
62-10	CD Player Mechanical Error	Radio receiver	AV-61
62-11	CD Insertion and Eject Error	Radio receiver	AV-61
62-12	CD Reading Abnormal	Radio receiver	AV-61
62-40	No Disc	Radio receiver	AV-60
62-41	Wrong Disc	1. CD 2. Radio receiver	AV-62
62-42	Disc cannot be Read	1. CD 2. Radio receiver	AV-62
62-43	CD-ROM Abnormal	1. CD 2. Radio receiver	AV-64
62-44	CD Abnormal	Radio receiver	AV-65
62-45	Eject Error	Radio receiver	AV-66
62-46	Scratched / Reversed Disc	1. CD 2. Radio receiver	AV-67
62-47	High Temperature	Radio receiver	AV-69
62-48	Excess Current	Radio receiver	AV-65
62-50	Tray Insertion / Ejection Error	Radio receiver	AV-65
62-51	Elevator Error	Radio receiver	AV-66
62-52	Clamp Error	Radio receiver	AV-66

IN-DASH CD CHANGER

DTC No.	Detection Item	Trouble Area	See page
63-10	CD Changer Mechanical Error	Radio receiver	AV-61
63-11	CD Insertion and Eject Error	Radio receiver	AV-61
63-12	CD Reading Abnormal	Radio receiver	AV-61
63-40	No Disc	Radio receiver	AV-60
63-41	Wrong Disc	1. CD 2. Radio receiver	AV-62
63-42	Disc cannot be Read	1. CD 2. Radio receiver	AV-62
63-43	CD-ROM Abnormal	1. CD 2. Radio receiver	AV-64
63-44	CD Abnormal	Radio receiver	AV-65
63-45	Eject Error	Radio receiver	AV-66
63-46	Scratched / Reversed Disc	1. CD 2. Radio receiver	AV-67
63-47	High Temperature	Radio receiver	AV-69
63-48	Excess Current	Radio receiver	AV-65
63-50	Tray Insertion / Ejection Error	Radio receiver	AV-65
63-51	Elevator Error	Radio receiver	AV-66
63-52	Clamp Error	Radio receiver	AV-66

DTC	01-21	ROM Error

DTC	01-22	RAM Error

DESCRIPTION

DTC No.	DTC Detection Condition	Trouble Area
01-21	A malfunction exists in ROM.	Radio receiver
01-22	A malfunction exists in RAM.	

INSPECTION PROCEDURE

HINT:
After the inspection is completed, clear the DTCs.

1	REPLACE RADIO RECEIVER

NEXT

AV

END

DTC	01-D5	Absence of Registration Unit

DTC	01-D8	No Response for Connection Check

DTC	01-D9	Last Mode Error

DTC	01-DA	No Response Against ON / OFF Command

DTC	01-DB	Mode Status Error

DTC	01-DE	Slave Reset

DESCRIPTION

DTC No.	DTC Detection Condition	Trouble Area
01-D5 *1, *3	A device that the sub-code shows is (was) disconnected from the system when turning the ignition switch on (ACC or IG). The communication condition with the device that the code shows cannot be obtained when the engine starts.	• Power source circuit of the component shown by the sub-code • AVC-LAN circuit between the radio receiver and the component shown by the sub-code • Component shown by the sub-code
01-D8 *2, *3	The device indicated by the sub-code is (was) disconnected from the system after the engine starts.	
01-D9 *1, *3	The device that had functioned before the engine stopped is (was) disconnected from the system when the ignition switch is (was) on (ACC or IG).	
01-DA *3	No response is identified when changing mode. Sound and image do not change by switch operation.	
01-DB *1, *3	A dual alarm is detected.	
01-DE *3, *4	A slave device has been disconnected after the engine starts.	

HINT:

- *1: Even if no fault is present, this trouble code may be stored depending on the battery condition or engine start voltage.
- *2: If the power connector is disconnected after the engine starts, this code is stored after 180 seconds.
- *3: If the device is reported as not existing during verification, check the power source circuit and AVC-LAN circuit for the device.
- *4: This code may be stored if the engine is started and the ignition switch is turned to the START position again. (Key type ignition switch only)

NOTICE:

- **Before starting troubleshooting, be sure to clear DTCs to erase codes stored due to the reasons described in the HINT above. Then, check for DTCs and troubleshoot according to the output DTCs.**
- **The radio receiver is the master unit.**
- **Be sure to clear and recheck DTCs after the inspection is completed to confirm that no DTCs are output.**

INSPECTION PROCEDURE

NOTICE:

Be sure to read DESCRIPTION before performing the following procedures.

1	CHECK "RADIO RECEIVER COMMUNICATION ERROR" IN FLOW CHART

Refer to the radio receiver communication error (See page AV-127).

NEXT

END

DTC	01-D6	No Master

DTC	01-D7	Connection Check Error

DESCRIPTION

DTC No.	DTC Detection Condition	Trouble Area
01-D6 *1	When either of the following conditions is met: • The device that stores (stored) the code has (had) been disconnected when the ignition switch is on (ACC or IG) • The master device has (had) been disconnected when this code is stored	• Radio receiver power source circuit • Power source circuit of the component which has stored this code • AVC-LAN circuit between the radio receiver and the component which has stored this code • Component which has stored this code • Radio receiver
01-D7 *2	When either of the following conditions is met: • The device that stored the code has (had) been disconnected after the engine starts (started) • The master device has (had) been disconnected when this code is (was) stored	

HINT:

- *1: Even if no fault is present, this trouble code may be stored depending on the battery condition or engine start voltage.
- *2: When 210 seconds have elapsed after disconnecting the power supply connector of the master component with the ignition switch on (ACC or IG), this code is stored.

NOTICE:

- **Before starting troubleshooting, be sure to clear DTCs to erase codes stored due to the reasons described in the HINT above. Then, check for DTCs and troubleshoot according to the output DTCs.**
- **The radio receiver is the master unit.**
- **Be sure to clear and recheck DTCs after the inspection is completed to confirm that no DTCs are output.**

INSPECTION PROCEDURE

NOTICE:

Be sure to read DESCRIPTION before performing the following procedures.

1	CHECK RADIO RECEIVER POWER SOURCE CIRCUIT

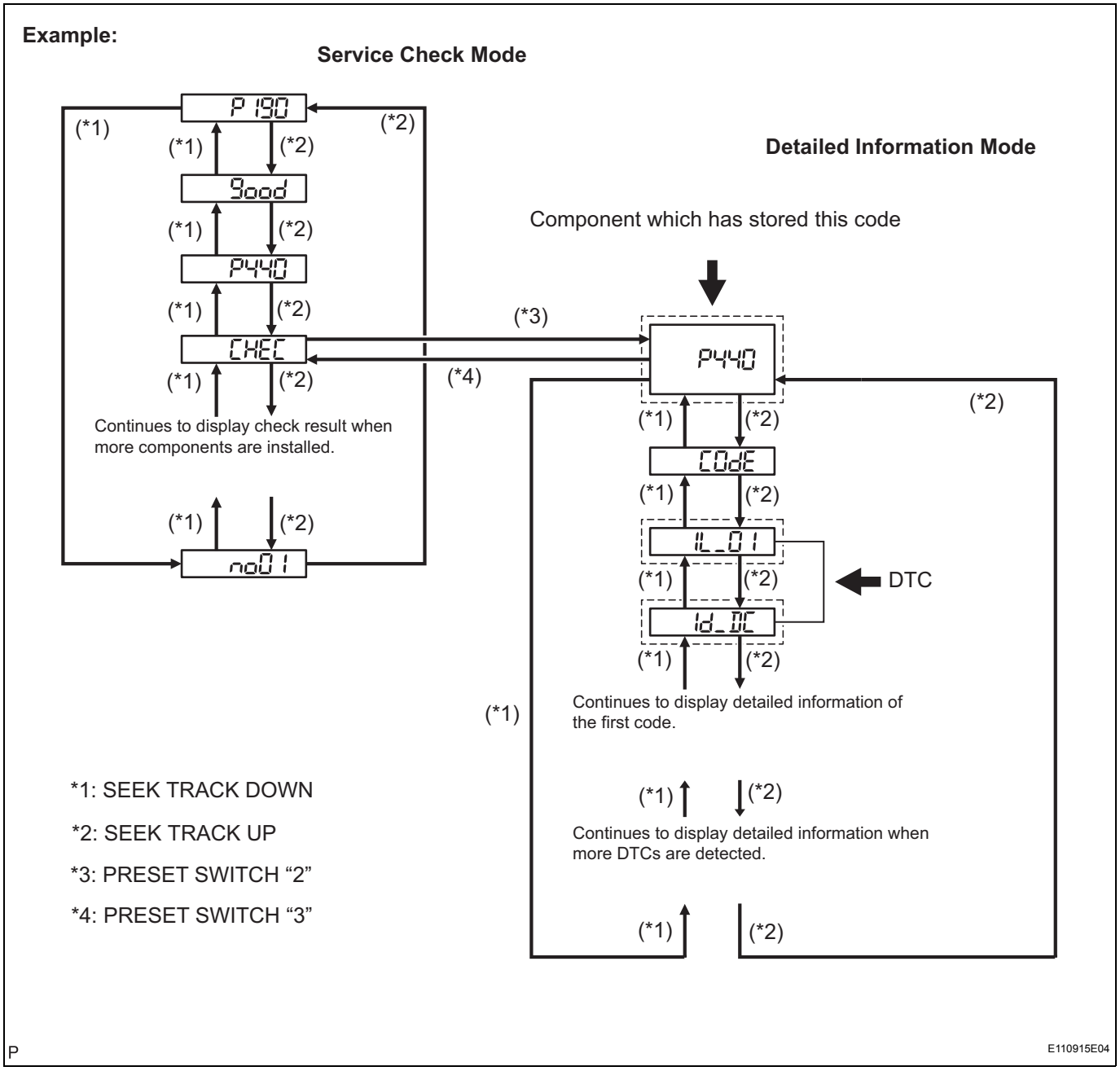
Refer to the radio receiver power source circuit (See page AV-147).

If the power source circuit is operating normally, proceed to the next step.

NEXT

2	IDENTIFY THE COMPONENT WHICH HAS STORED THIS CODE

(a) Enter the diagnostic mode.



(b) Press the preset switch "3" to change to "Detailed Information Mode".
(c) Identify the component which has stored this code.

Component Table:

Component	Physical address
Gateway ECU	1C6
Multi-display (Accessory meter)	1D4
Tape player	320
Stereo component amplifier	440

HINT:

- "440 (stereo component amplifier)" is the component which has stored this code in the example shown in the illustration.
- For details of the DTC display, refer to "DTC CHECK/ CLEAR" (See page AV-18).

AV

NEXT

3	CHECK POWER SOURCE CIRCUIT OF COMPONENT WHICH HAS STORED THIS CODE

(a) Inspect the power source circuit of the component which has stored this code.
If the power source circuit is operating normally, proceed to the next step.

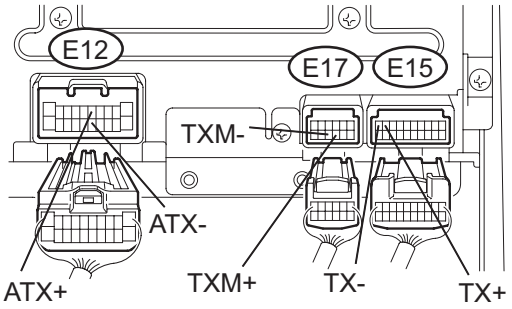
Component Table:

Component	Proceed to
Gateway ECU	Gateway ECU power source circuit (See page AV-153)
Multi-display (Accessory meter)	Multi-display power source circuit (See page AV-151)
Tape player	Tape player power source circuit (See page AV-155)
Stereo component amplifier	Stereo component amplifier power source circuit (See page AV-149)

NEXT

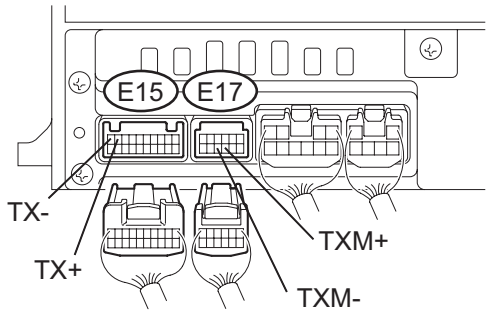
4	INSPECT RADIO RECEIVER

Wire Harness View (12 Speaker):



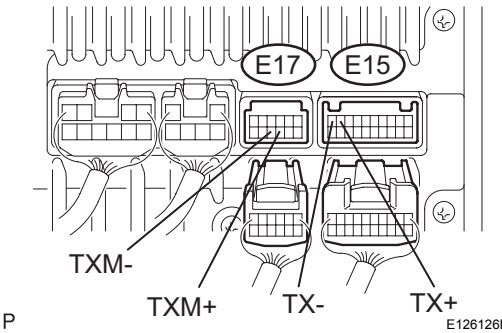
Wire Harness View

(9 Speaker, 6 CD Type):



Wire Harness View

(9 Speaker, 1 CD Type):



P E126126E02

(a) Disconnect the radio receiver connectors.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
TX+ (E15-9) - TX- (E15-10)	Always	60 to 80 Ω
TXM+ (E17-9) - TXM- (E17-10) (*1)	Always	60 to 80 Ω
ATX+ (E12-5) - ATX- (E12-15) (*2)	Always	60 to 80 Ω

*1: with Tape Player
*2: for 12 Speaker System

NG → REPLACE RADIO RECEIVER

OK

5	CHECK HARNESS AND CONNECTOR (RADIO RECEIVER - COMPONENT WHICH HAS STORED THIS CODE)

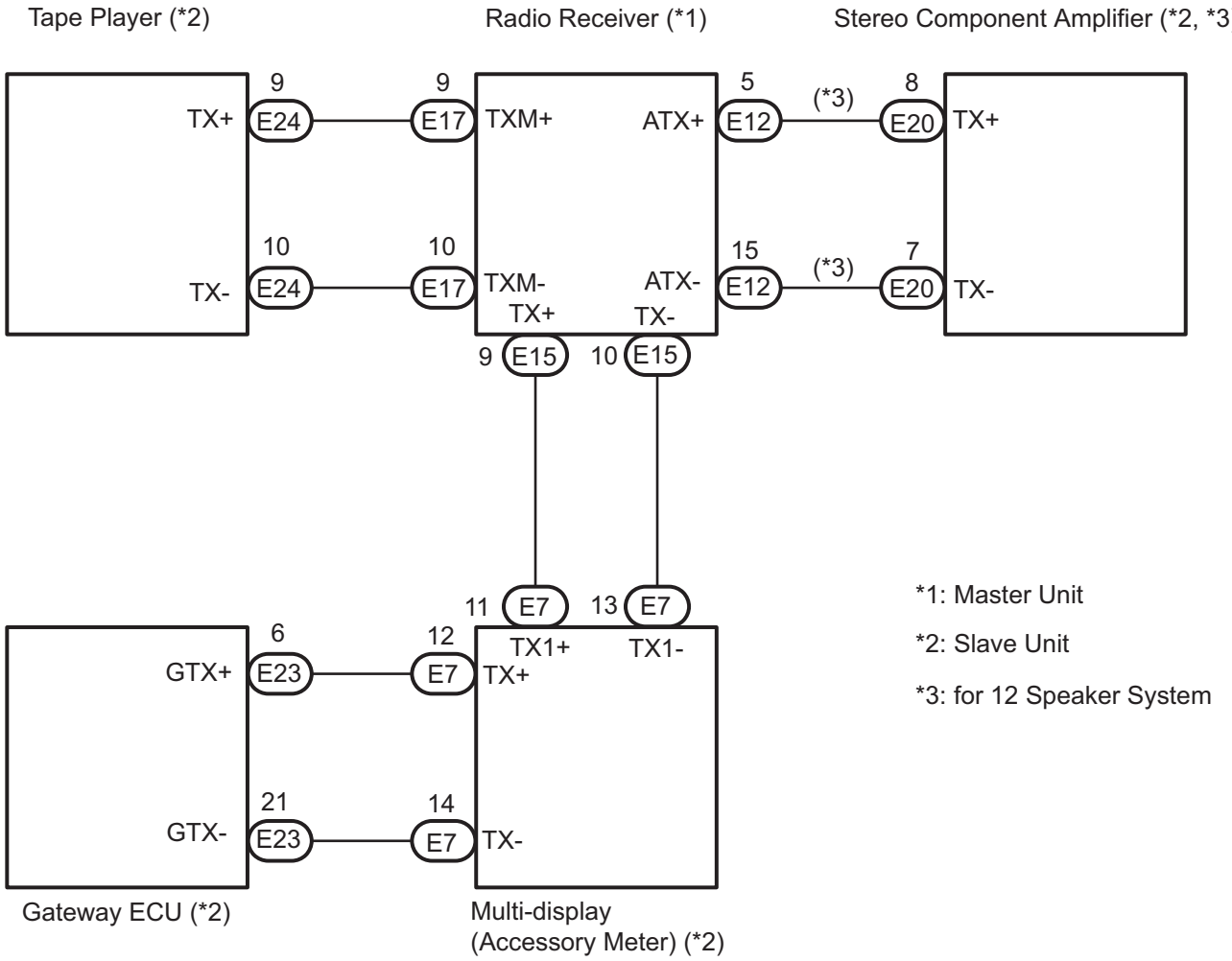
HINT:
For details of the connectors, refer to "TERMINALS OF ECU" (See page AV-13).

(a) Referring to the AVC-LAN wiring diagram below, check the AVC-LAN circuit between the radio receiver and the component which has stored this code.

AV

(1) Disconnect all connectors between the radio receiver and the component which has stored this code.
(2) Check for an open or short in the AVC-LAN circuit between the radio receiver and the component which has stored this code.
OK:
There is no open or short circuit.

AVC-LAN WIRING DIAGRAM



AV

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

6	REPLACE COMPONENT WHICH HAS STORED THIS CODE

(a) Replace the component which has stored this code with a normal one and check if the same problem occurs again.
OK:
Same problem does not occur.

NG → **REPLACE RADIO RECEIVER**

OK

END

DTC 01-DC Transmission Error

DESCRIPTION

DTC No.	DTC Detection Condition	Trouble Area
01-DC *1	Transmission to component shown by sub-code failed (Detecting this DTC does not always mean actual failure)	If the same sub-code is recorded in other components, check harness for power supply and communication system of all components shown by code

HINT:
*1: This code may be stored if the engine is started, idled for 60 seconds and then started again. (Key type ignition switch only)
NOTICE:
- **The radio receiver is the master unit.**
- **Be sure to clear and recheck DTCs after the inspection is completed to confirm that no DTCs are output.**
- **Before starting troubleshooting, be sure to clear DTCs to erase codes stored due to the reasons described in the HINT above. Them, check for DTCs and troubleshoot according to the output DTCs.**

AV

INSPECTION PROCEDURE

NOTICE:
Be sure to read DESCRIPTION before performing the following procedures.

1 CHECK FOR DTC OF OTHER COMPONENTS

(a) Check if the component shown by the sub-code is displayed in the check result of the other components.
  (1) Check if "01-DC" is output for the other components.
  (2) If "01-DC" is output for any other components, check if the same physical address is displayed.
  Result

Result	Proceed to
"01-DC" is output and the same physical address is displayed	**A**
"01-DC" is not output or the same physical address is not displayed	**B**

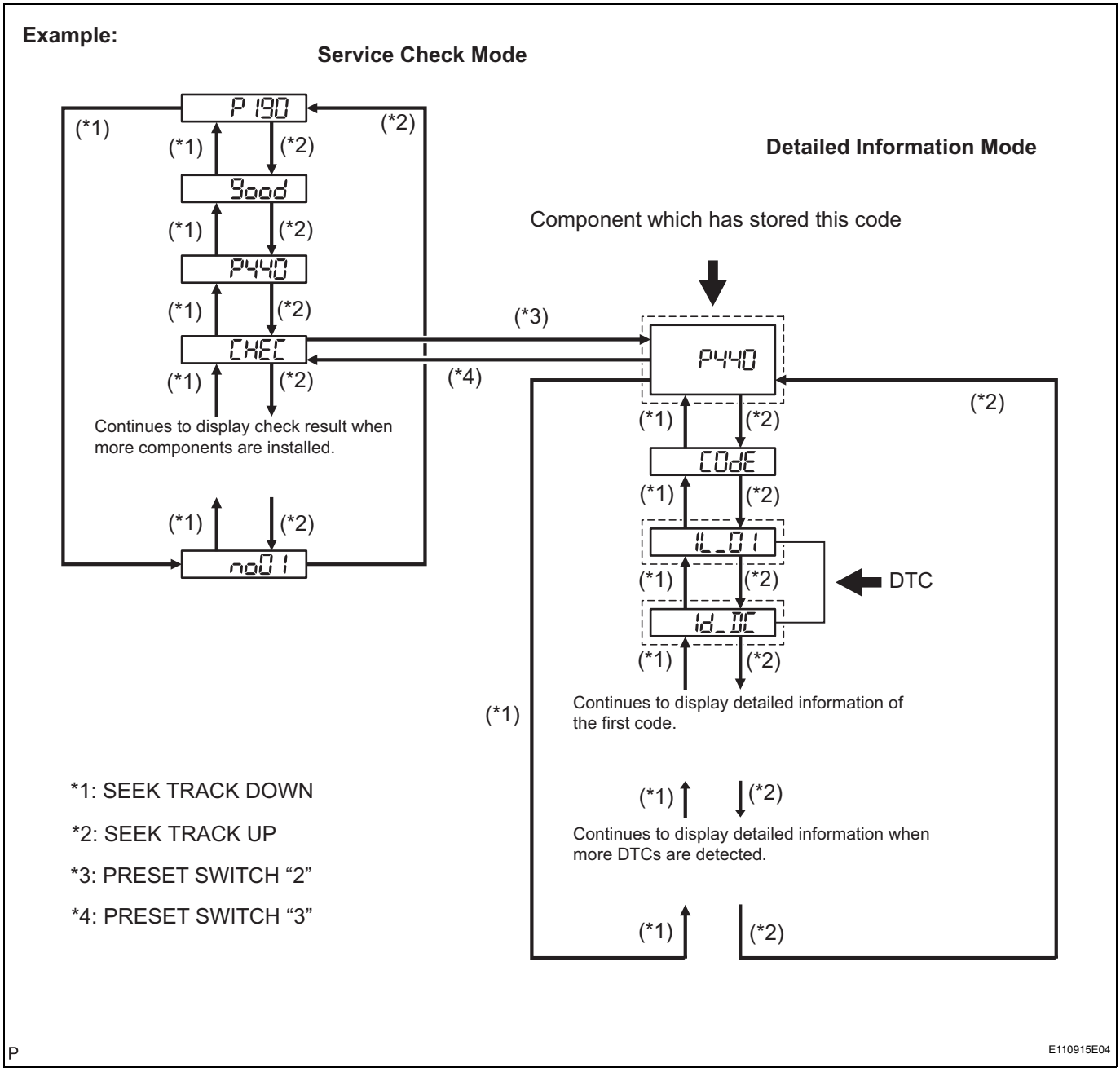
HINT:
For the list of the components shown by sub-codes, refer to the table in step 2.

B → **Go to step 4**

A

2 IDENTIFY THE COMPONENT WHICH HAS STORED THIS CODE

(a) Enter the diagnostic mode.



(b) Press the preset switch "3" to change to "Detailed Information Mode".
(c) Identify the component which has stored this code.

Component Table:

Component	Physical address
Gateway ECU	1C6
Radio receiver	190
Multi-display (Accessory meter)	1D4
Tape player	320
Stereo component amplifier	440

HINT:

- "440 (stereo component amplifier)" is the component which has stored this code in the example shown in the illustration.

AV

- For details of the DTC display, refer to "DTC CHECK/ CLEAR" (See page AV-18).

NEXT

3	CHECK COMPONENT WHICH HAS STORED THIS CODE

(a) Select the component which has stored this code.

Component Table:

Component	Proceed to
Gateway ECU	Gateway ECU communication error (See page AV-122)
Radio receiver	Radio receiver communication error (See page AV-127)
Multi-display (Accessory meter)	Multi-display communication error (See page AV-137)
Tape player	Tape player communication error (See page AV-142)
Stereo component amplifier	Stereo component amplifier communication error (See page AV-132)

NEXT

AV

END

4	CLEAR DTC

(a) Clear the DTCs (See page AV-18).
HINT:
If "01-DC" is output for only one component, this may not indicate a malfunction.

NEXT

5	RECHECK DTC

(a) Recheck for DTCs and check if the same trouble code occurs again.
OK:
Malfunction disappears.

NG → **Go to step 3**

OK

END

DTC	01-DD	Master Reset

DTC	01-E1	Voice Processing Device ON Error

DESCRIPTION

DTC No.	DTC Detection Condition	Trouble Area
01-DD *2	The device that should be the master has been disconnected after engine start	• Radio receiver power source circuit • AVC-LAN circuit between the radio receiver and the component which has stored this code • Radio receiver • Component which has stored this code
01-E1 *1	The AMP device records that the AMP output does not function even while the source device operates	

HINT:

- *1: Even if no fault is present, this trouble code may be stored depending on the battery condition or engine start voltage.
- *2: This code may be stored if the engine is started and the ignition switch is turned to the START position again. (Key type ignition switch only)

NOTICE:

- **Before starting troubleshooting, be sure to clear DTCs to erase codes stored due to the reasons described in the HINT above. Then, check for DTCs and troubleshoot according to the output DTCs.**
- **The radio receiver is the master unit.**
- **Be sure to clear and recheck DTCs after the inspection is completed to confirm that no DTCs are output.**

AV

INSPECTION PROCEDURE

NOTICE:

Be sure to read DESCRIPTION before performing the following procedures.

1	CHECK RADIO RECEIVER POWER SOURCE CIRCUIT

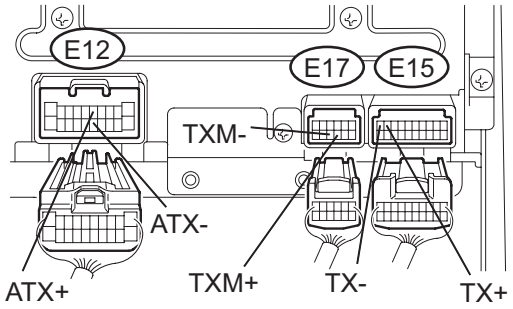
Refer to the radio receiver power source circuit (See page AV-147).

If the power source circuit is operating normally, proceed to the next step.

NEXT

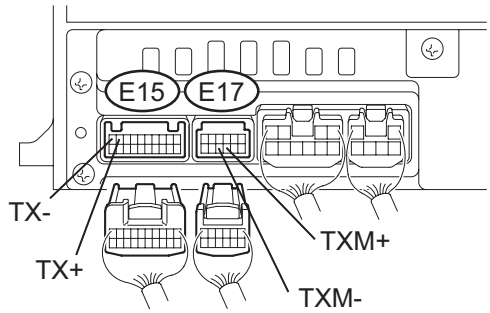
2	INSPECT RADIO RECEIVER

Wire Harness View (12 Speaker):



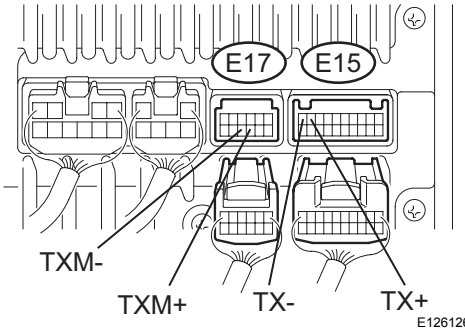
Wire Harness View

(9 Speaker, 6 CD Type):



Wire Harness View

(9 Speaker, 1 CD Type):



P E126126E02

(a) Disconnect the radio receiver connectors.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
TX+ (E15-9) - TX- (E15-10)	Always	60 to 80 Ω
TXM+ (E17-9) - TXM- (E17-10) (*1)	Always	60 to 80 Ω
ATX+ (E12-5) - ATX- (E12-15) (*2)	Always	60 to 80 Ω

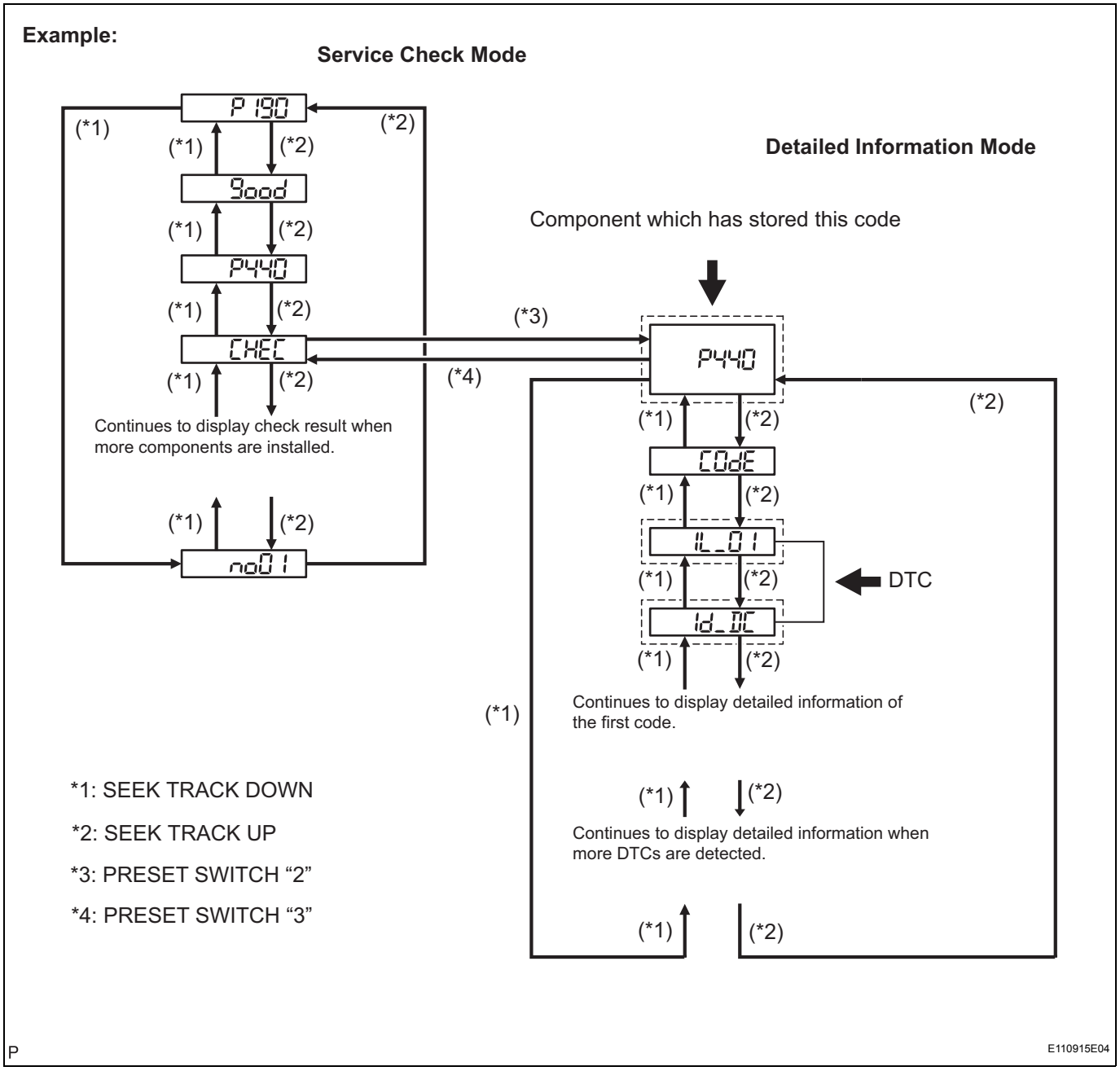
*1: with Tape Player
*2: for 12 Speaker System

NG → **REPLACE RADIO RECEIVER**

OK

3	IDENTIFY THE COMPONENT WHICH HAS STORED THIS CODE

(a) Enter the diagnostic mode.



(b) Press the preset switch "3" to change to "Detailed Information Mode".

(c) Identify the component which has stored this code.

Component Table

Component	Physical address
Gateway ECU	1C6
Multi-display (Accessory meter)	1D4
Tape player	320
Stereo component amplifier	440

HINT:

- "440 (stereo component amplifier)" is the component which has stored this code in the example shown in the illustration.
- For details of the DTC display, refer to "DTC CHECK/ CLEAR" (See page AV-18).

AV

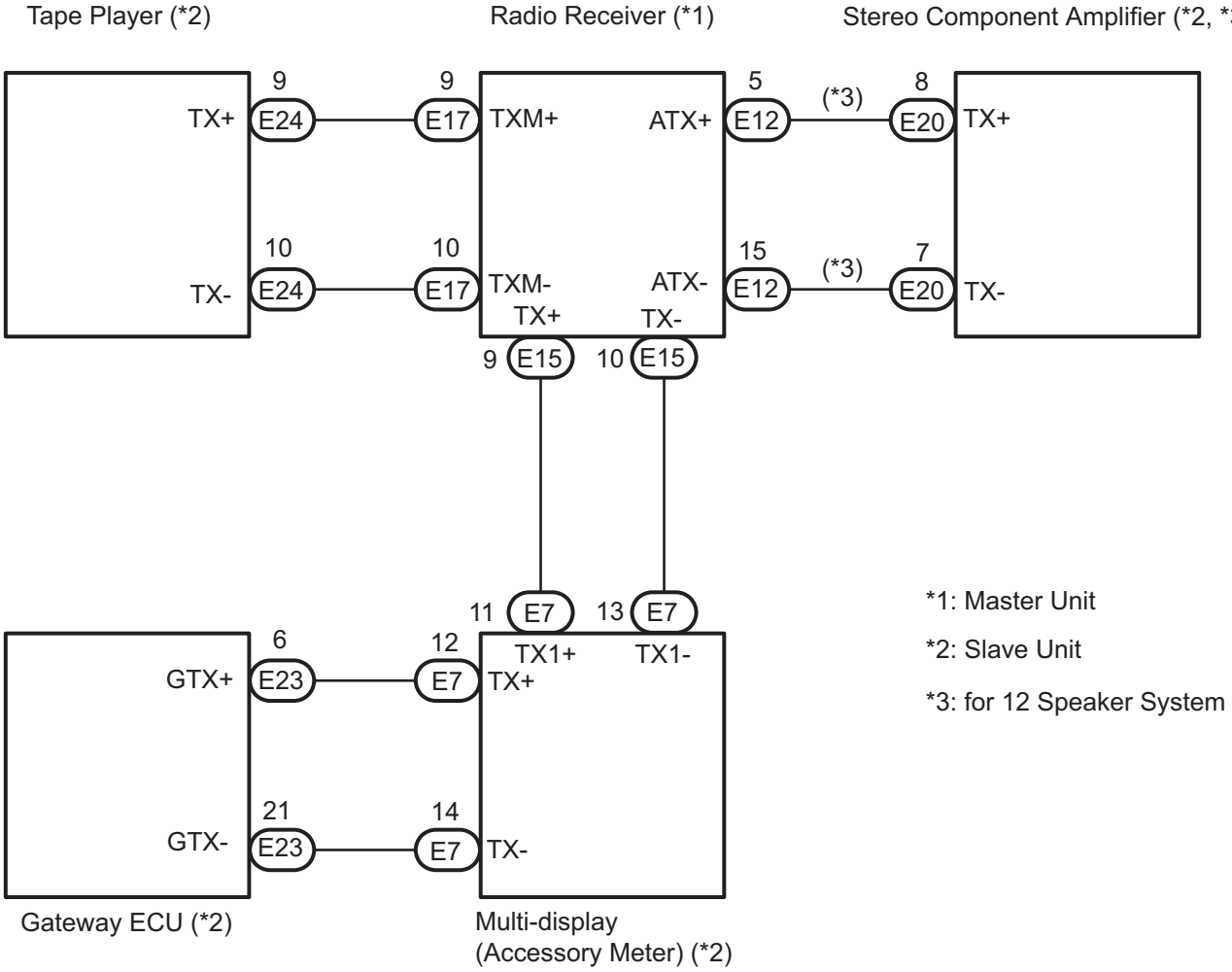
NEXT

4	**CHECK HARNESS AND CONNECTOR (RADIO RECEIVER - COMPONENT WHICH HAS STORED THIS CODE)**

HINT:
For details of the connectors, refer to "TERMINALS OF ECU" (See page AV-13).

(a) Referring to the AVC-LAN wiring diagram below, check the AVC-LAN circuit between the radio receiver and the component which has stored this code.
  (1) Disconnect all connectors between the radio receiver and the component which has stored this code.
  (2) Check for an open or short in the AVC-LAN circuit between the radio receiver and the component which has stored this code.
  OK:
  There is no open or short circuit.

AVC-LAN WIRING DIAGRAM



AV

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

5	**REPLACE RADIO RECEIVER**

(a) Replace the radio receiver with a normal one and check if the same problem occurs again.
OK:
Same problem does not occur.

NG → **REPLACE COMPONENT WHICH HAS STORED THIS CODE**

OK

END

DTC	01-DF	Master Error

DESCRIPTION

DTC No.	DTC Detection Condition	Trouble Area
01-DF *1	The device with a display fails and the master is switched to the audio device. Also when a communication error between sub-master (audio) and master occurs, this code is stored.	• Radio receiver power source circuit • AVC-LAN circuit between the radio receiver and the component which has stored this code • Radio receiver • Component which has stored this code

HINT:
*1: When 210 seconds have elapsed after disconnecting the power supply connector of the master component with the ignition switch on (ACC or IG), this code is stored.

NOTICE:

- **Before starting troubleshooting, be sure to clear DTCs to erase codes stored due to the reasons described in the HINT above. Then, check for DTCs and troubleshoot according to the output DTCs.**
- **The radio receiver is the master unit.**
- **Be sure to clear and recheck DTCs after the inspection is completed to confirm that no DTCs are output.**

AV

INSPECTION PROCEDURE

NOTICE:

Be sure to read DESCRIPTION before performing the following procedures.

1	CHECK RADIO RECEIVER POWER SOURCE CIRCUIT

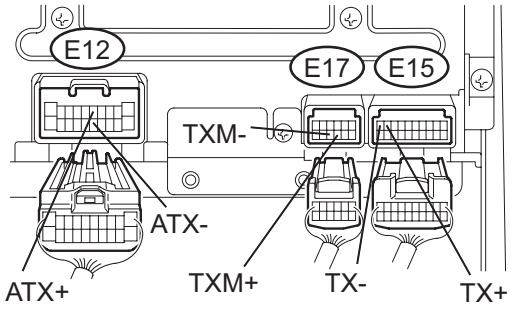
Refer to the radio receiver power source circuit (See page AV-147).

If the power source circuit is operating normally, proceed to the next step.

NEXT

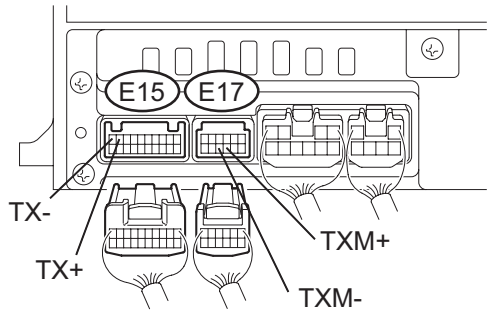
2	INSPECT RADIO RECEIVER

Wire Harness View (12 Speaker):



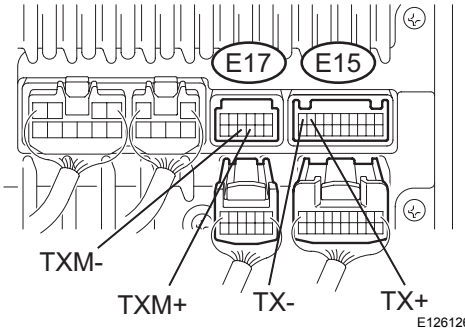
Wire Harness View

(9 Speaker, 6 CD Type):



Wire Harness View

(9 Speaker, 1 CD Type):



P E126126E02

(a) Disconnect the radio receiver connectors.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
TX+ (E15-9) - TX- (E15-10)	Always	60 to 80 Ω
TXM+ (E17-9) - TXM- (E17-10) (*1)	Always	60 to 80 Ω
ATX+ (E12-5) - ATX- (E12-15) (*2)	Always	60 to 80 Ω

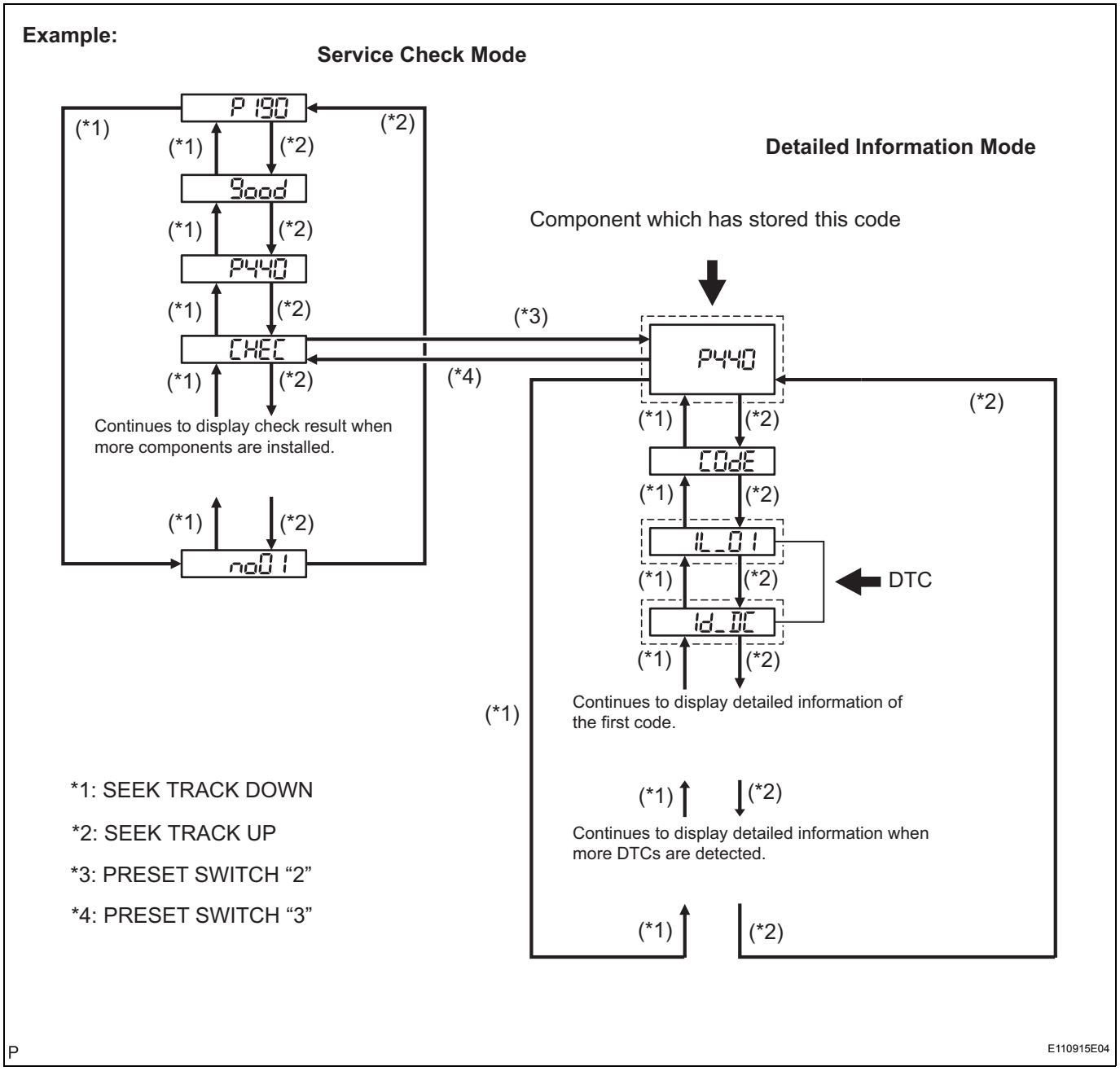
*1: with Tape Player
*2: for 12 Speaker System

NG → **REPLACE RADIO RECEIVER**

OK

3	IDENTIFY THE COMPONENT WHICH HAS STORED THIS CODE

(a) Enter the diagnostic mode.



(b) Press the preset switch "3" to change to "Detailed Information Mode".

(c) Identify the component which has stored this code.

Component Table:

Component	Physical address
Gateway ECU	1C6
Multi-display (Accessory meter)	1D4
Tape player	320
Stereo component amplifier	440

HINT:

- "440 (stereo component amplifier)" is the component which has stored this code in the example shown in the illustration.
- For details of the DTC display, refer to "DTC CHECK/ CLEAR" (See page AV-18).

AV

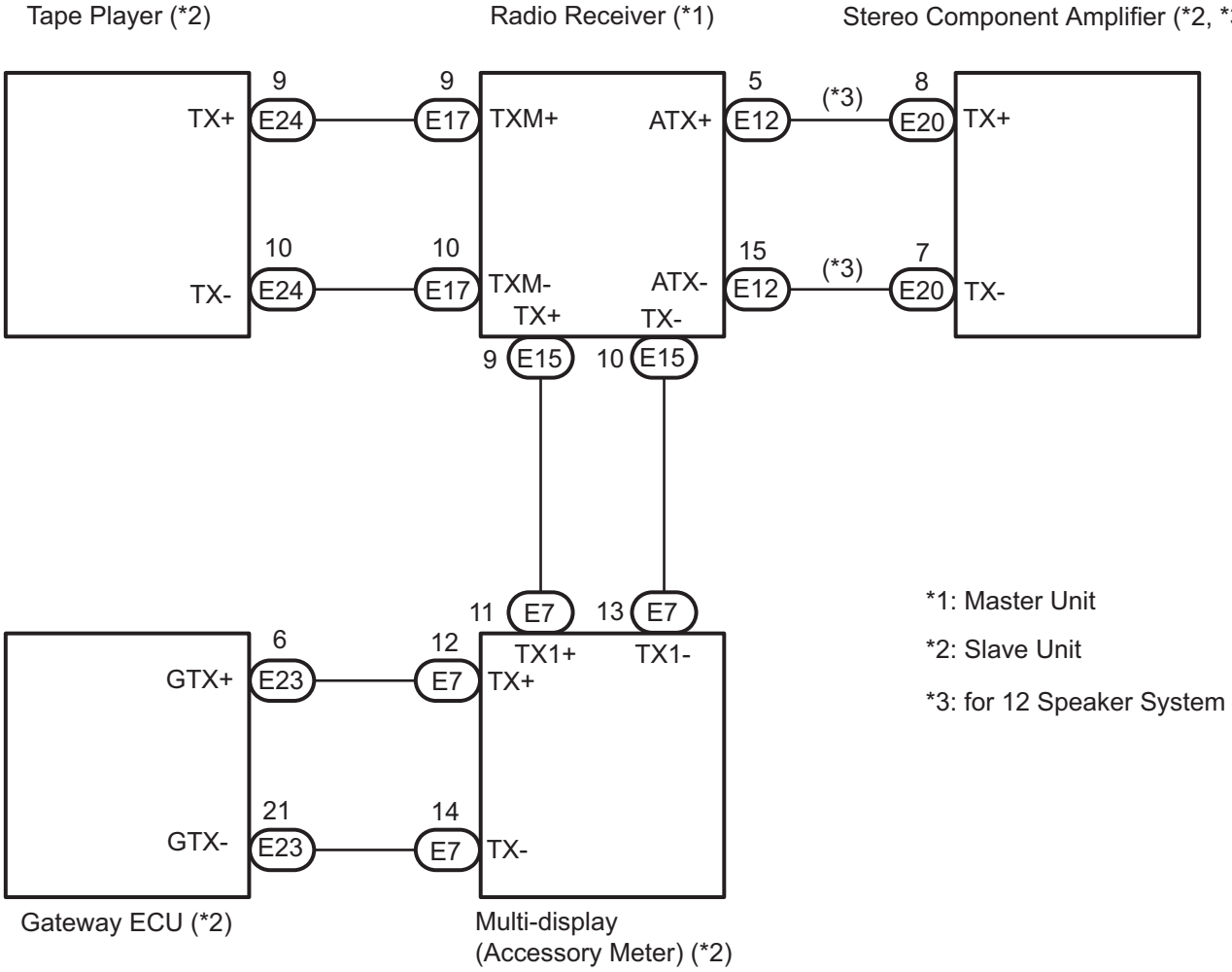
NEXT

4	**CHECK HARNESS AND CONNECTOR (RADIO RECEIVER - COMPONENT WHICH HAS STORED THIS CODE)**

HINT:
For details of the connectors, refer to "TERMINALS OF ECU" (See page AV-13).

(a) Referring to the AVC-LAN wiring diagram below, check the AVC-LAN circuit between the radio receiver and the component which has stored this code.
  (1) Disconnect all connectors between the radio receiver and the component which has stored this code.
  (2) Check for an open or short in the AVC-LAN circuit between the radio receiver and the component which has stored this code.
  OK:
  There is no open or short circuit.

AVC-LAN WIRING DIAGRAM



AV

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

5	**REPLACE RADIO RECEIVER**

(a) Replace the radio receiver with a normal one and check if the same problem occurs again.
OK:
Same problem does not occur.

NG → **REPLACE COMPONENT WHICH HAS STORED THIS CODE**

OK

END

DTC	01-E0	Registration Complete Indication Error

DTC	01-E3	Registration Demand Transmission

DTC	01-E4	Multiple Frame Incomplete

DESCRIPTION

DTC No.	DTC Detection Condition	Trouble Area
01-E0	"Registration complete" signal from the master device cannot be received.	-
01-E3	The registration demand signal from the slave device is output. Or the registration demand signal is output by receiving connection confirmation signal from the sub-master device.	-
01-E4	The multiple frame transmission is incomplete.	-

HINT:
Even if no fault is present, this a trouble code may be stored depending on the battery condition or engine start voltage.

AV

INSPECTION PROCEDURE

HINT:
After the inspection is completed, clear the DTCs. These DTCs do not indicate a malfunction.

DTC	01-E2	ON / OFF Indication Parameter Error

DESCRIPTION

DTC No.	DTC Detection Condition	Trouble Area
01-E2	The command for ON / OFF control from the master device has a problem.	Radio receiver

INSPECTION PROCEDURE

HINT:
After the inspection is completed, clear the DTCs.

1	REPLACE RADIO RECEIVER

NEXT

END

DTC	61-10	Belt Cut

DESCRIPTION

DTC No.	DTC Detection Condition	Trouble Area
61-10	The inside belt is cut or comes off	Tape player

INSPECTION PROCEDURE

HINT:
After the inspection is completed, clear the DTCs.

1	REPLACE TAPE PLAYER

NEXT

END

DTC	61-40	Mechanical Error of Media

DTC	61-41	Eject Error

DTC	61-42	Tape Tangling

DESCRIPTION

DTC No.	DTC Detection Condition	Trouble Area
61-40	A or mechanical problem occurs, or cassette tape is cut or entangled.	• Cassette tape • Tape player
61-41	A malfunction due to mechanical problem.	
61-42	Cassette tape is tangled.	

INSPECTION PROCEDURE

HINT:
After the inspection is completed, clear the DTCs.

AV

1	CHECK OPERATION

(a) Press the cassette tape EJECT switch of the tape player for 2 seconds or more and check that the cassette tape is ejected.
OK:
Cassette tape is ejected.

NG → **REPLACE TAPE PLAYER**

OK

2	CHECK CASSETTE TAPE

(a) Check that the ejected cassette tape does not have a peeling label, cassette body deformation or other problems.
OK:
No problem with cassette tape.

NG → **CASSETTE TAPE IS FAULTY**

OK

3	REPLACE CASSETTE TAPE

(a) Replace the cassette tape with a normal one and check if the same problem occurs again.
(1) Clear the DTC (See page AV-18).
(2) Recheck DTCs and check if the same trouble occurs again.
OK:
Malfunction disappears.

NG → **REPLACE TAPE PLAYER**

OK

CASSETTE TAPE IS FAULTY

DTC	61-43	Head Dirt

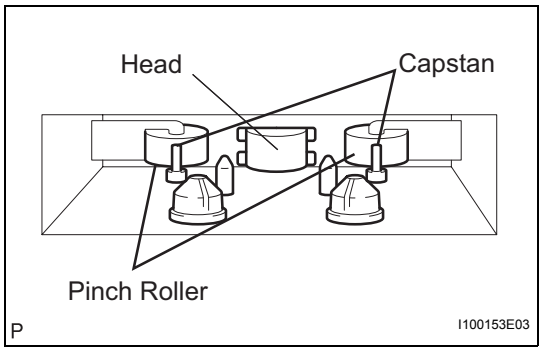
DESCRIPTION

DTC No.	DTC Detection Condition	Trouble Area
61-43	Head is dirty	Tape player

INSPECTION PROCEDURE

HINT:
After the inspection is completed, clear the DTCs.

1	CLEAN HEAD



(a) Head cleaning
  (1) Raise the cassette door with your finger. Using a pencil or similar object, push in the guide.
  (2) Using a cleaning pen or cotton applicator soaked in cleaner, clean the head surface, pinch rollers and capstans.
  (3) Clear the DTC (See page AV-18).
  (4) Recheck DTCs and check if the same trouble occurs again.
  OK:
  Malfunction disappears.

NG → **REPLACE TAPE PLAYER**

OK

HEAD WAS DIRTY

DTC	61-44	Device Power Supply Problem

DESCRIPTION

DTC No.	DTC Detection Condition	Trouble Area
61-44	A short or open in the power circuit	Tape player

INSPECTION PROCEDURE

HINT:
After the inspection is completed, clear the DTCs.

1 CLEAR DTC

(a) Clear the DTC (See page AV-18).

NEXT

2 RECHECK DTC

(a) Recheck DTCs and check if the same trouble occurs again.
HINT:
If DTCs are detected frequently, replace the tape player.
OK:
Malfunction disappears.

NG → **REPLACE TAPE PLAYER**

OK

END

DTC	62-40	No Disc

DTC	63-40	No Disc

DESCRIPTION

DTC No.	DTC Detection Condition	Trouble Area
62-40	No disc is inserted.	Radio receiver
63-40	No disc is inserted.	

INSPECTION PROCEDURE

HINT:
After the inspection is completed, clear the DTCs.

1	CHECK RADIO RECEIVER

(a) Check if a disc is inserted.
OK:
A disc is inserted.

OK → **REPLACE RADIO RECEIVER**

NG

END

DTC	63-10	CD Changer Mechanical Error

DTC	62-10	CD Player Mechanical Error

DTC	62-11	CD Insertion and Eject Error

DTC	62-12	CD Reading Abnormal

DTC	63-11	CD Insertion and Eject Error

DTC	63-12	CD Reading Abnormal

DESCRIPTION

DTC No.	DTC Detection Condition	Trouble Area
62-10	A mechanical error in the CD player is detected while the CD is not being inserted or ejected.	Radio receiver
62-11	CD insertion or ejection is failed.	
62-12	CD read problem occurs.	
63-10	A mechanical error in the CD changer is detected while the CD is not being inserted or ejected.	
63-11	CD insertion or ejection is failed.	
63-12	CD read problem occurs.	

AV

INSPECTION PROCEDURE

HINT:
After the inspection is completed, clear the DTCs.

1	REPLACE RADIO RECEIVER

NEXT

END

DTC	63-41	Wrong Disc

DTC	62-41	Wrong Disc

DTC	62-42	Disc cannot be Read

DTC	63-42	Disc cannot be Read

DESCRIPTION

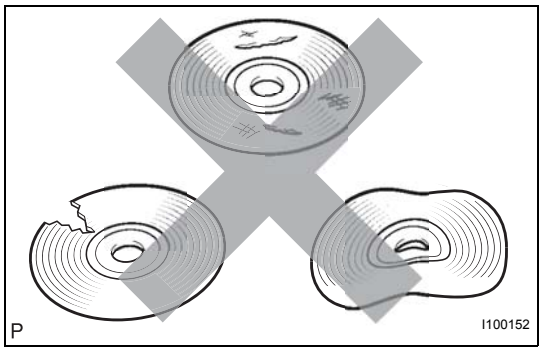
DTC No.	DTC Detection Condition	Trouble Area
62-41	An unsuitable disc is inserted.	• CD • Radio receiver
62-42	The disc cannot be read.	
63-41	An unsuitable disc is inserted.	
63-42	The disc cannot be read.	

INSPECTION PROCEDURE

AV

HINT:
After the inspection is completed, clear the DTCs.

1	CHECK DISC

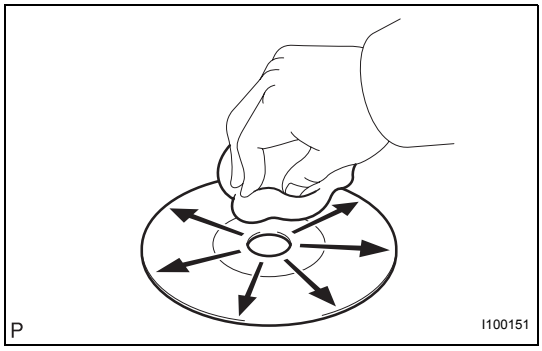


(a) Check that the disc is not deformed or cracked.
OK:
No deformation or cracks on the disc.

NG → **CHANGE DISC**

OK

2	CLEAN DISC



(a) Disc cleaning
(1) If dirt is on the disc surface, wipe it clean with a soft cloth from the inside to the outside in a radial direction
NOTICE:
Do not use conventional record cleaner or anti-static preservative.

NEXT

3	CLEAR DTC

(a) Clear the DTCs (See page AV-18).

NEXT

4	RECHECK DTC

(a) Recheck for DTCs and check if the same trouble occurs again.
OK:
Malfunction disappears.

OK → END

NG

5	REPLACE DISC

(a) Replace the disc with another and recheck.
(1) Replace the disc with another normal one.
(2) Clear the DTCs (See page AV-18).
(3) Recheck for DTCs and check if the same trouble occurs again.
OK:
Malfunction disappears.

NG → REPLACE RADIO RECEIVER

OK

END

DTC	63-43	CD-ROM Abnormal

DTC	62-43	CD-ROM Abnormal

DESCRIPTION

DTC No.	DTC Detection Condition	Trouble Area
62-43	CD-ROM operation is abnormal	• CD • Radio receiver
63-43	CD-ROM operation is abnormal	

INSPECTION PROCEDURE

HINT:
After the inspection is completed, clear the DTCs.

1	CHECK IF A PROPER CD IS INSERTED

(a) Make sure that the CD is an audio CD, and that it is not deformed, flawed, stained, burred, or otherwise defective.
OK:
Normal CD
HINT:
- Translucent or uniquely-shaped CDs cannot be played.
- CDs with adhesive paper labels should not be played.
- For details on playable CDs, refer to the Owner's Manual.

NG → **CD IS FAULTY**

OK

2	REPLACE CD

(a) Replace the CD with another and recheck.
(1) Replace the CD with another normal one.
(2) Clear the DTCs (See page AV-18).
(3) Recheck for DTCs and check if the same trouble occurs again.
OK:
Malfunction disappears.

NG → **REPLACE RADIO RECEIVER**

OK

END

DTC	63-44	CD Abnormal

DTC	62-44	CD Abnormal

DTC	62-48	Excess Current

DTC	62-50	Tray Insertion / Ejection Error

DTC	63-48	Excess Current

DTC	63-50	Tray Insertion / Ejection Error

DESCRIPTION

DTC No.	DTC Detection Condition	Trouble Area
62-44	Operation error in the CD mechanism	Radio receiver
62-48	Excess current is present in the CD player.	
62-50	Malfunction in insertion/ejection system	
63-44	Operation error in the CD mechanism	
63-48	Excess current is present in the CD changer.	
63-50	Malfunction in insertion/ejection system	

AV

INSPECTION PROCEDURE

HINT:
After the inspection is completed, clear the DTCs.

1	CLEAR DTC

(a) Clear the DTCs (See page AV-18).

NEXT

2	RECHECK DTC

(a) Recheck for DTCs and check if the same trouble occurs again.
HINT:
If DTCs are detected frequently, replace the radio receiver.
OK:
Malfunction disappears.

NG → **REPLACE RADIO RECEIVER**

OK

END

DTC	**63-45**	**Eject Error**
DTC	**62-45**	**Eject Error**
DTC	**62-51**	**Elevator Error**
DTC	**62-52**	**Clamp Error**
DTC	**63-51**	**Elevator Error**
DTC	**63-52**	**Clamp Error**

DESCRIPTION

DTC No.	DTC Detection Condition	Trouble Area
62-45	Disc cannot be ejected.	Radio receiver
62-51	Mechanical error occurs during elevator operation.	
62-52	Error occurs in CD player clamp.	
63-45	Magazine cannot be ejected.	
63-51	Mechanical error occurs during elevator operation.	
63-52	Error occurs in CD changer clamp.	

AV

INSPECTION PROCEDURE

HINT:
After the inspection is completed, clear the DTCs.

1	**CHECK RADIO RECEIVER**

(a) Check if a disc can be changed, inserted, or ejected normally.
OK:
Malfunction disappears.

NG → **REPLACE RADIO RECEIVER**

OK

END

DTC	63-46	Scratched / Reversed Disc

DTC	62-46	Scratched / Reversed Disc

DESCRIPTION

DTC No.	DTC Detection Condition	Trouble Area
62-46	Scratches or dirt is found on CD surface or CD is inserted upside down.	• CD • Radio receiver
63-46	Scratches or dirt is found on CD surface or CD is inserted upside down.	

INSPECTION PROCEDURE

HINT:
After the inspection is completed, clear the DTCs.

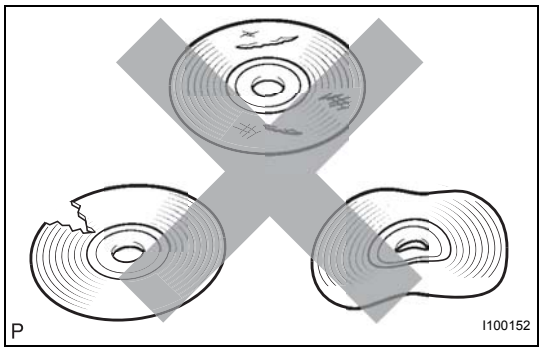
1	CHECK THAT CD IS INSERTED PROPERLY

(a) Check that the CD is not inserted upside down.
OK:
CD is properly inserted.

NG → **INSERT CD PROPERLY**

OK

2	CHECK DISC

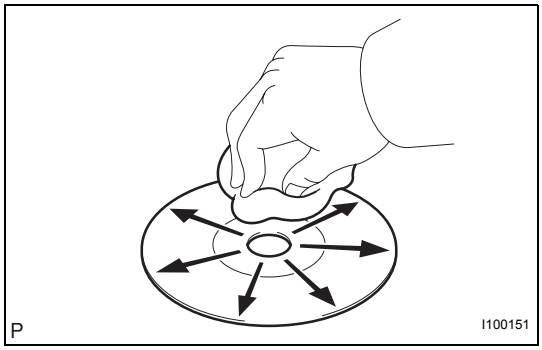


(a) Check that the disc is not deformed or cracked.
OK:
No deformation or cracks on the disc.

NG → **CHANGE DISC**

OK

3	CLEAN DISC



(a) Disc cleaning
(1) If dirt is on the disc surface, wipe it clean with a soft cloth from the inside to the outside in a radial direction
NOTICE:
Do not use a conventional record cleaner or anti-static preservative.

NEXT

4	CLEAR DTC

AV

(a) Clear the DTCs (See page AV-18).

NEXT

5	RECHECK DTC

(a) Recheck for DTCs and check if the same trouble occurs again.
OK:
Malfunction disappears.

OK → **END**

NG

6	REPLACE DISC

(a) Replace the disc with another and recheck.
(1) Replace the disc with another normal one.
(2) Clear the DTCs (See page AV-18).
(3) Recheck for DTCs and check if the same trouble occurs again.
OK:
Malfunction disappears.

NG → **REPLACE RADIO RECEIVER**

OK

END

DTC	63-47	High Temperature

DTC	62-47	High Temperature

DESCRIPTION

DTC No.	DTC Detection Condition	Trouble Area
62-47	Sensor detects that CD unit temperature is high. (Over 80 °C)	Radio receiver
63-47		

INSPECTION PROCEDURE

HINT:
After the inspection is completed, clear the DTCs.

1	CHECK RADIO RECEIVER

(a) Park the vehicle in an cool place.
(b) Check that the temperature of the radio receiver becomes sufficiently low, then start the engine.
(c) DTC clear and recheck.
(d) Check if DTC 63-47 is output.
OK:
DTC 63-47 is not output.

NG → **REPLACE RADIO RECEIVER**

OK

END

Noise Occurs

INSPECTION PROCEDURE

1	CHECK SPEAKER

(a) Check the speaker unit installation condition and that there are no cracks, scratches, deformation, or other failures.
(1) If the speaker is installed incorrectly, proceed to A.
(2) If foreign objects are in the speaker, proceed to B.
(3) If the speaker cone paper is broken, proceed to C.

A	REINSTALL SPEAKER PROPERLY
B	REMOVE FOREIGN OBJECT
C	REPLACE SPEAKER

AV OK

2	CHECK NOISE CONDITIONS

(a) Check the noise condition.
HINT:
The radio has a noise prevention function to reduce noise when listening to the radio. If a loud noise occurs, check whether the ground at the antenna mounting base and the noise prevention unit are installed and wired correctly.

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

HINT:
- In the chart's left column, find the situation that matches the customer's complaint. Then, in the right column, find the part that is causing the noise. Check the noise filter on the part.
- To save time and avoid a misdiagnosis, first make sure that the noise is not coming from outside the vehicle.

- Noise should be removed in descending order of loudness.
- Setting the radio to a frequency where no signal is received may make recognition of the noise problem easier.

NG → **REPAIR OR REPLACE NOISE SOURCE**

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

Pressing Power Switch does not Turn on System

INSPECTION PROCEDURE

1	CHECK VEHICLE CONDITION

(a) Check that conditions in the cabin are not likely to cause condensation.
HINT:
This problem occurs when the cabin is humid and the temperature changes rapidly. This may produce condensation, resulting in a short circuit.
OK:
Condensation is not likely to be produced.

NG → **DRY CABIN**

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

No Sound can be Heard from Speakers

INSPECTION PROCEDURE

1	CHECK RADIO RECEIVER

(a) Check radio receiver setting.
  (1) Check that the volume is not set to "0".
  (2) Check that "MUTE" is off.
  OK:
  The volume is not set to "0" and "MUTE" is off.

OK → **END**

NG

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

Sound Quality is Bad Only when CD is Played (Volume is Too Low)

INSPECTION PROCEDURE

1	**REPLACE CD**

(a) Replace the CD with another one and recheck.
(1) Check if the problem recurs using another CD.
OK:
Malfunction disappears.

NG → **REPLACE RADIO RECEIVER**

OK

CD IS FAULTY

Cassette Tape cannot be Ejected

INSPECTION PROCEDURE

1 CHECK OPERATION

(a) Press the cassette tape EJECT switch of the radio receiver for 2 seconds or more and check that the cassette tape is ejected.
OK:
Cassette tape is ejected.

NG → **REPLACE TAPE PLAYER**

OK

2 CHECK CASSETTE TAPE

(a) Check that the ejected cassette tape does not have a peeling label, cassette body deformation or other problems.
OK:
No problems with cassette tape.

NG → **CASSETTE TAPE IS FAULTY**

OK

3 REPLACE CASSETTE TAPE

(a) Replace the cassette tape with a normal one and check that the malfunction disappears.
OK:
Malfunction disappears.

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

OK

CASSETTE TAPE IS FAULTY

Cassette Tape cannot be Inserted or Played

INSPECTION PROCEDURE

1	CHECK FOREIGN OBJECT

(a) Check that the cassette tape player is free of foreign objects.
OK:
No foreign objects.

NG → **REMOVE FOREIGN OBJECT**

OK

2	CHECK CASSETTE TAPE

(a) Check that the cassette tape is a normal tape for recording sounds.
OK:
Cassette tape is normal.

NG → **CASSETTE TAPE IS FAULTY**

OK

3	CHECK TAPE PLAYER

(a) Replace the cassette tape with a normal one and check that the malfunction disappears.
OK:
Malfunction disappears.

NG → **REPLACE TAPE PLAYER**

OK

CASSETTE TAPE IS FAULTY

CD cannot be Ejected

INSPECTION PROCEDURE

1	CHECK OPERATION

(a) Press the CD EJECT switch of the radio receiver for 2 seconds or more and check that the CD is ejected.
OK:
CD is ejected.

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

OK

2	REPLACE CD

(a) Insert another CD and check if it is ejected.
OK:
CD is ejected.

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

OK

CD IS FAULTY

CD cannot be Inserted / Played or CD is Ejected Right After Insertion

INSPECTION PROCEDURE

1	CHECK IF A PROPER CD IS INSERTED

(a) Make sure that the CD is a normal audio CD, and that it is not deformed, flawed, stained, burred or has any other defects.
OK:
Normal audio CD.
HINT:
- Translucent or uniquely-shaped CDs cannot be played.
- CDs for personal computers (with music recorded in) and CD-Rs cannot be played.

NG → **CD IS FAULTY**

AV

OK

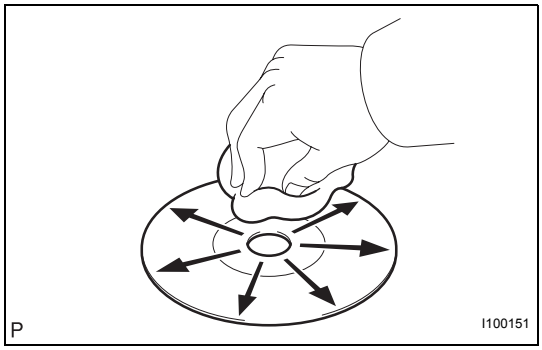
2	CHECK THAT CD IS INSERTED PROPERLY

(a) Check whether or not the CD is inserted upside down.
OK:
CD is properly inserted.

NG → **SET CD PROPERLY**

OK

3	CHECK CD



(a) Clean the disc by wiping it with a soft cloth from inside to outside in a radial direction.
OK:
Malfunction disappears.
NOTICE:
Do not use a conventional record cleaner or anti-static preservative.

NG → **Go to step 4**

OK

CD WAS DIRTY

4	REPLACE CD

(a) Replace the CD with a normal one and check that the malfunction disappears.
OK:
Malfunction disappears.

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

OK

CD IS FAULTY

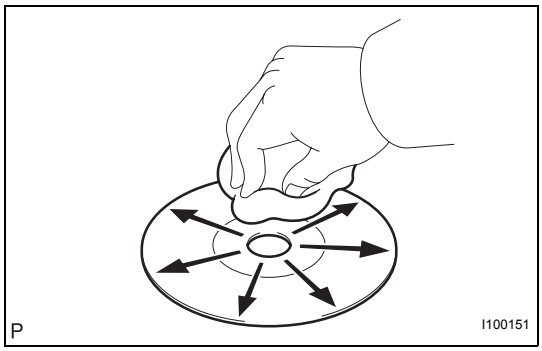
CD Sound Skips

INSPECTION PROCEDURE

HINT:

- The sound may skip when driving on an unpaved road.
- Sudden temperature changes in the cabin will cause condensation inside the CD player and prevent it from playing.

1	CHECK CD

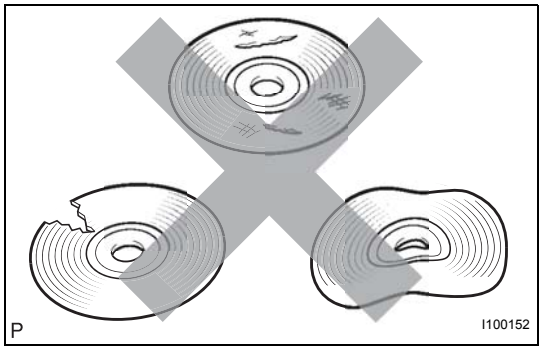


(a) Check the CD.
OK:
The CD is clean.
HINT:
If dirt is on the CD surface, wipe it clean with a soft cloth from inside to outside in a radial direction.
NOTICE:
Do not use a conventional record cleaner or anti-static preservative.

NG → **CLEAN CD**

OK

2	CHECK CD



(a) Check that the CD is not deformed or cracked.
OK:
No deformation or cracks on the CD.

NG → **CD IS FAULTY**

OK

3	CHECK OPERATION USING ANOTHER CD

(a) Check using another CD.
(1) Check if the problem recurs using another CD.
OK:
The problem does not occur.

OK → **CD IS FAULTY**

NG

4	CHECK RADIO RECEIVER

(a) Check the radio receiver installation condition.
(1) Check that the radio receiver is properly installed.
OK:
Radio receiver is properly installed.

NG → **REINSTALL RADIO RECEIVER PROPERLY**

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

Radio Broadcast cannot be Received or Poor Reception

INSPECTION PROCEDURE

1	CHECK RADIO RECEIVER

(a) Check the radio's automatic station search function.
(1) Check the radio's automatic station search function by activating it.
OK:
The radio's automatic station search function works properly.

OK → **REPLACE RADIO RECEIVER**

NG

2	CHECK OPTIONAL COMPONENTS

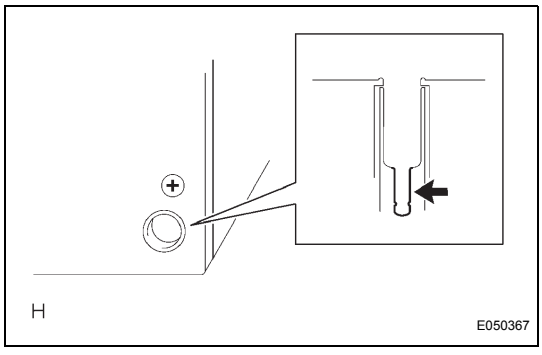
AV

(a) Check optional components (sun-shade film, telephone antenna, etc.).
(1) Check if any optional components, such as sun-shade film or telephone antenna that may decrease reception capacity, are installed.
OK:
Optional components are installed.
NOTICE:
Do not remove any optional components installed by the customer without his or her consent.

OK → **REMOVE OPTIONAL COMPONENTS (SEE NOTICE ABOVE)**

NG

3	CHECK RADIO RECEIVER

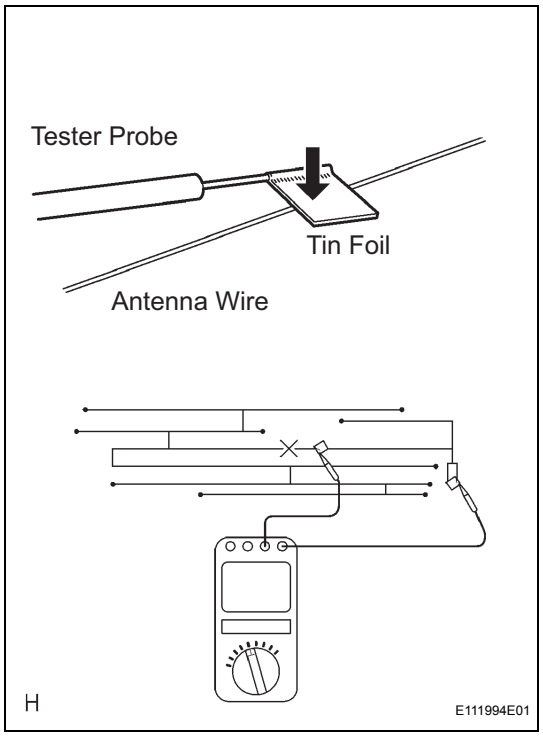


(a) Preparation for check
(1) Remove the antenna plug from the radio receiver.
(b) Check for noise
(1) Turn the ignition switch on (ACC) with the radio receiver connector connected.
(2) Turn the radio on and put into AM mode.
(3) Place a screwdriver, thin wire, or other metal object on the radio receiver's antenna jack and check that noise can be heard from the speaker.
OK:
Noise occurs.

NG → **REPLACE RADIO RECEIVER**

OK

4	CHECK GLASS ANTENNA



(a) Check for continuity of the antenna.
HINT:
Check for continuity at the center of each antenna wire as shown in the illustration.
NOTICE:
When cleaning the glass, wipe it in the direction of the wire with a soft dry cloth. Take care not to damage the wire. Do not use detergents or glass cleaners with abrasive ingredients. When measuring voltage, wrap a piece of tin foil around the tip of the negative probe and press the foil against the wire with your finger, as shown in the illustration.
OK:
There is continuity in the antenna.

NG → **REPAIR GLASS ANTENNA**

AV

OK

5	CHECK ANTENNA CORD

(a) Remove the antenna plug of the radio receiver and antenna.
(b) Measure the resistance between the antenna and radio receiver to check for an open circuit in the antenna cord.
Standard resistance:
Below 1 Ω
(c) Measure the resistance between the antenna cord and body ground to check for a short circuit in the antenna cord.
Standard resistance:
10 kΩ or higher

NG → **REPLACE ANTENNA CORD**

OK

6	REPLACE AMPLIFIER ANTENNA

(a) Replace the amplifier antenna and check if radio broadcasts can be received normally.
OK:
Radio broadcasts can be received.

OK → **END**

NG

REPLACE RADIO RECEIVER

Sound Quality is Bad Only when Playing Tape

INSPECTION PROCEDURE

1 REPLACE CASSETTE TAPE

(a) Replace the cassette tape with another one and recheck.
  (1) Replace the cassette tape with another normal one to check if the same trouble occurs again.
  OK:
  Malfunction disappears.

OK → **CASSETTE TAPE IS FAULTY**

NG

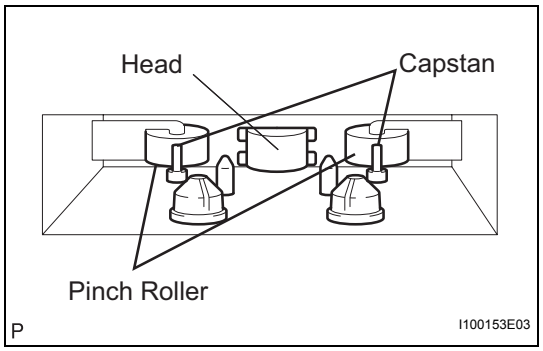
2 CHECK FOREIGN OBJECT

(a) Check for foreign objects.
  (1) Check that there are no foreign objects or defects in the cassette tape player.
  OK:
  No foreign objects or defects.

NG → **REMOVE FOREIGN OBJECT**

OK

3 CLEAN HEAD



(a) Head cleaning
  (1) Raise the cassette door with your finger. Using a pencil or similar object, push in the guide.
  (2) Using a cleaning pen or cotton applicator soaked in cleaner, clean the head surface, pinch rollers and capstans.
  (3) Check if the same trouble occurs again.
  OK:
  Malfunction disappears.

NG → **REPLACE TAPE PLAYER**

OK

HEAD WAS DIRTY

AV

Tape is Tangled due to Incorrect Tape Speed or Auto-Reverse Malfunction

INSPECTION PROCEDURE

1	CHECK FOREIGN OBJECT

(a) Check for any foreign objects.
(1) Check that there are no foreign objects or defects in the cassette tape player.
OK:
No foreign objects or defects.

NG → **REMOVE FOREIGN OBJECT**

OK ↓

AV

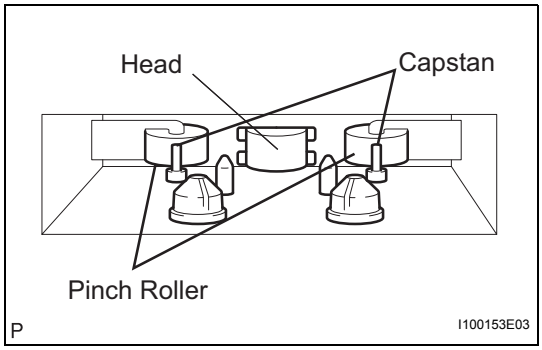
2	REPLACE CASSETTE TAPE (90 MIN. OR LESS)

(a) Check the cassette tape player using a normal cassette tape.
(1) Replace the cassette tape with another normal one (90 minutes or less) to see if the same trouble occurs again.
OK:
Malfunction disappears.

OK → **CASSETTE TAPE IS FAULTY**

NG ↓

3	CLEAN HEAD



(a) Head cleaning
(1) Raise the cassette door with your finger. Using a pencil or similar object, push in the guide.
(2) Using a cleaning pen or cotton applicator soaked in cleaner, clean the head surface, pinch rollers and capstans.
(3) Check if the same trouble occurs again.
OK:
Malfunction disappears.

NG → **REPLACE TAPE PLAYER**

OK ↓

HEAD WAS DIRTY

Poor Sound Quality in All Modes (Low Volume)

INSPECTION PROCEDURE

1	CHECK AUDIO SETTINGS

(a) Set "BASS", "MID" and "TREB" to the initial values and check that sound is normal.
OK:
Malfunction disappears.

OK → END

NG

2	COMPARE WITH ANOTHER VEHICLE OF SAME MODEL

(a) Compare with another vehicle of the same model.
(1) Compare with another vehicle of the same model which does not have trouble to see if there is any difference in the sound quality.
OK:
No difference is found.

OK → END

NG

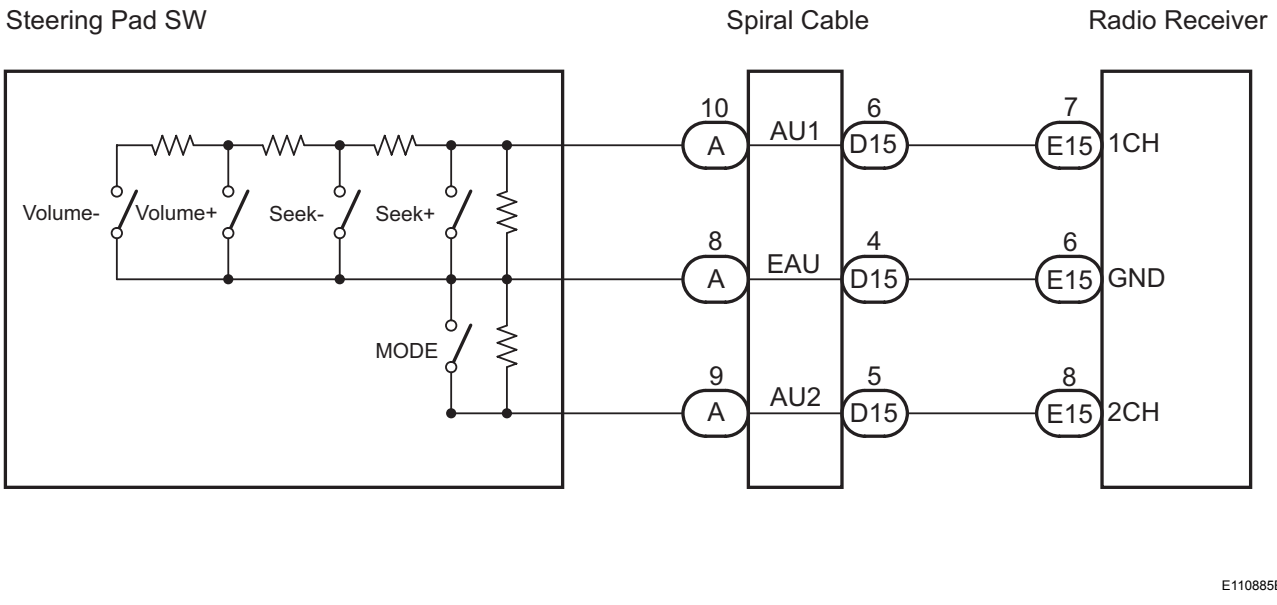
PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

Steering Pad Switch Circuit

DESCRIPTION

This circuit sends an operation signal from the steering pad switch to the radio receiver.
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 resulting condition is the same as if the switch were continuously depressed. Therefore, the radio receiver cannot be operated by the steering pad switch, and the radio receiver itself cannot function.

WIRING DIAGRAM



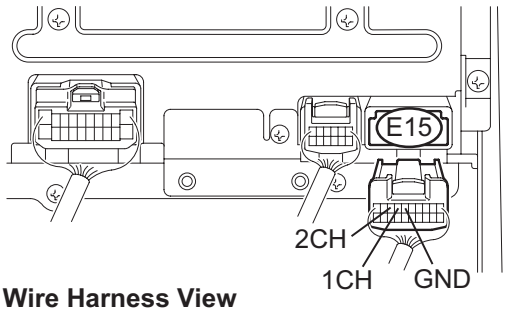
INSPECTION PROCEDURE

NOTICE:

The vehicle is equipped with an SRS (Supplemental Restraint System), such as airbags. Before servicing (including removal or installation of parts), be sure to read the precautionary notice for the Supplemental Restraint System (See page RS-1).

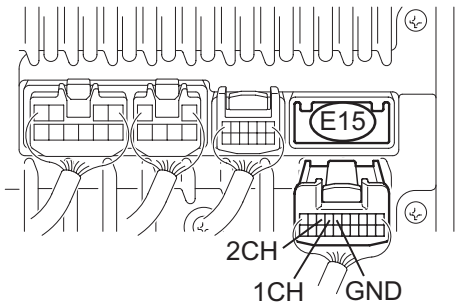
1	INSPECT RADIO RECEIVER

Wire Harness View (12 Speaker):



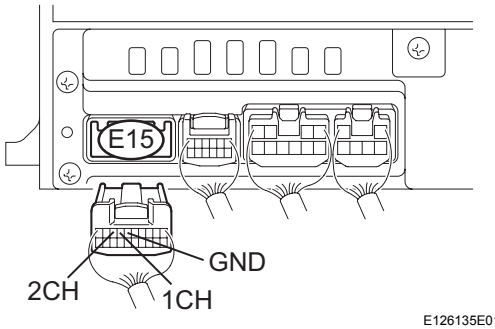
Wire Harness View

(9 Speaker, 1 CD Type):



Wire Harness View

(9 Speaker, 6 CD Type):



(a) Disconnect the radio receiver E15 connector.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Condition	Specified condition
1CH - GND	No switch is pushed	Approx. 100 kΩ
1CH - GND	SEEK+ switch: push	Approx. 0 Ω
1CH - GND	SEEK- switch: push	Approx. 0.3 kΩ
1CH - GND	VOL+ switch: push	Approx. 1 kΩ
1CH - GND	VOL- switch: push	Approx. 3.2 kΩ
2CH - GND	No switch is pushed	Approx. 100 kΩ
2CH - GND	MODE switch: push	Approx. 0 Ω

NG → **Go to step 2**

OK

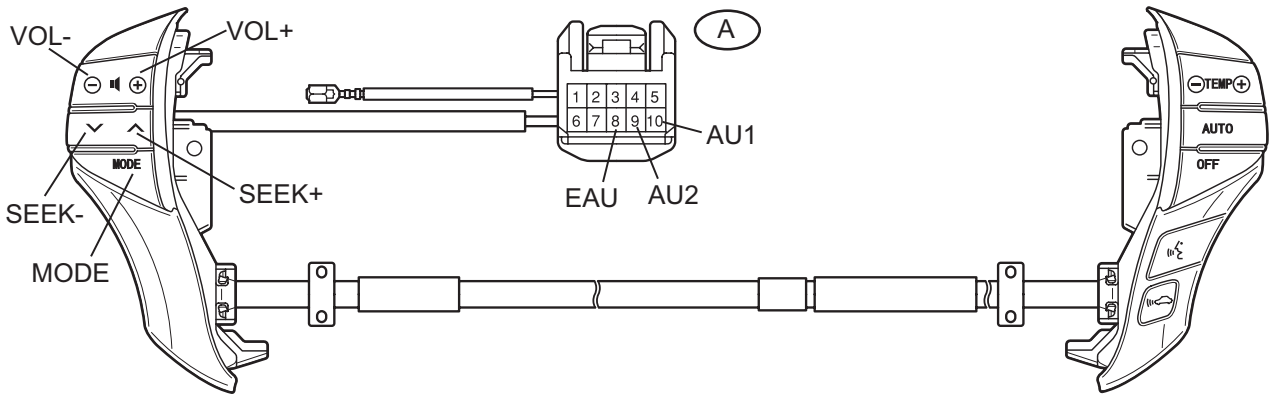
PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

2	INSPECT STEERING PAD SWITCH ASSEMBLY

(a) Disconnect the steering pad switch connector.

AV

Steering Pad Switch Connector Front View:



(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

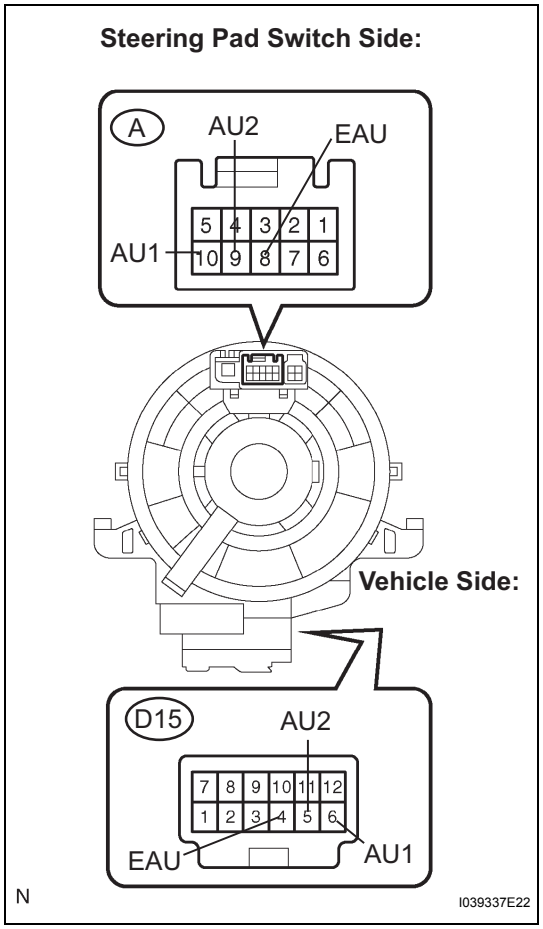
AV

Tester connection	Condition	Specified condition
AU1 - EAU	No switch is pushed	Approx. 100 kΩ
AU1 - EAU	SEEK+ switch: push	Approx. 0 Ω
AU1 - EAU	SEEK- switch: push	Approx. 0.3 kΩ
AU1 - EAU	VOL+ switch: push	Approx. 1 kΩ
AU1 - EAU	VOL- switch: push	Approx. 3.2 kΩ
AU2 - EAU	No switch is pushed	Approx. 100 kΩ
AU2 - EAU	MODE switch: push	Approx. 0 Ω

NG → **REPLACE STEERING PAD SWITCH ASSEMBLY**

OK

3	INSPECT SPIRAL CABLE



(a) Disconnect the spiral cable connector.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Condition	Specified condition
EAU - EAU	Always	Below 1 Ω
AU1 - AU1	Always	Below 1 Ω
AU2 - AU2	Always	Below 1 Ω

OK → **REPAIR OR REPLACE HARNESS OR CONNECTOR (SPIRAL CABLE - RADIO RECEIVER)**

NG

REPLACE SPIRAL CABLE

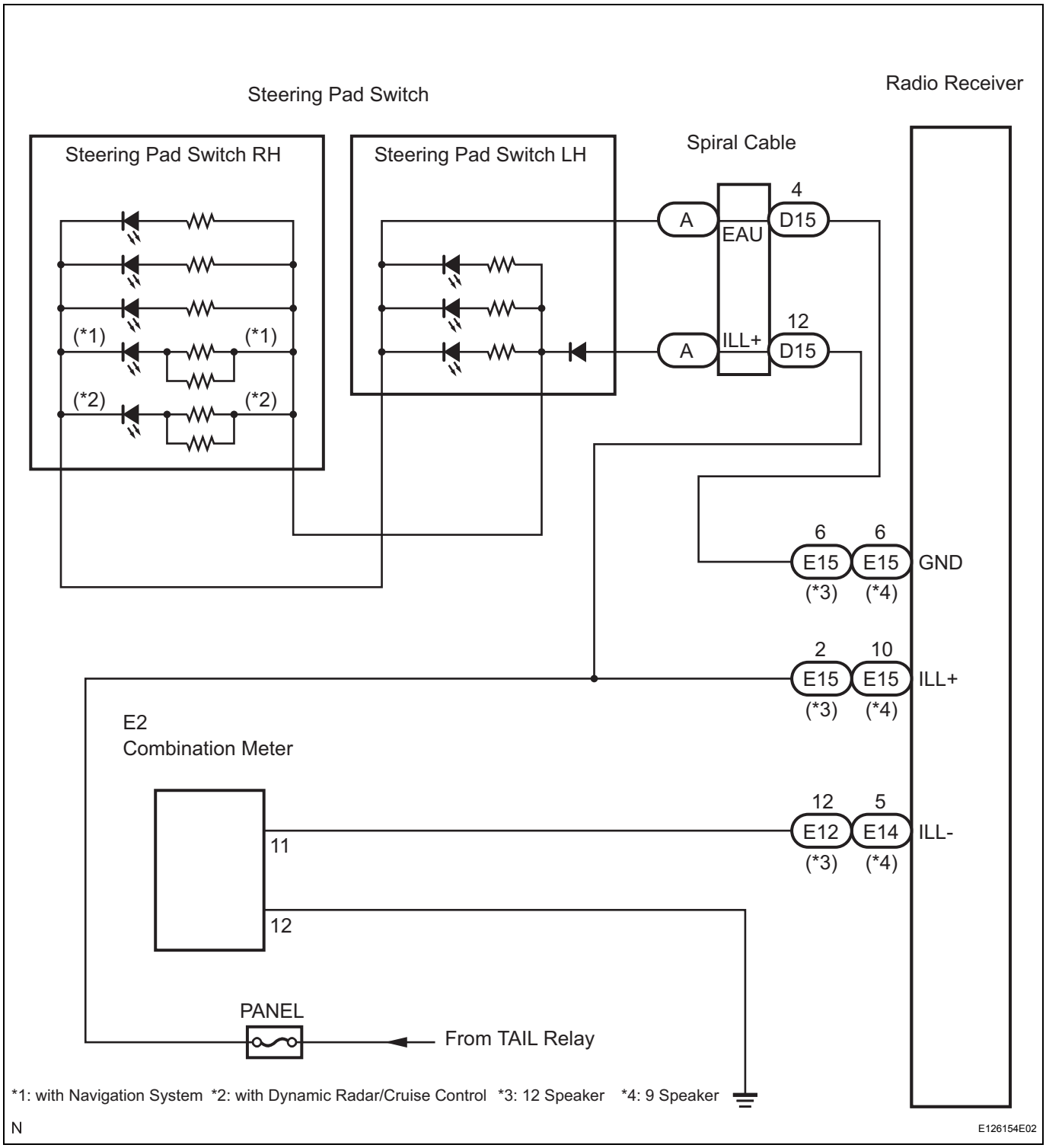
AV

Illumination Circuit

DESCRIPTION

Receiving a dimmer signal from the light control switch, the radio receiver dims the display and illuminates the panel switches and the steering pad switch.

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

The vehicle is equipped with an SRS (Supplemental Restraint System), such as airbags. Before servicing (including removal or installation of parts), be sure to read the precautionary notice for the Supplemental Restraint System (See page RS-1).

1 CHECK ILLUMINATION

(a) Check if the illumination for the radio receiver, steering pad switch, cigarette lighter, glove box light or others (transmission control SW, etc.) comes on when the light control switch is turned to the HEAD or TAIL position.

Result

Result	Proceed to
Illumination comes on for all components except steering pad switch.	A
Illumination comes on for all components except radio receiver.	B
No illumination comes on (radio receiver , steering pad switch, cigarette lighter, glove box light, transmission control switch).	C
No illumination comes on for all components except glove box light.	D

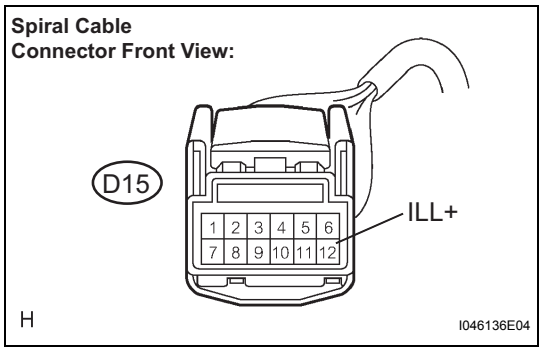
B → Go to step 6

C → GO TO LIGHTING SYSTEM

D → GO TO COMBINATION METER SYSTEM

A

2 CHECK HARNESS AND CONNECTOR (SPIRAL CABLE - BATTERY)



(a) Disconnect the spiral cable connector.

(b) Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester connection	Condition	Specified condition
ILL+ - Body ground	Light control SW TAIL or HEAD	10 to 14 V

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

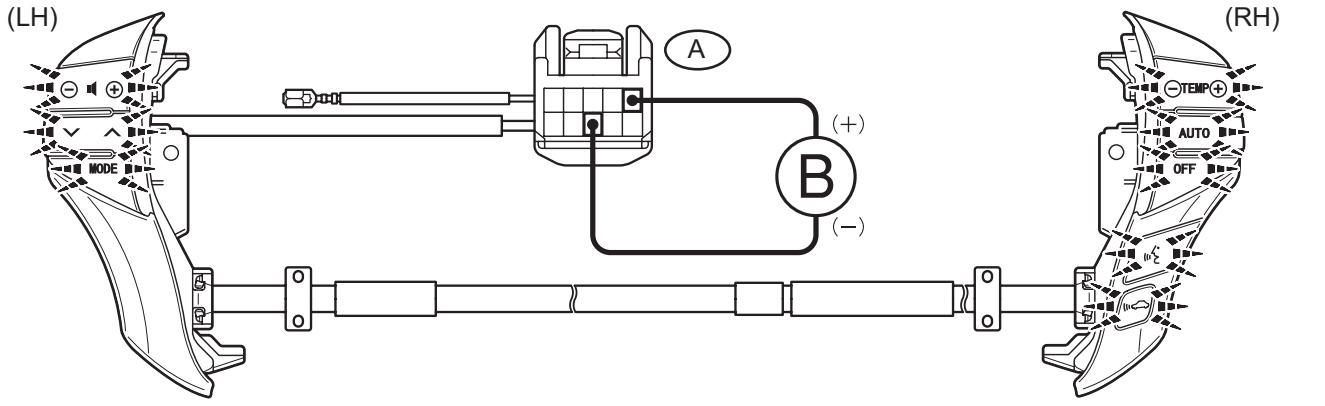
OK

3 INSPECT STEERING PAD SWITCH ASSEMBLY

(a) Disconnect the steering pad switch connector.

AV

Steering Pad Switch Connector Front View:



(b) Connect the positive (+) lead to terminal ILL+ and the negative (-) lead to terminal EAU of the steering pad switch connector.

(c) Check if the illumination for the steering pad switch comes on.

OK:

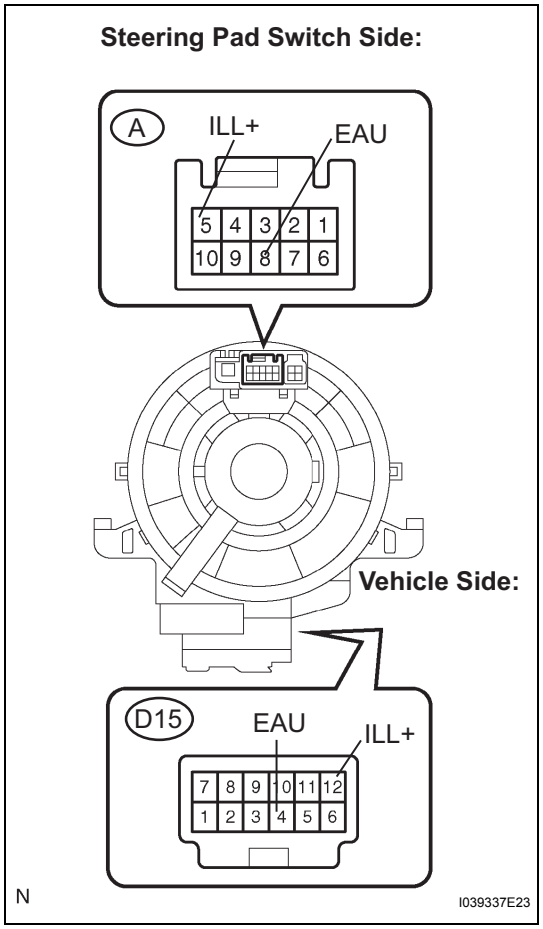
Illumination for the steering pad switch comes on.

AV

NG → **REPLACE STEERING PAD SWITCH ASSEMBLY**

OK

4	**INSPECT SPIRAL CABLE**



(a) Disconnect the spiral cable connector.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Condition	Specified condition
EAU - EAU	Always	Below 1 Ω
ILL+ - ILL+	Always	Below 1 Ω

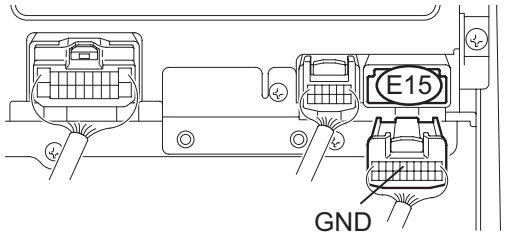
NG → **REPLACE SPIRAL CABLE**

OK

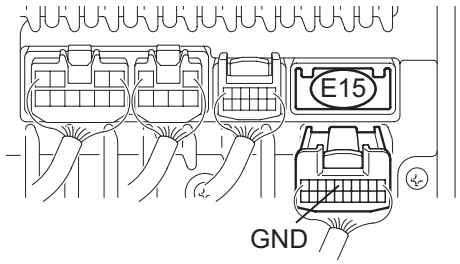
AV

5	CHECK HARNESS AND CONNECTOR (SPIRAL CABLE - RADIO RECEIVER)

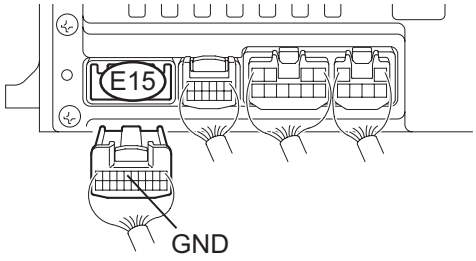
Radio Receiver (12 Speaker)
Wire Harness View:



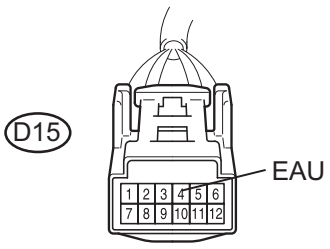
Radio Receiver (9 Speaker, 1 CD Type)
Wire Harness View:



Radio Receiver (9 Speaker, 6 CD Type)
Wire Harness View:



Spiral Cable Connector Front View:



P

E126138E01

(a) Disconnect the radio receiver E15 connector.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connector	Condition	Specified condition
GND - EAU	Always	Below 1 Ω
GND - Body ground	Always	10 kΩ or higher

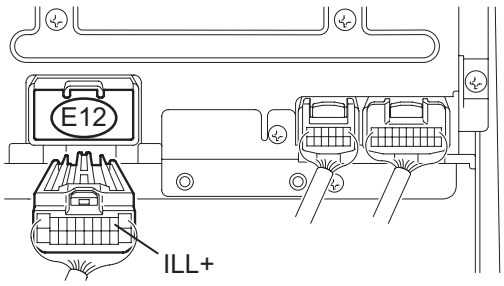
NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

REPLACE RADIO RECEIVER

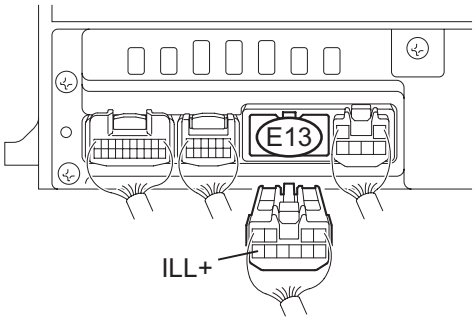
6 INSPECT RADIO RECEIVER

Wire Harness View (12 Speaker):



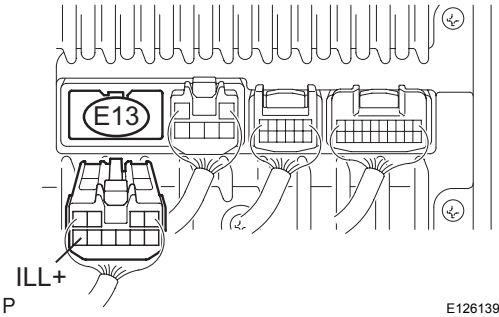
Wire Harness View

(9 Speaker, 6 CD Type):



Wire Harness View

(9 Speaker, 1 CD Type):



P E126139E01

(a) Disconnect the radio receiver E12 or E13 connector.
(b) Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester connector	Condition	Specified condition
ILL+ - Body ground	Light control switch TAIL or HEAD	10 to 14 V

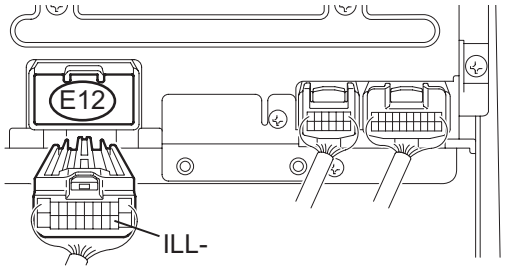
NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

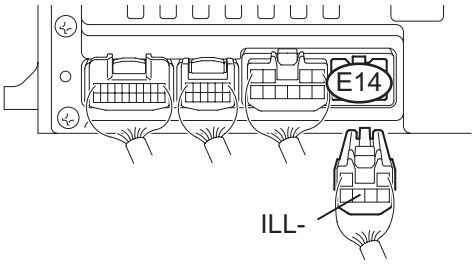
AV

7	CHECK HARNESS AND CONNECTOR (RADIO RECEIVER - COMBINATION METER)

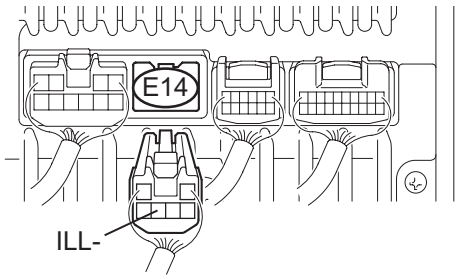
Radio Receiver (12 Speaker)
Wire Harness View:



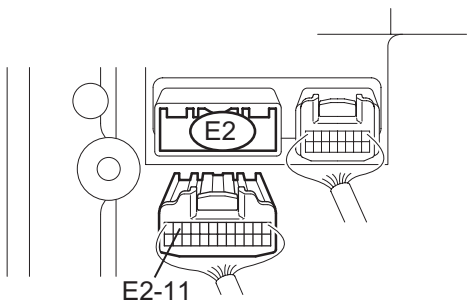
Radio Receiver (9 Speaker, 6 CD Type)
Wire Harness View:



Radio Receiver (9 Speaker, 1 CD Type)
Wire Harness View:



Combination Meter Wire Harness View:



P

E126140E01

(a) Disconnect the combination meter E2 connector.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connector	Condition	Specified condition
ILL- - E2-11	Always	Below 1 Ω

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

GO TO COMBINATION METER SYSTEM

Speaker Circuit

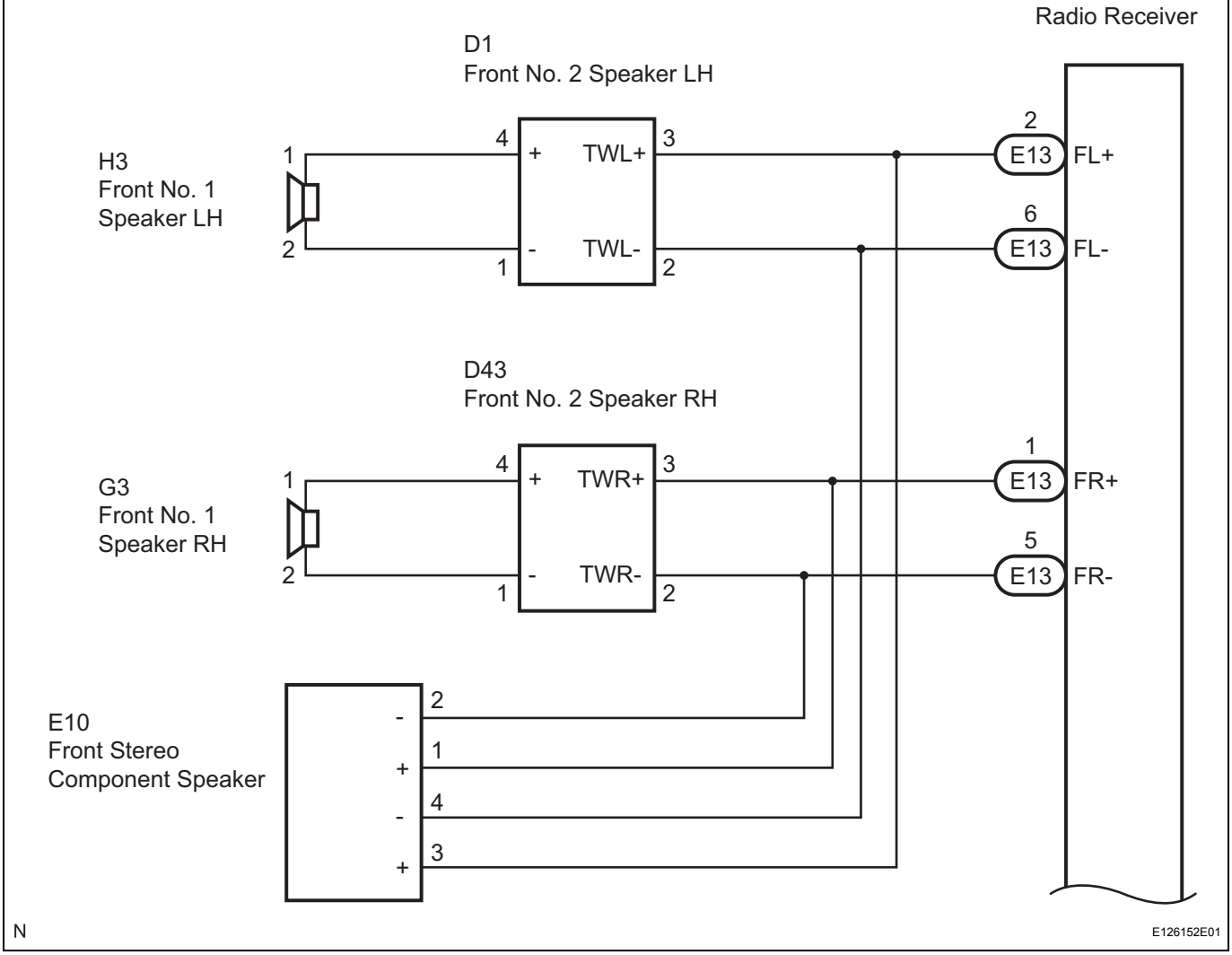
DESCRIPTION

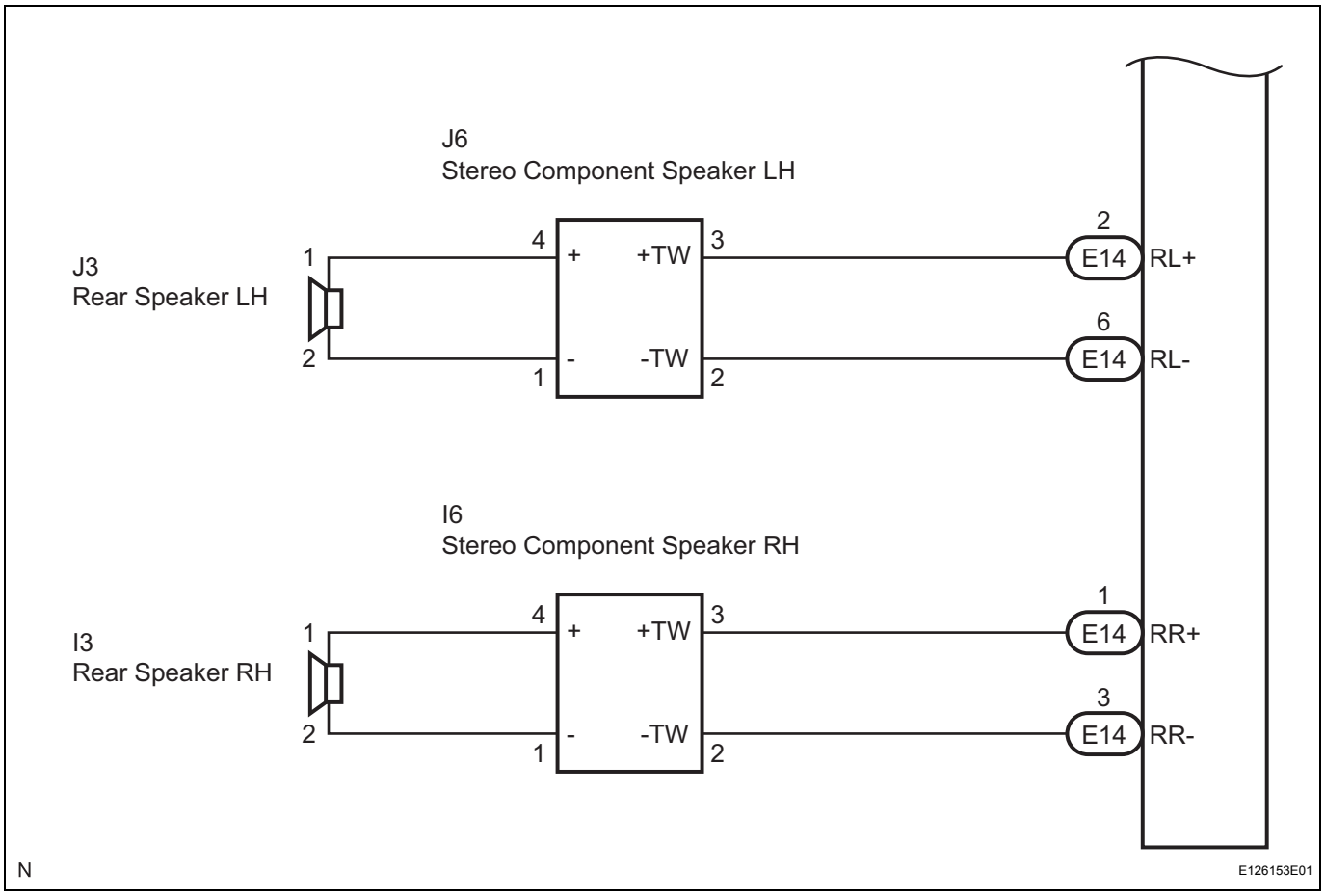
The sound signal that has been amplified by the stereo component amplifier or radio receiver is sent to the speakers from the stereo component amplifier or radio receiver through this circuit.
If there is a short in this circuit, the stereo component amplifier detects it and stops output to the speakers. Thus sound cannot be heard from the speakers even if there is no malfunction in the stereo component amplifier or speakers.
There are two cases when a short is detected.

- When a short is detected in the rear No. 2 speaker circuit, sound cannot be heard only from the rear No. 2 speaker.
- When a short is detected in any circuit other than the rear No. 2 speaker circuit, sound cannot be heard from all speakers including the rear No. 2 speaker.

WIRING DIAGRAM

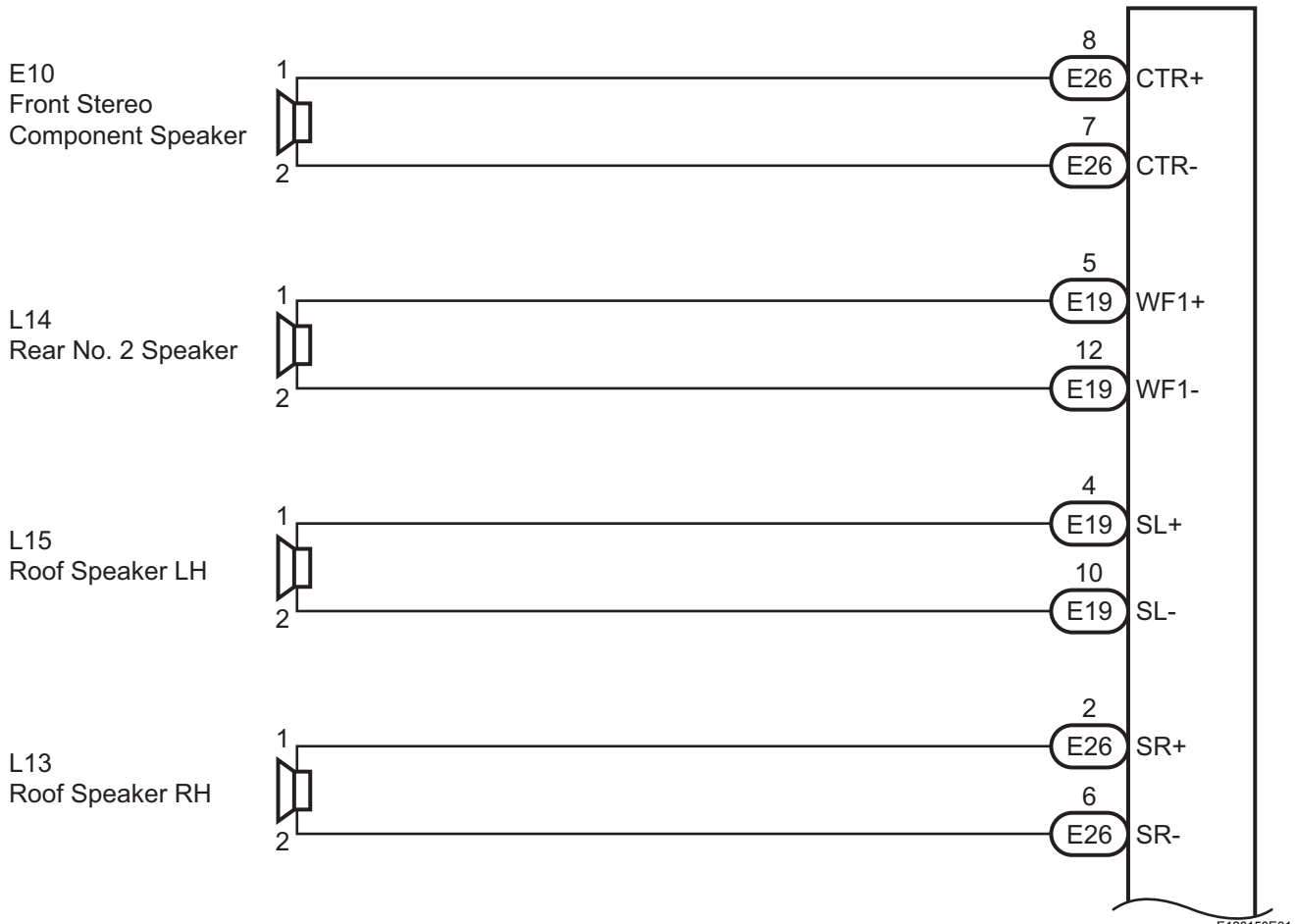
9 Speaker:



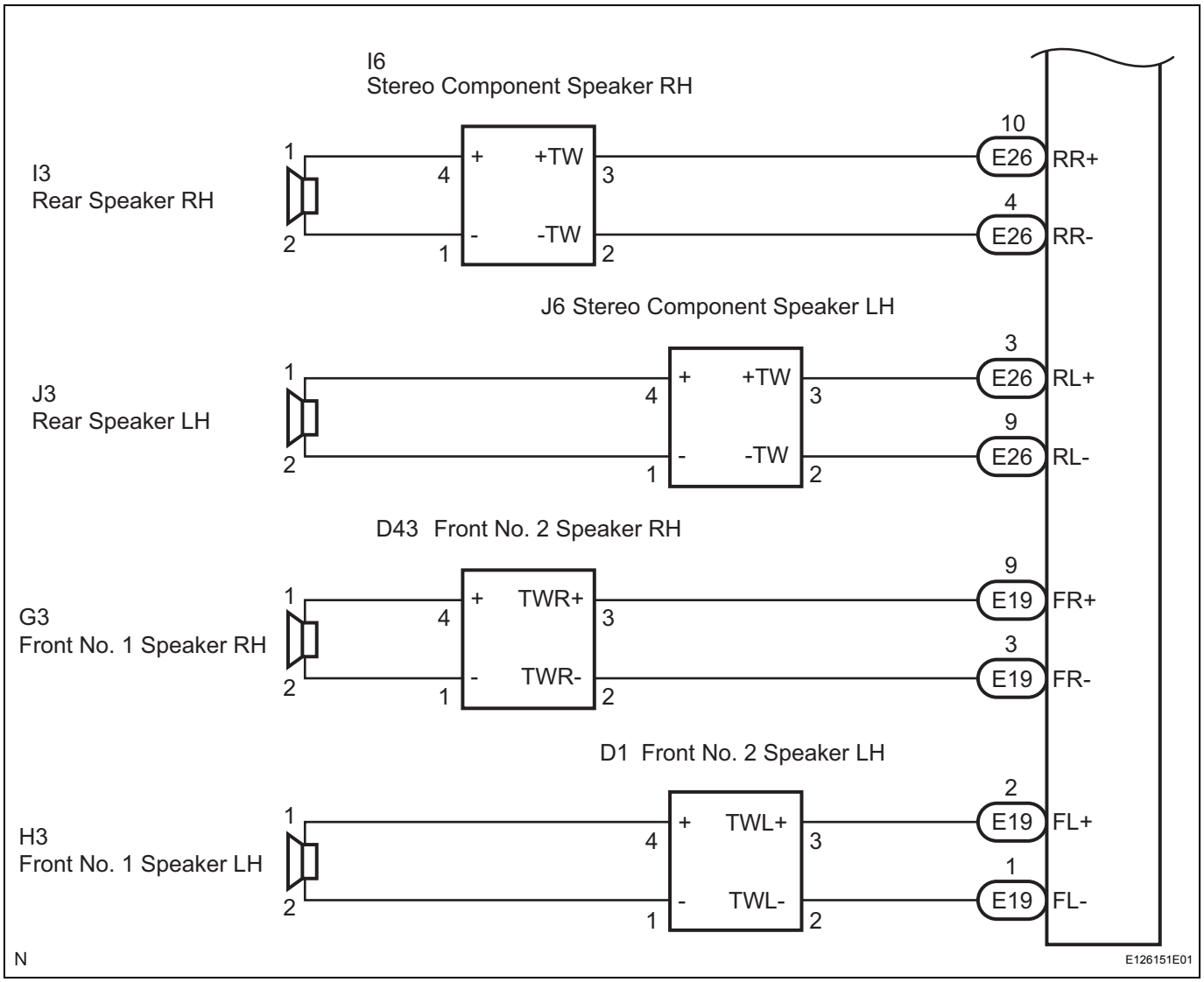

J6
Stereo Component Speaker LH
J3
Rear Speaker LH
1
2
4
+
+TW
3
-
-TW
1
2
2
E14
RL+
6
E14
RL-
I6
Stereo Component Speaker RH
I3
Rear Speaker RH
1
2
4
+
+TW
3
-
-TW
1
2
1
E14
RR+
3
E14
RR-
N
E126153E01

AV

12 Speaker:



AV

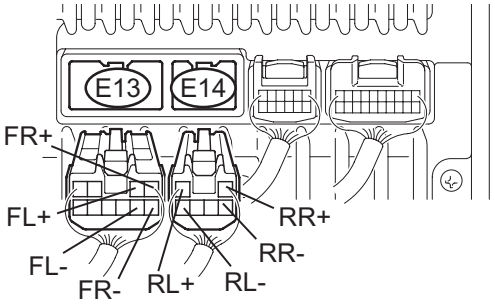

I6
Stereo Component Speaker RH
I3
Rear Speaker RH
+TW
-TW
10
E26
RR+
4
E26
RR-
J6 Stereo Component Speaker LH
J3
Rear Speaker LH
3
E26
RL+
9
E26
RL-
D43 Front No. 2 Speaker RH
G3
Front No. 1 Speaker RH
TWR+
TWR-
9
E19
FR+
3
E19
FR-
D1 Front No. 2 Speaker LH
H3
Front No. 1 Speaker LH
TWL+
TWL-
2
E19
FL+
1
E19
FL-
N
E126151E01

AV

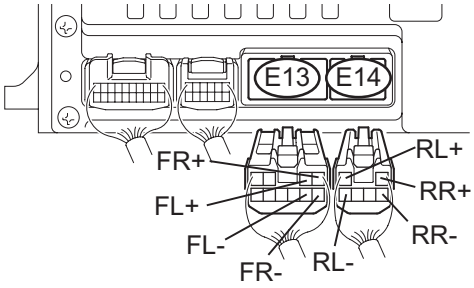
INSPECTION PROCEDURE

1	CHECK HARNESS AND CONNECTOR

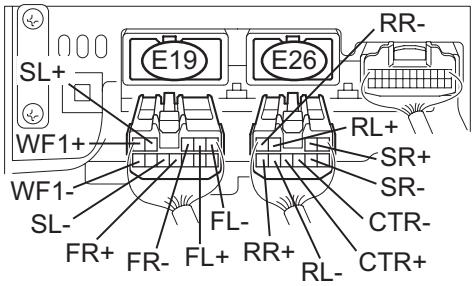
Radio Receiver (9 Speaker, 1 CD Type) Wire Harness View:



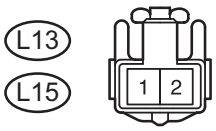
Radio Receiver (9 Speaker, 6 CD Type) Wire Harness View:



Stereo Component Amplifier (12 Speaker) Wire Harness View:



Roof Speaker (12 Speaker) Connector Front View:



P

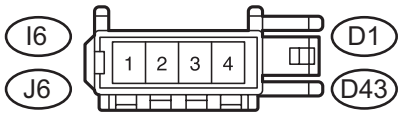
E126141E01

(a) Disconnect the connectors shown in the illustration on the left from the stereo component amplifier or the radio receiver and speakers.

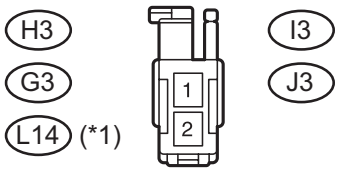
(b) Measure the resistance between speakers or between a speaker and the stereo component amplifier or the radio receiver to check for an open circuit in the wire harness.
Standard resistance:
Below 1 Ω

AV

Front No. 2 Speaker, Stereo Component Speaker Connector Front View:

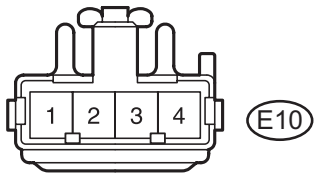


Front No. 1 Speaker, Rear No. 2 Speaker (*1), Rear speaker Connector Front View:



*1: 12 Speaker

Front Stereo Component Speaker Connector Front View:



P E126142E01

(c) Measure the resistance between body ground and the stereo component amplifier to check for a short circuit in the wire harness.
Standard resistance:
10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

2	INSPECT FRONT NO. 1 SPEAKER

(a) Resistance check
(1) Measure the resistance between the terminals of the speakers.
Standard resistance:
9 Speaker:
Approximately 4 Ω
12 Speaker:
1.8 to 2.6 Ω

NG → **REPLACE FRONT NO. 1 SPEAKER**

AV

OK

3	INSPECT FRONT NO. 2 SPEAKER

(a) Check that the malfunction disappears when another speaker in good condition is installed.
OK:
Malfunction disappears.
HINT:
- Connect all the connectors to the speakers.
- When there is a possibility that either the right or left front speaker is defective, inspect it by interchanging the right one with the left one.

OK → **REPLACE FRONT NO. 2 SPEAKER**

NG

AV

4	INSPECT REAR SPEAKER

(a) Resistance check
(1) Measure the resistance between the terminals of the speaker.
Standard resistance:
9 Speaker:
3.2 to 4.8 Ω
12 Speaker:
1.8 to 2.6 Ω

NG → **REPLACE REAR SPEAKER**

OK

5	INSPECT STEREO COMPONENT SPEAKER

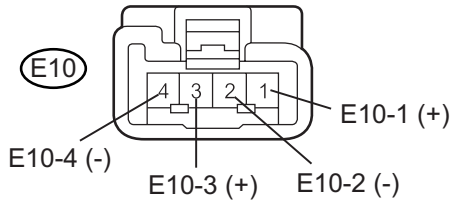
(a) Check that the malfunction disappears when another speaker in good condition is installed.
OK:
Malfunction disappears.
HINT:
- Connect all the connectors to the speakers.
- When there is a possibility that either the right or left front speaker is defective, inspect it by interchanging the right one with the left one.

OK → **REPLACE STEREOÅ@COMPONENT SPEAKER**

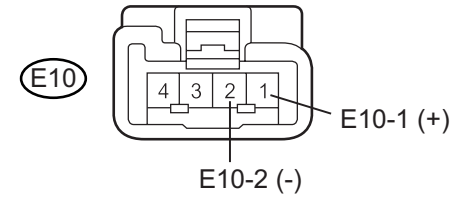
NG

6 INSPECT FRONT STEREO COMPONENT SPEAKER

9 Speaker:



12 Speaker:



H

E126143E01

(a) Resistance check
(1) Measure the resistance between the terminals of the front stereo component speaker.
Standard resistance (9 Speaker)

Tester Connection	Condition	Specified Condition
E10-1 - E10-2	Always	Approx. 40 Ω
E10-3 - E10-4	Always	Approx. 40 Ω

Standard resistance (12 Speaker)

Tester Connection	Condition	Specified Condition
E10-1 - E10-2	Always	1.5 to 2.1 Ω

NG → **REPLACE FRONT STEREO COMPONENT SPEAKER**

OK

7 INSPECT REAR NO. 2 SPEAKER

HINT:
If the vehicle is not equipped with a rear No. 2 speaker, proceed to the next step.

(a) Resistance check
(1) Measure the resistance between the terminals of the speaker.
Standard resistance:
1.8 to 2.6 Ω

NG → **REPLACE REAR NO. 2 SPEAKER**

OK

8 INSPECT ROOF SPEAKER

HINT:
If the vehicle is not equipped with a roof speaker, proceed to the next step.

AV

(a) Resistance check
(1) Measure the resistance between the terminals of the speaker.
Standard resistance:
1.5 to 2.1 Ω

NG → **REPLACE ROOF SPEAKER**

OK

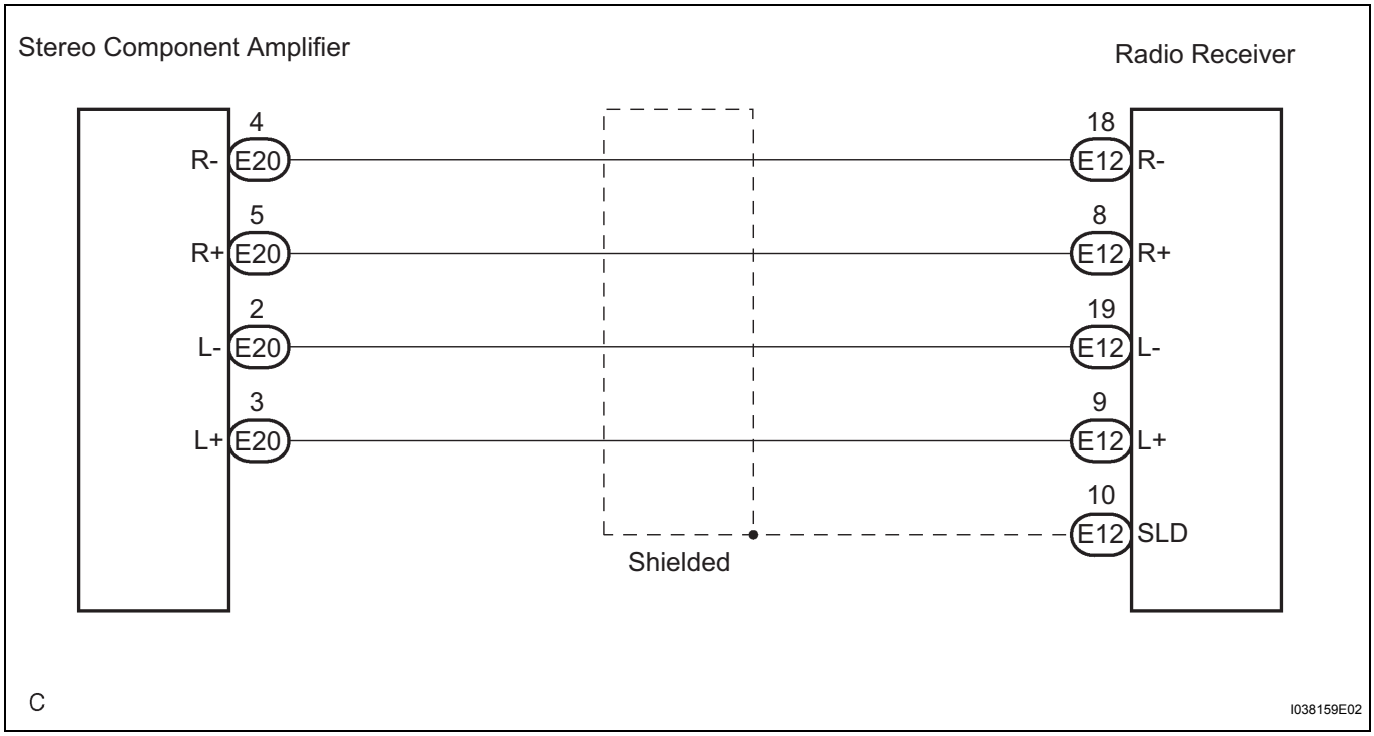
PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

Sound Signal Circuit between Radio Receiver and Stereo Component Amplifier

DESCRIPTION

The radio receiver sends a sound signal to the stereo component amplifier through this circuit.
The sound signal that has been sent is amplified by the stereo component amplifier, 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 or speakers.

WIRING DIAGRAM

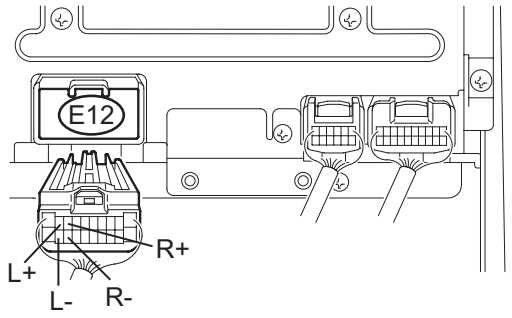


AV

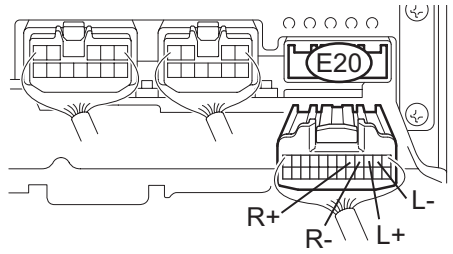
INSPECTION PROCEDURE

1	**CHECK HARNESS AND CONNECTOR (RADIO RECEIVER - STEREO COMPONENT AMPLIFIER)**

Radio Receiver (12 Speaker) Wire Harness View:



Stereo Component Amplifier Wire Harness View:



P E126144E01

(a) Disconnect the radio receiver E12 connector and stereo component amplifier E20 connector.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
L+ (E12) - L+ (E20)	Always	Below 1 Ω
L- (E12) - L- (E20)	Always	Below 1 Ω
R+ (E12) - R+ (E20)	Always	Below 1 Ω
R- (E12) - R- (E20)	Always	Below 1 Ω
L+ (E12 or E20) - Body ground	Always	10 kΩ or higher
L- (E12 or E20) - Body ground	Always	10 kΩ or higher
R+ (E12 or E20) - Body ground	Always	10 kΩ or higher
R- (E12 or E20) - Body ground	Always	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

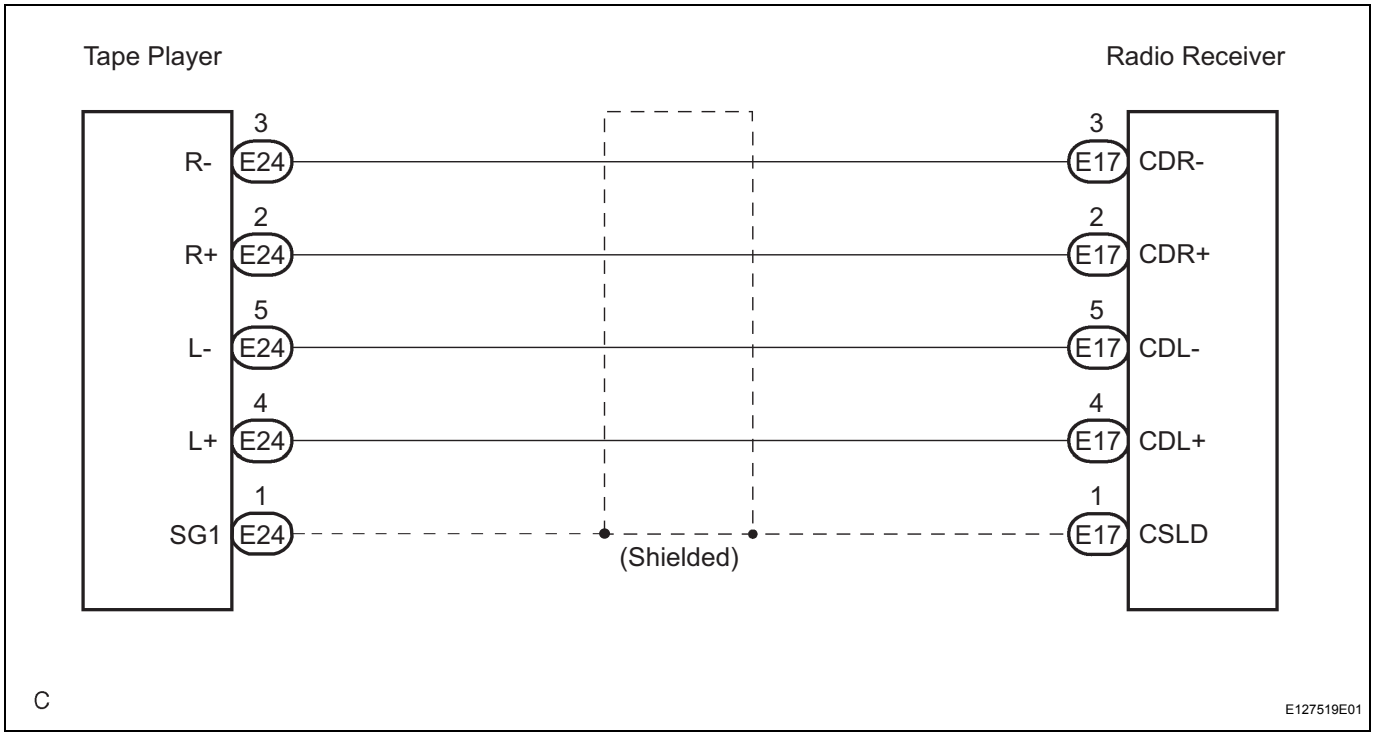
AV

Sound Signal Circuit between Radio Receiver and Tape Player

DESCRIPTION

The tape player sends a sound signal to the radio receiver through this circuit.
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 tape player or radio receiver.

WIRING DIAGRAM

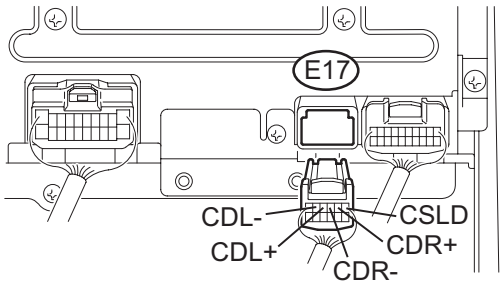


AV

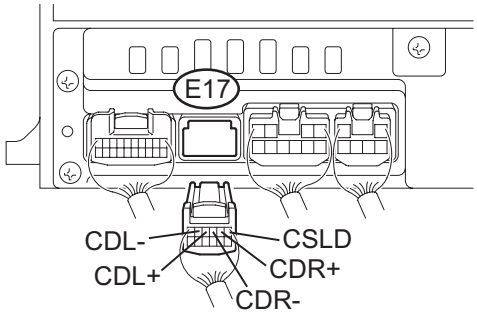
INSPECTION PROCEDURE

1	CHECK HARNESS AND CONNECTOR (RADIO RECEIVER - TAPE PLAYER)

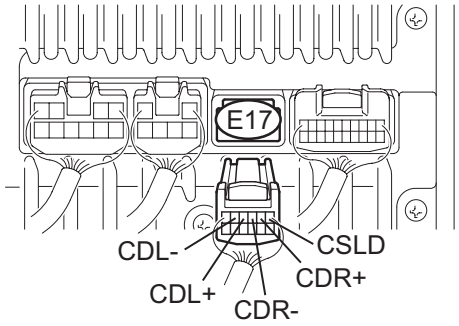
Radio Receiver (12 Speaker) Wire Harness View:



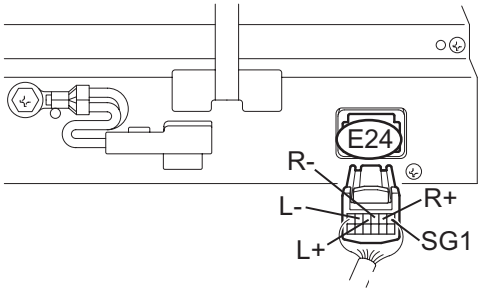
Radio Receiver (9 Speaker, 6 CD Type) Wire Harness View:



Radio Receiver (9 Speaker, 1 CD Type) Wire Harness View:



Tape Player Wire Harness View:



P

E126129E01

(a) Disconnect the radio receiver E17 connector and tape player E24 connector.

(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
CDL+ - L+	Always	Below 1 Ω
CDL- - L-	Always	Below 1 Ω
CDR+ - R+	Always	Below 1 Ω
CDR- - R-	Always	Below 1 Ω
CSLD - SG1	Always	Below 1 Ω
CDL+ - Body ground	Always	10 kΩ or higher
CDL- - Body ground	Always	10 kΩ or higher
CDR+ - Body ground	Always	10 kΩ or higher
CDR- - Body ground	Always	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

AV

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

Mute Signal Circuit between Radio Receiver and Stereo Component Amplifier

DESCRIPTION

This circuit sends a signal to the stereo component amplifier to mute noise. Because of that, the noise produced by changing the sound source ceases.
If there is an open in the circuit, noise can be heard from the speakers when changing the sound source.
If there is a short in the circuit, even though the stereo component amplifier is normal, no sound, or only an extremely small sound, can be produced.

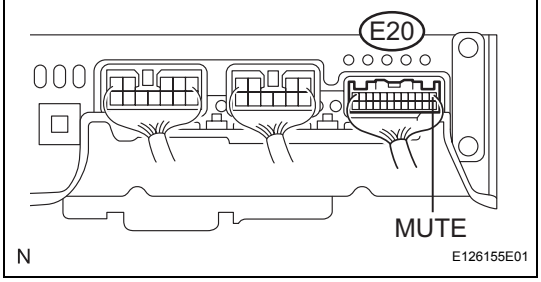
WIRING DIAGRAM

AV

INSPECTION PROCEDURE

1	INSPECT STEREO COMPONENT AMPLIFIER

Wire Harness View:



(a) Measure the voltage according to the value(s) in the table below.
Standard voltage

Tester connection	Condition	Specified condition
MUTE - Body ground	Turn ignition switch on (ACC), Audio system is playing → Changing mode	Above 3.5 V → Below 1 V

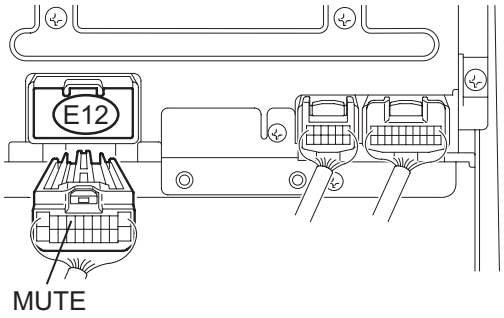
NG → **Go to step 2**

OK

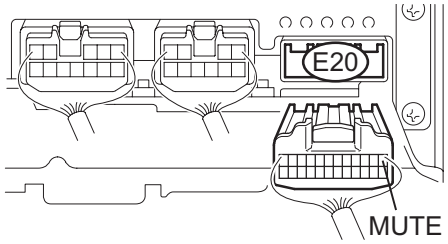
PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

2	CHECK HARNESS AND CONNECTOR (RADIO RECEIVER - STEREO COMPONENT AMPLIFIER)

Radio Receiver (12 Speaker) Wire Harness View:



Stereo Component Amplifier Wire Harness View:



P E126144E02

(a) Disconnect the the radio receiver E12 connector and stereo component amplifier E20 connector.
(b) Measure the resistance according to the values in the table below.

Standard resistance

Tester connection	Condition	Specified condition
MUTE - MUTE	Always	Below 1 Ω
MUTE - Body ground	Always	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

3	REPLACE STEREO COMPONENT AMPLIFIER

(a) Replace the stereo component amplifier and check that it operates normally.

OK:

The audio system operates normally.

OK → **END**

NG

REPLACE RADIO RECEIVER

AV

Mute Signal Circuit between Radio Receiver and Tape Player

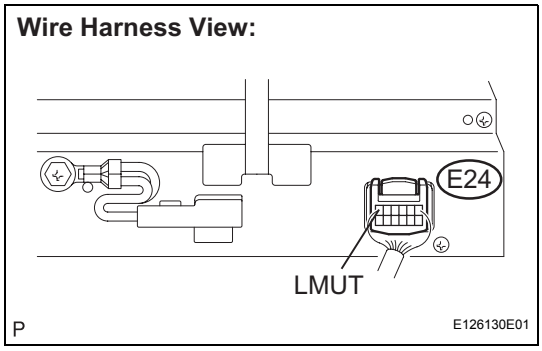
DESCRIPTION

This circuit sends a signal to the tape player to mute noise. Because of that, the noise produced by changing the sound source ceases.
If there is an open in the circuit, noise can be heard from the speakers when changing the sound source.
If there is a short in the circuit, even though the tape player is normal, no sound, or only an extremely small sound, can be produced.

WIRING DIAGRAM

INSPECTION PROCEDURE

1	INSPECT TAPE PLAYER



(a) Measure the voltage according to the value(s) in the table below.
Standard voltage

Tester Connection	Condition	Specified Condition
LMUT - Body ground	Turn ignition switch on (ACC). Audio system is playing → Changing mode	Above 3.5 V → Below 1 V

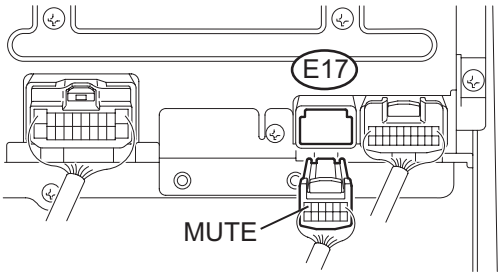
NG → **Go to step 2**

OK

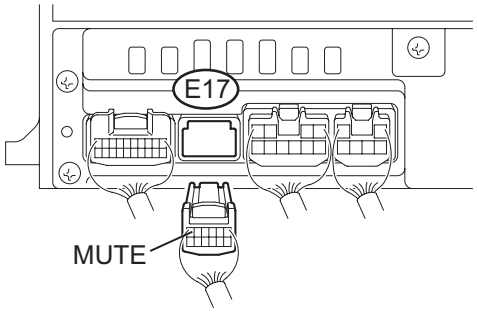
PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

2	CHECK HARNESS AND CONNECTOR (RADIO RECEIVER - TAPE PLAYER)

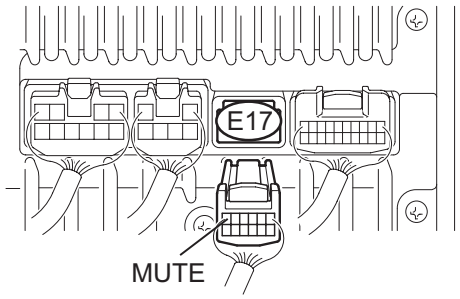
Radio Receiver (12 Speaker) Wire Harness View:



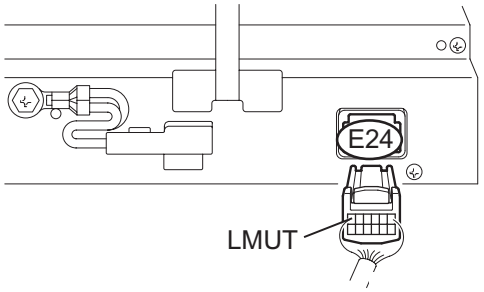
Radio Receiver (9 Speaker, 6 CD Type) Wire Harness View:



Radio Receiver (9 Speaker, 1 CD Type) Wire Harness View:



Tape Player Wire Harness View:



P

E126129E02

(a) Disconnect the the radio receiver E17 connector and tape player E24 connector.

(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
MUTE - LMUT	Always	Below 1 Ω
MUTE - Body ground	Always	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

AV

OK

3	REPLACE TAPE PLAYER

(a) Replace the tape player and check that it operates normally.
OK:
The audio system operates normally.

OK → END

NG

REPLACE RADIO RECEIVER

AVC-LAN Circuit

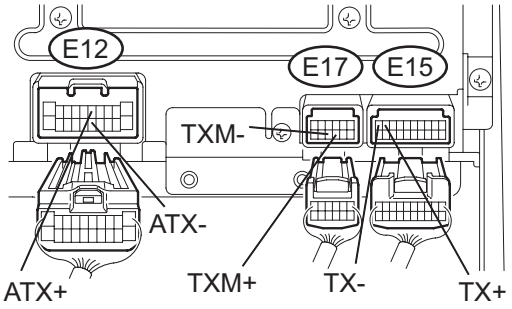
DESCRIPTION

Each unit of the audio system connected to the AVC-LAN (communication bus) transfers the signal of each switch by communication.
When a short to +B or short to ground occurs in this AVC-LAN, the audio system will not function normally as the communication is discontinued.

INSPECTION PROCEDURE

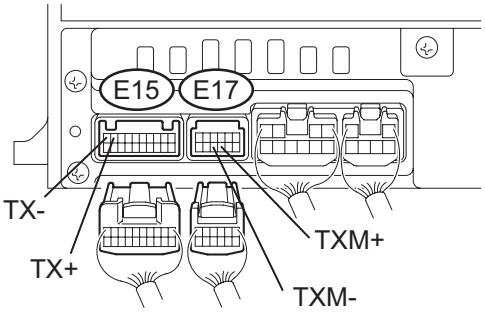
1	INSPECT RADIO RECEIVER

Wire Harness View (12 Speaker):



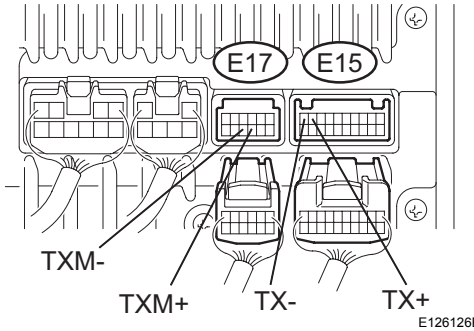
Wire Harness View

(9 Speaker, 6 CD Type):



Wire Harness View

(9 Speaker, 1 CD Type):



P E126126E02

(a) Disconnect the radio receiver connectors.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
TX+ (E15-9) - TX- (E15-10)	Always	60 to 80 Ω
TXM+ (E17-9) - TXM- (E17-10) (*1)	Always	60 to 80 Ω
ATX+ (E12-5) - ATX- (E12-15) (*2)	Always	60 to 80 Ω

*1: with Tape Player
*2: for 12 Speaker System

NG → REPLACE RADIO RECEIVER

OK

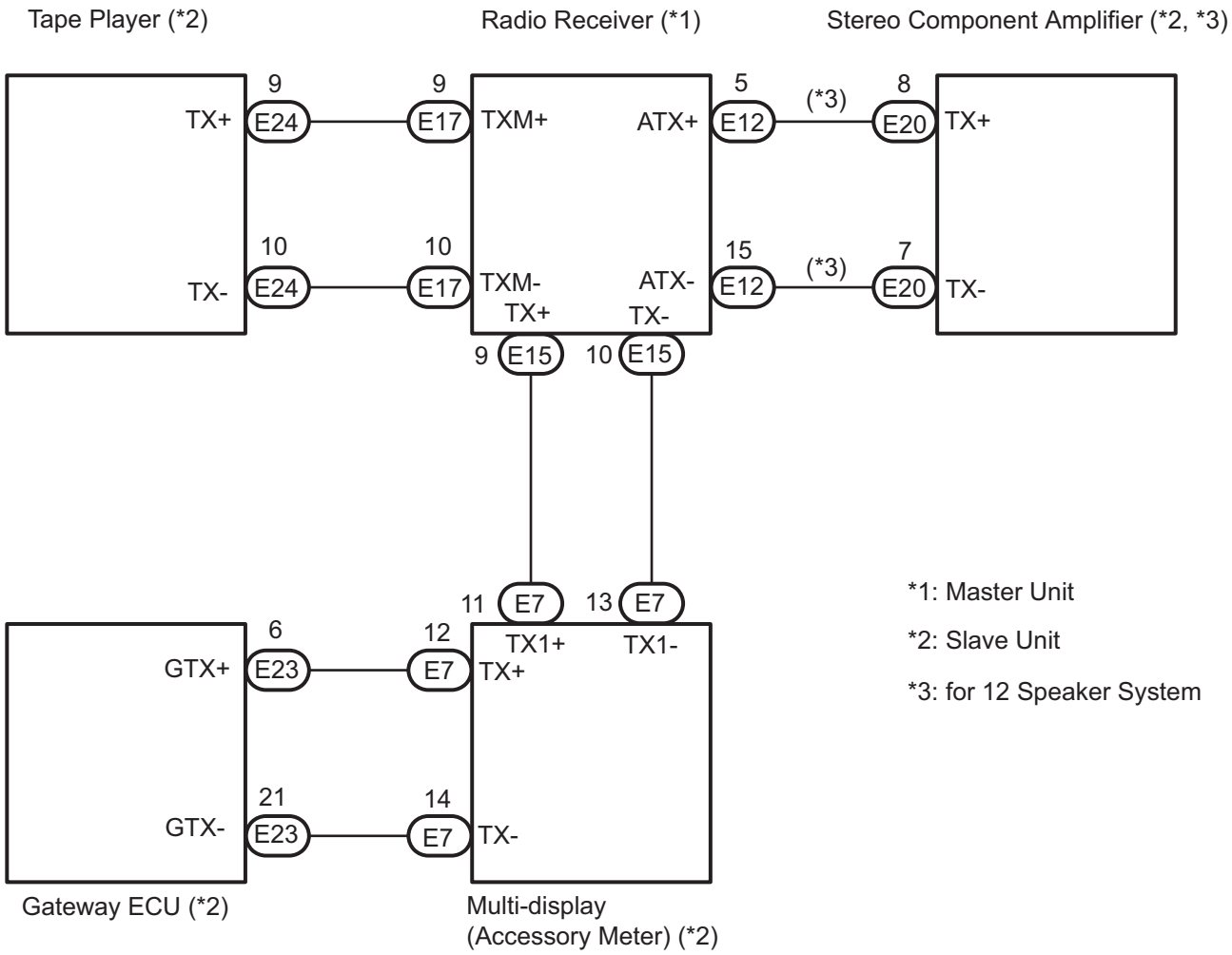
AV

2	CHECK HARNESS AND CONNECTOR

HINT:
For details of the connectors, refer to "TERMINALS OF ECU" (See page AV-13).

(a) Referring to the AVC-LAN wiring diagram below, check all AVC-LAN circuits.
  (1) Disconnect all connectors in all AVC-LAN circuits.
  (2) Check for an open or short in all AVC-LAN circuits.
  OK:
  There is no open or short circuit.

AVC-LAN WIRING DIAGRAM



NG	REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

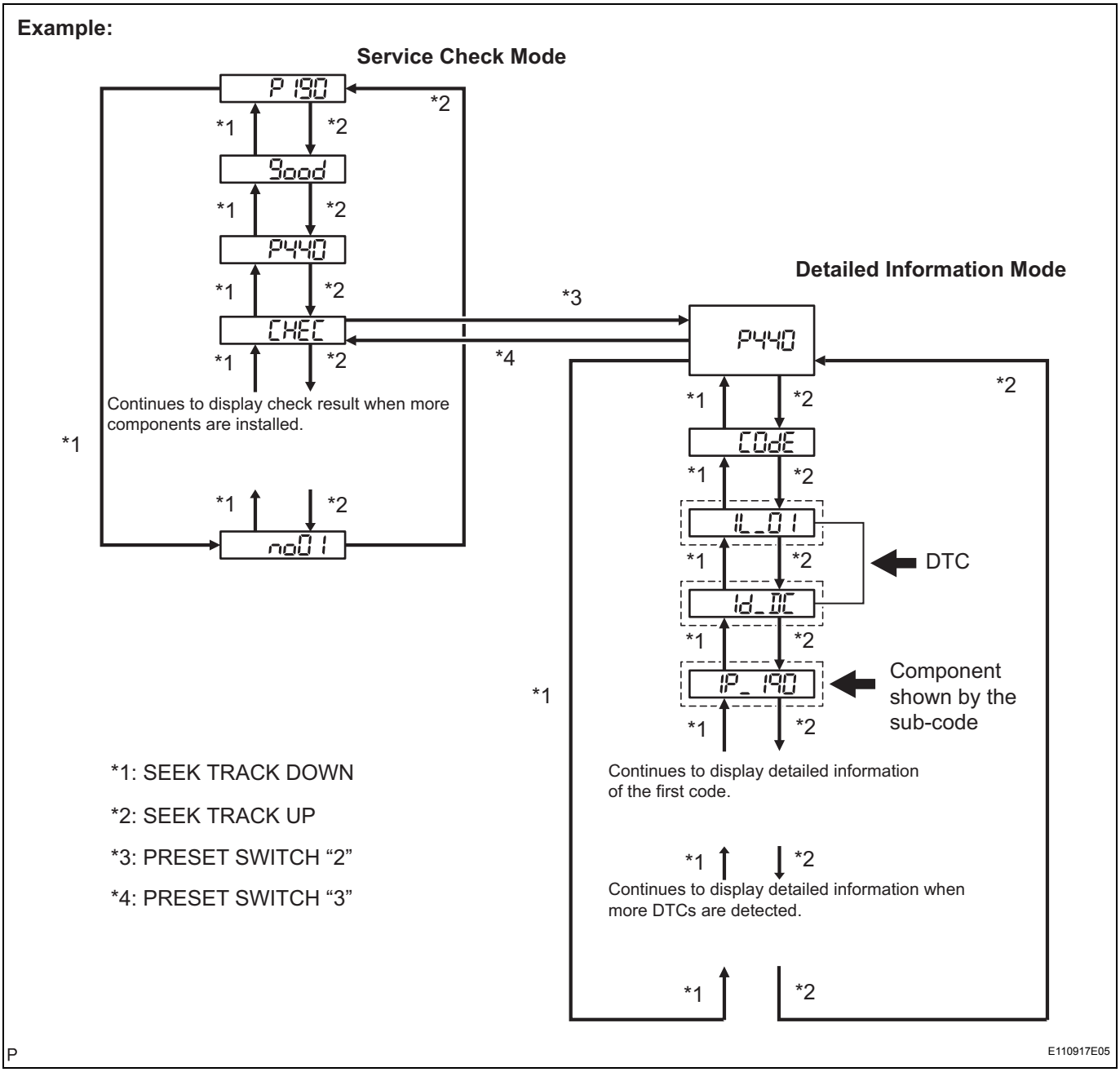
PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

Gateway ECU Communication Error

INSPECTION PROCEDURE

1	IDENTIFY THE COMPONENT SHOWN BY SUB-CODE

(a) Enter the diagnostic mode.



(b) Press the preset switch "3" to change to "Detailed Information Mode".

(c) Identify the component shown by the sub-code.

HINT:

- "190 (radio receiver)" is the component shown by the sub-code in the example shown in the illustration.

- For details of the DTC display, refer to "DTC CHECK/ CLEAR" (See page AV-18).

NEXT

2	CHECK POWER SOURCE CIRCUIT OF COMPONENT SHOWN BY SUB-CODE

(a) Inspect the power source circuit of the component shown by the sub-code.
If the power source circuit is operating normally, proceed to the next step.

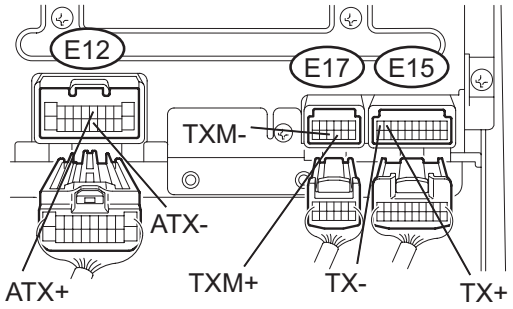
Component Table:

Component	Proceed to
Radio receiver (190)	Radio receiver power source circuit (See page AV-147)
Stereo component amplifier (440)	Stereo component amplifier power source circuit (See page AV-149)
Multi-display (Accessory meter) (1D4)	Multi-display power source circuit (See page AV-151)
Tape player (320)	Tape player power source circuit (See page AV-155)

NEXT

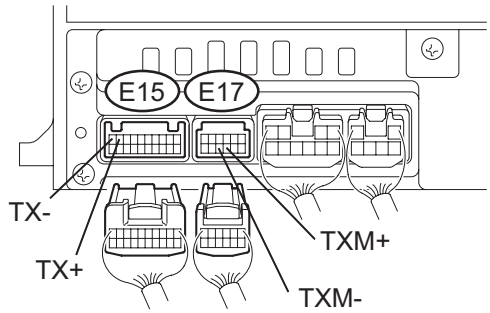
3	INSPECT RADIO RECEIVER

Wire Harness View (12 Speaker):



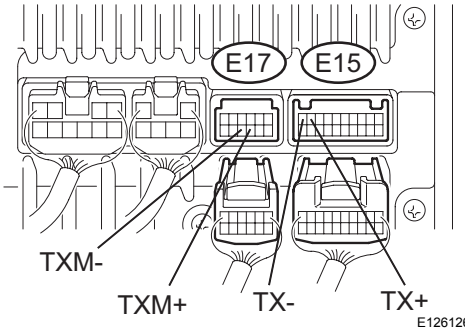
Wire Harness View

(9 Speaker, 6 CD Type):



Wire Harness View

(9 Speaker, 1 CD Type):



P E126126E02

(a) Disconnect the radio receiver connectors.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
TX+ (E15-9) - TX- (E15-10)	Always	60 to 80 Ω
TXM+ (E17-9) - TXM- (E17-10) (*1)	Always	60 to 80 Ω
ATX+ (E12-5) - ATX- (E12-15) (*2)	Always	60 to 80 Ω

*1: with Tape Player
*2: for 12 Speaker System

NG → REPLACE RADIO RECEIVER

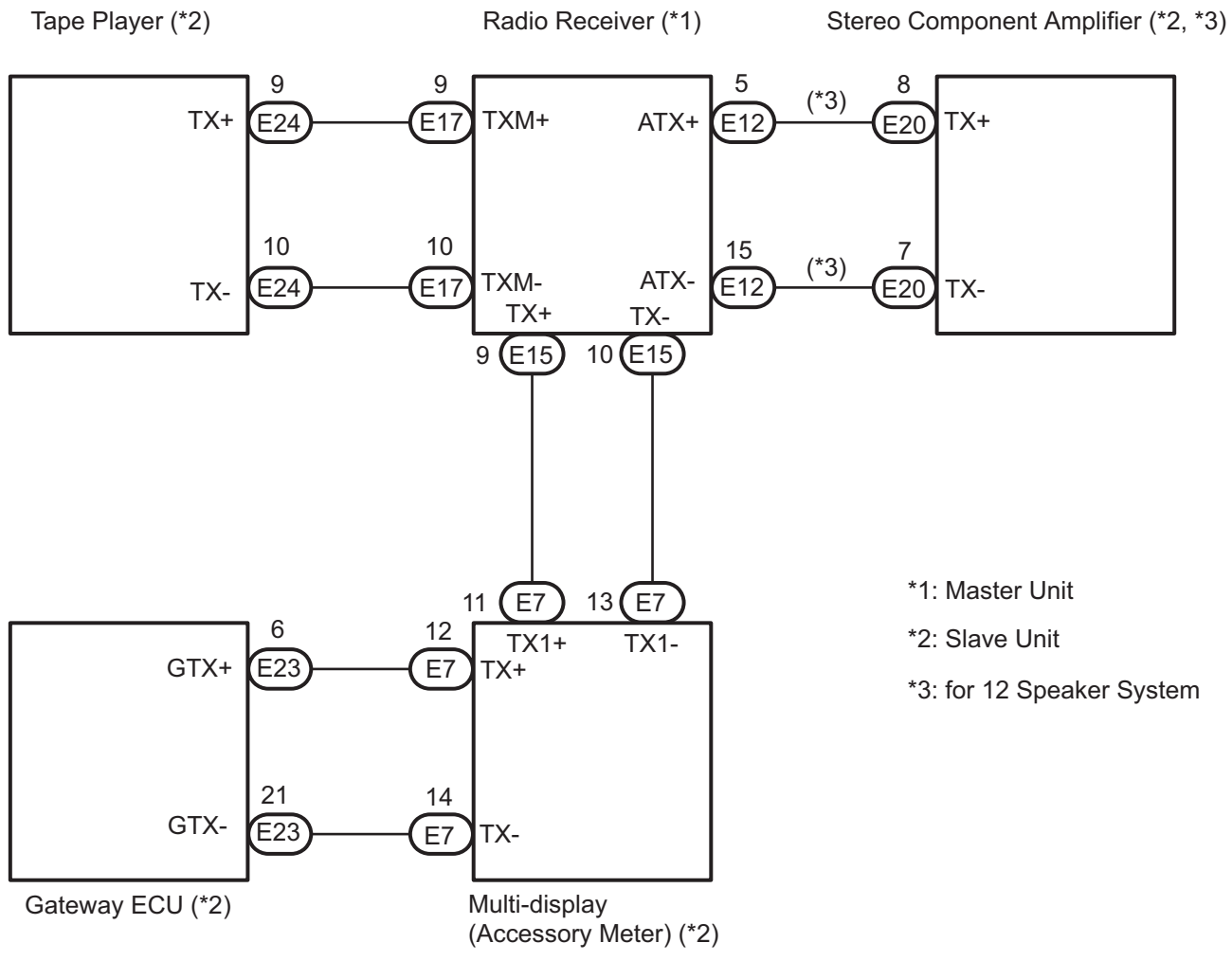
OK

4	CHECK HARNESS AND CONNECTOR (GATEWAY ECU - COMPONENT SHOWN BY SUB-CODE)

HINT:
- Start the check from the circuit that is near the component shown by the sub-code first.
- For details of the connectors, refer to "TERMINALS OF ECU" (See page AV-13).

(a) Referring to the AVC-LAN wiring diagram below, check the AVC-LAN circuit between the gateway ECU and the component shown by the sub-code.
  (1) Disconnect all connectors between the gateway ECU and the component shown by sub-code.
  (2) Check for an open or short in the AVC-LAN circuit between the gateway ECU and the component shown by the sub-code.
  OK:
  There is no open or short circuit.

AVC-LAN WIRING DIAGRAM



NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

5	REPLACE COMPONENT SHOWN BY SUB-CODE

(a) Replace the component shown by the sub-code with a normal one and check if the same problem occurs again.
OK:
Same problem does not occur.

NG → **REPLACE GATEWAY ECU**

OK

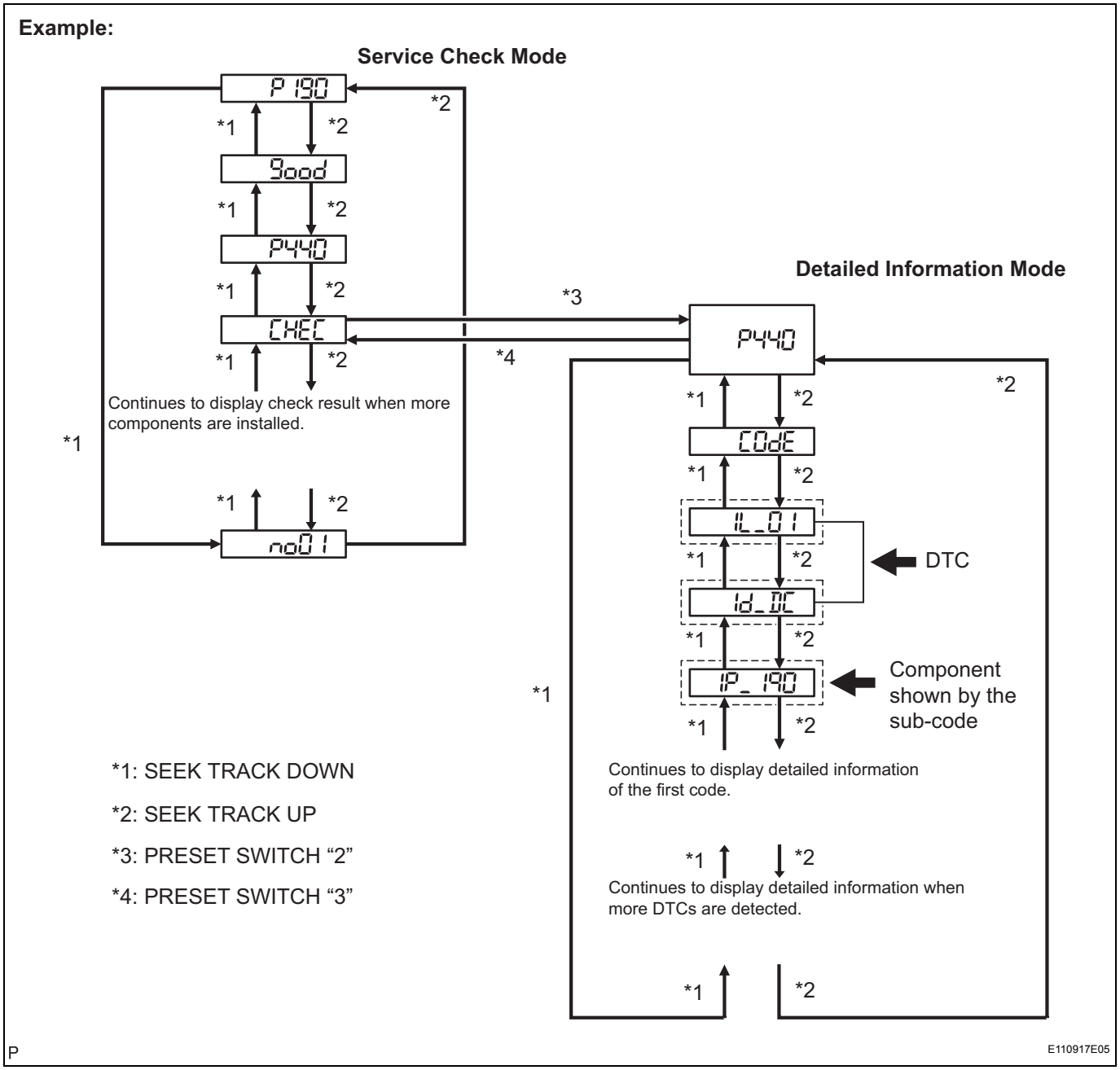
END

Radio Receiver Communication Error

INSPECTION PROCEDURE

1	IDENTIFY THE COMPONENT SHOWN BY SUB-CODE

(a) Enter the diagnostic mode.



(b) Press the preset switch "3" to change to "Detailed Information Mode".

(c) Identify the component shown by the sub-code.

HINT:

- "190 (radio receiver)" is the component shown by the sub-code in the example shown in the illustration.

- For details of the DTC display, refer to "DTC CHECK/ CLEAR" (See page AV-18).

NEXT

2	CHECK POWER SOURCE CIRCUIT OF COMPONENT SHOWN BY SUB-CODE

(a) Inspect the power source circuit of the component shown by the sub-code.
If the power source circuit is operating normally, proceed to the next step.

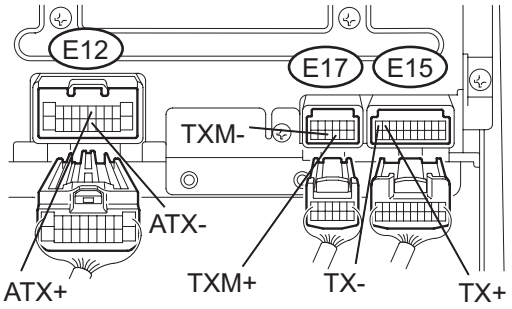
Component Table:

Component	Proceed to
Gateway ECU (1C6)	Gateway ECU power source circuit (See page AV-153)
Stereo component amplifier (440)	Stereo component amplifier power source circuit (See page AV-149)
Multi-display (Accessory meter) (1D4)	Multi-display power source circuit (See page AV-151)
Tape player (320)	Tape player power source circuit (See page AV-155)

NEXT

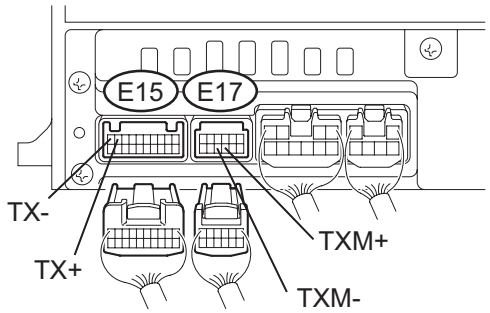
3	INSPECT RADIO RECEIVER

Wire Harness View (12 Speaker):



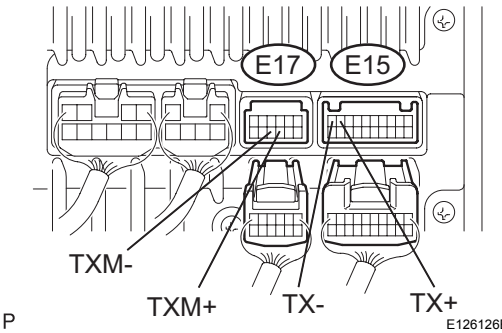
Wire Harness View

(9 Speaker, 6 CD Type):



Wire Harness View

(9 Speaker, 1 CD Type):



P E126126E02

(a) Disconnect the radio receiver connectors.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
TX+ (E15-9) - TX- (E15-10)	Always	60 to 80 Ω
TXM+ (E17-9) - TXM- (E17-10) (*1)	Always	60 to 80 Ω
ATX+ (E12-5) - ATX- (E12-15) (*2)	Always	60 to 80 Ω

*1: with Tape Player
*2: for 12 Speaker System

NG → REPLACE RADIO RECEIVER

OK

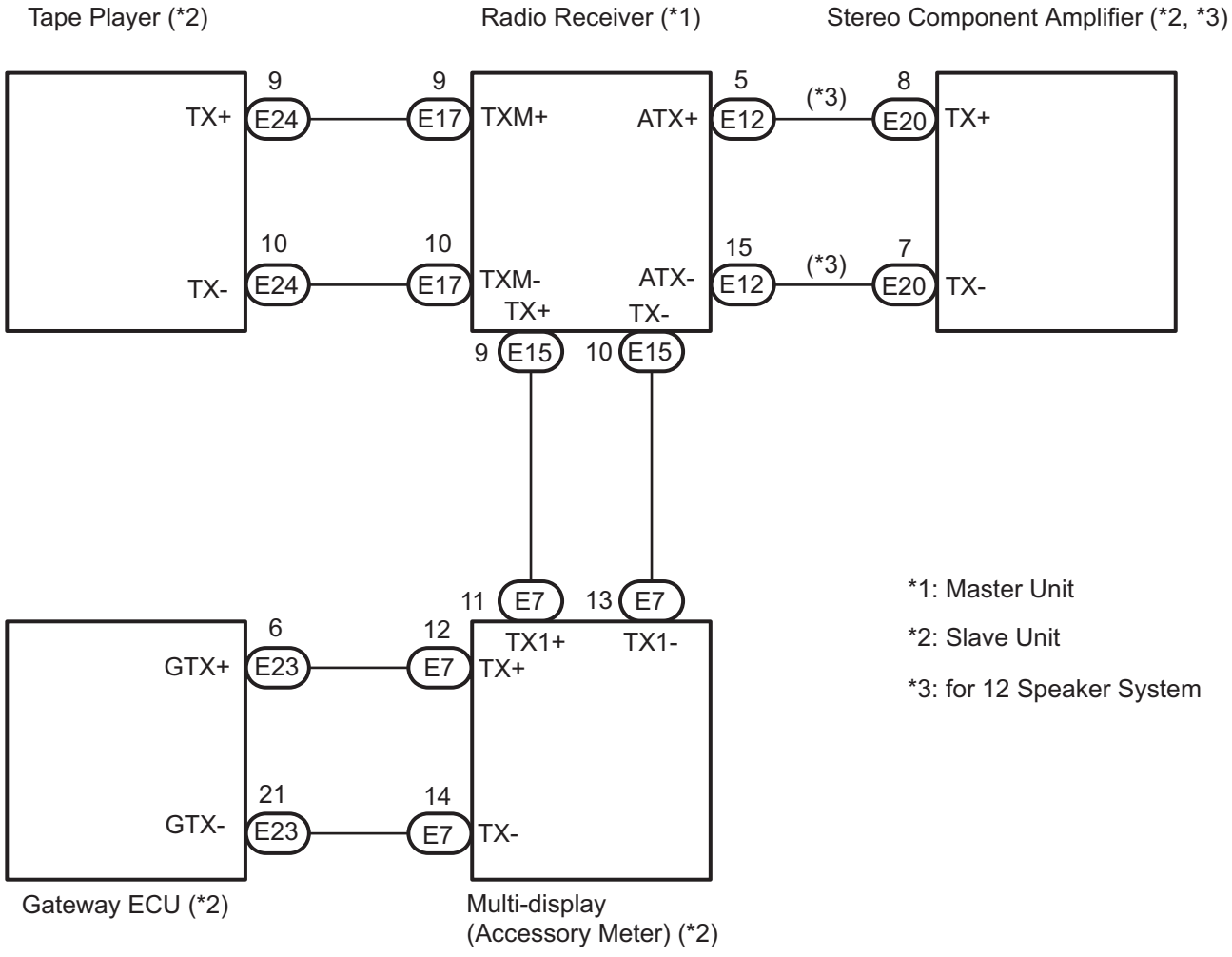
4	CHECK HARNESS AND CONNECTOR (RADIO RECEIVER - COMPONENT SHOWN BY SUB-CODE)

HINT:
- Start the check from the circuit that is near the component shown by the sub-code first.
- For details of the connectors, refer to "TERMINALS OF ECU" (See page AV-13).

AV

(a) Referring to the AVC-LAN wiring diagram below, check the AVC-LAN circuit between the radio receiver and the component shown by the sub-code.
  (1) Disconnect all connectors between the radio receiver and the component shown by sub-code.
  (2) Check for an open or short in the AVC-LAN circuit between the radio receiver and the component shown by the sub-code.
  OK:
  There is no open or short circuit.

AVC-LAN WIRING DIAGRAM



NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

5	REPLACE COMPONENT SHOWN BY SUB-CODE

(a) Replace the component shown by the sub-code with a normal one and check if the same problem occurs again.
OK:
Same problem does not occur.

NG → **REPLACE RADIO RECEIVER**

OK

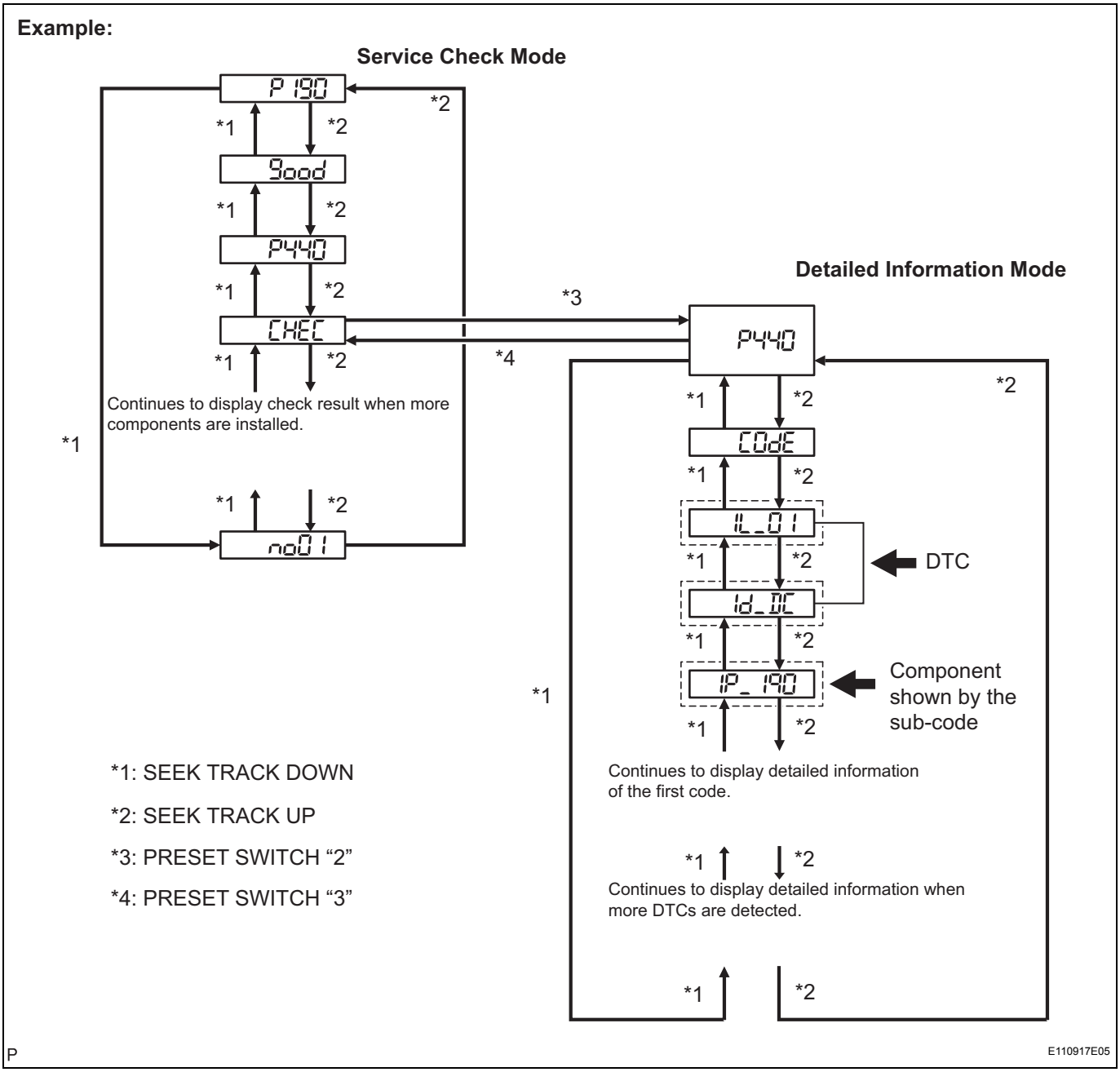
END

Stereo Component Amplifier Communication Error

INSPECTION PROCEDURE

1	IDENTIFY THE COMPONENT SHOWN BY SUB-CODE

(a) Enter the diagnostic mode.



(b) Press the preset switch "3" to change to "Detailed Information Mode".

(c) Identify the component shown by the sub-code.

HINT:

- "190 (radio receiver)" is the component shown by the sub-code in the example shown in the illustration.

- For details of the DTC display, refer to "DTC CHECK/ CLEAR" (See page AV-18).

NEXT

2	CHECK POWER SOURCE CIRCUIT OF COMPONENT SHOWN BY SUB-CODE

(a) Inspect the power source circuit of the component shown by the sub-code.
If the power source circuit is operating normally, proceed to the next step.

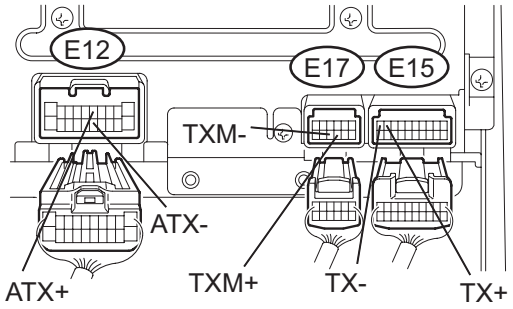
Component Table:

Component	Proceed to
Gateway ECU (1C6)	Gateway ECU power source circuit (See page AV-153)
Tape player (320)	Tape player power source circuit (See page AV-155)
Radio receiver (190)	Radio receiver power source circuit (See page AV-147)
Multi-display (Accessory meter) (1D4)	Multi-display power source circuit (See page AV-151)

NEXT

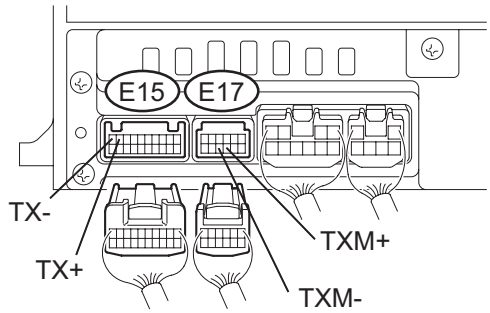
3	INSPECT RADIO RECEIVER

Wire Harness View (12 Speaker):



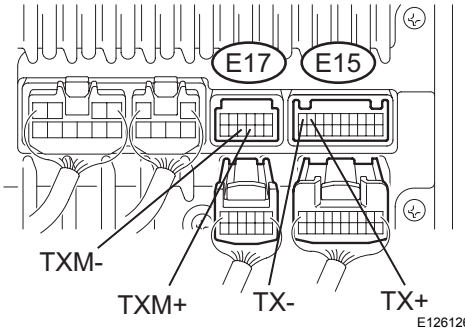
Wire Harness View

(9 Speaker, 6 CD Type):



Wire Harness View

(9 Speaker, 1 CD Type):



P E126126E02

(a) Disconnect the radio receiver connectors.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
TX+ (E15-9) - TX- (E15-10)	Always	60 to 80 Ω
TXM+ (E17-9) - TXM- (E17-10) (*1)	Always	60 to 80 Ω
ATX+ (E12-5) - ATX- (E12-15) (*2)	Always	60 to 80 Ω

*1: with Tape Player
*2: for 12 Speaker System

NG → REPLACE RADIO RECEIVER

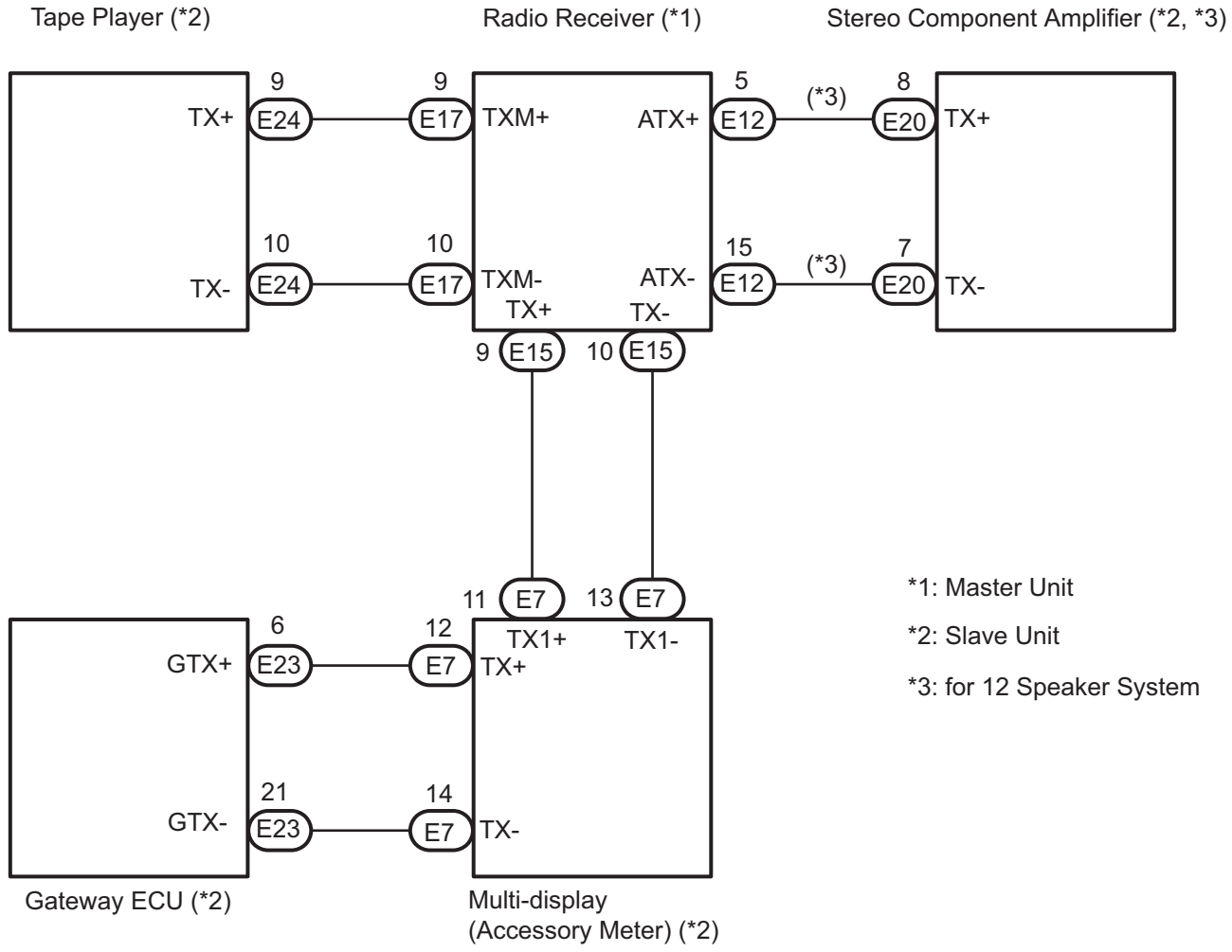
OK

4	CHECK HARNESS AND CONNECTOR (STEREO COMPONENT AMPLIFIER - COMPONENT SHOWN BY SUB-CODE)

HINT:
- Start the check from the circuit that is near the component shown by the sub-code first.
- For details of the connectors, refer to the "TERMINALS OF ECU" (See page AV-13).

(a) Referring to the AVC-LAN wiring diagram below, check the AVC-LAN circuit between the stereo component amplifier and the component shown by the sub-code.
  (1) Disconnect all connectors between the stereo component amplifier and the component shown by sub-code.
  (2) Check for an open or short in the AVC-LAN circuit between the stereo component amplifier and the component shown by the sub-code.
  OK:
  There is no open or short circuit.

AVC-LAN WIRING DIAGRAM



NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

AV

OK

5	REPLACE COMPONENT SHOWN BY SUB-CODE

(a) Replace the component shown by the sub-code with a normal one and check if the same problem occurs again.
OK:
Same problem does not occur.

NG → **REPLACE STEREO COMPONENT AMPLIFIER**

OK

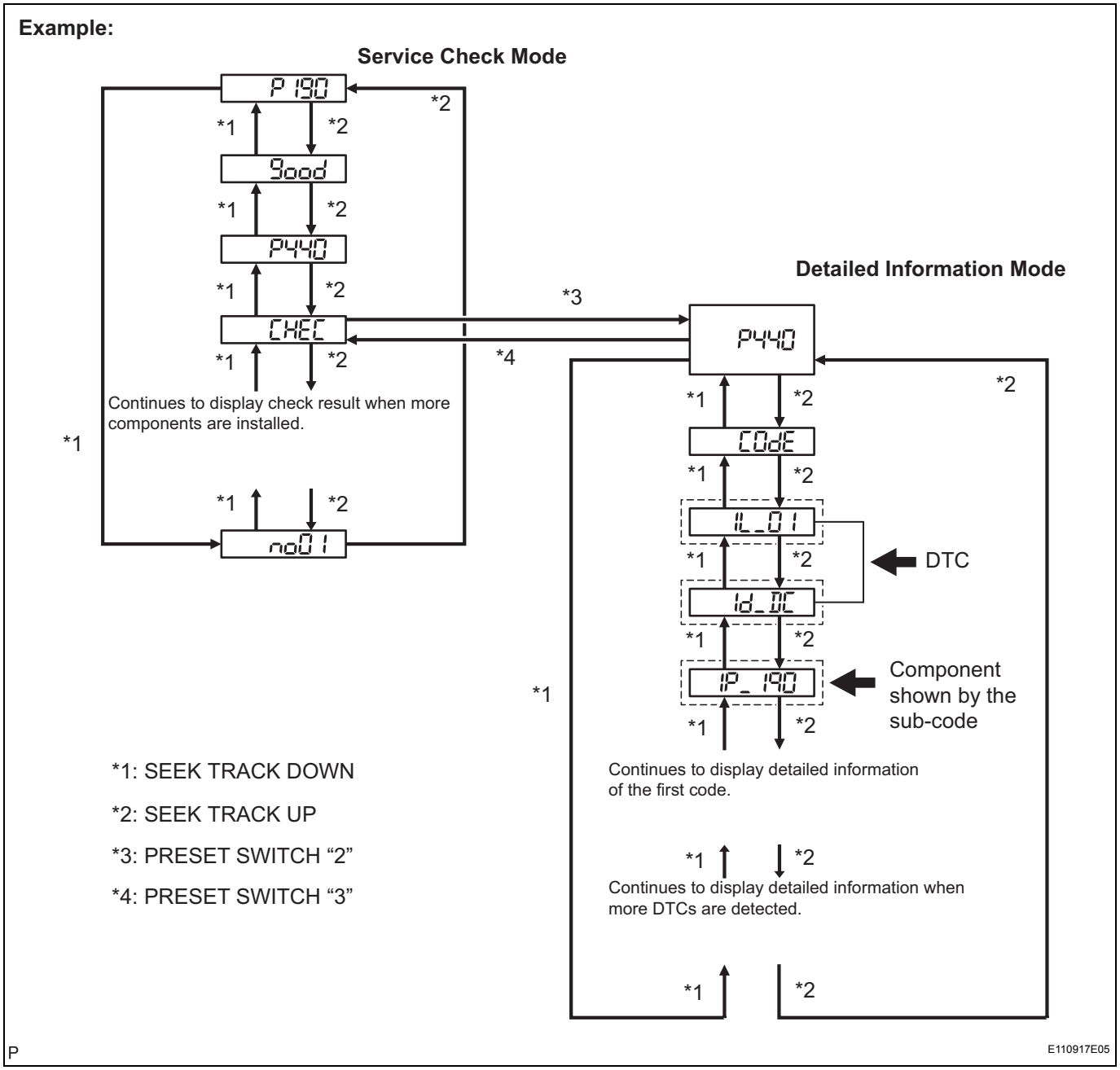
END

Multi-display Communication Error

INSPECTION PROCEDURE

1	IDENTIFY THE COMPONENT SHOWN BY SUB-CODE

(a) Enter the diagnostic mode.



(b) Press the preset switch "3" to change to "Detailed Information Mode".

(c) Identify the component shown by the sub-code.
HINT:
- "190 (radio receiver)" is the component shown by the sub-code in the example shown in the illustration.

- For details of the DTC display, refer to "DTC CHECK/ CLEAR" (See page AV-18).

NEXT

2	CHECK POWER SOURCE CIRCUIT OF COMPONENT SHOWN BY SUB-CODE

(a) Inspect the power source circuit of the component shown by the sub-code.
If the power source circuit is operating normally, proceed to the next step.

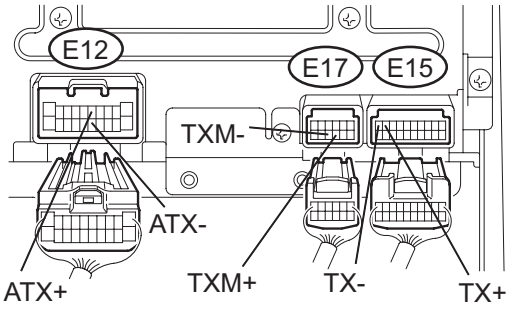
Component Table:

Component	Proceed to
Gateway ECU (1C6)	Gateway ECU power source circuit (See page AV-153)
Tape player (320)	Tape player power source circuit (See page AV-155)
Radio receiver (190)	Radio receiver power source circuit (See page AV-147)
Stereo component amplifier (440)	Stereo component amplifier power source circuit (See page AV-149)

NEXT

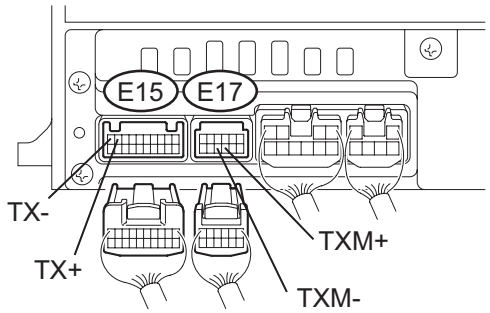
3	INSPECT RADIO RECEIVER

Wire Harness View (12 Speaker):



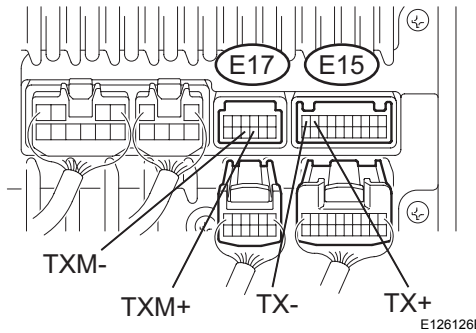
Wire Harness View

(9 Speaker, 6 CD Type):



Wire Harness View

(9 Speaker, 1 CD Type):



P E126126E02

(a) Disconnect the radio receiver connectors.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
TX+ (E15-9) - TX- (E15-10)	Always	60 to 80 Ω
TXM+ (E17-9) - TXM- (E17-10) (*1)	Always	60 to 80 Ω
ATX+ (E12-5) - ATX- (E12-15) (*2)	Always	60 to 80 Ω

*1: with Tape Player
*2: for 12 Speaker System

NG → REPLACE RADIO RECEIVER

OK

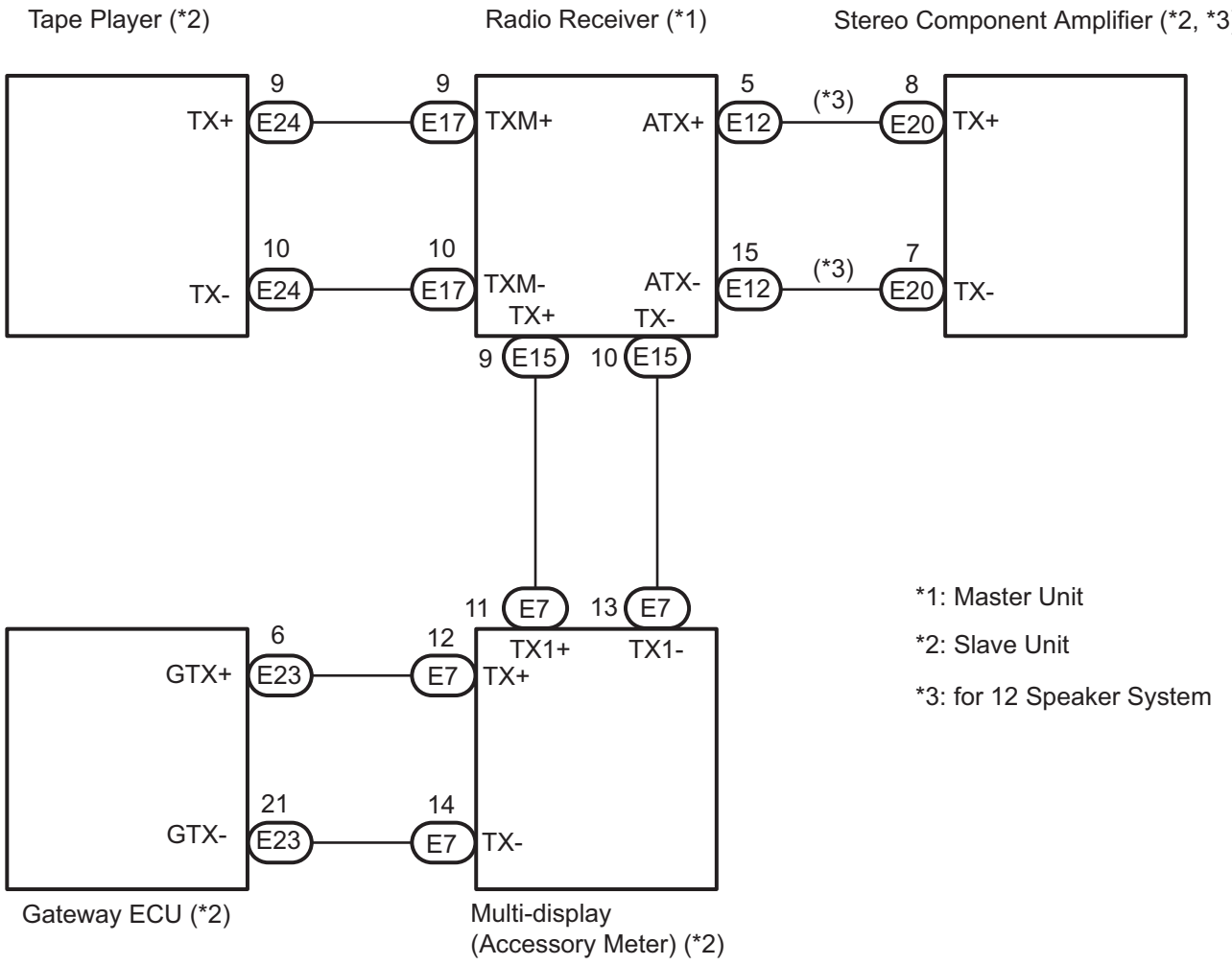
4	CHECK HARNESS AND CONNECTOR (MULTI-DISPLAY - COMPONENT SHOWN BY SUB-CODE)

HINT:
- Start the check from the circuit that is near the component shown by the sub-code first.
- For details of the connectors, refer to the "TERMINALS OF ECU" (See page AV-13).

AV

(a) Referring to the AVC-LAN wiring diagram below, check the AVC-LAN circuit between the multi-display (accessory meter) and the component shown by the sub-code.
   (1) Disconnect all connectors between the multi-display (accessory meter) and the component shown by the sub-code.
   (2) Check for an open or short in the AVC-LAN circuit between the multi-display (accessory meter) and the component shown by the sub-code.
   OK:
   There is no open or short circuit.

AVC-LAN WIRING DIAGRAM



P

E124057E04

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

5	REPLACE COMPONENT SHOWN BY SUB-CODE

(a) Replace the component shown by the sub-code with a normal one and check if the same problem occurs again.
OK:
Same problem does not occur.

NG → **REPLACE MULTI-DISPLAY (ACCESSORY METER)**

OK

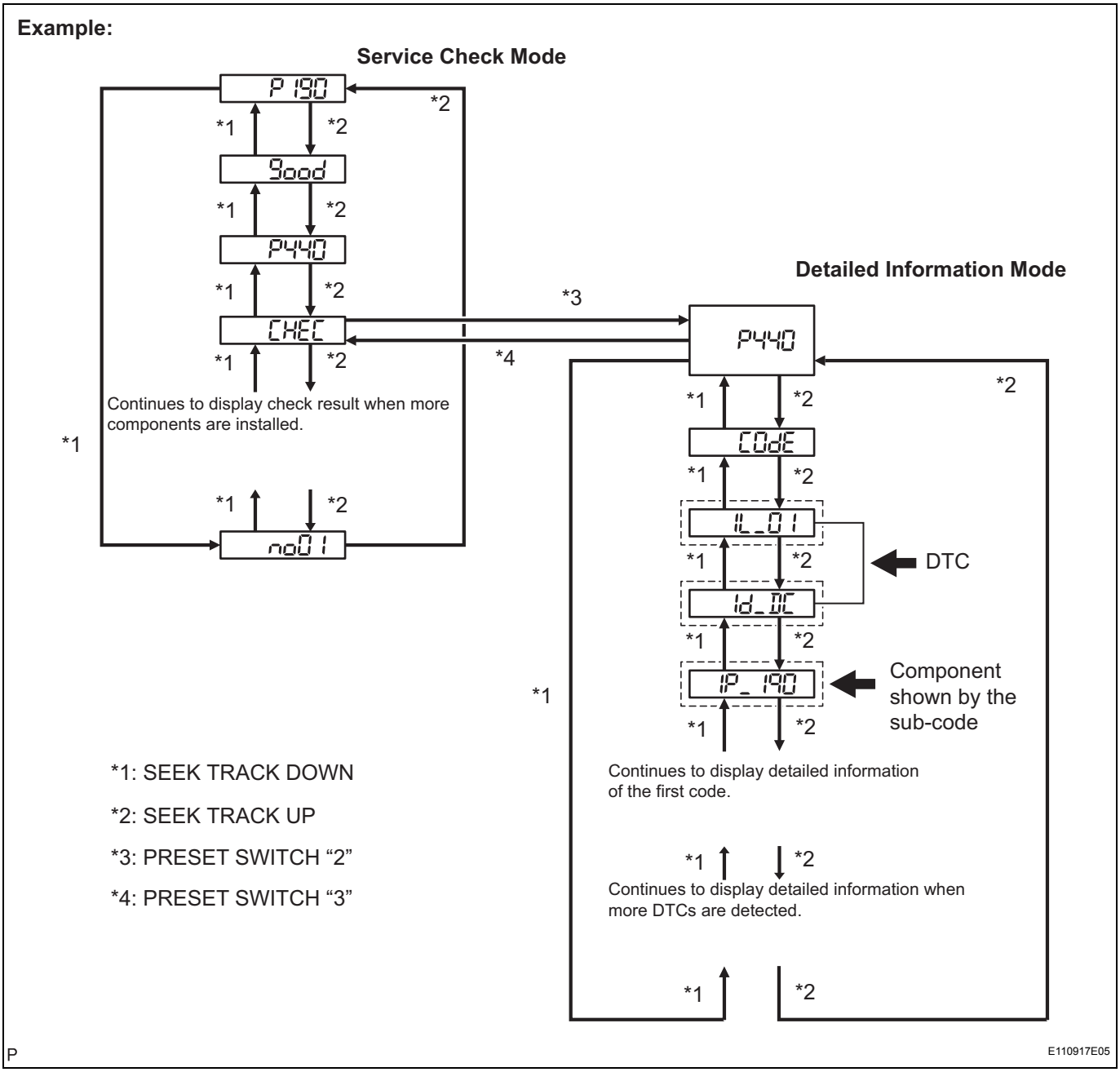
END

Tape Player Communication Error

INSPECTION PROCEDURE

1	IDENTIFY THE COMPONENT SHOWN BY SUB-CODE

(a) Enter the diagnostic mode.



(b) Press the preset switch "3" to change to "Detailed Information Mode".

(c) Identify the component shown by the sub-code.
HINT:
- "190 (radio receiver)" is the component shown by the sub-code in the example shown in the illustration.

- For details of the DTC display, refer to "DTC CHECK/ CLEAR" (See page AV-18).

NEXT

2	CHECK POWER SOURCE CIRCUIT OF COMPONENT SHOWN BY SUB-CODE

(a) Inspect the power source circuit of the component shown by the sub-code.
If the power source circuit is operating normally, proceed to the next step.

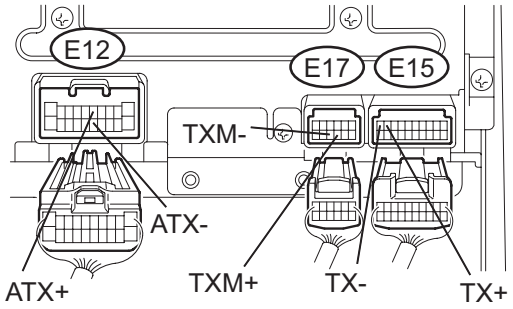
Component Table:

Component	Proceed to
Gateway ECU (1C6)	Gateway ECU power source circuit (See page AV-153)
Stereo component amplifier (440)	Stereo component amplifier power source circuit (See page AV-149)
Radio receiver (190)	Radio receiver power source circuit (See page AV-147)
Multi-display (Accessory meter) (1D4)	Multi-display power source circuit (See page AV-151)

NEXT

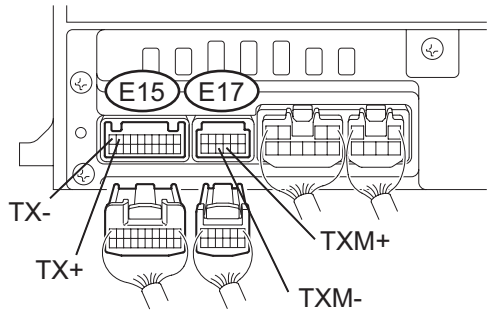
3	INSPECT RADIO RECEIVER

Wire Harness View (12 Speaker):



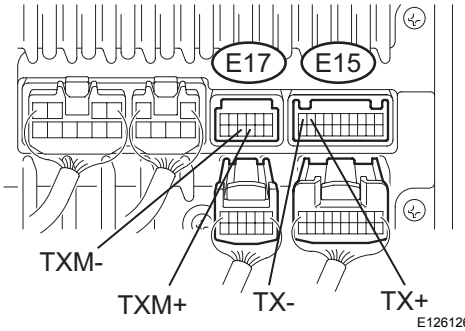
Wire Harness View

(9 Speaker, 6 CD Type):



Wire Harness View

(9 Speaker, 1 CD Type):



P E126126E02

(a) Disconnect the radio receiver connectors.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
TX+ (E15-9) - TX- (E15-10)	Always	60 to 80 Ω
TXM+ (E17-9) - TXM- (E17-10) (*1)	Always	60 to 80 Ω
ATX+ (E12-5) - ATX- (E12-15) (*2)	Always	60 to 80 Ω

*1: with Tape Player
*2: for 12 Speaker System

NG → REPLACE RADIO RECEIVER

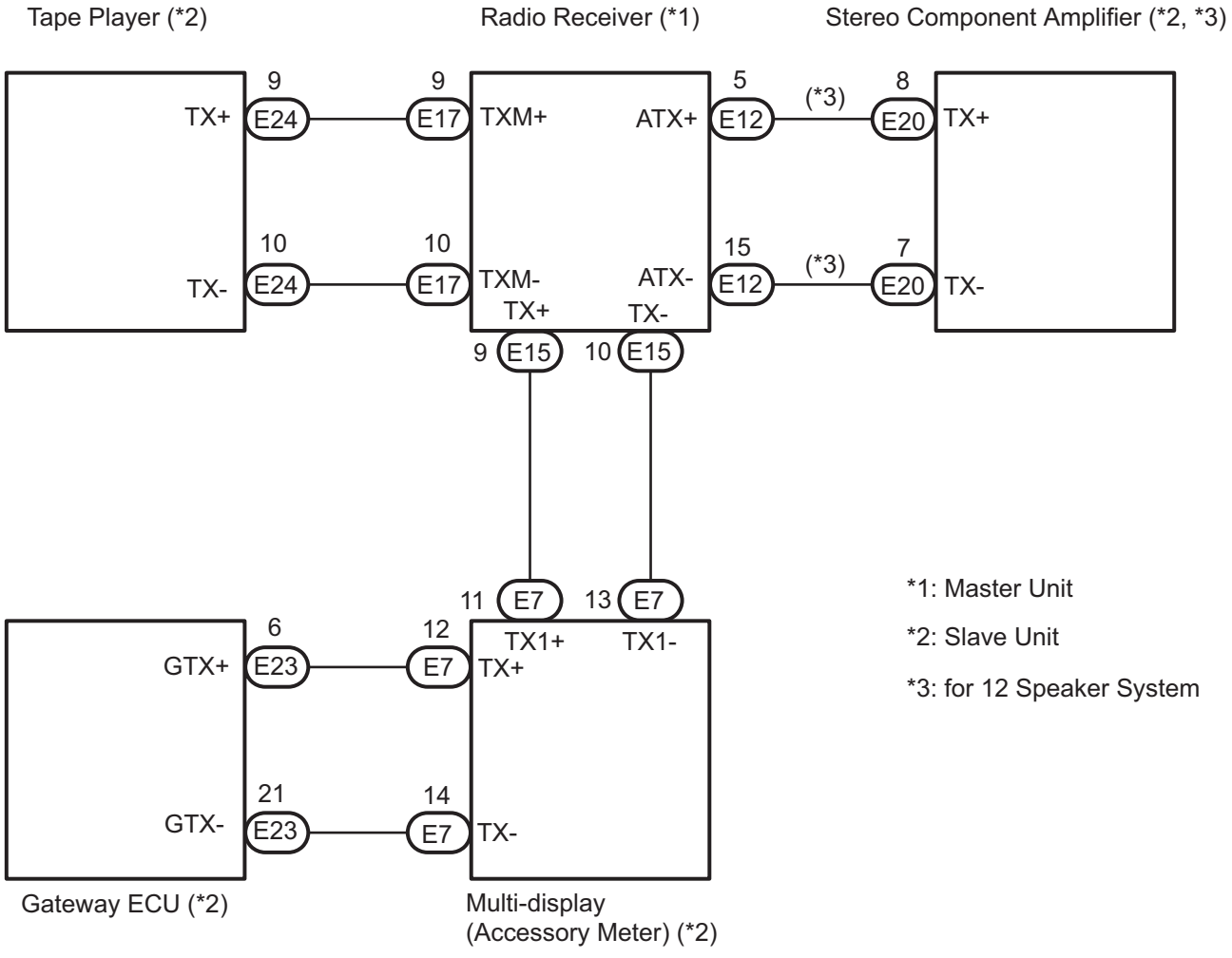
OK

4	CHECK HARNESS AND CONNECTOR (TAPE PLAYER - COMPONENT SHOWN BY SUB-CODE)

HINT:
- Start the check from the circuit that is near the component shown by the cub-code.
- For details of the connectors, refer to the "TERMINALS OF ECU" (See page AV-13).

(a) Referring to the AVC-LAN wiring diagram below, check the AVC-LAN circuit between the tape player and the component shown by the sub-code.
  (1) Disconnect all connectors between the tape player and the component shown by the sub-code.
  (2) Check for an open or short in the AVC-LAN circuit between the tape player and the component shown by the sub-code.
  OK:
  There is no open or short circuit.

AVC-LAN WIRING DIAGRAM



NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

AV

5	REPLACE COMPONENT SHOWN BY SUB-CODE

(a) Replace the component shown by the sub-code with a normal one and check if the same problem occurs again.
OK:
Same problem does not occur.

NG → **REPLACE TAPE PLAYER**

OK

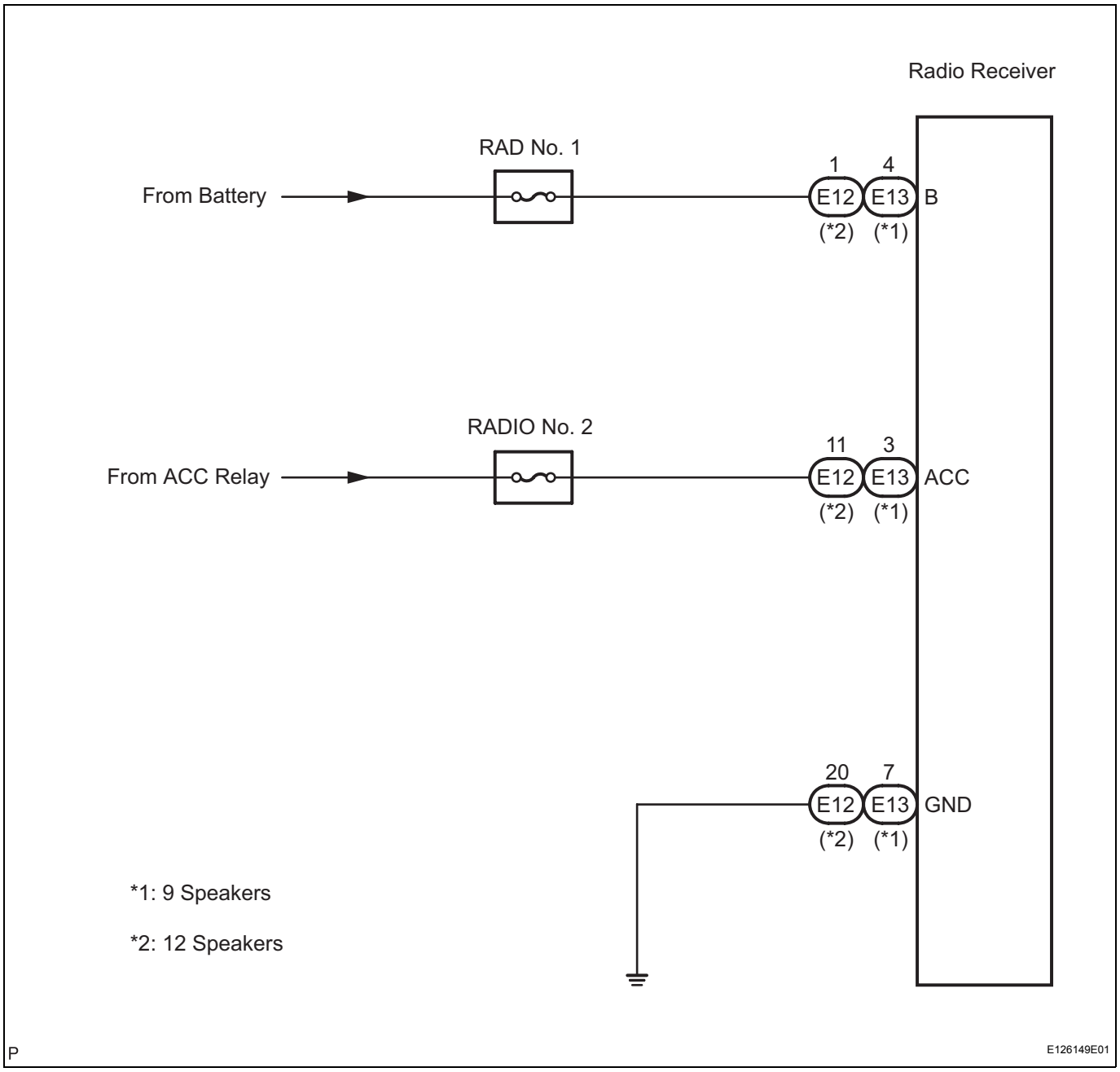
END

Radio Receiver Power Source Circuit

DESCRIPTION

This circuit provides power to the radio receiver.

WIRING DIAGRAM

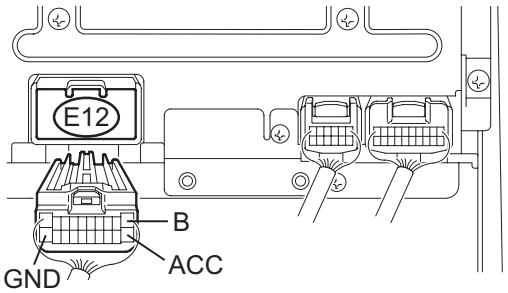


AV

INSPECTION PROCEDURE

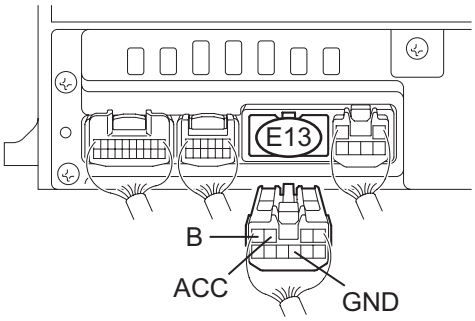
1	INSPECT RADIO RECEIVER

Wire Harness View (12 Speaker):



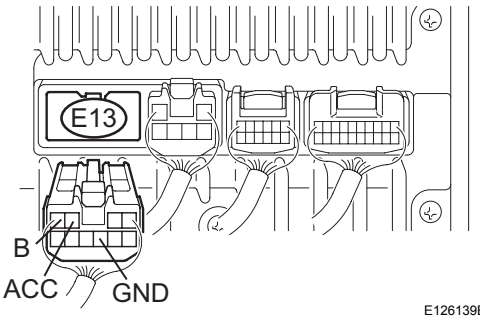
Wire Harness View

(9 Speaker, 6 CD Type):



Wire Harness View

(9 Speaker, 1 CD Type):



P E126139E02

(a) Disconnect the radio receiver E12 or E13 connector.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Condition	Specified condition
GND - Body ground	Always	Below 1 Ω

(c) Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester connection	Condition	Specified condition
B - GND	Always	10 to 14 V
ACC - GND	Ignition switch on (ACC)	10 to 14 V

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

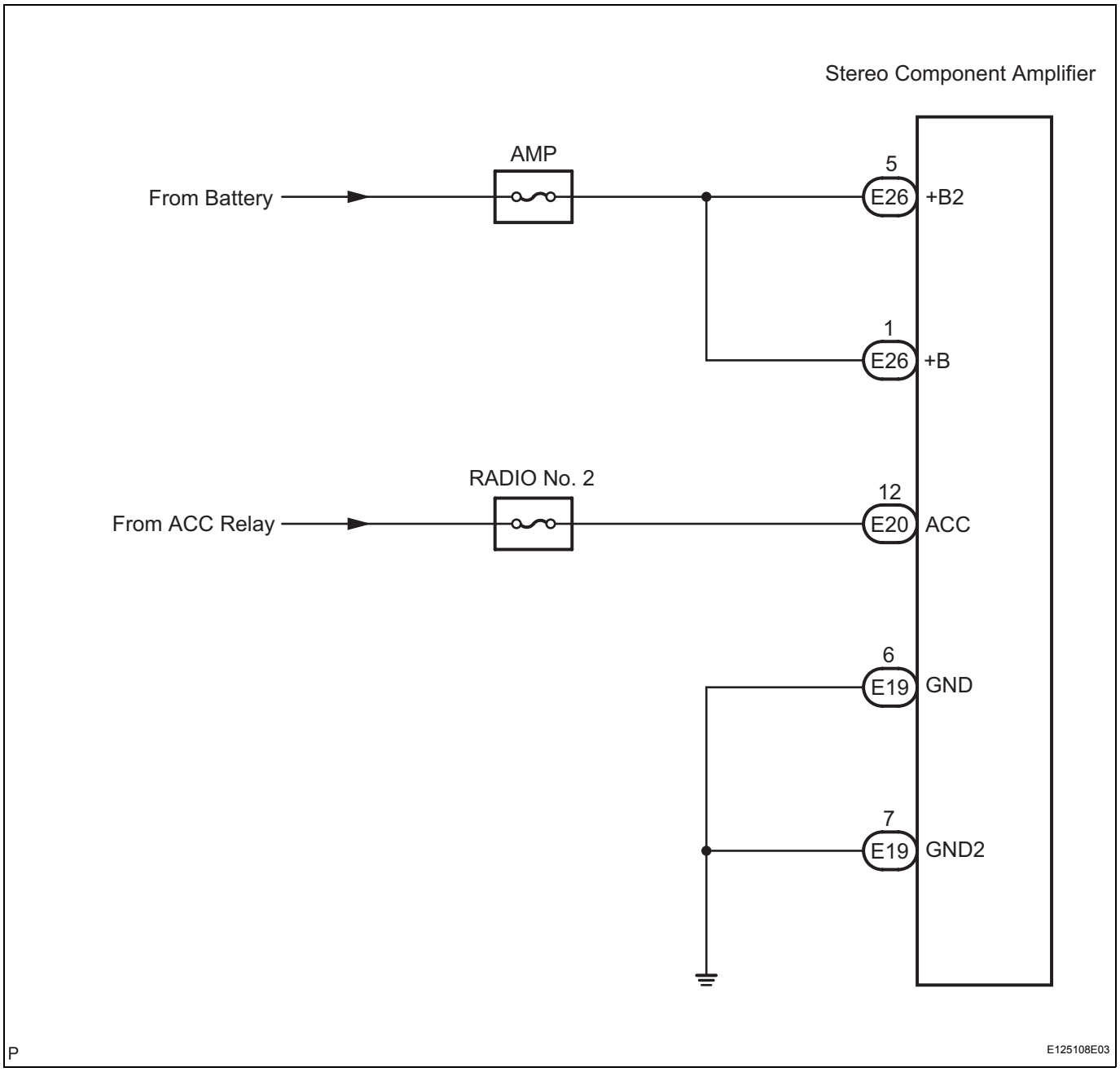
AV

Stereo Component Amplifier Power Source Circuit

DESCRIPTION

This circuit provides power to the stereo component amplifier.

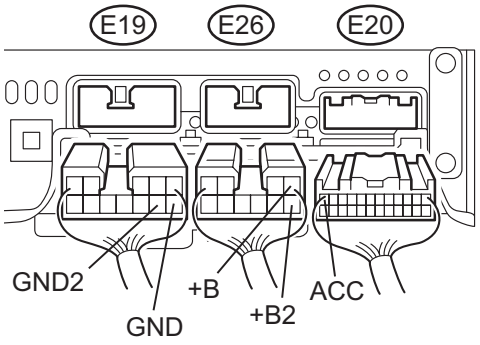
WIRING DIAGRAM



INSPECTION PROCEDURE

1	INSPECT STEREO COMPONENT AMPLIFIER

Wire Harness View:



N E126146E01

(a) Disconnect the stereo component amplifier E19, E20, and E26 connectors.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Condition	Specified condition
GND - Body ground	Always	Below 1 Ω
GND2 - Body ground	Always	Below 1 Ω

(c) Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester connection	Condition	Specified condition
B+ - GND	Always	10 to 14 V
+B2 - GND	Always	10 to 14 V
ACC - GND	Ignition switch on (ACC)	10 to 14 V

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

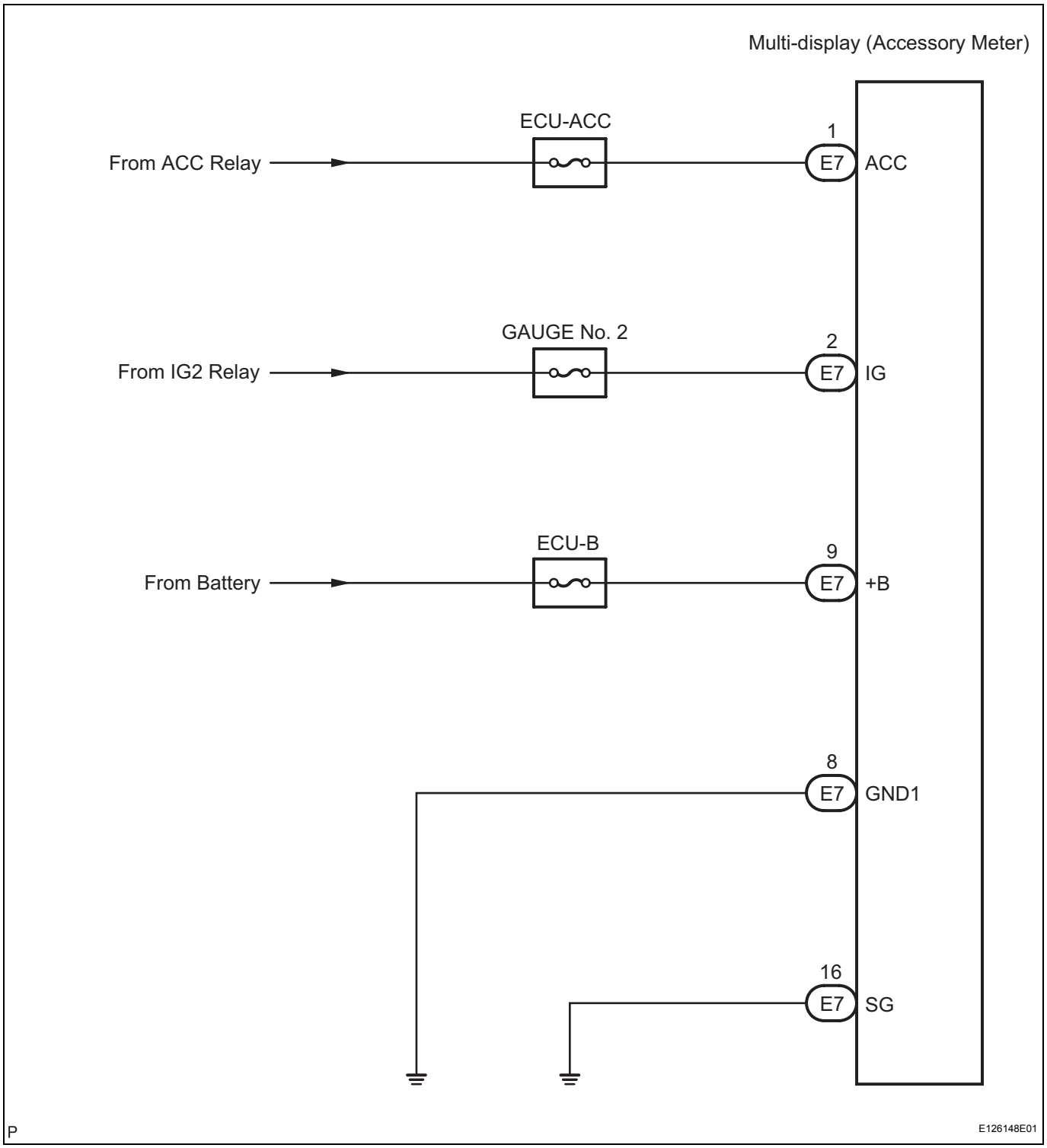
AV

Multi-display Power Source Circuit

DESCRIPTION

This is the power source circuit to operate the multi-display (accessory meter).

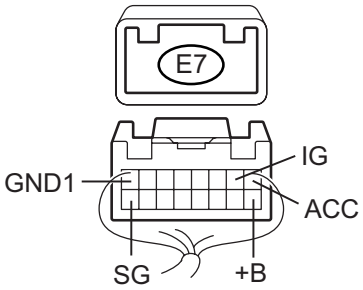
WIRING DIAGRAM



INSPECTION PROCEDURE

1	INSPECT MULTI-DISPLAY (ACCESSORY METER)

Wire Harness View:



H

E126147E01

(a) Disconnect the multi-display (accessory meter) E7 connector.

(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Condition	Specified condition
GND1 - Body ground	Always	Below 1 Ω
SG - Body ground	Always	Below 1 Ω

(c) Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester connection	Condition	Specified condition
+B - GND1	Always	10 to 14 V
ACC - GND1	Ignition switch on (ACC)	10 to 14 V
IG - GND1	Ignition switch on (IG)	10 to 14 V

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

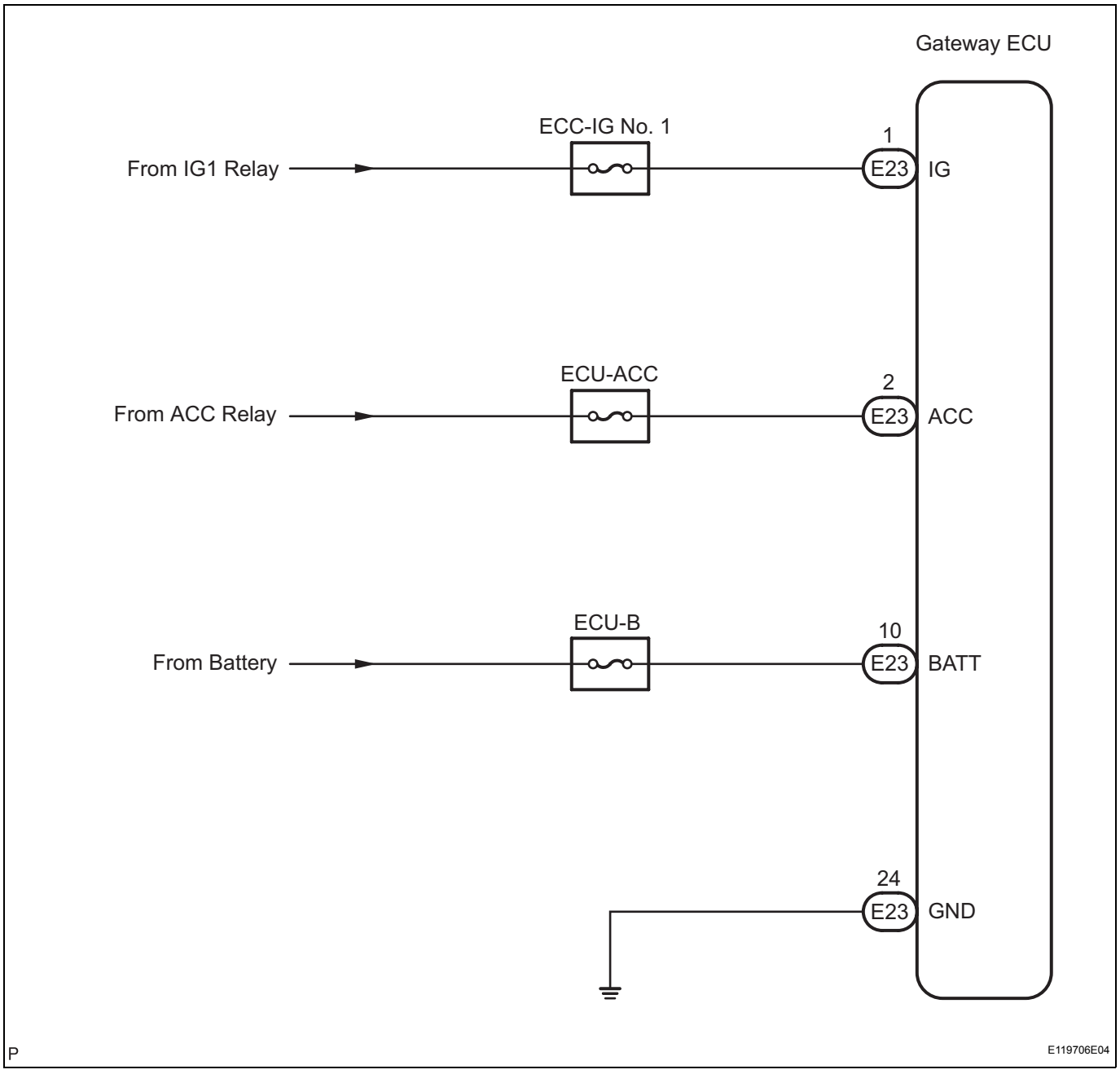
AV

Gateway ECU Power Source Circuit

DESCRIPTION

This is the power source circuit to operate the gateway ECU.

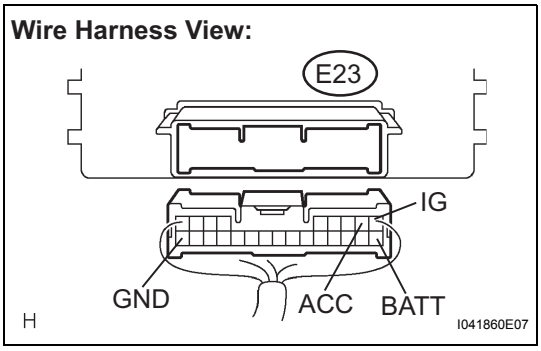
WIRING DIAGRAM



INSPECTION PROCEDURE

1	**INSPECT GATEWAY ECU**

Wire Harness View:



(a) Disconnect the gateway ECU connector E23.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Condition	Specified condition
GND - Body ground	Always	Below 1 Ω

(c) Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester connection	Condition	Specified condition
BATT - GND	Always	10 to 14 V
ACC - GND	Ignition switch on (ACC)	10 to 14 V
IG - GND	Ignition switch on (IG)	10 to 14 V

AV

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

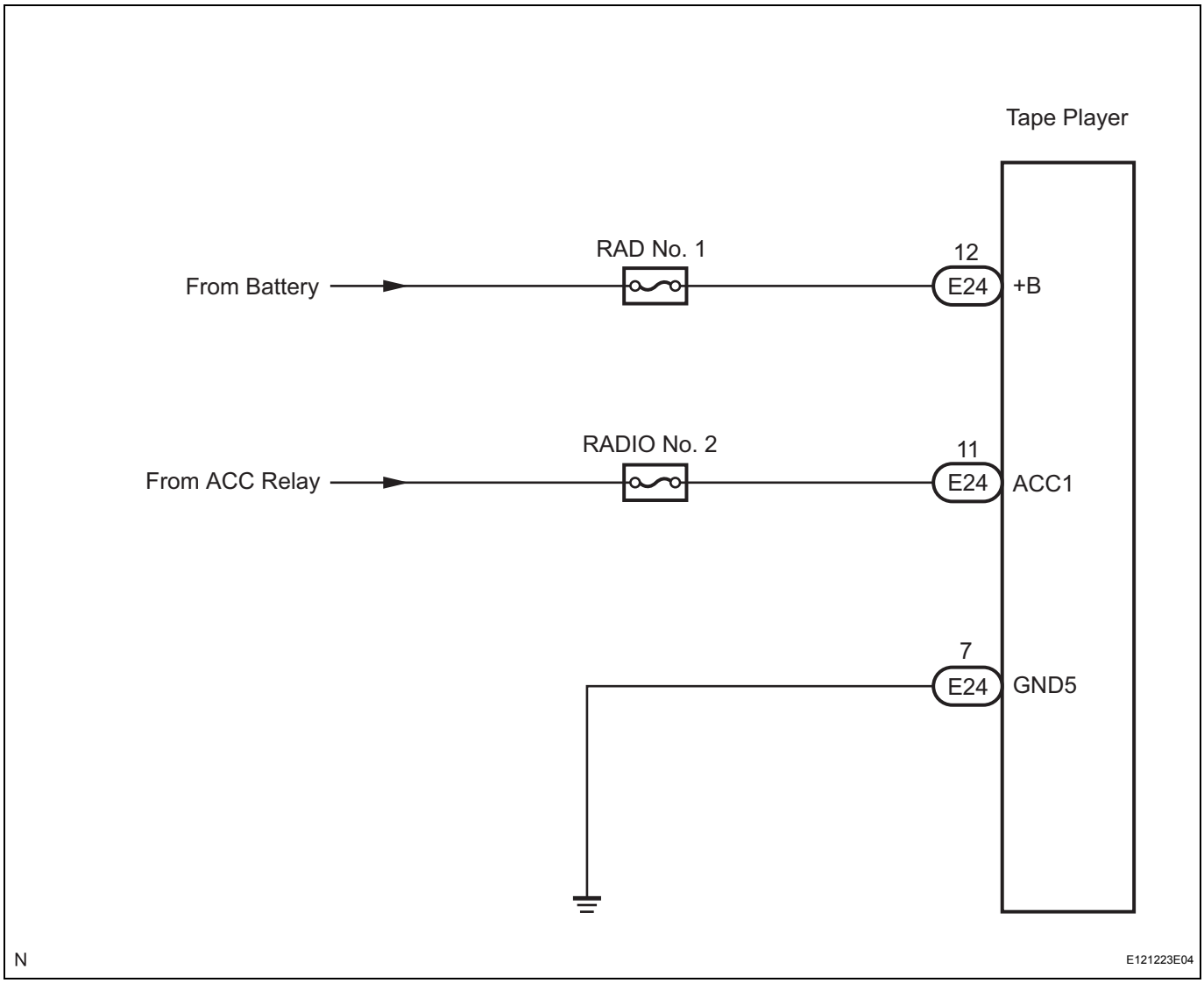
PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

Tape Player Power Source Circuit

DESCRIPTION

This circuit provides power to the tape player.

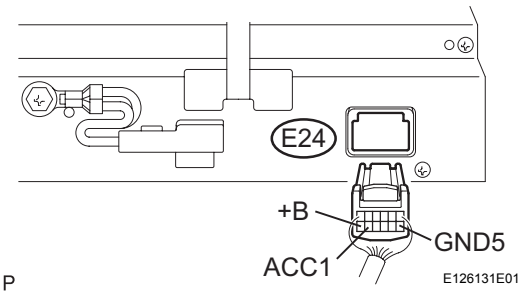
WIRING DIAGRAM



INSPECTION PROCEDURE

1	**INSPECT TAPE PLAYER**

Wire Harness View:



(a) Disconnect the tape player E24 connector.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
GND5 - Body ground	Always	Below 1 Ω

(c) Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester Connection	Condition	Specified Condition
+B - GND	Always	10 to 14 V
ACC1 - GND	Ignition switch on (ACC)	10 to 14 V

AV

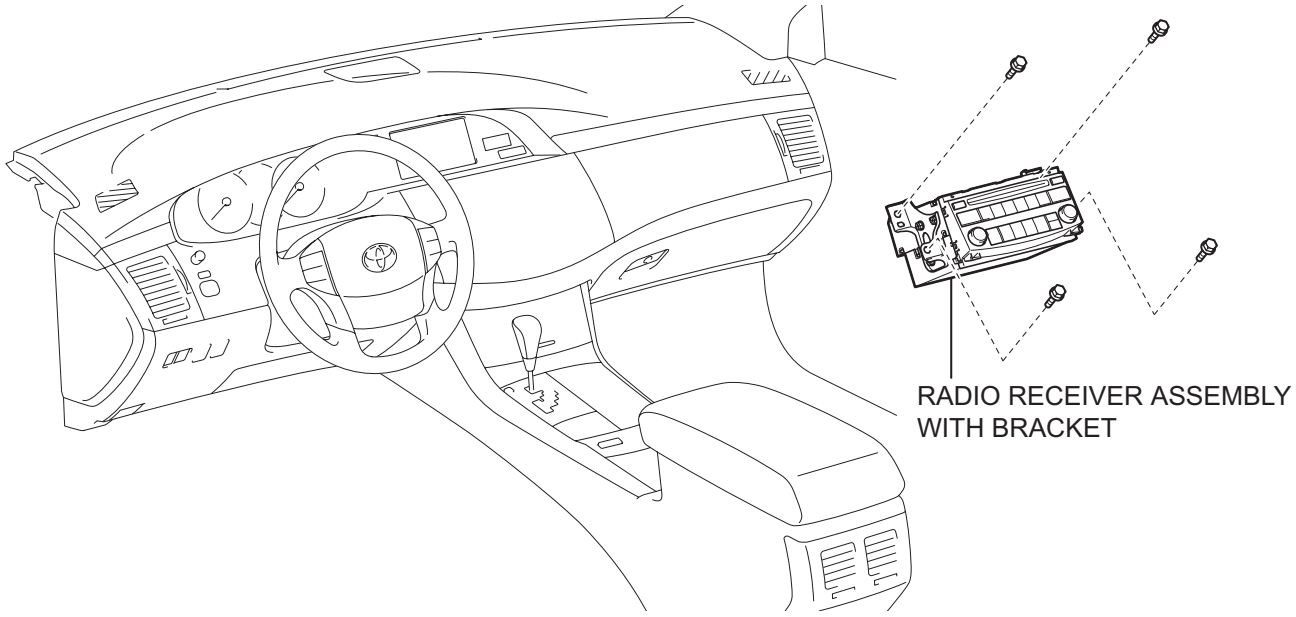
NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

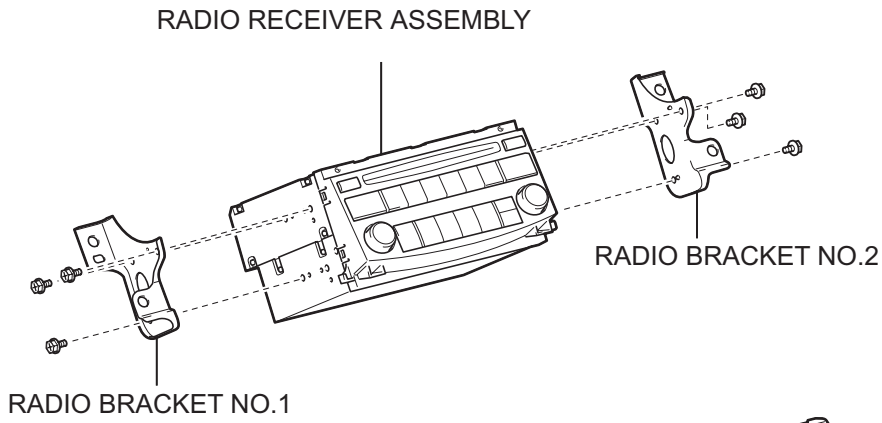
OK

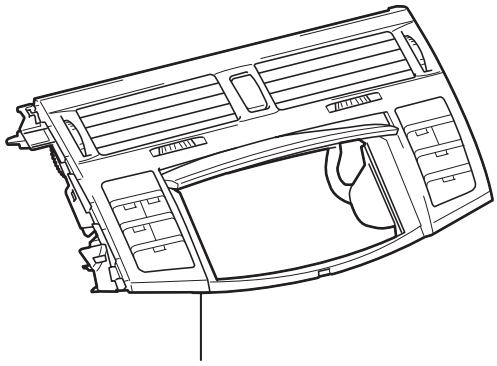
PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

RADIO RECEIVER

COMPONENTS







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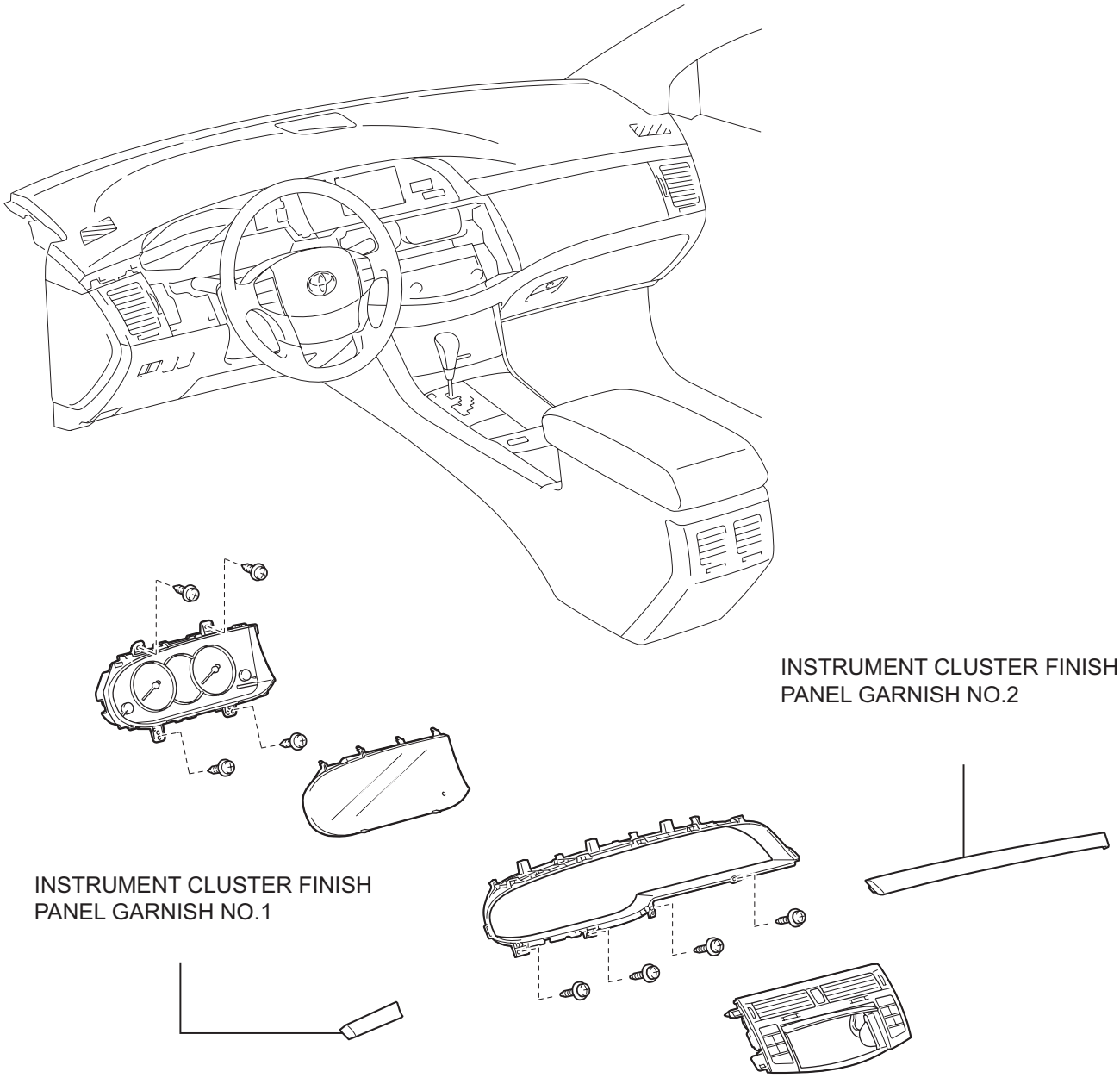
AV

AV

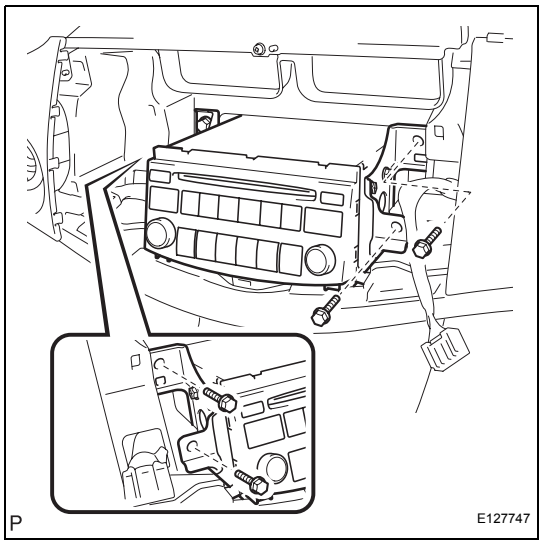


P

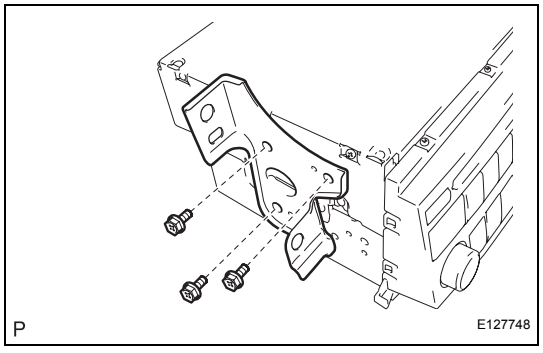
B115010E04

REMOVAL

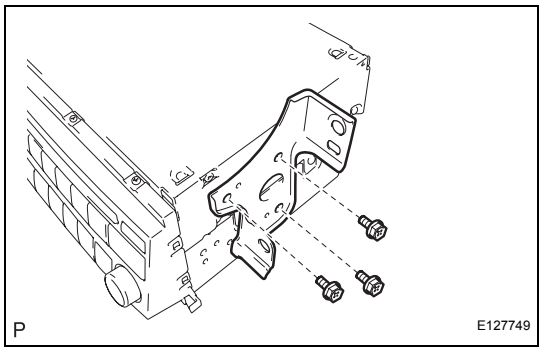
1. **REMOVE INSTRUMENT CLUSTER FINISH PANEL GARNISH NO. 1 (See page IP-9)**
2. **REMOVE INSTRUMENT CLUSTER FINISH PANEL GARNISH NO. 2 (See page IP-9)**
3. **REMOVE INSTRUMENT PANEL FINISH PLATE (w/o Smart Key System) (See page IP-9)**
4. **REMOVE INSTRUMENT PANEL SUB-ASSEMBLY (See page IP-9)**
5. **REMOVE INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY CENTER (See page AC-180)**
6. **REMOVE RADIO RECEIVER ASSEMBLY WITH BRACKET**
   (a) Remove the 4 bolts and pull the radio receiver assembly w/ bracket toward you.
   (b) Disconnect all connectors and remove the radio receiver assembly w/ bracket.



7. **REMOVE RADIO BRACKET NO. 1**
   (a) Remove the 3 bolts and radio bracket No. 1 from the radio receiver assembly w/ bracket.



8. **REMOVE RADIO BRACKET NO. 2**
   (a) Remove the 3 bolts and radio bracket No. 2 from the radio receiver assembly w/ bracket.
9. **REMOVE RADIO RECEIVER ASSEMBLY**



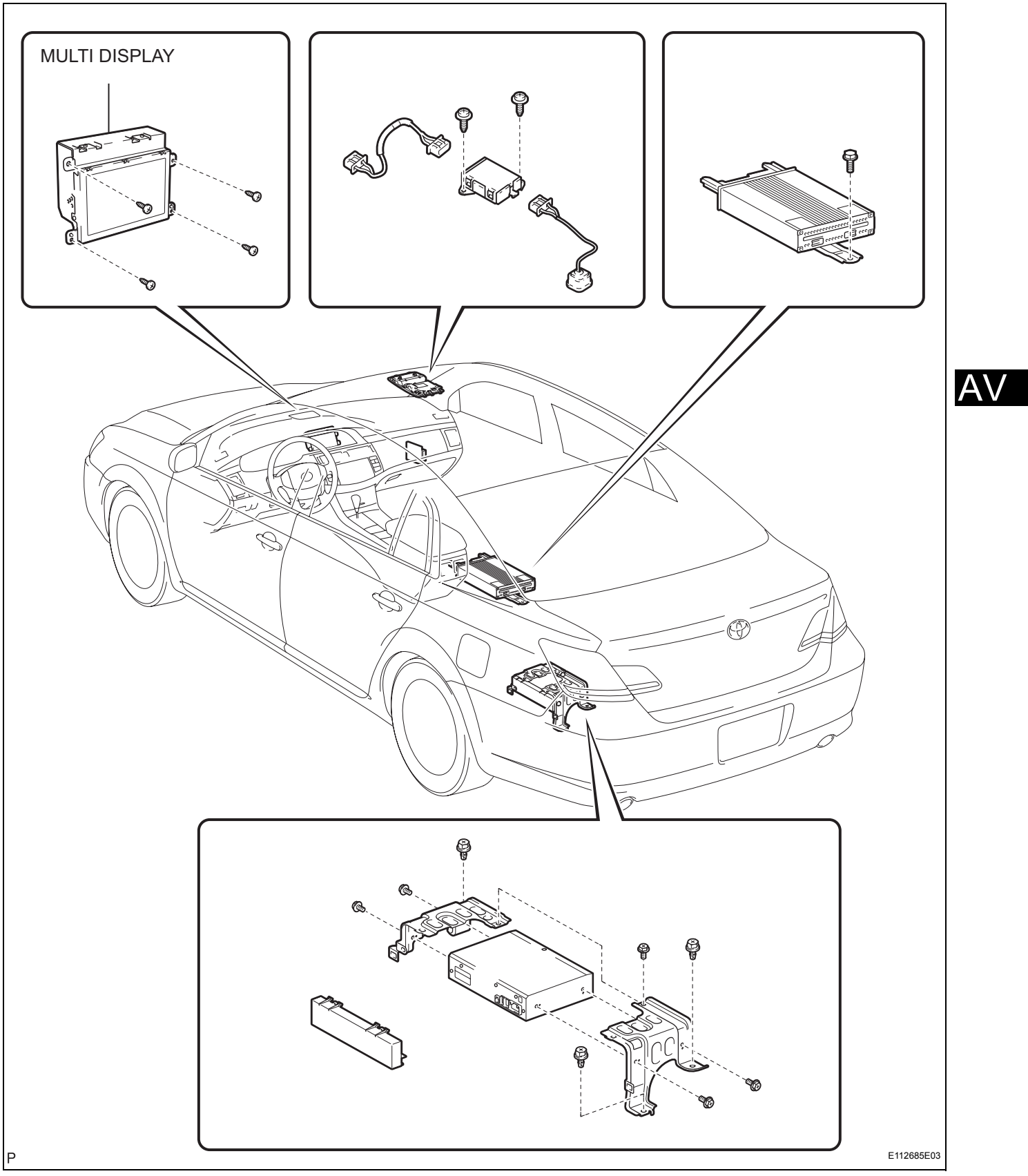
AV

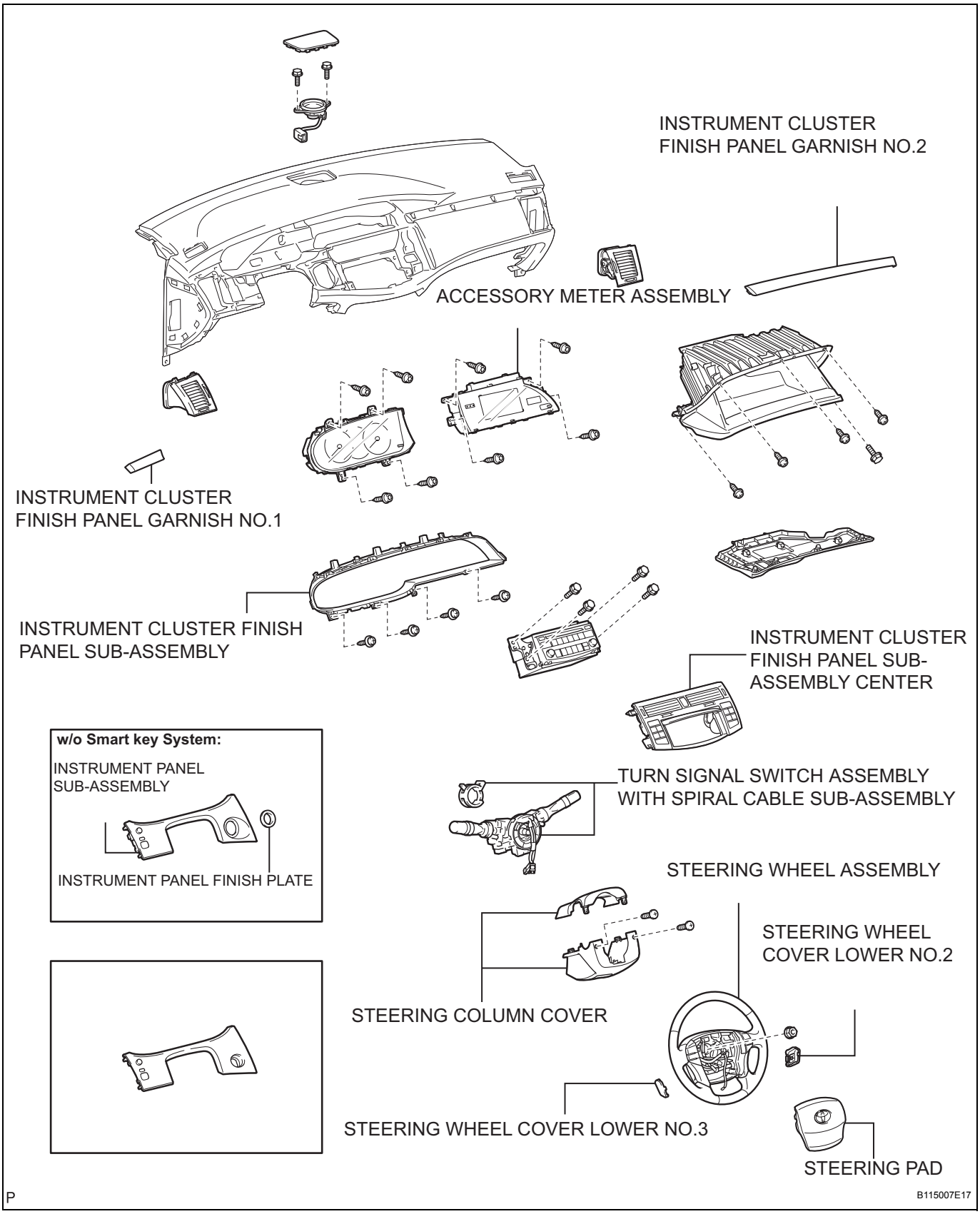
INSTALLATION

1. **INSTALL RADIO RECEIVER ASSEMBLY**
2. **INSTALL RADIO BRACKET NO. 2**
3. **INSTALL RADIO BRACKET NO. 1**
4. **INSTALL RADIO RECEIVER ASSEMBLY WITH BRACKET**
5. **INSTALL INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY CENTER**
6. **INSTALL INSTRUMENT PANEL SUB-ASSEMBLY**
7. **INSTALL INSTRUMENT PANEL FINISH PLATE (w/o Smart Key System)**
8. **INSTALL INSTRUMENT CLUSTER FINISH PANEL GARNISH NO. 2**
9. **INSTALL INSTRUMENT CLUSTER FINISH PANEL GARNISH NO. 1**

MULTI-DISPLAY

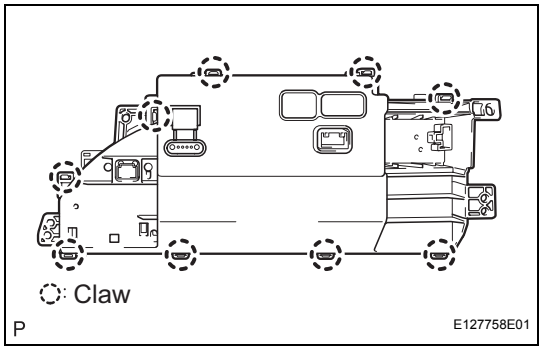
COMPONENTS



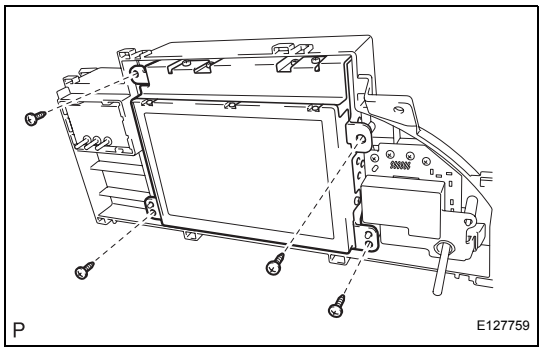

INSTRUMENT CLUSTER
FINISH PANEL GARNISH NO.2
ACCESSORY METER ASSEMBLY
INSTRUMENT CLUSTER
FINISH PANEL GARNISH NO.1
INSTRUMENT CLUSTER FINISH
PANEL SUB-ASSEMBLY
INSTRUMENT CLUSTER
FINISH PANEL SUB-
ASSEMBLY CENTER
w/o Smart key System:
INSTRUMENT PANEL
SUB-ASSEMBLY
INSTRUMENT PANEL FINISH PLATE
TURN SIGNAL SWITCH ASSEMBLY
WITH SPIRAL CABLE SUB-ASSEMBLY
STEERING WHEEL ASSEMBLY
STEERING WHEEL
COVER LOWER NO.2
STEERING COLUMN COVER
STEERING WHEEL COVER LOWER NO.3
STEERING PAD
P
B115007E17

REMOVAL

1. **TABLE OF BOLT, SCREW AND NUT (See page IP-8)**
2. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
   Wait for 90 seconds after disconnecting the cable to prevent the airbag working.
3. **REMOVE STEERING WHEEL COVER LOWER NO. 2 (See page RS-304)**
4. **REMOVE STEERING WHEEL COVER LOWER NO. 3 (See page RS-304)**
5. **REMOVE STEERING PAD (See page RS-304)**
6. **REMOVE STEERING WHEEL ASSEMBLY (See page SR-36)**
7. **REMOVE STEERING COLUMN COVER (See page SR-36)**
8. **REMOVE TURN SIGNAL SWITCH ASSEMBLY WITH SPIRAL CABLE (See page SR-36)**
9. **REMOVE INSTRUMENT CLUSTER FINISH PANEL GARNISH NO. 1 (See page IP-9)**
10. **REMOVE INSTRUMENT CLUSTER FINISH PANEL GARNISH NO. 2 (See page IP-9)**
11. **REMOVE INSTRUMENT PANEL FINISH PLATE (See page IP-9)**
12. **REMOVE INSTRUMENT PANEL SUB-ASSEMBLY (See page IP-9)**
13. **REMOVE INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY CENTER (See page AC-180)**
14. **REMOVE INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY (See page IP-10)**
15. **REMOVE ACCESSORY METER ASSEMBLY (See page IP-10)**
16. **REMOVE MULTI DISPLAY**
    (a) Disengage the 9 claws and remove the back cover.



AV



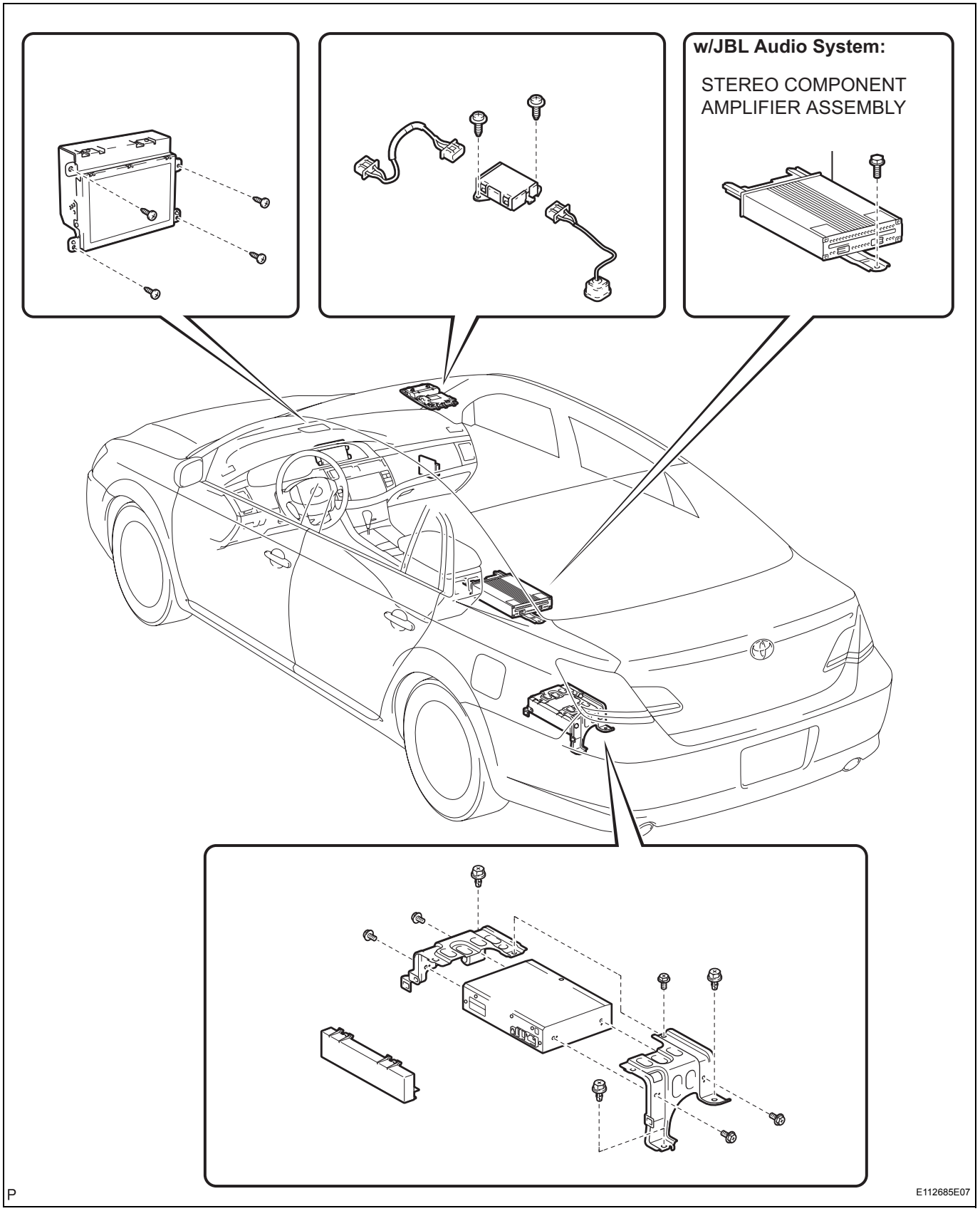
(b) Remove the 4 screws and multi display.

INSTALLATION

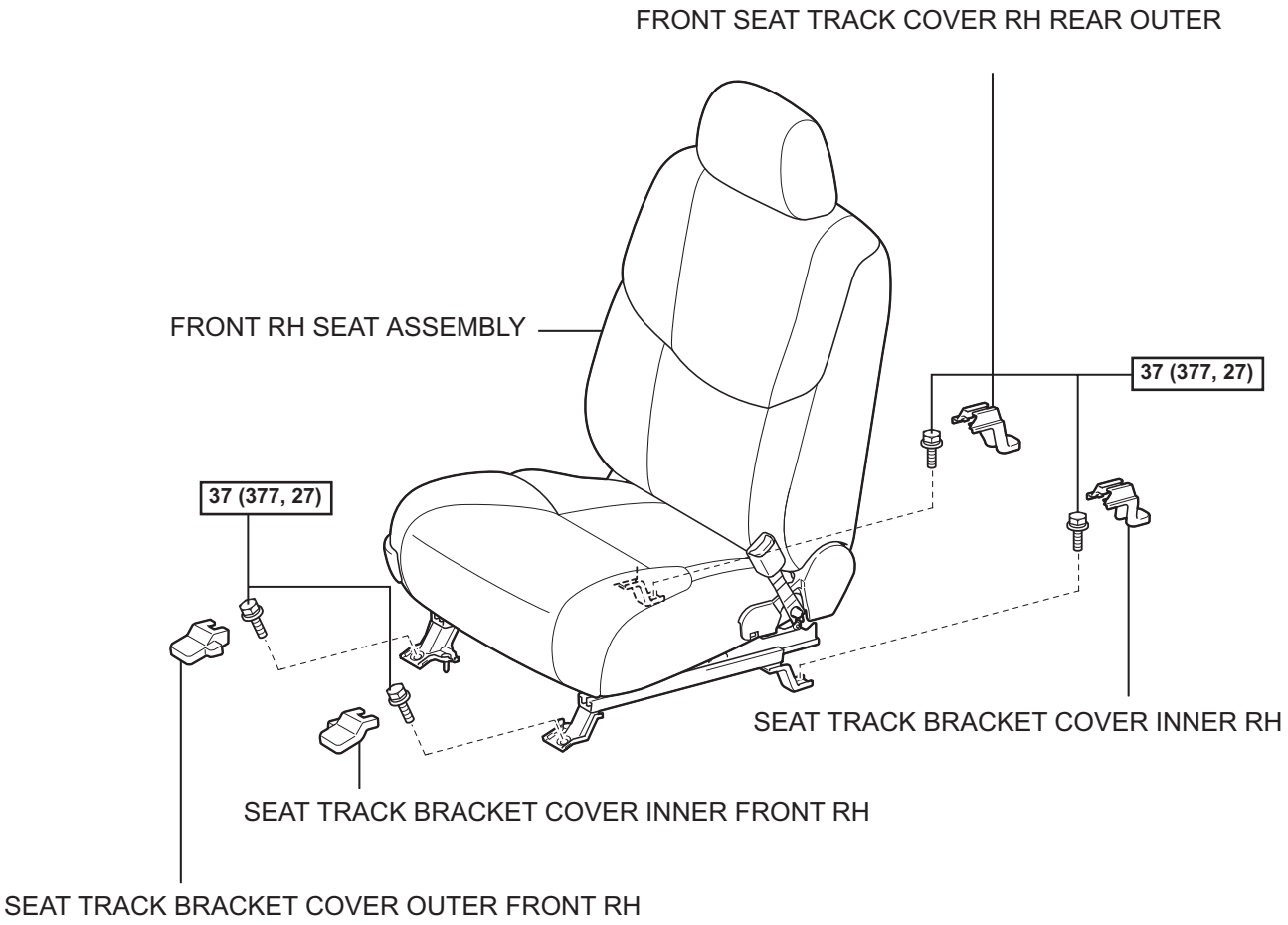
1. INSTALL MULTI DISPLAY
2. INSTALL ACCESSORY METER ASSEMBLY
3. INSTALL INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY
4. INSTALL INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY CENTER
5. INSTALL INSTRUMENT PANEL SUB-ASSEMBLY
6. INSTALL INSTRUMENT PANEL FINISH PLATE
7. INSTALL INSTRUMENT CLUSTER FINISH PANEL GARNISH NO. 2
8. INSTALL INSTRUMENT CLUSTER FINISH PANEL GARNISH NO. 1
9. INSTALL TURN SIGNAL SWITCH ASSEMBLY WITH SPIRAL CABLE
10. INSTALL STEERING COLUMN COVER
11. ADJUST SPIRAL CABLE (See page RS-316)
12. INSTALL STEERING WHEEL ASSEMBLY (See page SR-46)
13. INSTALL STEERING PAD (See page RS-305)
14. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL
15. PERFORM SYSTEM INITIALIZE (See page RS-306)
16. INSPECT STEERING PAD (See page RS-305)
17. INSPECT SRS WARNING LIGHT (See page RS-306)

STEREO COMPONENT AMPLIFIER

COMPONENTS



AV



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

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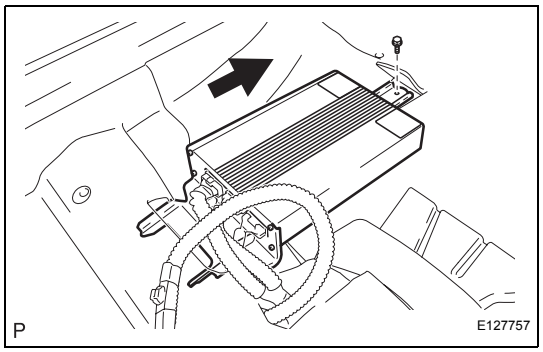
REMOVAL

1. **REMOVE SEAT TRACK BRACKET COVER OUTER FRONT RH (See page SE-40)**
2. **REMOVE SEAT TRACK BRACKET COVER INNER FRONT RH (See page SE-40)**
3. **REMOVE FRONT SEAT TRACK COVER RH REAR OUTER (See page SE-40)**
4. **REMOVE SEAT TRACK BRACKET COVER INNER RH (See page SE-40)**
5. **REMOVE FRONT RH SEAT ASSEMBLY (See page SE-40)**
6. **REMOVE STEREO COMPONENT AMPLIFIER ASSEMBLY**
   (a) Disconnect all connectors
   (b) Remove the bolt and stereo component amplifier assembly as shown in the illustration.

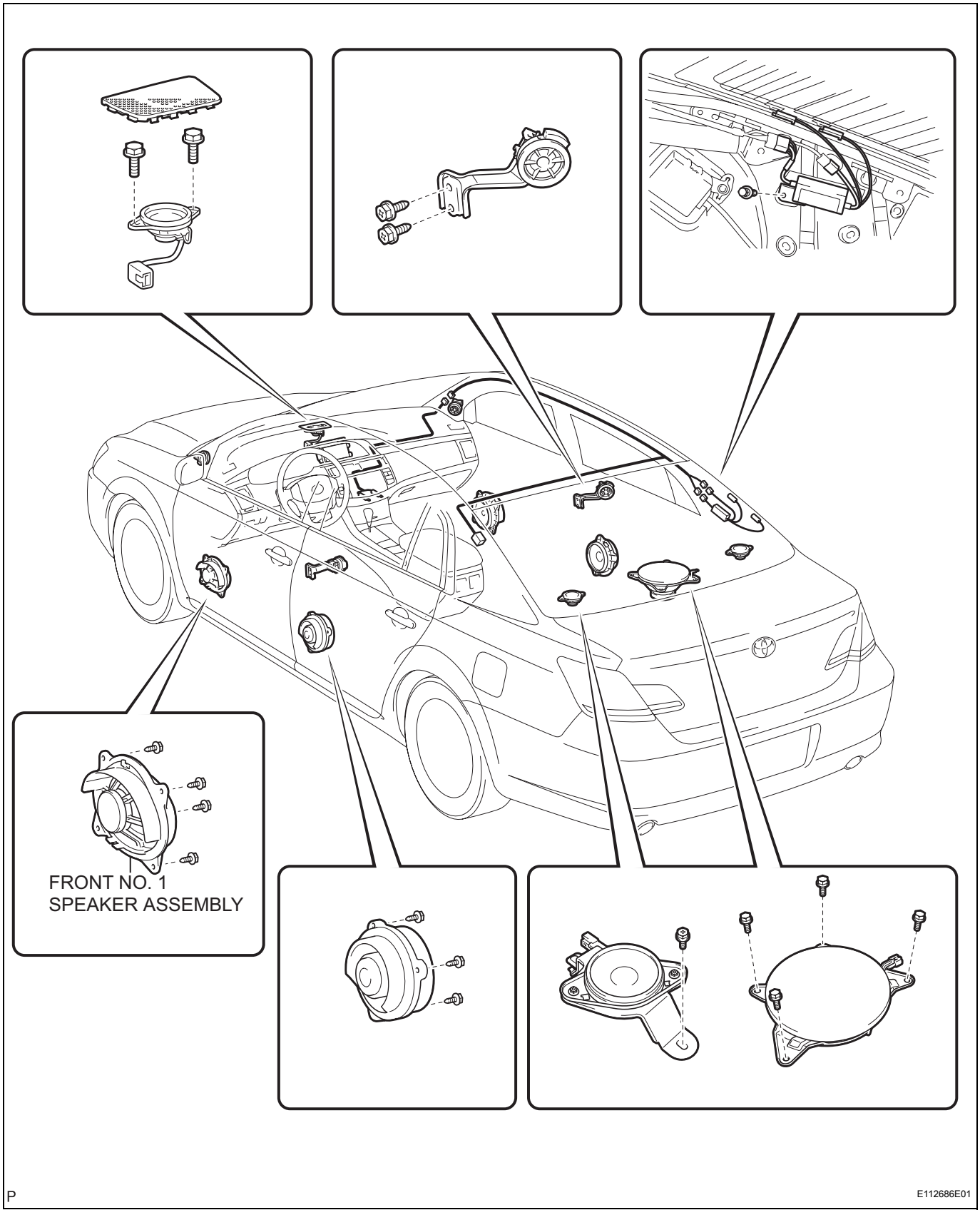


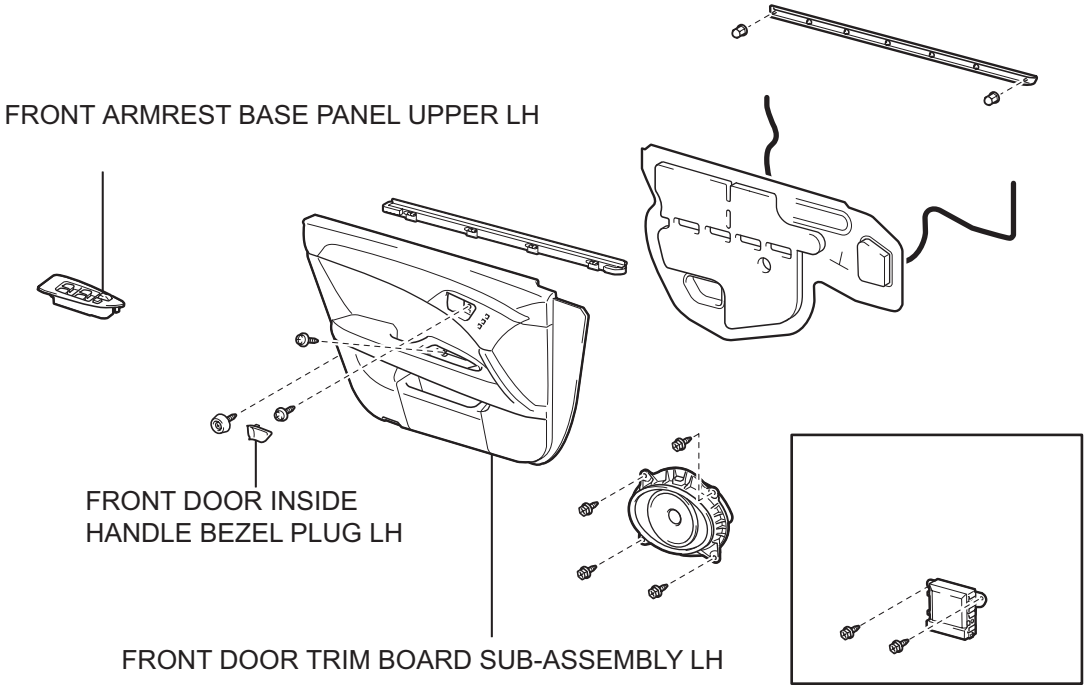
INSTALLATION

1. INSTALL STEREO COMPONENT AMPLIFIER ASSEMBLY
2. INSTALL FRONT RH SEAT ASSEMBLY (See page SE-42)
3. CHECK SEAT SLIDE ADJUSTER LOCKS (See page SE-43)
4. CHECK SEAT HEATER OPERATION (w/ Seat Heater System)
5. INITIALIZE FRONT PASSENGER OCCUPANT CLASSIFICATION SYSTEM (See page SE-43)
6. INSPECT SRS WARNING LIGHT (See page RS-330)

FRONT NO. 1 SPEAKER

COMPONENTS





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ON-VEHICLE INSPECTION

1. INSPECT FRONT NO. 1 SPEAKER

HINT:

Remove interior parts so that the front No. 1 speaker can be seen.

(a) Check the speaker installation.

OK:

The speaker is securely installed.

If the result is not as specified, reinstall the front No. 1 speaker.

(b) Visually check the speaker.

OK:

The cone paper of the speaker is not torn.

If the result is not as specified, replace the front No. 1 speaker.

(c) Speaker resistance check

(1) Disconnect the front No. 1 speaker connector.

(2) Measure the resistance between the terminals of the speaker.

Standard resistance:

9 Speaker System:

Approximately 4 Ω

12 Speaker System:

1.8 to 2.6 Ω

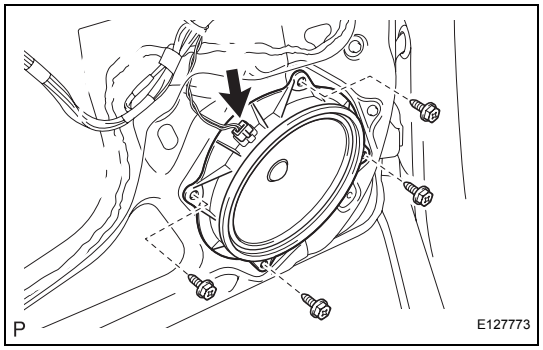
If the result is not as specified, replace the front No. 1 speaker.

REMOVAL

HINT:

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

1. **REMOVE FRONT DOOR LOWER FRAME BRACKET GARNISH LH (See page ED-7)**
2. **REMOVE FRONT DOOR INSIDE HANDLE BEZEL PLUG LH (See page ED-7)**
3. **REMOVE FRONT ARMREST BASE PANEL UPPER LH (See page ED-7)**
4. **REMOVE FRONT DOOR TRIM BOARD SUB-ASSEMBLY LH (See page ED-7)**
5. **REMOVE FRONT NO. 1 SPEAKER ASSEMBLY**
   (a) Disconnect the connector.
   (b) Remove the 4 screws and front No. 1 speaker assembly.

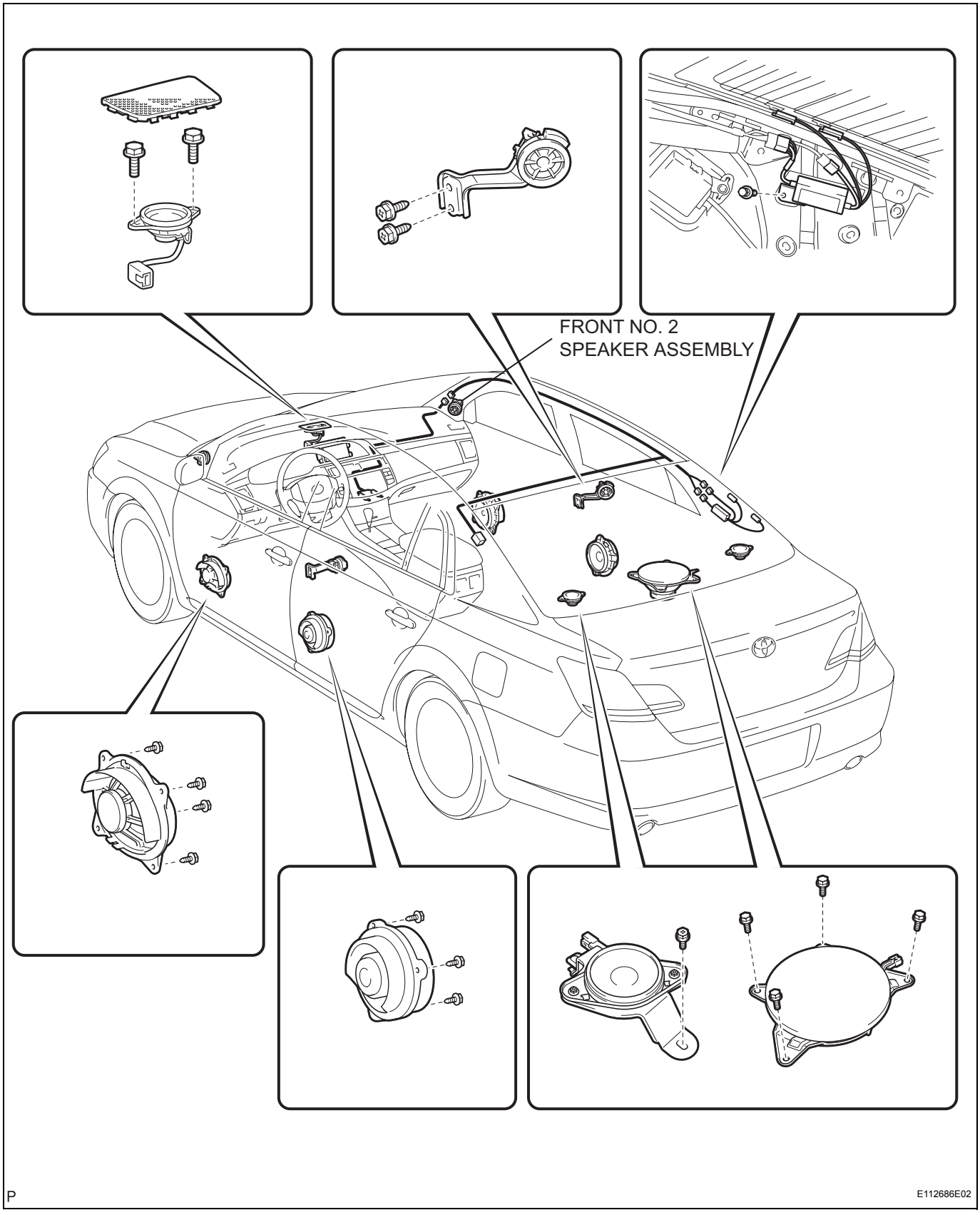


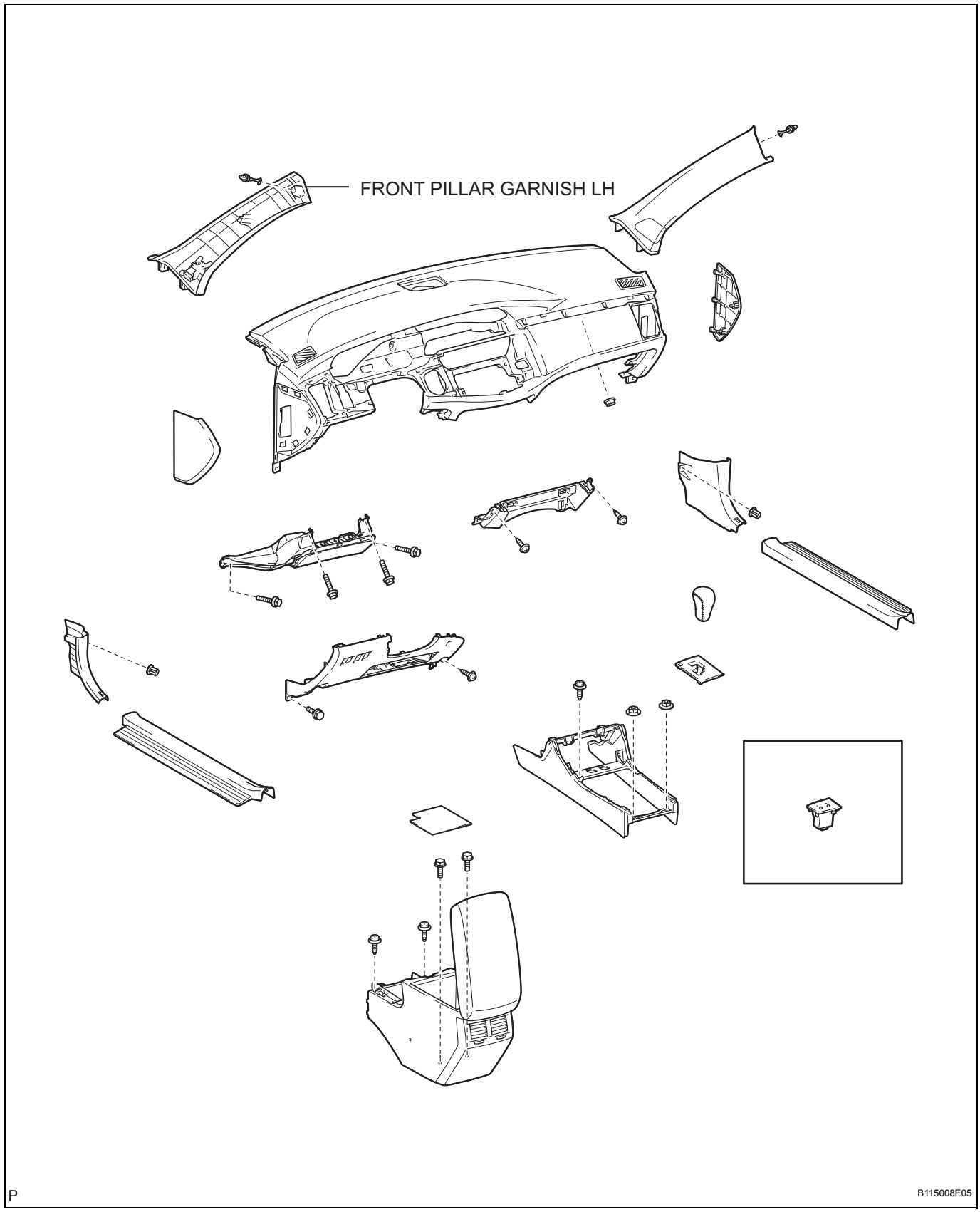
INSTALLATION

1. **INSTALL FRONT NO. 1 SPEAKER ASSEMBLY**
2. **INSTALL FRONT DOOR TRIM BOARD SUB-ASSEMBLY LH**
3. **INSTALL FRONT ARMREST BASE PANEL UPPER LH**
4. **INSTALL FRONT DOOR INSIDE HANDLE BEZEL PLUG LH**
5. **INSTALL FRONT DOOR LOWER FRAME BRACKET GARNISH LH**

FRONT NO. 2 SPEAKER

COMPONENTS




FRONT PILLAR GARNISH LH
P
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ON-VEHICLE INSPECTION

1. INSPECT FRONT NO. 2 SPEAKER

HINT:

Remove interior parts so that the front No. 2 speaker can be seen.

(a) Check the speaker installation.

OK:

The speaker is securely installed.

If the result is not as specified, reinstall the front No. 2 speaker.

(b) Visually check the speaker.

OK:

The cone paper of the speaker is not torn.

If the result is not as specified, replace the front No. 2 speaker.

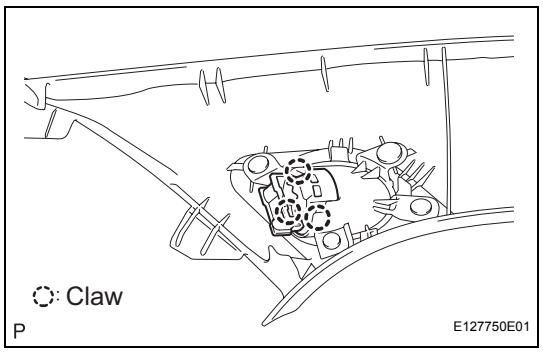
REMOVAL

HINT:

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

1. **REMOVE FRONT PILLAR GARNISH LH (See page IR-15)**

2. **REMOVE FRONT NO. 2 SPEAKER ASSEMBLY**
   (a) Disengage the 3 claws and remove the front No. 2 speaker assembly.

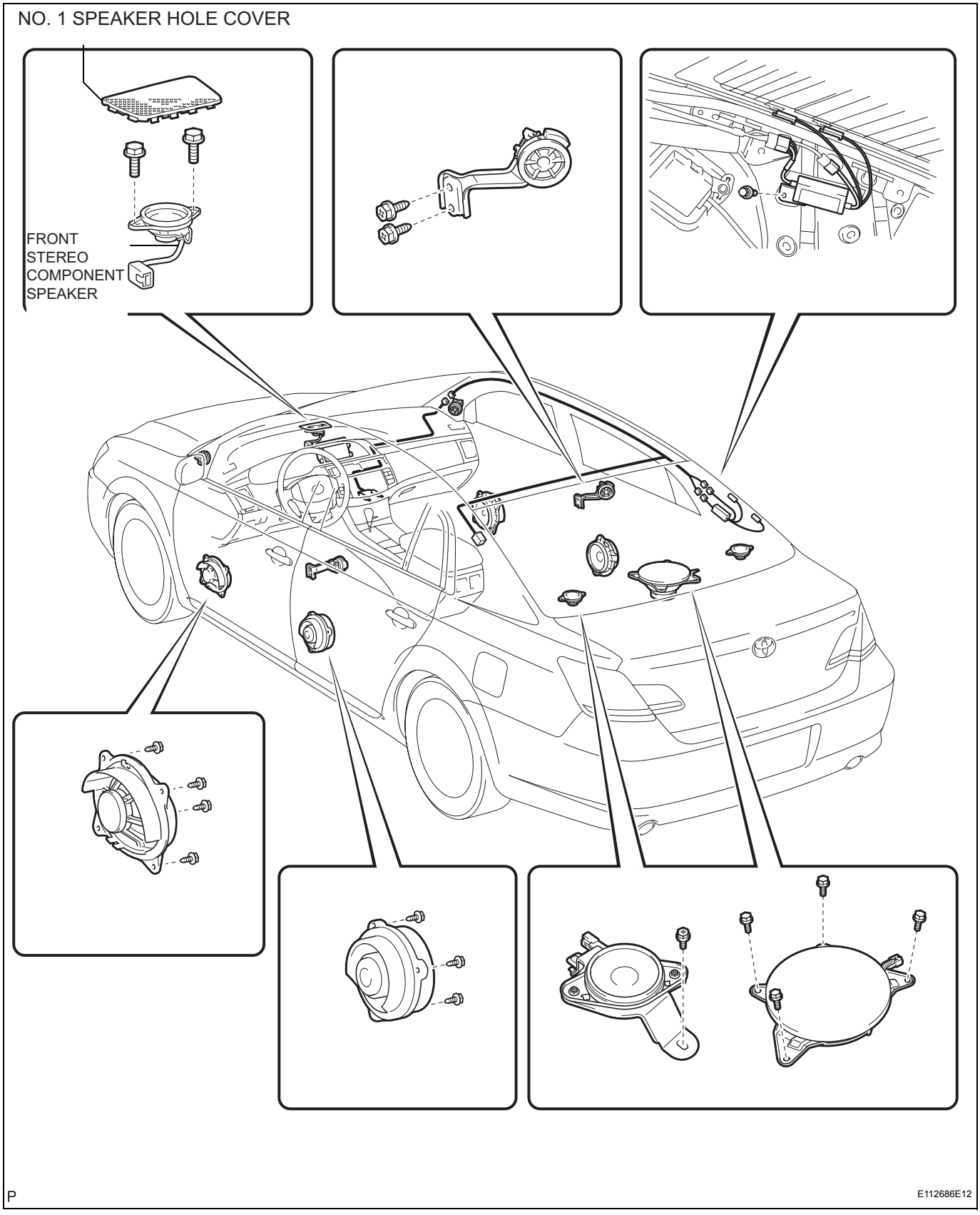


INSTALLATION

1. **INSTALL FRONT NO. 2 SPEAKER ASSEMBLY**
2. **INSTALL FRONT PILLAR GARNISH LH (See page IR-19)**

FRONT STEREO COMPONENT SPEAKER

COMPONENTS



ON-VEHICLE INSPECTION

1. INSPECT FRONT STEREO COMPONENT SPEAKER

HINT:

Remove interior parts so that the front stereo component speaker can be seen.

(a) Check the speaker installation.

OK:

The speaker is securely installed.

If the result is not as specified, reinstall the front stereo component speaker.

(b) Visually check the speaker.

OK:

The cone paper of the speaker is not torn.

If the result is not as specified, replace the front stereo component speaker.

(c) Speaker resistance check

(1) Disconnect the front stereo component speaker connector.

(2) Measure the resistance between the terminals of the speaker.

Standard resistance (9 Speaker System)

Tester Connection	Condition	Specified Condition
E10-1 - E10-2	Always	Approx. 40 Ω
E10-3 - E10-4	Always	Approx. 40 Ω

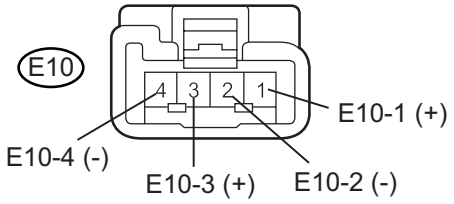
Standard resistance (12 Speaker System)

Tester Connection	Condition	Specified Condition
E10-1 - E10-2	Always	1.5 to 2.1 Ω

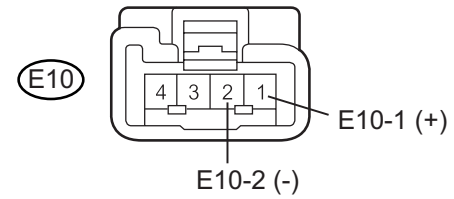
If the result is not as specified, replace the front stereo component speaker.

AV

9 Speaker:



12 Speaker:



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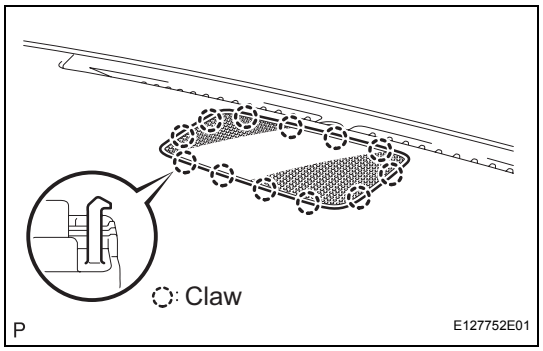
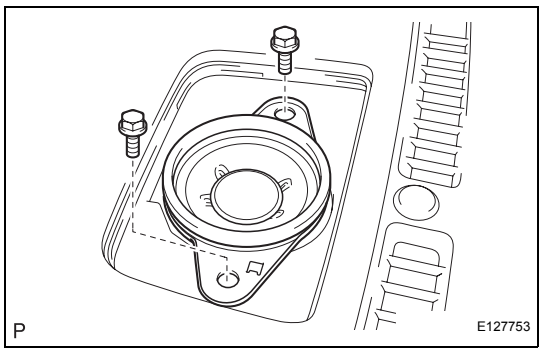


REMOVAL

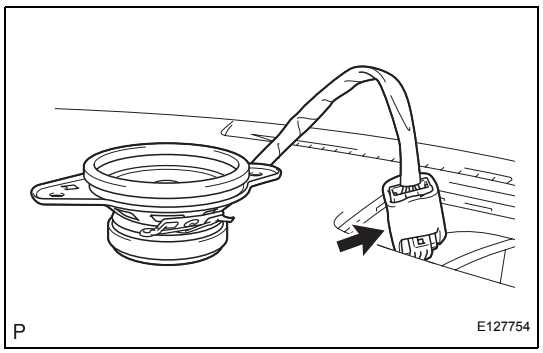
1. REMOVE NO. 1 SPEAKER HOLE COVER

(a) Disengage the 12 claws and remove the No. 1 speaker hole cover.



2. REMOVE FRONT STEREO COMPONENT SPEAKER

(a) Remove the 2 bolts.



(b) Pull the front stereo component speaker assembly toward you.

(c) Disconnect the connector and remove the front stereo component speaker assembly.

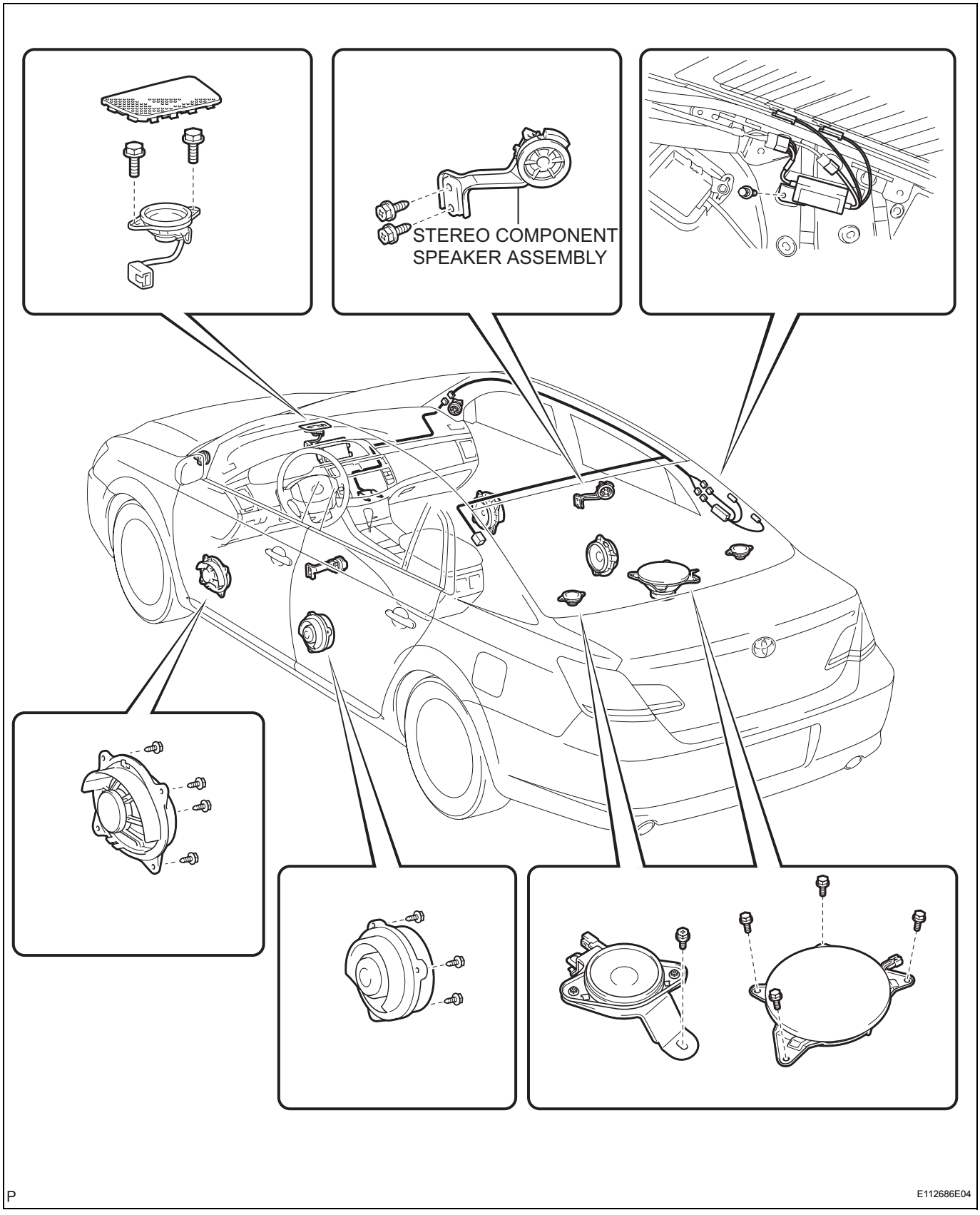
AV

INSTALLATION

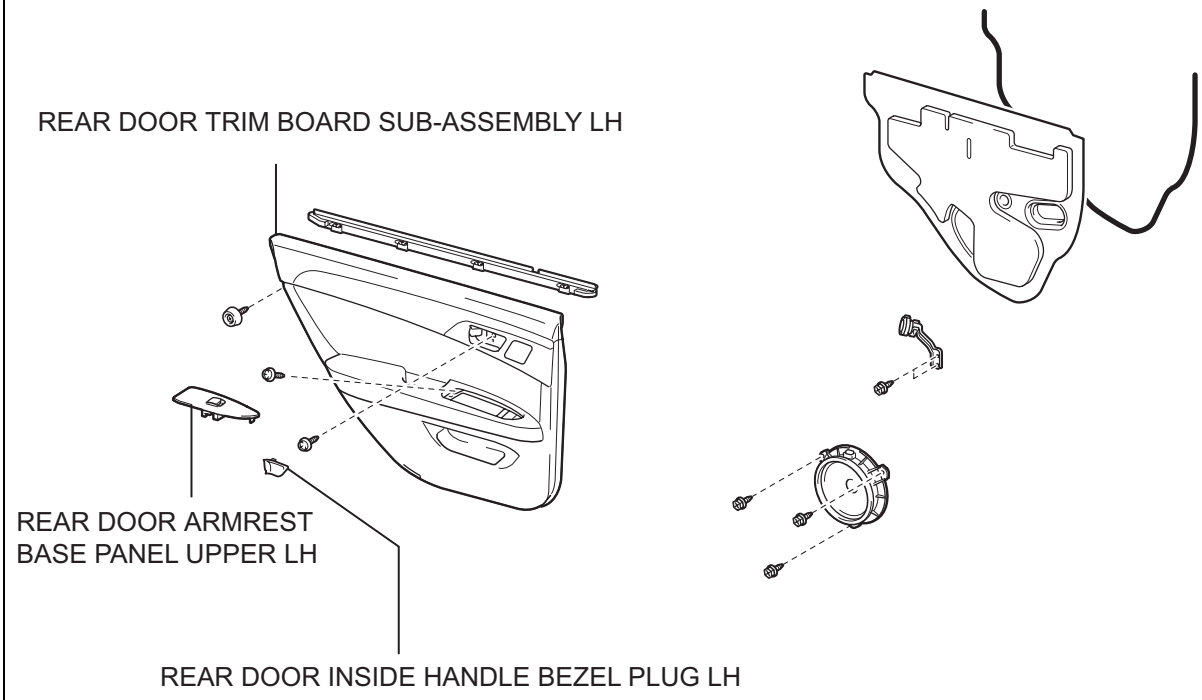
1. **INSTALL FRONT STEREO COMPONENT SPEAKER**
2. **INSTALL NO. 1 SPEAKER HOLE COVER**

STEREO COMPONENT SPEAKER

COMPONENTS



AV



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AV

ON-VEHICLE INSPECTION

1. INSPECT STEREO COMPONENT SPEAKER

HINT:

Remove interior parts so that the stereo component speaker can be seen.

(a) Check the speaker installation.

OK:

The speaker is securely installed.

If the result is not as specified, reinstall the stereo component speaker.

(b) Visually check the speaker.

OK:

The cone paper of the speaker is not torn.

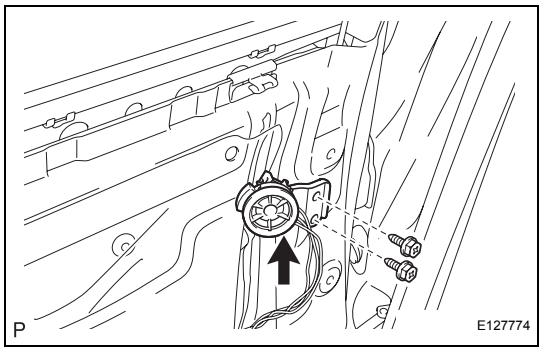
If the result is not as specified, replace the stereo component speaker.

REMOVAL

HINT:

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

1. **REMOVE REAR DOOR INSIDE HANDLE BEZEL PLUG LH (See page ED-18)**
2. **REMOVE REAR DOOR ARMREST BASE PANEL UPPER LH (See page ED-18)**
3. **REMOVE REAR DOOR TRIM BOARD SUB-ASSEMBLY LH (See page ED-18)**
4. **REMOVE STEREO COMPONENT SPEAKER ASSEMBLY**
   (a) Disconnect the connector.
   (b) Remove the 2 screws and stereo component speaker assembly.

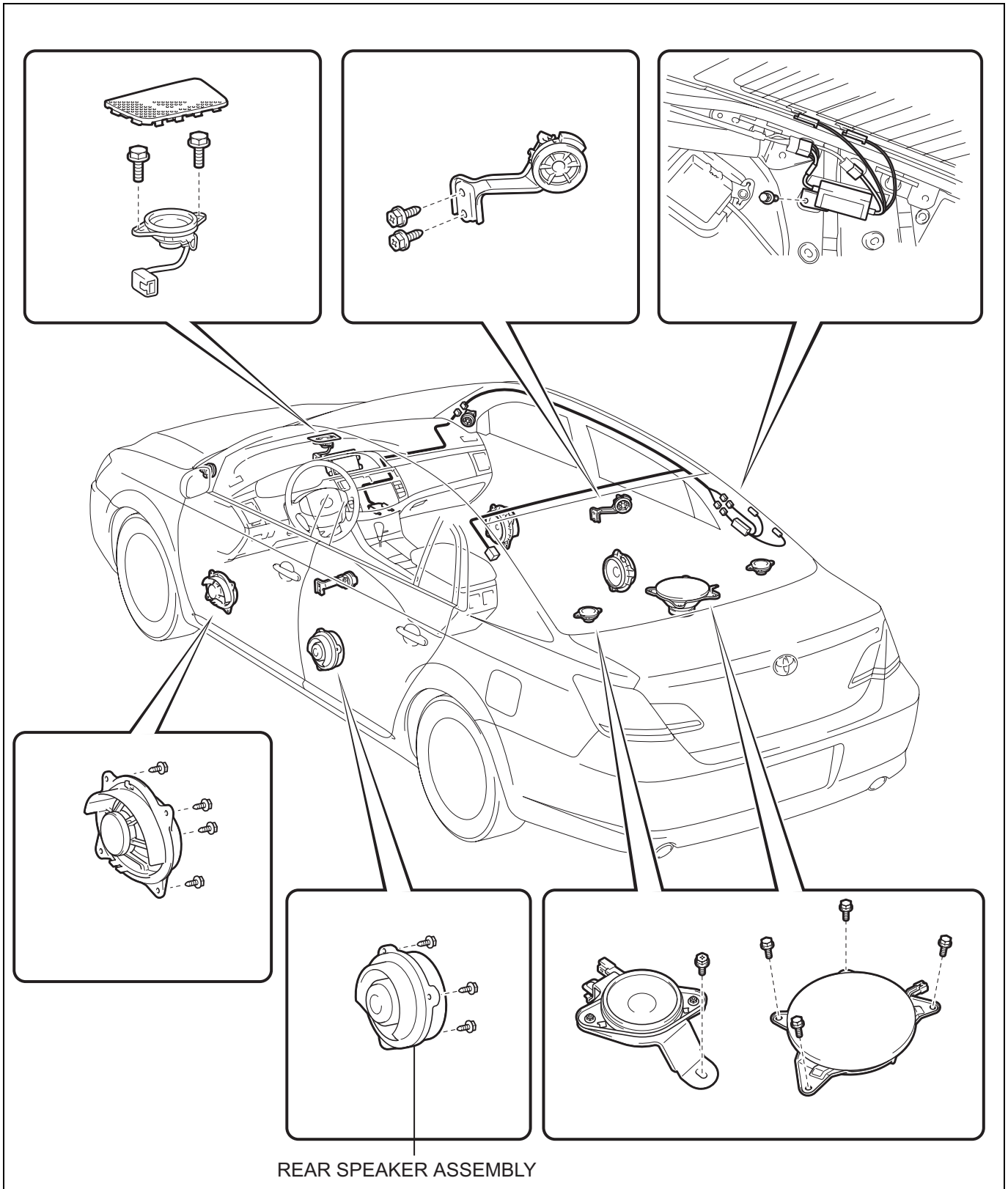


INSTALLATION

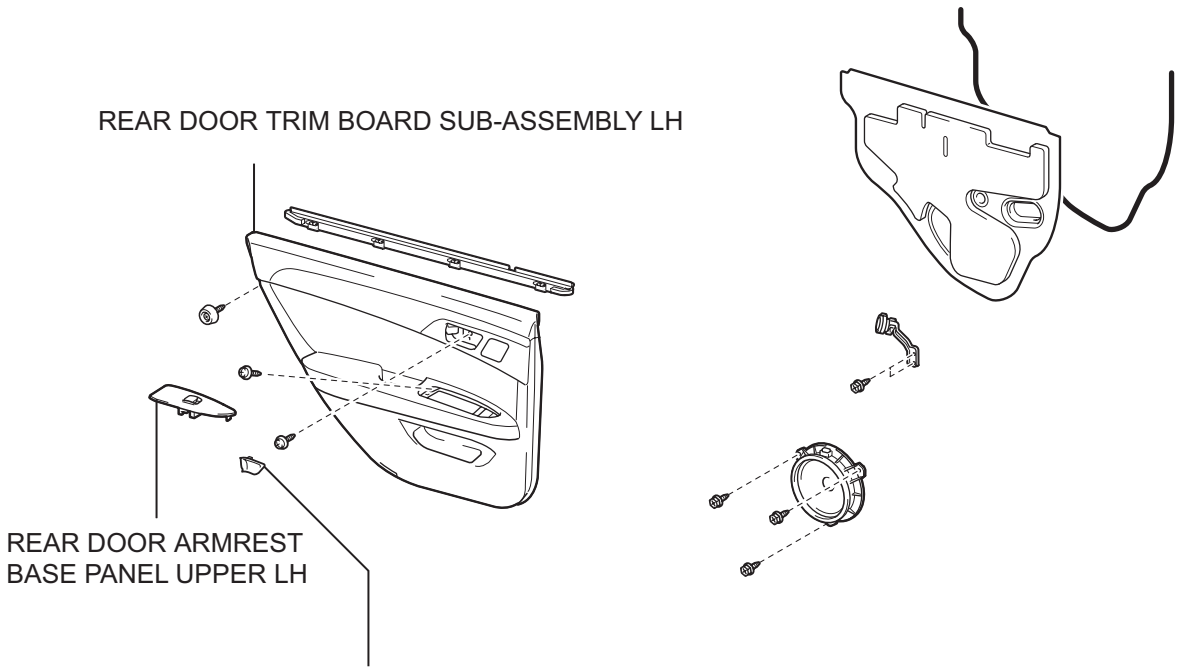
1. **INSTALL STEREO COMPONENT SPEAKER ASSEMBLY**
2. **INSTALL REAR DOOR TRIM BOARD SUB-ASSEMBLY LH**
3. **INSTALL REAR DOOR ARMREST BASE PANEL UPPER LH**
4. **INSTALL REAR DOOR INSIDE HANDLE BEZEL PLUG LH**

REAR SPEAKER

COMPONENTS



AV



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ON-VEHICLE INSPECTION

1. INSPECT REAR SPEAKER

HINT:

Remove interior parts so that the rear speaker can be seen.

(a) Check the speaker installation.

OK:

The speaker is securely installed.

If the result is not as specified, reinstall the rear speaker.

(b) Visually check the speaker.

OK:

The cone paper of the speaker is not torn.

If the result is not as specified, replace the rear speaker.

(c) Speaker resistance check

(1) Disconnect the rear speaker connector.

(2) Measure the resistance between the terminals of the speaker.

Standard resistance:

9 Speaker System: 3.2 to 4.8 Ω

12 Speaker System: 1.8 to 2.6 Ω

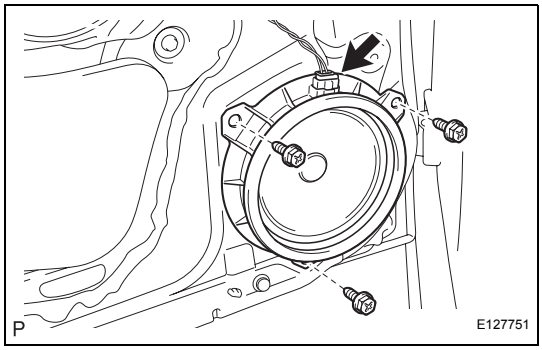
If the result is not as specified, replace the rear speaker.

REMOVAL

HINT:

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

1. **REMOVE REAR DOOR INSIDE HANDLE BEZEL PLUG LH (See page ED-18)**
2. **REMOVE REAR DOOR ARMREST BASE PANEL UPPER LH (See page ED-18)**
3. **REMOVE REAR DOOR TRIM BOARD SUB-ASSEMBLY LH (See page ED-18)**
4. **REMOVE REAR SPEAKER ASSEMBLY**
   (a) Disconnect the connector.
   (b) Remove the 3 screws and rear speaker assembly.



INSTALLATION

1. **INSTALL REAR SPEAKER ASSEMBLY**
2. **INSTALL REAR DOOR TRIM BOARD SUB-ASSEMBLY LH**
3. **INSTALL REAR DOOR ARMREST BASE PANEL UPPER LH**
4. **INSTALL REAR DOOR INSIDE HANDLE BEZEL PLUG LH**

ON-VEHICLE INSPECTION

1. INSPECT REAR SPEAKER

HINT:

Remove interior parts so that the rear speaker can be seen.

(a) Check the speaker installation.

OK:

The speaker is securely installed.

If the result is not as specified, reinstall the rear speaker.

(b) Visually check the speaker.

OK:

The cone paper of the speaker is not torn.

If the result is not as specified, replace the rear speaker.

(c) Speaker resistance check

(1) Disconnect the rear speaker connector.

(2) Measure the resistance between the terminals of the speaker.

Standard resistance:

9 Speaker System: 3.2 to 4.8 Ω

12 Speaker System: 1.8 to 2.6 Ω

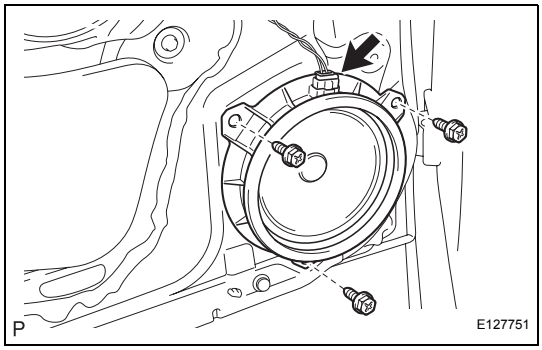
If the result is not as specified, replace the rear speaker.

REMOVAL

HINT:

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

1. **REMOVE REAR DOOR INSIDE HANDLE BEZEL PLUG LH (See page ED-18)**
2. **REMOVE REAR DOOR ARMREST BASE PANEL UPPER LH (See page ED-18)**
3. **REMOVE REAR DOOR TRIM BOARD SUB-ASSEMBLY LH (See page ED-18)**
4. **REMOVE REAR SPEAKER ASSEMBLY**
   (a) Disconnect the connector.
   (b) Remove the 3 screws and rear speaker assembly.

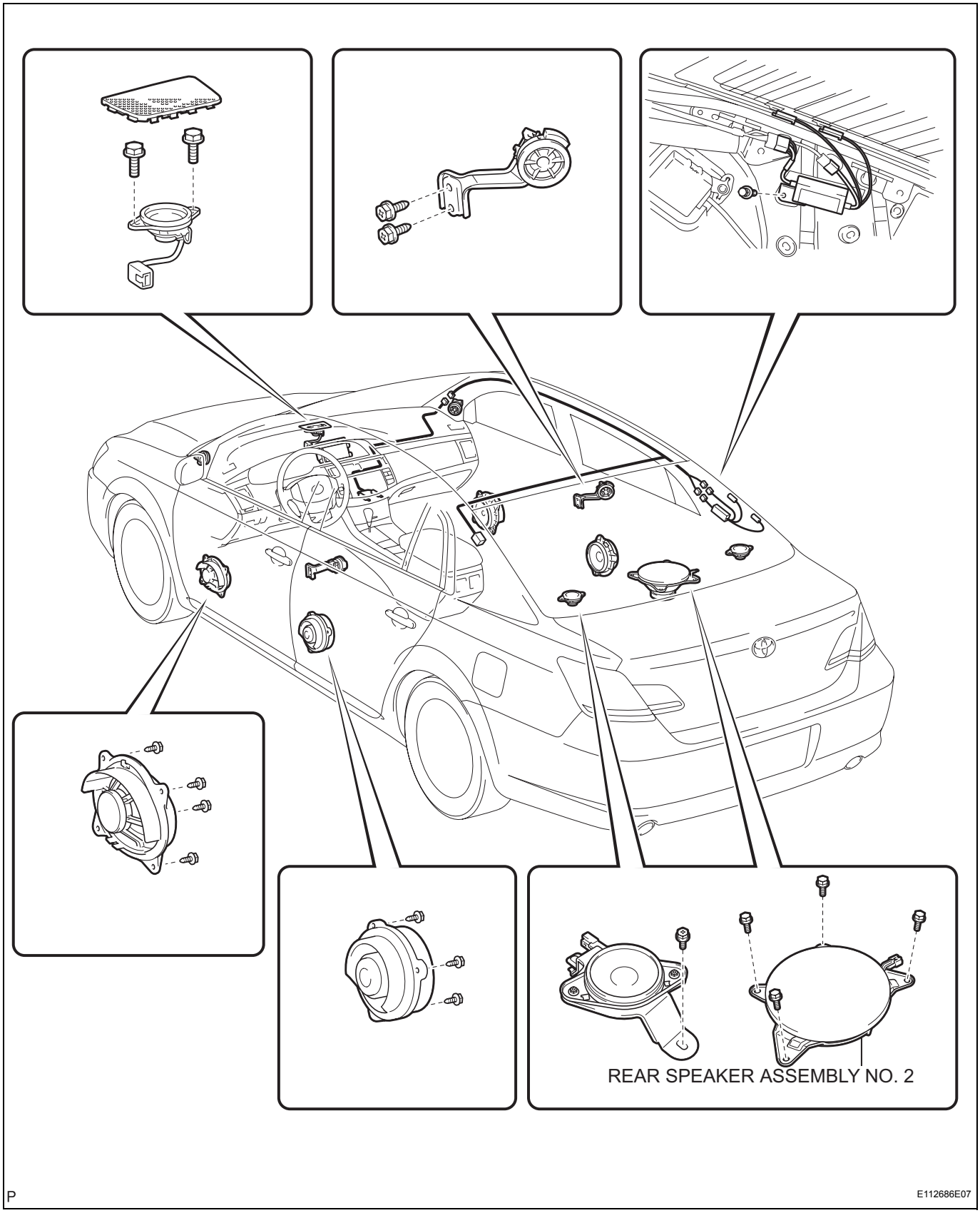


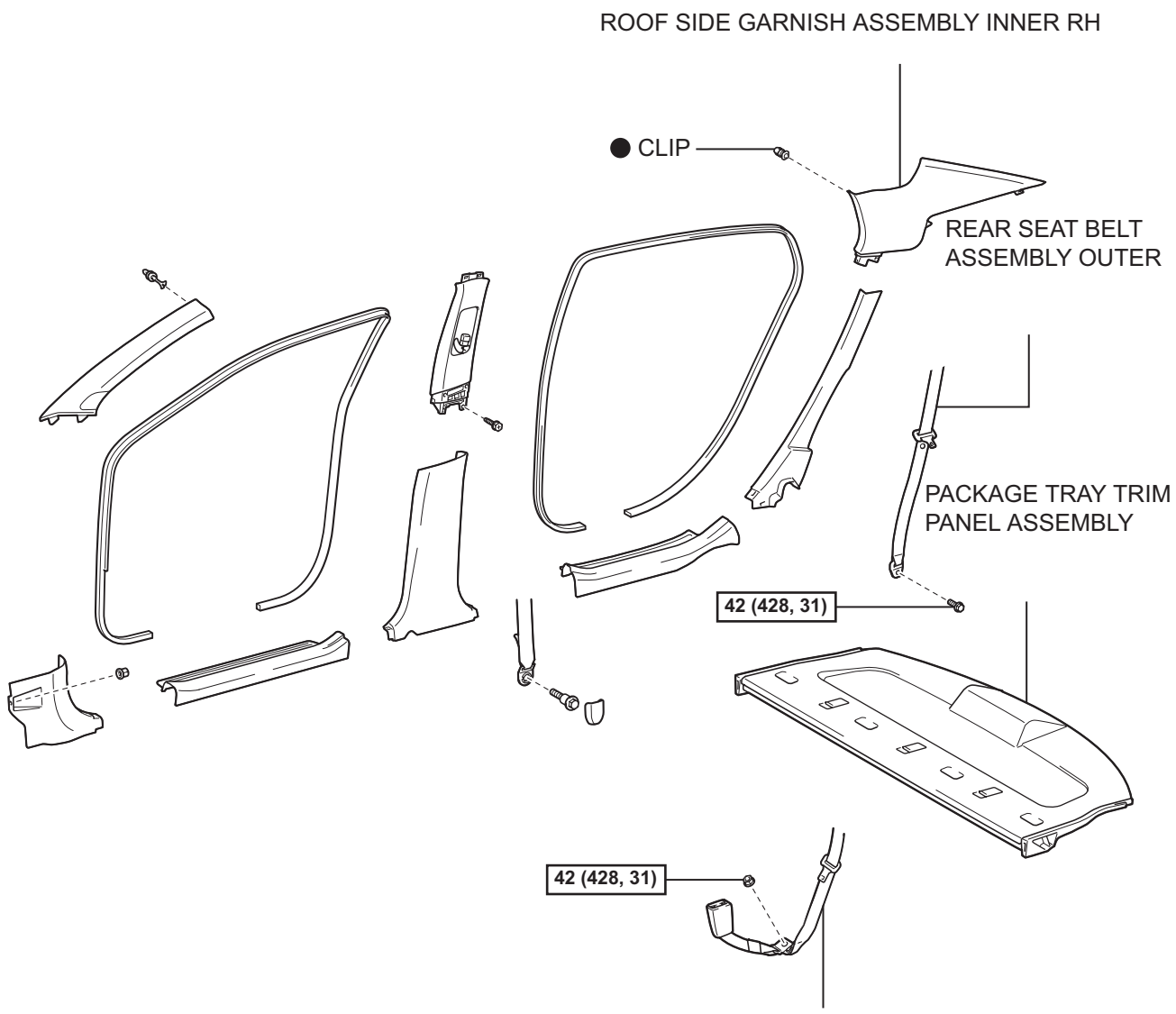
INSTALLATION

1. **INSTALL REAR SPEAKER ASSEMBLY**
2. **INSTALL REAR DOOR TRIM BOARD SUB-ASSEMBLY LH**
3. **INSTALL REAR DOOR ARMREST BASE PANEL UPPER LH**
4. **INSTALL REAR DOOR INSIDE HANDLE BEZEL PLUG LH**

REAR NO. 2 SPEAKER

COMPONENTS





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

● Non-reusable part

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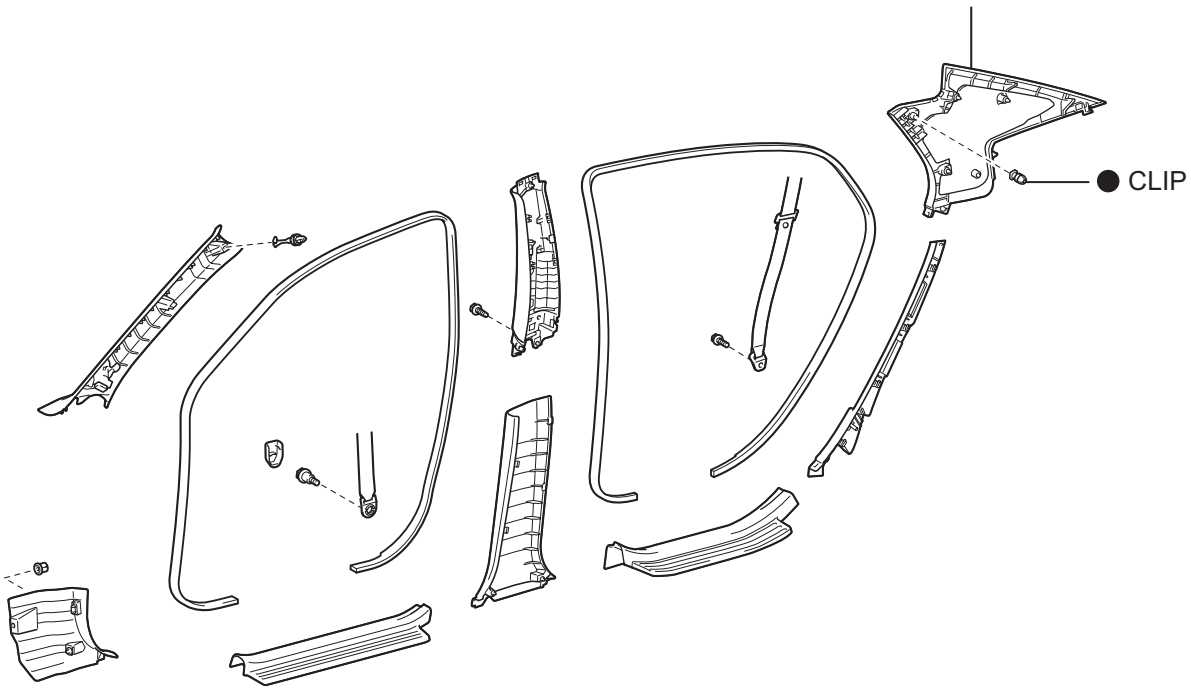
AV



● Non-reusable part

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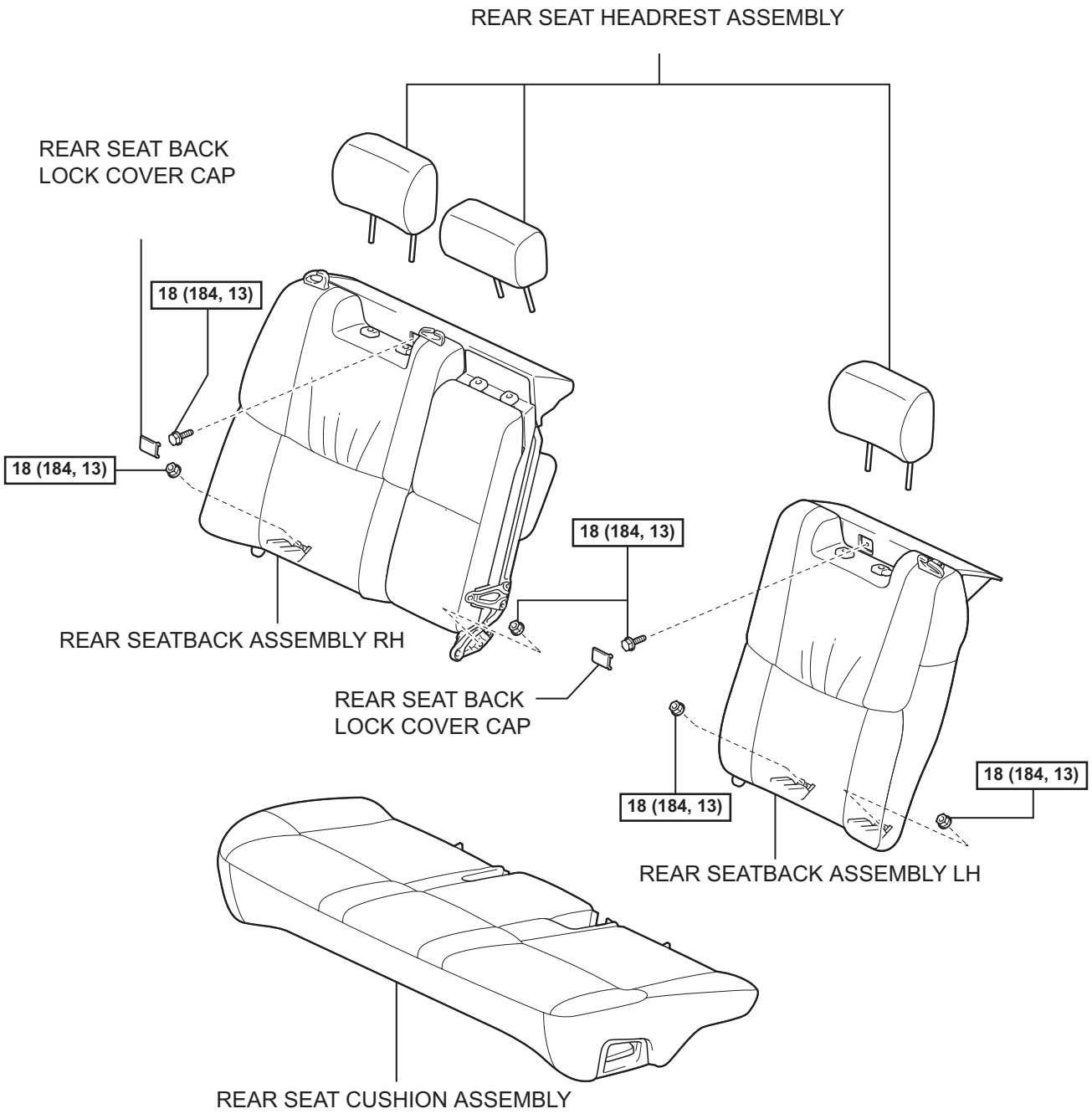

N*m (kgf*cm, ft.*lbf) : Specified torque

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AV

ON-VEHICLE INSPECTION

1. INSPECT REAR NO. 2 SPEAKER

HINT:

Remove interior parts so that the rear No. 2 speaker can be seen.

(a) Check the speaker installation.

OK:

The speaker is securely installed.

If the result is not as specified, reinstall the rear No. 2 speaker.

(b) Visually check the speaker.

OK:

The cone paper of the speaker is not torn.

If the result is not as specified, replace the rear No. 2 speaker.

(c) Speaker resistance check

(1) Disconnect the rear No. 2 speaker connector.

(2) Measure the resistance between the terminals of the speaker.

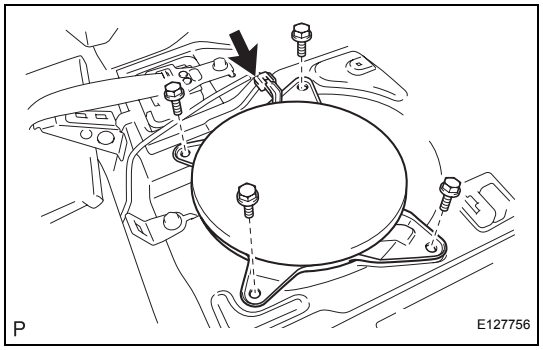
Standard resistance:

1.8 to 2.6 Ω

If the result is not as specified, replace the rear No. 2 speaker.

REMOVAL

1. REMOVE REAR SEAT CUSHION ASSEMBLY (See page SE-68)
2. REMOVE REAR SEAT HEADREST ASSEMBLY
3. REMOVE REAR SEAT BACK LOCK COVER CAP (See page SE-68)
4. REMOVE REAR SEATBACK ASSEMBLY LH (See page SE-68)
5. REMOVE REAR SEATBACK ASSEMBLY RH (See page SE-69)
6. REMOVE ROOF SIDE GARNISH ASSEMBLY INNER LH (See page IR-14)
7. REMOVE ROOF SIDE GARNISH ASSEMBLY INNER RH (See page IR-14)
8. SEPARATE REAR SEAT BELT ASSEMBLY OUTER (See page SB-25)
9. SEPARATE REAR SEAT INNER WITH CENTER BELT ASSEMBLY RH (See page SB-33)
10. SEPARATE REAR SEAT INNER WITH CENTER BELT ASSEMBLY LH (See page SB-33)
11. REMOVE PACKAGE TRAY TRIM PANEL ASSEMBLY (See page SB-31)
12. REMOVE REAR SPEAKER ASSEMBLY NO. 2
    (a) Disconnect the connector.
    (b) Remove the 4 bolts and rear speaker assembly No. 2.



INSTALLATION

1. INSTALL REAR SPEAKER ASSEMBLY NO. 2
2. INSTALL REAR SEAT BELT ASSEMBLY OUTER (See page SB-25)
3. INSTALL REAR SEAT INNER WITH CENTER BELT ASSEMBLY RH (See page SB-33)
4. INSTALL REAR SEAT BELT ASSEMBLY OUTER (See page SB-25)
5. INSTALL ROOF SIDE GARNISH ASSEMBLY INNER RH (See page IR-19)
6. INSTALL ROOF SIDE GARNISH ASSEMBLY INNER LH (See page IR-19)
7. INSTALL REAR SEATBACK ASSEMBLY RH (See page SE-76)
8. INSTALL REAR SEATBACK ASSEMBLY LH (See page SE-77)
9. INSTALL REAR SEAT CUSHION ASSEMBLY

ON-VEHICLE INSPECTION

1. INSPECT ROOF SPEAKER

HINT:

Remove interior parts so that the roof speaker can be seen.

(a) Check the speaker installation.

OK:

The speaker is securely installed.

If the result is not as specified, reinstall the roof speaker.

(b) Visually check the speaker.

OK:

The cone paper of the speaker is not torn.

If the result is not as specified, replace the roof speaker.

(c) Speaker resistance check

(1) Disconnect the roof speaker connector.

(2) Measure the resistance between the terminals of the speaker.

Standard resistance:

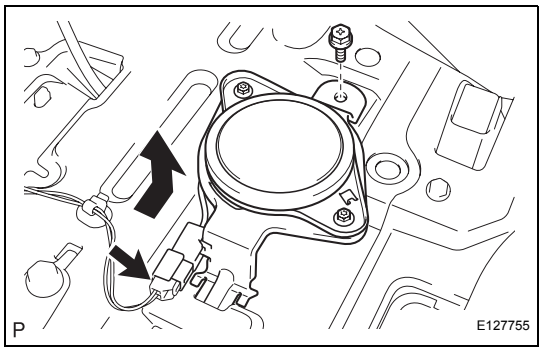
1.5 to 2.1 Ω

If the result is not as specified, replace the roof speaker.

REMOVAL

HINT:
- Use the procedures for the RH side and LH side.
- The procedures listed below are for the LH side.

1. **REMOVE REAR SEAT CUSHION ASSEMBLY (See page SE-68)**
2. **REMOVE REAR SEAT HEADREST ASSEMBLY**
3. **REMOVE REAR SEAT BACK LOCK COVER CAP (See page SE-68)**
4. **REMOVE REAR SEATBACK ASSEMBLY LH (See page SE-68)**
5. **REMOVE REAR SEATBACK ASSEMBLY RH (See page SE-69)**
6. **REMOVE ROOF SIDE GARNISH ASSEMBLY INNER LH (See page IR-14)**
7. **REMOVE ROOF SIDE GARNISH ASSEMBLY INNER RH (See page IR-14)**
8. **SEPARATE REAR SEAT BELT ASSEMBLY OUTER (See page SB-25)**
9. **SEPARATE REAR SEAT INNER WITH CENTER BELT ASSEMBLY RH (See page SB-33)**
10. **SEPARATE REAR SEAT INNER WITH CENTER BELT ASSEMBLY LH (See page SB-33)**
11. **REMOVE PACKAGE TRAY TRIM PANEL ASSEMBLY (See page SB-31)**
12. **REMOVE ROOF SPEAKER ASSEMBLY**
    (a) Disconnect the connector.
    (b) Remove the bolt and roof speaker assembly as shown in the illustration.

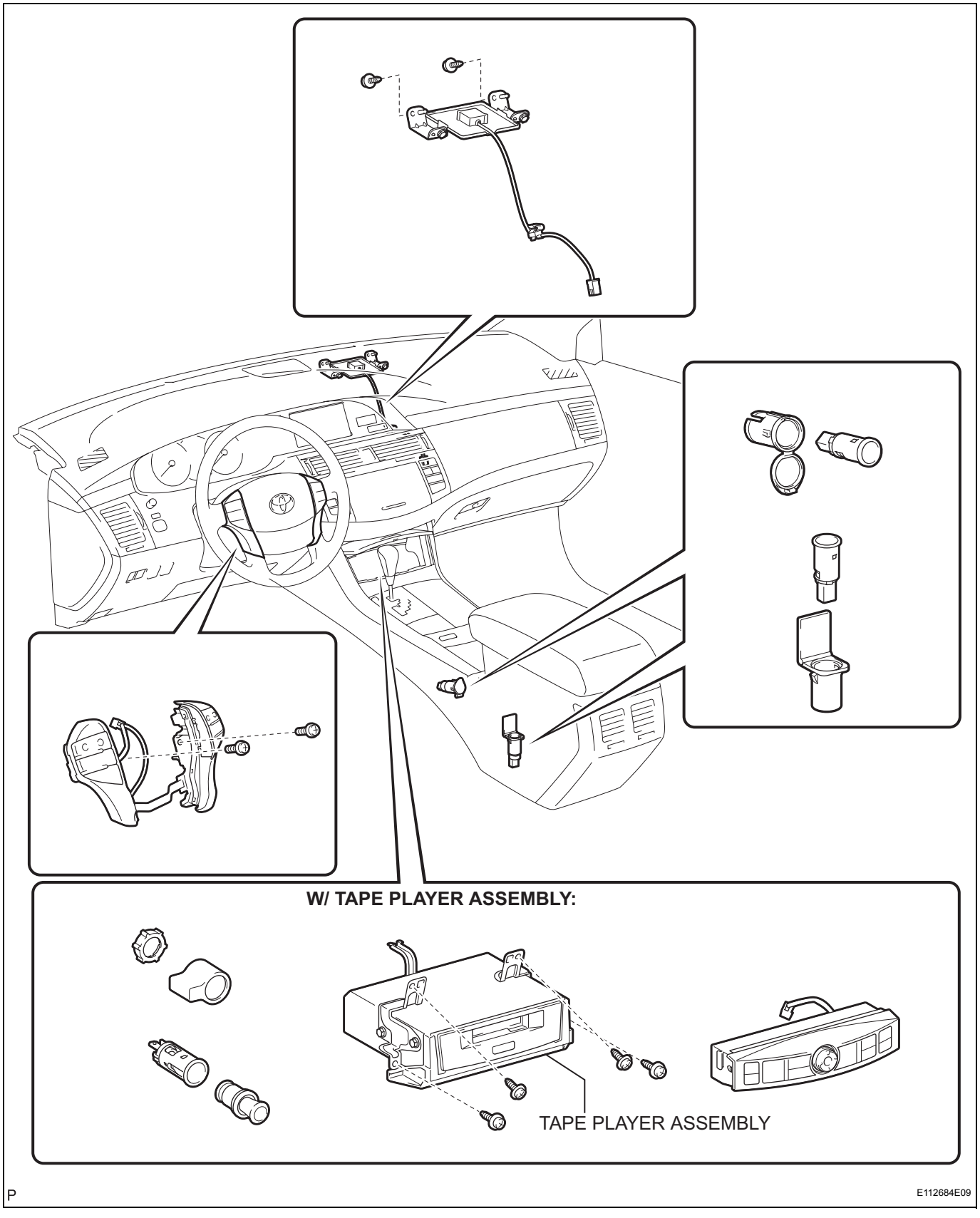


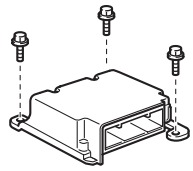
INSTALLATION

1. INSTALL ROOF SPEAKER ASSEMBLY
2. INSTALL REAR SEAT BELT ASSEMBLY OUTER (See page SB-25)
3. INSTALL REAR SEAT INNER WITH CENTER BELT ASSEMBLY RH (See page SB-33)
4. INSTALL REAR SEAT BELT ASSEMBLY OUTER (See page SB-25)
5. INSTALL ROOF SIDE GARNISH ASSEMBLY INNER RH (See page IR-19)
6. INSTALL ROOF SIDE GARNISH ASSEMBLY INNER LH (See page IR-19)
7. INSTALL REAR SEATBACK ASSEMBLY RH (See page SE-76)
8. INSTALL REAR SEATBACK ASSEMBLY LH (See page SE-77)
9. INSTALL REAR SEAT CUSHION ASSEMBLY

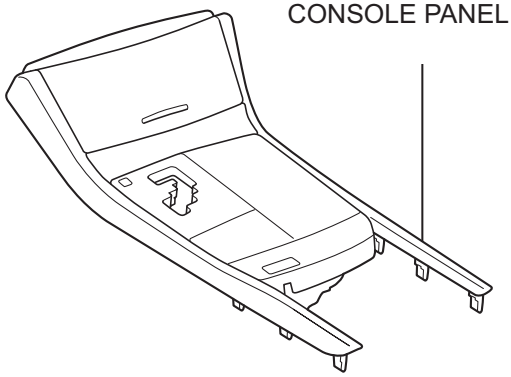
TAPE PLAYER

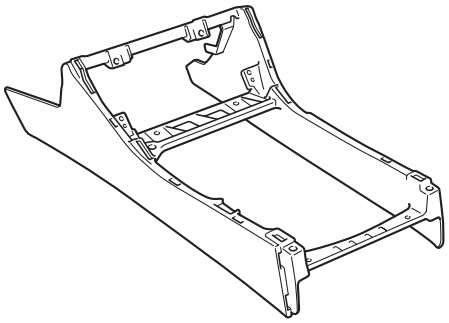
COMPONENTS

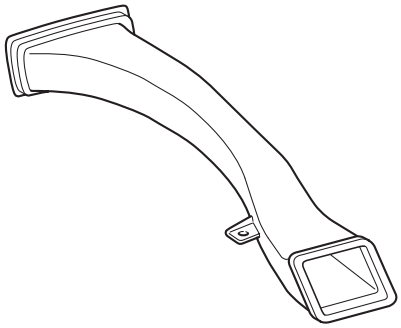


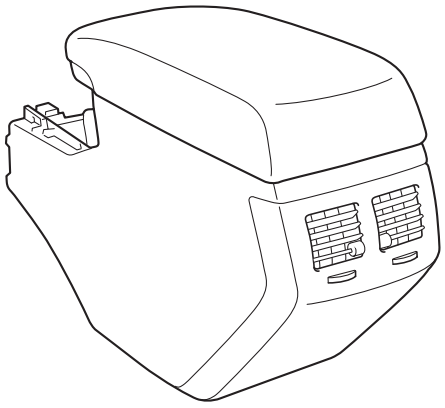


CONSOLE PANEL SUB-ASSEMBLY UPPER









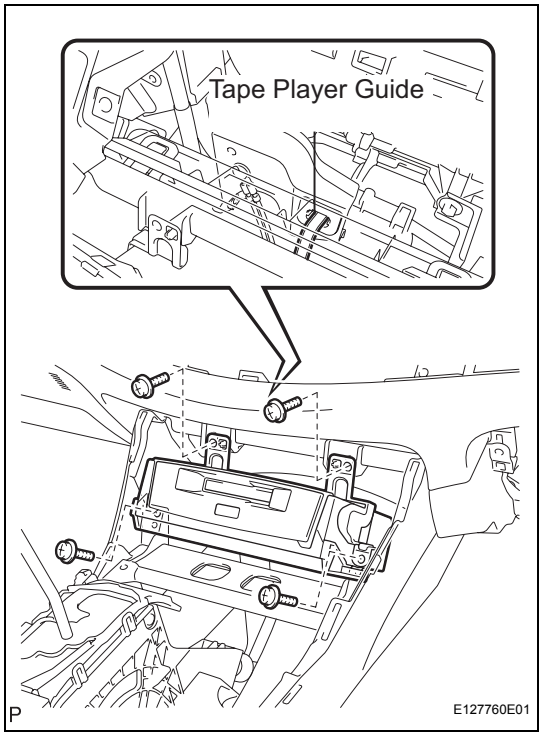
C

C114925E02

REMOVAL

1. **REMOVE CONSOLE PANEL SUB-ASSEMBLY UPPER (See page IP-13)**

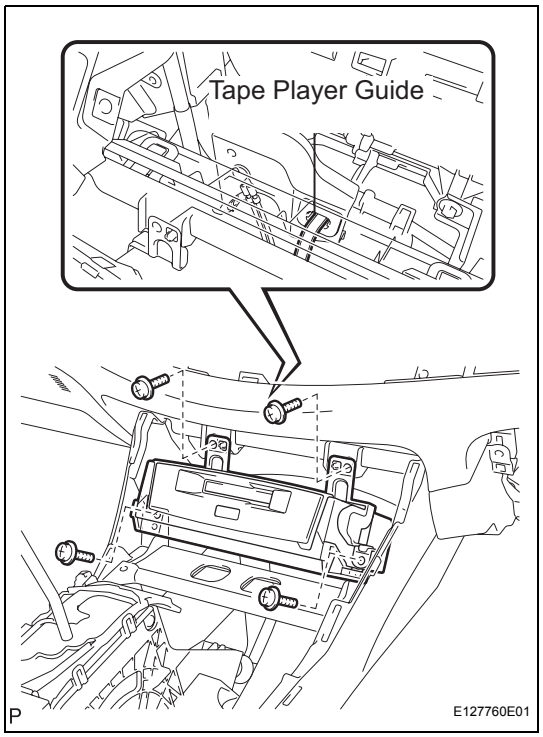
2. **REMOVE TAPE PLAYER ASSEMBLY**
   (a) Remove the 4 screws.
   (b) Pull the tape player assembly toward you and disengage tape player guide.
   (c) Disconnect all connectors and remove the tape player assembly.



INSTALLATION

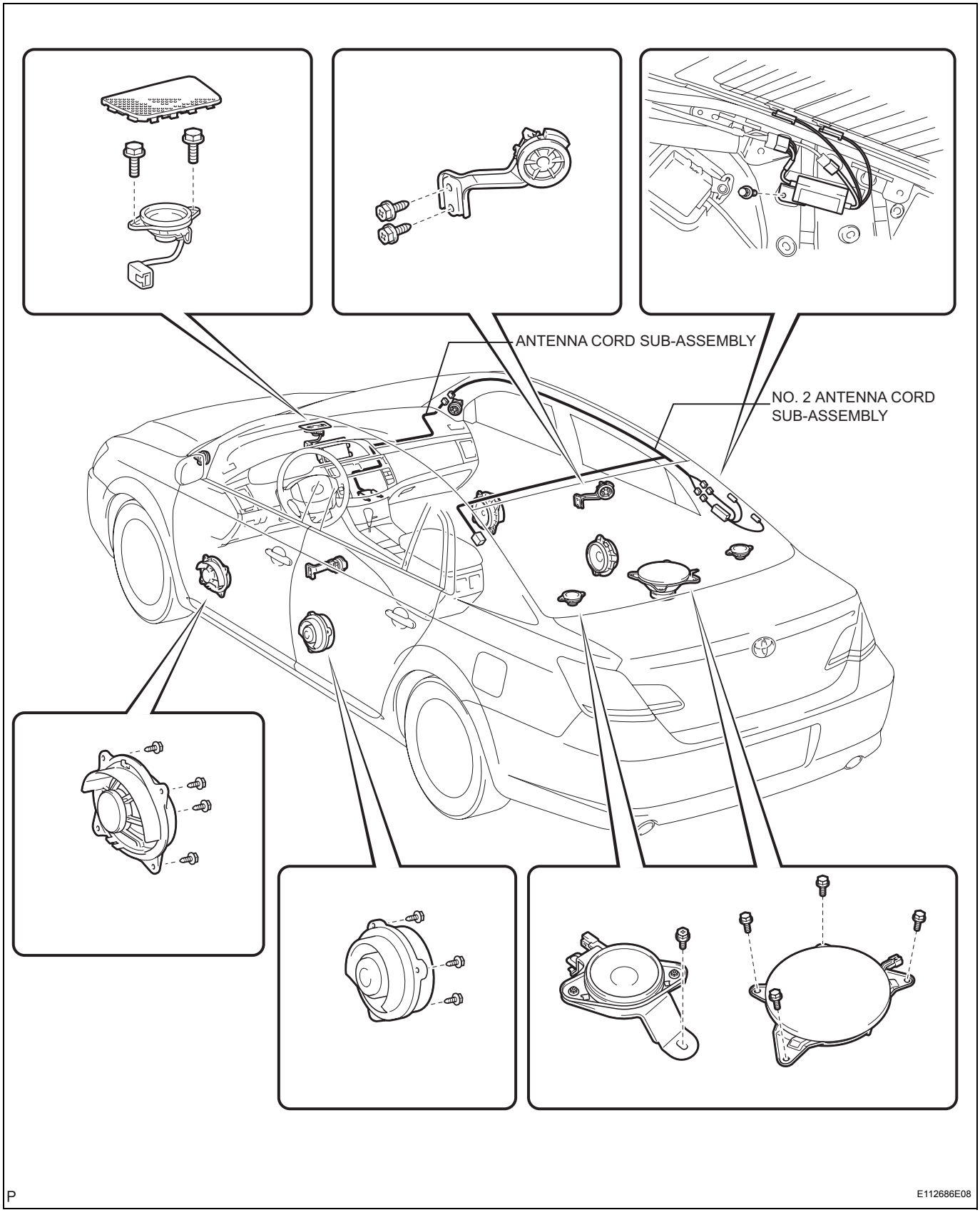
1. **INSTALL TAPE PLAYER ASSEMBLY**
   (a) Connect all connectors.
   (b) Install the tape player assembly with the 4 screws and tape player guide.

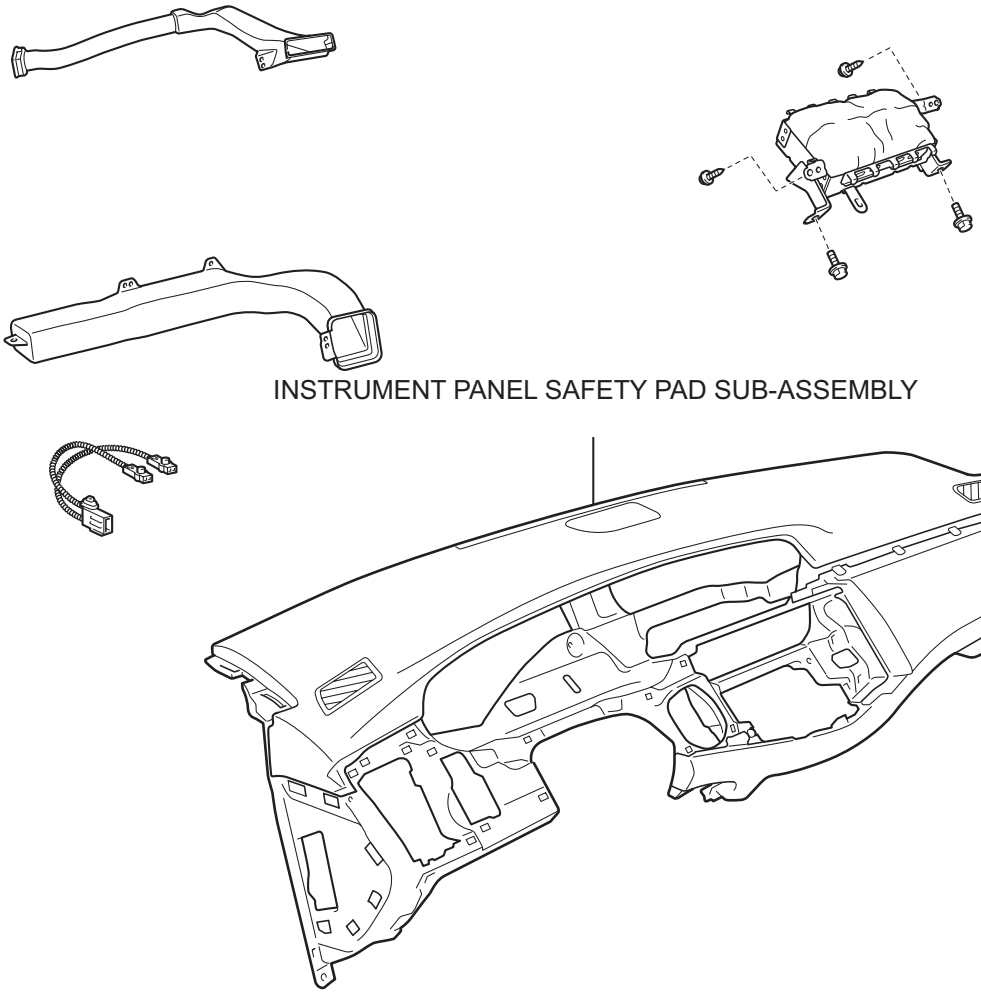
2. **INSTALL CONSOLE PANEL SUB-ASSEMBLY UPPER**



RADIO ANTENNA CORD

COMPONENTS

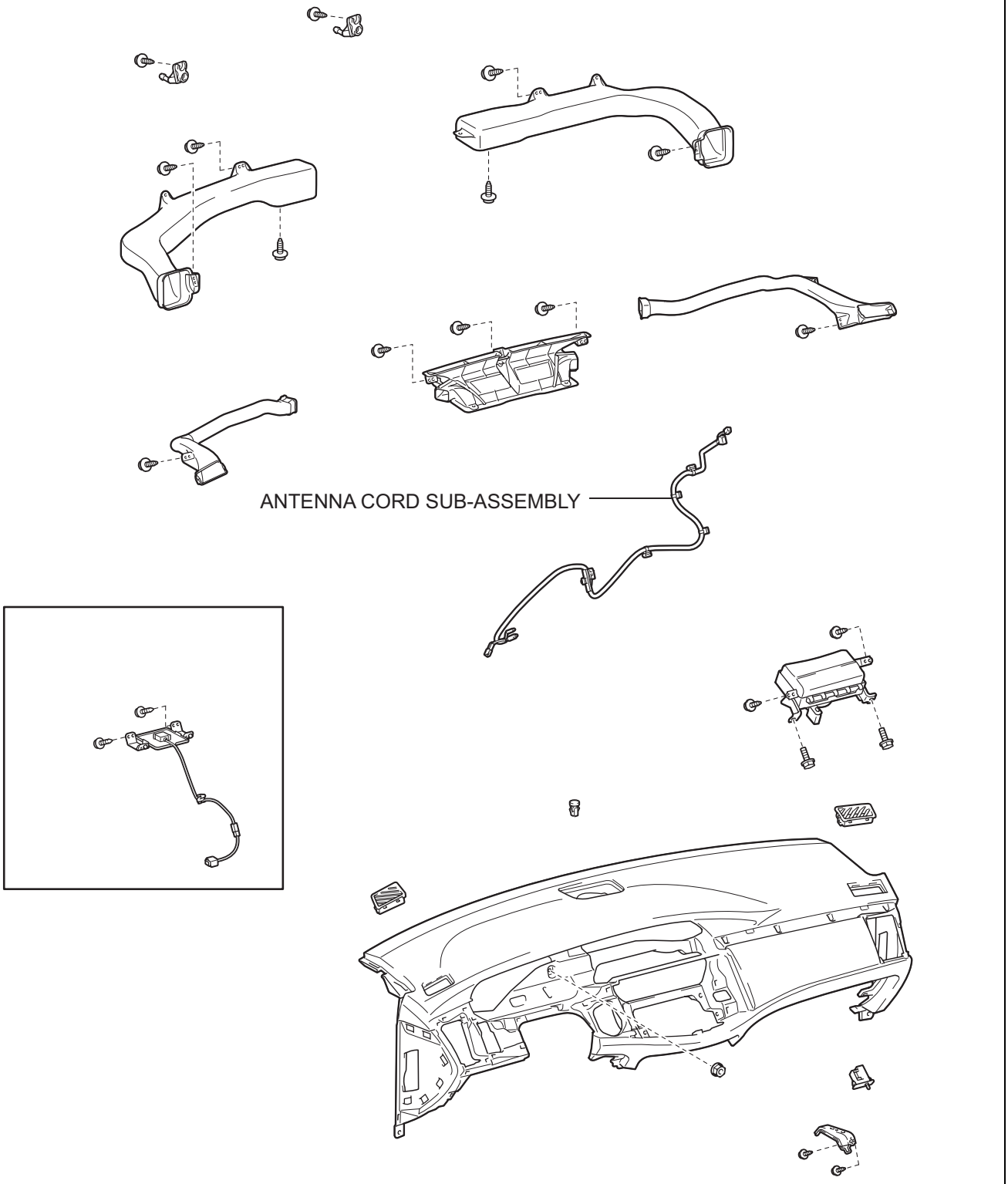




C

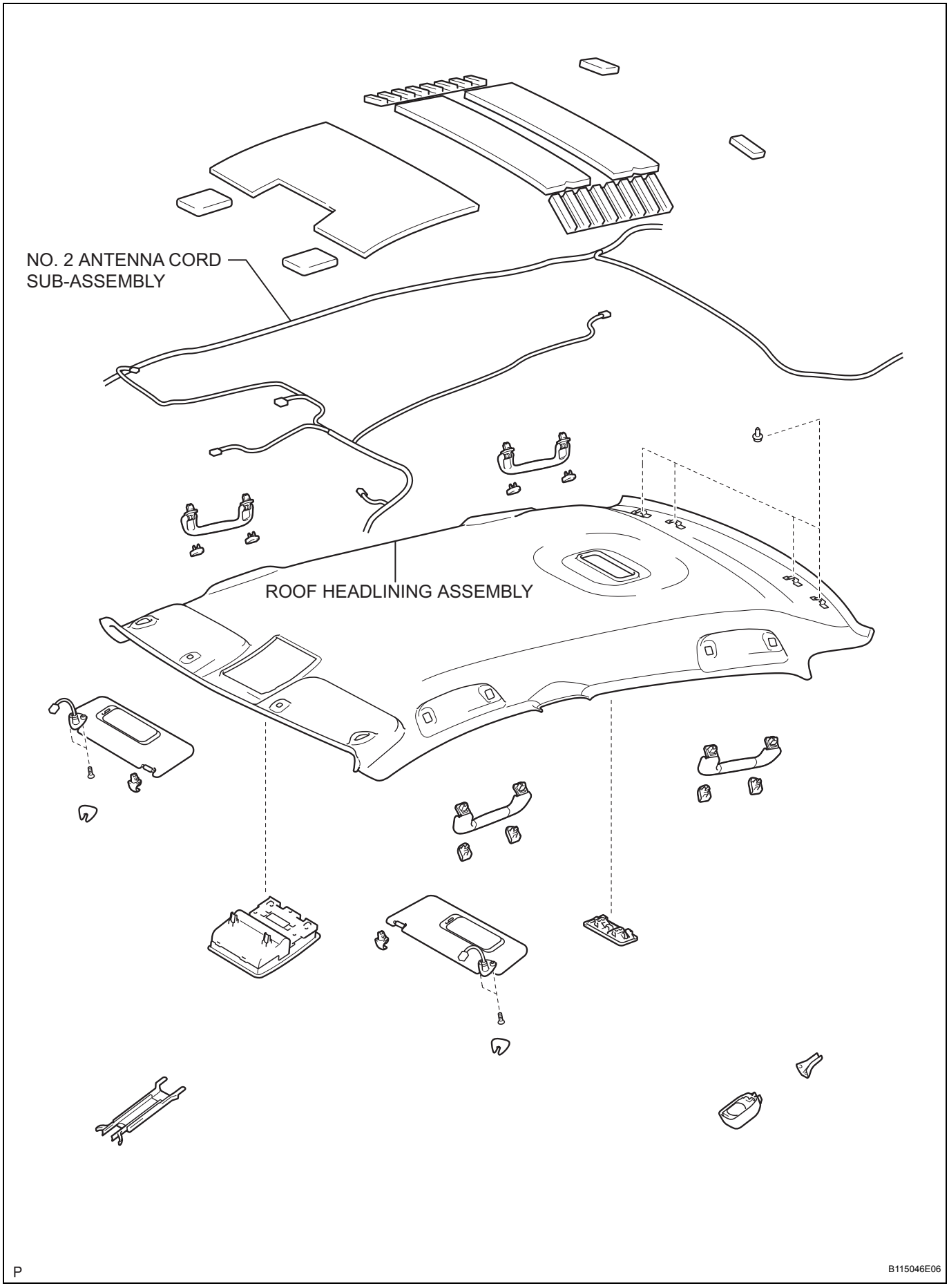
C114922E03

AV



P

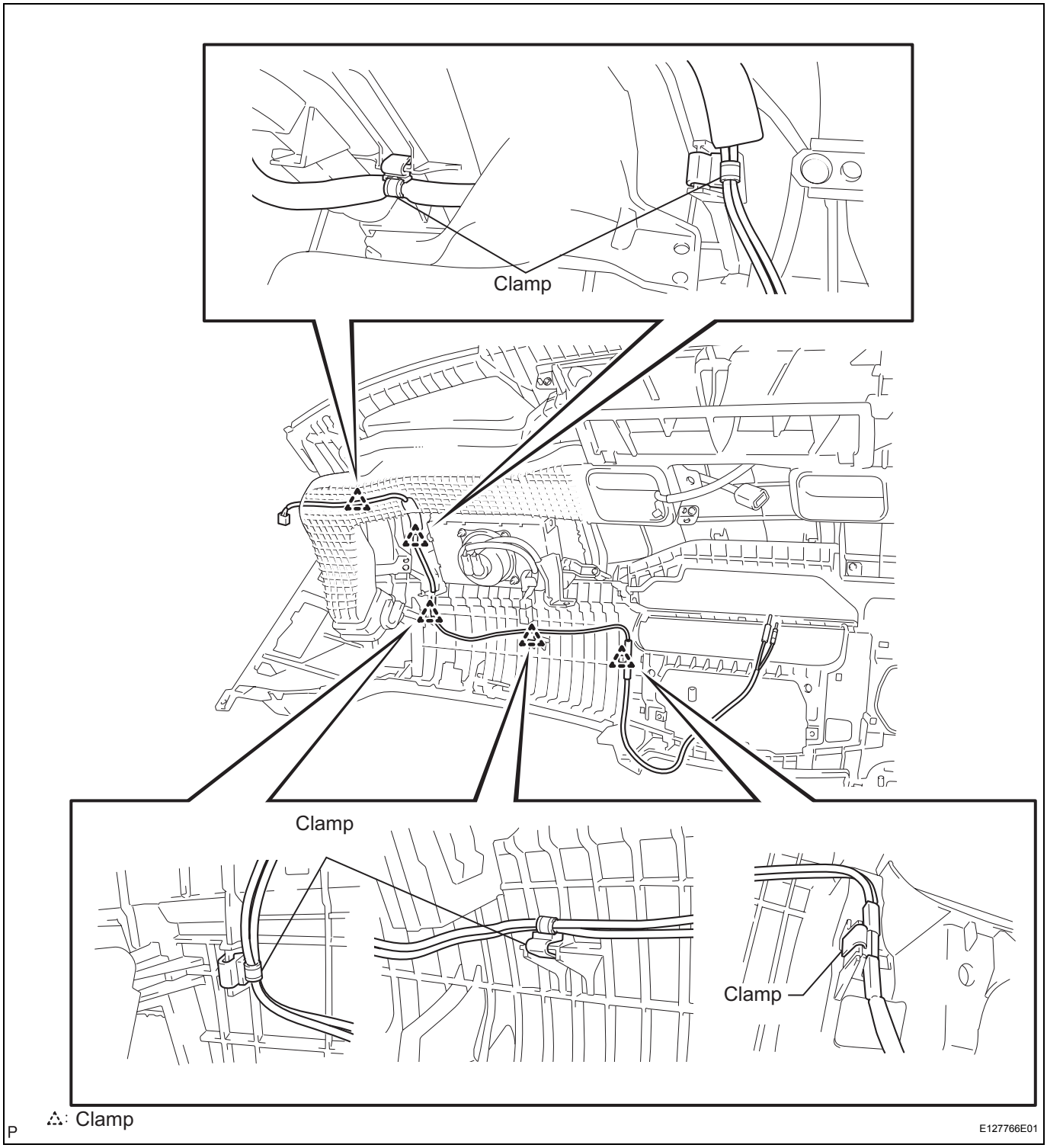
B115009E02


NO. 2 ANTENNA CORD SUB-ASSEMBLY
ROOF HEADLINING ASSEMBLY
P
B115046E06

REMOVAL

1. **TABLE OF BOLT, SCREW AND NUT (See page IP-8)**
2. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL (See page IP-8)**
3. **REMOVE INSTRUMENT PANEL SAFETY PAD SUB-ASSEMBLY (w/ Front Passenger Airbag)**
   HINT:
   Refer to the procedures up to the removal of the instrument panel safety pad sub-assembly (w/ front passenger airbag) (See page IP-8).

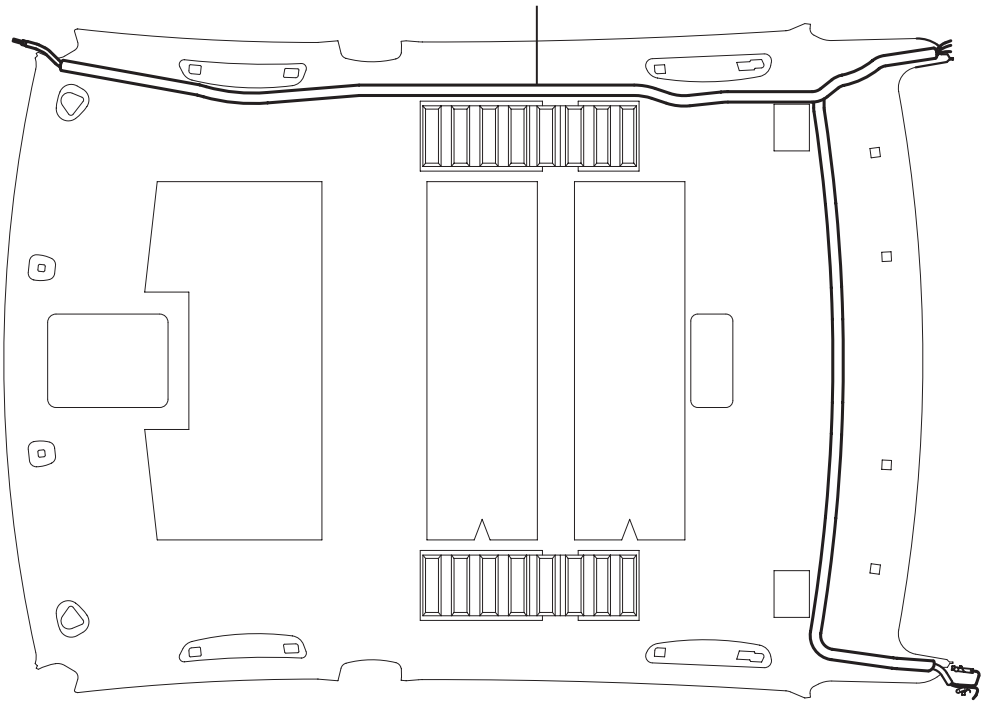
4. **REMOVE ANTENNA CORD SUB-ASSEMBLY**
   (a) Remove the 5 clamps and antenna cord sub-assembly.



5. **REMOVE ROOF HEADLINING ASSEMBLY**
   HINT:
   Refer to the procedures up to the removal of the roof headlining assembly (See page IR-11).

6. **REMOVE NO. 2 ANTENNA CORD SUB-ASSEMBLY**
   (a) Remove No. 2 antenna cord sub-assembly.

No. 2 Antenna Cord Sub-assembly



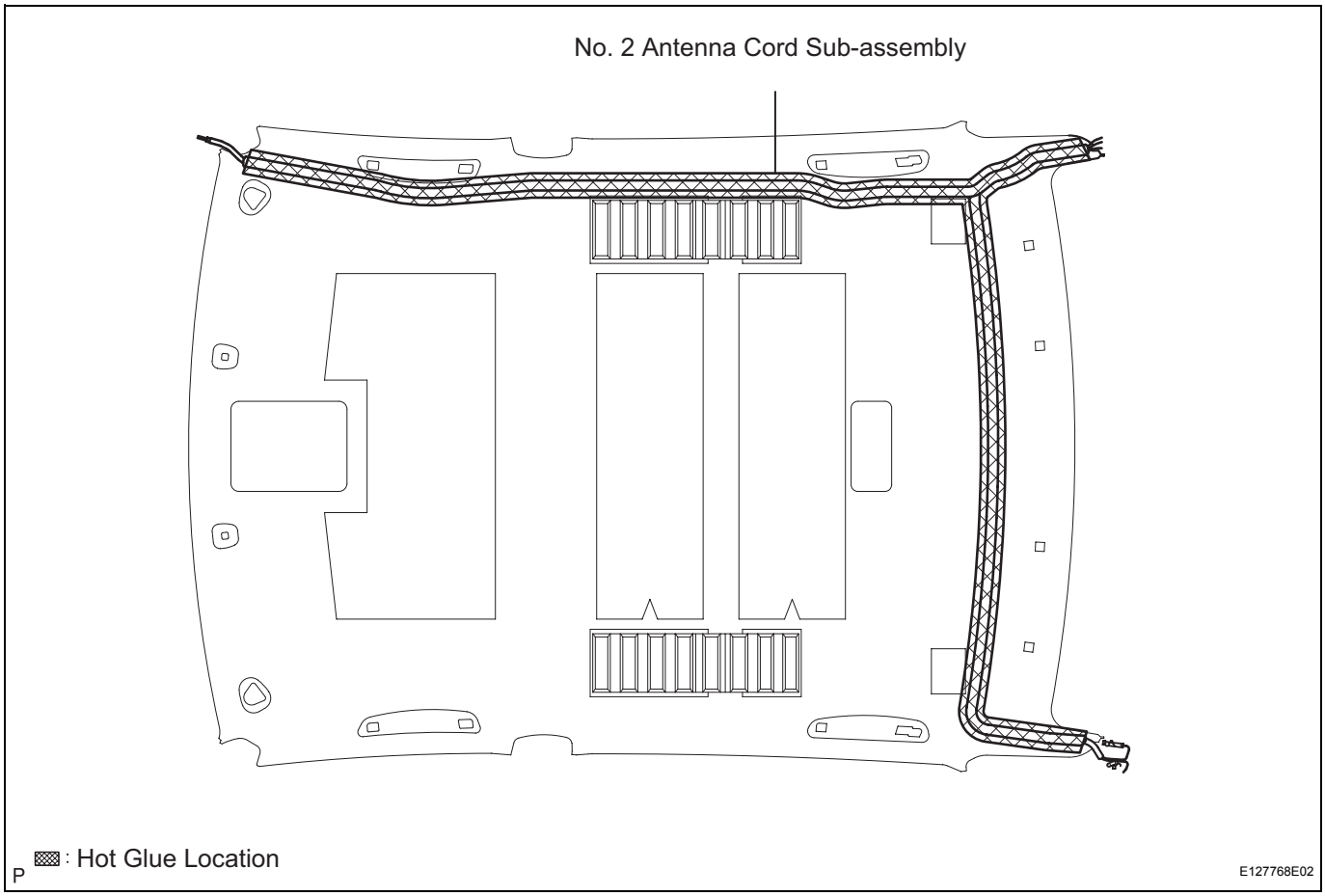
P

E127767E01

AV

INSTALLATION

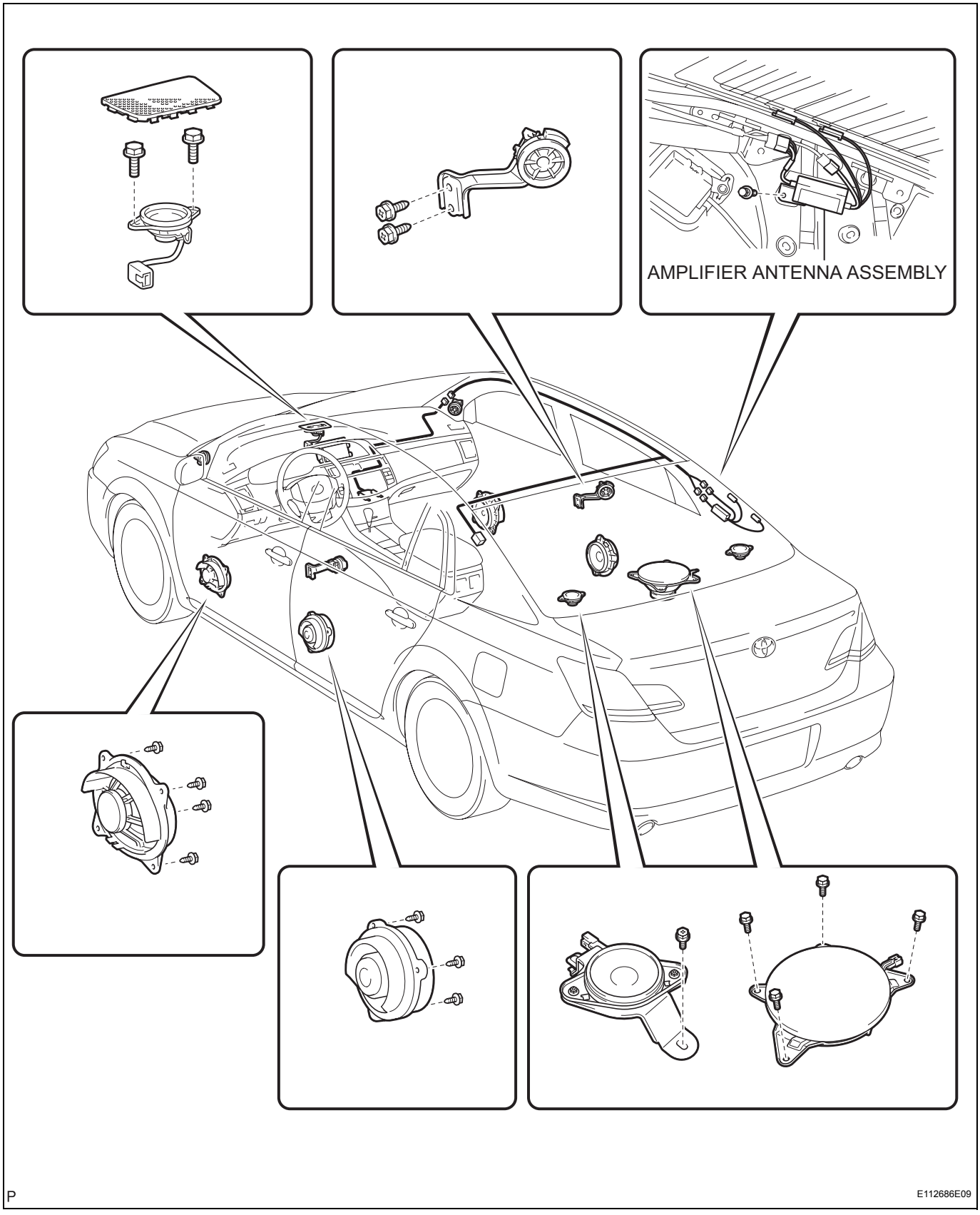
1. **INSTALL NO. 2 ANTENNA CORD SUB-ASSEMBLY**
   (a) Install the No. 2 antenna cord sub-assembly with the hot glue as shown in the illustration.



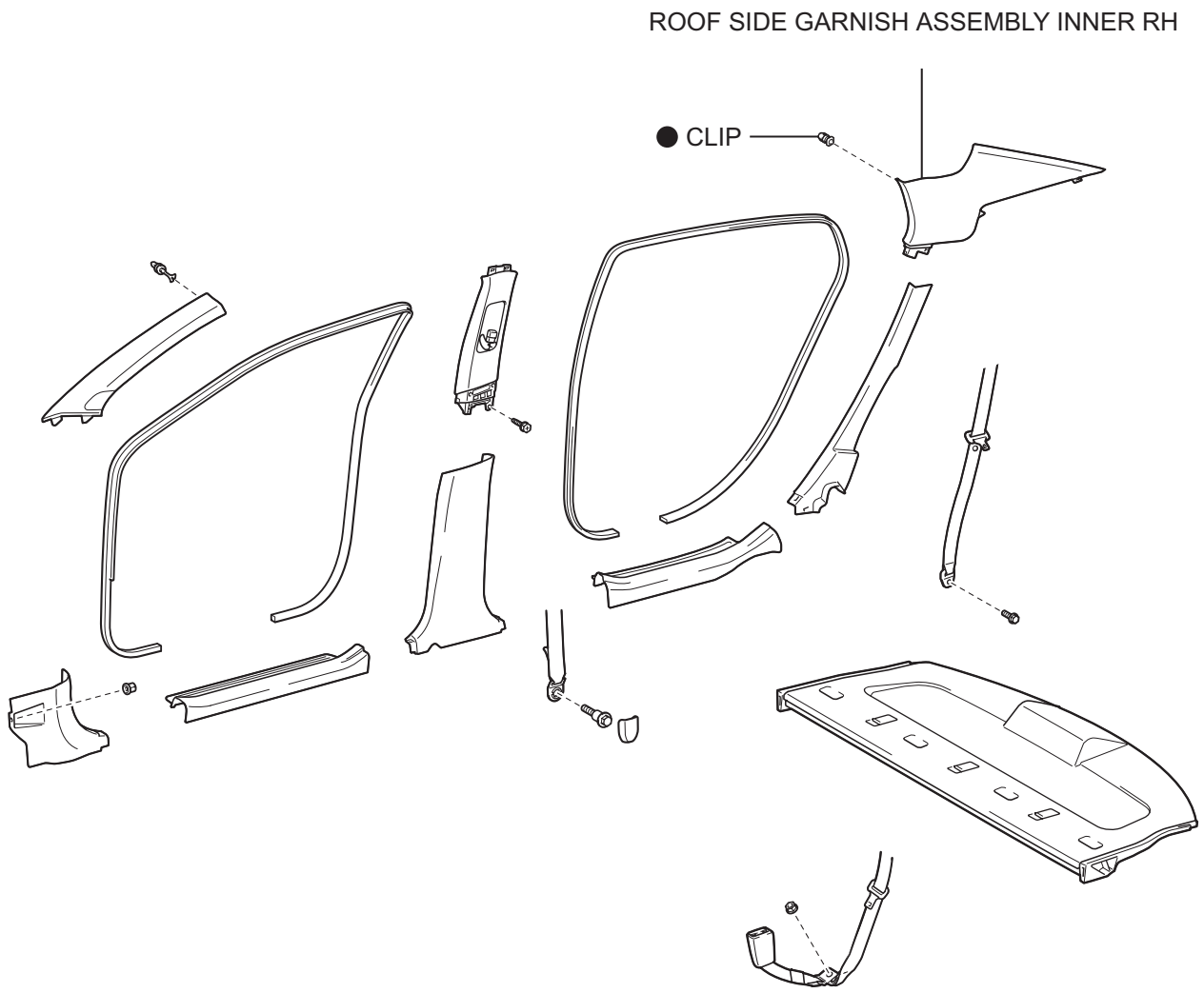
2. **INSTALL ROOF HEADLINING ASSEMBLY**
   HINT:
   Refer to the installation procedures of the roof headlining assembly (See page IR-19).
3. **INSTALL INSTRUMENT PANEL SAFETY PAD SUB-ASSEMBLY (w/ Front Passenger Airbag) (See page IP-17)**
4. **CENTER SPIRAL CABLE (See page RS-316)**
5. **INSTALL STEERING WHEEL ASSEMBLY (See page SR-46)**
6. **INSTALL STEERING PAD (See page RS-305)**
7. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**
8. **PERFORM SYSTEM INITIALIZE (See page RS-306)**
9. **INSPECT STEERING PAD (See page RS-305)**
10. **INSPECT SRS WARNING LIGHT (See page RS-306)**

AMPLIFIER ANTENNA

COMPONENTS



AV



● Non-reusable part

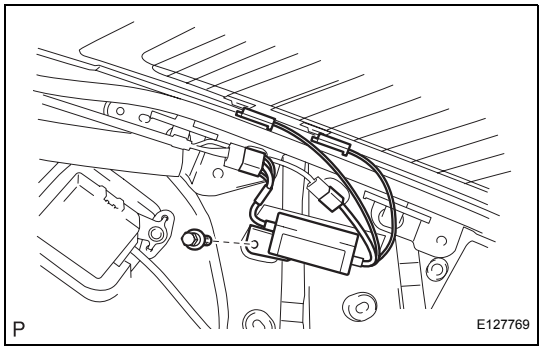
P

B115060E09

REMOVAL

1. **REMOVE ROOF SIDE GARNISH ASSEMBLY INNER RH (See page IR-14)**

2. **REMOVE AMPLIFIER ANTENNA ASSEMBLY**
   (a) Disconnect all connectors.
   (b) Remove the bolt and the amplifier antenna assembly.

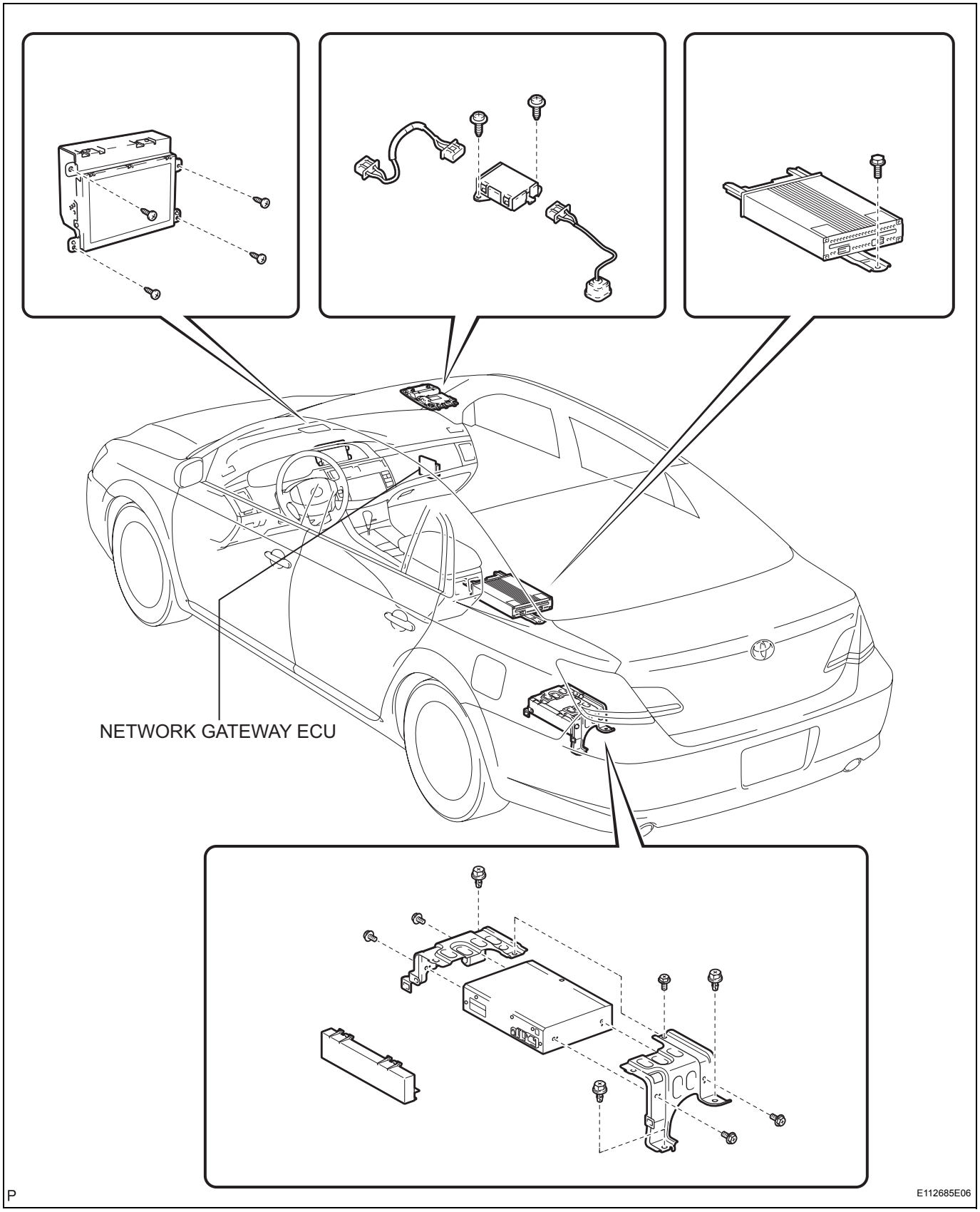


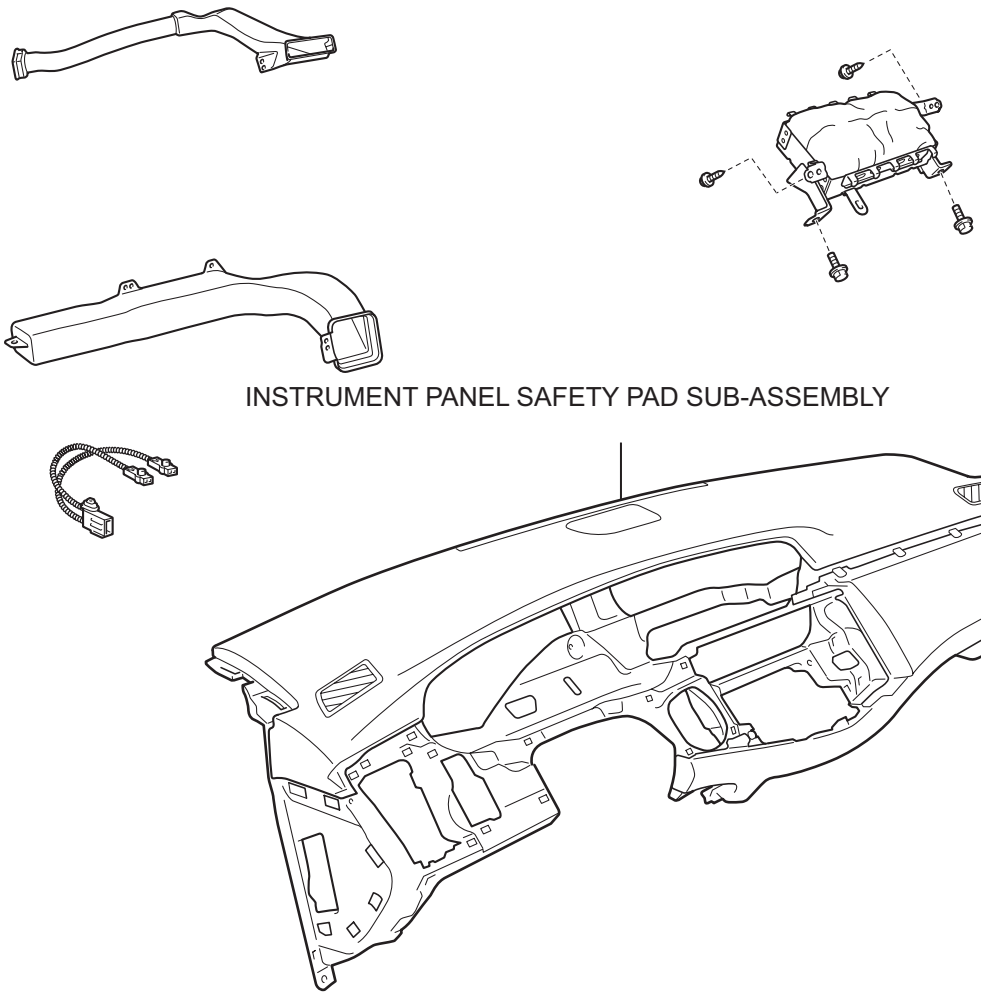
INSTALLATION

1. **INSTALL AMPLIFIER ANTENNA ASSEMBLY**
2. **INSTALL ROOF SIDE GARNISH ASSEMBLY INNER RH (See page IR-19)**

NETWORK GATEWAY ECU

COMPONENTS



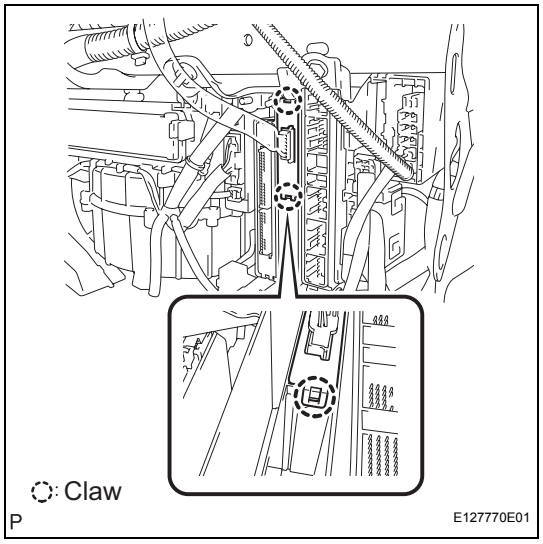


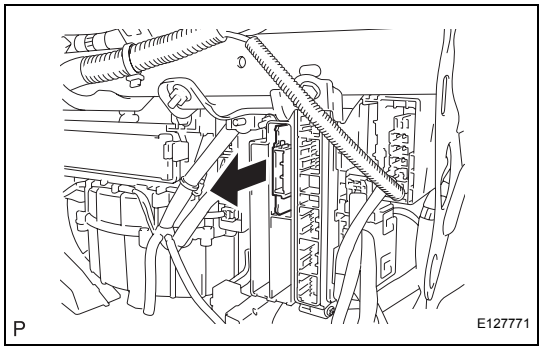
C

C114922E04

REMOVAL

1. **TABLE OF BOLT, SCREW AND NUT (See page IP-8)**
2. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
   Wait for 90 seconds after disconnecting the cable to prevent the airbag working.
3. **REMOVE INSTRUMENT PANEL SAFETY PAD SUB-ASSEMBLY (w/ Front Passenger Airbag)**
   HINT:
   Refer to the procedures up to the removal of the instrument panel safety pad sub-assembly (w/ front passenger airbag) (See page IP-8).
4. **REMOVE NETWORK GATEWAY ECU**
   (a) Disconnect the connector.
   (b) Disengage the 2 claw and remove the ECU aggregation cover No. 1.





   (c) Remove the network gateway ECU assembly as shown in the illustration.

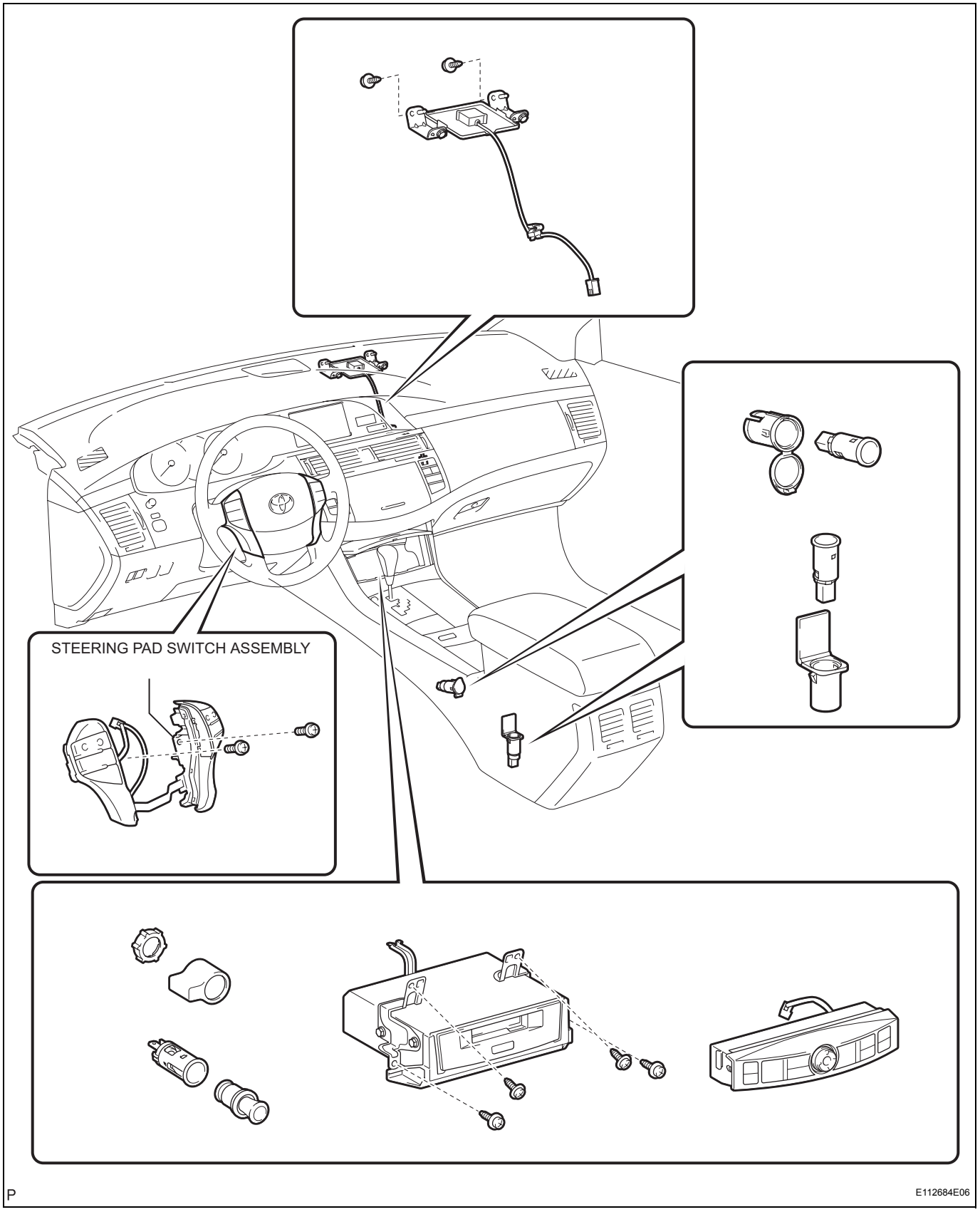
AV

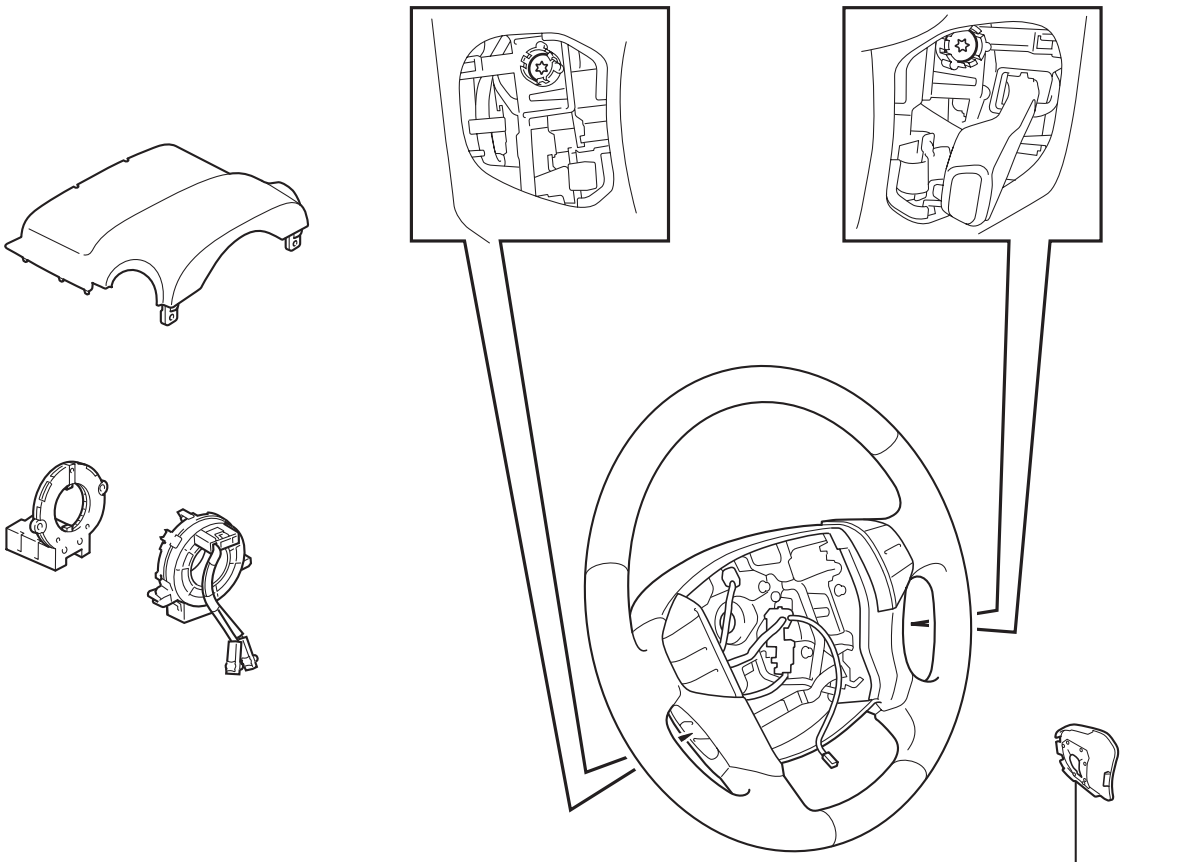
INSTALLATION

1. INSTALL NETWORK GATEWAY ECU
2. INSTALL INSTRUMENT PANEL SAFETY PAD SUB-ASSEMBLY (w/ Front Passenger Airbag) (See page IP-17)
3. CENTER SPIRAL CABLE (See page RS-316)
4. INSTALL STEERING WHEEL ASSEMBLY (See page SR-46)
5. INSTALL STEERING PAD (See page RS-305)
6. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL
7. PERFORM SYSTEM INITIALIZE (See page RS-306)
8. INSPECT STEERING PAD (See page RS-305)
9. INSPECT SRS WARNING LIGHT (See page RS-306)

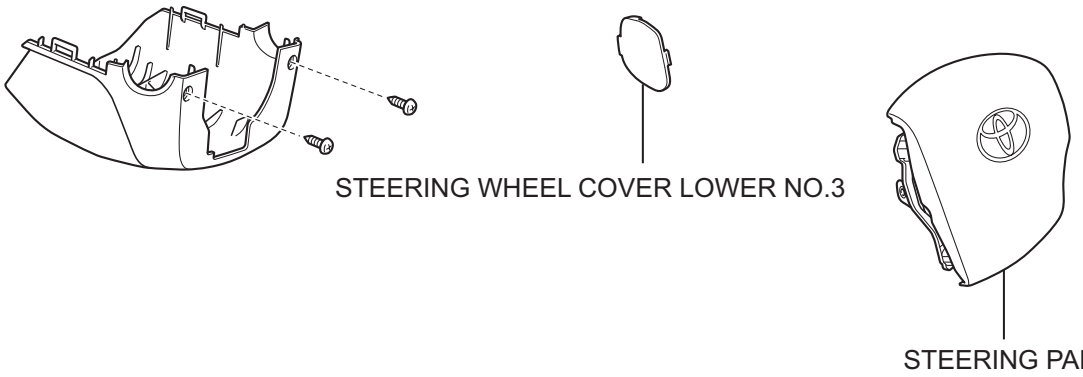
STEERING PAD SWITCH

COMPONENTS





STEERING WHEEL COVER LOWER NO.2



STEERING WHEEL COVER LOWER NO.3

STEERING PAD

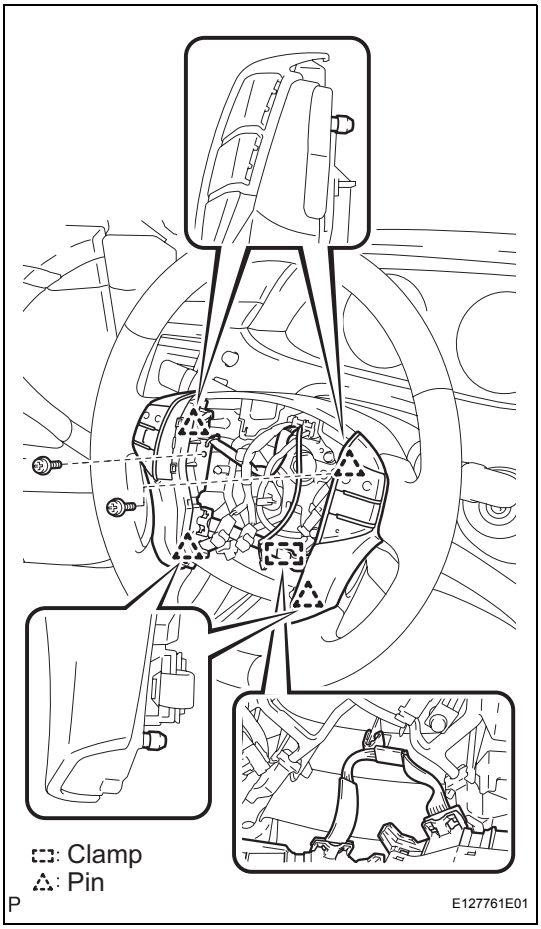
C

C114921E07

AV

REMOVAL

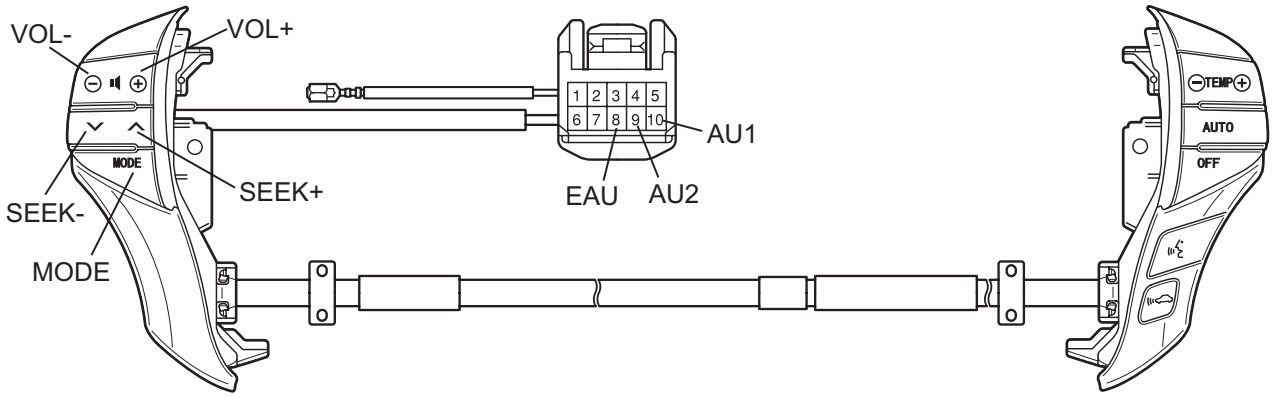
1. **TABLE OF BOLT, SCREW AND NUT (See page IP-8)**
2. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
   Wait for 90 seconds after disconnecting the cable to prevent the airbag working.
3. **REMOVE STEERING WHEEL COVER LOWER NO. 2 (See page RS-304)**
4. **REMOVE STEERING WHEEL COVER LOWER NO. 3 (See page RS-304)**
5. **REMOVE STEERING PAD (See page RS-304)**
6. **REMOVE STEERING PAD SWITCH ASSEMBLY**
   (a) Disconnect the connector.
   (b) Remove the 2 screws and remove the clamp.
   (c) Disengage the 4 pins and remove the steering pad switch assembly.



INSPECTION

1. **INSPECT STEERING PAD SWITCH (w/o Navigation System)**
   (a) Disconnect the steering pad switch assembly connector.

Steering Pad Switch Connector Front View:



(b) Measure the resistance according to the values in the table below.

Standard resistance

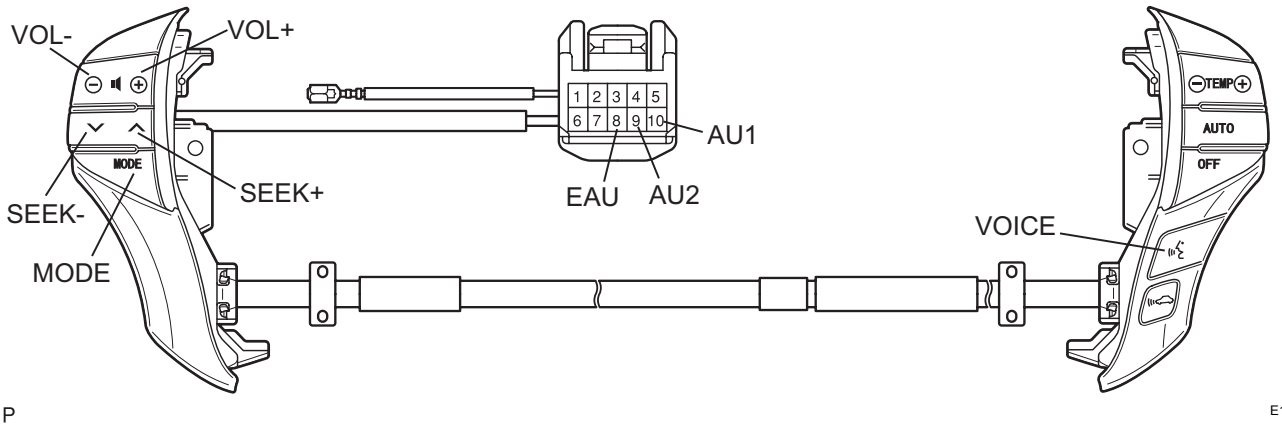
Tester connection	Condition	Specified condition
AU1 - EAU	No switch is pushed	Approx. 100 kΩ
AU1 - EAU	SEEK+ switch: push	Approx. 0 Ω
AU1 - EAU	SEEK- switch: push	Approx. 0.3 kΩ
AU1 - EAU	VOL+ switch: push	Approx. 1 kΩ
AU1 - EAU	VOL- switch: push	Approx. 3.2 kΩ
AU2 - EAU	No switch is pushed	Approx. 100 kΩ
AU2 - EAU	MODE switch: push	Approx. 0 Ω

If the result is not as specified, replace the steering pad switch.

2. INSPECT STEERING PAD SWITCH (w/ Navigation System)

(a) Disconnect the steering pad switch assembly connector.

Steering Pad Switch Connector Front View:



(b) Measure the resistance according to the values in the table below.

Standard resistance

Tester connection	Condition	Specified condition
AU1 - EAU	No switch is pushed	Approx. 100 kΩ
AU1 - EAU	SEEK+ switch: push	Approx. 0 Ω
AU1 - EAU	SEEK- switch: push	Approx. 0.3 kΩ
AU1 - EAU	VOL+ switch: push	Approx. 1 kΩ
AU1 - EAU	VOL- switch: push	Approx. 3.2 kΩ
AU2 - EAU	No switch is pushed	Approx. 100 kΩ
AU2 - EAU	MODE switch: push	Approx. 0 Ω
AU2 - EAU	VOICE switch: push	Approx. 3.2 kΩ

If the result is not as specified, replace the steering pad switch.

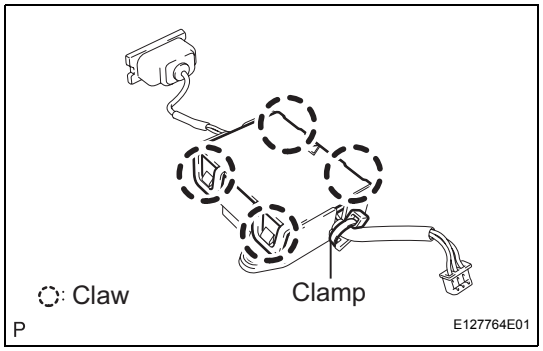
AV

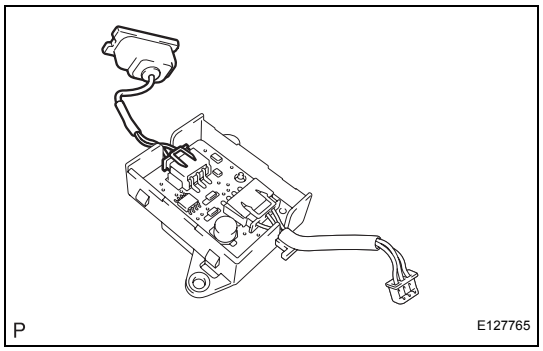
INSTALLATION

1. **INSTALL STEERING PAD SWITCH ASSEMBLY**
2. **INSTALL STEERING PAD (See page RS-305)**
3. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**
   Some systems need initialization when disconnecting the cable from the negative battery terminal.
4. **PERFORM SYSTEM INITIALIZE (See page RS-306)**
5. **INSPECT STEERING PAD (See page RS-305)**
6. **INSPECT SRS WARNING LIGHT (See page RS-306)**

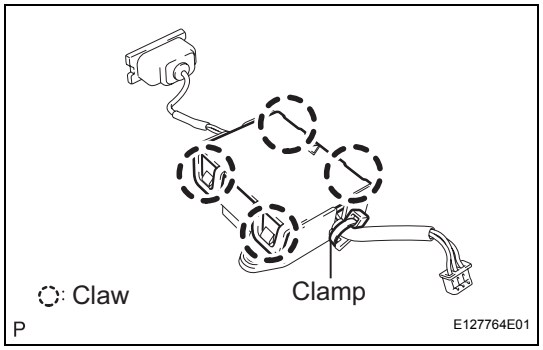
REMOVAL

1. **REMOVE ROOF CONSOLE BOX ASSEMBLY (See page IR-16)**
2. **REMOVE TELEPHONE MICROPHONE ASSEMBLY (See page AV-222)**
3. **REMOVE AMPLIFIER MICROPHONE ASSEMBLY**
   (a) Remove the clamp.
   (b) Disengage the 4 claws and remove the microphone retainer.





   (c) Disconnect the connector and remove the amplifier microphone.



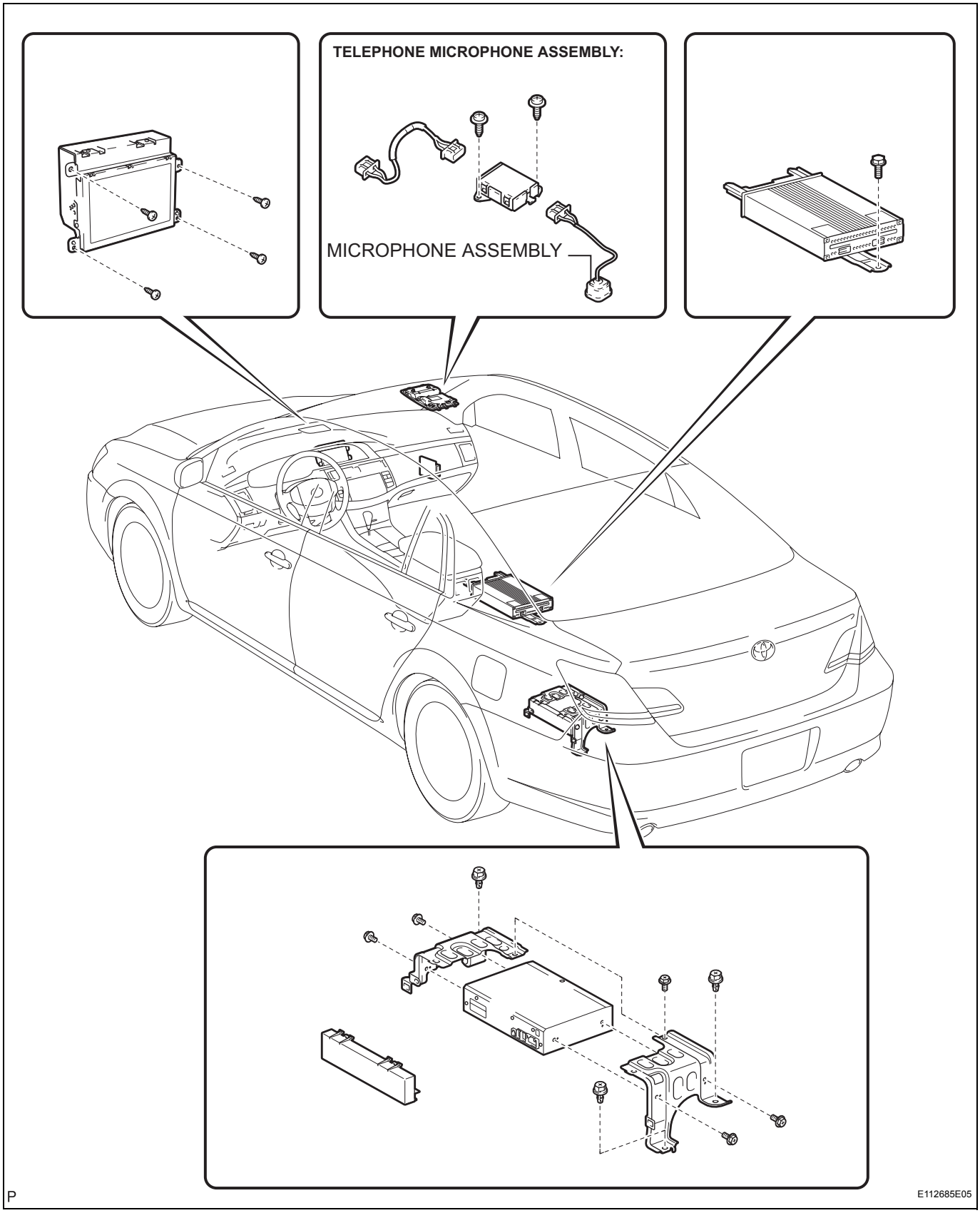
INSTALLATION

1. **INSTALL AMPLIFIER MICROPHONE ASSEMBLY**
   (a) Install the amplifier microphone with the 4 claws and the new clamp.
2. **INSTALL TELEPHONE MICROPHONE ASSEMBLY**
3. **INSTALL ROOF CONSOLE BOX ASSEMBLY**

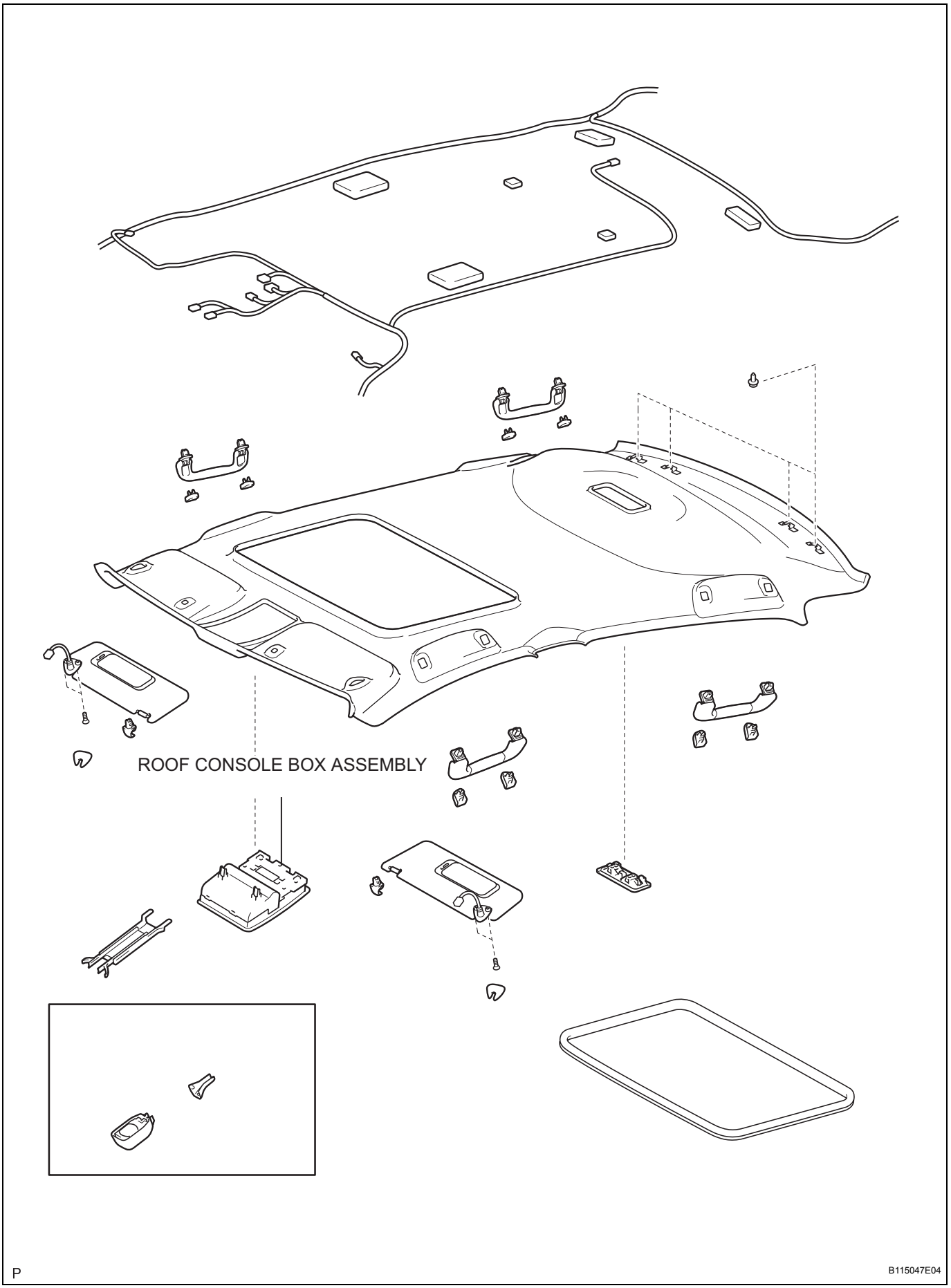
AV

MICROPHONE

COMPONENTS

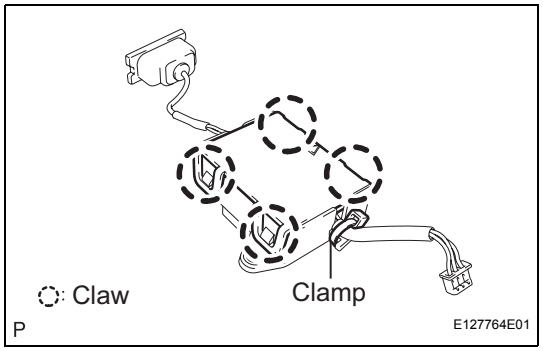


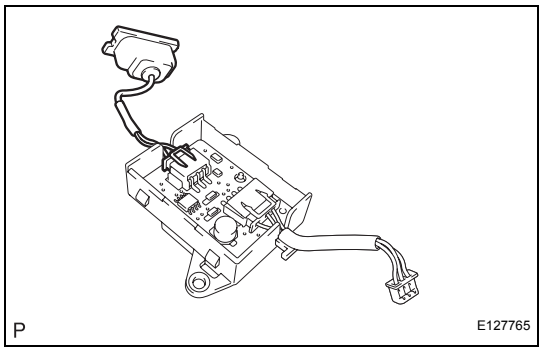
AV



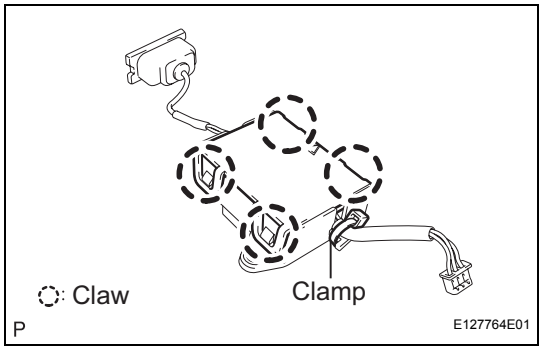
REMOVAL

1. **REMOVE ROOF CONSOLE BOX ASSEMBLY (See page IR-16)**
2. **REMOVE TELEPHONE MICROPHONE ASSEMBLY (See page AV-222)**
3. **REMOVE AMPLIFIER MICROPHONE ASSEMBLY**
   (a) Remove the clamp.
   (b) Disengage the 4 claws and remove the microphone retainer.





   (c) Disconnect the connector and remove the amplifier microphone.



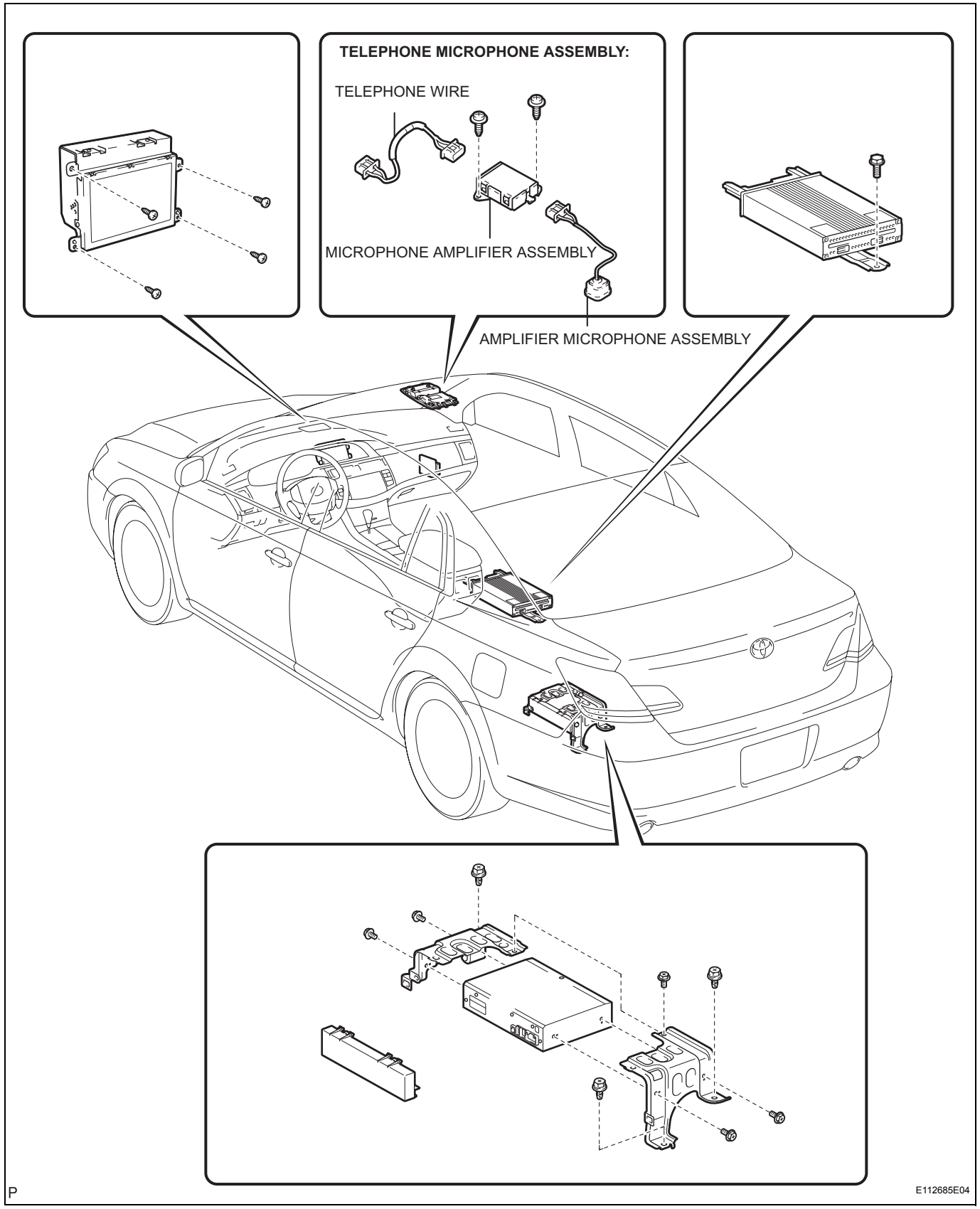
INSTALLATION

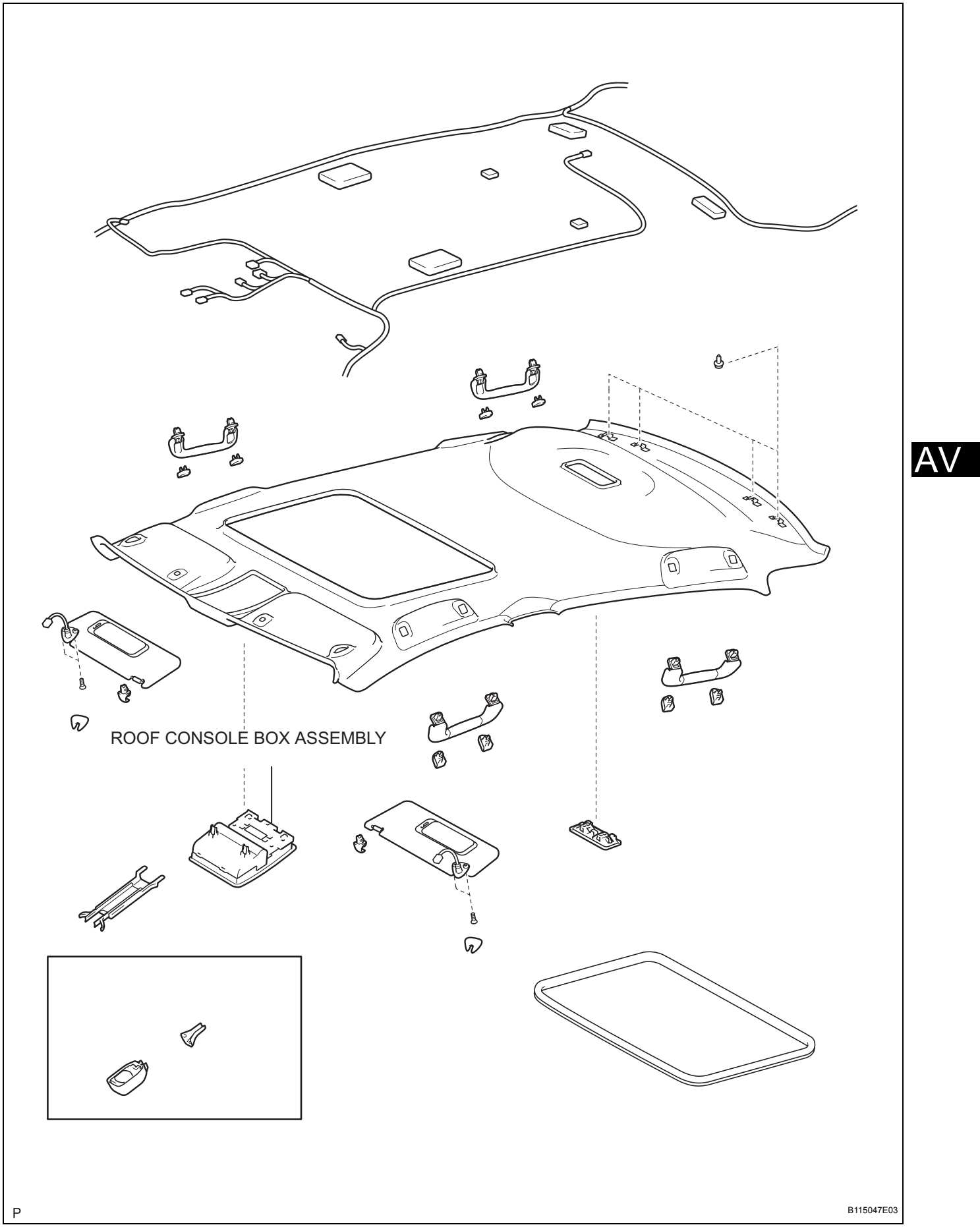
1. **INSTALL AMPLIFIER MICROPHONE ASSEMBLY**
   (a) Install the amplifier microphone with the 4 claws and the new clamp.
2. **INSTALL TELEPHONE MICROPHONE ASSEMBLY**
3. **INSTALL ROOF CONSOLE BOX ASSEMBLY**

AV

MICROPHONE AMPLIFIER

COMPONENTS



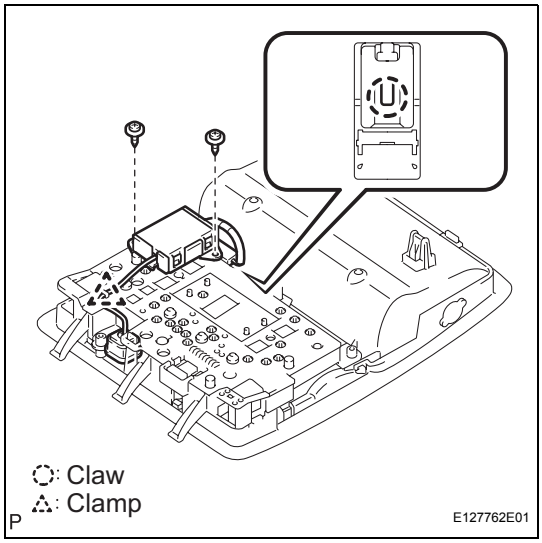

ROOF CONSOLE BOX ASSEMBLY
P
B115047E03

REMOVAL

1. **REMOVE ROOF CONSOLE BOX ASSEMBLY (See page IR-16)**

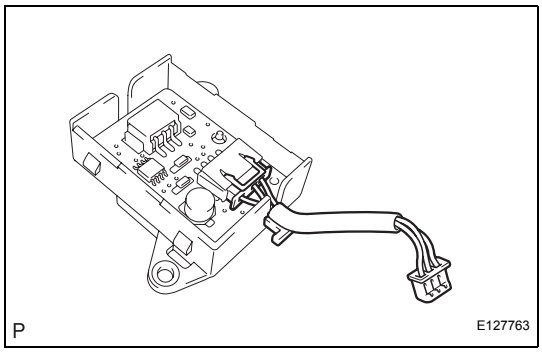
2. **REMOVE TELEPHONE MICROPHONE ASSEMBLY**
   (a) Disengage the claw and remove the clamp.
   (b) Remove the 2 screws and remove the telephone microphone assembly.

3. **REMOVE AMPLIFIER MICROPHONE ASSEMBLY**



4. **REMOVE TELEPHONE WIRE**
   (a) Disconnect the connector and remove the telephone wire.

5. **REMOVE MICROPHONE AMPLIFIER ASSEMBLY**



INSTALLATION

1. **INSTALL MICROPHONE AMPLIFIER ASSEMBLY**
2. **INSTALL TELEPHONE WIRE**
3. **INSTALL AMPLIFIER MICROPHONE ASSEMBLY**
4. **INSTALL TELEPHONE MICROPHONE ASSEMBLY**
5. **INSTALL ROOF CONSOLE BOX ASSEMBLY**

WINDOW GLASS ANTENNA WIRE

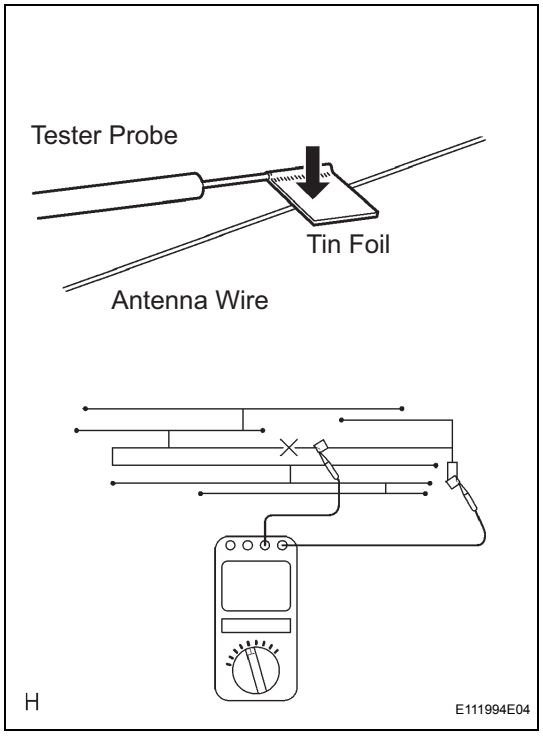
INSPECTION

1. INSPECT WINDOW GLASS ANTENNA WIRE

NOTICE:

When cleaning the glass, use a soft, dry cloth, and wipe the glass in the direction of the wire. Take care not to damage the wires. Do not use detergents or glass cleaners with abrasive ingredients. When measuring voltage, wind a piece of tin foil around the top of the negative probe and press the foil against the wire with your finger, as shown in the illustration.

(a) Check the continuity, at the center of each antenna wire, as shown in the illustration.



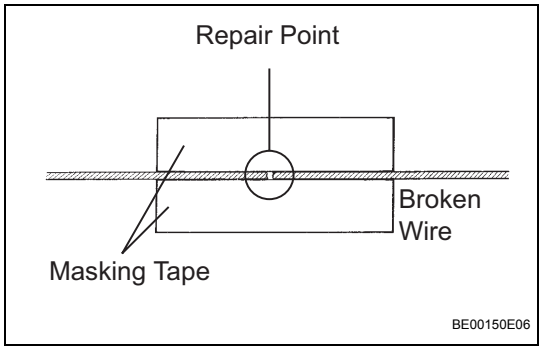
REPAIR

1. REPAIR WINDOW GLASS ANTENNA WIRE

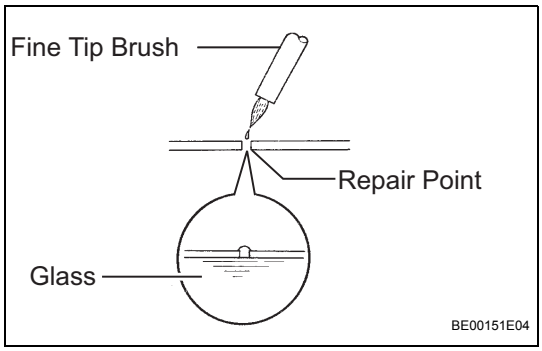
(a) Clean the broken wire tips with a grease, wax and silicone remover.

(b) Place masking tape along both sides of the wire to be temporarily hold it in place.

(c) Thoroughly mix the repair agent (Dupont paste No. 4817).



AV



(d) Using a fine tip brush, apply a small amount of the mixed repair agent to the wire.
(e) After a few minutes, remove the masking tape.
(f) Do not repair the defogger wire for at least 24 hours after the window glass (antenna wire repair).