

Last Modified: 11-13-2015	6.6 G	Doc ID: RM000005VMS000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: INVERTER RELAY: ON-VEHICLE INSPECTION; 2016 MY Tacoma [08/2015 -]		

ON-VEHICLE INSPECTION

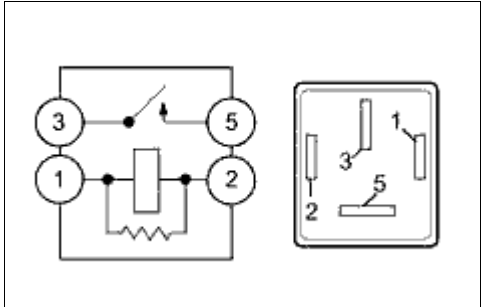
1. INSPECT INVERTER RELAY

(a) Check the resistance.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
3 - 5	Voltage is not applied between terminals 1 and 2	10 kΩ or higher
3 - 5	Voltage is applied between terminals 1 and 2	Below 1 Ω



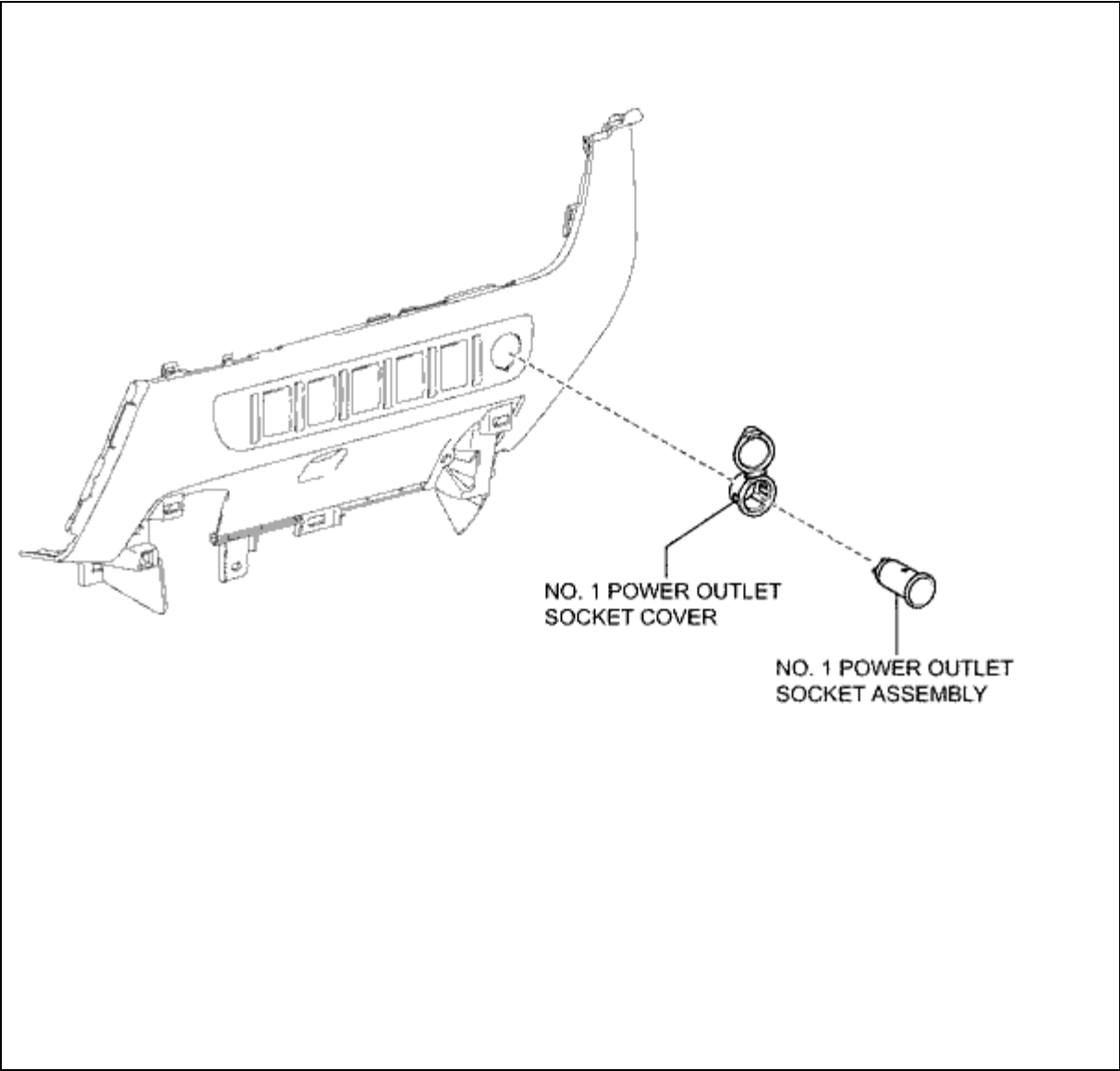
If the result is not as specified, replace the inverter relay.



Last Modified: 11-13-2015	6.6 K	Doc ID: RM000001TRA00AX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: POWER OUTLET SOCKET (for Front Side): COMPONENTS; 2016 MY Tacoma [08/2015 -]		

COMPONENTS

ILLUSTRATION



Last Modified: 11-13-2015	6.6 A	Doc ID: RM0000016UT00BX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: POWER OUTLET SOCKET (for Front Side): INSTALLATION; 2016 MY Tacoma [08/2015 -]		

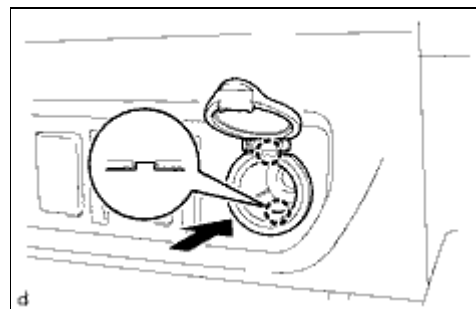
INSTALLATION

1. INSTALL NO. 1 POWER OUTLET SOCKET COVER

(a) Engage the 2 claws to install the No. 1 power outlet socket cover.

2. INSTALL NO. 1 POWER OUTLET SOCKET ASSEMBLY

(a) Engage the 2 claws to install the No. 1 power outlet socket assembly as shown in the illustration.



3. INSTALL INSTRUMENT PANEL LOWER CENTER FINISH PANEL



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Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: POWER OUTLET SOCKET (for Front Side): REMOVAL; 2016 MY Tacoma [08/2015 -]		

REMOVAL

1. REMOVE INSTRUMENT PANEL LOWER CENTER FINISH PANEL

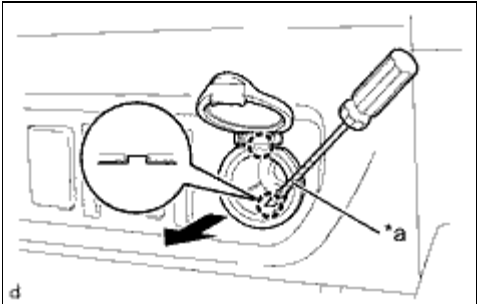
INFO

2. REMOVE NO. 1 POWER OUTLET SOCKET ASSEMBLY

- (a) Using a screwdriver with its tip wrapped in protective tape, disengage the 2 claws to remove the No. 1 power outlet socket assembly as shown in the illustration.

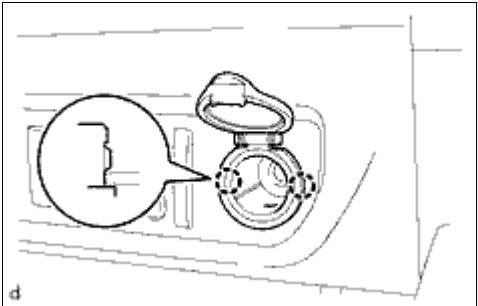
Text in Illustration

*a	Protective Tape
----	-----------------



3. REMOVE NO. 1 POWER OUTLET SOCKET COVER

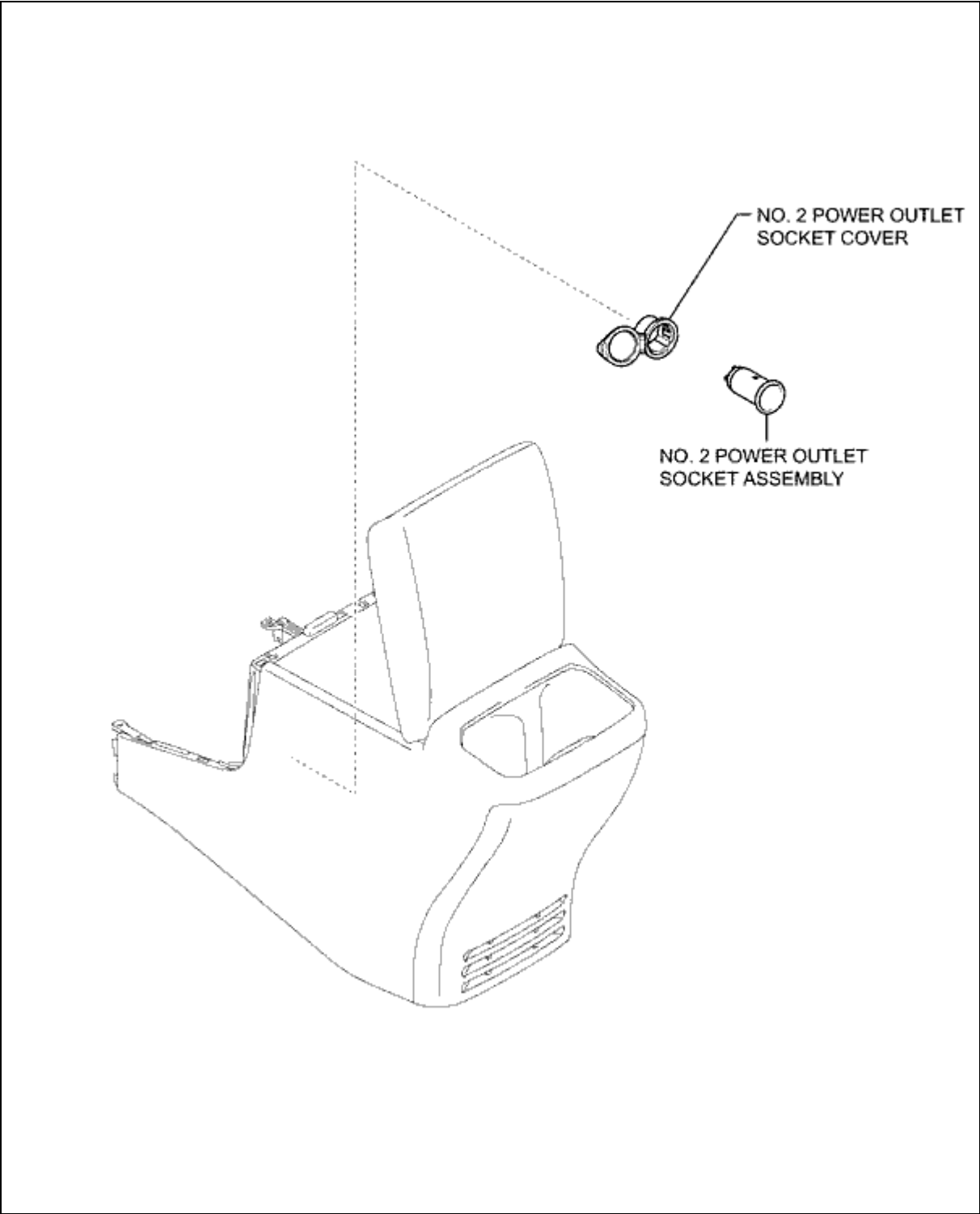
- (a) Disengage the 2 claws to remove the No. 1 power outlet socket cover.



Last Modified: 11-13-2015	6.6 K	Doc ID: RM000005VMQ000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: POWER OUTLET SOCKET (for Rear Side): COMPONENTS; 2016 MY Tacoma [08/2015 -]		

COMPONENTS

ILLUSTRATION





Last Modified: 11-13-2015	6.6 A	Doc ID: RM000005VMP000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: POWER OUTLET SOCKET (for Rear Side): INSTALLATION; 2016 MY Tacoma [08/2015 -]		

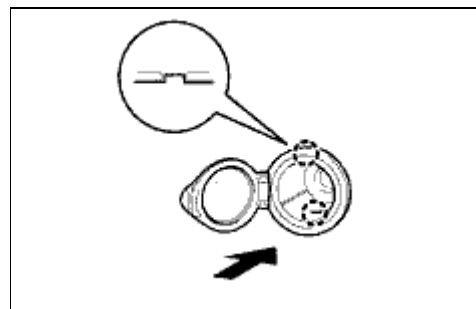
INSTALLATION

1. INSTALL NO. 2 POWER OUTLET SOCKET COVER

- (a) Engage the 2 claws to install the No. 2 power outlet socket cover.

2. INSTALL NO. 2 POWER OUTLET SOCKET ASSEMBLY

- (a) Engage the 2 claws to install the No. 2 power outlet socket assembly as shown in the illustration.



3. INSTALL REAR CONSOLE BOX ASSEMBLY



Last Modified: 11-13-2015	6.6 A	Doc ID: RM000005VMR000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: POWER OUTLET SOCKET (for Rear Side): REMOVAL; 2016 MY Tacoma [08/2015 -]		

REMOVAL

1. REMOVE REAR CONSOLE BOX ASSEMBLY

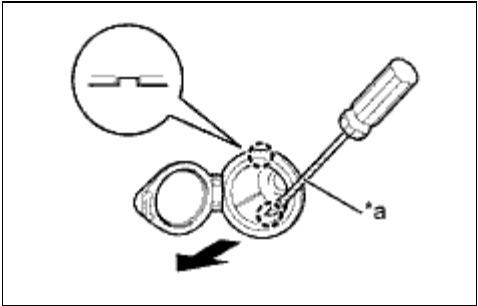
INFO

2. REMOVE NO. 2 POWER OUTLET SOCKET ASSEMBLY

- (a) Using a screwdriver with its tip wrapped in protective tape, disengage the 2 claws to remove the No. 2 power outlet socket assembly as shown in the illustration.

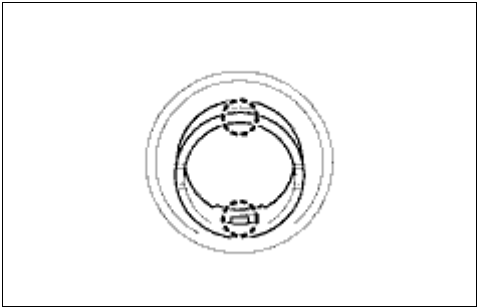
Text in Illustration

*a	Protective Tape
----	-----------------



3. REMOVE NO. 2 POWER OUTLET SOCKET COVER

- (a) Disengage the 2 claws to remove the No. 2 power outlet socket cover.

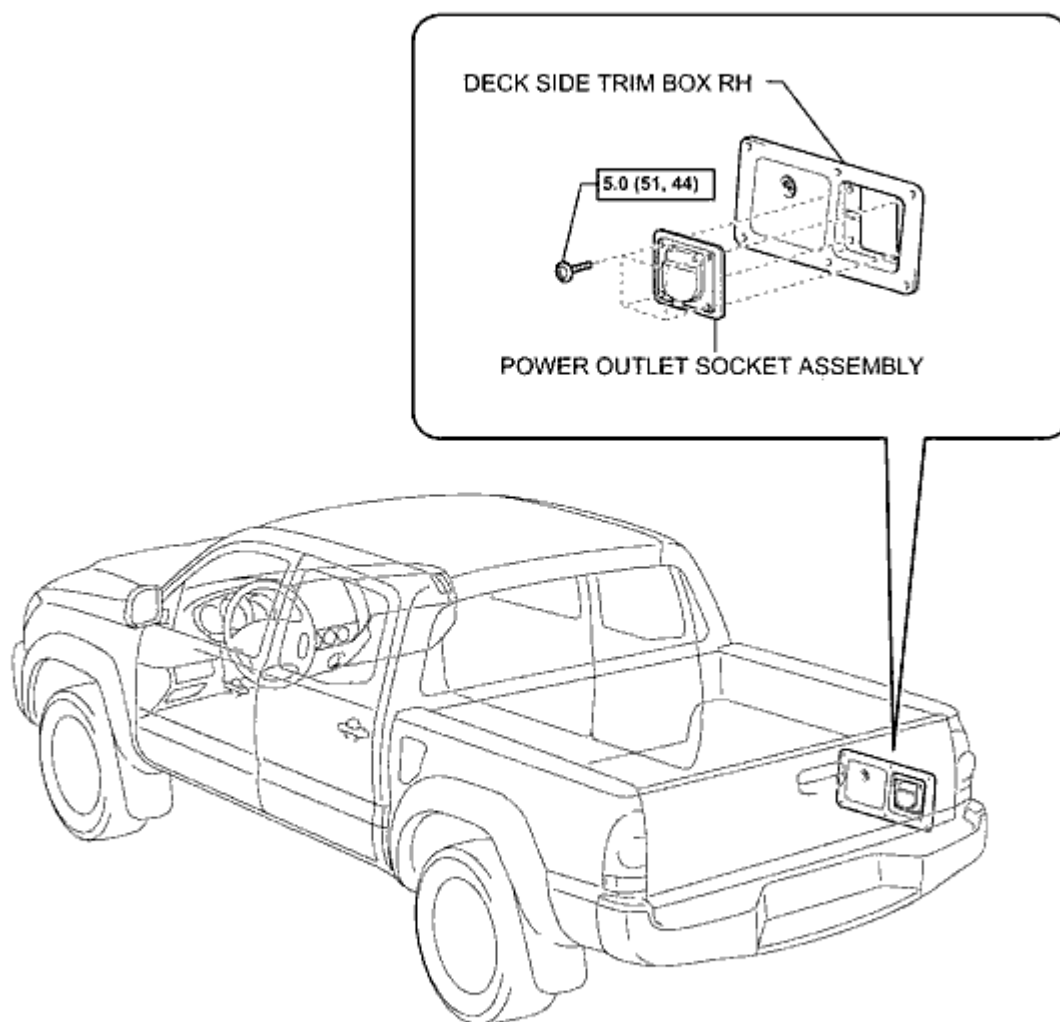


Last Modified: 11-13-2015	6.6 K	Doc ID: RM000001TRB00AX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: REAR POWER OUTLET SOCKET: COMPONENTS; 2016 MY Tacoma [08/2015 -]		

COMPONENTS

ILLUSTRATION

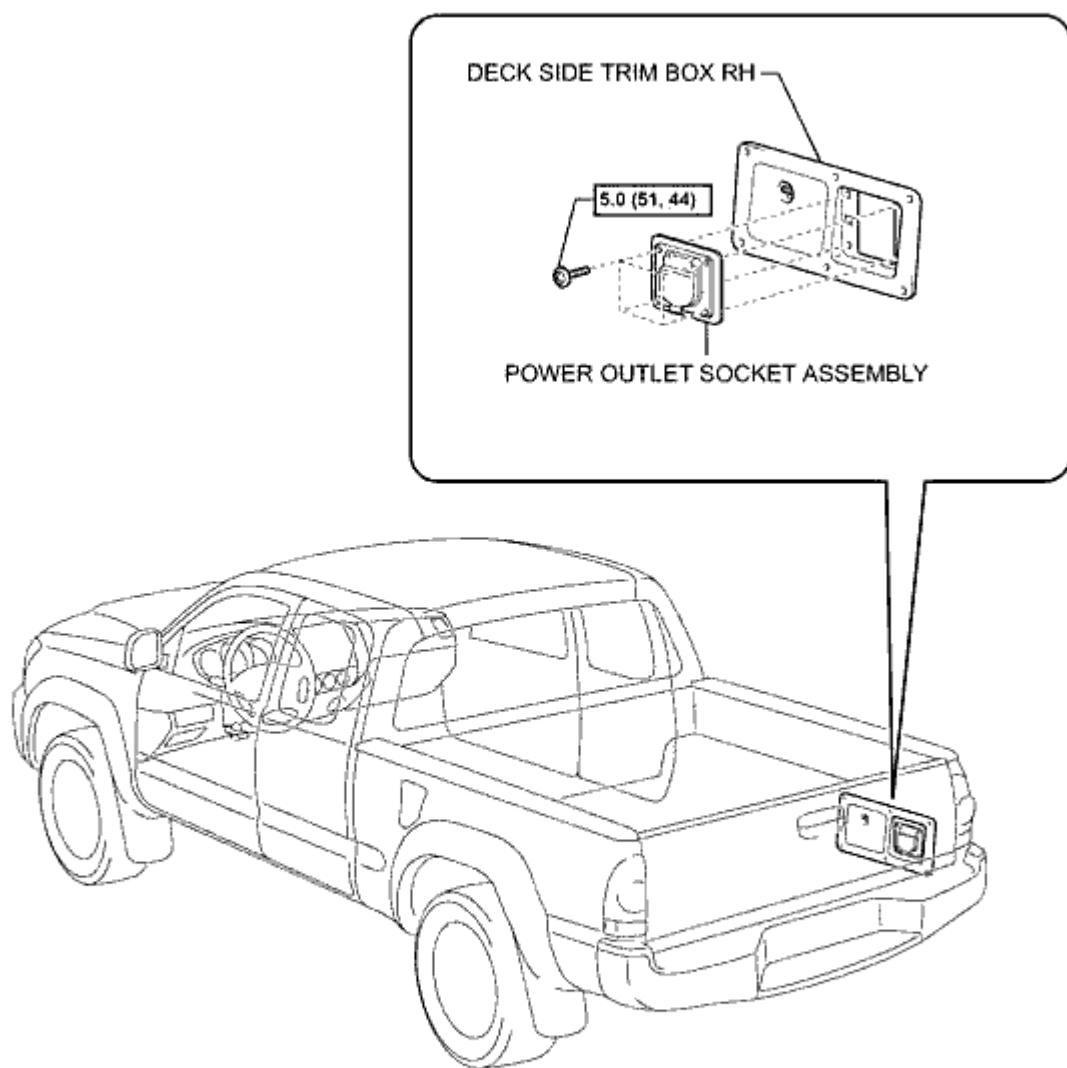
DOUBLE CAB:



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

ILLUSTRATION

ACCESS CAB:



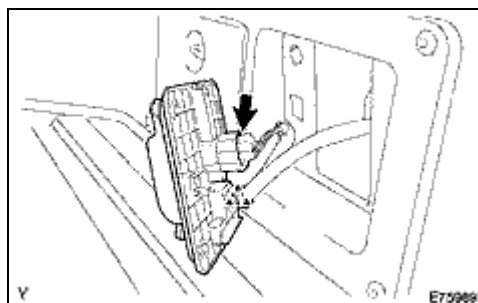
N*m (kgf*cm, ft*lb) : Specified torque



Last Modified: 11-13-2015	6.6 A	Doc ID: RM0000016V200BX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: REAR POWER OUTLET SOCKET: INSTALLATION; 2016 MY Tacoma [08/2015 -]		

INSTALLATION

1. INSTALL POWER OUTLET SOCKET ASSEMBLY



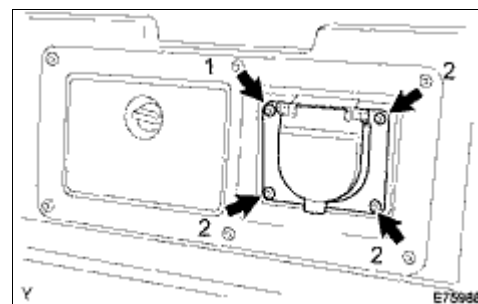
- (a) Install the clamp.
- (b) Connect the connector.
- (c) Using a torx socket wrench T30, install the 4 screws and the power outlet socket assembly.

Torque:

5.0 N·m {51 kgf·cm, 44 in·lbf}

NOTICE:

Install the screws in the order shown the illustration.



2. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

Torque:

5.4 N·m {55 kgf·cm, 48 in·lbf}

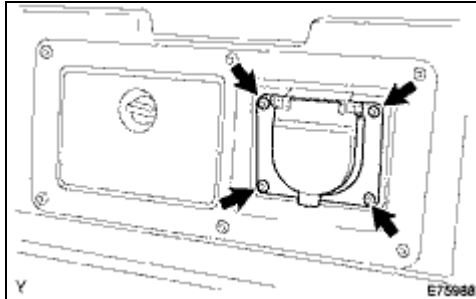


Last Modified: 11-13-2015	6.6 A	Doc ID: RM0000016V400BX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: REAR POWER OUTLET SOCKET: REMOVAL; 2016 MY Tacoma [08/2015 -]		

REMOVAL

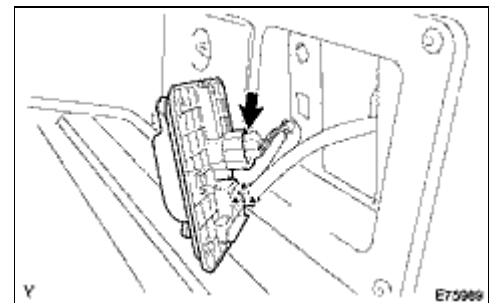
1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

2. REMOVE POWER OUTLET SOCKET ASSEMBLY



(a) Using a torx socket wrench T30, remove the 4 screws.

(b) Disconnect the connector.



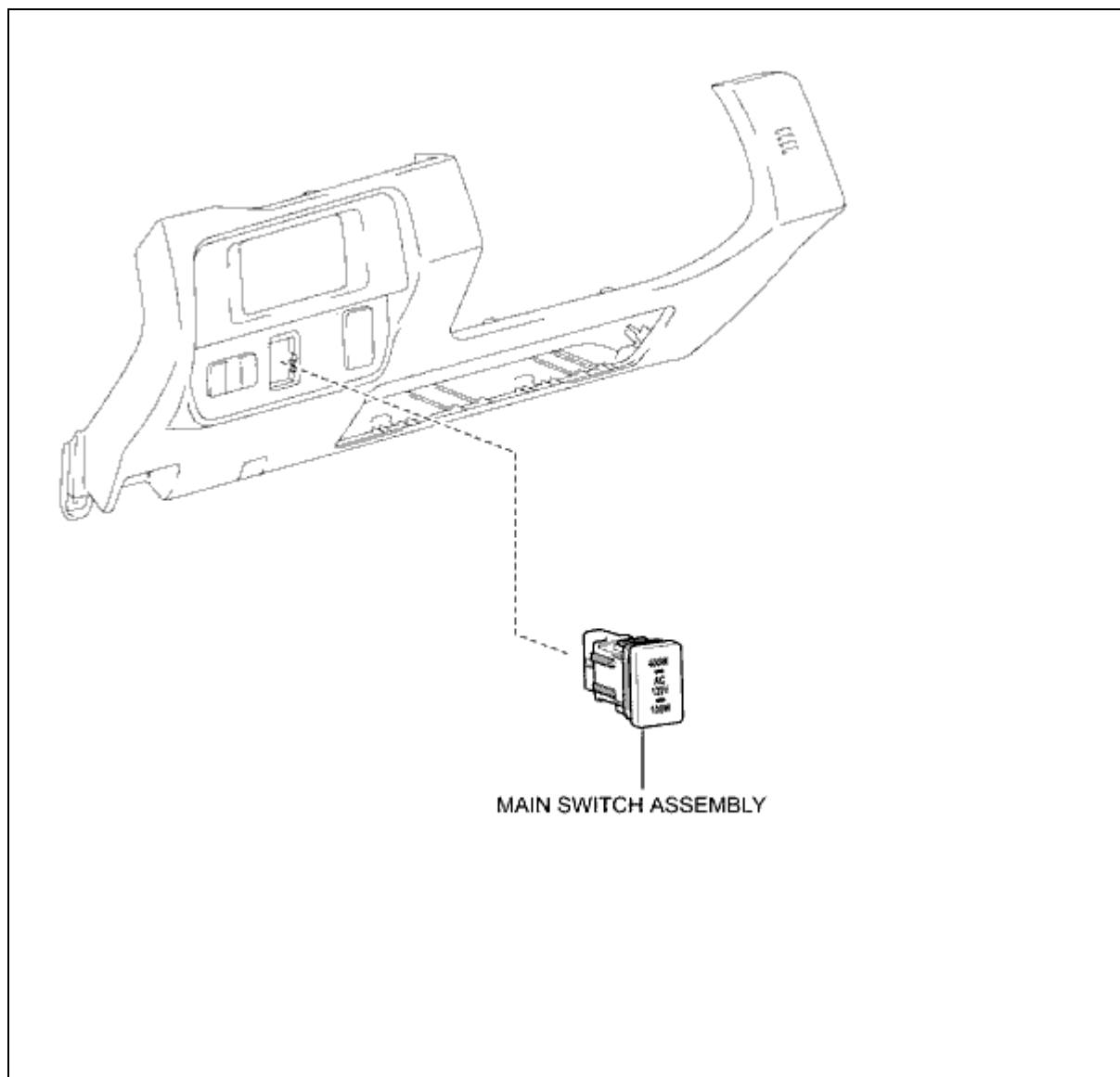
(c) Remove the clamp and the power outlet socket assembly.



Last Modified: 11-13-2015	6.6 K	Doc ID: RM000005VMV000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: REAR POWER OUTLET SWITCH: COMPONENTS; 2016 MY Tacoma [08/2015 -]		

COMPONENTS

ILLUSTRATION



Last Modified: 11-13-2015	6.6 G	Doc ID: RM000005VMU000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: REAR POWER OUTLET SWITCH: INSPECTION; 2016 MY Tacoma [08/2015 -]		

INSPECTION

1. INSPECT MAIN SWITCH ASSEMBLY

(a) Check the main switch assembly.

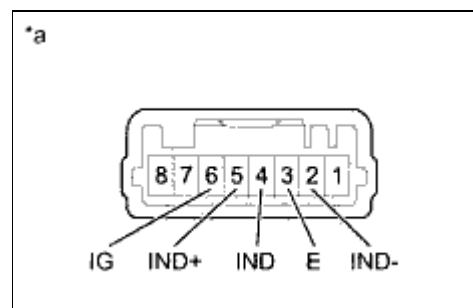
(1) Measure the resistance according to the value(s) in the table below.

Text in Illustration

*a	Component without harness connected (Main Switch Assembly)
----	---

Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
6 (IG) - 3 (E)	Switch on	Below 1 Ω
	Switch off	10 k Ω or higher



If the specified condition is not met, replace the main switch assembly.

(b) Check the switch indicator.

(1) Apply battery voltage to the main switch assembly and check that the switch indicator illuminates.

OK:

MEASUREMENT CONDITION	SWITCH CONDITION	SPECIFIED CONDITION
Battery positive (+) → 5 (IND+) Battery positive (-) → 2 (IND-)	Always	Illuminates

OK:

MEASUREMENT CONDITION	SWITCH CONDITION	SPECIFIED CONDITION
Battery positive (+) → 6 (IG) Battery positive (-) → 4 (IND)	Always	Illuminates

If the specified condition is not met, replace the main switch assembly.



Last Modified: 11-13-2015	6.6 A	Doc ID: RM000005VMT000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: REAR POWER OUTLET SWITCH: INSTALLATION; 2016 MY Tacoma [08/2015 -]		

INSTALLATION

1. INSTALL MAIN SWITCH ASSEMBLY

(a) Engage the 2 claws to install the main switch assembly.

2. INSTALL INSTRUMENT PANEL LOWER FINISH PANEL SUB-ASSEMBLY RH



Last Modified: 11-13-2015	6.6 A	Doc ID: RM000005VMW000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: REAR POWER OUTLET SWITCH: REMOVAL; 2016 MY Tacoma [08/2015 -]		

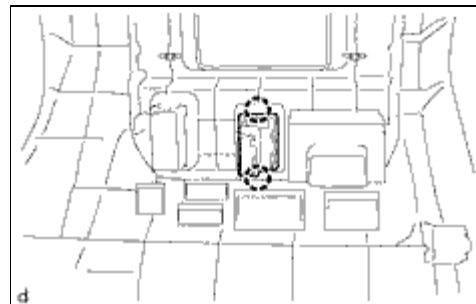
REMOVAL

1. REMOVE INSTRUMENT PANEL LOWER FINISH PANEL SUB-ASSEMBLY RH

INFO

2. REMOVE MAIN SWITCH ASSEMBLY

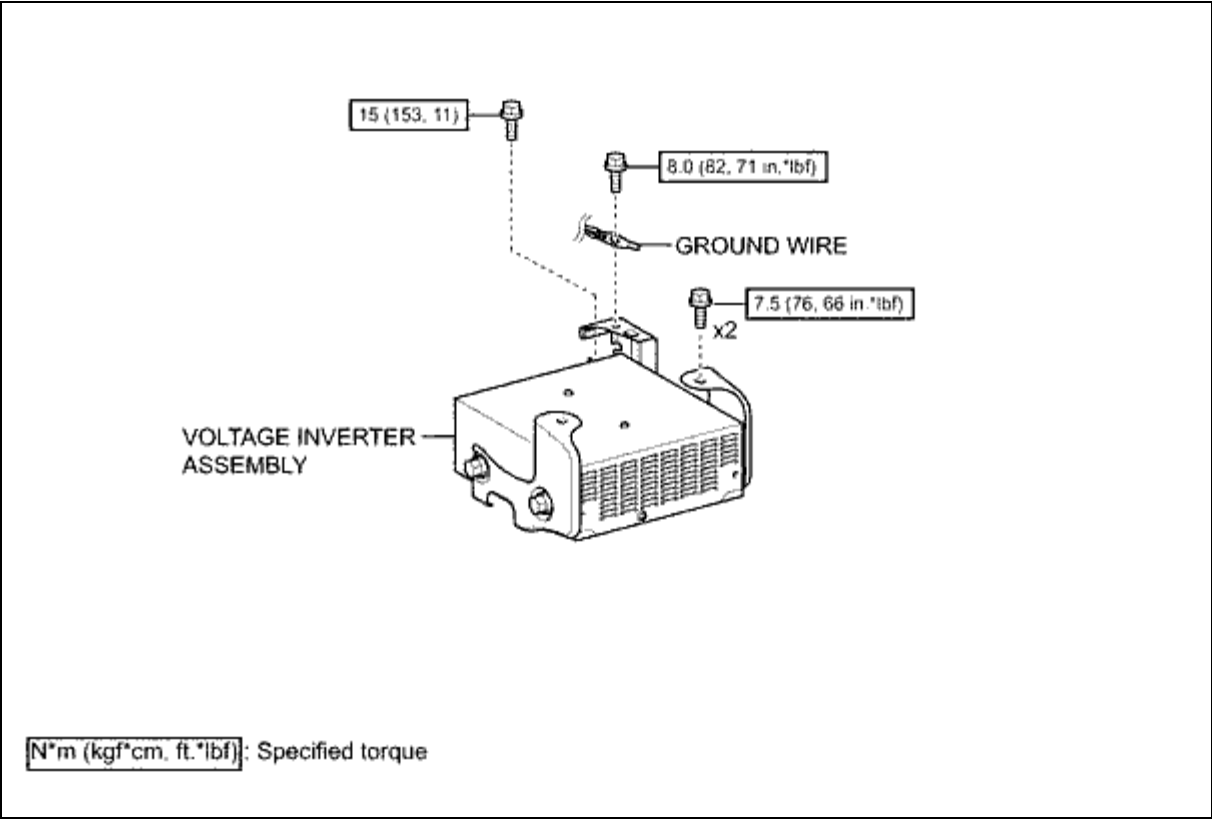
(a) Disengage the 2 claws to remove the main switch assembly.



Last Modified: 11-13-2015	6.6 K	Doc ID: RM0000016UO00AX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: VOLTAGE INVERTER: COMPONENTS; 2016 MY Tacoma [08/2015 -]		

COMPONENTS

ILLUSTRATION

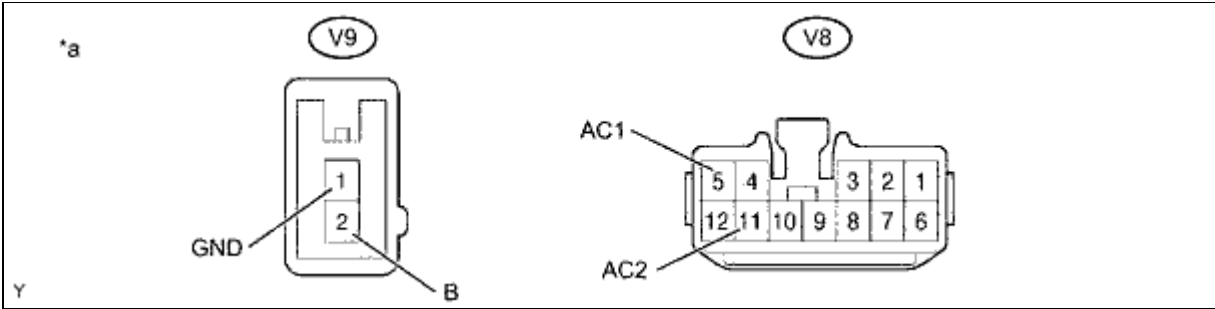


Last Modified: 11-13-2015	6.6 G	Doc ID: RM0000016VV00AX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: VOLTAGE INVERTER: INSPECTION; 2016 MY Tacoma [08/2015 -]		

INSPECTION

1. INSPECT VOLTAGE INVERTER ASSEMBLY

- (a) Check the voltage inverter assembly.
 - (1) Measure the voltage according to the value(s) in the table below.



Text in Illustration

*a	Component with harness connected (Voltage Inverter Assembly)	-	-
----	---	---	---

Standard:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
V9-2 (B) - V9-1 (GND)	Ignition switch (ON)	11 to 15 V
V9-1 (GND) - Body ground	Always	Below 1 V
V8-5 (AC1) - V8-11 (AC2)	Ignition switch (ON) Main switch (ON)	108 to 132 V

If the result is not as specified, replace the voltage inverter assembly.



Last Modified: 11-13-2015	6.6 A	Doc ID: RM0000016UN00AX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: VOLTAGE INVERTER: INSTALLATION; 2016 MY Tacoma [08/2015 -]		

INSTALLATION

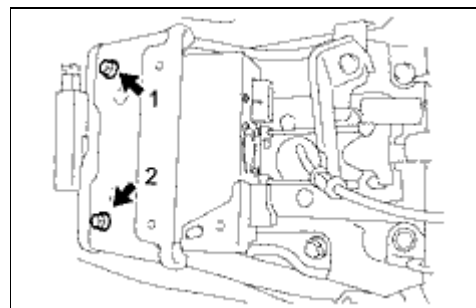
1. INSTALL VOLTAGE INVERTER ASSEMBLY

(a) Temporarily install the voltage inverter assembly with the 3 bolts.

(b) Tighten the 2 bolts in the order shown in the illustration.

Torque:

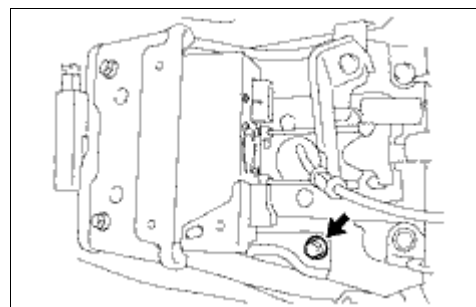
7.5 N·m {76 kgf·cm, 66in·lbf}



(c) Tighten the bolt.

Torque:

15 N·m {153 kgf·cm, 11ft·lbf}



(d) Connect the 2 connectors and engage the clamp.

(e) Connect the ground wire with the bolt.

Torque:

8.0 N·m {82 kgf·cm, 71in·lbf}

2. INSTALL REAR CONSOLE BOX ASSEMBLY



Last Modified: 11-13-2015	6.6 A	Doc ID: RM0000016UP00AX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: VOLTAGE INVERTER: REMOVAL; 2016 MY Tacoma [08/2015 -]		

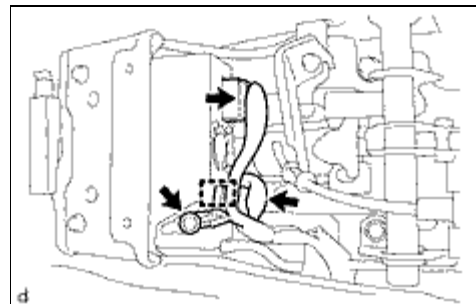
REMOVAL

1. REMOVE REAR CONSOLE BOX ASSEMBLY

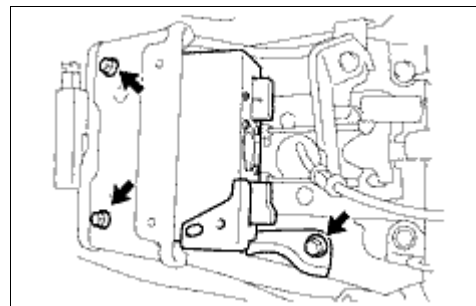
INFO

2. REMOVE VOLTAGE INVERTER ASSEMBLY

(a) Remove the bolt to disconnect the ground wire.



(b) Disconnect the 2 connectors and disengage the clamp.



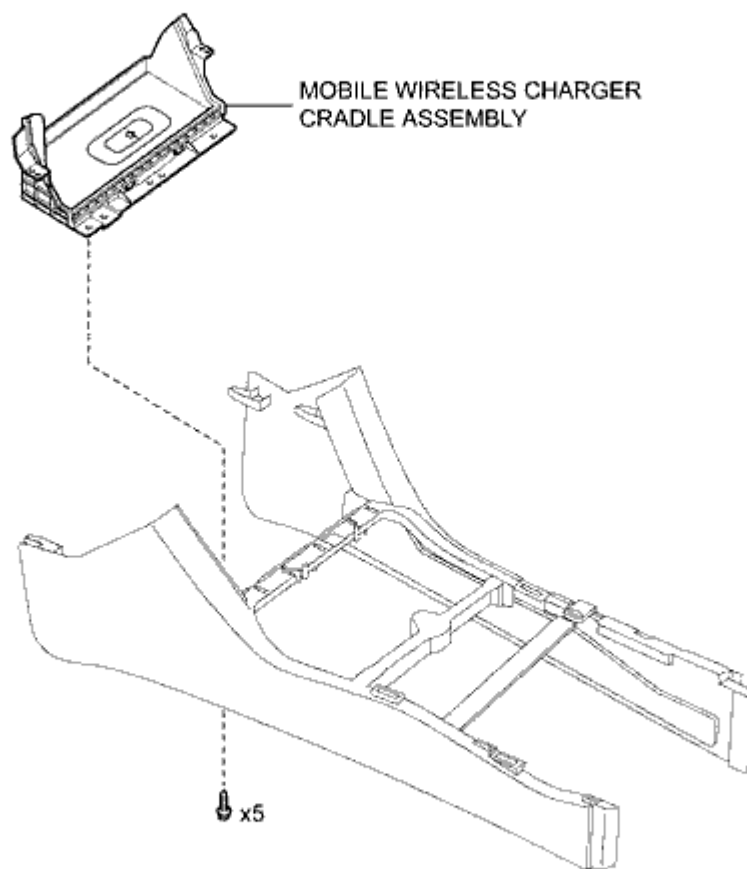
(c) Remove the 3 bolts and voltage inverter assembly.



Last Modified: 11-13-2015	6.6 K	Doc ID: RM000005VMY000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: WIRELESS CHARGER ASSEMBLY: COMPONENTS; 2016 MY Tacoma [08/2015 -]		

COMPONENTS

ILLUSTRATION



Last Modified: 11-13-2015	6.6 A	Doc ID: RM000005VMX000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: WIRELESS CHARGER ASSEMBLY: INSTALLATION; 2016 MY Tacoma [08/2015 -]		

INSTALLATION

1. INSTALL MOBILE WIRELESS CHARGER CRADLE ASSEMBLY

(a) Install the mobile wireless charger cradle assembly with the 5 screws.

2. INSTALL FRONT CONSOLE BOX



Last Modified: 11-13-2015	6.6 A	Doc ID: RM000005VMZ000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: WIRELESS CHARGER ASSEMBLY: REMOVAL; 2016 MY Tacoma [08/2015 -]		

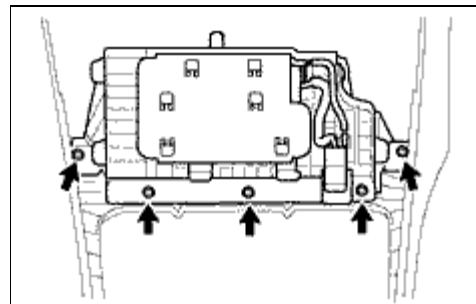
REMOVAL

1. REMOVE FRONT CONSOLE BOX

INFO

2. REMOVE MOBILE WIRELESS CHARGER CRADLE ASSEMBLY

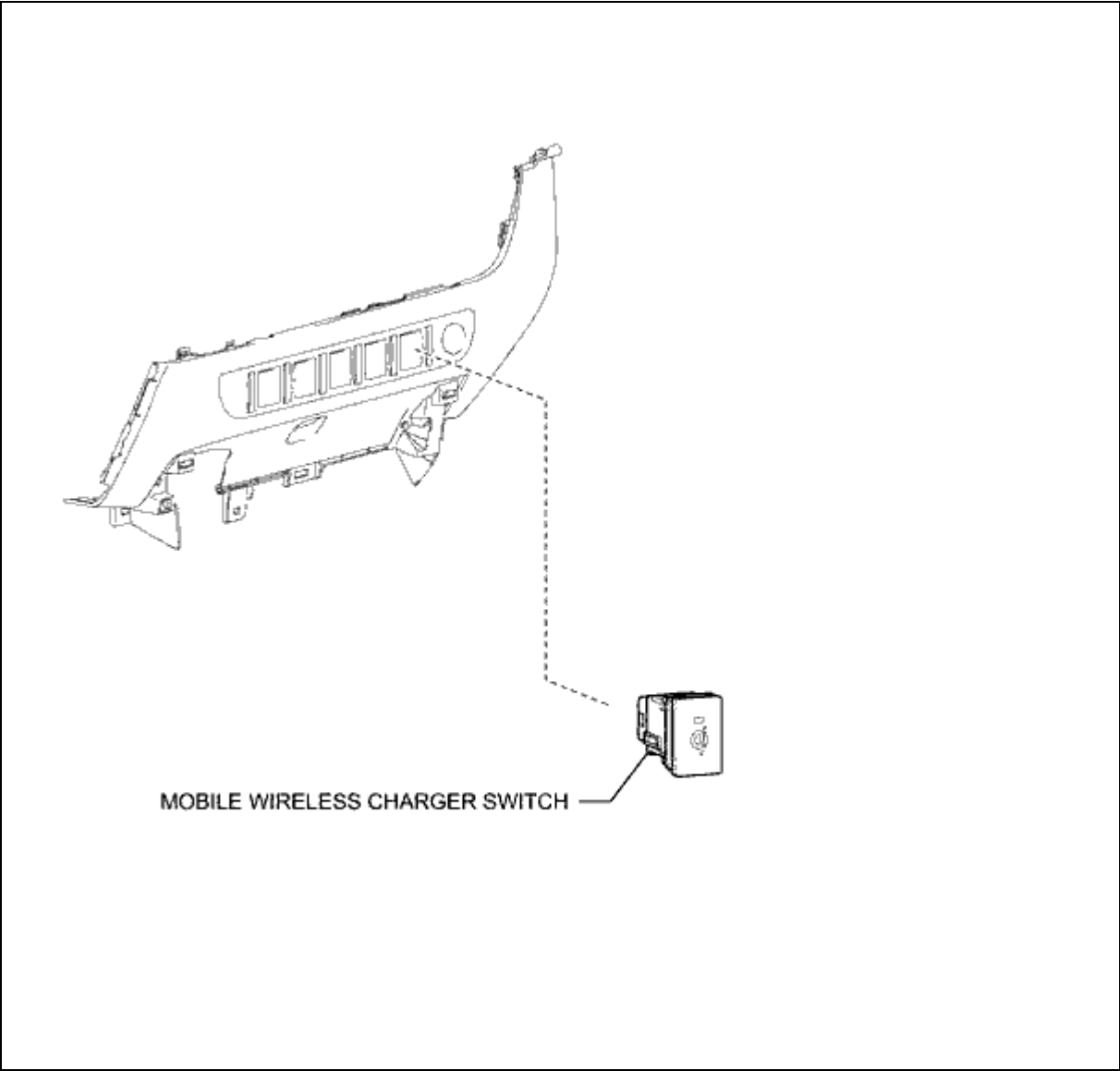
- (a) Remove the 5 screws and mobile wireless charger cradle assembly.



Last Modified: 11-13-2015	6.6 K	Doc ID: RM000005VN1000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: WIRELESS CHARGER MAIN SWITCH: COMPONENTS; 2016 MY Tacoma [08/2015 -]		

COMPONENTS

ILLUSTRATION



Last Modified: 11-13-2015	6.6 G	Doc ID: RM000005HCW00BX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: WIRELESS CHARGER MAIN SWITCH: INSPECTION; 2016 MY Tacoma [08/2015 -]		

INSPECTION

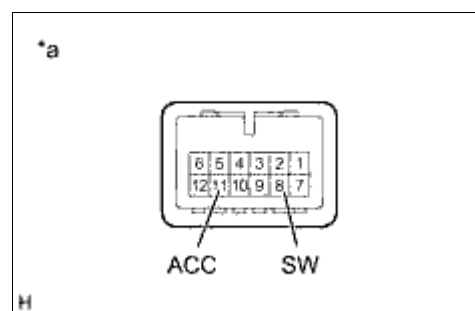
1. INSPECT MOBILE WIRELESS CHARGER SWITCH

(a) Check the mobile wireless charger switch.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
11 (ACC) - 8 (SW)	Mobile wireless charger switch is on (not protruding)	Below 1 Ω
	Mobile wireless charger switch is off (protruding)	10 k Ω or higher



Text in Illustration

*a	Component without harness connected (Mobile Wireless Charger Switch)
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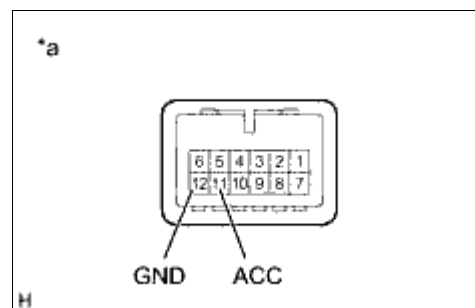
If the result is not as specified, replace the mobile wireless charger switch.

(b) Check that the switch indicator light illuminates.

(1) Apply battery voltage to the mobile wireless charger switch connector and check the operation of the switch indicator light.

OK:

CONNECTION	CONDITION	SPECIFIED CONDITION
Battery positive (+) → Terminal 11 (ACC)	Mobile wireless charger switch is on (not protruding)	Switch indicator light illuminates
Battery negative (-) → Terminal 12 (GND)	Mobile wireless charger switch is off (protruding)	Switch indicator light does not illuminate



Text in Illustration

*a	Component without harness connected
----	-------------------------------------

	(Mobile Wireless Charger Switch)
--	----------------------------------

If the result is not as specified, replace the mobile wireless charger switch.

(c) Check that the switch illuminates.

(1) Apply battery voltage to the mobile wireless charger switch and check that the switch illuminates.

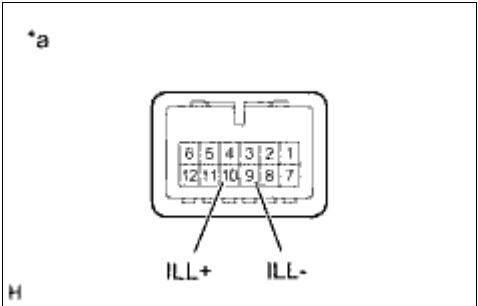
OK:

CONNECTION	SPECIFIED CONDITION
Battery positive (+) → Terminal 10 (ILL+)	Illuminates
Battery negative (-) → Terminal 9 (ILL-)	

Text in Illustration

*a	Component without harness connected (Mobile Wireless Charger Switch)
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If the result is not as specified, replace the mobile wireless charger switch.



Last Modified: 11-13-2015	6.6 A	Doc ID: RM000005VN0000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: WIRELESS CHARGER MAIN SWITCH: INSTALLATION; 2016 MY Tacoma [08/2015 -]		

INSTALLATION

1. INSTALL MOBILE WIRELESS CHARGER SWITCH

(a) Engage the 2 claws to install the mobile wireless charger switch.

2. INSTALL INSTRUMENT PANEL LOWER CENTER FINISH PANEL



Last Modified: 11-13-2015	6.6 A	Doc ID: RM000005VN2000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: WIRELESS CHARGER MAIN SWITCH: REMOVAL; 2016 MY Tacoma [08/2015 -]		

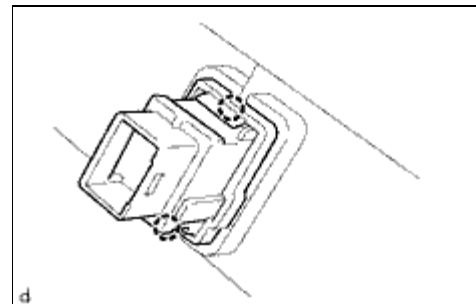
REMOVAL

1. REMOVE INSTRUMENT PANEL LOWER CENTER FINISH PANEL

INFO

2. REMOVE MOBILE WIRELESS CHARGER SWITCH

- (a) Disengage the 2 claws to remove the mobile wireless charger switch.



Last Modified: 11-13-2015	6.6 D	Doc ID: RM0000056TQ00DX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: WIRELESS CHARGING SYSTEM: HOW TO PROCEED WITH TROUBLESHOOTING; 2016 MY Tacoma [08/2015 -]		

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:

Use the following procedure to troubleshoot the wireless charging system.

1.	VEHICLE BROUGHT TO WORKSHOP
-----------	------------------------------------

NEXT



2.	CUSTOMER PROBLEM ANALYSIS CHECK AND SYMPTOM CHECK
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- In troubleshooting, confirm that the problem symptoms have been accurately identified. Preconceptions should be discarded in order to make an accurate judgment. To clearly understand what the problem symptoms are, it is extremely important to ask the customer about the problem and the conditions at the time the malfunction occurred.
- Gather as much information as possible for reference. Past problems that seem unrelated may also help in some cases.
- The following 5 items are important points for problem analysis:

What	Vehicle model, system name
When	Date, time, occurrence frequency
Where	Road conditions
Under what conditions?	Driving conditions, weather conditions
How did it happen?	Problem symptoms

NEXT



3.	INSPECT BATTERY VOLTAGE
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(a) Measure the battery voltage.

Standard Voltage:

11 to 14 V

If the voltage is below 11 V, recharge or replace the battery before proceeding to the next step.

NEXT



4.	PROBLEM SYMPTOMS TABLE
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(a) Refer to Problem Symptoms Table [INFO](#) .

RESULT	PROCEED TO
Fault is not listed in Problem Symptoms Table.	A
Fault is listed in Problem Symptoms Table.	B

B Go to step 6

A



5.	OVERALL ANALYSIS AND TROUBLESHOOTING
-----------	---

(a) Operation Check [INFO](#) .

(b) Terminals of ECU [INFO](#) .

NEXT



6.	REPAIR OR REPLACE
-----------	--------------------------

NEXT



7.	CONFIRMATION TEST
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NEXT **END**



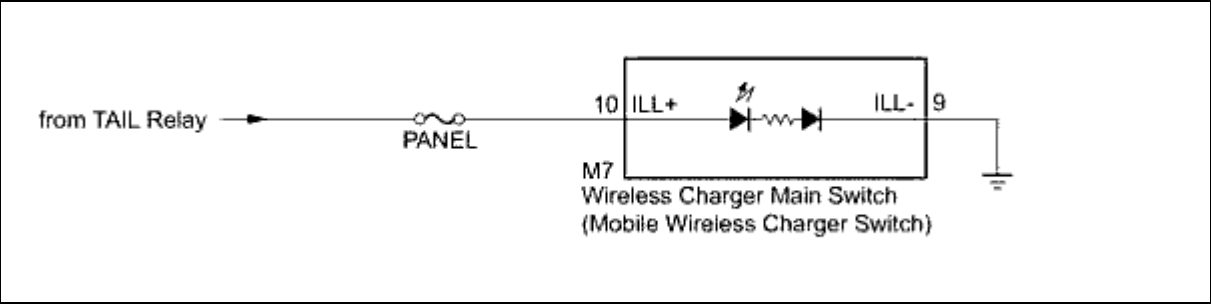
Last Modified: 11-13-2015	6.6 J	Doc ID: RM0000012CG11YX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: WIRELESS CHARGING SYSTEM: Main Switch Illumination Circuit; 2016 MY Tacoma [08/2015 -]		

Main Switch Illumination Circuit

DESCRIPTION

When the light control switch is turned to the tail or head position, this circuit sends an illumination signal to the wireless charger main switch (mobile wireless charger switch). Based on this signal, the wireless charger main switch (mobile wireless charger switch) is illuminated.

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:
 Inspect the fuses for circuits related to this system before performing the following inspection procedure.

PROCEDURE

1.	CHECK HARNESS AND CONNECTOR (ILLUMINATION SIGNAL)
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- (a) Disconnect the M7 wireless charger main switch (mobile wireless charger switch) connector.
- (b) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
M7-10 (ILL+) - Body ground	Light control switch in tail or head position	11 to 14 V

NG **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK



2.	CHECK HARNESS AND CONNECTOR (WIRELESS CHARGER MAIN SWITCH - BODY GROUND)
----	---

- (a) Disconnect the M7 wireless charger main switch (mobile wireless charger switch) connector.
- (b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
M7-9 (ILL-) - Body ground	Always	Below 1 Ω

NG **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK **PROCEED TO NEXT SUSPECTED AREA SHOWN IN PROBLEM SYMPTOMS TABLE**



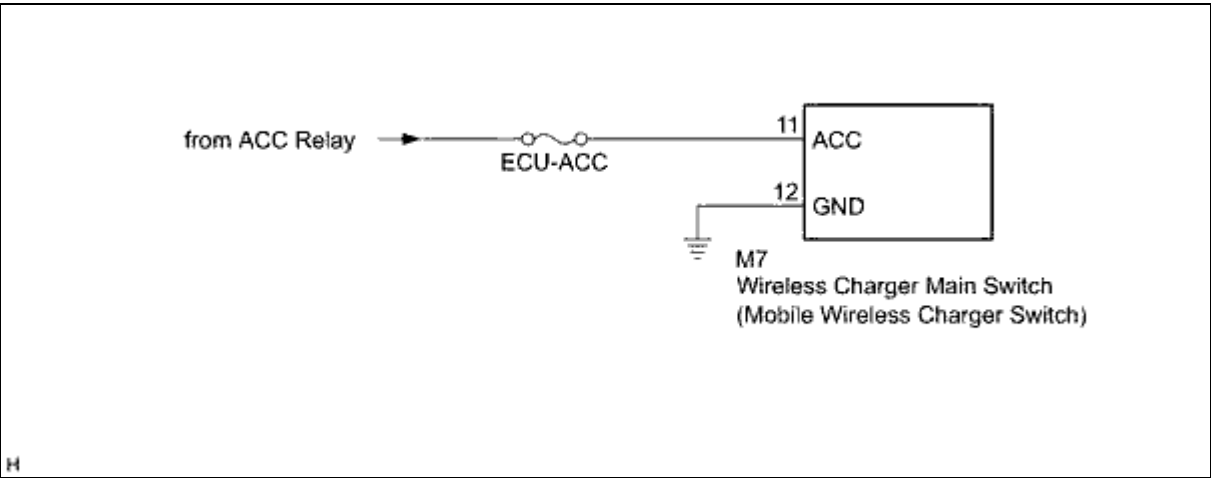
Last Modified: 11-13-2015	6.6 J	Doc ID: RM000002NNF0QDX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: WIRELESS CHARGING SYSTEM: Main Switch Power Source Circuit; 2016 MY Tacoma [08/2015 -]		

Main Switch Power Source Circuit

DESCRIPTION

This circuit supplies power to the wireless charger main switch (mobile wireless charger switch) and illuminates the switch indicator light when the wireless charger main switch (mobile wireless charger switch) is turned on.

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

Inspect the fuses for circuits related to this system before performing the following inspection procedure.

PROCEDURE

1.	CHECK HARNESS AND CONNECTOR (WIRELESS CHARGER MAIN SWITCH (MOBILE WIRELESS CHARGER SWITCH) POWER SOURCE)
----	---

- (a) Disconnect the M7 wireless charger main switch (mobile wireless charger switch) connector.
- (b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
M7-12 (GND) - Body ground	Always	Below 1 Ω
M7-11 (ACC) - Body ground	Always	10 kΩ or higher

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

Standard Voltage:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
M7-11 (ACC) - M7-12 (GND)	Ignition switch ACC	11 to 14 V

NG ► REPAIR OR REPLACE HARNESS OR CONNECTOR

OK ► PROCEED TO NEXT SUSPECTED AREA SHOWN IN
PROBLEM SYMPTOMS TABLE



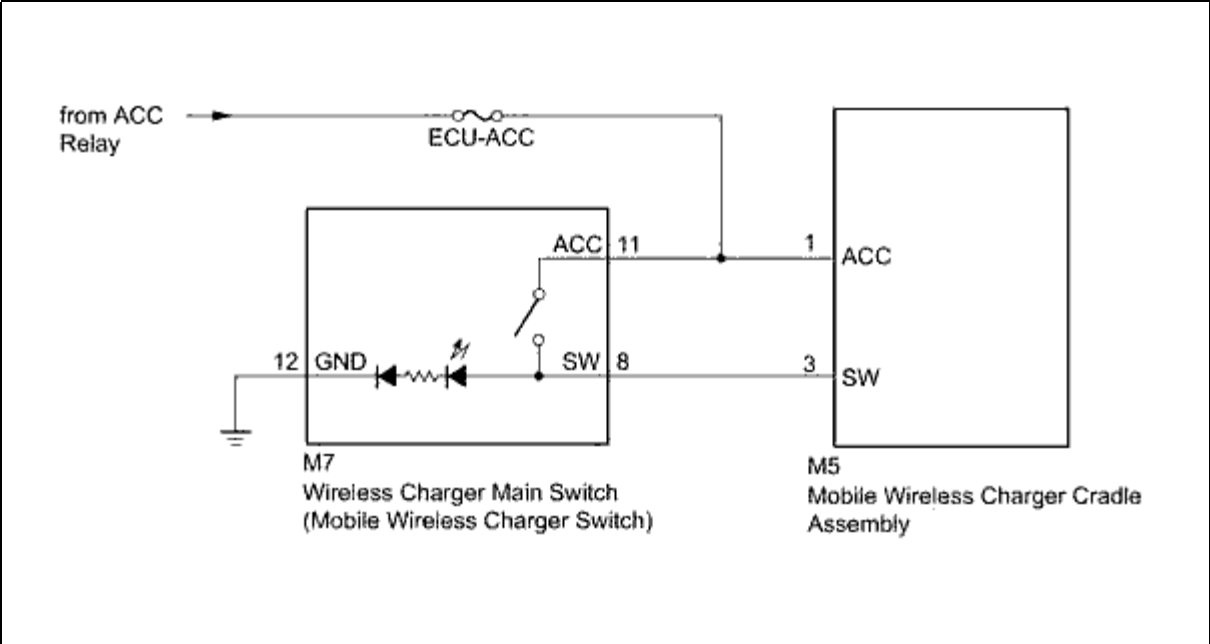
Last Modified: 11-13-2015	6.6 J	Doc ID: RM000002NNF0QEX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: WIRELESS CHARGING SYSTEM: Main Switch Signal Circuit; 2016 MY Tacoma [08/2015 -]		

Main Switch Signal Circuit

DESCRIPTION

When the wireless charger main switch (mobile wireless charger switch) is turned on, this circuit sends an on signal to the mobile wireless charger cradle assembly using the power supplied to the wireless charger main switch (mobile wireless charger switch).

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:
Inspect the fuses for circuits related to this system before performing the following inspection procedure.

PROCEDURE

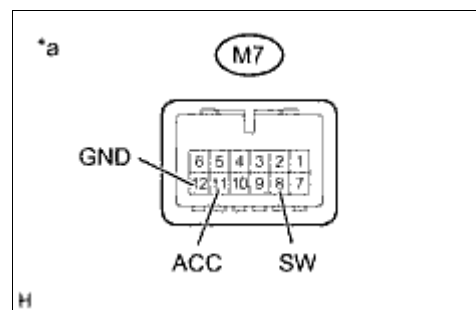
1.	INSPECT WIRELESS CHARGER MAIN SWITCH (MOBILE WIRELESS CHARGER SWITCH)
----	--

(a) Remove the wireless charger main switch (mobile wireless charger switch) [INFO](#) .

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
M7-11 (ACC) - M7-12 (GND)	Wireless Charger Main Switch (Mobile Wireless Charger Switch) is on (not protruding)	Below 1 Ω
	Wireless Charger Main Switch (Mobile Wireless Charger Switch) is off (protruding)	10 k Ω or higher



Text in Illustration

*a	Component without harness connected (Wireless Charger Main switch (Mobile Wireless Charger Switch))
----	--

NG ▶ **REPLACE WIRELESS CHARGER MAIN SWITCH (MOBILE WIRELESS CHARGER SWITCH)**

OK
▼

2.	CHECK TERMINAL VOLTAGE (WIRELESS CHARGER MAIN SWITCH - BATTERY AND GROUND)
----	---

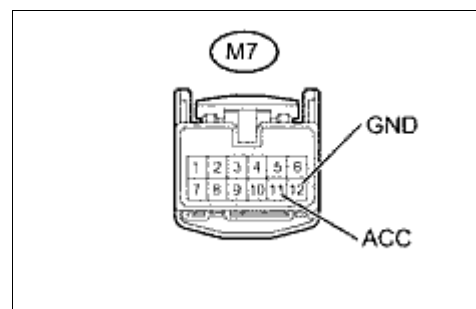
(a) Measure the voltage and resistance according to the value(s) in the table below.

Standard Voltage:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
M7-11 (ACC) - Body ground	Ignition Switch ACC	11 to 14 V

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
M7-12 (GND) - Body ground	Always	Below 1 Ω



NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK



3.

CHECK HARNESS AND CONNECTOR (WIRELESS CHARGER MAIN SWITCH - MOBILE WIRELESS CHARGER CRADLE ASSEMBLY)

(a) Disconnect the M5 mobile wireless charger cradle assembly connector.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
M5-3 (SW) - M7-8 (SW)	Always	Below 1 Ω

NG  **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK  **PROCEED TO NEXT SUSPECTED AREA SHOWN IN PROBLEM SYMPTOMS TABLE**



Last Modified: 11-13-2015	6.6 D	Doc ID: RM000005HCU00DX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: WIRELESS CHARGING SYSTEM: OPERATION CHECK; 2016 MY Tacoma [08/2015 -]		

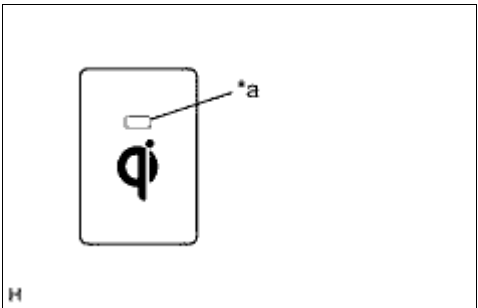
OPERATION CHECK

1. CHECK WIRELESS CHARGING SYSTEM OPERATION

- (a) Turn the ignition switch ON (IG or ACC).
- (b) Press the mobile wireless charger switch and check that the switch indicator light illuminates.

Text in Illustration

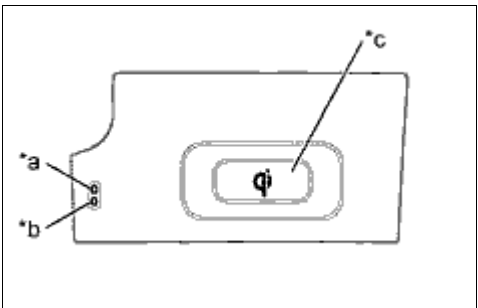
*a	Switch Indicator Light
----	------------------------



- (c) Place a rechargeable device on the charging area and check that the indicator light (amber) illuminates, indicating a charge is in progress.

Text in Illustration

*a	Indicator Light (Green)
*b	Indicator Light (Amber)
*c	Charging Area



- (d) Check that the indicator lights (amber and green) are illuminated when charging is complete.

HINT:

- Some phones, cases or cover type wireless chargers may not cause the green indicator to illuminate even though it is fully charged.
- Check the mobile device to confirm charge status.

HINT:

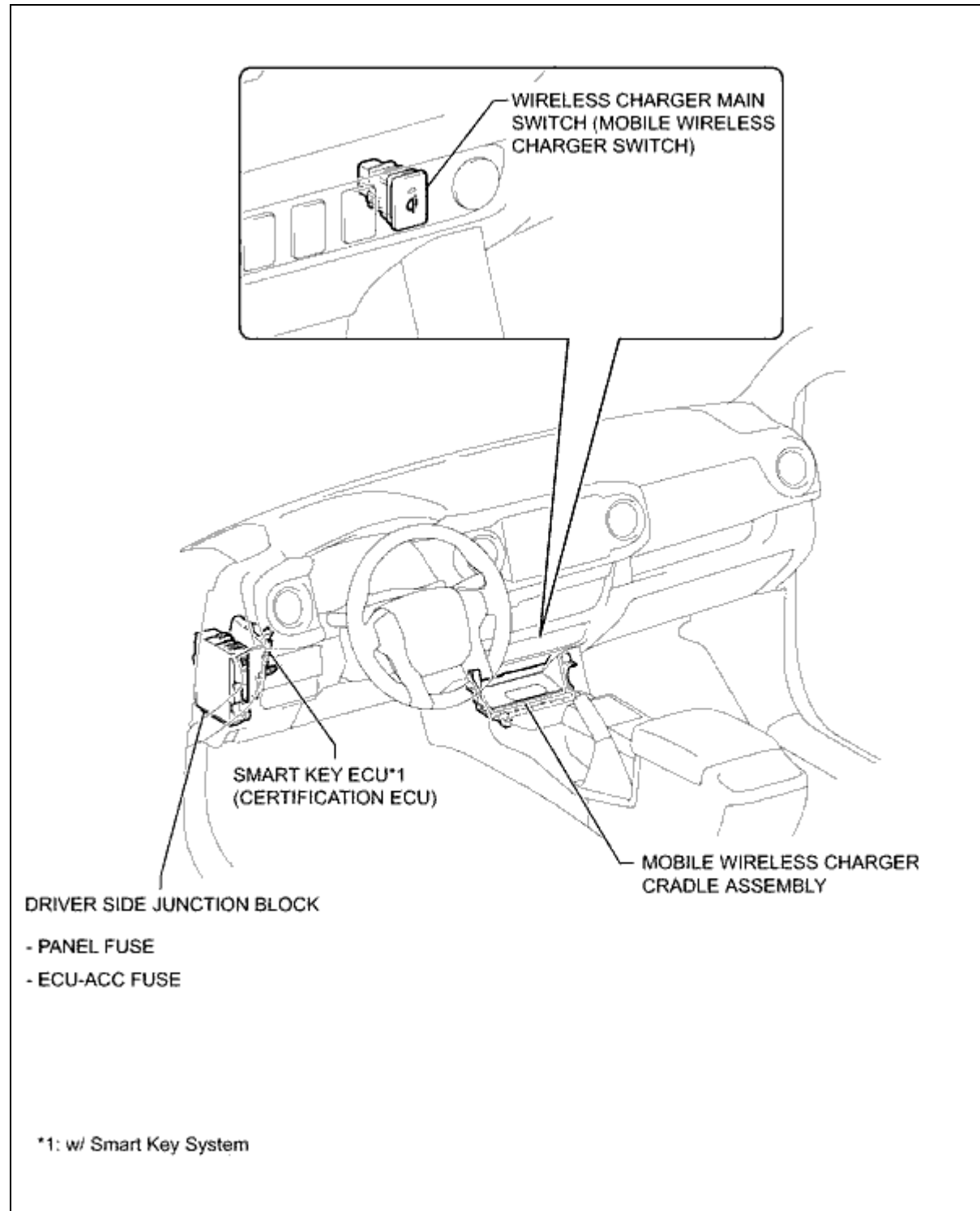
Please refer to precaution for the details [INFO](#) .



Last Modified: 11-13-2015	6.6 R	Doc ID: RM000005HCT00DX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: WIRELESS CHARGING SYSTEM: PARTS LOCATION; 2016 MY Tacoma [08/2015 -]		

PARTS LOCATION

ILLUSTRATION



Last Modified: 11-13-2015	6.6 L	Doc ID: RM000005HCS00EX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: WIRELESS CHARGING SYSTEM: PRECAUTION; 2016 MY Tacoma [08/2015 -]		

PRECAUTION

1. IGNITION SWITCH EXPRESSIONS

- (a) 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.

EXPRESSION	IGNITION SWITCH (POSITION)	ENGINE SWITCH (CONDITION)
Ignition switch off	LOCK	Off
Ignition switch ACC	ACC	On (ACC)
Ignition switch ON	ON	On (IG)
Engine start	START	Start

2. PRECAUTION FOR WHEN USING WIRELESS CHARGER

- (a) If the mobile wireless charger cradle assembly surface becomes too hot during charging operation, the indicator lights (green and amber) on the mobile wireless charger cradle assembly will blink and charging will be canceled. If the surface cools down, the indicator light (amber) will be illuminated and charging will be resumed.
- (b) A rechargeable device may not be recharged depending on the shape, material or thickness of accessories applied to it, such as a cellular phone cover.
- (c) Do not put foreign matter or metal objects, such as a paper clip, between the charging area and the rechargeable device. Doing so may result in a charging failure, or burns or a fire due to overheating of the metal object.
- (d) Do not apply a metallic object, such as an aluminum sticker, to the mobile wireless charger cradle assembly. Doing so may result in burns or a fire due to overheating of the metal object.



Last Modified: 11-13-2015	6.6 T	Doc ID: RM0000056R500EX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: WIRELESS CHARGING SYSTEM: PROBLEM SYMPTOMS TABLE; 2016 MY Tacoma [08/2015 -]		

PROBLEM SYMPTOMS TABLE

HINT:

- Use the table below to help determine the cause of problem symptoms. If multiple suspected areas are listed, the potential causes of the symptoms are listed in order of probability in the "Suspected Area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.
- Inspect the fuses and relays related to this system before inspecting the suspected areas below.

Wireless Charging System

SYMPTOM	SUSPECTED AREA	SEE PAGE
Even when the mobile wireless charger switch is turned on, the switch indicator light does not illuminate	Main switch power source circuit	INFO
	Wireless charger main switch	INFO
When the mobile wireless charger switch is turned on, the switch indicator light illuminates but the indicator light (amber) on the mobile wireless charger cradle assembly does not illuminate and a device cannot be charged	Check that the device being used is a Qi-compliant rechargeable device	-
	Check if wireless charging is possible using another Qi-compliant rechargeable device	-
	Wireless charger power source circuit	INFO
	Main switch signal circuit	INFO
	Status signal circuit	INFO
	Mobile wireless charger cradle assembly	INFO
When the mobile wireless charger switch is turned on, the indicator light (amber) on the mobile wireless charger cradle assembly illuminates but a device cannot be recharged	Check that the device being used is a Qi-compliant rechargeable device	-
	Check if wireless charging is possible using another Qi-compliant rechargeable device	-
	Mobile wireless charger cradle assembly	INFO
Even when the light control switch is turned to the tail or head position, the mobile wireless charger switch does not illuminate	Main switch illumination circuit	INFO
	Wireless charger main switch	INFO
Even when the light control switch is turned to the tail or head position, the indicator lights (green and amber) on the mobile	Wireless charger illumination circuit	INFO

SYMPTOM	SUSPECTED AREA	SEE PAGE
wireless charger cradle assembly do not dim	Mobile wireless charger cradle assembly	INFO
The indicator lights (green and amber) on the mobile wireless charger cradle assembly blink	If the temperature around the charging area is high, wait until it cools down	-
	Check that the device being used is a Qi-compliant rechargeable device	-
	Check if wireless charging is possible using another Qi-compliant rechargeable device	-
	Status signal circuit	INFO
	Mobile wireless charger cradle assembly	INFO



Last Modified: 11-13-2015	6.6 D	Doc ID: RM0000056R600DX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: WIRELESS CHARGING SYSTEM: SYSTEM DESCRIPTION; 2016 MY Tacoma [08/2015 -]		

SYSTEM DESCRIPTION

1. WIRELESS CHARGER FUNCTION OUTLINE

- (a) The wireless charging system enables Qi-compliant* rechargeable devices, such as a cellular phone, to be recharged by merely placing it on the charging area of the mobile wireless charger cradle assembly on the console panel.

HINT:

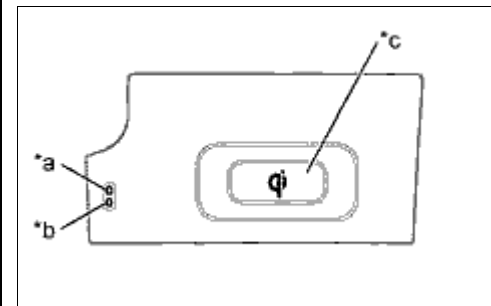
*: Qi (pronounced chee) is a wireless technology which allows devices to recharge without using any wires.

- (b) The indicators shown in each condition are as follows:

Text in Illustration

*a	Indicator Light (Green)
*b	Indicator Light (Amber)
*c	Charging Area

INDICATOR LIGHT		OPERATION CONDITION
GREEN	AMBER	
Off	Off	No rechargeable device is on the charging area.
Off	On	A rechargeable device is placed on the charging area or while recharging.
On	On	Recharging is complete.*1
Blinks	Blinks	The indicators blink in the following situations: • High charging area temperature*2 • Wire harness disconnection between certification ECU (smart key ECU assembly) and mobile wireless charger cradle assembly • Charging error



BLINKING PATTERN	ERROR TYPES
Green - Green - Amber	High charging area temperature*2
Green - Amber - Green	Wire harness disconnection between certification ECU (smart key ECU assembly) and mobile wireless charger cradle assembly

BLINKING PATTERN	ERROR TYPES
Amber - Green - Amber	Charging error

HINT:

*1: Some phones, cases or cover type wireless chargers may not cause the green indicator to illuminate even though it is fully charged. Check the mobile device to confirm charge status.

Please refer to precaution for the details  .

*2: If foreign matter is present between the mobile wireless charger cradle assembly and a compatible rechargeable device, such as a cellular phone, charging efficiency is lowered and the foreign matter may heat up. If the mobile wireless charger cradle assembly detects heat from the foreign matter, the indicator lights will blink.

(c) When charging of the wireless charger stops temporarily

(1) If any of the following operations are performed with the electrical key transmitter sub-assembly present, charging may stop temporarily:

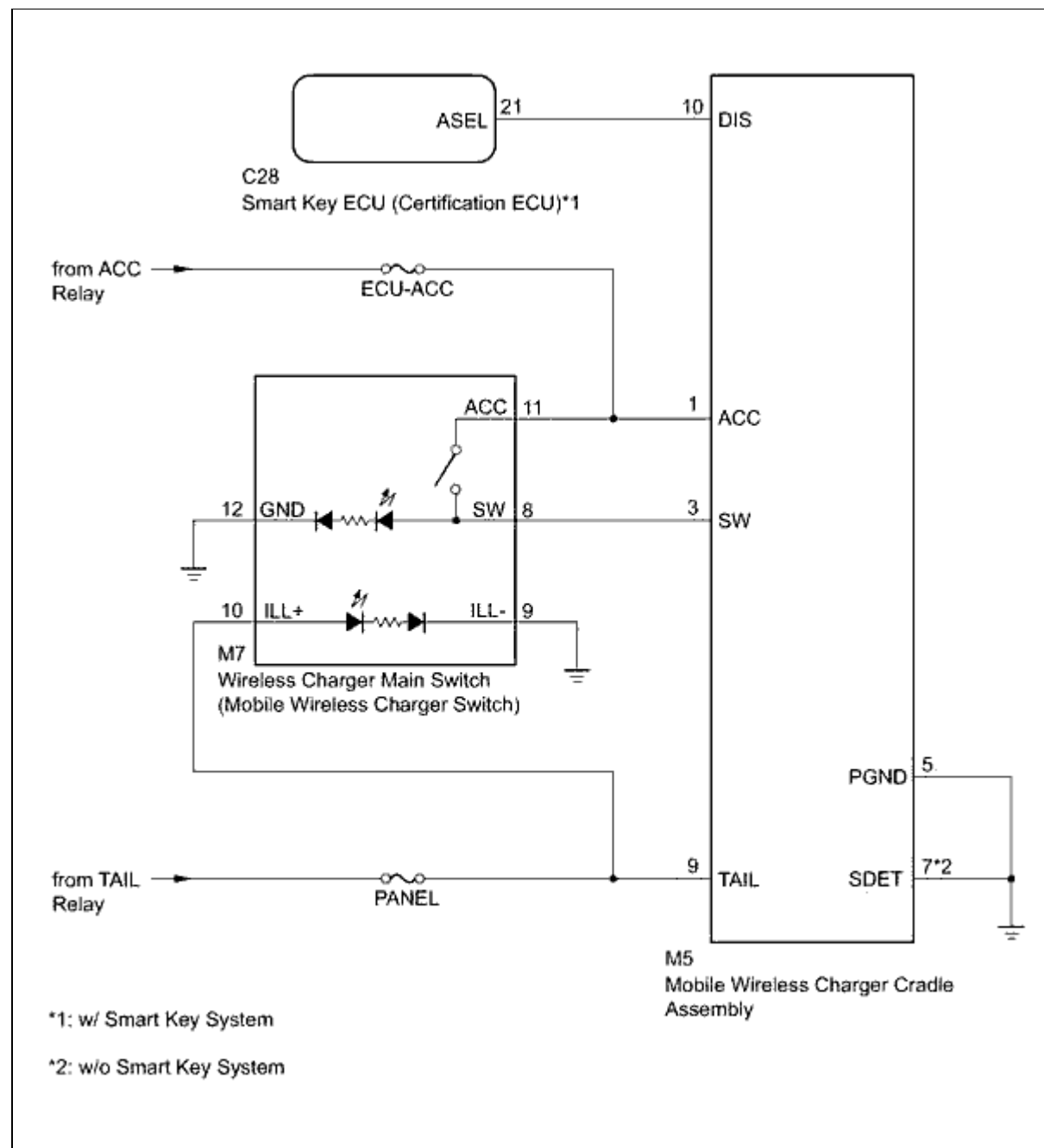
- Locking/unlocking the doors by touching the door handle
- Opening/closing the doors
- Starting the engine
- Locking the doors by pressing the lock button on the electrical key transmitter sub-assembly
- When the electrical key transmitter sub-assembly is out of the detection area

(2) If the mobile wireless charger cradle assembly surface becomes too hot during charging operation, the indicator lights (green and amber) on the mobile wireless charger cradle assembly will blink and charging will be canceled. If the surface cools down, the indicator light (green) will be illuminated and charging will be resumed.



Last Modified: 11-13-2015	6.6 U	Doc ID: RM0000056R400DX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: WIRELESS CHARGING SYSTEM: SYSTEM DIAGRAM; 2016 MY Tacoma [08/2015 -]		

SYSTEM DIAGRAM



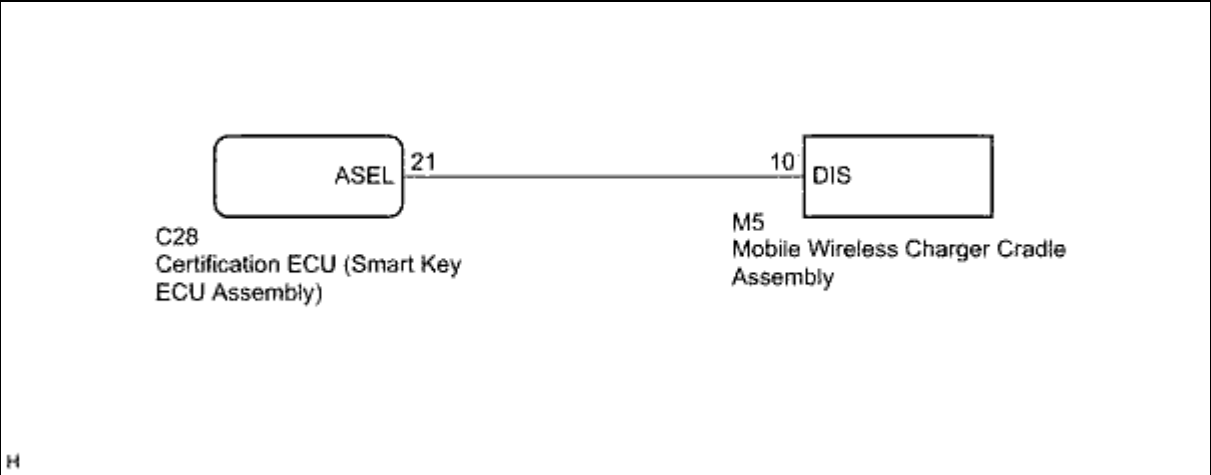
Last Modified: 11-13-2015	6.6 J	Doc ID: RM000003XE907LX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: WIRELESS CHARGING SYSTEM: Status Signal Circuit; 2016 MY Tacoma [08/2015 -]		

Status Signal Circuit

DESCRIPTION

This circuit sends a smart key system status signal from the certification ECU (smart key ECU assembly) to the mobile wireless charger cradle assembly. Based on this signal, the mobile wireless charger cradle assembly suspends or resumes wireless charging.

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:
Before replacing the certification ECU (smart key ECU assembly), refer to the Registration ([INFO](#)).

PROCEDURE

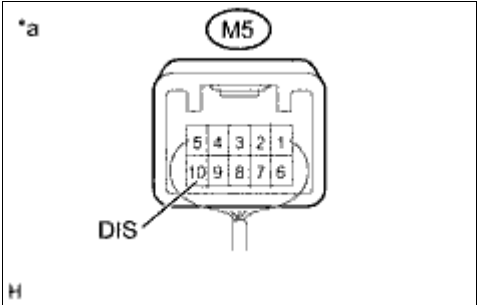
1.	INSPECT MOBILE WIRELESS CHARGER CRADLE ASSEMBLY
----	---

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

Text in Illustration

*a	Component with harness connected (Mobile Wireless Charger Cradle Assembly)
----	---

Standard Voltage:



TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
M5-10 (DIS) - Body ground	For 1500 ms after turning ignition switch from off to on (IG)*1	4.4 to 6.5 V
	Being charged	Below 1 V
	Charging suspended due to smart key system status*2	4.4 to 6.5 V

HINT:

- *1: The mobile wireless charger cradle assembly checks the status signal for 1500 ms when the ignition switch is turned from off to on (IG). If a status signal voltage of less than 1 V continues for 400 ms or more during the check, the mobile wireless charger cradle assembly judges that the status signal is interrupted, blinks the indicators and stops the operation until the ignition switch is turned off then on (IG) again.
- *2: For the status of the smart key system when charging is stopped temporarily, refer to System Description [INFO](#).

NG ► **GO TO STEP 2**

OK ► **PROCEED TO NEXT SUSPECTED AREA SHOWN IN PROBLEM SYMPTOMS TABLE**

2.	CHECK HARNESS AND CONNECTOR (MOBILE WIRELESS CHARGER CRADLE ASSEMBLY - CERTIFICATION ECU (SMART KEY ECU ASSEMBLY))
-----------	---

- (a) Disconnect the M5 mobile wireless charger cradle assembly connector.
- (b) Disconnect the C28 certification ECU (smart key ECU assembly) connector.
- (c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
M5-10 (DIS) - C28-21 (ASEL)	Always	Below 1 Ω
M5-10 (DIS) - Body ground	Always	10 k Ω or higher

NG ► **REPAIR OR REPLACE HARNESS OR CONNECTOR**

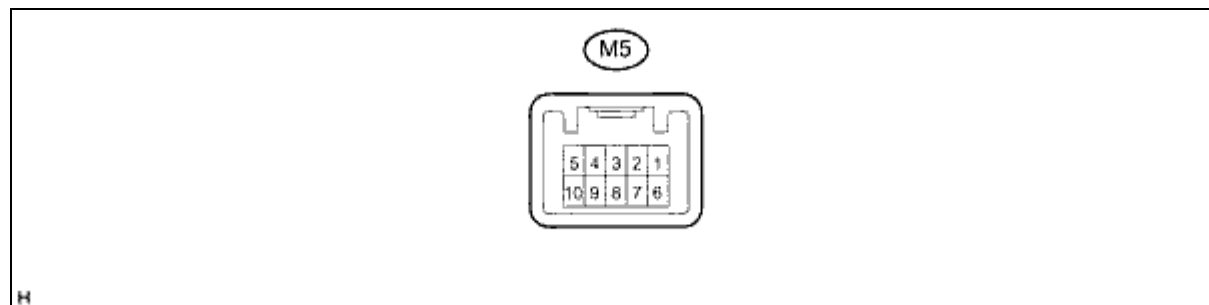
OK ► **REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)**



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Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: WIRELESS CHARGING SYSTEM: TERMINALS OF ECU; 2016 MY Tacoma [08/2015 -]		

TERMINALS OF ECU

1. MOBILE WIRELESS CHARGER CRADLE ASSEMBLY



TESTER CONNECTION	WIRING COLOR	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
M5-1 (ACC) - M5-5 (PGND)	GR - W-B	Power source (ACC)	Ignition Switch ON (ACC)	11 to 14 V
			Ignition Switch off	Below 1 V
M5-5 (PGND) - Body ground	W-B - Body ground	Ground	Always	Below 1 V
M5-9 (TAIL) - M5-5 (PGND)	G - W-B	Illumination signal	Light control switch off	Below 1 V
			Light control switch in tail or head position	11 to 14 V
M5-10 (DIS) - Body ground	Y - Body ground	Smart key system status signal	For 1500 ms after turning ignition switch from off to on (IG)*1	4.4 to 6.5 V
			Being charged	Below 1 V
			Charging suspended due to smart key system status*2	4.4 to 6.5 V

*1: The mobile wireless charger cradle assembly checks the status signal for 1500 ms when the ignition switch is turned from off to on (IG). If a status signal voltage of less than 1 V continues for 400 ms or more during the check, the mobile wireless charger cradle assembly judges that the status signal is interrupted, blinks the indicators and stops the operation until the ignition switch is turned off then on (IG) again.

*2: For the status of the smart key system when charging is stopped temporarily, refer to System Description [INFO](#).



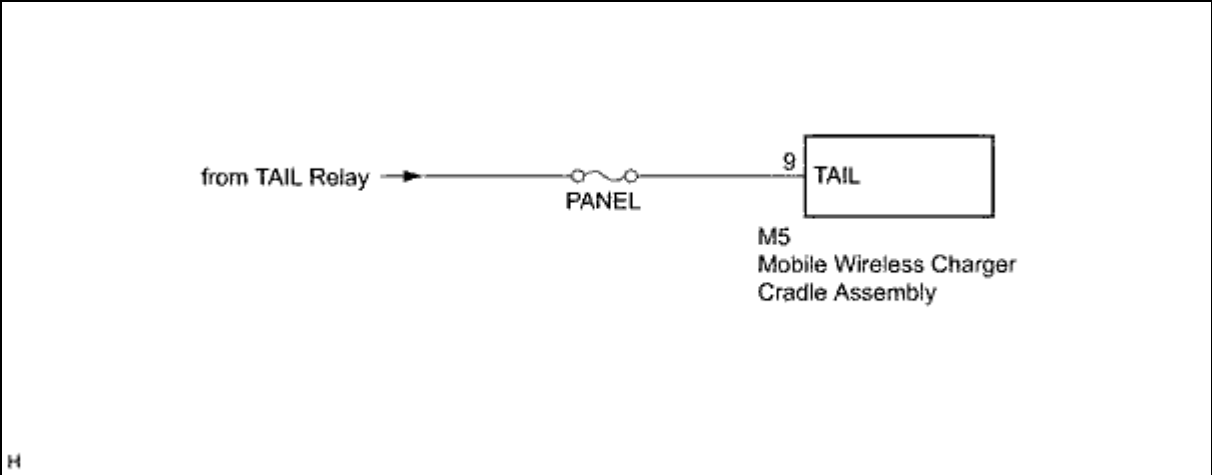
Last Modified: 11-13-2015	6.6 J	Doc ID: RM0000012CG11XX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: WIRELESS CHARGING SYSTEM: Wireless Charger Illumination Circuit; 2016 MY Tacoma [08/2015 -]		

Wireless Charger Illumination Circuit

DESCRIPTION

When the light control switch is turned to the tail or head position, this circuit sends an illumination signal to the mobile wireless charger cradle assembly. Based on this signal, the mobile wireless charger cradle assembly dims the indicator lights (green and amber).

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

Inspect the fuses for circuits related to this system before performing the following inspection procedure.

PROCEDURE

1.	CHECK HARNESS AND CONNECTOR (ILLUMINATION SIGNAL)
----	---

- (a) Disconnect the M5 mobile wireless charger cradle assembly connector.
- (b) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
M5-9 (TAIL) - Body ground	Light control switch in tail or head position	11 to 14 V

NG ► REPAIR OR REPLACE HARNESS OR CONNECTOR

OK ► PROCEED TO NEXT SUSPECTED AREA SHOWN IN
PROBLEM SYMPTOMS TABLE



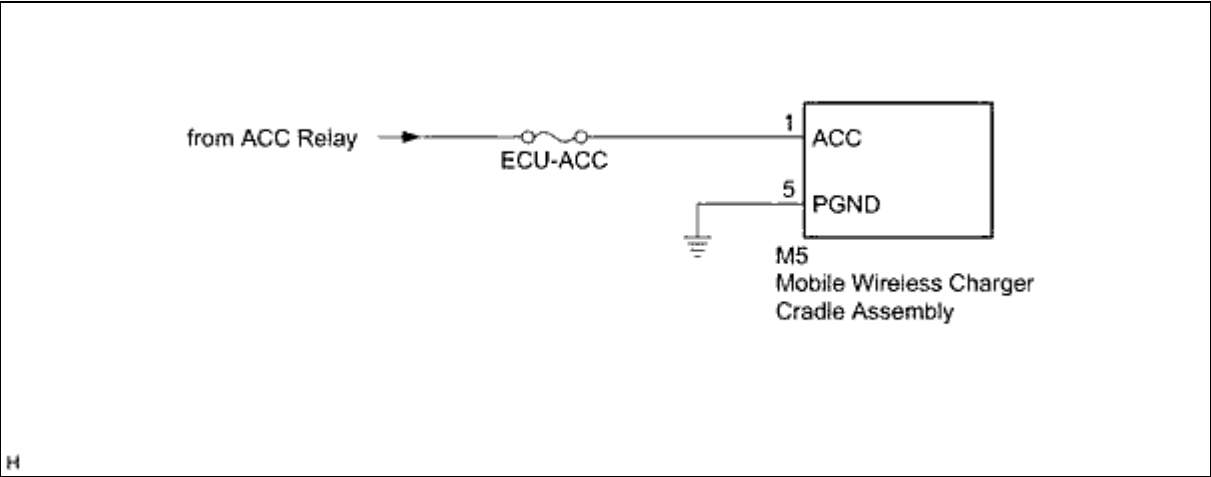
Last Modified: 11-13-2015	6.6 J	Doc ID: RM000002NNF0QCX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: OTHER SYSTEM: WIRELESS CHARGING SYSTEM: Wireless Charger Power Source Circuit; 2016 MY Tacoma [08/2015 -]		

Wireless Charger Power Source Circuit

DESCRIPTION

This is the power source circuit to operate the mobile wireless charger cradle assembly.

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:
Inspect the fuses for circuits related to this system before performing the following inspection procedure.

PROCEDURE

1.	CHECK HARNESS AND CONNECTOR (MOBILE WIRELESS CHARGER CRADLE ASSEMBLY POWER SOURCE)
----	---

- (a) Disconnect the M5 mobile wireless charger cradle assembly connector.
 - (b) Measure the resistance according to the value(s) in the table below.
- Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
M5-5 (PGND) - Body ground	Always	Below 1 Ω
M5-1 (ACC) - Body ground	Always	10 kΩ or higher

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

Standard Voltage:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
M5-1 (ACC) - M5-5 (PGND)	Ignition switch ACC	11 to 14 V

NG ► REPAIR OR REPLACE HARNESS OR CONNECTOR

OK ► PROCEED TO NEXT SUSPECTED AREA SHOWN IN
PROBLEM SYMPTOMS TABLE

