

**TECHNICAL INSTRUCTIONS
FOR
SAFETY RECALL E0M
SPRIAL CABLE REPLACEMENT**

**CERTAIN 2009 –2010 MY COROLLA,
2009 – 2010 MY COROLLA MATRIX,
2008 – 2010 MY HIGHLANDER,
2006 – 2008 MY RAV4,
2009 – 2010 MY TACOMA,
2006 – 2010 MY YARIS VEHICLES**

UPDATED SEPTEMBER 22, 2017

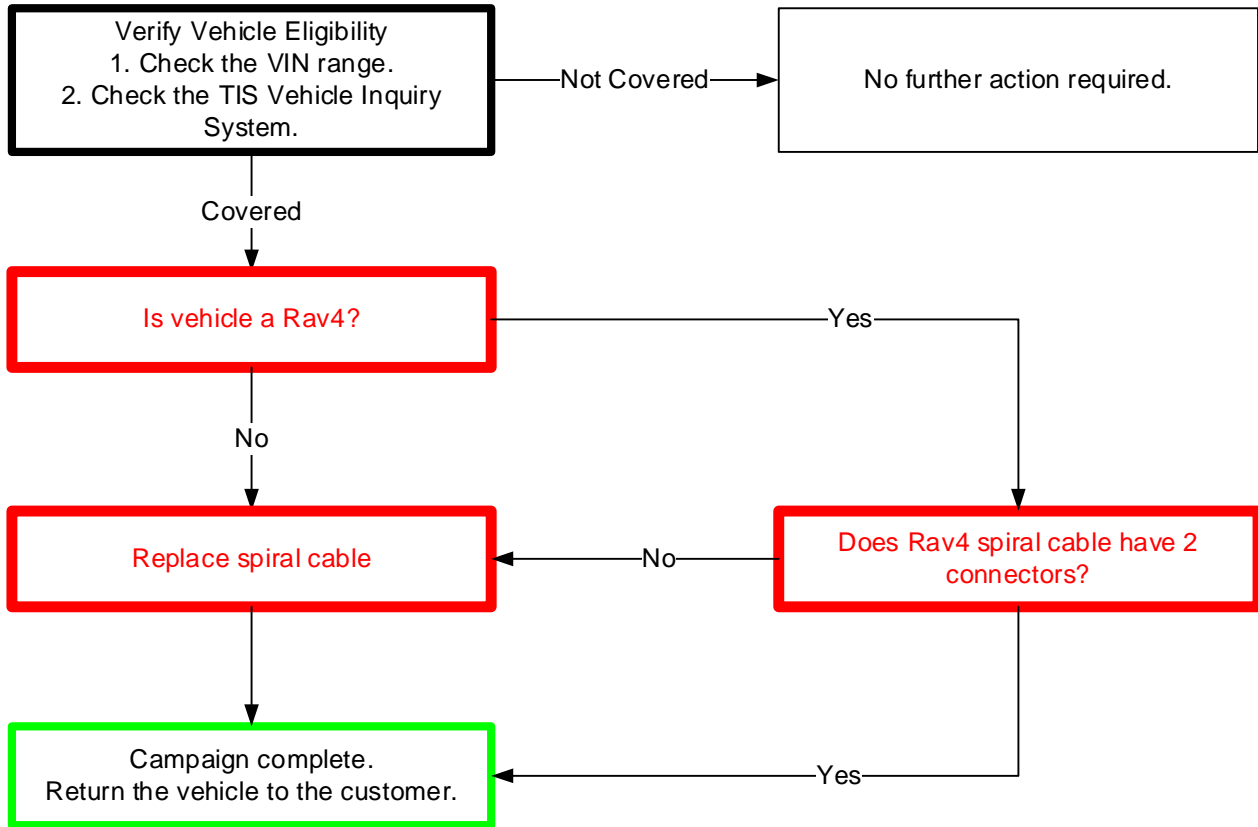
9-21-2017

- Added inspection for Rav4 Models
- Added step in flowchart

All dealership associates involved in the recall process are required to successfully complete E-Learning course SC13A. To ensure that all vehicles have the repair performed correctly; technicians performing this recall repair are required to currently hold at least one of the following certifications levels:

- Toyota Certified (Electrical)
- Toyota Expert (Electrical)
- Master
- Master Diagnostic Technicians

I. OPERATION FLOW CHART



II. IDENTIFICATION OF AFFECTED VEHICLES

NOTE:

- Check the TIS Vehicle Inquiry System to confirm the VIN is covered in this Safety Recall, and that the campaign has not already been completed by another dealer.
- TMS warranty will not reimburse dealers for repairs conducted on vehicles that are not affected or were completed by another dealer.

III. PREPARATION

A. PARTS

Model	Part Number	Part Description (kit contents)	Quantity
All	04004-07122	E0M Spiral Cable Kit (spiral cable p/n 84306-04080 and grease packet p/n 84323-42010)	1

B. TOOLS & EQUIPMENT

- Standard hand tools
- Techstream 2.0 / TIS Techstream /Techstream Lite (Software 8.30 or Higher)
- "TORX" Socket T30
- Torque wrench

SST – This is an essential special service tool that the dealership should have.

Tool Number	Tool Name
09950-50013	Universal Puller Set C

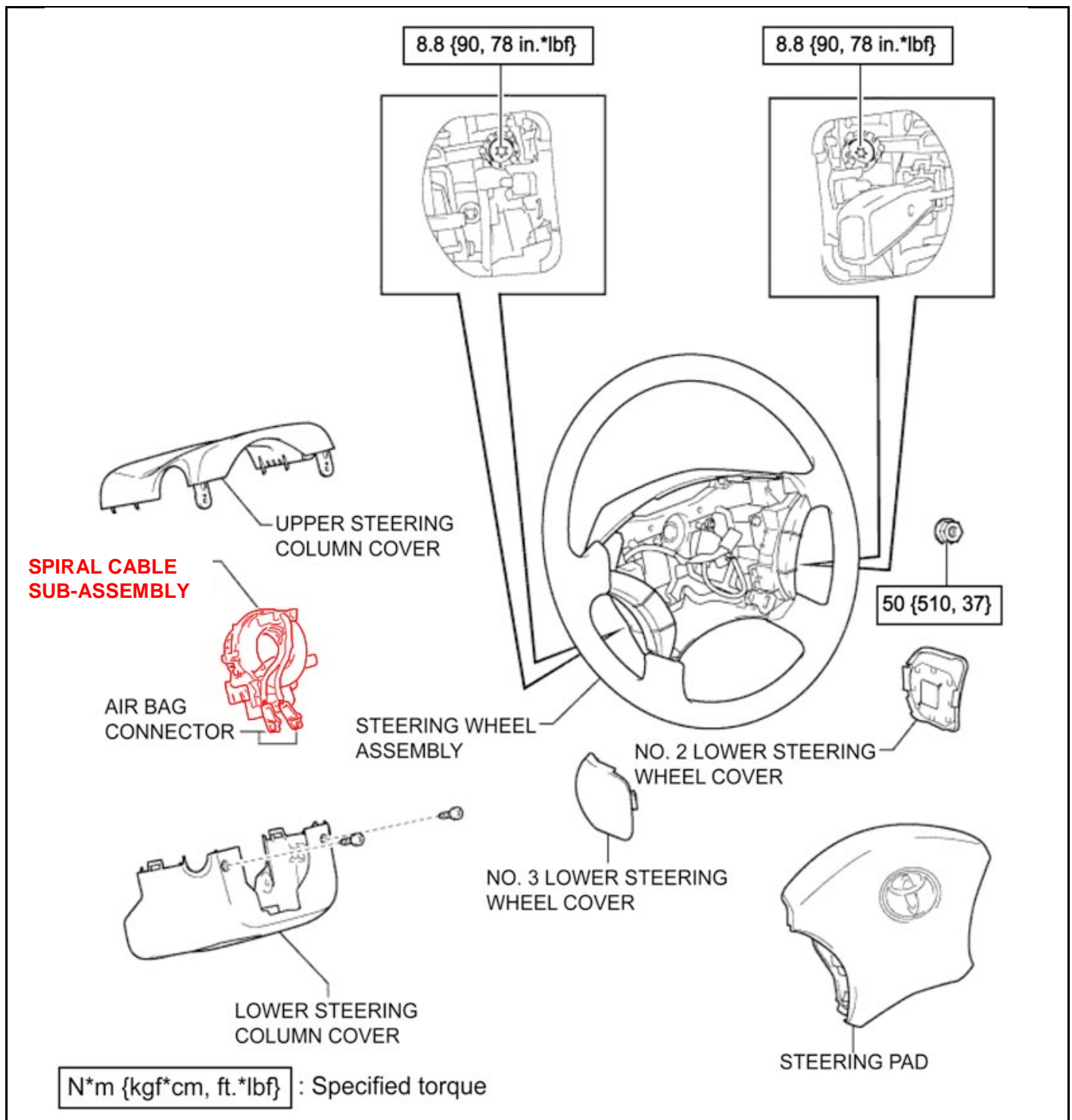
C. MATERIALS

- Protective tape
- Marker pen

IV. BACKGROUND

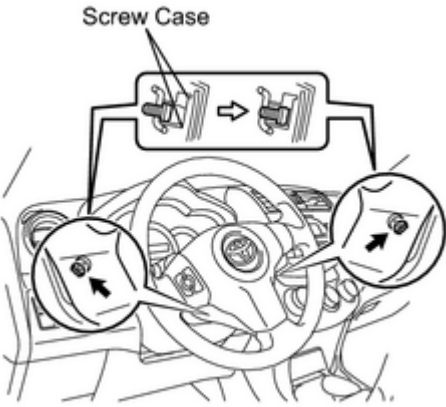
The steering column assembly in the involved vehicles contains a spiral cable assembly with electrical connections to the driver's airbag module that could become damaged when the steering wheel is turned. If this occurs, the air bag warning lamp will illuminate. In addition, the driver's air bag could become deactivated, causing it to not deploy in the event of a crash. This could increase the risk of injury to the driver.

V. SPIRAL CABLE REPLACEMENT



Note: This is a general picture of the steering column with the spiral cable each vehicle covered by this SSC may differ. Refer to the Technical Information System (TIS), using applicable vehicle and model year for the correct illustration.

NOTE: THIS STEP IS FOR RAV4 VEHICLES ONLY



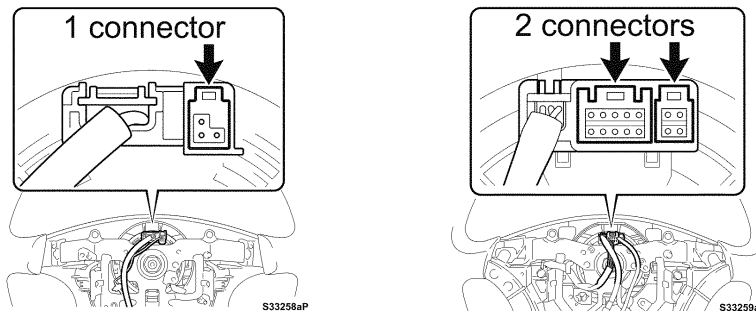
0. CHECK THE NUMBER OF SPIRAL CABLE CONNECTORS

- a. Remove steering pad assembly
 - Straighten the front wheels
 - Using a T30 "TORX" driver, loosen the 2 screws until the groove along each screw circumference catches on the screw case
 - Pull out the steering pad from the steering wheel and support the steering pad with one hand

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NOTE: THIS STEP IS FOR RAV4 VEHICLES ONLY

b. Check the number of spiral cable connectors



-1 Connectors – Go to Step 1

-2 Connectors - Campaign complete, return vehicle to customer

1. CHECK FOR DTCs

- a) Perform a Health Check.
- b) Check for any DTC's
- c) Record any DTC's

NOTE:

This campaign covers issues related to the spiral cable. If any other DTC's are Pending, Current, and/or History. Verify warranty coverage and refer to the appropriate repair manual on TIS for proper diagnosis and repair. If vehicle is not covered under warranty, advise the customer prior to diagnosing or repairing the vehicle.

2. REMOVE THE SPIRAL CABLE

	<ul style="list-style-type: none">• Follow all precautions as outlined on TIS before servicing the SRS system.• Wait at least 90 seconds after disconnecting the cable from the negative battery terminal to prevent airbag and seat belt pre-tensioner deployment.
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- a) Refer to the Technical Information System (TIS), using the applicable vehicle and model year for spiral cable removal:

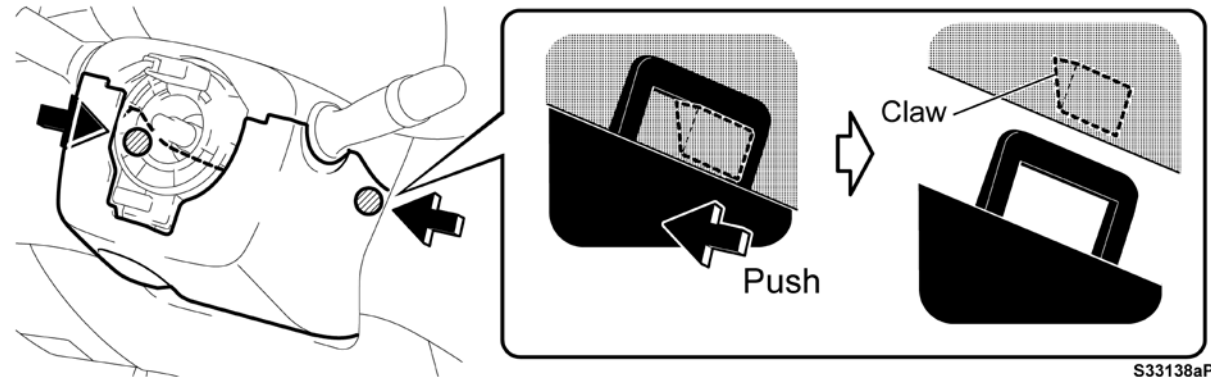
<u>2009 MY Corolla</u>	<u>2009 MY Highlander</u>	<u>2009 MY Tacoma</u>	<u>2009 MY Yaris</u>
<u>2010 MY Corolla</u>	<u>2010 MY Highlander</u>	<u>2010 MY Tacoma</u>	<u>2010 MY Yaris</u>
<u>2009 MY Corolla Matrix</u>	<u>2006 MY RAV4</u>	<u>2006 MY Yaris</u>	
<u>2010 MY Corolla Matrix</u>	<u>2007 MY RAV4</u>	<u>2007 MY Yaris</u>	
<u>2008 MY Highlander</u>	<u>2008 MY RAV4</u>	<u>2008 MY Yaris</u>	

Note: Prior to removing the steering column cover on the RAV4 review these steps to avoid damaging the claws.



Failure to observe the procedure instructed below could cause the claws of the steering column covers to be broken.

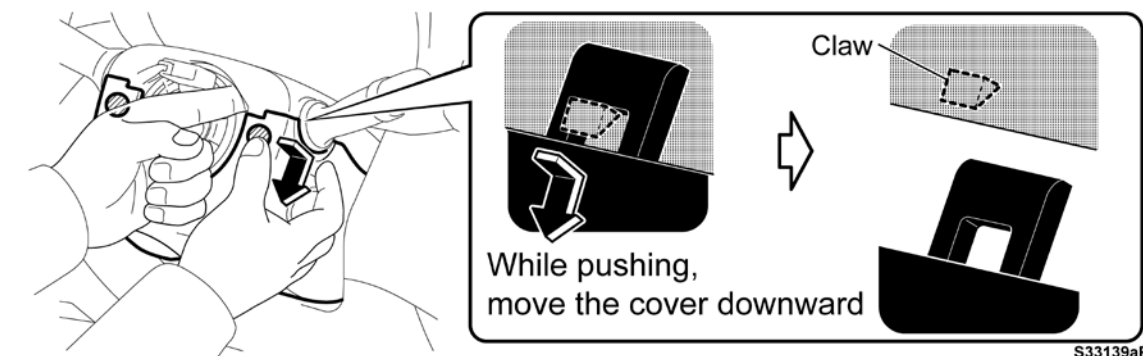
Disengage the claws of the upper column cover by pushing on the areas highlighted by the arrows, on each side as shown in the illustration below.



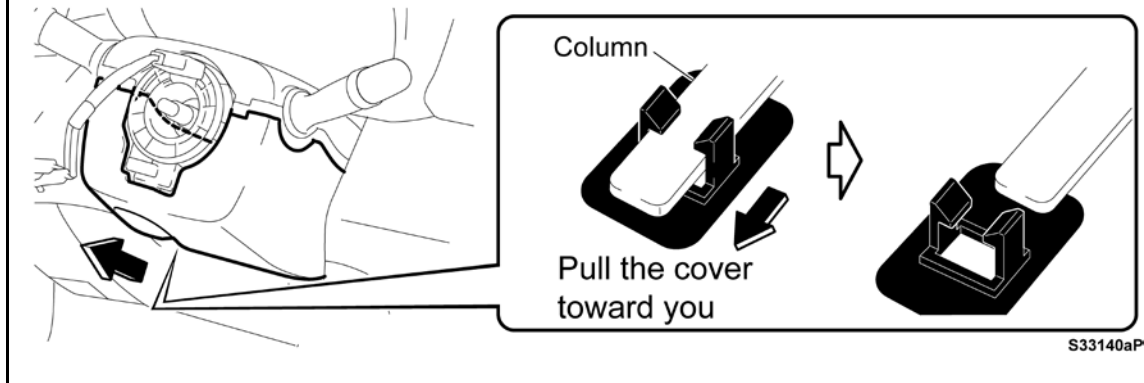
While holding the upper column cover and pushing on the areas highlighted in the illustration below, move the lower column cover downward.



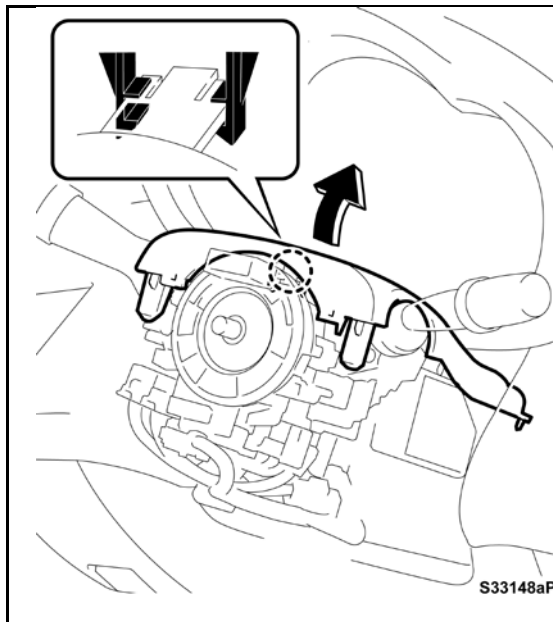
Even if a service hole is provided, *DO NOT* push on the cover with a screwdriver through that hole. Doing so could cause the claw to be broken.



Pull the lower column cover toward you to detach it from the steering column.

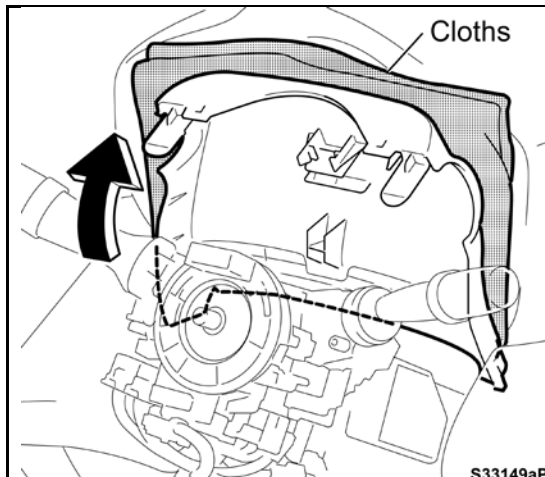


- a) Raise the upper column cover as shown in the illustration to disengage the claw.

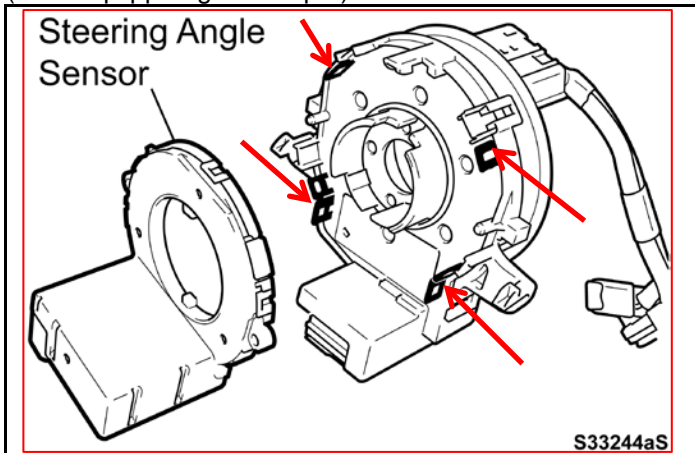


The back of the upper column cover is attached to the fabric *DO NOT* forcibly raise the cover.

- b) Place cloths over the meter hood, and then set the upper column cover against the hood.



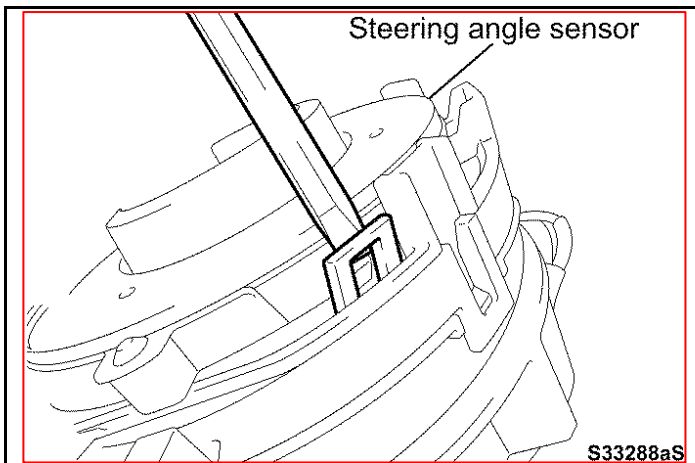
3. Remove the Steering Angle Sensor if equipped
(if not equipped go to Step 5)



a) Locate the 6 clips on the old spiral cable.

Note: The Steering Angle Sensor will be reused.

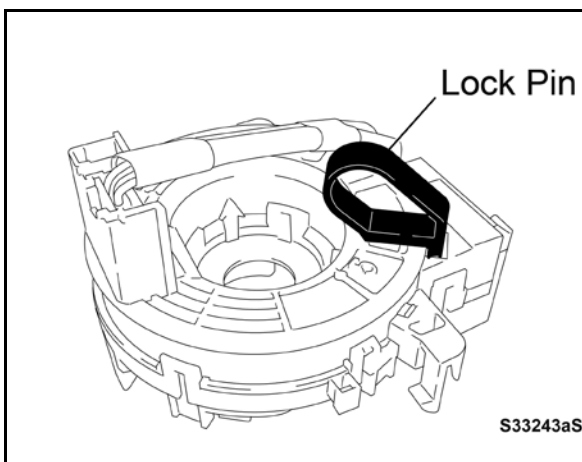
The Steering Angle Sensor has already been removed in this picture for clarity.



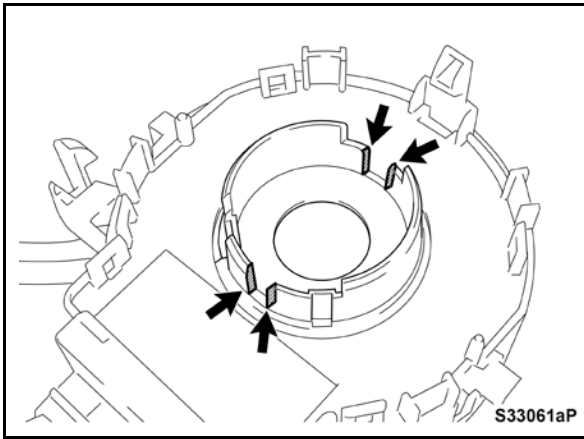
b) Break off the 6 clips from the spiral cable.

c) Disengage the steering angle sensor from the spiral cable.

4. Install the Steering Angle Sensor onto the new Spiral Cable

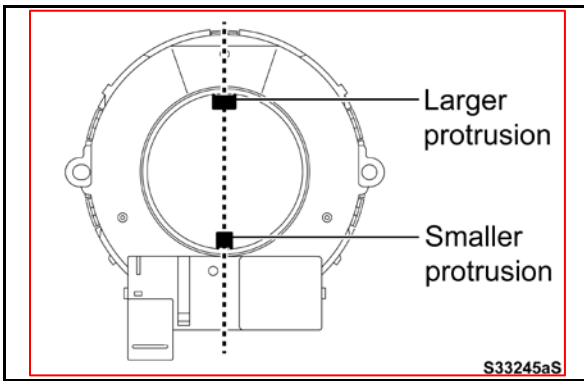


DO NOT break/snap off the lock pin until prior to installing the steering wheel. Otherwise, the center position of a new spiral cable will be misaligned.



a) In order to prevent noise from occurring, apply a small amount of grease (included in the new spiral cable kit) onto the surface at the 4 locations shown in the illustration.

NOTE: Apply approximately a 2mm thick covering on the surfaces as shown in the illustration.



b) Align the tabs of the steering angle sensor with the new spiral cable

Note: Place the large tab at the 12 o'clock position

c) Install the steering angle sensor onto the new spiral cable and ensure the 6 clips engage the 6 ears.

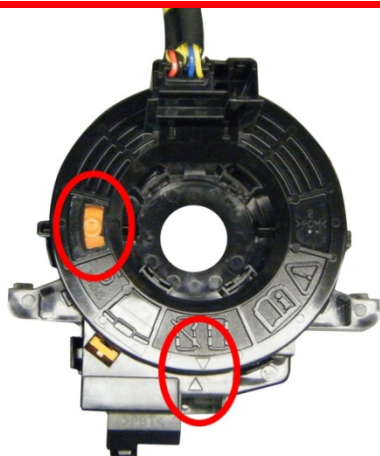
5. INSTALL THE NEW SPIRAL CABLE

Refer to the Technical Information System (TIS), using the applicable vehicle and model year for spiral cable installation:

<u>2009 MY Corolla</u>	<u>2009 MY Highlander</u>	<u>2009 MY Tacoma</u>	<u>2009 MY Yaris</u>
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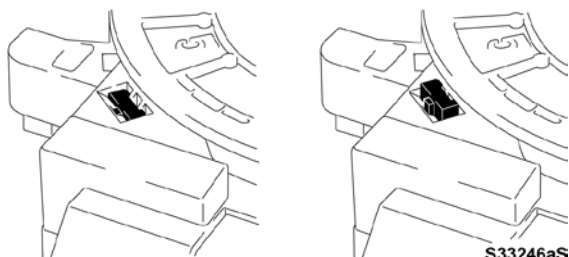


Prior to reinstalling the steering wheel ensure the following



- *DO NOT* rotate the spiral cable prior to installing the steering wheel, the new spiral cable will be correctly centered.
- If the spiral cable has been rotated, you must recenter the spiral cable prior to installation.
 1. Turn the cable counterclockwise by hand until it becomes hard to turn.
 2. Turn the cable clockwise about 2.5 turns.
 3. Confirm the alignment marks align *AND* the orange roller is visible in the window.

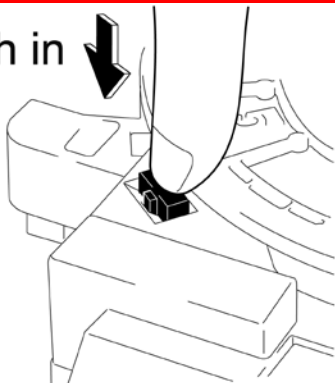
OK **NG**



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4. After removing the lock pin inspect the spiral cable for any portion of the lock pin that may remain in the spiral cable.

Push in



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5. If a portion of the lock pin protrudes above the surface of the spiral cable, push it in until it is flush or slightly below the surface.

6. TEST DRIVE VEHICLE

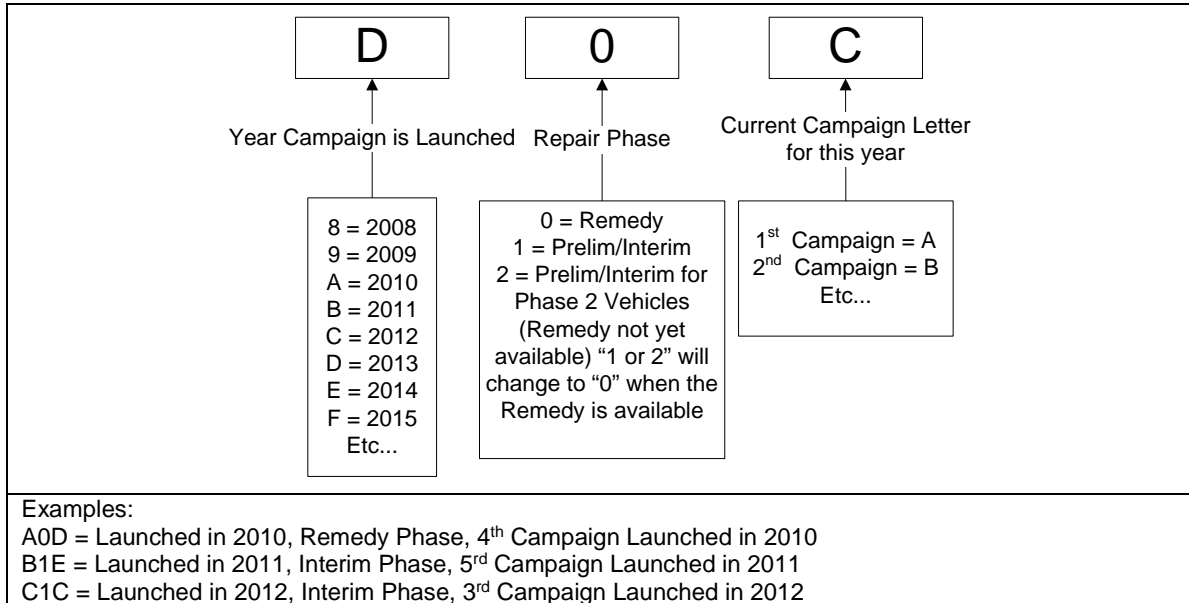
◀ VERIFY REPAIR QUALITY ▶

- Confirm there are no abnormal noises from the steering column
- Confirm the SRS warning light goes out after starting the vehicle
- Confirm there are no DTCs in the SRS and ABS systems

If you have any questions regarding this update, please contact your regional representative

VI. APPENDIX

A. CAMPAIGN DESIGNATION DECODER



B. CAMPAIGN PARTS DISPOSAL

As required by Federal Regulations, please make sure all campaign parts (original parts) removed from the vehicle are disposed of in a manner in which they will not be reused, **unless requested for parts recovery return.**