

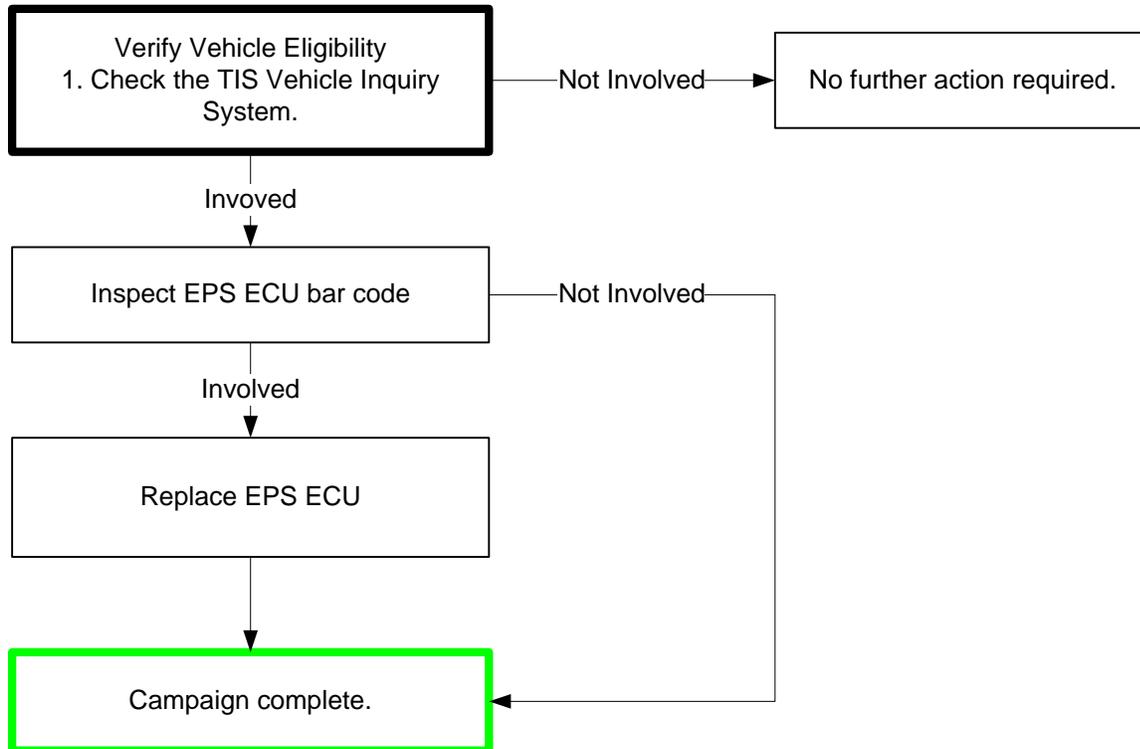
**TECHNICAL INSTRUCTIONS**  
**FOR**  
**SAFETY RECALL F0J**  
**POWER STEERING ECU INSPECTION**  
**CERTAIN 2015 MODEL YEAR HIGHLANDER & HIGHLANDER HV**

The repair quality of covered vehicles is extremely important to Toyota. All dealership technicians performing this procedure are required to successfully complete the most current version of the E-Learning course “Safety Recall and Service Campaign Essentials” To ensure that all vehicles have the repair performed correctly; technicians are required to currently hold at least one of the following certification levels to perform this operation:

- Toyota Certified Chassis
- Toyota Expert Chassis
- Master
- Master Diagnostic Technicians

It is the dealership’s responsibility to select technicians with the above certification level or greater to perform this repair. Carefully review your resources, the technician skill level, and ability before assigning technicians to this repair. It is important to consider technician days off and vacation schedules to ensure there are properly trained technicians available to perform this repair at all times.

## I. OPERATION FLOW CHART



## II. IDENTIFICATION OF AFFECTED VEHICLES

### A. COVERED VIN RANGE

- Check the TIS Vehicle Inquiry System to confirm the VIN is involved in this Safety Recall, and that the campaign has not already been completed prior to dealer shipment or 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

Part Number	Part Description	Quantity
89650-0E170	Highlander EPS ECU KIT (includes EPS ECU p/n 89650-0E110 and bolts)	1
89650-0E190	Highlander HV EPS ECU KIT (includes EPS ECU p/n 89650-0E140 and bolts)	1
Local Source	ZIP TIE	1

### B. TOOLS & EQUIPMENT

- Standard hand tools
- Techstream
- Torque wrench
- Bar Code Scanner\* (Datalogic 2430)

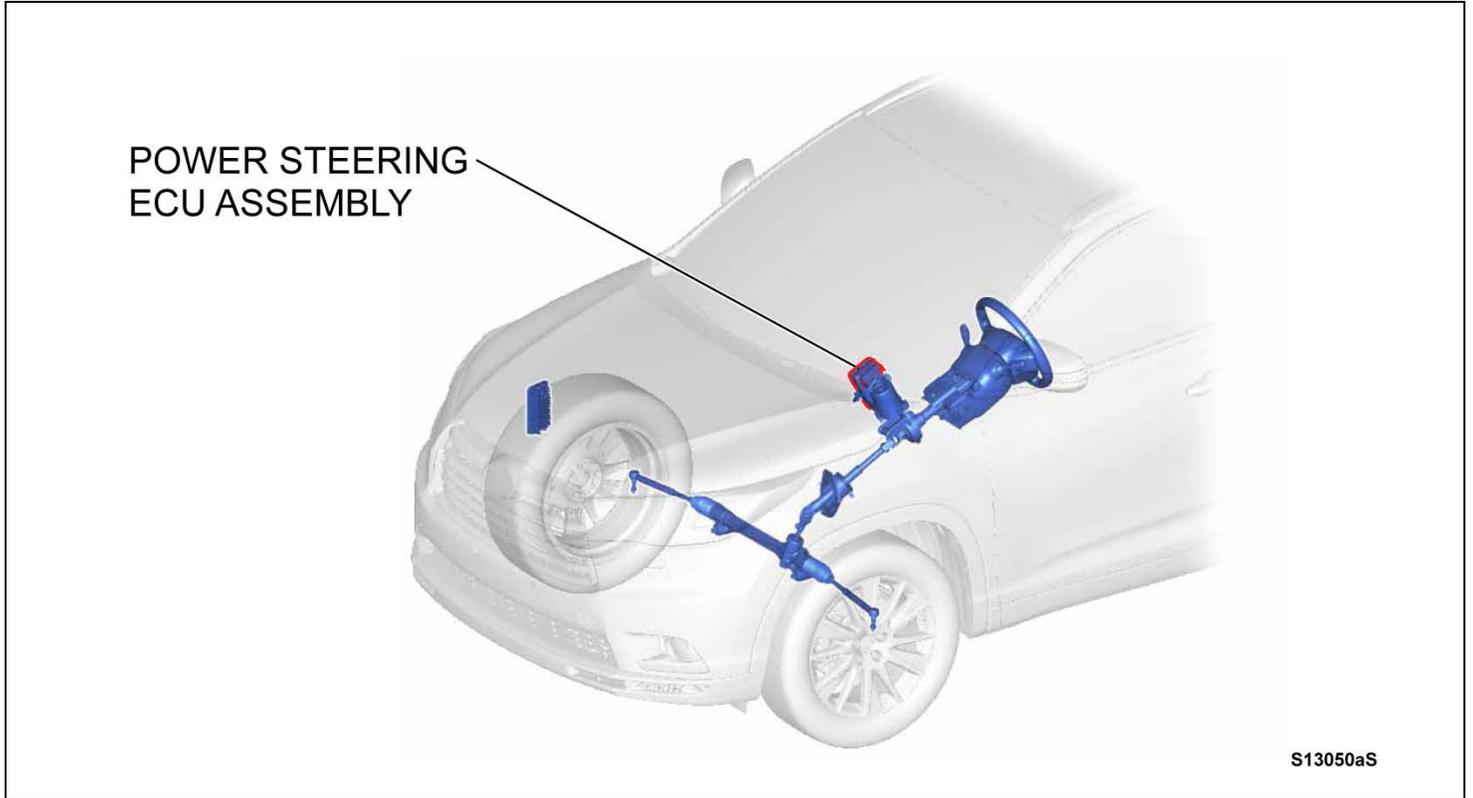
\*Bar code scanners were sent each dealer at the launch of this program.

**SST-** These are essential special service tools that the dealership should have.

Part Number	Description	Quantity
00002-06000-01	Plastic Pry Tool Set	1

## IV. BACKGROUND

A circuit board for the electric power steering (EPS) in the subject vehicles may have been damaged during its manufacturing process. This can result in the loss of power steering assist. Manual steering is maintained, but the loss of power steering assist results in increase steering effort at low vehicle speeds and increases the risk of a crash.



# V. COMPONENTS

FRONT DOOR OPENING TRIM  
WEATHERSTRIP LH

LOWER No.1 INSTRUMENT PANEL  
AIRBAG ASSEMBLY

10 (102, 7)

INSTRUMENT PANEL  
FINISH PANEL END LH

LOWER INSTRUMENT  
PANEL FINISH PANEL  
SUB-ASSEMBLY

HOOD LOCK CONTROL  
LEVER SUB-ASSEMBLY

COWL SIDE TRIM  
SUB-ASSEMBLY LH

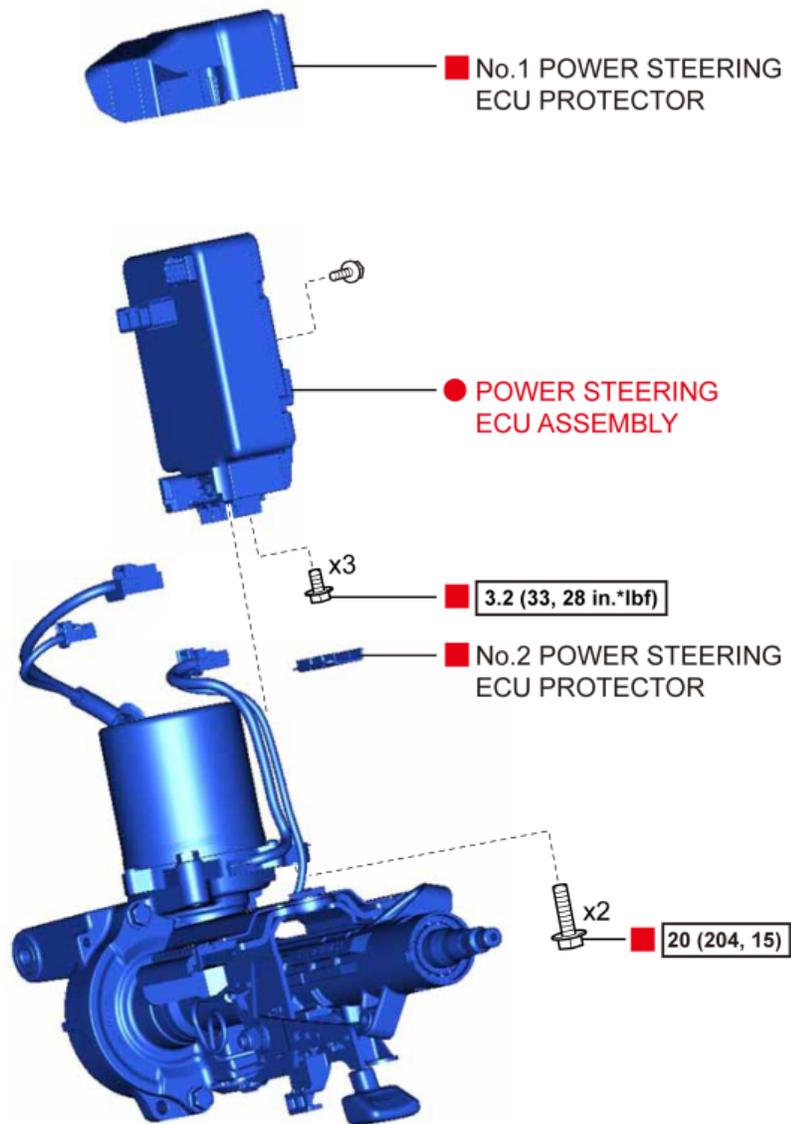
No.1 INSTRUMENT PANEL UNDER  
COVER SUB-ASSEMBLY

FRONT DOOR  
SCUFF PLATE LH

No.4 AIR DUCT  
SUB-ASSEMBLY

9.8 (100, 87 in.\*lbf)

S13048aS



■ : Replacement part if it is damaged or deformed

● : Component to be replaced

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

S13049bS

## VI. WORK PROCEDURE

### 1. CHECK FOR DTCs



**This campaign only covers the inspection of the EPS ECU.  
No other components in the steering system are covered by this campaign.**

- a) Using Techstream, perform a health check to confirm if there are any steering system related DTCs present in the system (**current, history or pending**).

#### NOTES:

- Ensure that the Techstream software is 10.0 or higher.
- On the “connect to vehicle” screen, enter the VIN number to ensure that the vehicle information is uploaded to TIS.

### 2. RECORD SYSTEM SETTINGS

- a) Record any audio and climate control settings prior to disconnecting the negative battery terminal.

### 3. PLACE THE FRONT WHEELS IN THE STRAIGHT AHEAD POSITION

### 4. RECORD THE POSITION OF THE STEERING WHEEL AND DRIVER’S SEAT

### 5. SLIDE THE DRIVER’S SEAT TO THE REARMOST POSITION AND TILT THE STEERING WHEEL UP.

### 6. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

- a) Always disconnect the negative terminal before working with any SRS components in order to prevent unintentional deployment.
- b) Wait 90 seconds or more after disconnecting the negative terminal before performing any work due to the backup power supply equipped to the airbag system

### 7. REMOVE THE LOWER No.1 PANEL AIRBAG

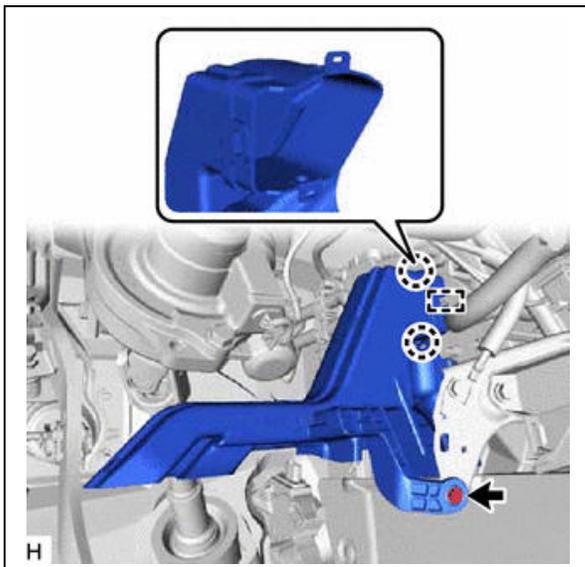
Refer to the Technical Information System (TIS), using the applicable vehicle and model year.

[Highlander](#)

[Highlander HV](#)

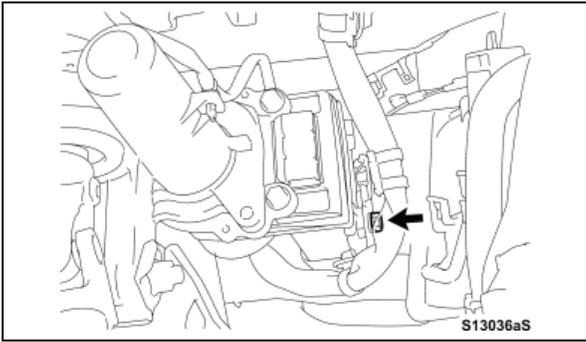
### 8. REMOVE THE No. 4 AIR DUCT

- a) Remove the bolt.
- b) Disengage the 2 claws and guide to remove the airduct.

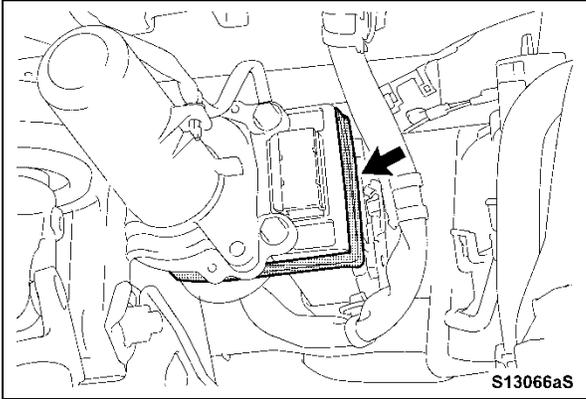


## 9. REMOVE THE EPS ECU

a) Remove the bolt from the EPS ECU.

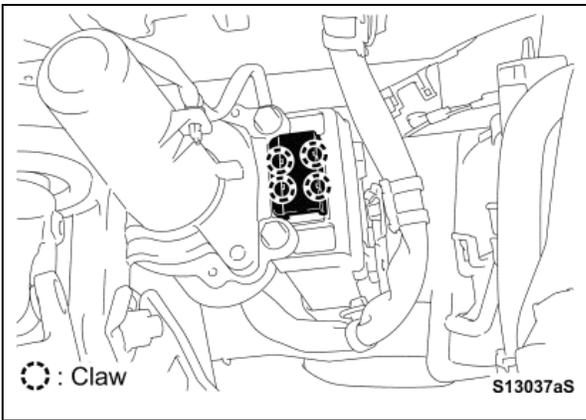


b) Remove and discard the vinyl tape from around the ECU and steering column.

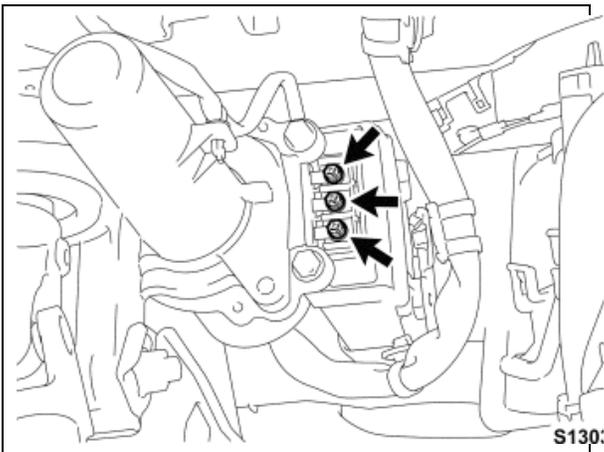


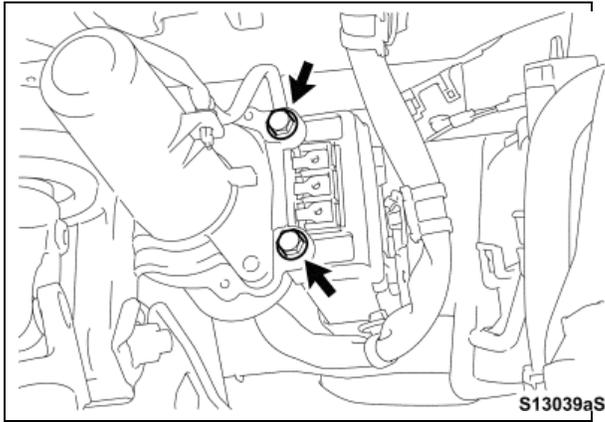
c) Disengage the 4 claws to remove the No. 2 power steering protector.

**NOTE: If the No. 2 protector is damaged replace it with a new one.**

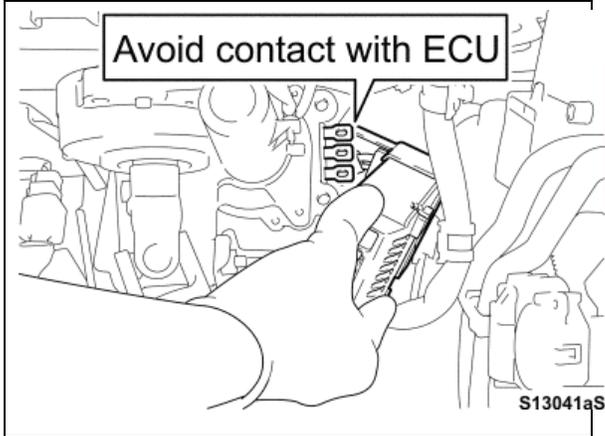


d) Remove the 3 terminal bolts.





e) Remove the 2 bolts for the EPS ECU.



f) Remove the EPS ECU.



Do not damage the terminals on the steering column when removing the ECU.

## 10. INSPECT EPS ECU BAR CODE

a) Go to <http://nds-f0j.imagespm.info/login.cfm>



b) Scan the VIN on the certification label located in the left front door jam.

**NOTE:** All information must be scanned into the web site. Manual entry is not available.

**Ensure that Datalogic scanner model # 2430 is used for this recall.**



c) Scan the bar code on the EPS ECU.

d) The web site will provide the results of the bar code scan.

## Website result

 **TOYOTA**

Safety Recall F0J - EPS Validation Website Logout

Validation Result Screen for Highlander and Highlander HV

Below are the results of the EPS ECU Validation for this vehicle, please print a copy of this validation result and file it with the R.O.

VIN: 5TDJKRFH4F000000000  
Model: Highlander LHD  
EPS ECU Serial Number: EATCEC0173037089889C12014120200626  
Result: The Vehicle EPS ECU is Not Affected by this campaign

# OK

Print website results and attach to repair order

Perform Steps 12 – 15 and 17

 **TOYOTA**

Safety Recall F0J - EPS Validation Website Logout

Validation Result Screen for Highlander and Highlander HV

Below are the results of the EPS ECU Validation for this vehicle, please print a copy of this validation result and file it with the R.O.

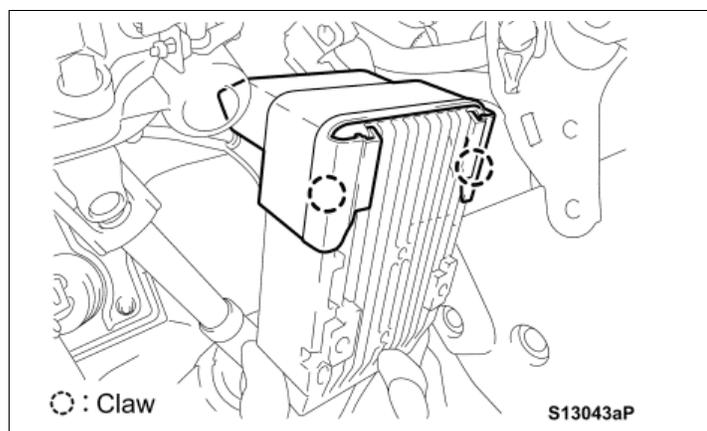
VIN: 5TDJKRFH4F000000000  
Model: Highlander LHD  
EPS ECU Serial Number: EATCEC0173037089889C12014120200626  
Result: **THE EPS ECU is AFFECTED, repair the vehicle as described in the TI.**

# NG

Print website results and attach to repair order

Install new EPS ECU

Perform Steps 11 - 17

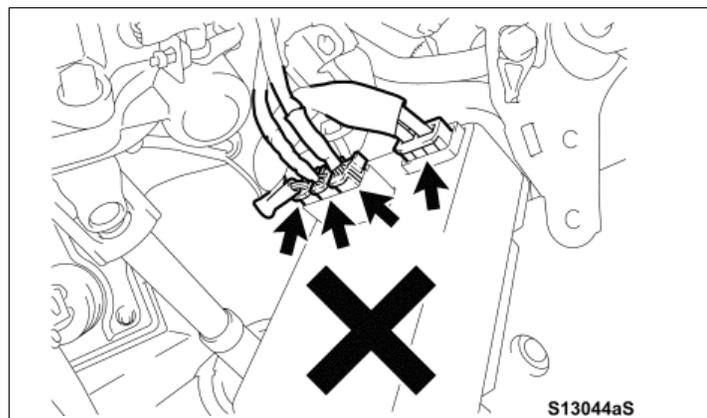


### 11. ECU NEEDS TO BE REPLACED

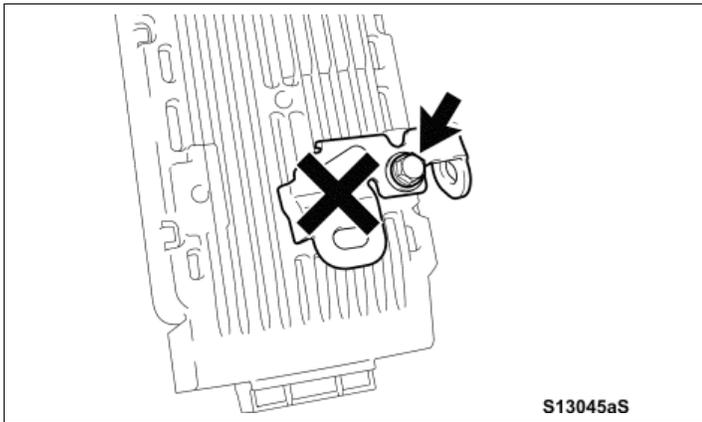
- a) Detach the 2 claws and remove the No. 1 protector from the ECU.



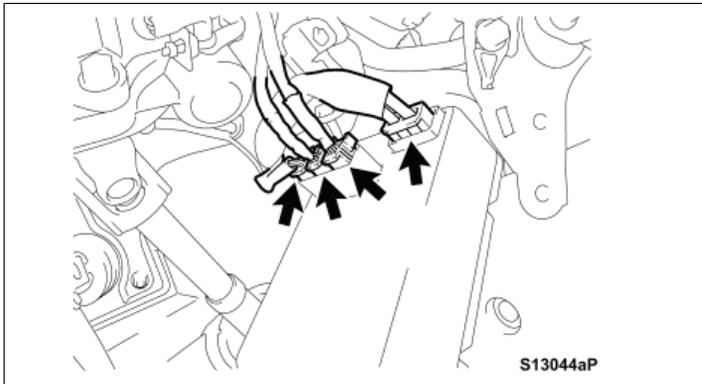
**If the No.1 EPS ECU protector is damaged during removal, replace it with a *NEW* one.**



- b) Disconnect the 4 Connectors from the EPS ECU.  
c) Mark the old EPS ECU so it is not reused.



d) Remove the bolt and wire harness bracket from the **NEW** EPS ECU and discard.

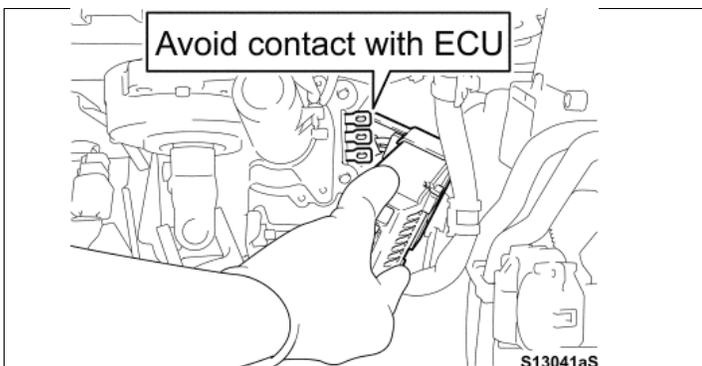


e) Reconnect the 4 connectors to the new EPS ECU.



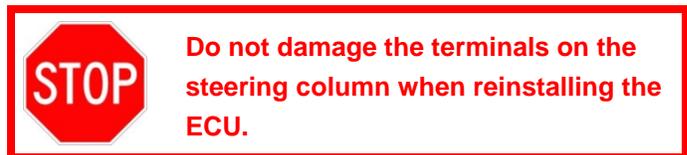
f) Reengage the 2 claws to reinstall the No. 1 protector onto the ECU.

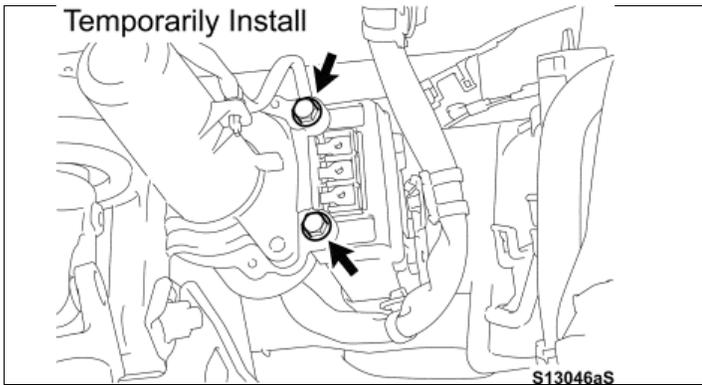
g) Proceed to Step 12.



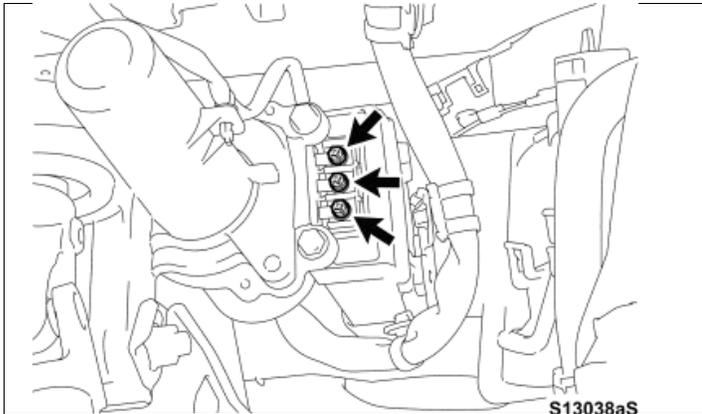
## 12. REINSTALL THE EPS ECU OR NEW ECU

a) Install the EPS ECU.



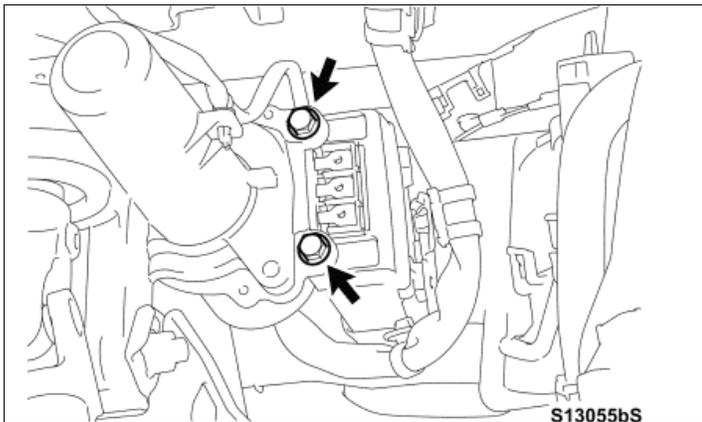


- b) Temporarily install the 2 **new** bolts for the EPS ECU.



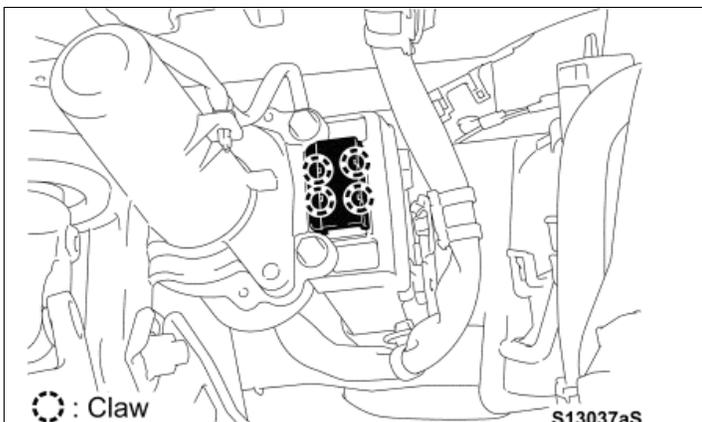
- c) Install the 3 **new** terminal bolts.

**TORQUE:**  
**3.2 N\*m (33 kgf\*cm, 28 in\*lbf)**



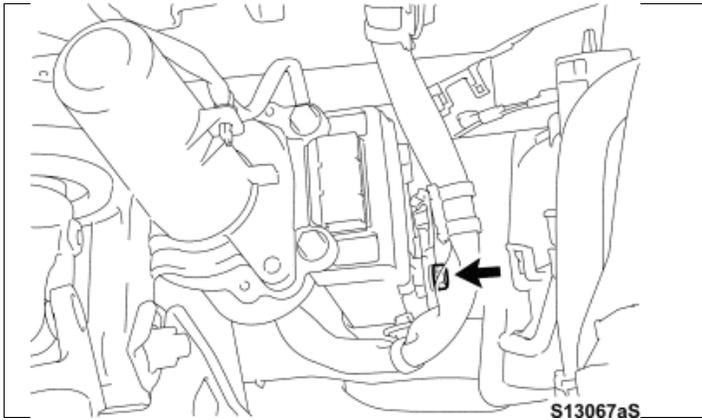
- d) Torque the 2 ECU bolts.

**TORQUE:**  
**20 N\*m (204 kgf\*cm, 15 ft\*lbf)**

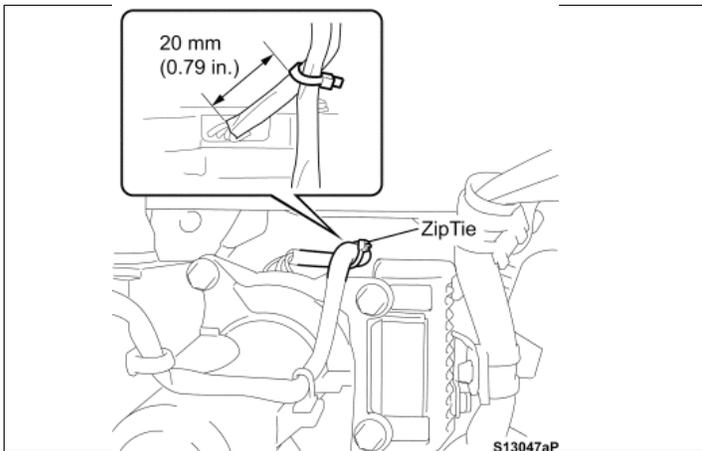


- e) Reinstall the No.2 EPS ECU protector.

**NOTE: If the No.2 protector is damaged replace it with a new one.**

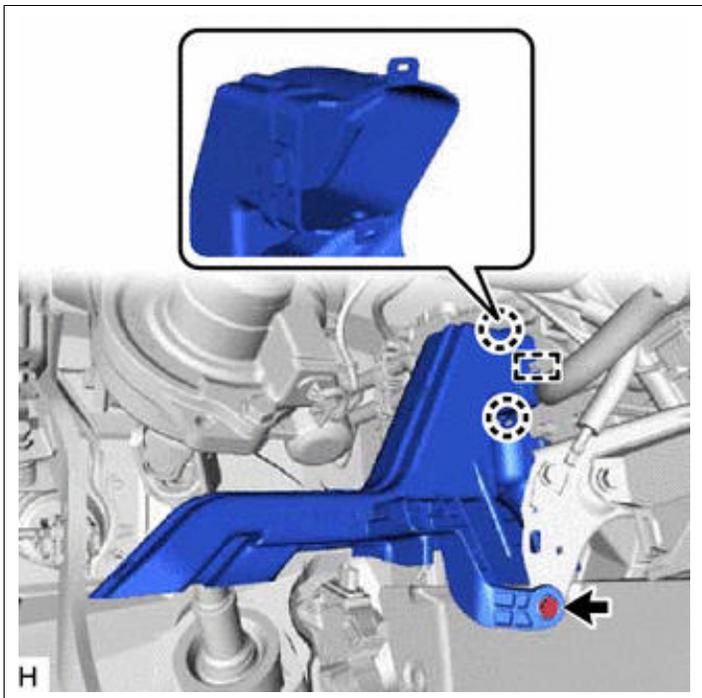


f) Reinstall the clamp bracket and bolt.



g) Secure the 2 harnesses with a zip tie.

**NOTE: Place the zip tie on the green protective tubing approximately 20mm from the end as shown**



### 13. REINSTALL THE No. 4 AIR DUCT

### 14. REINSTALL THE LOWER No.1 PANEL AIRBAG

Refer to the Technical Information System (TIS), using the applicable vehicle and model year.

[Highlander](#)

[Highlander HV](#)

**15. RECONNECT NEGITIVE BATTERY CABLE**

a) Perform any needed system intializations

**16. ASSIST MAP WRITING (EPS ECU REPLACEMENT ONLY)**

Refer to the Technical Information System (TIS), using the applicable vehicle and model year.

[Highlander](#)

[Highlander HV](#)

**17. CHECK AND CLEAR ANY DTC's**

**◀ VERIFY REPAIR QUALITY ▶**

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

**VII. APPENDIX**

**A. CAMPAIGN DESIGNATION DECODER**

