

Toyota Motor Sales, U.S.A., Inc. 19001 South Western Avenue Torrance, CA 90501 (310) 468-4000

To: All Toyota Dealer Principals, Service Managers, Parts Managers

Subject: Special Service Campaign (SSC) – 90A 2006 – 2007 Model Year Highlander HV and 2007 Model Year Camry HV Electric Power Steering Link (EPS) Assembly

Toyota will initiate a Special Service Campaign to replace the Electric Power Steering Link (EPS) Assembly in certain 2006 – 2007 model year Highlander HV and 2007 model year Camry HV's.

In certain 2006 – 2007 model year Highlander HV and 2007 model year Camry HV's, due to insufficient adhesion between the permanent magnets and the rotor of the EPS, the motor may gradually lose torque when the wheel is turned to the complete left or right position. If this condition occurs, customers may experience a noticeable gradual increase in the steering effort necessary at low speeds. This condition may be most perceptible when parking the vehicle.





The following vital information is provided to inform you and your staff of the owner notification phase of the campaign and your degree of involvement.

1. Owner Notification Letter Mailing Date

The owner notification will commence in late January, 2009, approximately one week after the dealer notification.

Please note that only owners of the affected vehicles will be notified. If your dealership is contacted by an owner who has not yet received a notification, please **verify eligibility by confirming through Dealer Daily/TIS prior to performing repairs.** Dealers should perform the repair as outlined in the attached Technical Instructions.

2. Vehicles in Dealer Stock

Dealers are requested to perform SSC procedures on any vehicles in their stock prior to sale or lease. Vehicle SSC completion can be verified through TIS.

3. <u>Dealer/Owner Lists</u>

VIN lists (VIN only due to Privacy Laws) for SSC 90A have been distributed to Service and Parts Managers. These lists are based upon the dealership's Primary Marketing Area (PMA) or selling dealership where applicable. Based upon our records, a dealership which does not have an affected vehicle in their PMA will receive a report indicating so.

4. <u>Number and Identification of Involved Vehicles</u>

There are approximately 47,900 2006 through 2007 model year Highlander HV, and 24,500 Camry HV's involved in the U.S.

Model	\\/\/	Year	VIN Range		
WOUEI	VVIVII		VDS	Ranges	
HIGHLANDER HV	JTE	2006		0001012 - 0016484	
		2007	DVVZTA	0016485 - 0017903	
		2006	EW21A	0001052 - 0033953	
		2007		0033956 - 0036624	
			GW21A	0016486 - 0017906	
			HW21A	0033954 - 0036620	
CAMRY HV	JTN	2007	BB46K	3000151 - 3026447	

Please note that not all vehicles in the VIN range are affected by this SSC. If your dealership is contacted by an owner of an involved vehicle, who has not yet received a notification, please **verify** *eligibility by confirming through Dealer Daily/TIS prior to performing repairs*. Dealers should perform the repair as outlined in the attached Technical Instructions.

5. <u>Parts Ordering</u>

The necessary parts can be ordered through the dealer's facing PDC. Please refer to the table below and the Technical Instructions for part number information.

Model Application	Part No.	Part Name	Qty/Unit
	04007-06448	Electric Power Steering Link Kit	1
	04007-68148	EPS Link Assembly, Repair Kit	1
Camry HV	04007-06233	Electric Power Steering Link Kit	1

6. <u>Repair Procedures</u>

Refer to the attached Technical Instructions.

7. <u>Reimbursement Procedures</u>

Submit Special Service Campaign claims following the procedures described in the Toyota Warranty Policy and Procedures Manual.

The operation codes to be used for this campaign are:

SSC #	Op. Code	Description	Flat Rate Hour
90A 8613	8613CL	Replace the EPS Assy for Highlander HV	5.0 hr/vehicle
	8613CM	Replace the EPS Assy for Camry HV	4.3 hr/vehicle

NOTE: The above flat rate times include 0.1 hour for administrative costs per unit for the dealership.

Please review this entire package with your Service and Parts staff to familiarize them with the proper step-bystep procedures required to implement this Special Service Campaign.

Thank you for your cooperation. TOYOTA MOTOR SALES, U.S.A., INC.

Special Service Campaign 90A Certain 2006-2007 Highlander HV and 2007 Camry HV Electric Power Steering Link (EPS) Assembly Replacement

Dear Toyota Owner:

Thank you very much for your patronage of Toyota. We are dedicated to providing vehicles of outstanding quality and value. As part of our continuing efforts to provide superior customer satisfaction, Toyota is announcing a Special Service Campaign on certain 2006 - 2007 model year Highlander HV and 2007 model year Camry HV vehicles to replace the Electric Power Steering Link (EPS) Assembly.

What is the condition?

On certain Toyota vehicles, you may experience a noticeable gradual increase in the steering effort necessary at low speeds when turning the steering wheel to the complete left or right position. This condition may be most perceptible when parking your vehicle.

What is the cause of the condition?

This condition is caused by an insufficient adhesion between the permanent magnets and the rotor of the Electric Power Steering Link (EPS) Assembly, eausing the motor to gradually lose torque when the wheel is turned to the complete left or hight position.

What will Toyota do?

Any Toyota dealer will replace the Electric Power Steering Link (EPS) Assembly with an improved one at NO CHARGE.

What should you do?

Please contact your authorized Toyota dealer to schedule an appointment to replace the Electric Power Steering Link (EPS) Assembly with a newly designed one. Based upon your specific vehicle model, the repair may take up to approximately five hours. However, depending upon the dealer's work schedule, it may be necessary to make your vehicle available for a longer period of time.

Please present this notice to the dealer when you bring the vehicle in for your service appointment.

If you would like to update your vehicle ownership or contact information, please go to <u>www.toyota.com/ownersupdate</u>. You will need your full 17-digit Vehicle Identification Number (VIN) to input the new information.

What if you have other questions?

Your local Toyota dealer will be more than happy to answer any of your questions and set up an appointment to perform the repair. If you require further assistance, you may contact the Toyota Customer Experience Center at 1-888-270-9371 Monday through Friday, 5:00 am to 6:00 pm, or Saturday 7:00 am through 4:00 pm Pacific Standard Time.

We have sent this notice in the interest of your continued satisfaction with our products, and we sincerely regret any inconvenience this condition may have caused you.

Thank you for driving a Toyota.

Sincerely,

TOYOTA MOTOR SALES, U.S.A., INC.

ΤΟΥΟΤΑ

Special Service Campaign (SSC 90A) Q&A

2006 through 2007 Model Year Highlander HV and 2007 Model Year Camry HV vehicles Electric Power Steering Link (EPS) Assembly Replacement

Q1: What is the condition?

A1: Customers may experience a noticeable gradual increase in the steering effort necessary at low speeds when turning the steering wheel to the complete left or right position. This condition may be most perceptible when parking the vehicle.

Q2: What is the cause of this condition?

A2: This condition is caused by an insufficient adhesion between the permanent magnets and the rotor of the Electric Power Steering Link (EPS) Assembly, causing the motor to gradually lose torque when the wheel is turned to the complete left or right position.

Q3: Are there any warnings that this condition exists?

A3: Yes, the steering effort will gradually increase and an abnormal noise may be heard if the wheel is turned to the complete left or right position.

Q4: Which and how many vehicles are involved?

A4: There are approximately 72,400 vehicles involved.

Model Year	Affected Vehicles	Approx UIO
2007	Camry HV	24,500
2006 – 2007	Highlander HV	47,900

Q5: Are there any other Toyota or Lexus vehicles involved?

A5: Yes, this condition also affects approximately 153,900 Lexus vehicles involved in the U.S.

Affected Vehicle	Approx UIO
2006 model year GS300	43,800 (24,600 2WD, 19,200 AWD)
2007 model year GS350	4,500 (2,400 2WD, 2,100 AWD)
2006 through 2007 model year GS430	7,600
2007 model year GS450h	1,800
2006 through 2007 model year IS250	40,600 (24,200 2WD, 16,400 AWD)
2006 through 2007 model year IS350	17,500
2006 through 2007 model year RX400h	38,100 (5,600 2WD, 32,500 AWD)

Q6: What is the production period of the affected vehicles?

A6: The affected vehicles were produced:

Model	Production Range	
2006 through 2007 model year Highlander HV	Mid February 2005 – Mid September 2006	
2007 model year Camry HV	Early March 2006 – Late September 2006	

Q7: How many incidents of this condition have been reported?

A7: There have been 18 cases of this condition reported in the affected vehicles in the United States from this condition.

Q8: Have there been any accidents reported?

A8: No. There have been no accidents reported which relate to this condition.

Q9: What is Toyota going to do?

A9: Owners of the involved vehicles will receive a Special Service Campaign notification by first class mail beginning in late January 2009. Toyota dealers will replace the Electric Power Steering (EPS) Assembly with an improved one at **NO CHARGE** to the customer.

Q10: How long will the repair take?

A10: The repair will take approximately five hours. However, depending upon the dealer's work schedule, it may be necessary to make the vehicle available for a longer period of time.

<u>Q11:</u> What should an owner do if they experience the condition, or have immediate concerns <u>about their vehicle?</u>

A11: If an owner has any immediate concerns they are requested to contact their local Toyota dealer for diagnosis, and if applicable, repair.

TECHNICAL INSTRUCTIONS

FOR

SPECIAL SERVICE CAMPAIGN 90A

ELECTRIC POWER STEERING LINK (EPS) ASSEMBLY REPLACEMENT

2007 CAMRY HV & 2006 THROUGH 2007 HIGHLANDER HV

I. OPERATION FLOW CHART



II. IDENTIFICATION OF AFFECTED VEHICLES

A. AFFECTED VIN RANGE

Madal	\A/MI	Year	VIN Range		
woder	VVIVII		VDS	Ranges	
Camry HV	JTN	2007	BB46K	3000151 - 3026447	
Highlander HV	JTE	2006	DW21A	0001012 - 0016484	
			EW21A	0001052 - 0033953	
			GW21A	0001541 - 0013007	
			HW21A	0001275 - 0020710	
		2007	DW21A	0016485 - 0017903	
			EW21A	0033956 - 0036624	
			GW21A	0016486 - 0017906	
			HW21A	0033954 - 0036620	

III. PREPARATION

A. PARTS

Model	Part Number	Part Description	Quantity			
Camry HV	04007-06233	EPS Kit	1			
	The kit above include	es the following parts:				
44200-33471 = EPS	S Assembly = Qty 1	95381-03025 = Clip = Qty 1				
Model	Part Number	Part Description	Quantity			
Highlander HV	04007-06448	EPS Kit	1			
The kit above includes the following parts:						
44200-48132 = EPS	S Assembly = Qty 1	95381-03220 = Clip = Qty 1				
Model	Part Number	Part Description	Quantity			

woder	Fart Number	Fart Description	Quantity		
Highlander HV	04007-68148	EPS Assy, Repair Kit	1		
The kit above includes the following parts:					
17451-22070 = Exhaust Pipe Gasket = Qty 1 90917-06089 = Exhaust Pipe Gasket = Qty 2					
90917-06046 = Exhau	st Pipe Gasket = Qty 1	90179-10070	= Nut = Qty 4		

B. Tools

- Standard tools and Torque wrench
- SST 09628-00011 or 09960-20010 (Ball Joint Puller) or equivalent
- Techstream

IV. BACKGROUND AND COMPONENTS

In certain '06 – '07 MY Highlander HV and '07 MY Camry HV, due to insufficient adhesion between the permanent magnets and the rotor of the EPS, the motor may gradually lose torque when the wheel is turned to the complete left or right position. If this condition occurs, customers may experience a noticeable gradual increase in the steering effort necessary at low speeds. This condition may be most perceptible when parking the vehicle.



V. WORK PROCEDURE

THIS WORK PROCEDURE IS TO BE PERFORMED BY A HV CERTIFIED TECHNICIAN ONLY. FOLLOW ALL NECESSARY HV SAFETY PRECAUTIONS DURING VEHICLE REPAIR.



THIS TI CONTAINS REPLACEMENT OF THE EPS ASSEMBLY FOR BOTH THE CAMRY HV AND THE HIGHLANDER HV. REFER TO THE FOLLOWING PAGES FOR VEHICLE SPECIFIC PROCEDURES:

- CAMRY HV EPS ASSEMBLY REPLACEMENT PROCEDUREPAGE 3
- HIGHLANDER HV EPS ASSEMBLY REPLACEMENT PROCEDUREPAGE 7

AFTER REPLACING THE EPS ASSEMBLY:

- CLEAR THE ROTATION ANGLE SENSOR CALIBRATION VALUE.
- INITIALIZE THE ROTATION ANGLE SENSOR.
- CALIBRATE THE TORQUE SENSOR TO THE ZERO POINT.
- INITIALIZE THE SFI SYSTEM.

A. CAMRY HV EPS ASSEMBLY REPLACEMENT PROCEDURE

- Camry HV EPS Removal -







1. POSITION THE STEERING WHEEL

- a) Make sure the front wheels are in a straight-ahead position and the steering wheel is centered.
- b) Using the seat belt, hold the steering wheel in the centered position to prevent damage to the spiral cable.

NOTE:

This operation is important in order to prevent damage to the spiral cable.

- 2. REMOVE THE LUGGAGE TRIM SERVICE HOLE COVER
 - a) Release the 2 claws and remove the luggage trim service hole cover.
- 3. DISCONNECT THE CABLE FROM NEGATIVE BATTERY TERMINAL
- 4. LIFT THE VEHICLE
- 5. REMOVE THE FRONT WHEELS
- 6. SEPARATE THE STEERING INTERMEDIATE SHAFT SUB-ASSEMBLY
 - a) Remove the bolt.



b) Separate the steering intermediate shaft sub-assembly from the EPS assembly.



7. SEPARATE TIE ROD ASSEMBLY LH

a) Remove the cotter pin and the nut.

- Camry HV EPS Removal Continued -



- b) Using the SST 09628-00011 *or* 09960-20010 *or* equivilant, separate the tie rod assembly LH from the steering knuckle.
- c) Repeat the procedure for the RH side.

NOTE:

- Hang the SST with a string, etc. to prevent it from falling.
- Do not damage the front disc brake dust cover.
- Do not damage the ball joint dust cover.
- Do not damage the steering knuckle.



8. SEPARATE THE FRONT STABILIZER LINK ASSEMBLY (FOR TMMK MADE)

a) Remove the nut and the front stabilizer link assembly LH.b) Perform the same procedure for the RH side.

NOTE:

If the ball joint turns together with the nut, use a 6mm hex socket wrench to hold the stud.



9. SEPARATE THE FRONT STABILIZER LINK ASSEMBLY (FOR TMC MADE)

- a) Remove the nut and the front stabilizer link assembly LH.
- b) Perform the same procedure for the RH side.

NOTE:

If the ball joint turns together with the nut, use a wrench (17 mm) to hold the stud.



10. REMOVE THE EPS ASSEMBLY

a) Lift the front stabilizer bar up.

- Camry HV EPS Removal Continued -



- b) Disconnect the 3 wire harness connectors from the EPS assembly.
- c) Remove the 2 wire harness clamps from the bracket.

 Remove the 2 bolts, 2 nuts, and the EPS assembly from the front frame assembly.

NOTE:

Turn the bolt while holding the nut.

- e) Loosen the bolts from the rear of the cross member.
- Remove the EPS assembly from the right hand side of the vehicle.



- Camry HV EPS Installation -



1. INSTALL THE NEW EPS ASSEMBLY.

NOTE:

Remove the protective connector caps after installing the EPS assembly into the vehicle.

STOP

REINSTALL THE COMPONENTS IN THE REVERSE ORDER OF REMOVAL. PLEASE NOTE THAT THE TORQUE SPECIFICATIONS ARE INCLUDED IN THE ILLUSTRATION BELOW.



2. RECONNECT THE CABLE TO NEGATIVE BATTERY TERMINAL

3. PERFORM INITIALIZATIONS

4. INSPECT AND ADJUST THE FRONT WHEEL ALIGNMENT

B. HIGHLANDER HV EPS ASSEMBLY REPLACEMENT PROCEDURE

- Highlander HV EPS Removal -







1. POSITION THE STEERING WHEEL

- a) Make sure the front wheels are in a straight-ahead position and the steering wheel is centered.
- b) Using the seat belt, hold the steering wheel in the centered position to prevent damage to the spiral cable.

NOTE:

This operation is important in order to prevent damage to the spiral cable.

- 2. DISCONNECT THE CABLE FROM NEGATIVE BATTERY TERMINAL
- 3. LIFT THE VEHICLE
- 4. REMOVE THE FRONT WHEELS
- 5. REMOVE THE ENGINE UNDER COVER NO. 2
 - a) Remove the 2 bolts, the 2 screws and the clip, and then remove engine under cover No. 2.
- 6. SEPARATE THE STEERING INTERMEDIATE SHAFT SUB-ASSEMBLY
 - a) Remove the bolt.



b) Separate the steering intermediate shaft sub-assembly from the EPS assembly.



7. SEPARATE THE TIE ROD ASSEMBLY

- a) Separate tie rod assembly for the LH side.
- b) Remove the cotter pin and the nut.

- Highlander HV EPS Removal Continued -



c) Using the SST 09628-00011 *or* 09960-20010 *or* equivilant, separate the tie rod assembly LH from the steering knuckle.

NOTE:

- The picture to the right shows SST 09628-00011
- Hang the SST with a string, etc. to prevent it from falling.
- Do not damage the front disc brake dust cover.
- Do not damage the ball joint dust cover.
- Do not damage the steering knuckle.
- d) Separate tie rod assembly RH from the steering knucle.



8. SEPARATE THE FRONT STABILIZER LINK ASSEMBLY

a) Remove the nut and the front stabilizer link assembly LH.

NOTE:

If the ball joint turns together with the nut, use a 6mm hex socket wrench to hold the stud.

b) Remove the nut and the front stabilizer link assembly RH.

9. REMOVE THE EXHAUST PIPE SUB-ASSEMBLY FRONT NO. 3

- a) Disconnect the heated oxygen sensor connector.
- b) Remove the wire harness clamp from the bracket.



- c) Remove the 4 bolts and 2 nuts, and the exhaust pipe subassembly front No. 3.
- d) Remove the 3 gaskets.



- Highlander HV EPS Removal Continued -



10. REMOVE THE EXHAUST PIPE ASSEMBLY FRONT

- a) Disconnect the heated oxygen sensor connector.
- b) Remove the wire harness clamp.
- c) Remove the 2 nuts and the exhaust pipe assembly front.d) Remove the gasket.



11. REMOVE THE MANIFOLD STAY

a) Remove the bolt and nut, and the manifold stay.



12. REMOVE THE FRONT STABILIZER BRACKETS LH

- a) Remove the 2 bolts and the front stabilizer bracket No. 1 LH.
- b) Remove the front stabilizer bracket No. 2 LH from the front stabilizer bar bushing No. 1.



13. REMOVE THE FRONT STABILIZER BRACKETS RH

- a) Remove the 2 bolts and the front stabilizer bracket No. 1 RH.
- b) Remove the front stabilizer bracket No. 2 RH from the front stabilizer bar bushing No. 1.

14. REMOVE THE FRONT STABILIZER BAR BUSHING NO. 1

a) Remove the 2 front stabilizer bar bushings No. 1 from the front stabilizer bar.

- Highlander HV EPS Removal Continued -



15. REMOVE THE EPS ASSEMBLY

- a) Remove bolt (A) and the wire harness bracket from the EPS assembly.
- b) Remove bolt (B) and the power steering wire from the EPS assembly.
- c) Remove bolt (C) and the power steering wire from the EPS assembly.
- d) Disconnect the 3 wire harness connectors from the EPS assembly.



- e) Remove the 2 bolts, 2 nuts, and the EPS assembly from the front frame assembly.
- f) Remove the EPS assembly from the right hand side of the vehicle.

NOTE: Turn the bolt while holding the nut.

- Highlander HV EPS Installation -



1. INSTALL THE NEW EPS ASSEMBLY

NOTE:

Remove the protective connector caps after installing the new EPS assembly into the vehicle.

NOTE:

Using a Vernier caliper, measure the free length of the compression springs for the exhaust pipe sub-assembly. If the free length is less than the minimum, replace the compression spring.

Minimum length: 41.5 mm (1.634 in.)



REINSTALL THE COMPONENTS IN THE REVERSE ORDER OF REMOVAL. PLEASE NOTE THAT THE TORQUE SPECIFICATIONS ARE INCLUDED IN THE ILLUSTRATIONS BELOW.



5. RECONNECT THE CABLE TO NEGATIVE BATTERY TERMINAL

6. PERFORM INITIALIZATIONS

7. INSPECT AND ADJUST THE FRONT WHEEL ALIGNMENT

VI. APPENDIX

A. CAMPAIGN PARTS DISPOSAL

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.