TECHNICAL SERVICE BULLETIN

SUBJECT: MDPS FLEXIBLE COUPLING REPLACEMENT

★ NOTICE

This bulletin has been revised to include additional information. New/revised sections of this bulletin are indicated by a black bar in the margin area.

This bulletin provides information related to the replacement of the flexible coupling in the MDPS motor of some of vehicles, which may experience a "clicking" noise emanating from the MDPS when turning the steering wheel left or right, while stopped. This condition may be caused by premature wear of the flexible coupling in the MDPS. To correct this concern, replace the flexible coupling as outlined in this TSB. Refer to the table below for production dates and a breakdown of replacement procedures by model.

Procedure	Model/Year	Applicable Production Range	Replacement Part
1	Forte (TD) / 2012~2013	From Jan. 05, 2012 ~ Mar. 31, 2013	
2	Soul (AM) / 2010~2013	From Sep. 01, 2009 ~ Aug. 15, 2013	
	Optima (TF) / 2011~2014	From Aug. 17, 2010 ~ Dec. 18, 2013	
	Optima (QF) / 2011~2014	From Aug. 12, 2011 ~ Dec. 18, 2013	
	Cadenza (VG) / 2014	From Feb. 01, 2013 ~ Apr. 19, 2014	
	Forte (YD) / 2014	From Jan. 7, 2013 ~ Dec. 18, 2013	

File Under: <CHASSIS>

Circulate To: ☒ **General Manager**   ☒ **Service Manager**   ☒ **Parts Manager**

☒ **Service Advisor(s)**   ☒ **Technician(s)**   ☒ **Body Shop Manager**   ☐ **Fleet Repair**

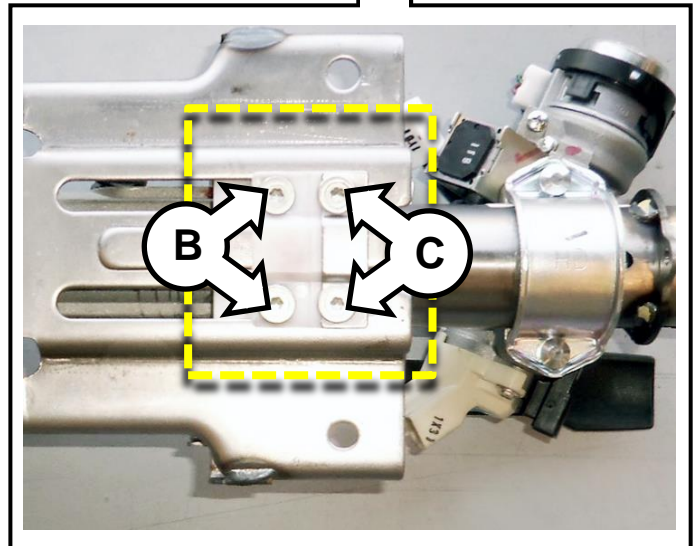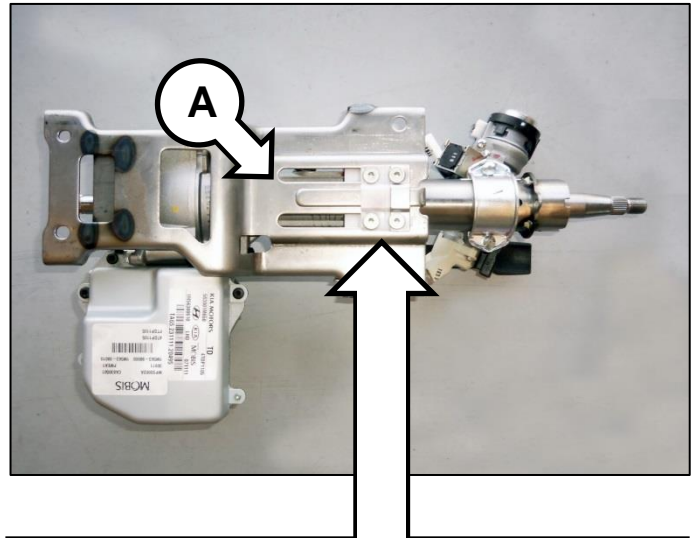| SUBJECT:	MDPS FLEXIBLE COUPLING REPLACEMENT

Replacement Procedure 1: This procedure applies to Forte (TD) models.

1. Remove the MDPS unit by referring to the applicable procedure on KGIS.

> ★ **NOTICE**
>
> **Before removing the MDPS unit, make sure to align the steering wheel to the center position.**

2. Locate the steering column guide bracket (A) and remove four (4) Torx® head screws (B/C) securing it to the steering column.

    Tightening torque:
    B: 3.6 lb-ft (4.9 Nm)
    C: 2.2 lb-ft (2.9 Nm)

3. Lift the steering column guide bracket (D) and remove the plastic spacer (E). Retain all parts as they will be reused.
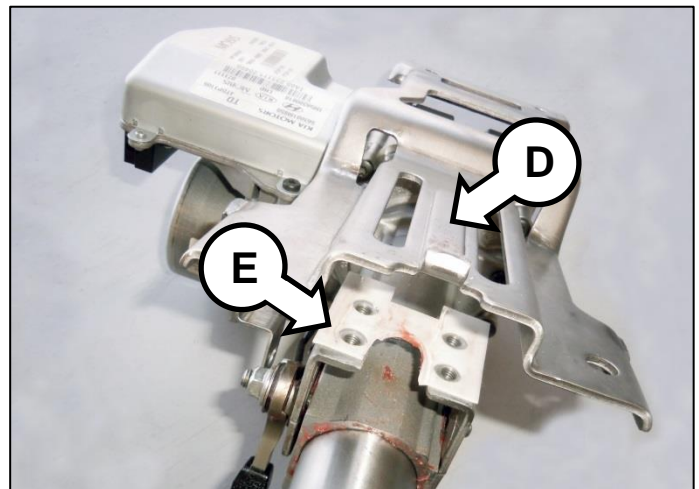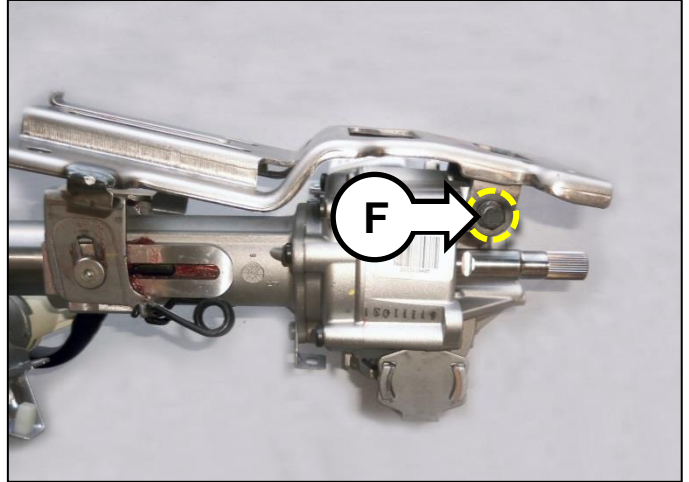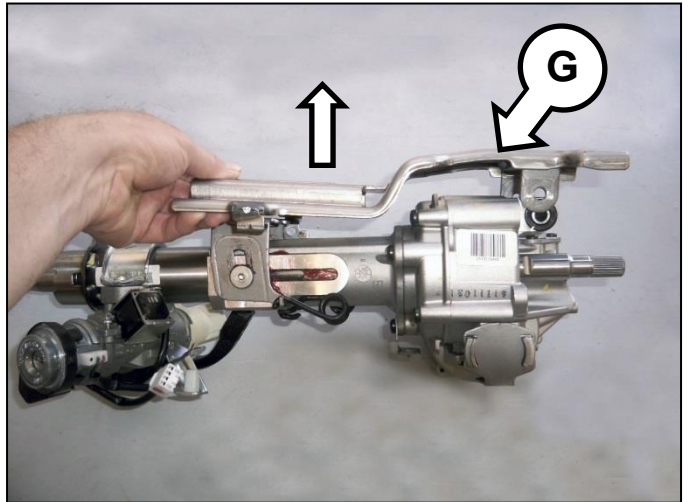
4. Remove the steering column guide bracket hinge bolt (F).

    Tightening torque:
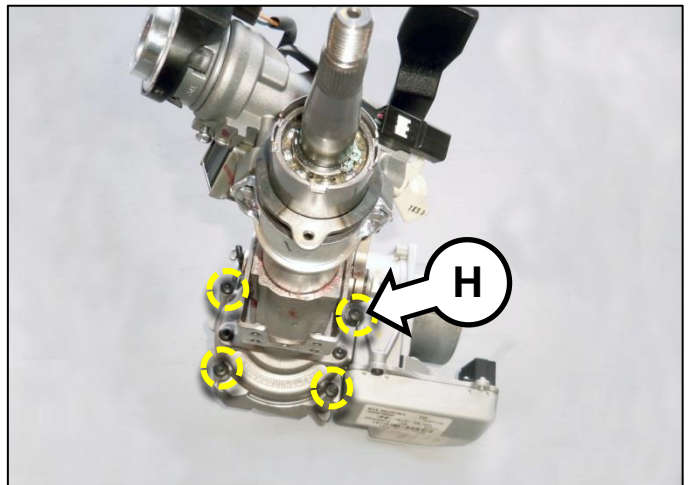   **13~14.5lb-ft (17.7~19.6 Nm)**

5. Remove the steering column guide bracket (G) from the steering column.
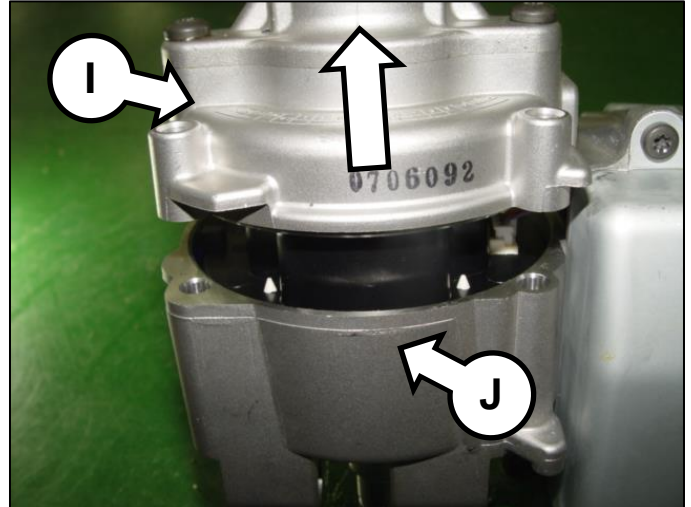
6. Hold the MDPS upright and loosen four Torx® head screws (H) securing the column to the motor housing.

    Tightening torque:
    6.5~9.4lb-ft   (8.8~12.7 Nm)

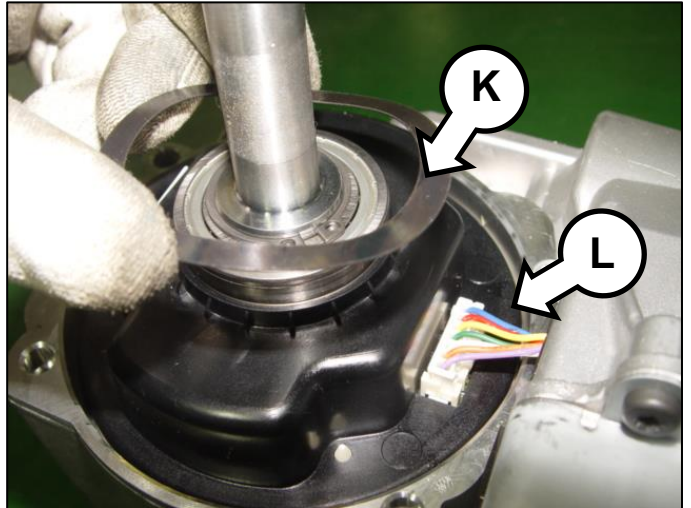| SUBJECT:	MDPS FLEXIBLE COUPLING REPLACEMENT

7. Separate the upper half (I) of the motor housing from the lower half (J).
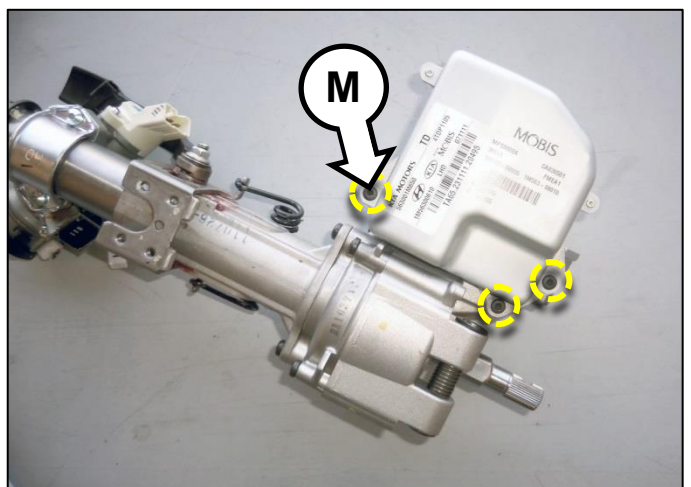
8. Remove the washer-gasket (K) and connector (L) from lower portion of the MDPS.

⚠ **CAUTION**

To avoid damage, use caution when removing the connector.

9. Remove three (3) Torx® head screws (M) securing the MDPS ECU cover.

   Tightening torque:
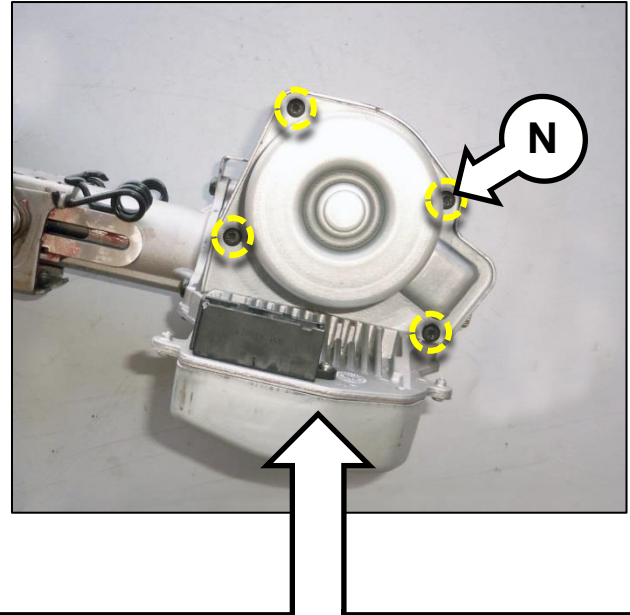   **3.6~5.1lb-ft (4.9~6.9Nm)**

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10. Remove four (4) Torx® head screws (N) securing the MDPS motor cover.

    Tightening torque:
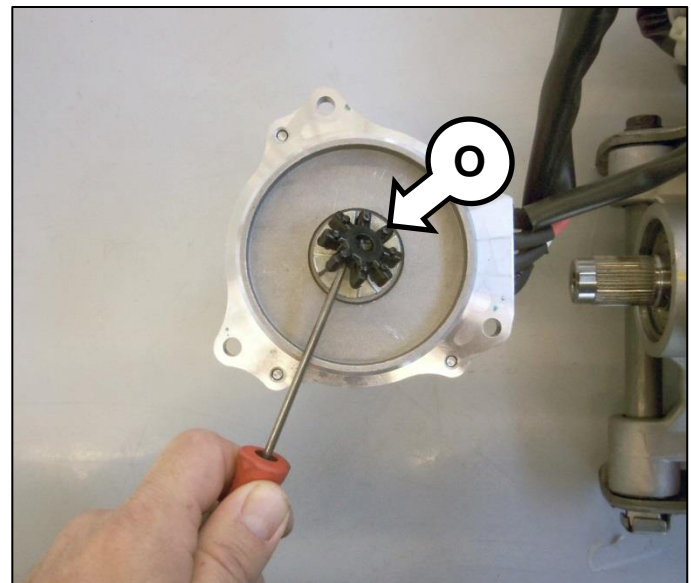   **3.6~5.1lb-ft (4.9~6.9Nm)**

11. Remove the MDPS motor cover.

    ### ⚠ CAUTION

    To avoid damage, use caution when removing the connector and the wiring harness.


12. Remove the original flexible coupling (O) from the housing. In addition, use an air gun to remove any foreign matter from the motor and/or the housing.

13. Replace the original flexible coupling with the new part (P). Refer to the graphic below to properly align the flexible coupling with the motor housing.

> ★ **NOTICE**
>
> **Before installing the new part, make sure it has "4P" embossed on the surface.**
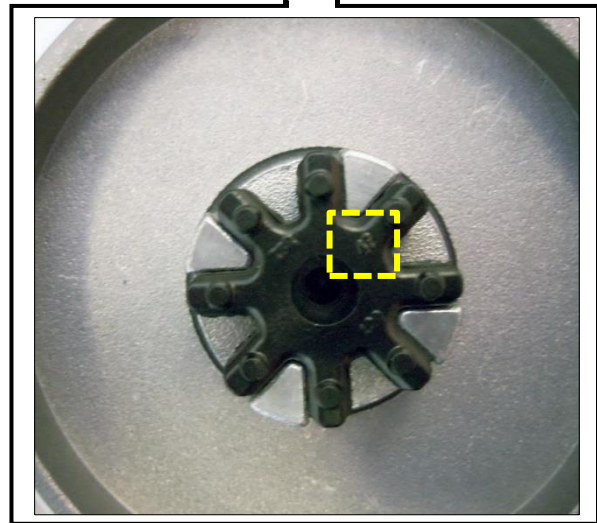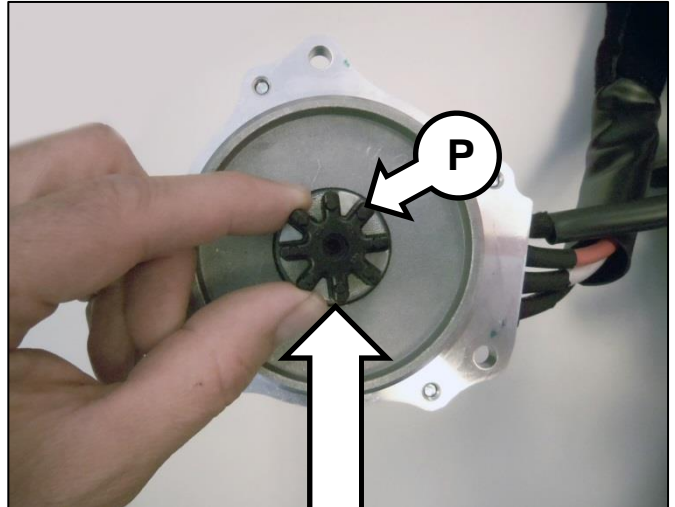
14. Reinstall all removed components by reversing the order of removal.

> ★ **NOTICE**
>
> **Before re-installing the MDPS unit, make sure the front wheels are pointing straight ahead.**

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Replacement Procedure 2: This procedure applies to Soul (AM), Optima (QF/TF), Cadenza (VG) and Forte (YD) models.
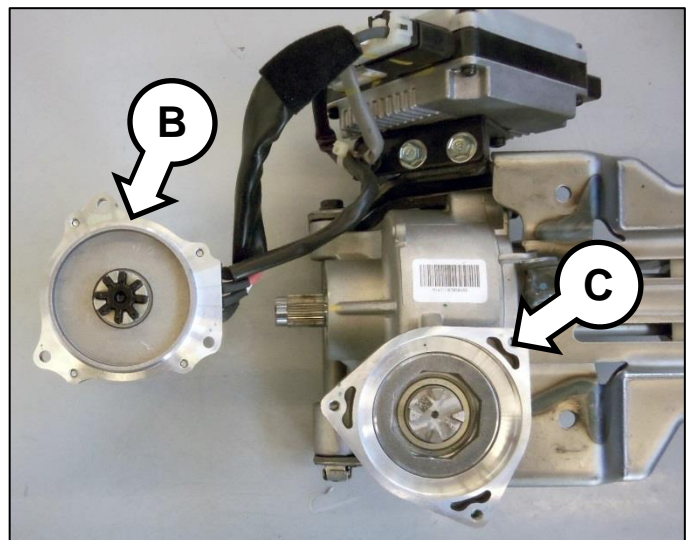

★ NOTICE

Before removing the MDPS unit, make sure to align the steering wheel to the center position.

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1. Remove the MDPS unit by referring to the applicable procedure on KGIS.

2. Remove 3 bolts (A) securing the MDPS motor to the housing.
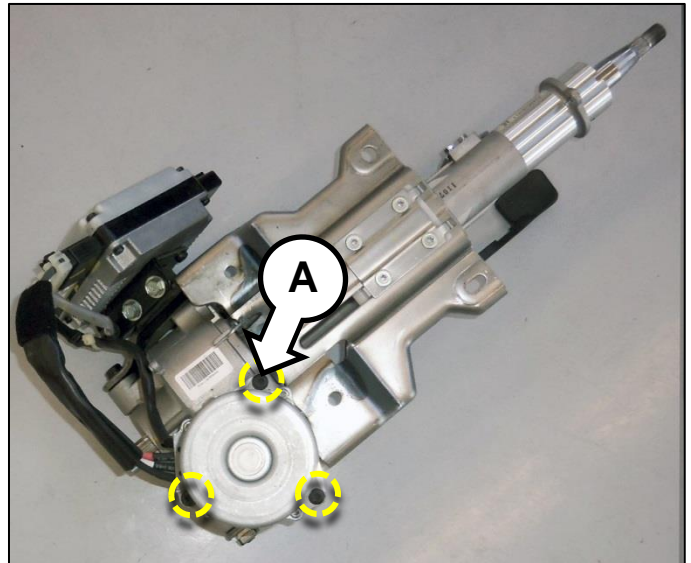
3. Separate the MDPS motor (B) from the housing (C), as shown.

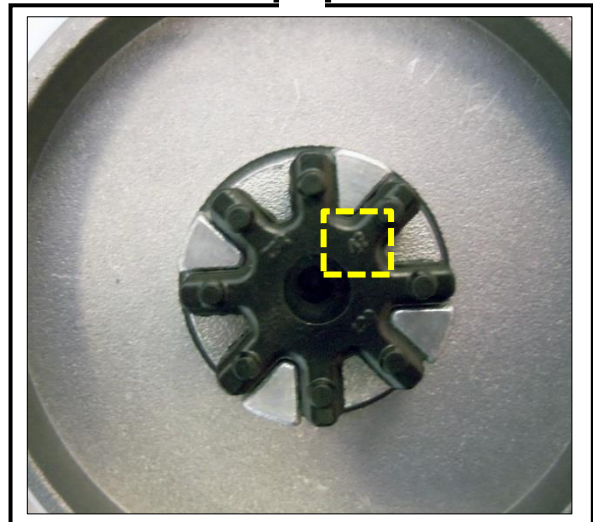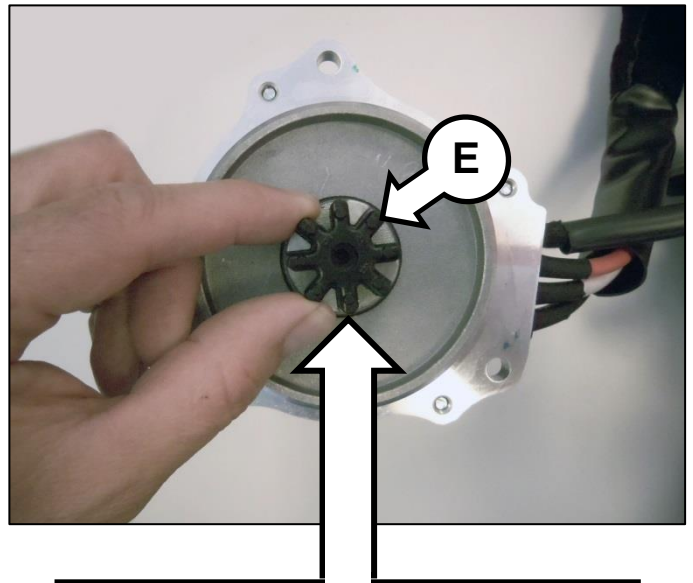**SUBJECT:** MDPS FLEXIBLE COUPLING REPLACEMENT

4. Remove the original flexible coupling (D) from the motor. In addition, use an air gun to remove any foreign matter from the motor and/or the housing.
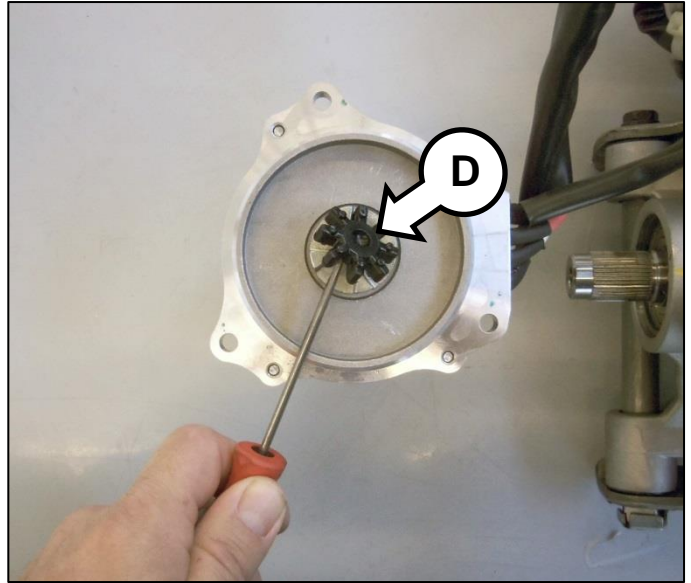
5. Install the new flexible coupling (E) onto the MDPS motor, as shown.

★ **NOTICE**

Before installing the new flexible coupling, make sure it has "4P" embossed on the surface.

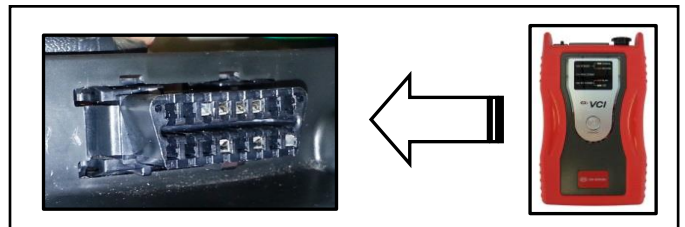**SUBJECT:**

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★ NOTICE

Before re-installing the MDPS unit, make sure the steering wheel is aligned to the center position, with the front wheels pointing straight ahead.

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6. Reinstall all removed components by reversing the order of removal.

Calibration Procedure:

1. Connect the power supply cable to the GDS.

2. Connect the USB cable between the VCI and the GDS.

3. Connect the Main 16-pin DLC cable (GHDM – 241000) to the VCI.

4. Connect the Main 16-pin DLC cable (GHDM – 241000) to the OBD-II connector, located under the driver's side of the instrument panel.
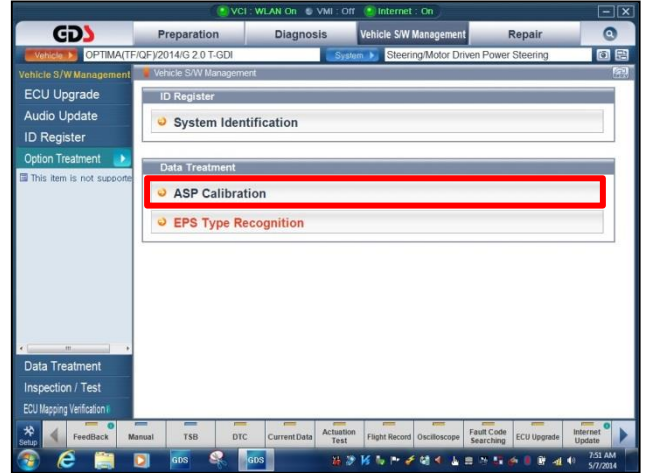

5. Select **EPS** and click on **OK**.

6. Select **Option Treatment** under the Vehicle S/W Management tab.

TSB: CHA 044 [REV 1] Multiple Models May 2014

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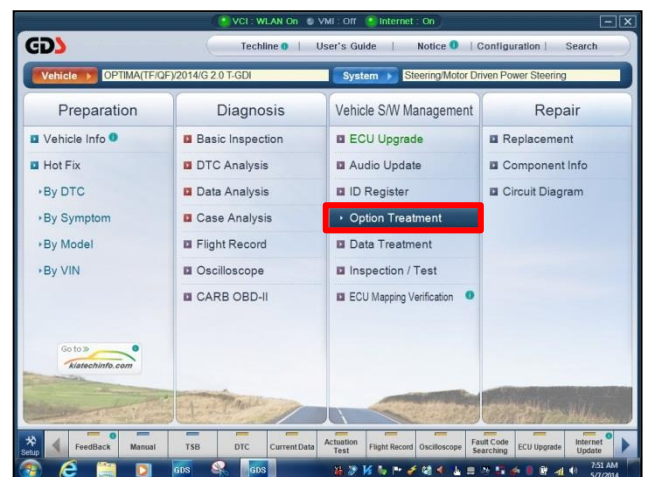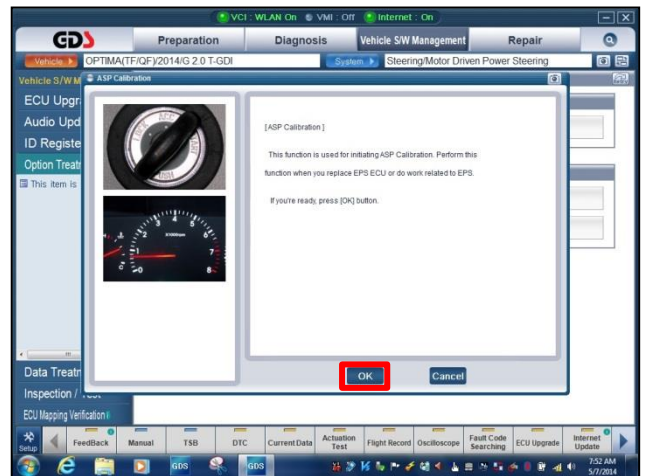
7. Select **ASP Calibration**.

8. Click **OK** to continue with ASP calibration.
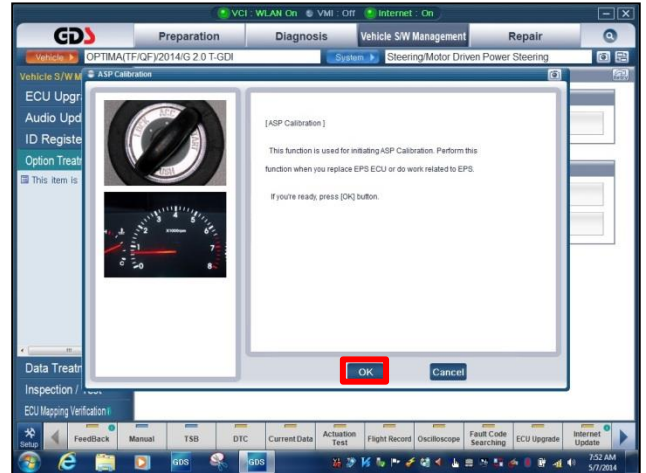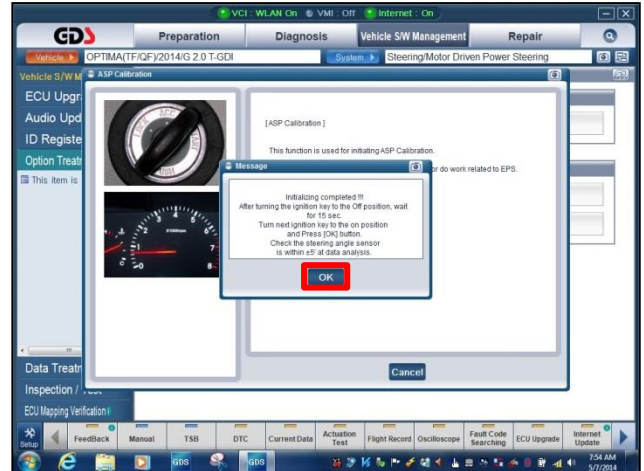

9. Start the engine and center the steering wheel. Then, click on **OK**.
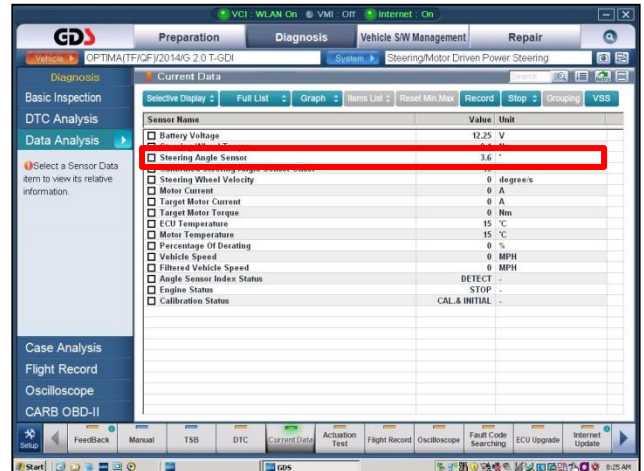
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10. Turn the ignition **OFF** and wait 15 seconds. Then, turn the ignition **ON** and click on **OK**.

11. Access **Current Data** and verify the Steering Angle Sensor value is at 0.0 ± 5.0 degrees.

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AFFECTED VEHICLE PRODUCTION RANGE:

Model/Year	Applicable Production Range
Forte (TD) / 2012~2013	From Jan. 05, 2012 ~ Mar.31, 2013
Soul (AM) / 2010~2013	From Sep. 01, 2009 ~ Aug. 15, 2013
Optima (TF) / 2011~2014	From Aug. 17, 2010 ~ Dec.18, 2013
Cadenza (VG) / 2014	From Feb. 01, 2013 ~ Apr.19, 2014
Forte (YD) / 2014	From Jan. 7, 2013 ~ Dec.18, 2013
Optima (QF) / 2011~2014	From Aug. 12, 2011 ~ Dec.18, 2013

PART INFORMATION:

Part Name	Part No.	Qty.	Replacement Part
Flexible Coupling	56315 2K000FFF	1	

WARRANTY INFORMATION:
N CODE = N29   C CODE = C63

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	QTY.
Soul (AM)	W	56310 2K625	0	(CHA 044) MDPS Flexible Coupling Replace	56315F00	1.3 M/H	56315 2K000FFF	1
Optima (QF)		56310 2T301				1.5 M/H		
Forte (TD)		56310 1M550			56315F02	1.6 M/H		
Optima (TF)		56310 2T305				1.3 M/H		
Cadenza (VG)		56310 3R561				1.5 M/H		
Forte (YD)		56310 A7410				1.3 M/H		