

Replacement

1. Turn the steering wheel so that the front wheels are placed in the straight ahead position.

⚠ CAUTION

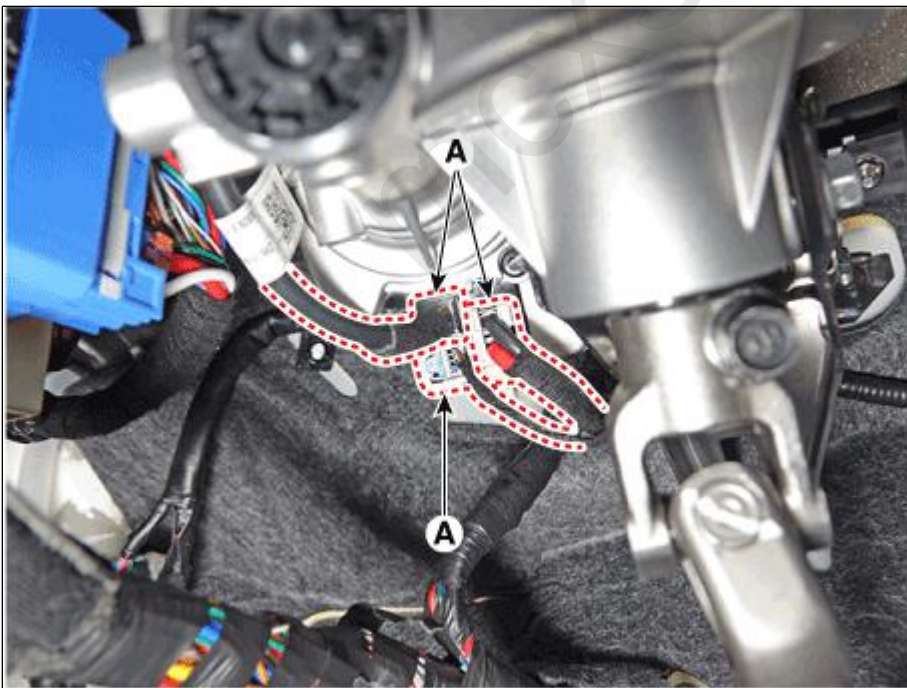
⚠ If the steering wheel and the front tires are not set straight ahead together, it may affect the number of
ç circulation of steering wheel and damage the cable inside the clock spring.

2. Turn the ignition switch OFF and disconnect the battery negative (+) cable.

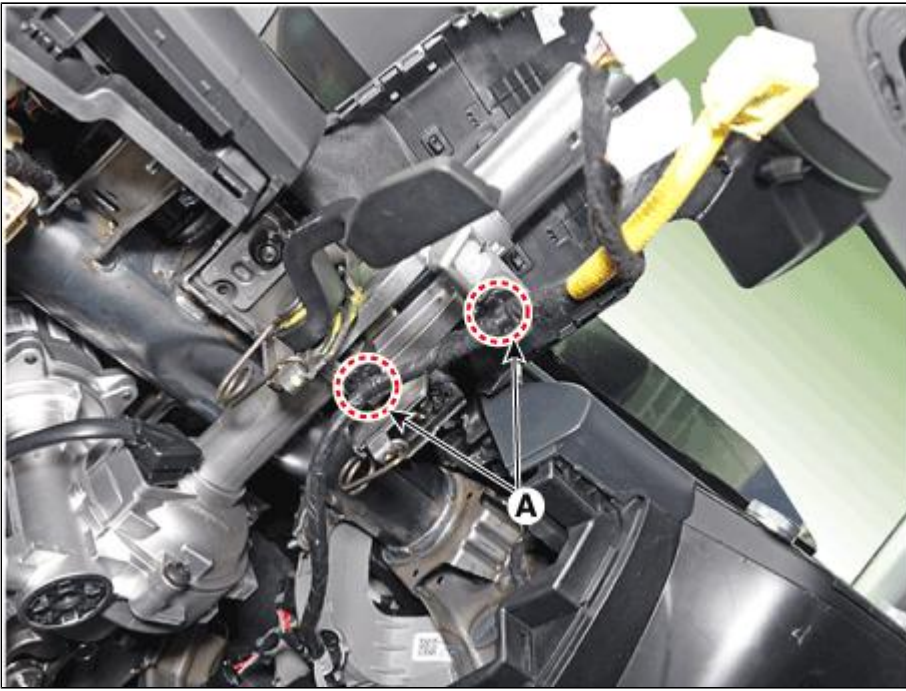
⚠ WARNING

⚠ Disconnect the battery negative cable from the battery and then wait for at least 3 minutes.
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3. Remove driver airbag (DAB) module.
(Refer to Restraint - "Driver Airbag (DAB) Module and Clock Spring")
4. Remove the steering wheel.
(Refer to Steering System - "Steering Wheel")
5. Remove the clock spring.
(Refer to Restraint - "Driver Airbag (DAB) Module and Clock Spring")
6. Remove the steering column shroud panel.
(Refer to Body - "Steering Column Shroud Panel")
7. Remove the crash pad lower panel.
(Refer to Body - "Crash Pad")
8. Remove the brake booster. **(Only RHD)**
(Refer to Brake System - "Brake Booster")
9. Remove the brake pedal. **(Only RHD)**
(Refer to Brake System - "Brake Pedal")
10. Disconnect the MDPS connector (A).



11. Remove the wiring clip (A) from the steering column.



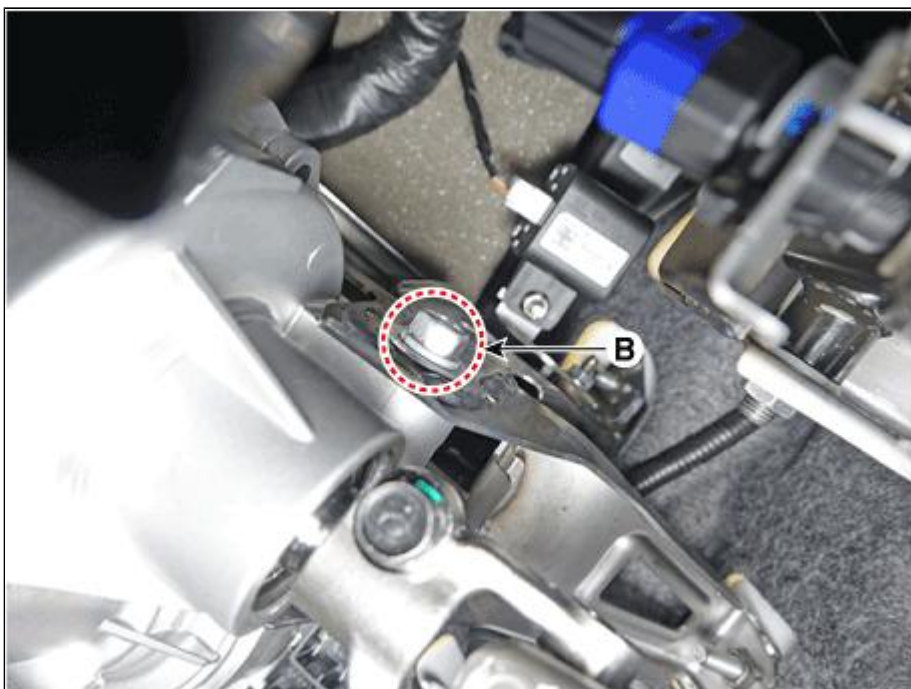
12. Remove the steering column assembly after loosening the mounting nuts (A) and bolt (B).

Tightening torque

(A) : 25.0 - 29.4 N.m (2.5 - 3.0 kgf.m, 14.5 - 21.7 lb-ft)

(B) : 53.9 - 58.8 N.m (5.5 - 6.0 kgf.m, 39.8 - 43.4 lb-ft)





13. Remove the MDPS power pack (A) after loosening the bolts.

Tightening torque :

8.0 - 12.0 N.m (0.82 - 1.22 kgf.m, 5.9 - 8.8 lb-ft)

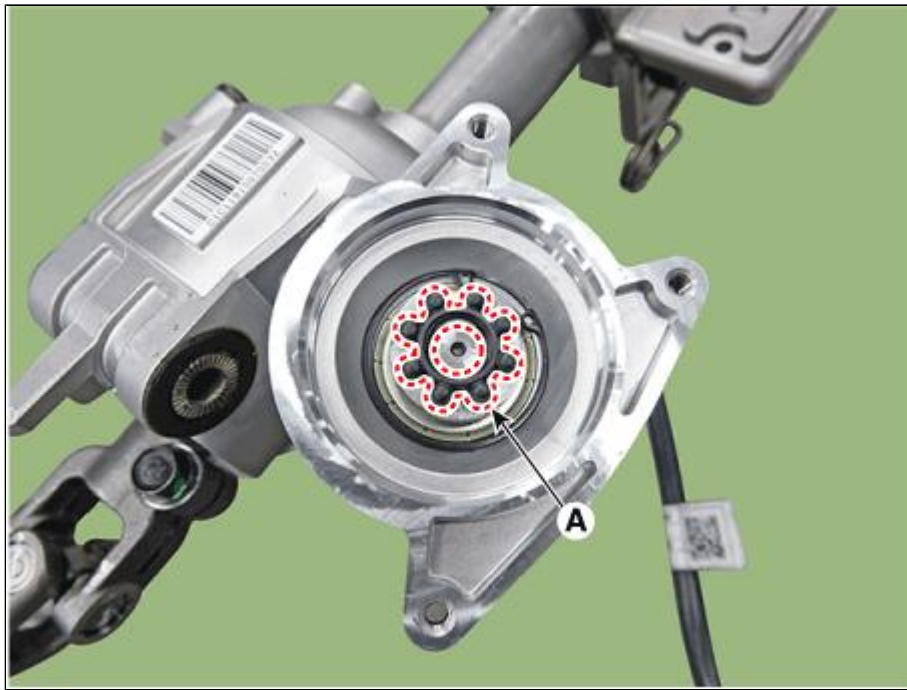


14. Install the new MDPS powerpack.

NOTICE

⌘ Check the couple ring (A) whether it is assembled, before installing the new MDPS motor.

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15. To reassembly, reverse the disassembly procedure.
16. Conduct the "EPS Type Recognition" by diagnostic tool.
(Refer to MDPS PowerPack Assembly - "Diagnosis with Diagnostic tool")
17. Conduct the "ASP Calibration" by diagnostic tool.
(Refer to MDPS PowerPack Assembly - "Diagnosis with Diagnostic tool")
18. Erase DTC.

Diagnosis with Diagnostic tool

EPS Type Recognition

⚠ CAUTION

- ⚠ When missing the EPS Type Recognition, occur a problem with motor driven power steering performance.

EPS Type Recognition procedures

1. Connect self-diagnosis connector(16pins) located in the lower of driver side crash pad to self-diagnosis device.
2. Turn the self-diagnosis device after key is ON.
3. Turn the steering wheel to straight ahead position.
4. After Selecting the "vehicle model" and "system", select the "EPS Type Recognition" on diagnostic tool vehicle selection screen.

S/W Management

Systems

Components

Unfold All

■ 4WD Control

■ Motor Driven Power Steering

■ System Identification

■ Steering Angle Sensor(SAS) Calibration

■ Part exchange (Power steering motor)

■ Part exchange (Power steering ECU)

■ EPS Type Recognition

■ Parking Guide System

■ BVM

■ Multi Function Camera

■ Immobilizer

■ Smart Key Unit

■ Cluster Module

■ IBU-BCM

■ IBU-TPMS

■ Smart Junction Block

■ Transmitter Code Saving

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Do not touch any system buttons while performing this function.

S/W Management



• ESP Type Recognition

Purpose	To load accurate EPS type into Electric Power Steering(EPS) ECU.
Enable Condition	1.Engine Off 2.Ignition Switch On
Concerned Component	Electric Power Steering(EPS) ECU
Concerned DTC	C1702
Fail Safe	Warning Lamp On
Etc	-

OK



Do not touch any system buttons while performing this function.

5. Remove the DTC.
6. Turn off the IG switch and wait for 20 seconds or more before starting the engine. And then make sure that MDPS works properly.

SAS Calibration

- â Steering-angle sensor detects the steering angle and steering angle speed. Steering angle and steering angle speed are used for steering wheel damping and return controls in addition to providing assistance torque.

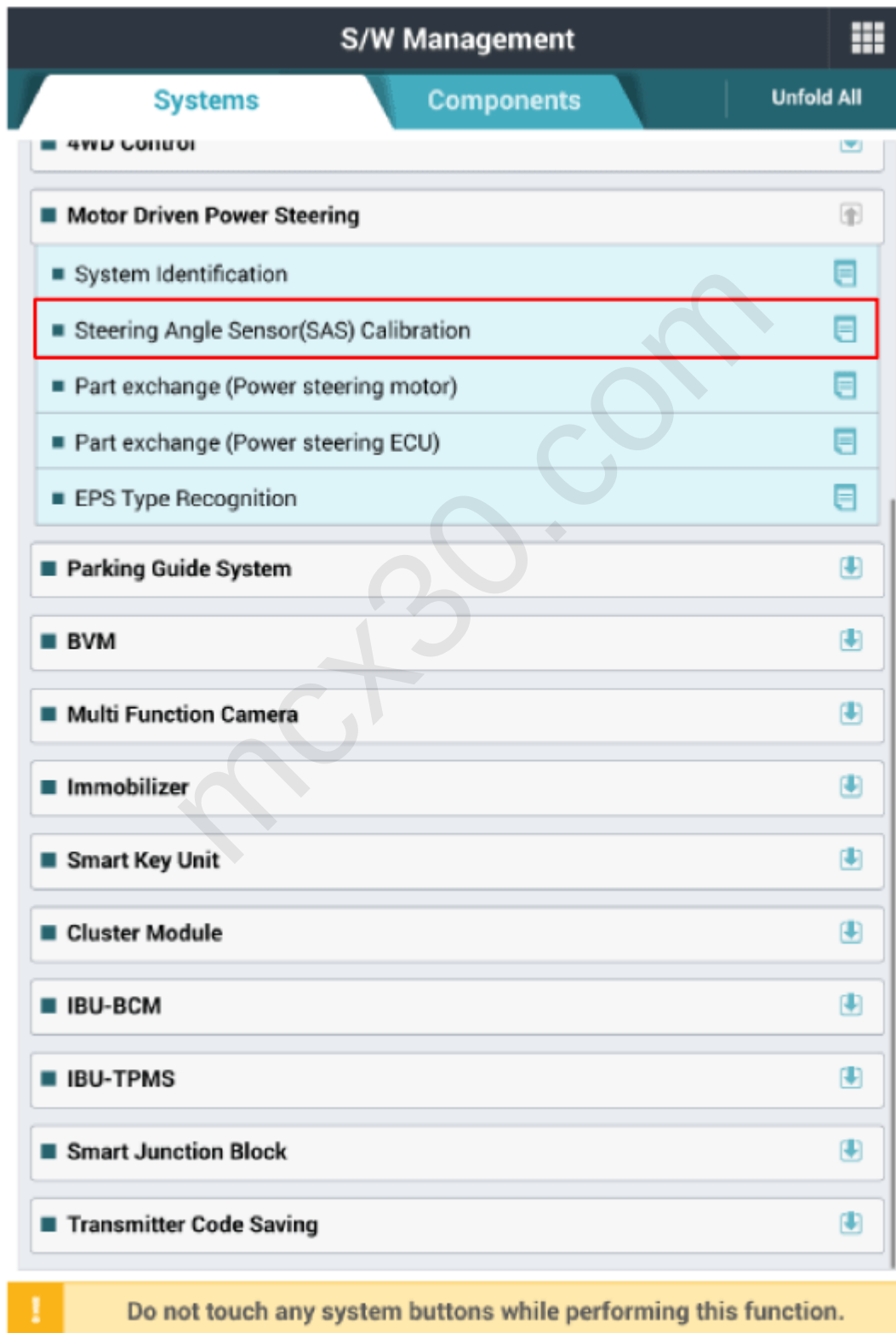
NOTICE

- â You can use a scan tool to (diagnostic tool) check if the battery voltage is proper before perform the "SAS Calibration".
- â Make sure that no connector engaged to the vehicle or scan tool is disconnected during the "SAS Calibration".

- â Once the "SAS Calibration" is complete, turn off the IG switch and wait for 10 seconds or more before
ç starting the engine to check the operation.

SAS Calibration procedures

1. Connect self - diagnosis connector (16pins) located in the lower of driver side crash pad to self - diagnosis device.
2. Turn the self - diagnosis device after key is ON.
3. Turn the steering wheel to straight ahead position.
4. After Selecting the "vehicle model" and "system", select the "SAS Calibration" on diagnostic tool vehicle selection screen.





• Steering Angle Sensor(SAS) Calibration

Purpose	To calibrate steering angle value on the Electric Power Steering(EPS) ECU to actual steering angle value of vehicle.
Enable Condition	1.Engine Off 2.Ignition Switch On
Concerned Component	Electric Power Steering(EPS) ECU, Steering Angle Sensor(SAS)
Concerned DTC	C1261
Fail Safe	Warning Lamp On
Etc	Perform this function when you replace EPS ECU or do work related to EPS.

OK



Do not touch any system buttons while performing this function.

5. Remove the DTC.

6. Turn off the IG switch and wait for 10 seconds or more before starting the engine. And then make sure that MDPS works properly.

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