

 **HYUNDAI**  
**Technical Service Bulletin**

GROUP <b>STEERING</b>	NUMBER <b>21-ST-001H</b>
DATE <b>January 2021</b>	MODEL(S) <b>Sonata (DN8) 2.5T Sonata (LFA) 2.0T Veloster N (JSN)</b>

**SUBJECT:** RACK-MOUNTED DUAL PINION MDPS REPAIR INFORMATION

**Description:** The rack-mounted dual pinion Motor Driven Power Steering (MDPS) system components can be replaced separately from the complete assembly. This bulletin provides information on the separate components and the replacement procedure of these components.







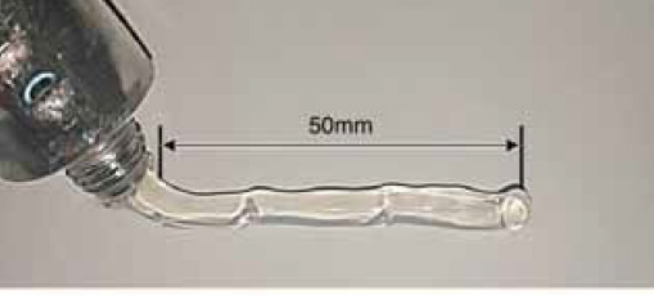


**Applicable Vehicles:** All Sonata 2.0T (LFA), Sonata 2.5T (DN8a), Veloster N 2.0T (JSN)

**NOTICE**

*Refer to the applicable service manual for detailed information on service procedures and Diagnostic Trouble Code(s) (DTC).*

**Parts Information: Dual-Pinion MDPS Components**

Part Name	Image
MDPS Gear & Linkage Assembly	
Short Gear (MDPS Gear & Linkage Assembly without Power Pack and Lead Wire)	
Power Pack	
Lead Wire	
Power Pack Mounting Bolt – Mobis Spec (LFA, DN8a)  <b>Replace with a new bolt when replacing Power Pack.</b>	
Power Pack Mounting Bolt – Mando Spec (JSN)  <b>Replace if the bolt thread is damaged or worn.</b>	
Grease for Mando Systems  The proper amount of grease is equivalent to a 50mm bead.  *Each tube of grease can be used on approximately 15 vehicles.	 <p style="text-align: center;"><b>Part Number: YSBB0-91105-FFF</b></p>

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**Parts Information: Parts Table**

Model	Full Assy	Short Gear	Power Pack	Power Pack Bolt	Rubber Coupling	Lead Wire	Note
Sonata (LFa) 2.0T	57700-C2000	57770-C2000	56320-C2000	57138-L1000	56380-C1500	56396-C2100	Mobis
	57700-C2050	57770-C2050	56320-C2050			56396-C2100	
	57700-C1700	57770-C1700	56320-C1170			56396-D4110	
Sonata (DN8a) 2.5T	57700-L0000	57770-L1000	56370-L0100	56396-L1000			
Veloster N (JSN)	57700-K9000	57770-K9500	56320-K9000	57138-D7090	-	56396-K9000	Mando
	57700-K9010	57770-S0210					
	57700-K9500	57770-K9500	56320-K9500				

**Warranty Information:**

Model	Op Code	Operation	Op Time	Causal Part	Nature Code	Cause Code
Sonata (LFa) 2.0T	56500R00	Steering Gear Box Assembly Replacement	Refer to LTS for current LTS time	57700-C2000	D66	ZZ3
	56555R00	Steering Short Gear Assembly Replacement				
	56505R00	Steering Power Pack Replacement				
	56396R00	Lead Wiring Assembly Replacement				
Sonata (DN8a) 2.5T	56500R00	Steering Gear Box Assembly Replacement	Refer to LTS for current LTS time	57700-L0000	D66	ZZ3
	56555R00	Steering Short Gear Assembly Replacement				
	56505R00	Steering Power Pack Replacement				
	56396R00	Lead Wiring Assembly Replacement				

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Veloster N (JSN)	56500R00	Steering Gear Box Assembly Replacement	57700-K9000		
	56555R00	Steering Short Gear Assembly Replacement			
	56505R00	Steering Power Pack Replacement			
	56396R00	Lead Wiring Assembly Replacement			

**NOTE:** Dealers may claim \$0.10 on sublet for reimbursement of grease.

## Mobis System Dual Pinion MDPS: Sonata (DN8a 2.5T, LFa 2.0T) Service Procedures:

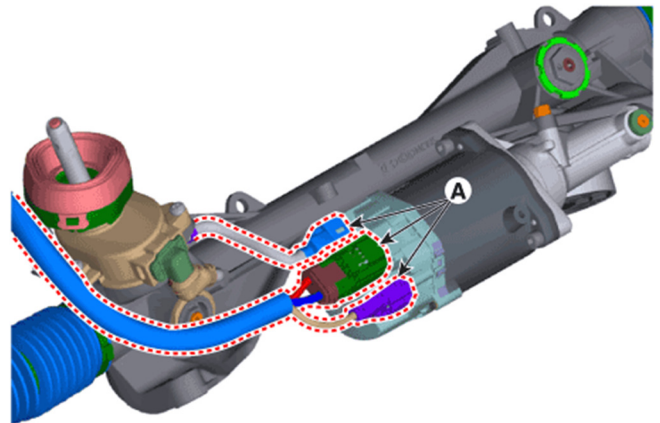
### Power Pack & Short Gear Replacement

1. Remove the steering gear box assembly from the vehicle. Refer to the applicable service manual procedures:

**Steering system → Motor driven power steering → Steering gear box → Repair procedures.**

#### **NOTICE**

To prevent potential damage to the clock spring, lock the steering wheel in place before removing the steering gear box assembly.



Disconnect the power pack connectors (A).

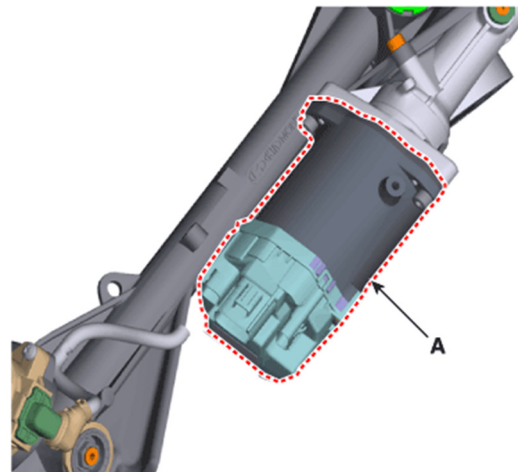
2. Loosen and remove the power pack mounting bolts. Remove the power pack (A).

### Torque Specifications (Mobis):

<b>lb-ft</b>	•14.5 - 17.4
<b>kgf.m</b>	•2.0 - 2.4
<b>N.m</b>	•19.6 - 23.5

#### **NOTICE**

Replace the power pack mounting bolt with a new one.



3.
  - If replacing the short gear assembly, transfer the removed power pack onto the new short gear assembly.
  - If replacing the power pack, install the new power pack onto the short gear assembly.

**NOTICE**

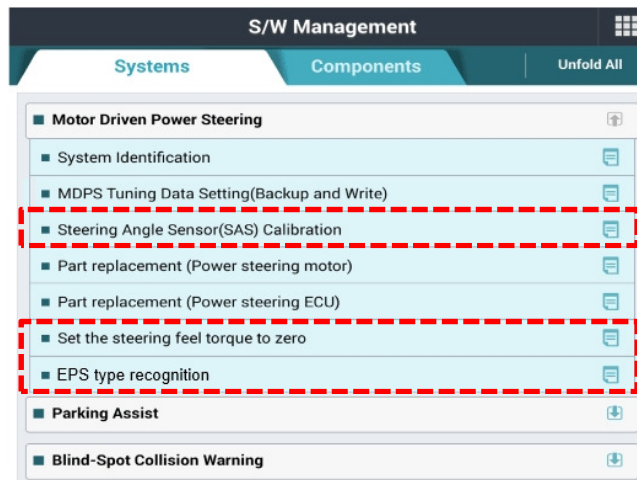
**When installing the power pack onto the short gear assembly, carefully align the coupler properly before tightening the mounting bolts.**

**If the coupling is damaged or deformed, replace the coupling.**



4. Install the steering gear box assembly onto the vehicle. Install all parts in reverse order of removal.
5. Using the GDS, perform the following functions in the Motor Driven Power Steering system:

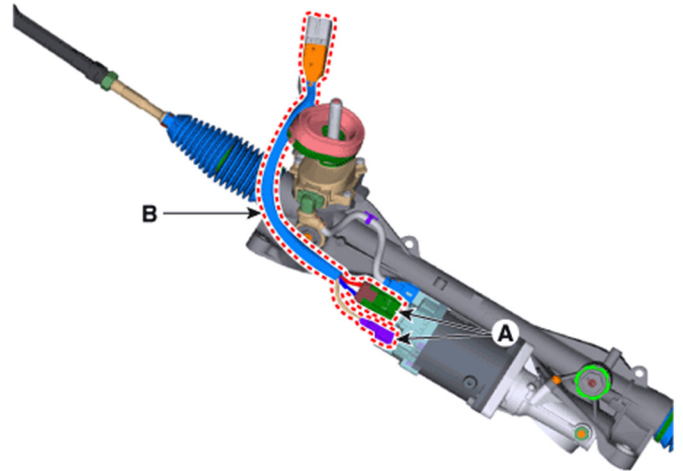
- **Steering Angle Sensor (SAS) calibration**
- **EPS Type Recognition**



6. The service procedure is now complete.

## Lead Wire Replacement

1. Disconnect the power pack connectors (A), then replace the lead wire (B).



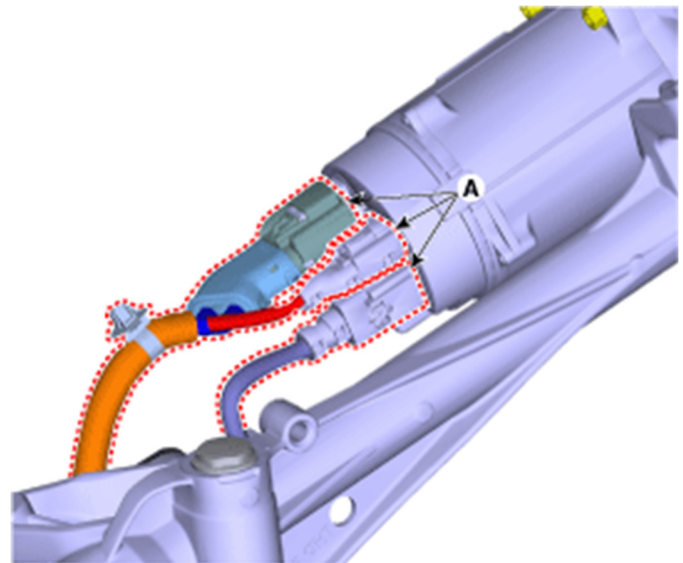
## Mando System Dual Pinion MDPS: Veloster N (JSN 2.0T) Service Procedures:

1. Remove the steering gear box assembly from the vehicle. Refer to the applicable service manual procedures:

**Steering system → Motor driven power steering → Steering gear box → Repair procedures.**

### **NOTICE**

**To prevent potential damage to the clock spring, lock the steering wheel in place before removing the steering gear box assembly.**



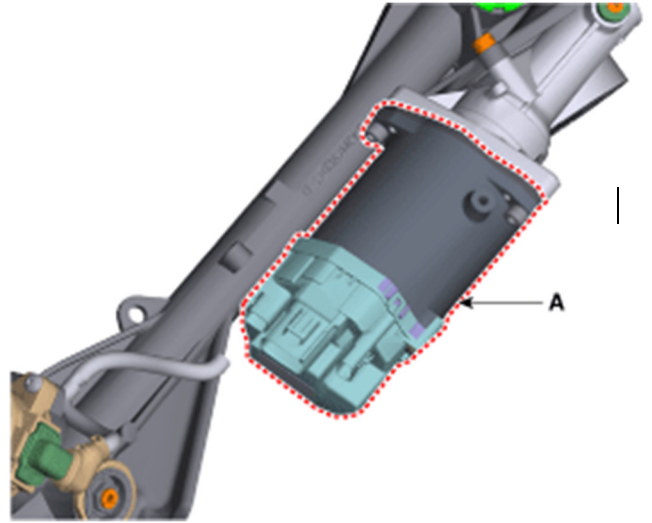
Disconnect the power pack connectors (A).



- Loosen and remove the power pack mounting bolts. Remove the power pack (A).

**Torque Specifications (For Mando):**

<b>lb-ft</b>	•10.3 - 11.8
<b>kgf.m</b>	•1.43 - 1.63
<b>N.m</b>	•14 - 16

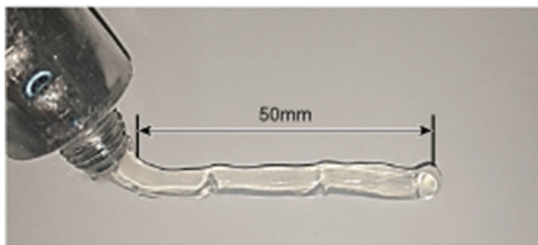


**NOTICE**

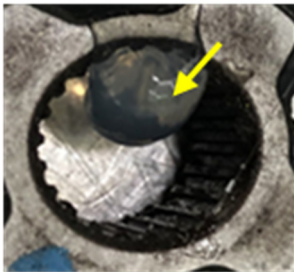

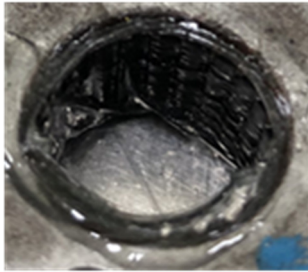
Inspect the power pack mounting bolt threads for wear or damage. If worn or damaged, replace the bolt with a new one.

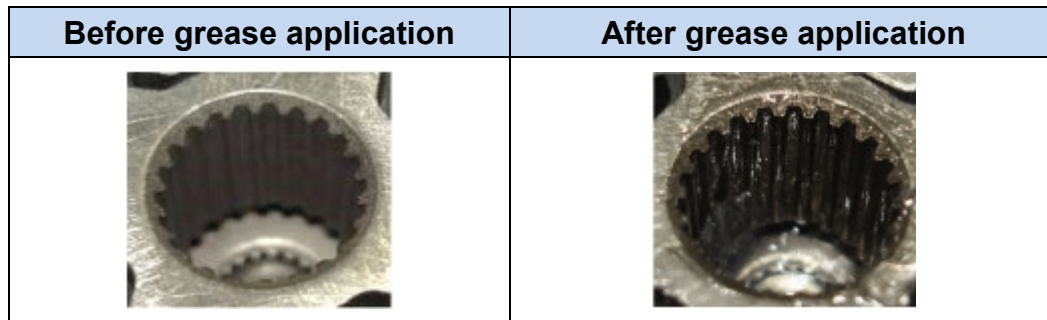
- Apply grease to the serrated gear area of the power pack according to the instructions below.

- **Grease specification:** Multemp MM-V
- **Application quantity:** 0.7~1.2g (50mm)



Apply grease to the serrated areas using a clean screwdriver or similar tool.

		
1) Insert grease.	2) Spread grease on the all serrated areas.	3) Check that the grease covers all serrated surfaces.



4.
  - If replacing the short gear assembly, transfer the removed power pack onto the new short gear assembly.
  - If replacing the power pack, install the new power pack onto the short gear assembly.

**NOTICE**

**When installing the power pack onto the short gear assembly, carefully align the coupler properly before tightening the mounting bolts.**

5. Install the steering gear box assembly onto the vehicle. Install all parts in reverse order of removal.

6. Using the GDS, perform the following functions in the Motor Driven Power Steering system:

- **Steering Angle Sensor (SAS) calibration**
- **EPS Type Recognition**

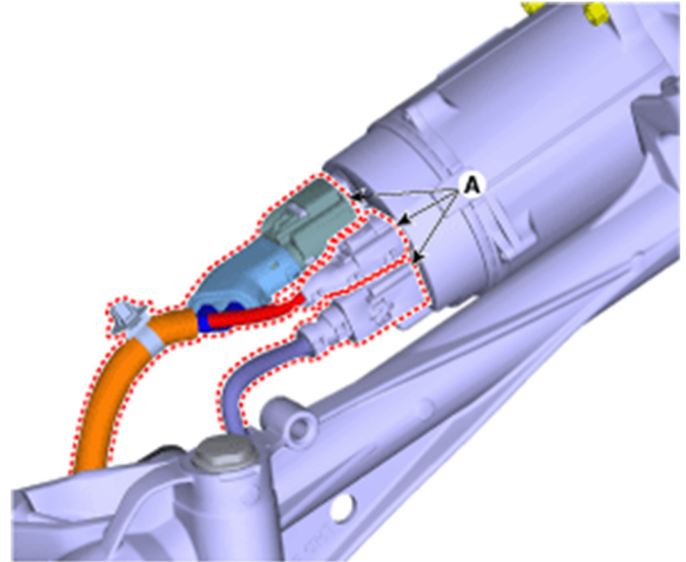


7. The service procedure is now complete.



**Lead Wire Replacement**

1. Disconnect the power pack connectors (A).



2. Remove the mounting clip (A), then replace the lead wire.

