

 Preview Solution CBR-2515-1

Mack Chassis - Hard Steering Due to Steering Column Miter Box Corrosion - Inspection and Replacement Procedure - LR Model

Published 20 October 2025

Valid For

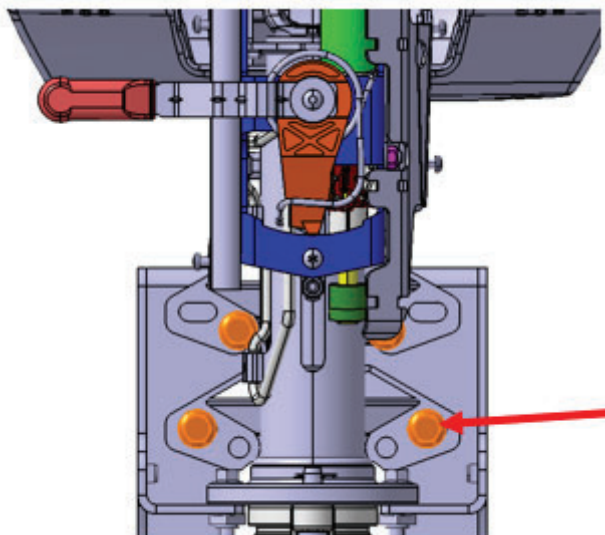
Mack Chassis - LR
Model Year - Pre - 2024

Certain Mack LR models may have insufficient lubrication in the miter box located at the base of the steering column. Over time, this condition can lead to corrosion of the miter box gears, resulting in increased steering effort and reduced steering wheel returnability.

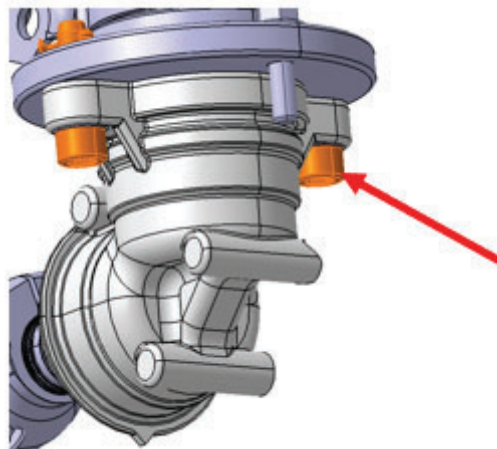
1. Remove kick panel and lower column covers.



2. **Remove the four (4) screws** securing the steering column to the mounting bracket.
This will allow the column to separate from the bracket.



3. **Remove the cotter pins and two (2) screws**, then **lower the miter box** from the steering column.



4. Inspect the miter box for signs of rust or corrosion.

- **If rust is present**, replace the steering column assembly. Refer to Impact operation **6412-03-02-04**.
 - *Note:* Updated steering columns feature improved plating and lubrication, providing enhanced resistance to corrosion.
- **If no rust is present**, reinstall the miter box and **torque the screws to 50 Nm (36 ft·lb)**. Install **new cotter pins** to secure the fasteners. Reassemble in reverse order.



Related links and attachments

No links or attachments available



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64154-2 Steering Column, Replacement

	Illustrations may differ slightly from the actual vehicle being serviced. However, key components addressed in this information are represented as accurately as possible.
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	CAUTION
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Service Information Advisory.

If you are not properly trained and certified in this procedure, ask your supervisor for training before you perform it.

- ▶ You must read and understand the precautions and guidelines in Service Information, Function Group 6, "General Safety Practices, Wheel Suspension and Steering" before performing this procedure.

	CAUTION
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Risk of material damage.

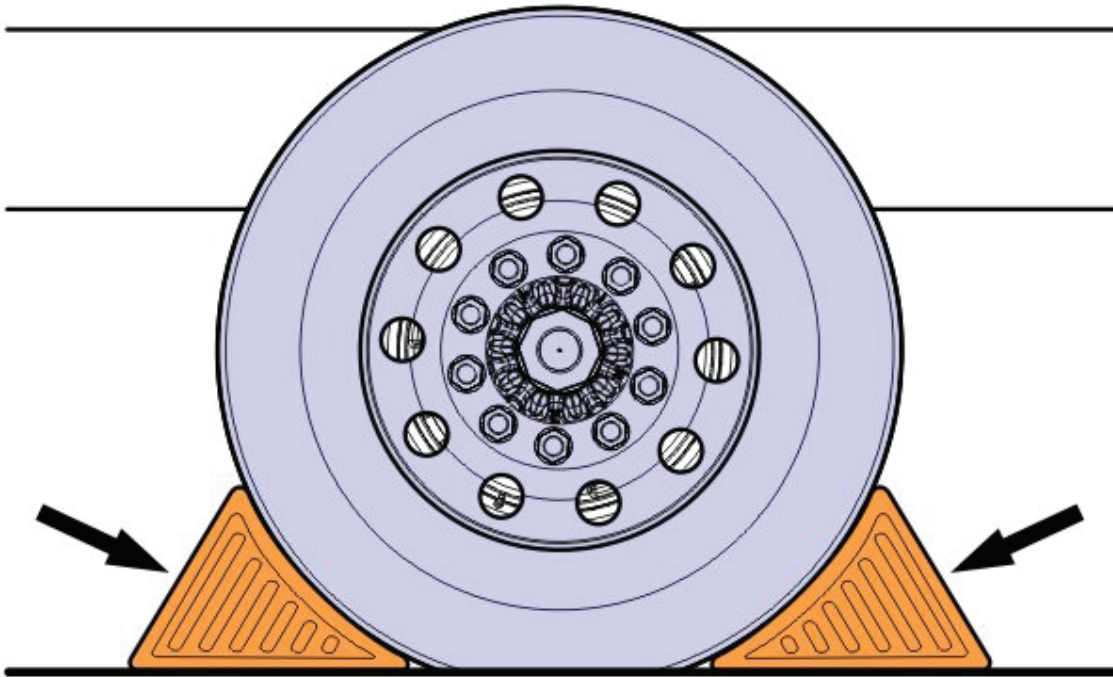
Paintwork and panels can be easily damaged if you use the wrong type of tool.

- ▶ Only use plastic tools when working on fragile parts.

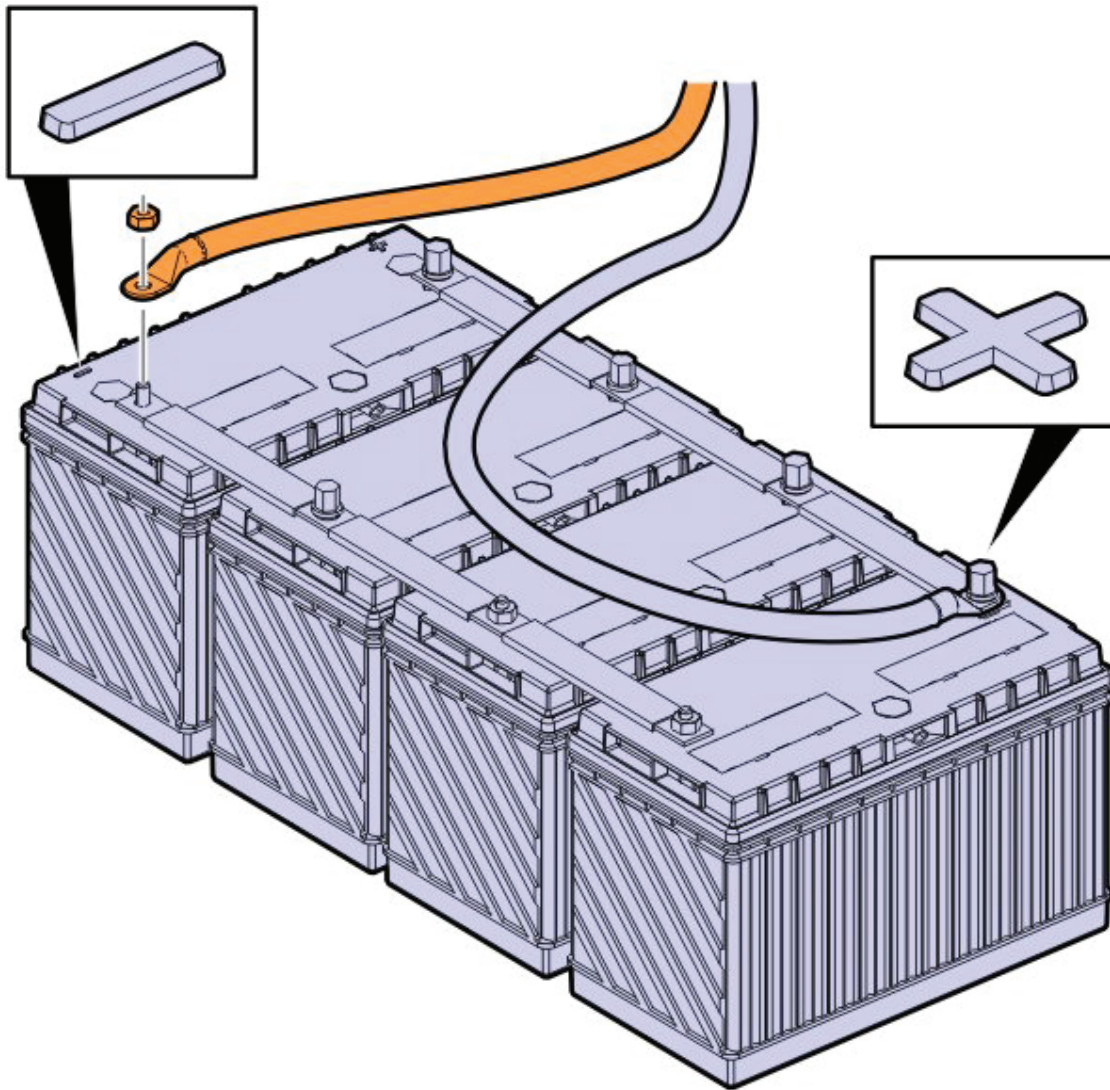
Special tools

9996519

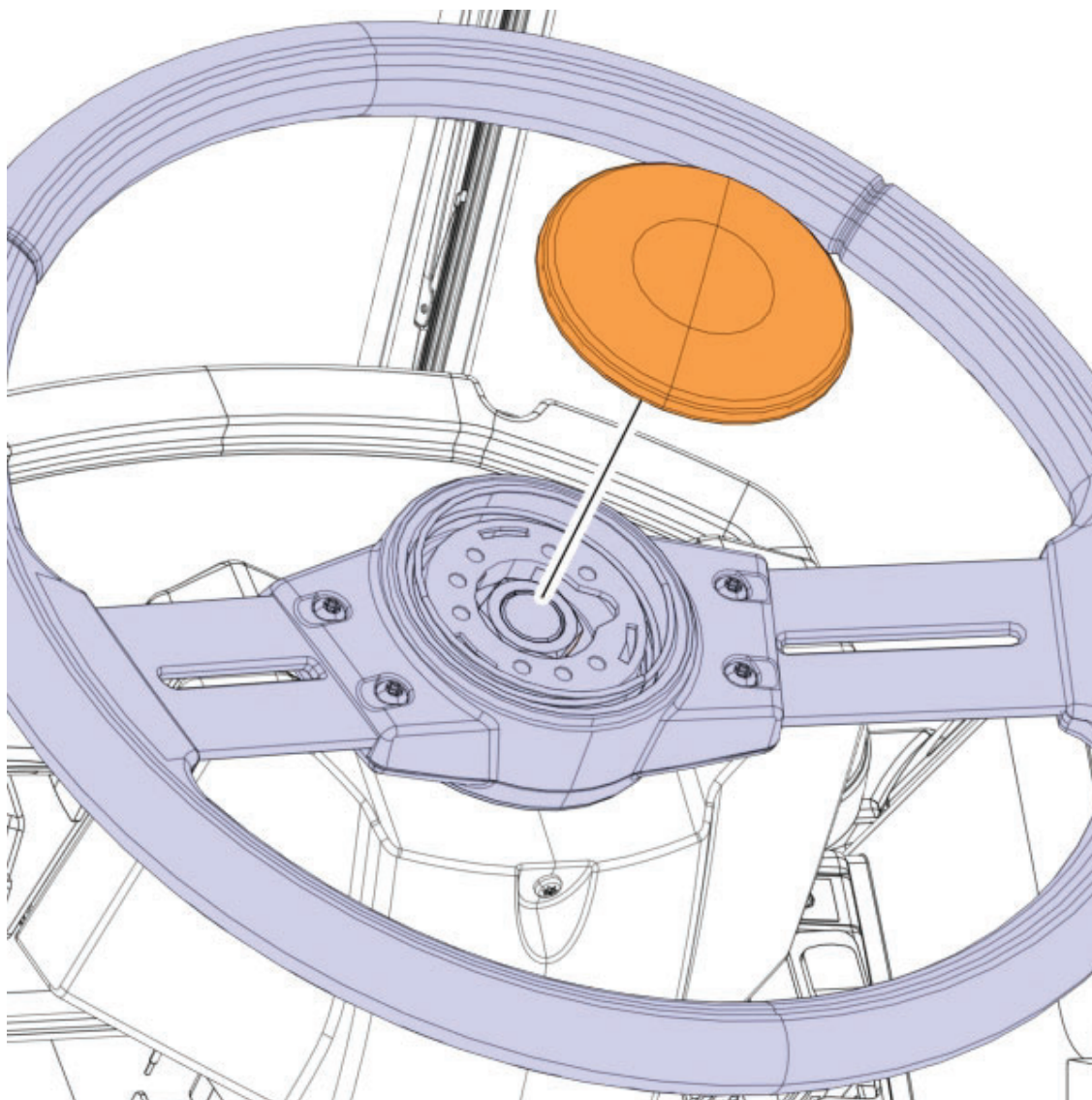
- | | |
|----------|---|
| 1 | Park the vehicle on a level surface with the steering wheel in the straight ahead position. |
| 2 | Apply the parking brake. |
| 3 | Place the transmission in neutral or park. |
| 4 | Install the wheel chocks. |



5	Disconnect the cable from the battery's negative terminal.
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6	Remove the horn button.
7	Disconnect the connector.



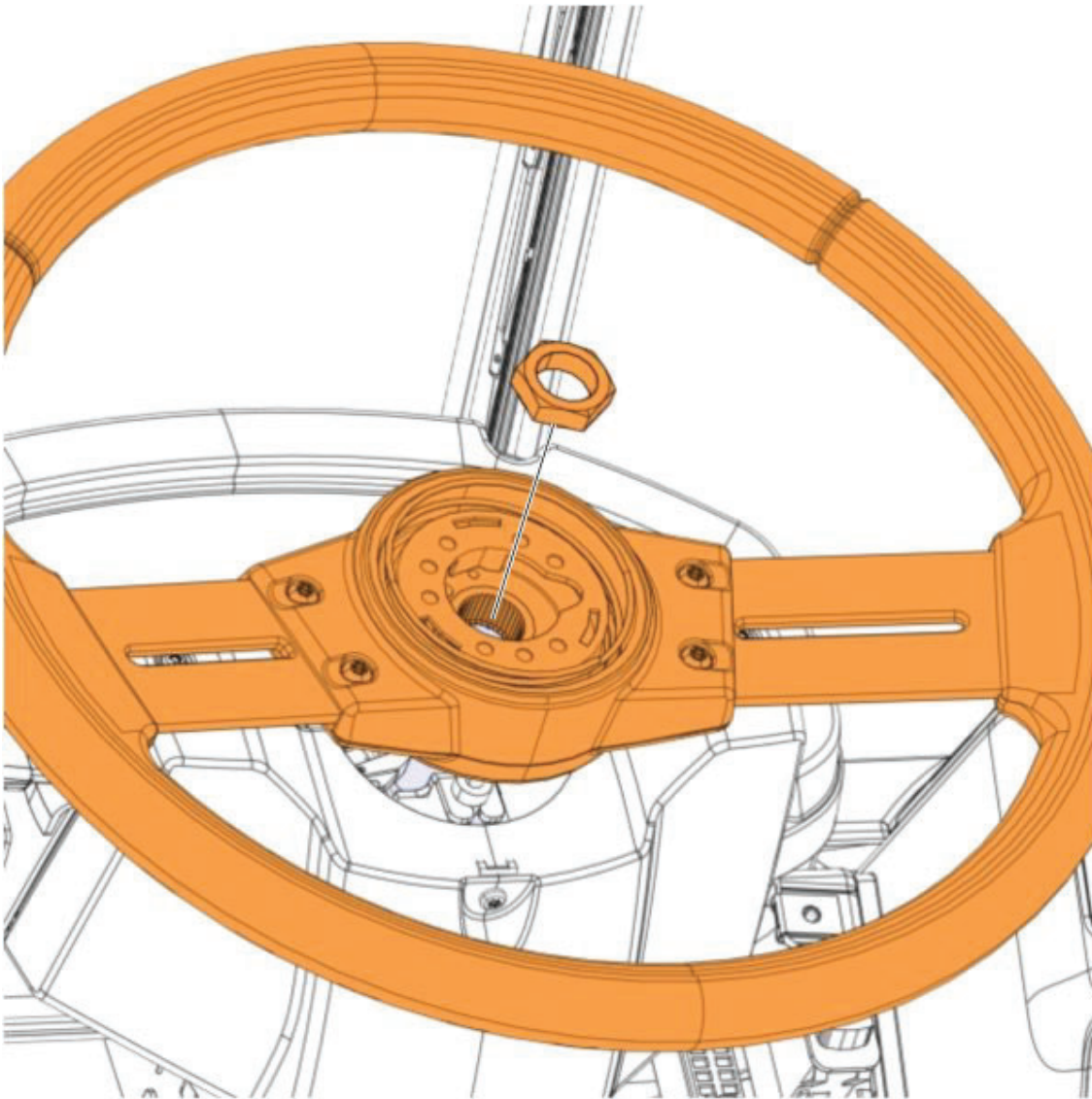
8	Remove the steering wheel nut.
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9	Remove the steering wheel.
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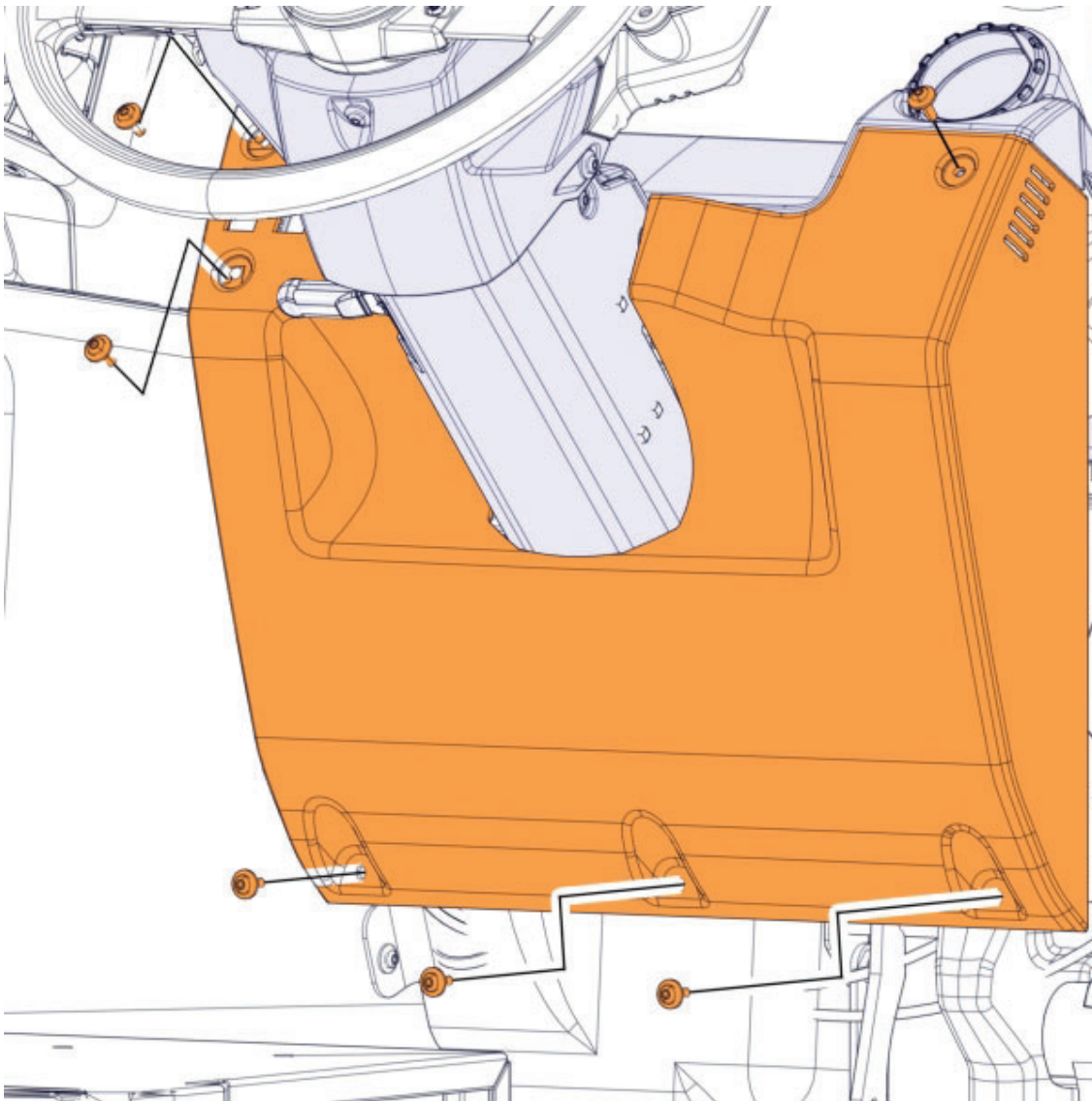
Required material

PULLER	9996519
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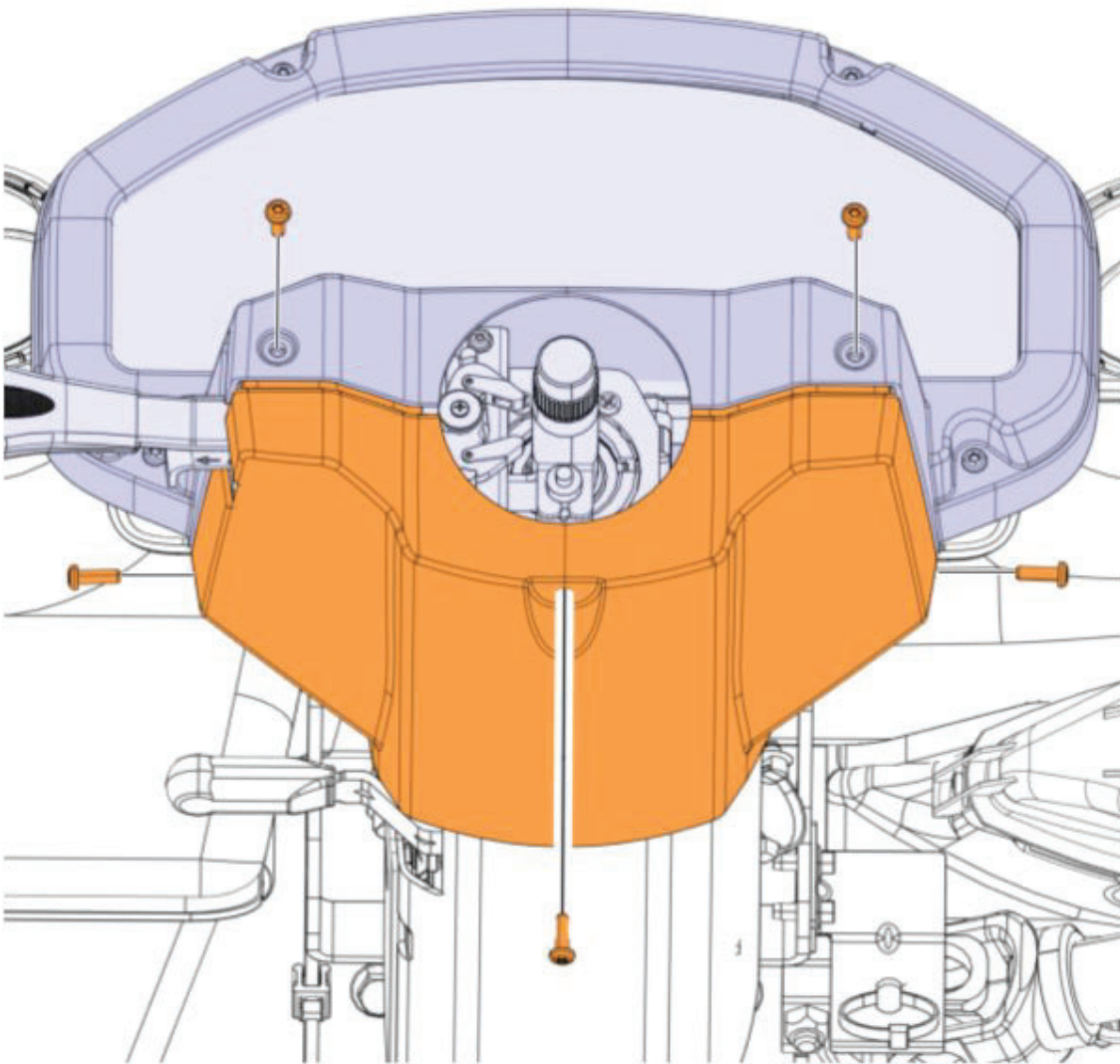
i	Note Use the special tool.
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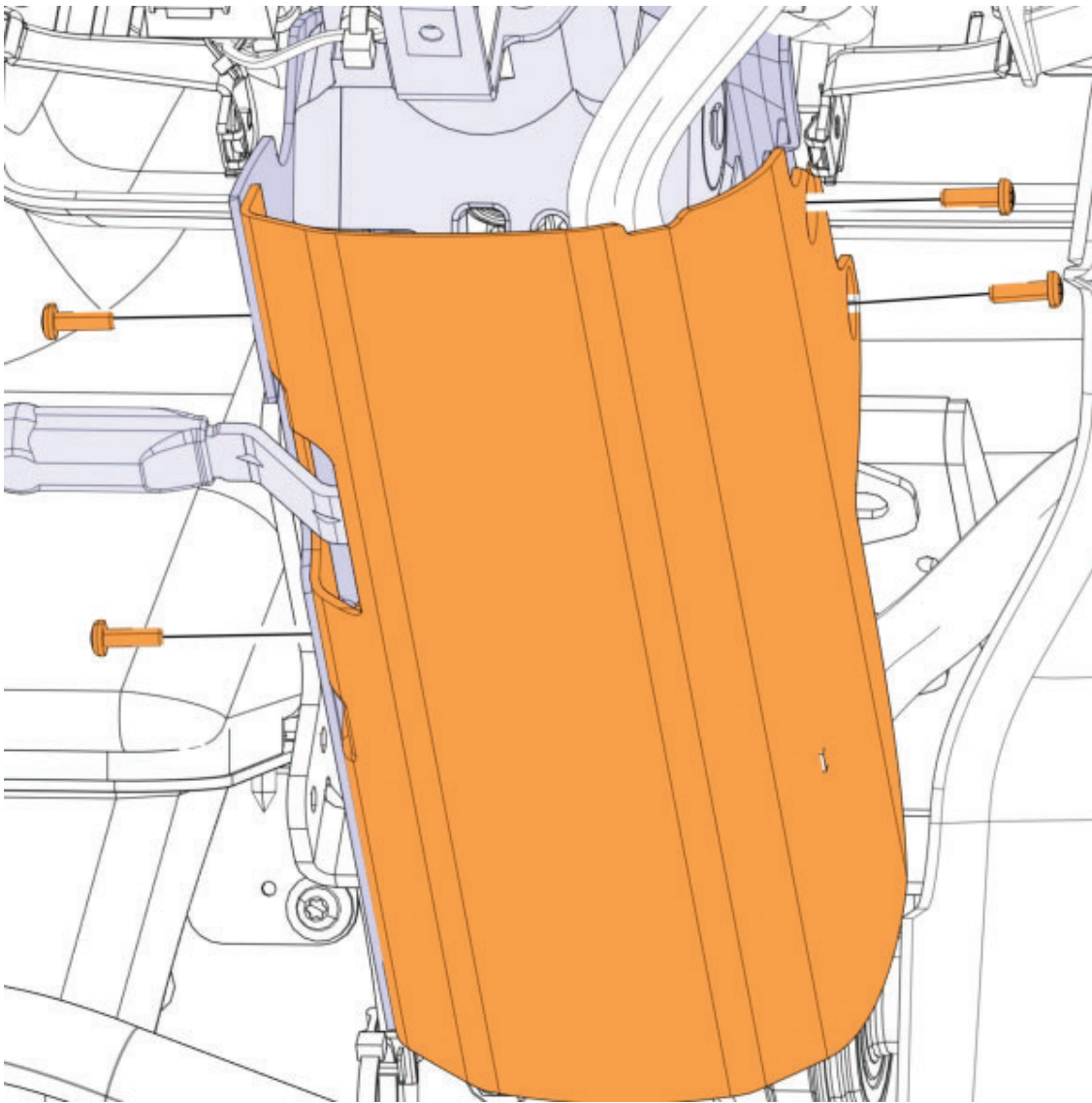
10	Remove the panel.
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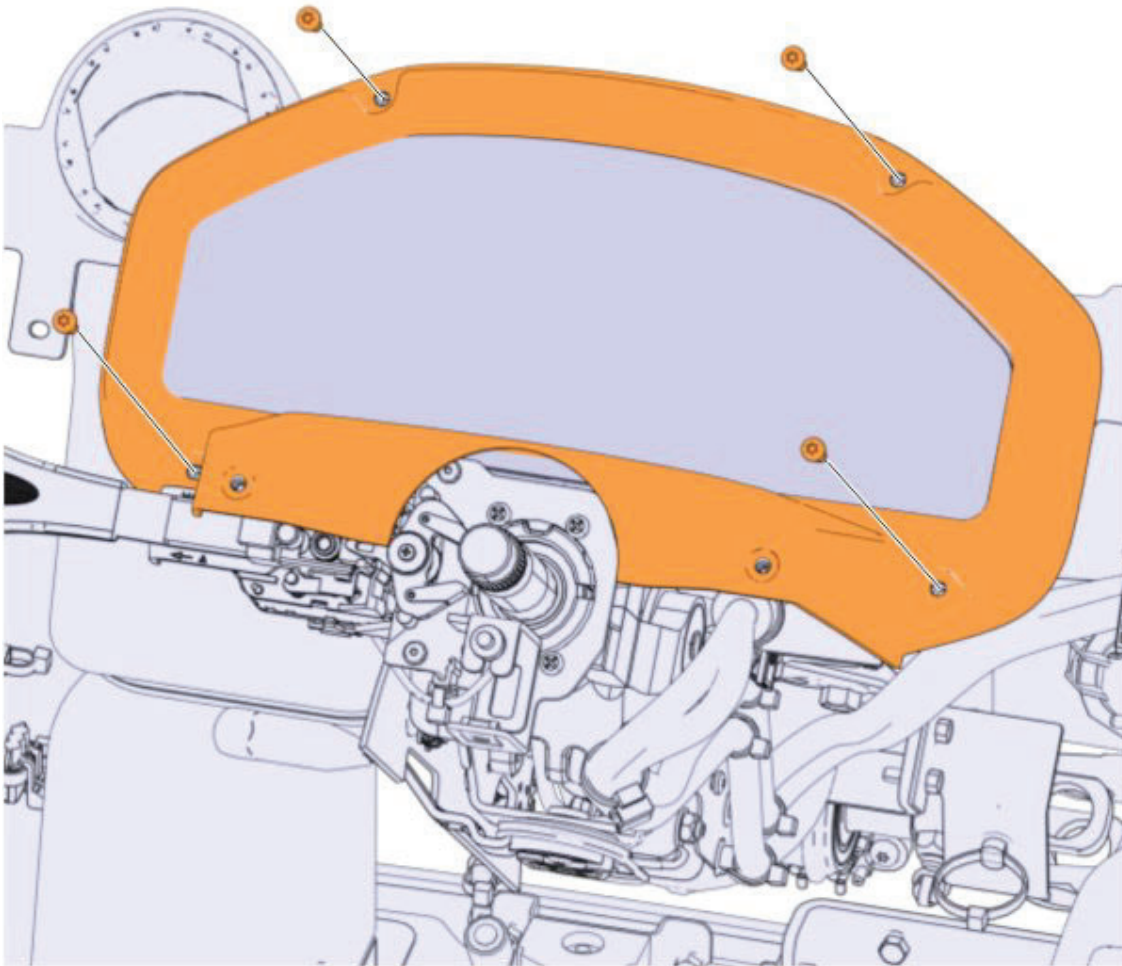
11	Remove the panel.
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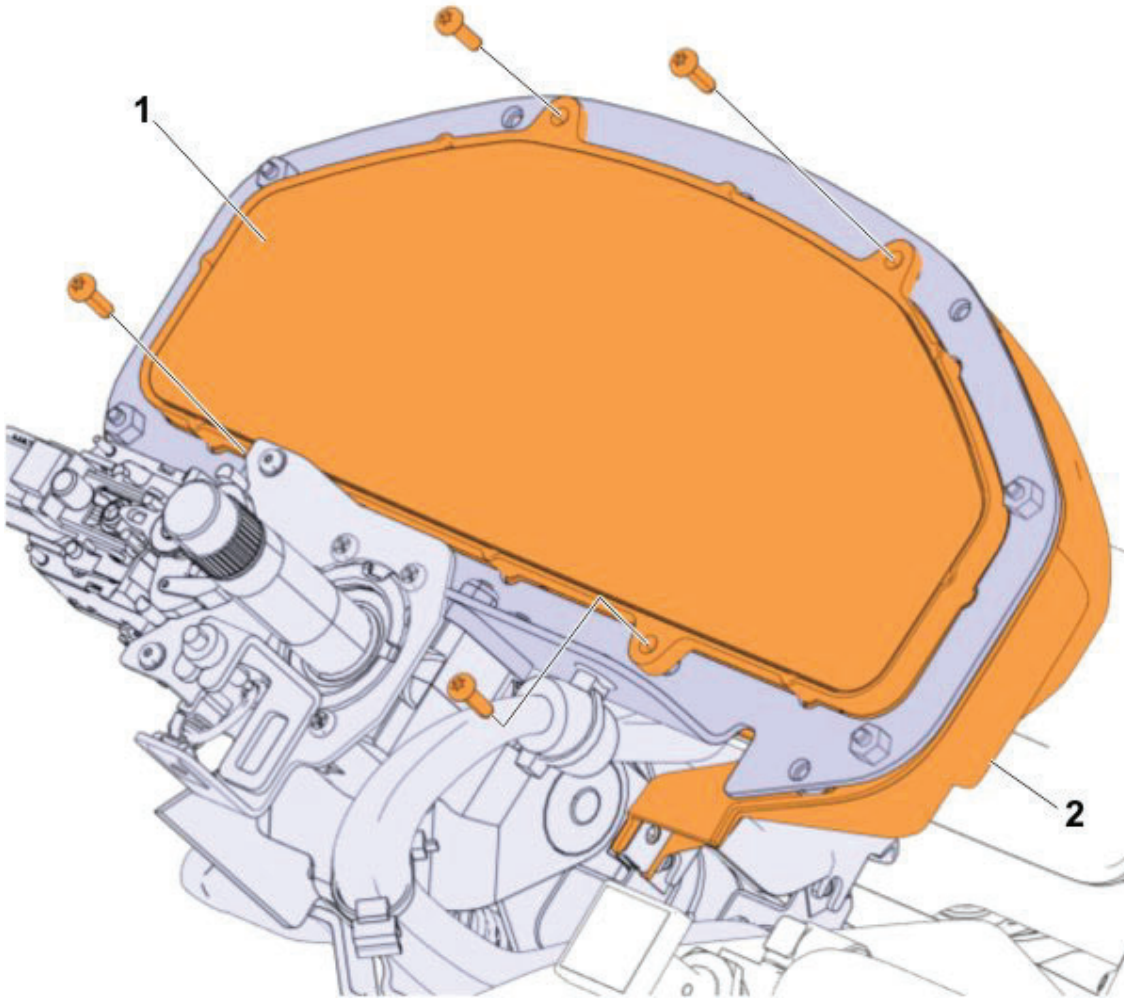
12	Remove the cover.
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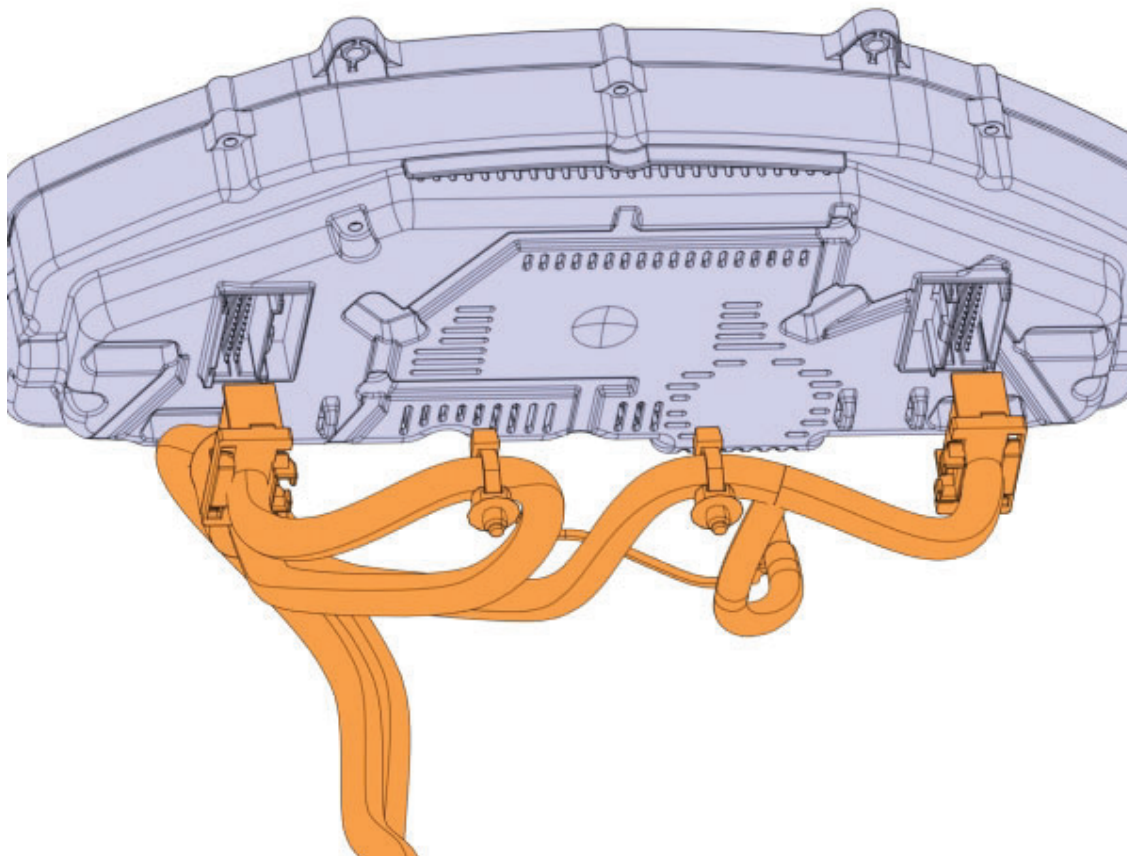
13	Remove the instrument cluster bezel.
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14	Remove the instrument cluster (1) and the rear cover (2).
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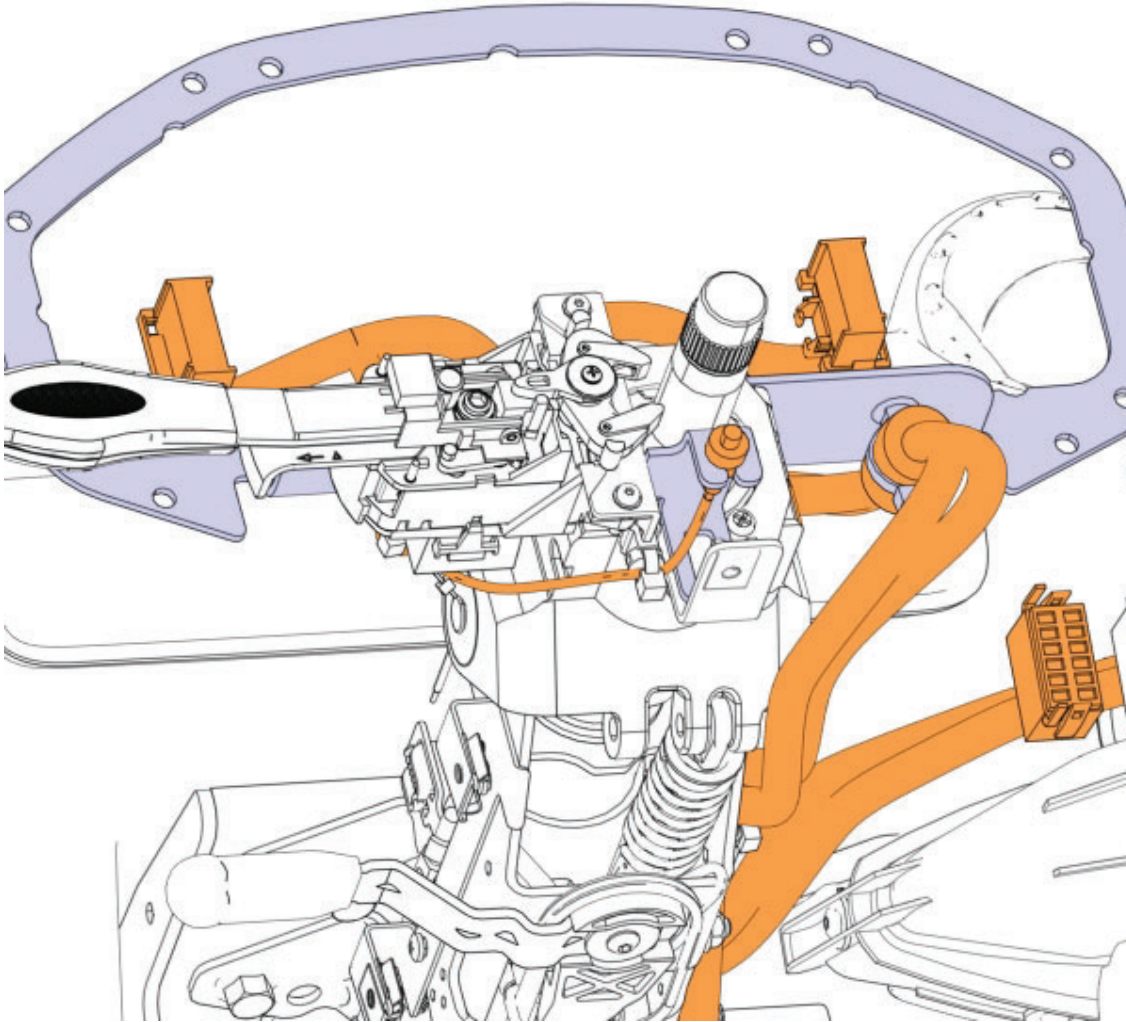
15	Disconnect the connectors.
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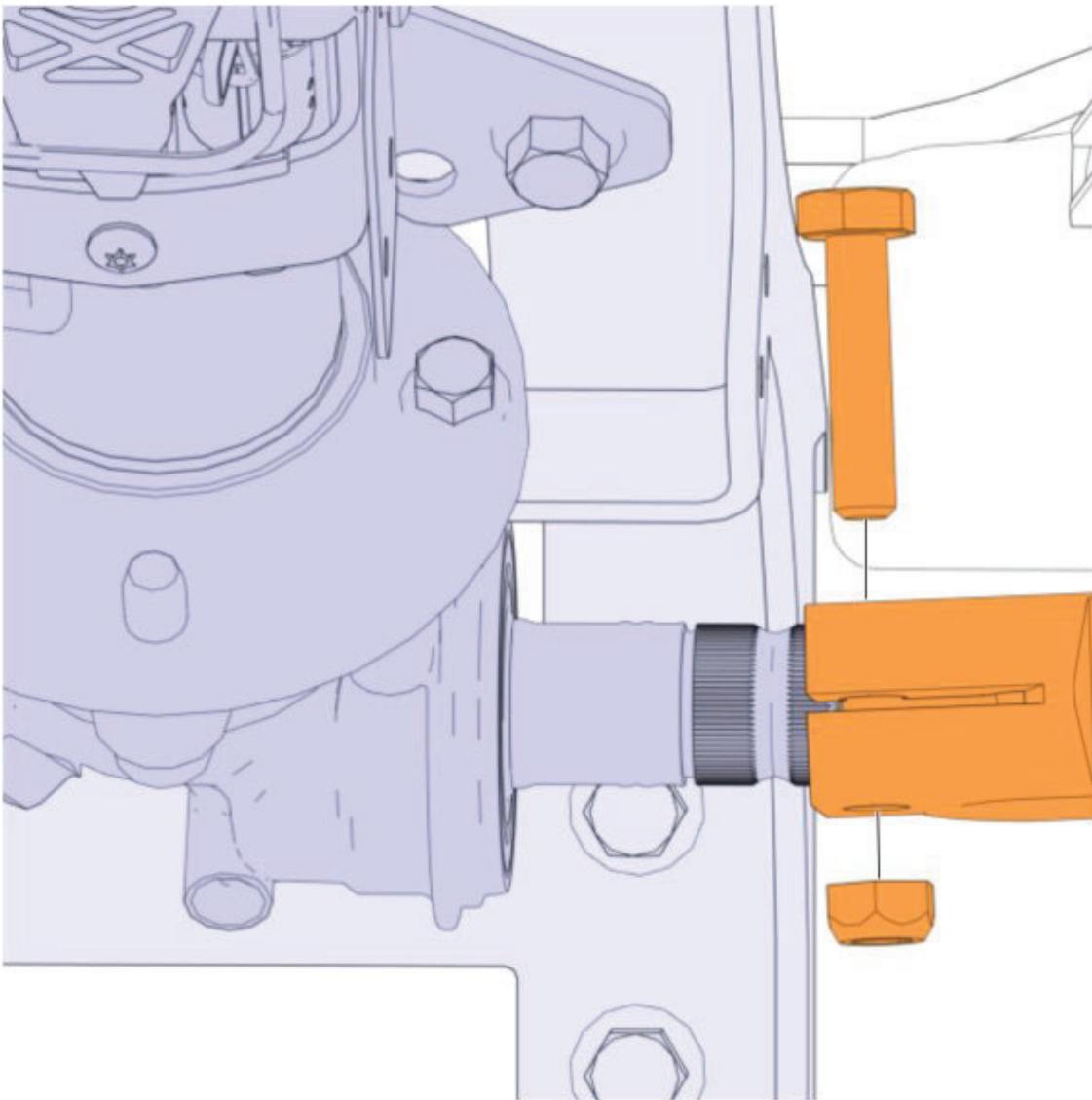
16	Disconnect the turn signal switch connector.
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	CAUTION
Risk of material damage.	
The cables can be damaged by sharp tools.	
▶	Take care when removing the cable ties.

17	Cut and remove any harness cable ties.
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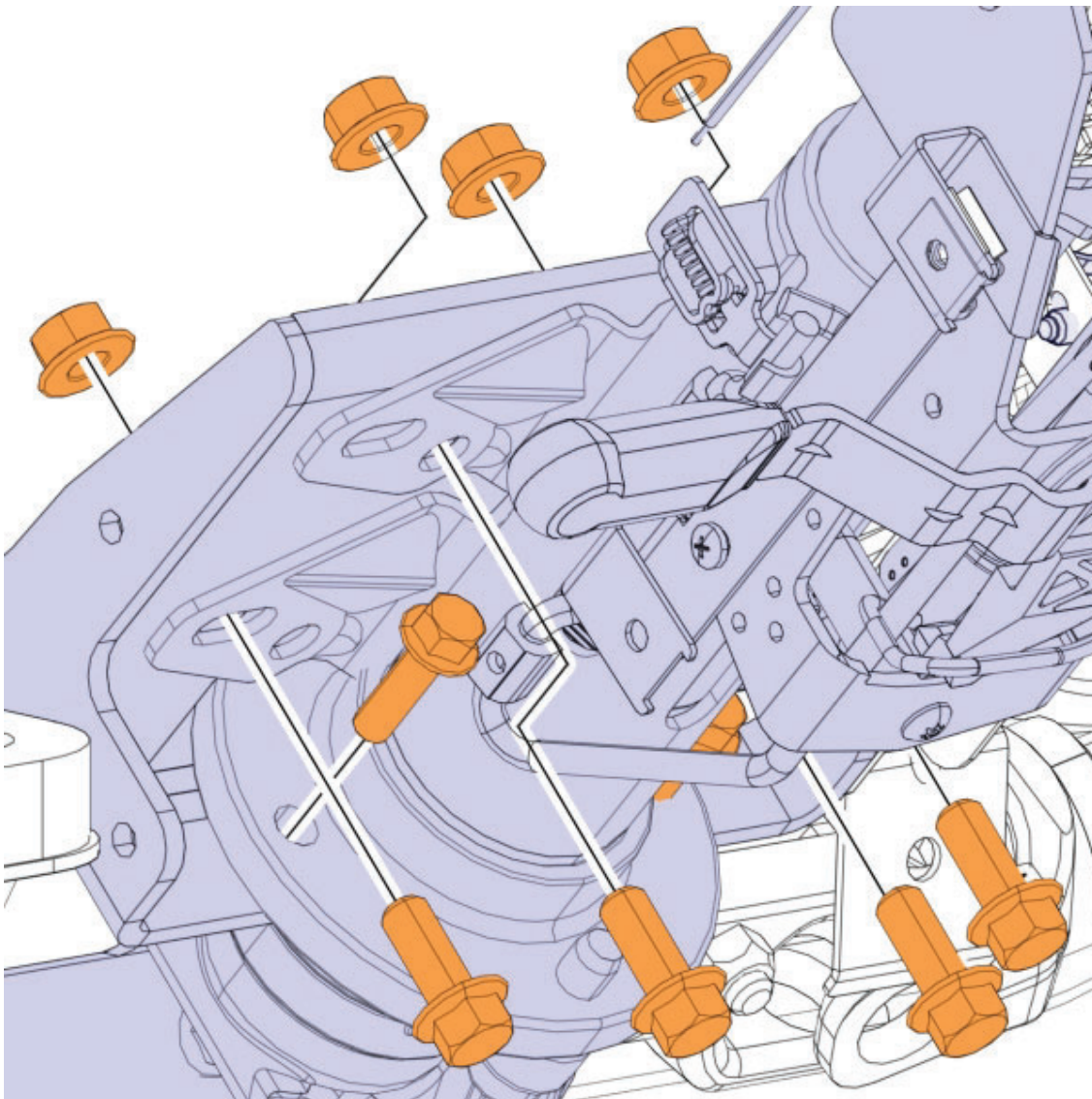


18	Disconnect the steering shaft coupler.
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19	Remove the steering column fasteners.
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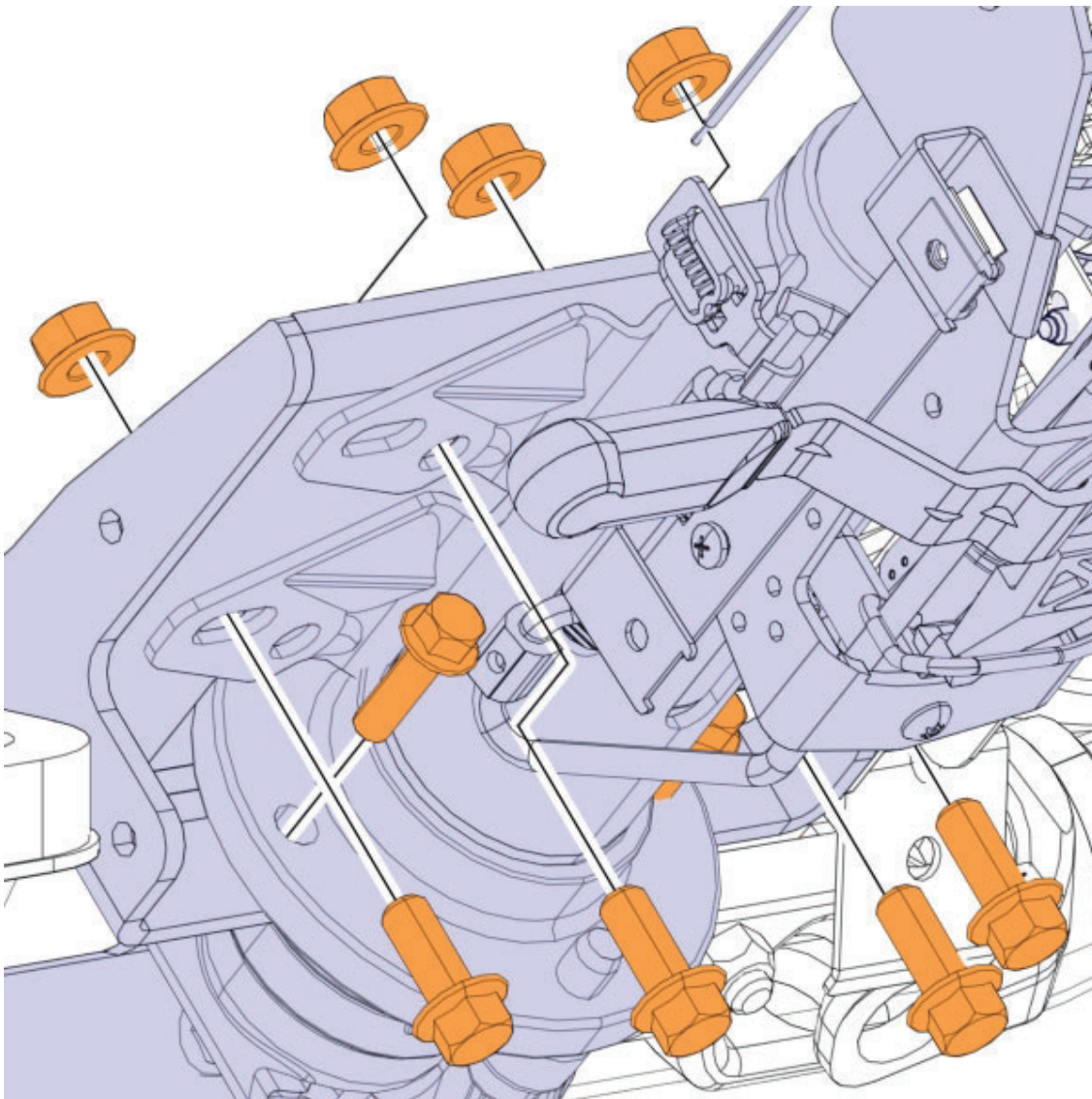
20	Remove the steering column.
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21	Transfer any reusable steering column parts.	
	Tightening torque	
	Turn signal switch, fastener	2.9 ±0.5 Nm (26 ±4 lb _f ·in)
	Tightening torque	
	Horn ring, fastener	2.9 ±0.5 Nm (26 ±4 lb _f ·in)
	Tightening torque	
	Instrument cluster bracket, fastener	6.1 ±0.9 Nm (54 ±8 lb _f ·in)
22	Position the steering column in the cab.	

23	Install the fasteners hand tight.
	<div style="display: flex; align-items: center;"> <div style="background-color: #0056b3; color: white; padding: 2px 5px; font-weight: bold; font-size: 1.2em; margin-right: 5px;">i</div> <div style="border: 1px solid black; padding: 2px;"> <p>Note Use new fasteners.</p> </div> </div>

24	Tighten the fasteners.	
	Tightening torque	
	Steering column, #8 fastener	$30 \pm 5.4 \text{ Nm}$ $(22 \pm 4 \text{ lb}_f\text{-ft})$
	Tightening torque	
	Steering column, #10 fastener	$61 \pm 9.5 \text{ Nm}$ $(45 \pm 7 \text{ lb}_f\text{-ft})$

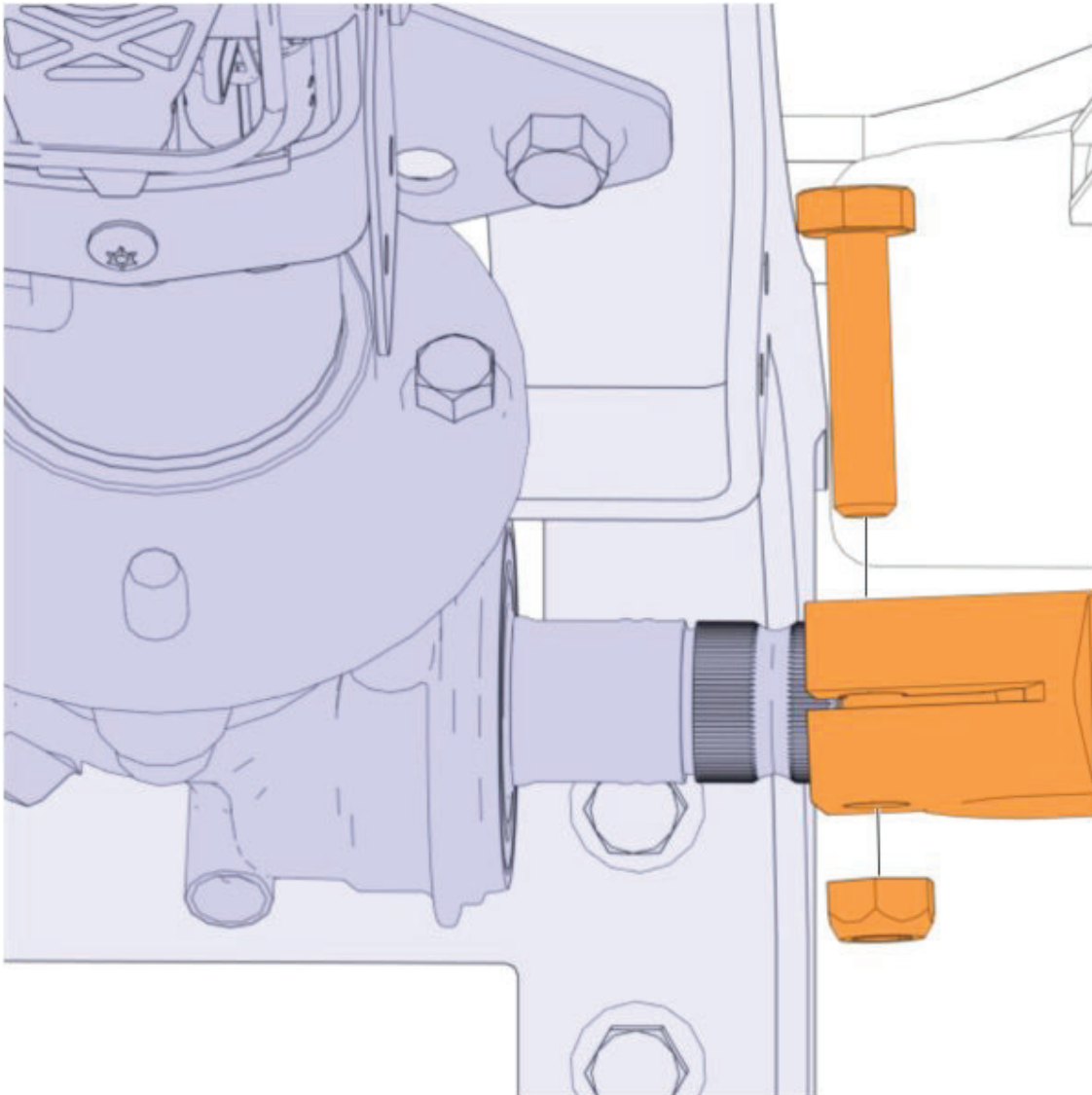


25	Connect the steering shaft coupler.
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Tightening torque			
Steering shaft coupler, nut	104 ±19 Nm (77 ±14 lb _f ·ft)		
<table border="1"> <tr> <td style="text-align: center;">i</td> <td>Note Use new fasteners.</td> </tr> </table>		i	Note Use new fasteners.
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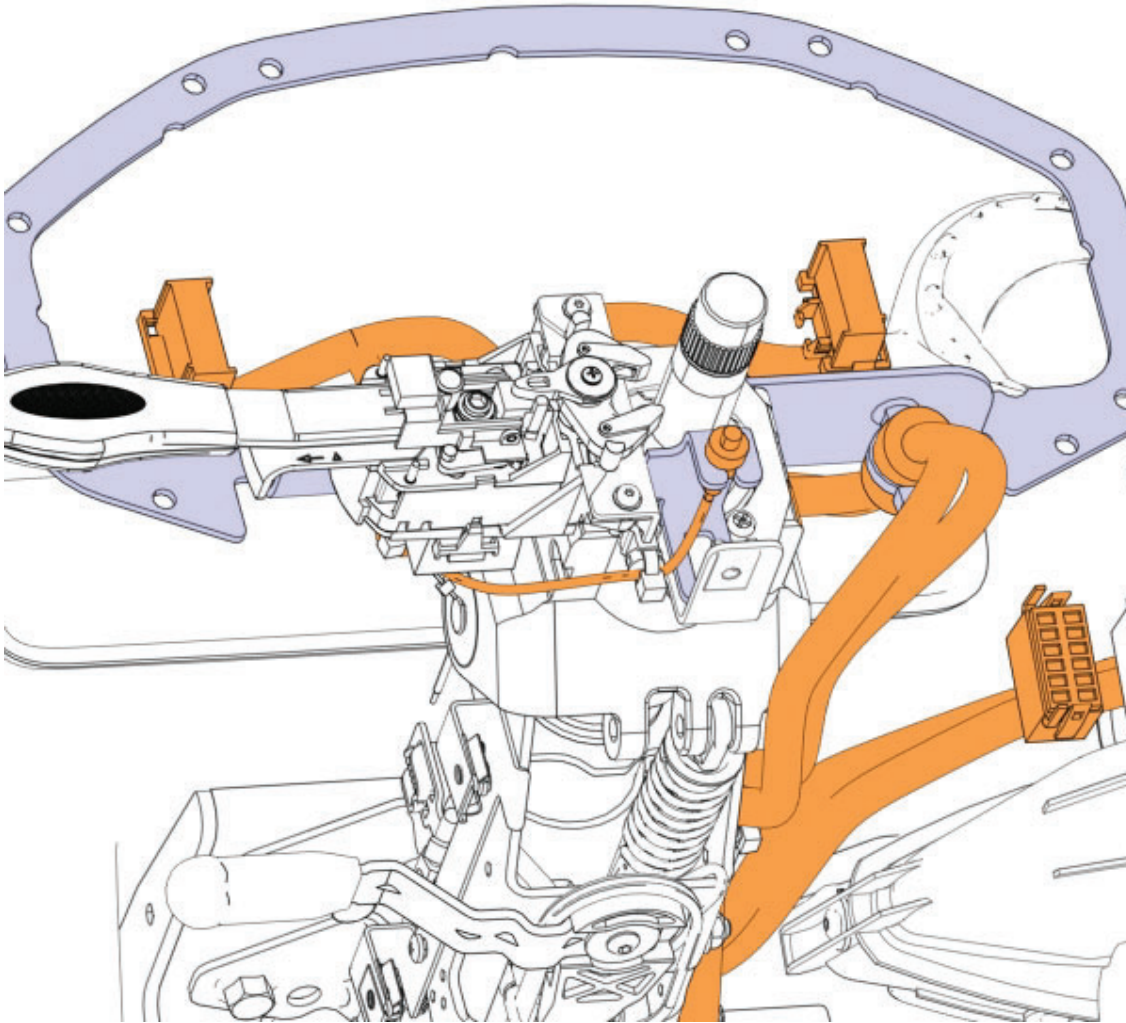
26 Connect the turn signal and horn connectors.

	CAUTION
Harness routing	
Harnesses can be damaged if mounted too close to moving parts.	
▶	Mount harnesses so they cannot contact moving parts.

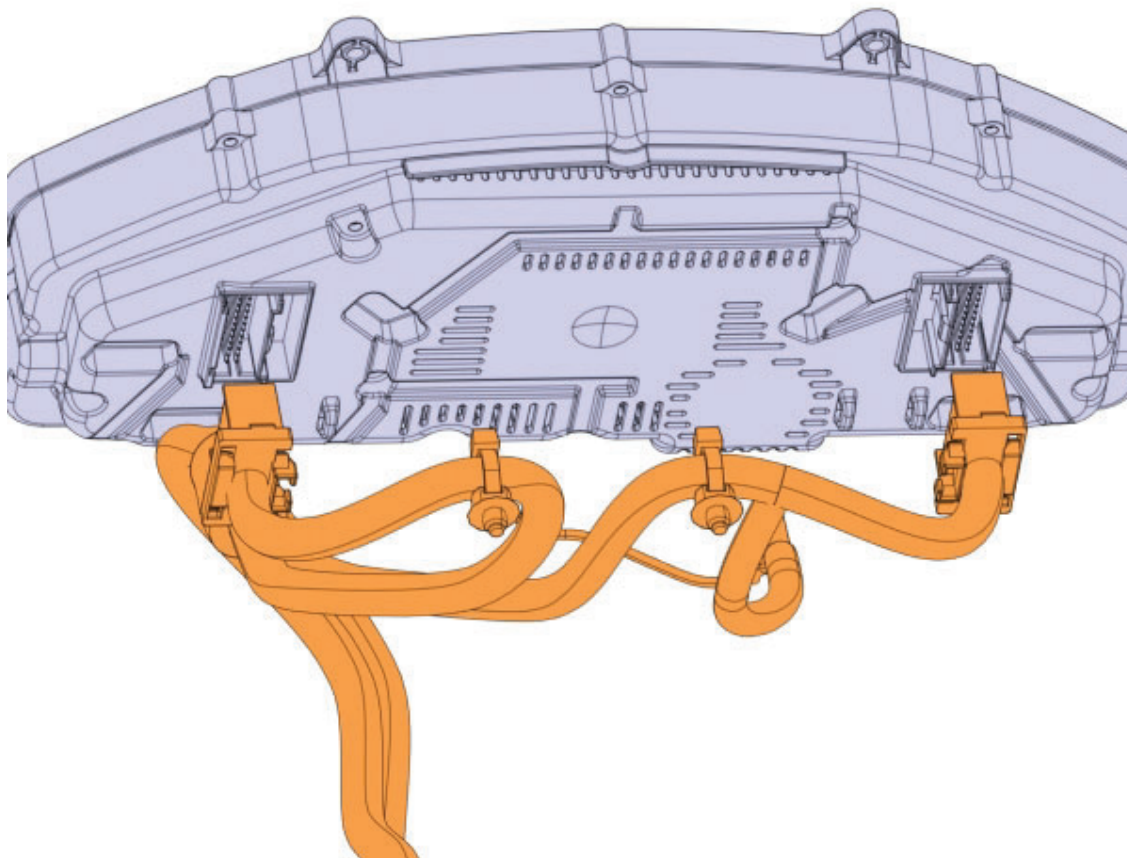
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27	Position the harness on the steering column for later connection to the instrument cluster and secure with cable ties.
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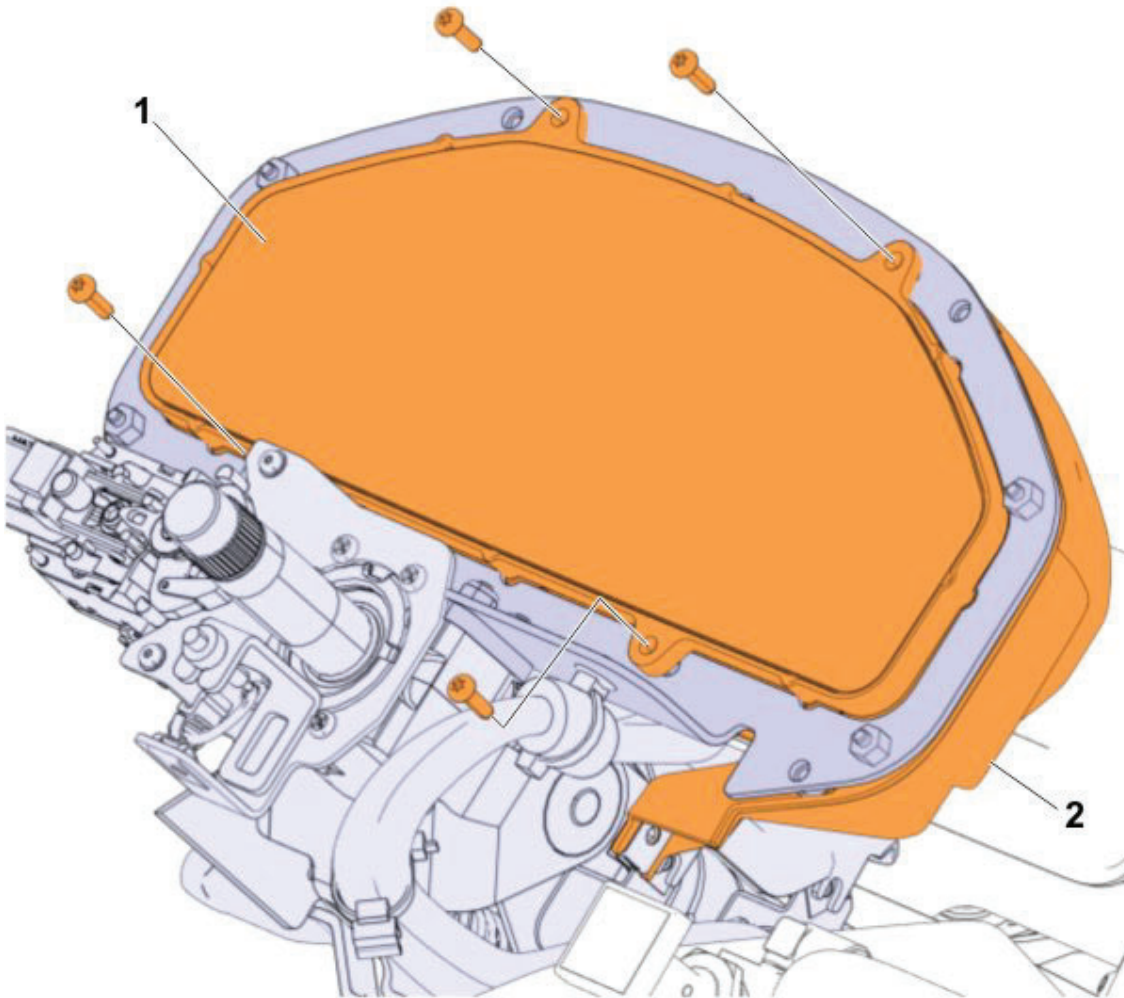
28	Connect the connectors.
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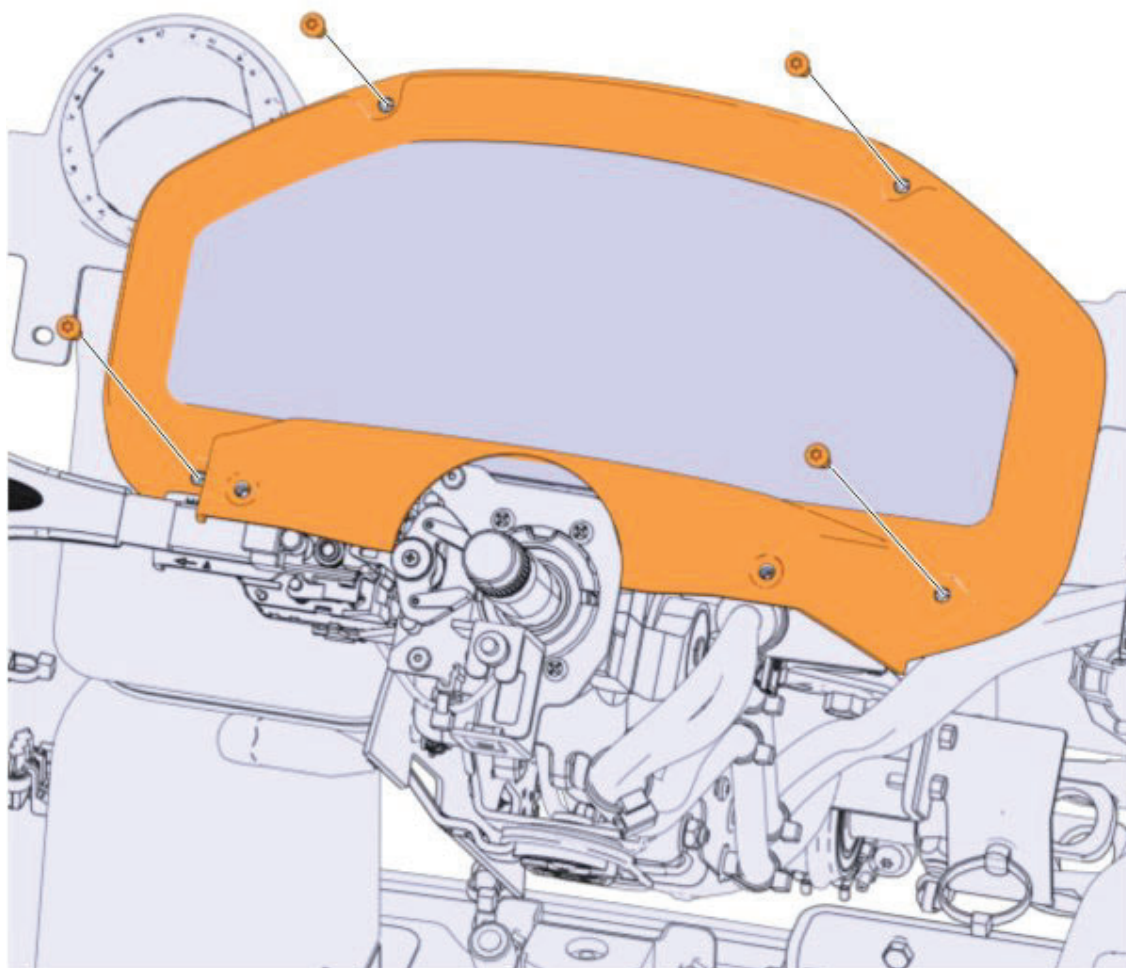
29	Install the instrument cluster (1) .	
	Tightening torque	
	Instrument cluster, fastener	1.1 ±0.3 Nm (10 ±3 lb _f ·in)
i	Note Do not tighten the screws until they are all in place.	

30	Install the instrument cluster rear cover (2) .	
	Tightening torque	
	Instrument cluster rear cover, fastener	1.1 ±0.3 Nm (10 ±3 lb _f ·in)
i	Note	

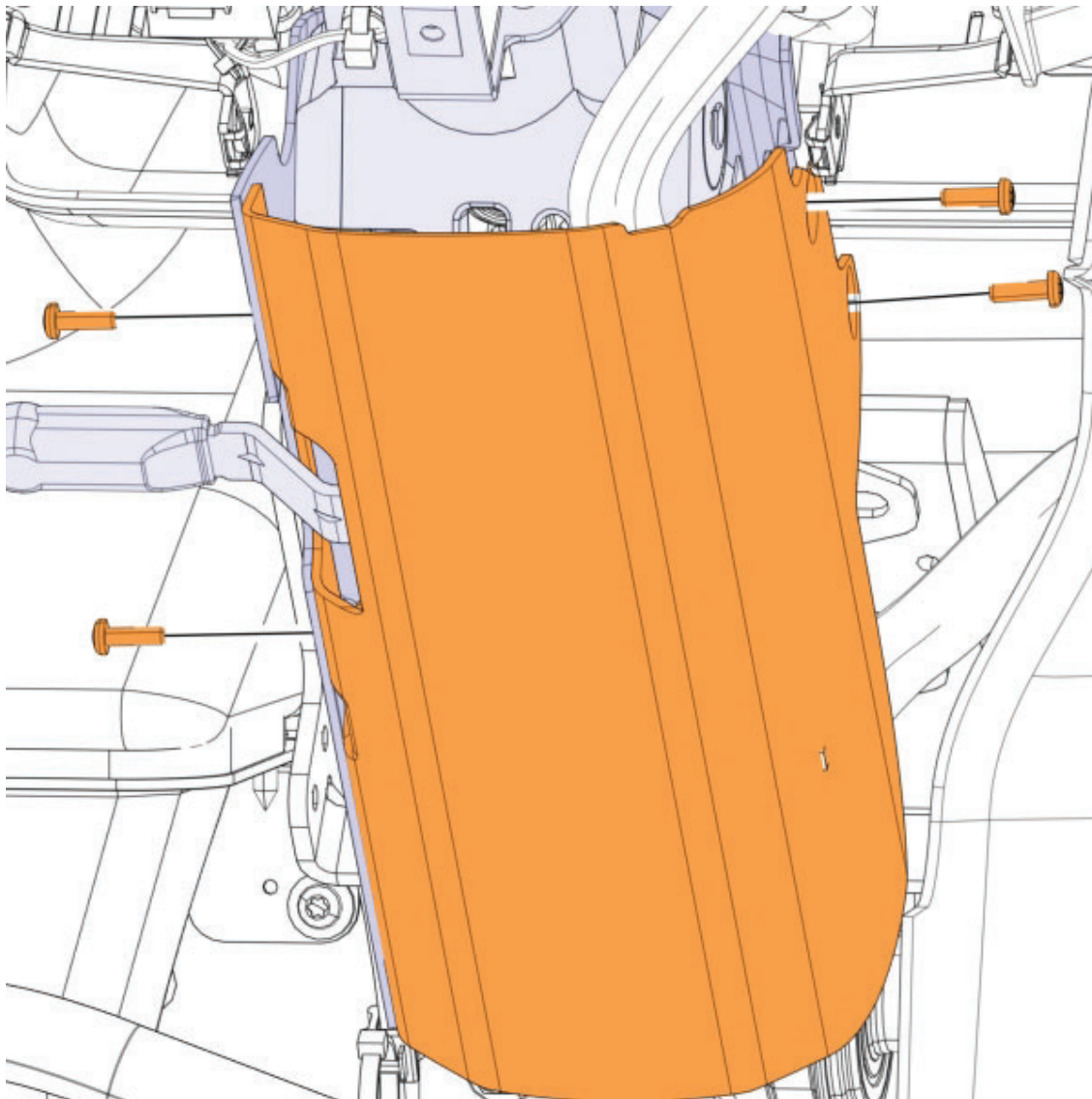
Do not tighten the screws until they are all in place.



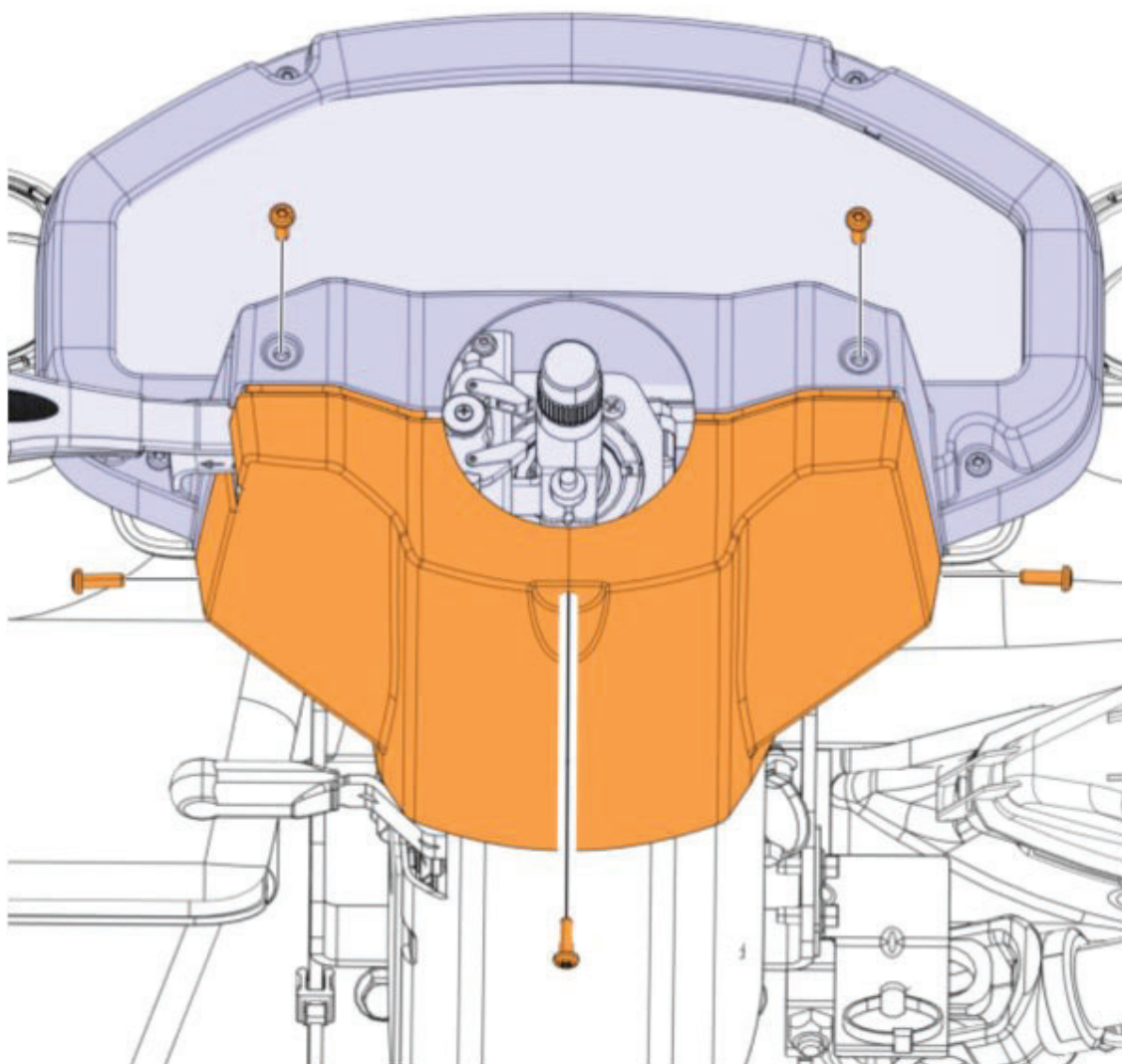
31	Install the instrument cluster bezel.			
	Tightening torque			
	Instrument cluster bezel, fastener	1.1 ±0.3 Nm (10 ±3 lb _f ·in)		
	<table border="1"> <tr> <td style="text-align: center;">i</td> <td>Note Do not tighten the screws until they are all in place.</td> </tr> </table>		i	Note Do not tighten the screws until they are all in place.
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32	Install the cover.	
	Tightening torque	
	Interior panel, fastener	3.4 ±0.6 Nm (30 ±5 lb _f ·in)

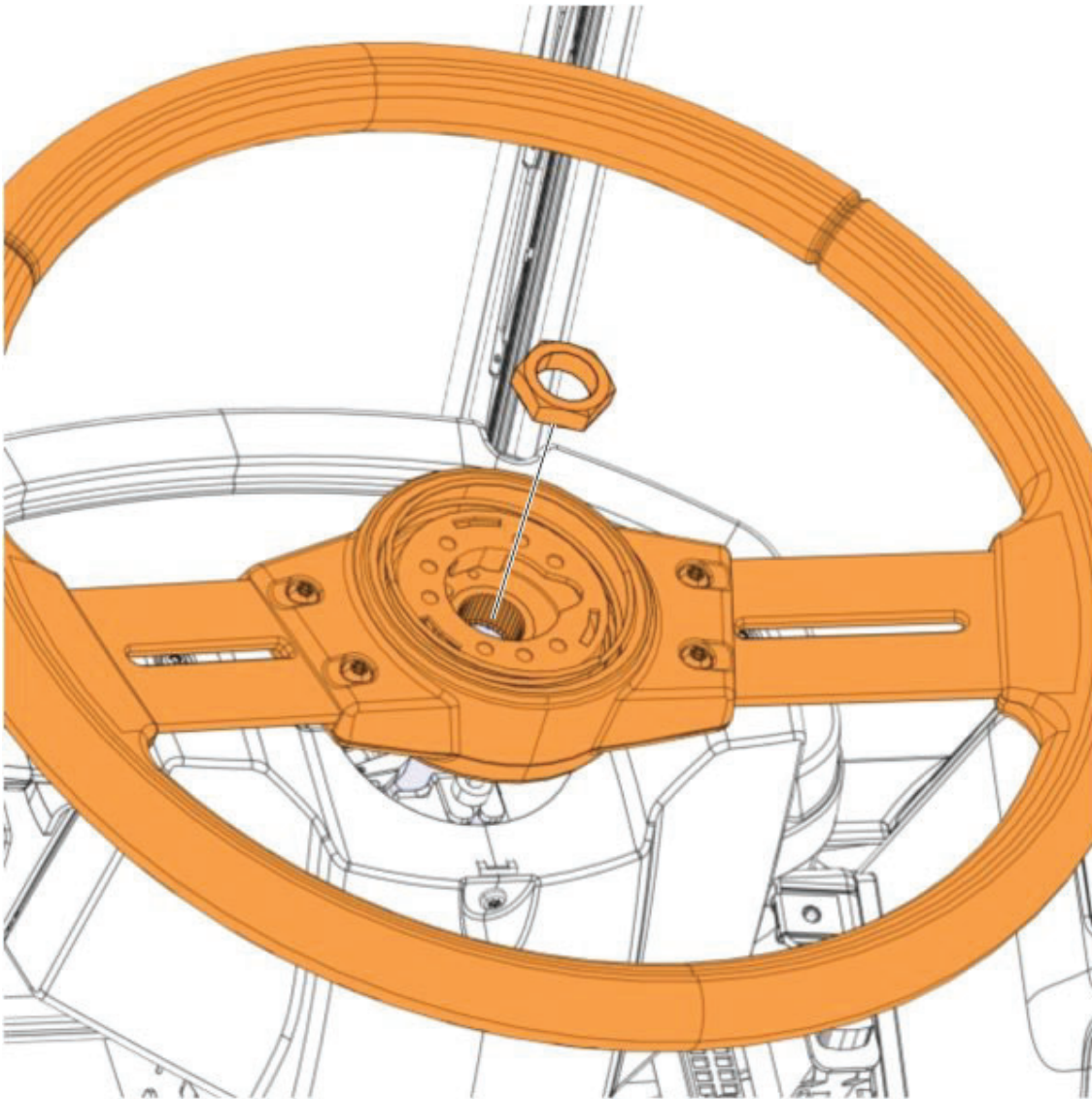


33	Install the panel.	
	Tightening torque	
	Interior panel, fastener	3.4 ±0.6 Nm (30 ±5 lb _f ·in)



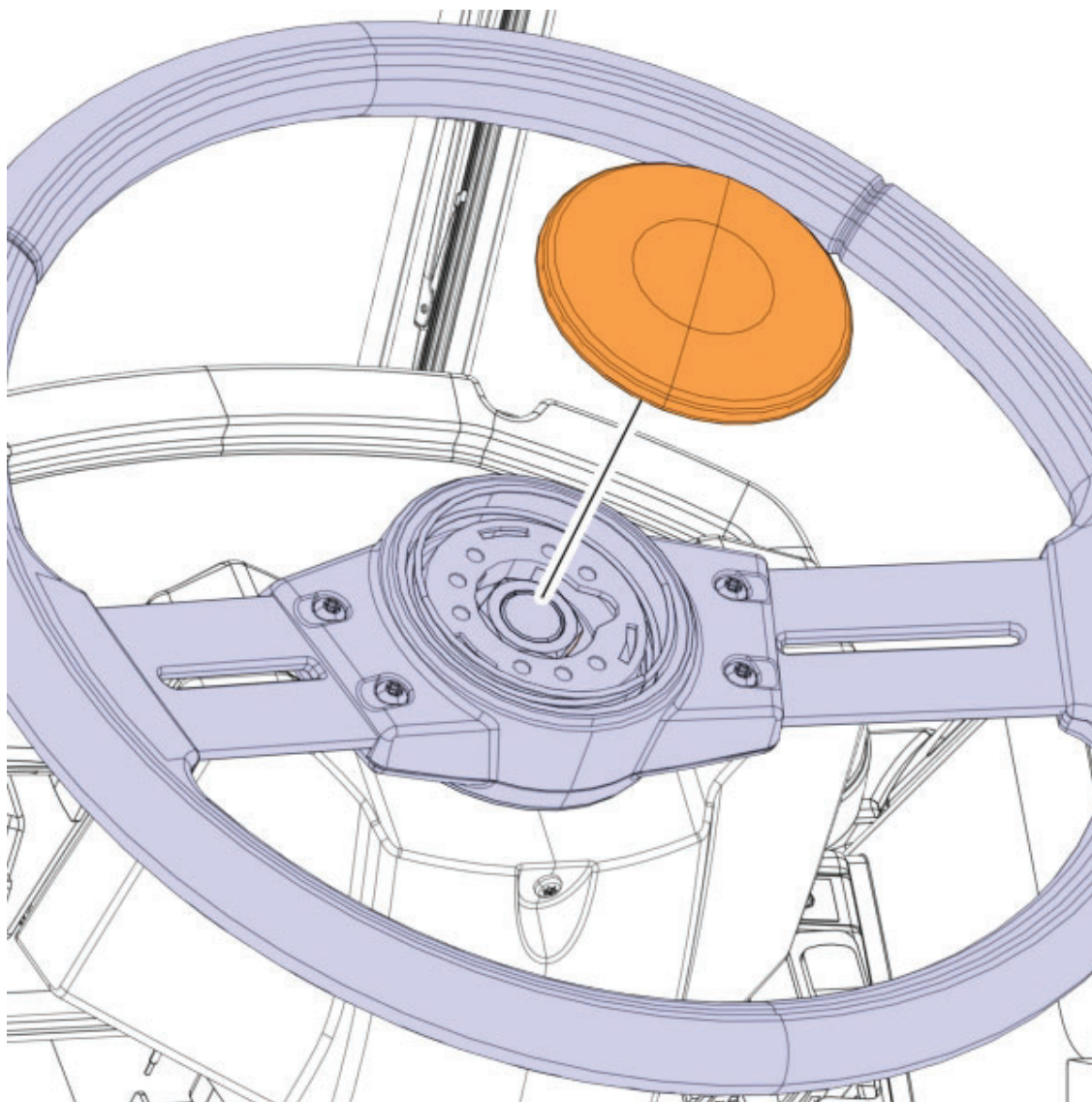
34	Install the steering wheel.				
	<table border="1" style="width: 100%;"> <tr> <td style="width: 30px; text-align: center;">i</td> <td>Note</td> </tr> <tr> <td colspan="2">Place the steering wheel in the driving position above the steering shaft before installing it.</td> </tr> </table>	i	Note	Place the steering wheel in the driving position above the steering shaft before installing it.	
i	Note				
Place the steering wheel in the driving position above the steering shaft before installing it.					

35	Install the steering wheel nut.		
	Tightening torque		
	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">Steering wheel, nut</td> <td style="width: 50%;">68 ±5 Nm (50 ±4 lb_f·ft)</td> </tr> </table>	Steering wheel, nut	68 ±5 Nm (50 ±4 lb _f ·ft)
Steering wheel, nut	68 ±5 Nm (50 ±4 lb _f ·ft)		

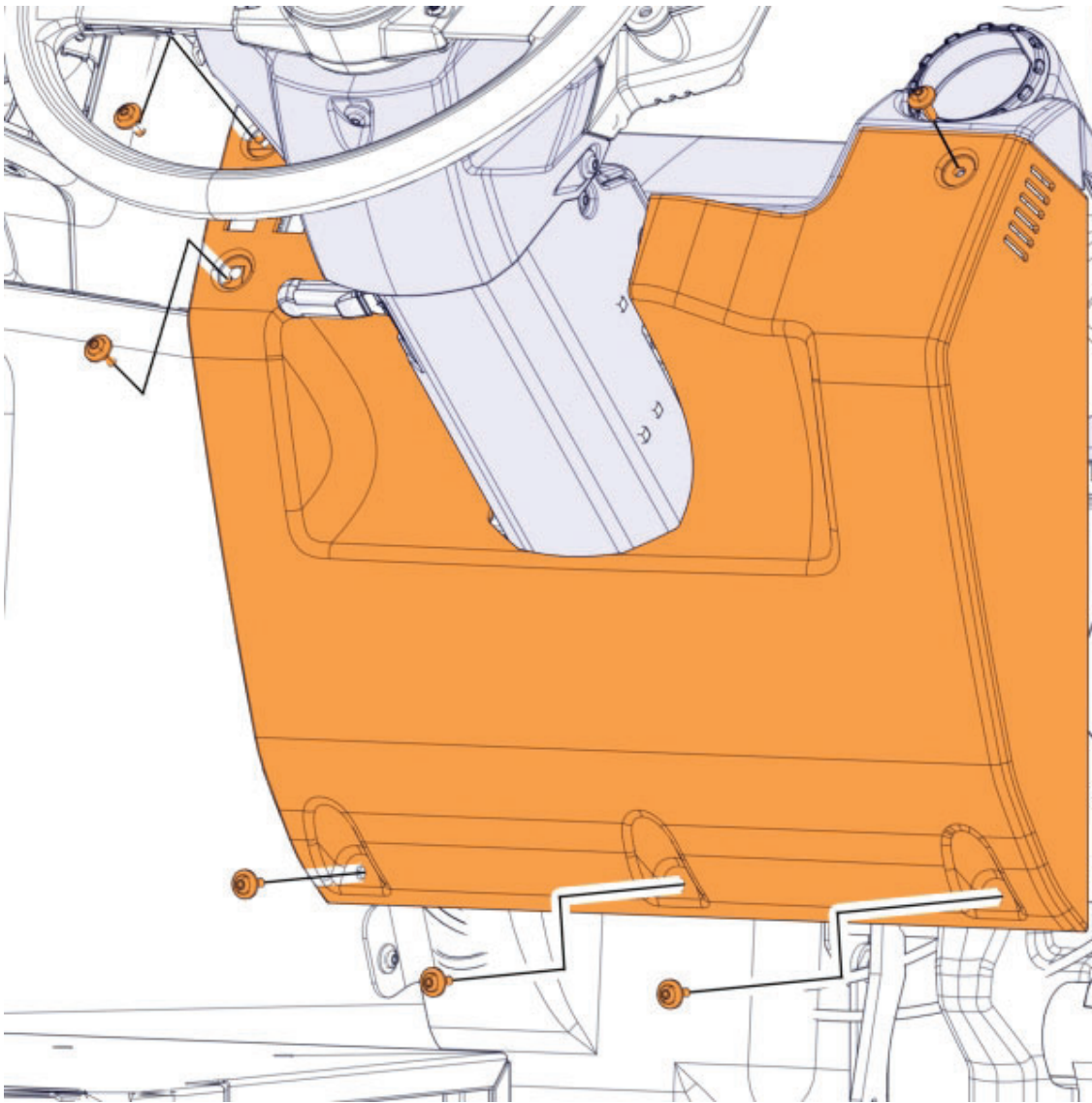


36	Connect the horn connector.
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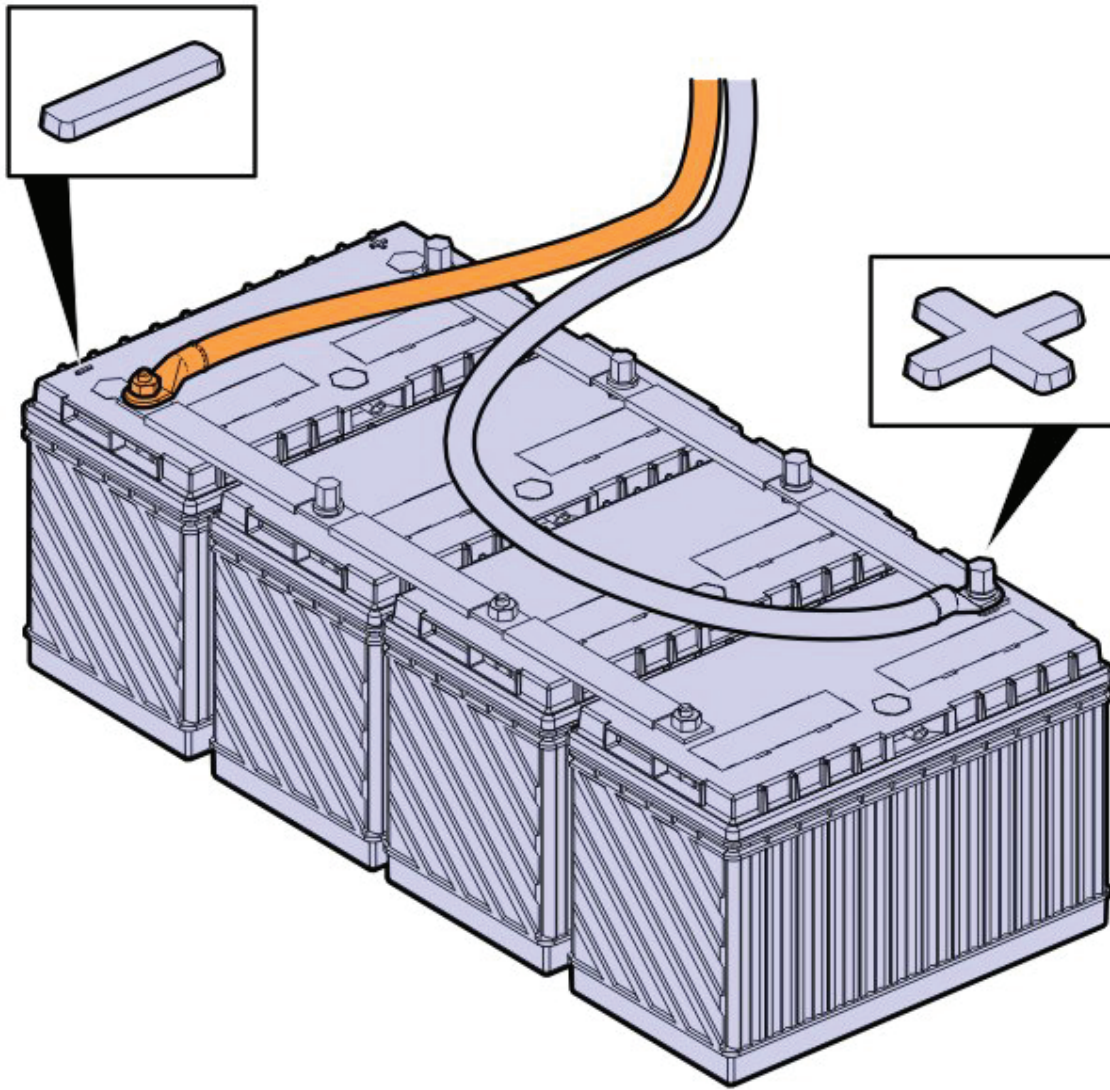
37	Install the horn button.
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38	Install the panel.	
	Tightening torque	
	Interior panel, fastener	3.4 ±0.6 Nm (30 ±5 lb _f ·in)



39	Connect the battery cable to negative (ground) terminal.
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40	Remove the wheel chocks.
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