#### Heavy Commercial Vehicles

Information bulletin to be circulated to:	•	Warranty Manager	Parts Manager	Master Technician	Service Consultant	BMIS
	✓	<b>✓</b>	✓	✓	✓	✓

Subject	F-LINE Steering Column Snap Ring Replacement		
Variant	H476-H476C-H566 Vehicles		
Abstract	"This document covers the engineering solutions implemented to address the steering column retaining ring dislodgement issue observed in F-LINE vehicles"		

# Parts to be Used

Part Number	Part Name	Number of Parts	
W527119-S300	Steering Column Snap Ring	1	
SDM-M2G1-A	Loctite	3-5 ml	

### Labour

Labour Code	Labour Name	Duration (hour)	
F2V87 W527119	Steering Column Snap Ring R/I	0.10	
F7V05 3F818	Steering Wheel Angle Sensor R/I	0.20	
	(Incl. Clockspring)		
F2V87 3600	Steering Wheel R/I	0.15	
F2V87 3A515	Steering Wheel Hub R/I	0.05	

# **Service Application**

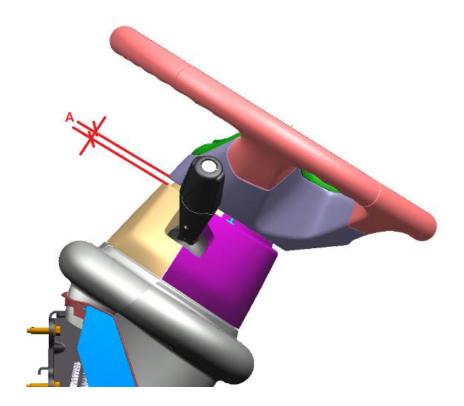
Follow the instructions below to perform the corrective action for the retaining ring dislodgement issue in the steering column

### Evaluation of the gap between the steering wheel and surrounding plastic body parts.

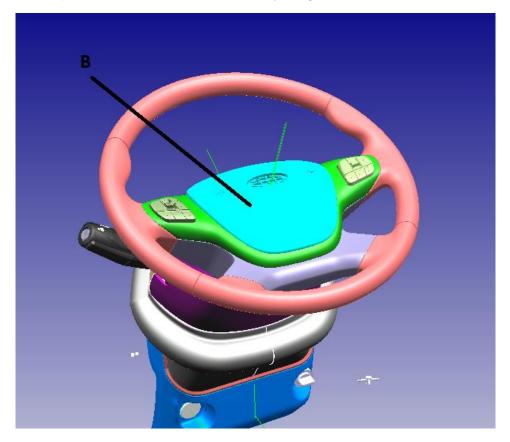
- Evaluation of the gap between the steering wheel and surrounding plastic body parts.
- If there is no clearance between these two parts and interference is observed, the retaining ring inside the steering column might have been displaced from its groove.

If it is suspected that the retaining ring inside the steering column has come out of its position, eliminate the issue by following the corrective steps outlined below.

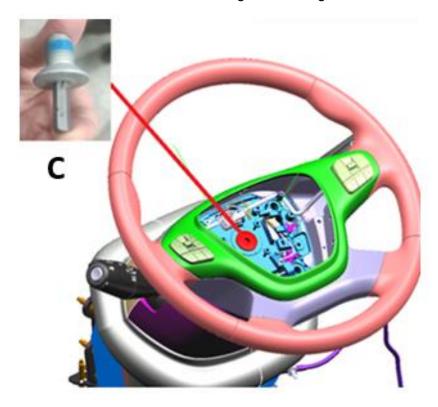
- 1. Stop the vehicle safely with the wheels in a straight-ahead position.
- 2. Adjust the steering wheel to the highest and closest position to the windshield. (Figure A)



3. Remove the horn pad and horn connector **carefully**. (Figure B)

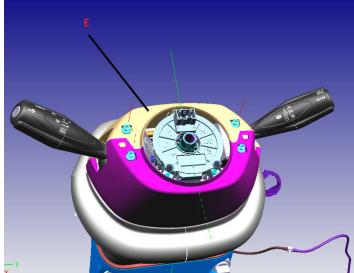


4. Using an APEX-50 tool, remove the bolt securing the steering wheel to the shaft. (Figure C)



5. Disconnect the clock spring connector **carefully** and remove the steering wheel. **Do this process carefully, otherwise clockspring could be damaged.** (Figures D, E)

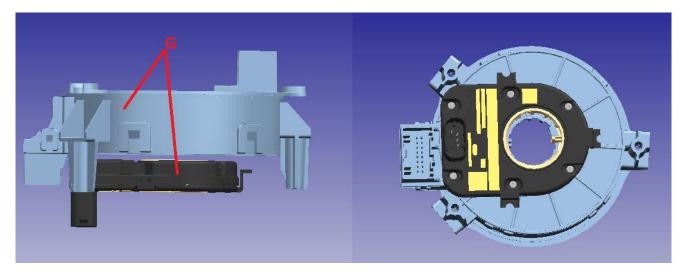




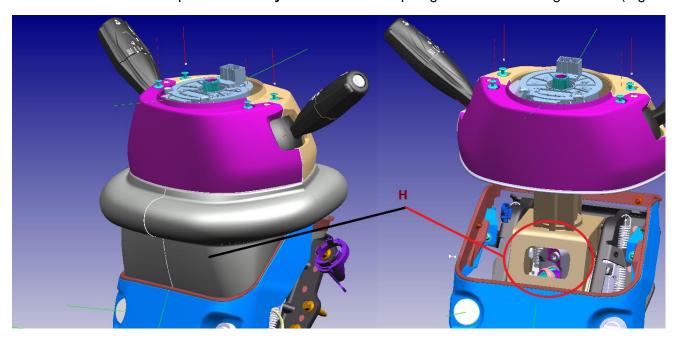
6. Remove the four screws of the plastic parts shown and position the parts underneath the metal brackets **carefully**. (Figure F)



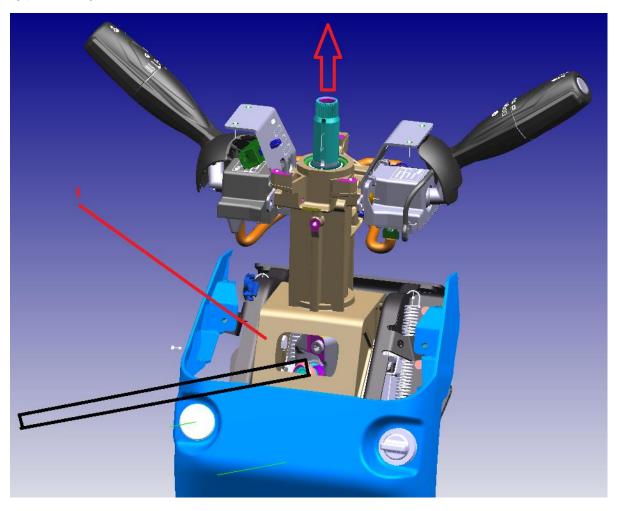
7. Remove the two connectors and three smounting bolts of the clock spring. Remove the clock spring and SAS sensor together without separating them. (Figure G)



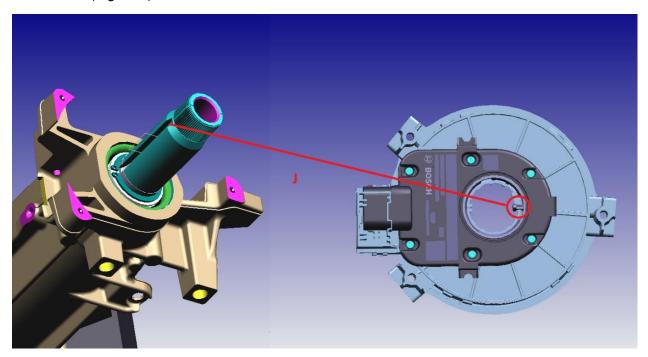
8. Pull the leather cover upward **carefully** to access the snap ring inside the steering column. (Figure H)



- 9. Remove the dislodged retaining ring using snap ring pliers.
- 10. Install the new snap ring (W527119-S300, inner diameter 22.2 mm) onto the shaft.
- 11. Push the steering shaft upward using a pry bar and seat the snap ring fully into its groove using snap ring pliers. (Figure I)



- 12. After assembly is complete, reposition the leather cover. (Figure H)
- 13. Install the clock spring and SAS sensor together, tighten the bolts, and reconnect the connectors. (Figure J)



- 14. Reinstall the plastic parts and fasten them with screws. (Figure F)
- 15. Check the alignment of the slotted tooth on the steering wheel with its mating part and assemble.
- 16. Apply LOCTITE to the steering wheel bolt and tighten it to 80 Nm torque.
- 17. Reconnect the horn.
- 18. Ensure there is sufficient clearance between the steering wheel and the plastic body. (Figure A)
- 19. Start the vehicle and turn the steering wheel fully to the right and left five times to verify proper system operation.

Note: All procedures must be performed by authorized technicians with appropriate safety precautions in place.