Replace Rear Drive Unit Inverter 55 Degree Fluid Coupling

Classification	Campaign Bulletin	**Section/Group**	40 - Rear Drive Unit	**Country/Region**	United States, Canada
Year	2019	**Model**	Model 3	**Version**	All

Bulletin Classification: *This campaign bulletin addresses a known non-safety-related condition and provides recommended technical diagnosis and repair procedures. Apply this procedure to all vehicles in the affected VIN range listed. These instructions assume knowledge of motor vehicle and high voltage electrical component repairs, and should only be executed by trained professionals. Tesla assumes no liability for injury or property damage due to a failure to properly follow these instructions or repairs attempted by unqualified individuals.*

Condition

On certain Model 3 vehicles, coolant might leak from the rear drive unit inverter 55 degree fluid coupling. This could result in a low coolant alert in the vehicle.

Correction

Use Toolbox to perform a Coolant Air Purge routine. If necessary, replace the rear drive unit inverter 55 degree fluid coupling.

Correction Description	Correction	Time
SB-19-40-001 Not Applicable	S011940001	0.00
Inspection Of 55 Degree Fluid Coupling; No Replacement Needed	S021940001	0.60
Replace 55 Degree Fluid Coupling	S031940001	0.80

Required Part(s):	Part Number	Description	Quantity
	1102179-00-D	ASY, FLUID COUPLING, VDA-18, 55DEG, 50A	1

This part number was current at the time of publication. Use the revision listed or later, unless otherwise specified in the Parts Manual.

Procedure

1. Raise and support the vehicle (refer to Service Manual procedure 10000205).
2. Connect a laptop with Toolbox to the vehicle.
3. Make sure that the vehicle is not in Drive.

4. In Toolbox, select **Actions** and type "vcfront" into the search field.

5. Select **UPDATE_VCFRONT** from the Action List, click the play button next to “TEST-RESET_VCFRONT,” and then click **Run**.

6. On the Actions page, type "thermal" in the search field, and then select **TEST_VCFRONT_X_THERMAL-COOLANT-AIR-PURGE**.

7. In the Action List, click the play button next to "TEST_VCFRONT_X_THERMAL-COOLANT-AIR-PURGE," and then click **Run**.

    - The test lasts approximately 10 minutes (ignore the “stop” message) and the coolant pumps will be audible.
    - Monitor speeds in Garage under the PT Thermal tab. Idle speed is approximately 1500 RPM. Test speeds vary from 3500 to 6500 RPM and the 5-way valve will actuate between the Series and Parallel positions.

    NOTE: If pump speeds exceed 6900 rpm, there is still air entrapped in the system. Stop the test by placing the vehicle in Drive, and then repeat step 3 through step 7.

8. While the coolant air purge is running, raise the vehicle to a comfortable working height and remove the mid aero shield (refer to Service Manual procedure 12030502).

9. Inspect the 55 degree fluid coupling for residual coolant or an active coolant leak (Figure 1):
    - If no residual coolant or active coolant leak is detected, discontinue this procedure.
    - If residual coolant or an active coolant leak is detected, continue to the next step.

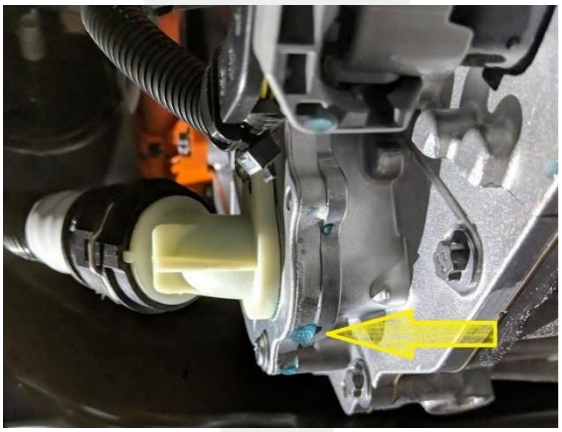

Figure 1

10. Fully lower the vehicle.

11. Disconnect 12V power (refer to Service Manual procedure 17010200).

12. Remove the outer HVAC plenum duct (refer to Service Manual procedure 18109102).

13. Fully raise the vehicle to a comfortable working height.

14. Remove and replace the rear drive unit inverter 55 degree fluid coupling (refer to Service Manual procedure 40014002).

15. Perform the cooling system vacuum refill procedure (refer to Service Manual procedure 18300400).

16. Reconnect 12V power (refer to Service Manual procedure 17010200).

17. Reinstall previously removed components.

18. Disconnect the laptop with Toolbox from the vehicle.

Affected VIN(s)	Affected Model 3 vehicles built between approximately October 8, 2018 and December 29, 2018. **NOTE:** This is a simplified summary of the affected VIN list. Refer to the VIN/Bulletin Tracker or Customer/Vehicle profile to determine applicability of this bulletin for a particular vehicle.

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