

## 2015–2020 Ford F–150 and 2017–2020 Ford F–250/350/450 Super Duty Evaporator & Thermistor Service Precaution

The thermistor (also known as the evaporator temperature sensor or anti-ice sensor) reads and sends temperature readings to the A/C control module to regulate passenger A/C temperature. The thermistor is generally located in the under-dash HVAC housing unit, attached to the evaporator and is generally accessible at the engine firewall or by removing the dash to expose the HVAC housing unit behind the glove box. (Figures 1.1 and 1.2)



**Figure 1.1**  
*2017 Ford F-350 Super Duty*



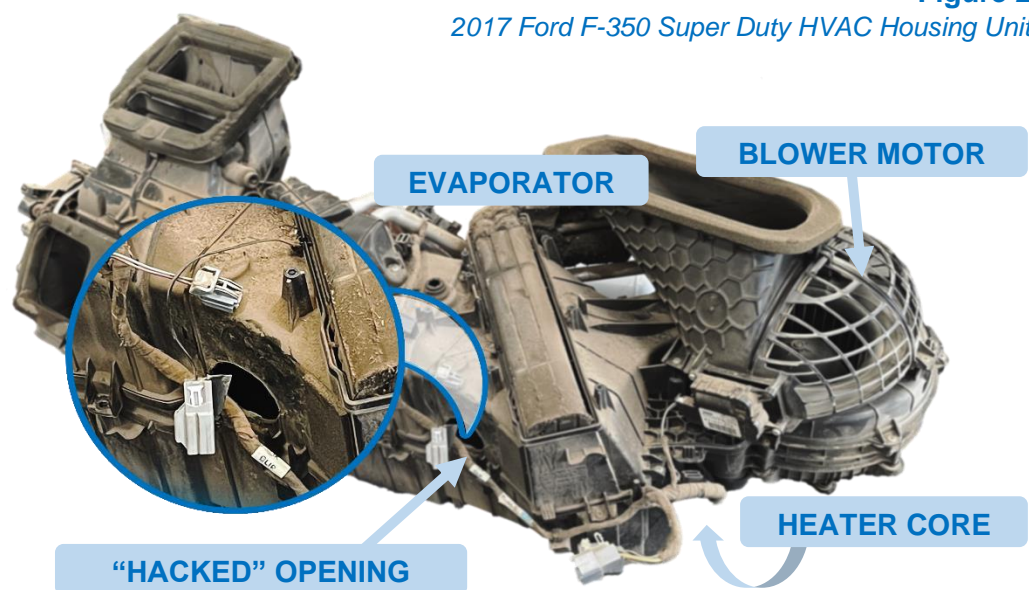
**Figure 1.2**  
*2017 Ford F-350 Super Duty*

### DO IT YOURSELF SERVICE PRECAUTION:

As a work around to the time intensive task of removing the dash to access the thermistor and evaporator in the HVAC housing unit, there is a popular DIY “hack” where a hole is cut into the plastic HVAC housing unit to access the thermistor (Figure 2). While this “hack” is effective in some cases, please note:

- If a hole is cut into the plastic HVAC housing unit, gpd highly recommends using a plastic welder to seal the “hacked” opening.

**Figure 2**  
*2017 Ford F-350 Super Duty HVAC Housing Unit*



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The logo for Global Parts Distributors, LLC (gpd) features the lowercase letters "gpd" in a bold, sans-serif font. To the right of the text is a stylized graphic of three concentric, curved lines that resemble a signal or a fan, all contained within a white circular shape that is partially cut off by the blue background.

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TECH TIP

#221

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## DO IT YOURSELF SERVICE PRECAUTION CONT'D:

- Failure to re-seal the HVAC housing unit exposes the thermistor, evaporator, heater core, and blower motor to environmental debris which can cause damage and/or audible noise in the passenger cabin.
- Failure to re-seal the HVAC housing unit also alters air flow and temperature, which will further hinder performance of the temperature control system.
- Changing the original position or modifying the thermistor can also hinder performance as the climate control system is relying on temperature readings from the thermistor for optimal performance.

## MANUFACTURER RECOMMENDATION FORD MOTOR CO. SERVICE BULLETIN #21-2250

*Some 2015-2020 F-150, 2017-2020 Super Duty and 2018-2020 Expedition/Navigator vehicles may exhibit poor air conditioning (A/C) performance, loss of airflow and/or engine cooling fans running continuously from high A/C pressures. This concern may be from the evaporator freezing up due to the evaporator temperature sensor being biased. To correct the condition, follow the Service Procedure steps to replace the evaporator temperature sensor.*

### SERVICE PROCEDURE:

*Note: If A/C pressures on both sides are too high, perform an evacuation/recharge procedure before diagnostics.*

1. *Run the A/C on maximum/recirculation and blower speed on high for at least 10 minutes with the engine idling, then drive the vehicle.*
2. *Using the datalogger on the appropriate Ford diagnostic scan tool, pull up the EVAP\_TEMP PID in the front controls interface module (FCIM) to read the evaporator temperature and use the thermometer to measure the vent outlet temperature. Compare the temperature reading of the EVAP\_TEMP PID to the thermometer's vent outlet temperature reading during A/C use.*
3. *Is the temperature reading shown on the vent outlet thermometer colder than the temperature reading of the EVAP\_TEMP PID?*

*(1). Yes – replace the evaporator assembly per the Workshop Manual (WSM), Section 412-00. The evaporator temperature sensor is part of the evaporator assembly.*

*(2). No – this article does not apply. Refer to the WSM for normal diagnostics.*

**PRO TIP:** Keeping a functioning and malfunctioning thermistor on hand is useful for troubleshooting. Simply compare readings from a faulty thermistor when troubleshooting to verify if the installed thermistor is functioning.