

Plastic Scraper
Oil Drain Equipment

Materials

Name	Specification
Motorcraft® SAE 5W-20 Premium Synthetic Blend Motor Oil XO-5W20-QSP	WSS-M2C945-A
Motorcraft® Silicone Gasket Remover ZC-30-A	-
Motorcraft® Metal Surface Prep ZC-31-B	-
Silicone Gasket and Sealant TA-30	WSE-M4G323-A4
Motorcraft® Orange Concentrated Antifreeze/Coolant VC-3-B	WSS-M97B44-D
Metal Brake Parts Cleaner PM-4-A, PM-4-B	-

REMOVAL AND INSTALLATION > ENGINE FRONT COVER > REMOVAL



NOTE: During engine repair procedures, cleanliness is extremely important. Any foreign material, including any material created while cleaning gasket surfaces, that enters the oil passages, coolant passages or the oil pan, can cause engine failure.

1.

With the vehicle in NEUTRAL, position it on a hoist. Refer to: Jacking and Lifting - Overview .

2.

Disconnect the battery ground cable. Refer to: Battery Disconnect and Connect .

3.

Drain the engine cooling system. Refer to: COOLING SYSTEM DRAINING AND VACUUM FILLING .

4.

Remove the following items:

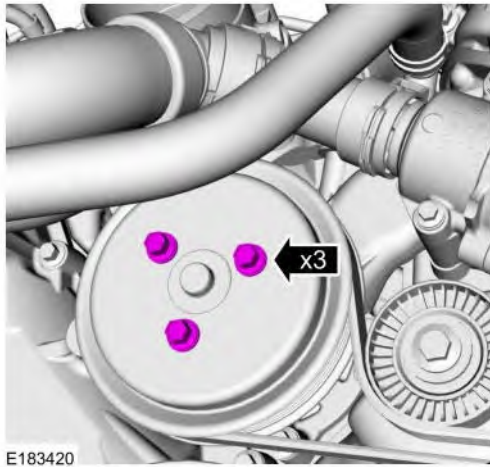
Refer to: DEGAS BOTTLE .

Refer to: Valve Cover LH .

Refer to: Valve Cover RH .

5.

Loosen the coolant pump pulley bolts.



6.

Remove the following items:

Refer to: ACCESSORY DRIVE BELT .

Refer to: AIR CONDITIONING (A/C) COMPRESSOR BELT .

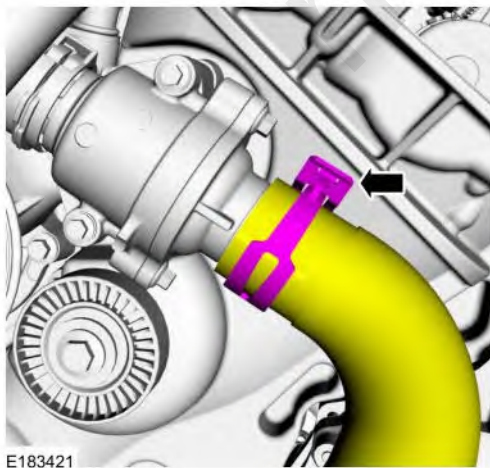
Refer to: ACCESSORY DRIVE BELT TENSIONER .

Refer to: AIR CONDITIONING (A C) COMPRESSOR BELT TENSIONER .

Refer to: Crankshaft Front Seal .

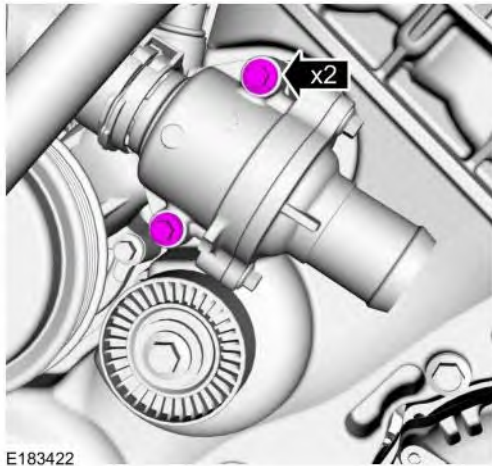
7.

Disconnect the lower radiator hose from the thermostat housing assembly.



8.

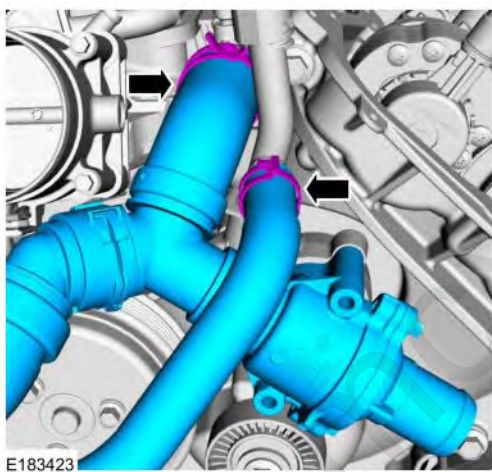
Remove the thermostat housing bolts.



9.

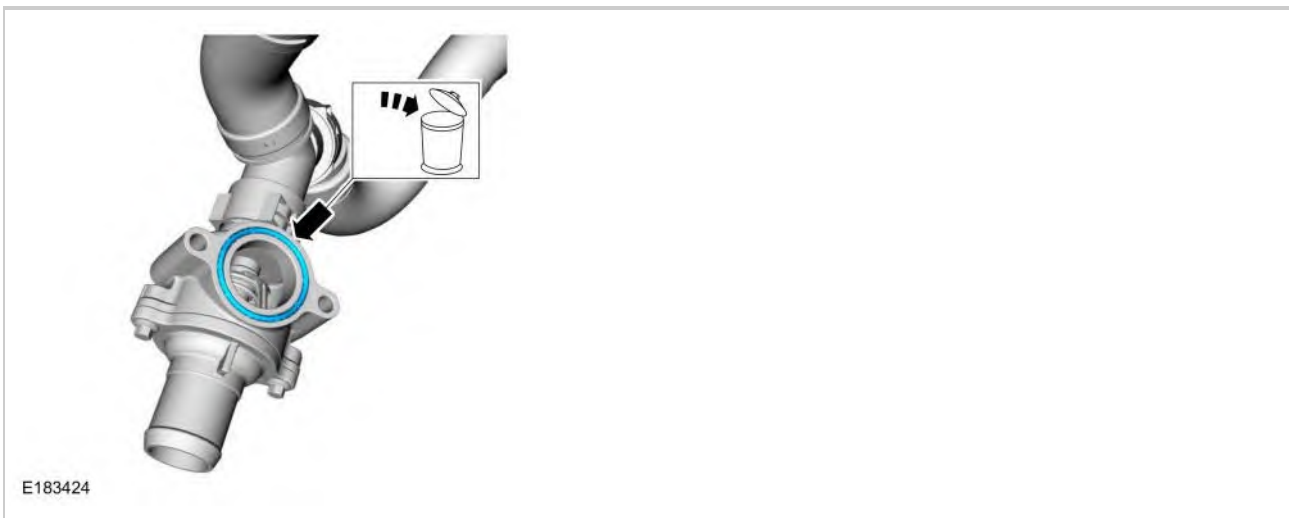
Release the clamp and remove the degas bottle coolant hose.

Release the clamp and remove the upper radiator hose T-connector/thermostat housing assembly.



10.

Remove and discard the thermostat housing O-ring seal.



11.

Remove the bolts and the coolant pump pulley.



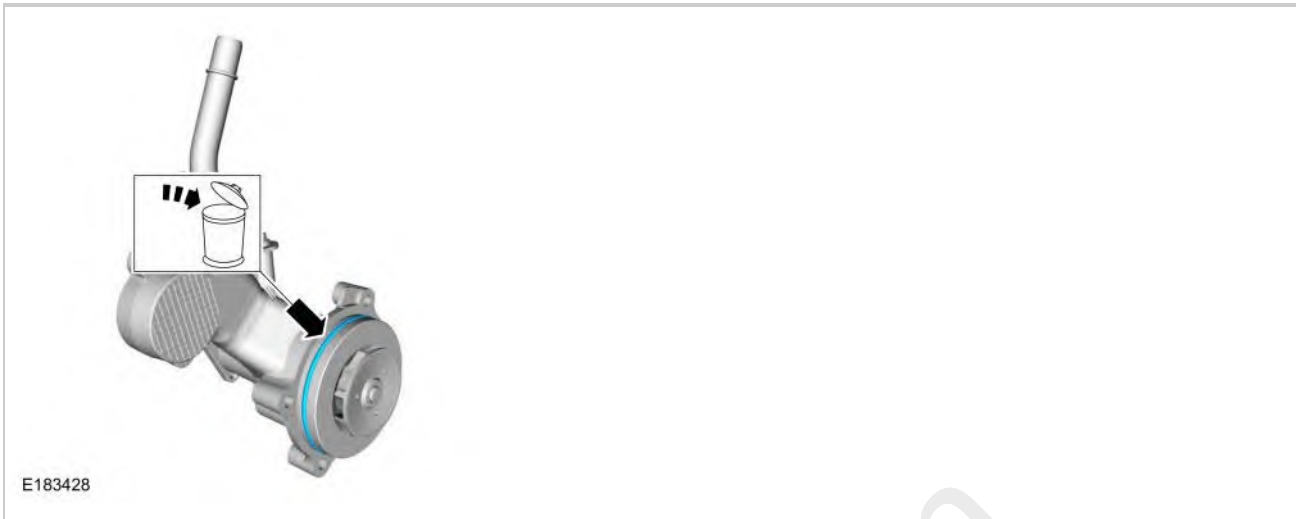
12.

Remove the bolts and the coolant pump.



13.

Remove and discard the coolant pump O-ring seal.



14.

Remove the throttle body. Refer to: THROTTLE BODY .

15.

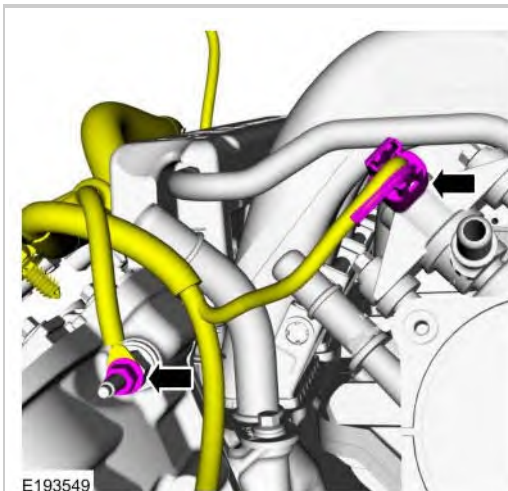
Detach the wiring harness retainers from the engine front cover and stud bolt.



16.

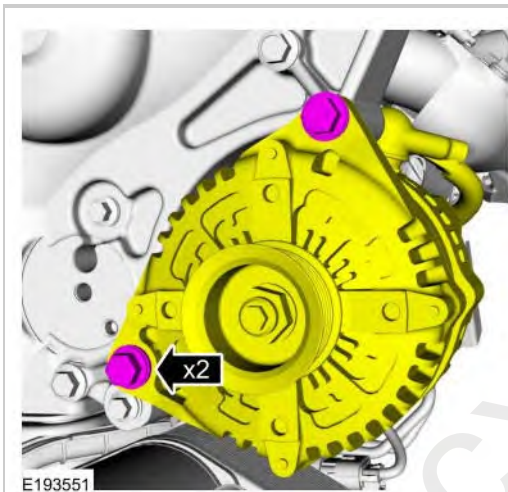
Disconnect the EVAP canister purge valve.

Remove the nut and ground wire.



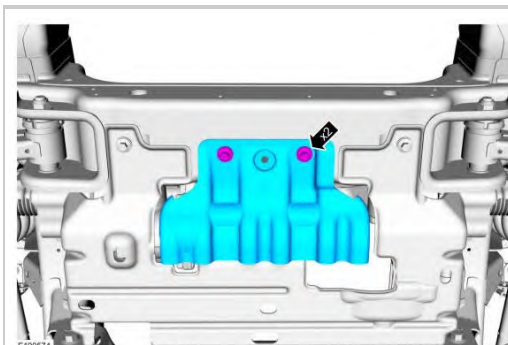
17.

Remove the bolts and position the generator aside.



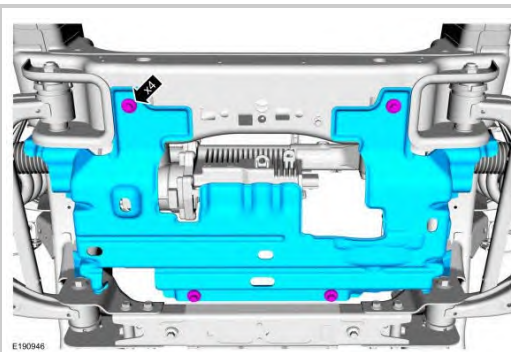
18.

If equipped, remove the bolts and the skid plate.



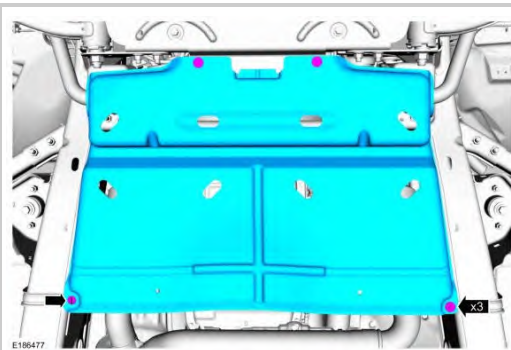
19.

If equipped, remove the fasteners and the underbody shield.



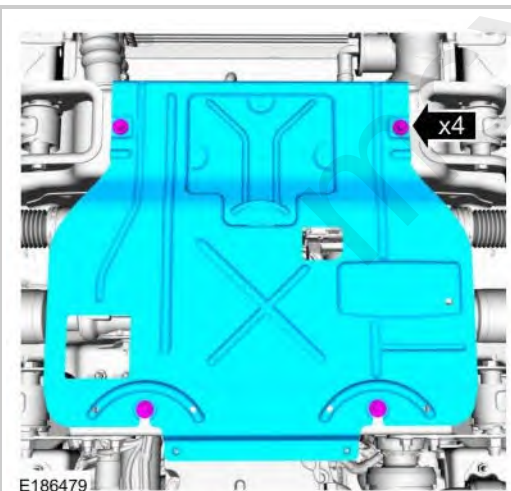
20.

If equipped, remove the fasteners and the underbody shield.



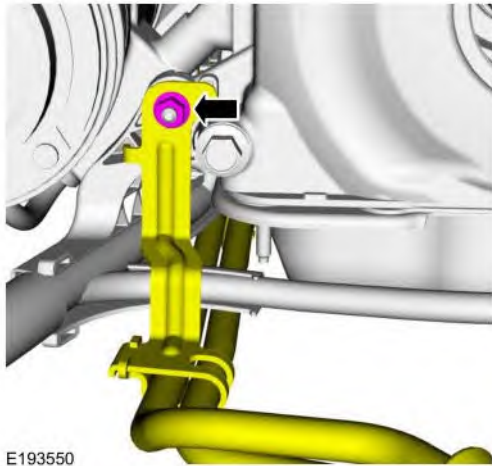
21.

If equipped, remove the bolts and the skid plate.



22.

Remove the nut and position the transmission cooler tubes aside.



23.

1.

Depress the tab and detach the wiring harness retainer from the oil pan.

2.

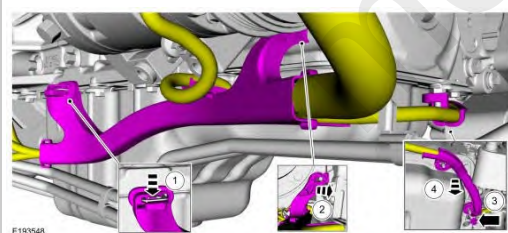
Slide the wiring harness retainer off of the engine front cover stud bolt.

3.

Remove the nut.

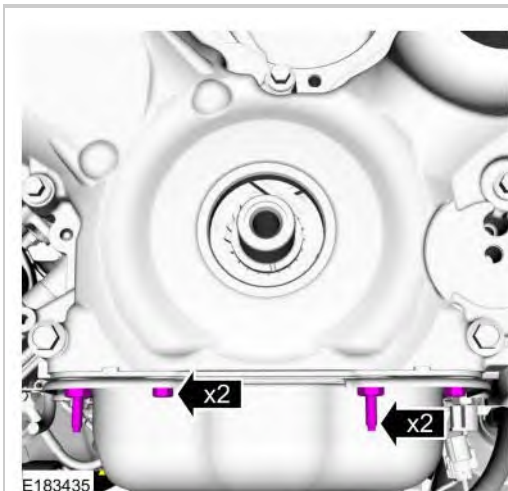
4.

Detach the wiring harness retainer off of the oil pan stud bolt.



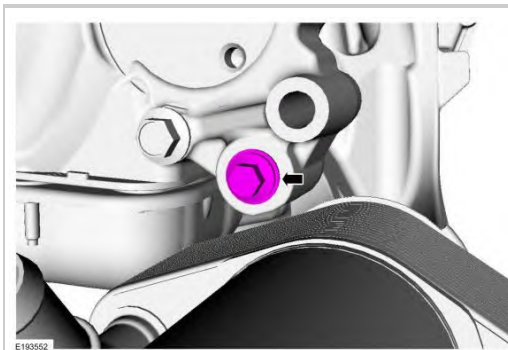
24.

Remove the bolts and stud bolts.



25.

Remove the engine front cover-to-oil filter adapter bolt.



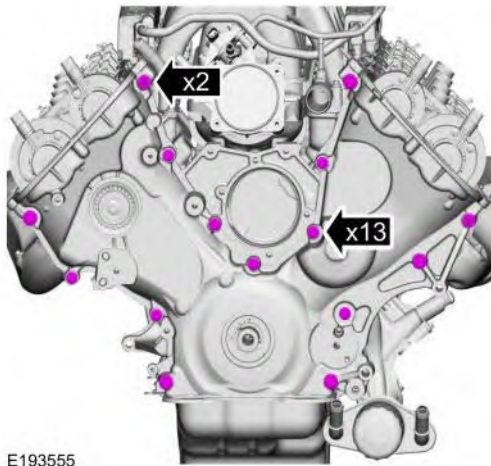
26.

Using a 10 mm Hex Bit loosen the engine front cover-to-oil filter adapter jack screw.



27.

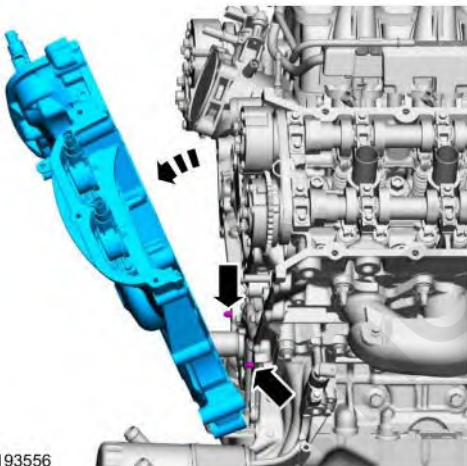
Remove the bolts and stud bolts.



28.

 **NOTE:** Timing drive components removed from view for clarity.

Remove the engine front cover from the front cover-to-cylinder block dowels.



29.

Remove and discard the gaskets.