

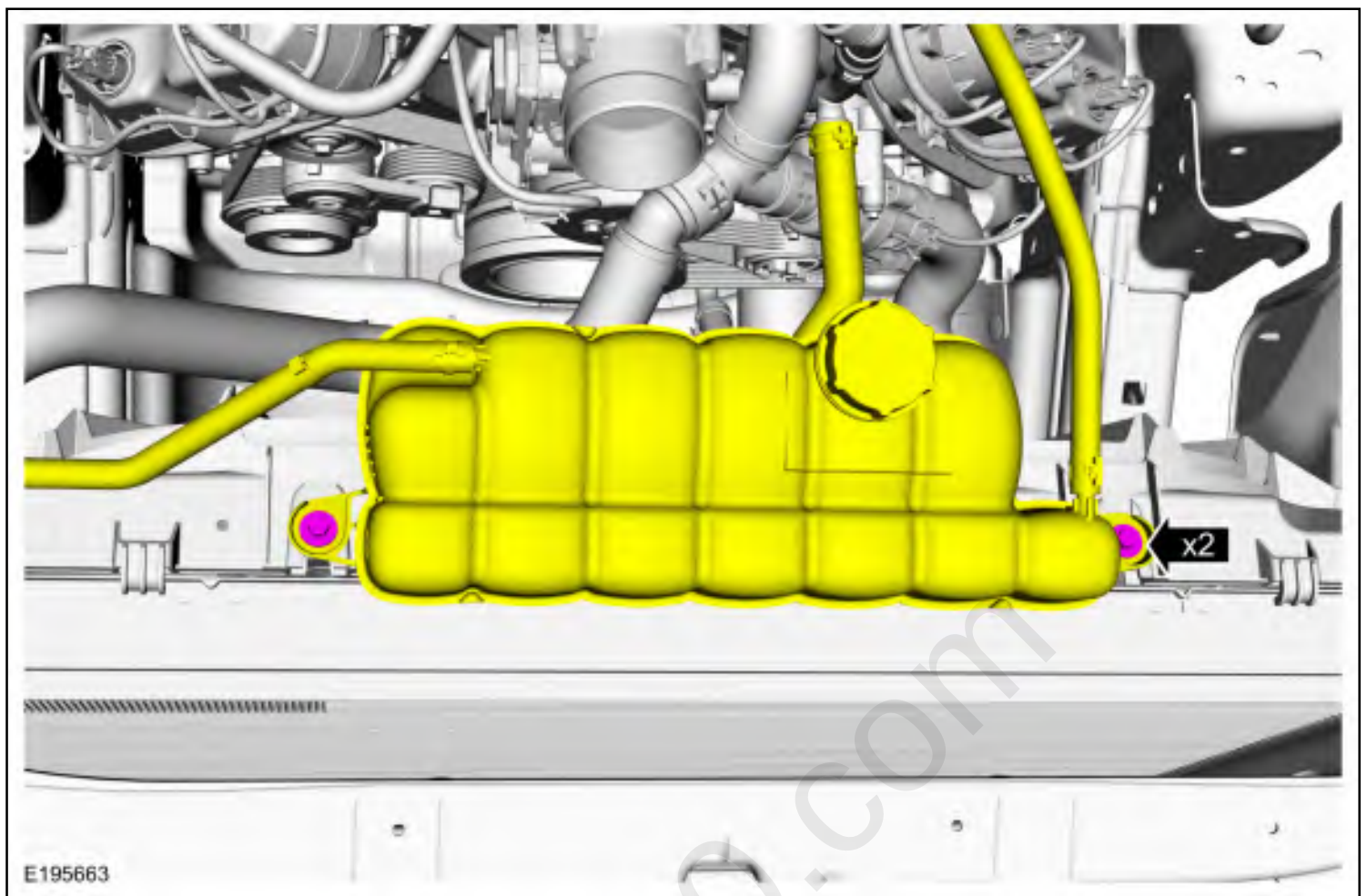
Coolant Pump

Materials

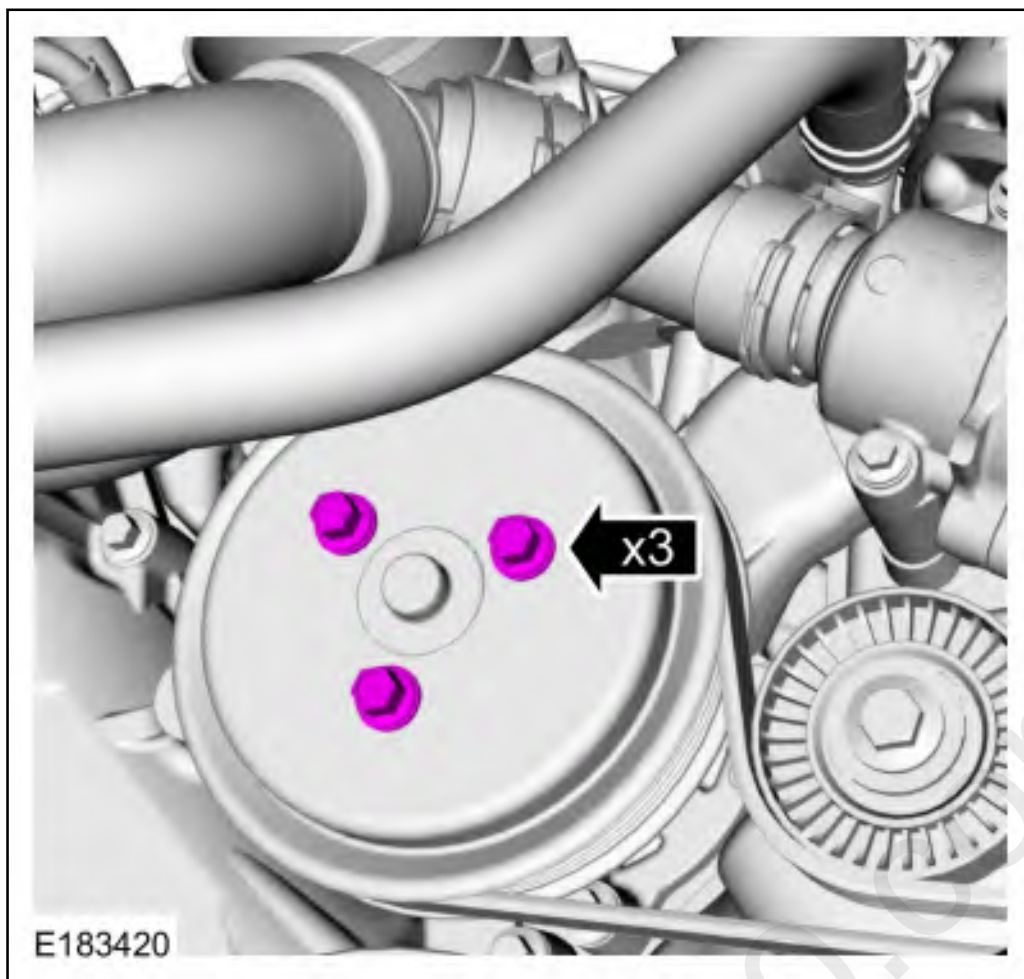
Name	Specification
Motorcraft® Metal Surface Prep Wipes ZC-31-B	-
Motorcraft® Orange Concentrated Antifreeze/Coolant VC-3-B	WSS-M97B44-D

Removal

1. Drain the cooling system.
Refer to: [Cooling System Draining, Vacuum Filling and Bleeding](#) (303-03D Engine Cooling - 5.0L 32V Ti-VCT, General Procedures).
2. Remove the air cleaner outlet pipe.
Refer to: [Air Cleaner Outlet Pipe](#) (303-12D Intake Air Distribution and Filtering - 5.0L 32V Ti-VCT, Removal and Installation).
3. Remove the bolts and position the degas bottle aside.

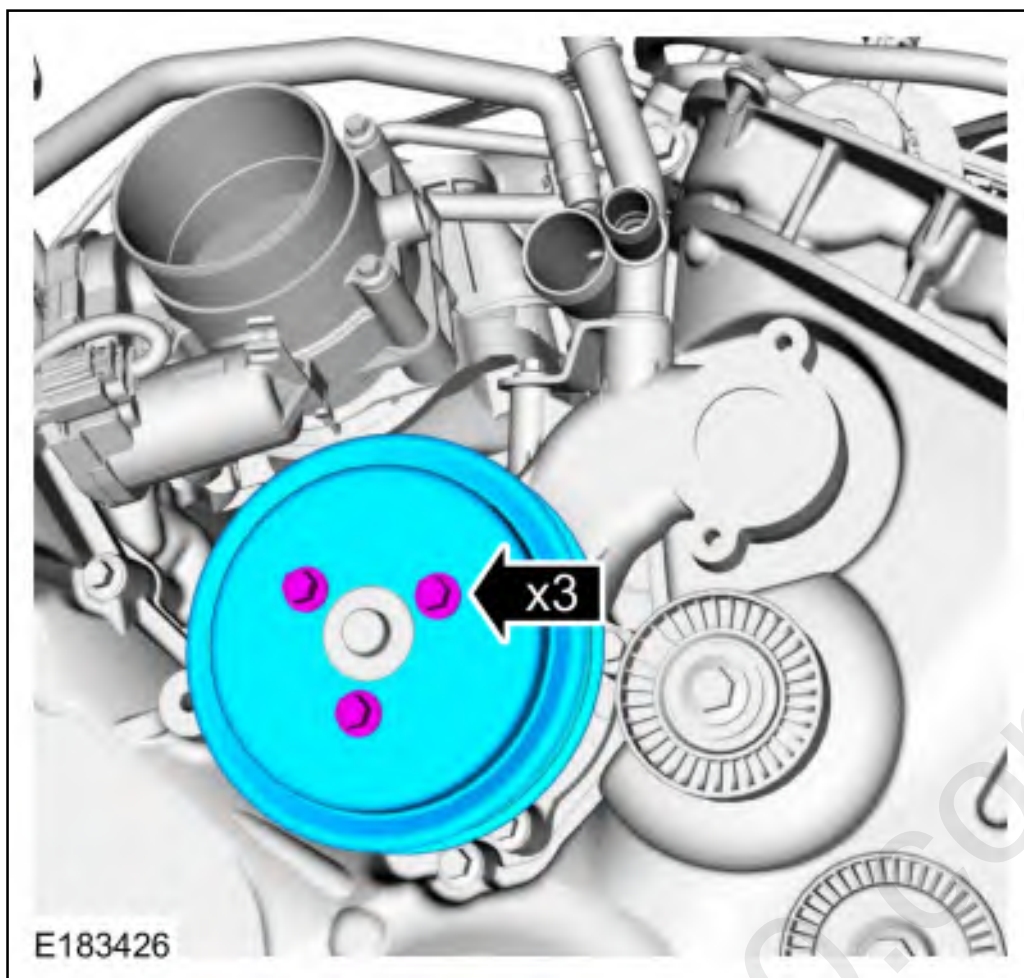


4. Loosen the coolant pump pulley bolts.

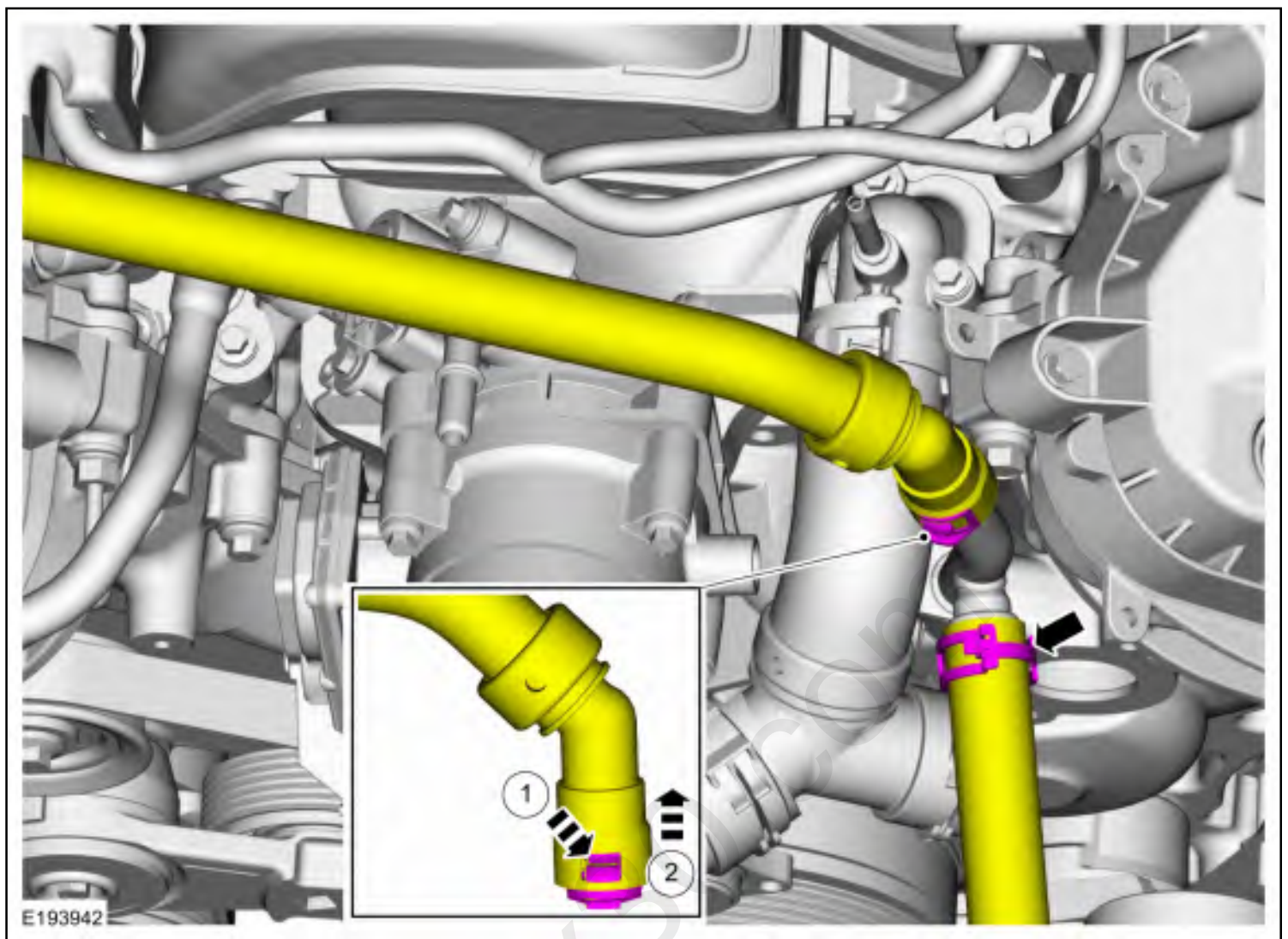


5. Remove the accessory drive belt.
Refer to: [Accessory Drive Belt](#) (303-05D Accessory Drive - 5.0L 32V Ti-VCT, Removal and Installation).
6. **NOTICE: Cover the A/C compressor belt to prevent coolant contamination of the belt.**

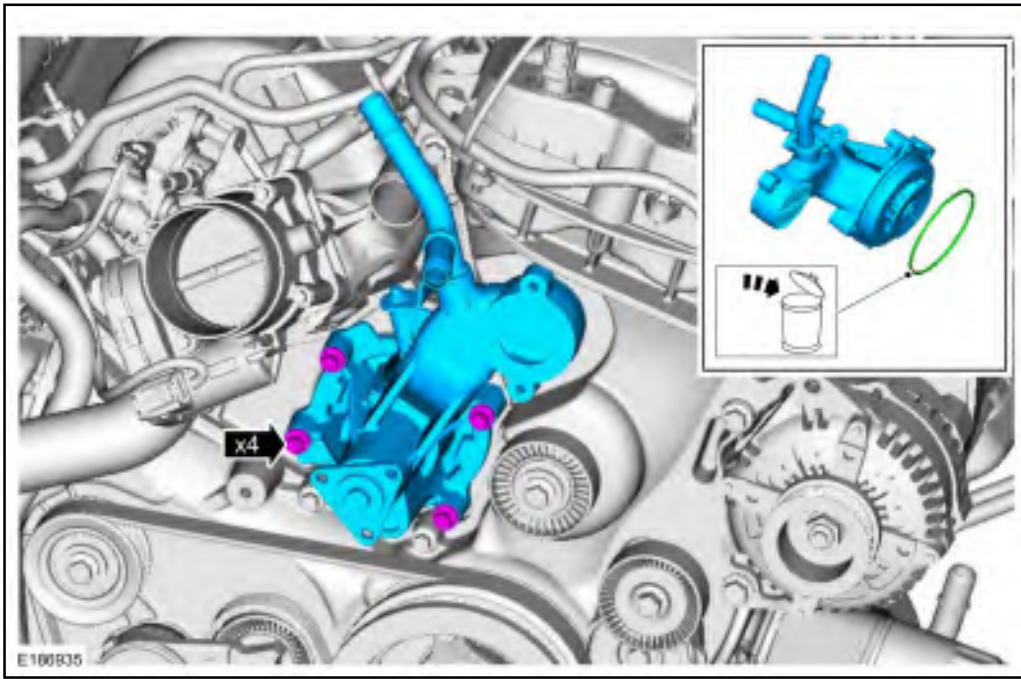
Completely cover the A/C compressor belt with waterproof plastic.
7. Remove the thermostat housing.
Refer to: [Thermostat Housing](#) (303-03D Engine Cooling - 5.0L 32V Ti-VCT, Removal and Installation).
8. Remove the bolts and the coolant pump pulley.



- Disconnect the heater outlet hose from the heater outlet tube.
- Release the clamp and disconnect the lower degas bottle hose from the heater outlet tube.

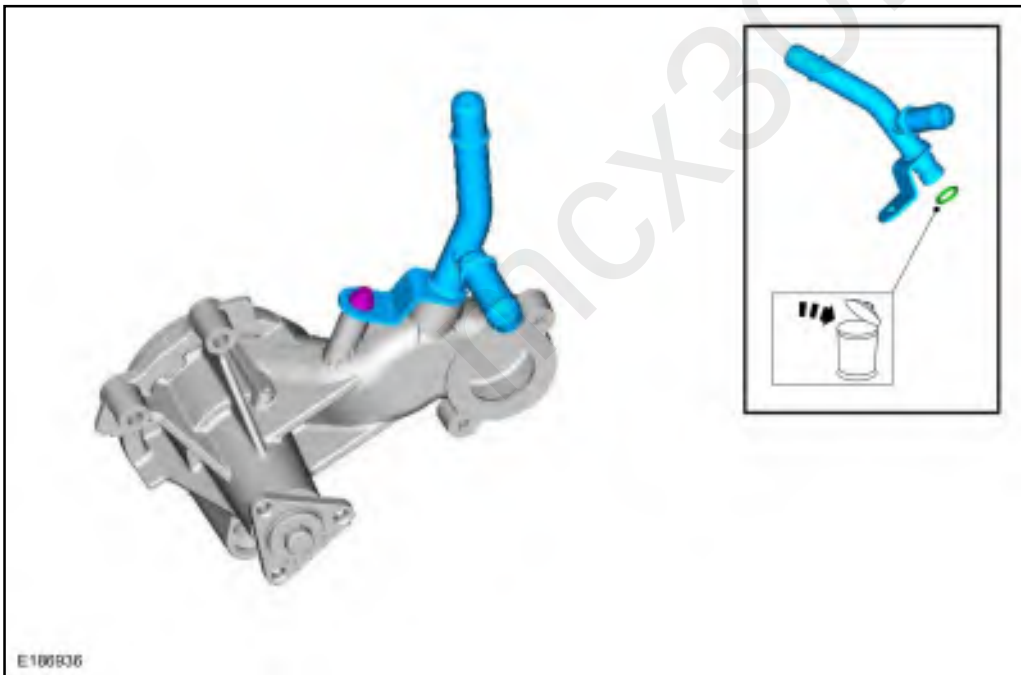


- Remove the bolts and the coolant pump.
- Remove and discard the O-ring seal.



11. **NOTE:** *This step is only necessary when installing a new component.*

- Remove the bolt and the heater outlet tube.
- Remove and discard the O-ring seal.



Installation

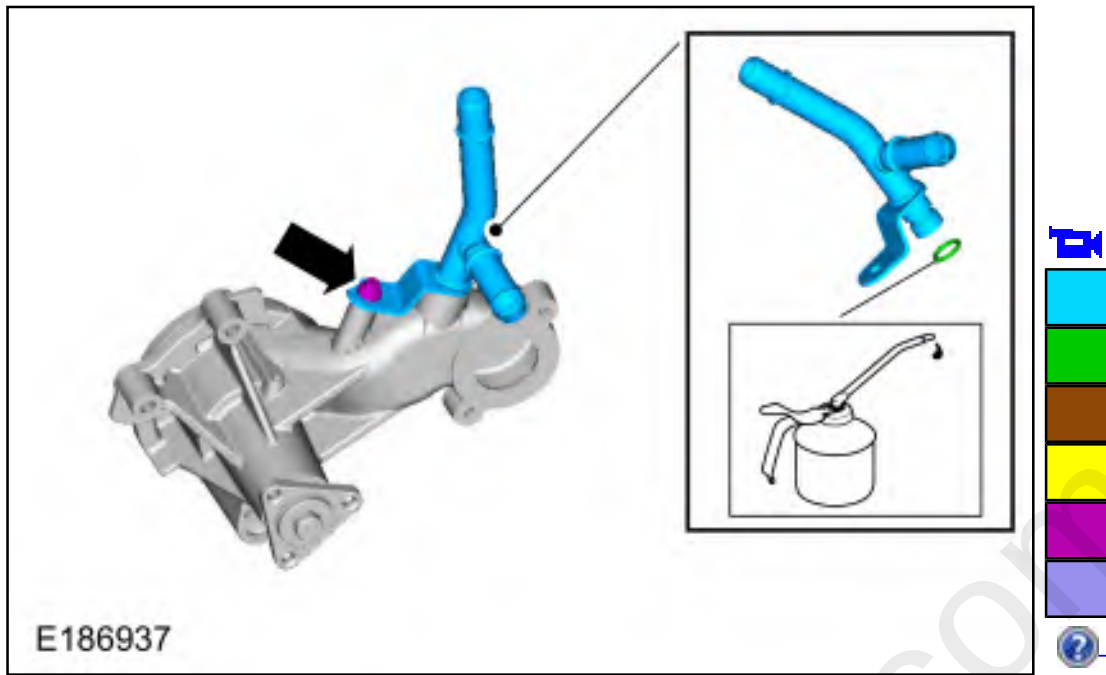
1. **NOTE:** *This step is only necessary when installing a new component.*

- Install a new O-ring seal on the heater outlet tube and lubricate it with clean engine coolant.

Material: Motorcraft® Orange Concentrated Antifreeze/Coolant / VC-3-B (WSS-M97B44-D)

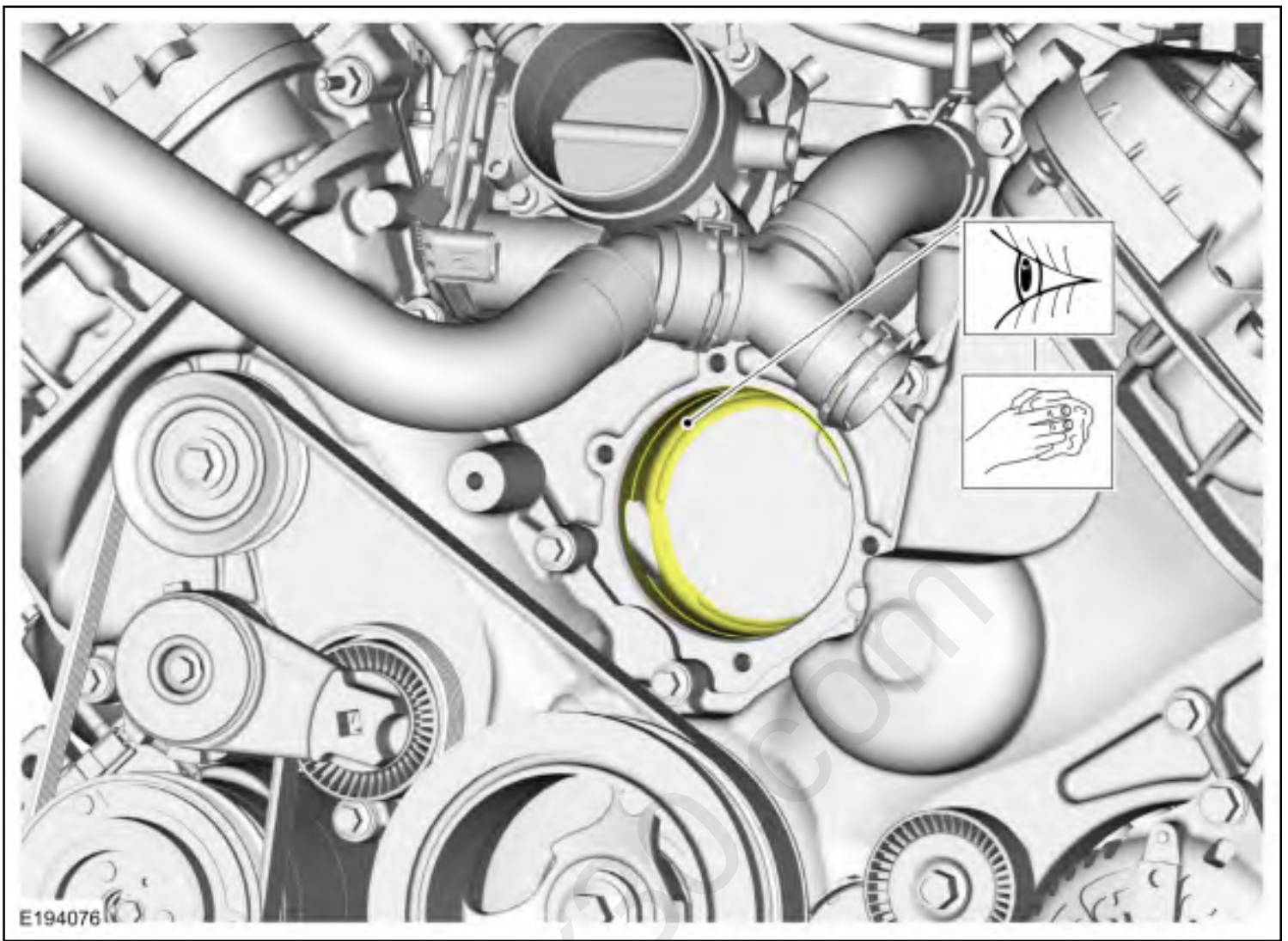
- Install the heater outlet tube and the bolt.

Torque: 89 lb.in (10 Nm)



2. Inspect the sealing surfaces and clean with metal surface prep wipes.

Material: Motorcraft® Metal Surface Prep Wipes / ZC-31-B



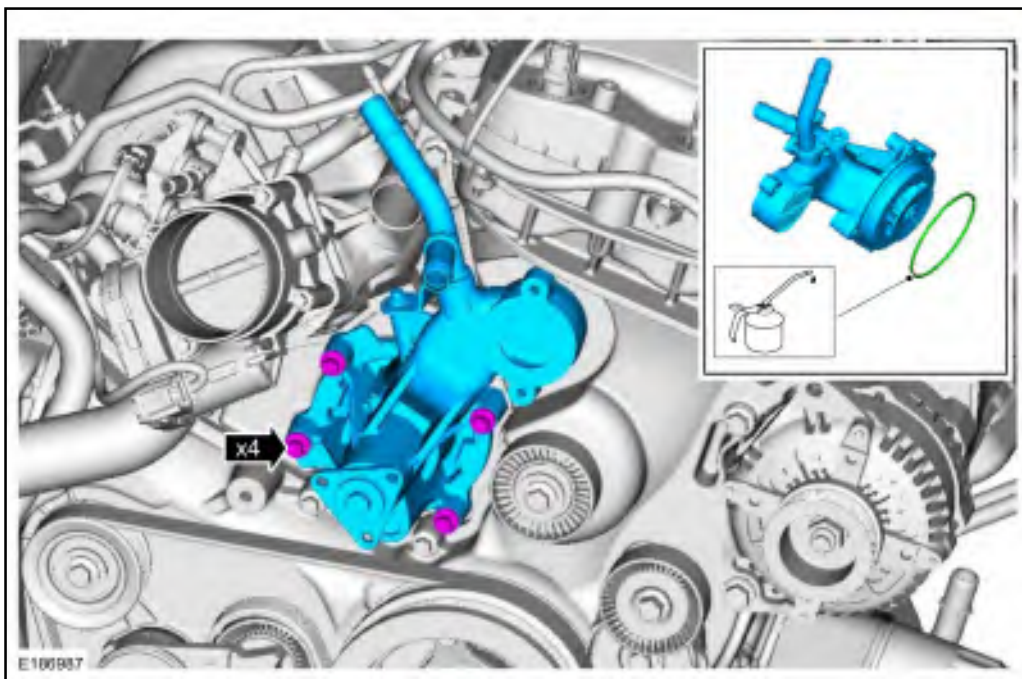
3. **NOTICE:** Align the bolt holes with the bosses prior to insertion of the coolant pump and insert the pump straight into the coolant pump cavity. Do not rotate the coolant pump once installed into the coolant pump cavity or the O-ring seal can be damaged, causing the coolant pump to leak.

- Install a new O-ring seal and lubricate it with clean engine coolant.
Material: Motorcraft® Orange Concentrated Antifreeze/Coolant / VC-3-B (WSS-M97B44-D)
- Install the coolant pump and tighten the bolts in 2 stages.

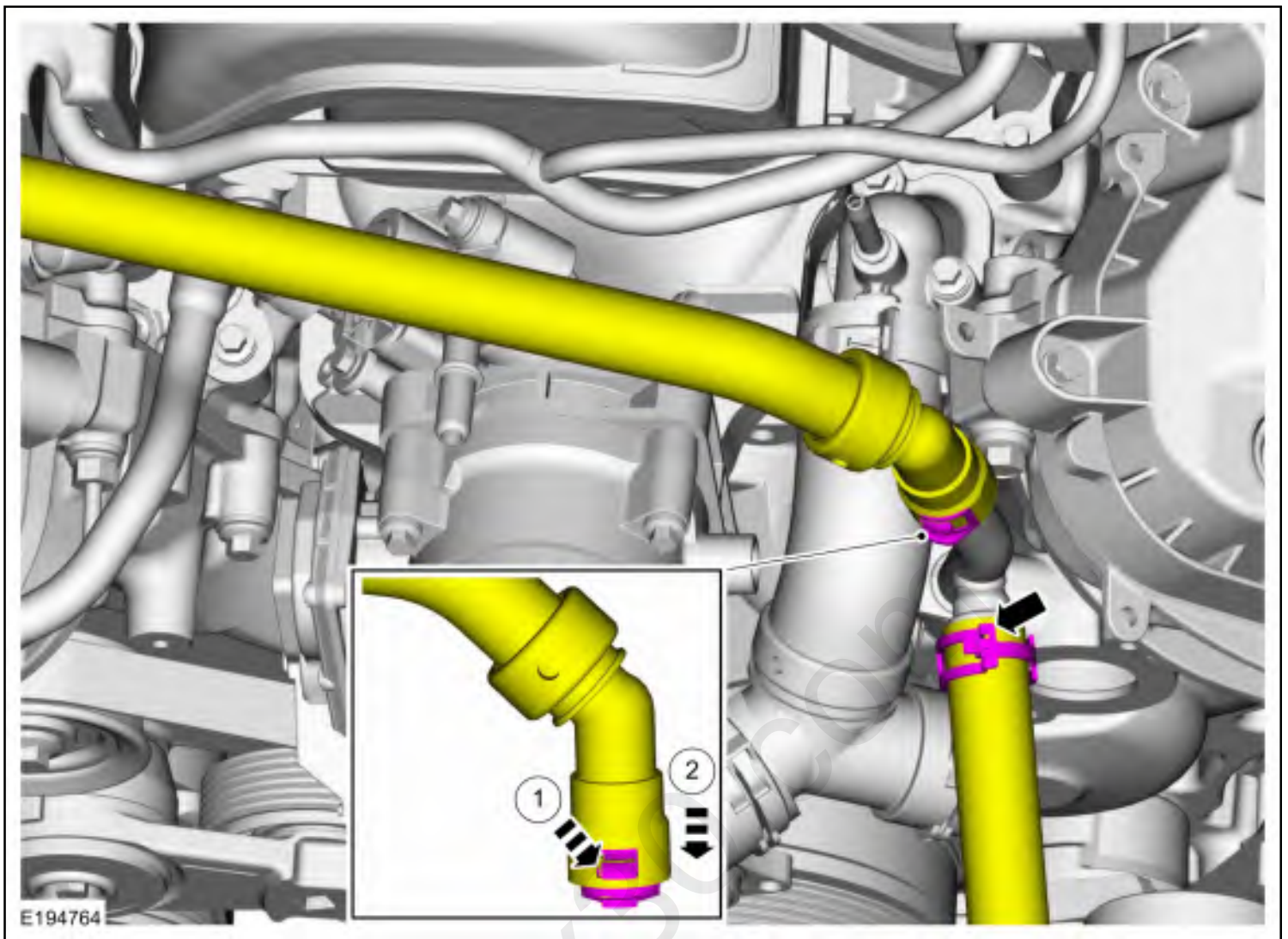
Torque:

Stage 1: 177 lb.in (20 Nm)

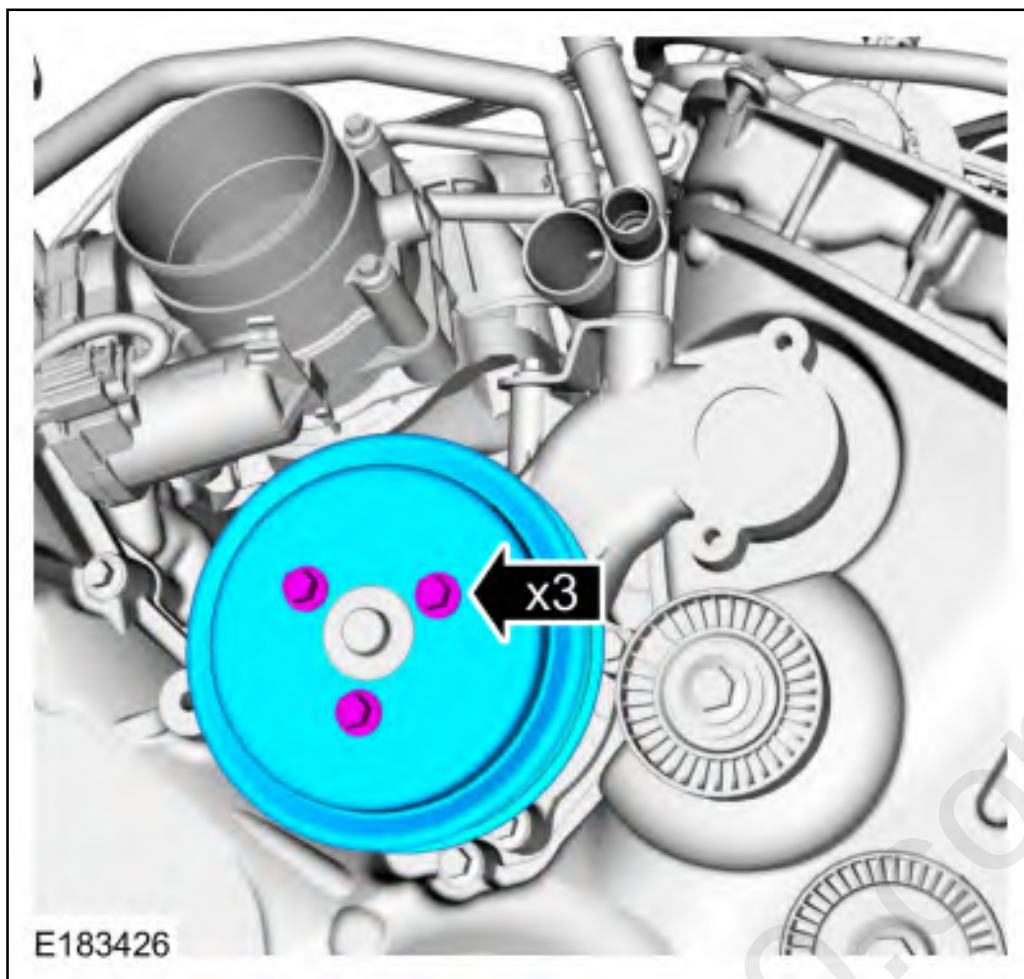
Stage 2: 60°



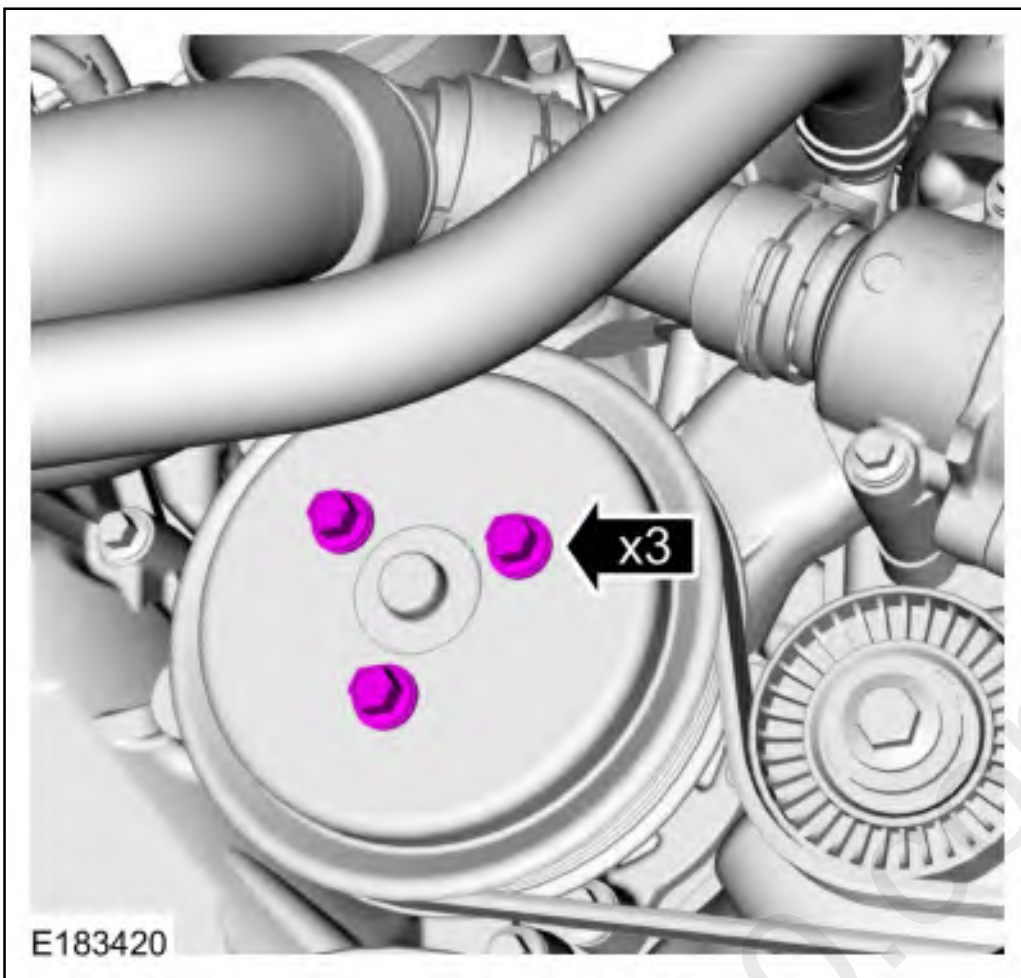
- Connect the lower degas bottle hose to the heater outlet tube and position the clamp.
- Connect the heater outlet hose to the heater outlet tube.



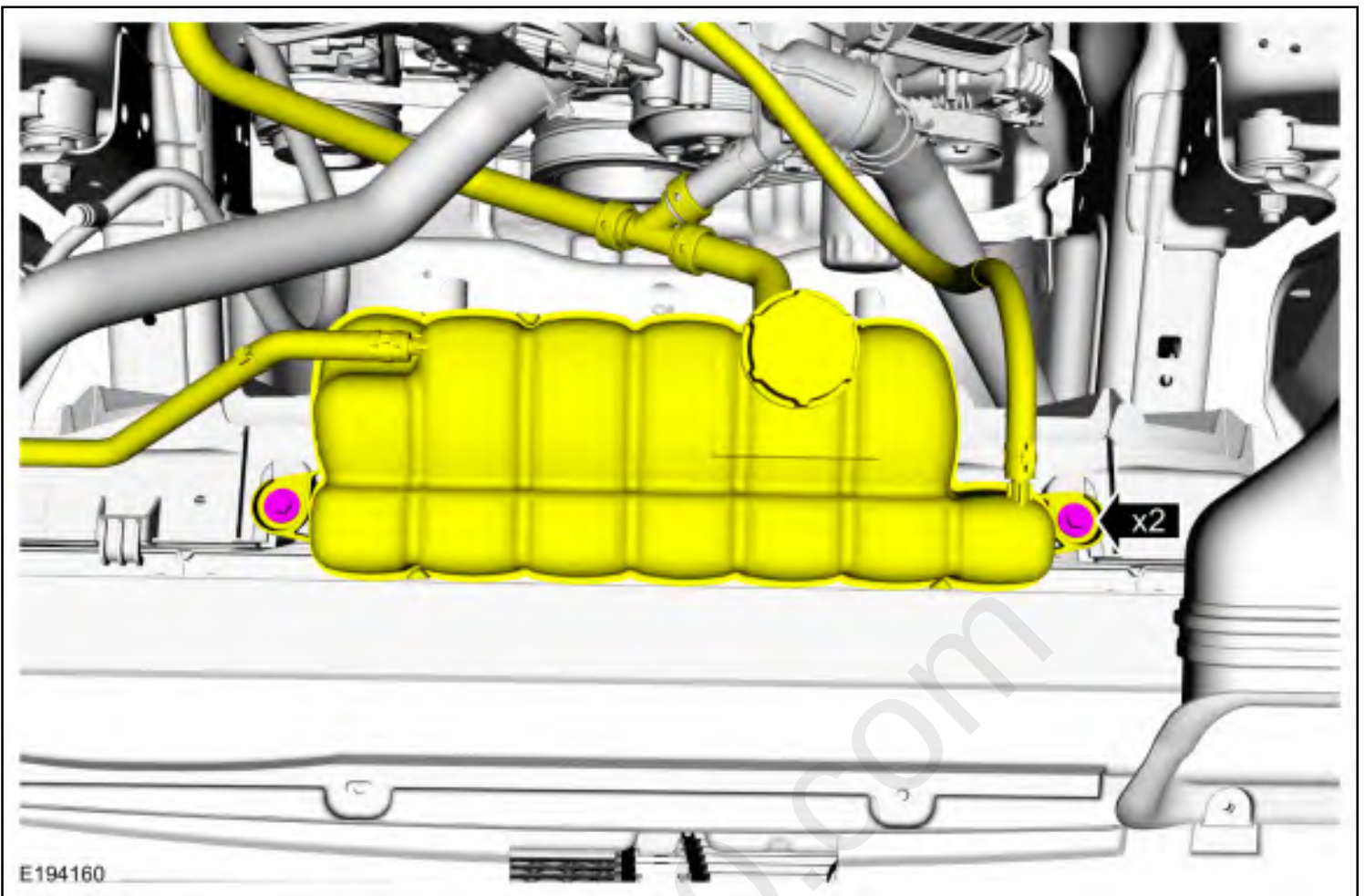
5. Position the coolant pump pulley and install the bolts finger tight.



6. Install the thermostat housing.
Refer to: [Thermostat Housing](#) (303-03D Engine Cooling - 5.0L 32V Ti-VCT, Removal and Installation).
7. Remove the plastic from the A/C compressor belt.
8. Install the accessory drive belt.
Refer to: [Accessory Drive Belt](#) (303-05D Accessory Drive - 5.0L 32V Ti-VCT, Removal and Installation).
9. Tighten the coolant pump pulley bolts.
Torque: 18 lb.ft (25 Nm)



10. Position the degas bottle back and tighten the bolts.
Torque: 62 lb.in (7 Nm)



11. Install the air cleaner outlet pipe.
Refer to: [Air Cleaner Outlet Pipe](#) (303-12D Intake Air Distribution and Filtering - 5.0L 32V Ti-VCT, Removal and Installation).
12. Fill and bleed the cooling system.
Refer to: [Cooling System Draining, Vacuum Filling and Bleeding](#) (303-03D Engine Cooling - 5.0L 32V Ti-VCT, General Procedures).