

303-03C Engine Cooling - 3.5L EcoBoost (272kW/370PS)
Removal and Installation

2017 F-150

Procedure revision date: 06/10/2019

Coolant Pump

Special Tool(s) / General Equipment

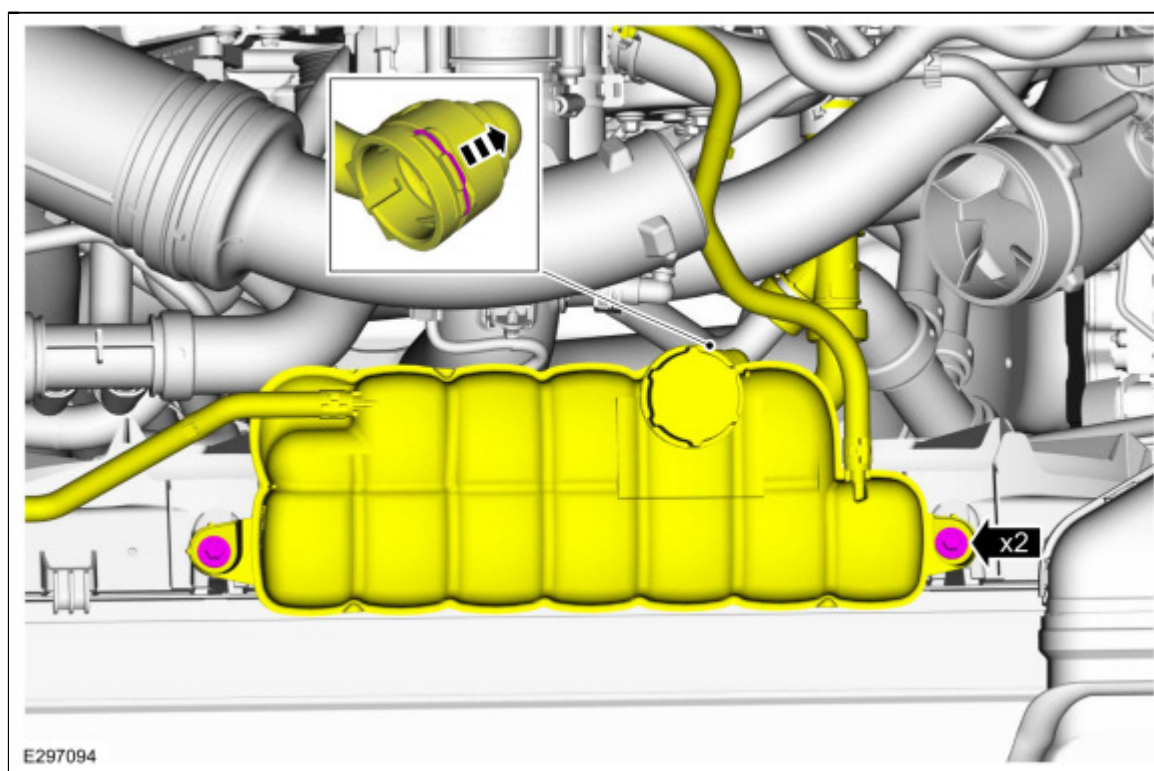
Hose Clamp Remover/Installer

Materials

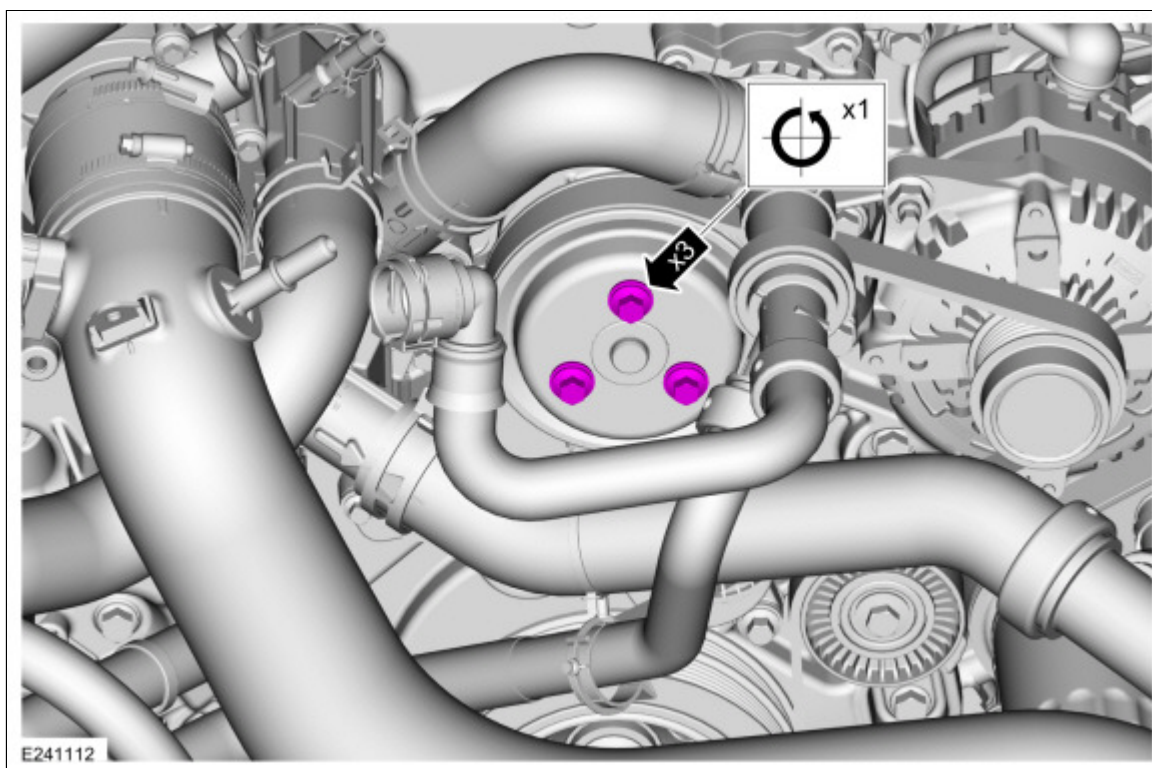
Name	Specification
Motorcraft® Orange Concentrated Antifreeze/Coolant VC-3-B	WSS-M97B44-D

Removal

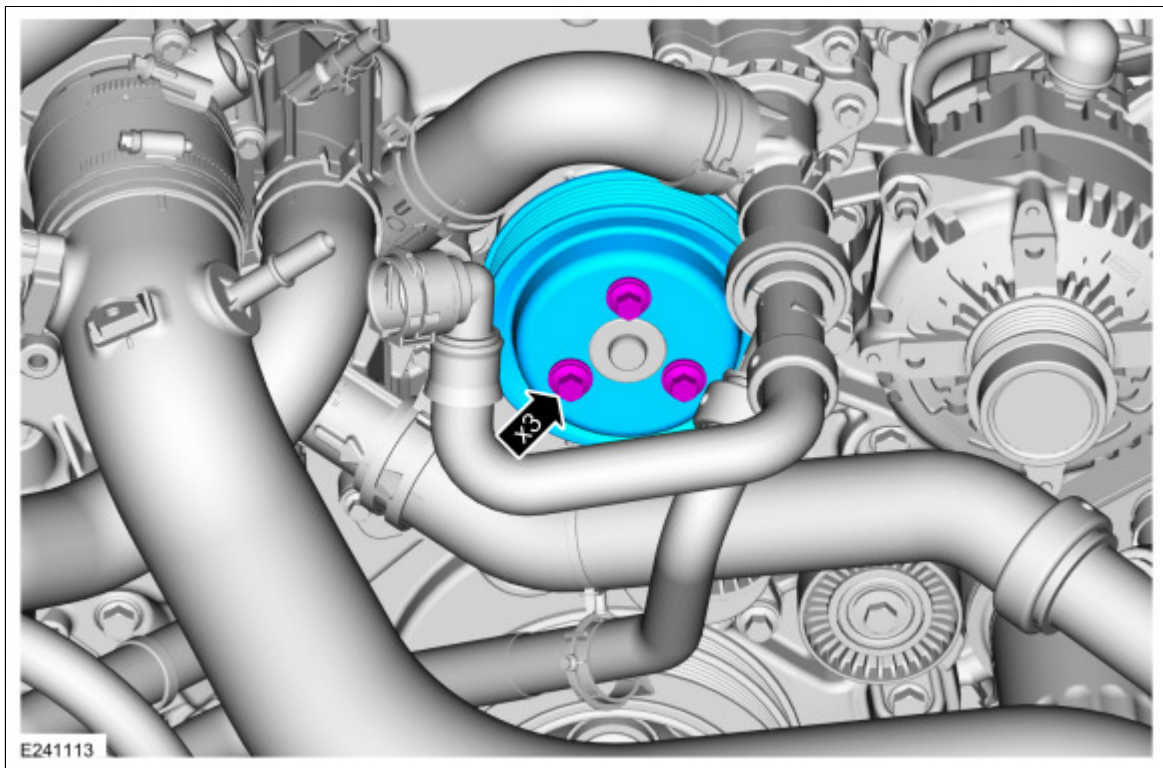
1. Drain the cooling system.
Refer to: [Engine Cooling System Draining, Vacuum Filling and Bleeding](#) (303-03C Engine Cooling - 3.5L EcoBoost (272kW/370PS), General Procedures).
2. Remove the LH CAC intake pipe.
Refer to: [Charge Air Cooler \(CAC\) Intake Pipe](#) (303-12C Intake Air Distribution and Filtering - 3.5L EcoBoost (272kW/370PS), Removal and Installation).
3.
 - Remove the spring clip and disconnect the lower coolant hose.
 - Remove the bolts and position the degas bottle aside.



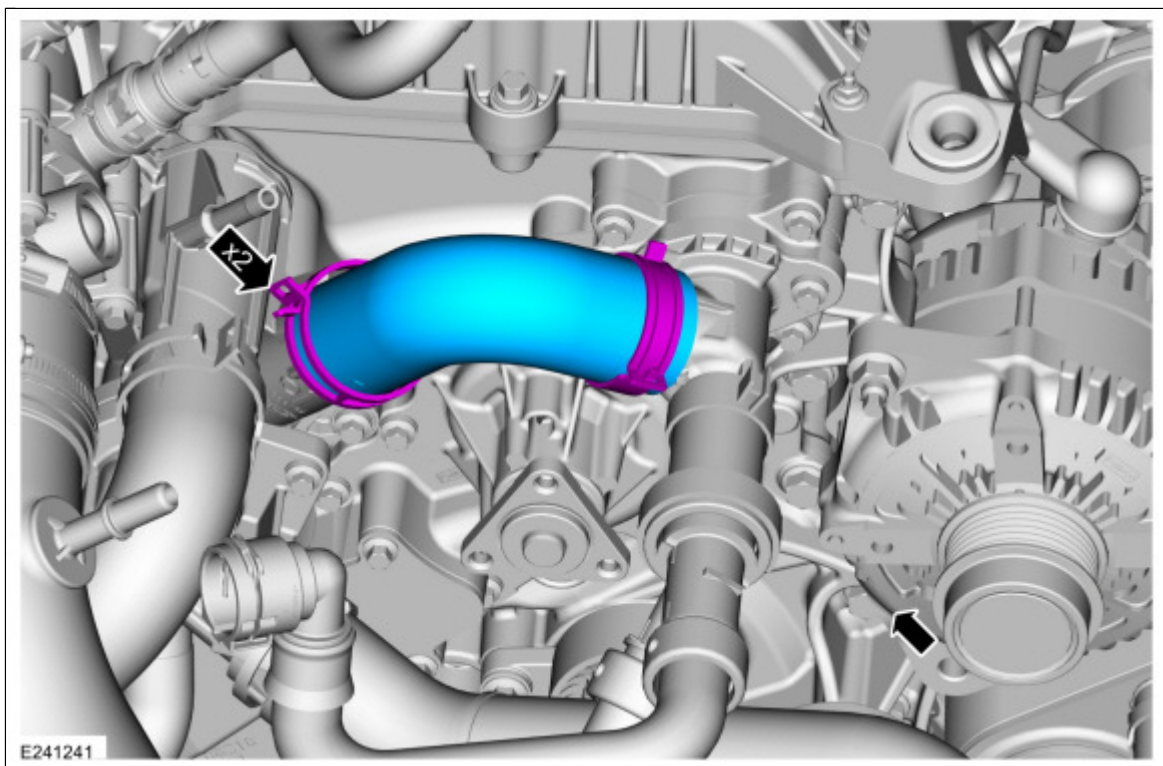
4. Loosen the coolant pump pulley bolts.



5. Remove the accessory drive belt.
Refer to: [Accessory Drive Belt](#) (303-05C Accessory Drive - 3.5L EcoBoost (272kW/370PS), 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 bolts and the coolant pump pulley.

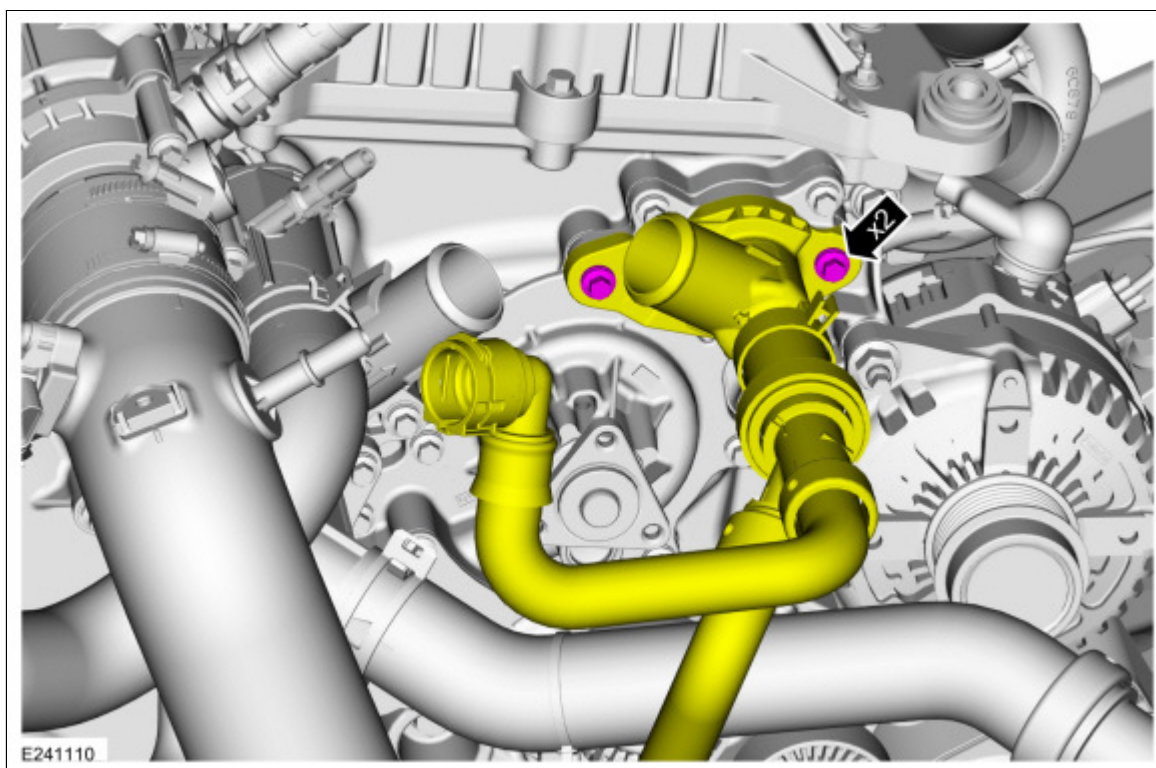


8. Release the clamps and remove the coolant hose.
Use the General Equipment: Hose Clamp Remover/Installer

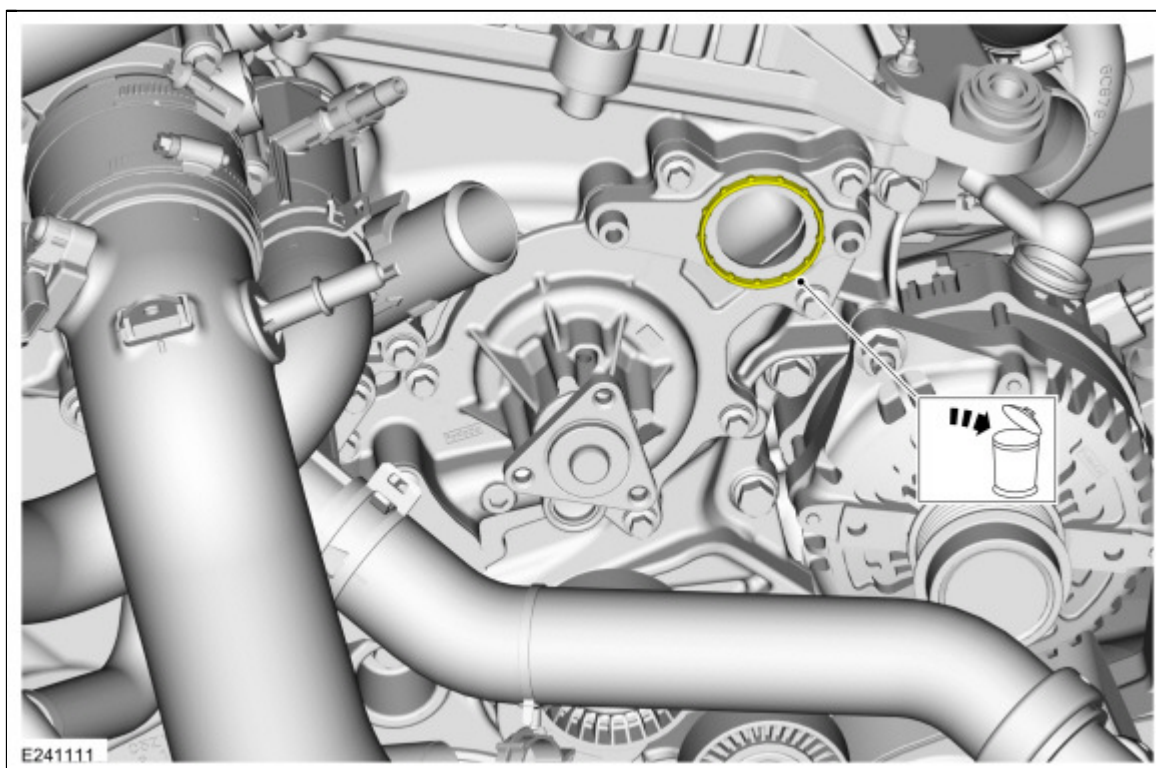


9. Remove the bolts and position the water pump outlet connector aside.

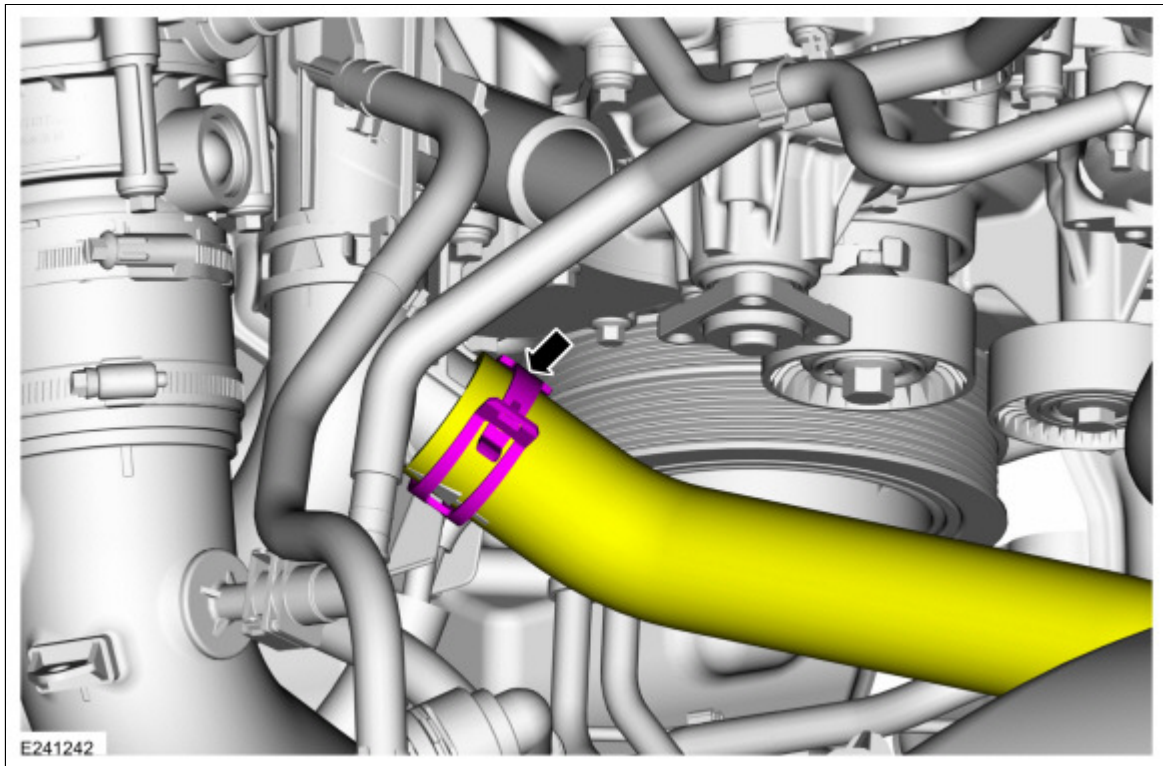




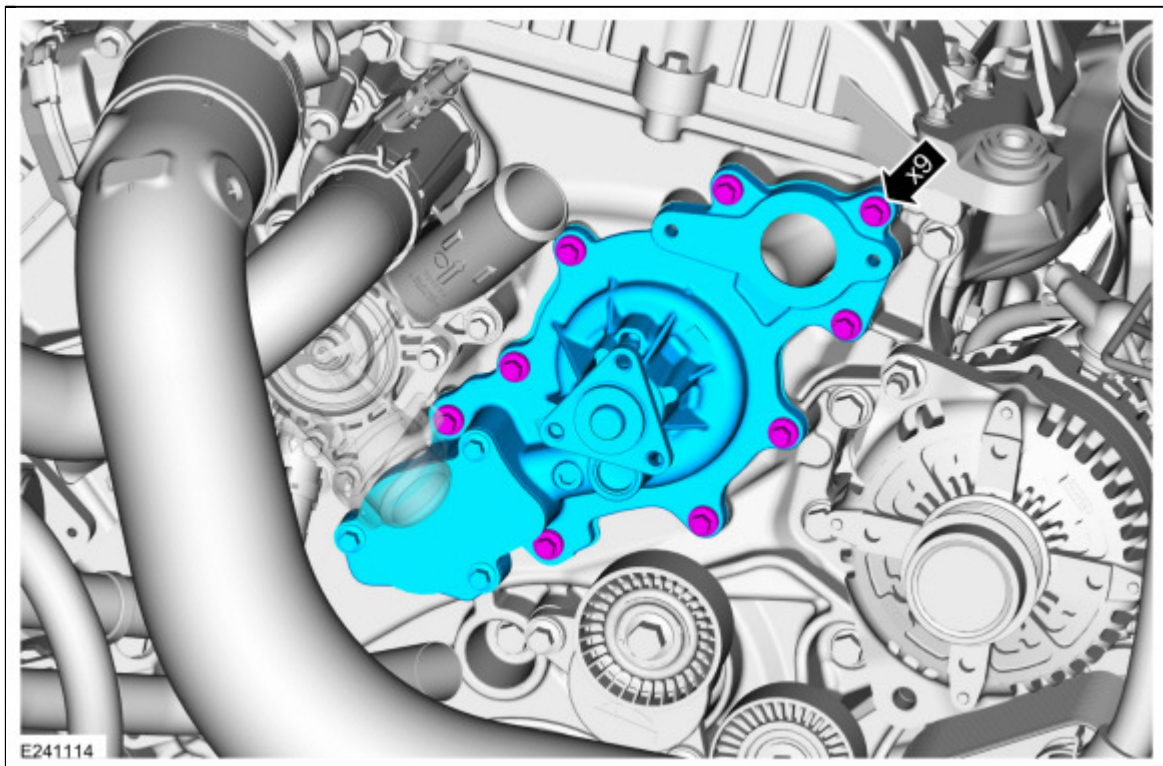
10. Remove and discard the O-ring seal.



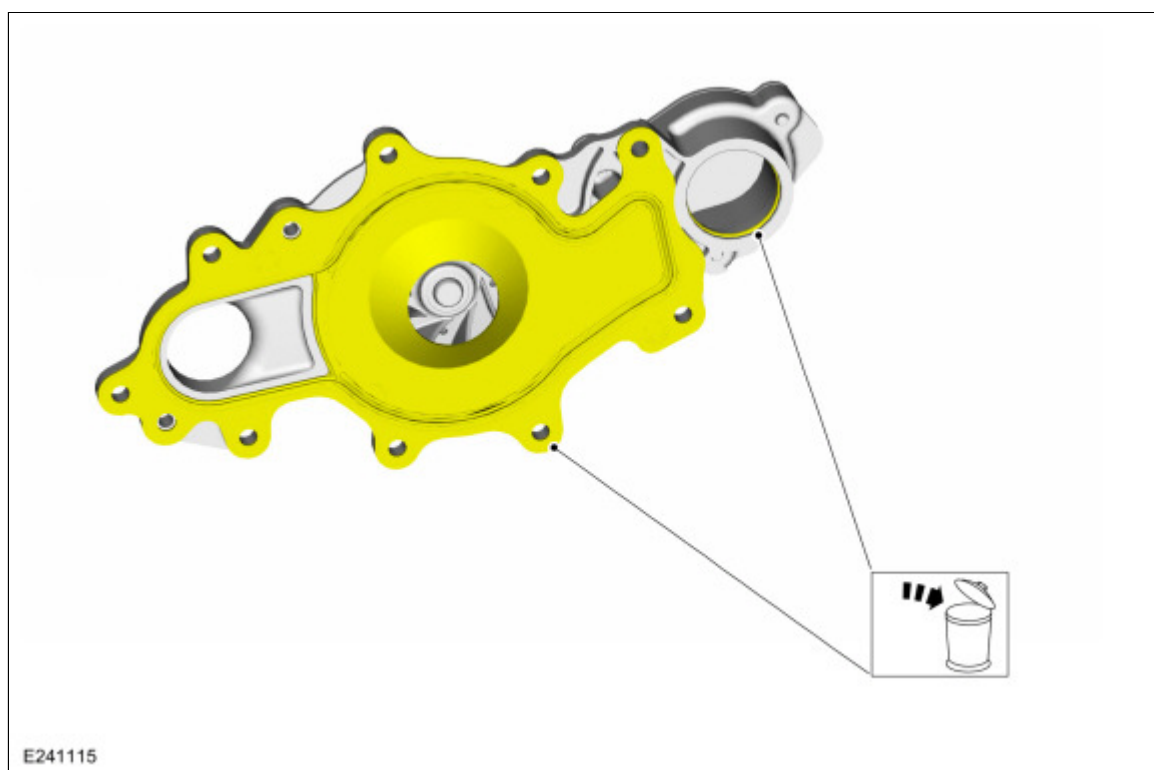
11. Release the clamp and disconnect the lower radiator hose.
Use the General Equipment: Hose Clamp Remover/Installer



12. Remove the bolts and the coolant pump.

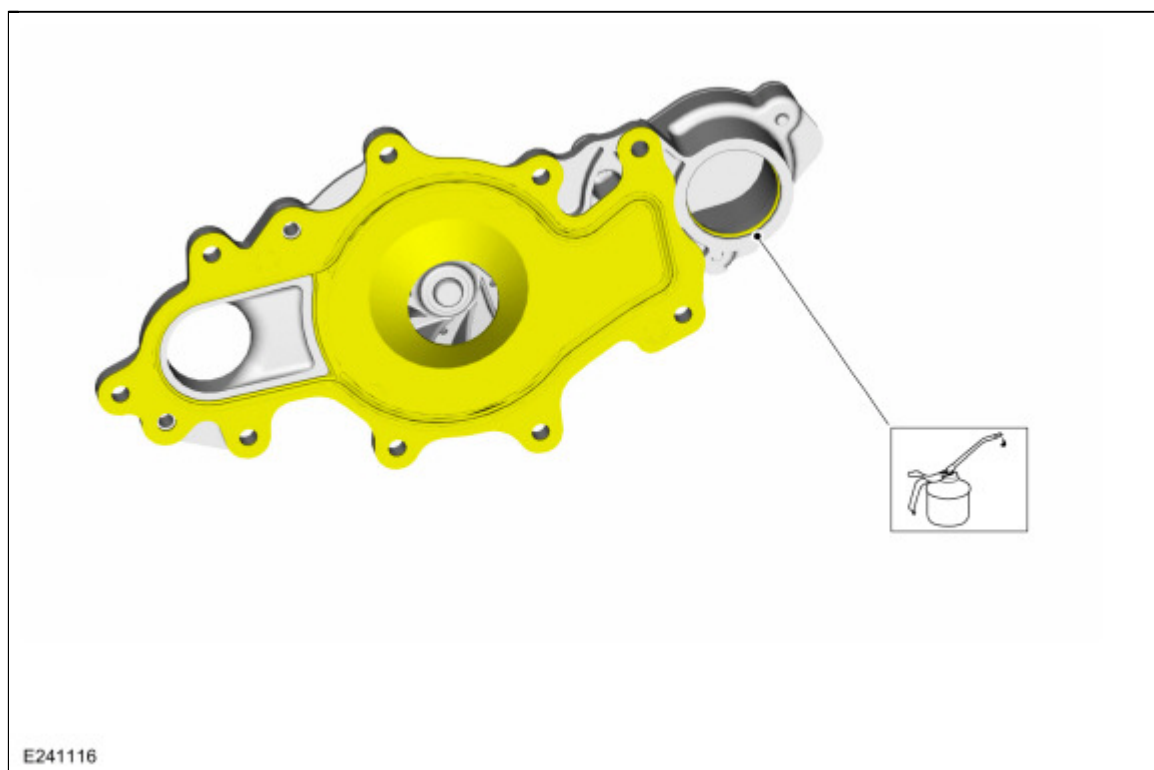


13. Remove and discard the coolant pump gasket and O-ring seal.



Installation

1. Install a new coolant pump gasket and Lubricate the O-ring seal with clean engine coolant.
Material: Motorcraft® Orange Concentrated Antifreeze/Coolant / VC-3-B (WSS-M97B44-D)



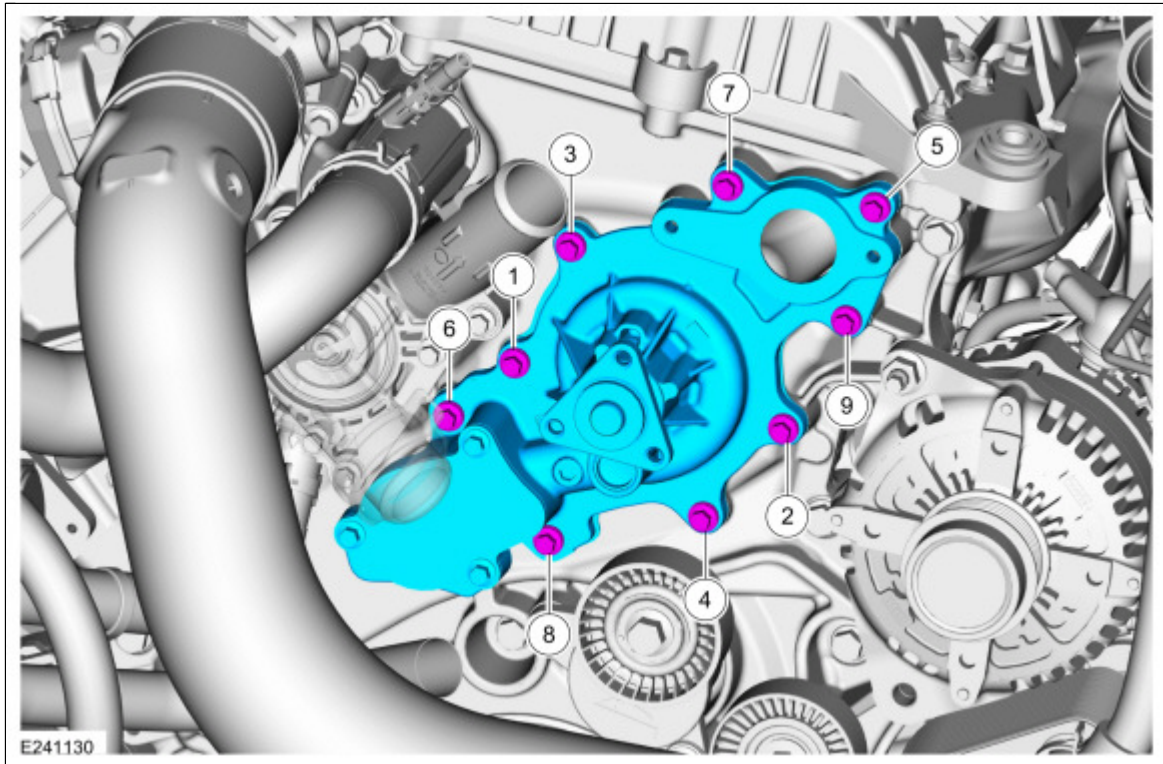
2. **NOTE:** Components not shown for clarity.

Install the coolant pump and tighten the bolts.

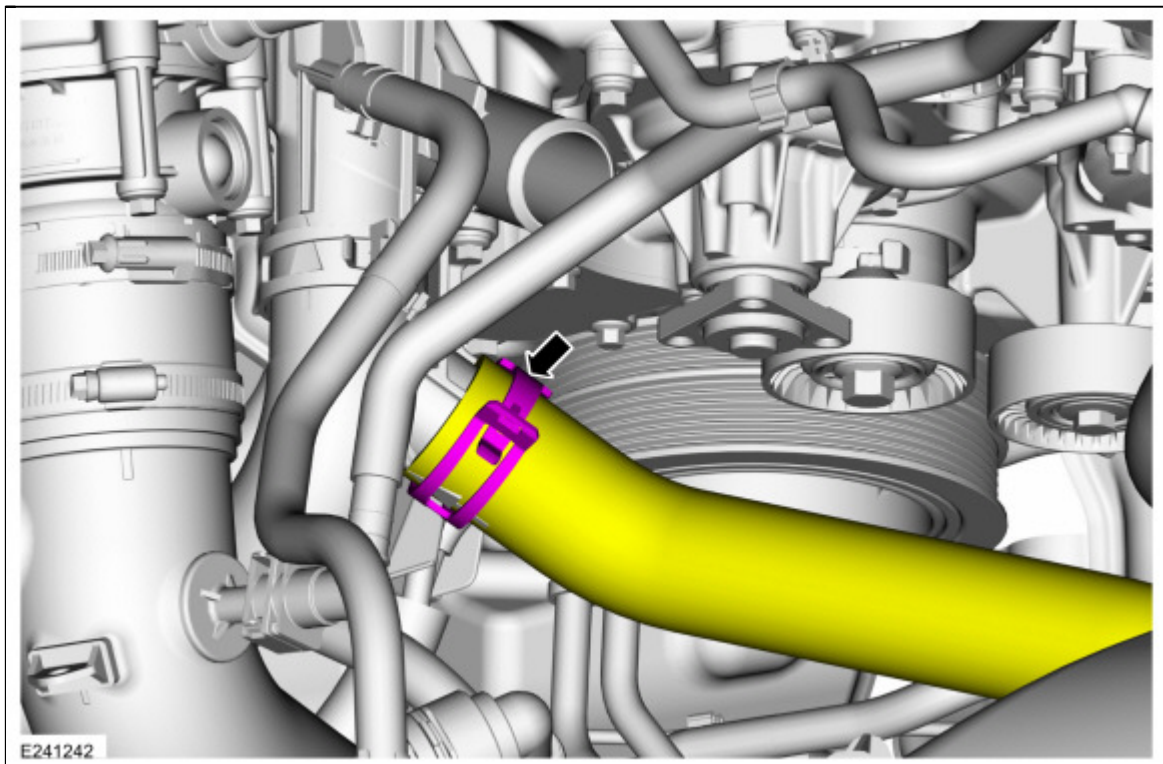
Torque:

Stage 1: 89 lb.in (10 Nm)

Stage 2: 45°

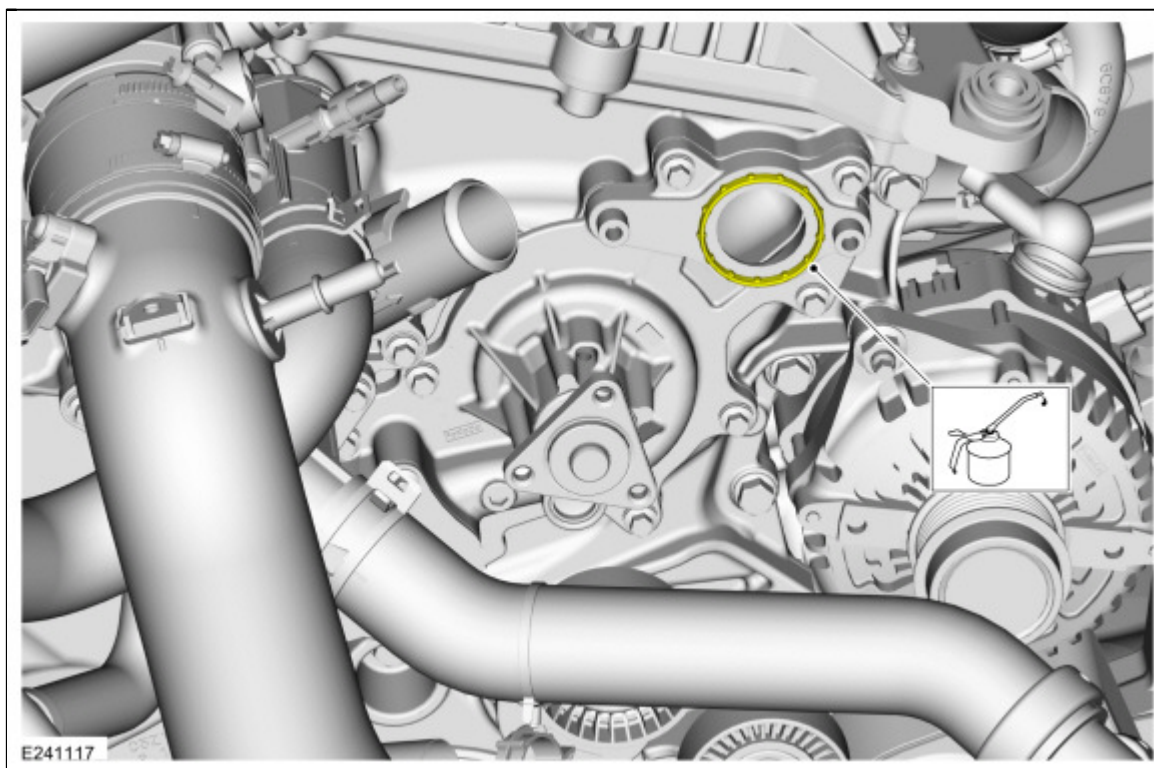


3. Connect the lower radiator hose and position the clamp.
Use the General Equipment: Hose Clamp Remover/Installer



4. Lubricate the O-ring seal with clean engine coolant.

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

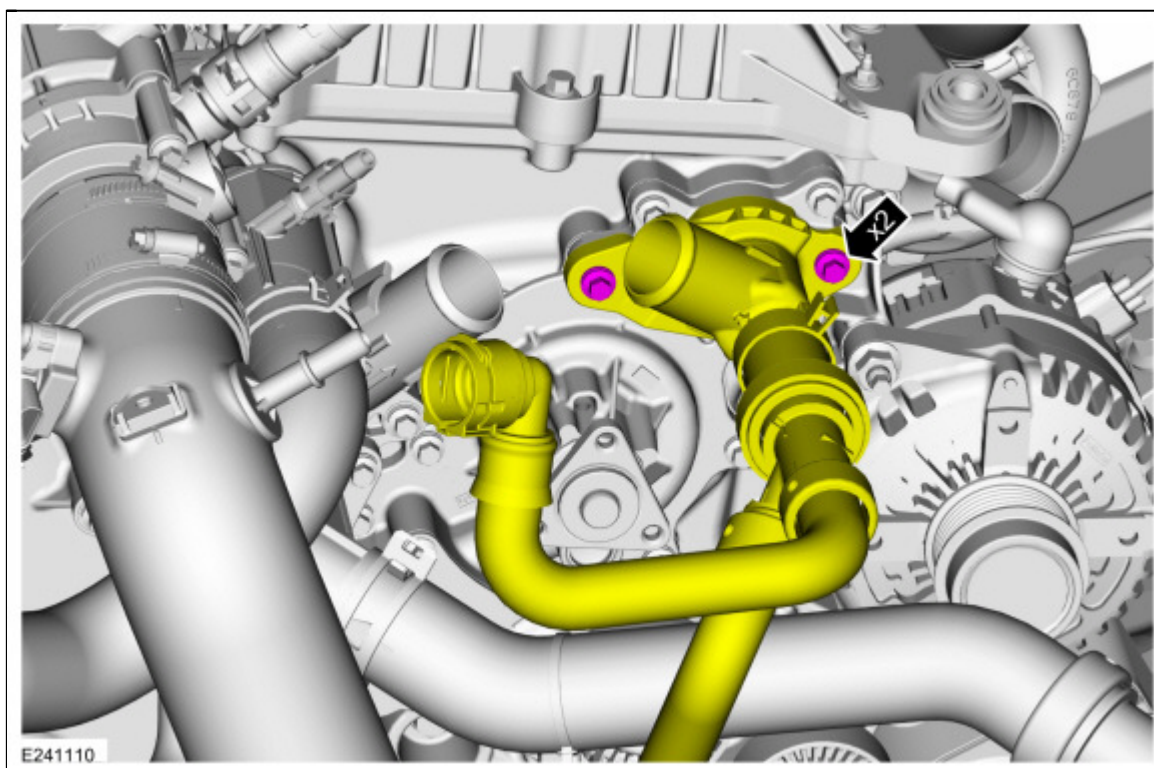


5. Position the water pump outlet connector and tighten the bolts.

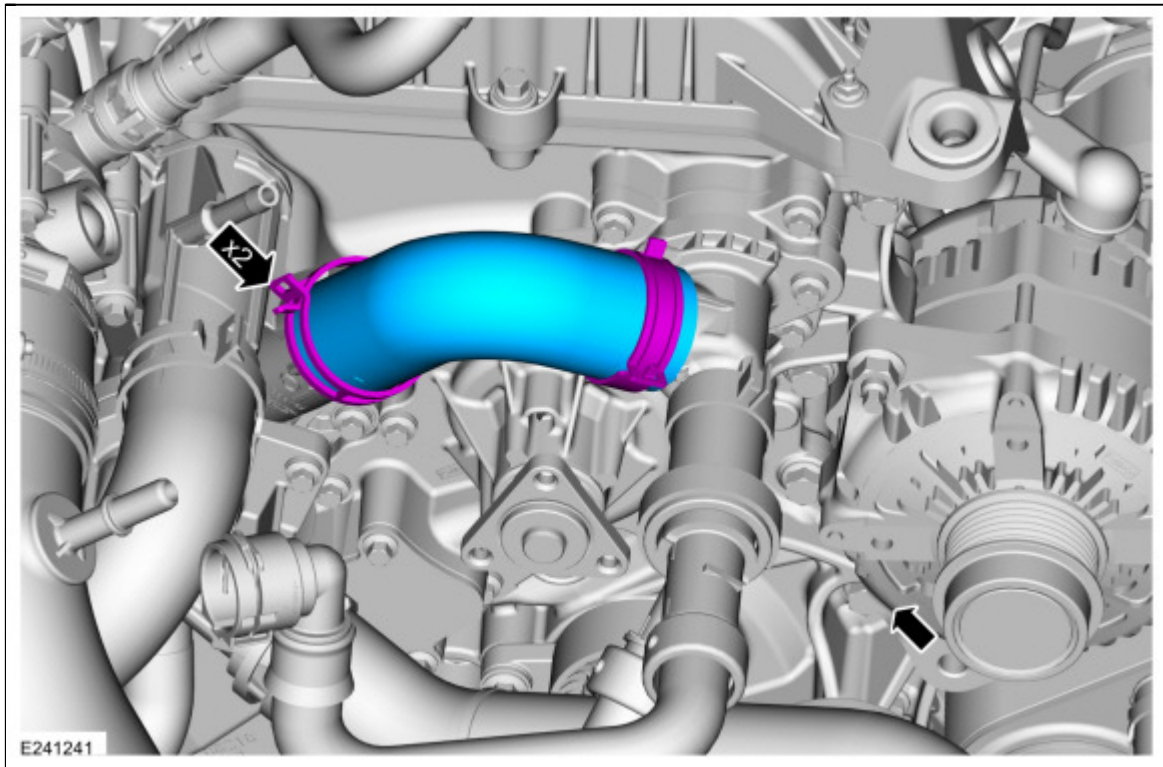
Torque:

Stage 1: 89 lb.in (10 Nm)

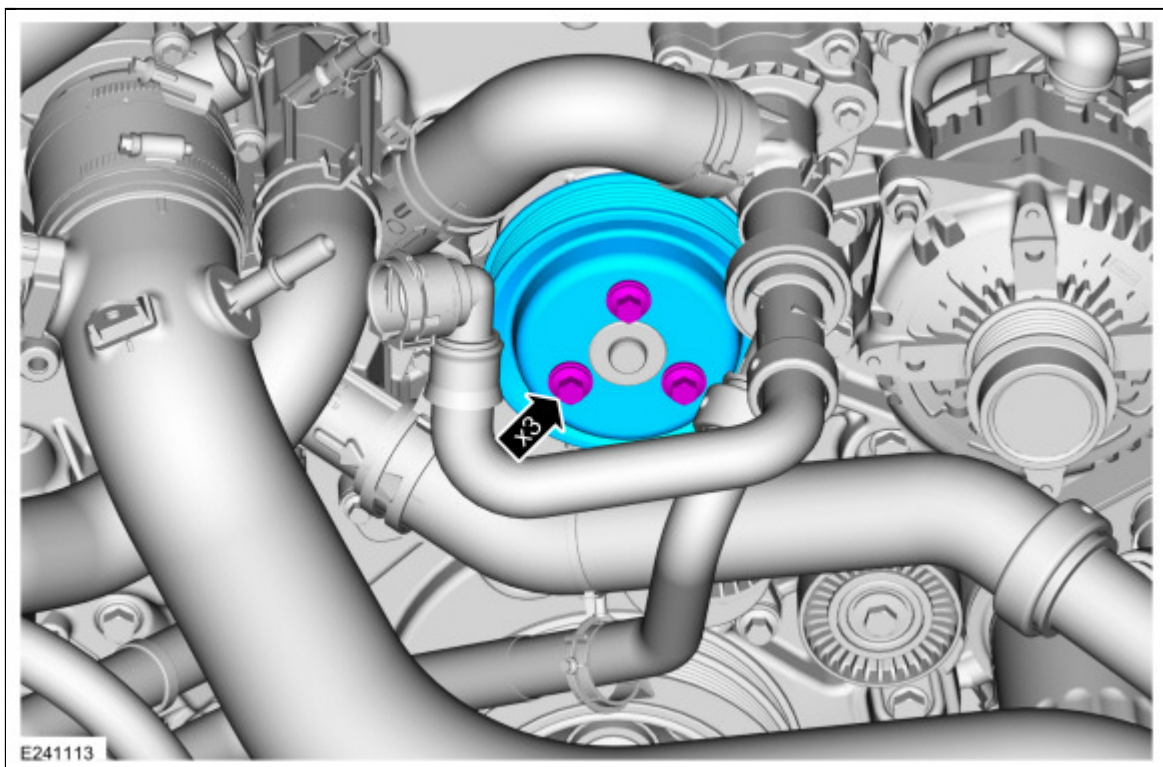
Stage 2: 45°



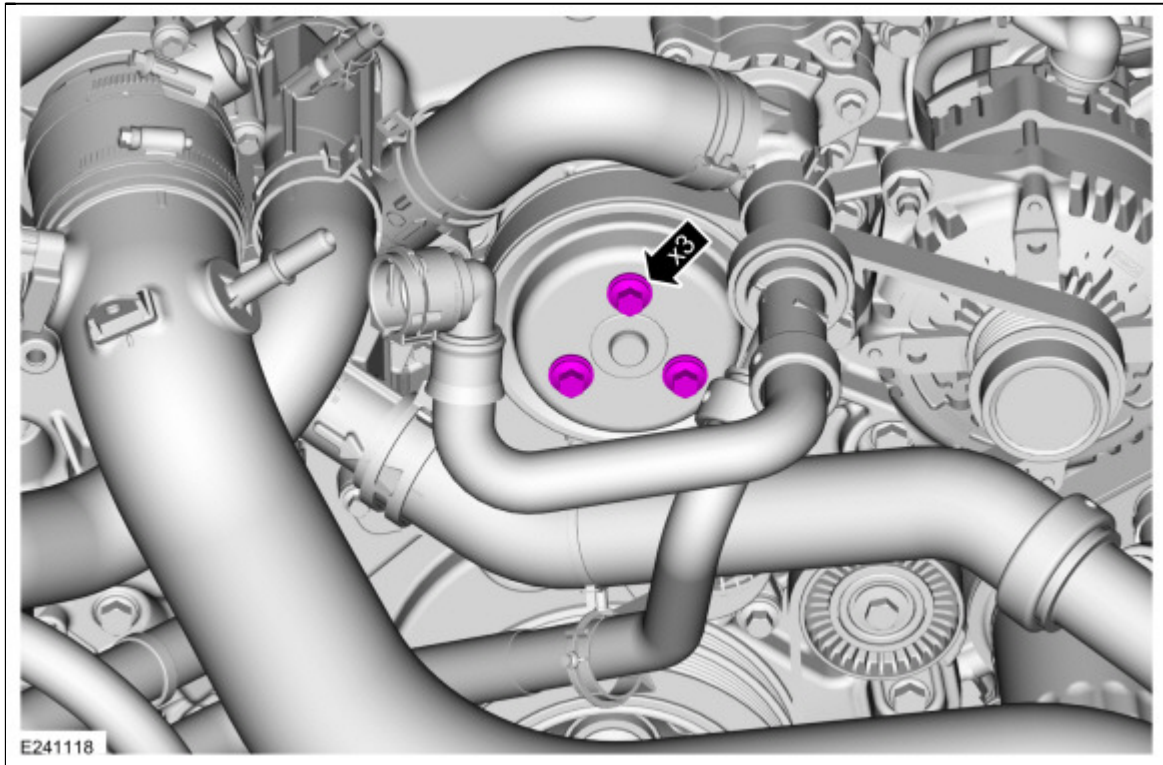
6. Install the coolant hose.
Use the General Equipment: Hose Clamp Remover/Installer



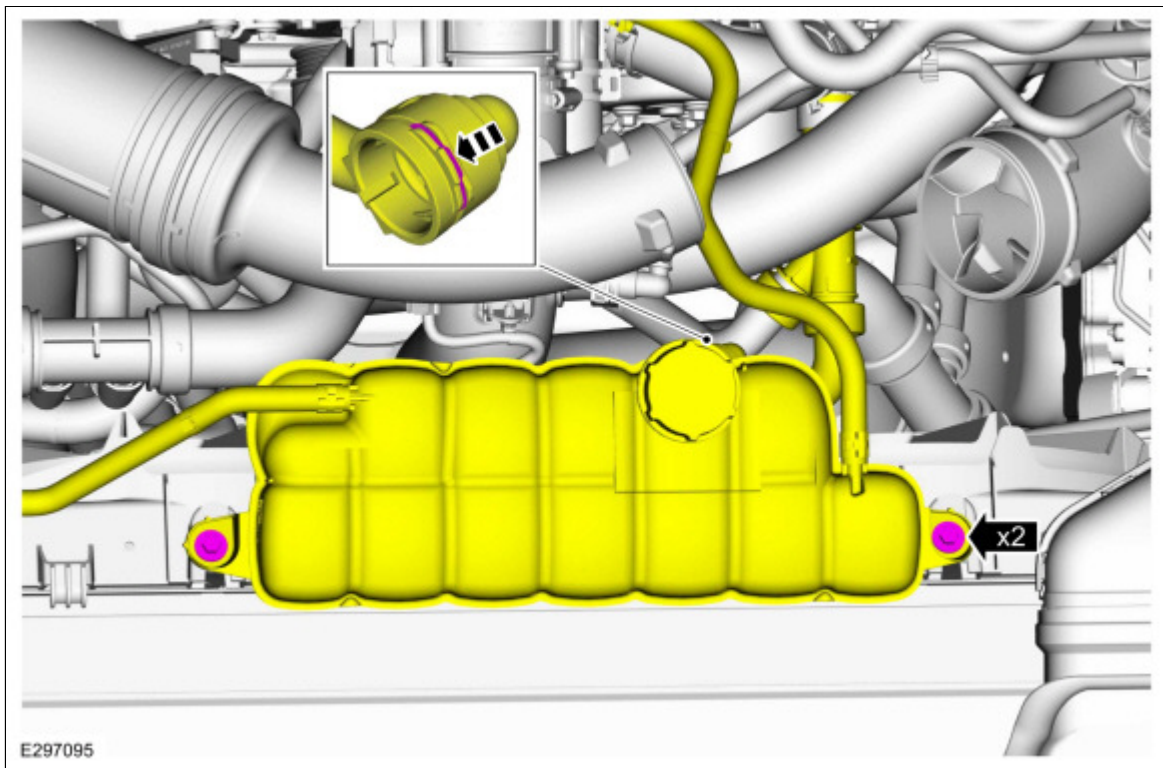
7. Position the coolant pump pulley and install the bolts finger tight.



8. Install the accessory drive belt.
Refer to: [Accessory Drive Belt](#) (303-05C Accessory Drive - 3.5L EcoBoost (272kW/370PS), Removal and Installation).
9. Remove the plastic from the A/C compressor belt.
10. Tighten the coolant pump pulley bolts.
Torque: 18 lb.ft (24 Nm)



11.
 - Position the degas bottle and install the bolts.
Torque: 62 lb.in (7 Nm)
 - Connect the lower degas bottle hose and install the spring clip.



12. Install the LH CAC intake pipe.
Refer to: [Charge Air Cooler \(CAC\) Intake Pipe](#) (303-12C Intake Air Distribution and Filtering - 3.5L EcoBoost (272kW/370PS), Removal and Installation).
13. Fill and bleed the cooling system.
Refer to: [Engine Cooling System Draining, Vacuum Filling and Bleeding](#) (303-03C Engine Cooling - 3.5L EcoBoost (272kW/370PS), General Procedures).

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