

303-03 Engine Cooling - 2.3L EcoBoost (201kW/273PS)  
Removal and Installation

2019 Ranger  
Procedure revision date: 01/7/2019

### Coolant Pump

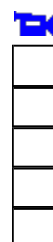
#### Materials

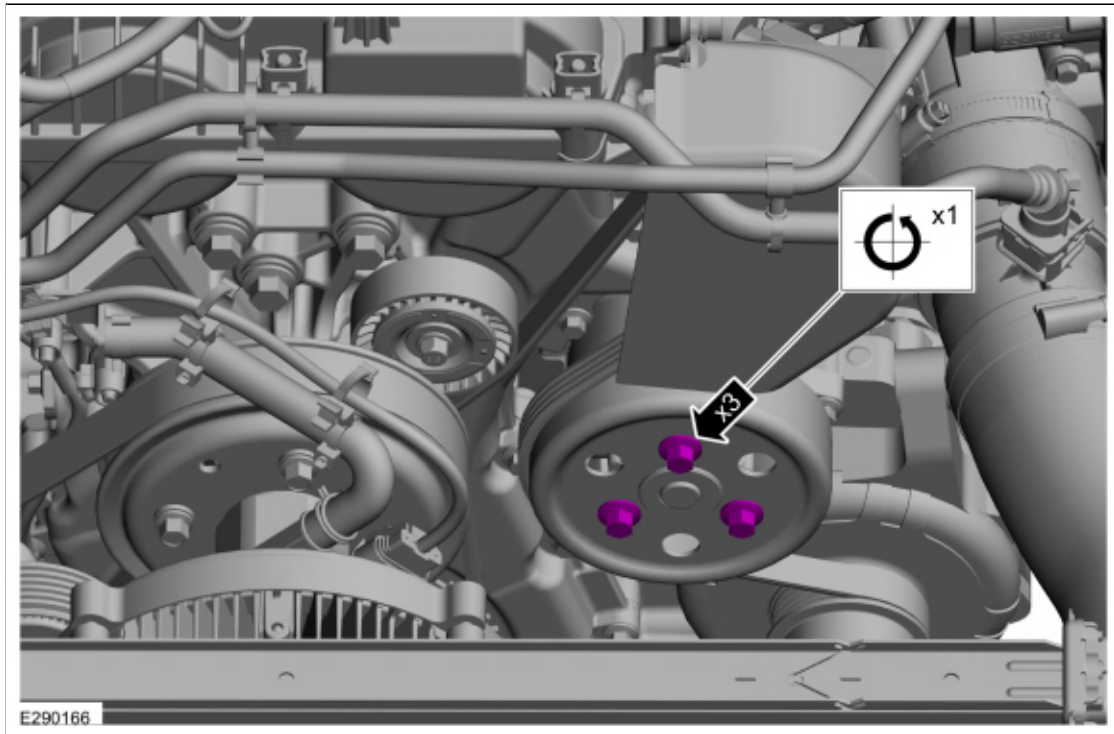
Name	Specification
Motorcraft® Orange Prediluted Antifreeze/Coolant VC-3DIL-B	WSS-M97B44-D2
Motorcraft® Yellow Concentrated Antifreeze/Coolant VC-13-G	WSS-M97B57-A1
Motorcraft® Yellow Prediluted Antifreeze/Coolant VC-13DL-G	WSS-M97B57-A2
Motorcraft® Orange Concentrated Antifreeze/Coolant VC-3-B	WSS-M97B44-D

#### Removal

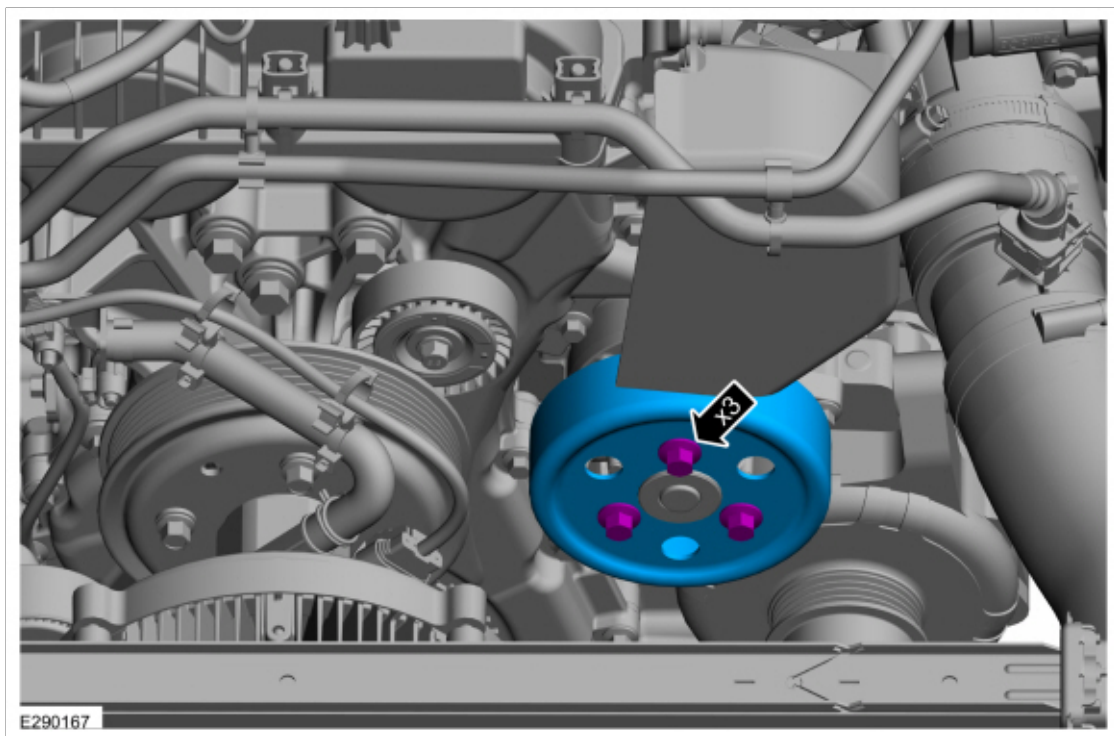
**NOTE:** Removal steps in this procedure may contain installation details.

1. Drain the cooling system.  
Refer to: [Cooling System Draining, Vacuum Filling and Bleeding](#) (303-03 Engine Cooling - 2.3L EcoBoost (201kW/273PS), General Procedures).
2. Remove the upper cooling fan shroud.  
Refer to: [Cooling Fan Upper Shroud](#) (303-03 Engine Cooling - 2.3L EcoBoost (201kW/273PS), Removal and Installation).
3. Loosen the coolant pump pulley bolts.



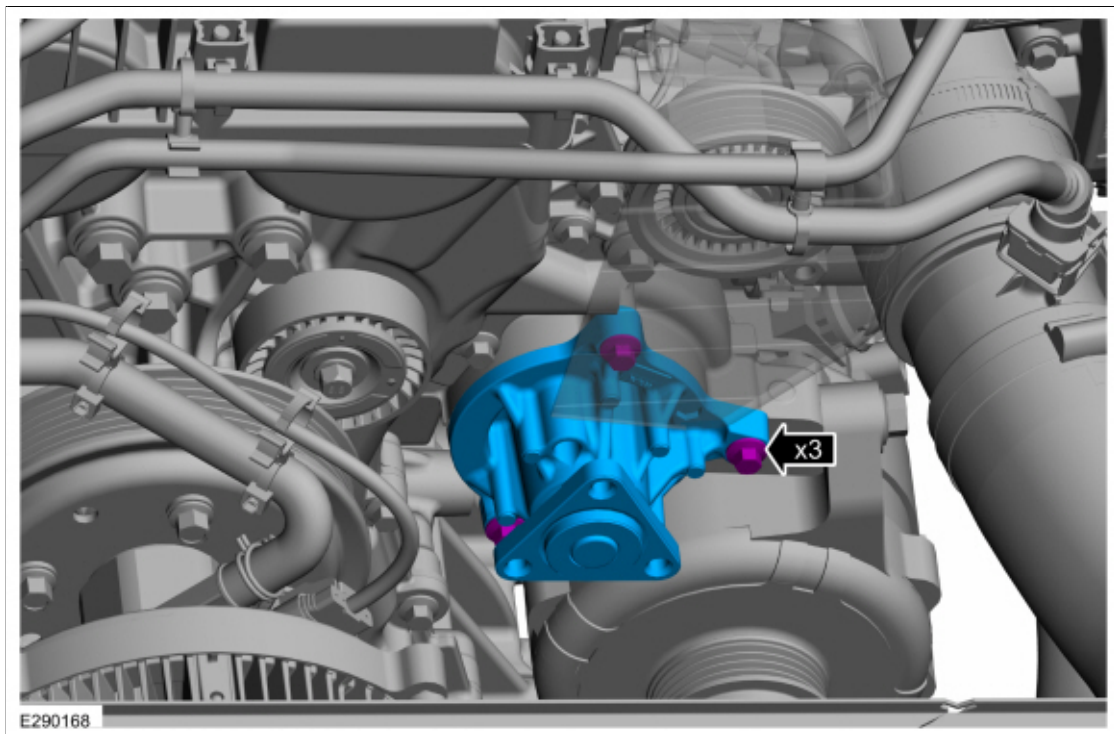


4. Remove the accessory drive belt.  
Refer to: [Accessory Drive Belt](#) (303-05 Accessory Drive - 2.3L EcoBoost (201kW/273PS), Removal and Installation).
5. Remove the bolts and the coolant pump pulley.

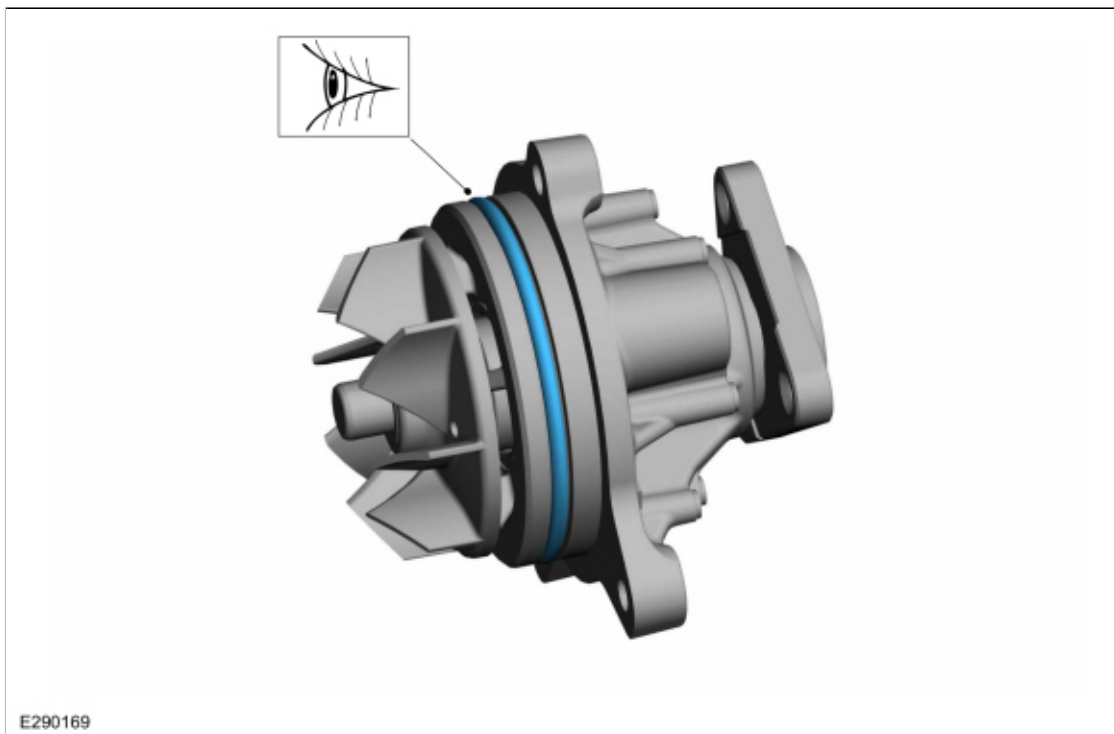


6. **NOTE:** Make sure that the mating faces are clean and free of foreign material.

Remove the bolts and the coolant pump.



7. Inspect the O-ring seal and replace if necessary.



## Installation

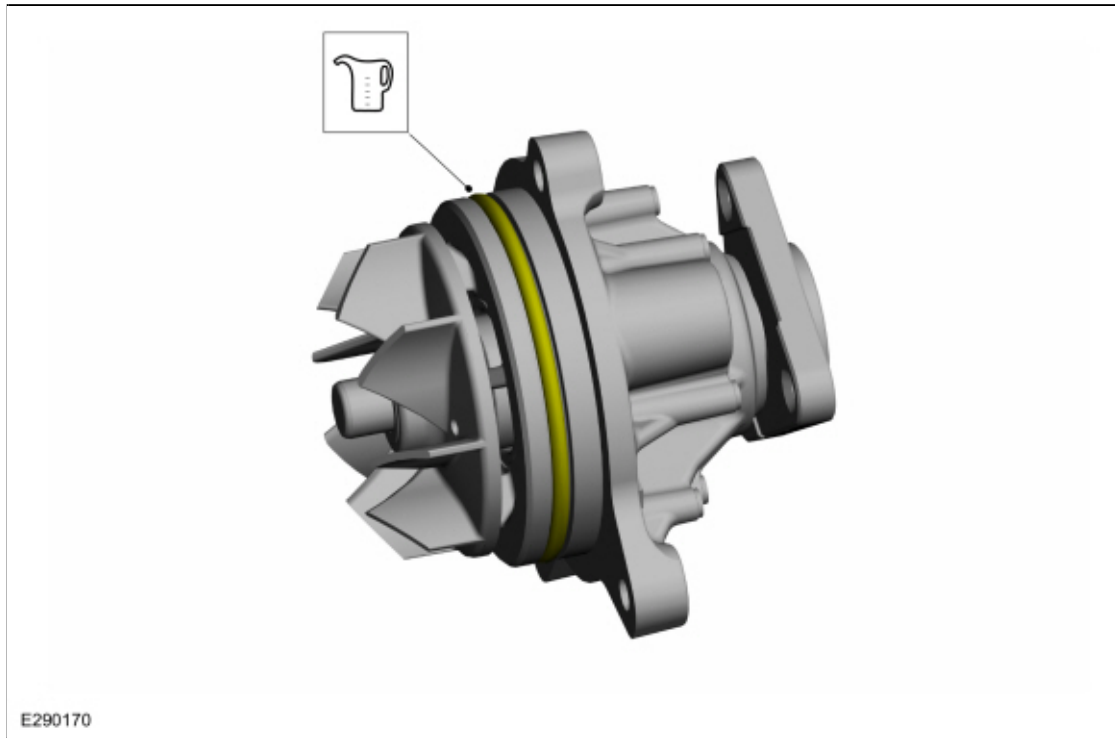
1. Lubricate the O-ring seal with clean engine coolant.

*Material:* Motorcraft® Orange Prediluted Antifreeze/Coolant / VC-3DIL-B (WSS-M97B44-D2)

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

*Material:* Motorcraft® Yellow Concentrated Antifreeze/Coolant / VC-13-G (WSS-M97B57-A1)

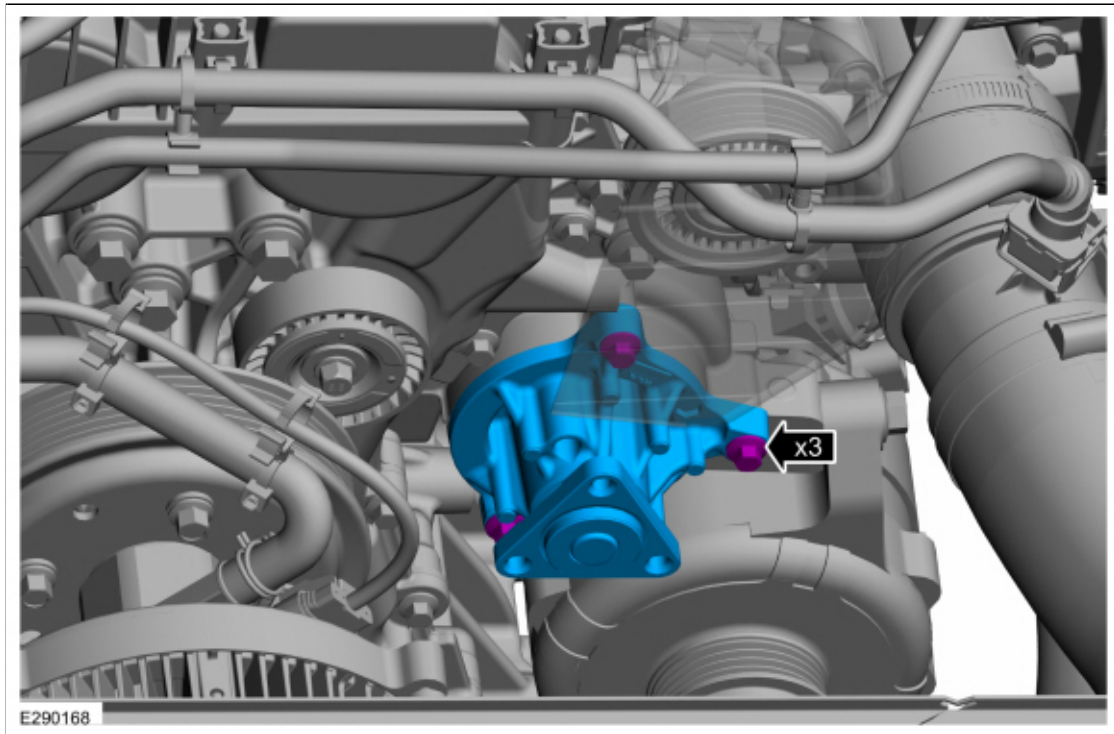
*Material:* Motorcraft® Yellow Prediluted Antifreeze/Coolant / VC-13DL-G (WSS-M97B57-A2)



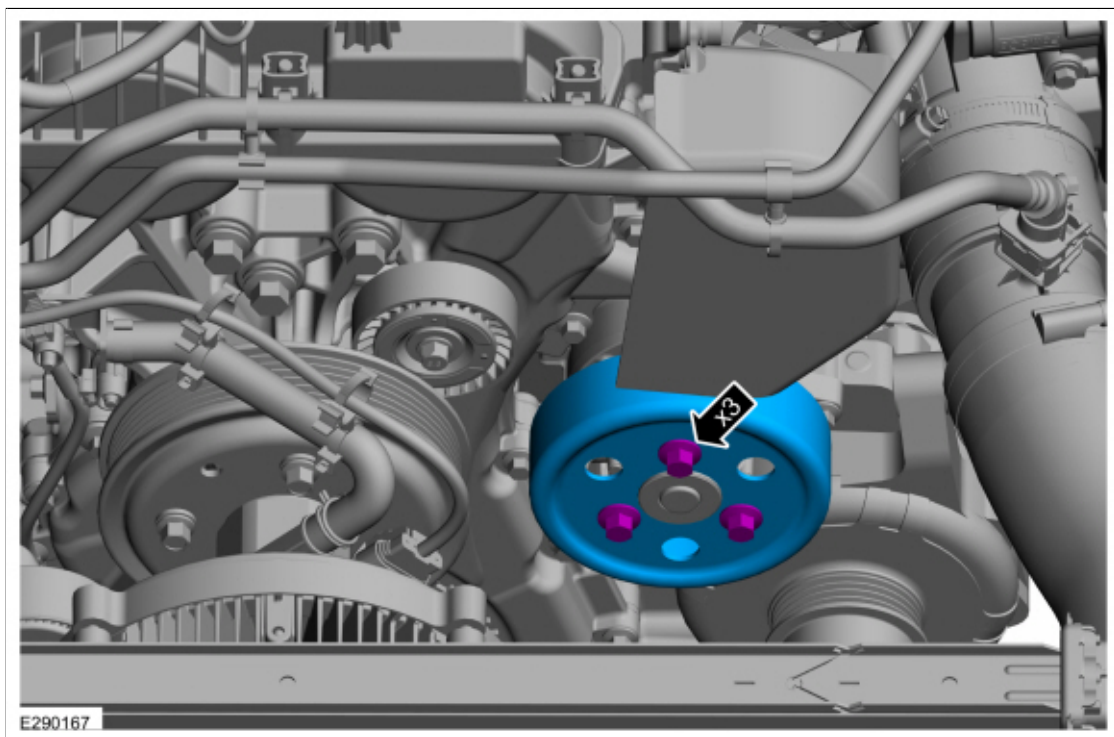
2. **NOTE:** Make sure that the mating faces are clean and free of foreign material.

Install the coolant pump and the bolts.

*Torque:* 93 lb.in (10.5 Nm)



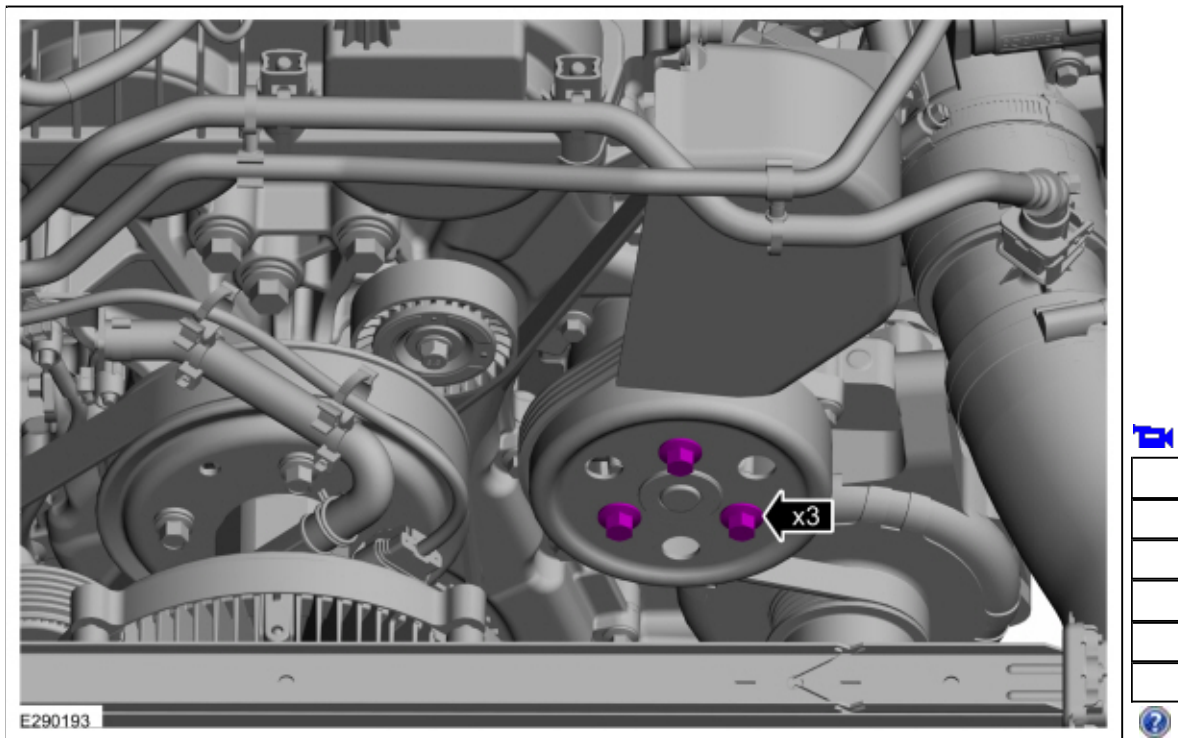
3. Position the coolant pump pulley and install the bolts finger tight.



4. Install the accessory drive belt.  
Refer to: [Accessory Drive Belt](#) (303-05 Accessory Drive - 2.3L EcoBoost (201kW/273PS), Removal and Installation).



5. Tighten the coolant pump pulley bolts.  
*Torque: 177 lb.in (20 Nm)*



6. Install the upper cooling fan shroud.  
Refer to: [Cooling Fan Upper Shroud](#) (303-03 Engine Cooling - 2.3L EcoBoost (201kW/273PS), Removal and Installation).
7. Fill and bleed the cooling system.  
Refer to: [Cooling System Draining, Vacuum Filling and Bleeding](#) (303-03 Engine Cooling - 2.3L EcoBoost (201kW/273PS), General Procedures).

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