

# Charge Air Cooler (CAC)

## Special Tool(s) / General Equipment

Hose Clamp Remover/Installer

## Materials

| Name                                                   | Specification |
|--------------------------------------------------------|---------------|
| Motorcraft® Metal Brake Parts Cleaner - PM-4-A, PM-4-B | -             |

## Removal

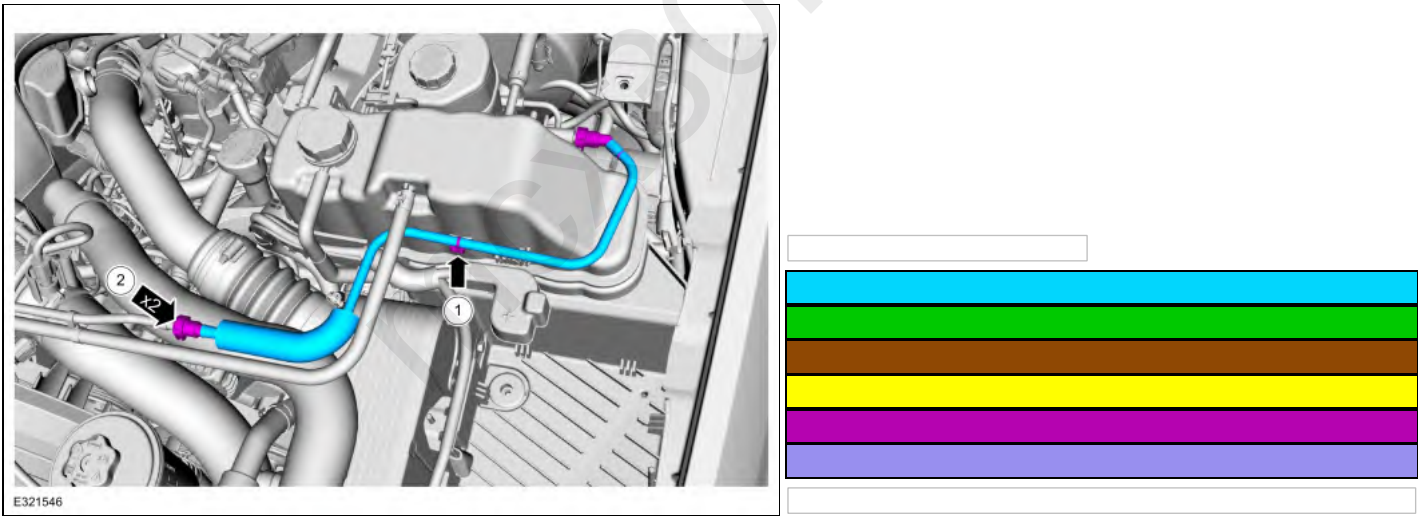
**NOTICE:** The turbocharger compressor vanes can be damaged by even the smallest particles. When removing any turbocharger or engine air intake system component, ensure that no debris enters the system. Failure to do so may result in damage to the turbocharger.

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

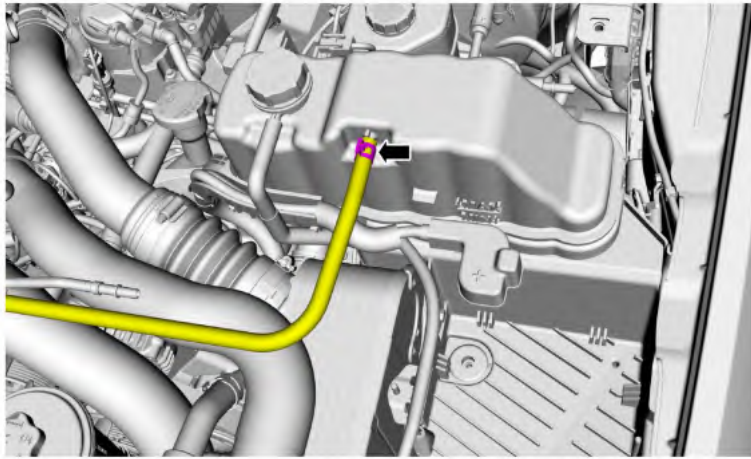
1. With the vehicle in NEUTRAL, position it on a hoist.  
Refer to: Jacking and Lifting - Overview (100-02 Jacking and Lifting, Description and Operation).
2. Drain the engine and the powertrain secondary cooling systems.  
Refer to: Engine Cooling System Draining, Vacuum Filling and Bleeding (303-03B Engine Cooling - 6.7L Power Stroke Diesel, General Procedures).  
Refer to: Engine Cooling System Draining, Vacuum Filling and Bleeding (303-03C Powertrain Secondary Cooling - 6.7L Power Stroke Diesel, General Procedures).
3. Remove the secondary battery.  
Refer to: Battery (414-01 Battery, Mounting and Cables, Removal and Installation).
4.

1. Detach the retainer.

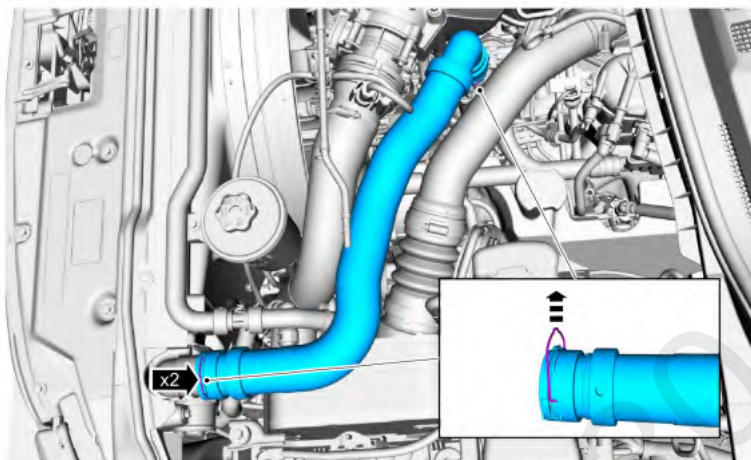
2. Disconnect the quick release couplings and remove the tube.  
Refer to: Quick Release Coupling (310-00 Fuel System - General Information - 6.7L Power Stroke Diesel) .

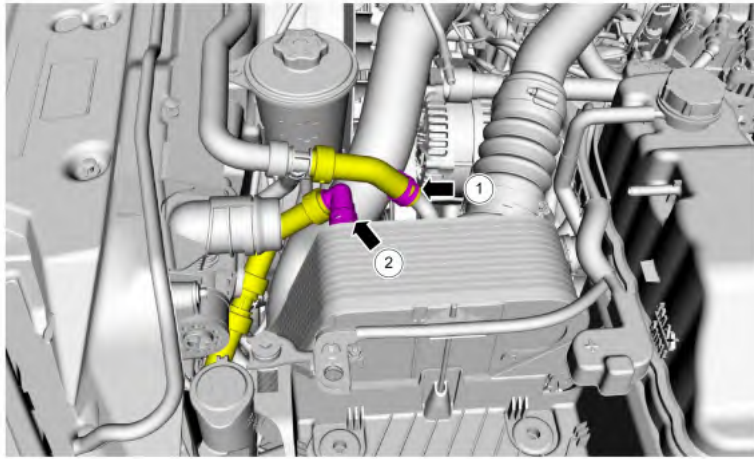


5. Release the clamp and disconnect the hose.  
Use the General Equipment: Hose Clamp Remover/Installer



6. Pull the upper radiator hose spring clips until the end of the clips are in the detent of the quick connect coupling and remove the upper radiator hose.

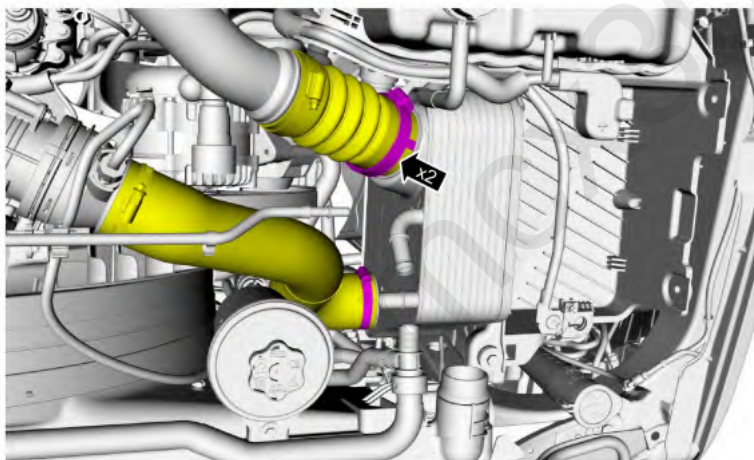




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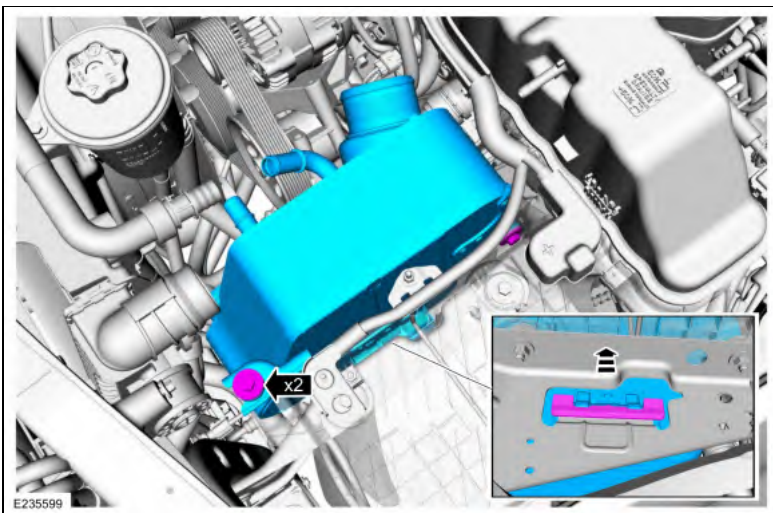
8. Loosen the clamps and disconnect the CAC pipes.  
*Torque: 106 lb.in (12 Nm)*



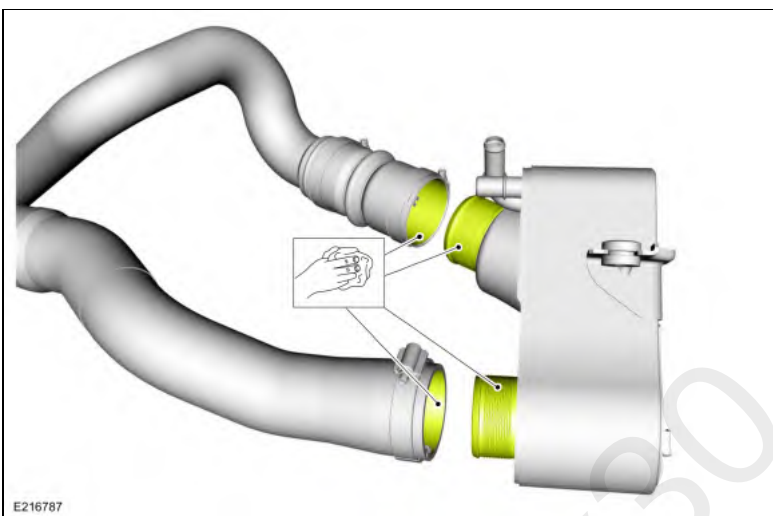
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9.
  - Remove the bolts and the CAC.  
*Torque: 106 lb.in (12 Nm)*
  - If the CAC has a suspected coolant leak, perform the CAC Leak Test.  
Refer to: Charge Air Cooler (CAC) Leak Test (303-12B Intake Air Distribution and Filtering - 6.7L Power Stroke Diesel, General Procedures).
  - Inspect the CAC for metal particles and oil. If contamination is found,  
Refer to: Charge Air Cooler (CAC) Cleaning (303-12B Intake Air Distribution and Filtering - 6.7L Power Stroke Diesel, General Procedures).



10. Clean the joint clamp surfaces and the CAC connections.  
*Material: Motorcraft® Metal Brake Parts Cleaner / PM-4-A, PM-4-B*



#### Installation

1. Inspect the turbocharger or engine air intake system components and clean, if necessary.
2. To install, reverse the removal procedure.
3. **NOTICE: Evaluate the cooling system condition before filling the engine and the powertrain secondary cooling systems. Failure to follow these instructions can result in damage to the engine or the powertrain secondary cooling systems.**

Evaluate the engine and powertrain secondary cooling systems.

Refer to: Engine Cooling System Condition Evaluation (303-03B Engine Cooling - 6.7L Power Stroke Diesel, General Procedures).

Refer to: Engine Cooling System Condition Evaluation (303-03C Powertrain Secondary Cooling - 6.7L Power Stroke Diesel, General Procedures).