

Charge Air Cooler (CAC) Cleaning

Materials

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

Inspection

Vehicles With Turbocharger Failure

1. If there has been metal contact within the turbocharger compressor:
 1. Remove the CAC tubes and inspect for metal particles.
 2. Remove the CAC from the vehicle.
Refer to: Charge Air Cooler (CAC) (303-12B Intake Air Distribution and Filtering - 6.7L Power Stroke Diesel, Removal and Installation).
 3. Blow compressed air into the inlet air port (angled port) to dislodge metal particles from the heat exchanger core, being careful to observe any metal particles coming out.
 4. If metal particles are found, install a new CAC.
Refer to: Charge Air Cooler (CAC) (303-12B Intake Air Distribution and Filtering - 6.7L Power Stroke Diesel, Removal and Installation).
2. Drain the fluids by tilting the ports downward and rocking the cooler to fully drain each port.
3. Inspect for any burnt-on oil or dust collected on the CAC. These may be signs of misuse and could void the warranty. If these are found, flush the cooler, refer to Flushing in this procedure.

Vehicles Without Turbocharger Failure

4. If there is no turbocharger problem, but oil is found dripping from the CAC tubes or joints, remove the lower end of the cold CAC tube, and collect and properly dispose of any oil that spills out.
 - If oil drains out, find the source of the oil by inspecting the turbocharger or crankcase ventilation system. With the vehicle on level ground, drain the oil that spills out and reinstall the CAC tube.
 - If no oil drains out, reinstall the CAC tube.

Flushing

NOTICE: Do not use a high-pressure power washer to clean the CAC or damage to the CAC may occur.

NOTICE: Do not use ultrasonic cleaning equipment on the CAC. Failure to follow these instructions may result in damage to the CAC and contamination of the engine intake airstream.

5. Drain all contaminants from the CAC prior to cleaning.
6. Clean the joint clamp areas and the CAC connections.
Material: Motorcraft® Metal Brake Parts Cleaner / PM-4-A, PM-4-B
7. Position the CAC flat with the inlet and outlet ports pointing up.
8. Add an appropriate amount of a commercially available detergent cleaner such as Simple Green® Pro HD, or equivalent, to the CAC. Follow the manufacturer's directions for heavy cleaning. Fill the CAC to 40% of its volume with water.
9. Plug or cap the CAC openings.
10. Raise one end of the CAC and agitate it by hand for at least 5 minutes.
11. Raise the other end of the CAC and agitate it in the other direction by hand for at least 5 minutes.
12. Drain the CAC.
13. Flush the CAC thoroughly with clean water.

14. Repeat Steps 5 through 13 until no contaminants are found in the flushing water.
 15. Allow the CAC to air dry.
 16. Install the CAC.
Refer to: Charge Air Cooler (CAC) (303-12B Intake Air Distribution and Filtering - 6.7L Power Stroke Diesel, Removal and Installation).
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