

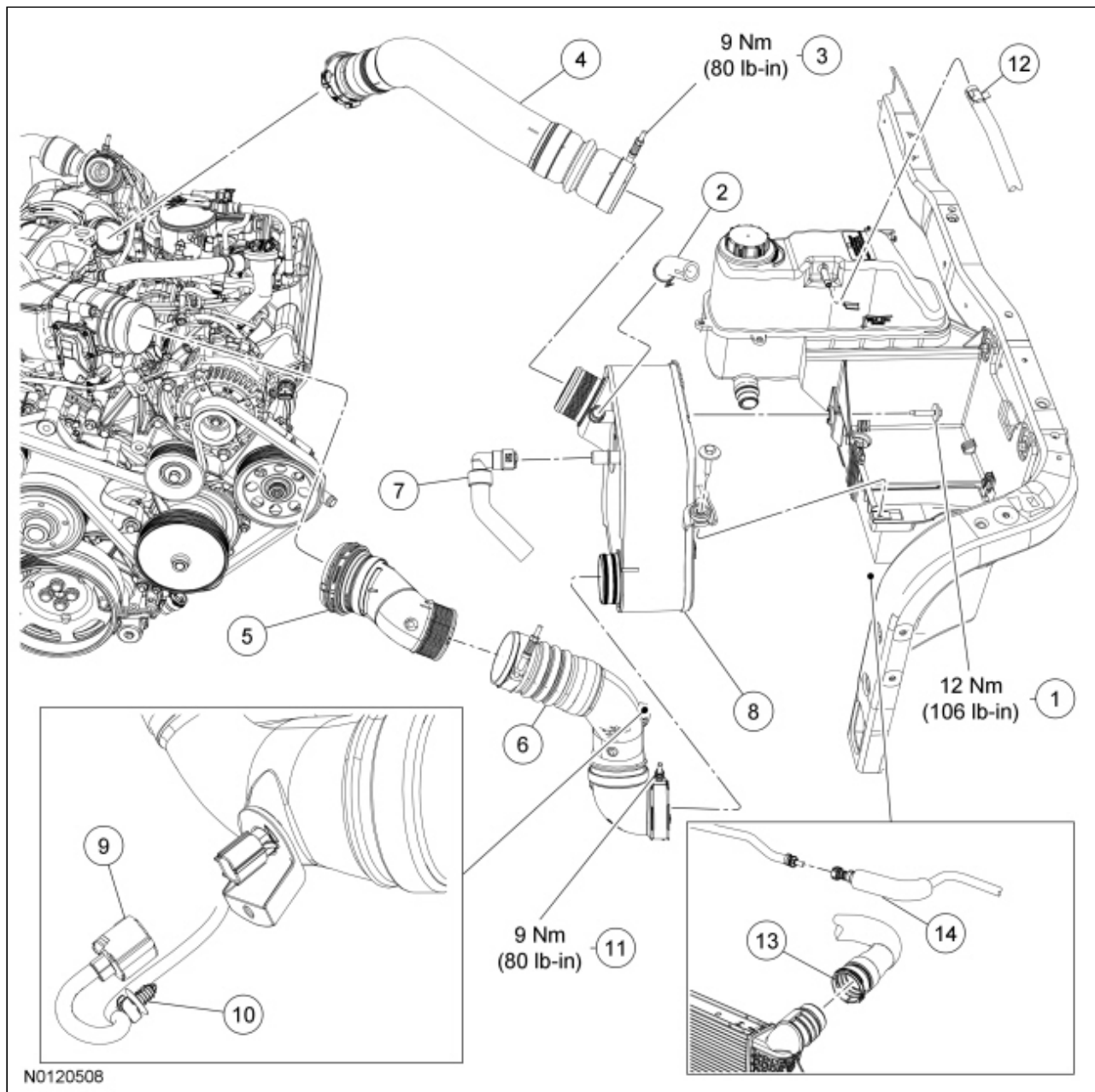
SECTION 303-12: Intake Air Distribution and Filtering  
REMOVAL AND INSTALLATION

2011 F-250, 350, 450, 550 Super Duty Workshop Manual

Procedure revision date: 12/08/2010

**Charge Air Cooler — 6.7L Diesel****Material**

Item	Specification
Metal Brake Parts Cleaner PM-4-A or PM-4-B (US); CPM-4 (Canada)	—

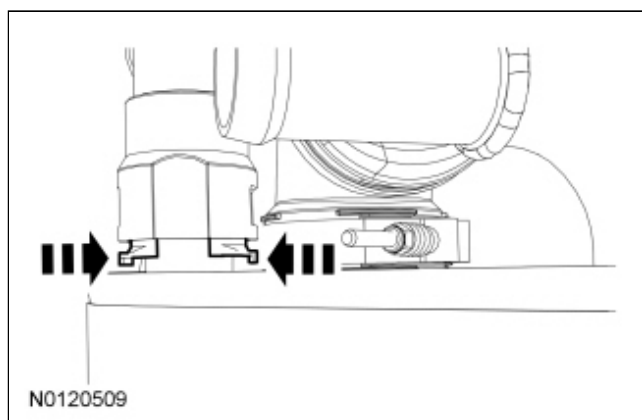


Item	Part Number	Description
1	W708661	Charge Air Cooler (CAC) bolt (2 required)
2	8C471	<a href="#">CAC</a> coolant outlet hose
3	—	<a href="#">CAC</a> inlet tube-to- <a href="#">CAC</a> clamp (part of 6C646)
4	6C646	<a href="#">CAC</a> inlet tube
5	—	<a href="#">CAC</a> outlet (upper) tube (part of 6F073)
6	—	<a href="#">CAC</a> outlet (lower) tube (part of 6F073)
7	8C472	<a href="#">CAC</a> coolant inlet hose
8	6K775	<a href="#">CAC</a>
9	—	Charge Air Cooler Temperature (CACT) sensor electrical connector (part of 12A581)
10	—	Wiring harness retainer (part of 12A581)
11	—	<a href="#">CAC</a> outlet (lower) tube clamp (part of 6F073) (2 required)
12	8075	Coolant hose
13	8260	Upper radiator hose
14	9C493	Vacuum tube

## Removal

**NOTICE:** Do not use ultrasonic cleaning equipment on the Charge Air Cooler (CAC). Failure to follow these instructions may result in damage to the [CAC](#) and contamination of the engine intake airstream.

1. With the vehicle in NEUTRAL, position it on a hoist. For additional information, refer to [Section 100-02](#).
2. Drain the engine and the secondary cooling systems. For additional information, refer to [Section 303-03B](#) and [Section 303-03C](#).
3. Remove the secondary battery. For additional information, refer to [Section 414-01](#).
4. Disconnect the upper radiator hose from the radiator and position the hose aside.
5. Disconnect the vacuum tube quick connect coupling and position the tube aside. For additional information, refer to the quick connect coupling procedure in [Section 310-00](#).
6. Disconnect the coolant hose from the degas bottle.
7. Disconnect the Charge Air Cooler (CAC) coolant outlet hose from the [CAC](#).
8. Depress the quick connect retainer tabs and disconnect the [CAC](#) coolant inlet hose from the [CAC](#).



9. Loosen the clamp and disconnect the [CAC](#) inlet tube from the [CAC](#) .
  - Position the tube aside.
10. Disconnect the Charge Air Cooler Temperature (CACT) sensor electrical connector and wiring harness retainer.
11. Loosen the [CAC](#) outlet tube-to- [CAC](#) clamp.
12. Loosen the clamp and disconnect the upper [CAC](#) outlet tube from the lower [CAC](#) outlet tube.
13. Remove the 2 bolts and the [CAC](#) .
  - Remove the lower [CAC](#) outlet tube from the [CAC](#) .
  - If the [CAC](#) has a suspected coolant leak, perform the [Charge Air Cooler \(CAC\) Leak Test](#) in this section.
  - Inspect the [CAC](#) for metal particles and oil . For additional information, refer to [Charge Air Cooler \(CAC\) Cleaning](#) in this section.

## Installation

1. **NOTE:** Thoroughly clean the joint clamp areas as well as the turbocharger connection, engine connection and the [CAC](#) connections, using metal brake parts cleaner.

Connect the lower [CAC](#) outlet tube to the [CAC](#) . Do not tighten the clamp at this time.

2. Install the [CAC](#) and the 2 bolts.
  - Tighten to 12 Nm (106 lb-in).
3. Connect the upper [CAC](#) outlet tube to the lower [CAC](#) outlet tube.
  - Tighten the clamp to 9 Nm (80 lb-in).
4. Tighten the [CAC](#) outlet tube-to- [CAC](#) clamp to 9 Nm (80 lb-in).
5. Connect the Charge Air Cooler Temperature (CACT) sensor electrical connector and wiring harness retainer.
6. **NOTE:** If there is any oil residue, clean the connecting port on the Charge Air Cooler (CAC) and the inside surface of the [CAC](#) inlet tube to prevent the tube from blowing off.

Connect the [CAC](#) inlet tube to the [CAC](#) .

- Tighten the clamp to 9 Nm (80 lb-in).

7. Connect the [CAC](#) coolant inlet hose to the [CAC](#).
8. Connect the [CAC](#) coolant outlet hose to the [CAC](#).
9. Connect the coolant hose to the degas bottle.
10. Connect the vacuum tube quick connect coupling. For additional information, refer to the quick connect coupling procedure in [Section 310-00](#).
11. Connect the upper radiator hose to the radiator.
12. Install the secondary battery. For additional information, refer to [Section 414-01](#).
13. **NOTICE: Evaluate the cooling system condition before filling the engine and the secondary cooling systems. Failure to follow these instructions can result in damage to the engine or the secondary cooling system.**

Evaluate the engine and the secondary cooling systems condition. For additional information, refer to Cooling System Condition Evaluation in [Section 303-03B](#) and [Section 303-03C](#).

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