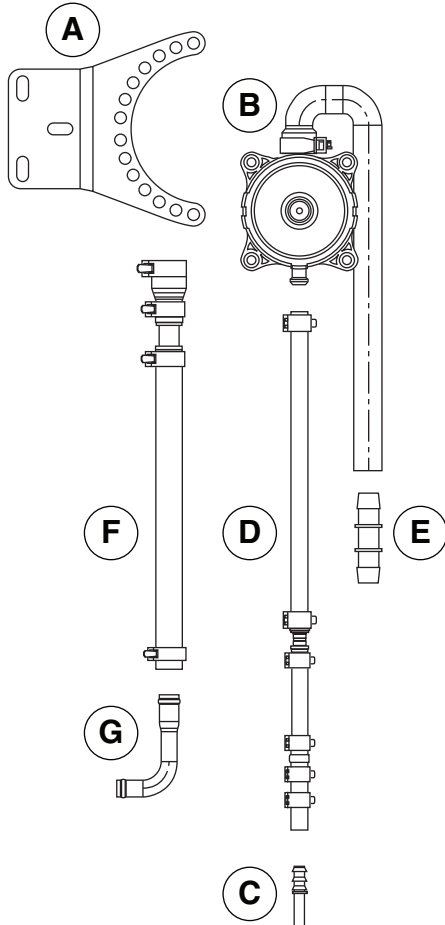




Fleetguard® Open Crankcase Ventilation (OCV) Kit Installation Instructions



**Installation Instructions for:
CV50117 on Cummins® 5.9 L ISB Engines
(Not for Dodge RAM Applications)**

Parts List

Part	Description
A	Mounting Bracket
B	Breather Assembly and Mounting Hardware
C	Cylinder Block Insert Fitting
D	Drain Hose Assembly with Check Valve
E	Vent Hose Connector
F	Inlet Hose Assembly
G	Elbow Adapter Assembly (not required for all applications)

Tools Required

Description
Hose Clamp Pliers
Hose Cutter
3/8" to 1" Ratchet and Socket Set
3/8" to 1" Wrench Set
Rubber or Wooden Mallet

About This Manual

Read the entire document carefully prior to installing your Cummins Filtration® Open Crankcase Ventilation (OCV) system. It is imperative that you pay attention to the alerts that highlight important topics and steps about the installation, operation and maintenance of the Cummins Filtration OCV system. The following types of alerts appear in this manual:

Note: Provides important additional information.

⚠ CAUTION Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury, or alerts against unsafe practices or actions that could damage the product. Contact your Cummins Filtration distributor, dealer or Cummins Filtration, Inc. if you have questions regarding the installation.

⚠ CAUTION: These instructions are intended for use by professional mechanics who are trained in the proper use of power and hand tools, using appropriate safety precautions (including eye protection).

Crankcase Ventilation Kit Installation

Locating and Mounting the Breather Assembly

1. Check both sides of the cylinder block to determine the location of the unused dipstick port boss. Select a boss that will allow the drain hose, when installed, to run directly from the breather assembly to the crankcase. **The drain hose must be free of any loops, kinks or abrupt bends to ensure proper oil drainage.**
2. Find a mounting location for the breather assembly and bracket at least 14" (350 mm) above the oil level in the crankcase and a minimum of 4" (102 mm) from both the exhaust manifold and exhaust piping. The "cold side" of the engine is the preferred location for mounting. The breather assembly must be mounted vertically (as shown) for proper operation.

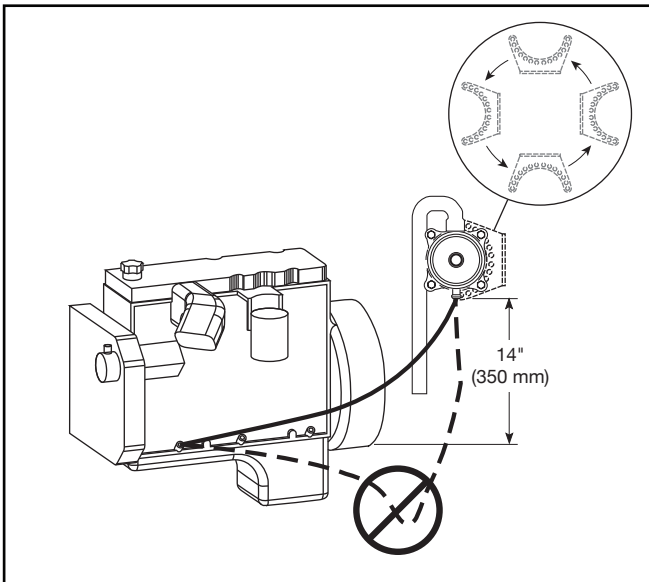


Figure 1 – Mounting Location

3. Install the service part bracket to the mounting location selected. The mounting bracket can be attached to the breather assembly at different positions by simply rotating the bracket. Attach the breather assembly to the bracket using the hardware provided, ensuring the breather assembly is mounted vertically and the oil drain outlet is directed downward.

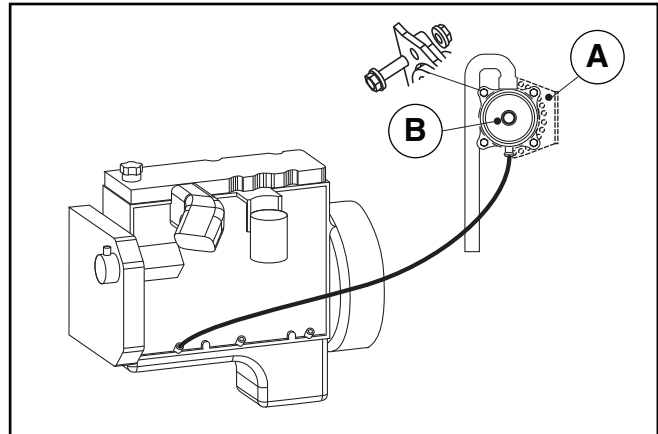


Figure 2 – Mounting the Breather Assembly

Installing the Insert Fitting

4. Locate the selected oil dipstick port boss at the bottom of the cylinder block (above the pan rail) for installation of the barbed insert fitting. The OD of the fitting is 0.375" (9.5 mm).

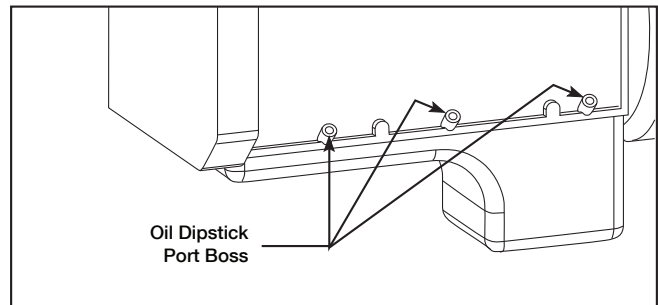


Figure 3 – Installing the Insert Fitting

5. Remove the frost plug from the boss carefully to ensure no contaminants enter the crankcase.
6. Install the insert fitting into the boss by tapping it lightly with a rubber or wood mallet to ensure it is properly seated. **The knurled end of the fitting goes into the boss; the barbed end protrudes outward.**

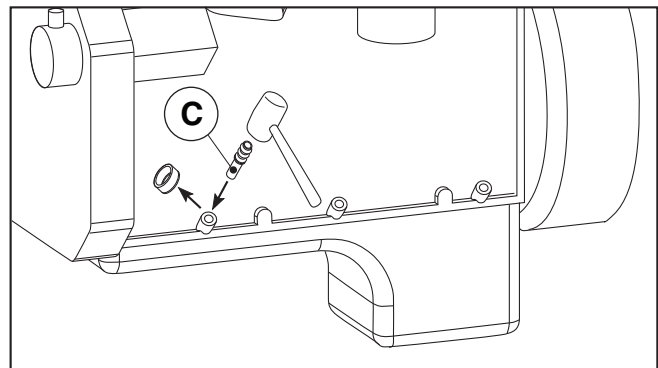


Figure 4 – Seating the Insert Fitting

Installing the Drain Hose

The drain hose assembly is three sections of hose with plastic connections. The smaller ID hose (0.375" (9.5 mm)) connects to the barbed insert fitting at the crankcase; the larger ID hose (0.5" (13 mm)) connects to the breather assembly.

7. Attach the small ID drain hose to the insert fitting. Secure with clamp.

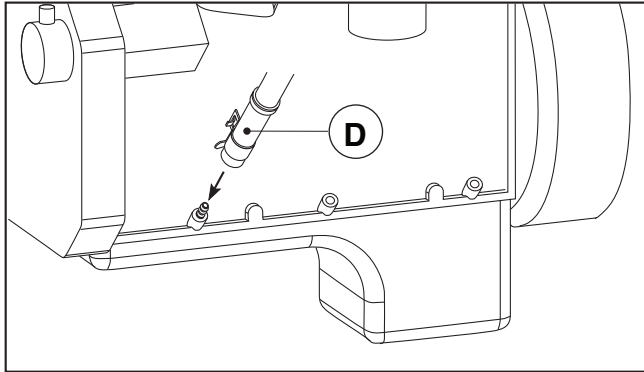


Figure 5 – Attaching the Drain Hose to the Insert Fitting

8. Route the drain hose to the breather assembly to determine the proper length.

⚠ CAUTION: The drain hose must be free of any loops, kinks or abrupt bends to ensure proper drainage.

9. If the hose is too long, trim the excess from the larger ID section of the hose. Attach to the breather, secure with clamp. **Reinspect the hose and routing to verify it is free of any loops, kinks or abrupt bends.**

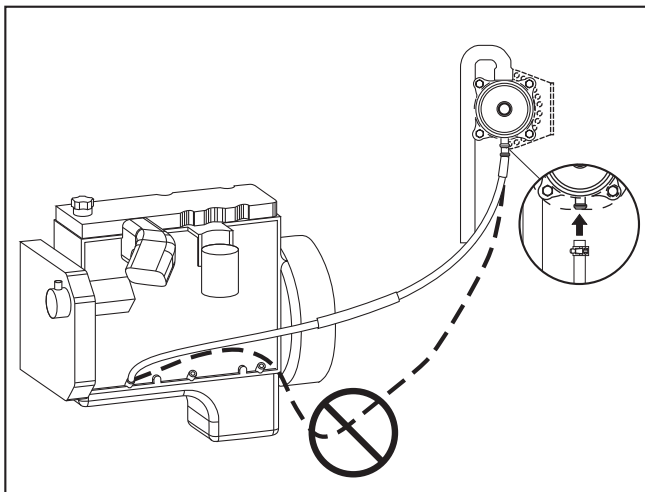


Figure 6 – Routing the Drain Hose

Installing the Vent Extension to the Breather Assembly

10. Ensure the vent extension is directed downward.
11. **(Optional)** - If a longer vent extension hose is needed, attach a 0.75" (19 mm) ID hose (not included in the kit) to the vent extension using the plastic connector provided. If an extension is added, stabilize by attaching a tie wrap or clamp from the hose to a secure point in the engine compartment.

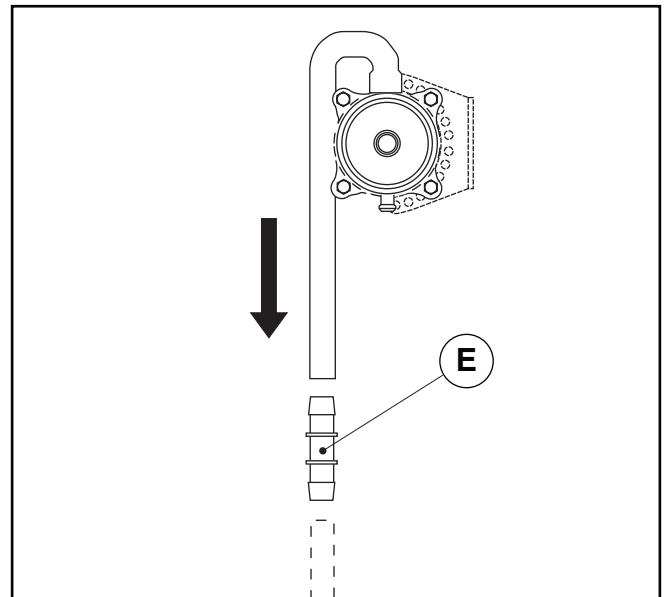


Figure 7 – Installing the Vent Extension

Installing the Breather Inlet Hose Assembly

12. Remove the existing 0.75" (19 mm) ID hose from the engine breather vent on the front of the engine.

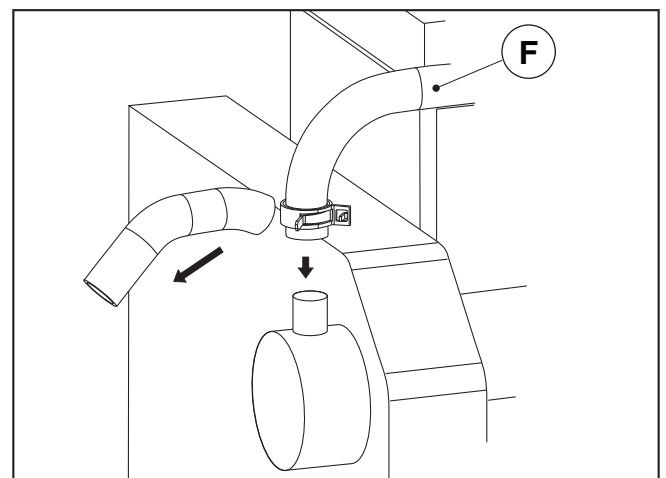


Figure 8 – Installing the Breather Inlet Hose Assembly

- Secure the 1" (25 mm) ID inlet hose end to the breather assembly using the clamp provided.

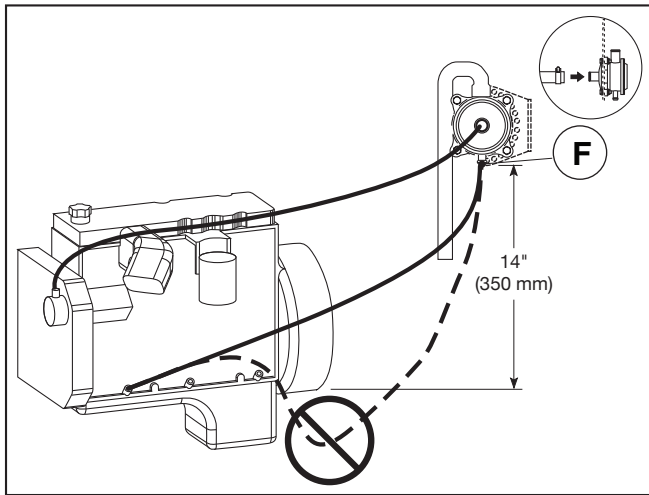


Figure 9 – Routing the Inlet Hose

- Route the new inlet hose assembly to the existing breather vent. Trim the 0.75" (19 mm) ID hose end to proper length and secure with clamp.

⚠ CAUTION: Ensure the hose routing is a minimum of 4" (100 mm) from both the exhaust manifold and exhaust piping. Avoid trimming too short to prevent hose kink after installation.

System Maintenance

Cummins Filtration® recommends that the crankcase ventilation hardware be inspected at least once every year or 1500 hours, whichever occurs first. The crankcase ventilation filter requires no regular service, but should be checked for loose connections or leaks. Cummins Filtration recommends that the blowby flow rate and crankcase pressure be verified annually. Maximum flow for the crankcase ventilation filter is 6.5 ft³/min (184 L/min).

Ordering Information

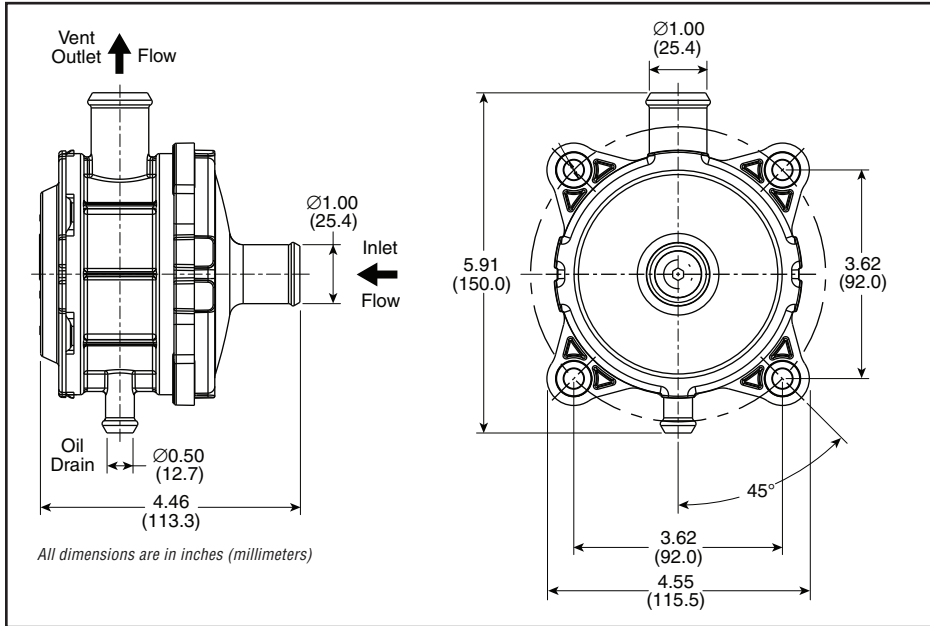
Part Number	Description
CV50117	ISB 5.9 L Kit
Q157449	Mounting Bracket

Specifications

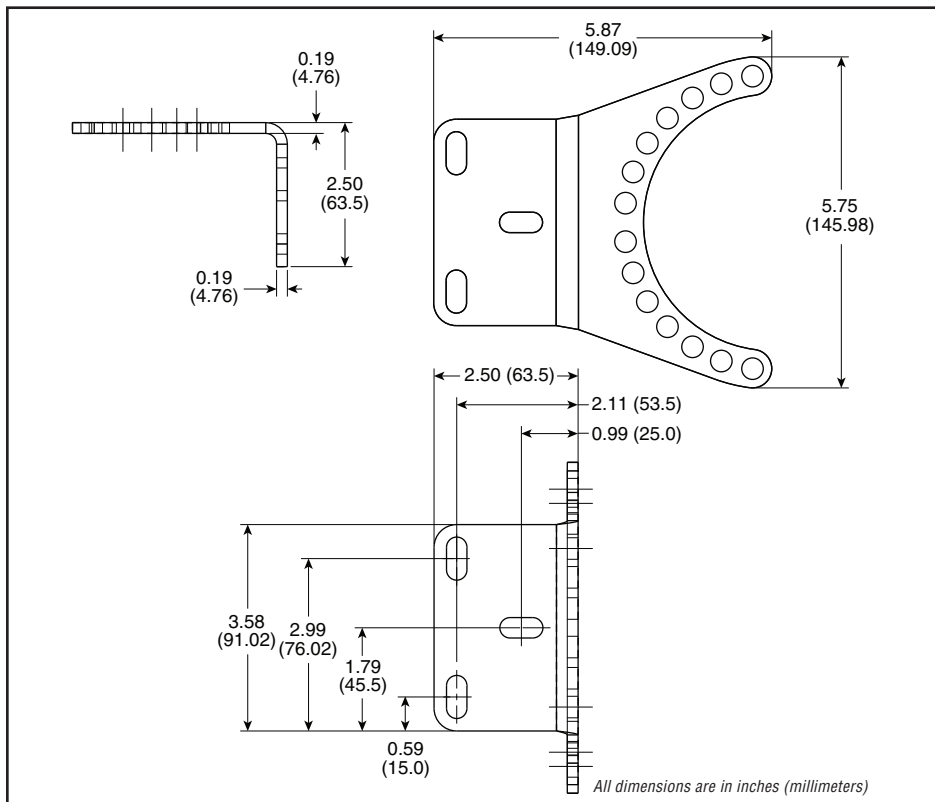
Part Number	Minimum Flow	Maximum Flow	Maximum Restriction	Kit Weight (Dry)
CV50117	3.3 ft ³ /min (93 L/min)	6.5 ft ³ /min (184 L/min)	10.5 inH ₂ O (267 mmH ₂ O)	9.9 lbs (4.5 kg)

Dimensions

Breather Assembly



Mounting Bracket





Filtration

**For more information, visit
cumminsfiltration.com**

LT36283
©2012 Cummins Filtration Inc.
Printed in the U.S.A.