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.

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.

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).

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.
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.

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.

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.

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

**Figure 9 – Routing the Inlet Hose**

14. 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.

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**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).

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**Ordering Information**

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<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>CV50117</td>
<td>ISB 5.9 L Kit</td>
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<tr>
<td>Q157449</td>
<td>Mounting Bracket</td>
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**Specifications**

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<tr>
<th>Part Number</th>
<th>Minimum Flow</th>
<th>Maximum Flow</th>
<th>Maximum Restriction</th>
<th>Kit Weight (Dry)</th>
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<tbody>
<tr>
<td>CV50117</td>
<td>3.3 ft³/min (93 L/min)</td>
<td>6.5 ft³/min (184 L/min)</td>
<td>10.5 inH₂O (267 mmH₂O)</td>
<td>9.9 lbs (4.5 kg)</td>
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</tbody>
</table>
Dimensions

Breather Assembly

Mounting Bracket

All dimensions are in inches (millimeters)