## Racor

# Air Filtration Products

#### Introduction

Racor CCV heater kits are an optional accessory for engine applications operating in severe cold weather. Emulsion and/or ice deposits on the element and inside the canister develop when the air blast from the radiator cools the CCV assembly. The emulsions are created by water vapors condensing and combining with oil droplets in the cold air stream of the CCV system. This build-up can prematurely choke the filter. The heater band and insulating sleeve are placed over the CCV canister and insulate the assembly to prevent the emulsion build-up.

#### In Depth

**Closed Crankcase Ventilation** (CCV) Systems are used to prevent emissions from contaminating internal surfaces of the engine air induction system and prevent engine room environments from being coated with oily Both functions residue. maintain engine performance and improve the operating environment over the life of the In cold weather engine. applications, the gases and vapors processed by the CCV system are affected by ambient conditions. The freezing air that has passes through the enaine compartment, for cooling purposes, force the

canister to function as a heat sink for the crankcase gases. The canister is cooled to ambient temperature and oil mist and water vapor particles traveling through the CCV system will then coalesce against the cold interior surfaces of the CCV canister. introduces This process microscopic particles of oil and water to each other. When they mix, an emulsification of the two liquids occurs. This emulturns the sification two particles into a creamy jelly-like substance. The mixture slowly builds up as cold air continually cools the canister and the process repeats itself. The emulsified oil-water mixture collect to a point where element life is compromised and crankcase pressure will rise.

These heater kits prevent this build-up and ensure element life by warming the canister surfaces. The temperature of the canister is raised near to that of the crankcase gases entering the CCV assembly. If the canister surfaces are as warm as the crankcase gases, then the oil and water mixture will not coalesce on the interior walls. Since no oil or water coalesces, no emulsification occurs.



**CCV Assembly** 



**Heater Band** 



**Insulating Sleeve** 

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#### How To Order

CCV Assembly Number	Heater Kit Number
CCV4500	CCV55461
CCV6000	CCV55462
CCV8000	CCV55463

Kits include heater band and insulating sleeve only. CCV assembly sold separately.



#### Installation Instructions

- 1. Clean exterior of CCV canister thoroughly. Adhesive is used to bond insulating sleeve to canister. Oily film present on canister surfaces will affect adhesion.
- 2. Wrap heater band around CCV assembly and secure Velcro closure to fasten to canister. Align plug with center of CCV product label as shown above.
- 3. Slide insulation sleeve over heater band. Secure sleeve to CCV assembly with adhesive strips located along top of sleeve.
- 4. Plug power cord into 120 volt AC outlet with 15 amp circuit.
- 5. Allow enough slack in power cord for element removal (servicing). When routing power cord, avoid rubbing areas and hot surfaces.

**Note:** These heaters are thermostatically controlled and will turn ON if the canister falls below 156°F (69°C) and will turn OFF when the canister reaches 174°F (79°C). It will take approximately 4 minutes for the heater to warm the CCV canister to maximum temperature.

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