

CCV Heaters Kits

Instruction Part Number 12994 Rev B



CCV heater kits are an optional accessory for engine applications operating in severe cold weather. Emulsion and/or ice deposits on the filter 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 emulsion build-up.



Contact Information Features/Benefits

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- Prevents emulsion and/or ice build-up of water vapors
- Protects the CCV unit in severe cold weather
- Available for AC or DC power supplies



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How It Works

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 residue. Both functions maintain engine performance and improve operating environment over the life of the engine. In cold weather applications, gases and vapors processed by the CCV system are affected by ambient conditions. 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. This process introduces microscopic particles of oil and water to each other. When they mix, an emulsification of the two liquids occurs. This emulsification turns the 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 collects to a

point where element life is compromised and crankcase pressure will rise. These heater kits prevent this build-up and ensure filter 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.

Installation Guidelines

CCV3500 Only

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.
3. Slide bottom piece of insulation sleeve over heater band. Sleeve opening should slide around bracket. Secure sleeve to CCV assembly with adhesive strips located along bottom of sleeve.
4. Slide top piece of insulation sleeve over outside top of bottom insulation sleeve. Sleeve opening should align with CCV outlet. Secure Velcro closure to fasten sleeve together.

5. For AC models—Connect power cord to appropriate power source with 15 amp circuit.
6. For DC models—Use wiring diagram on next page for proper installation.
7. Allow enough slack in power cord for element removal (servicing). When routing power cord, avoid rubbing areas and hot surfaces.

CCV4500, 6000, 8000, 12000

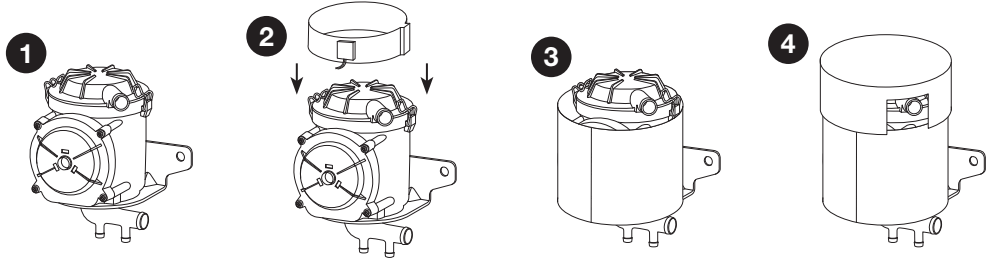
1. Clean exterior of CCV canister thoroughly. Adhesive is used to bond insulating sleeve to canister. Oily film present on canister surfaces will affect adhesion.
2. Wrap heater band around CCV assembly and secure Velcro closure to fasten to canister. Align plug with center of CCV product label.

3. Slide insulation sleeve over heater band. Secure sleeve to CCV assembly with adhesive strips located along top of sleeve.
4. For AC models—Connect power cord to appropriate power source with 15 amp circuit.
5. For DC models—See Wiring Diagram on next page for proper installation.
6. Allow enough slack in power cord for element removal (servicing). When routing power cord, avoid rubbing areas and hot surfaces.

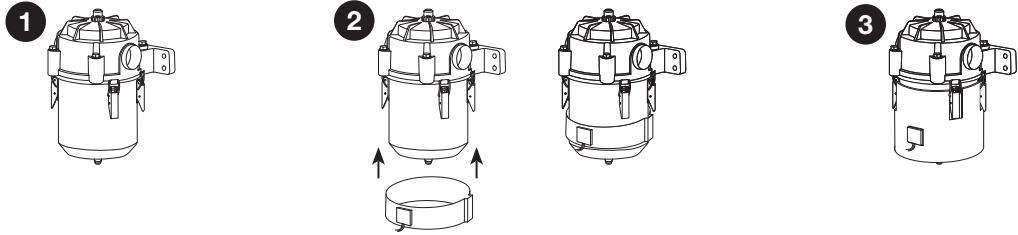
Note—These heaters are thermostatically controlled and will turn ON when the canister falls below 156°F (69°C) and will turn OFF when the canister reaches 174°F (79°C). It will take approximately 4 minutes for heater to warm CCV canister to maximum temperature.

Installation Diagram

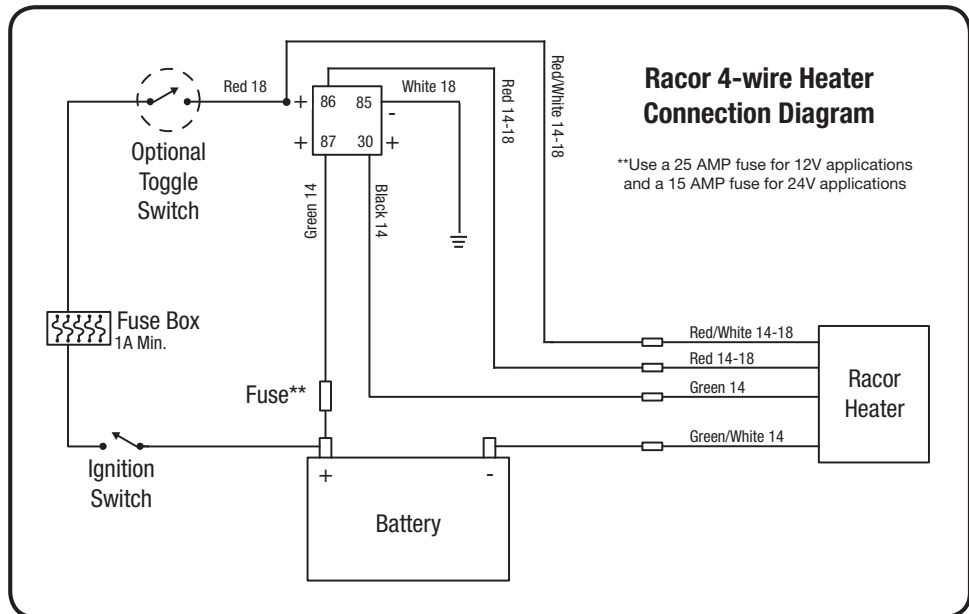
CCV3500



CCV4500
CCV6000
CCV8000
CCV12000



Wiring Diagram



Replacement Kits

CCV Assembly	120V AC Heater Kit	12V DC Heater Kit	24V DC Heater Kit	Wattage
CCV3500	CCV55644	CCV55644-12	CCV55644-24	150
CCV4500	CCV55461	CCV55461-12	CCV55461-24	100
CCV6000	CCV55462	CCV55462-12	CCV55462-24	150
CCV8000	CCV55463	CCV55463-12	CCV55463-24	200
CCV12000	CCV55642	CCV55642-12	CCV55642-24	200

Note—Kits include heater band and insulation sleeve only. CCV assembly sold separately.

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