

540 Radiator Coolant Service OPERATION MANUAL



The RCS Coolant Machine completely removes contaminated engine coolant while simultaneously refilling the cooling system with new coolant. Keeping the cooling system full at all times eliminates air locks from occurring. RCS gives you the ability to hook up to the cooling system while it is cool and not under pressure - alleviating working with hot pressurized coolant. Flushing chemicals can be used to maximize the cleaning of the cooling system. This proven thermal barrier process makes a cooling system flush & exchange, the most effective, time-saving response to cooling system service requirements.

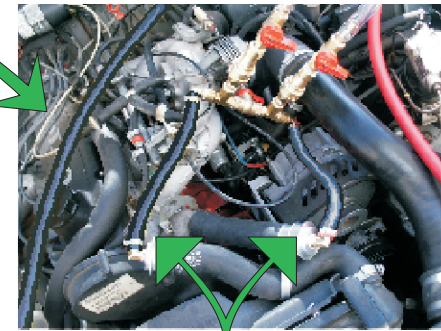
Always wear protective devices for eyes and hands when operating the RCS Machine. Always set PARKING BRAKE and install fender covers when working on a vehicle.

- ⌚ Open the radiator/expansion tank cap
(**CAUTION:** Fluid may be hot & cap under pressure)
- ⌚ Connect shop air to RCS, turn the left valve on top of the machine to exchange and check the pressure (15-17 psi)
- ⌚ If adjustment is needed set regulator by pulling out on knob and turn it either clock wise to increase or counter clockwise to decrease the pressure, then push in the knob to lock.
- ⌚ Be sure proper amount of **premixed** coolant is in the new coolant tank plus 2LT (or 2 Qt) extra (**be sure the cap is tight on the new coolant tank**)
- ⌚ Check the fluid level on the used tank to insure there is enough room for the used coolant you will be extracting from the vehicle..
- ⌚ **IMPORTANT! Empty the used fluid tank after every service.**
- ⌚ Use the evacuator hoses (attach it to the black drain hose, turn both diverter valves to "ON" "DRAIN VEHICLE TANK" position, the other valve to "OFF") to clean out the overflow tank & evacuate out approx. 2 liters (2 quarts) of coolant from the system. (See picture to the right)

Step 1 - Connection of loop Hose

LONG BLACK HOSE

LONG RED HOSE



Loop Hoses

**CAUTION:
CONNECTORS
WILL BE
HOT!**

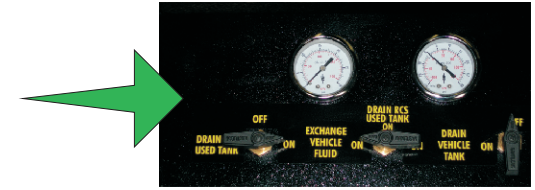
- ⌚ Remove the top radiator hose at either the engine block or at the radiator whichever is the most accessible. **If desired pour a radiator flush chemical into the radiator hose or into the radiator.**
- ⌚ Connect one end of the adapter loop hose to the radiator, the other toward thermostat. Attach the long red hose to the loop hose towards the **thermostat** and the long black hose towards the **radiator**. (See picture above.)
- ⌚ **Always replace the OE spring style hose clamps with the banded radiator hose clamps provided with the adapter kit. If the banded hose clamps are missing, obtain new banded clamps and use them to attach the adapters to the radiator and hose.**
- ⌚ **IMPORTANT** - Top up with appropriate fluid.
- ⌚ **NOTE:** On reverse flow systems connect the opposite direction (long red hose towards radiator)



Technical Support line Toll free 1- 888- 467- 4142

EXCHANGE OF THE COOLANT FLUID

- ⌚ Open loop hose valve only, and close valves on the long red and black hoses.
- ⌚ Start vehicle - check fluid level in radiator after a few minutes of run time. Top up if required.
- ⌚ If using a cleaner, run vehicle for suggested length of time for cleaning.
- ⌚ Turn off vehicle
- ⌚ Close loop hose valve
- ⌚ Turn both diverter valves "ON" "EXCHANGE VEHICLE FLUID" position (see picture to right)
- ⌚ At desired pressure (15-17 psi) open ball valves on black and red hoses
- ⌚ When desired amount has been exchanged, close ball valve on red hose first then on black hose. Evacuate out approximately 2 LT (2 Qt) of coolant from radiator so that the level is below the top radiator hose



TO DISCONNECT LOOP HOSE

- ⌚ Disconnect the red fill hose & black drain hoses
- ⌚ Disconnect the adapter loop hose
- ⌚ If desired, pour a conditioner into the radiator or top radiator hose
- ⌚ Reconnect top radiator hose to radiator and make sure clamps are tight
- ⌚ Top up radiator and overflow tank using evacuator hose attached to the red fill hose
- ⌚ Start vehicle, check coolant level and check for possible leaks

After service you **MUST** test drive vehicle and **THEN** check fluid levels once again.

TO DRAIN USED COOLANT TANK

- ⌚ Connect clear evacuator hose to long Black drain hose. Connect shop air to machine.
- ⌚ Position both diverter valves to "DRAIN RCS USED TANK" (see picture to right)
- ⌚ Place the clear hose into a waste tank open ball valve on black hose, the air pressure will force used coolant out of the used coolant tank, when finished turn both diverter valves to exchange position



TROUBLESHOOTING

No pressure: Set regulator 15-17 psi, tighten filler cap

No vacuum: Clean external muffler or debris in the air line

Optional Procedure: USE OF CONE ADAPTER

CAUTION: FLUID MAY BE HOT AND CAP UNDER PRESSURE

Then engine is turned on and running at normal operating temperature when using this system. **IMPORTANT!** Remove the filler cap on the coolant machine.

- 1) Connect the Red and Black hoses to the cone adapter (with valves in the closed position)
- 2) If required attach the clear hose provided into the end of the rubber cone.
- 3) Turn left valve to OFF position and the middle and the right valves to "DRAIN VEHICLE TANK"
 - Remove radiator or overflow tank cap and place the rubber cone tightly in the hole, then open the valve on the BLACK hose
- 4) When a sufficient amount of fluid has come out, close the valve and open the valve on the RED hose
- 5) If required, top fluid by closing filler cap on coolant machine and turn the left and the middle valves to exchange.

Valve Quick Reference Guide

1. USED FLUID SUCTION
2. EXCHANGE FLUID MODE
3. EVAC PRIOR TO DISCONNECTION FROM VEHICLE
4. EMPTY USED FLUID TANK