

OPERATION
&
MAINTENANCE
MANUAL

CSC Series

Coolant Service Center

Manual P/N 035-80318-00

Introduction

The CSC10R is a time saving member of RTI's family of coolant handling equipment. This portable unit safely drains and refills automotive engine cooling systems in a portion of the time it takes for conventional methods. When properly operated, this unit induces no air or pressure into the engine's cooling system. No hose cutting or tee is required - gravity and the engine's own water pump perform the service.

The filtration-type Recycling Center incorporated into the rear of the unit takes this process one step further. A special formulated advanced inhibitor package is added to the filtered coolant for adjustment of the pH and to replenish depleted inhibitors, buffers, anti-foaming agents, and dyes. Once mixed, the properly recycled coolant meets or exceeds ASTM standards.

YOUR RESPONSIBILITY

The user of a CSC10R is solely responsible for all environmental and safety concerns, or laws pertaining to the use and disposal of antifreeze/coolant handled or produced by this equipment.

Do your part for the environment. Recover, recycle when possible, and dispose of wastes in a proper manner.

Waste coolant must be evaluated prior to recycling... DO NOT process if waste coolant contains non-antifreeze contaminants such as OIL, GASOLINE, SOLVENTS, etc.

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Safety Precautions

WARNING:

FAILURE TO FOLLOW THESE PRECAUTIONS CAN RESULT IN SERIOUS INJURY OR DEATH.

- Read and understand the operation manual completely before operating this unit.
- Always wear proper eye and skin protection when operating and maintaining this equipment.
- Hazardous voltages present. Use only with a grounded electrical outlet and grounded extension cords. Do not remove the ground prong from the plug.
- Take precautions to keep clothing, hair, hands, hoses, etc. Away from all moving parts on the vehicle.
- Automotive cooling systems can be under pressure and extremely hot. Allow the cooling system to cool down and use extreme caution when removing caps and hoses.
- Antifreeze/coolants and inhibitors are poisonous to people and animals and are also corrosive. Clean up any spills immediately.
- Before using the RTI Automotive Reinhibitor for CSC10R, read all warnings and precautions on the bottle's label.

CAUTION:

FAILURE TO FOLLOW THE PRECAUTIONS AS OUTLINED IN THE OPERATION MANUAL CAN RESULTS IN DAMAGE TO THE ENGINE, VEHICLE OR EQUIPMENT WHICH WILL NOT BE SUPPORTED OR COVERED UNDER WARRANTY.

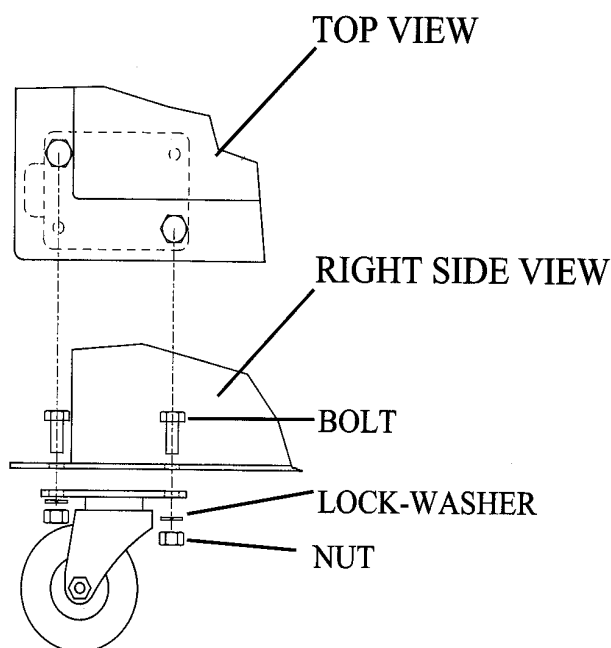
- Do not allow waste coolant drum to overflow. Immediately clean up any coolant or reinhibitor spills. Damage to the vehicle and equipment can result from the corrosiveness of coolant and reinhibitors.
- Continuous monitoring of the Quick Change process is required. Leaving the vehicle unattended while operating this equipment can result in damage to the engine, vehicle, and/or equipment.
- The dirty waste coolant **MUST** meet specific requirements in order to produce an acceptable recycled coolant product. the use of processed waste coolant that does not meet the requirements can result in damage to the equipment or the vehicle's engine.

Assembly

INSTALLATION OF SWIVEL CASTERS

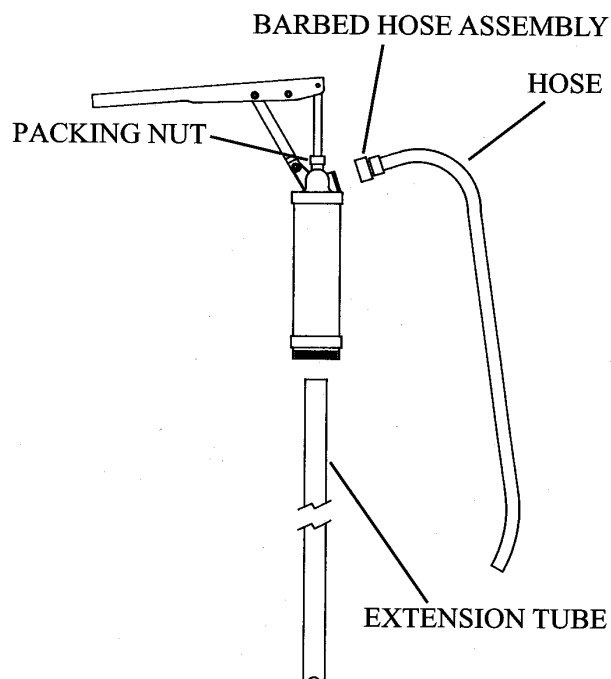
Locate the 4 swivel casters and bag of hardware that were shipped in the Fill Bucket on top of the unit. Verify that the hardware bag contains 8 bolts, 8 lock-washers, and 8 nuts.

Have a helper tilt the unit on its bottom edge to install each caster. Insert the bolt from the top, secure the washer and nut on the bottom. Tighten with a 1/2" wrench or socket.



HAND PUMP ASSEMBLY

1. Remove pump from box.
2. Screw barbed hose assembly onto the pump outlet. Attach the section of hose to the barb and tighten clamp.
3. Screw the extension tube to the bottom of the pump and fully extend the tube.
4. Securely tighten packing nut at the top of the pump to prevent leakage.
5. Screw pump into large opening on supplied 15 gallon Clean Coolant Drum.



Sequence of Operation

The CSC10R is a device designed to perform quick and simple engine coolant changes on automobiles and light trucks. When properly operated, this Quick Change can be accomplished in as little as ten minutes. The following is the normal sequence of operation for the CSC10R. Refer to the "Performing A Quick Change" and "Using The Recycling Center" section of this manual for complete instructions before operating your unit.

PREPARE FOR THE QUICK CHANGE - A

vehicle is pulled into the service area and the CSC10R is positioned. An appropriate amount of new recycled coolant is mixed in the CSC10R Fill Bucket.

USE THE EVACUATION PUMP - Waste coolant is removed from the vehicle's radiator and overflow bottle using the CSC10R Suction Hose.

ATTACH THE CSC10R - The GREEN Fill Hose and BLACK Drain hose are attached to the vehicle's cooling system through a removed upper radiator hose. No hose cutting or tees are required.

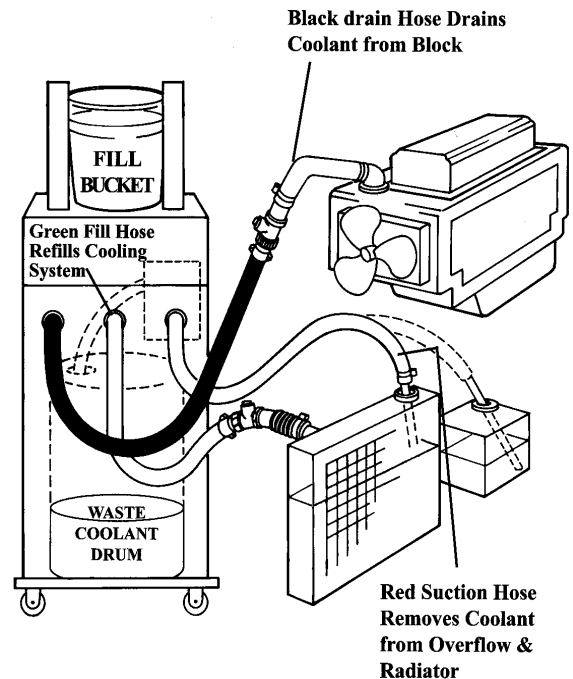
PERFORM THE QUICK CHANGE - While the Drain Valve on the BLACK Drain Hose is closed, the Fill Valve on the GREEN Fill Hose is opened and the vehicle's engine started. The Drain Valve is opened, and the level in the Fill Bucket will drop as the new coolant displaces the waste coolant. the waste coolant drains through the BLACK Drain Hose and into the Waste Coolant Drum in the rear of the unit. When only two quarts of new coolant remain in the CSC10R Fill Bucket, the Fill and Drain Valves are closed, and the vehicle's engine is turned off.

DISCONNECT THE CSC10R - The CSC10R is removed from the vehicle and the vehicles' radiator hose is re-attached.

TOP OFF - The radiator and overflow bottle are filled to the proper levels using the GREEN Fill Hose. The engine is started to check for leaks.

RECYCLE - Once the CSC10R Waste Coolant Drum contains twelve to fifteen gallons of waste coolant, it is time to recycle. The valve on the YELLOW Hose is opened and inserted into the Clean Coolant Drum. The Process Switch is turned on, and in less than ten minutes, the filtering process is complete.

REINHIBIT - After the filtering cycle is complete, the recycled coolant is mixed with water or antifreeze to obtain the desired freeze/boil protection. RTI's Automotive Reinhibitor for CSC10R is added to adjust the pH and to replenish depleted corrosion inhibitors, buffers, anti-foaming agents, and dyes. This process produces a quality recycled coolant that meets or exceeds ASTM standards.



Performing A Quick Change

Following these guidelines will allow a Quick Change on most vehicles. Due to the variety of automobile and light truck coolant system designs, slight variations of this procedure may be necessary.

PREPARE FOR OPERATION

1. Pull the vehicle into the service area. Set the vehicle's heater controls to the highest temperature setting and turn off the heater fan.
2. SHUT OFF THE VEHICLE'S ENGINE and raise the hood.
3. Verify that the Fill Valve on the GREEN Fill Hose and the Drain Valve on the BLACK Drain Hose of the CSC10R are both in the CLOSED position.

WARNING

Wear proper eye and skin protection such as safety glasses and gloves.

4. Determine the total cooling system capacity of the vehicle. Prepare a mixture of new or recycled antifreeze and water equal to the system capacity. Pour the mixture into the Fill Bucket. Place the lid on the Fill Bucket.

NOTE: Most engine manufacturers' recommend a mixture of 50% antifreeze and 50% water. Use distilled or demineralized water to prevent scale and mineral build-up.

5. Check the level in the Waste Coolant Drum in the rear of the CSC10R to verify that it is not too full to hold another coolant change.

CAUTION:

Do not allow the Waste Coolant Drum to overflow. Immediately clean up any spills. Damage to the vehicle and equipment can result from the corrosiveness of the coolant.

6. Wheel the CSC10R to the front of the vehicle and plug the electric cord into a 115 volt, 60 Hz grounded receptacle. Use a 16 gauge (minimum) grounded extension cord if necessary.

NOTE: The CSC10R relies on gravity to fill the vehicle's cooling system. The TOP of the vehicle's radiator must be LOWER than the BOTTOM of the Fill Bucket on the CSC10R for the coolant change to occur.

USE OF THE EVACUATION PUMP:

WARNING:

Automotive cooling systems can be under pressure and extremely hot. Allow the vehicle's cooling system to cool down and use extreme caution when removing caps and hoses. Consult the vehicle manufacturer for recommended procedure on removing the radiator cap.

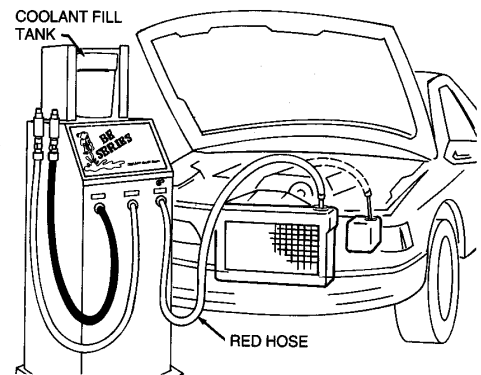
1. Squeeze the vehicle's upper radiator hose to determine the amount of pressure in the system. If the hose is hot and hard, allow the cooling system to cool down before proceeding.
2. Carefully remove the vehicle's radiator cap.
3. Insert the Plastic Wand on the RED Hose into the radiator. Turn the CSC10R Evacuation Pump (the switch is located on the front bevel of the unit) and remove the liquid from the radiator until the liquid level is below the UPPER radiator hose (approximately two quarts). Turn off the Evacuation Pump and replace the radiator cap.

CAUTION

Do not remove too much liquid from the radiator. Allowing air to enter the LOWER radiator hose can result in damage to the vehicle's engine.

CAUTION

Never allow the Evacuation Pump to operate without liquid. Running the pump dry will cause premature wear or damage to the pump and is not covered under warranty.



4. Locate the vehicle's coolant overflow bottle and remove its cap. Insert the Plastic Wand on the RED Suction Hose into the overflow bottle, turn on the Evacuation Pump, and remove as much liquid as possible. Turn off the pump and return the RED Suction Hose to its clip. Replace the cap on the overflow bottle.

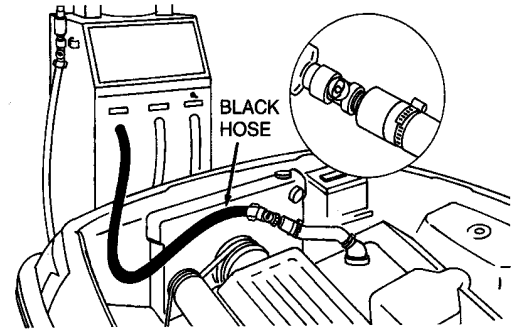
HINT: If the overflow bottle contains sludge, loosen it with water sprayed from a hose.

ATTACH THE CSC10R TO THE VEHICLE - CONVENTIONAL COOLING SYSTEMS:

1. Loosen the hose clamp that holds the UPPER radiator hose to the radiator. Use a nut-driver, screwdriver, or hose clamp pliers (depending on the type of clamp) to loosen the clamp.
2. Pull loose and remove the UPPER radiator hose from the vehicle's radiator. Be careful not to damage the radiator inlet or hose while removing.

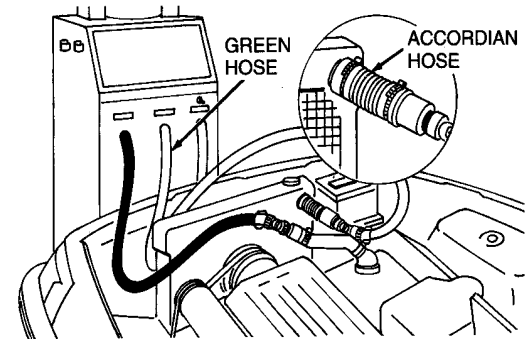
3. Attach the BLACK Drain Hose from the CSC10R to the removed, open end of the UPPER radiator hose by inserting its Step Adapter into the UPPER radiator hose. With a hose clamp, seal the UPPER radiator hose tightly to the "best fit" step on the Step Adapter.

HINT: In some cases, the size difference between the UPPER radiator hose and the Step Adapter may seem too large. It is OK to tighten down the hose clamp to seal up to a 1/4" gap. A "worm-gear" type clamp tightened with a nut driver works best.



4. Attach the "best fit" Flexible Hose Adapter to the radiator's inlet and secure it tightly using the supplied hose clamp. Be careful not to damage the radiator's inlet.

5. Attach the GREEN Fill Hose from the CSC10R by inserting its Step Adapter into the open end of the Flexible Hose Adapter. With a hose clamp, seal the Flexible Hose Adapter tightly to the "best fit" step on the Step Adapter.



CAUTION

Check and ensure that all hoses, rags, tools, or other objects will be clear from moving parts of the vehicle.

ATTACH THE CSC10R TO THE VEHICLE - SPECIAL COOLING SYSTEMS:

HINT: Some vehicles with non-conventional cooling systems require a different procedure for attaching the CSC10R. Some examples are:

- ◆ Mid or rear engine vehicles with the radiator in the front of the vehicle
- ◆ Radiators that do not allow access to the upper radiator hose.
- ◆ Pressurized overflow systems where the overflow bottle is capped, not the radiator.

1. Loosen the hose clamp that holds the UPPER radiator hose to the thermostat housing on the engine. Use a nut-driver, screwdriver, or hose clamp pliers (depending on the type of clamp) to loosen the clamp.
2. Pull loose and remove the UPPER radiator hose from the vehicle's thermostat housing inlet. There may be liquid in the hose - place a supply of rags under the hose to catch any spilled coolant. Be careful not to damage the radiator hose while removing.
3. Attach the GREEN Fill Hose from the CSC10R to the removed, open end of the UPPER radiator hose by inserting its Step Adapter into the UPPER radiator hose. With a hose clamp, seal the UPPER radiator hose tightly to the "best fit" step on the Step Adapter.

HINT: In some cases, the size difference between the UPPER radiator hose and the Step Adapter may seem too large. It is OK to tighten down the hose clamp to seal up to a 1/4" gap. A "worm-gear" type clamp tightened with a nut driver works best.

4. Attach the "best fit" Flexible Hose Adapter to the thermostat housing's inlet and secure it tightly using the supplied hose clamp.
5. Attach the BLACK Drain Hose from the CSC10R by inserting its Step Adapter into the open end of the Flexible Hose Adapter. With a hose clamp, seal the Flexible Hose Adapter tightly to the "best fit" step on the Step Adapter.

CAUTION

Check and ensure that all hoses, rags, tools, or other objects will be clear from moving parts of the vehicle.

PERFORMING THE QUICK CHANGE:

WARNING

Keep clothing, hair, hands, etc. away from all moving parts of the vehicle.

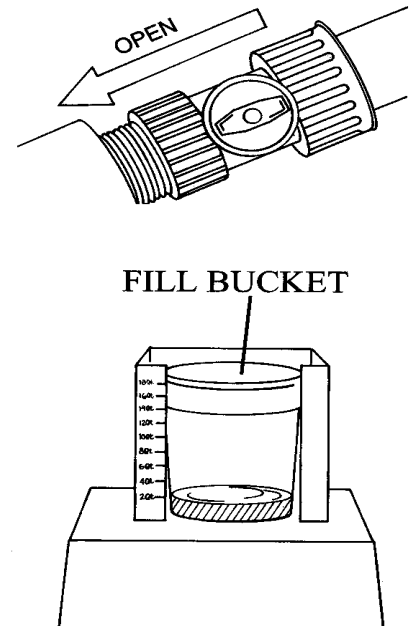
CAUTION

Continuous monitoring of the Quick Change process is required. Leaving the vehicle unattended while operating this equipment can result in damage to the engine, vehicle and/or equipment.

1. OPEN the Fill Valve on the GREEN Fill Hose. The level in the Fill Bucket will begin to drop, then stop. Keep the Drain Valve on the Black Drain Hose closed at this time.
2. Start the engine of the vehicle.
3. OPEN the Drain valve on the Black Drain Hose. Watch the level in the Fill Bucket. If the level does not drop, or stops dropping, CLOSE the Drain Valve. After approximately 30 to 60 seconds, RE-OPEN the Drain Valve. Repeat this procedure until two quarts remain in the Fill Bucket.

NOTE: Opening and closing the Drain Valve as described will protect vehicles with the thermostat located ahead of the water pump ("reverse flow" cooling systems). This procedure prevents the old coolant from being pumped out of the engine block prematurely when the new coolant is restricted by a closed thermostat.

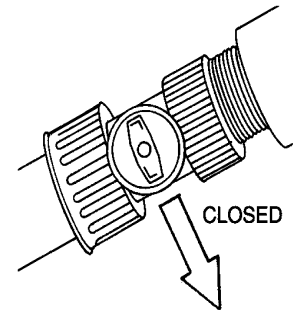
HINT: The coolant change can occur only if the vehicle's thermostat is open. To help get the vehicle up to normal operating temperature, it may be necessary to raise the rpm's of the engine to warm it up before the level in the Fill Bucket will continue to drop.



4. CLOSE the Fill Valve on the Green Hose.
5. Allow the engine to run for 10 seconds after closing the Fill Valve, then TURN THE ENGINE OFF. This lowers the coolant level in the radiator to help prevent coolant from spilling when re-attaching the UPPER radiator hose.

CAUTION:

Failure to turn vehicles engine off ten seconds after closing Fill Valve can result in damage to the vehicle.

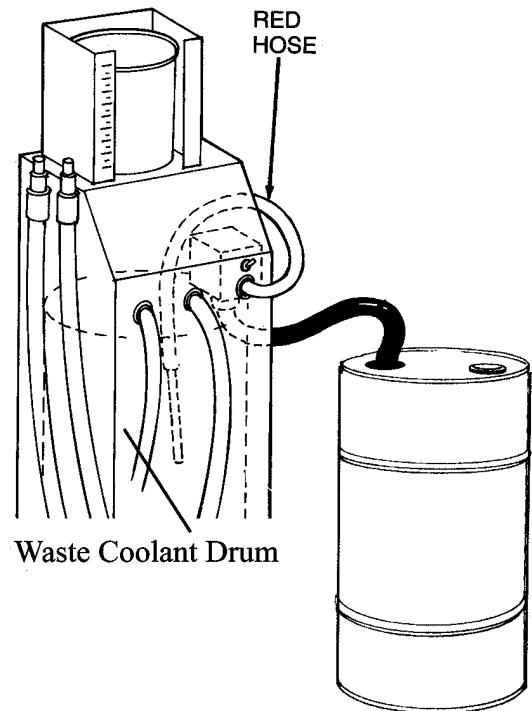


6. CLOSE the Drain Valve on the BLACK Drain Hose.
7. Remove the CSC10R from the vehicle. reconnect the UPPER radiator hose to the radiator (or the thermostat housing for "special" cooling systems) and clamp securely.
8. Remove the vehicle's radiator cap and top off the radiator using the remaining coolant in the Fill Bucket. While holding the GREEN Frill Hose over the radiator's opening, SLOWLY open the Fill Valve to allow the top off coolant to flow. Also, open the vehicle's coolant overflow bottle and fill to the proper level. return both caps and secure.
9. Start engine of the vehicle and check for leaks.

DRAINING THE WASTE COOLANT DRUM:

It may be necessary to occasionally drain the Waste Coolant Drum without recycling (e.g., waste coolant does not meet minimum standards for recycling).

1. Remove the BLACK hose from the large opening of the Waste Coolant Drum (located in the back of the machine) and place it into a receiving container.
2. Insert the wand from the RED hose into the large opening on the Waste Coolant Drum until it reaches the bottom.
3. Turn ON the Evacuation Pump (located on the front bevel of the unit).
4. Allow the pump to run until all liquid is removed from the Waste Coolant Drum.
5. Turn OFF the Evacuation Pump and return BLACK and RED hoses to their original positions.



CAUTION

Never allow the pump to operate without liquid. Running the pump dry will cause premature wear or damage to the pump and is not covered under warranty.

Using The Recycling Center (Optional)

The Coolant Recycling Center is located on the back of the CSC10R. Recycle when the Waste Coolant Drum contains between 12 and 15 gallons. Do not allow drum to overflow.

CAUTION:

Waste coolant **MUST** be evaluated prior to recycling. Improperly recycled coolant which does not meet standards can result in damage to the equipment or the vehicle's engine and is not supported under warranty.

CAUTION:

Do not recycle hot coolant. the waste coolant must be below 120°F. Recycling hot waste coolant can result in equipment damage.

EVALUATING WASTE COOLANT FOR RECYCLING:

1. Check the large opening on the Waste Coolant Drum for oil floating on the surface of the waste coolant. Remove any oil present previous to recycling and dispose of properly.
2. Open the valve on the Yellow Hose and place it into the large opening on the Waste Coolant Drum.
3. Press the Process Switch to ON position. Allow pump to run for approximately 20 seconds then switch to OFF position. This step clears the filter of liquid from the previous batch.
4. Remove nozzle from drum and pump approximately 20 ounces into the triangular measuring cup. Observe for excessive foaming (bubbles which do not readily break or standing foam).
5. Check sample for appearance/odor, freeze point and pH.

THE FOLLOWING STANDARDS MUST BE MET TO PRODUCE AN ACCEPTABLE RECYCLED COOLANT:

- ✓ **APPEARANCE / ODOR** of the waste coolant must have the distinct and characteristic appearance and odor of antifreeze/coolant.

DO NOT process if the waste coolant contains any non-antifreeze contaminants such as oil, gasoline, solvents, etc.

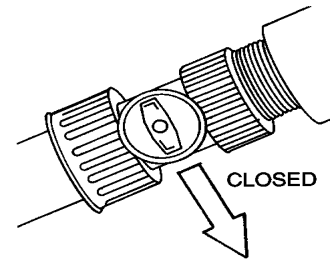
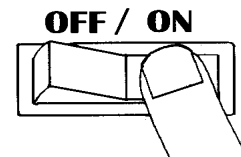
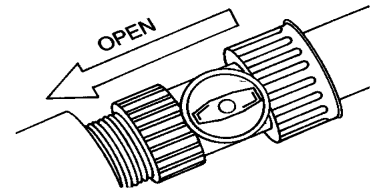
DO NOT process if waste coolant appears milky or is excessively foamy.

- ✓ **FREEZE POINT** of waste coolant must be at least -5°F or lower. Coolants with freeze points from -4° to +32°F do not contain sufficient ethylene glycol.
- ✓ **pH** of waste coolant must be at least 8. Use supplied pH test strips.

WASTE COOLANT WHICH DOES NOT MEET THE ABOVE STANDARDS SHOULD NOT BE RECYCLED and should be disposed of according to local, state and federal regulations.

START THE RECYCLING PROCESS:

1. Plug the electric cord into a 115 volt, 60 Hz, grounded receptacle. Use a 16 gauge (minimum) grounded extension cord if necessary.
2. Open the Valve on the CSC10R YELLOW Hose and insert the hose into the small opening of the Clean Coolant Drum (extra 15 gallon drum supplied with the unit).
3. Press the Process Switch to the ON position at the Recycling Center (rear of unit) to start the Recycling Pump.
4. When the CSC10R Waste Coolant Drum is empty, push the Process Switch to the OFF position.
5. Remove the YELLOW Hose from the Clean Coolant Drum. Close the Valve and return the hose to its Hose Clip on the side of the CSC10R.



NOTE: If the filtering process takes more than 10 minutes or stops completely, the filters require changing. refer to the "Maintenance Schedule" section of this manual for complete instructions.

CAUTION:

Never allow the Filter Pump to operate without liquid. running the pump dry will cause premature wear or damage to the pump and is not covered under warranty.

The filtered coolant is now ready for reinhibiting. Add RTI's Automotive Reinhibitor For CSC10R according to the bottle's label or the "Adding The Inhibitor" section of this manual.

ADDING THE REINHIBITOR

Once the coolant has been processed through the Recycling Center, the final step is to reinhibit the coolant to adjust the pH and replenish depleted corrosion inhibitors, buffers, anti-foaming agents and dyes.

WARNING:

The reinhibitor package is poisonous and corrosive. Before using the RTI Automotive Reinhibitor for CSC10R, read all warnings and precautions on the bottle's label.

1. Using the supplied Hand Pump, pump a small amount of the processed coolant into the Measuring Cup and measure the freeze point using the Coolant Tester or a Refractometer.
2. Adjust the freeze point to obtain the desired freeze/boil protection. Most engine manufacturers recommend a freeze protection around -34°F. If the freeze point is between -40°F and -60°F, add water to raise the freeze point. Use distilled or demineralized water to prevent scale and mineral build-up. If the freeze point is between -30°F and -4°F, add straight antifreeze to lower the freeze point.

3. Add 4 fluid ounces of Automotive Reinhibitor For CSC10R for each gallon of processed coolant. Mix well, by placing hose from hand pump into small opening on drum and recirculating.
4. After adding the initial amount of reinhibitor, measure the pH of the processed coolant using the pH Dip Sticks (supplied) or a pH meter. The desired pH is between 9.2 and 10.6.
5. If the measured pH is below this range, add additional 1 fluid ounce of reinhibitor per gallon of processed coolant and mix well. Repeat this step until the pH is within the target range OR until a TOTAL of 8 fluid ounces of reinhibitor has been added for each gallon of processed coolant. Only add as much inhibitor as needed.

The recycled coolant is now ready for use!

Maintenance Schedule

EVERY USE:

CLEAN ANY SPILLS - Antifreeze/coolants and reinhibitor can be corrosive to the unit's painted finish. Thoroughly wipe, rinse and dry any spills immediately.

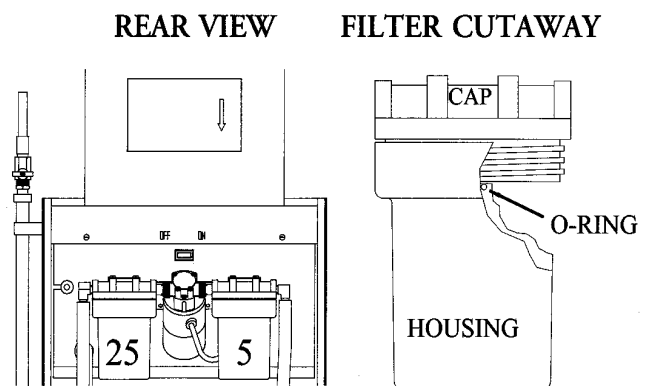
WEEKLY:

FLUSH EVACUATION PUMP - Fill a bucket with cool, clean water. Insert the Plastic Wand on the RED Suction Hose into the bucket. Turn ON the Evacuation Pump (located on the front bevel of the unit). Turn OFF the Evacuation Pump when the bucket is empty.

CHANGE AS REQUIRED:

REPLACE FILTERS - If the filtering process takes more than 10 minute or stops completely, the filters require changing.

1. Disconnect the power cord.
2. Unscrew the filter housing. Remove used cartridge and discard properly.
3. Rinse the filter housing with water and dry. Remove the O-ring from the housing and wipe groove and O-ring clean.
4. Lubricate the O-ring with a coating of clean petroleum jelly.
5. Place the O-ring back in place, pressing it down into the groove with two fingers.



NOTE: This step is important to ensure proper filter seal. Make sure the O-ring is sealed level in the groove in the housing.

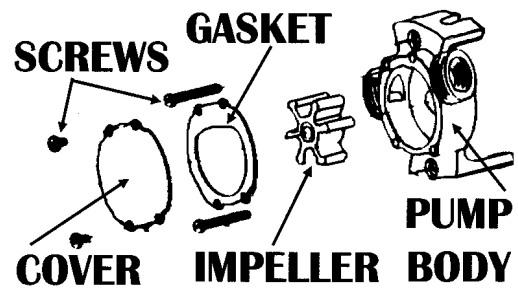
NOTE: If the O-ring appears damaged or crimped, replace it at this time.

6. Insert a new Filter Cartridge into the housing making sure that it slips down over the sump standpipe. Be certain that the 25 micron filter is installed in the left housing, and the 5 micron filter is installed in the right housing.
7. Screw housing onto the cap and hand tighten. **DO NOT OVER TIGHTEN.**

REPLACE PUMP IMPELLER - If loss of pump performance is noticed due to pump being run dry, wear or damage from foreign objects, replace impeller.

NOTE: Unit has two pumps. One is located at the rear of the unit, the other is located behind the panel of the Recycling Center.

1. Disconnect power.
2. Remove cover plate from the pump head (held in place with four Phillips Head screws).
3. Remove old impeller.
4. Lubricate the new impeller with petroleum jelly.
5. Push the impeller onto the motor shaft and at the same time twist in a clockwise direction. This will bend the blades in the direction for proper operation.



6. Replace the cover using a new gasket, tightening all screws evenly and snugly. Do not over tighten.

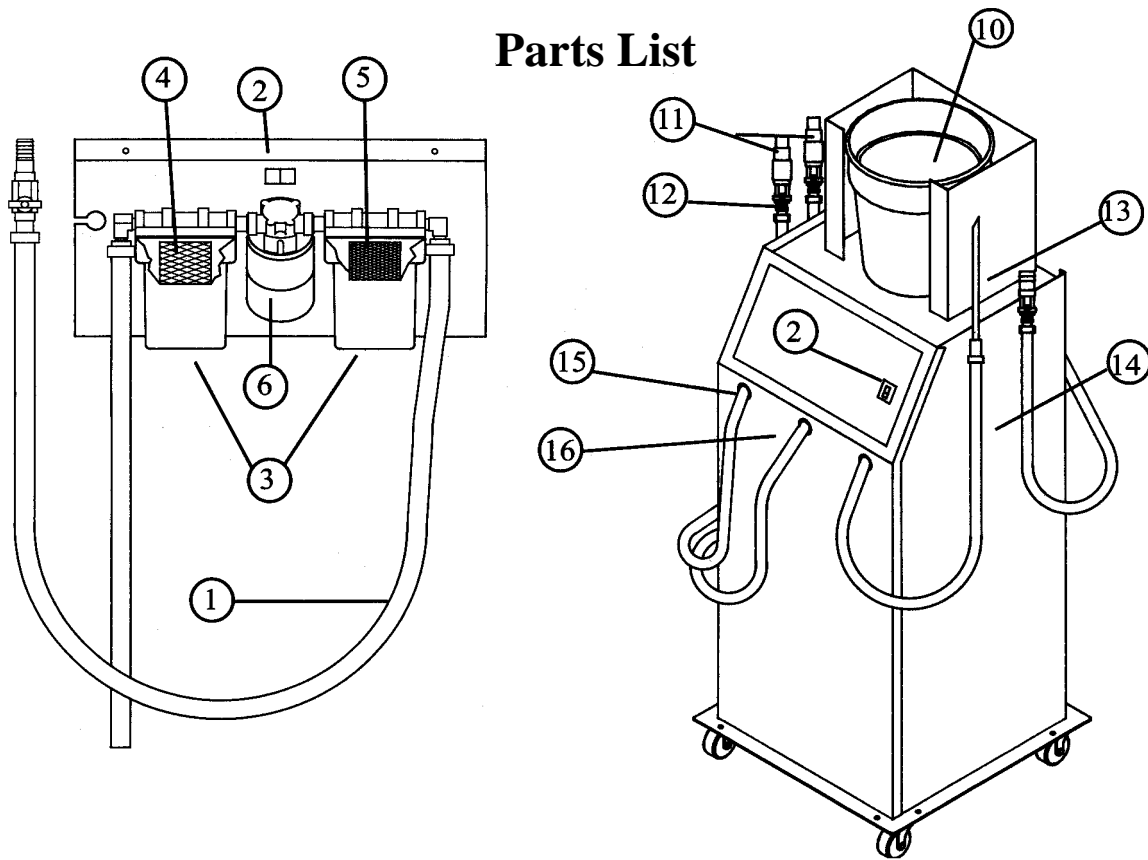
WARRANTY

When operated in strict accordance with these instructions, this unit is warranted for one (1) year from date of shipment against defects in material and workmanship to the original purchaser. A dated proof of purchase is required. All warranty claims are FOB factory, York, PA. Liability under this warranty is expressly limited to the repair or replacement (at RTI's option) of the products or parts thereof and is in lieu of any other warranties, either express or implied. This warranty does not apply to parts broken due to accident, misapplication, abuse, tampering, or alteration. If this warranty does not apply, the purchaser shall bear all costs for labor, material and transportation.

TECHNICAL SERVICE HOTLINE: 800-468-2321 (ext. 259)

Coolant Service Center/Recycler

Parts List



Item	Description	Part Number
1	Filter Outlet Hose Assembly	070-80008-00
2	On/Off Switch	070-80009-00
3	Filter Housing	070-80010-00
4 & 5	20 pc Filter Pack (10) 25 & (10) 5 Micron	070-80007-00
6	Filter Pump & Motor Assembly	070-80013-00
7*	pH Measuring Sticks	070-80012-00
8*	CSC10R Reinhibitor	070-80006-00
9*	Filter Housing Wrench	070-80014-00
10	Fill Bucket	070-80015-00
11	Step Adapter	070-80016-00
12	Ball Valve	070-80017-00
13	Plastic Wand	070-80018-00
14	RED Pump Hose	070-80019-00
15	BLACK Drain Hose	070-80020-00
16	GREEN Fill Hose	070-80021-00
18*	Pump Impeller Kit	070-80022-00
19*	Evacuation Pump & Motor Assembly	070-80013-00

* Items Not Shown on Drawing

FREEZE POINT ADJUSTMENT CHART

STEP 1 - CHECK FREEZE POINT OF PROCESSES COOLANT

STEP 2 - DETERMINE NUMBER OF GALLONS OF PROCESSED COOLANT IN CLEAN COOLANT DRUM. THE DRUM HAS GALLON MARKINGS ON THE SIDE.

STEP 3 - ADJUST FREEZE POINT TO -34°F BY ADDING REQUIRED QUARTS OF ANTIFREEZE USING THE CHART BELOW.

STEP 4 - ADD PROPER AMOUNT OF REINHIBITOR PER INSTRUCTIONS ON BOTTLE LABEL OR MANUAL.

FREEZE POINT	GALLONS OF PROCESSED COOLANT				
	3 GALLONS	6 GALLONS	9 GALLONS	12 GALLONS	15 GALLONS
-25°F	1.8	1.5	2.5	3.5	4.5
-20°F	1.5	3	4.5	6	7.5
-15°F	2	4	6	8	10
-10°F	2.5	5	7.5	10	12.5
-5°F	3.5	7	10.5	13.5	17
	↑ QUARTS OF ANTIFREEZE TO ADD ↑				