



ROBINAIR

Operating Manual



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Model 75700 Coolant Exchanger



Model 75700 Coolant Exchanger

SAFETY DEFINITIONS: Follow all **WARNING**, **CAUTION**, **IMPORTANT**, and **NOTE** messages in this manual. These messages are defined as follows: **WARNING** means you may risk death or serious personal injury; **CAUTION** means you may risk personal injury, property damage, or serious unit damage; **IMPORTANT** means you may risk unit damage; and **NOTES** provide clarity and helpful tips. These safety messages cover situations ROBINAIR is aware of. ROBINAIR cannot know, evaluate, and advise you regarding all possible hazards. You must make sure all conditions and procedures do not jeopardize your personal safety.

DISCLAIMER: All information, illustrations, and specifications contained in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without obligation to notify any person or organization of such revisions or changes. Further, ROBINAIR shall not be liable for errors contained herein or for incidental or consequential damages (including lost profits) in connection with the furnishing, performance, or use of this material. If necessary, obtain additional health and safety information from the appropriate government agencies, and the vehicle and coolant manufacturers.



Warning



Before using the coolant exchanger, read, understand, and follow the safety precautions and operating instructions outlined in this manual. This equipment must be operated by qualified personnel – the operator must be familiar with vehicle cooling systems, coolants, and the dangers they present.



– If the operator cannot read English, operating instructions and safety precautions must be read and discussed in the operator's native language.



– Si el operador no puede leer inglés, las instrucciones de operación y las precauciones de seguridad deberán leerse y comentarse en el idioma nativo del operador.



– Si l'utilisateur ne peut lire l'anglais, les instructions et les consignes de sécurité doivent lui être expliquées dans sa langue maternelle.



Do not drink antifreeze or solution. Avoid inhaling mist or hot vapors. (Ethylene glycol base.) If swallowed, drink two glasses of water; induce vomiting; and call a physician. If inhaled, move to fresh air and call a physician. Use the unit in locations with mechanical ventilation that provides at least four air changes per hour. If accidental system discharge occurs, ventilate the work area before resuming work.



Do not store ethylene glycol based solutions in open or unlabeled containers. Ethylene glycol causes birth defects in laboratory animals; solution may taste pleasant to animals, but is poisonous to them.



Contact with antifreeze/coolant may cause injury. Hot antifreeze/coolant can burn skin and injure eyes. Wear protective equipment, including safety goggles and gloves, when operating this equipment. If contact with eyes occurs, call a physician immediately, and flush eyes with cold water for 30 minutes. If contact with skin occurs, thoroughly wash area with soap and water.



Vehicle cooling systems which are hot, are under pressure — opening a hot system, except as described in this manual, can cause an uncontrolled release of engine coolant. Do not open the radiator cap, and do not remove hoses from a hot system except as directed in this manual.



Do not pressurize the vehicle cooling system above its pressure rating. Doing so may result in cooling system failure and the release of engine coolant.



Never run a vehicle engine without adequate ventilation. Breathing vehicle emissions can cause sickness, injury, or death.

Working in the vicinity of a lead-acid or other automotive battery is dangerous. Wear eye protection. NEVER smoke, or allow a spark or flame in the vicinity of a battery. Batteries generate explosive gases during normal battery operation.

This equipment is not designed for any other purposes than testing cooling systems and exchanging used antifreeze/coolant with new or recycled product.

The operator is responsible for complying with any and all applicable laws and regulations governing the use of this type of equipment, as well as disposal of used antifreeze/coolant and used equipment and components.

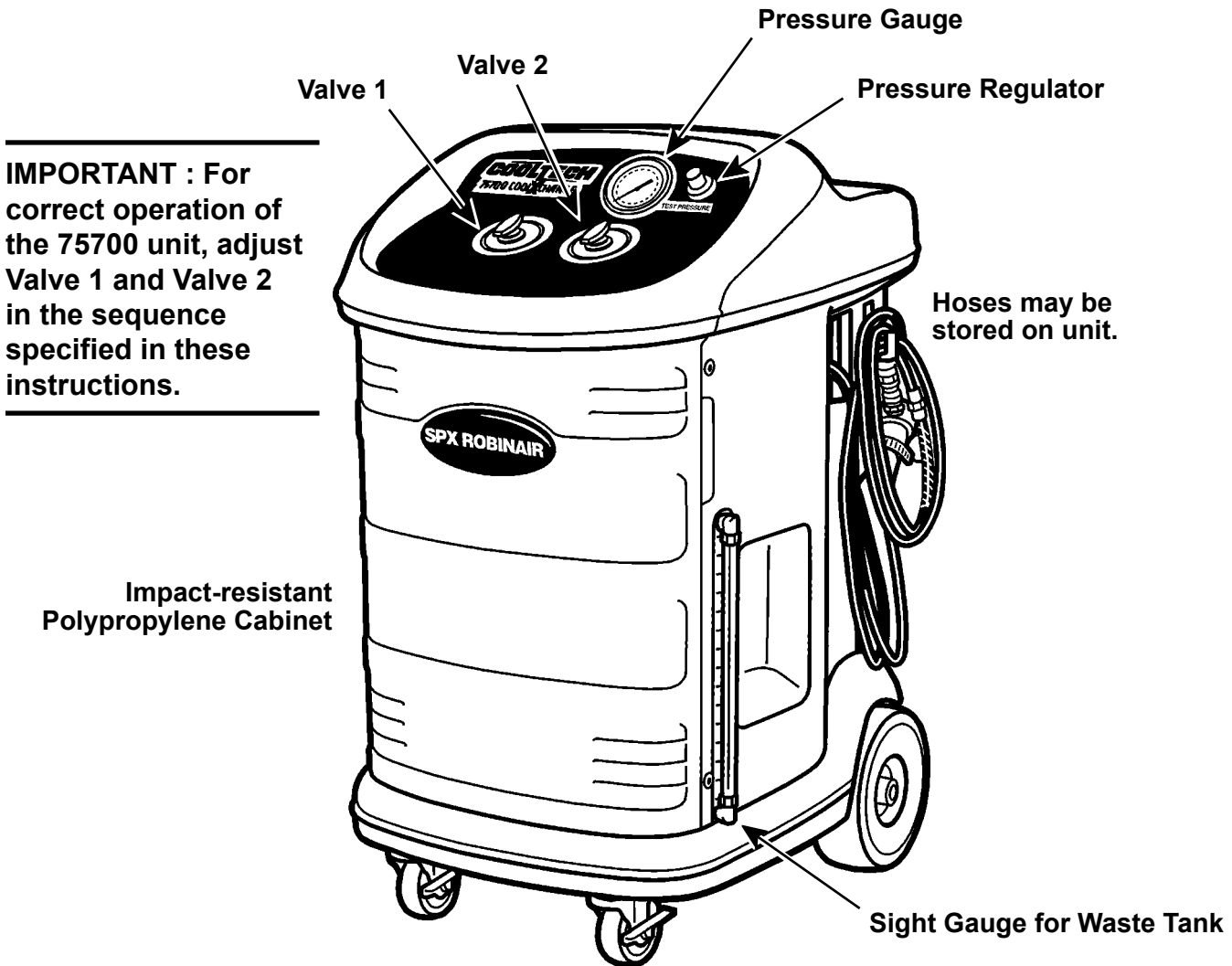
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Introduction

The 75700 COOLXCHANGE offers everything you need to quickly remove and replace coolant in a vehicle: drain and fill, and pressure test for leaks. Two external, new coolant supply tanks allow on-board storage of two different coolant types.

No electricity is needed—shop air powers the unit. No hoses to cut. No additional ventilation is required—the service procedure is performed with the engine off. The coolant transfer process is “hands off”—simply make the correct connections and watch it happen. A typical exchange procedure may take only 10 minutes!



IMPORTANT : For correct operation of the 75700 unit, adjust Valve 1 and Valve 2 in the sequence specified in these instructions.

Impact-resistant Polypropylene Cabinet

Technical Specifications

Power Supply : 80–120 psi shop air
Internal Tank : 15-gallon capacity waste tank
External Tanks : Two 7-gallon capacity supply tanks
Dimensions : 47" H x 26" W x 33" D
(119 cm x 66 cm x 84 cm)

Glossary

Antifreeze : Substance used to lower the freezing point of another liquid; has not yet been mixed with water.
Coolant : A mixture of antifreeze and water.
System : The cooling system of the vehicle being serviced.
Unit : The 75700 COOLXCHANGE.

Attach Hoses

1. Attach the black hose (new coolant) to the top coupler on the upper left side of the unit's rear panel. The decal next to the coupler is marked "Coolant Outlet to Car." See Figure 1.
2. Attach the clear hose (waste coolant) to the bottom coupler marked "Coolant Inlet from Car."
3. Verify Valve 1 and Valve 2 on the 75700 unit are in the OFF position.
4. Connect an air coupler fitting (user-supplied) to the air supply inlet. Attach a shop air line to the fitting that is regulated to supply 80–120 psi of clean compressed air.

Assemble Supply Tanks

The 75700 is shipped with two empty supply tanks, which will be filled with new coolant and strapped to the back of the unit.

1. Fill one supply tank with new coolant. Install the dip tube cap on the tank. See Figure 2.

Note: You may fill the second supply tank with a different type of coolant, or you may leave it empty at this time. Install the solid cap on the second tank.

2. Place both tanks side-by-side on the back of the unit, and secure them with the Velcro® strap.
4. Attach the supply hose coupler to the dip tube cap as shown in Figure 1.

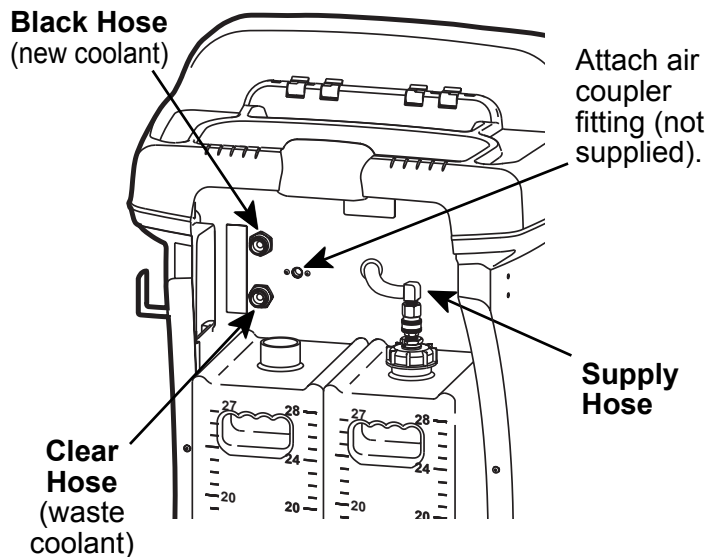


Figure 1

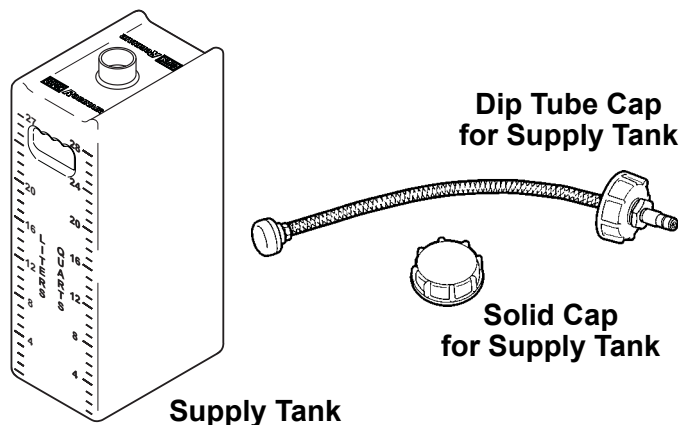


Figure 2

Relieve Cooling System Pressure

⚠ WARNING: Cooling systems that are hot, are under pressure. Working on a hot cooling system without first relieving the pressure will result in serious personal injury.

On some systems it is necessary to allow the cooling system to cool before servicing the vehicle. On vehicles that have a radiator cap, it is possible to relieve pressure by drawing a vacuum on the overflow port.

System Inspection

Before starting the service procedure, verify :

- the 75700 unit is connected to a supply tank holding the correct amount and type of new coolant for the vehicle being serviced.
- the waste coolant tank has enough capacity to exchange the desired amount of coolant.
Note: Running the unit with a full waste tank will degrade the performance of the unit.
- the vehicle ignition is in the OFF position.
- valves 1 and 2 on the 75700 unit are OFF.
- the valve on the black hose is open. See Figure 3.
- the filter screen on the clear hose is clean.

Relieve Pressure on a Hot System that has a Radiator Cap :

1. Remove the vehicle's overflow tank hose from the coolant overflow barb on the radiator neck.
2. Two sizes of siphon tubes have been included with the 75700 unit. See Fig. 4. Select the siphon tube which most closely matches the size of the coolant overflow barb on the vehicle's radiator neck.
3. Slide the siphon tube onto the coolant overflow barb on the radiator neck.
4. Connect the coupler end of the siphon tube to the clear hose from the 75700 unit. See Figure 5.
5. Turn both valves on the unit to VACUUM. As the valve in the radiator cap releases pressure, coolant may be seen in the siphon tube.
6. After pressure is relieved, turn both valves OFF.

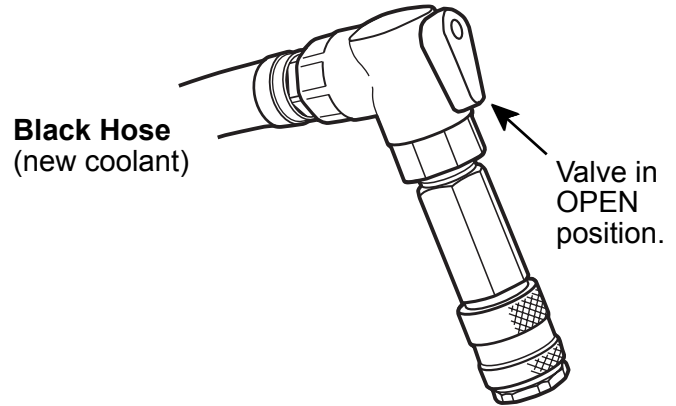


Figure 3

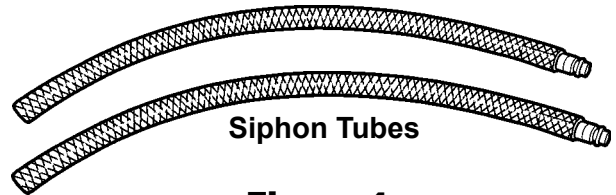


Figure 4

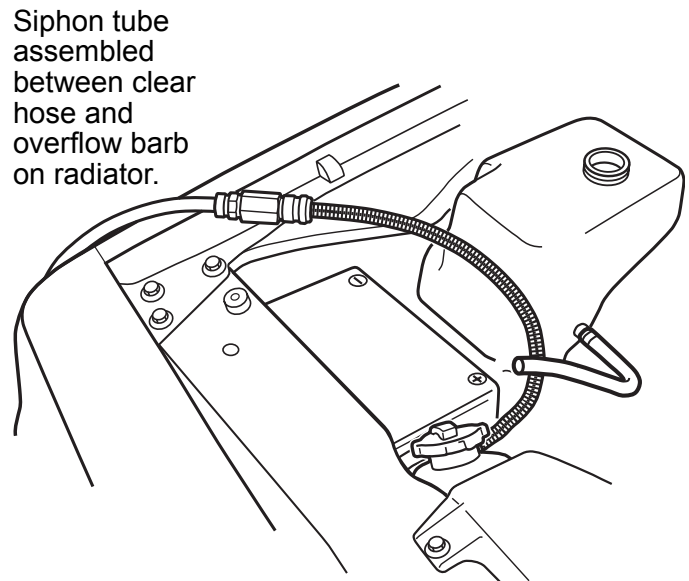


Figure 5

Lower the Coolant Level

1. After the cooling system has been depressurized or cooled down, CAREFULLY remove the coolant reservoir cap and the radiator cap.
2. With the coupler end of the siphon tube connected to the clear hose (waste coolant) from the 75700 unit, insert the other end of the siphon tube into the coolant reservoir.
3. Turn both valves on the unit to VACUUM to empty the coolant reservoir.
4. Insert the siphon tube into the radiator, and lower the coolant level in the radiator to a level below the upper radiator hose.
5. Turn both valves on the 75700 unit OFF.
6. Remove the siphon tube from the radiator, and disconnect it from the clear hose.
7. Reinstall any disconnected hoses on the vehicle.
8. Reinstall the radiator cap and coolant reservoir cap.

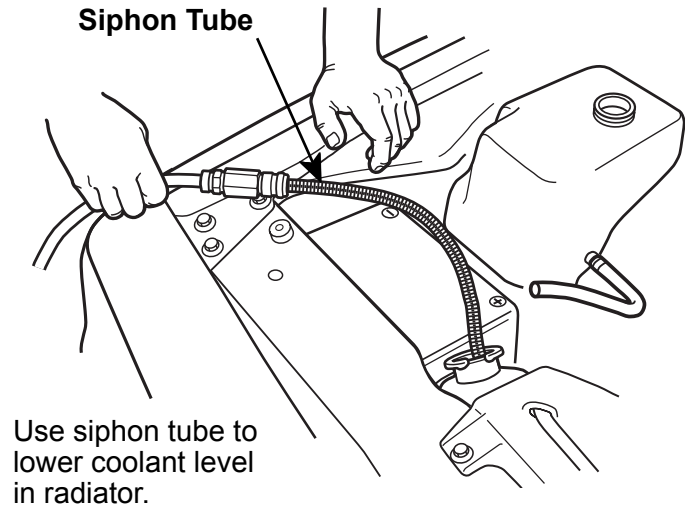


Figure 6

Vehicle Connections

The upper radiator hose may be disconnected either where it connects to the radiator or where it connects to the engine, whichever is most convenient on the vehicle being serviced.

1. Disconnect the upper radiator hose from the radiator or the engine.
2. Insert a step adapter into the radiator hose. See Figure 7.
3. Select an adapter hose that has the same inner diameter as the radiator hose. Clamp a step adapter to the hose, and then clamp the assembly to the hose barb where the upper radiator hose was connected.
4. Connect the clear hose (waste coolant) to the step adapter leading into the radiator.
5. Connect the black hose (new coolant) to the step adapter leading into the engine. The valve on the black hose should be OPEN. See Figure 8.
6. Pinch off the coolant overflow hose and any other hoses connected to the coolant reservoir. See Figure 9.

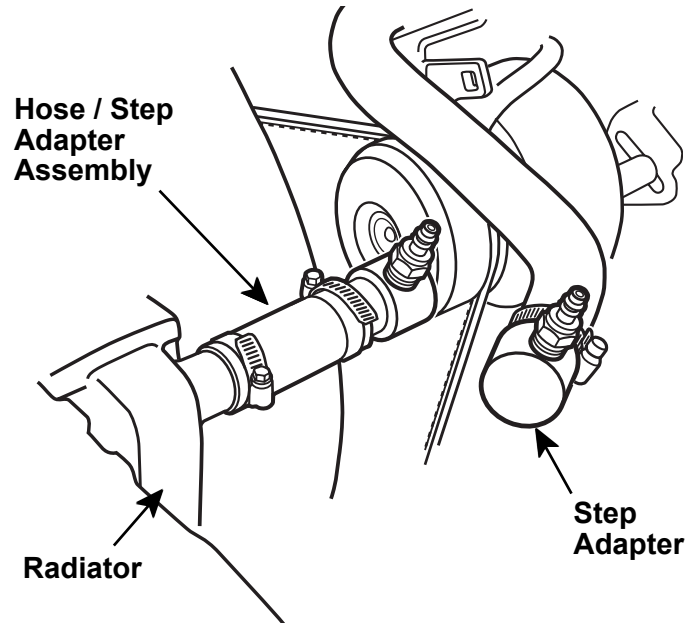


Figure 7

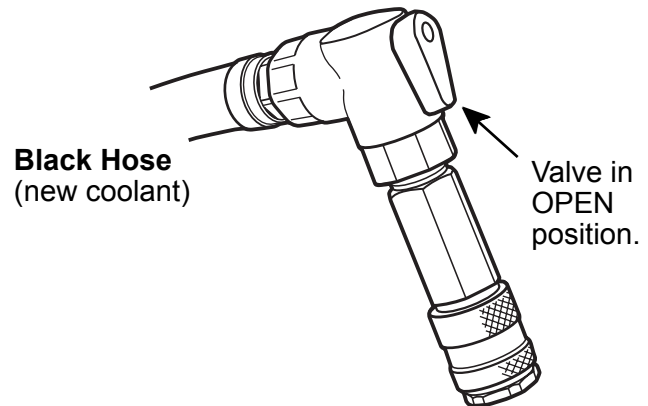


Figure 8

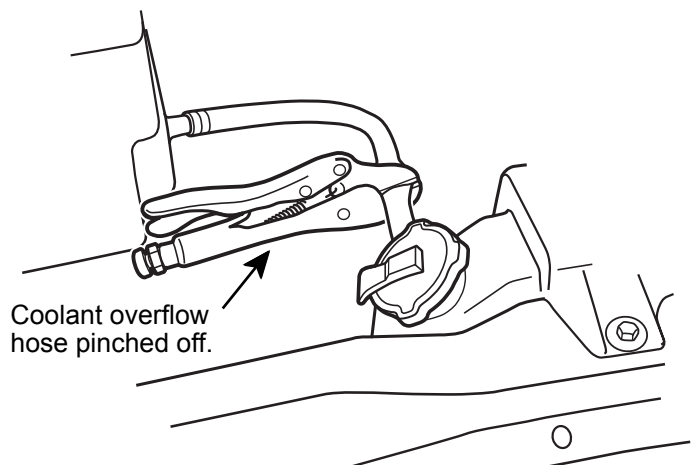


Figure 9

Pressure Test

This procedure checks the coolant system for leaks. A drop in pressure indicates a leak in the system that must be repaired before refilling the system with coolant.

IMPORTANT: For correct operation of the 75700 unit, adjust Valve 1 and Valve 2 in the sequence specified in these instructions.

1. Turn the regulator on the 75700 control panel counterclockwise (CCW) to lower the test pressure. See Figure 10.
Note: Adjusting the regulator requires pulling up on the regulator knob, and then turning the knob.
2. Turn Valve 1 to PRESSURE TEST.
3. Turn Valve 2 to PRESSURIZE.
4. Adjust the regulator clockwise to the correct test pressure.

⚠ CAUTION: To prevent damage to the vehicle, test pressure must range BELOW the pressure indicated on the radiator cap, overflow cap, or vehicle specifications.

5. Turn Valve 2 to HOLD.
6. Observe the pressure gauge on the control panel:
 - a constant pressure reading indicates no leaks in the system;
 - a drop in pressure indicates a leak in the system that must be repaired.

Note: The cooling system may need to be pressurized more than once to equalize test pressure throughout the system.

7. If a leak must be repaired, turn both valves to VACUUM to relieve pressure. Perform repairs, and repeat the Pressure Test.

If no repairs are needed, proceed to the Exchange Procedure.

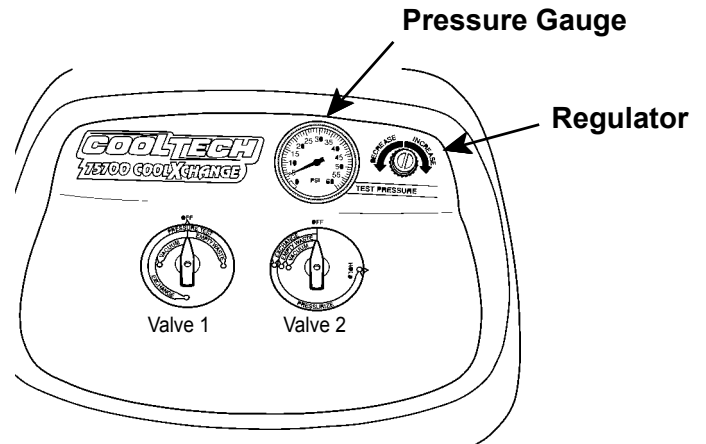


Figure 10

Exchange Process

IMPORTANT: For correct operation of the 75700 unit, adjust Valve 1 and Valve 2 in the sequence specified in these instructions.

1. Note the level of coolant in either the sight gauge for the waste coolant tank or the new coolant tank on the back of the unit.
2. Turn Valve 1 to EXCHANGE.
3. Turn Valve 2 to EXCHANGE.
4. Watch the fluid level indicator. After exchanging the correct amount of coolant (based on the vehicle's cooling system capacity), turn Valve 1 OFF. Turn Valve 2 OFF.

Note: The coolant running through the waste hose at this time should be clean. If not, continue the exchange process until the coolant running through the waste hose is clean.

Complete the Exchange Process

This procedure will top off the coolant in the radiator and fill the coolant overflow reservoir.

1. Remove the step adapters and hoses. Reassemble the upper radiator hose to the vehicle.
2. Release any pinched-off hoses.
3. Connect the siphon tube to the black hose (new coolant).
4. Remove the radiator cap and/or coolant reservoir cap.
5. Close the valve on the end of the black hose (new coolant). See Figure 11.
6. Turn both valves on the 75700 to EXCHANGE.
7. Insert the siphon hose into the radiator and/or coolant overflow reservoir, and open the valve on the end of the black hose. Top off the coolant in the radiator, and fill the coolant overflow reservoir to the FULL indicator.
8. Replace the radiator cap and coolant reservoir cap.
9. Start the engine to purge any air in the system. Repeat the procedure to top off the coolant system as needed.

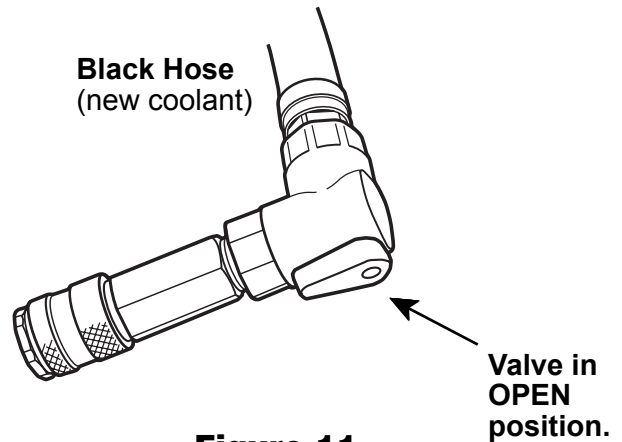
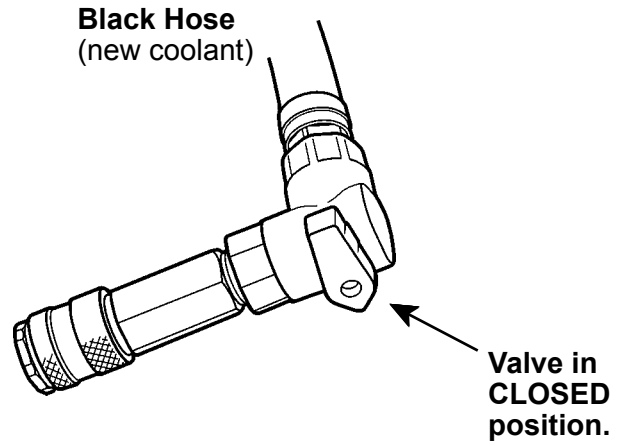


Figure 11

Tech Tip

Some vehicles require a different vehicle hookup due to the way the coolant flows through the system.

If, during the exchange process, you can't hear the pump running, and the flow rate is slower than usual, it may be necessary to change the way the hoses are connected to the vehicle.

1. Connect the clear hose (waste coolant) to the step adapter leading into the engine.
2. Connect the black hose (new coolant) to the step adapter leading into the radiator. The valve on the black hose should be OPEN.
3. Leave the coolant overflow hose and any other hoses connected to the coolant reservoir pinched off.
4. Repeat the Exchange Process.

Changing Supply Tanks

This procedure outlines how to switch supply tanks so the 75700 will exchange the correct type of coolant for the vehicle being serviced.

1. Disconnect the supply hose from the dip tube cap. See Figure 12. Remove the dip tube cap.
2. Connect the siphon tube to the black hose (new coolant).
3. Insert the other end of the siphon tube into the supply tank.
4. Turn the valves on the 75700 to EXCHANGE until coolant stops flowing in the siphon tube.
5. Turn the valves on the 75700 OFF.
6. Connect the dip tube cap to a supply tank containing the type of coolant that is correct for the vehicle being serviced.
7. Connect the supply hose to the dip tube cap.

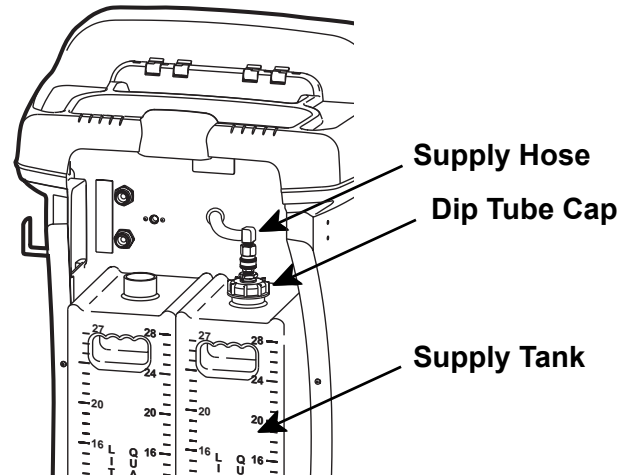


Figure 12

Emptying the Waste Tank

Running the 75700 unit with a full waste tank will degrade the performance of the unit.

1. Connect the siphon tube to the black hose (new coolant).
2. Insert the other end of the siphon tube into a waste barrel.
3. Turn both valves on the 75700 to EMPTY WASTE.
4. Watch the sight glass for the waste tank. See Figure 13. Empty the tank completely.



Figure 13

IMPORTANT: Do not leave any waste coolant in the black hose because it functions as the new coolant hose when servicing a vehicle.

Maintenance

Cleaning the Filter

Sediment will collect in the filter that is installed on the waste hose. See Figure 14. Routinely clean the filter to keep the unit operating correctly.

1. Unthread the cap from the filter body.
2. Rinse the screen and the inside of the cap under running water.
3. Reassemble the filter.

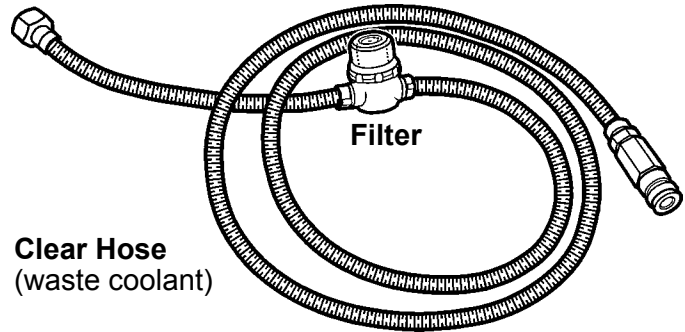


Figure 14

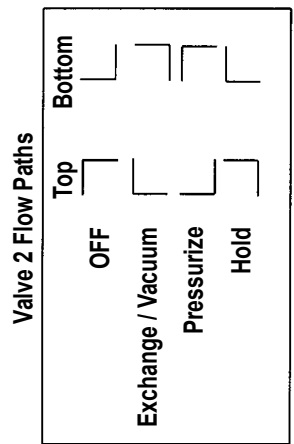
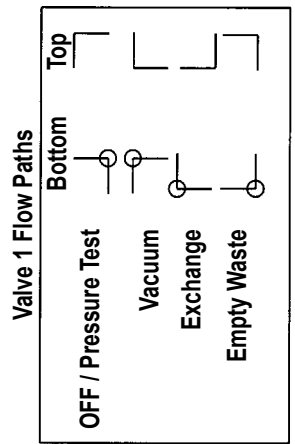
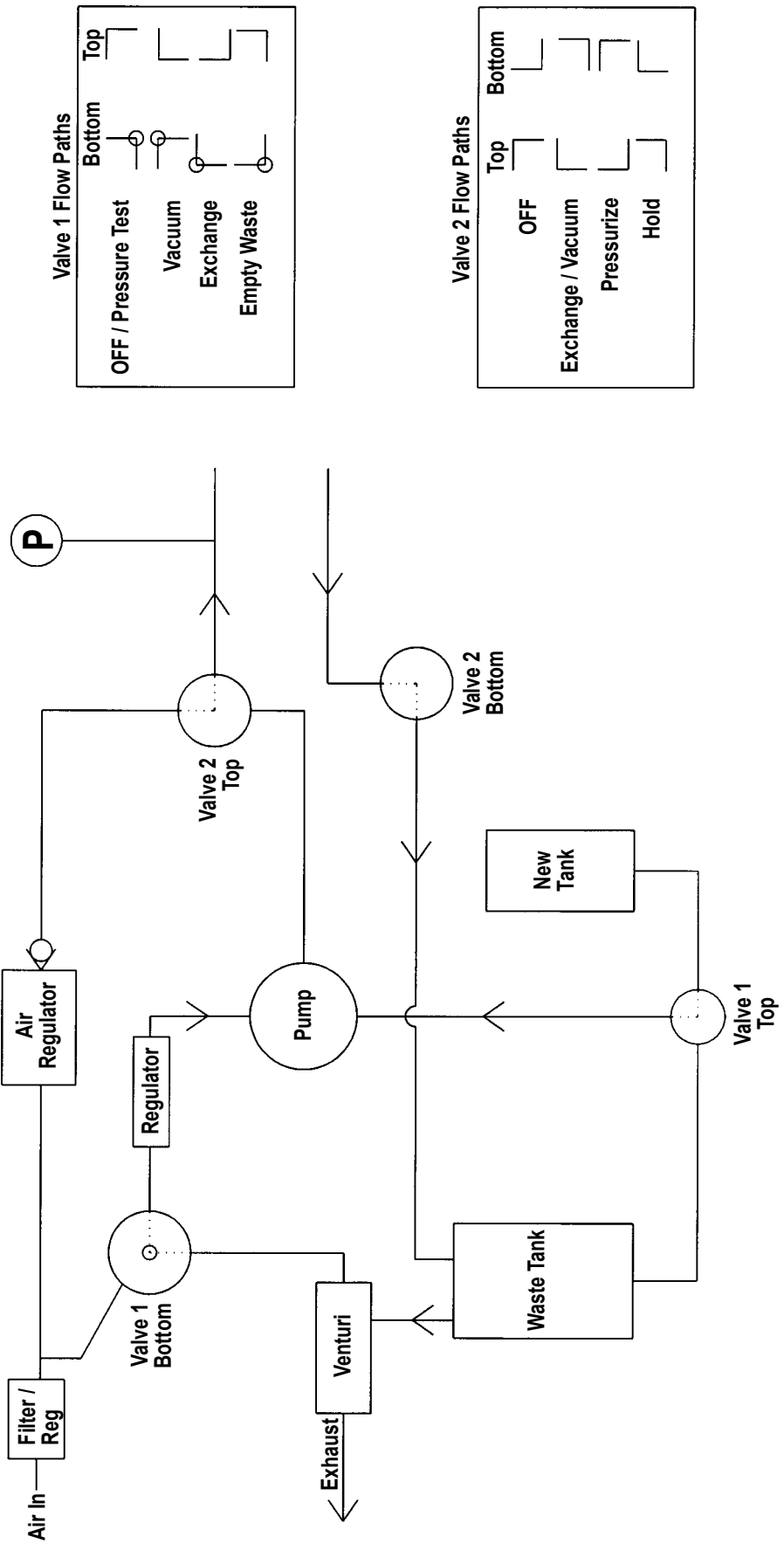
Troubleshooting

Symptom	Cause	Solution
Coolant exchanger does not operate.	1. Air supply is not connected to unit.	1. Attach shop air line to unit that is regulated to supply 80–120 psi of clean compressed air. Refer to “Setup” in this manual.
Unit does not relieve pressure in vehicle cooling system. OR Unit does not lower coolant level in radiator or coolant reservoir.	1. Filter screen on waste coolant hose is plugged. 2. Waste coolant tank is full. 3. Air supply pressure is too low. 4. Unit hoses are assembled incorrectly.	1. Unthread cap from filter; rinse screen and inside of cap under running water. See “Maintenance.” 2. Connect siphon tube to black hose; insert tube into waste barrel; turn valves to EMPTY WASTE. See “Maintenance.” 3. Regulate shop air line to 80–120 psi of clean compressed air. See “Setup.” 4. Attach black hose to top coupler; attach clear hose to bottom coupler. See “Setup.”
Unit does not hold pressure during pressure test.	1. Hoses connected to coolant reservoir not pinched closed. 2. Test pressure is too high. 3. Leak in cooling system.	1. Use pliers to pinch off coolant overflow hose and other hoses connected to coolant reservoir. Refer to “Vehicle Connections.” 2. Test pressure must be below pressure indicated on radiator cap, overflow cap, or vehicle specs. See “Pressure Test.” 3. Repair leak and repeat “Pressure Test.”
No, or slow, exchange.	1. Vehicle requires a different hookup. 2. Valve on new coolant hose not completely OPEN. 3. Filter screen on waste coolant hose is plugged.	1. Connect clear hose to engine; connect black hose to radiator. See Tech Tip in “Exchange Process.” 2. Open valve. See “Exchange Process.” 3. Unthread cap from filter; rinse screen and inside of cap under running water. See “Maintenance.”

contd.

Troubleshooting

Symptom	Cause	Solution
No, or slow, exchange contd.	4. Waste coolant tank is full.	<i>4. Connect siphon tube to black hose; insert tube into waste barrel; turn valves to EMPTY WASTE. See "Maintenance."</i>
	5. Air supply pressure to unit is too low.	<i>5. Regulate shop air line to 80–120 psi of clean compressed air. See "Setup."</i>
	6. Hoses are incorrectly assembled to 75700 unit.	<i>6. Attach black hose to top coupler; attach clear hose to bottom coupler. See "Setup."</i>
Coolant level in coolant reservoir rising or overflowing during exchange procedure.	1. Hoses connected to coolant reservoir not pinched closed.	<i>1. Use pliers to pinch off coolant overflow hose and other hoses connected to coolant reservoir. Refer to "Vehicle Connections."</i>
Fluid level in new coolant tank does not decrease during exchange.	1. Coolant supply hose not connected to new tank.	<i>1. Attach coolant supply hose to dip tube cap on supply tank. See "Setup."</i>
	2. Valve on new coolant hose not completely OPEN.	<i>2. Open valve. See "Exchange Process."</i>



Accessories

Here are some optional accessories, available from SPX Robinair, to help you take the guesswork out of servicing cooling systems.

Radiator Coolant Dye

- Pinpoint leaks in radiators, water pumps, head gaskets, and hoses and fittings.
- Extended-life dye is formulated for use in extended-life coolants, which eliminates the color distortion problem found with existing radiator coolant dyes.
- Extended-life dye is for use with red, orange, or yellow extended-life coolants.
- Each bottle services one vehicle.

No. 16266 – Extended-life radiator coolant dye. Six (1 oz. / 30 ml) bottles.

No. 16255 – Standard radiator coolant dye. Six (.25 oz. / 7.5 ml) bottles.

Cordless / Rechargeable True UV Light

- 12 LEDs produce high-intensity true UV light. (100,000 hour LED bulbs.)
- Nickel metal hydride battery (does not develop a memory). Battery life is 3 hours (continuously ON). Includes battery charger and UV-enhancing glasses.
- 1-year warranty.

No. 16345 – Cordless & rechargeable true UV light. Wt., 9 oz.

Coolant and Battery Refractometer

- Measures the freezing point of either propylene or ethylene-glycol based cooling systems.
- Checks electrolyte solution strength in batteries.
- Features high-quality optics with ultra-smooth focus.

No. 75240 – Coolant and battery refractometer. Coolant scale range: 32° F to -60° F.

No. 75245 – Coolant and battery refractometer. Coolant scale range: 0° C to -50° C.



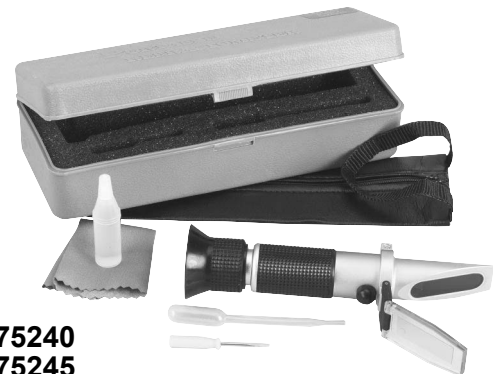
16266



16255



16345



75240
75245

Econo-Clean Coolant Service Accessories

- To ensure coolant will provide adequate protection to the vehicle, the coolant should be adjusted to the manufacturer's specifications. These accessories will help you quickly test coolant.

No. 75133 – Pocket pH pen. Quickly shows the pH level of the coolant, whether used or recycled.

No. 75134 – Coolant test strips. Bottle of 70 strips; just dip a strip in coolant, and it shows freezing point and pH.

No. 75234 – 3-Way coolant test strips for the heavy-duty truck market. Just dip a strip in coolant, and it shows freezing point, pH, and nitrite.

Hose Pinch-off Pliers

- Shuts off flow through vacuum lines, fuel lines, coolant lines, etc.
- Ratchet mechanism holds pivoting jaws tightly in place. Heavy-duty swivel jaws pivot to ensure parallel pinching.
- Three different sizes of pliers are available.

No. 4510-8 – 8 in. tool for small hoses & tight areas.

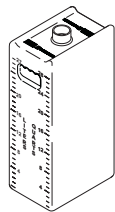
No. 4510-10 – 10 in. tool for radiator & vacuum lines.

No. 4510-12 – 12 in. tool for radiator & vacuum lines.

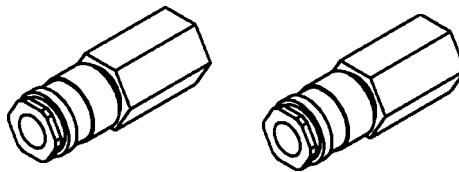


4510-8
4510-10
4510-12

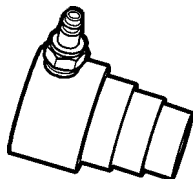
Replacement Parts List



No. 75370 Replacement Supply Tank (7 gal.)



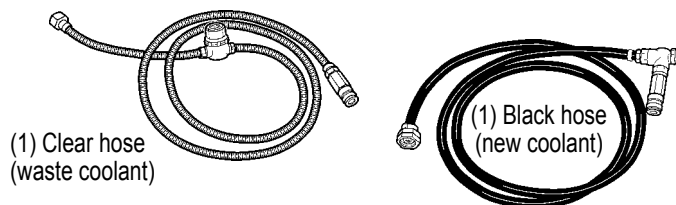
No. 75125 Quick Coupler Set



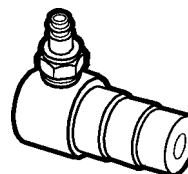
No. 75116 Step Adapter (2.25 → 2 → 1.75)



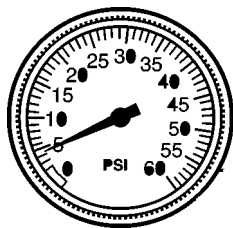
No. 75130 Dip Tube Assembly



No. 75117 Replacement Hose Set



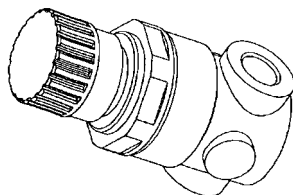
No. 75491 Step Adapter (1.5 → 1.375 → 1.25)



No. 75118 Replacement Pressure Gauge



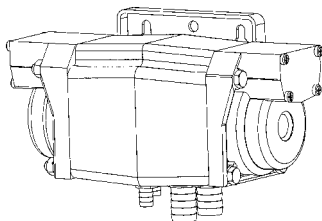
No. 75492 Siphon Hose (5/16")



No. 75119 Replacement Pressure Regulator



No. 75493 Siphon Hose (3/8")



No. 75123 Replacement Pump Assembly

Limited Warranty

This product is warranted to be free from defects in workmanship, materials, and components for a period of one year from date of purchase. All parts and labor required to repair defective products covered under the warranty will be at no charge.

The following restrictions apply:

1. The limited warranty applies to the original purchaser only.
2. The warranty applies to the product in normal usage situations only, as described in the Operating Manual. The product must also be serviced and maintained as specified.
3. If the product fails, it will be repaired or replaced at the option of the manufacturer.
4. Transportation charges for warranty service will be reimbursed by the factory upon verification of the warranty claim and submission of a freight bill for normal ground service. Approval from the manufacturer must be obtained prior to shipping to an authorized service center.
5. Warranty service claims are subject to authorized inspection for product defect(s).
6. The manufacturer shall not be responsible for any additional costs associated with a product failure including, but not limited to, loss of work time, loss of coolant, and unauthorized shipping and/or labor charges.
7. All warranty service claims must be made within the specified warranty period. Proof-of-purchase date must be supplied to the manufacturer.

This Limited Warranty does NOT apply if:

- The product, or product part, is broken by accident.
- The product is misused, tampered with, or modified.
- The product has been used for any purpose other than exchanging and testing engine coolant.

In all other locations, contact your local distributor.

To help us serve you better,
be prepared to provide the model number,
serial number, and date of purchase of your unit.

To validate your warranty,
complete the warranty card attached to your unit,
and return it within ten days from date of purchase.

If your unit needs repairs or replacement parts,
please contact a service center in your area.
For help locating a service center, visit our web site.

Due to ongoing product improvements,
we reserve the right
to change design, specifications, and materials without notice.



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