

# CT6

COOLANT TRANSFUSION SYSTEM

## OPERATING INSTRUCTIONS



Wear safety goggles to protect your eyes.



Wear Nitrile,<sup>®</sup> Neoprene<sup>®</sup> or PVC gloves to protect your hands.



Wear a long-sleeved shirt and rubber or other protective apron.

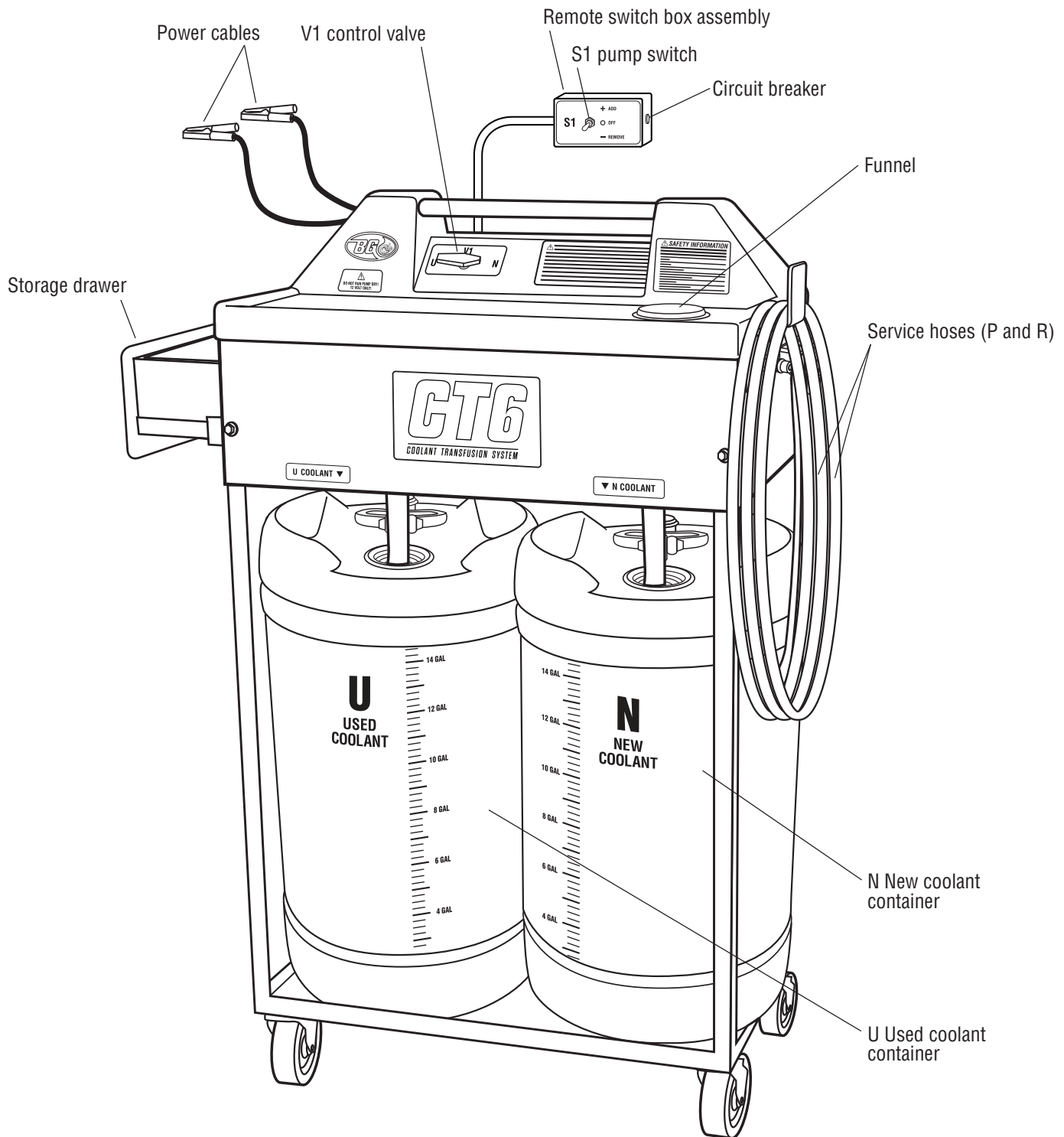
**IMPORTANT!** The following instructions must be read and understood before attempting to use the BG CT6 Coolant Transfusion System. Read product Safety Data Sheet before handling any BG product.

1. **Caution:** Heavy object. Consider mechanical aid or at least a three-person team lift when lifting machine.
2. Make sure this service is performed in a well-ventilated area.
3. Keep all hoses and tools away from moving engine parts.
4. Check all lines, hoses and points of connection for cracks and leaks before and after service.
5. This machine incorporates parts such as snap switches and receptacles that may produce arcs or sparks. Keep it in a designated room or enclosure for machines of this nature, or keep it 18 inches (46 cm) or more above the floor.
6. **WARNING!** Use EXTREME CAUTION when removing radiator cap to prevent being burned by hot fluid escaping the cooling system. Use EXTREME CAUTION when handling hoses and adapters as they can reach the same temperature as coolant.
7. **WARNING!** Fluid ejection hazard. Do not run machine unless properly connected to a cooling system.
8. Ensure that the BG CT6 S1 pump switch is in the “Off” (O) position before connecting to a power source.
9. Dispose of cooling system fluids and filters in accordance with federal, state, and local regulations.
10. The BG CT6 Coolant Transfusion System is designed for use with BG products described in these instructions only. The use of any other chemicals or fluids with this system will void all warranties and could create hazardous conditions. DO NOT use the BG CT6 to pump or transfer any flammable or combustible liquids.
11. **Caution:** Operator can lose control of the machine while moving on uneven or inclined surfaces, risking the machine tipping over and causing injury to personnel or damage to property.



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## Preparing for Service

1. Place the two 15-gallon containers inside the BG CT6. Insert the hoses hanging down inside the machine into the corresponding container: left hose (used coolant) in the left container and the right hose (new coolant) in the right container.
2. Attach the suction wand to the end of the pump hose (P).
3. Roll BG CT6 to the new (or recycled) 50/50 coolant supply. Be sure S1 pump switch is set to "Off" (○).
4. Connect the power cables to a 12-volt battery or other 12-volt power source.
5. Insert the suction wand into the new coolant supply.
6. Turn V1 control valve to "N".
7. Turn S1 pump switch to "Remove" (–). This will fill the BG CT6 new coolant (N) container.
8. Turn S1 pump switch to "Off" (○).

IMPORTANT! Do not run pump dry!

**NOTE:** The BG CT6 can also be filled by pouring or pumping coolant (using an external pump) directly into the funnel on top of the machine.

### To empty the BG CT6 Used Coolant (U) container:

1. Attach the CT6 Waste Fluid Drain Hose to the waste fluid (W) port. Secure the end of the hose into a used coolant receptacle.
2. Attach an air line to the supply air (A) port.
3. Open the ball valve at the supply air (A) port.
4. When the used coolant (U) container is empty, close ball valve at the supply air (A) port
5. Disconnect air line from the the supply air (A) port.

Filling the new coolant (N) container and emptying the used coolant (U) container can be done simultaneously.





## Preparing for Service

1. Attach the suction wand to the end of the pump hose (P).
2. Roll BG CT6 to the new (or recycled) 50/50 coolant supply. Be sure S1 pump switch is set to "Off" (○).
3. Connect the power cables to a 12-volt battery or other 12-volt power source.
4. Insert the suction wand into the new coolant supply.
5. Turn V1 control valve to "N".
6. Turn S1 pump switch to "Remove" (–). This will fill the BG CT6 new coolant (N) container.
7. Turn S1 pump switch to "Off" (○).

**IMPORTANT!** Do not run pump dry!

The BG CT6 can also be filled by pouring or pumping coolant (using an external pump) directly into the funnel on top of the machine.

### To empty the BG CT6 Used Coolant (U) container:

1. Attach the CT6 Waste Fluid Drain Hose to the waste fluid (W) port place the end of the hose into a used coolant receptacle.
2. Attach an air line to the supply air (A) port.
3. Open the ball valve at the supply air (A) port.
4. When the used coolant (U) container is empty, close ball valve at the supply air (A) port
5. Disconnect air line from the the supply air (A) port.

**NOTE:** Filling the new coolant (N) container and emptying the used coolant (U) container can be done simultaneously.



## **Installing BG Upper Radiator Hose Adaptor**

**CAUTION!** To prevent being burned by hot fluid escaping from the cooling system, allow vehicle to cool before removing radiator cap!

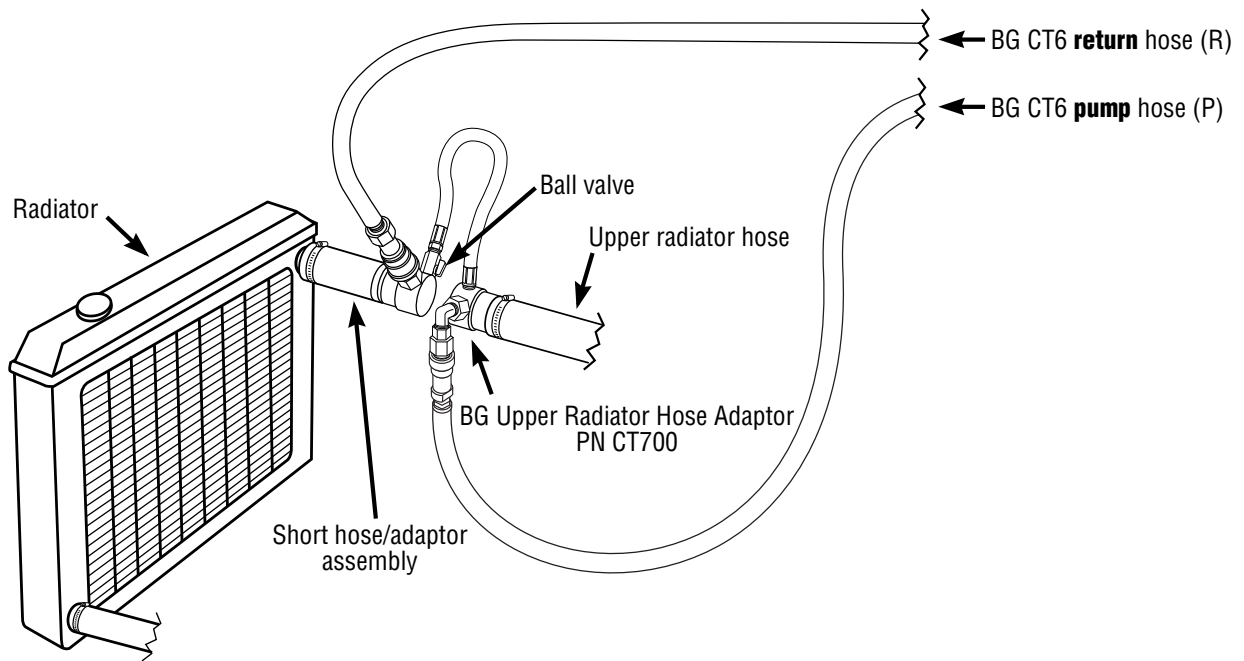
1. Remove radiator cap and insert the suction wand end of the pump hose (P) as deep into the radiator as possible.
2. Turn V1 control valve to “U.”
3. Turn S1 pump switch to “Remove” (–). Remove enough used coolant to allow for a dry removal of the upper radiator hose, then turn S1 pump switch to “Off” (○).
4. Move the suction wand to the radiator overflow tank.
5. Turn S1 pump switch to “Remove” (–) to remove all the used coolant from it.
6. Turn S1 pump switch to “Off” (○).
7. Clamp off the upper radiator hose about 4–6 inches (10–15 cm) from the end that connects to the radiator. Remove the upper radiator hose from the radiator.
8. Determine the correct size adaptor and matching short hose/adaptor assembly needed for the upper radiator hose. Screw the CT700 adaptors into the base unit—it makes no difference which adaptor goes into which end. Put the loose clamp into place on the hose—do not tighten.
9. Install the CT700 adaptor between the radiator and upper radiator hose and tighten all clamps. Be sure the ball valve on the connector hose is in the open position (handle parallel to the hose).

**NOTE:** The CT700 is non-directional.



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## **BG Cooling System Service PROCEDURE**

1. Install one 12 oz. (355 mL) bottle of BG Universal Cooling System Cleaner, PN 540, into the mouth of the radiator.
2. Insert the suction wand into the radiator.
3. Turn V1 control valve half way between “N” and “U”.
4. Turn S1 pump switch to “Add” (+).
5. Turn V1 control valve slowly to “U” to avoid splashing the coolant. Fill the radiator.
6. Turn S1 pump switch to “Off” (○).
7. Replace the radiator cap securely.
8. Start the engine and run at idle 10–15 minutes to circulate the BG Universal Cooling System Cleaner.
9. Stop engine and remove the suction wand from the end of the pump hose (P).

### **Coolant Transfusion: Engine Off**

#### **Systems with thermostat connected to upper radiator hose:**

1. Attach the pump hose (P) to the engine side of the CT700.
2. Attach the return hose (R) to the radiator side of the CT700.
3. Close the ball valve on the CT700.
4. Turn V1 control valve to the halfway position between “N” and “U”.
5. Turn S1 pump switch to “Add” (+).
6. Slowly turn the V1 control valve to “N” until used fluid starts to flow out of the return hose (R). Once flow is established, leave the V1 control valve in that position.

*continued on next page*



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**Procedure** *continued from previous page*

## **Systems with thermostat connected to lower radiator hose**

1. Attach the pump hose (P) to the radiator side of the CT700.
2. Attach the return hose (R) to the engine side of the CT700.
3. Close the ball valve on the CT700.
4. Pinch off the small tube that connects the radiator fill neck to the recovery tank. (Failure to pinch off this hose may allow the cap to vent coolant under pressure to the recovery tank causing it to fill and overflow.)
5. Turn V1 control valve to “N”.
6. Turn S1 pump switch to “Add” (+).

**NOTE: If attempting to do service and the pump stops or flutters (turns off and on repeatedly),\*** check for flow through the service hoses. If there is flow, the service will proceed without a problem. The fluttering can be stopped by moving the control valve towards the center position (do not completely shut off flow). If there is no flow, check quick coupler connections and verify thermostat location for proper flow direction.

\*The BG CT6 system contains a pressure switch that is set to prevent over-pressurizing of the cooling system. Motor will start again when pressure is released.

*In the event that flow cannot be achieved with the engine off,  
the service can be performed with the engine running.*

## **Coolant Transfusion: Engine Running**

1. Reverse the BG CT6 service hoses (P and R) at the BG CT700, so that the pump hose (P) is attached to the side opposite the thermostat. The return hose (R) should be attached to the thermostat side.
2. Open ball valve on BG CT700
3. Start engine and run until it reaches full operating temperature.
4. Close ball valve on BG CT700.
5. Turn V1 control valve to “N”.
6. Turn S1 pump switch to “Add” (+).
7. It will be necessary to pinch off the small hose to the recovery tank to prevent the radiator cap from releasing coolant as the thermostat closes and opens. The pump motor will also likely cycle on and off as pressure builds when the thermostat closes.





## Removing the CT700 Upper Radiator Hose Adaptor

NOTE: Do not allow the BG CT6 new coolant (N) container to run dry—save enough coolant to refill the overflow tank.

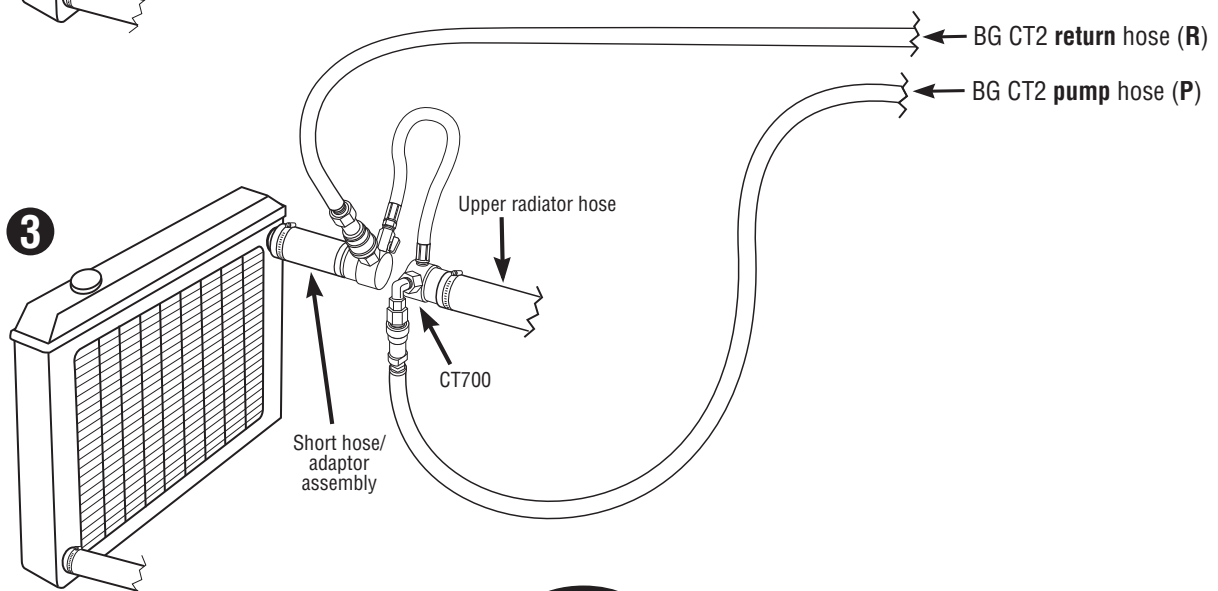
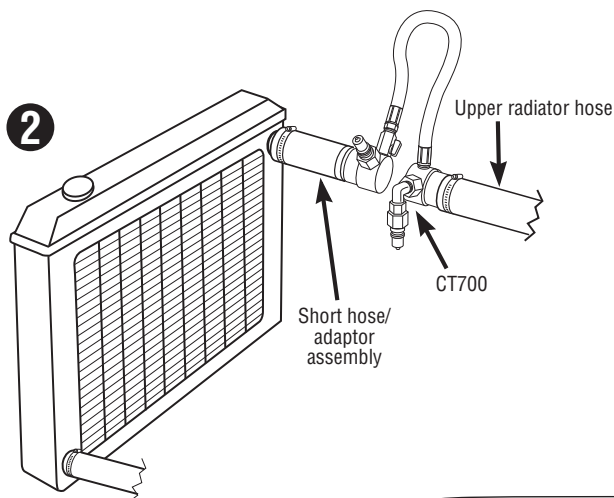
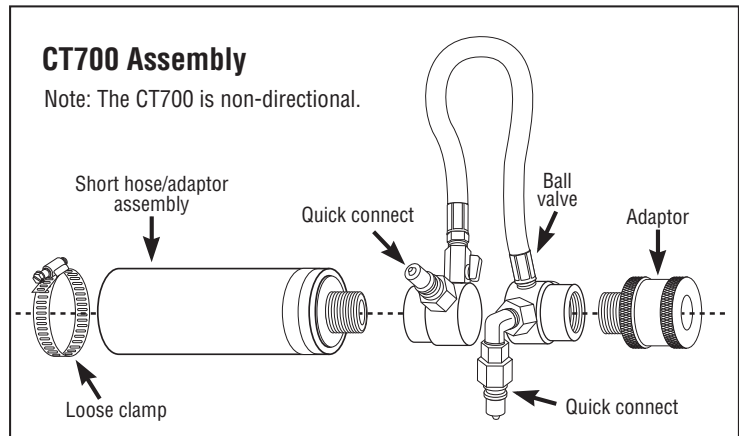
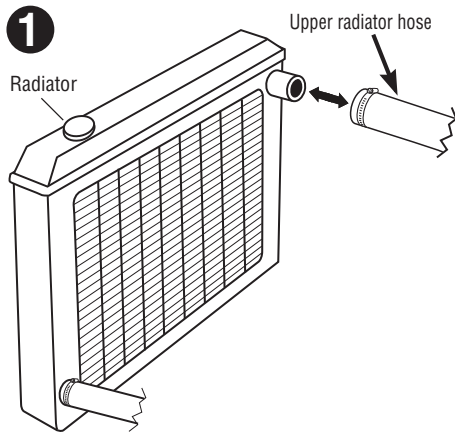
1. When transfusion is complete, turn S1 pump switch to “Off” (○).
2. Turn vehicle engine off.
3. Open the ball valve on the CT700 to release any trapped pressure from the engine.
4. Important! Allow the engine to cool before removing the radiator cap! Remove radiator cap.
5. Disconnect both service hoses (P and R) from the CT700.
6. Attach the suction wand to the pump hose (P) and insert the suction wand deep into the radiator.
7. Turn V1 control valve to “N”.
8. Turn S1 pump switch to “Remove” (–). This will transfer the new coolant in the upper radiator into the BG CT6 new coolant (N) container.
9. Turn S1 pump switch to “Off” (○). Remove suction wand from the radiator.
10. Remove the CT700 and reconnect the upper radiator hose securely.
11. Add BG Universal Super Cool,<sup>®</sup> PN 546, to radiator.
12. Place the suction wand back into the radiator.
13. Turn V1 control valve half way between “N” and “U”.
14. Turn S1 pump switch to “Add” (+).
15. Turn V1 control valve slowly to “U” to avoid splashing the coolant. Refill radiator with new coolant.
16. Turn S1 pump switch to “Off” (○). Remove suction wand from the radiator.
17. Replace radiator cap securely.
18. Move suction wand to overflow tank and fill to the normal level with new coolant.



# BG Upper Radiator Hose Adaptor Set

PN CT700

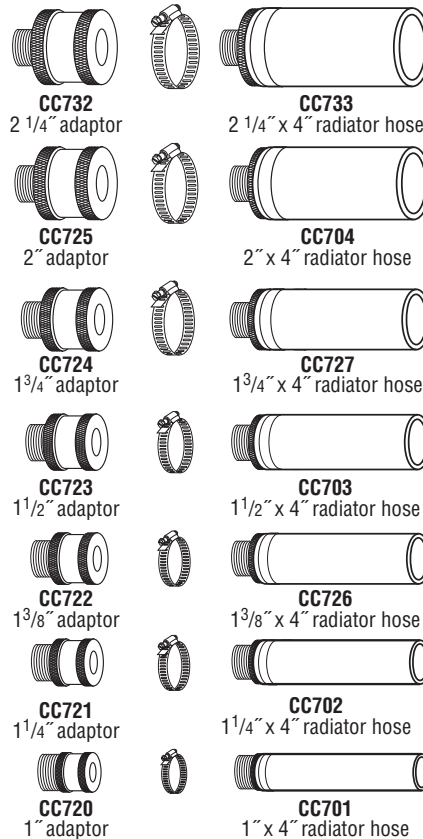
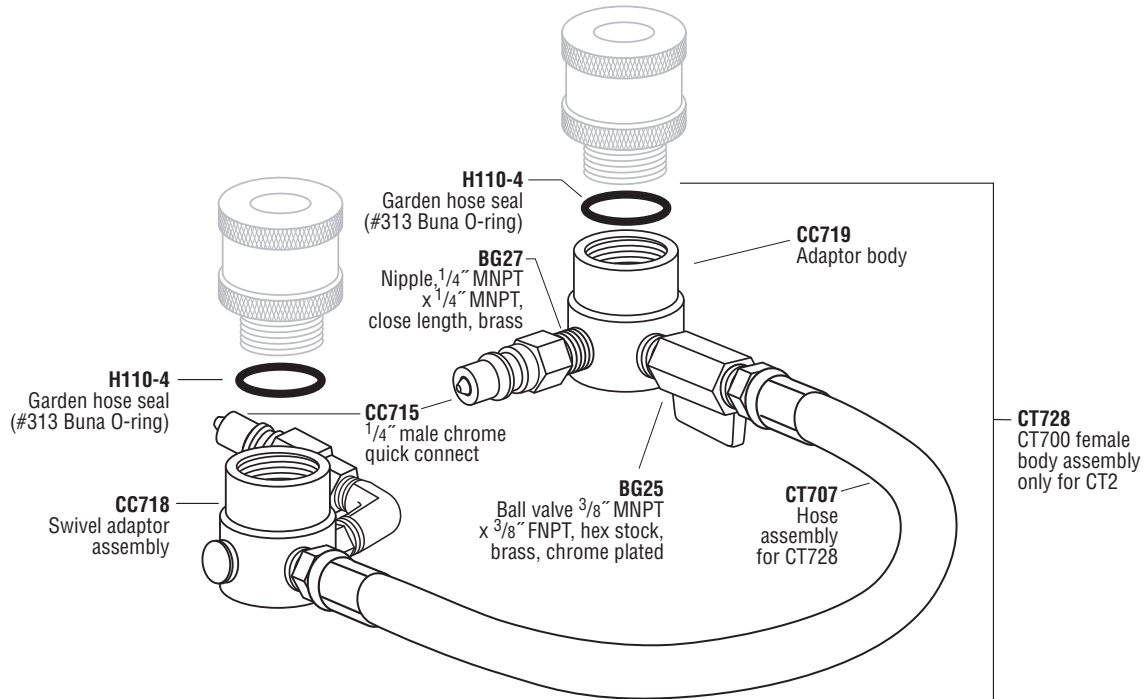
## Installation



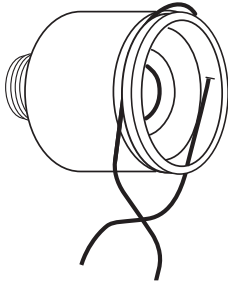
# BG Upper Radiator Hose Adaptor Set

PN CT700

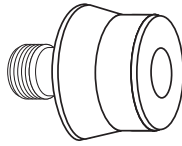
## Parts List



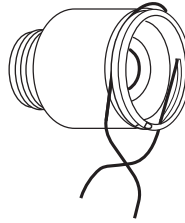
## Optional Upper Radiator Hose Adaptors



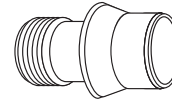
**991-017**  
Ford 6.4 radiator  
adaptor, female



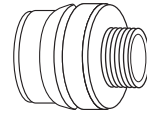
**991-018**  
Ford 6.4 radiator  
adaptor, male



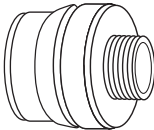
**991-020**  
Ford Focus radiator  
adaptor, female



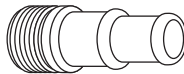
**991-021**  
Ford Focus radiator  
adaptor, male



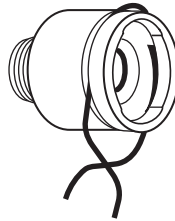
**CC729**  
VW radiator adaptor  
(mates w/CC734)



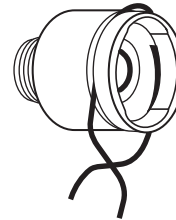
**CC730**  
BMW & VW radiator adaptor  
(mates w/CC735)



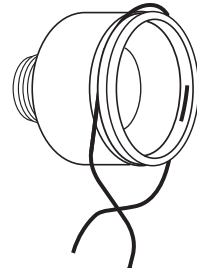
**CC731**  
5/8" & 3/4" adaptor



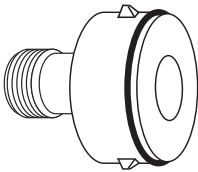
**CC734**  
VW radiator  
adaptor, female



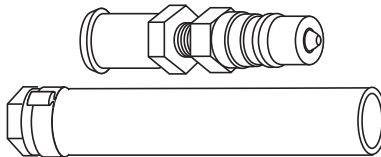
**CC735**  
BMW & VW radiator  
adaptor, female



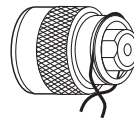
**991-022**  
Mercedes radiator  
adaptor, female



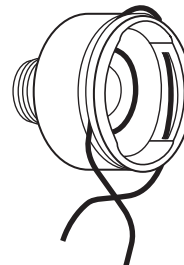
**991-023**  
Mercedes radiator  
adaptor, male



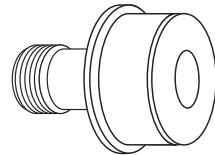
**CT2-017**  
3/4" remote coolant  
tank adaptor



**991-025**  
Audi/Ford expansion  
tank adaptor



**991-029**  
Ford 6.7L coolant  
adaptor, female



**991-030**  
Ford 6.7L coolant  
adaptor, male

## Large Capacity Upper Radiator Hose Adaptor Set

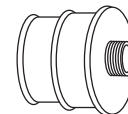
PN CT6-100



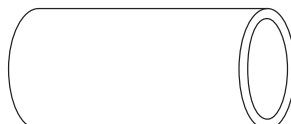
**CC738**  
2 3/4" x 6" radiator hose



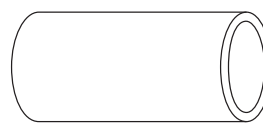
**CC737**  
2 1/2" x 6" radiator hose



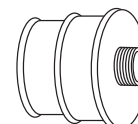
**CC736**  
2 1/2", 2 3/4" radiator adaptor  
(2 each)



**CC741**  
3 1/2" x 6" radiator hose



**CC740**  
3" x 6" radiator hose



**CC739**  
3", 3 1/2" radiator adaptor  
(2 each)





## Inspection and Maintenance

Before each use, inspect the general condition of the BG CT6. Check for loose screws, misaligned or binding parts of moving parts, cracked or broken parts, and any other condition that may affect the safe operation of the BG CT6. If any of these conditions exist, have the problems corrected before further use. Do not use damaged equipment.

The BG CT6 requires no scheduled maintenance although there is a bowl strainer that can be removed and cleaned if the BG CT6 starts to function irregularly.

All receptacles used for the transfer of new fluids and chemicals should be kept clean. The new coolant (N) container should be removed and washed if there is any particulate matter on the bottom. The funnel should be kept covered when not in use.



# **CT6**

*COOLANT TRANSFUSION SYSTEM*

## **Specifications**

- Height: 48.1 inches/1.22 Meter
- Width: 30.1 inches/.76 Meter
- Depth: 17.5 inches/.44 Meter
- Weight: 130 lbs/59 Kg
- Maximum rated pressure: 32 PSI/2.2 bar
- Construction: Steel frame with heavy duty casters  
PVC plastic skin and console
- Power Requirements: 12 Volt DC
- Maximum Current: 15A
- Process Rate: Average transfusion time is 10–20 minutes,  
depending on condition and model of vehicle
- Process Method: In loop with vehicle's cooling system using pump  
to assist with delivery of new coolant while  
transferring used coolant to machine.

MADE IN U.S.A.

