CT4

COOLANT TRANSFUSION SYSTEM

Reference Manual

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BG Cooling System Service
PRODUCTS

BG Universal Cooling System Cleaner
PN 540

BG Universal Super Cool®
PN 546

BG Universal Cooling System Sealer
PN 511

CT4
COOLANT TRANSFUSION SYSTEM

Specifications

Height:	37.25 inches/0.9462 Meter
Width:	27.00 inches/0.6858 Meter
Depth:	14.50 inches/0.3683 Meter
Construction:	Steel frame with heavy duty casters PVC plastic skin and console
Power Requirements:	Shop air supply
Process Rate:	Average transfusion time is 10 minutes, depending on condition and model of vehicle
Process Method:	In loop with vehicle's cooling system using pump and created vacuum to assist with removal of used coolant and delivery of new coolant.

MADE IN U.S.A.

Limited Warranty

This product is warranted by BG Products, Inc. to be free of defects in workmanship and materials for a period of one (1) year from the date of purchase by original purchaser. If the product fails within this period, it will be repaired or replaced at seller's option, provided (1) the product is submitted with proof of purchase date and (2) transportation charges are prepaid to the nearest Service Center. Liability under this warranty is expressly limited to repairing or replacing the product or parts thereof. This warranty does not apply to product or parts broken by accident, negligence, overload, abuse, or if they have been tampered with or altered in any way. This warranty does not apply to service hoses and adaptors which may need replacing due to normal wear. If this warranty does not apply, then the purchaser shall pay all costs for labor, material and transportation.

Note: The use of this apparatus for any purpose other than the services described will render this warranty null and void, as will the use of any chemicals other than the BG products described in this manual. No other warranties are expressed or implied.

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Safety Requirements

Wear safety goggles to protect your eyes.

Wear Nitrile,® Neoprene® or PVC gloves to protect your hands.

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

The following instructions must be followed before servicing or attempting to place this system into operation and removing or adding fluid to any vehicle cooling system.

1. Carefully read the BG CT4 Reference Manual before beginning vehicle service.
2. Before handling any BG product, read its Safety Data Sheet.
3. Wear safety goggles to protect your eyes.
4. Wear Nitrile,® Neoprene® or PVC gloves to protect your hands.
5. Wear a long-sleeved shirt and rubber or other protective apron.
6. A combination of mechanical and local ventilation should be used to prevent operator exposure to noxious fumes.
7. Keep all hoses and tools away from moving engine parts.
8. Check all lines and adaptors for cracks and leaks before and after service.
9. Use EXTREME CAUTION when removing radiator cap to prevent being burned by hot fluid escaping from the cooling system. Use EXTREME CAUTION when handling hoses and connectors on BG CT4 unit as they can reach the same temperature as coolant.
10. DO NOT dispose of any cooling system fluids or filters in a manner that is not in compliance with Federal, State or Local environmental regulations.

The BG CT4 Coolant Transfusion System is designed to be used only with a vehicle cooling system service. DO NOT use the BG CT4 to pump or transfer any flammable or combustible liquids.

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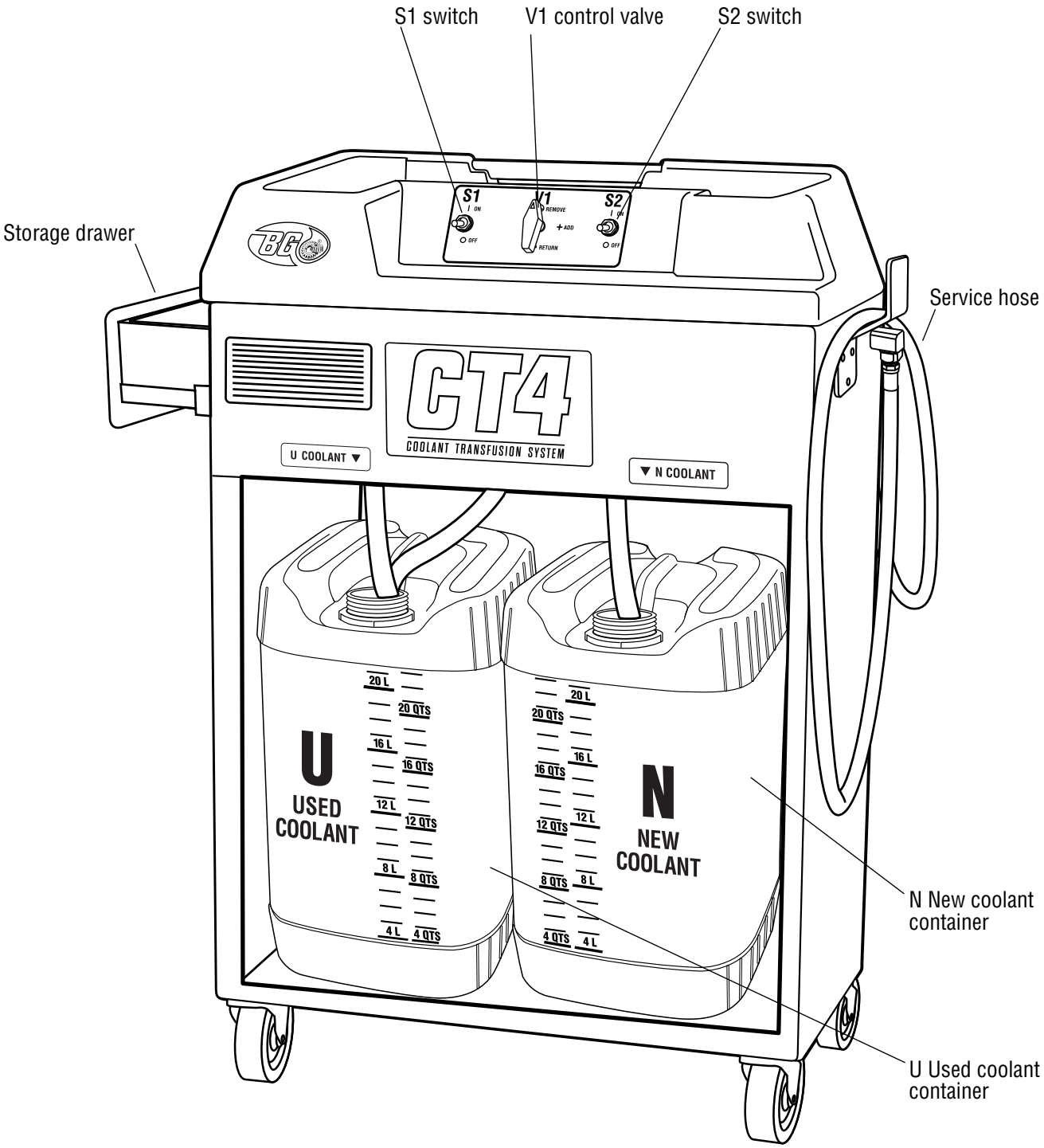


Filling BG CT4 New Coolant (N) Container

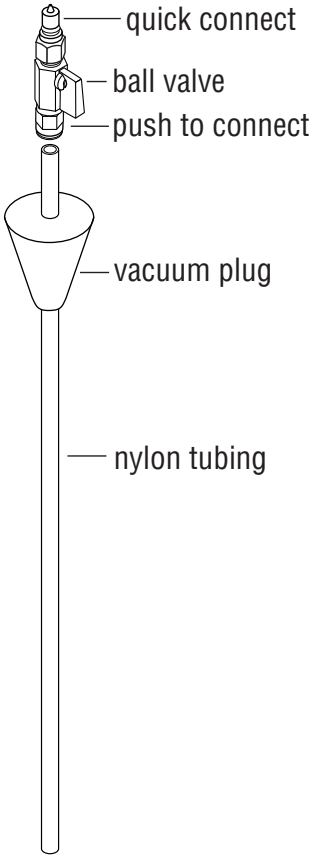
With pressurized fluid supply:

1. Remove cap from BG CT4 new coolant (N) container.
2. Insert pressurized fluid supply dispenser into BG CT4 new coolant (N) container and fill.
3. When filling is complete, replace cap on BG CT4 new coolant (N) container

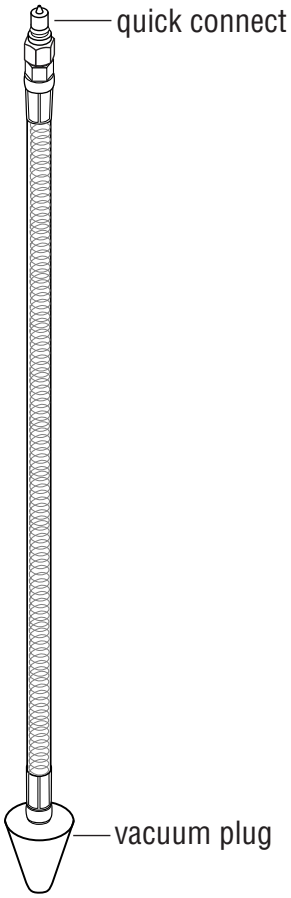
Use BG CT4 to fill itself:

1. Move the used coolant drain hose (not the clear drawer drain hose) from the BG CT4 used coolant (U) container to the new coolant (N) container.
2. Attach wand to service hose and put into container of 50/50 coolant.
3. Turn V1 control valve to “Remove” (–).
4. Turn S1 pump switch to “On” (I).
5. When filling is complete, return BG CT4 used coolant drain hose to used coolant (U) container.

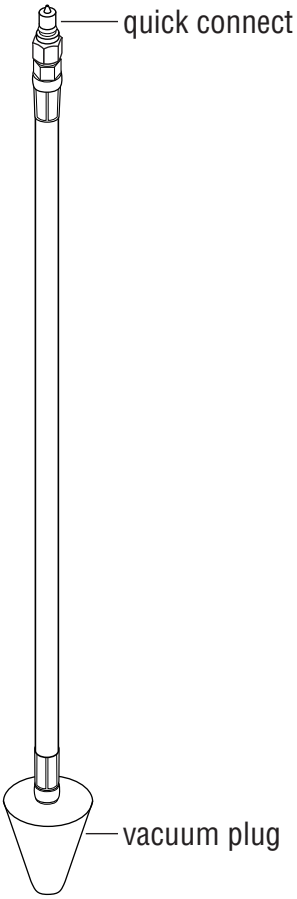
Adjustable vacuum plug assembly and wand
PN CT4-005



Small vacuum plug assembly
PN CT4-014



Large vacuum plug assembly
PN CT4-004



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BG Cooling System Service

Install Cleaner

1. Add 12 ounces (354 mL) of BG Universal Cooling System Cleaner, PN 540, to cooling system.
2. Operate engine until it reaches normal operating temperature. Continue operating engine for 10 to 30 minutes, keeping engine at normal operating temperature with heater controls at their highest position.

Drain Unpressurized Recovery Tank

1. Turn BG CT4 S1 and S2 pump switches to “Off” (O).
2. Turn V1 control valve to “Remove” (–).
3. Attach air supply to BG CT4.
3. Attach wand to service hose and open the ball valve on the wand.
4. Insert wand into recovery tank.
5. Turn S1 pump switch to “On” (I) to begin extracting used coolant.
6. Turn S1 pump switch to “Off” (O) when finished.
7. Remove the wand from the recovery tank.

Extract Used Coolant

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

1. Shut off engine and very carefully remove the radiator cap from the radiator or remote tank
2. Seat adjustable vacuum plug into the fill neck. Be sure nylon tube reaches as deep as possible into the radiator or remote tank. The nylon tubing must be in the coolant to work properly. If vacuum plug seals above the recovery tank port in the neck, pinch off the tube connecting port to tank.
3. Turn V1 control valve to “Remove” (–).
4. Start engine and turn S1 pump switch to “On” (I).
5. When radiator hoses collapse, use pinch off pliers to completely close the radiator hose opposite the thermostat hose. If the coolant extraction had started to slow, you should notice a burst of used coolant going through immediately after pinching of the hose.

continued on next page

Extracting Used Coolant *continued from previous page*

Sometimes it also helps to break the vacuum connection at the vacuum plug, allowing air to enter the system and then immediately reseat the plug and let the vacuum pull down again. This will work only once per service. Do not allow engine to run longer than 3 (three) minutes once hoses have collapsed!

Helpful Hints for Extracting Coolant

NOTE! Be sure to include the capacity of the recovery/remote tank when comparing system capacity to amount of coolant removed. System capacity includes the recovery/remote tank capacity.

Vehicle cooling system designs vary widely between different makes and models. Here are some ways of extracting to most used coolant from these different configurations:

System Description: No cap on the radiator—all coolant servicing must be done through the remote tank.

A live tank with coolant circulation that has a large hose coming out the bottom and may have other smaller hoses connecting also. Making sure the nylon tubing in the vacuum plug reaches the lowest part of the remote tank to remove the most coolant from this type of system.

System Description: Removable cap on the radiator and a wire reinforced bottom radiator hose that cannot be collapsed.

Inserting the vacuum plug assembly in the radiator mouth will only remove about 1/3 to 1/2 of the coolant. To remove more coolant:

- Repeat the service—If 50 percent of the capacity was removed the first pass, the second pass will raise efficiency to approximately 75 percent and you have only used the same amount of coolant as the capacity of the system. Just remember that the system must have time to reheat and circulate before doing the second exchange.
- Make connection to drain port at the bottom of the radiator.
- Allow air into the system through a bleed screw or loosened hose as far from the vacuum plug as possible.
- Break vacuum connection to let air in the system and then pull down again.
- Turn heater controls to maximum heat setting.

NOTE! If you allow air into the system, you must reseal the source and pull a vacuum on the system to install the new coolant.

Always be sure that vehicle is running and at full operating temperature; the hotter the better. Never allow engine to run more than 3 (three) minutes without coolant!

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BG Cooling System Service
Refill with New Coolant

1. When there is no more flow out of the cooling system, remove pinch off pliers from the radiator hose.
2. Leave the engine running and turn the V1 control valve to “Return” (↵).
3. Turn S1 pump switch to “Off” (○). New 50/50 coolant will flow into the cooling system filling the vacuum without leaving any air pockets.
4. When radiator hoses have inflated, the installation of new 50/50 coolant should be complete.
5. Remove vacuum plug from radiator or recovery tank and check coolant level.
6. Install BG Universal Super Cool,® PN 546, in cooling system.

Top Off Radiator or Fill Remote/Recovery Tank

1. Attach the wand to the service hose. Make sure the wand ball valve is closed.
2. Insert wand into radiator or fill remote/recovery tank.
3. Turn V1 control valve to “Add” (+).
4. Turn S1 pump switch to “On” (I).
5. Slowly open ball valve on the wand to fill to the normal level with new coolant.
6. Remove wand from radiator or fill remote/recovery tank.
7. Replace radiator cap or fill remote/recovery tank cap securely.

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Removing Trapped Air

The CT4 is the perfect tool for removing trapped air from upper engine levels of the cooling system.

1. Remove cap from the radiator remote tank. Fluid level should be at least 2–3 inches/5–7 cm below fill neck.
2. Attach wand to BG CT4 service hose.
3. Turn V1 control valve to “Remove” (–).
4. Turn S2 pump switch to “Off” (O).
5. Turn S1 pump switch to “On” (I) to lower the level as necessary.
6. Turn S1 pump switch to “Off” (O).
7. Install vacuum plug into radiator or remote tank fill neck.
8. Turn V1 control valve to “Remove” (–).
9. Turn S2 pump switch to “Off” (O).
10. Turn S1 pump switch to “On” (I) only a few seconds at a time. If the radiator hoses begin to collapse, the BG CT4 will extract coolant instead of the air pockets. Recheck coolant level every few seconds. When level ceases to go down, all the air pockets have been removed.
11. Remove vacuum plug.
12. Connect the wand to service hose.
13. Turn S1 pump switch to “Off” (O).
14. Turn V1 control valve to “Add” (+).
15. Turn S2 pump switch to “On” (I) to top off cooling system to normal level.
16. Remove vacuum plug.
17. Replace radiator cap and radiator remote tank cap.

CERTIFICATE & DECLARATION OF CONFORMITY FOR CE MARKING

Company contact details:
BG Products, Inc.
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Tel: 316.265.2686 rgarcia@bgprod.com www.bgprod.com

BG Products, Inc. declares that their:
1) Transmission Fluid Changing Machine
Models: PXT, PXT2, PF5-MO, PF5-HO, PF5 and PF19
2) Antifreeze Changing Machine
Models: CT2, CT6 and CT4
including all component parts

are classified within the following EU Directives:
Machinery Directive 2006/42/EC
Electromagnetic Compatibility Directive 2004/108/EC

and further conform with the following EU Harmonized Standards:
EN ISO 12100:2010
EN 61000-6-2:2005
EN 61000-6-4:2007+A1:2011

Dated: 10 April 2015
Position of signatory: CFO
Name of Signatory: Ron Garcia
Signed below:
on behalf of BG Products, Inc.

Scan this code or visit
http://bgfor.me/ct4ref
to access instructions
in other languages and
additional information.
This code can also be
found on the serial plate
on the back of the BG CT4.

BG Products, Inc.

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