OPERATING INSTRUCTIONS

“STEAM CHIEF”
Hydrant Thawing Device

Manufactured by:

C. A. Turner Co, Inc.
6 Marshall St.
Leicester, MA  01524
The Steam Chief should only be operated out of doors and never inside any buildings, sheds, cellars, offices or any other domiciles. The Steam Chief is manufactured for thawing frozen fire hydrants only.

1 Please check the glass sight glass and pressure gauge for possible damage caused by transportation. Be sure to inspect the tank for any cracks or dents. If there is any damage please contact the delivering carrier whether it be UPS or a trucking company, and file a claim for concealed damage.

TOOLS NEEDED FOR ASSEMBLY: One 9/16” WRENCH, One small adjustable crescent wrench

Install pressure gauge (shipped separately) in tee on front side of top inlet just before the top ball valve. Set gauge with face facing out to front so as to be seen from normal standing position. Install handle valve and nut (if separately packed). Remove cardboard guard from sight gauge glass, if any.

3 Check the 15 Pound pop valve for obstructions or damage, flip the chrome handle to the straight position then release the handle, it should spring back to the closed position. If it does not do this the valve is damaged and the steamer cannot be used until it is replaced.

5 Through the top center inlet fill the tank until water is approximately 1/2 way up the sight glass. Replace the fill plug and tighten securely a suitable wrench. CLOSE BOTH SIGHT GAUGE VALVES BEFORE CONTINUING.

Your steamer has been shipped with its own gas hose and gas regulator. Attach the regulator to a 20 LB. propane cylinder and attach gas hose to the needle gas valve on the center leg of the base of the tank. The fittings of the gas hose and the gas regulator are left hand fittings; turn them counter clockwise to tighten them. Make sure the needle valve mounted on the steamer leg, is in the off position (fully clockwise). When the gas hose and regulator are tightly secured turn on your propane tank valve to the on position. The regulator shipped with your steamer has been pre-set and locked in position to insure proper and safe heat to the burner. DO NOT change this setting at any time. DO NOT use the regulator with any other piece of equipment except the “Steam Chief”. Please contact us if there are any problems at this time.

7 Attach the free end of your 12’ steamer hose to the outlet valve. Note that the outlet has been equipped with a 3/8” female pipe thread, this valve is permanent and should not be removed. After connecting your hose to the outlet make sure that the ball valve on the steamer is in the OFF position.

Note: Always keep your “Steam Chief” in a vertical position, Never operate horizontally.

8 Access to the burner nozzle is provided by access holes in the flame shield. Use a long stem propane lighter or another suitable lighting device through this access hole just over the top the burner nozzle slowly turn the gas valve to open position - about 1/4 turn should be sufficient to allow gas to the nozzle. It may take a few seconds for any air present in your gas hose to escape before the nozzle lights.

9 After the burner lights turn the needle valve to the full open position (fully counter clockwise) this will give maximum flame to the base of the tank and heat the water until it turns to steam. It will take approximately 5 minutes for the pressure gauge to begin showing pressure. The tank will reach 10 to 13 Lbs. or pressure within 6 to 10 minutes. Heating time will vary depending on the temperature of the water you put into the tank and the outside temperature present in your area.

10 While the tank is heating keep close eye on the pressure gauge. Open the steamer cap on the fire hydrant and push the steam hose with the elbow pipe into the barrel of the hydrant until it meets ice. As the tank pressure approaches 12 to 13 Lbs. on the pressure gauge, open the steam supply ball valve on the top of the tank to a half open position. Steam will exit out of your hydrant thaw hose and gauge pressure will drop. A pressure of 7 to 10 lbs is usually a sufficient flow of steam to thaw a frozen hydrant. You can throttle the output of steam by slightly opening or closing your supply ball valve. It is recommended that you keep your tank pressure below the 12 to 13 Lb. range or your ‘Pop Safety Valve’ will open to relieve the tank. The outlet pressure of the steamer can be held at any point by the adjustment of the top ball valve.

11 Wearing gloves to prevent burns, slowly try to rotate the steam hose and jiggle it to allow it to work its way down the hydrant barrel while thawing the ice. When the hose cannot be inserted further, pull the steam hose out of the hydrant and turn off the steamer. Operate the hydrant in the normal manner to see if water is present, if not, repeat process until its thawed.

Never use your steamer in a confined area. Always use the Steam Chief in its upright position.

PACKAGE CONTENTS
The steamer has been supplied with a 12’ length of rubber pressure hose and bent steam nozzle (steel).
10’ Propane Hose
Propane tank regulator adjusted and locked.
Steam Chief complete with 30 Lb. gauge and 15# Pop Safety Valve.
SAFETY PRECAUTIONS & CONFINED SPACES

Before filling or before removing the fill plug always check pressure gauge reading-evacuate any pressure in the tank by flipping the pressure release valve handle or by opening the supply ball valve.

*Always use only the propane gas regulator that was supplied with the ‘Steam Chief’.*

Never block the outlet of the steam pressure relief valve.

*Never use oils or any lubricant on any part of the ‘Steam Chief’ apparatus.*

Always fill the ‘Steam Chief’ tank with potable water only.

You can return your ‘Steam Chief’ to us at anytime, prepaid, for testing and verification. This service is offered free of charge.

The ‘Steam Chief’ will be tested and verified. If repairs are needed we will give you a written estimate explaining in detail what repairs are needed and at what costs. Again there is no charge for this service. There will be a charge for shipping and insurance only to return the ‘Steam Chief’ to the sender.

STORAGE

Evacuate pressure in the tank, remove the fill plug, disconnect any external hoses, disconnect pressure gauge, stand the steam chief upside down until all water has been drained from the tank. Turn the ‘Steam Chief’ upright and reinstall the pressure gauge. Leave the fill plug off for 48 hours allowing the tank to dry. Store the tank only in a heated area to prevent condensation.

Optional– before re-installing the fill plug fill the tank with approximately one quart of Non-Toxic anti-freeze for potable water systems. This anti freeze is available at Hardware stores and RV dealers. Use only anti-freeze for water systems. The anti-freeze will help prevent rust and corrosion.

HINTS AND TECHNIQUES

The time it takes to thaw a hydrant will vary because of several facts:

The current temperature, how long the hydrant has been frozen and how much ice there is in the barrel itself, are just some examples. If there is a large quantity of ice in the hydrant the operator will be turning that ice into cold water during the thawing process. This cold water will slow down the thawing process because the steam hose is going to be immersed in that cold water. This will cause the steam in the hose to condense before it hits the actual ice. Therefore it is sometimes recommended to stop the steam process and pump out the hydrant to remove this cold water before resuming the steaming process to melt the ice. We recommend the use of the Model PT-730 Hydrant Diaphragm pump for this purpose. You can view it at [http://www.caturner.com/hydrantpump.htm](http://www.caturner.com/hydrantpump.htm) or request literature by fax or standard mail. This diaphragm pump is 12 volt powered, totally self priming and ideal for the purpose of removing water quickly without being damaged.

For further Assistance call

[USA Blue Book](https://www.usabluebook.com)