

Model TM2000CLO

P/NFT2000 Flame Tube

Disassemble brass fittings before melting out solder

Stainless Steel Flame Tube

Base

Nozzle

Pressure Regulator

Lift Lock to turn knob

Swivel - Tip Rotates 360°

Model TM2100CLO
TM3000CLO

US Patent No. 7,347,685

P/N FT2300 Flame Tube Assembly

Disassemble brass fittings before melting out solder

Stainless Steel Flame Tube

Manifold Nozzles (2)

Keep dirt out of air passage

Pressure Regulator

Lift Lock to turn knob

Swivel - Tip Rotates 360°

WARRANTY CLAUSE: General Regulator, Inc. believes the information contained herein to be reliable. However, the technical information is given by General Regulator, Inc. without charge and the user shall employ such information at his own discretion and risk. General Regulator, Inc. assumes no responsibility for results or damages incurred from the use of such information in whole or part.

THREE YEAR LIMITED WARRANTY General Regulator, Inc.'s CROSSTECH PROFESSIONAL TORCHES are warranted to be free from defects in material and workmanship for three years from the date of delivery. All regulators are stamped with a date code showing the week and year the product was shipped from General Regulator, Inc. Claims under this warranty must be accompanied by the original sales ticket or shipping documents to establish date of purchase. If the customer can not provide this documentation, the date code on the product will be used to determine the start of the warranty period. Repair (or at our option, replacement) will therefore be made of any unit which proves to be defective during this period, provided the unit is returned properly packed, with all transportation charges prepaid to General Regulator, Inc. Any repair approved hereunder will be made without charge to the owner for parts and labor. This warranty extends only to the original purchaser and is not transferable. This warranty does not extend to units which have been subjected to misuse, abuse, neglect, accident or to units which have been used in violation of operating instructions. Equipment which, in our judgement, shows evidence of having been altered, modified or serviced without authorization, will be ineligible for service under warranty.

REPAIR SERVICE: General Regulator, Inc. will repair CROSSTECH torch regulators which are either no longer covered by warranty or have been abused by the customer, for a nominal \$15.00 fee plus shipping expenses.

NOTICE: General Regulator, Inc. is not responsible for torch tips which the user has gotten solder into. General Regulator, Inc. does not repair flame tubes. The user will have to replace the flame tube at his own expense unless the General Regulator, Inc. Repair Service is used.

* MAPP® is a registered trademark of Airco, Inc., Montvale, N.J.

*TEFLON is a registered trademark of DuPont De Nemours & Co., Inc., E.I., Wilmington, DE

*CROSSTECH, CROSSTECH PROFESSIONAL TORCHES, CROSSWIRL, CROSSWIRL BURNERS, THE GATLING GUN TORCH, CROSSTECH 357, and CROSSTECH 357 PROFESSIONAL TORCHES ARE TRADEMARKS of General Regulator, Inc.

U.S. Patent Nos. 7347685, 4255124, 4324269, 3698427, 3699998, Des. 263,790, Des. 372,653, Des. 372,654, Des. 374,384

Foreign Patents: Gt. Brit. 137829; 1974 1975 1982 1984 CANADA

CROSSTECH™ PROFESSIONAL TORCHES

Model
TM2000CLO

Models
TM2100CLO & TM3000CLO

OWNER'S GUIDE

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OPERATING INSTRUCTIONS

- 1) **Ventilate confined areas** - use fans to carry away fumes. The work area must be free of any combustible materials such as gasoline, acetone, etc. Always have a fire extinguisher available in case of any unpredictable fire.
- 2) **Wear safety glasses** to prevent any eye injury. Dark welding glasses are not necessary.
- 3) **Make sure the pressure regulator is in the "OFF" index position.**
- 4) **Attach the torch/regulator assembly to the appropriate MAPP* or propane cylinder. DO NOT USE A WRENCH TO TIGHTEN. HAND TIGHTEN ONLY.**
- 5) **Cap the end of the torch tube with the spark lighter to trap the gas for ignition.**
- 6) **Open the regulator approximately 1/4 turn until the fuel can be heard escaping through the torch.**
- 7) **Light the torch. Remove the lighter and immediately turn the knob to the correct MAPP or propane position once the torch lights.** The MAPP position is full on and the propane position is the first index hole.
- 8) **When swinging the torch to different positions, be careful not to touch the last two inches of the flame tube, which is very hot sometimes.**
- 9) **NEVER TURN DOWN THE FUEL PRESSURE FOR EXTENDED PERIODS SO THE FLAME TUBE WILL NOT OVER HEAT OR GET RED AND BURN.** There are temperature sensitive materials in the ignitor assembly which can be damaged if the flame tube is over heated.
- 10) **WARNING:** Operation of the torch with MAPP gas in the inverted position is not recommended. The torch will start to sputter and flare up after a period of time depending upon the outside temperature. This is usually the case in cold weather. (This is common for MAPP torches.) Use with propane gas in the inverted position is usually no problem. **IF THE TORCH IS USED IN THE INVERTED POSITION AND THE TORCH DOES FLARE UP, IMMEDIATELY TURN THE TANK UPRIGHT AND TURN OFF THE REGULATOR. THE TORCH MAY CONTINUE TO BURN UNTIL THE LIQUID GAS HAS EVAPORATED OUT OF THE REGULATOR. THE REGULATOR VALVE REALLY TURNED OFF DURING THIS CONDITION.** The swivel has been provided to eliminate the need to invert the torch. **USE IT FOR SAFETY.**
- 11) **Always remove the torch/regulator assembly from the cylinder when not in use.**
- 12) **Never store gas cylinders in rooms used for habitation.** Keep cylinders out of direct sunlight and away from heat or open flames.
- 13) **TM2000CLO nozzle cleaning procedure:** If during normal operation the tip becomes red and the flame ap-

pears to be smaller than normal, check the tank to see if there is still any liquid gas in it. If not, replace the tank. If the tank is full, the nozzle has become clogged. **NEVER USE WIRE OR ANY OTHER MATERIAL TO CLEAN THE HOLE.**

A. Unscrew the torch from the stem once the flame tube has cooled off. The tip can be cooled by submerging the last two inches from the burner end into cold water. This is very important because the flame tube was heated to approximately 2000°F when it turned red.

B. Once the torch is unscrewed from the stem, remove the screen from the torch base by first removing the "O" ring which holds it in place. Submerge the base up to the air inlet holes in a cleaning solution as alcohol. Use an up & down motion to dislodge the dirt out of the nozzle hole. Also clean the screen so that light can be seen through it.

C. The next procedure is to blow the dirt out of the hole with air. Place two fingers over the base air inlet holes and blow air into the flame tube. The nozzle hole is very small so the operator may think the nozzle is still clogged when actually it is clean. Reassemble the screen and the "O" ring into the torch base. Reassemble the torch to the stem and operate the torch. If the nozzle is still clogged, repeat the above procedure.

TM2100CLO & TM3000CLO - There is no way for the customer to clean the nozzle. Customer should never have to do this. If there is a problem, return the torch to General Regulator, Inc. and we will fix the problem free of charge.

DO NOT OVER TIGHTEN TORCH TIP OR MANIFOLDS FOR MULTIPLE TIP TORCHES, TO THE SWIVEL

IMPORTANT NOTICE

This torch tip is designed to work on constant gas pressure. This is a single turn pressure regulator. Only use the torch in the full on position for MAPP® gas. The propane position is the first dent, which is approx. 3/4 of a turn. **DO NOT USE THE TORCH WITH MAPP® GAS IN THE PROPANE POSITION. THIS WILL CAUSE LOW GAS FLOW AND THE TIP WILL TURN BROWN. Do not over tighten 100 & 2000 series torch tips. There is an o-ring in the torch tip which is used to hold a stainless steel filter. Over tightening will cause reduced or no gas flow.**

FUEL TANK PRESSURE NOTICE

Both MAPP® gas and Propane gas are liquid petroleum fuels. The pressure in these tanks are a function of both the environmental temperature in which the tank is used and the flow rate out of the tank. The liquid in the tank is turned into a gas for use in the torch. This process will cool down the tank and reduce the pressure in the tank. **WHEN USING THE TORCH, ESPECIALLY WITH MAPP® GAS, IF YOU NOTICE THE FLAME**

HAS SIGNIFICANTLY REDUCED IN SIZE OR THE TIP MIGHT BE TURNING BROWN, SWITCH TO ANOTHER ROOM TEMPERATURE TANK.

TROUBLESHOOTING

1. TORCH WILL NOT LIGHT: The torch sometimes will not light if the gas pressure is too high. Reduce the gas flow and try again. This is particularly a problem with propane.

2. NO FUEL COMING OUT OF THE TORCH: This sometimes happens when the user slips the lock pin in the knob over the lock on the regulator body. Be careful not to use excessive force in shutting off the regulator knob. This is a single turn regulator. If you find that you have slipped the lock pin over the lock, simply use a screw driver to move the lock pin up enough so the pin will travel over the lock in the direction which normally turns on the fuel in the torch. After the lock pin passes over the lock, use the same screw driver and push on the lock in from the side with the nameplate on the knob so the lock pin will just miss the regulator body in the full on position. You may have to lift the nameplate to make this adjustment. **Make sure the torch is not connected to a fuel tank.**

3. TORCH CONTINUES TO BURN AFTER SHUTTING OFF THE TORCH: If you use the torch in a position in which liquid fuel from the tank enters the regulator body and then shut off the torch, the torch will continue to burn until all the liquid fuel in the regulator evaporates off through the torch tip. The regulator valve really did shut off. All hand torches have this problem. **The user should use the handy swivel so this won't happen.**

4. FLAME IS ERRATIC OR BUSHY: This will usually happen when solder gets in the torch tip. **Unscrew the brass fittings before melting solder out of the tips. There is a Teflon seal in the tip which can be damaged if the brass pieces are not first unscrewed.**

Shipping Address for Returns:

**GENERAL REGULATOR, INC.
PRODUCT RETURNS DEPT.
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