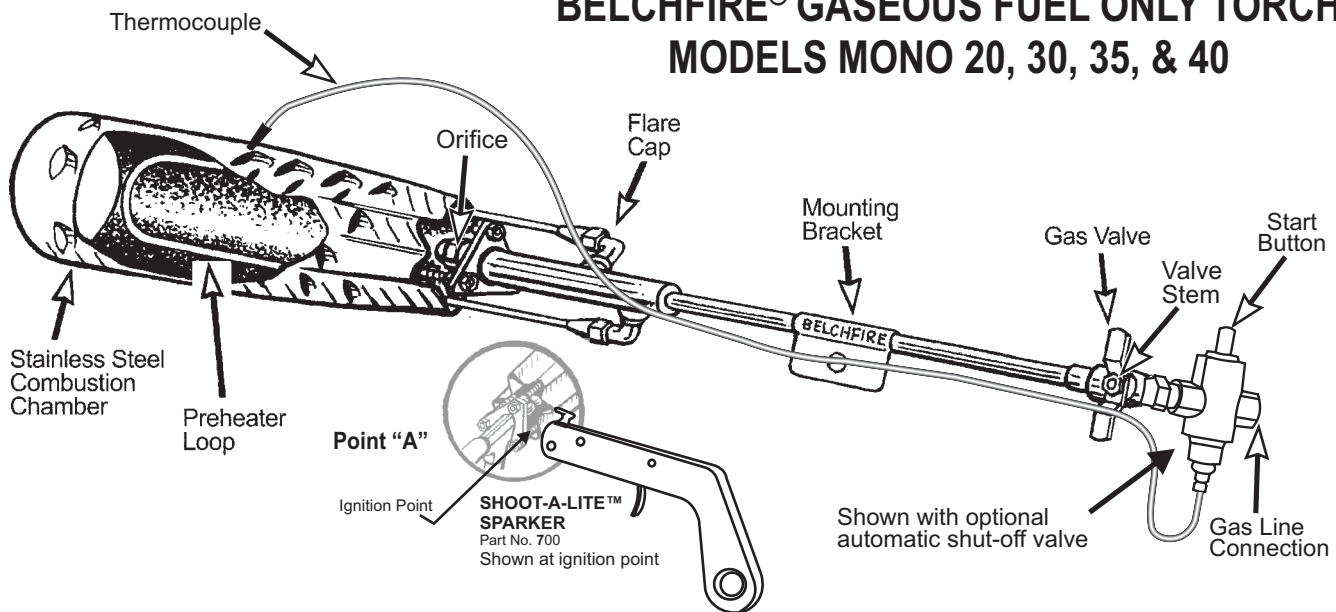


OPERATING INSTRUCTIONS

BELCHFIRE® GASEOUS FUEL ONLY TORCH

MODELS MONO 20, 30, 35, & 40



IMPORTANT

It is imperative that personnel responsible for the operation, and all operators of the Belchfire® equipment, read and understand these instructions prior to lighting and use of Belchfire® torches.

All installation and operating shop procedures involving this equipment must comply with OSHA standards for Metal Fabricators, Section 1910 and American National Standards Institute ANSI Z229.1.

SAFETY INSTRUCTIONS

1. Retain all safety and operational instructions for future reference.
2. Do not leave the torch unattended while in operation.
3. Do not stand or prop the torch on the burner end while in operation.
4. Do not use indoors unless adequate air for combustion and ventilation is available.
5. Do not use liquid-feed fuel with any Belchfire® torch.
6. Do not use acetylene or oxygen with any Belchfire® torch.
7. Inspect Belchfire® torch before each use. If it is evident there is excessive damage, it must be replaced prior to the torch being put into operation. The replacement torch shall be that specified by Belchfire Corporation.
8. Inspect all hoses before each use of the torch. If it is evident there is excessive abrasion or wear, or the hose is cut, it must be replaced prior to the torch being put into operation. The replacement hose assembly shall be that specified by Belchfire Corporation.
9. Do not exceed withdrawal rates of the fuel being used.
10. If the LP-gas cylinders are used, these cylinders must provide adequate capacity to insure vapor withdrawal.
11. When torch is not in use, gas must be turned off at LP-gas supply.
12. When stored indoors, the connection between the LP-gas supply and the torch must be disconnected. If cylinder(s) is used, it must be removed from the torch and stored outdoors in accordance with Chapter 5 of the standard for the Storage and Handling of Liquefied Petroleum Gases, ANSI/NFPA 58.

All replacement parts should be obtained from BELCHFIRE CORPORATION, 4916 North 125th Street, Butler, WI 53007.

INTRODUCTION

The Belchfire® Mono series torches are designed to operate with any one of the following gases - natural, propane, butane, MAPP, Flamex,

FOR YOUR SAFETY

If you smell gas:

1. Shut off gas to the device.
2. Extinguish any open flame.
3. Check the device for leaks using soapy water.
4. Do not attempt to relight the device until all leaks are repaired and there is no gas smell.

Do not use this device in areas where gasoline or other liquids having flammable vapors are stored or used.

Never attempt to light torch that is pointed into a vessel where gas can accumulate. Point torch OUTSIDE the vessel and reposition only when flame is established.

Only use striker to light the torch that is capable of producing a spark similar to the Shoot-A-Lite striker. Always light from rear of combustion chamber (point A Figure 1).

propylene and any other LP classified gaseous fuel. Minimum line pressure of 15 PSI is required.

WARNING - DO NOT USE ACETYLENE WITH THESE OR ANY OTHER BELCHFIRE® TORCHES.

HOOK-UP

Minimum line I.D.'s would be 3/8" for the Mono 40 and 1/4" for the Mono 20, 30, 35 torches. Fuel gas lines should be connected to torch fitting as shown on mounting bracket (figure 1). Gas Fittings are 3/8" NPT for Models Mono 20, 30, 35 and 1/2" NPT for Mono 40.

Gas line pressure must be 15 PSI, as long as the withdrawal rates of the fuel used are not exceeded. Gas connections should be made only to a regulator designed to operate with the fuel gas to be used.

STARTING PROCEDURE

As with all fuel-burning torches, there is a certain amount of hazard involved with the operator and his use of the torch. All normal safety precautions associated with this type of equipment should be observed. In addition, the following starting procedure should be followed:

1. Use supplied striker and position at rear opening of combustion Chamber (Point "A" Figure 1).
2. With striker in position at Point A, open gas valve slowly until gas flows. Pull trigger on striker. Keep pulling trigger until gas ignites. If no ignition, immediately shut off gas by turning clockwise. Check for proper hook-up. If everything checks out, repeat starting operations 1 and 2.
3. Once fuel is ignited, adjust valve slowly until flame required is achieved.

STARTING PROCEDURE WITH AUTOMATIC SHUTOFF VALVE INSTALLED

Once torch installation and system checkout is completed, make sure torch valve is in OFF position (handle turned all the way clockwise to valve stop).

1. Turn on main fuel supply
2. Open torch gas valve approximately 1/8 turn (counter-clockwise). No fuel will flow until automatic shutoff valve button is pushed. If fuel flows, CONSULT FACTORY.
3. With striker in position, push in button on automatic shut-off valve. Gas will flow. Pull trigger on striker and keep repeating until gas ignites.
4. Within 20-30 seconds the thermocouple will heat up and will signal the valve to remain open. Release button and adjust flame to meet your flame requirements.
5. If after releasing the automatic shutoff valve button the flame does not remain ignited, turn gas valve clockwise to stop. Repeat steps 1 - 5 and hold automatic shutoff valve in for 40-60 seconds. If flame still does not remain ignited, turn gas valve clockwise to stop. Contact factory for further instructions.

NOTE: When in operation, if flame is extinguished momentarily and does not reignite, the thermocouple will cool down and signal fuel shut-off valve to close (approximately 30 seconds). If the above happens, a restarting procedure must be started to reignite torch.

FLAME ADJUSTMENT

Belchfire[®] torches have a completely flexible flame and can be adjusted to suit any purpose. The size and type (lazy, long, neutral, oxidizing, etc.) Of the flame is controlled by adjusting the valve clockwise to decrease flame size and shutoff and counter-clockwise to increase flame size.

When operating properly, the combustion chamber will be cherry red forward of the ignition point.

SHUT DOWN PROCEDURE

The following shut down procedure should be followed:

1. Turn gas valve clockwise to stop.
2. Shut off fuel gas at the source and disconnect the torch.

SERVICE AND REPAIRS

Belchfire[®] torches will eventually require servicing or replacement of parts due to wear from normal use. All maintenance should be performed by authorized Belchfire[®] service personnel. All repairs made by these personnel are fully guaranteed against defective material and workmanship. Repairs made or attempted by anyone other than these personnel cannot be guaranteed.

Should any questions arise about the Belchfire[®] torch, feel free to write or call us at any time. In any communications, please give model number of the torch.

BELCHFIRE[®] MAINTENANCE

STAINLESS STEEL COMBUSTION CHAMBER REPLACEMENT

1. Replacement of the stainless steel combustion chamber is accomplished by loosening and removal of the outside 1/4-20 holding nut (one each per mounting screw). After removal, pull chamber off torch and replace with new stainless steel combustion chamber.
2. The new stainless steel combustion chamber will have, two new 1/4-20 nuts per mounting screw. Remove outside 1/4-20 nut; adjusting inside locating nuts to the same distance from the end of the chamber; insert chamber screws into locating holes in triangle; replace outside nuts and tighten.

VALVE

1. Valve stem can be tightened or loosened by adjustment of stem nut under the handle. Clockwise tightens - counter-clockwise loosens.

PRE HEATER LOOPS

1. Replacement of Pre-heater loop is accomplished by first removing combustion chamber. Loosen and slide flare caps away from torch elbow. After removal replace with new pre-heater loop. Tighten flare caps and check for leaks. Replace combustion chamber.

ORIFICE

1. Gas orifice can be replaced by removing combustion chamber first. Unscrew old orifice and replace with new.. Tighten orifice and check for leaks. Replace combustion chamber.

BELCHFIRE[®] WARRANTY

Belchfire[®] is proud of the quality of the torches which it sells. Because of our confidence in our quality, Belchfire[®] agrees to repair or replace any part or parts which examination proves to be defective in workmanship or material. In order to take advantage of this guarantee, the complete torch must be returned prepaid to the factory for examination. This guarantee does not include repair or replacement required because of misuse, abuse, or normal wear and tear. Repairs made by other than authorized factory personnel relieves Belchfire[®] Corporation of further liability under this guarantee.

THIS GUARANTEE IS MADE EXPRESSLY IN PLACE OF ALL OTHER GUARANTEES OR WARRANTIES, EXPRESSED OR IMPLIED WITH RESPECT TO QUALITY, MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE.