## Operating Pressures

| Model | BTU | P.S.I. | Normal |
|---|---|---|---|
| VT 3-30 SVC | 500,000 | 5-90 P.S.I. | 30 P.S.I. |
| VT 2 1/2-30 SVC | 400,000 | 5-90 P.S.I. | 25 P.S.I. |
| VT 2 1/2-24 SVC | 500,000 | 5-90 P.S.I. | 30 P.S.I. |
| BP 2512 SVC | 400,000 | 5-90 P.S.I. | 25 P.S.I. |

## Weeding Tips

**1.** Most generally it is not necessary to reduce weeds and undesirable plants to ashes. Your Torch will generate sufficient heat to kill at a slow walk. Within hours you will witness green weeds wilting and dieing.

**2**. Flaming is not a cure-all. It may be necessary to repeat weeding several times per year, depending on the plant species and whether seeds germinate during the growing season. Some weeds are more heat resistant than others and may require several flamings. Always remain a safe distance from flowers, desirable plants and trees. In time you will determine the range of your torch and may operate in and around plants with ease. Practice makes perfect!

**3.** If in doubt, don't. This philosophy will save your lawn, garden and peace of mind.

**4.** Always keep a type ABC fire extinguisher handy.

**5**. Avoid desirable lawn and garden plants as the torch does not distinguish between desirable and undesirable growth.

**6.** To determine effectiveness, press flamed weed leaf between thumb and forefinger. A fingerprint usually indicates a good kill.

**7.** Whenever possible, flame small weeds - the more tender, the easier to kill.

**8**. Always remain a safe distance from evergreens, pine needles, and all conifers. Highly flammable and easily ignited, pine needles are a fire hazard.

**9.** Do not flame poison oak, ivy or any plant capable of causing a skin rash. Smoke will contain skin irritants if plants are flamed.

# Red Dragon Torches

## Operating Instructions & Parts Manual

**Models**

**VT 3 - 30 SVC** **VT 2 1/2 - 30 SVC**
**VT 2 1/2 -24 SVC** **BP 2512 SVC**

***Please read and retain this information for future reference.***

**• This device is intended for outdoor use only.**

**• This torch is designed for a vapor-withdrawal LP-Gas cylinder**

## WARNING:

**DO NOT OPERATE THIS EQUIPMENT IF:**

- You are subject to seizures, loss of consciousness, or fainting.
- You have been drinking alcohol, using illicit drugs, or prescription drugs that might effect your judgment or balance.
- You have not read or do not understand the operator's manual.
- You are not capable of safely operating this type of equipment.

**DO NOT ALLOW CHILDREN TO OPERATE THIS EQUIPMENT.**

## 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 leaks are repaired and there is no gas smell

***DO NOT use this device in areas where gasoline or other liquids having flammable vapor are stored or used.***

## Assembly Instructions

***Note: Unpack and inspect for damage.***

**1.** Using the thread compound capsule supplied with torch kit, connect one end of the male adaptor to the torch and tighten securely.

**2.** Using thread compound, connect the squeeze valve with adjustable pilot to the other end of the male adaptor. Tighten securely.

**3.** Using thread compound, connect the handle grip to the sqeeze valve with adjustable pilot. Tighten securely.

**4.** Using thread compound, connect male end of the hose to the female end of the handle grip. Tighten securely.

**5.** Using thread compound, connect the female end of the hose to the 1/4" male end of the P-3200W P.O.L. Tighten securely.

## Connecting To The Supply Cylinder

The propane supply cylinder used with this torch should be no less than 20 lb. capacity (except for the BP 2512 C) and must be designed, fabricated, tested and marked in accordance with regulations of the U.S. Department of Transportation, the Canadian Transport Commission or the Interstate Commerce Commission. Supply cylinders must be arranged to provide for vapor withdrawal from the operating cylinder.

**1.** Inspect the nut/nipple of the P.O.L. connection on the LP-Gas hose. Check for dents or physical damage. The O-ring should be present on nipple fitting. If damage is evident, call for replacement parts.

**2.** Be certain the supply cylinder valve is fully turned off. Remove the protective plastic plug from the cylinder valve outlet connection.

**3.** Connect the P.O.L. nut/nipple fitting on the hose to the propane supply cylinder by turning the left hand threaded P.O.L. nut counter clockwise into the cylinder valve outlet. Snug the connection tight with a wrench. DO NOT OVER TIGHTEN.

**4.** Slowly open the cylinder valve. Check all LP-gas connections for leaks using soapy water or suitable leak detection solution. DO NOT USE MATCHES OR OPEN FLAME TO CHECK FOR LEAKS. Do not attempt to operate the torch if there is evidence of a leak or at any time the odor of gas is detected.

## Lighting Instructions

### IMPORTANT NOTE

The P.O.L. contains an integral flow-check valve. Opening the LP-Gas cylinder valve rapidly can cause the valve to check. If the P.O.L. flow valve checks, close the LP-Gas cylinder valve, wait 10-15 seconds and *slowly* open the LP-Gas cylinder valve.

- If no leaks are found, proceed with lighting the torch.
- Always use a flint lighter to ignite the torch. DO NOT USE MATCHES OR CIGARETTE LIGHTER TO IGNITE THE TORCH.
- Be certain the flame adjusting valve is closed before opening the LP-Gas cylinder valve.

1. Slowly open the LP-Gas cylinder valve. Check all connections for leaks with a leak detection solution, such as soapy water. Leaks will be indicated by forming bubbles around the source. Allow one minute for bubbles to appear. Repair all leaks and test for leaks prior to lighting torch.

2. Familiarize yourself with the functions of the squeeze valve operations. The round knob, marked with arrows "off" and "on," is the adjustment valve for lighting the torch and adjusting the pilot flame. Once the desired pilot flame is achieved, the squeeze handle is depressed to give the required working flame pattern.

3. Open the flame adjusting valve (the round knob) 1/8 turn or until a small amount of gas is heard escaping. Using a flint lighter, ignite the torch. **DO NOT PLACE YOUR HAND OR ANY PART OF YOUR BODY IN THE PATH OF THE BURNER WHILE LIGHTING OR OPERATING THE TORCH. DO NOT USE MATCHES OR CIGARETTE LIGHTER TO IGNITE THE TORCH.**

4. Adjust the size of the pilot flame by using the flame adjusting valve. Adjust to a low flame that will keep the torch burning in existing conditions, a small flame is usually adequate. Depress the squeeze vavle to achieve full flame.

## Torch Shut-Off

**1.** Close the LP-Gas cylinder valve.

**2.** Allow the gas to burn out of hose. After the flame is no longer visible, turn the flame adjusting valve to the closed or "off" position. TO RESTART follow lighting instructions.

## Safety Check List

- Gloves should be used at all times. Long sleeves, long pants and boots are recommended.
- Use only vapor torches on cylinders equipped with vapor withdrawal valves.
- Secure cylinders in a level, upright position. Do not invert or lay cylinders on their sides.
- Do not apply flame to cylinders to check for leaks or to increase gas pressure.
- Keep torches, open flame and sources of ignition away from cylinders, regulators and hose.
- Do not operate torches or any equipment if the odor of LP-Gas is evident. Immediately shut off all valves and, using soapy water, check all equipment for leaks.
- Cylinder valves must be protected. Do not hoist a cylinder by the valve.
- Do not leave the torch unattended while in operation.
- Do not stand or prop the torch on the burner end while in operation.
- This equipment is for outdoor use only with adequate ventilation.
- Have a type ABC fire extinguisher on the job site, easily accessible to the person operating the torch.

## For More Information

Consult your local LP Dealer, Flame Engineering, NPGA, or NFPA Pamphlet 58. This information is provided as a general guide for safe LP-Gas use *and in no way constitutes a complete safety program.*

## Daily Equipment Check List

- Visually inspect all parts of the torch equipment for damage and wear. If the hose shows excessive abrasion or wear, or if the hose is cut, replace it before operating the torch. Replace torch hose assembly with test laboratory listed LP-Hose, 350 P.S.I. working pressure.
- Using a soapy water solution, check all connections and fittings for leaks. DO NOT USE A MATCH OR OPEN FLAME TO TEST FOR LEAKS.
- Check LP cylinders for dents, damage to collar, damage to valve, or corroded foot ring. Do not use damaged cylinder. Know if you are using liquid or vapor withdrawal. **USE ONLY VAPOR WITHDRAWAL CYLINDER WITH THE VT 3-30 SVC, VT 2 1/2-30 SVC, VT 2 1/2-24 SVC AND BP 2512 SVC TORCH KITS.**
- For outdoor use only.
- Ignite torch. Check operation of valve and other adjustable parts. *Note: when extinguishing a torch, shut-off cylinder valve first and allow gas to burn out of lines.*

## WARNING

Use extreme caution at all times. You are using an intense open flame. This torch produces an extremely hot and nearly invisible flame. Read and follow the Safety Check List and Daily Equipment Check List before attempting to operate this torch.

### CAUTION

- Propane is heavier than air which can cause it to accumulate in low areas. Be certain all areas are well ventilated.
- Propane has a distinct ODOR. If you smell it, IMMEDIATELY discontinue work, extinguish all flames, locate the leak and correct it, ventilate area before lighting torch.
- Use extreme caution at all times. This device has an intense open flame. Disregard of safe practices can result in severe fire damage, personal injury, or possible death.

## Disconnecting From The Supply Cylinder

**1.** Be certain supply cylinder valve is turned off.

**2.** Disconnect the P.O.L. nut/nipple fitting on the LP hose to the propane supply.

**3.** Replace the protective plastic plug into the cylinder valve outlet.

## Storage

Never attempt to store the torch while it is hot. When the torch is stored indoors, the connection between the LP-Gas supply cylinder and the torch must be disconnected and the cylinder removed form the torch and stored in accordance with Chapter 5 of ANSI/NFPA 58, the standard for storage and handling of liquefied petroleum gases. Do not store the torch in locations where it may be damaged.

**WARNING**

The gas supply hose shall be protected from traffic, building materials and contact with hot surfaces during use and while in storage.

## Maintenance

- Surfaces of the torch may be cleaned with soap or detergent and water solutions. Do not use petroleum-based cleaners to clean any components of the torch or the torch body.
- Remove any debris and combustible material from the torch. The torch must be kept clear and free from combustible materials, gasoline and other flammable vapors and liquids.
- The supply hose assembly shall be visually inspected prior to each torch use. If 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 specified by Flame Engineering, Inc. Contact Flame Engineering for further information.

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VTINSTENG8-8-07

## Parts List

**VT 3-30 SVC Torch VT 2 1/2-30 SVC Torch VT 2 1/2-24 SVC Torch**