

INSTRUCTIONS

#74-571 Torch Kit

DANGER

- Extremely Flammable
- Fire / Explosion Hazard
- Open Flame
- Carbon Monoxide

NOTE: The use of the word Propane in these instructions also refers to the use, warning and cautions for Propylene.

WARNING

- Thoroughly read and understand all of these instructions.
- Every time you use this equipment apply all of the information contained herein or else personal injury, death and property damage can occur.
- Do not attempt to use this equipment unless you are trained in its proper use or are under competent supervision.

NOTICE: IMPORTANT INFORMATION

These instructions contain information related to the operation and safe usage of propane gas equipment and in no way represents a complete operating and safety program.

Additional literature and/or training information can be obtained from the American Welding Society, Miami, FL; National Fire Protection Association, Quincy, MA; OSHA; ANSI; and training schools. User is responsible for using the proper procedures that apply to the particular application.

GENERAL WARNINGS & CAUTIONS

WARNING - PROPANE: This equipment is designed for use with vapor withdrawal propane gas cylinders only. Propane is extremely flammable, has a distinct odor and is heavier than air, causing it to accumulate in low-lying areas. When propane is ignited in uncontrolled situations it will cause an intense fire or explosion. Propane cylinders are pressurized. DO NOT DROP OR HIT.

- Always check equipment and hose for leaking gas with leak detector fluid. Stop if leak cannot be corrected.
- Always discontinue working if you smell gas.
- Always use and store cylinders in a secure, upright position and in a well ventilated, non-enclosed area. Keep heat and flame away from cylinders.

WARNING - FIRE HAZARD: This torch equipment is used with extremely flammable propane fuel that instantly produces a flame temperature of over 2,000 degrees. The flame or heat produced by this equipment can instantly ignite combustible material and can damage most all materials. Combustible materials include, but are not limited to, sawdust, cloth, dry grass, gasoline, paints, natural gas, plastic, insulation, wood and similar products. Combustibles, when heated or ignited, can cause severe fires or explosions.

- Always remove or completely protect combustibles from torch's flame and heat in and around your work area. The open flame and heat from this torch is difficult to see and can extend over 5 feet with certain accessories. Torch use can cause molten material, heat and embers to travel 25 feet or more in certain conditions.
- Always check to make sure no materials will unintentionally be exposed to heat or flame. If possible, water down any surrounding areas. Heat can be conducted to adjoining surfaces that may become pressurized or ignitable without direct flame contact.

- Always wear flame-resistant clothing to protect against the dangers of torch use. Always wear safety goggles and keep clothing free from oils.
- Always have both water and fire extinguisher easily accessible and provided for each worker operating a torch. After use, check work area thoroughly for at least 30 minutes for hidden hot spots that may cause fire. Water down any questionable areas.
- Always keep hot material and flame away from gas cylinders, hoses and regulators.

WARNING - VENTILATION: Always ventilate your work area and surrounding areas thoroughly with clean, fresh air to avoid hazards from the ignition of combustible gases or from breathing hazardous fumes.

- Always ventilate combustible gases from area before lighting a torch. Do not light a torch if the atmosphere in or around your work area contains combustible gases.
- Always ventilate any hazardous gases and fumes caused by using a torch, which is inhaled, can cause asphyxiation, nausea, fainting or death.
- Always ventilate the work area to resupply oxygen that was depleted from torch's combustion process.

WARNING - DOs AND DON'Ts: Listed below are general safety precautions that must be applied to avoid personal injury, death or property damage.

- DO take extra precautions before using a torch to remove explosive sources or pockets of gas that may exist around your work area.
- DO take extra precautions when working in confined spaces which will more quickly accumulate hazardous gases.
- DO protect combustible material that can be found in places like corners, voids, gaps and similar places around your work area.
- DO use only the proper parts and accessories with this equipment. Improper parts, service, repairs or modifications are dangerous and can void warranty.
- DO replace or repair equipment at the first sign of wear, tear or trouble.
- DO keep away from children.
- DO inspect the equipment for wear, tear and loose connections each time before lighting.
- DO comply with federal, state and local regulations.
- DO be aware tip-end will get very hot during use.
- DO replace gauges with gauges of identical pressure and use Teflon tape on the replacement gauges and all replacement fittings.
- DO make sure that flame is completely extinguished after turning equipment off. Use only a flint or electronic lighter to light this s equipment.
- DO make sure A/C units, exhaust fans and air intake fans are shut off so hot materials will not enter
- DO use caution when using torch near pipes and vents in case there is suction present.
- DO take extra precautions to secure cylinders on roofs, balconies and elevated places.
- DO clear hose of residual gas after each use in a well-ventilated area and away from flames and heat.

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- DO use a regulator or an excess flow valve.
 - DO disconnect equipment from fuel source after each use. DO close all valves when not in use.
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- DO NOT use this equipment in an enclosed area. This is an unvented device that consumes oxygen and emits hazardous carbon monoxide fumes.
 - DO NOT heat an object that contains or has contained flammable liquids or vapors. These can explode.
 - DO NOT leave an operating torch unattended.
 - DO NOT leave work area until you make certain there is, no smoldering or hot material that could ignite.
 - DO NOT repair any equipment (unless you are qualified to perform such work)
 - DO NOT modify equipment.
 - DO NOT point flame into unseen areas such as in holes, voids, or corners.
 - DO NOT place work piece on concrete or other rock-like material. These materials may explode.
 - DO NOT look directly into the encl of the tip or put near your face.

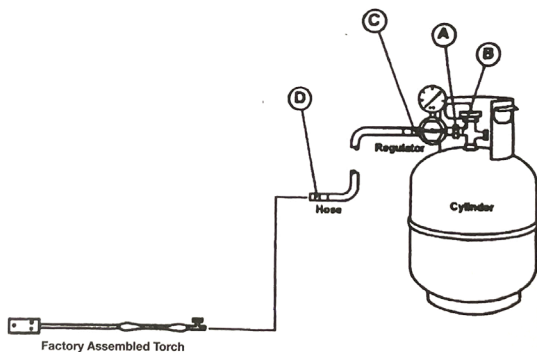
TO ASSEMBLE AIR-PROPANE EQUIPMENT

Caution prior to assembly, inspect "O" rings, washers, connections and equipment for damage, dirt or grease. Clean equipment of all foreign material before assembly. Do not use damaged or faulty equipment.

FACTORY ASSEMBLED TORCHES

When using factory assembled torches make sure connections have not loosened during transportation.

Attach excess flow valve or regulator inlet nut (A) to cylinder valve opening (B) and securely tighten with wrench. Attach hose nut (D) to, valve of factory assembled torch and securely tighten with wrench NOTE: Hose connections have left hand threads and are tightened in a counter-clockwise direction.



TO OPERATE AIR-PROPANE (VAPOR) EQUIPMENT

- 1) Make sure valve is closed on torch, furnace or flame tool.
- 2) Turn regulator pressure adjusting screw counter-clockwise until it turns without tension. This stops gas from exiting the regulator when the cylinder is opened. Excess flow valve does not have adjusting screw.

Use with Excess Flow Adapter

Slowly open cylinder valve to full open. If cylinder valve is opened too quickly, the excess flow adaptor will activate (you will hear a click when this occurs.) This activation minimizes gas flow through the adaptor. If this happens, the adaptor will automatically reset in approximately 10-20 seconds with the torch valve shut off; allow to reset. Proceed to step 4.

- 3) Turn regulator pressure adjusting screw clockwise to desired operating pressure.
- 4) Before using, always apply gas leak detector solution to all connections. Bubbles indicate a leak. Do this away from flames, sparks or spark-producing devices. Test for leaking gas no more than 30 seconds at a time. If a leak is detected, tighten and check again. Do not use if the leak cannot be corrected; return to place of purchase. Do not use flame to test for leaks.
- 5) If no leaks are present, point the heating assembly away from flammable material, open the control valve one quarter turn and use a spark lighter to ignite the gas. On pilot torch, (AP-54) while not depressing lever, open on/off valve at rear of torch. Open pilot valve O11 torch and light tip; adjust pilot flame to desired size. Depress lever for full brush flame; release lever to return to preadjusted pilot flame.
- 6) The flame will be almost invisible in bright light. Use the control valve and regulator to control the size and heat output of the flame.
- 7) To shut off the heating assembly, first close the control valve on the encl of the torch. The flame should go off. Next close the cylinder valve. Open the torch control valve to purge all gas out of the system. Back out the regulator adjusting screw and close the torch control valve.
- 8) Disconnect from fuel source when not in use.

GENERAL SOLDERING AND BRAZING INFORMATION

Soldering and brazing are processes of joining metals by heating a point to suitable temperature then applying a filler metal. Melting points of soldering filler metals is below 840°F, while brazing filler metals have melting points above 840°F.

Soft soldering is used when strength is not as important as sealing or conductivity, such as plumbing or electrical applications.

Silver brazing, sometimes referred to as silver soldering, is high in strength and is used to seal fittings containing higher pressure and temperatures, such as in hearing, air conditioning and refrigeration.

Phos-copper brazing is applied without flux and requires more heating. The application characteristics are like silver brazing.

BASIC STEPS IN MAKING A SOUND JOINT

- 1) Study the joint to make sure there is proper clearance for the filler metal to flow. This is approximately .003".
- 2) Clean surfaces free from dirt, grease, oil and oxides with steel wool, wire brushing, sanding, etc.
- 3) Apply flux to the cleaned area (except when using flux coated or pho-copper rod). Flux prevents further contamination and aids in the flow of the filler metal.
- 4) Choose the filler metal and heat the joint until the flux is completely fluid. Now move the direct heat away from the joint and touch it with filler metal. Inspect and if needed add filler metal and/or heat until the filler metal flows completely through and around the joint.
- 5) To prevent corrosion clean the joint area by removing all flux residue and debris.