

OWNER'S MANUAL AND INSTRUCTIONS

PROPANE AND NATURAL GAS TORCHES



*This owner's manual includes all components commonly used on this torch. However, depending on model purchased, some components may not be included as part of the total torch package. Please refer to price list to determine components purchased with **your** torch.*

<p>FOR YOUR SAFETY</p> <p>Do not use this torch in a space where gasoline or other liquids having flammable vapors are stored or used.</p>
<p>CAUTION</p> <p>The appliance area shall be kept clear and free from combustible materials, gasoline, and other flammable vapors and liquids.</p>
<p>WARNING</p> <p>Do not use open flame (matches, torches, candles, etc.) in checking for gas leaks. A fire or explosion may result.</p>
<p>WARNING</p> <p>L.P. gas is extremely flammable, heavier than air and does not disperse readily. If gas is smelled, evacuate the area immediately and call your fire department.</p>

<u>Model</u>	<u>Output (Btuh)</u>	<u>Fuel</u>
156	250,000	LP Vapor Withdrawal
162	400,000	LP Vapor Withdrawal
163	400,000	LP Vapor Withdrawal
164	365,000	Natural Gas
166	500,000	LP Vapor Withdrawal
168	200,000	LP Vapor Withdrawal
169	200,000	LP Vapor Withdrawal
171	500,000	LP Vapor Withdrawal

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Quality heaters you can count on.

W6636 L.B. White Rd., Onalaska, WI 54650 ■ (800) 345-7200 ■ (608) 783-5691 ■ (608) 783-6115, fax ■ info@lbwhite.com

Thank you

for purchasing L. B. White. This L. B. White torch incorporates the benefits from the most experienced manufacturer of heating products using state-of-the-art technology.

If you have any suggestions or comments, please call us toll free at 1-800-345-7200.

I. WARRANTY

- A. Equipment
L. B. White Co., Inc. warrants that the component parts of its equipment are free from defects in material and workmanship, when properly installed, operated, and maintained in accordance with the Installation and Maintenance Instructions, safety guides and labels contained with each unit. If, within 12 months from the date of purchase by the end user, any component is found to be defective, L. B. White Co., Inc. will at its option, repair or replace the defective part or equipment, with a new part or equipment, F.O.B., Onalaska, Wisconsin.
- B. Parts
L. B. White Co., Inc. warrants that replacement parts purchased from the company and used on the appropriate L. B. White equipment are free from defects both in material and workmanship for 12 months from the date of purchase by the end user. Warranty is automatic if a component is found defective within 12 months of the date code marked on the part. If the defect occurs more than 12 months later than the date code but within 12 months from the date of purchase by the end user, a copy of a bill of sale will be required to establish warranty qualification.

II. GENERAL INFORMATION

IMPORTANT

This Owner's Manual and all safety-related information as shipped with this unit are to remain with the unit.

Read this Owner's Manual and any other safety-related information accompanying this product before attempting to install, use, or service it.

Save this manual and all other safety-related information for future reference.

The manufacturer assumes no responsibility for equipment installed in violation of any code or regulation, or misapplication. This manual will instruct you in the service and care of your unit. Have your installer review this manual with you so that you fully understand the torch and how it functions.

The parts list within this Owner's Manual is designed for ease of parts selection. Wherever possible, the parts list allows parts selection without use of the model number. Parts may be selected by referring to applicable illustrations.

Contact your local L. B. White distributor or the L. B. White Co., Inc. for assistance, or if you have any questions about the use of the equipment or its application.

The L. B. White Co., Inc. has a policy of continuous product improvement and parts standardization. It reserves the right to change specifications and design without notice.

III. SAFETY PRECAUTIONS

GENERAL HAZARD WARNING

Failure to comply with the precautions and instructions provided with this torch can result in death, serious bodily injury and property loss or damage from hazards of fire, explosion, burn, asphyxiation, carbon monoxide poisoning, and/or electrical shock.

Only persons who can understand and follow the instructions should use or service this torch.

If you need assistance or torch information such as an instructions manual, labels, etc., contact the manufacturer.

WARNING

Fire, burn, inhalation, and explosion hazard. Keep solid combustibles, such as building materials, paper or cardboard, a safe distance away from the torch as recommended by the instructions. Never use the torch in spaces which do or may contain volatile or airborne combustibles, or products such as gasoline, solvents, paint thinner, dust particles or unknown chemicals.

1. All of L. B. White Co., Inc.'s torches should meet the requirements of local, state and national L.P. gas and natural gas, electrical and safety codes. Your gas supplier, local licensed electrician, local fire department, and governmental agencies can help you determine these requirements. In absence of local codes, comply with the Standard for Storage and Handling of Liquefied Petroleum Gas, ANSI/NFPA 58-Latest Edition. If you are still in doubt, contact the L. B. White Co.
2. Do not use the torch in unventilated areas. Adequate ventilation must be provided. Use of torches in unventilated, tightly-enclosed areas or living quarters may cause death or serious bodily injury due to asphyxiation.

3. If the flame in your torch becomes extinguished, shut off the gas immediately and wait until you are certain the gas has cleared away before relighting. Torches equipped with a safety control valve and thermo-couple assembly are designed to automatically shut off the gas supply if the flame is extinguished.
4. Constant supervision of the torch is required when in operation.
5. Ensure the torch receives the proper operating pressure as given in the specification table for the specific torch. See pages 5 - 8. Do not operate torch above prescribed operating pressure. Excess pressure may cause blowout of flame resulting in explosion with death or serious bodily injury.
6. Do not direct flame toward the gas cylinder as heat causes increased pressure. The safety valves on the cylinder may open releasing gas into the air, which can explode if ignited by the torch flame.
7. Keep the torch and its exposed flame away from all combustible materials (paper, cardboard, building materials, etc.)
8. Keep temperature of all gas cylinders below 100° F. Keep all cylinders out of enclosed areas.
9. Some torch models require a regulator to be connected to the gas supply to provide proper operating pressure. Other torches operate with direct tank pressure. Refer to the following table to determine if your torch requires a regulator for operation.

<u>Torch Model</u>	<u>Regulator Required</u>	<u>Regulator Not Required</u>
156	X	
162	X	
163	X	
164	X	
166	X	
168	X	
169		X
171		X

10. Use of an incorrect hose, regulator, POL fitting, or excess flow valve may lead to gas leaks and explosion or asphyxiation. If the torch is purchased without these items, or if these items are lost or damaged, contact the L. B. White Co. to obtain information on the correct parts to use with each torch.
11. Incorrect assembly of torch can result in fire, explosion, death, or bodily injury from asphyxiation due to gas leaks.
12. Follow assembly and operating instructions in owner's manual supplied with each torch, before using torch. If an owner's manual is lost or not available, contact L. B. White to obtain a copy on the correct parts to use with each torch.

13. If you suspect a gas leak or smell gas odor, **EXTINGUISH ALL FLAMES AND SPARKS IMMEDIATELY. CALL YOUR LP GAS DEALER AND YOUR FIRE DEPARTMENT.**
14. LP gas is heavier than air and settles in low areas. Do not install LP gas burning equipment in an area where gas may settle.
15. Inspect the torch at time of installation, and at each start up for gas leaks and at least once a month and whenever accidental damage occurs. Any damage to the torch must be repaired immediately by a qualified service person.

WARNING

Do not use a pressure washer, water, or liquid cleaning solution on any safety control components. Use of a pressure washer, water, or liquid cleaning solution on the safety control components can cause severe personal injury or property damage due to water and/or liquids:

- * Causing corrosion which can result in gas leaks and fire or explosion from the leak.

Clean all components of the torch with a dry brush or dry cloth.

16. If the torch is not working properly, remove from service immediately. Have it repaired and tested by an authorized person before placing it back into service.
17. Use gas pipe joint compound that is resistant to LP gas and natural gas on all connections.
18. Use only L. B. White replacement parts on our torches.
19. This torch is not to be used in heating living quarters.
20. The hose assembly shall be visually inspected prior to each use of the torch. If it is evident there is excessive abrasion or wear, or if the hose is cut, it must be replaced prior to the torch being put into operation. The hose assembly shall be protected from traffic, building materials and contact with hot surfaces during use and while in storage. The replacement hose shall be that specified by the manufacturer. (See parts list for specific torch.)

IV. INSTALLATION INSTRUCTIONS

1. Read all Safety Instructions and follow L. B. White recommendations when installing this torch.
2. Assemble according to the instructions provided on pages 5-8 for specific torch.
3. The unit's gas regulator (with pressure relief valve) must be installed so its vent is pointed downward.
4. Always use pipe joint compound that is resistant to LP gas and natural gas.
5. Check all connections with approved leak detectors.

WARNING

Do not use open flame (candles, torches, matches, etc.) in checking for gas leaks. A fire or explosion may result.

6. Light according to instructions within this manual.
7. If gas flow is interrupted and torch flame becomes extinguished, immediately close all fuel supply valves. Do not relight until you are sure that all gas that may have accumulated has cleared away. In any event, do not relight for at least 5 minutes.

WARNING

L.P. gas is extremely flammable, heavier than air and does not disburse readily. If gas is smelled, evacuate the area immediately and call your fire department.

V. LIGHTING INSTRUCTIONS

1. Read the Safety Instruction Manual (enclosed with the torch) and the Safety Precautions within this manual.
2. Insert POL fitting into propane cylinder and tighten with wrench. (POL and cylinder valve have left-hand threads.)
3. Close manual burner valve by turning valve handle according to arrow on valve.
4. Open propane cylinder valve slowly and check all connections for gas leaks with approved leak detectors at every connection. Correct any leak by tightening or disassembling leaking joint, reapplying pipe compound and retightening the joint securely. Replace the component if the leak cannot be stopped.

A. Models 156, 163 and 164 Torches with Pilot Safety Control Valve

1. Fully depress the button on the pilot safety control while applying flame to the pilot orifice.
2. Keep the button depressed on the safety control until the thermocouple warms up so the pilot stays lit after the control button is released.
3. Open manual main burner valve on the torch so main burner ignites.

B. Models 166, 168, 169 and 171 Torches

1. Open manual main burner valve on torch about 1/8 turn.
2. Apply a flame to torch outlet until gas lights.
3. Open manual valve completely.

C. Models 162 Torch

1. Open the manual main burner valve on the torch.
2. Fully depress the button on the safety control while apply flame to the burner outlet.
3. Keep the button firmly depressed until the thermocouple warms up so the burner stays lit after the button is released.
4. If torch will not operate, close manual needle valve and check excess flow valve by closing cylinder valve all the way for a few minutes and then reopening cylinder valve very slightly.

VI. SHUT-DOWN INSTRUCTIONS

1. Close manual cylinder valve and allow torch to burn off any gas remaining in the gas supply hose.
2. Close manual valve on torch handle.
3. For storage, the connection between the LP gas cylinder(s) and the torch must be disconnected. The cylinder(s) must be moved from torch and stored in accordance with Chapter 5 of Storage and Handling of Liquefied Petroleum Gases ANSI/NFPA 58-latest edition.

VII. MAINTENANCE INSTRUCTIONS

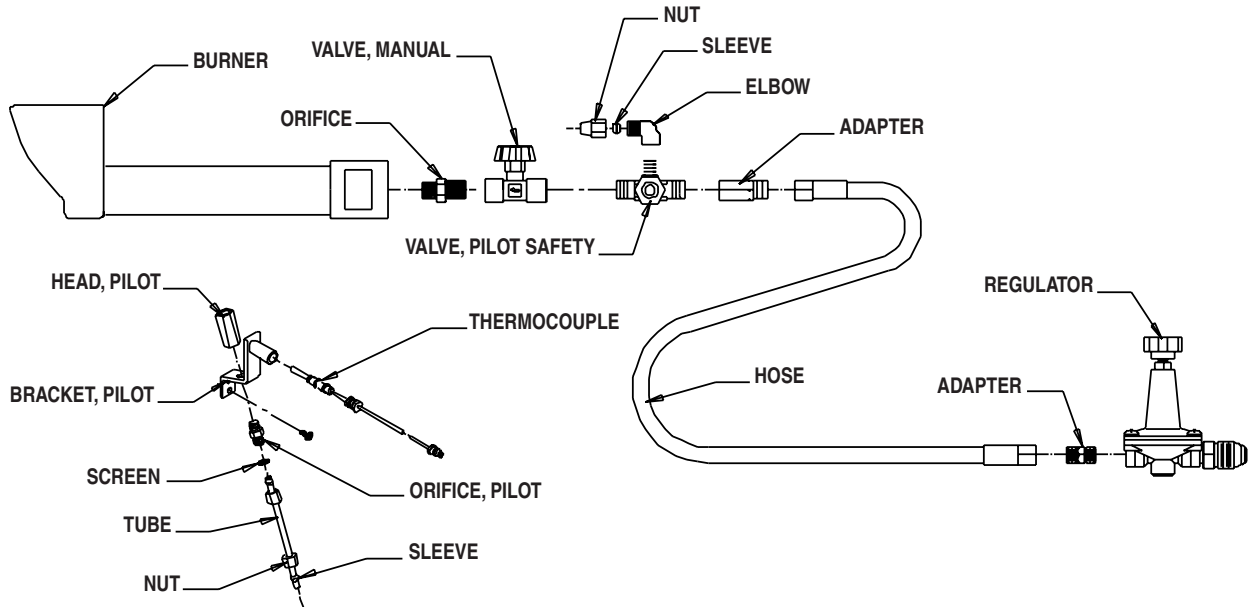
1. Shut off all gas supply valves before cleaning or performing maintenance procedures.
2. The torch should have all dust, dirt, or lint removed as necessary to ensure a clean unit. Special attention should be given to the primary air openings, controls, pilot light and burner.
3. Check all gas piping annually for leaks or restrictions in gas lines.

VIII. ASSEMBLY INSTRUCTIONS, SPECIFICATIONS AND PARTS SELECTION

Model 156

1. Connect one end of hose to adapter at torch inlet. Tighten securely.

2. Connect other end of hose to adapter at regulator. Tighten securely.



Specifications and Part Numbers

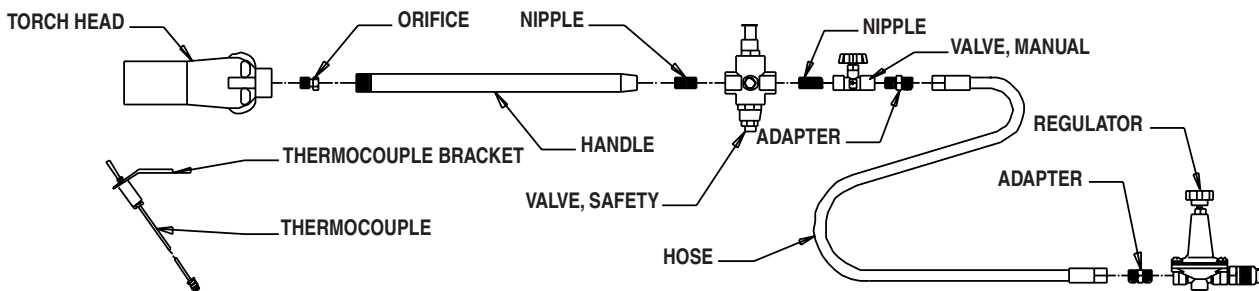
Model	Heat Output	Operating Pressure/Fuel	Torch	Pilot Head	Pilot Orifice	Screen	Sleeve	Nut
156	250,000 BTUH	25 PSIG LP Vapor	Cast Iron 320-03989	400-01079	310-01230	130-01722	130-02543	130-02542

Pilot Bracket	Burner Orifice	Pilot Tube	Thermocouple	Manual Valve	Pilot Safety Valve	Adapter	Hose	Adapter	Regulator
400-03202	310-01329	410-20529	120-05864	130-20229	130-07966	310-07970	550-20703 1/4 in. ID x 10 ft.	310-01098	550-21788

Model 162

1. Connect one end of hose adapter at inlet of needle valve. Tighten securely.

2. Connect other end of hose to adapter at regulator outlet. Secure tightly.

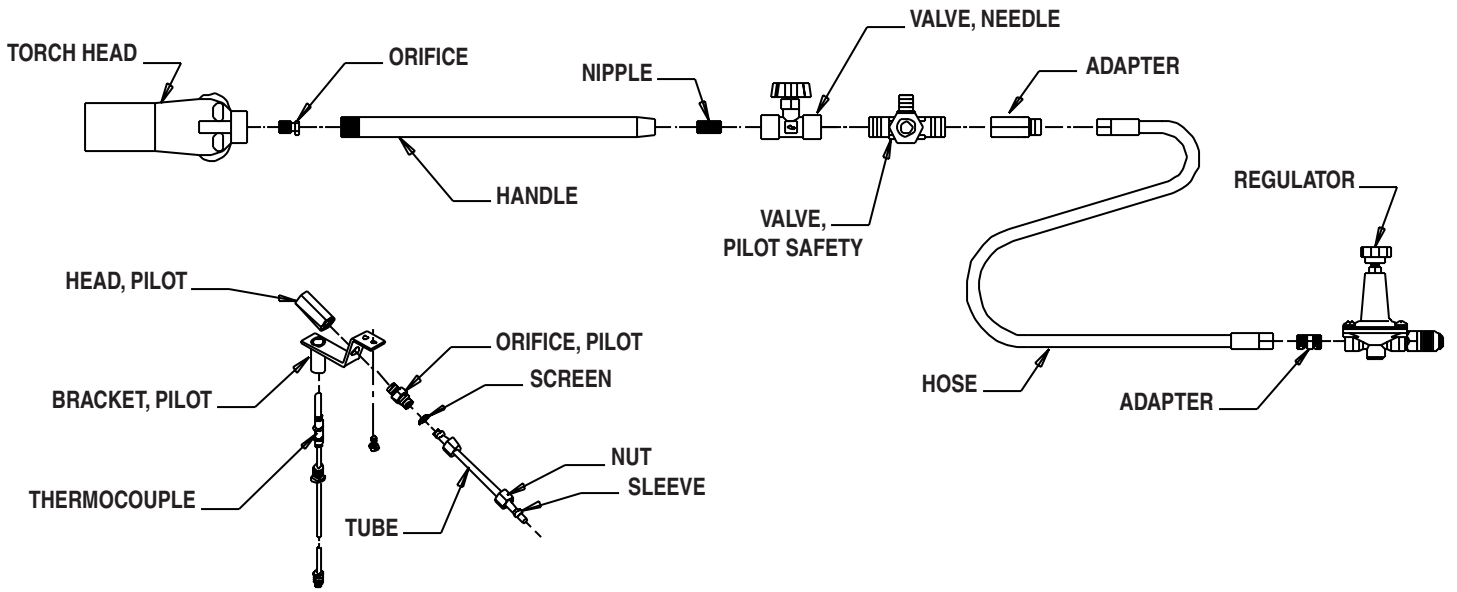


Specifications and Part Numbers

Model	Heat Output	Operating Pressure/Fuel	Torch Head	Handle	Orifice	Nipple	Manual Valve	Hose Adapter	Hose	Regulator	Safety Valve	Thermocouple	Thermocouple Bracket
162	400,000 BTUH	25 PSIG LP Vapor	Cast Iron, 320-03432 2 3/8 in. OD x 7 in.	330-05169 11 in.	310-03416	130-01142	130-20229	310-01098	550-20703 1/4 in. x 10 ft.	550-21788 25 PSIG	130-01108	30 in. 120-01020	400-01094

Models 163

1. Connect one end of hose adapter at inlet of needle valve. Tighten securely.
2. Connect other end of hose to adapter at regulator outlet. Secure tightly.



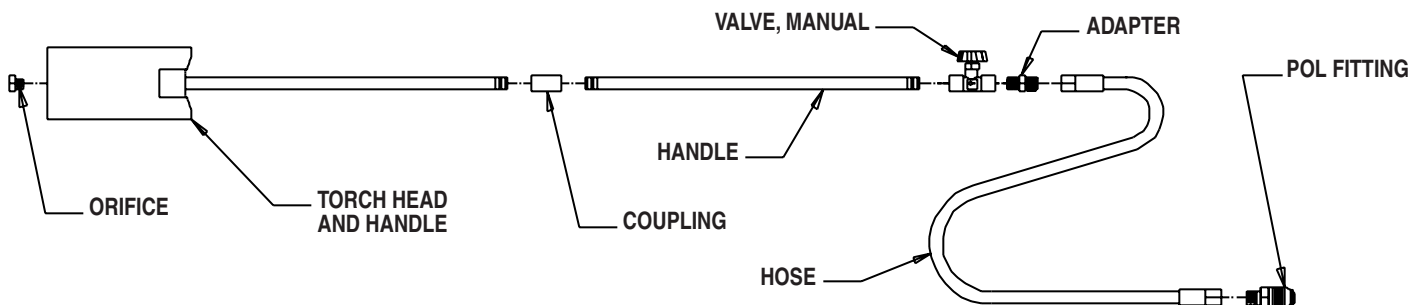
Specifications and Part Numbers

Model	Heat Output	Operating Pressure/Fuel	Torch Head	Handle	Orifice	Nipple	Manual Valve	Hose Adapter (at Regulator)	Hose Adapter (at Pilot Valve)
163	400,000 BTUH	25 PSIG LP Vapor	Cast Iron 320-03432 2 3/8 in. OD x 7 in.	330-01018 13 in.	310-03416	130-01142	130-20229	310-01098	310-07970

Hose	Regulator	Pilot Safety Valve	Thermocouple	Bracket, Pilot	Head, Pilot	Orifice, Pilot	Screen	Tube	Nut	Elbow	Sleeve
550-20703 1/4 in. x 10 ft.	550-21788 25 PSIG	130-07966	30 in. 120-01020	400-03202	400-01079	310-01230	130-01722	130-02550	130-02542	130-07968	130-02543

Models 169 and 171

1. Connect handle coupling onto handle of torch head. Tighten securely.
2. Connect handle into coupling. Tighten securely.
3. Thread hose adapter into inlet of needle valve. Note gas flow arrow on valve body. Tighten securely.
4. Connect manual valve to handle on torch. Note gas flow arrow on valve body. Tighten securely.
5. Attach hose onto hose adapter at needle valve.
6. Connect other end of hose onto POL fitting and tighten securely.



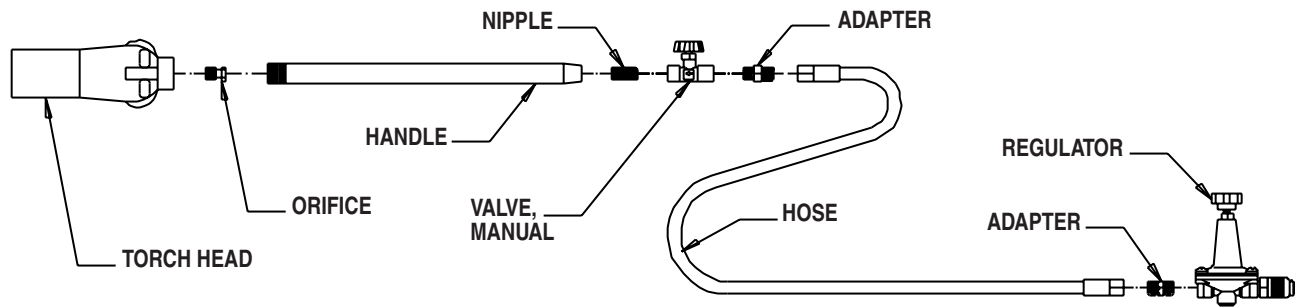
Specifications and Part Numbers

Model	Heat Output	Operating Pressure/Fuel	Torch Head and Handle	Orifice	Handle	Manual Valve	Hose	Hose Adapter	Coupling	P.O.L. Fitting
169	200,000 BTUH	Tank Pressure	420-06383 Tubular Steel 3 in. OD x 6 in.*	310-05166	410-05161 14 in.	130-20229	550-20703 1/4 in. OD x 10 ft.	310-01098	130-02954	130-05170
171	500,000 BTUH	LP Vapor	420-06164 Tubular Steel 3 in. OD x 6 in.*	310-05168						

* Torch head dimension only. Handle welded to head is 14 in. length.

Models 166 (BIG BERTHA) and 168 (LITTLE BERTHA)

1. Connect nipple into handle of torch. Tighten securely.
2. Connect manual valve to nipple. Note gas flow arrow on valve body. Tighten securely.
3. Connect hose adapter to inlet of manual valve. Tighten securely.
4. Connect hose to adapters at needle valve and regulator outlet. Tighten securely.



Specifications and Part Numbers

Model	Heat Output	Operating Pressure/Fuel	Torch Head with Orifice	Orifice	Handle	Nipple	Manual Valve	Hose Adapter	Hose	Regulator
166	500,000 BTUH	25 PSIG	320-02856 Cast Iron 2 3/8 in. OD x 8 in.	310-01016	330-05169 11 in.	130-01142	130-20229	310-01098	550-20703 1/4 in. OD x 10 ft.	550-21788 25 PSI
168	200,000 BTUH	LP Vapor	320-02854 Cast Iron 2 in. OD x 7 in.	310-10132						

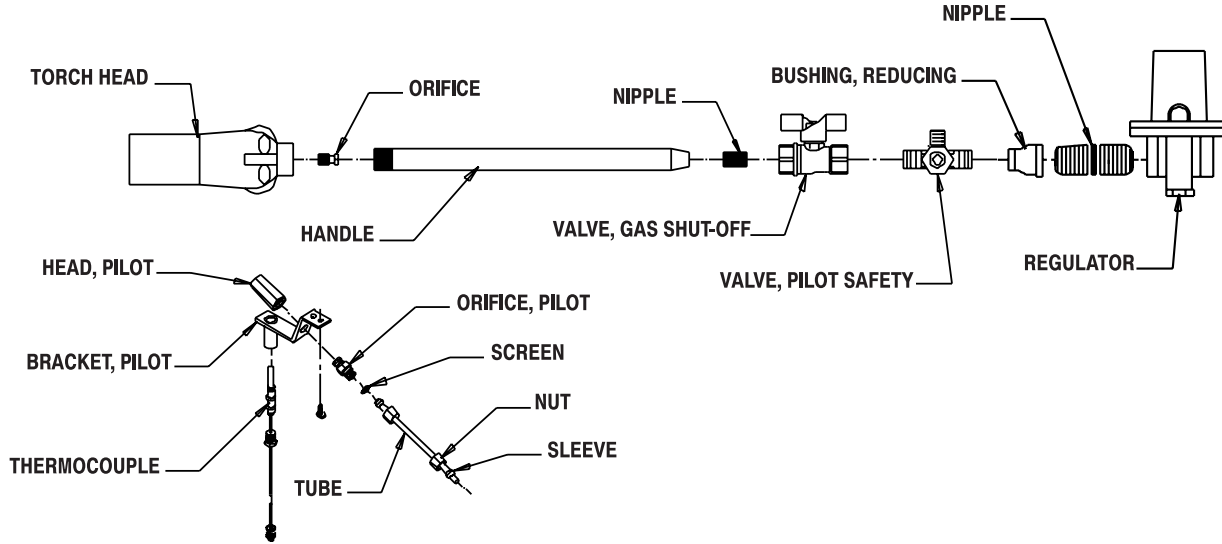
Model 164

This torch is completely assembled and tested by the factory prior to shipment. Assembly is not required.

IMPORTANT

The Model 164 natural gas torch requires a maximum of 15 PSIG and a minimum of 10 PSIG at the inlet of the regulator to achieve the 7 PSIG outlet pressure necessary to obtain rated heat output.

Make sure your natural gas utility is capable of supplying this pressure to the inlet of the regulator.



Specifications and Part Numbers

Model	BTUH	Operating Pressure/Fuel	Torch Head	Handle	Orifice	Manual Valve	Hose*	Regulator
164	365,000 BTUH	Inlet Max. 15 PSIG Inlet Min. 10 PSIG Outlet 7 PSIG Natural Gas	Cast Iron 320-01014 2 1/3 in. OD x 8 in.	330-01018 13 in.	310-01081	130-09698	550-20704 1/2 in. ID x 10 ft.	550-01104 7 PSIG

* Hose is ordered as an accessory and does not ship as standard with the torch.

Pilot Safety Valve	Thermocouple	Bracket, Pilot	Head, Pilot	Orifice, Pilot	Tube, Pilot	Nut	Sleeve
130-07966	36 in. 120-03066	400-03202	400-01079	310-01520	550-07079	130-02542	130-02543