

D PROPANE FURNACE
DESCRIPTION AND USE

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1. GENERAL

- 1.01 This section covers the description and use of the D Propane Furnace. The B and C Propane Furnaces are retained as superseded types.
- 1.02 This section is reissued to revise testing procedures to ensure the safe operation of propane furnaces.
- 1.03 To permit proper seating of the paraffin pot on the furnace, the D propane furnace is constructed with 1-inch diameter trunnions instead of the 1- $\frac{1}{4}$ inch diameter trunnions found on the older furnaces. In all other respects, the D and C propane furnaces are identical.
- 1.04 Information pertaining to the B and C propane cylinders and the C manhole heater is found in Sections 081-330-116 and 081-315-101, respectively. The workman should be familiar with these sections prior to using the furnace.
- 1.05 The E pressure hose, solder pot shield, and hood are not parts of the furnace and must be ordered separately.

NOTICE
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2. DESCRIPTION

2.01 The D propane furnace consists of a burner, furnace unit (includes handle, top, body, and base), regulator (includes regulator, gauge, and dust cap), and a control valve. The entire unit weighs about 15 pounds. Figure 1 illustrates the D propane furnace.

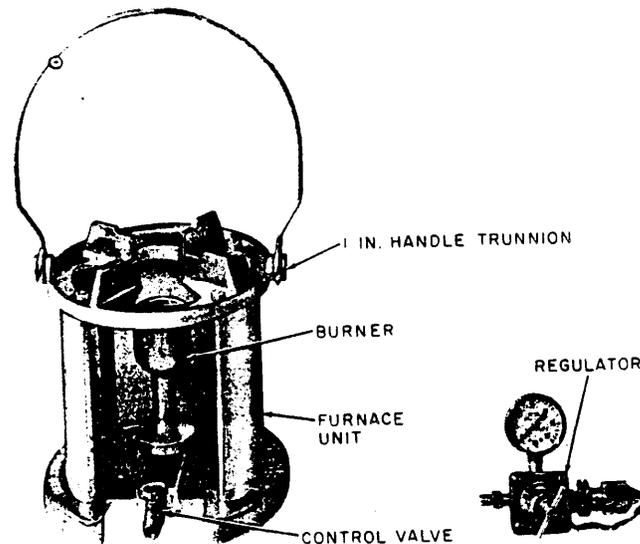


Fig. 1 - D Propane Furnace

- 2.02 The hood is placed on the furnace as shown in Fig. 2 when the furnace is used as a tent heater.
- 2.03 A shield is available that may be placed on the furnace as shown in Fig. 3 when the furnace is used to heat solder.
- 2.04 Figure 4 illustrates a typical setup of the D Propane Furnace.

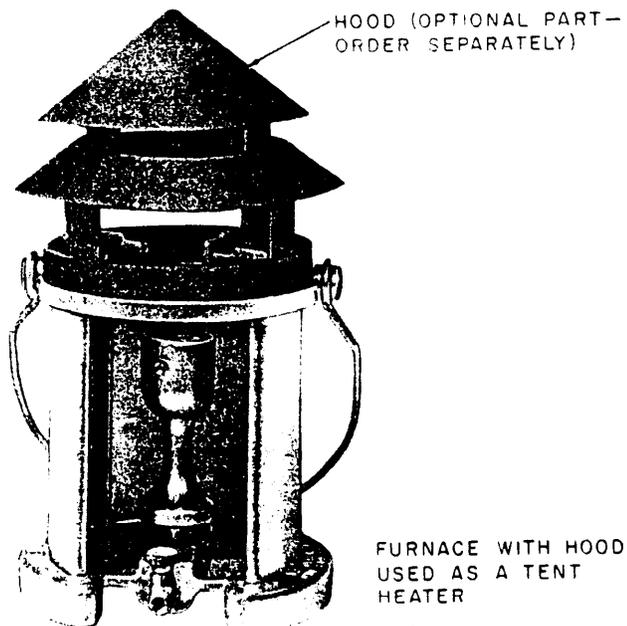


Fig. 2 - Hood in Place on Furnace

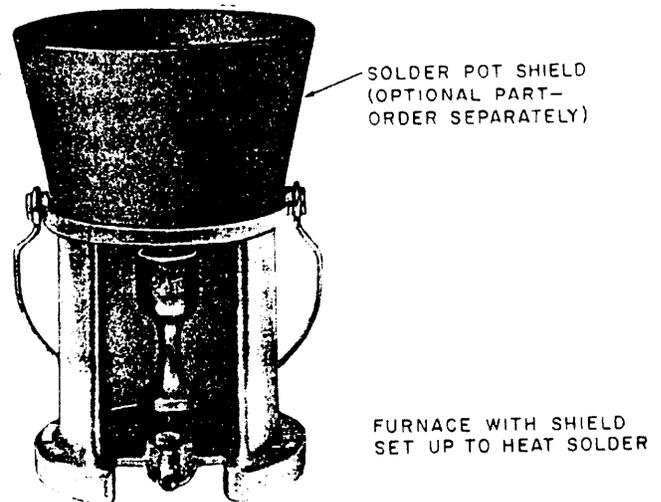


Fig. 3 - Solder Pot Shield in Place on Furnace

3. PRECAUTIONS

- 3.01 Propane gas is highly explosive and heavier than air. When used in the vicinity of a manhole and a leak occurs, the gas would seek the lowest level and enter the manhole. Locate the tank as far away from the manhole as possible.
- 3.02 Always store the cylinders in an upright position.
- 3.03 Provide adequate ventilation when the furnace is used with the hood as a tent heater. There is a danger of oxygen deficiency when the furnace is operated in any tightly closed area.
- 3.04 **NEVER TEST FOR LEAKS WITH AN OPEN FLAME.** Follow procedures outlined in paragraphs 4.06 and 4.07 of this practice.
- 3.05 **DO NOT USE A FURNACE IN A MANHOLE.** When the furnace is used in the vicinity of a manhole and a tent is in place over the manhole the furnace must be operated outside the tent.

- 3.06 Do not use the furnace in a tent when hot paraffin is present. After any boiling-out operation, ventilate the tent before using the furnace as a tent heater.
- 3.07 Do not touch or allow tools, equipment, or articles of personal clothing to come in contact with the upper portion of the furnace when the furnace is hot.
- 3.08 Do not store the furnace until it has cooled sufficiently.
- 3.09 Keep the cylinder valve closed when the furnace is not in operation.
- 3.10 Keep all connections free from dirt or obstructions to avoid clogging the regulator valve or furnace orifice. Keep the dust cap in place on the regulator when the regulator is not connected to the cylinder.
- 3.11 Do not attempt to make any repairs on the regulator.
- 3.12 Observe all precautions in Section 081-330-116 on B and C propane cylinders.

4. USE

- 4.01 The D propane furnace is used to (1) heat materials used in splicing operations, (2) heat tents when the hood is properly placed on the furnace and the proper gas pressure is maintained, and (3) provide warm air for ventilating manholes with the furnace is used in conjunction with the C manhole heater and a blower.

OPERATION

- 4.02 Inspect the tank, heater and assembly for defects.
- 4.03 To operate the furnace connect the regulator to the propane cylinder and the E pressure hose to the regulator and furnace, as shown in Fig. 4, using B or C regulator wrench to tighten the connections.
- 4.04 Close the furnace control valve.
- 4.05 Open the valve on the propane cylinder.
- 4.06 Soap test all fittings for leaks, taking care to prevent the soap solution from coming into contact with the face of the regulator.
- 4.07 If the pressure hose is suspected of leaking, test by immersing the hose in water. No attempt should be made to repair leaks other than to assure that the connections are properly tightened. Return defective parts for exchange in accordance with local procedures.

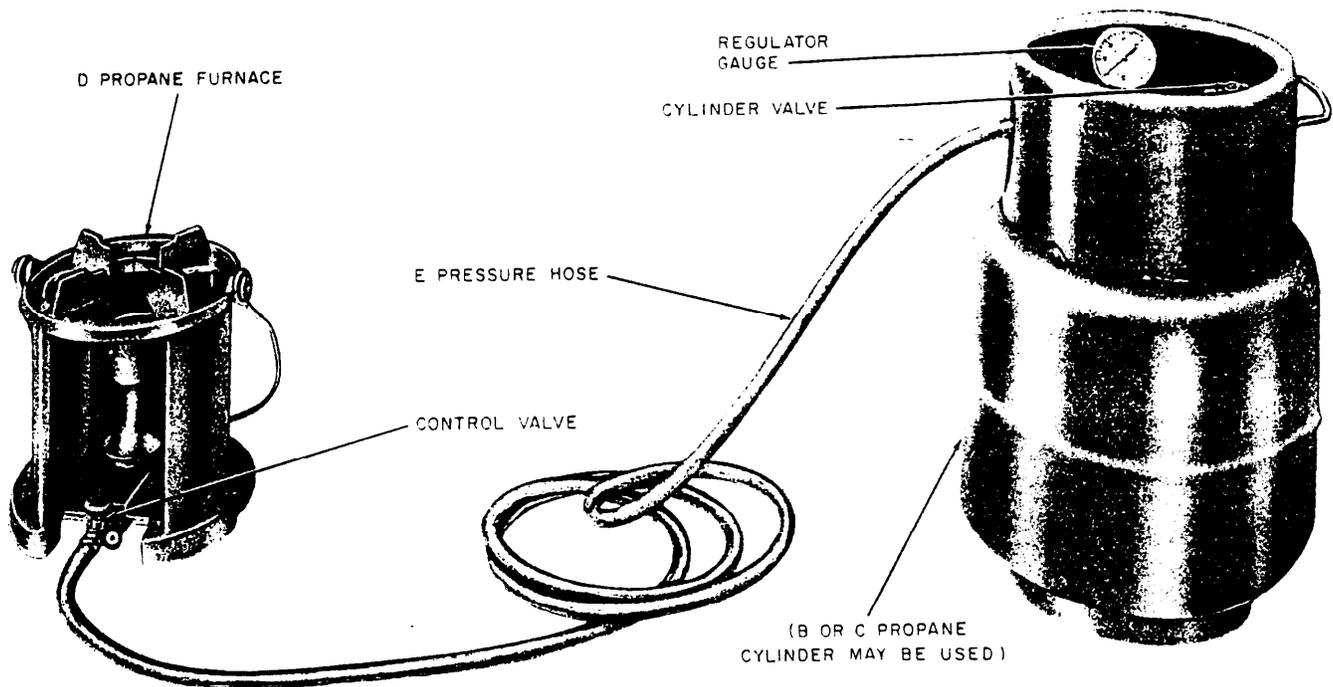


Fig. 4 - Typical Setup

- 4.08 Open the control valve $\frac{1}{4}$ -turn and ignite the gas with a friction-type lighter.
- 4.09 Control the flame by means of the control valve.
- 4.10 Extinguish the flame on the furnace by closing the cylinder valve located on the propane cylinder.
- 4.11 If the flame should go out, close the control valve and, after a short wait to allow excess gas to dissipate, relight the furnace using the method previously described. If the furnace was being used in a tent, thoroughly ventilate the tent before relighting the furnace.
- 4.12 If the regulator does not function properly, examine the regulator vent to ensure that it is free of foreign material. Also check the four bonnet mounting screws. (Loose screws will permit propane to leak past the diaphragm seal. Tighten as required). If after checking the screws, the regulator does not function properly, exchange the regulator in accordance with local instructions. **DO NOT ATTEMPT TO MAKE ANY REPAIRS ON THE REGULATOR.**
- 4.13 To keep the burner free of dirt or other obstructions, clean it with a wire brush.

- 4.14 Furnace replacement and associated parts are:
- . Hood
 - . Burner
 - . Valve, Control
 - . Regulator (includes gauge and dust cap)
 - . Unit, Furnace (includes handle, top, body and base)
 - . Shield

5. Superseded Types

- 5.01 The superseded B and C propane furnaces are basically the same as the D propane furnace and are used for the same operations.
- 5.02 Procedures in this practice covering precautions and the use of the D propane furnace apply to the superseded types.