

## PNEUMATIC LEAD CUTTING AND MASONRY

### DRILLING KIT—

### DESCRIPTION AND USE

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#### 1. GENERAL

1.01 This section describes the Pneumatic Lead Cutting and Masonry Drilling Kit and its uses.

1.02 This kit may be used as an aid for cutting, opening, or removing lead sleeves and wiped end joints on splices. It eliminates the need for the unwiping operation and the associated heating of solder. It will also facilitate drilling operations in manhole walls and other masonry surfaces.

#### 2. DESCRIPTION

2.01 The No. 970 Lead Cutting and Drilling Kit (Fig. 1) consists of a Black and Decker Pneumatic hammer, No. 948 Lead Cutter, No. 948R Lead Cutter, No. 954 Scraper Chisel, a safety tool retainer, a drill adapter, and a metal carrying case. A small Allen wrench for use with the retainer and a drift pin are also included with the kit.

2.02 The power source for the hammer is compressed air or nitrogen. The C Gas Regulator may be used with the nitrogen cylinder.

#### 3. PRECAUTIONS

3.01 The pneumatic hammer is normally operated between 50 psi and 90 psi and uses approximately 5 CFM of compressed air or nitrogen.

\*\*Reprinted to comply with modified final judgment.

Occasionally it may be necessary to increase the pressure; however, *at no time should the pressure exceed 125 psi.*

3.02 While the pneumatic hammer is in operation the manhole must be power ventilated.

3.03 The hammer *should not* be operated until the chisel point is in a cutting position. Operation in midair may damage the piston or the safety tool holder.

3.04 *Eye protection is required while operating the hammer.*

3.05 All requirements called for in Section 620-140-501 shall be observed when the hammer is used in a manhole.

#### 4. MAINTENANCE

4.01 When the tool is new and thereafter daily before using, lubricate by placing approximately 4 drops of lightweight oil (KS-6232 or equivalent) into the air inlet on the hammer. After the air hose is connected and the hammer operated, the lubricant is distributed by the flow of air.

4.02 If there is erratic action or loss of power when the hammer is being used:

- Check air supply for constant flow at sufficient pressure
- Check air lines and connections for leaks
- Flush hammer with lubricant described in 4.01.

Should the problem persist, return the tool for repair.

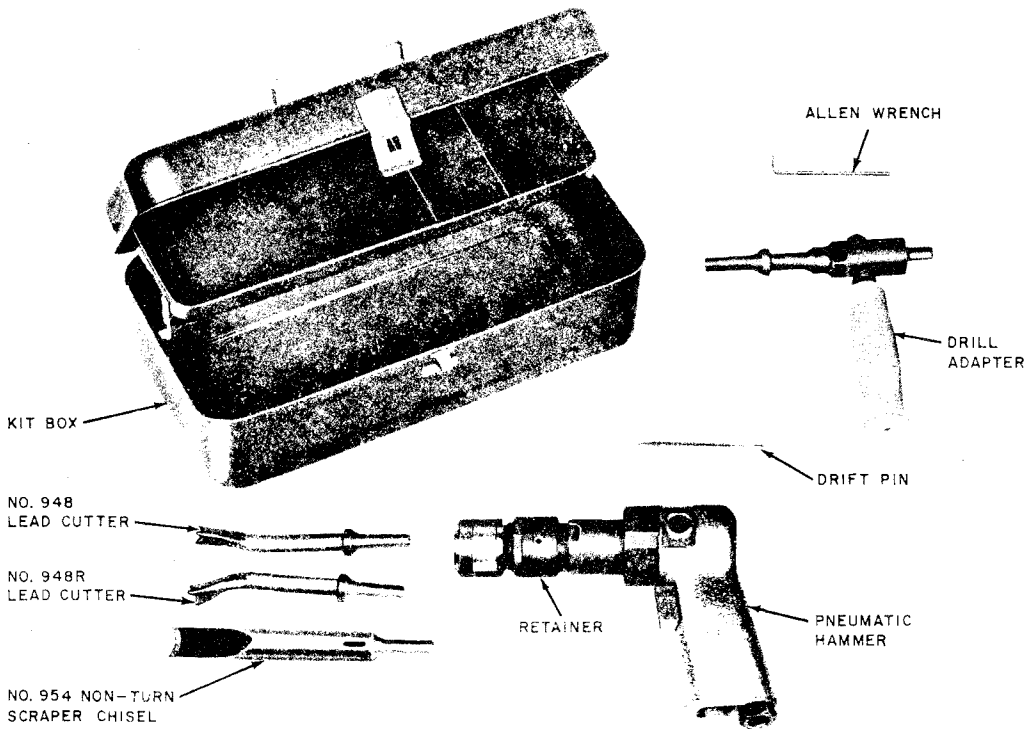


Fig. 1—No. 970 Lead Cutting and Drilling Kit

## 5. USE

**5.01** After observing the precautions and maintenance instructions, connect the hammer to the pressure source.

**5.02** The following procedure describes the method for complete removal of a lead sleeve having a Y joint at each end. If only the center portion of the sleeve is to be removed or if the lead wedge is to be left in place, discontinue sleeve removal at appropriate step.

**5.03** Before cutting firmly engage the tip of the blade into the lead sleeving. Make a longitudinal cut using the 948 tool as shown in Fig. 2. **Caution should be observed to avoid damaging underlying cable conductors.**

**5.04** Remove the 948 tool and replace it with the 948R tool.

**5.05** Make a cut around the sleeve at each end as shown in Fig. 3. The sleeve may now be pried open in the usual manner.

**5.06** Working from the front, complete cutting away the center portion of the sleeve as shown.

**5.07** Removal of the wiped end and lead wedges is accomplished by cutting away small wedge shaped sections using the 954 chisel or by unwiping. It is important that the craftsmen should not try to remove a large section in one cut as this will invariably lead to sheath damage.



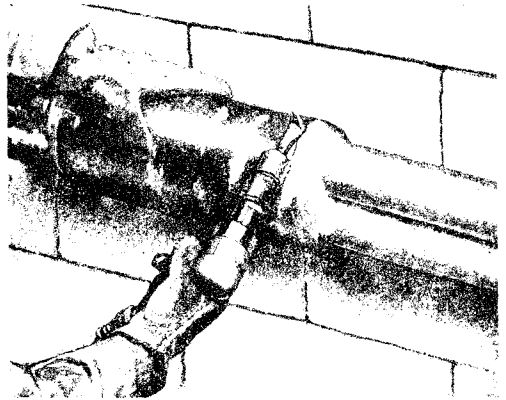
Fig. 2—Longitudinal Cut (No. 948 Tool)

**5.08** While removing the wiped ends, *no cut should be closer to the sheath than 1/4 inch.*

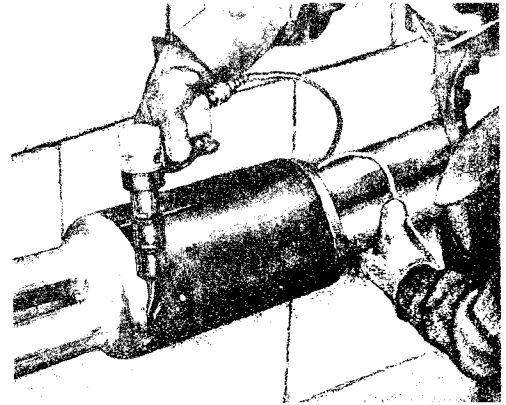
**5.09** The small quantity of sleeve and solder remaining on the cable sheath may be partially removed using the chisel. It is important that the sheath should not be damaged, therefore, final removal of the solder should be accomplished using a rasp or a hot soldering copper.

**5.10** To use the pneumatic hammer for drilling, depress the retainer, install the drill adapter, and insert the drill bit appropriate for the job involved.

**5.11** When standard drilling is being done press the tip of the drill bit firmly against the surface at the exact location of the desired hole. As the hammer is operated rotate the handle slowly in a 90 to 180 degree arc to aid in drilling (Fig. 4).



A



B

Fig. 3—Peripheral Cuts (No. 948R Tool)

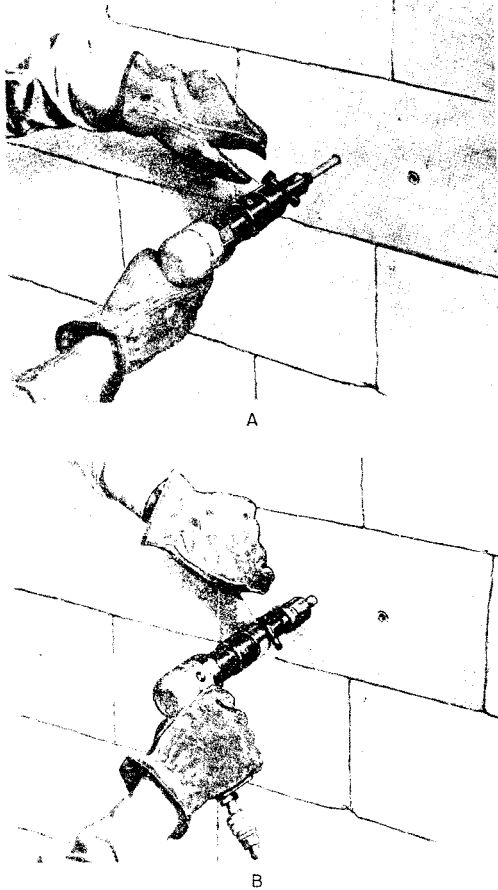


Fig. 4—Drilling Operation