

*BJM #806B*

**PLUGS  
CLEANING AND POLISHING  
USING  
PORTABLE PLUG CLEANER**

**1. GENERAL**

**1.01** This section covers procedures for cleaning and polishing various types of plugs using the 384A portable plug cleaner.

**1.02** This section, which replaces Section 022-180-811, is reissued to add the 385D plug chuck to the list of tools and materials and to add procedures for mounting the 396-type plug in this chuck.

**1.03** Plugs having dirty contacting surfaces may cause noise and cutouts resulting in adverse service reactions. Therefore, it is important to maintain the contacting surfaces in a satisfactorily clean condition. The procedures covered in this section provide means of cleaning the tip, ring, and sleeve portions of the plugs.

**1.04** In general, satisfactory cleaning results are obtained by using a mild abrasive applied under moderate pressure at relatively low speed. These conditions are obtained with the portable plug cleaner and hand methods covered in this section. Exceptions are made to these procedures in the case of silver-tipped plugs as outlined in 1.05. As stated in 1.06, these procedures do not apply to gold-plated coaxial-type plugs.

**1.05 *Silver-Tipped Plugs:*** Some plugs commonly used with J and K carrier equipment have brass sleeves and silver tips. Procedures for cleaning these plugs are covered in 4.05.

**1.06 *Gold-Plated Coaxial-Type Plugs:*** These plugs should not be cleaned with metal polish or other abrasives, or with manual or motor-driven plug cleaners. Procedures for cleaning these plugs are covered in 4.06.

**2. LIST OF TOOLS AND MATERIALS**

CODE OR SPEC NO.	DESCRIPTION
<b>TOOLS</b>	
384A	Portable Plug Cleaner
385A	Plug Chuck (for 47- and 347-type plugs)
385B	Plug Chuck (for 137-, 152-, and 289-type plugs)
385C	Plug Chuck (for 109-, 110-, 309-, and 310-type plugs)
385D	Plug Chuck (for 396-type plugs) ←
<b>MATERIALS</b>	
KS-2423	Cloth
KS-7860	Petroleum Spirits
P-243641	Cotton Cord [1 hank (48 feet) of cord is furnished with 384A portable plug cleaner]
—	Bell System Metal Paste Polish

**3. PREPARATION OF TOOLS AND MATERIALS**

**384A Portable Plug Cleaner**

**3.01 *Mounting the Plug Cleaner:*** If the portable plug cleaner is to be used at a switchboard having a lockrail, adjust the mounting bracket of the cleaner to accommodate the thickness of the rail. A tight fit on the rail is not required. Lift the keyshelf and mount the cleaner on the rail. The cleaner may be positioned in a similar manner on any convenient mounting surface.

**3.02 Mounting 385-Type Chuck in Cleaner**

(1) Mount the chuck provided for the type of plug to be cleaned in the cleaner as follows. The chucks for various type plugs are covered in Part 2, List of Tools. Insert the stud of the chuck in the hole in the upright portion of the portable cleaner so that the two pins in this portion of the cleaner enter their associated holes in the chuck. Secure the chuck in position by tightening the wing nut on the stud with the washer under the nut.

(2) Clamping the plug in the chuck may be facilitated by positioning the chuck clamp lever so that it extends downward in the clamped position.

**Cord for Cleaning Plug**

**3.03** To prepare a cleaning cord, cut a 2-foot length of the cord. Evenly distribute a small amount of Bell System metal paste polish over approximately one-half the length at one end of the cord. Avoid excessive polish on the cord to prevent accumulation of polish on the plug being cleaned. The other half of the cord is used to remove the small amount of polish remaining on the plug after cleaning.

**3.04** With the plug cleaner mounted as described in 3.01, wrap the half of the cord to which metal polish was applied around the centering pin of the plug cleaner as follows. Facing the outer end of the plug cleaner, pass the treated half of the cord over the centering pin from the left, loop the cord once around the pin, and bring the right end of the cord down at the rear of the loop and to the right of the pin.

**4. CLEANING PROCEDURES**

**4.01 Mounting Plug in Plug Cleaner:** Insert the plug to be cleaned into the chuck and position the plug tip firmly against the centering pin. When inserting the 137-, 152-, 289-, and 396-type plugs in the chuck, position one of the twin tips firmly against the centering pin. In the case of the 396-type plug, make sure that the twin plug tips are in a horizontal plane. Swing the clamp lever to securely clamp the plug in

position. After cleaning one tip, invert the plug in the chuck and clean the other tip. While mounting or removing the plug, the cord may be hung over the front of the cleaner as shown in Fig. 1.

**All Plugs Except Silver-Tipped Plugs and Gold-Plated Coaxial-Type Plugs**

**4.02** Slide the cleaning cord over the tip of the plug. Then draw the portion of the cord to which the polish was applied up and down and back and forth along the plug until all parts of the plug are clean. Avoid excessive pressure and speed which might damage the plug insulation.

**4.03** After cleaning the plug as covered in 4.02, draw the cord across the plug until the portion without polish engages the plug. Repeat the procedure covered in 4.02 to remove all polish from the plug or, if preferred, wipe the plug with a clean KS-2423 cloth after removing the plug from the plug cleaner.

**4.04** Periodically apply a small amount of polish to the cleaning cord. Discard the cord when it becomes worn or frayed.

**Silver-Tipped Plugs**

**4.05** Using a fresh cord with a very small amount of metal polish, clean these plugs as covered in 4.02 and 4.03 but take care to exert very light pressure during the cleaning operation.

**Gold-Plated Coaxial-Type Plugs**

**4.06** The following limitations apply to the cleaning of these plugs.

- (1) Plug cleaners, metal polish, or abrasives should not be used.
- (2) The inner surfaces of these plugs should not be cleaned.
- (3) Clean the exterior surfaces of the plug using a clean KS-2423 cloth moistened with KS-7860 petroleum spirits. Take care that no dirt is deposited on the inner surfaces while cleaning the exterior surfaces. After cleaning, wipe the exterior surfaces of the plug with a dry KS-2423 cloth.

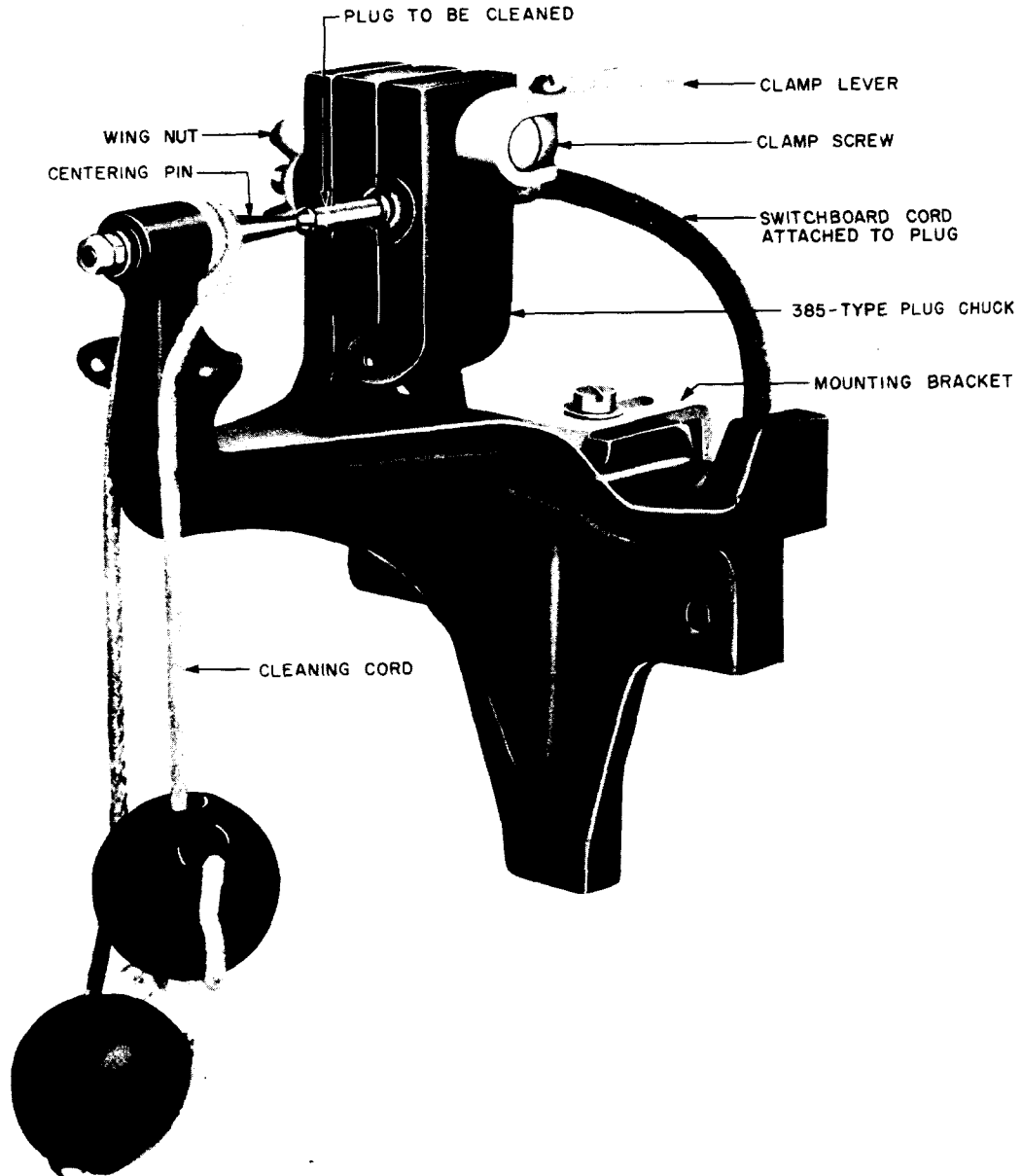


Fig. 1 - 384A Portable Plug Cleaner With Plug Mounted in 385-Type Chuck Before Being Clamped