

Issue No.	Date of Issue	Approved	
		B.T.L.	D.& R.
1-D	4-5-28	WHM	GWK
A. T. & T. CO. STANDARD			

REQUIREMENTS AND ADJUSTING PROCEDURES
FOR
CENTRAL OFFICE AND PBX APPARATUS

CLEANING PROCEDURES
FOR
KEY CONTACTS

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
Department of Development and Research
Bell Telephone Laboratories, Inc.

SECTION 1 - GENERAL

1.1 The cleaning procedures specified herein shall be followed in cleaning key contacts. These procedures supplement the methods for cleaning which are included in the "X" specifications covering individual types of keys.

1.2 Due to the fact that the failure of a circuit to function properly is often traced to dirty contacts, it is essential that these contacts be kept clean. Therefore, it is important where a key is equipped with a cover that this should not be left off the key longer than absolutely necessary. Also the keyshelf should not be kept open unnecessarily.

1.3 The methods for taking the key apart are covered by the individual "X" specifications for the various types of keys and are not therefore included herein.

1.4 The bottle containing the CP carbon tetrachloride should be kept corked when not in use to prevent evaporation and to avoid dust getting into the liquid. The liquid and the inside of the bottle must not be permitted to become dirty. Occasional cleaning of the bottle and replacement of the liquid will prevent this. It is also important that a clean toothpick be used for each set of

contacts as it has been found that otherwise the deposit removed from one set of contacts may be left in the liquid and later deposited on another set of contacts.

1.5 List of the Tools and Materials required for use in cleaning key contacts covered by this R.A.P.

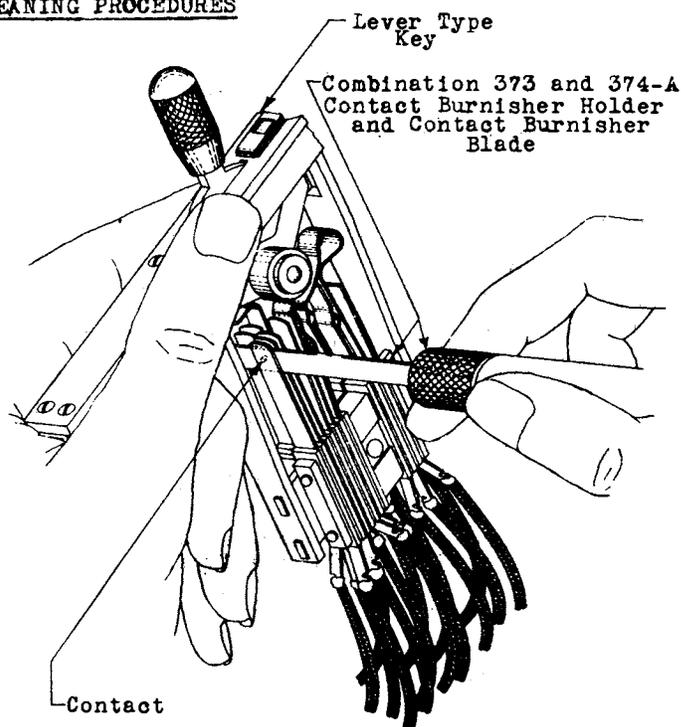
<u>Tools</u>	
<u>Code No.</u>	<u>Description</u>
373	Contact Burnisher Holder
374-A	Contact Burnisher Blade
374-B	Contact Burnisher Blade
KS-2993	Camel's Hair Brush

Materials

-	C.P. Carbon Tetrachloride
-	Cloth per KS-2423
-	Hardwood Toothpicks, Flat at One End and Pointed at the Other

SECTION 2 - CLEANING PROCEDURES2.1 CLEANING CONTACTS

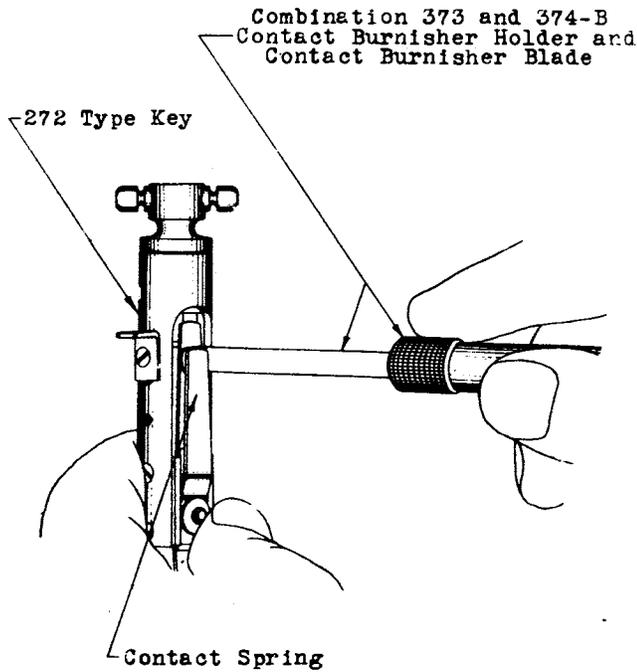
M-1 Burnishing Contacts To burnish the contacts use the Nos. 373 and the 374-A or B contact burnisher holder and contact burnisher blade as shown in Fig. A. In burnishing normally open contacts, press the contacts together manually, or operate the key giving a slight pressure only on the blade of the burnisher. In the case of normally closed contacts, the tension of the springs themselves will usually furnish sufficient pressure against the burnisher. Usually, by rubbing the burnisher back and forth between the contacts two or three times, the desired result is obtained. Note that the key still meets the contact follow requirement after burnishing as constant burnishing increases the contact separation and reduces the follow. If not, correct in accordance with the methods given in the individual "X" specifications.



Method of Burnishing Contacts
of Lever Type Keys

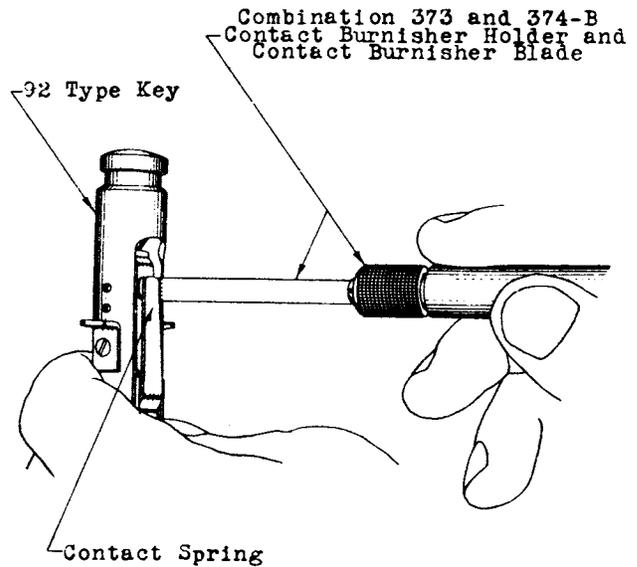
Fig. A

M-2 Pitted Contacts Pitted contacts should be treated by inserting the burnishing blade between the contacts and rubbing it back and forth, until the pits, if not removed, are reduced appreciably. Abrasives other than the Nos. 373 and 374-A or B contact burnisher holder and contact burnisher blade should never be used. Note that the key still meets the contact follow requirement after the burnishing as constant burnishing increases the contact separation and reduces the follow. If not, correct in accordance with methods given in the individual key "X" specification.



Method of Burnishing Contacts of 272 and Similar Type Keys

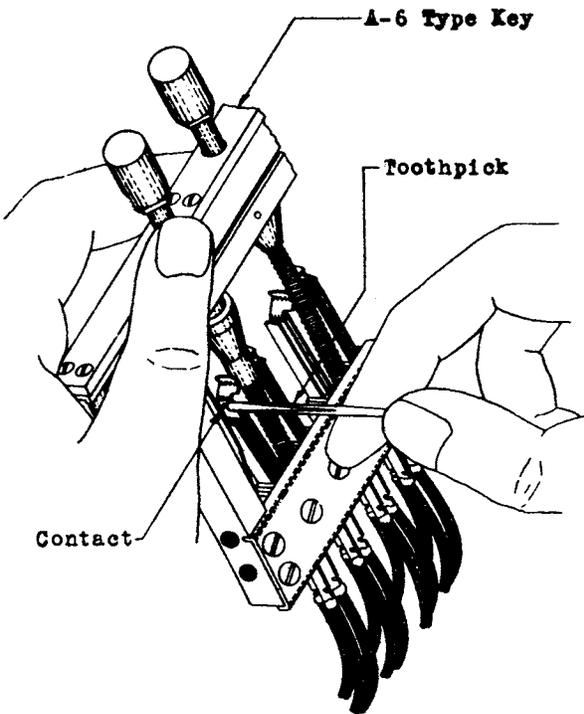
Fig. B



Method of Burnishing Contacts of 92 and Similar Type Keys

Fig. C

M-3 Flushing Contacts Clean the contacts with C.P. carbon tetrachloride in the following manner. Dip the flat end of a clean toothpick in the C.P. carbon tetrachloride to a depth of about 1/4" and deposit the liquid on the contacts (held slightly separated), then rub the flat end of the toothpick back and forth two or three times between the contacts which should now have a slight pressure against the sides of the toothpick. (See Fig. D).



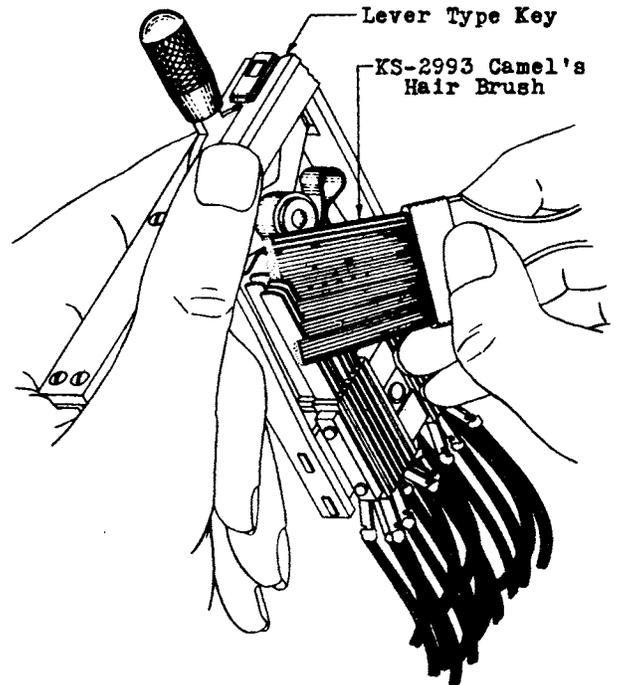
Method of Cleaning Contacts

Fig. D

The liquid will soften any deposit that may have collected on the contacts and the rubbing will remove it. Then, with the contacts held slightly apart, they should be flushed with a little liquid taken up on the clean point of the toothpick (not the end that was used for rubbing). Be sure that the sides as well as the tops of the contact points and discs are flushed, as dirt on the sides is loosened when the liquid is applied to the contacts, and if this dirt is not removed it may later be deposited upon the contact surfaces. The flushing is intended to wash off any particles that remain after the rubbing.

M-4 Following the use of the C.P. carbon tetrachloride, the contacts should be burnished in accordance with methods described in paragraph M-1.

M-5 General Cleaning If an excessive amount of dust has collected on the key it is advisable to brush the key with the KS-2993 camel's hair brush as shown in Fig. E. Adjacent apparatus should be protected while performing this operation.



Method of Brushing off Dust from Exposed Parts of Key

Fig. E

M-6 Key Covers Before replacing key covers, clean them on the inside with a clean cloth per KS-2423. Do not use a cloth that has been moistened with oil of any kind.