AUTOMATIC EXCHANGES

Lubrication and Cleaning of Mechanisms

[Maintenance Routine Instruction (M.R.I.) No. R 172]

1 **INTRODUCTION** This Instruction describes the work to be done when attention is given to a mechanism, primarily for lubrication.

2 **GENERAL** TELEPHONES, Automatic, H 5010 describes a mechanism overhaul procedure whereby each mechanism is overhauled only when necessary. This procedure was introduced after investigation had shown that good service was given by mechanisms which received little other attention than an annual lubrication. Dust and dirt are potential sources of faults but, if left undisturbed, electromechanical apparatus can often function satisfactorily even when dirty in appearance. The time of lubrication is a convenient one for deciding whether cleaning is necessary and if, in the light of local atmospheric conditions, a decision is taken that cleaning is required, the following paragraphs cover the operation necessary. Even when cleaning has been decided upon the mechanism should be disturbed as little as possible.

When cleaning mechanisms or relays on racks, care should be taken to avoid spreading dust. A vacuum cleaner fitted with a Tool, Equipment Cleaning, No. 5 (flexible brush holder) and a Tool, Equipment Cleaning, No. 1, 2 or 3 (brush) should be used in conjunction with a Brush, Cleaning.

LUBRICATION AND CLEANING PROCEDURE

3 **TWO-MOTION SELECTORS** Remove all dust and dirty or excessive lubricant, using a Brush, Cleaning and a Duster, Selector, Cleaning. Generally, dismantling will not be necessary, and should be avoided, but on 2000-type selectors the removal of the detent guard and assembly will not affect the adjustment of the selector and will make cleaning easier. If the accumulation of dirt on relays is such that it will be disturbed and distributed in the course of lubricating the associated mechanism, it should be removed with a vacuum cleaner fitted with the appropriate tools (see par. 2); the relay and mechanically-operated spring-set contacts should then be cleaned (see TELEPHONES, Automatic, H 5006).

Lubricate in accordance with TELEPHONES, Automatic, B 5137.

4 **UNISELECTORS (EXCEPT MOTOR DRIVE TYPE)** Remove all dust and dirty or excessive lubricant from the mechanism using a Brush, Cleaning and a Duster, Selector, Cleaning. Remove dust from the lower half of the bank with a Brush, Uniselector, Cleaning.

If the bank contacts are corroded or if there is any evidence of deposits of oily dirt, remove the mechanism from the bank. No adjustment should be disturbed; where a mechanism positioning-gland lock-nut is fitted, check that it is tight; where no lock-nut is used, take care to avoid altering the adjustment of the gland. Clean the bank contacts in accordance with TELEPHONES, Automatic, H 5012. Clean the tips of the wiper blades and the brush feeds with a piece of Tape, Bank Cleaning No. 1 used in conjunction with a Cleaner, Contact No. 8A.

If the collector rings are corroded or have oily dirt deposited on them, remove the wiper assembly, and clean the collector rings with Cord, Cleaning, No. 1 (G.E.C. or P.O. Type 1 uniselectors) or Cord, Cleaning, No. 2 (P.O. Types 2 and 3 and similar types). Before replacing the wiper assembly oil the wiper assembly bearings; the wiper assembly should not be removed solely for this purpose.

Lubricate in accordance with TELEPHONES, Automatic, B 5137, paying special heed to par. 5 which details the conditions under which wiper tips and brush feeds should be lubricated.

(NOTE:- It is not intended that uniselector mechanisms should invariably be removed from their banks when the mechanisms are lubricated; at some exchanges the banks will require no cleaning for some years, other than the dusting of their lower halves. However, where conditions are very dirty, it may be necessary to clean thoroughly the whole of the banks fairly frequently, especially those of uniselectors on lower shelves).

5 **MOTOR DRIVE UNISELECTORS** Remove the mechanism from the bank and place an Outrigger No. 1 in position to support the mechanism. Remove the wiper assembly and lubricate the wiper bearings. Clean the tips of the wiper blades and the brush feeds with Tape, Bank Cleaning No. 1. Replace the wiper assembly.

Remove the interrupter assembly to enable the rotor to be removed from its spindle. Remove all dust and dirty or excessive lubricant, using a Brush, Cleaning and a Duster, Selector, Cleaning. Lubricate in accordance with TELEPHONES, Automatic, B 5137. Replace the rotor and interrupter assembly, taking care to replace the rotor in the same position as that from which it was removed. The wiper assembly and rotor should not be removed at the same time nor should the wiper assembly be rotated while the rotor is out of position, otherwise the relative positions of the rotor and the idler gear may be disturbed, and re-adjustment may then be necessary.

6 **REGENERATORS** Remove all dust and dirty or excessive lubricant using a Brush, Cleaning and Duster, Selector, Cleaning and lubricate in accordance with TELEPHONES, Automatic, B 5137.

7 **PRINTER, METER CHECK NO. 2A AND RECORDER, FAULT NO. 1B** Remove all dust using a vacuum cleaner in conjunction with a Brush Cleaning as described in par. 2. The method of lubrication is given in the relevant MAI.

8 All equipment should be given a functional test before being restored to service.

References:- TELEPHONES, Automatic, B 5137, H 5006, H 5010, H 5012
(Sv6.1.2)

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