INSTALLATION OF TP106244 RESISTOR

1000-ohm Shunt for Holding-magnet Selector Coils Connected in Parallel

1. GENERAL

1.01 This section furnishes information for the installation and use of the TP106244 resistor which may be used to reduce negative (spacing) internal bias for holding-magnet selectors with coils connected in parallel on the following apparatus:

14 teletypewriter
15 teletypewriter
14 typing reperforator
14 reperforator transmitter
114 reperforator transmitter
BS3C sequential selector
BS6L sequential selector
BS2D sequential selector

1.02 This section is reissued:

(a) To omit reference to the 26 teletypewriter.

(b) To include the 14 and 114 reperforator transmitters, and the BS3C, BS6L, and BS2D sequential selectors.

(c) To present more fully the principles governing the use of this shunt. To emphasize when the shunt will be helpful and when the reverse.

(d) To bring the connection procedure up to date.

1.03 The TP106244 resistor consists of a 1000-ohm, 1/2-watt, cylindrical-type, fixed resistor. No mounting arrangements are required as the resistor is supported by its own leads.

1.04 A TP106244 resistor is furnished with all new units of the types mentioned above. If it is not present, it may be procured separately and added by an installer or repairman. It should be connected as described in Part 2 of this section.

1.05 The use of the TP106244 resistor in no way reflects on the ability of the machine to perform satisfactorily in service. This resistor was designed to provide an element of flexibility to counteract the spacing internal bias which it is not economically feasible to eliminate entirely in manufacture, repair, or maintenance.

1.06 If units having holding-magnet selectors with coils connected in parallel for 0.060-ampere operation do not meet the receiving tolerance tests given in BSP P30.002, make readjust tests as specified in that section for the source of signals available. Make these readjust tests both with and without the shunt in the circuit. Then the arrangement which gives the better results should be used. If the selector has negative internal bias the use of the shunt will usually improve margins. However, if the selector has zero or positive internal bias the use of this shunt will usually **reduce** the margins. New units, or repaired units of recent manufacture generally have negative internal bias and require the shunt. But as the selector wears, this initial negative internal bias usually tends to change to zero or positive, and the shunt may have to be removed. If the tolerance tests of BSP P30.002 cannot be met by either adding or removing the shunt according to the circumstances, try the adjustment procedures suggested in BSP P30.002; and if these fail, consult your supervisor.

1.07 If the 1000-ohm shunt is added to a holding-magnet selector which is connected to a long loop requiring loop-loading arrangements, transmission tests should be made to determine if the loading arrangements require any modifications as a result of changing the impedance of the selector magnet by the addition of the shunt.

1.08 An advantage in the use of 1000-ohm shunts across magnet coils lies in the fact that where two machines are connected in series at a station, the interaction of the machines on each other is reduced.

2. PROCEDURE

2.01 On 14 reperforator-transmitters, 114 reperforator-transmitters, and 14Y, 14AA, 14AB, 14AD, 14AE, and 14AF typing reperforators, the resistor should be connected to upper terminals of a 3-lug terminal strip located near the selector. This terminal strip is covered by an insulated metal guard which must be removed to gain access to the strip. To shunt the

resistor across the selector magnet coils, one lead of the resistor should be connected to the left upper terminal and the other lead to the center upper terminal. When it is not desired to use the shunt, both leads of the resistor should be connected to the left upper terminal.

2.02 On 15 teletypewriters, 14 teletypewriters, and 14 typing reperforators other than those listed in 2.01, the resistor should be mounted in the base. To shunt the resistor across the selector magnet coils, one lead should be connected to terminal 45 and the other to terminal 46. When it is not desired to use the shunt, both leads of the resistor should be connected to terminal 46.

2.03 On BS3C, BS6L, and BS2D sequential selectors, the leads of the resistor should be connected to the terminals of a 2-lug terminal strip mounted to the upper left of the selector. To shunt the resistor across the selector magnet coils, connect a lead to each terminal. When it is not desired to use the shunt, both leads of the resistor should be connected to the right-hand terminal. ↵