

RELAYS

209, 215, 228, 255 TYPES AND D-160118

REMAGNETIZATION OF PERMANENT MAGNETS

USING THE NO. 520A TOOL

1. GENERAL

1.01 This section describes the method for remagnetizing the permanent magnets of 209-, 215-, 228-, 255-type and D-160118 relays.

1.02 This section is reissued to add a method of operating the No. 520A tool not equipped with the mark-time switch, and to add the method of remagnetizing the permanent magnet of the D-160118 relay.

1.03 The No. 520A tool is an electro-magnet which when energized creates a powerful magnetic field. As this field may cause temporary injury to watches, the following precaution shall be followed:

Caution: All persons having occasion to come within five feet of the magnetizer, while it is in operation, shall be cautioned to remove their watches.

1.04 The permanent magnets of the relays undergo a loss of magnetization, which may vary somewhat depending upon the treatment which the magnets receive.

1.05 Relays which have been remagnetized should be readjusted to meet the requirements specified in the sections applying to the particular relays.

2. APPARATUS

2.01 No. 520A tool (magnetizer).

3. METHOD

3.01 On the No. 520A tool, equipped with mark-time switch, be sure that the switch is not operated to close the electrical circuit before placing a relay between the magnets. The ON position is indicated by buzzing of the switch.

209-, 215-, 255-type and D-160118 Relays

3.02 Remove the cover from the relay to be remagnetized.

3.03 Hold the relay horizontally with the contact screws towards the magnetizer, and with the permanent magnet above the

relay base or frame member. In this position, the 215-, 255-type and D-160118 relays will be turned as they are used in service while 209-type relays will be inverted so that the magnet is uppermost.

3.04 Unclamp the movable pole piece of the magnetizer and adjust its position and the position of the relay so that both pole faces of the magnetizer and the outer surfaces of the relay magnet are in line and separated by only a slight clearance. Clamp the pole piece in this position.

3.05 Push the relay in as far as it will go, maintaining the alignment of the outer surfaces of the magnet with the pole faces of the magnetizer.

No. 520A Tool Equipped With Mark-time Switch

3.06 Operate the mark-time switch. Do not hold the switch after it has been operated. Closure of the electrical circuit through the magnetizer when the mark-time switch is operated is indicated by buzzing of the switch mechanism for about seven seconds. Approximately one second after operation of the switch (before the switch stops buzzing) pull the relay out quickly, keeping it horizontal and with the outer surfaces of the magnet in line with the pole faces of the magnetizer.

3.07 The mark-time switch shall be allowed to open the supply circuit between each remagnetizing operation to avoid damage to the next relay to be remagnetized.

3.08 Remount the cover on the relay and remove it from the immediate vicinity of the magnetizer.

No. 520A Tool Not Equipped With Mark-time Switch

3.09 Operate the switch. Hold the switch operated for one second. Pull the relay out quickly keeping it horizontal and with the outer surfaces of the magnet in line with the pole faces of the magnetizer. Release the switch.

3.10 Remount the cover on the relay and remove it from the immediate vicinity of the magnetizer.

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* 228-type Relay

3.11 The procedure for remagnetization of this relay is the same as that covered in 3.03 to 3.08, inclusive, except that two operations are required, one for each permanent magnet. Hold the relay horizontal with the permanent magnets above the base

or frame member, when remagnetizing each magnet. Open the supply circuit after remagnetizing the first magnet before remagnetizing the second magnet.

3.12 Remove the relay from the immediate vicinity of the magnetizer and remount the base plate and cover.