

RELAYS

85F, 85N, AND 87 AND 186 TYPES

PIECE-PART DATA AND REPLACEMENT PROCEDURES

1. GENERAL

1.01 This section covers the information necessary for ordering parts to be used in the maintenance of Nos. 85F, 85N, and 87- and 186-type relays.

1.02 This section is reissued to bring the piece-part data up to date. Detailed reasons for reissue will be found at the end of the section. Since this reissue covers a general revision, the arrows ordinarily used to indicate changes have been omitted.

1.03 Part 2 of this section covers the piece-part numbers and the corresponding names of the parts which it is practicable to replace in the field in the maintenance of these relays. No attempt should be made to replace parts not designated. Part 2 also contains explanatory figures showing the different parts. This information is called Piece-Part Data.

1.04 Part 3 of this section covers the approved procedures for the replacement of the parts covered in Part 2. This information is called Replacement Procedures.

2. PIECE-PART DATA

2.01 The figures included in this part show the various piece parts in their proper relation to other parts of the relay. The piece-part numbers of the various parts are given together with the names of the parts as listed by the Western Electric Company Merchandise Department. When these names differ from those in general use in the field, the latter names, in some cases, are shown in parentheses.

2.02 When ordering parts for replacement purposes, give the piece-part number as well as the name of the part. Example: "P-132461 Coil." Do not refer to the BSP number or any information shown in parentheses following the piece-part numbers

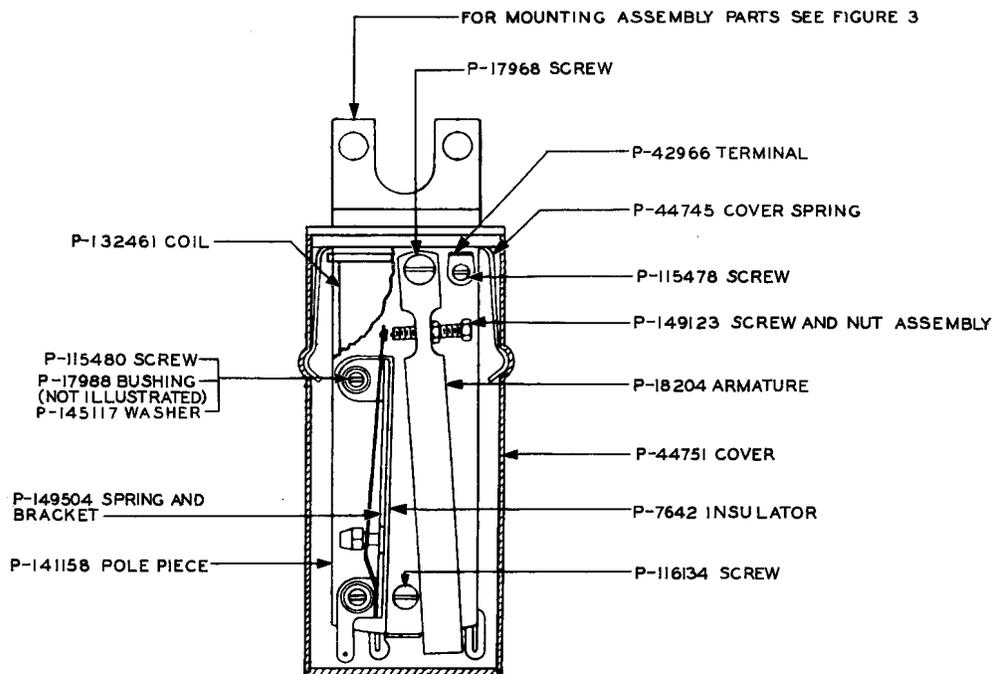


Fig. 1 - No. 85F Relay Having Screw and Nut Assembly in Armature

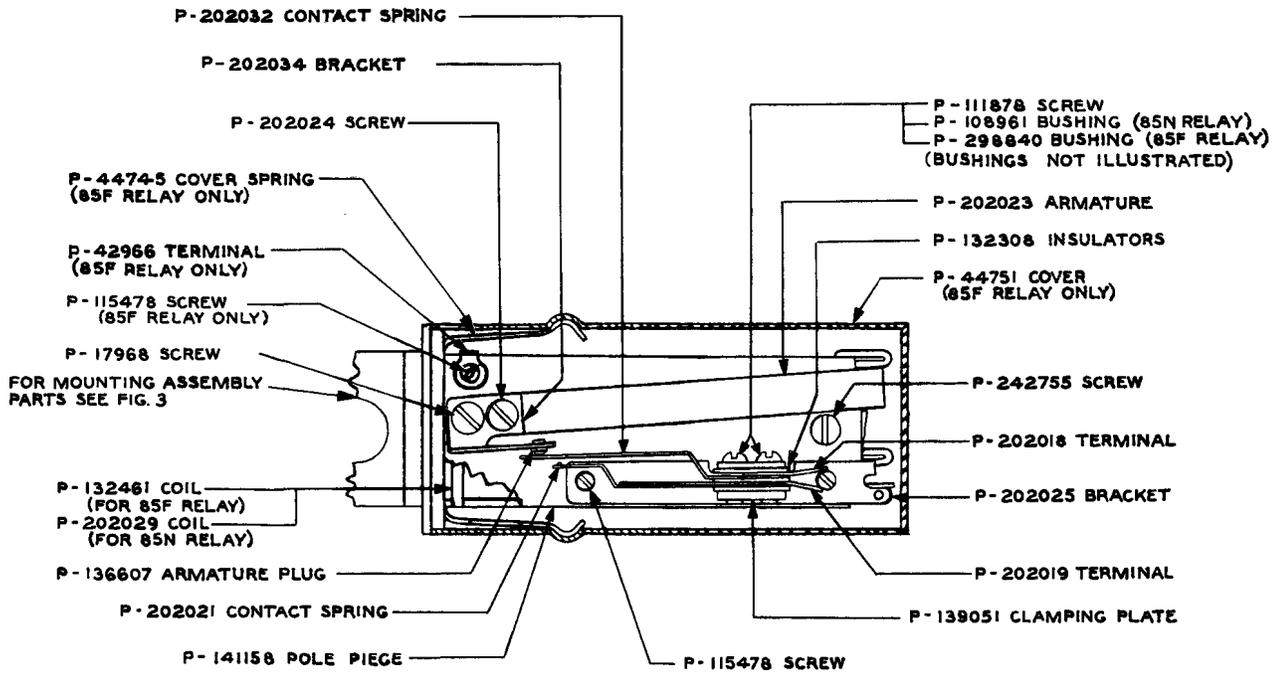


Fig. 2 - No. 85F Relay Having Bracket and Armature Plug on Armature and No. 85N Relay

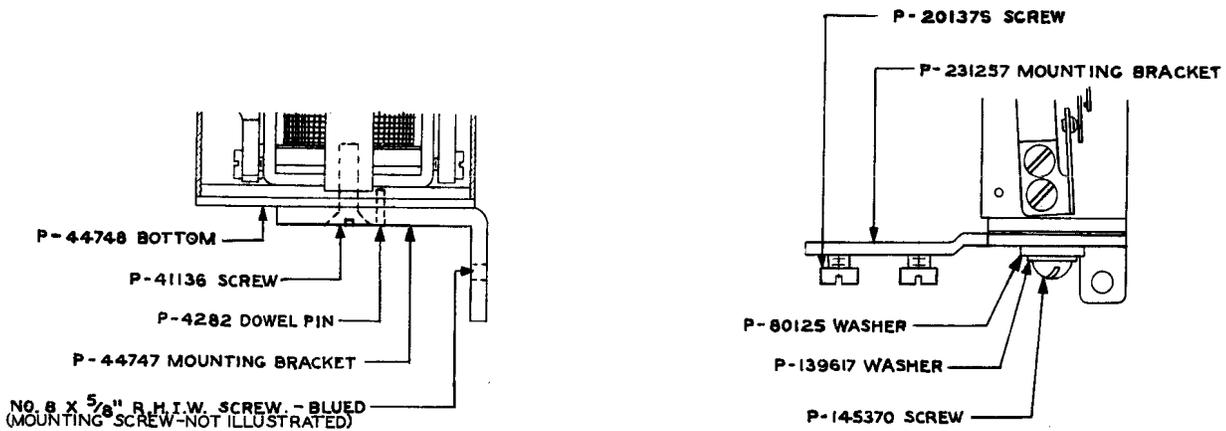


Fig. 3 - Mounting Assemblies for Nos. 85F and N Relays

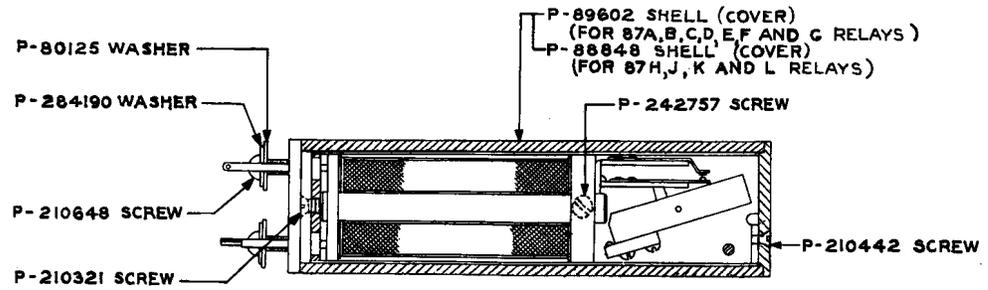


Fig. 4 - Parts Common to All 87-type Relays

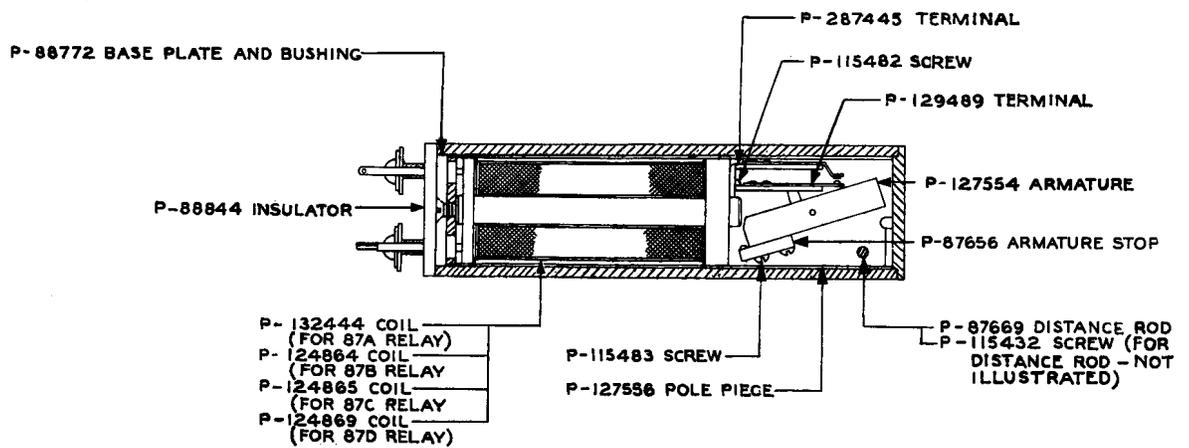


Fig. 5 - Nos. 87A, B, C, and D Relays

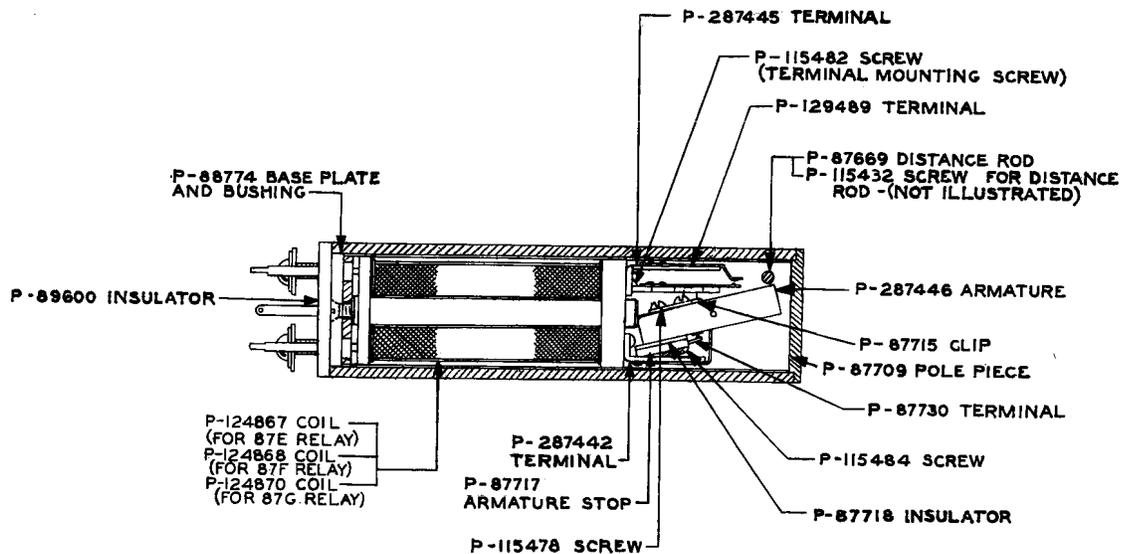


Fig. 6 - Nos. 87E, F, and G Relays

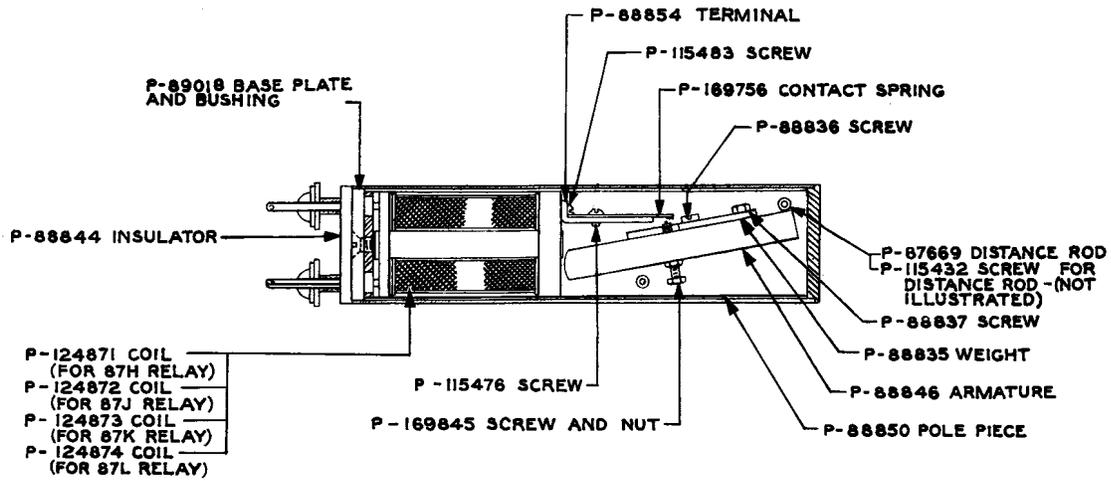


Fig. 7 - Nos. 87H, J, K, and L Relays

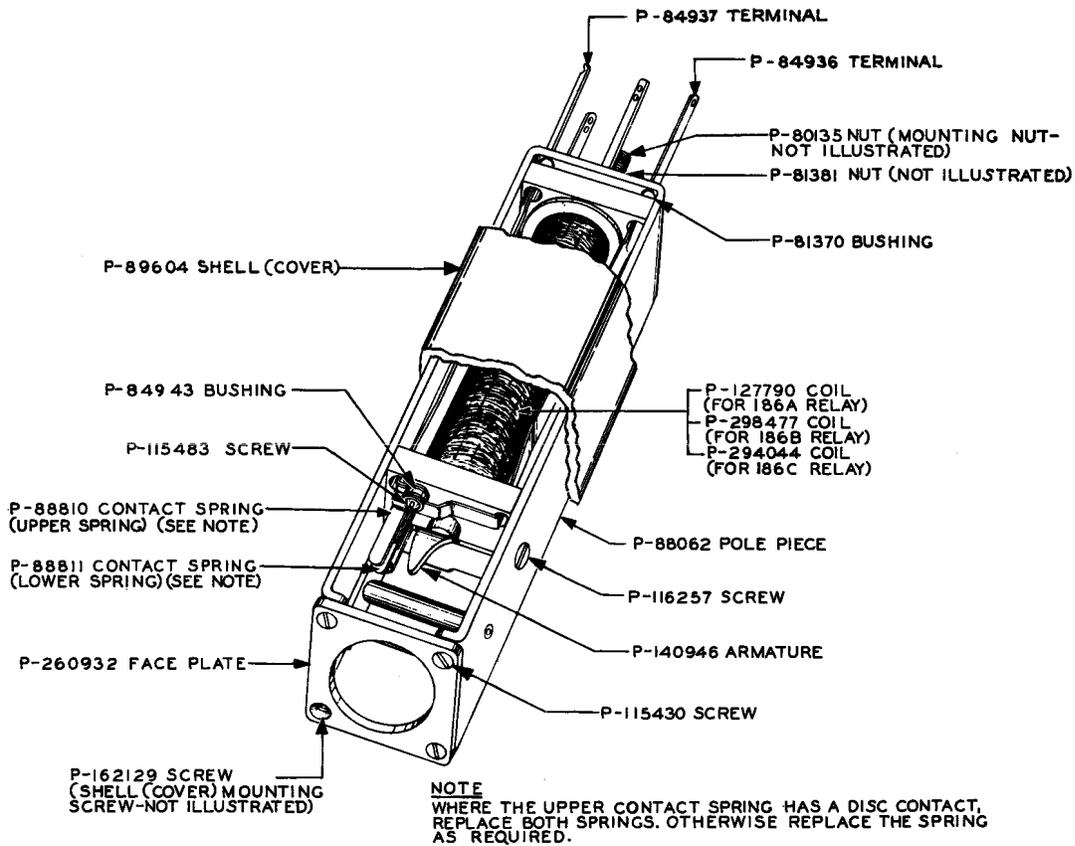


Fig. 8 - 186-type Relays

3. REPLACEMENT PROCEDURES3.01 List of Tools

<u>Code or Spec No.</u>	<u>Description</u>
72	Combination 5/32-in. and 3/16-in. Hex. Double-end Socket Wrench and Screwdriver
102	3/8-in. Hex. Single-end Socket Wrench
349	3/16-in. and 7/32-in. Hex. Closed Double-end Offset Wrench
-	3-in. Cabinet Screwdriver
KS-6854	3-1/2-in. Screwdriver
-	4-in. Regular Screwdriver

3.02 After making any replacement of parts, the part or parts replaced shall meet the readjust requirements involved as specified in Section 040-216-701 for the No. 85F relay, Section 040-217-701 for the 87-type relays, and Section 040-224-701 for the 186-type relays. Other parts whose adjustment may have been directly disturbed by the replacing operations shall be checked to the readjust requirements and an over-all operation check shall be made before restoring the circuit to service.

3.03 No replacement procedures are specified for screws and other parts when the procedure consists of a simple operation.

Caution: When replacing the armature of a 186-type relay, make sure the bottom of the armature does not bind against the spoolhead when the relay is operated.

3.04 In replacing any of the parts of the 87- and 186-type relays other than the cover, it will be necessary to remove the relay from the mounting plate.

3.05 When it is necessary to replace any of the following parts, remove the cover and remove the parts in order as follows. Make the necessary replacements and reassemble all parts in the reverse order to that specified below.

87-type Relays

3.06 Armature: To replace the armature, remove the distance rod or rods, as the case may be, and the two coil mounting screws. Spread the ends of the pole piece and remove the armature.

3.07 Terminal: To replace a terminal, remove the two terminal mounting screws and pull out the terminal.

3.08 Coil: To replace the coil, remove the base plate screw and pull out the coil.

186-type Relays

3.09 Armature: To replace the armature, remove the face plate and the two coil mounting screws. Spread the ends of the pole piece and remove the armature.

3.10 Contact Springs, Bushing, and Terminals: To replace the contact springs, bushing, and terminals, remove the terminal mounting screw. Remove the springs and bushing and pull out the terminals.

3.11 Coil and Pole-piece Bushings: To replace the coil or the pole-piece bushings, remove the coil mounting nut and pull out the coil.

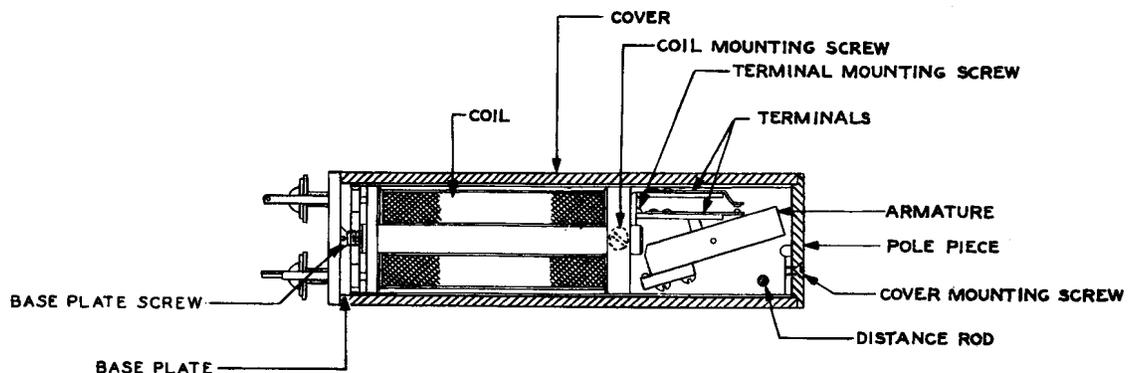


Fig. 9 - 87-type Relays (Nos. 87E, F, and G Relays Illustrated)

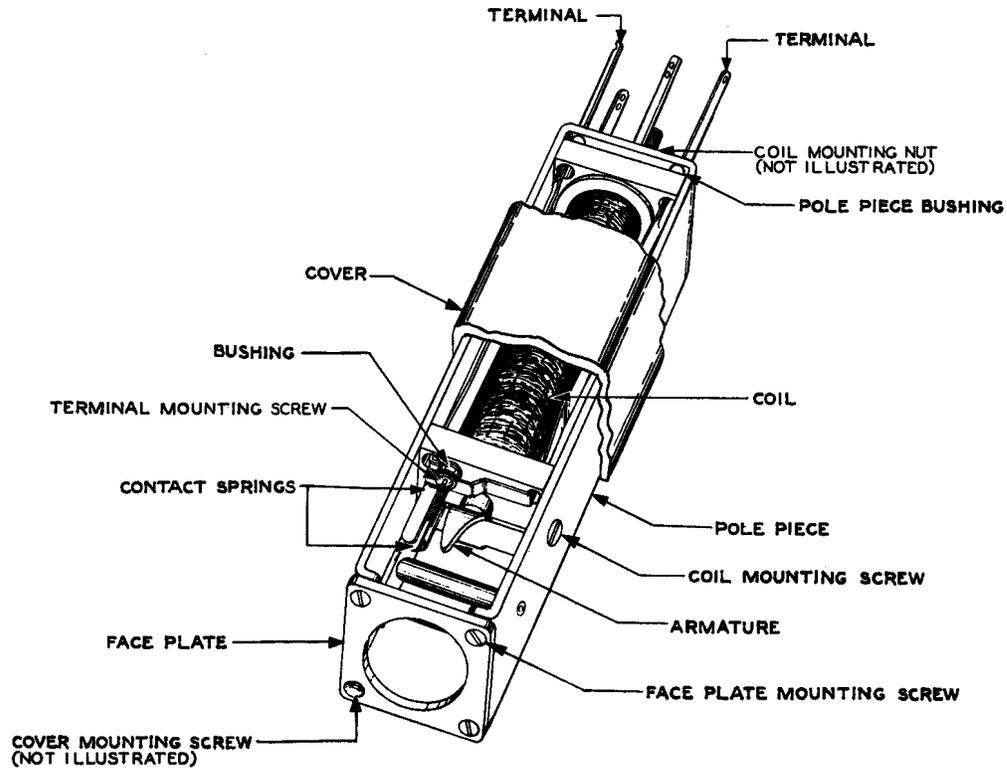


Fig. 10 - 186-type Relays

REASONS FOR REISSUE

1. To revise the piece-part data.
 2. To revise 3.02 to agree with the latest information for
 3. To add procedures.
- checking the apparatus after making replacements.