

## CONTACTORS

### KS-5323, KS-5323-01, KS-5694, AND KS-15572

### 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 the KS-5323, KS-5323-01, KS-5694 and KS-15572 contactors. It also covers the approved procedures for replacing these parts.

1.02 This section is reissued to add the KS-5323-01, KS-5694 and KS-15572 contactors and to bring the section generally up to date. Detailed reasons for reissue will be found at the end of the section.

1.03 Part 2 of this section covers the various parts which it is practicable to replace in the field in the maintenance of these contactors. 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.

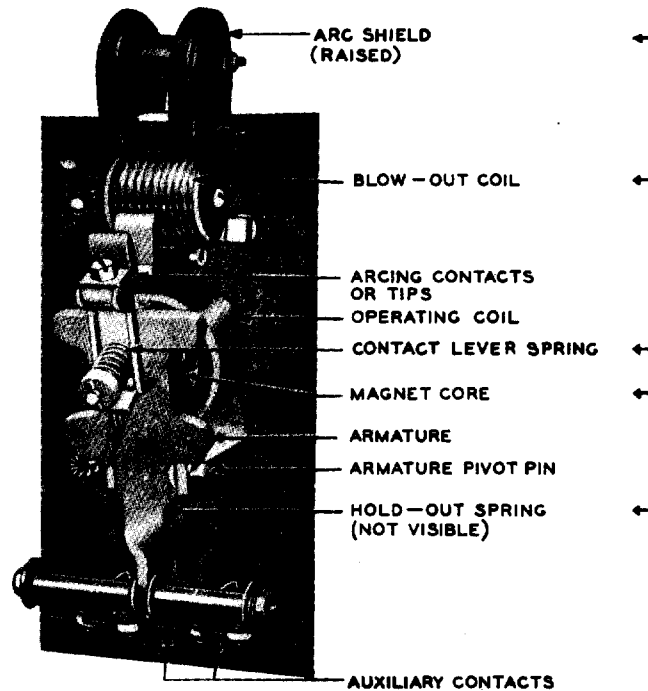


Fig. 1 - Typical Contactor in Which the Arcing Contacts Serve as Main Contacts

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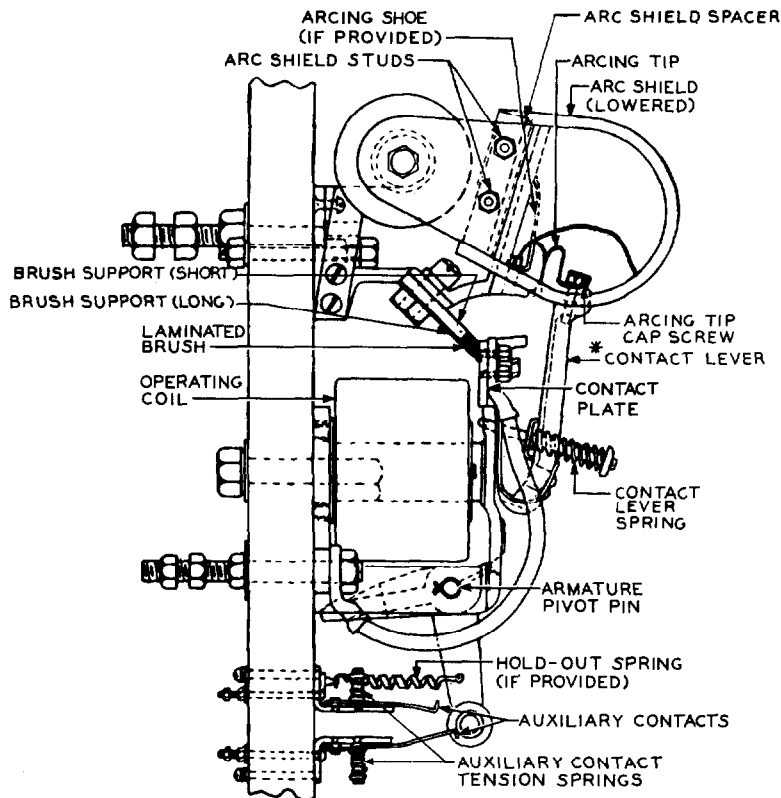
**2. PIECE-PART DATA**

2.01 The figures included in this part show the various replacement parts in their proper relation to other parts of the apparatus together with their corresponding names.

2.02 When ordering parts for replacement purposes, give the name of the part as shown in the figures of this section and also the complete nameplate data of the contactor including the manufacturer's name, serial, KS, and list number, for example, 1 - contact lever spring for the 44-65 volt, 100 ampere Cutler-Hammer, Incorporated, contactor per KS-5323-01, L10. When ordering

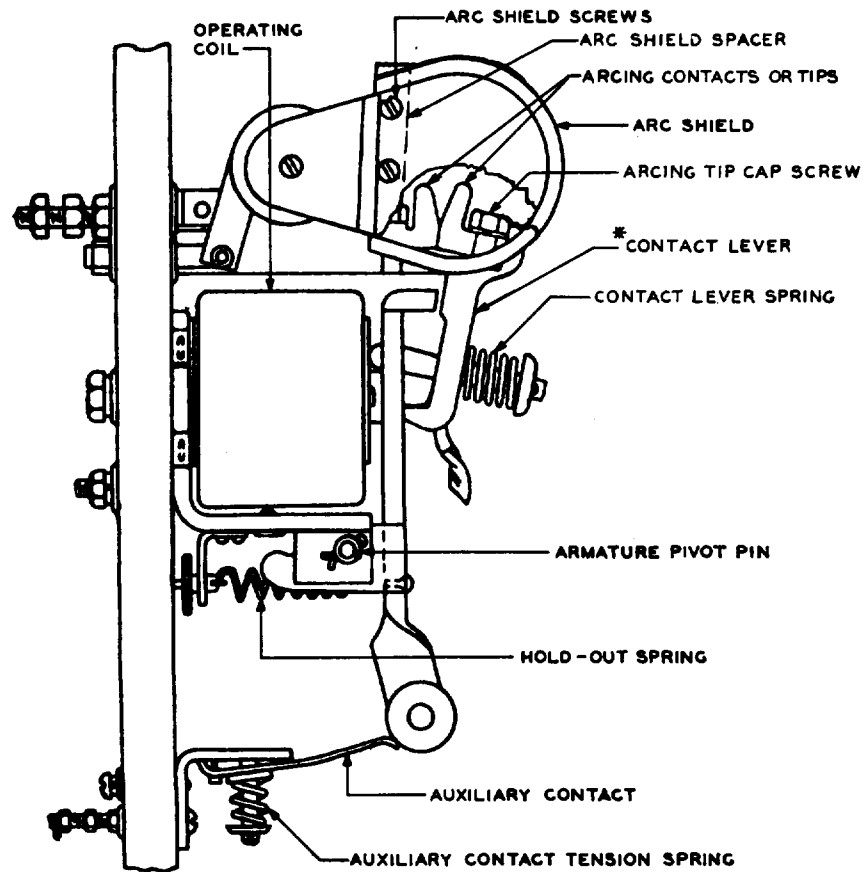
an auxiliary contact, also state whether the contact is normally open or normally closed. In addition, if the contactor is equipped with both long-wipe and short-wipe normally closed auxiliary contacts, state whether a long-wipe or short-wipe contact is required.

2.03 Miscellaneous parts such as screws, nuts, washers, cotter pins, etc., which are not named in the illustrations and which cannot be obtained locally should be ordered by referring to the associated part, for example, 1 - cotter pin for the contact lever spring for the 44-65 volt, 100 ampere, Cutler-Hammer, Incorporated contactor per KS-5323-01, L10.



\* CONTACT LEVER INCLUDES ARCING TIP, CAP SCREW, WASHERS, RIVETS AND CONNECTOR

**Fig. 2 - Typical Contactor Having Main Contacts and Arcing Tips**



\* CONTACT LEVER INCLUDES ARCING TIP CAP SCREW AND CONNECTOR

Fig. 3 - Typical 50-ampere Contactor in Which the Arcing Contacts Serve as Main Contacts

3. REPLACEMENT PROCEDURES

3.01 List of Tools and Materials

<u>Code or Spec No.</u>	<u>Description</u>	<u>Code or Spec No.</u>	<u>Description</u>
		R-3040	5/8- and 3/4-inch Hex. Open Double-end Flat Wrench
<u>Tools</u>			
417A	1/4- and 3/8-inch Hex. Open Double-end Flat Wrench	-	13/32- and 19/32-inch Open Double-end Flat Wrench J.H. Williams Co., Cat. No. 24 (or equivalent)
418A	5/16- and 7/32-inch Hex. Open Double-end Flat Wrench	-	3-inch Cabinet Screwdriver
KS-13816	15/16- and 1-inch Open Double-end Flat Wrench	-	5-inch Regular Screwdriver
R-1542	6-inch Adjustable Wrench	-	6-1/2-inch P-long-nose Pliers
R-1770	1/2- and 9/16-inch Open Double-end Flat Wrench	-	1-lb Claw Hammer
<u>Materials</u>			
R-2593	7/8- and 1-1/16-inch Open Double-end Flat Wrench	KS-7860	Petroleum Spirits
		KS-14666	Cloth

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- 3.02 Remove the apparatus from service before making any replacements.
- 3.03 After making any replacement of parts, the apparatus should be checked and where necessary, readjusted to meet the approved requirements.
- 3.04 No replacement procedures are specified for screws and other parts where the replacement consists of a simple operation.
- 3.05 Arcing Tips and Arcing Shoe: To replace the arcing tips or arcing shoe, raise the arc shield and remove the arcing tip, cap screws, washers, arcing tips, and arcing shoe (if provided) using a wrench or a 5-inch regular screwdriver. Insert the new arcing tips or arcing shoe and replace the cap screws, washers, arcing tips, or arcing shoe making sure that they are tight. Drop the arc shield to its former position.
- 3.06 Laminated Brush, Brush Support (Long), and Brush Support (Short): To replace a laminated brush or brush supports, remove the nut or nuts holding the brush and brush supports in position using a wrench, and insert a new brush. If desirable, new brush supports may be inserted at the same time. Replace the nut or nuts and tighten securely. When the laminated brush is replaced, non-laminated or worn contact plates should also be replaced as outlined in 3.07.
- 3.07 Contact Plate: To replace the contact plate associated with the laminated brush, remove the cap screws and washers fastening the terminal lug to the contact plate and the nut and washer holding the contact plate in position, using a wrench or screwdriver. Insert the new contact plate with stud, and reassemble to the armature in the reverse order.
- 3.08 Arc Shield and Arc Shield Spacer: To replace the arc shield or arc shield spacer, remove the nut and washer from one side of each of the studs or machine screws holding the arc shield and arc shield spacer in position, using a wrench, and remove the studs or screws from the opposite end. Replace the shield or spacer with a new one, reinsert the studs or screws, replace the nuts and washers and tighten.
- 3.09 Contact Lever Spring: To replace the contact lever spring, remove the cotter pin from the slot on the end of the "T" bolt, using pliers. Next remove the cupped washer and then the spring. Insert the new spring, compressing with the fingers, and replace the cupped washer and cotter pin.
- 3.10 Auxiliary Contact Tension Spring: To replace an auxiliary contact tension spring, remove the cotter pin from the slot in the end of the pin which is part of the interlock contact post and the cupped washer, using pliers. Remove the spring. Insert the new spring, compressing with the fingers and replace the cupped washer and cotter pin.
- 3.11 Auxiliary Contacts: To replace an auxiliary contact, remove its associated tension spring as outlined in 3.10, and in addition the remaining cupped washer. Remove the contact from the interlock contact post by slipping it over both the guiding stud and the pin of the post. Insert the new contact shaping it with the pliers, if necessary, so as to obtain the proper contact tension, and replace the auxiliary contact tension spring assembly by following the reverse procedure.
- 3.12 Hold-out Spring: To replace a hold-out spring, unhook the stationary end of the spring from its stud. The other end of the spring can then be readily removed from the drilling located in the tail of the armature. A new spring shall then be installed in the reverse order.
- 3.13 Operating Coil: To replace the operating coil, remove the hold-out spring (if provided) as outlined in 3.12. Remove the cotter pin at one end of the armature pivot pin, using the pliers. Then remove the armature pivot pin by tapping gently with a hammer. The complete armature assembly can now be removed. Next remove the cotter pin and coil washer from the magnet core using pliers. After unsoldering the coil leads, the coil itself can be removed by slipping it off the magnet core. Take care not to lose the springs located in the magnet frame and which hold the coil in position. Insert the new coil in position taking care not to damage the insulation. Replace the coil washer and insert the cotter pin in the magnet core. To do this it will be necessary to press the operating coil and washer toward the mounting base thereby compressing the base springs until the cotter pin slot becomes visible. Replace the armature by reinserting the armature pivot pin and cotter pins and resolder the leads.
- 3.14 Contact Lever: To replace the contact lever, raise the arc shield. Remove the cotter pin from the slot on the end of the "T" bolt, using pliers. Next remove the cupped washer and then the contact lever spring. The new contact lever shall then be installed in the reverse order.

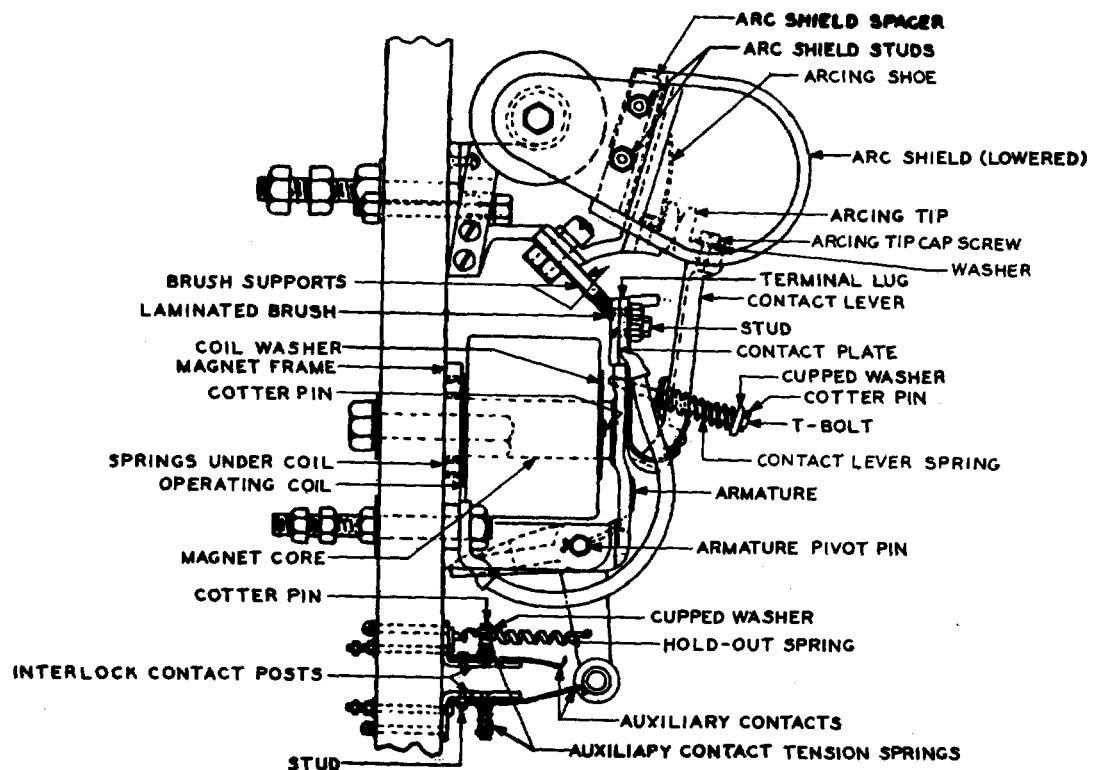


Fig. 4 - Typical Contactor Having Main Contacts and Arcing Tips

REASONS FOR REISSUE

1. To add the KS-5323-01, KS-5694, and KS-15572 Contactors.
2. To revise the list of tools and materials (3.01).
3. To add a procedure for the arcing shoe (3.05) and the contact lever (3.14).
4. To amplify the procedure for the laminated brush and brush supports (3.06) and operating coil (3.13).
5. To revise Fig. 1 and 2 and to add Fig. 3 and 4.