

# **ALLIS-CHALMERS MANUFACTURING COMPANY**

## **SUGGESTED MAINTENANCE CHECK LIST FOR TYPES AM-75, AM-150C-AM-150D-AM-250C-AM-250D AIR MAGNETIC CIRCUIT BREAKERS**

**(REFERENCES ARE TO INSTRUCTION BOOKS)**

**BWX-6458**

**BWX-6459**

**BWX-6473**

**BWX-6347**

**BWX-6348**

The following list is intended to serve as an easy to use guide for the purpose of insuring complete and adequate servicing of the equipment at the regularly scheduled maintenance intervals.

A routine service inspection should be made at six months or 2000 operation intervals, whichever comes first. The actual service interval and the amount of servicing required will usually be determined by the particular conditions at the installation and will be influenced by such things as the number of operations, number of fault interruptions, cleanliness of the equipment, and past experience with the equipment.

Servicing is usually intended to cover adjusting, cleaning, lubricating, tightening, inspection, test ect. A permanent record is usually desirable and should list for each serial number the date, operation counter reading, general condition of equipment, and work done by serviceman.

For new equipment not yet in service, refer to paragraph 1 through 10 of the instruction book.

1. Prepare breaker for servicing by removing phase barriers, arc chute top section, barrier stack, and arc chute lower section. All parts lift off easily without removing hardware, except for arc chute lower section which requires the blowout coil terminals to be loosened. Refer to Fig. 12.
2. Operate breaker with maintenance closing device to check general operation and freedom of movement.
3. Visually inspect all parts during all phases of servicing.

4. If a travel recording device is available, it will furnish an excellent indication of the mechanical operation of the breaker. Refer to paragraph 50.
5. Clean all parts of breaker. An air blower is useful in removing dust from generally inaccessible places.
6. Remove disconnect arms as a unit by removing bolt 9-290. Refer to Fig. 9. Carefully inspect all contact surfaces in hinge joint. Contact washer 9-285 and adjacent surfaces should be clean and free of roughness or galling. Clean parts thoroughly and lightly brush off the felt sealing washer. Lubricate contact washer and mating surfaces by rubbing in microfine dry graphite used sparingly. Reassemble hinge joint and adjust hinge contact pressure per paragraph 30. (Note - older instruction books may state 8 to 12 pounds pull - 6 to 10 is adequate).
7. Check operating mechanism toggle adjustment per paragraph 31. Adjustment is by shims 3-96.
8. Check latch operating mechanism adjustment per paragraph 32.
9. Check trip pin (3-123) clearance per paragraph 37.
10. Check limit switch (Fig. 3) adjustment per paragraph 34. Operate manually and electrically. Inspect to see that contacts are clean and made properly.
11. Check stroke of main contact per paragraph 28.
12. Check adjustment of main contact per paragraph 29.
13. Check auxiliary switch adjustment per paragraph 33. Inspect condition of contacts.
14. Check control relay for proper action, check condition of contacts.
15. Operation counter is actuated by a spring

which should be adjusted for minimum force by positioning of the counter arm.

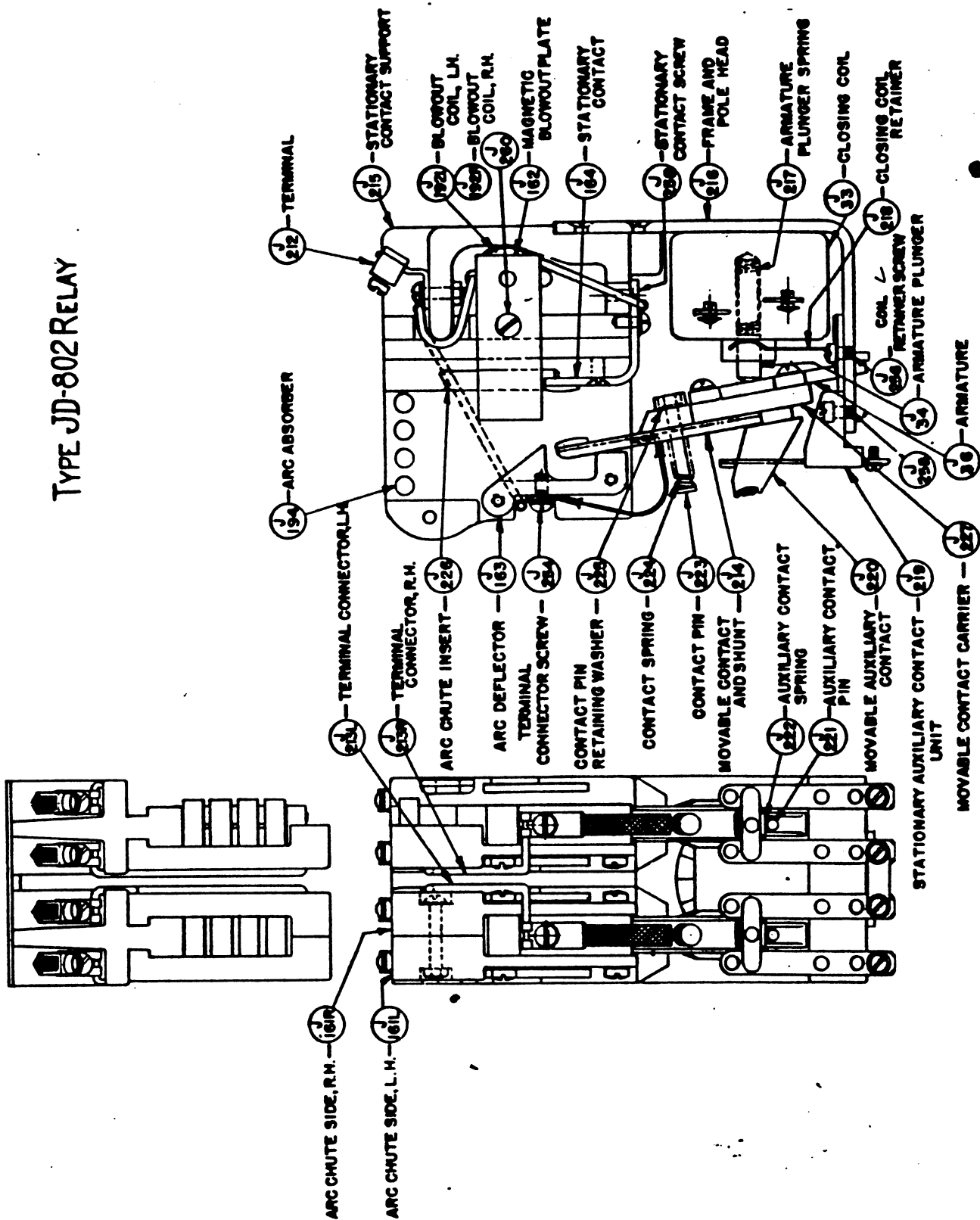
16. Mechanical trip interlock 2-18 should be adjusted to trip the breaker within  $3/8$  of linear travel of roll as crank rotates away from breaker and there is a minimum of  $1/16$ " overtravel. The breaker must trip within the first  $5/16$ " of movement as the movable portion is lowered from its fully raised position in cubicle. Per paragraph 36.
17. Check all wiring for frayed or broken wires, tighten all terminals.
18. Check all hardware for tightness (see special instructions for hinge joint hardware, Item 6 above). Note that Stover locknuts are used in many places. These nuts may be identified by the slightly egg-shaped hole on one end and the parallel grooves on the corresponding face of the nut.
19. Operate breaker manually and electrically. Check operation at minimum close and trip voltage if possible.
20. If breaker is rectifier operated, refer to rectifier instruction book for instructions.
21. Reassemble breaker - Be sure blowout coil terminals are properly fastened.
22. Check breaker in cubicle. Check general fit and line-up. Check operation of trip interlock in test position and fully inserted position. Check grounding contacts for good contact.
23. General. The above points will provide a quick reference for maintenance procedures. Other items may be added as experience dictates. For a more thorough understanding of the equipment, the instruction book should be studied. Refer to paragraphs 47 through 51 for general comments on maintenance and lubrication.

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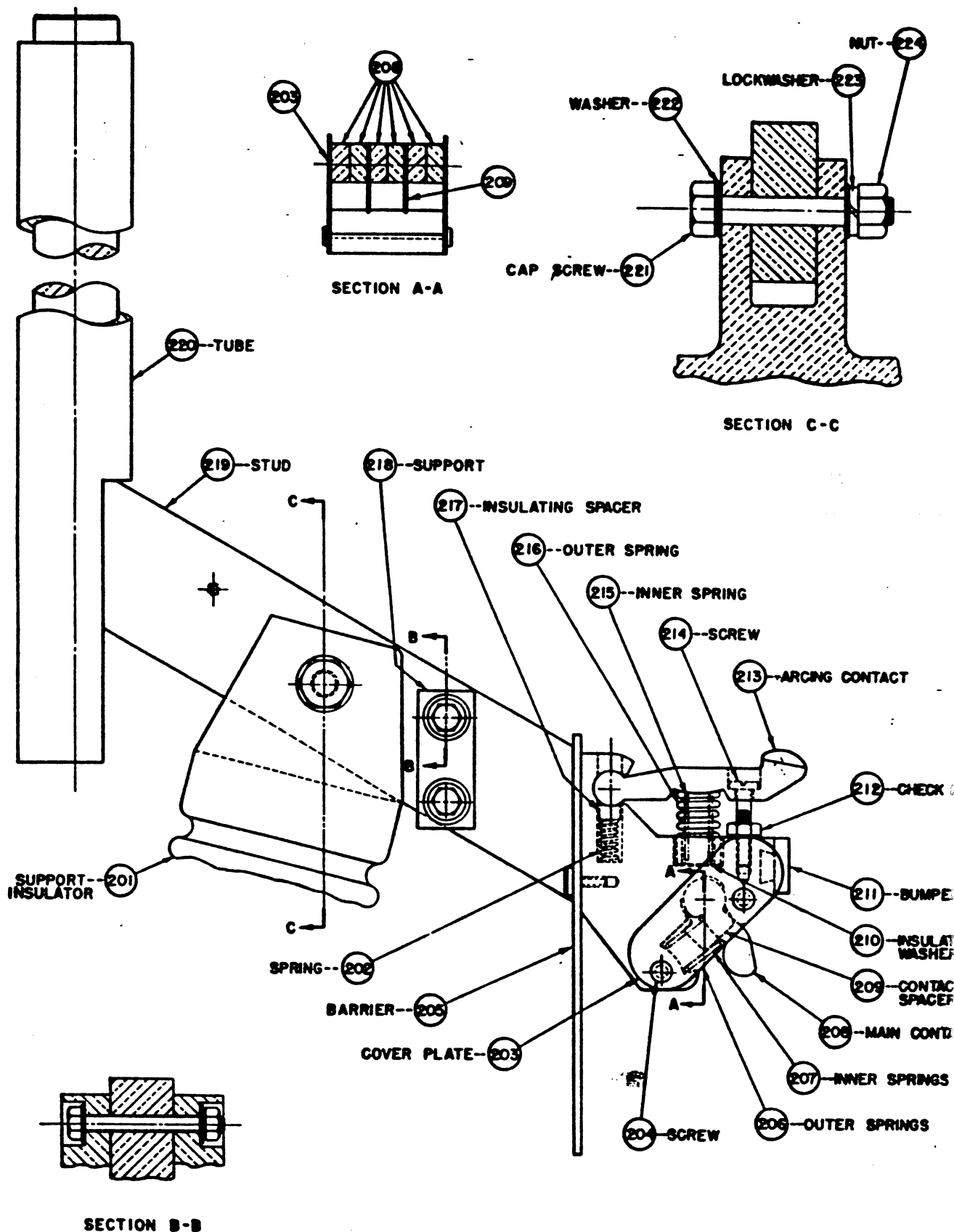




TYPE JD-802 RELAY



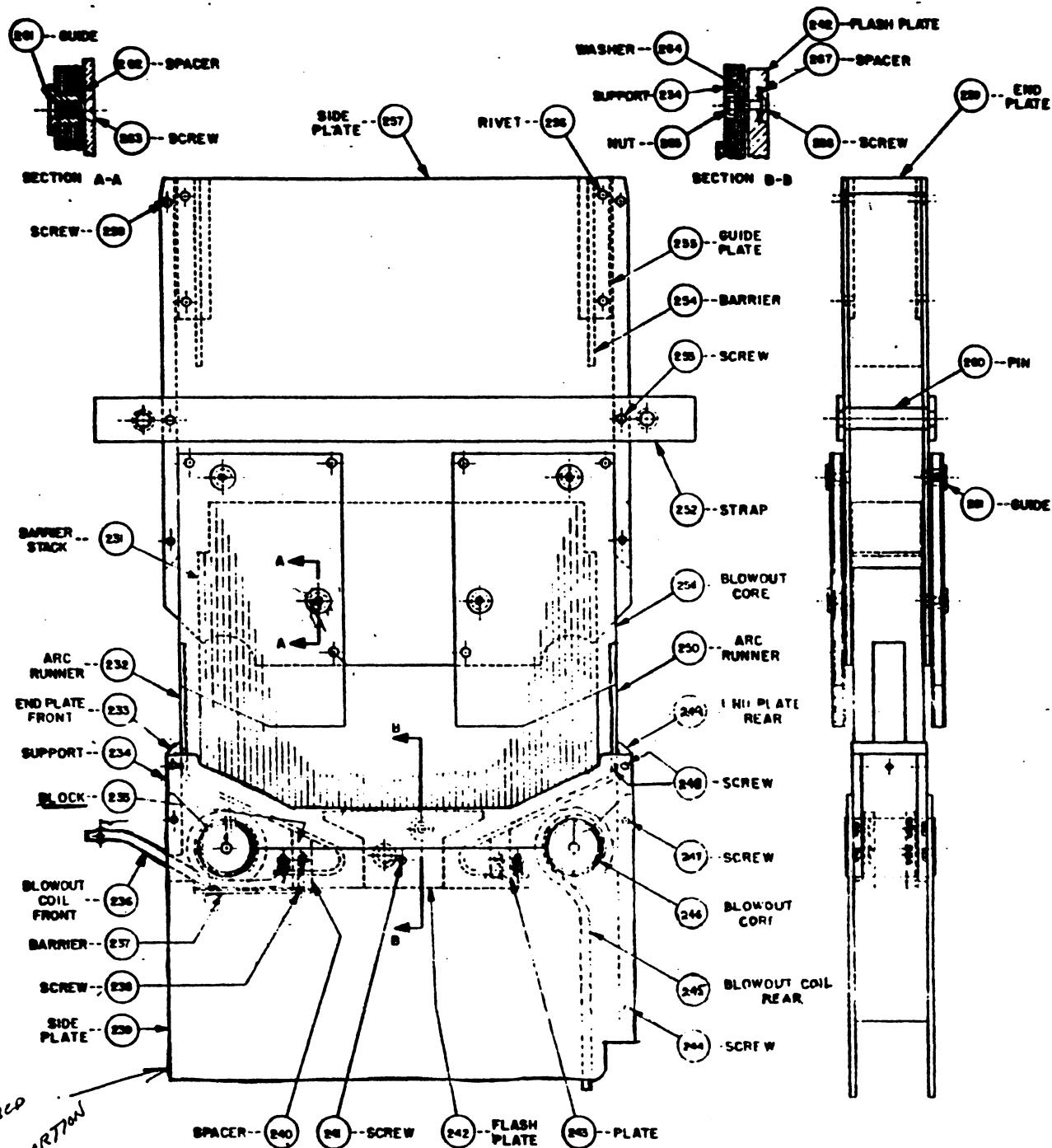
# ALLIS-CHALMERS CIRCUIT BREAKER EQUIPMENT



**FIG. 7**

TYPICAL FRONT BUSHING  
AND CONTACT ASSEMBLY  
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# ALLIS-CHALMERS CIRCUIT BREAKER EQUIPMENT

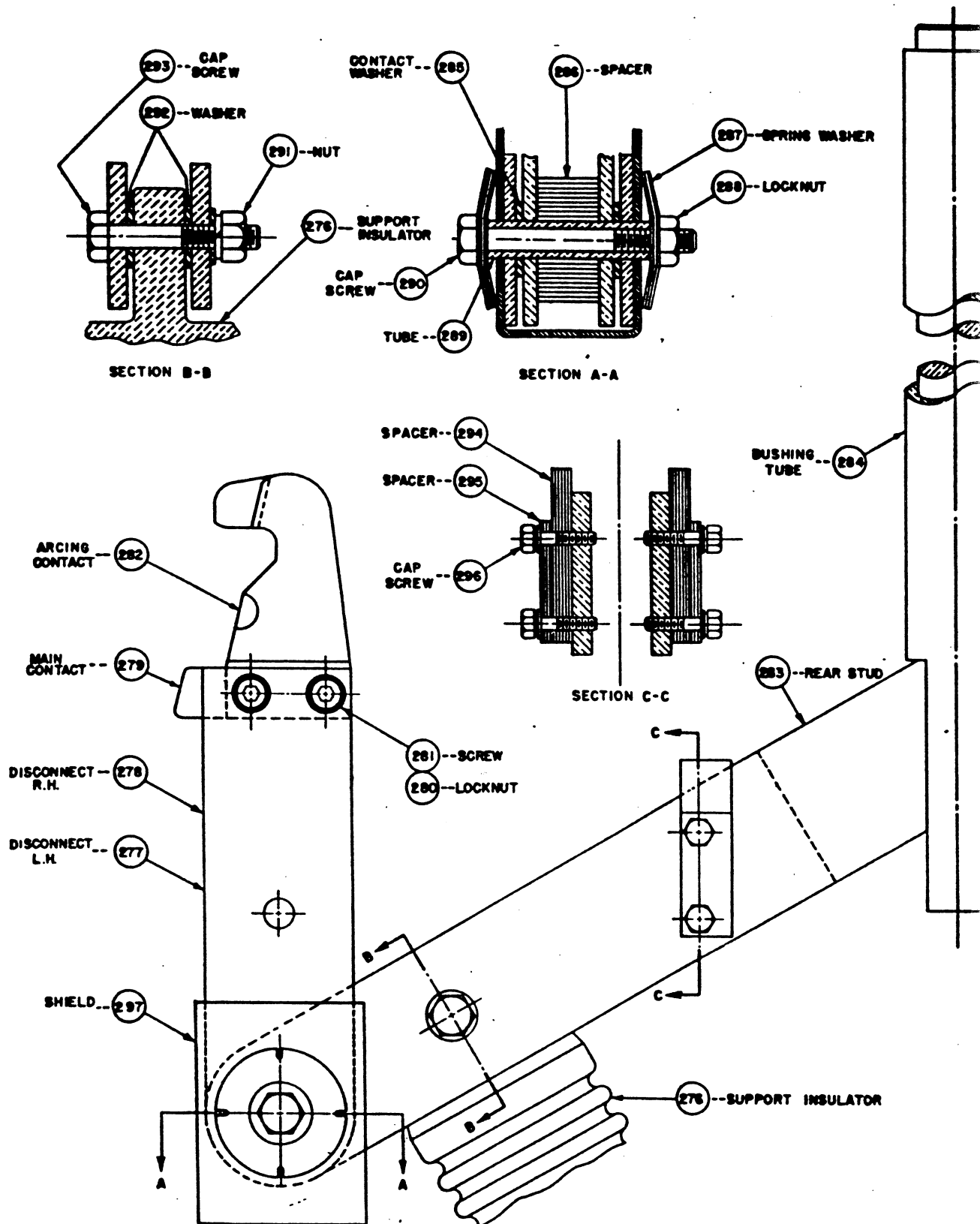


Red outlined  
AREA - LOWER PORTION

**FIG. 8**

TYPICAL ARC-CHUTE ASSEMBLY  
9-4-52 BK 10-995

# ALLIS-CHALMERS CIRCUIT BREAKER EQUIPMENT



**FIG. 9**

TYPICAL REAR BUSHING AND DISCONNECT  
CONTACT ASSEMBLY

NOVEMBER 7, 1952

71-400-04 MK.401