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INSTRUCTIONS FOR CARE OF CONTACTS  
GENERAL ELECTRIC CO. AIR CIRCUIT BREAKERS

TYPE AL-2-50, AL-2-75, AL-2-100

TYPE AE-1-25 &amp; TYPE MC-5

NEW CONTACTS

The contacts of these circuit breakers are cleaned and adjusted before shipment, but due to the possibility of dust collecting on the contacts, a sulphide film forming on them or a change in adjustment as a result of improper handling during shipping or installation, it is recommended that the contacts be inspected and the main contacts cleaned and readjusted, if necessary, just before the breakers are placed in operation. The main contacts have been coated with a wax to retard the formation of any surface film on the contacts. This coating will not interfere with the proper operation of the breaker since it will volatilize at the normal operating temperatures of the breaker. If abrasive dust has been present during the installation period, the contacts should be carefully wiped off to remove the dust adhering to the contact surfaces. The following procedure is suggested.

1. Wipe off any dust which may have collected on the contact surfaces with a clean cloth.
2. Clean the contacts with a good grade of silver polish or very fine sandpaper to remove any dark surface film so that the contacts are clean and bright. If silver polish is used, care must be exercised to remove all polish from the contacts or insulated parts after cleaning. If sandpaper is used, care must be exercised to maintain line contact.
3. Take contact impressions as described below to determine if proper line contact is being obtained. If necessary improve contacts as described.

CONTACTS WHICH HAVE BEEN IN SERVICE

Contacts should always be inspected after a breaker is known to have opened a short circuit. Periodic maintenance should be as follows:

1. Wipe off dust and clean the contacts as described under "New Contacts".

2. Take contact impressions and improve contacts to obtain line contact if necessary. Remove any rough or high spots caused by opening high currents with a fine clean mill file or very fine sandpaper. Small depressions in the contacts need not be removed if 75% line contact can be obtained.

CONTACT IMPRESSIONS

These breakers are equipped with high pressure line type contacts. To obtain a line contact, one silver contact surface is machined flat and the other surface in contact with it is machined with a radius. For proper operation, the contacts should be adjusted so that they make contact for at least 75% of the length of the contact. To check the contact adjustment, hold between the stationary and movable contacts a piece of thin carbon paper with tissue paper on the carbon side. Close the breaker slowly, open it and examine the impression on the paper. Good contact is indicated if an impression shows for 75% or more of the length of the contact. Good contact is also indicated if a .002 inch feeler gauge cannot be inserted for more than 25% of the length of the contact.

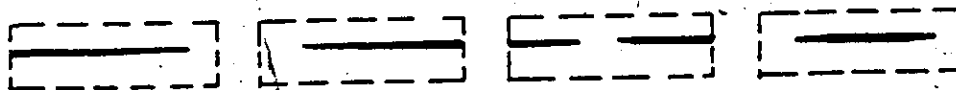
Should poor line contact be obtained, it will be necessary to improve the contact by using a file to remove material from the high spots until a line is obtained for the required 75% of the length. Care must be exercised to maintain a radius on one contact surface so that the line impression will not be too broad. The radius is on the stationary contact surface in the AE-1-25 breaker but on the movable contact surfaces in the other breakers.

Read the instruction book applying to these breakers for additional information on contact construction and contact maintenance.

Typical samples of good and bad contact impressions are shown below:



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**GENERAL ELECTRIC**  
SCHENECTADY, N.Y.