

4-14-65

## Finger Cluster Assemblies for Types DB, DM and DR Circuit Breakers

**Summary:** Low Voltage Switchgear, Switchgear Division, East Pittsburgh, announces the availability in limited quantities of a new finger cluster assembly for use on DB-50, DB-75, DB-100, DBF-16, DBF-40 and DM circuit breakers. These new assemblies will become standard on all our Low Voltage Switchgear as soon as they are available in larger quantity. The purpose of this announcement is to offer any customer who has encountered difficulty with the previous assemblies the earliest possible opportunity to obtain the new assemblies.

The finger cluster assembly which has been used for many years consists of copper fingers and flat steel springs held in a copper alloy retainer. It has been our experience that a very small fraction of these retainers have cracked after being in service for a period of time. Cracking in the retainer causes serious loss of contact pressure between the fingers and the main disconnect contacts of both breaker and switchgear. In 1960 the alloy of the retainer was improved and we have an "almost zero" record of trouble with retainers of the new alloy. The improved alloy and a replacement policy on retainers was announced in Electric Supervisors Letter #62-1.

The new finger cluster assembly was designed to remove the last trace of trouble with the cracked retainers and to have an assembly which looked and could be identified by customers as different. The new assembly is physically and electrically interchangeable with the old. Its design is such that there is no spring stress on the retainer. Contact pressure is now supplied by a system of coil springs, tension members and pins, all made of steel. Assemblies for the DB-50, DB-75 and DBF-16 have four independent spring systems on four finger subassemblies. Assemblies for the DB-100, DBF-40 and DM have five independent spring systems. All the new assemblies have been thoroughly checked in temperature and short circuit tests. A DB-50, DB-75 or DBF-16 assembly is shown in the attached photograph.

The new finger cluster assemblies will become standard on Low Voltage breakers as soon as our production rate becomes sufficiently high. During the transition period orders for replacement assemblies will be given priority over regular production.

**Recommendation:** We recommend to all customers who have DB, or DM circuit breakers that the finger cluster assemblies be inspected at regular, annual intervals. If any sign of a crack in the retainer is discovered, we recommend replacement by the new assemblies. We are not recommending wholesale replacement of all assemblies of the old type. We have no evidence that the incidence of cracked retainers is high enough to warrant a general replacement program.

Assemblies with cracked retainer will be replaced at no charge if they are within the warranty period. Beyond warranty replacement will be made until July 1, 1966, at the special, below full cost, price shown in the following table. Orders received after July 1, 1966, will be filled at regular renewal parts prices.

| BREAKER<br>TYPE          | NEW FINGER<br>ASSEMBLY | REPLACES OLD<br>FINGER ASSEMBLY | SPECIAL<br>PRICE   |
|--------------------------|------------------------|---------------------------------|--------------------|
| DB-50<br>DB-75<br>DBF-16 | S#679C711G02           | S#1589435                       | \$6.00<br>NET EACH |
| DB-100<br>DBF-40<br>DM   | S#679C711G03           | S#29B8671G01                    | \$9.75<br>NET EACH |

Similar new contacts assemblies will be made available for DR circuit breakers, but design details are not yet complete. Identification of these assemblies and prices will be published as soon as possible.

W. H. Ferguson, Product Manager  
Low Voltage Switchgear

Attach.

