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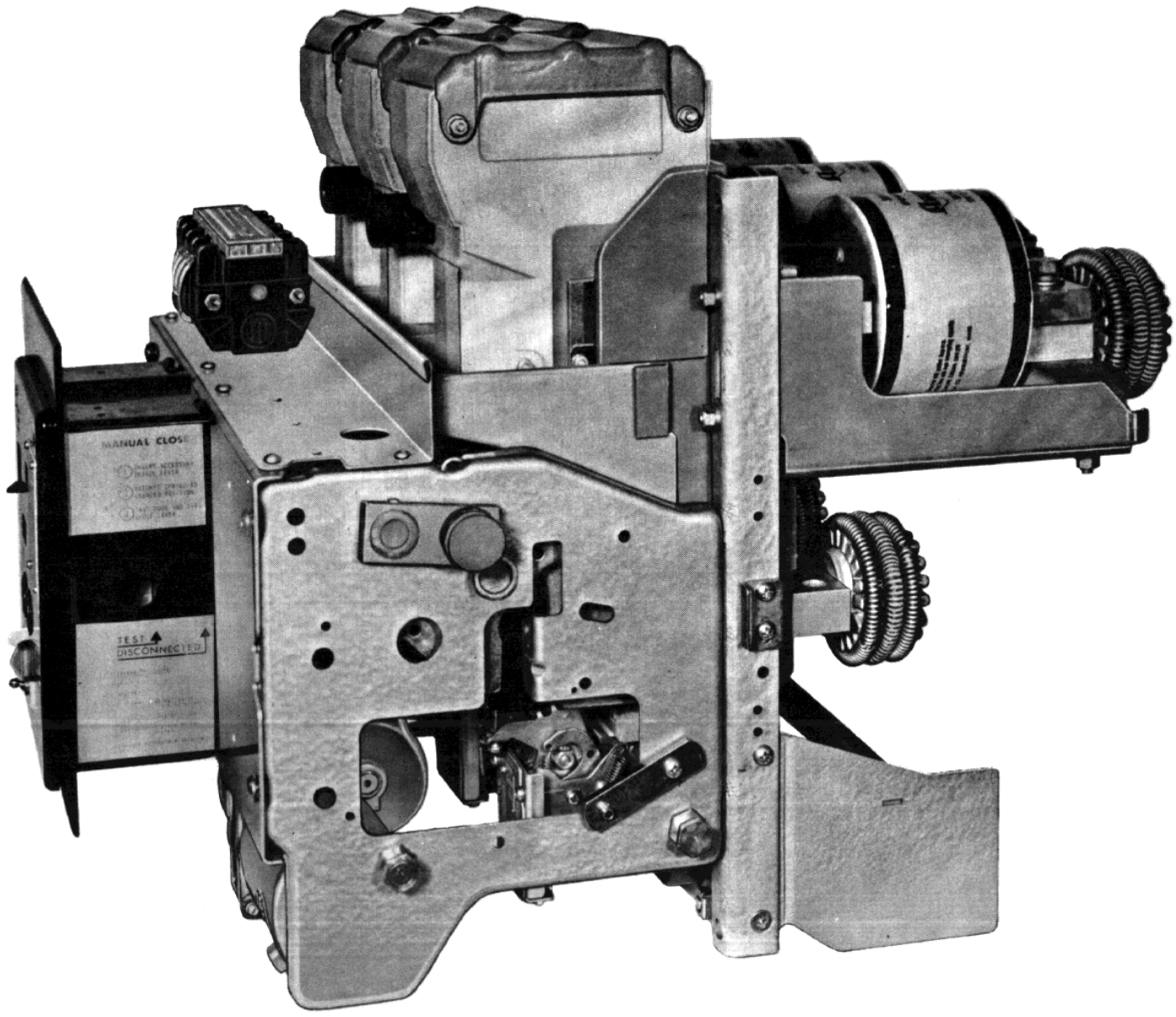
IB 6.1.2.7-3B

Installation/Maintenance Instructions

I-T-E Low-Voltage Power Circuit Breakers

K-Don® - 600 thru 1600 and 600S thru 1600S Fused Circuit Breakers

Drawout Switchboard Mounted



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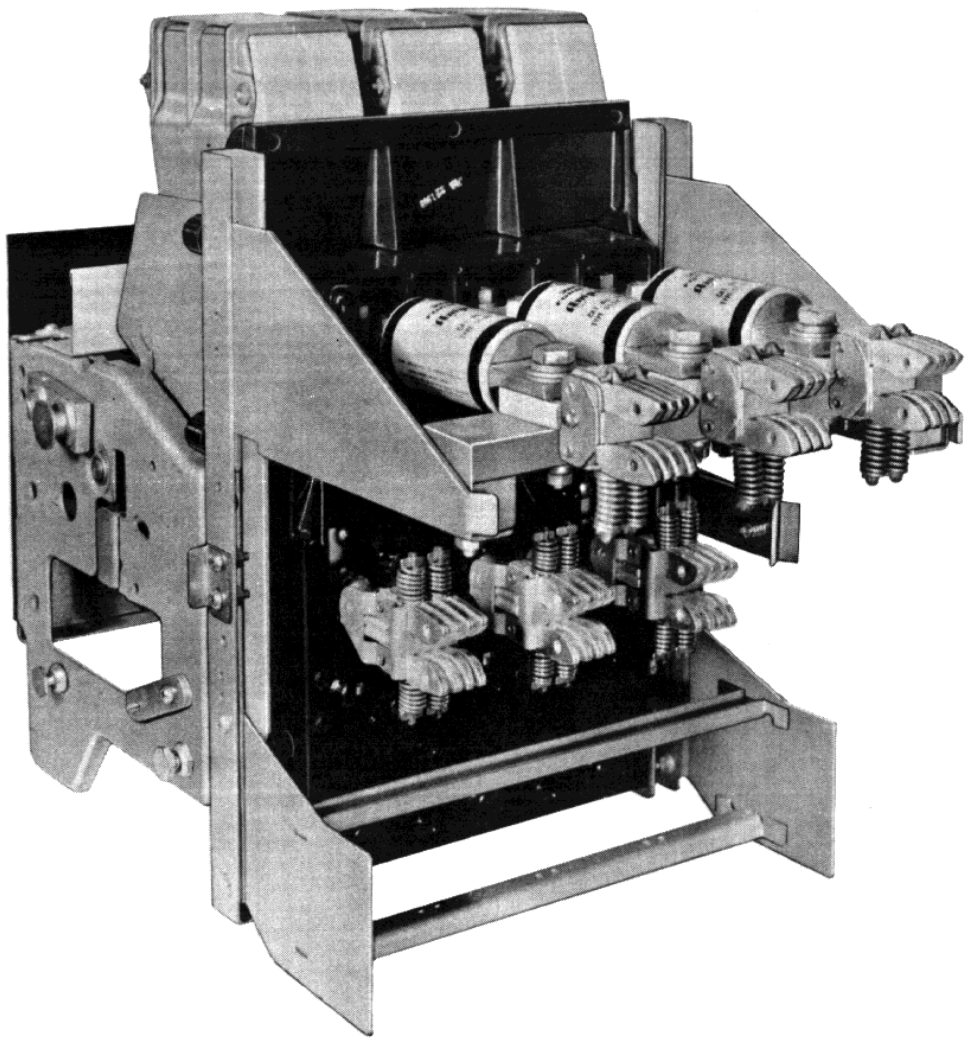

Fig. 1

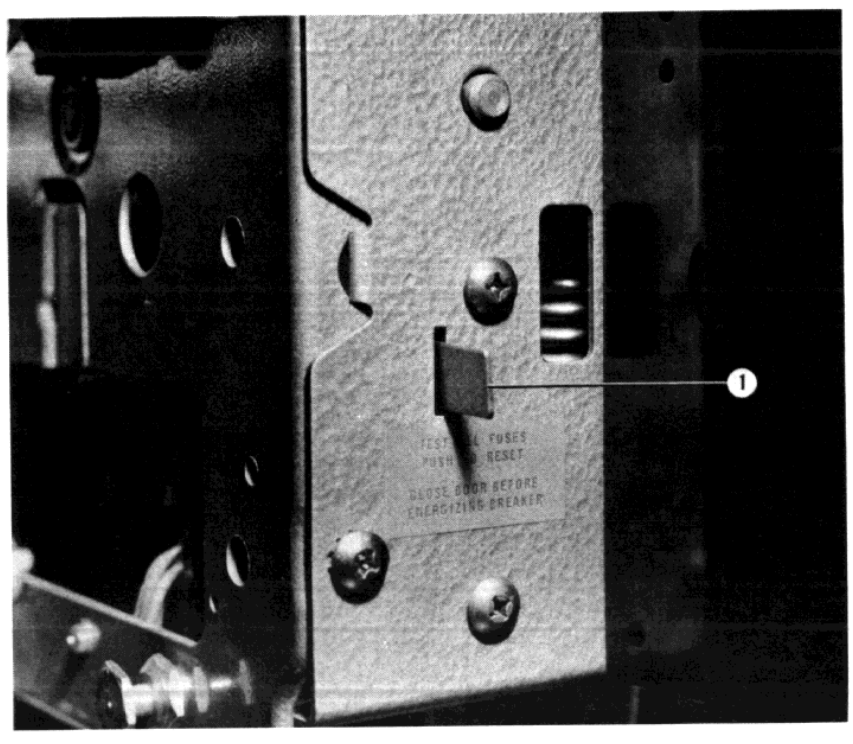

Fig. 2

INTRODUCTION

These fused circuit breakers are assemblies of the basic K-Line® circuit breakers, with the addition of integral current-limiting fuses and an open-fuse-trip device to provide a coordinated protective device. The K-Don® circuit breakers are supplied in drawout arrangement only and should never be used in stationary mounting.

All instructions pertaining to installation, operation and maintenance of basic K-Line circuit breakers also apply to the K-Don circuit breakers.

CURRENT-LIMITING FUSES (See Fig. 1)

The current-limiting fuses normally mounted on the K-Don circuit breaker are a special Chase-Shawmut type with the continuous current rating dependent on the coordination between the fuses, the direct-acting trip device and the other protected equipment. The maximum continuous current rating of the fuses is limited as noted on the circuit-breaker nameplate.

When a fault occurs to open a fuse or fuses, the K-Don circuit breaker will automatically open by operation of the open-fuse-trip device.

When a fuse or more than one fuse has blown, it is recommended that all three fuses be replaced regardless of apparent condition because the time-current characteristic of an unblown fuse could be affected and thus system coordination would be affected.

To replace the fuses, the circuit breaker should be withdrawn from its compartment and conveniently located so that the fuses are readily accessible. Fuse replacement is a simple mechanical procedure, and the one basic requirement is that the bolts should be retightened to a torque value of 45-50 ft./lbs.

NOTE: When replacing the fuses, do not remove the wires from the open-fuse-trip device. If it is necessary to check individual fuse continuity, the fuses must be removed from the circuit breaker to isolate the fuse from the paralleled coil of the device.

Replacement fuses MUST be the current-limiting type and are to be the Chase-Shawmut Special Purpose Type 55AL, UL listed, of the same continuous current rating as previously installed so that coordination is not affected. Any other type fuse, even if modified for mounting, will not necessarily provide proper coordination and protection.

OPEN-FUSE-TRIP DEVICE

The open-fuse-trip device, supplied on 3-pole circuit breakers, provides automatic opening of the circuit breaker when one or more fuses open.

The device consists of three voltage coils with one coil wired in parallel with each fuse. The coils operate on the voltage produced by the fuse during interruption and cause mechanical tripping of the circuit breaker.

When the open-fuse-trip device operates, an indicator (1, Fig. 2) will extend through the front of the mechanism mounting plate providing indication that the circuit breaker has opened due to fuse operation. This is visible only with the door open. Further, the automatic trip indicator on the escutcheon will also have extended, providing visible external indication of automatic opening. If the automatic trip indicator is extended but the open-fuse-trip device indicator is not, then the circuit breaker opened from direct-acting trip device operation because of a small overload which did not operate the fuses.

If the open-fuse-trip device indicator is extended, the circuit breaker will be held in the trip-free position so that it cannot be reclosed. If the indicator is inadvertently reset and the circuit breaker reclosed before the fuses are replaced, the circuit breaker will safely open again, when there is load current, but this practice is not recommended.

After the fuses have been replaced and the fault removed, both trip indicators should be pushed in to reset the circuit-breaker mechanism. The fused circuit breaker may then be closed and service resumed.

The design of the open-fuse-trip device is such that no maintenance or adjustment is necessary on this device for its normal operating life.

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