DESCRIPTION • INSTALLATION • MAINTENANCE

INSTRUCTIONS

TYPE L-63 ELECTRICAL INTERLOCK

APPLICATION

THE TYPE L-63 ELECTRICAL INTERLOCK is an auxiliary switching device designed primarily for mounting on D.C. magnetic contactors. A single unit provides either one contact normally open, or, one contact normally closed.

RATING

The interlock is capable of closing and carrying 10 amperes continuously. It has a D.C. interrupting capacity of 300 volt amperes inductive at a maximum of 600 volts.

CONSTRUCTION

The L-63 interlock employs a bridging type of contact arrangement as shown in Fig. 3.

The stationary contact assembly consists of a pair of silver contact buttons (1) welded to supports (2) which enclose two ceramic permanent (blow out) magnets (3). These supports also provide connecting terminals (4) and function as arc horns during arc interruption. The blow out magnets are oriented such that one arc blows outwards and the other arc blows inwards during interruption so that operation of the interlock is independent of terminal polarity.

The moving contact assembly comprises a pair of silver contacts (5) welded to a bridging member carried on an insulating pushrod (6). The pushrod also carries a single contact spring (7) and spring seat (8); and a single return spring (9) which is shielded by an arc resisting tube (10).

Two identical mouldings enclose the complete unit which is permanently riveted together.

Choice between normally open and normally closed contacts is achieved by selection of one of two positions for the contact spring seat (8). Access to the spring seat is obtained by removing either one of two sealing caps.

Conversion From Normally Open to Normally Closed Contacts.

1. Remove one or both sealing caps by inserting a screwdriver blade into the slot provided, and prying open.

2. Move the spring seat (8) against the spring (7), and rotate it about the pushrod until the spring seat snaps and locks into the two triangular shelves in the moulded housing.

3. Note that the contacts are now closed and that the interlock is operated by pushing end "B" (See Fig. 3) of the pushrod.

4. Replace the sealing caps. Snap firmly into position to ensure a tight dust excluding seal.

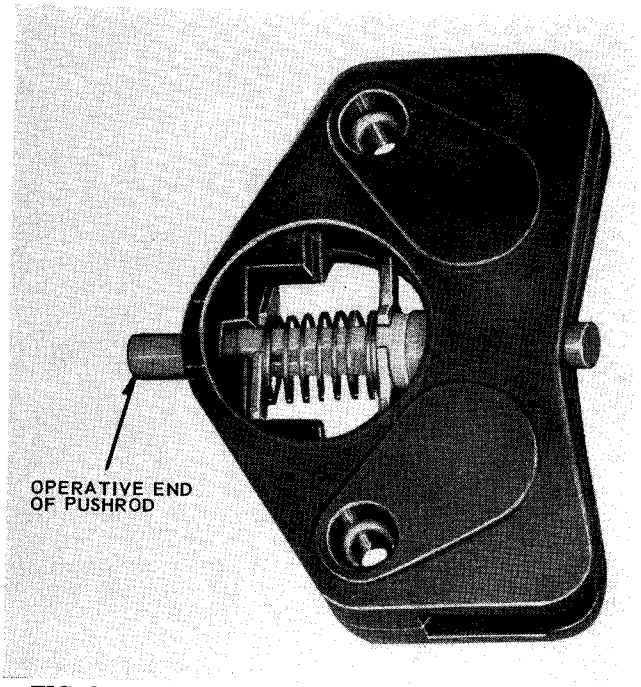

FIG. 1. Interlock Set for Normally Open Operation (Shown with Sealing Cap Removed)

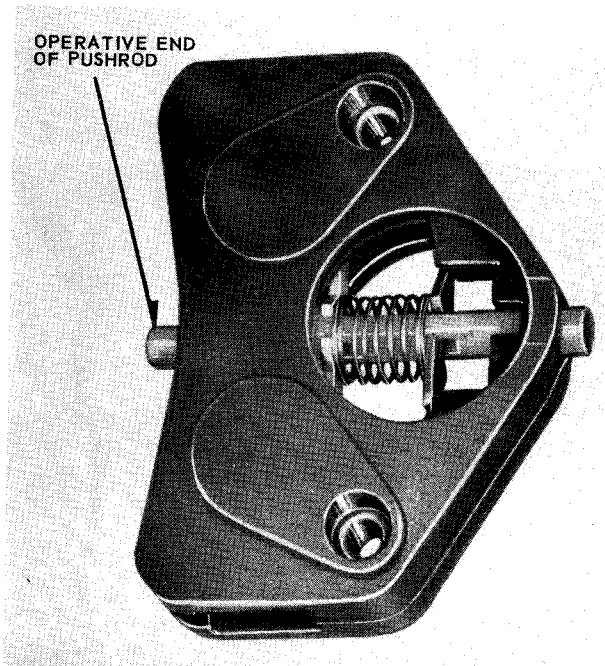

FIG. 2. Interlock set for Normally Closed Operation (Shown with Sealing Cap Removed)

Conversion From Normally Closed to Normally Open Contacts

1. Remove one or both sealing caps by inserting a screwdriver blade into the slot provided, and prying open.

2. Move the spring seat (8) against the spring (7), and lift it out of the triangular shelves in the moulded housing. Rotate the spring seat about the pushrod until the spring seat snaps into the open position.

3. Note that the contacts are now open and that the interlock is operated by pushing end "A" (See Fig. 3) of the pushrod.

4. Replace the sealing caps. Snap firmly into position to ensure a tight dust excluding seal.

INSTALLATION

The interlock is mounted by two uninsulated screws which pass through the riveted eyelet holes. Note that the direction of mounting depends upon whether the interlock is to be used for normally open or normally closed operation. In either case, the operative end of the pushrod must face towards the actuating finger. Note too, that it is possible to stack two interlocks by mounting one against the other using common (uninsulated) mounting screws.

When an interlock and its actuating finger are first mounted on a contactor it may be necessary to adjust the contact overtravel by bending the actuating finger slightly. Overtravel is correctly set when 1/16" of the interlock pushrod protrudes from the interlock housing when the contactor armature is completely sealed.

MAINTENANCE

Very little maintenance is required by the L-63 interlock beyond occasional examination to see that the parts move freely, without friction or binding. If correctly set during the initial installation, the contact overtravel will remain constant. If a variation occurs, it can be reset by bending the actuating finger so that 1/16" of the pushrod protrudes—as described above.

Occasional removal of the sealing caps and blowing through with compressed air is recommended but no attempt to use oil or grease should be made, since this only hastens the accumulation of dust.

The condition of the contacts can be observed approximately by examination through the terminal openings. When the contacts eventually become worn, after prolonged life, to the point where operation becomes unreliable, then the complete interlock should be replaced by a new unit.

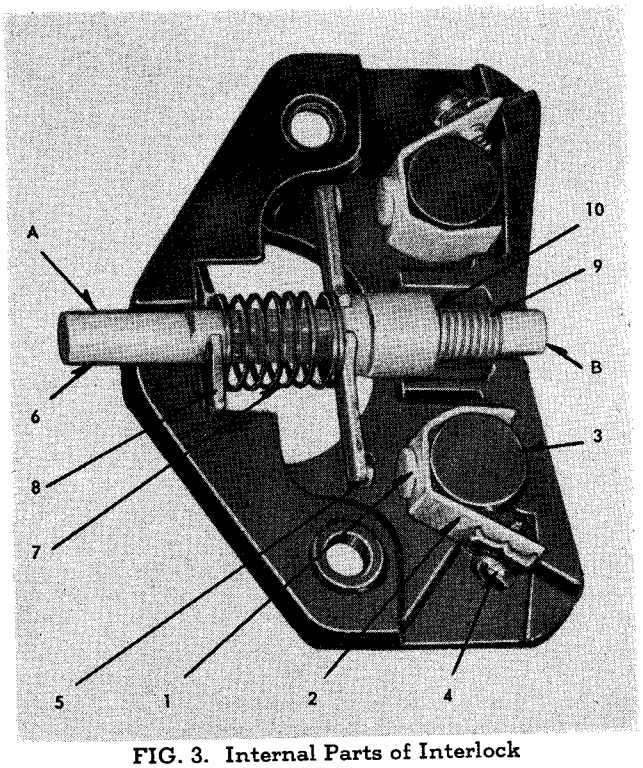

FIG. 3. Internal Parts of Interlock

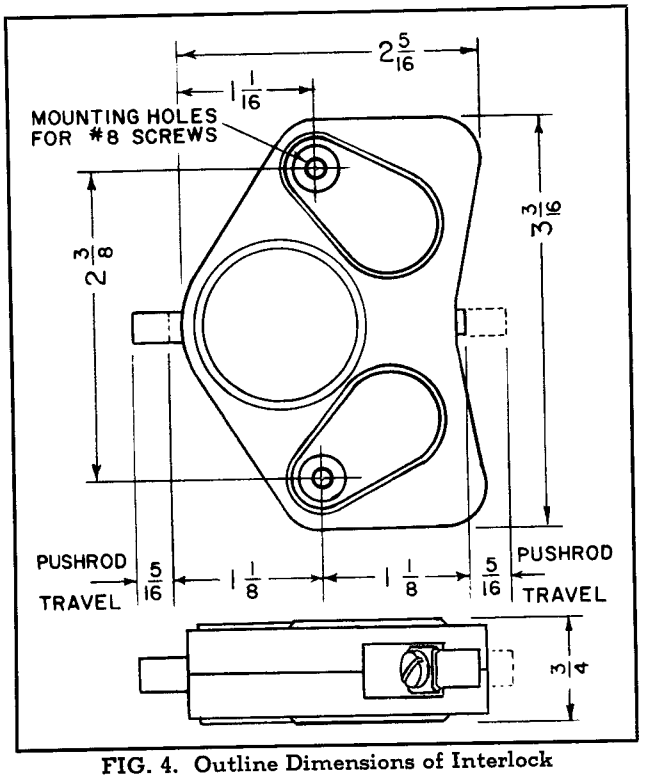

FIG. 4. Outline Dimensions of Interlock

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The stationary contact assembly consists of a pair of silver contact buttons (1) welded to supports (2) which enclose two ceramic permanent (blow-out) magnets (3). These supports also provide connecting terminals (4) and function as arc horns during current interruption. The blow-out magnets are oriented such that one arc blows outward and the other arc blows inward during interruption so that operation of the interlock is independent of terminal polarity.

The moving contact assembly comprises a pair of silver contacts (5) welded to a bridging member carried on an insulating pushrod (6). The pushrod also carries a contact spring (7) and spring seat (8); and a return spring (9) which is shielded by an arc resisting tube (10).

Two identical molded housings (11) enclose the complete unit which is permanently riveted together.

Choice between normally open and normally closed contacts is achieved by selection of one of the two positions, for the contact spring seat (8). Access to the spring seat is acheived by removing the covers, (12).

Conversion From Normally Open to Normally Closed Contact Action.

1. Remove both covers (12) from the access openings by prying with a screwdriver blade.

2. Move the spring seat (8) against the spring (7), compressing the spring nearly solid. Then rotate the spring seat about the pushrod until it drops back and locks into the two triangular shelves in the molded housing. Figure 4 shows the spring seat in this position.

3. Note that the contacts are now closed and that the interlock is operated by depressing the end of the pushrod indicated in Figure 4.

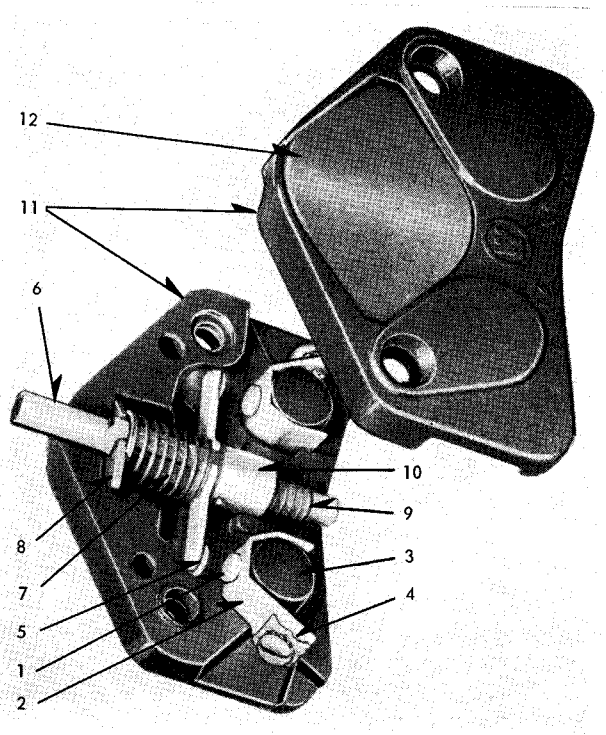

FIG. 1. Internal Parts of Interlock

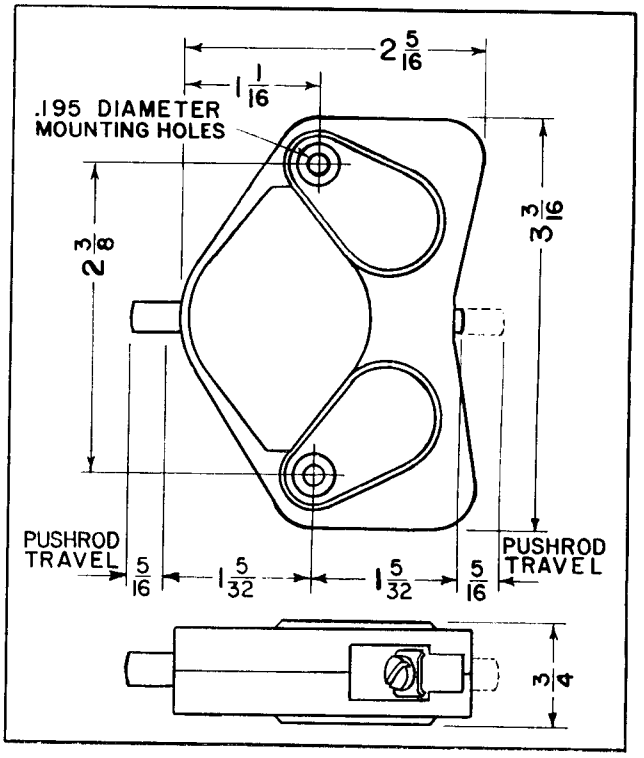

FIG. 2. Outline Dimensions of Interlock

4. Replace the covers by inserting one corner under the ledge provided in the molded housing and bending the cover between thumb and forefinger until the other corner may be freely inserted under the other retaining ledge.

Conversion From Normally Closed to Normally Open Contact Action.

1. Remove both covers (12) from the access openings by prying with a screwdriver blade.

2. Move the spring seat (8) against the springs (7), and lift it out of the triangular shelves in the molded housing. Rotate the spring seat about the pushrod until it can snap back into the open position as shown in Figure 3.

3. Note that the contacts are now open and that the interlock is operated by depressing the pushrod from the end indicated in Figure 3.

4. Replace the covers by inserting one corner under the retaining ledge in the housing and bending the cover between thumb and forefinger until the other corner may be freely inserted under the other ledge.

INSTALLATION

The interlock is mounted by two screws which pass through the riveted eyelet holes. Note that the direction of mounting depends upon whether the interlock is to be used for normally open or normally closed operation. In either case, the operative end of the pushrod must face toward the actuating finger. Note, too, that it is possible to stack two interlocks by mounting one against the other using common (uninsulated) mounting screws.

When an interlock and its actuating finger are first mounted on a contactor the actuating finger must be adjusted to allow the interlock pushrod to protrude 3/32" from the interlock housing when the pushrod has been depressed by the actuating finger. This adjustment is essential to insure proper contact overtravel and to avoid bottoming the pushrod inside the housing. After adjustment, the pushrod should have at least 1/32" of free travel beyond the position of the pushrod when it is depressed to the limit of the actuating finger travel.

MAINTENANCE

Very little maintenance is required by the L-63 interlock beyond occasional examination to see that the parts move freely without friction or binding, and that the actuating finger remains in proper adjustment—as described above.

Under dusty conditions, it is recommended that the interlock be cleaned occasionally by blowing through the terminal openings with compressed air, but no attempt to use oil or grease should be made, since this only hastens the accumulation of dust.

The condition of the contacts can be observed approximately by examination through the terminal openings. When the contacts eventually become worn, after prolonged life, to the point where operation becomes unreliable, the complete interlock should be replaced by a new unit.

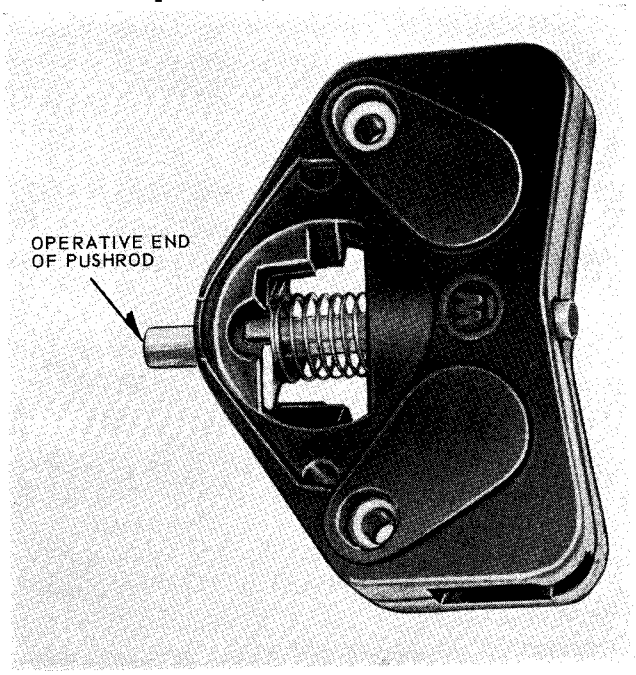

FIG. 3. Interlock Set for Normally Open Operation (Shown with Covers Removed)

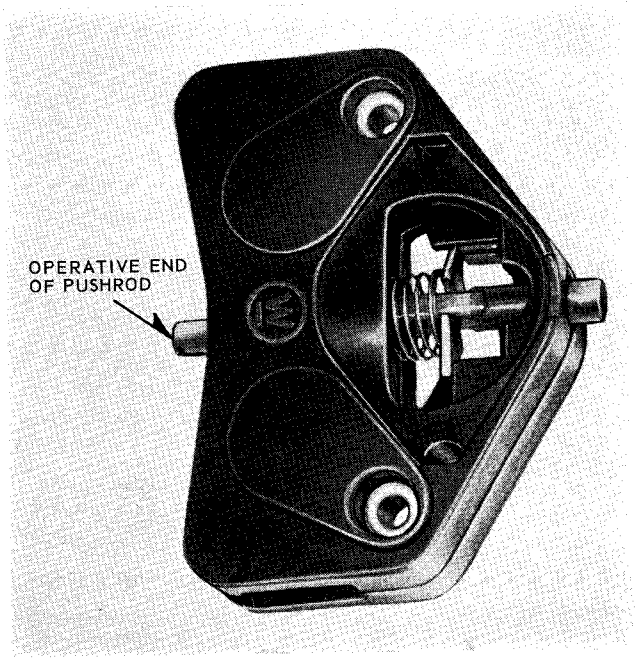

FIG. 4. Interlock Set for Normally Closed Operation (Shown With Covers Removed)