

Installation/Maintenance Instructions

Interrupter Switches

Operating Mechanism

IMPORTANT

Make absolutely sure applicable equipment is de-energized and properly grounded before proceeding with any installation or maintenance.

METAL-ENCLOSED, FUSED-INTERRUPTER SWITCH INSTRUCTIONS

STANDARD MANUAL OPERATING MECHANISM

The BBC interrupter switch operating mechanism is a stored-energy device. This stored-energy device operates independently of the speed with which the operator moves the manual handle to open or close switch.

OPERATING SEQUENCE

1. Check worded and color-coded position indicator (Fig. 1) built into manual handle housing which indicates switch and spring position.
2. If manual handle includes a Kirk interlock, make sure it is unlocked before actuating manual handle. (For interlock operation, see Fig. 3.)
3. With switch in closed position as in Fig. 2, handle is in the up position. Rotate handle 180° applying approximately 50 lbs pressure. A chain-driven sprocket crank compresses the stored-energy spring until completely compressed or charged. When spring is charged, it moves overcenter, discharging and driving operating plate which is connected to operating shaft. Switch is opened by porcelain links and cranks attached to shaft.
4. With switch in open position, handle will be in the down position. To close switch, reverse operating procedure.

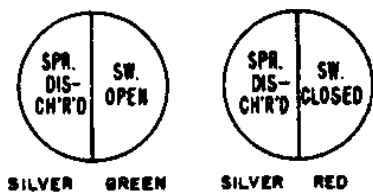


Fig. 1

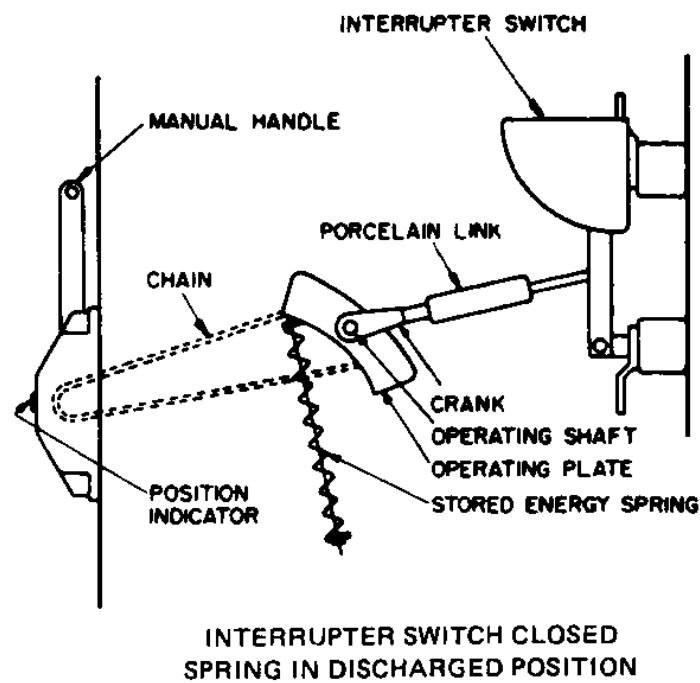
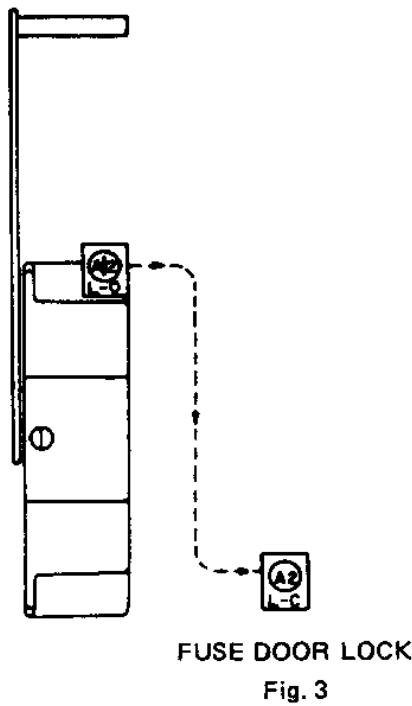


Fig. 2

Fig. 3 is a typical example of interlocking to prevent access to fuses until switch is open. Two keys are supplied, one with each lock. Before operation, one key must be removed and placed under supervisory control or destroyed. One key remains in lock cylinder as shown.



INTERLOCK OPERATING SEQUENCE

1. Open switch, turn Key A2 on handle-interlock to lock open, and remove key.
2. Insert key into interlock on fuse door and turn to unlock.
3. Open fuse door, Key A2 is now held captive. To restore service, reverse procedure.

STANDARD MOTOR OPERATING MECHANISM

When standard mechanism is supplied with motor (Fig. 4), operation of the stored-energy device becomes automatic. The operation is the same as described on Page 1, except motor is used to charge spring rather than manual handle. With automatic operation, the manual handle is only used when motor control power is not available. Thus, normal operation is completely electric and manual handle operation requires a safety interlock to separate electric and manual operation.

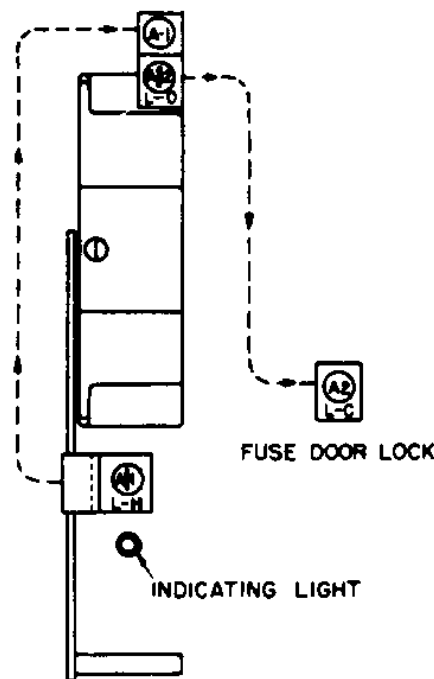
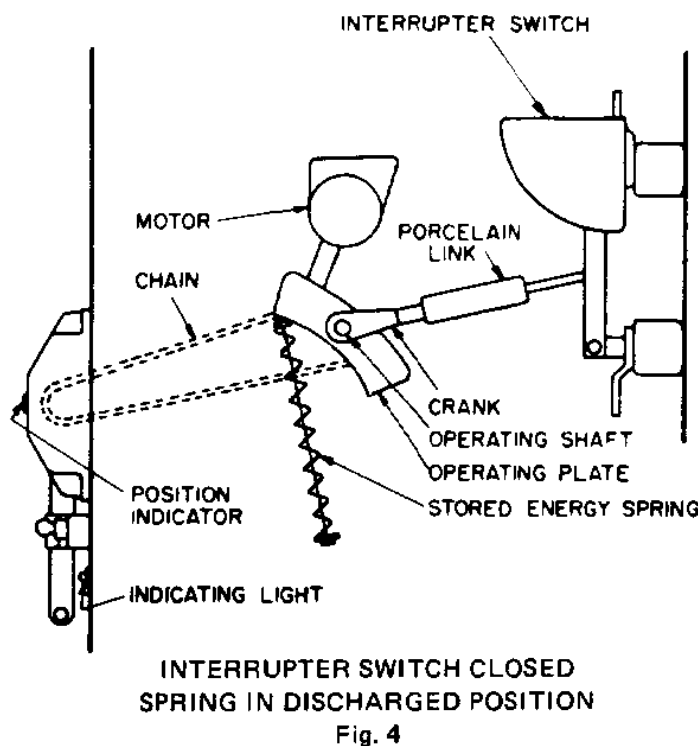
Safety interlock and emergency manual handle operation is described on Page 4.

Fig. 5 is a typical example of interlocking to prevent access to fuses until switch is open. Four keys are supplied, one with each lock. Before operation, two keys must be removed and placed under supervisory control or destroyed. Two keys remain in lock cylinders as shown.

INTERLOCK OPERATING SEQUENCE

1. With switch in open position, turn Key A-1 then remove and inset in A-1 cylinder on handle-interlock.
2. Turn Key A-2 to lock open and remove key.

- 3. Insert key into interlock on fuse door and turn to unlock.
- 4. Open fuse door, Key A-2 is now held captive. To restore service, reverse procedure.

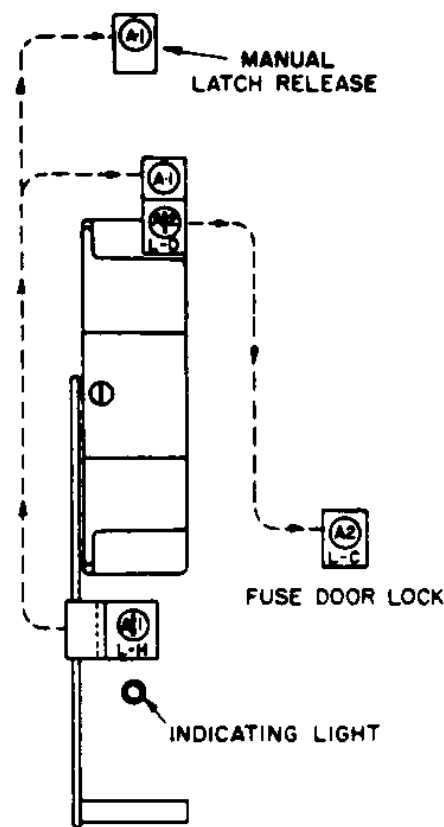
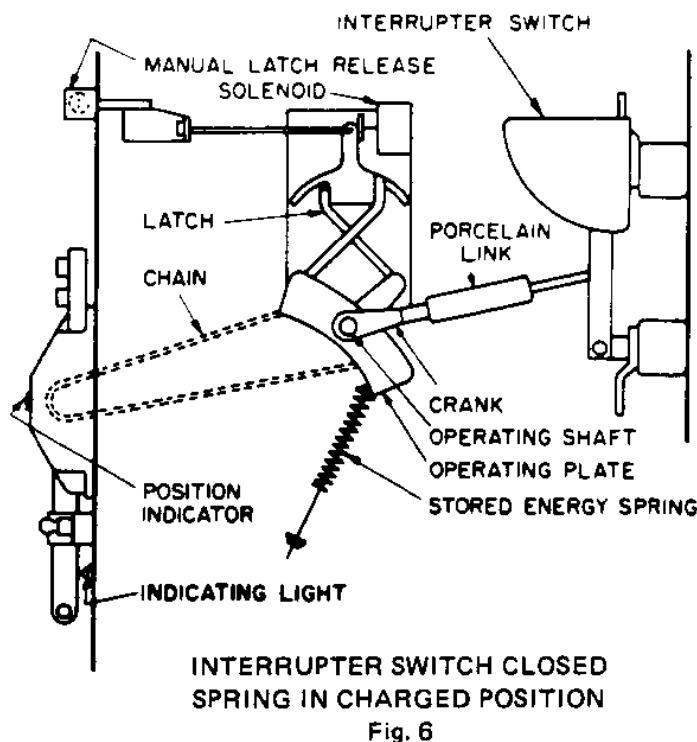


STANDARD LATCHED OPERATING MECHANISM WITH AND WITHOUT MOTOR

When standard mechanism is supplied with latch (Fig.6), operation of the stored-energy device is the same as described on Page 1 for Manual Operation, or Page 2 for Motor Operation. The addition of latch to mechanism permits capture of stored-energy spring for either an opening or closing switch operation by means of a solenoid. When motor is used to charge spring, normal operation is completely electric as described on Page 2. The safety interlock and emergency manual handle operation is described on

Page 4. When motor is not supplied, manual handle must be used to charge spring after each opening or closing operation as described on Page 4. For manual means of operating latch, see Fig. 7 and description below.

Fig. 7 is typical of interlocking:
A. To prevent access to fuses until switch is open.
B. For manual emergency means to operate latch. Five keys are supplied, one with each lock. Before operation, 3 keys must be removed and placed under supervisory control or destroyed. Two keys remain in lock cylinders as in Fig. 7.



INTERLOCK OPERATING SEQUENCE

C. For locking switch open for fuse access.

1. With switch in open position, turn Key A-1 then remove and insert in A-1 cylinder on handle-interlock. Light will go out indicating open circuit.

2. Turn Key A-2 to lock open and remove key.

3. Insert key into interlock on fuse door and turn to unlock.

4. Open fuse door, Key A-2 is now held captive. To restore service, reverse procedure.

D. For manual emergency operation of latch.

1. Turn Key A-1 holding manual handle and remove key. Light will go out indicating open circuit.

2. Insert Key A-1 into manual-latch-release lock, and turn to release latch and operate switch.

3. To return to normal electric operation, return Key A-1 to manual handle lock. Light will indicate closed circuit.

MANUAL HANDLE OPERATION WITH ELECTRIC MOTOR AND/OR LATCH

When control power is not available, the following sequence is used for manual operation.

1. To free handle, turn key 90° to right, shown in Fig. 8. Lock releases handle arm and actuates a safety switch to open electric circuit. Indicating light provides positive visual indication of circuit condition. Light should go on when control power for electric operation is available..

2. Slide latch block on handle arm down to clear "DK" lock shown in Fig. 9.

3. With handle arm in free-wheeling position, locate handle arm in proper position for operation. Switch closed, handle arm up as shown in Fig. 10. Switch open handle arm down. Push in handle arm as shown in Fig. 10 to engaged position. While holding handle arm in engaged position, rotate handle arm 180° to operate. After rotating 180° handle arm will return to free-wheeling position. If mechanism is equipped with latch, see paragraph 5.

4. Slide latch block up handle arm and place in proper position as shown in Fig. 8. Turn key 90° to left. Handle arm is now locked and electric circuit closed.

5. Latched mechanism with or without motor adds two additional switch conditions. (Spring charged to close, switch open and spring charged to open, switch closed. Check worded and color-coded position indicator Fig. 1.) To lock switch open, note spring must be discharged. With switch open spring charged, place handle in up position push in handle arm as shown in Fig. 10 to engaged position. While holding handle arm in engaged position, rotate handle arm 180° to discharge spring.

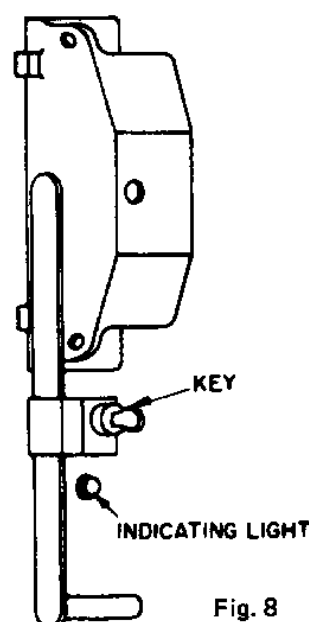


Fig. 8

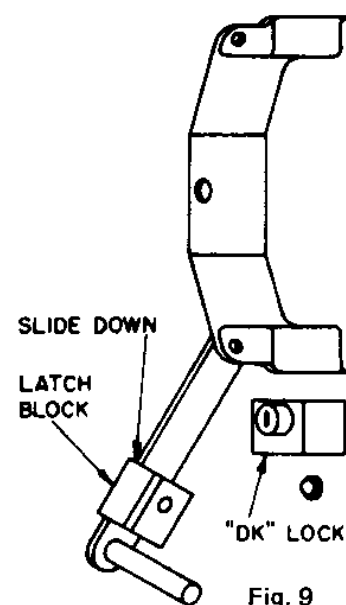


Fig. 9

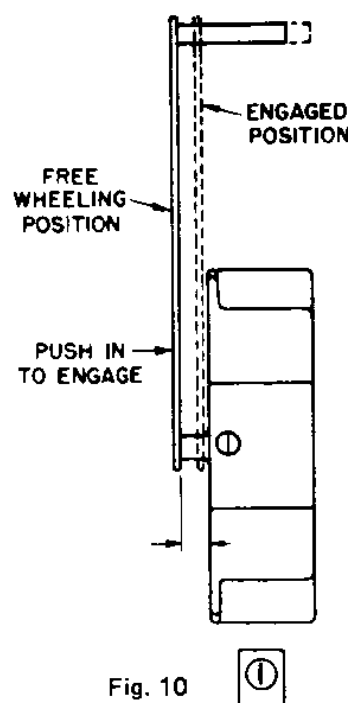


Fig. 10