## SERVICE NOTE

SUPERSEDES:

None

# HP MODEL 8690A SWEEP OSCILLATORS Serial Prefix 803 - Only

## IMPROVED PEN LIFT RELAY KIT

A new Pen Lift Relay Kit, HP Part No. 08690-6045, is the recommended replacement for Pen Lift Relay A9K1.

The new relay has a higher contact rating for increased reliability, and should be installed in all instruments with Serial Prefix 803. The kit is available at no charge through your nearest HP Sales Office.

## PARTS INCLUDED IN RELAY KIT 08690-6045

| Quantity                  | Description                      | HP Part No. |
|---------------------------|----------------------------------|-------------|
| 1                         | Relay, SPDT 6V                   | 0490-0123   |
| $\overset{\mathtt{1}}{2}$ | Washer, Helical                  | 2190-0003   |
| 2                         | Screw, Machine $4-40 \times 3/8$ | 2200-0143   |
| 4                         | Washer, Shouldered               | 3050-0004   |
| 2                         | Washer, Flat                     | 3050-0105   |
| 1                         | Bracket, Fuseholder              | 08690-0018  |
| 1                         | Jumper                           | 08690-6044  |
| 1                         | Service Note                     | 8690A-8     |

MS/mh/WA 5/68-4

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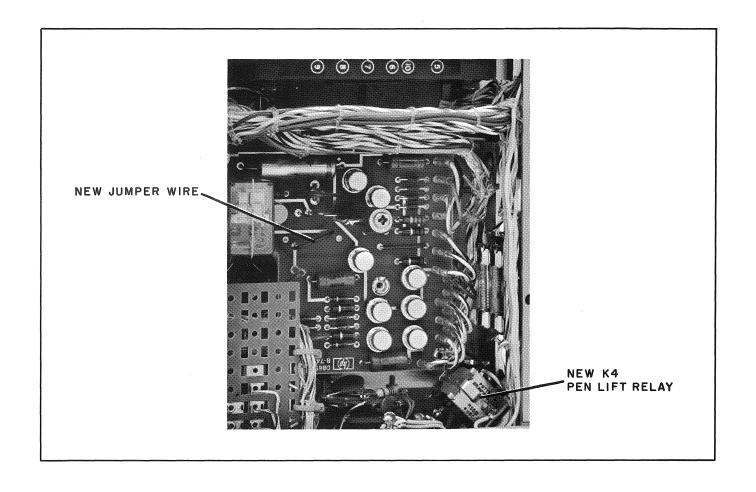


Figure 1. Installation of Jumper Wire on A9 Board

## INSTALLATION PROCEDURE

- 1. Remove ac power cable from instrument.
- 2. Remove bottom cover.
- 3. Locate Board A9 mounted just behind the front panel line switch. Clip Pen Lift Relay A9K1 off the board. Do not worry about damaging the old relay during its removal, as it will not be used again.
- 4. Solder a brown jumper wire on the top side of the A9 Board as shown in Figure 1.

#### Note

Some instruments will contain modified A9 Boards with a hole drilled in the printed circuit path between the anode of A9CR17 and one of the old relay coil terminals. These boards also have a 56.2  $\Omega$  Resistor, R13, soldered on the back of the board. If your instrument contains one of these modified boards, connect the jumper wire as shown in Figure 2.

- 5. Assemble the new fuseholder and relay bracket as shown in Figure 3.
- 6. Remove and discard the old F3, F4, F5 Fuseholder Bracket. Save the fuses and install them in the new fuseholder.
- 7. Install the new bracket in the same position as the old one and reconnect the leads to F3, F4, and F5. (Wire colors are shown in Figure 3.)
- 8. Remove the white/violet/gray wire connected to Pin #1 of the A9 Board (see Figure 2). Connect the wire to one coil terminal of the new pen lift relay as shown in Figure 3.
- 9. Connect the brown wire from the new relay to Pin #1 of the A9 Board.
- 10. Remove the white and white/violet wires from Pins #8 and #9 of the A9 Board (see Figure 2). Pull these wires out of the wiring harness back to the point where the harness splits. Reroute the wires through the other branch of the harness to the new pen lift relay, connect the wires to the relay as shown in Figure 3.
- 11. Replace cover and power cable. Verify correct pen lift relay operation according to the procedure of Table 5-2, Paragraph 20 in your Operating and Service Manual.
- 12. Correct the Parts List of your Operating and Service Manual by adding the fuseholder bracket and new K4 Pen Lift Relay and deleting A9K1.

Also correct Figure 7-2 to show K4 in place of A9K1.

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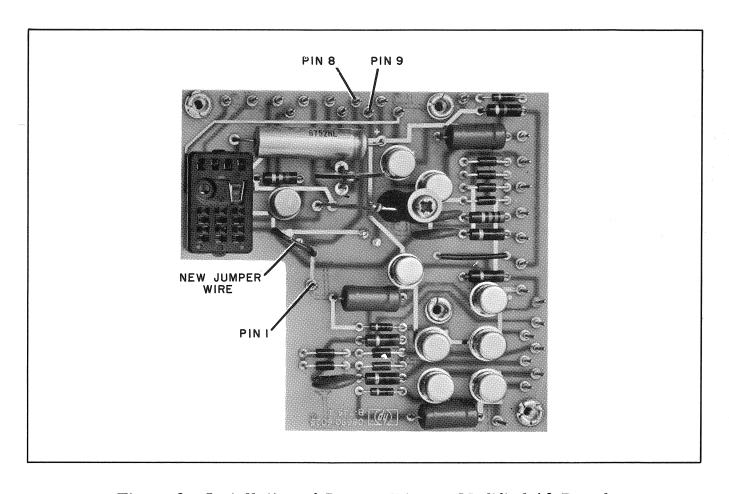


Figure 2. Installation of Jumper Wire on Modified A9 Boards

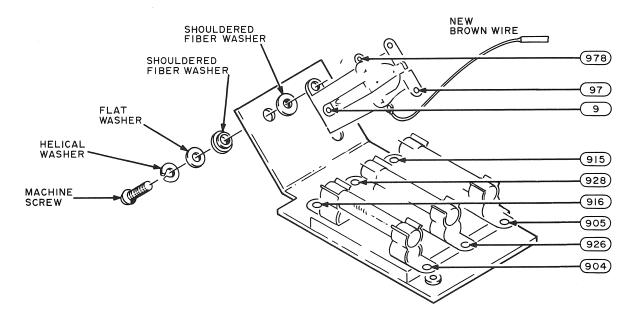


Figure 3. Relay Mounting Details