

DESCRIPTION AND MAINTENANCE INSTRUCTIONS

RELAYS & SOLENOIDS

(This EO replaces EO 40-40-2B dated 12 Jul 57)

**MAINTENANCE AND SERVICING
INSTRUCTIONS**

1 Relays installed in the starter, under-carriage, flap, propeller feathering, bomb-bay door, electrically driven pumps and battery circuits do not normally require attention beyond the checking of external connections, between periodic inspections. In the event the circuit controlled by the relay becomes inoperative the relay is to be checked as follows:-

(a) Disconnect wiring from the cold terminal of the main contacts.

(b) Connect a voltmeter (30 volt range) across the two terminals of the coil circuit. Close the pilot switch. Line voltage should be indicated or the relay will not close.

(c) Connect a voltmeter between the hot terminal of the main contacts and ground on the airframe. Line voltage should be indicated.

(d) Connect a voltmeter between the cold terminal of the main contacts and ground on the airframe. The voltage reading should be identical to the voltage indicated on the hot side of the relay. If any difference in voltage is shown the relay is to be replaced.

(e) Reconnect the wiring to the cold terminal of the main contacts and repeat steps (b), (c) and (d).

2 Failure of the relays may result if they are operated with batteries in a poor state of charge and generators not operating. If the power requirements of the equipment being operated should be high, the battery potential may drop below the value required to keep the relay closed. The circuit will then be opened and immediately the potential rises and the

relay again closes the circuit. The cycle of operation is completed at a rapid rate and will continue until the load is removed or the operating switch is turned to the OFF position. The arcing which occurs during this rapid rate of operation will cause the relay to fail in a short period of time. The same condition will result with rapid manual operation of the relay operating switch.

INSPECTION

3 Every minor check the external electrical connections for security and serviceability.

4 Every major the relay contacts are to be examined for burning and pitting. Relay contacts to be cleaned and burnished but not to be dressed down to a point where the plating is removed.

5 Every major, the bakelite cover, and the insulating spacers, washers and bushings (where applicable) are to be examined for cracks and breaks.

NOTE

The instructions outlined above are to apply in all cases except where aircraft EOs state otherwise. Where this is the case the aircraft EO is to have precedence over this EO. See relevant sections of EO 40-40 for detailed instructions.

PRECAUTIONS ON ASSEMBLY

6 Care is to be taken to ensure that the bakelite cover and the insulating spacers, washers and bushings (where applicable) are not damaged during assembly.

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF

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