

### Chapter 7

## PROTECTION UNIT, ROTAX, TYPE F6001

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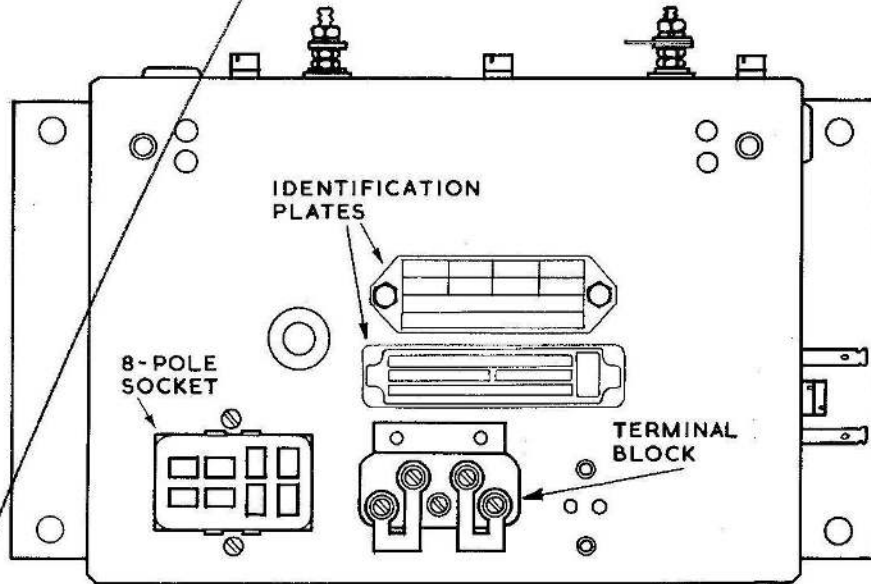


Fig. 1. F6001 protection unit (plan view)

#### Introduction

1. ◀ The protection unit, Type F6001 (Ref. No. 5UC/6631) affords protection for the U2704/1 transformer rectifier unit against consequential damage of essential components resulting from a short circuit occurring due to breakdown of any one rectifier arm. The unit is incorporated in the U2704/1 transformer rectifier unit which forms part of an aircraft a.c. generating system. ▶

#### DESCRIPTION

2. The unit comprises a rectangular chassis in which are fitted relays N.106996/1 and N.105744, resistance unit ZA.6204, 10-pole socket N.122642 and terminal block N.109858, mounted as shown in fig. 1 and 2. Flanges on the ends of the unit facilitate mounting.

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## Operation

3. The unit embodies two independently operated sections, which are appropriately connected in either the L.V. or M.V. main rectifier circuits. A rectifier fault would cause its respective section to operate the field contactor and thereby switch-off the generator.

### *L.V. rectifier protection circuit*

4. The L.V. section of the unit basically comprises a potentiometer (A1 and D1), and a relay (N.106996/1). These components and

their respective connections are shown in fig. 3. The potentiometer is connected across the 28 volt d.c. busbars and the relay is connected between the mid-point of this potentiometer and the star point of the main transformer secondary, which, by considering the system, will be seen to be at 14 volts d.c. with respect to earth. The relay is connected between these two points of equal potential so that under normal conditions no current flows through its operating coil.

5. In the event of a fault, such as a main rectifier failure, the a.c. line connected to the

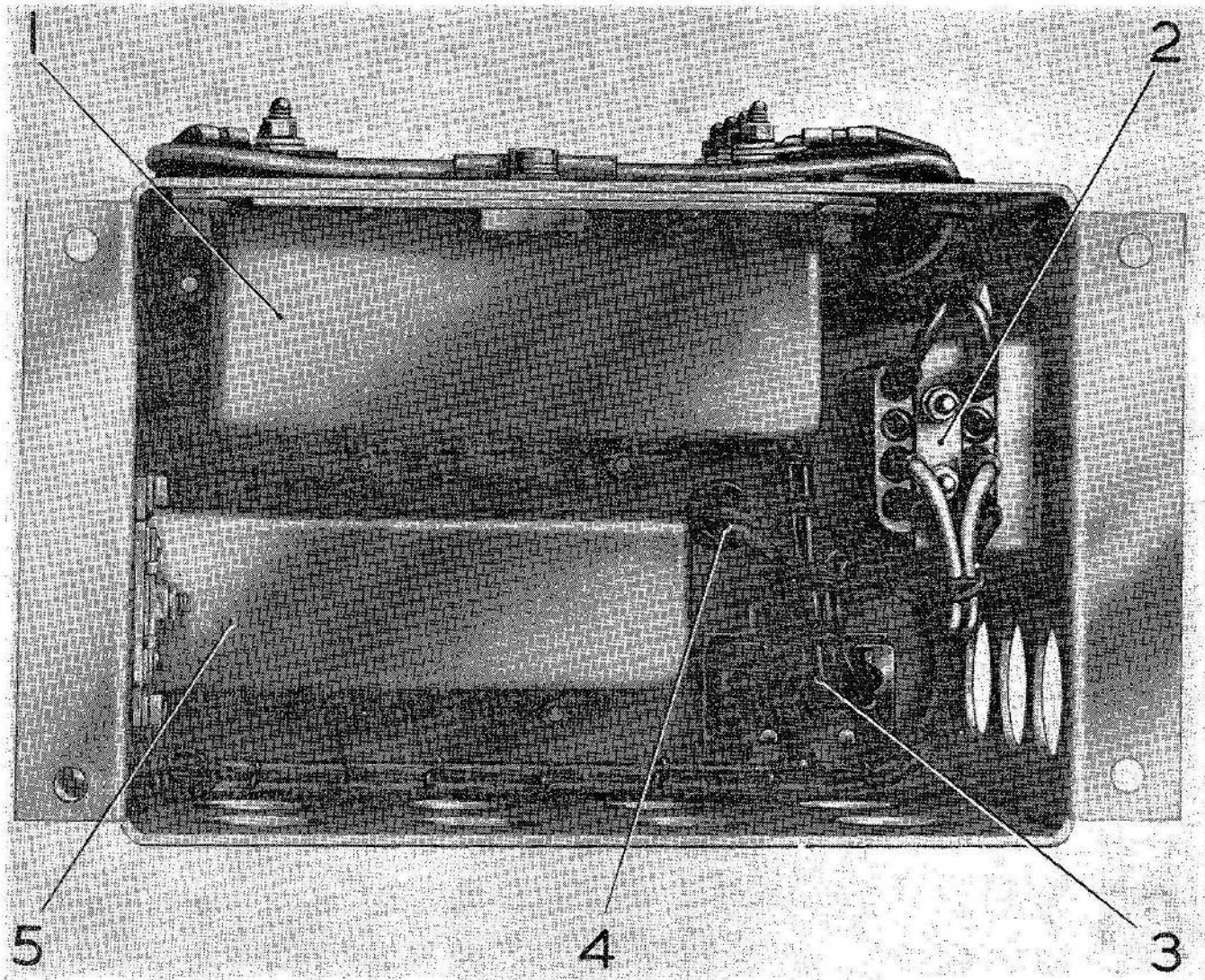


Fig. 2. Interior view of protection unit

- 1 RESISTANCE UNIT, ZA6204
- 2 RELAY, N105744
- 3 10-POLE SOCKET, N122642

- 4 LEADS TO TERMINAL BLOCK (N109858)
- 5 RELAY, N106996/1

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