

RESTRICTED
ADMIRALTY
AIR MINISTRY

Chapter 5

LOW PRESSURE FILTER

(Python Mk. 2 and 3 aero-engine)

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INTRODUCTION

1. The low-pressure filter (*fig. 1*) fitted to the Python Mk. 2 and 3 aero-engine is mounted beneath the reduction gear, on the accessory drives box and engine bulkhead. The purpose of the filter is to protect the internal mechanism of the high-pressure fuel pump and other components, by preventing particles of foreign matter in the fuel from entering the engine fuel system.

DESCRIPTION

2. The filter unit comprises the following main components, a filter body casting, a bowl and a filter element. The filter body is a casting, having mounting lugs formed on the rear face. The rear face also accommodates the fuel inlet union (4). From the fuel inlet union, an inlet passage leads to a large annular chamber formed within the casting. A central chamber communicates, via a second passage, with the fuel outlet union. An internal web, forming the inner end of the central passage, is internally threaded to receive the phosphor-bronze upper end plate (6), which is locked in position by a screwed peg (1). In the centre of this plate is an internally threaded boss into which the bowl retaining bolt is screwed.

3. The bowl, and the element (8) are of standard "Tecalemit" type. The element is a star-section felt filter, reinforced with wire gauze and supported on a helical spring (7). The element is located on a retaining bolt (15), and between the upper end plate (6) and

the lower end plate (10). This bolt, which also retains the bowl to the filter body, passes through a hole in the base of the bowl, where it is sealed on the outside of the bowl by a soft aluminium washer; on the inner side of the bowl is a helical spring (13), a spring retainer (12), and a rubber sealing washer (11). This assembly, including the lower end plate, is retained in position (on the retaining bolt) by a spring ring (9) located in a groove (16) on the bolt.

4. The filter bowl (*fig. 1*) is cylindrical and closed at the lower end. The drilled boss in the centre of the base, through which the retaining bolt passes, also contains a stud for securing the bolt locking plate. The upper flange of the bowl spigots into the filter body casting, where it is sealed by a rubber sealing ring (5). A flat on the flange of the bowl forms a seating for the bowl lock-plate (3), the lock-plate being secured to the filter body casting by two studs, nuts and spring washers.

INSTALLATION

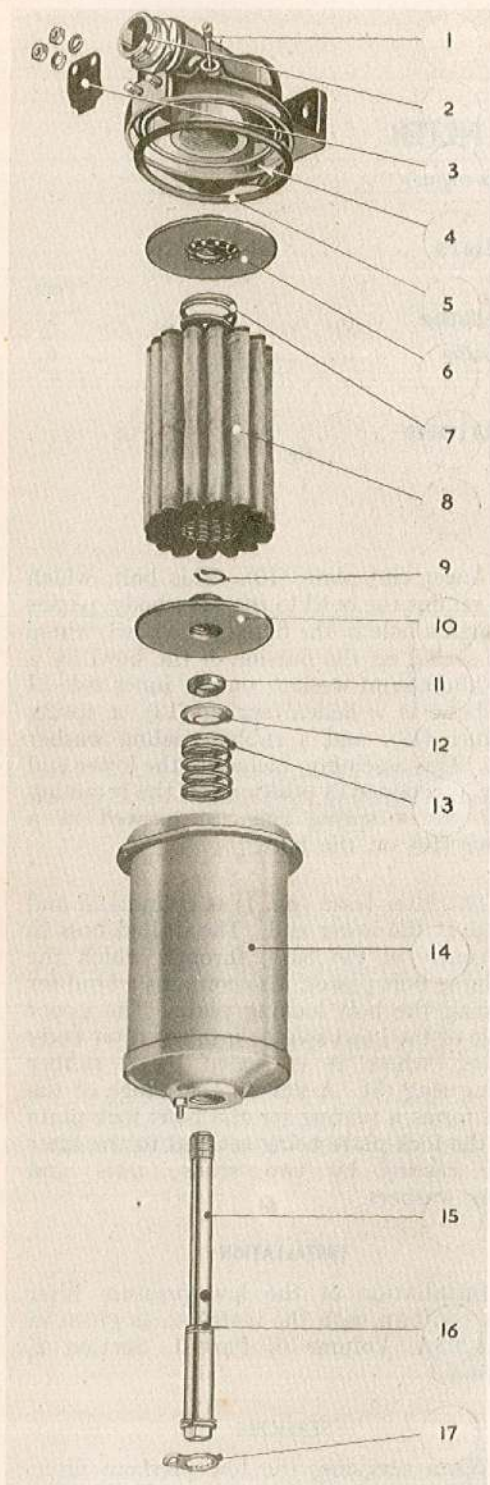
5. Installation of the low pressure filter must conform with the instructions given in A.P.4293A, Volume 6, Part 1, Section 2, Chapter 1.

SERVICING

6. When servicing the low pressure filter, the instructions given in A.P.4293A, Volume 1, Section 2, Chapter 1 must be followed.

FUEL SYSTEM COMPONENTS (GENERAL) FOR GAS-TURBINE AERO-ENGINES
 This is Amendment List No. 9 to Air Publication 4282, Volume 1
 Section 5. List of Chapters. Delete "(to be issued later)" after the title
 of Chapter 5, and write "(A.L.9)" in the outer margin against the deletion.
 Insert this Chapter 5 to follow Chapter 4. Record the incorporation of
 this A.L. in the Amendment Record Sheet.

ENGINEER



- 1 END PLATE LOCATING PEG
- 2 FUEL OUTLET
- 3 FILTER BOWL LOCK-PLATE
- 4 FUEL INLET
- 5 RUBBER SEALING RING
- 6 UPPER END PLATE
- 7 SUPPORT SPRING
- 8 ELEMENT
- 9 SPRING RING
- 10 LOWER END PLATE
- 11 SEALING WASHER
- 12 SPRING RETAINER
- 13 SPRING
- 14 BOWL
- 15 RETAINING BOLT
- 16 GROOVE FOR END PLATE SPRING RING
- 17 LOCK-PLATE

Fig. 1. Low pressure filter, dismantled



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