

Chapter 12 VACUUM SYSTEM

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DESCRIPTION

Introduction

1. A single pump installation operates the vacuum system for the low-level bomb sight fitted at the air bomber's position in the nose of the aircraft.

VACUUM PUMP

2. The pump (Leading Particulars), fitted on the aft face of the No.3 engine accessories gearbox is fitted with an inlet and an outlet port. The outlet port is connected by piping to an oil separator mounted on the forward face of the fire-wall. A suction relief valve is connected to the inlet port of the pump.

SYSTEM COMPONENTS

5. Instructions on servicing and testing the pump, suction relief valve and the oil separator is given in A.P 4303Z, Vol.1, Sect.9.

OIL SEPARATOR

3. The oil separator consists of a metal box containing a curved and perforated baffle plate which separates the oil from the air pumped from the vacuum pump. The three pipe connections are for the air inlet, to which the pipe from the vacuum pump is connected, an air outlet and an oil outlet. The oil outlet is connected by a pipe to the accessories gearbox sump.

PIPE SYSTEM

4. From the suction relief valve the

SERVICING

LEAK TESTING

6. To leak test the system proceed as follows:-

(1) Disconnect the flexible pipe from

piping passes along the front spar to enter the fuselage through a flanged adapter. In the fuselage the piping passes forward to connect to a manifold on the starboard side of the nose-wheel bay. From this manifold the pipe is run through the nose section floor and forward to an airtight box on the starboard side of the air bomber's station. A flexible pipe is used to make the connection between the adapter on the side of the air tight box and the bomb sight. A branch pipe taken from the main suction in the starboard heater bay is connected to a gauge on the flight engineer's panel. The nominal suction developed in the system is 4.5 in. Hg.

the bomb sight and connect an air supply to the pipe.

(2) Disconnect the pipe from the suction gauge on the flight engineers fixed panel and blank off the pipe.

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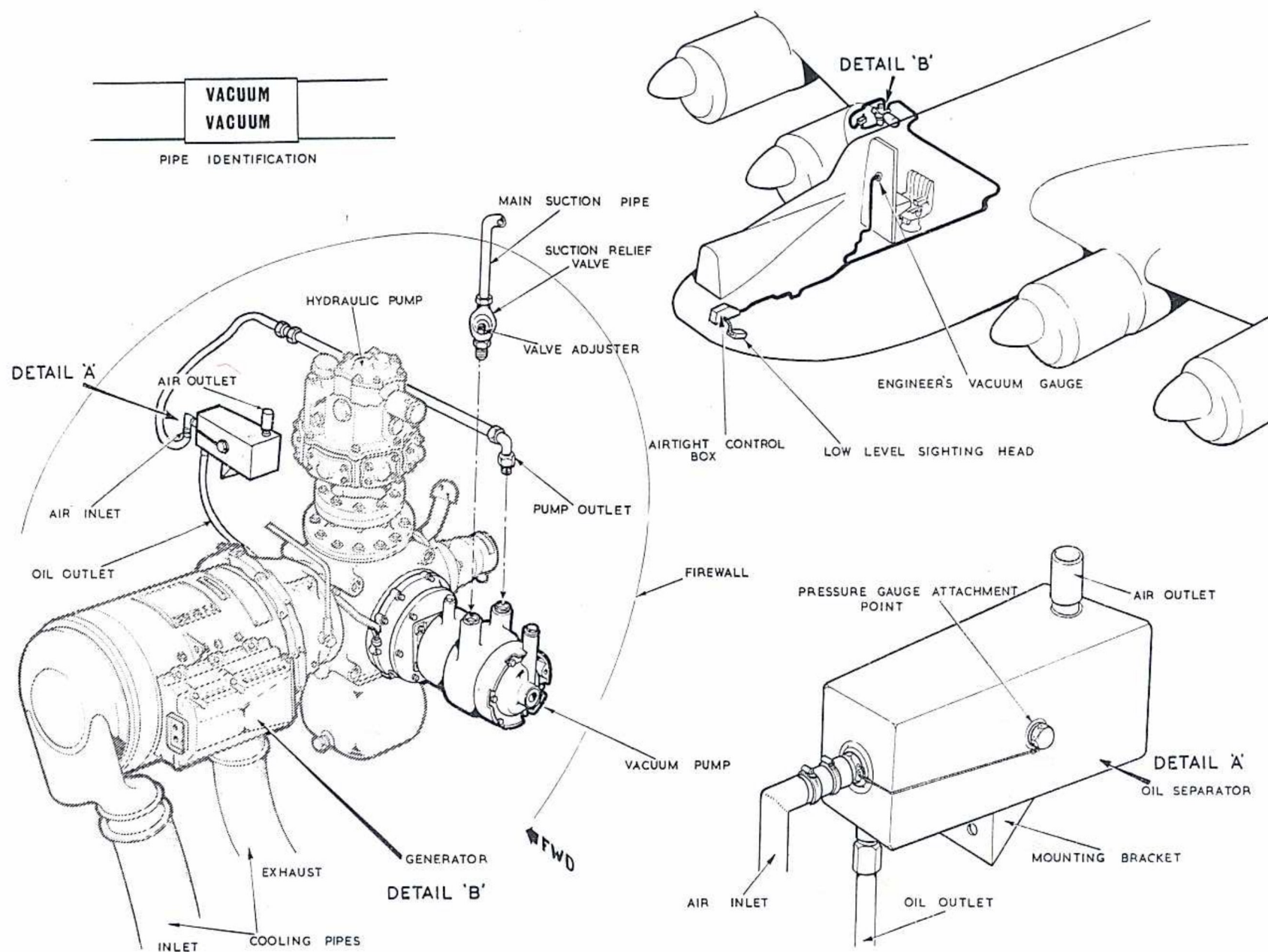


Fig.1. Vacuum system.

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(3) Disconnect the pipe from the suction relief valve and fit a 2 to 20 p.s.i. pressure gauge (Ref. No. 4G/2595) to the pipe.

(4) Using the air supply connected in op.(1) apply a pressure of 10 p.s.i. to the piping. Maintain this pressure for 20 min. during which time no leak is permissible.

(5) On completion of test remove the blank and test equipment and connect and lock as necessary the pipes disconnected for the test.

REMOVAL AND ASSEMBLY

General

7. When any component has been removed and subsequently to be renewed

or refitted the instructions given in A.P. 4303Z, Vol.1, Sect.9, Chap.2 must be adhered to. After renewal of any pipe

the system must be leak tested as laid down in para.6.