

Chapter 6 HYDRAULIC PRESSURE GAUGES

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Introduction

1. This chapter contains a brief description of the hydraulic pressure gauges, of which there are five, in the aircraft. The instruments have circular dials, and are mounted in small S.A.E. cases and fitted with an adjustable lubber mark to enable any desired reading to be indicated clearly. Full details of this type of gauge will be found in A.P.1275A, Vol. 1, Sect. 15.

2. The Mk.14LL gauge has a small fluorescent label marked HYD secured to the dial by two countersink screws arranged one above the other.

ILLUSTRATION

	Fig.
Front view	1

Description

3. The mechanism of the gauge is of the Bourdon tube type, the movement of the tube being transmitted to the pointer spindle through a sector gear and pinion. A hair-spring with one end anchored and the other attached to the pointer spindle, acts as an anti-backlash device between the sector gear and pinion. In order to prevent the hair-spring fouling the mechanism, the pointer spindle carries a brass disc guard.

TABLE

	Table
Component, type and Ref.No.	1

4. The front cover glasses of the instruments are each provided with a fluorescent lubber mark to indicate normal working pressure of the part of the system being served. The bezel has two slots to enable it to be unscrewed, so that the glass with lubber mark is free to rotate to the required position or setting.

TABLE 1

Component, type and Ref. No.

Component	Type or Mk.	Ref. No.	Range lb/in. ²	Dial marking
Pressure gauge ...	14LL ...	6A/2693	... 0 - 4000 ...	-
Label ...	- ...	6A/2775	... - ...	HYD

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5. The dial markings, which are fluorescent, show readings of from 0 – 40 units, each unit representing 100 lb/in.²

6. The gauge is fitted with a fixed overload arrangement in the form of a shoe which acts as a limit stop for the Bourdon tube.

7. The locations and lubber settings of the five gauges are:

(1) Front cockpit under coaming on port side	1500
(2) Rear cockpit top port main instrument panel	1500
(3) Starboard wheel bay— brake system	600
aileron system	1500
(4) Port wheel bay above horizontal datum just aft of main undercarriage forging	1950
(5) Port fuselage forward of tail unit just below datum	1350

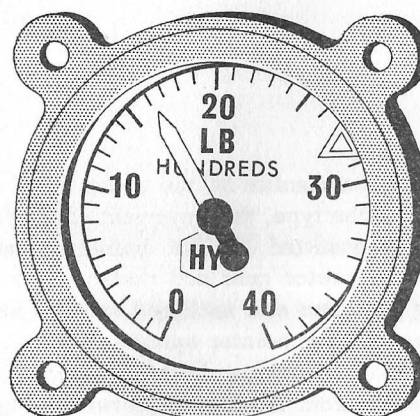


Fig. 1. Front view

Operation

8. Operation of the gauge is dependent on the shape of the Bourdon tube when pressure is applied. One end of the tube is fixed and open to the pressure source; the other end is free to move and is closed. The greater the pressure, the wider the curve of the tube, reduction of pressure allowing the tube to resume its natural state. Movement of the tube moves the pointer spindle as described in para. 3.

Installation and removal

9. The gauges are secured to the various mountings by means of four screws engaging self-locking inset nuts in the case flange. These four pan-head 1 in. UNC screws are not to be cropped.

Servicing

10. The servicing permitted at units and the tests and tolerances specified, are detailed in Appendix 1 to A.P.1275A, Vol.1, Sect.15, Chap.6 under the title 'Standard Serviceability Test (S.G.53)'.

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