

Chapter 6

OXYGEN PRESSURE GAUGE

Part No. OP.7600

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Introduction

1. This gauge is used in certain aircraft liquid oxygen systems to indicate the gas pressure in the supply line from the liquid oxygen converter.

DESCRIPTION

2. The unit consists of a dial-type gauge, housed in a 2.0 in. S.A.E. rimless case which is suitably threaded at the forward end to enable the gauge to be panel mounted. The dial face is graduated from 0 to 400 lb/in² in increments of 20 lb/in².
3. The gauge operates on the Bourdon tube principle, a 1/8 in. Bsp internal cone seating, pressure connection extending from the rear of the casing. A gauze disc, located in the back of the gauge case, protects a safety bursting disc.

INSTALLATION

4. Information concerning the installation of the gauge in the aircraft will be found in the relevant air publication.

WARNING . . .

Many materials, particularly oil and grease, are subject to spontaneous combustion when exposed to undiluted oxygen under pressure. Precautions must, therefore, be taken to exclude oil, grease, dust and metal particles from entering the unit.

SERVICING

5. The gauge is sealed during manufacture and must not, therefore, be dismantled.

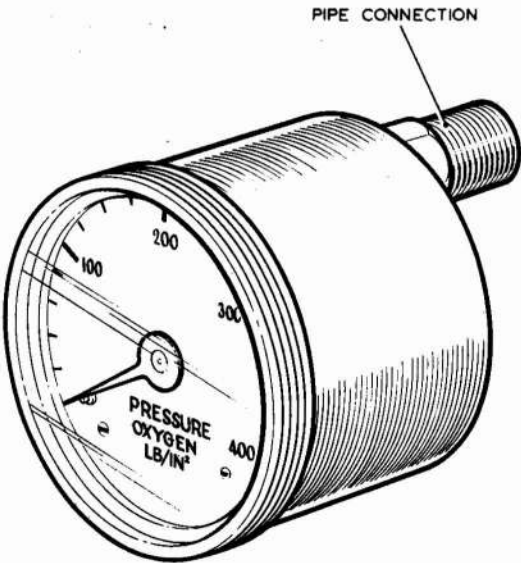


Fig. 1. Oxygen pressure gauge—general

Appendix 1
STANDARD SERVICEABILITY TEST
for
OXYGEN PRESSURE GAUGE
(Part No. OP.7600)

Introduction

1. The tests described in this Appendix should be applied before the gauge is installed in an aircraft, when the serviceability of the gauge is in doubt and at the appropriate examination periods at Equipment Depots.

Test equipment

2. The following test equipment is required:—
- (1) Calibrator, pressure gauge, Mk. 3 (Ref. No. 6C/1130).
 - (2) Pressure transmitter (Ref. No. 6C/2147).
 - (3) Oxygen pressure gauge (Ref. No. 6C/264).
 - (4) Breathing oxygen test supply 600 lb/in².

Particulars of tests

3. Soap solution for leak testing must be prepared in accordance with the instructions contained in Part 1, Sect. 2, Chap. 1. Precautions must be taken to prevent the solution entering the gauge, and all traces of soap and moisture must be removed when each test is completed.

TEST PROCEDURE

WARNING . . .

Many materials, particularly oil and grease, are subject to spontaneous combustion when exposed to undiluted oxygen under pressure. Precautions must be taken, therefore, to exclude oil, grease, dust and metal particles from the unit and test equipment.

Calibration test

4. The calibration test should be applied using items (1) and (2) of the test equipment (para. 2) and in accordance with the instructions contained in A.P.1275T, Vol. 1, Chap. 8 and 36. The gauge should be tested in the horizontal and vertical positions with both increasing and decreasing pressures, and should be within the limits given in Table 1.

TABLE 1
Calibration data

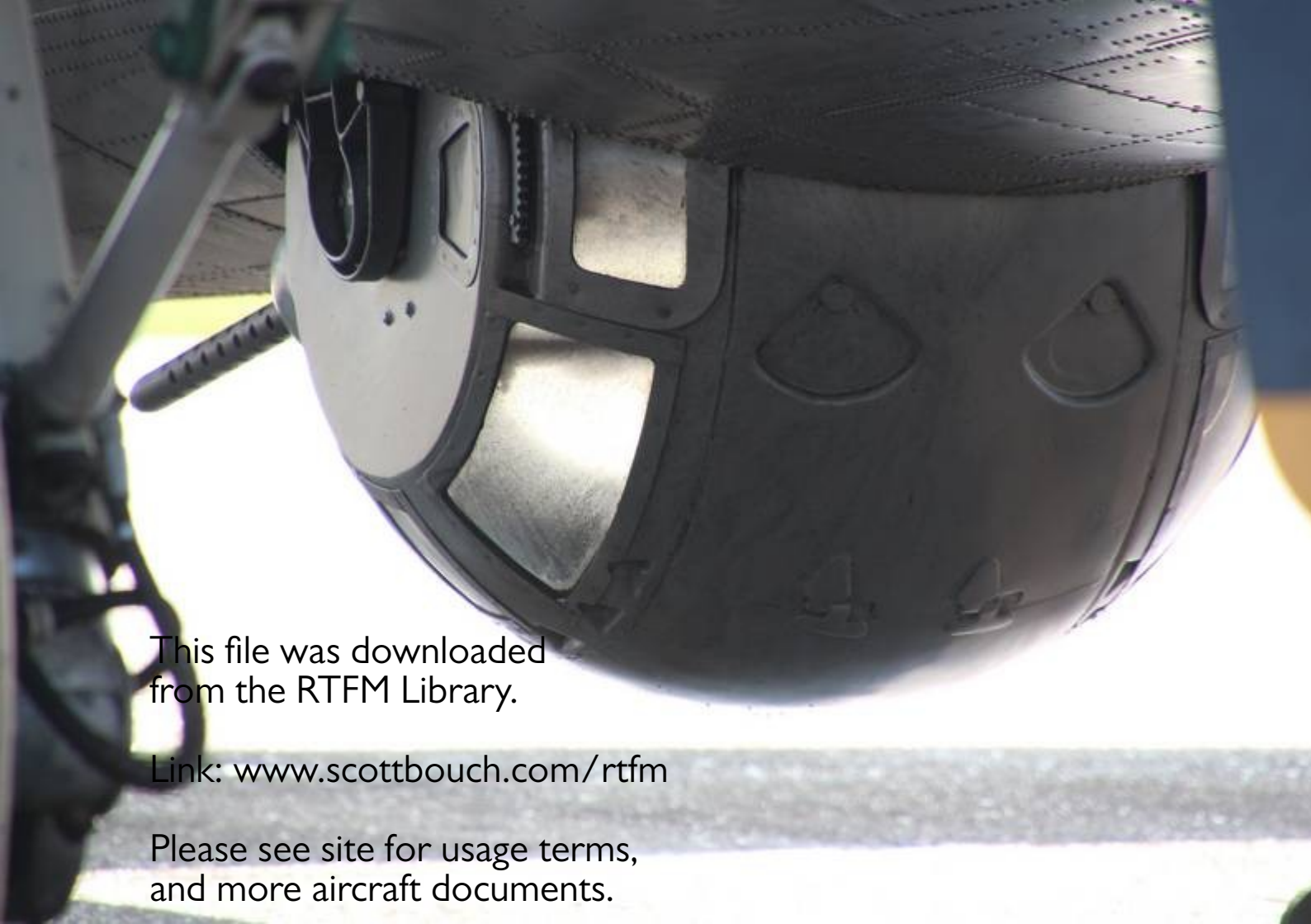
Gauge reading (lb/in ²)	True pressure (lb/in ²)	
	Min.	Max.
0	0	10
100	95	105
200	190	210
300	290	310
400	390	410

Leak test

5. Connect a breathing oxygen test supply (◀400▶ lb/in²) to the gauge inlet, close the supply valve and observe the gauge reading. There should not be any fall in the pressure reading over a period of five minutes.

Cleansing

6. After the tests have been completed, cleanse the entrance to gauge using a jet of compressed air. Allow the gauge to stand for as long as possible before use.



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