

Chapter 3

OXYGEN CONVERTER PRESSURE GAUGE

(OP 5750)

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Introduction

1. This gauge is employed in liquid oxygen systems to indicate the build-up pressure in the liquid oxygen converter.

DESCRIPTION

2. The unit consists of a dial-type gauge, the casing of which is suitably threaded at the forward end to enable the gauge to be panel mounted by means of a flange adapter assembly (Ref. No. 6A/4246). The dial is graduated from 0 to 150 lb/in². in increments of 10 lb/in².

3. The gauge operates on the Bourdon tube principle, a 1/8 in. B.S.P., internal cone seating, pressure connection extending from the rear of the casing.

INSTALLATION

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

SERVICING

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

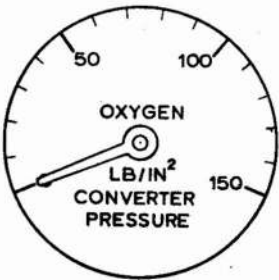
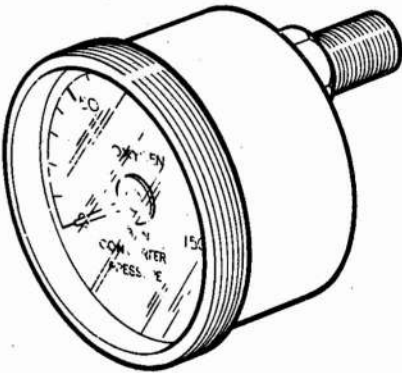


Fig. 1. Oxygen converter pressure gauge (Part No. OP.5750)

Appendix 1

STANDARD SERVICEABILITY TESTS

for

OXYGEN CONVERTER PRESSURE GAUGE

(Part No. OP 5750)

Introduction

1. The tests described in this appendix should be applied before the gauge is installed in 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 (0 to 150 lb/in²)
 - (4) Breathing oxygen test supply (150 lb/in²)
 - (5) Differential pressure chamber, Mk. 1 or 1A (Ref. No. 6A/1455 or 6A/1649).

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 the test equipment.

Calibration test

3. 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 following limits:—

Gauge reading (lb/in ² .)	Type pressure (lb/in ² .)	
	Min.	Max.
zero	zero	5
50	46	54
100	94	106
150	142	158

Leak test

4. Connect a breathing oxygen test supply (150 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 2 minutes.

External pressure test

5. Blank the gauge inlet connection and, using the differential pressure chamber, submit the gauge to an external pressure of 9 lb/in². After this test, the gauge glass must be examined for failure and the tests described in para. 3 and 4 repeated.

Cleansing

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

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