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MODEL S.122 FORM 6, PRESSURE TRANSMITTER

SANGAMO WESTON LIMITED.

MAINTENANCE MANUAL

MODEL S.122 FORM 6 - PRESSURE TRANSMITTER

This manual complies with British Civil Airworthiness Requirements, Section A, Chapter A6-2. The technical accuracy of this manual has been verified and is certified correct.

Signed: H.S. Lovegrove.

Date: NOVEMBER 1962

A.R.B. Design Approval No. AD/1147/47

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REVISION RECORD

The introduction of any amendment or revision not certified in accordance with British Civil Airworthiness Requirements Section A, Chapter A6-2, will invalidate the statement of certification on Page 1. Amendments or revisions embodied in this manual, which have been certified under an approved authorisation other than that applicable to the initial certification must be recorded on separate record sheets.

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MODEL S.122 FORM 6 - PRESSURE TRANSMITTER

1. Description, operation and data

A. Description

Model S.122 Form 6 pressure transmitter comprises two interdependent sections. One, the hydraulic section, accommodates a pressure sensitive element consisting of an S-shaped Bourdon Tube, and the other, a resistor with a sliding contact actuated by a linkage from the pressure sensitive element. Electrical connection to the transmitter is via three 6 B.A. terminal screws on a moulded bakelite block. The hydraulic inlet is via a connection which is, generally, threaded ⅛ in B.S.P.
Variants of Model S.122 Form 6 pressure transmitters cover specific ranges of pressure and, in some cases, particular applications (i.e. oil and grease free for use with pure air or liquid oxygen). Details of these variants, together with the ranges covered, are listed in sub-paragraph C 'Data'.

B. Operation

Pressure applied to the transmitter is converted into linear movement by means of the Bourdon Tube. This movement, which is proportional to the applied pressure, is used to operate the contact slider of a variable resistor, the resistance being interpreted in terms of pressure by an associated ratiometer type indicator.

C. Data

Model No.	Range	Special geatures or application
S.122.6.63	0-4000 p.s.i.	
S.122.6.64	0-2000 p.s.i.	
S.122.6.71	0-3000 p.s.i.	
S.122.6.73	0-400 p.s.i.	
S.122.6.85	0-6000 p.s.i.	
*S.122.6.105	0-400 p.s.i.	For use with liquid oxygen
*S.122.6.109	0-600 p.s.i.	For use with pure air
*S.122.6.110	0-6000 p.s.i.	For use with pure air
*S.122.6.111	0-4000 p.s.i.	For use with liquid oxygen
S.122.6.126	0-3000 p.s.i.	Hydraulic inlet connection threaded 7/16 in UNF (male pipe)

*NOTE: Oil and grease free.

2. Unpacking

Self-evident.

3. Acceptance checks

A. Temperate areas

Pressure transmitters sent to temperate areas should be removed from their packing and examined, through the polythene bag, for signs of damage.

B. Tropical areas

Pressure transmitters sent to tropical areas should not be removed from their packing until required for installation.

4. Storage instructions

A. Conditions

(1) It is recommended that the pressure transmitter be retained in its original packing throughout the storage period, and kept in a place remote from any process emitting fumes which might cause damage to the packing materials or to the transmitter.

(2) The storage conditions should be such that the humidity does not exceed 50% and the temperature is within the range -20°C. to +50°C.

B. Limiting period

Provided that the storage conditions have been fulfilled, the shelf life of the pressure transmitter is five years. After this period it should be checked in accordance with the instructions contained in the Overhaul manual and, if found satisfactory, repacked and returned to storage.

5. Checks before installation

The following checks must be made before the pressure transmitter is installed:

(1) Examine the case, hydraulic inlet connection and Bakelite terminal block for signs of damage.

(2) If the transmitter is suspect, it must be checked as detailed in paragraph 8 (Testing) of the Overhaul manual, with particular reference to the addendum which gives special precautions that are necessary when checking Variants for use with pure air or liquid oxygen.

6. Installation

The transmitter must be installed as detailed in the Aircraft manual.

7. Checks after installation

The checks detailed in the Aircraft manual should be made after the transmitter is installed.

8. Maintenance.

The following maintenance checks should be made whenever the equipment associated with the transmitter is inspected.

(1) Examine the transmitter for cleanliness, security of mounting and tightness of electrical connections.

(2) Ensure that the hydraulic inlet connection to the transmitter is secure and that there are no signs of leakage.

(3) Actuate the equipment associated with the transmitter and check that the transmitter is functioning within reasonable limits.

9. Trouble shooting

Reference should be made to paragraph 9 'Trouble shooting' of the Overhaul manual.

10. Removal

The pressure transmitter should be removed as detailed in the Aircraft manual.

12. Overhaul period

No overhaul is required during the service life of the transmitter. The ultimate life of the transmitter is 10000 hours flying time. At the expiry of this period the hydraulic unit must be discarded. The electrical section of the transmitter may be returned to the manufacturer for salvage considerations.

13. Return to manufacturer or base

When the transmitter is returned to the manufacturer or base, a short history of the unit should be included in the package.

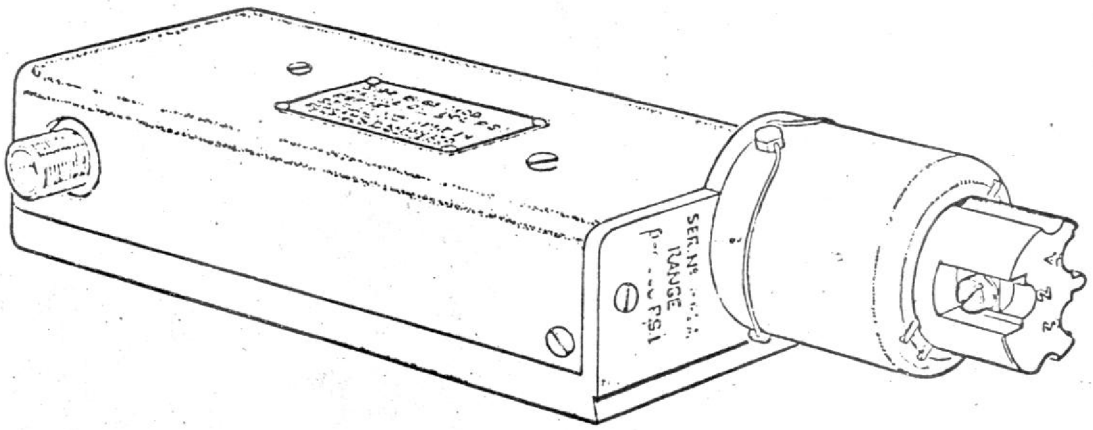

Fig. 1. Model S.122 Form 6 - Pressure Transmitter