OVERHAUL MANUAL

MODEL S.122 FORM 4 - PRESSURE TRANSMITTER

SANGAMO WESTON LIMITED

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

Signed. 

Date. September 1969

C.A.A. Design Approval No. AD/1147/47

MODEL S.122 FORM 4 - PRESSURE TRANSMITTER

REVISION RECORD SHEET

Revision No.	Date of Issue	Incorporated by:	Date	Remarks
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The introduction of any amendment or revision not certified in accordance with British Civil Airworthiness Requirements Chapter A6-2 will invalidate the statement of certification on Model S.122 Form 4.
Amendments or revisions embodied in this manual, which have been certified under an approval authorisation other than that applicable to the initial certification must be recorded on separate record sheets.

SANGAMO WESTON LTD.

OVERHAUL MANUAL 31-09-24

MODEL S.122 FORM 4 - PRESSURE TRANSMITTER

LETTER OF TRANSMITTAL

FOR

REVISION No.1

Issued July 1964
by
Sangamo Weston Ltd., Enfield, Middlesex, England

	ACTION	REASON
1.	Remove and destroy page 19 of Overhaul Manual Addendum 31-09-24 and substitute page 19 incorporating Revision 1.	Paragraph 13, Overhaul period revised.
2.	Record the incorporation of this revision on the Revision Record Sheet. ✓	
3.	Retain this Letter of Transmittal. ✓	This certifies compliance with Section A, Chapter A6-2, of British Civil Airworthiness Requirements.

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

Signed: [signature]

Date: 30th. July 1964

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

SANGAMO WESTON LTD.

OVERHAUL MANUAL 31-09-24

MODEL S.122 FORM 4 - PRESSURE TRANSMITTER

LETTER OF TRANSMITTAL

FOR

REVISION No.2

Issued December 1964
by
Sangamo Weston Ltd., Enfield, Middlesex, England

ACTION	**REASON**
1. Remove and destroy pages 7/8, 13/14, 17/18 and 21/22 of Overhaul Manual 31-09-24 and substitute pages 7/8, 13/14, 17/18 and 21/22 incorporating Revision 1.	Pages 7, 13, 14, 17 and 22 revised.
2. Record the incorporation of this revision on the Revision Record Sheet.	
3. Retain this Letter of Transmittal.	This certifies compliance with Section A, Chapter A6-2, of British Civil Airworthiness Requirements.

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

Signed: H. Lovegrove.

Date: 18/12/64.

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

SANGAMO WESTON LTD.

OVERHAUL MANUAL 31-09-24

MODEL S.122 FORM 4 - PRESSURE TRANSMITTER

LETTER OF TRANSMITTAL

FOR

REVISION No. 3

Issued July **1966**
by
Sangamo Weston Ltd., Enfield, Middlesex, England

ACTION	REASON
1. Remove and destroy page 21/22 of Overhaul Manual 31-09-24 and substitute page 21/22 incorporating Revision 3.	Parts List revised, page 22.
2. Record the incorporation of this revision on the Revision Record Sheet on page 3.	
3. Retain this Letter of Transmitter.	This certifies compliance with Section A, Chapter A6-2, of British Civil Airworthiness Requirements.

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

Signed:

Date: 20th July, 1966.

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

SANGAMO WESTON LTD.

OVERHAUL MANUAL 31-09-24

MODEL S.122 FORM 4 - PRESSURE TRANSMITTER

LETTER OF TRANSMITTAL

FOR

REVISION No. 4

Issued September 1966
by
Sangamo Weston Ltd., Enfield, Middlesex, England

ACTION	**REASON**
1. Remove and destroy pages 1/2, 9/10, 13/14, 15/16, 17/18 and 21/22 and substitute pages 1/2, 9/10, 13/14, 15/16, 17/18 and 21/22 incorporating Revision 4.	New telephone number and note added to Page 1; Fig. 2 revised on Page 10; paragraph 4C(3) and 6A Assembly on Page 13; paragraph 6A(9) on Page 14; *NOTE* following paragraph 8A(4) on Page 16; Fig. 4 on Page 17; paragraph 10 Storage Instructions on Page 18; Fig. 5 on Page 21 and Parts List on Page 22.
2. Record the incorporation of this revision on the Revision Record Sheet on Page 3.	
3. Retain this Letter of Transmittal.	This certifies compliance with Section A, Chapter A6-2, of British Civil Airworthiness Requirements.

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

Signed: [signature]

Date: 25th January, 1967.

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

SANGAMO WESTON LTD.

OVERHAUL MANUAL 31-09-24

MODEL S122 FORM 4 - PRESSURE TRANSMITTER

LETTER OF TRANSMITTAL
FOR
REVISION No. 5

Issued September 1969
by
Sangamo Weston Ltd., Enfield, Middlesex, England

ACTION	REASON
1. Remove and destroy pages 1/2 and substitute pages 1/2 incorporating Revision 5.	New Telephone number on Page 1, and new signature on Page 2.
2. Record the incorporation of this revision on the Revision Record Sheet on Page 3.	
3. Retain this Letter of Transmittal.	This certifies compliance with Section A, Chapter A6-2, of British Civil Airworthiness Requirements.

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

Signed: [signature]

Date: 1st September 1969

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

SANGAMO WESTON LTD.

OVERHAUL MANUAL 31-09-24

MODEL S.122 FORM 4 - PRESSURE TRANSMITTER

LETTER OF TRANSMITTAL

FOR

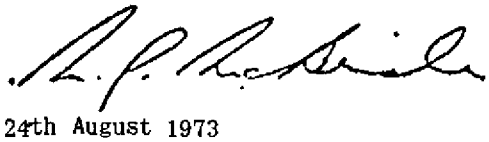
REVISION No.6

Issued July 1973
by
Sangamo Weston Ltd., Enfield, Middlesex, England

NB, PAGES MISSING FROM THIS REV, HAVE BEEN SUPERSEDED BY LATER REVISIONS.

ACTION	REASON
1. Remove and destroy pages 11/12, 15/16, 19 of Overhaul Manual 31-09-24 and substitute pages 11/12, 15/16, 19 incorporating Revision 6.	**Cleaning**-revised schedule of cleaning materials list, page 12. **Materials**-revised schedule of materials list, page 15. **Testing**-new test instrument added to test circuit diagram, Fig.3, page 15. **Special Tools**-list revised, page 19. **Overhaul Period**-new ultimate life period added, page 19.
2. Record the incorporation of this revision on the Revision Record Sheet on Page 3.	
3. Retain this Letter of Transmittal.	This certifies compliance with Section A, Chapter A6-2, of British Civil Airworthiness Requirements.

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

Signed: 

Date: 24th August 1973

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

SANGAMO WESTON LTD.

OVERHAUL MANUAL 31-09-24

MODEL S.122 FORM 4 - PRESSURE TRANSMITTER

LETTER OF TRANSMITTAL

FOR

REVISION No. 7

Issued July 1974
by
Sangamo Weston Ltd., Enfield, Middlesex, England

ACTION	**REASON**
1. Remove and destroy pages 1/2 and 15/16 of Overhaul Manual 31-09-24 and replace by pages 1/2 and 15/16 incorporating Revision 7.	Authority change - Page 2 Testing-Text and Test circuit diagram revised; page 15/16.
2. Record the incorporation of this revision on the Revision Record Sheet on Page 3.	
3. Retain this Letter of Transmittal.	This certifies compliance with Section A, Chapter A6-2 of British Civil Airworthiness Requirements.

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

Signed: 

Date: July 1974

C.A.A. **Design Approval No. AD/1147/47**

OVERHAUL MANUAL

MODEL S.122 FORM 4 - PRESSURE TRANSMITTER

TABLE OF CONTENTS

ILLUSTRATIONS

This section of the Overhaul manual contains information common to all variants of Pressure Transmitter, Model S.122 Form 4. Details applicable to particular variants only, are contained in the addenda immediately following the main section of this manual.

1. Description and operation

A. General

Pressure transmitter, Model S.122 Form 4 is designed for the measurement of gauge oil pressure and is intended for use with a suitably calibrated ratiometer type indicator. Variants for measurement of pneumatic pressure are also available. The transmitter comprises two interdependent sections; one the hydraulic unit accommodating a pressure sensitive element and the other, the electrical section, a resistor with a sliding contact.

B. Detail (Refer to Fig. 1 and 2.)

The hydraulic unit (24) contains a double S-shaped Bourdon tube one end of which is connected to a brass inlet connection firmly fastened to the base of the housing. The free end of the tube is coupled to contact (22) by means of a linkage shaft which passes through a bearing in the end wall of the hydraulic unit. Sideways movement of the Bourdon tube is prevented by a leaf spring fastened between the end of the tube and the hydraulic unit. An electrical contact (22) bears against a nickel chromium winding on resistor holder (14) which is fastened to, but insulated from the hydraulic unit by insulated studs (18). The position of the resistor holder, relative to the contact, can be adjusted by domed nuts (13) and (15). Contact (22) and the resistor are connected to a three-pin socket by phosphor bronze ligaments (4). Cover (3) fits over the electrical section of the transmitter and is secured in position by special screws (2) which, in turn, are secured by means of sealing wire (1). A moulded light alloy cover is fitted over the hydraulic unit and secured in position by four countersunk screws.

C. Operation

Pressure applied to the transmitter causes a linear movement of the free end of the Bourdon tube. This movement, which is proportional to the applied pressure, is transmitted by means of a shaft to contact (22), causing it to travel across the resistance winding and vary the resistance between the contact and each end of the winding. The change in resistance is shown by an associated ratiometer type indicator which is calibrated in terms of pressure.

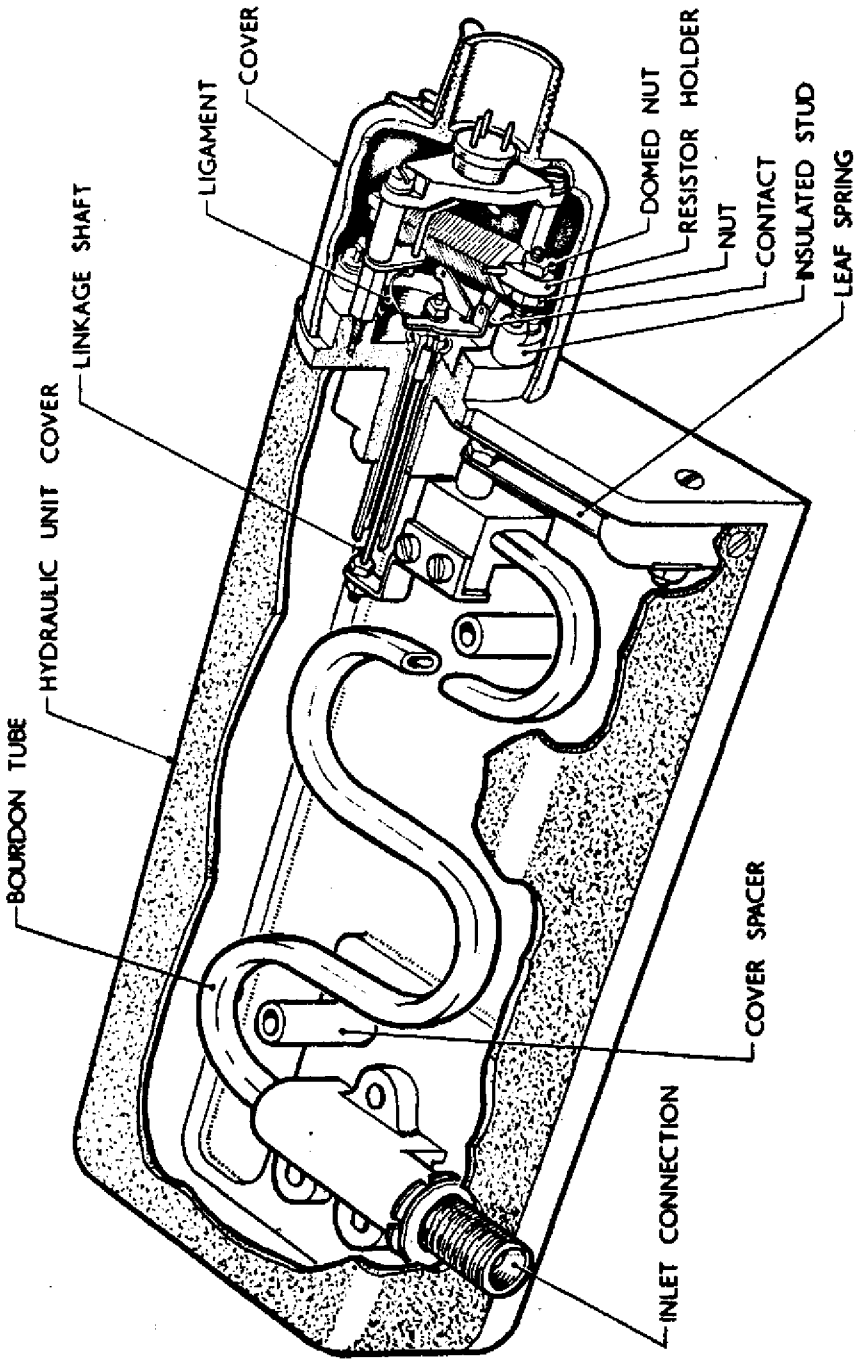


Fig.1. Sectional View of Pressure Transmitter

2. Disassembly

A. Checks before disassembly

Ascertain if the pressure transmitter has been returned with a history sheet giving details of components requiring particular attention.

B. Preparation

Absolute cleanliness of work bench and tools must be observed throughout the disassembly procedure. Obtain a supply of Toluene for the removal of Bostik adhering to screws, nuts, etc.

C. Procedure (Refer to Fig.2.)

(1) Cut and remove sealing wire (1) from screws (2).

(2) Remove the three special 6 B.A. screws (2) from cover (3) and carefully withdraw the cover.

(3) Unsolder the three ligaments (4) from the resistor holder pins and the plug pins.

CAUTION: OVERHEATING THE LIGAMENTS WILL RESULT IN DISTORTING THEM. DO NOT ALLOW THE SOLDERING IRON TO TOUCH THE RESISTOR HOLDER OR OTHER PARTS WHICH CAN BE DAMAGED BY HEAT.

(4) Unscrew and remove 8 B.A. screw (5), lockwasher (6), sleeve (7) and plug pin support (8).

(5) Release 8 B.A. screw (9) and lockwasher (6) and remove terminal block (10).

(6) Unscrew and remove pillars (11) and (12).

(7) Release the two 8 B.A. domed nuts (13) and remove the resistor holder (14).

(8) Release the two 8 B.A. screws (16) and lockwashers (17) and remove the two insulated studs (18).

(9) Release 12 B.A. nut (19) and lockwasher (20), and remove insulated washer (21), contact (22) and insulator (23).

NOTE: Check whether contact (22) and hydraulic unit (24) are each marked with a red identification spot. The red spot on the hydraulic unit is marked on the circular face to which the electrical section is secured. The presence of a red spot on the unit indicates that the linkage shaft has a length of movement that requires a contact similarly marked. Similarly, an unmarked unit combines with an unmarked contact. When fitting replacement components, order as applicable and select the appropriate part number as given in the parts list.

(10) Unscrew and remove the two 2 B.A. and two 6 B.A. countersunk screws from the cover of the hydraulic unit.

(11) Remove the cover and collect the two cover spacers from inside the unit.

NOTE: Further disassembly of the hydraulic unit is not permissible. If the item is unserviceable it must be discarded and a complete replacement unit fitted.

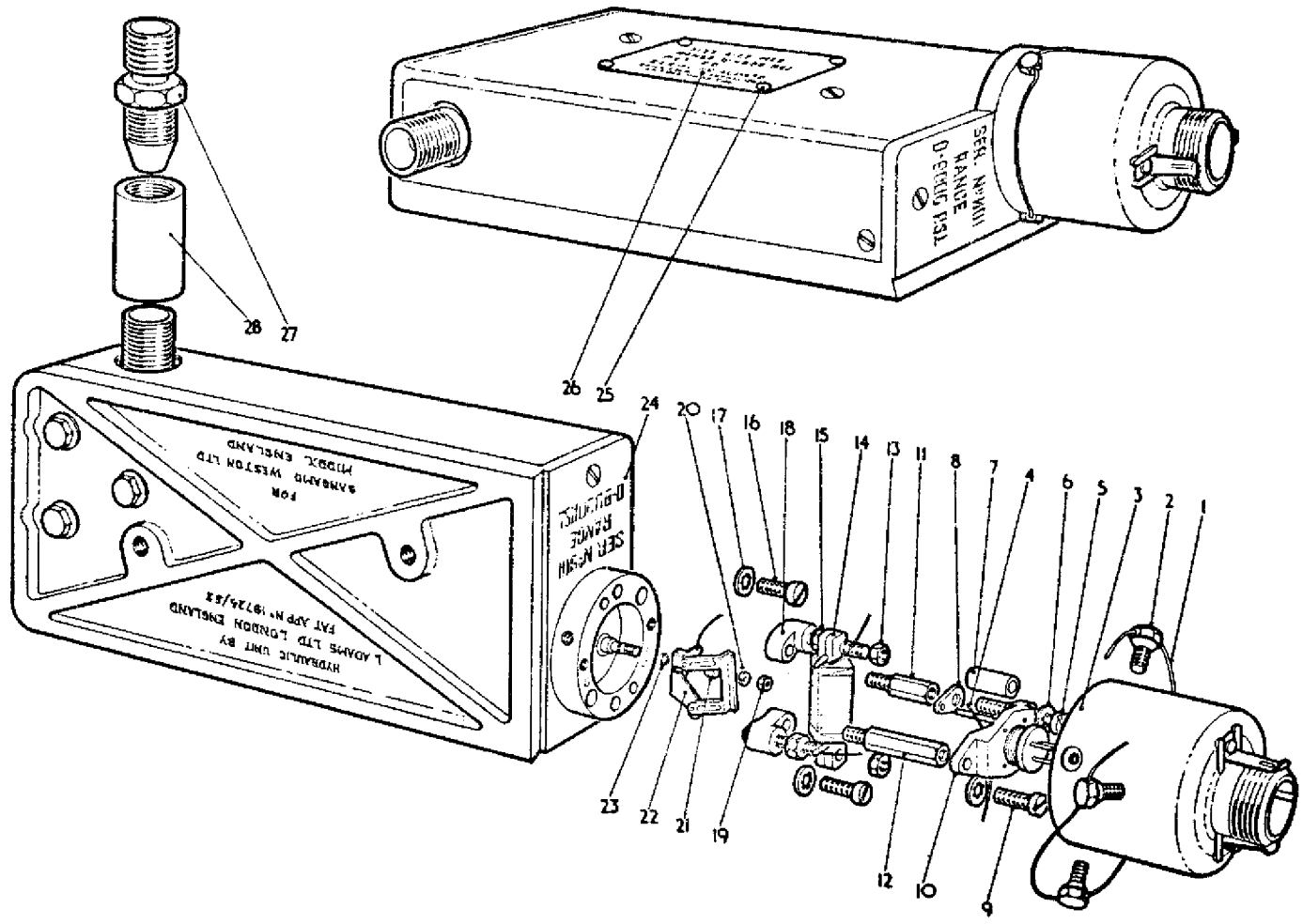


Fig. 2. Exploded View of Pressure Transmitter.

KEY TO FIG. 2.

1. Sealing wire
2. 6 B.A. sp. hex. hd. screw
3. Cover
4. Ligament
5. 8 B.A. screw
6. Shakeproof washer
7. Sleeve
8. Plug pin support
9. 8 B.A. screw
10. Terminal block
11. Short pillar
12. Long pillar
13. 8 B.A. domed nut
14. Resistor holder
15. 8 B.A. domed nut
16. 8 B.A. screw
17. Shakeproof washer
18. Insulated stud
19. 12 B.A. nut
20. 12 B.A. lockwasher
21. Insulating washer
22. Contact
23. Insulator
24. Hydraulic unit
25. No. 16 bifurcated rivet
26. Nameplate

3. Cleaning

A. Procedure

(1) Remove all Bostik from nuts, screws, and other dismantled components using Toluene as the cleaning agent. Particular attention must be given to pins, etc., to which ligaments will be resoldered

CAUTION: DO NOT ALLOW TOLUENE TO COME INTO CONTACT WITH VARNISHED SURFACES OR INSULATING MATERIALS.

(2) The hydraulic unit can be cleaned, if necessary, by means of a clean lint free cloth moistened with carbon tetrachloride.

(3) If operation (2) is carried out, the transmitter shaft must be re-lubricated with low temperature oil to specification D.T.D.822 or D.T.D.822A.

B. Schedule of cleaning materials

(1) Toluene.

(2) Lint free cloth.

(3) Genklene I.C.I.Ltd.

(4) Low temperature oil D.T.D.822 or D.T.D.822A.

4. Inspection

A. Metal components

Examine for:

(1) Corrosion.

(2) Serviceability of threads.

(3) Distortion.

(4) Cracks.

(5) Security of sub-assemblies not dismantled.

B. Hydraulic unit

Examine for:

(1) Leaks at ends of Bourdon tube.

(2) Split or damaged Bourdon tube.

C. Resistor holder

Examine for:

(1) Blemishes or excessive wear on contact surface.

(2) Loose winding turns.

(3) Resistance of winding. This must be within the limit 3,250 ohms ±30 ohms.

D. **Contact**

Examine for:

(1) Blemishes or excessive wear on contact surface.

(2) Bent or damaged contact edge.

E. **Insulated studs and terminal block**

Examine for chipped or cracked bakelite mouldings.

5. **Repair**

A. **Loose or damaged nameplate**

(1) Remove nameplate (26) by withdrawing the four bifurcated rivets (25).

(2) Secure nameplate in position with new rivets.

6. Assembly

A. **Procedure** (Refer to Fig. 2.)

During the process of assembly all screws and nuts should be sealed against vibration by the application of Bostik, to SANGAMO WESTON specification B.S.104 to their threads. Bostik must also be applied to the pillars (11) and (12) and insulated studs (18) before they are secured in position. After position adjustments have been made to the contact slider and the resistor holder, the domed nuts (13) and (15) should be sealed similarly. Also the surfaces of contact block (10) which meet pillar (26) and sleeve (7) should be coated with Bostik before assembly. All soldered connections must be made with 50/50 tin-lead solder and pure resin flux. Lubricate the linkage shaft with low temperature oil to specification D.T.D.822 or D.T.D.822A before replacing insulator (23).

Assemble the pressure transmitter as follows:

(1) Position the hydraulic unit (24) on the bench and place the two cover spacers in their recesses on the base of the unit.

(2) Carefully place the cover in position, ensuring that the spacers remain upright.

(3) Secure the cover by inserting and tightening the two 2 B.A. and two 6 B.A. countersunk screws.

(4) Place the two insulated studs (18) in position and secure by means of the two 8 B.A. screws (16) and lockwashers (17).

(5) Screw short pillar (11) and long pillar (12) into position.

(6) Place insulator (23) on the end of the linkage shaft, together with contact (22) and insulating washer (21); temporarily secure by replacing lockwasher (20) and 12 B.A. nut (19).

NOTE: Position the working surface of contact (22) to face the short pillar (11), i.e., contact body towards long pillar (12).

(7) Position Tool No. 12886 on insulated studs (18). The chamfered end of the tool must be towards the hydraulic unit and the chamfered side must face long pillar (12).

(8) Align contact (22) with the face of the tool and tighten nut (19) holding the contact firmly to prevent it twisting.

(9) Set the working edge of contact (22) parallel and adjacent to the face of the tool by bending the contact mounting tags, not the ribbed arms. The working edge must not touch the tool face and the gap must not exceed 0.01 in.

(10) Remove the tool from the insulated studs.

(11) Carefully solder a ligament to the terminal tag of contact (22).

(12) Replace the resistor holder (14), (with the unvarnished edge towards contact (22)), onto insulated studs (18) and then replace the two 8 B.A. domed nuts (13) but do not tighten the nuts against the resistor holder.

(13) Solder ligaments (4) to the appropriate terminal pins of the resistor holder.

(14) Assemble terminal block (10) and secure with the 8 B.A. lockwasher (6) and screw (9).

(15) Solder the free ends of ligaments (4) into position; the ligament end from contact (22) to the long pin of terminal block (10), the other two ligament ends to the plug pins.

NOTE: The ligaments must form a natural arc between connections and must not be kinked or distorted.

(16) Coat all soldered connections with Bostik to SANGAMO WESTON specification B.S. 104 and allow to air dry for two hours.

(17) Bake the assembly for two hours at 110°C. (230°F.)

The pressure transmitter must now be subjected to the adjustments and tests detailed in paragraph 8 (**Testing**). When these requirements have been satisfied, the assembly procedure may be completed as follows:

(18) Assemble cover and secure by means of the three special screws (2).

(19) Thread sealing wire (1) through the heads of screws (2) and twist the two ends together; trim to leave between 3 and 5 turns.

B. Schedule of materials

The materials mentioned in the preceding paragraph A, and detailed below, can be obtained from SANGAMO WESTON LTD., ENFIELD, MIDDLESEX, ENGLAND or, in some instances, direct from the manufacturer.

B.S. 104	Bostik No. 772 thinned with acetone to a brushable consistency.
D.T.D. 822 or 822A	Low temperature oil.
Solder 50/50 tin lead	

8. Testing

A. Adjustments

(1) Connect the pressure transmitter into the circuit given in Fig. 3.

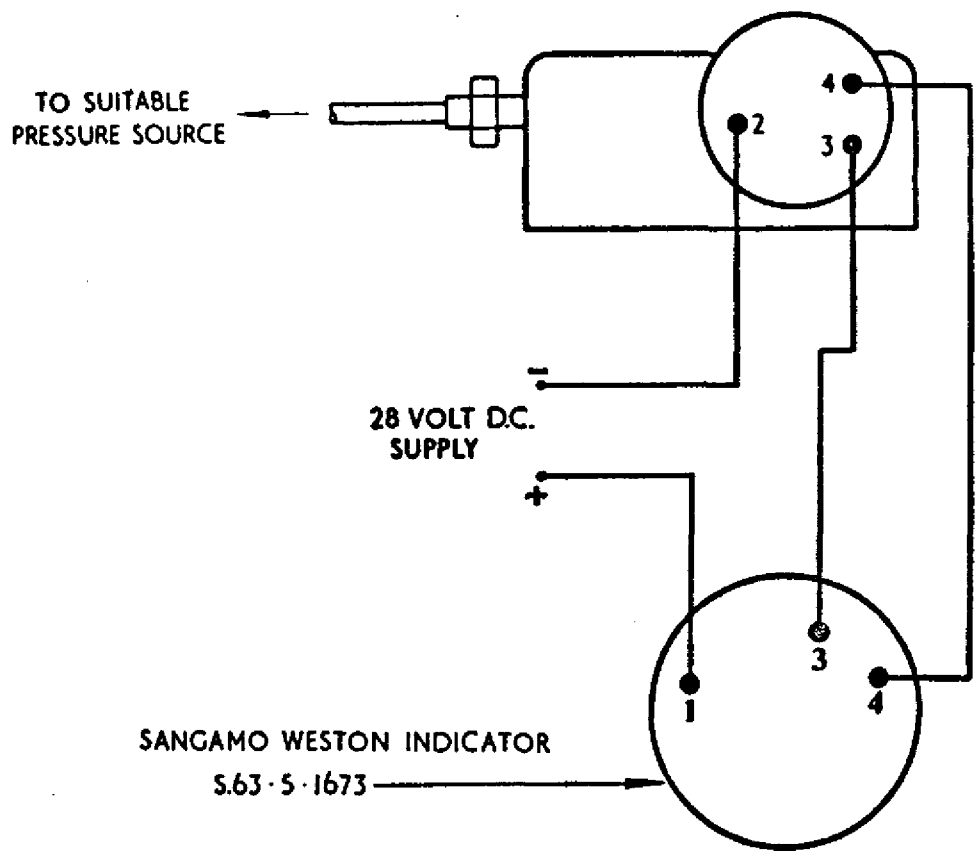


Fig. 3. Test circuit.

(2) Switch on the d.c. supply and apply to the transmitter a pressure corresponding in value to the first cardinal of the indicator scale.

(3) Adjust the position of the resistor holder (14) by means of domed nuts (13) and (15) until the indicator pointer indicates the applied pressure.

NOTE: Viewed from the contact side, the right hand side of the resistor holder must be moved away from the body of the transmitter in order to cause the indicator to deflect towards the zero cardinal.

(4) Apply the maximum pressure for which the transmitter is designed and adjust the left hand end of the resistor holder until the indicator pointer indicates the correct pressure.

NOTE: A mechanical vibrator (a.c. buzzer) must be fixed to the transmitter body to give a small amount of vibration during accuracy checks.

(5) Repeat operations (3) and (4) until the resistor holder is adjusted correctly. After adjustment the indicator deflections must be within the limits given in the addendum for the particular variant of pressure transmitter being overhauled.

(6) When adjustments have been completed, ensure that there is sufficient clearance between the insulated studs (18) and cover (3), using a cover that has been cut away along one side for checking purposes.

B. Insulation resistance

(1) Measure the insulation resistance by means of a 500 volts megger applied to each contact terminal in turn and the transmitter body.

(2) The insulation resistance must not be less than 100 megohms.

9. Trouble shooting

If incorrect deflections are obtained on the indicator associated with the pressure transmitter, ensure that neither the indicator nor the connecting leads are faulty.

A. Causes

After overhaul the main causes of trouble are:

(1) Open circuit resistor winding.

(2) Dirt on the resistor or contact edges.

(3) Misalignment of contact.

(4) Indicator scale shape incorrect due to non-linearity of winding or shorted turns.

B. Correction

(1) The correction of faults will necessitate partial dismantling.

(2) Refer to the trouble shooting chart given in Fig. 4. for correction of faults.

(3) After correction and re-assembly, the pressure transmitter must be tested as detailed in paragraph 8 (Testing).

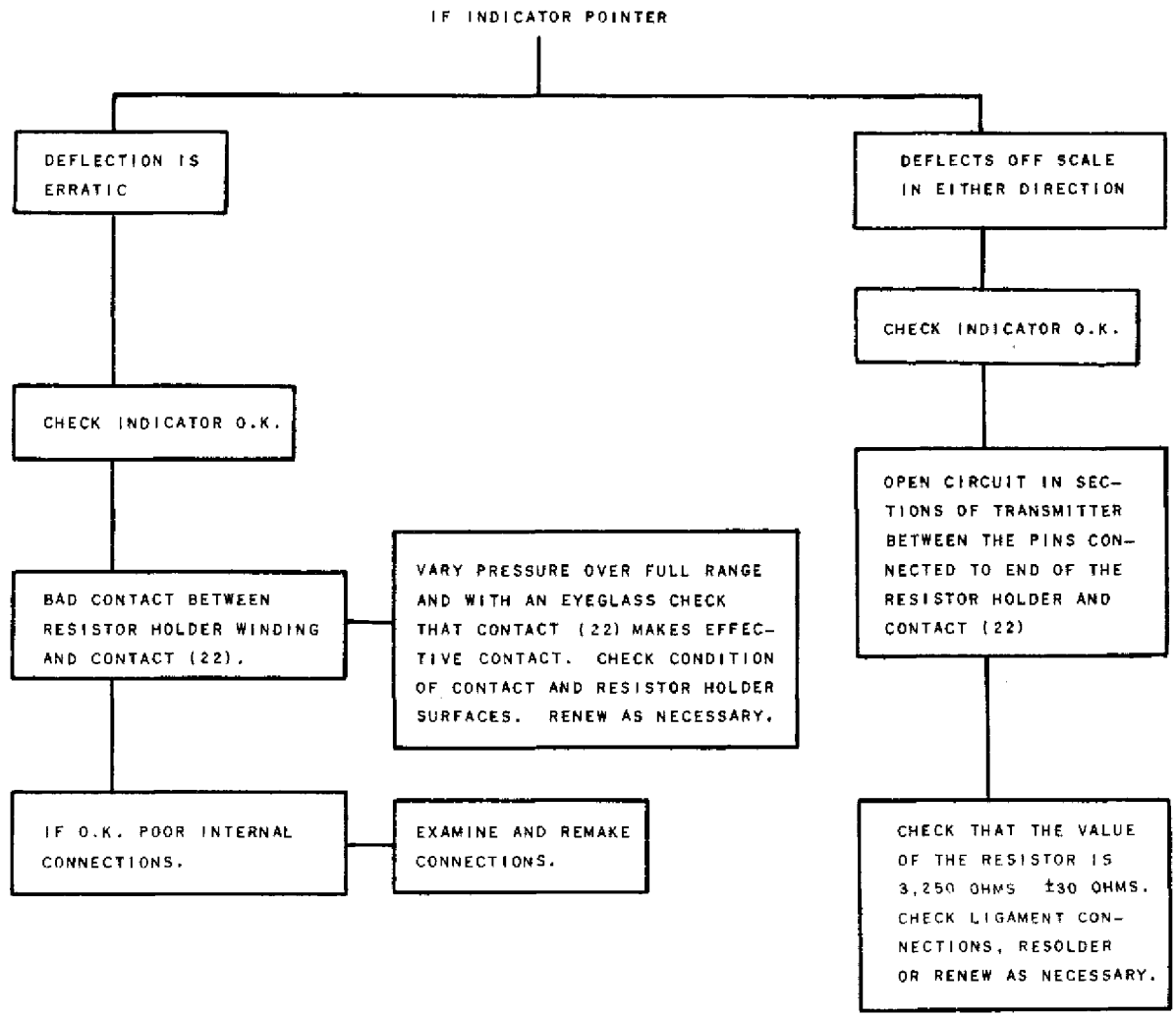


Fig. 4. Trouble shooting chart

10. Storage instructions

A. Conditions

(1) If the original packing is not available, prepare the following:

(a) Packing in temperate areas:

(i) Oven dried silica gel and a humidity indicator.
(ii) A polythene bag of suitable size to contain the pressure transmitter together with 1 oz oven dried silica gel and a humidity indicator; the polythene bag must be heat sealed.
(iii) Sufficient paper wadding to wrap around the transmitter in the polythene bag.
(iv) A cardboard box of suitable size to contain the above package.
(v) Gummed paper strip to seal the box.
(vi) A label to be affixed to the box and giving the following information:

a - Identification, e.g. S.122.4.00

b - Modification standard

c - Date of removal from aircraft

d - Details and date of any component change

e - Reason for return of transmitter

(b) Packing in tropical areas:

(i) Water resistant paper to completely enwrap the transmitter; then proceed as described in (a) (i) to (vi).

(2) If the original packing is available, repack the transmitter and affix a label as in (a) (vi).

B. Storage limiting period

(1) The storage limiting period for the transmitter is 5 years.

(2) Pressure transmitters in store for 5 years must be subjected to an accuracy check also the insulation resistance test described in paragraph 8 (Testing).

(3) Pressure transmitters must be stored under conditions where the humidity does not exceed 50% and where the temperature is within the range $-20^{o}C$ to $+50^{o}C$.

11. Special tools

Item	Description	Part Number
1	Contact Setting Gauge	Tool No.12886 (T.D.9632) SANGAMO WESTON LIMITED
2	Indicator	S63.5.1673 SANGAMO WESTON LIMITED

13. Overhaul period

No overhaul of the transmitter is normally required during the period of its life. The information contained in this manual is to assist should repairs be necessary, due to failure or suspected failure of the transmitter.

The ultimate life of the transmitter is 10,000 hours (operational) or 10 years life. The unit must be discarded after whichever period expires first.

12. Illustrated parts list

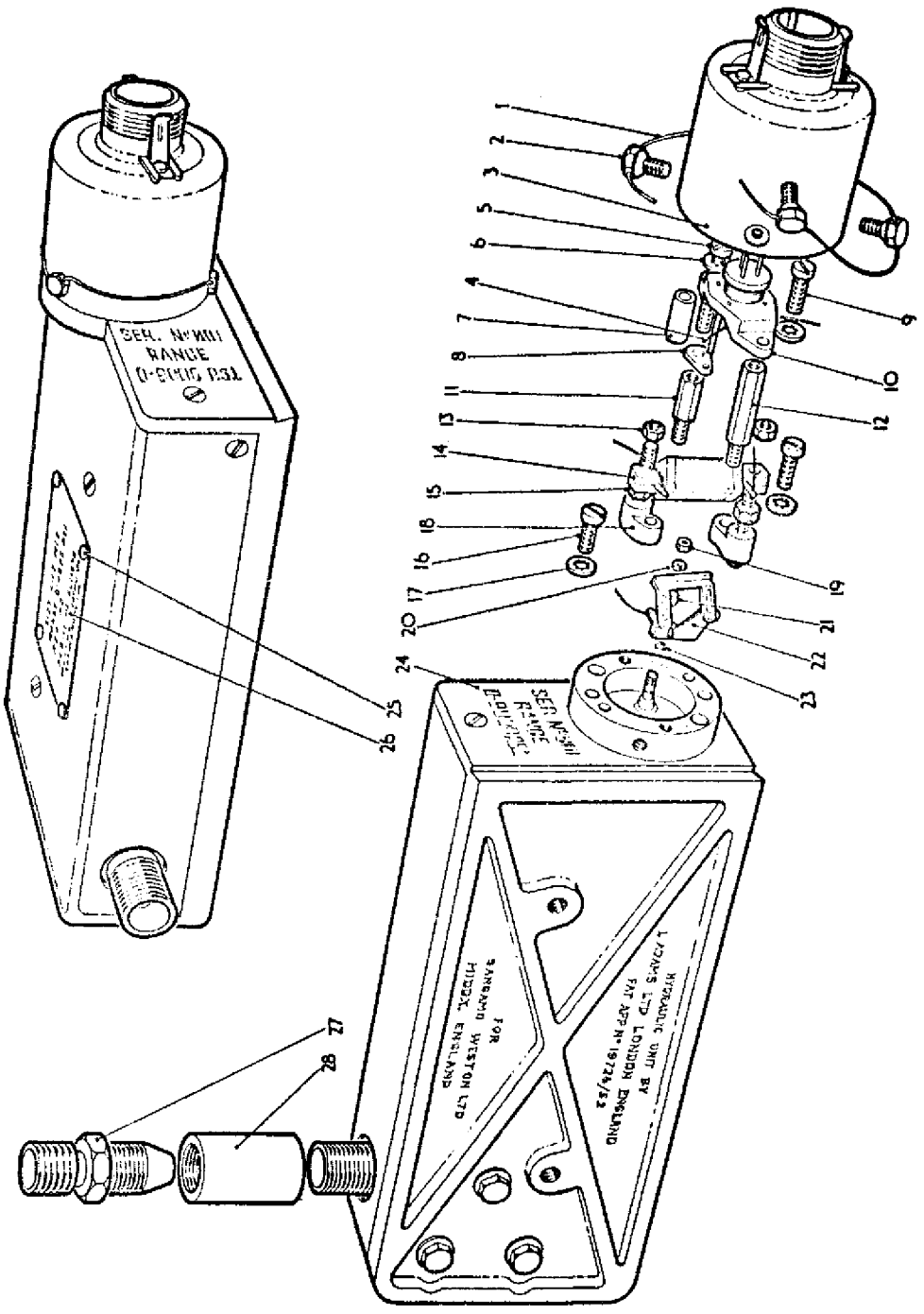


Fig.5. Model S.122 Form 4. Pressure Transmitter.

This list to be used with Variant Parts List for Model S.122 Form 4

COMMON PARTS LIST

MODEL S.122 FORM 4

	Fig. and Index No.	Nomenclature	Part No.	Units per Assy.
		Pressure Transmitter	S.122.4	
	1	Wire, sealing	167723	1
	2	Screw, 6 B.A., Sp. Hex. Hd.	167571	3
	3	Cover	167572	1
	4	Ligament, 0.0008 in x 0.0008 in x 0.5 in	M.P.S.42 Sub.25	3
	5	Screw, 8 B.A. x 5/8 in, Ch. Hd.	156000	1
	6	Washer, shakeproof	94469	2
	7	Sleeve	167690	1
	8	Support, plug pin	167390	1
	9	Screw, 8 B.A. x 5/16 in, Ch. Hd.	96646	1
	10	Block, terminal	171646	1
	11	Pillar, short	167389	1
	12	Pillar, long	165079	1
	13	Nut, 8 B.A., domed	165085	2
	14	Holder, resistor	165081	1
	15	Nut, 8 B.A., domed	See Index No.13	2
	16	Screw, 8 B.A. x 5/16 in, Ch. Hd.	See Index No.9	2
	17	Washer, shakeproof	See Index No.6	2
	18	Stud, insulated	165520	2
	19	Nut, 12 B.A.	155125	1
	20	Lockwasher, 12 B.A.	155830	1
	21	Washer, insulating	154399	1
R	22	Contact	179215	1
	23	Insulator	154397	1
	25	Rivet, bifurcated, 3/16 in x No.16	93962	4
	26	Nameplate	176163	1

NOTE: Sangamo Weston Code appears on Nameplate

The term 'variant' defines a particular application of the Model. The last figure group of the Sangamo Weston Code number identifies the variant and enables the user to select the correct variant parts list.

OVERHAUL MANUAL

ADDENDUM

MODEL S. 122. 4. 29 – PRESSURE TRANSMITTER 0/2000 p. s. i.

The information contained in the main section of the Overhaul manual for Model S. 122 Form 4 is applicable to this variant S. 122. 4. 29 also. Additional information relating to Model S. 122. 4. 29 only is given in this addendum, together with details of the test procedure applicable to this variant.

REVISION RECORD SHEET

Revision No.	Date of Issue	Incorporated by	Date	Remarks
1	Sept 66		26.10.66	
2	Sept 66		19.12.66	
3				
4				
5				
6				
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10				

SANGAMO WESTON LTD.

OVERHAUL MANUAL ADDENDUM 31-09-24/29

MODEL S.122.4.29 - PRESSURE TRANSMITTER 0/2000 p.s.i.

LETTER OF TRANSMITTAL

FOR

REVISION No. 2

Issued September 1966
by
Sangamo Weston Ltd., Enfield, Middlesex, England

ACTION	REASON
1. Remove and destroy page 3 of Overhaul Manual Addendum 31-09-24/29 and substitute page 3 incorporating revision 2.	Text of Description revised on page 3.
2. Record the incorporation of this Revision on the Revision Record Sheet on page 1.	
3. Retain this Letter of Transmittal.	This certifies compliance with Section A, Chapter A6-2, of British Civil Airworthiness Requirements.

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

Signed: N.B. Longmore.

Date: 24th October, 1966

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

SANGAMO WESTON LTD.

OVERHAUL MANUAL 31-09-24/29

MODEL S.122.4.29 - PRESSURE TRANSMITTER 0/2000 p.s.i.

LETTER OF TRANSMITTAL

FOR

REVISION No.1

Issued September 1964
by
Sangamo Weston Ltd., Enfield, Middlesex, England

	ACTION	REASON
1.	Remove and destroy page 5 of Overhaul Manual Addendum 31-09-24/29 and substitute page 5 incorporating Revision 1. ✓	Parts list revised, page 5.
2.	Record the incorporation of this revision on the Revision Record Sheet. ✓	
3.	Retain this Letter of Transmittal. ✓	This certifies compliance with Section A, Chapter A6-2, of British Civil Airworthiness Requirements.

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

Signed: N.H. Lovegrove

Date: 21st. September 1964

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

MODEL S.122.4.29 - PRESSURE TRANSMITTER 0/2000 p.s.i.

Description

This model is designed for the measurement of gauge oil pressure over the range 0 to 2000 p.s.i., and is used in conjunction with a suitably calibrated ratiometer type indicator.

Some models, which are silver soldered at both ends of the Bourdon tube and fitted with a Dowty seal, carry the marking "MOD.419" on the side of the base plate, and the variant number is followed by the suffix F or a succeeding letter.

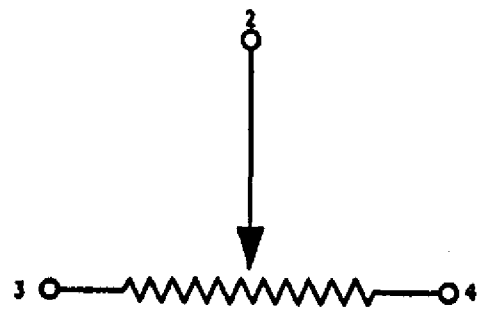

Fig.6. - Circuit diagram.

NOTE: The plug pins of the pressure transmitter are not numbered. The numbers given in the above circuit diagram are only for cross reference with the test circuit given in Fig.3 of the main section of this manual.

Testing

After the adjustments detailed in paragraph 8 (Testing) of the main section of the Overhaul manual have been completed, the deflection of the associated indicator must be within the limits given in the following table, the indicator being of known accuracy.

Pressure (p.s.i.)	Tolerance (p.s.i.)
0	100
400	60
800	60
1200	60
1600	60
2000	60

CAUTION: THE TRANSMITTER MUST NOT BE SUBJECTED TO ANY OVERLOAD PRESSURE.

This list to be used with Common Parts List for Model S.122 Form 4

VARIANT PARTS LIST

Model S.122.4.29

	Fig. and Index No.	Nomenclature	Part No.	Units per Assy.
	Fig.5	Pressure transmitter 0/2000 p.s.i.	S.122.4.29	
	22	Contact with Red Spot to be used with		
R		hydraulic unit with Red Spot	179214)	
	22	Contact without Red Spot to be used with	)	1
R		hydraulic unit without Red Spot	179215)	
	24	Hydraulic Unit (state with or without		
		Red Spot)	168821/2000	1

Sangamo Weston Code appears on nameplate

OVERHAUL MANUAL

ADDENDUM

MODEL S.122.4.31 - PRESSURE TRANSMITTER 0/4000 p.s.i.

The information contained in the main section of the Overhaul manual for Model S.122 Form 4 is applicable to this variant S.122.4.31 also. Additional information relating to Model S.122.4.31 only is given in this addendum, together with details of the test procedure applicable to this variant.

REVISION RECORD SHEET

Revision No.	Date of Issue	Incorporated by	Date	Remarks
1	30.6.66	[signature]	12.10.66	
2	Sept 1966	[signature]	29.12.66	
3				
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SANGAMO WESTON LTD.

OVERHAUL MANUAL ADDENDUM 31-09-24/31

MODEL S.122.4.31 - PRESSURE TRANSMITTER 0/4000 p.s.i.

LETTER OF TRANSMITTAL

FOR

REVISION No. 2

Issued September 1966
by
Sangamo Weston Ltd., Enfield, Middlesex, England

ACTION	REASON
1. Remove and destroy page 3 of Overhaul Manual Addendum 31-09-24/31 and substitute page 3 incorporating revision 2.	Text of Description revised on page 3.
2. Record the incorporation of this revision on the Revision Record Sheet on page 1.	
3. Retain this Letter of Transmittal.	This certifies compliance with Section A, Chapter A6-2, of British Civil Airworthiness Requirements.

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

Signed:

Date: 24th October, 1966

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

SANGAMO WESTON LTD

OVERHAUL MANUAL 31-09-24/31

MODEL S.122.4.31 - PRESSURE TRANSMITTER 0/4,000 p.s.i.

LETTER OF TRANSMITTAL

FOR

REVISION No.1

Issued June 1964
by
Sangamo Weston Ltd., Enfield, Middlesex, England

ACTION	REASON
1. Remove and destroy page 5 of Overhaul Manual Addendum 31-09-24/31 and substitute page 5 incorporating Revision 1. ✓	Parts List revised, page 5.
2. Record the incorporation of this revision on the Revision Record Sheet. ✓	
3. Retain this Letter of Transmittal. ✓	This certifies compliance with Section A, Chapter A6-2, of British Civil Airworthiness Requirements.

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

Signed: S.R. Lovegrove.

Date: 30th. June 1964

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

MODEL S.122.4.31 - PRESSURE TRANSMITTER 0/4000 p.s.i.

Description

This model is designed for the measurement of gauge oil pressure over the range 0 to 4000 p.s.i., and is used in conjunction with a suitably calibrated ratiometer type indicator.

Some models, which are silver soldered at both ends of the Bourdon tube and fitted with a Dowty seal, carry the marking "MOD.419" on the side of the base plate, and the variant number is followed by the suffix F or a succeeding letter.

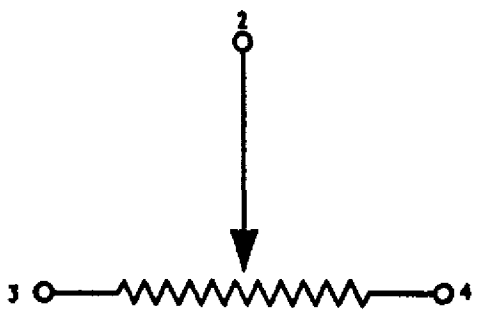

Fig.6. - Circuit diagram

NOTE: The plug pins of the pressure transmitter are not numbered. The numbers given in the above circuit diagram are only for cross reference with the test circuit given in Fig.3 of the main section of this manual.

Testing

After the adjustments detailed in paragraph 8 (**Testing**) of the main section of the Overhaul manual have been completed, the deflection of the associated indicator must be within the limits given in the following table, the indicator being of known accuracy.

Pressure (p.s.i.)	Tolerance (p.s.i.)
0	200
800	120
1600	120
2400	120
3200	120
4000	120

CAUTION: THE TRANSMITTER MUST NOT BE SUBJECTED TO ANY OVERLOAD PRESSURE.

This list to be used with Common Parts List for Model S. 122 Form 4

VARIANT PARTS LIST

Model S. 122. 4. 31

	Fig. and Index No.	Nomenclature	Part No.	Units per Assy.
	Fig. 5	Pressure transmitter 0/4000 p.s.i.	S. 122. 4. 31	
	22	Contact with Red Spot to be used with		
R		hydraulic unit with Red Spot	179214)	
	22	Contact without Red Spot to be used with	)	1
R		hydraulic unit without Red Spot	179215)	
	24	Hydraulic Unit (state with or without		
		Red Spot)	168821/4000	1

Sangamo Weston Code appears on nameplate