



## OVERHAUL MANUAL

### ADDENDUM

MODEL S. 78.3.950 - D.C. AMMETER 0-300 AMPS

In addition to the information contained in the main part of this manual, the following details apply to the Model S.78.3.950.

### REVISION RECORD SHEET

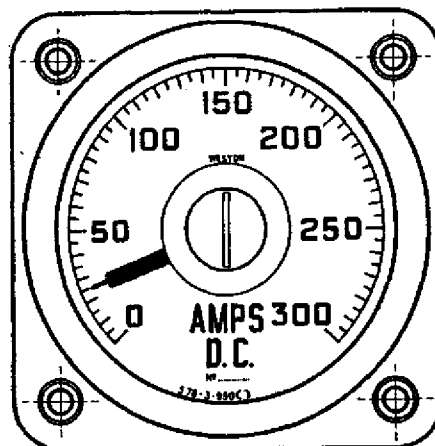
Revision No.	Date of Issue	Incorporated by	Date	Remarks
1	<del>January</del>	<del>26</del>	<del>1963</del>	
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Scale presentation

### Description

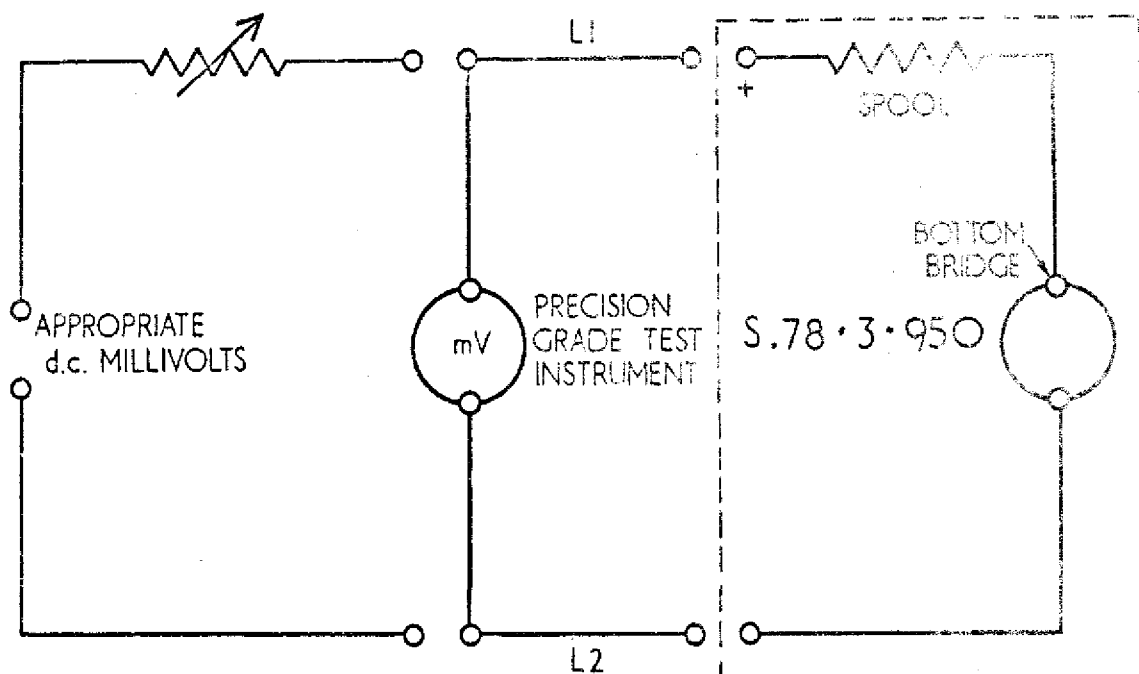
This indicator is basically a d.c. permanent magnet moving-coil millivoltmeter designed for use with an external shunt to measure d.c. current over a range of 0-300 amperes. The scale is calibrated in increments of 5 amperes with cardinals at 50 ampere intervals from zero; the scale is finished in black with figures and markings painted in white. Terminal connection to the indicator is provided. The positive terminal is identified by a red spot on the case adjacent to the terminal.

### Data

Resistance of moving element	2.5 - 3.4 ohms
Resistance of spool	6.5 ohms nominal
Resistance of indicator	7.4 ohms nominal at 20°C.
Current sensitivity of F.S.D.	10mA $\pm$ 5%

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$$L1 + L2 = 0.1 \text{ OHM}$$

Fig. 6. Test circuit and internal wiring diagram.

### Calibration

If the movement has been dismantled, the magnet must be raised, aged and stabilized as described in paragraph 6, Section A of the manual with 75 millivolts d.c. applied to the indicator. Connect the indicator as shown in Fig. 6. The external resistance of the circuit, including leads, must be 0.1 ohm. Treat as for 75 millivolt full scale deflection and calibrate at 20°C. as below.

MILLIVOLTS	75	62.5	59	37.5	25	12.5	0
SCALE MARK	300	250	200	150	100	50	0

NOTE: The indicator reads low with increase of temperature by 0.05mV per °F. (0.09mV per °C.), i.e. at 25°C. P.S.D. will be 74.43mV.

### Accuracy

The accuracy of the indicator must be 2% of full scale deflection (i.e. 1.5mV).



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This list to be used with Common Parts List for Model S.78 Form 3 (Mod. J & Onwards)

### VARIANT PARTS LIST

S.78.3.950 (MOD. J & ONWARDS)

Fig. and Ref. No.	Description	Part No.	No. Off
Fig. 5	D.C. Ammeter 0-300 amps.	S.78.3.950	
4	Cover assembly	166887	1
6	Glass	166225	1
7	Screw, 10 B.A. x 0.19 in. (Black)	156396	2
8	Lockwasher, 10 B.A. (Black)	154825	2
9	Scale, Blank	165402	1
25	Bridge, Top	166732	1
28	Bush, Insulating	162551	3
31	Bush, Insulating	See Index No. 28	3
39	Element, Moving c/w Springs, Pivots, Pivot Nuts, Pivot Bases, Pointer & Balance Weights	39/S.78.3.950	1
41	Pole-Piece	171512	1
43	Spool	43/S.78.3.950	1
44	Lockwasher, 10 B.A. (Not Shown)	153367	1
45	Stud, 10 B.A. (Not Shown)	153496	1
49	Base	168915	1

Sangamo Weston Code appears on front of Scale

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