

Chapter 1-26

INDICATOR, TYPE S149.1.552

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DIAL PRESENTATION

1 The temperature indicator, Type S149.1.552 (Fig 1) is calibrated in deg C from 0 to 150, the pointer deflection being controlled by the variation of resistance with temperature of an externally connected platinum law resistance thermometer element. The indicator movement is designed as a ratiometer.

2 The indicator is a semi-sealed unit, and incorporates a pointer return unit which returns the pointer below the 0 deg C cardinal when the indicator is not energized.

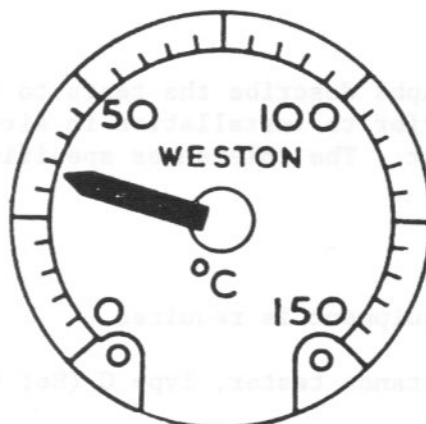


Fig 1 Indicator, Type S149.1.552

CIRCUIT AND CONNECTIONS

3 The combined indicator and test circuit diagram is shown in Fig 2. Connection to the indicator is made by means of three unified thread (6-32 UNC) terminal screws A, B and C, at the rear of the indicator. Terminal D is not connected internally.

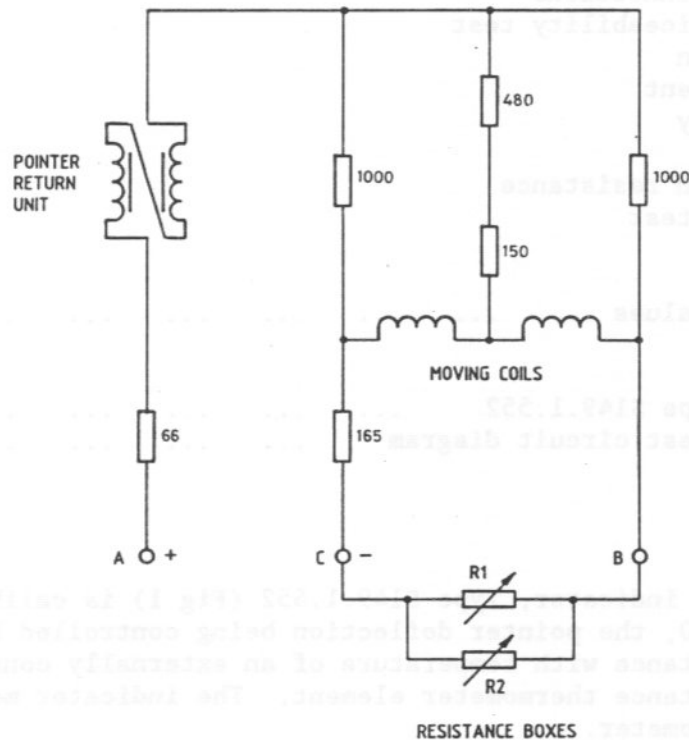


Fig 2 Circuit and test diagram

STANDARD SERVICEABILITY TESTIntroduction

4 The following paragraphs describe the tests to be applied to the indicator immediately prior to installation in aircraft and at any time the serviceability is suspect. The tolerances specified are not to be exceeded.

Test equipment

5 The following test equipment is required.

- 5.1 Insulation resistance tester, Type C (Ref No 5G/9156675).
- 5.2 Decade resistance box (Ref No 10S/16237) ... .. 2 off.

Power supply

6 A 28 V dc power supply is required.

Testing

## Insulation resistance

7 Using the insulation resistance tester set to the 250 V range, measure the resistance between each terminal and the case of the indicator. In each instance the resistance is to be not less than 0.5 megohm.

## Accuracy test

8 Set the resistance boxes to be used as R1 and R2 to 131 ohms and 28470 ohms respectively, then connect the indicator, with the dial vertical and in the normal viewing position to the test circuit (Fig 2).

CAUTION ...

When adjusting the resistance boxes, R1 and R2 must not be permitted to fall below the values 100 ohms and 1000 ohms respectively. Failure to observe this warning may result in damage to the indicator.

9 Set R1 and R2 to each set of values shown in Table 1, in turn. Check that at each setting, for both increasing and decreasing scale values, the indicator pointer indicates within the tolerances shown in Table 1.

10 Disconnect the indicator from the test circuit.

TABLE 1 CALIBRATION VALUES

Resistance (ohms)		Scale values deg C
R1	R2	
131	28470	-3 to 3
136	36856	7 to 13
142	15368	17 to 23
147	17860	27 to 33
152	20852	37 to 43
157	22251	47 to 53
162	26081	57 to 63
167	27722	67 to 73
172	32699	77 to 83
177	34633	87 to 93
182	36622	97 to 103
187	38667	107 to 113
192	42990	117 to 123
197	38612	127 to 133
202	40604	137 to 143
207	38746	147 to 153