Chapter 33

TRANSFORMER, THORN, TYPE 80/10/0319

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LEADING PARTICULARS

Transformer, Thorn, Type 80/10/0319	*Ref. No.*
Type of winding	*Auto*
Input	115*V*, 400 *c/s*
Rated output	345*V*, 70*mA*
Input fuse, 250*mA*, *Type* 153 (*Belling Lee*, *Type L*562) ...	*Ref. No.* 10*H*/58680
Output fuse, 100*mA*, *Type* 154 (*Belling Lee*, *Type L*562) ...	*Ref. No.* 10*H*/58681
Weight	0·719 *lb.*

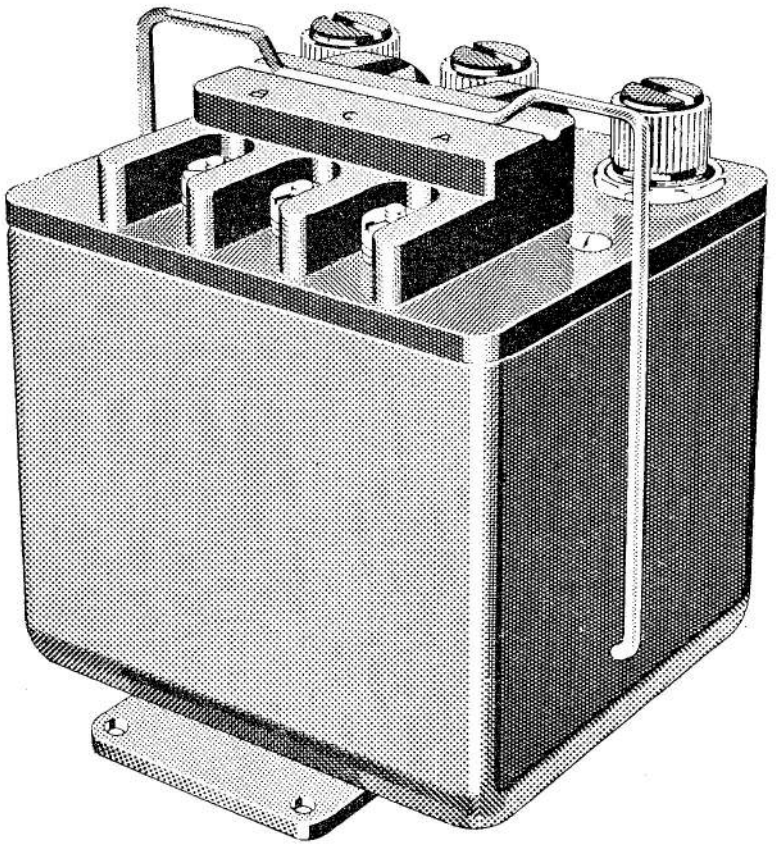

Fig. 1. General view of transformer

Introduction

1. The transformer, Thorn, Type 80/10/0319, is an auto-transformer designed solely for use with the Thorn luminescent passenger notice signs, which are described in A.P.4343E, Vol. 1, Book 4, Sect. 18. From an input of 115V, 400 c/s the transformer provides an output of 345-volts capable of operating up to 7 signs (eighty $\frac{3}{4}$ in. letters) or 70mA.

DESCRIPTION

2. The transformer is auto-wound with its windings wound on a laminated iron core which is secured to a moulded top plate. The top plate accommodates the three terminal studs and the three miniature, Belling Lee Type L575, fuse carriers. The transformer unit is housed in a pressed alloy case into which it is secured by a spring saddle-clip which permits the transformer unit to be renewed without removing the case from its installed position in the aircraft.

SERVICING

3. The transformer should be examined for signs of mechanical damage, overheating, and for loose or broken connections. The fuses should be checked for continuity and the moulded top plate examined for cracks. When the serviceability of a unit is in doubt it should be tested in accordance with the procedure detailed in the Standard Serviceability Test, Appendix A to this chapter. Units which fail this test should be disposed of in accordance with current authorised procedure.

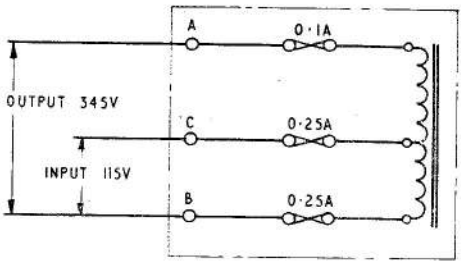

Fig. 2. Circuit diagram

Appendix A

STANDARD SERVICEABILITY TEST FOR TRANSFORMER, THORN, TYPE 80/10/0319

Introduction

1. The following tests may be applied to ascertain the serviceability of the transformer prior to its installation in an aircraft, or at any other specified time.

TEST EQUIPMENT

2. The following test equipment or suitable equivalents will be required:—

(1) Two multimeters, Type 12889, Ref. No. 5QP/17447.

(2) 115V 400 c/s a.c. supply.

(3) One load comprising 2500 ohm variable resistor in series with a 0·07 microfarad capacitor.

(4) 500V insulation resistance tester, Type D, Ref. No. 5G/203.

TEST PROCEDURE

No load test

3. With 115V a.c. applied to terminals B and C, the no load primary current should be 28 ± 4 mA. The output voltage, between terminals A and B, should be 365 ± 15 volts.

Load test

4. Connect the load in series with a multimeter, Type 12889, across terminals A and B. With 115V a.c. applied to terminals B and C, adjust the load resistor to give a secondary current of 50 mA. The secondary voltage should then be 345 volts $\pm$ 5%.

Insulation resistance test

5. With all external circuits disconnected. test between each terminal and the case, The reading obtained in each instance should be not less than 5 megohms.

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