



TEST REPORT

1/5/24
GT-24-005
Revision 1
Page 1 of 6

GT-24-005

Glenair GS27500 Group 9 Commercial Equivalent Wire Test Summary (Ref. QTP-1417)

Revision	Description of Changes	Date	Author
1	Initial Release	1/5/24	JCR



TEST REPORT

1/5/24
GT-24-005
Revision 1
Page 2 of 6

1.0 Scope

This report summarizes the test results of Glenair's GS27500-24SS2N23 commercial equivalent wire to ANSI/NEME WC 27500 group 9. All tests were performed according to ANSI/NEME WC 27500 and QTP-1417.

2.0 Reference Documents

AS4373 Revision F	Test Methods for Insulated Electric Wire
ASTM D3032 Revision 21A	Standard Test Methods for Hookup Wire Insulation
ANSI/NEME WC 27500	Aerospace and Industrial Electrical Cable

3.0 Test Specimens

The part number and description of the wire tested are listed in Table I.

Table I

Part Number	Description
GS27500-24SS2N23	24AWG twisted pair of GS22759/45 with single Nickle coated copper shield, white XLETFE extruded outer jacket

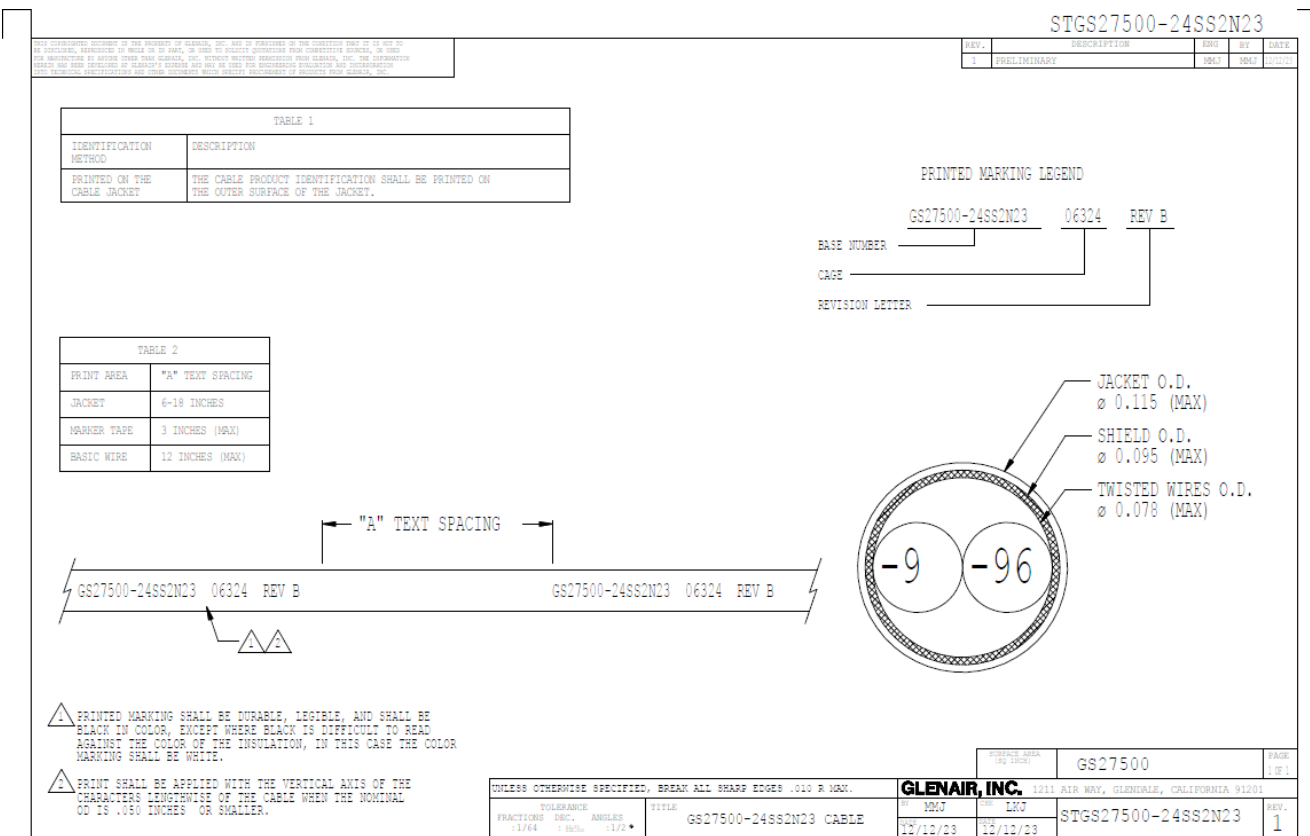


Figure 1 – Glenair GS27500-24SS2N23 Wire Drawing

4.0 Summary of Results

The test results are summarized in Table II.

Table II



TEST REPORT

1/5/24
GT-24-005
Revision 1
Page 4 of 6

Test	Method	Test Requirements	Results	Results
Identification of Cable Wire	ANSI/NEME WC 27500 section 4.3.1	The basic wire insulation for single or multi-conductor cables shall provide a method of determining the wire number.	Pass	Pass
Stripe, Band, or Print Durability	ANSI/NEME WC 27500 section 4.3.22	125 cycles, 500 grams	Pass	Pass
Cable Lay-up	ANSI/NEME WC 27500 section 4.3.1	Lay Direction: Left Hand Lay Lay Length: 6-16 times outer major axis diameter.	Left Hand 0.858"	Pass
Shield Coverage	ANSI/NEME WC 27500 section 4.3.5	85% Minimum	95%	Pass
Braid Angle	ANSI/NEME WC 27500 section 4.3.5	18°-40°	21°	Pass
Identification of Product	ANSI/NEME WC 27500 section 4.3.1	The wire product identification shall appear on all individual basic wires when required by the basic wire specification	Pass	Pass
Jacket Wall Thickness and Concentricity	ANSI/NEME WC 27500 section 4.3.12	Concentricity 70% Minimum	80%	Pass
Strippability	ANSI/NEME WC 27500 section 4.3.1	No adherence to the underlying shield or cable	Pass	Pass
Cable Diameter	ANSI/NEME WC 27500 section 4.4	0.1158" Maximum	0.1049"	Pass
Cable Weight	ANSI/NEME WC 27500 section 4.5	10.38 lb/1000ft Maximum	10.20 lb/1000ft	Pass



TEST REPORT

1/5/24
GT-24-005
Revision 1
Page 5 of 6

Cold Bend	ANSI/NEME WC 27500 section 4.3.6	No cracks in the jacket	Pass	Pass
Jacket, Tensile Strength, and Elongation	ANSI/NEME WC 27500 section 4.3.13	Tensile Strength: 5,000psi minimum Elongation: 50% minimum	8525psi 210%	Pass
Blocking	ANSI/NEME WC 27500 section 4.3.15	No Adhesion or Sticking	Pass	Pass
Crosslinked Verification	ANSI/NEME WC 27500 section 4.3.10	No cracking or dielectric breakdown (1000V)	Pass	Pass
Copper shield round strand material	ANSI/NEME WC 27500 section 4.3.1	Conform to ASTM B3	Pass	Pass
Thickness of shield strand coating	ANSI/NEME WC 27500 section 4.3.2.2.1	Electronic Determination Method of ASTM B296 or B355	Pass	Pass
Continuity of shield strand coating	ANSI/NEME WC 27500 section 4.3.2.2.2	No exposed copper	Pass	Pass
Shield strand elongation	ANSI/NEME WC 27500 section 4.3.2.1	Elongation: 6% Minimum	Pass	Pass
Dielectric withstand-- component wire (100%)	ANSI/NEME WC 27500 section 4.3.3.1	No electrical breakdown or arcing	Pass	Pass
Jacket flaws (100%)	ANSI/NEME WC 27500 section 4.3.4	No Flaws	Pass	Pass



TEST REPORT

1/5/24
GT-24-005
Revision 1
Page 6 of 6

Conductor continuity (100%)	ANSI/NEME WC 27500 section 4.3.8	No Discontinuity	Pass	Pass
Basic wire acceptance	Basic Wire Specification	Review basic wire specification	Pass	Pass
Continuous lengths (100%)	ANSI/NEME WC 27500 section 4.6	85% of lengths shall be greater than 100ft 100% of lengths shall be greater than 50ft	Pass	Pass
Workmanship	ANSI/NEME WC 27500 section 4.3.1	No visible irregularities when viewed with the unaided eye	Pass	Pass
Flammability	ANSI/NEME WC 27500 section 4.3.19	Sample shall not burn more than 30 seconds or more than 3 inches	<3.0 sec 1.3"	Pass

5.0 Conclusion

Glenair's GS27500-24SS2N23 wire meets all performance requirements of ANSI/NEME WC 27500. In some instances, the oven calibration was performed in accordance with ISO instead of ASTM Type II.