



MACLEAN POWER SYSTEMS

A MacLean-Fogg Company

Engineering Test Report

NYLON CONDUIT WIREHOLDER: VALIDATION TESTING J0588Z

Project M-616

Test ID: LR0127, LR0128

Testing performed at MacLean Power Systems, York, SC

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M-616- Validation Testing for J0588Z Wireholder



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1. Purpose

The testing detailed below is to validate the performance requirements of the J0588Z Nylon Conduit Wireholder. The tensile test will test the holding strength of the J0588Z Nylon Wireholder after installing into wood. The cantilever test will determine the strength of the J0588Z Nylon Wireholder when subjected to cantilever load of 600 lbs. without breaking or causing extensive deformation.

2. Tensile Test (LR-0127)

2.1 Test Procedure

2.1.1 A sample part of J0588Z Nylon Conduit Wireholder was installed with a hook in the tensile testing machine. Figure 1 shows the setup.

2.1.2 The Wireholder was then tensile loaded to failure on the tensile testing machine.

2.1.3 This test process was repeated twice more.

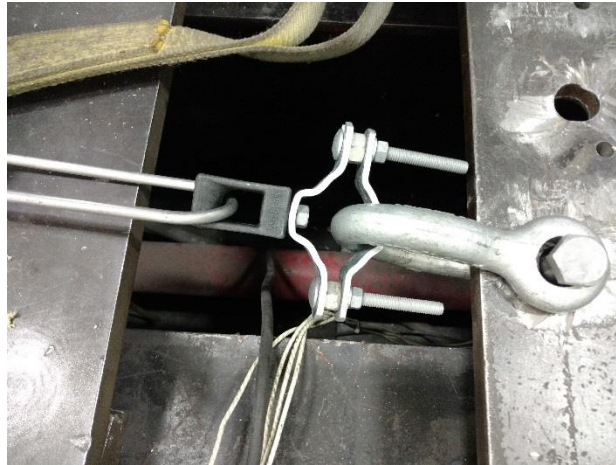


Figure 1: Tensile Test Setup

2.2 Test Results

All the samples fractured at the Nylon part of the Wireholder. Table 1 shows the data for the tensile test.

Table 1: Tensile Test Results

Sample	Load at Failure (lbs.)	Mode of Failure
1	3271	Fractured at Nylon
2	3418	Fractured at Nylon
3	3908	Fractured at Nylon

3. Cantilever Test (LR-0128)

4.1 Test Procedure

4.1.1 A sample part of J0588Z Nylon Conduit Wireholder was installed on a 1" thick steel plate. Figure 2 shows the test setup.

4.1.2 A proof load of 600 lbs. was placed on the Wireholder.

4.1.3 The part was then loaded to failure.

4.1.4 This test process was repeated twice more.



Figure 2: Cantilever Test Setup

4.2 Test Results

All three Wireholders passed the proof load of 600 lbs. Table 2 shows the results from the test.

Table 2: Cantilever Test Results

Sample	Load at Failure (lbs.)	Mode of Failure
1	2695	Fractured at Nylon
2	3307	Bolt Stripped from Nut
3	1543	Fractured at Nylon

4. Conclusion

The results from the tests show that the J0588Z Nylon Conduit Wireholder performs as expected. The tensile test shows that the holding strength for J0588Z is suitable for the applications it is used in. The cantilever test shows that the J0588Z can withstand a minimum cantilever load of 600 lbs. without damage.



5. Appendix

Tensile Test Results



Sample after Tensile Test



Samples after Tensile Test



Samples after Tensile Test



Cantilever Test Results



Sample after Cantilever Test



Sample after Cantilever Test



Sample after Cantilever Test



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