

HYDROSTATIC TEST REPORT

DATE: 2-22-11 EMS

Couplings: Ground Joint Couplings: 2" Viton Seal, female x female
- Coupling/ferrule system rated to 1000 psi. WP

Hose: High Pressure Air: 2" Goodyear Gorilla rated at 500 psi.

Attachment: Crimped: plated steel long ferrules

Goal: To exceed 2000 psi. (hose WP of 500 psi. @ 4 to 1 Safety Factor)

Results: Hose exceeded 4 times WP. Hose burst 2127 psi.

This test was conducted to ASTM D380 standards. See engineering details below.

HOSE: 2" Goodyear Gorilla, 500 psi W.P.; initial length of 18."

END CONNECTION #1: Assembled by Campbell, GJS-8, a 2" ground joint Viton hose stem, a RGN-8 nut with a FPS200240L plated steel ferrule. The hose wall on this end measured between .265" and .275" with a .272" average. Assembly was relatively easy and required no lubrication or pounding; only force. This end was crimped to $\phi 2.554$ ". The ferrule was selected and the crimp diameter interpolated from the newest crimp chart, due to expire 4-30-11. This end was crimped on a Custom Crimp cc-600 crimper using 63mm dies. This end was connected to our tester manifold using a previously used GFS-8 2" spud with a 2" x 3/4" reducing bushing and a GMS-3 male NPT 3/4" spud through our usual 3/4" ground joint style connection. Teflon tape and pipe dope was used on the NPT threads. See first connection photo. Both the RGN-8 and tester nuts were hand tight.

END CONNECTION #2: Assembled by Campbell, GJS-8, a 2" ground joint Viton hose stem, a RGN-8 nut with a FPS200240L plated steel ferrule. The assembly was as above with the following exceptions. The hose wall on this end measured .268" to .275" with a .271" average. The interpolated crimp of $\phi 2.553$ was done on the same crimper. This end was connected to our standard ground joint valve adapter with valve attached using a previously used GFS-8 2" spud with a 2" x 3/4" reducing bushing and a GMS-3 male NPT 3/4" spud through a 3/4" ground joint connection. See second connection photo.

TEST: The assembly was filled with water and air was evacuated from the system by use of the valve at the free end of the assembly. All components and the assembly were at a test temperature of about 70° F. The assembly was made up and crimped 24 hours before the test. See inlet temp and in tester photos.

Pressure was raised rapidly and observed at various stages, within ASTM D380 parameters. The Hose elongated slightly during pressurization until it burst near the middle of the assembly. See burst photo. **The highest pressure recorded was 2127 psi.** See peak photo. No hose movement relative to the fitting was noted at either end. See End 1 and End 2 photos.

CONCLUSION:

Based on this test, the hose working pressure of 500 psi. at 70° F, has been verified. This test exceeded the working pressure of the hose by a 4 to 1 safety factor.

These fittings on rubber hose have a WP of 1000 psi. at 70° F, however the hose did not survive to a pressure high enough to test the fitting at 4 times its working pressure.

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