Hydrostatic Test Report Date: 8-31-18B

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Campbell Fittings THE LEADER IN HOSE SYSTEMS TECHNOLOGY.

Hose/Fitting	3/4" ContiTech Yellow Nitrogen Service Hose, 300 WP, assembly sent in from ContiTech, IL=9.625", FL=7"	Compression Ratio	
Fitting & Retention	End 1 – BMHS-3/FLPS075112 or 114 End 2 – BFHS-3/FLPS075112 or 114	Highest Pressure	1552 psi
End 1 Diameter & Wall Thickness	Actual wall unknown OD = 1.157", Crimp = 1.130"	Test Temperature	76 F
End 2 Diameter & Wall Thickness	Actual wall unknown OD = 1.158", Crimp = 1.129"	Failure Mode	Hose burst 2 3/8" from the end 2 ferrule end.



Assembly in the tester prior to test



Initial close-up at 60 psi and 76F, End 1 (top) End 2 (bottom)



Photo taken at 1254 psi, prior to burst



Final Stretch close-up posttest, End 1 (top), End 2 (bottom)



nose burst and burst close up



Peak pressure and final hose labeling

Primer: This hose assembly was sent in fully assembled from ContiTech to be performance tested by Campbell.

TEST RESULTS: As the pressure was raised, stretch was evaluated; in increments of WP. Stretch was zero through the 600 psi point, and then some yellow became visible between the black mark and the ferrule end, measuring .015 at each end at the 900 psi point, increasing to about .04" at 1200 psi. Just after passing the 1500 psi point, the hose burst 2.375" from end 2. The time between passing 1500 psi and the hose burst was not long enough to gain a stretch measurement. After the rapid depressurization, hose stretch immediately returned to its start position, leaving a sliver of yellow visible at E1, nothing visible at E2 (same as the prior test done today), so effectively, no measurable permanent stretch. A short video was taken at the very end of the test, clearly showing the burst taking place.

Conclusion: The hose and fittings performed very well in this test, both achieving 5.17 times their rated working pressures. The hose to fitting connection showed good low stretch numbers which indicates that we have a good solid connection, the connection was not the failure mode and no measureable permanent stretch, are all indicative of an excellent connection. The Bowes fittings are a sexed coupling, meaning they have a specific male and a female coupling half. This design allows for a nice gasket design in which the gasket surrounds the diameter of the male coupling half with an o-ring like seal that allows for higher sealing pressures than other gasket designs. This coupling and hose combination is quite capable for the 300 psi @ 70 F rating.

Both of today's tests performed very similarly to the test of BM/FHS-3 in the same hose, tested on 6-15-18B performing to a hose burst of 1538 psi, also bursting closer to end 2.