

Prepared By: Randi Kremer, Chief Engineer

| | | | |
|---|--|--------------------------|---|
| Hose | 3" Boston Bulldog Gold HP Air Hose, H600948 Max Temp. 250 F, WP = 600 psi | Compression Ratio | Proprietary data, crimped per the IMS-12 HW crimping instructions |
| Fitting & Retention | IMS-12 HW Both ends | Highest Pressure | 3539 psi |
| End 1 Diameter & Wall Thickness | .371, .361, .352, .363=.362 Avg. Crimp – 4.020 | Test Temperature | 200 F |
| End 2, 3 & 4 Diameter & Wall Thickness | .361, .347, .344, .358=.353 Avg. Crimp – 4.005 | Failure Mode | Hose burst near the center of the free length. |



Assembly prior to heat soak and pressurization



E1 and E2 prior to heat soak and pressurization



E1 and E2 after heat soak, prior to pressurization



E1 and E2 Pre-Failure, taken around 3000 psi



Hose burst-Failure at 3539 psi



Highest pressure achieved

Test Results: This assembly heat soaked for 6 hours with a final test temperature of 200 F prior to pressurization. Each end showed approximately .090" stretch at 200 F prior to the test. As the pressure increased to 2X WP or 1200 psi, stretch was up to .120", when the pressure reached 2400 psi, stretch was .188" and at 3000 psi, stretch was .250". At peak pressure, 3539 psi, the hose burst near the center of the free length. We achieved 5.89 times the working pressure at a temperature of 200 F.

We rate this hose and fitting assembly at its WP of 600 psi up to 231 F, then as the temperature gets hotter, pressure rating falls to 500 psi @ 240 F and 409 psi @ 250 F (the maximum recommended temperature for this hose). These pressure ratings maintain Campbell's corporate 4 to 1 safety factor, throughout the temperature range.