



PRESS-SEAL GASKET CORPORATION

Phone (260) 436-0521 Fax (260) 436-1908

Test Report

PSX:Direct Drive 28" Pipe-to-Manhole Connector

October 7, 2003

R. W. Neuhaus
M. R. Miller
P. S. Pennell

Purpose of Test: This test was performed to reconfirm performance of 28-inch diameter PSX:Direct Drive with the requirements of ASTM C 923, Section 7.

Test Materials: The test was performed using a PSX:Direct Drive 28A Pipe-to-Manhole Connector. This connector was constructed of two 5/8-11 adjuster mechanisms installed at the three-o'clock and nine-o'clock positions. The adjusters were tightened in an alternating pattern in 10 ft/lb increments to 60 ft/lb torque using an adjustable torque wrench. The rubber connector was a PS 528 profile extruded in 40-durometer rubber. Installation was into a 60-inch manhole used previously for several other tests. The pipe used in this test was standard 24" ASTM D 3034, SDR35 sewer pipe installed into a flexible coupling in the center of the manhole to permit angular deflection. The manhole was sealed using a cast concrete top fitted with inlet and outlet pipes for filling, venting and measuring pressures within the manhole. The entire assembly was constrained by an upper and lower steel framework secured with heavy chains and load binders (see fig. 1). Pressure was measured at the outlet fitting using a 0-30 psi gauge in current calibration. Timing of the tests was performed using a calibrated stopwatch.



Fig. 1

Page 1 of 3

Mail to: P.O. Box 10482
Fort Wayne, IN 46852

Ship to: 6932 Gettysburg Pike
Fort Wayne, IN 46804

Web Site: www.press-seal.com
E-Mail: sales@press-seal.com

Test Method: After assembly of the test apparatus, the outlet vent was opened and the inlet tap was opened. When water filled the vessel completely as evidenced by its flowing from the outlet vent, the inlet valve was closed and then the outlet valve was closed.

With the pipe in straight alignment with the manhole, pressure was raised slowly to 13 psi. This pressure was then maintained for 10 minutes. There were no leaks witnessed from any part of the PSX:Direct Drive connector or from its interface with the pipe or with the manhole.

After the straight-alignment test was completed, pressure was relieved from the apparatus and the pipe was placed in shear with a hydraulically-induced load of 150 lbf/inch pipe diameter, or a load of 3600 lbf, per the requirements of ASTM C 923 (see Fig. 2).

The assembly was then slowly re-pressurized to 10 psi and this pressure was maintained for 10 minutes. Again, no leaks were observed at any point of the PSX connector, manhole, or pipe.



Fig. 2

Finally, the assembly was depressurized and the pipe was moved to a seven-degree angle of deflection (see Fig. 3). Once set to this angle, pressure was re-established at 10 psi and held for 10 minutes. As before, no leaks were observed at any locations of the connector, pipe, and manhole.



Fig. 3

Conclusion: The PSX:Direct Drive 28-inch connector documented herein has successfully passed all performance requirements of ASTM C 923, Section 7.

Respectfully submitted,

Ron W. Neuhaus
R&D Technician

Michael R. Miller
Systems Director and Quality Manager

Paul S. Pennell
Engineering Technician