

INTEGRITY TESTING LABORATORIES

CLIENT:

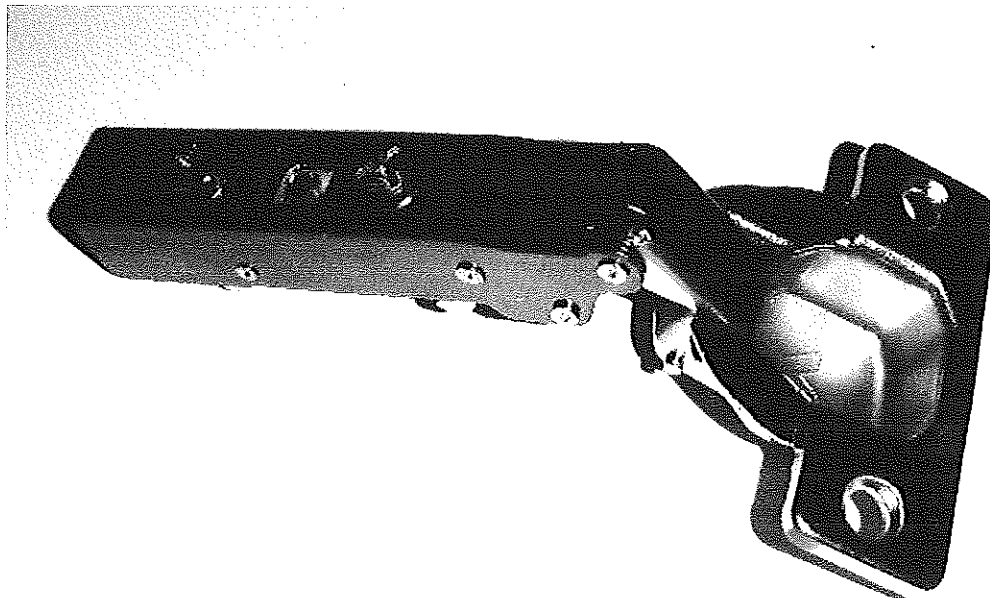
Hardware Resources
4319 Marlena Street
Bossier City, LA 71111
Attention: Travis McElveen

LABORATORY NO: F1209241-2A
DATE: October 27, 2012
CLIENT P.O. NO.: Vbl, T. McElveen
STANDARD: ANSI/BHMA A156.9-03
ANSI/KCMA A161.1-01

SAMPLE: 125 DEGREE EUROPEAN SELF CLOSING HINGE,
P/N 900.OU84.05, TESTED WITH PLATE 600.3553.65

ABSTRACT

This report serves to document the testing of the above sample to all applicable hinge test paragraphs of ANSI/BHMA A156.9-2003, American national standards for cabinet hardware, and ANSI/KCMA A161.1-01, American national standards for kitchen and vanity cabinets. Test procedures include a hinge permanent set test, hinge operating life test, closing force test, self closing test, an over opening test, and a salt spray finish test. In addition, **we were requested to double the number of required operating cycles to 100,000.** The remainder of this report will show how the hinge samples submitted for testing **exceeded all of the requirements needed for conformance to these two standards.**



Self-Closing Hinge, P/N 900.OU84.05

Integrity Testing: 469 CR 306, Corinth MS 38834 Phone: (714) 630-2363

This report applies only to the sample or samples submitted for testing and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, or these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed, and upon that condition that it not be used, in whole or in part, in any advertising or publicity matter without prior written authorization from these laboratories.

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**OBSERVATIONS AND RESULTS
ANSI/BHMA A156.9-03-GRADE 2**

LABORATORY DETERMINATION	LABORATORY OBSERVATION	ANSI/BHMA A156.9-03 GRADE 2 REQUIREMENT	TEST RESULT
Hinge Permanent Set Test BHMA Section 4.1	Vertical Deflection = 0.046"	0.060" maximum vertical deflection after 75 lb. test load.	PASS
Hinge Operating Life Cycle Test, BHMA Section 4.2	Hinge cycled 100,000 complete cycles instead of the required 50,000 cycles Vertical Deflection = 0.025"	0.030" maximum vertical deflection after 50,000 cycles with 12 lb. test load.	PASS
Hinge Self Closing Force Test, BHMA Section 4.4.2	Closing Force = 8 oz.	4 oz. minimum closing force.	PASS
Hinge Self Closing Test BHMA Section 4.4.3	Door closed and remained closed from 10°.	Hinges shall close door from 10° after 50,000 cycles.	PASS
Hinge Over Opening Test BHMA Section 4.4.4	Door closed and remained closed from 10°.	Hinges shall close door from 10° after 17-lb. test force.	PASS
Salt Spray Finish Test BHMA Section 4.16.5	No substrate corrosion or surface staining was observed	12 hours exposure. No base/substrate corrosion exceeding 1/16", or more than one spot per square inch. No surface staining larger than 1/4", or more than 5% of surface.	PASS

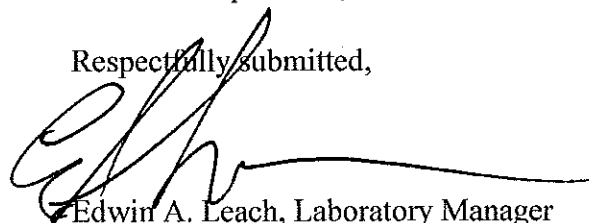
ANSI/KCMA A161.1-01

LABORATORY DETERMINATION	LABORATORY OBSERVATION	ANSI/KCMA A161.1-95 REQUIREMENT	TEST RESULT
Door Racking and Hinge Permanent Set Test Section 6.1	Vertical Deflection = 0.033"	0.065" maximum vertical deflection after 65 lb. test load.	PASS
Hinge Operating Life Cycle Test, Section 6.2	Hinge cycled 100,000 complete cycles instead of the required 25,000 cycles Vertical Deflection = 0.018"	0.065" maximum vertical deflection after 25,000 cycles.	PASS

CONCLUSION

During the execution of the testing program, the model 900.OU84.05 hinge performed well with no structural breakage or failure. This sample submitted for testing **exceeded all of the hinge test requirements and conforms** to ANSI/BHMA 156.9-2003 for Grade 2 products, **and conforms** to ANSI/KCMA A161.1-01.

Respectfully submitted,

Edwin A. Leach, Laboratory Manager
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