

# INTEGRITY TESTING LABORATORIES

A Division of ErgoLabs, Inc.

**CLIENT:**

Hardware Resources  
P.O. Box 72430  
Bossier City, LA 71172  
Attention: Udhaya Nallamottu

LABORATORY NO: F0702201-1

DATE: February 20, 2007

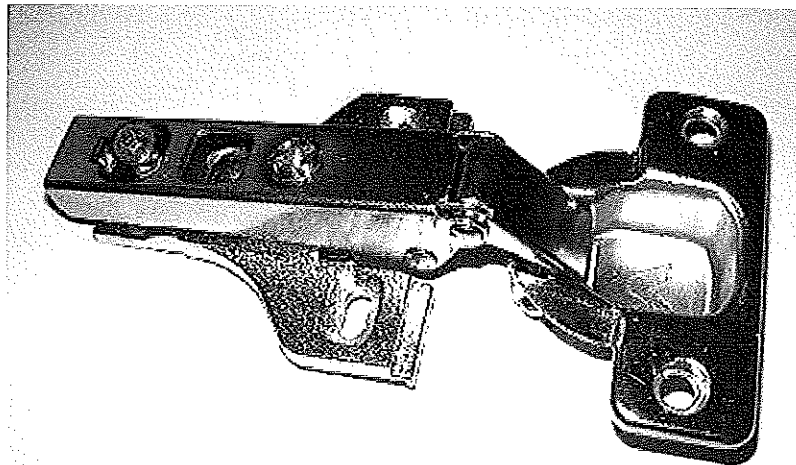
CLIENT P.O. NO.: letter, Udahay

STANDARD: ANSI/BHMA A156.9-03  
ANSI/KCMA A161.1-01

**SAMPLE:** EUROPEAN SELF CLOSING HINGE, P/N 500.OU84.05  
TESTED WITH MOUNTING PLATE P/N 400.3453.65

## 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 A161-01, 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, and an over opening test. 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 500.OU84.05, WITH PLATE 400.3453.65

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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 = 0.045"	0.060" maximum vertical deflection after 75 lb. test load.	PASS
Hinge Operating Life Cycle Test BHMA Section 4.2	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 = 10 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

**ANSI/KCMA A161.1-01**

LABORATORY DETERMINATION	LABORATORY OBSERVATION	ANSI/KCMA A161.1-01 REQUIREMENT	TEST RESULT
Door Racking and Hinge Permanent Set Test Section 6.1	Vertical Deflection = 0.032"	0.065" maximum vertical deflection after 65 lb. test load.	PASS
Hinge Operating Life Cycle Test Section 6.2	Vertical Deflection = 0.018"	0.065" maximum vertical deflection after 25,000 cycles.	PASS

**CONCLUSION**

During the execution of the testing program, the model 500.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  
 INTEGRITY TESTING LABORATORIES, a division of ErgoLabs, Inc.