

# INTEGRITY TESTING LABORATORIES

a division of ErgoLabs, Inc.

## CLIENT:

The HardwareHouse  
943 Hazel Street  
Livermore, CA 94550

LABORATORY NO: F0707061-1  
DATE: July 16, 2007  
CLIENT P.O. NO.: Email, J. McDonald  
STANDARD: ANSI/BHMA 156.9-03  
ANSI/KCMA A161.1-00  
ANSI/BIFMA X5.5-98

**SAMPLE:** 20" FULL EXTENSION BALL BEARING DRAWER SLIDES,  
P/N 4501, TESTED WITH A 24" WIDE BY 22" DEEP SAMPLE  
TEST DRAWER

## ABSTRACT

This report serves to document the testing of the above sample to all applicable drawer test paragraphs of ANSI/BHMA 156.9-2003, ANSI/KCMA A161.1-00, and ANSI/BIFMA X5.5-98. The sample was tested to meet the requirements of all three of the above standards, including the BHMA product grade 1 classification. The remainder of this report will show how the drawer slides submitted for testing **conformed** to the requirements needed for conformance to these standards.

## PROCEDURES

All procedures were performed with strict adherence to the cited standards. The drawer test load was 100 lbs for all procedures, higher than any of the minimum requirements.

3911 E. LaPalma, Suite E, Anaheim Hills, CA 92807 Phone: (714) 630-2363 Fax: (714) 630-2256

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

<b>LABORATORY DETERMINATION</b>	<b>LABORATORY OBSERVATION</b>	<b>ANSI/BHMA A156.9-03 GRADE 1 REQUIREMENT</b>	<b>TEST RESULT</b>
Drawer slide stop test BHMA section 4.11.2	The stop position provided 45 lbs., or ten times the operating force.	The stop position shall provide at least ten times the normal drawer operating force.	<b>PASS</b>
Drawer removal and load placement BHMA section 4.11.3	The slides permitted complete drawer removal. Placement of loads did not cause removal or partial removal from the drawer's suspended position when operated.	Drawer slides shall permit complete drawer removal. Load placement shall not cause the drawer to be removed or partially removed from its suspended position during drawer operation.	<b>PASS</b>
Drawer cycle life test BHMA section 4.11.4	Drawer operated for a total of 50,000 cycles with a 100 lb. test load. Drawer opening force = 4.5 lbs. after the performance of the test.	Drawer shall be cycled 2/3 of the total travel for 50,000 cycles with a 50 lb. test load. Drawer shall be completely operable after the performance of the test.	<b>PASS</b>
Drawer edge load test BHMA section 4.11.5	There was no structural breakage or loss of serviceability of the slide suspensions with an additional 75 lb. edge load applied	There shall be no failure of the slides with an additional 75 lb. mass applied to the drawer edge in the half-extended position.	<b>PASS</b>

**ANSI/KCMA A161.1-00**

<b>LABORATORY DETERMINATION</b>	<b>LABORATORY OBSERVATION</b>	<b>ANSI/KCMA A161.1-00 REQUIREMENT</b>	<b>TEST RESULT</b>
Drawer Operating Life Cycle Test Section 7.1	There was no structural breakage or loss of serviceability after the performance of the test with a 100 lb test load.	The drawer suspension shall remain completely operable after the performance of 25,000 cycles. The required load for the test drawer size was 55 lbs.	<b>PASS</b>

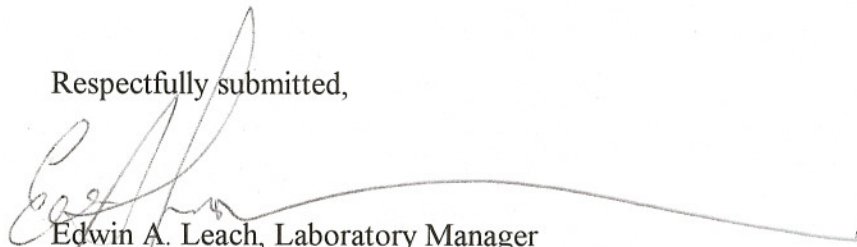
**RESULTS (CONT.)  
 ANSI/BIFMA X5.5-98**

LABORATORY DETERMINATION	LABORATORY OBSERVATION	ANSI/BIFMA X5.5-98 REQUIREMENTS	TEST RESULT
Extendible member proof load test, X5.5, Paragraph 4.7	Load extendible member with 100 lbs instead of 60.7 as required. Close member for 15 minutes, extend member for 15 minutes and remove load	There shall be no sudden and major change in structural integrity of the product.	PASS- there was no loss of serviceability of the slide suspensions.
Extendible member cycle test, X5.5 paragraph 7	Load extendible member with 100 lbs instead of 45 as required. Open and close member for a total of 50,000 cycles. After completion, pull forces were recorded to be 4.5 lbs.	There shall be no loss of serviceability. Pull forces shall be less than 11.2 lbs.	PASS- there was no loss of serviceability of the slide suspensions. The pull forces recorded were well within the allowable maximum.
Outstop test, X5.5 paragraph 8.2	Load extendible member with 100 lbs instead of 45 as required. Measure and record pull force to be 4.5 lbs. adjust apparatus to apply 9.5-lb outward load for 80% of drawer travel. Repeat 4 more times	There shall be no loss of serviceability. Pull forces shall be less than 11.2 lbs.	PASS- there was no loss of serviceability of the slide suspensions. The pull forces recorded were well within the allowable maximum.
Outstop cyclic test, X5.5 paragraph 8.3,	Load extendible member with 100 lbs instead of 45 as required. Measure and record pull force to be 4.5 lbs. adjust apparatus to apply 9.5-lb outward load against outstops device for 15,000 cycles.	There shall be no loss of serviceability. Pull forces shall be less than 11.2 lbs.	PASS- there was no loss of serviceability of the slide suspensions. The pull forces recorded were well within the allowable maximum.
Rebound test, X5.5 paragraph 9	Load extendible member with 100 lbs instead of 45 as required. Adjust apparatus to apply 40-lb inward load, releasing 2" from the fully closed position. Repeat 4 more times	There shall be no loss of serviceability. Pull forces shall be less than 11.2 lbs. All five final rest positions shall be no more than 1.5" from the fully closed position.	PASS- there was no loss of serviceability of the slide suspensions. The pull forces recorded were well within the allowable maximum. All final rest positions were less than 1.5" from the fully closed position.

**CONCLUSION**

During the execution of the testing program, the model 4501, 20" drawer slide suspension performed well with no structural breakage or failure with the above load. This sample submitted for testing met all of the drawer slide test requirements and **conforms** to ANSI/BIFMA X5.5-98, ANSI/KCMA A161.1-00, and ANSI/BHMA A156.9-2003 for **Grade 1** products.

Respectfully submitted,



Edwin A. Leach, Laboratory Manager  
 INTEGRITY TESTING LABORATORIES, a division of ErgoLabs, Inc.

