

INTEGRITY TESTING LABORATORIES



CLIENT:

Guangdong Dongtai Hardware
Precision Mfg. Co., Ltd (DTC)
2, He An Industry Rd. 1, Dongfeng,
Leliu, Shunde, Foshan,
Guangdong, China

LABORATORY NO: F2401041-4
DATE: January 15, 2024
CLIENT P.O. email
STANDARDS: ANSI/BHMA 156.9-20
ANSI/KCMA A161.1-22

SAMPLE: ONE CONCEALED HINGE, SELF CLOSE, SOFT CLOSE,
PIVOT-STAR C81 SERIES, ANYWAY SNAP-ON SOFT CLOSE

ABSTRACT

This report serves to document the testing of the above sample to all applicable hinge test paragraphs of ANSI/BHMA A156.9-2020, American national standards for cabinet hardware, and ANSI/KCMA A161.1-2022, American national standards for kitchen and vanity cabinets. We were requested to exceed all performance requirements by **increasing the number of cycles to 200,000 cycles**. The remainder of this report will show how the hinge samples submitted for testing **met the requirements needed for conformance** to the two test standards.



HINGE PIVOT-STAR C81 SERIES

Integrity Testing, 3959 S.W. 12th Court, Ft. Lauderdale, FL 33312 - Phone: (714) 321-0191

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. Samples were submitted as received, directly by the client along with all descriptors, names, models, or ID, no sampling procedures were performed by these laboratories. Client provided samples can affect reported results. No external service providers were utilized for the reported determinations. 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. Where statements of conformity are made in testing reports, the following decision rules are applied: **PASS** – Results within limits/specifications – **FAIL** – Results exceed limits/specifications. All laboratory procedures were performed in compliance with ISO/IEC 17025:2017.

OBSERVATIONS AND RESULTS

ANSI/BHMA A156.9-20-GRADE 2

SAMPLES RECEIVED: 1/4/24 – SAMPLE CONDITION: NEW - SAMPLES TESTED: 1/4/24 - 1/15/24			
LABORATORY DETERMINATION	LABORATORY OBSERVATION	ANSI/BHMA A156.9-20 GRADE 2 REQUIREMENT	TEST RESULT
Hinge Permanent Set Test BHMA Section 4.2	Vertical Deflection = 0.049"	0.060" maximum vertical deflection after 75 lb. test load.	PASS
Hinge Operating Life Cycle Test BHMA Section 4.3	Vertical Deflection = 0.018" 200,000 cycles completed	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 = 18 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

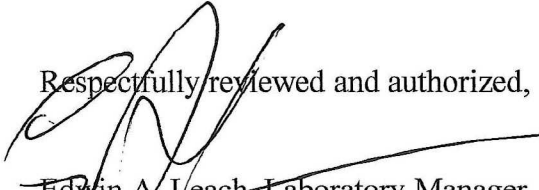
ANSI/KCMA A161.1-22

LABORATORY DETERMINATION	LABORATORY OBSERVATION	ANSI/KCMA A161.1-22 REQUIREMENT	TEST RESULT
Door Racking and Hinge Permanent Set Test Section 6.1	Vertical Deflection = 0.022"	0.065" maximum vertical deflection after 65 lb. test load.	PASS
Hinge Operating Life Cycle Test Section 6.2	Vertical Deflection = 0.013" 200,000 cycles completed	0.065" maximum vertical deflection after 25,000 cycles.	PASS

CONCLUSION

During the execution of the testing program, the model **PIVOT-STAR C81 SERIES HINGE** performed well with no structural breakage or failure, including the increased cycle performance of 200,000 cycles. This sample submitted for testing **exceeded all of the hinge test requirements and conforms** to ANSI/BHMA 156.9-2020 for Grade 2 products, **and conforms** to ANSI/KCMA A161.1-22.

Respectfully reviewed and authorized,


Edwin A. Leach, Laboratory Manager
INTEGRITY TESTING LABORATORIES

