

**PELICAN-HARDIGG™  
LIGHT LIFT CASE TEST DATA**

**OCTOBER 2021**

DESIGNED IN

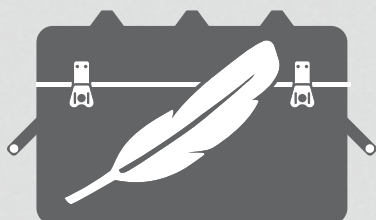
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SINCE 1976



## MIGHT MEETS LIGHT

### PELICAN-HARDIGG™ LIGHT LIFT CASES



Pelican is the worldwide leader in case manufacturing with quality and performance that is unmatched.

"Pelican-Hardigg™ Light Lift cases combine agility with the durability you expect from a Pelican case. A history of product development and a commitment to extensive MIL standard testing puts our cases hands above the competition.

Let us show you how.

**Pelican Products, Inc.**

23215 Early Avenue, Torrance, CA 90505

Tel (310) 326-4700 • Toll Free (800) 473-5422

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# **PELICAN-HARDIGG™** **LIGHT LIFT CASE TEST RESULTS**



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	<b>AL2624-1205</b>	<b>AL3018-0802</b>	<b>AL4824-1604</b>
			
	INT L x W x H 29.06" x 27" x 20.69"	INT L x W x H 32.75" x 20.87" x 12.61"	INT L x W x H 51.62" x 27.62" x 23.36"
PNEUMATIC LEAK TEST VACUUM/PRESSURE *	PASS +/- .25 PSI	PASS +/- .25 PSI	PASS +/- .25 PSI
LW ROTO CASE WEIGHT	22.47 LBS. (-30.4%)	17.00 LBS. (-28.3%)	36.41 LBS. (-31.3)
STD WEIGHT ROTO CASE	32.30 LBS.	23.72 LBS.	53.01 LBS.
MIL-STD-810 FALLING RAIN TEST	PASS	PASS	PASS
MIL-STD-810 SALT FOG **	PASS	PASS	PASS
MIL-STD-810 FUNGUS **	PASS	PASS	PASS
MIL-STD-810 WATER VAPOR **	PASS	PASS	PASS
MIL-STD-810 BLOWING SAND **	PASS	PASS	PASS
MIL-STD-810 ALTITUDE **	PASS	PASS	PASS
MIL-STD-810 HUMIDITY **	PASS	PASS	PASS
MIL-STD-810 HI/LO TEMP STORAGE **	PASS	PASS	PASS
FED-STD-101C 73°F DROPS	PASS	PASS	PASS
FED-STD-101C -20°F DROPS ***	PASS	PASS	PASS
FED-STD-101C 140°F DROPS	PASS	PASS	PASS
FED-STD-101C LOOSE CARGO BOUNCE	PASS	PASS	PASS
FED-STD-101C RANDOM VIBRATION	PASS	PASS	PASS
SWEEP/DWELL VIBRATION ATA-300	PASS	PASS	PASS
MAXIMUM GROSS PAYLOAD	300 LBS. PER CASE	300 LBS. PER CASE	300 LBS. PER CASE
CONCENTRATED LOAD	PASS (1,325 LBS.)	PASS (1,060 LBS.)	MAX STACKING HEIGHT LIMITED TO 9.5'
STRAPPING LOAD	PASS	PASS	PASS
ATA-300 FALLING DART	PASS (13 LB DROP)	PASS (13 LB DROP)	PASS (13 LB DROP)

\* Light Lift cases supplied as "weather-resistant" with an open loop gasket.

\*\* Passes test results due to product similarity.

\*\*\* Drop testing for -40°F/C requires application specific testing; PASS/FAIL is based upon payload and case configuration.

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The following is the product test criteria applicable to the Pelican Lightweight Rotationally Molded Case Product Line (LW Case). Representative Roto Case Specimens are as follows.

- AL2624-1205, All Catch, Gray-572
- AL3018-0802, All Catch, Gray-572
- AL4824-1604, All Catch, Gray-572

## ENVIRONMENTAL PERFORMANCE

**RAIN & IMMERSION:** MIL-STD 810G, Methods 506.2, Procedure I & 512.5, Procedure I / FED-STD 101C Test cases resistant to penetration of water by rain, water spray, or dripping water. Immersion is tested at 1 meter for 1 hour (30 min & 40°F Temperature differential optional). Pelican Cases are sold as water resistant. Ref. TS-1023 (Rain) and TS-976 (Immersion).

**SALT FOG:** MIL-STD 810G, Method 509.5 Tests protective coatings and finishes on hardware to determine the effects of salt deposits. Important in identifying corrosion. Salt Fog is specific to hardware as the polyethylene shell is inert. Passing by Similarity TO TS-1038.

**FUNGUS:** MIL-STD 810G, Method 508.6 Tests the extent to which material will support fungal growth and how any fungal growth may affect performance or use of the material. Passing by Similarity to TS-971 Similar Construction and Materials.

**WATER-VAPOR TRANSMISSION RATE:** ASTM D 1008-64, ASTM E 96 & MIL-C-4150J Tests the water vapor permeability for the case material through the wall of the case. Passing by Similarity to TS-1061 Similar Construction and Materials.

**BLOWING SAND and DUST:** MIL-STD 810G Method 510.5, Procedure I Evaluates the ability of material to resist the effects of dust that may obstruct openings and the ability of material to be stored and operated in blowing sand conditions without degrading performance, effectiveness, reliability, and maintainability due to abrasion (erosion) or clogging effects of large, sharp-edged particles. Passing by Similarity to TS-971 Similar Construction and Materials.

**ALTITUDE (LOW PRESSURE):** MIL-STD-810G, Method 500.3 No issue with “free breathing” style case. For “airtight” style case performance is a function of pressure relief valve characteristics. Tests to determine if material can withstand and/or operate in a low pressure environment and/or withstand rapid pressure changes. Passing by Similarity to TS-971 Similar Construction and Materials.

**RELATIVE HUMIDITY:** MIL-STD-810G, Method 507.5 Procedure I Tests case material likely to be stored or deployed in a warm, humid environment in warm, humid areas that can experience high internal temperature and humidity conditions. Passing by Similarity to TS-1030 Similar Construction and Materials.

**HIGH AND LOW TEMPERATURE STORAGE:** MIL-STD-810G, Method 501.5 & Method 502.5 -60°F to +160°F with 24 Hour Stabilization Time. Evaluates for material likely to be stored in areas where temperatures (ambient or induced) are higher and lower than standard ambient temperatures.



## MECHANICAL PERFORMANCE

**SHOCK (TRANSIT DROP):** MIL-STD-810G, Method 516.6 Procedure IV Test Load Weights determined from MIL-C-4150J Referencing FED-STD 101C, Method 5007.1, Para. 6.3, Procedure A, Level A (26) ea. Establish the material can physically and functionally withstand the relatively infrequent, non-repetitive mechanically induced shocks encountered in handling, transportation, and service environments.

**DROP TEST SEQUENCE:** High and Low Temperature Drops Conducted per MIL-STD-648E Appendix G. Also Ref. TS-1005 All Corners, Edges & Faces at Room Temperature unless otherwise specified.

		DROP TYPE	DROP HEIGHT (IN.)	TEST LOAD (LBS.)
<b>AL2624-1205</b>	ROOM TEMPERATURE	FREE FALL	30	130
	HIGH/LOW TEMPERATURE	ROTATIONAL	36	130
<b>AL3018-0802</b>	ROOM TEMPERATURE	FREE FALL	48	70
	HIGH/LOW TEMPERATURE	ROTATIONAL	19	70
<b>AL4824-1604</b>	ROOM TEMPERATURE	FREE FALL	36	170
	HIGH/LOW TEMPERATURE	ROTATIONAL	24	170

**VIBRATION:** ASTM D999-07, Method A1 loose cargo bounce and ASTM D4169, Schedule E vibration sweep. Assesses the performance of a container, its closures and strength to protect against vibration such as it experiences in transportation.

**VIBRATION:** MIL-STD-810G, Method 514.6 Ref. TS-1040 Verifies that material will function in and withstand the vibration exposures of a life cycle (along with the anticipated platform involve) ATA-300 VIBRATION, Sweep and Dwell, Para. B-2-4.

**CONCENTRATED LOAD TEST:** FED-STD 101, METHOD 5016 / DOT 49CFR 178.350 @ 265 LBS./SQFT for 24 hours. Ref. TS-1019 Tests a container under superimposed load for 1 hour without sustaining permanent deformation or damage. Establishes maximum stacking weights.

**STRAPPING LOAD:** Assesses the strapping loads. Maximum is no greater than 50 lbf. strapping load. ATA-300 FALLING DART IMPACT RESISTANCE (PENETRATION) TEST, Category 1, Para. B-2-5, 13.2 lb. Dart from 19.7" Determines the impact and puncture resistance of the case by means of High Speed Falling Weight (13lbs).

## FORM, FIT AND FUNCTION

**LEAK TEST:** IAW FTMS 101, Method 500. A vacuum/pressure test. Drawing a -0.50 psi vacuum and pressurization to +0.50 psi for standard roto cases. Draws a -0.25 psi vacuum and pressurization to +0.25 psi for Light Lift roto cases. All hardware must function smoothly and reliably from -40°F to +160°F.

## GENERAL PASSING CRITERIA

No loss of function (including environmental protection), loose hardware, or permanent damage beyond scuffing, scratching or localized indentation of the wall.