## **TEST REPORT NO. 53628-1**



TEST, ENGINEERING AND RESEARCH GROUP, SAN BERNARDINO

Pelican Products, Inc. 23215 Early Avenue Torrance, CA 90505 Our Job No.

DE 53628

Contract

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Your P.O. No.

43647

Date

November 1, 2006

This report contains true and correct data obtained in the performance of the test program set forth in your purchase order. Test methods, results, and equipment used are recorded on these data sheets.

Where applicable, instrumentation used in obtaining this data has been calibrated using standards which are traceable to the National Institute of Standards and Technology.

### SUMMARY:

One Case, Part No. 1080 (no serial number) was subjected to Dust IP6X Category 2 Testing and Rain Intrusion IPX6 Testing in accordance with CEI IEC 529 specifications. Upon completion of the tests, no visible evidence of damage to the test specimen was observed. Complete test details, including photos and equipment lists, are contained in this report.

Test Dates: 10/13/06-10/30/06

STATE OF CALIFORNIA COUNTY OF SAN BERNARDINO SS.	TEST OPERATIONS
Douglas G. Anderson  and says: That the information contained in this report is the result of complete and carefully conducted tests and is to the best of his knowledge true and correct in all respects.	TEST ENGINEER H. Pemberton  DEPT. DEPT.
SUBSCRIBED and sworn to before me this day of, 2006 by Douglas G. Anderson personally known to me or proved to me on the basis of satisfactory evidence to be the person who appeared before me.	MANAGER TO MINION 11/100  QUALITY ASSURANCE FIRST HAPPORALL
CAROL A GARRITY Commission # 1472052 Notary Public - California	For G. Montgomery

My Comm. Expires Mar 8, 2008



# **DATA SHEET**

Customer	Pelican Products, Inc.	<b>Job No.</b> _ 53628		
		Date _ 10/9/2006		
Specimen	Case			

### **RECEIVING INSPECTION**

/lanufa	cturer:	Pelican Prod	ucts, Inc.		
P/N's	1080			_ S/N's	N/A
				-	
				_	
				_	
				-	
How do	es identi	fication inforr	nation appea	- r: (name pla	ate, tag, painted, imprinted, etc.)
Sticker					ato, tag, painted, imprinted, etc.,
Exami		Visual, for evi			workmanship, or other ation.
Insned	tion Res	ults: There	vas no visible	e evidence o	of damage to the specimen(s)

recinsp

Inspected By Sheet No. 1

Approved

Da

-of

Date 1019/06



# **DATA SHEET**

Test Title Dust IP6X Category 2

Pelican Products, Inc. Job No. 53628 Customer **Date Started** 10/13/2006 Specimen Case Serial No. N/A **Part No.** 1080 Date Comp. 10/13/2006 Par. 13.4 & 13.6 Photo Yes Amb. Temp. 15°C to 35 °C Spec. CELIEC 529

### Requirements:

Dust Concentration:

2 Kg per cubic meter test chamber volume

Duration:

8 hours

### **Test Method:**

Place the test specimen in a test chamber. Establish a dust concentration of 2 Kg per cubic meter of test chamber volume. Expose the test specimen to this dust environment for 8 hours.

Remove accumulated dust from the test specimen by brushing, wiping, or shaking, taking care to avoid introducing additional dust into the test item. Do not remove dust by either air blast or vacuum cleaning. Perform a visual examination for evidence of damage or deterioration.

### **Test Results:**

All testing was performed according to the Test Methods and Requirements stated above. Upon completion of the test, no visual evidence of dust intrusion was observed inside the test specimen. No visible evidence of damage to the test specimen was observed upon completion of testing.

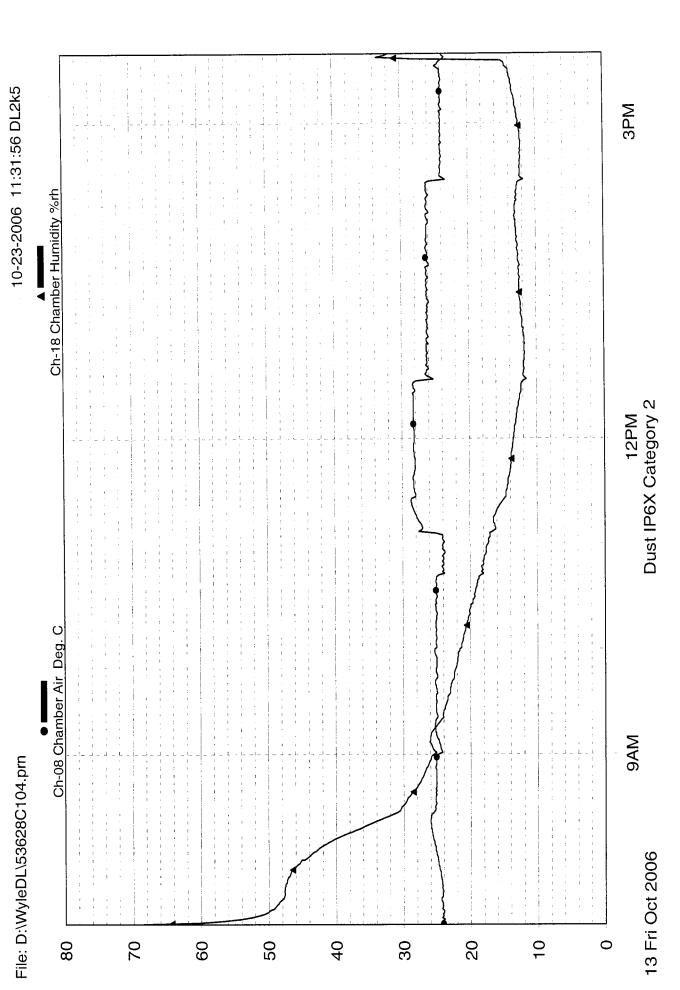
page1

Tested By

Engineer



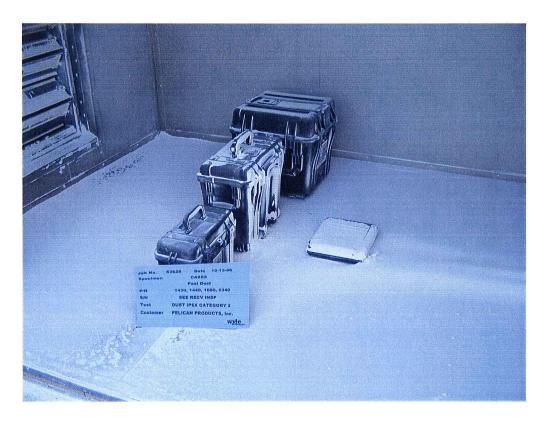
# **Pelican J/ N-53628** Cases # 1430 , 1440 , 1080 , 0340







Photograph 1
Dust Test Setup (Tested with other Pelican Product Items)



Photograph 2 Post Dust Test

.1 sec

01/28/2007

07/28/2006

W13604

10 hour

365530

Cole Parmer

Stopwatch

3%

11/30/2006

05/31/2006

W11829

0-100%

HMP 135Y

Vaisala

Rh Probe

TEST TITLE: Dust (IPX6 Category 2)

60.00.00 Mfg. Spec. Mfg. Spec. Mfg.Spec. ACCY. ±2% Engineer: H. Pemberton 12/01/2006 12/01/2006 Calibration \* Calibration \* Technician: C. Natzic DUE CALIBRATION Date: 10-10-2006 \* System \* System 12/01/2005 12/01/2005 LAST W14903 W50708 W13690 W50716 WYLE # -60 to +180°F / 11' x 7' x 7' / LN2 20 Channels Volts or TC's Job No.: 53628 10VDC & Type T TC's RANGE See Recv. Insp. -100° to 240°F Serial No.: 922 / CN9000 MODEL # 2700 7700 Dust MANUFACTURER Watlow / Omega CUSTOMER: Pelican Products, Inc. Keithley Keithley Wyle See Recv. Insp. Chamber - Environmental Specimen: Cases Controller - Chamber EQUIPMENT Multiplexer Module Multimeter/DAS Part No.:

d using stand	Science & Technology. Certificates and reports of all calibrations are retained in the Wyle Laboratories QA files and are	available for inspection upon request. *Equipment identified as System Calibration are verified prior to use.
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# DATA SHEET

**Test Title** Rain Intrusion (IPX6)

Customer Pelican Products, Inc. **Job No.** 53628

Specimen **Date Started** 10/30/2006 Case

Serial No. N/A Date Comp. **Part No.** 1080 10/30/2006

Spec. CELIEC 529 **Par.** 14.2.6 Photo Yes Amb. Temp. 75° ±15F

### Requirements:

Water Delivery: 100 liter/min  $\pm$  5% (26 gal/min)

Water Pressure: Adjusted as needed to achieve specified delivery rate

Nozzle Inner Diameter: 12.5 mm inner diameter (0.5 inches)

2.5 to 3 meters from nozzle to test specimen Distance:

Water Temperature: Water temperature maintained at not less than 5 °K

(10 °F) below the specimen temperature

Test Duration: 1 minute per square meter of surface area of the test

specimen but at least a minimum of 3 minutes

### **Test Method:**

Measure and record the enclosure outer dimensions. Measure and record the water temperature and specimen surface temperature. Verify the water temperature is not less than 5 °K (10 °F) below the specimen temperature.

Using the requirements stated above, expose the test specimen to the specified water test for duration of 1 minute per square meter of surface area of the test specimen but at least a minimum of 3 minutes.

Perform a visual examination for ingress of water. Specify, if any, the amount of water which may have entered the test specimen and where the water was deposited.

### **Test Results:**

The test was completed following the test method and requirements stated above. Upon completion of the test, no water was observed in the test specimen. No visible evidence of damage to the test specimen was observed upon completion of testing.

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Tested By

Engineer





Photograph 3 Rain Intrusion Test Setup



Photograph 4 Rain Intrusion Test Setup

**Wyle** Laboratories

TEST TITLE: Rain Intrusion (IPX6)

10-36-06 Mfg. Spec. ACCY. .1 sec 0.5% 1% Engineer: H. Pemberton 04/27/2007 06/26/2007 01/28/2007 Technician: S. Paysen 01/28/2007 DOE CALIBRATION Date: 10-30-2006 10/27/2006 07/28/2006 06/26/2006 07/28/2006 LAST W47046 W13604 W12590 W13596 WYLE # Job No.: 53628 30" Hg VAC / 100 PSIG See Recv. Insp. RANGE -300 to +700 °F 10 hour 100 ft. Serial No.: MODEL # 365530 819 7.5 9 MANUFACTURER Cole Parmer CUSTOMER: Pelican Products, Inc. Ashcroft Tegam Keson See Recv. Insp. Temperature - Digital Indicator Case EQUIPMENT Gauge Pressure Tape Measure Specimen: Stopwatch Part No.:

Where applicable, the listed test equipment has been calibrated using standards which are traceable to the National Institute of Science & Technology. Certificates and reports of all calibrations are retained in the Wyle Laboratories QA files and are available for inspection upon request. \*Equipment identified as System Calibration are verified prior to use.