### **TEST REPORT NO. 53628-12**



TEST, ENGINEERING AND RESEARCH GROUP, SAN BERNARDINO

Pelican Products, Inc. 23215 Early Avenue Torrance, CA 90505

Our Job No.

DE 53628

Contract

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. 1690 (no serial number) was subjected to Dust IP6X Category 2 Testing and Immersion IPX7 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: 10/10/06-10/12/06

| 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.  SUBSCRIBED and sworn to before the this | TEST ENGINEER H. Pemberton  DEPT. MANAGER  P. Knoll  QUALITY ASSURANCE  TO G. Montgomery |



# **DATA SHEET**

| Customer | Pelican Products, Inc. | <b>Job No.</b> 53628 |
|----------|------------------------|----------------------|
|          |                        | Date10/9/2006        |
| Specimen | Case                   |                      |

### **RECEIVING INSPECTION**

| Manufacturer: Pelican Products, Inc. |  |  |                                     |  |
|--------------------------------------|--|--|-------------------------------------|--|
| P/N's                                | 1690   | S/N's  | N/A                                 |  |
|                                      |  |  |                                     |  |
|                                      |  |  |                                     |  |
|                                      |  |  |                                     |  |
|                                      |  |  |                                     |  |
|                                      | oes identification informat                    | tion appear: (name pla                         | ate, tag, painted, imprinted, etc.) |  |
| Sticker                              |  |  |                                     |  |
| ≣xamiı                               | nation: Visual, for evider<br>defects, and con | nce of damage, poor<br>npleteness of identific |                                     |  |
| nspec                                | tion Results: There was                        | s no visible evidence<br>herwise noted below.  | of damage to the specimen(s)        |  |

recinsp

Sheet No.
Approved Halt Date 10/9/06

SB - 614 - Rev. 08/06



# DATA SHEET

Test Title Dust IP6X Category 2 Customer Pelican Products, Inc. Job No. 53628 Specimen Case **Date Started** 10/10/2006 Serial No. N/A **Part No.** 1690 **Date Comp.** 10/10/2006 **Par.** 13.4 & 13.6 **Photo** Yes **Amb. Temp.** 15°C to 35 °C Spec. CEI IEC 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

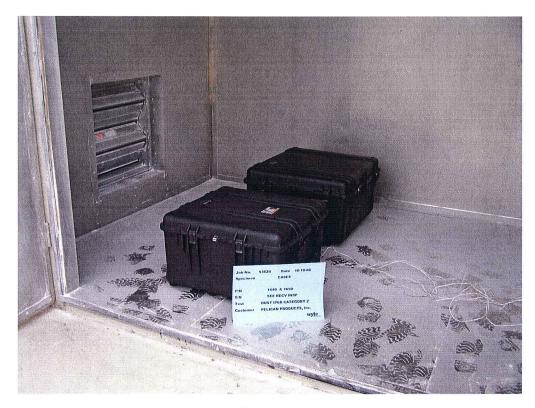
Tested By

Engineer



Report No. 53628-12 Page 4 of 9





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



Photograph 2
Post Dust Test

WJe Iaboratories

TEST TITLE: Dust (IPX6 Category 2)

Technician: C. Natzic & Yololo Date: 10-10-2006 Job No.: 53628 CUSTOMER: Pelican Products, Inc Cases Specimen:

Engineer: H. Pemberton See Recv. Insp. Serial No.: See Recv. Insp.

Part No.:

Mfg. Spec. Mfg. Spec. Mfg.Spec. ACCY. .1 sec ±2% 3% 12/01/2006 Calibration \* 12/01/2006 11/30/2006 Calibration \* 01/28/2007 DUE CALIBRATION \* System \* System 05/31/2006 12/01/2005 12/01/2005 07/28/2006 LAST W14903 W11829 W13604 W13690 W50716 W50708 WYLE # -60 to +180°F / 11' x 7' x 7' / LN2 20 Channels Volts or TC's 10VDC & Type T TC's RANGE -100° to 240°F 0-100% 10 hour 922 / CN9000 MODEL # **HMP 135Y** 365530 7700 2700 Dust MANUFACTURER Watlow / Omega Cole Parmer Keithley Keithley Vaisala Wyle Chamber - Environmental Controller - Chamber EQUIPMENT Multiplexer Module Multimeter/DAS Stopwatch Rh Probe

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.



# DATA SHEET

Test Title Immersion (IPX7) Customer Pelican Products, Inc. **Job No.** 53628 Specimen Case **Date Started** 10/12/2006 **Part No.** 1690 Serial No. N/A **Date Comp.** 10/12/2006 Spec. CEI IEC 529 **Par.** 14.2.7 Photo Yes Amb. Temp. 75° ± 15 °F

#### Requirements:

Water Level: Test specimens with a height less than 850 mm

> (33.46 inches) has the lowest point of the test specimen 1000 mm (39.37 inches) below the surface of the water surface. Test specimens with a height equal to or greater than 850 mm (33.46 inches) has the highest point of the test specimen 150 mm (3.9)

inches) below the surface of the water

Water Temperature:

Water temperature maintained at not less than 5 °K

(10 °F) below the specimen temperature

Soak Duration: 30 minutes

#### **Test Method:**

Visually inspect the test specimen. Place the test specimen in a submersion tank. Test specimens with a height less than 850 mm (33.46 inches) has the lowest point of the test specimen 1000 mm (39.37 inches) below the surface of the water surface. Test specimens with a height equal to or greater than 850 mm (33.46 inches) has the highest point of the test specimen 150 mm (3.9 inches) below the surface of the water.

Verify the water temperature is not less than 5 °K (10 °F) below the specimen temperature. Allow the test specimen to soak for 30 minutes.

Remove the test specimen from the tank. To check for the presence of moisture inside the specimen the specimen is to be cut open per customer directions. Document all results.

#### Test Results:

The test was performed in accordance with the Test Method and Requirements stated above. Weights and sand bags totaling 620 lbs were placed inside the test specimen to eliminate buoyancy. Upon completion of the test, no water 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





Photograph 3 Immersion Test Setup



Photograph 4 Immersion Test Setup

**wyle** 

TEST TITLE: Immersion (IPX7)

10 111/06 Mfg. Spec. ACCY. .1 sec .2 lbs. 0.1% .1% Engineer: H. Pemberton Technician: S. Paysen 09/14/2009 01/28/2007 06/26/2007 01/28/2007 05/08/2007 DUE CALIBRATION Date: 10-11-2006 09/14/2006 07/28/2006 05/08/2006 07/28/2006 06/26/2006 LAST W12590 W13596 W13604 W13126 W13057 WYLE # Job No.: 53628 See Recv. Insp. RANGE -300 to +700 °F 0 - 250 ml 1000 lbs. 10 hour 100 ft. Serial No.: MODEL # TR-1-NK 365530 3025 100 819 MANUFACTURER Certified Scale Cole Parmer CUSTOMER: Pelican Products, Inc. Tegam Keson Pyrex See Recv. Insp. Temperature - Digital Indicator Cases EQUIPMENT Cylinder Graduated Tape Measure Specimen: \_ Stopwatch Part No.: Scale

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.