

Report No.: HC50094/2013

Page: of

Date: May 22, 2013

COMEUP INDUSTRIES INC. NO. 112, NANYANG ST., XIZHI DIST., NEW TAIPEI CITY, TAIWAN

The following merchandise was submitted and identified by the vendor as:

**Product Description: Automotive Winch** 

Style/ Item No.: Seal 9.5/9504241, 9504242 Manufaturer/ Vendor: Comeup Industries Inc.

Country of Origin: Taiwan

Quantity: Total 2 pieces

**Testing Period:** May 17, 2013 to May 21, 2013

Note: (Client's declaration) Seal 9.5, Seal 9.5s, Seal 9.5rs, Seal 12.5, Seal 12.5s and

Seal 12.5rs used the identical enclosure.

We have tested the submitted sample(s) as requested and the following results were obtained: Test Required:

Test for Degrees of Protection Provided by Enclosures (IEC 60529 Edition 2.1: 2001)

IP Code	IP68	
First characteristic numeral	Degrees of protection against access to hazardous parts and against solid foreign objects	
Second characteristic numeral	Degrees of protection against ingress of water	

#### Test Results:

#### Conclusion

Submittals sample(s) comply with the requirement and acceptance conditions of IEC 60529 Edition 2.1: 2001 Degrees of Protection Provided by Enclosures -- IP68 The detailed description of test result, please see attached sheet(s).

> Signed for and on behalf of SGS TAIWAN Ltd.

Hank Chiou Asst. Supervisor

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Report No.: HC50094/2013

Page: of 7

# <u>Test for Degrees of Protection Provided by Enclosures:</u>

### Test Equipment:

Name	Brand	Model	Serial No.
1.0 mm Test Wire Probe	ED&D	TRP-02	B0050180
Digital Force Gauge	ALGOL	HF-50	HF-106764
Dust Tester	T-MACHINE	TMJ-9723S	T-23-110708
IPX7/IPX8 Immersion Tank	Self-made	SGS-ETR-0201	000001

# **Lab Environmental Conditions:**

Ambient temperature:  $(25 \pm 3) \,^{\circ}$ C  $(55 \pm 20)$  % RH Ambient humidity:

### Test Method/ Specification:

Test method: IEC 60529 Edition 2.1: 2001--IP68 1. Test for protection against access to hazardous parts:

Test method: The test wire with 1.0 mm in diameter and 100 mm long is pushed against

> or inserted through any openings of the enclosure with designated force. Examine whether the test wire touches the hazardous live parts inside the

enclosure or not.

Test force: 1 N±10 %

#### 2. Test for protection against solid foreign objects:

Test method: Dust test

Sample condition: Non-Operating Type of dust: Talcum powder

The amount of dust: 6.75 kg $3.375 \text{ m}^3$ The chamber size: The maximum depression: -20 mbar Test duration: 8 hours

Examine the protection against ingress dust of specimen(s) after this test.

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Report No.: HC50094/2013

Page: of 7

## Test Method/ Specification--Continued:

#### 3. Test for protection against water:

Test means: Completely immerse the specimen in water in its service position as

specified by client.

Sample condition: Non-Operating

Test condition: The lowest point of enclosures is located 1000 mm below the surface of the

water

Test duration: 1 hour

Test Device: As shown in photo 6, 7

Examine the protection against ingress water of specimen(s) after this test.

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Report No.: HC50094/2013

Page: of 7

Specimen:

Style/ Item No.: Seal 9.5/9504242, 9504241

Quantity: Total 2 pieces

#### Test Result:

A. Degrees of protection against access to hazardous parts and against solid foreign objects (IP6X)

A-1 Test for protection against access to hazardous parts (IP6X)

Test Result				
Check Item	Style/ Item No.			
Check Item	Seal 9.5/ 9504242			
1 Does the test wire penetrate any openings of the enclosure?	No			
(followed check item 1) If the test wire penetrates any openings of the enclosure, does the test wire touch any hazardous live parts or any hazardous mechanical parts?	N/A			
3 (followed check item 2) Does adequate clearance be kept between the test wire and hazardous live parts or hazardous mechanical parts?	N/A			

Note 1: N/A means "Not Applicable".

Note 2: The check items in this test report for inspecting the degree of protection provided by enclosures are reference to the requirements specified in IEC 60529 Edition 2.1: 2001 and in accordance with the acceptance conditions specified by client.

#### A-2 Test for protection against solid foreign objects (IP6X)

Test Result		
Charle I4	Style/ Item No.	
Check Item	SEAL 9.5/ 9504242	
1 Does any dust deposit inside the enclosure at the end of the test?	No	

Note 1: N/A means "Not Applicable".

Note 2:The check items in this test report for inspecting the degree of protection provided by enclosures are reference to the requirements specified in IEC 60529 Edition 2.1: 2001 and in accordance with the acceptance conditions specified by client.

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Report No.: HC50094/2013

5 Page: of 7

#### **Test Result--Continued:**

B. Degree of protection against ingress of water (IPX8)

	Test Result		
Check Item		Style/ Item No.	
		SEAL 9.5/ 9504241	
1	Does any water enter the enclosure?	No	
2	(followed check item 1) If any water has entered, does the water accumulate near the cable end or live parts?	N/A	
2.1	(followed check item 2) Does the water be sufficient to interfere with the correct operation of the equipment or impair safety?	N/A	
2.2	(followed check item 2.1) Does the water deposit on insulation parts where it could lead to tracking along the creepage distances?	N/A	
2.3	(followed check item 2.2) Does the water reach live parts or windings not designed to operate when wet?	N/A	

Note 1: N/A means "Not Applicable".

Note 2:The check items in this test report for inspecting the degree of protection provided by enclosures are reference to the requirements specified in IEC 60529 Edition 2.1: 2001 and in accordance with the acceptance conditions specified by client.

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Report No.: HC50094/2013

Page: 6 of 7

#### **Test Photos:**



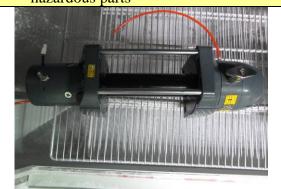
Appearance of specimen



Test for protection against access to hazardous parts



Test for protection against access to hazardous parts



Test for protection against solid foreign objects (Dust test)



Test for protection against solid foreign objects (Dust test)

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Report No.: HC50094/2013

Page: of 7

Test Photos--Continued:



Test for protection against water



7. Test for protection against water

**The End of Test Report** 

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