



# VIPAC ENGINEERS & SCIENTISTS

Vipac Engineers & Scientists Limited

ABN 33 005 453 627

The Victorian Technology Centre  
Private Bag 16, Port Melbourne, Victoria, 3207, AUSTRALIA  
Telephone +61 3 9647 9700 Facsimile +61 3 9646 4370

Web [www.vipac.com.au](http://www.vipac.com.au)

## TEST CERTIFICATE

<b>CLIENT:</b>	<b>WESTAFLEX / UNIFLEX (AUST) PTY LTD 140-160 BAMFIELD ROAD Heidelberg West VIC 3081</b>	<b>REF NO.:</b>	<b>30V-08-0190-TRP-427917-1</b>
		<b>REPORT NO.:</b>	<b>427917-1</b>
		<b>DATE:</b>	<b>01 DEC 2008</b>
<b>CONTACT:</b>	<b>MICHAEL STERLING</b>		

**TEST TYPE:** WATER SPRAY TEST

**PART DESCRIPTION:** FAN AND MOTOR ASSEMBLY

**SERIAL NO:** SAMPLE 1 (R2E 220-AA52-72)  
SAMPLE 2 (R2E 220-BD92-09)

**TEST SPECIFICATION:** AS 60529 – Degrees of protection provided by enclosures (IP Code) – IPX5, table 8 (Test means and main test conditions for the tests for protection against water), section 5 and clause 14.2.5

**TEST INFORMATION:**

Engineer:	Chris Johnson	
Title:	Project Engineer – Automotive	
Operation of test sample:	Non-powered	
Water nozzle size:	6.3 mm diameter	
Water flow rate:	12.5 litres / minute	
Distance of nozzle to sample:	2.7 meters	
Duration of test	3 minutes	
Sample 1 Test Date:	1/12/08	
Sample 2 Test Date	1/12/08	
<b>Ambient Environmental Conditions:</b>	Sample 1	Sample 2
Ambient Temperature (°C):	17.5	17.8
Relative Humidity (%):	58	53
Barometric Pressure (kPa):	101.6	101.9

Table 1 – Water Spray Test Information



Figure 1 – Water jet test



Figure 2 – Sample orientation changed during test

**RESULTS:**



Figure 3 – Sample 1, water pooling inside housing and dripping down inside of enclosure



Figure 4 – Sample 1, minimal water on fan motor housing and no water inside fan motor

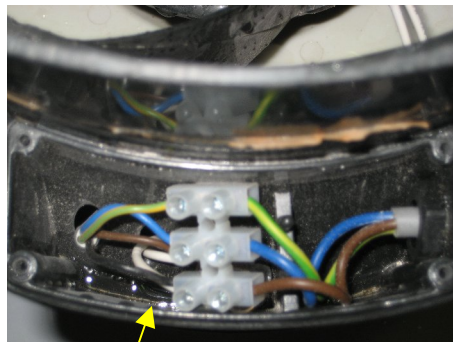


Figure 5 – Sample 1, some water migration into base of terminal housing



Figure 6 – Sample 2, water pooling inside housing and dripping down inside of enclosure

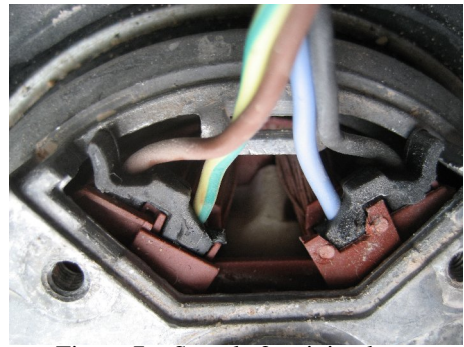


Figure 7 – Sample 2, minimal water on fan motor enclosure and no water inside fan motor

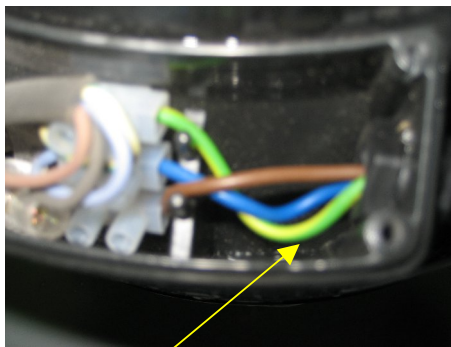


Figure 8 – Sample 2, some water migration into base of terminal housing

Note: Both samples were powered up (240 volts) pre-test and post test. Each sample function was the same

Comment: Samples returned to Westaflex / Uniflex Australia for inspection

**AUTHOR:**

Christopher Johnson  
PROJECT ENGINEER

Date

**APPROVED:**

Maurizio Demontis  
TEAM LEADER - AUTOMOTIVE

Date