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60222/M/REV01

**LABORATORY TESTING OF BUTTON FIX
SYSTEM**

BUTTONFIX LIMITED

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CONSULTING ENGINEERS

INVESTIGATION INSPECTION
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LABORATORY TESTING OF BUTTON FIX SYSTEM

BUTTONFIX LIMITED

Buttonfix Limited
Unit A, 1 Britton Street
London
EC1M 5NW

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For the attention of: Mr Tony Wills

31 July 2017

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Materials, samples and test specimens are retained for a period of 2 months from the issue of the final report. Your attention is drawn to the enclosed sample retention form and we would be grateful if you could complete the form and return it within one month from the date of the report.

Tests reported on sheets not bearing the UKAS mark in this report/certificate are not included in the UKAS accreditation schedule for this laboratory.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

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TEST CERTIFICATE

Certificate:	60222/M/1/REV01	Order Ref:	BF050717 Corian/Type1 Bonded
Samples Received:	June 2017	Tested By:	NAF
Test Date:	26-27 July 2017	Test Procedure:	In House
Client Details:	Buttonfix Limited, Unit A, 1 Britton Street, London, EC1M 5NW		

STRENGTH TESTING OF BUTTON-FIX SYSTEM

Test Details	:	Type 1 bonded
Adhesive	:	Corian glue
Backing material	:	Corian plaques 12 mm thick
Test equipment	:	Hounsfield tensometer ref.: C/002

TEST RESULTS

Sample Reference	Load Direction	Maximum Failure Load (kN)	Comments
MX 614-1	Vertical Load (Shear) Surface Mount	2.660 (271 kg)	Button pulled from mount
MX 614-2	Vertical Load (Shear) Surface Mount	2.835 (289 kg)	Button pulled from mount
MX 614-3	Vertical Load (Shear) Surface Mount	2.155 (220 kg)	Button pulled from mount
MX 614-4	85 degrees to vertical Surface Mount	2.660 (271 kg)	Button pulled from mount
MX 614-5	85 degrees to vertical Surface Mount	2.835 (289 kg)	Button pulled from mount
MX 614-6	85 degrees to vertical Surface Mount	2.155 (220 kg)	Button pulled from mount
MX 615-1	Vertical Load (Shear) Rebated	6.140 (626 kg)	Countersunk screw failed in shear
MX 615-2	Vertical Load (Shear) Rebated	6.140 (626 kg)	Countersunk screw failed in shear
MX 615-3	Vertical Load (Shear) Rebated	5.880 (600 kg)	Countersunk screw failed in shear

For Sandberg LLP



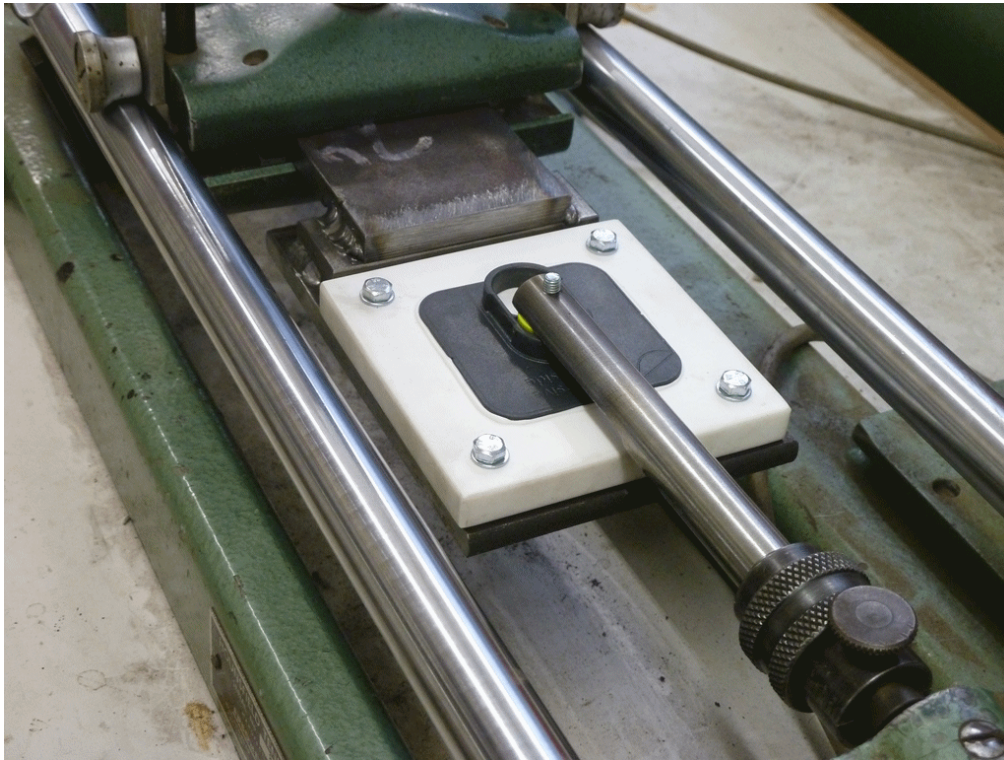
Date: 31 July 2017

Neale Fetter - Assistant Manager Metallurgy Department

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APPENDIX A

Photographs 1 to 6



Photograph 1 A view showing the test set-up for surface mounted vertical (shear) test.



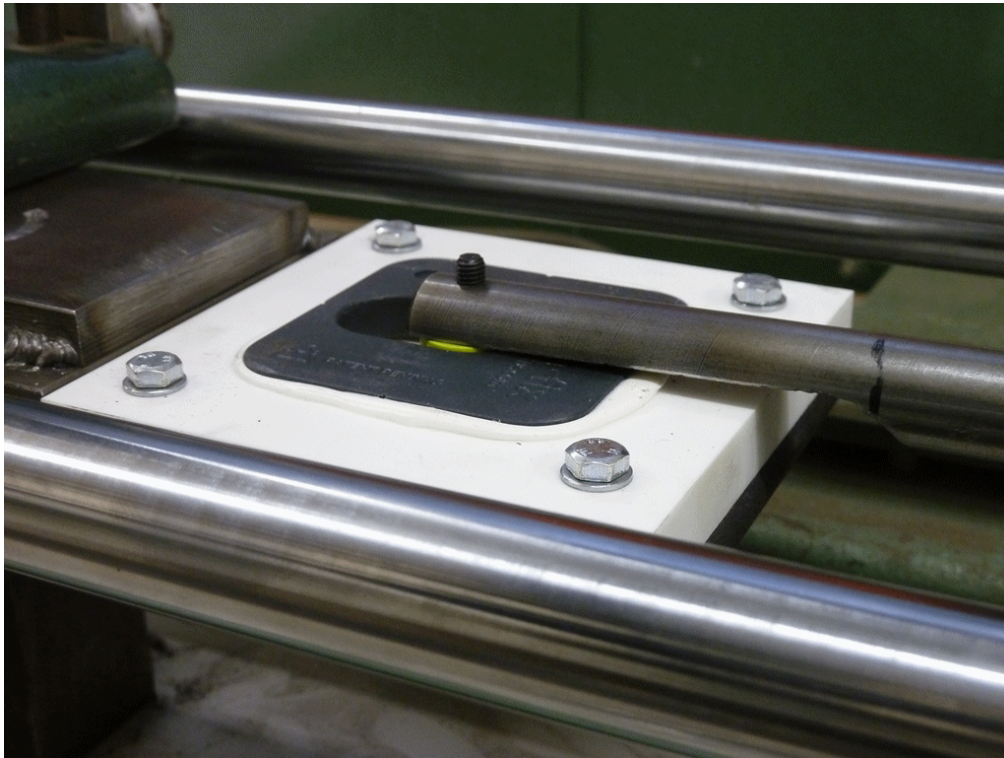
Photograph 2 A view showing vertical (shear) failure mode. The mount material surrounding the button distorted and the button pulled from mount.



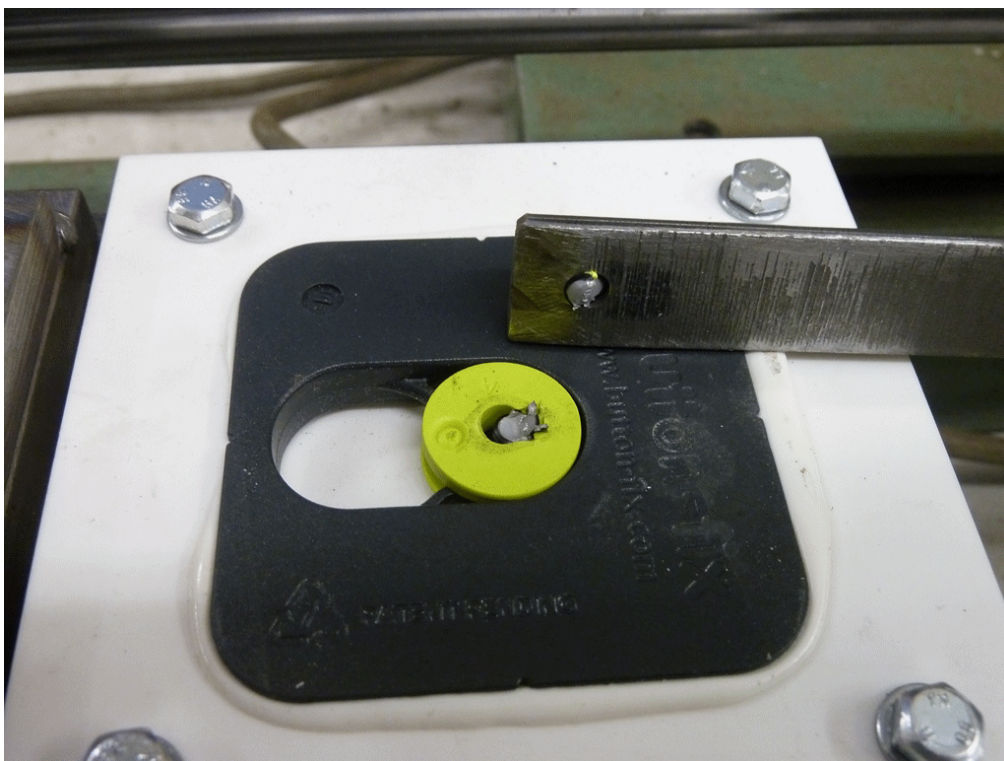
Photograph 3 A view showing the test set up for surface mounted 85 degrees from vertical (tension) test.



Photograph 4 A view showing the 85 degrees from vertical test failure mode. The mount material surrounding and the button distorted, allowing the button to be pulled from the mount.



Photograph 5 A view showing the test set-up for rebate mounted vertical (shear) test.



Photograph 6 A view showing the vertical (shear) test where the countersunk M5 screw failed in shear.

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Where our involvement consists exclusively of testing samples, the results and our conclusions relate only to the samples tested.