

Boyland Joinery

Test and Examination of Timber Glazed Casement Window System





Test Report

Report No.	MATR123	Number of pages within this report	9
Client	Boyland Joinery Stony Lane Christchurch Dorset BH23 1EZ		
Authority & Date	Boyland Joinery 14.12.04		

Items tested	1x Double Casement window consisting of 2 outward projecting side hung sashes.
Specification	BS 7950:1997 Specification for enhanced security performance of casement and tilt/turn windows for domestic applications
Results	See summary of Results on page 2

Prepared by	Petita Wiles
Authorised by	Dave Smith
Issue Date	15.12.2004
Conditions of issue	"Every care has been taken to ensure that the results stated in this report are accurate at the time of testing, they should only be regarded as a screen test and should not be relied upon for legal purposes. The test results apply only to the products tested and do not infer compliance of other items of the same description whether from the same batch or otherwise"

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TEST AND EXAMINATION OF 1 TIMBER GLAZED CASEMENT WINDOW SYSTEM.

INTRODUCTION

At the request of Boyland Joinery the Timber window, detailed below and described on page 3, were tested and assessed to the requirements of BS 7950:1997. Specification for enhanced security performance of casement and tilt/turn windows for domestic applications, as indicated on the following pages of this Report. This request was made in an Order from the client dated 14.12.04 and reference MATR123. It is emphasized that assessments have not been made against the other Clauses of the specification.

Test Samples

1x Double Casement window consisting of 2 outward projecting side hung sashes.

Summary of Results

1. Manipulation Not Applicable on this Occasion	The test samples met/failed the requirements of the specification in respect of Clause 7 Annex A.4 of BS7950:1997.
2. Glazing removal Not Applicable on this Occasion	The test samples met/failed the requirements of the specification in respect of Clause 7 Annex A.5 of BS7950:1997.
3. Mechanical loading	The test samples met the requirements of the specification in respect of Clause 7 Annex A.6 of BS7950:1997.
4. Manual check test Not Applicable on this Occasion	The test samples met/failed the requirements of the specification in respect of Clause 7 Annex A.7 of BS7950:1997.

DESCRIPTION OF SAMPLE

Sample type -	1x Double Casement window consisting of 2 outward projecting side hung sashes.
Material -	Timber
Construction -	

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FITTINGS

	Type	Part No.
Friction stays -	Securistyle	
Locking -	MACO RAIL System 20BS 9.0mm M Bolt	
	Night vent Striker	97913
	Maco Hinge Protector	94100
	Handle	
Fixings -	Stays	
Gasket	Sash & Frame	
	Glass	
Beading		

Glass -	Toughened
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Glazing system -	
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Sample dimensions -	Overall size	
	Length: 1300mm	Width: 1300mm
	Sash 1 size	
	Length:	Width: 568mm
	Sash 2 size	
	Length:	Width: 568mm

EXAMINATION AND TEST

Sample type -	1x Double Casement window consisting of 2 outward projecting side hung sashes
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TECHNOLOGY IN MOTION

Date of Test -	14.12.04
Laboratory Temperature -	21 c

EXAMINATION AND TEST

Annex A.6 Mechanical Loading test

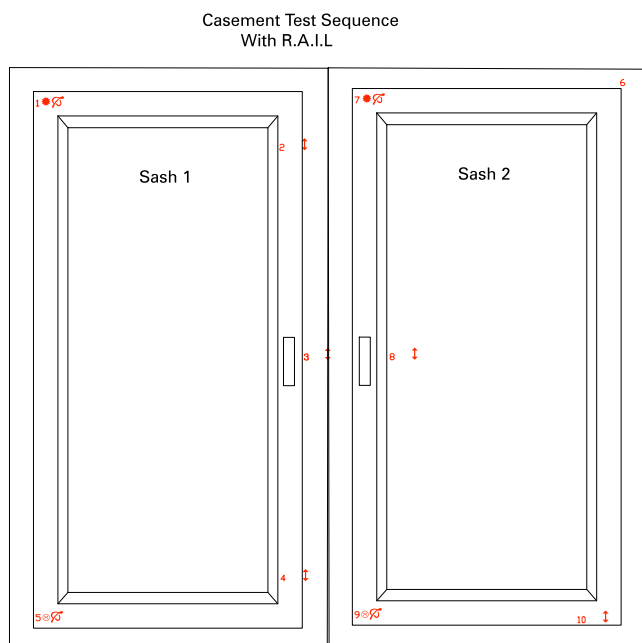
The sample was mounted vertically in the test rig as described in Annex A.2.

The test was carried out in accordance with the procedures detailed in Annex A.6 And figure 1 using the test apparatus detailed in Appendix A of this test report.

Diagram of points of application of loads.

Annex A.6.2 Loading procedure

Point of application of load



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TEST SEQUENCE FIRST SASH

1a	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Vertically towards opposite stay.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind hinge.	10 Secs

1b	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Horizontally to disengage hinge protector.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind hinge.	10 Secs

2a	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Vertically to disengage shoot bolt and mushroom cam.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind locking point.	10 secs

2b	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Horizontally to disengage shoot bolt and mushroom cam.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind locking point.	10 Secs

2c	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Vertically to disengage shoot bolt and mushroom cam.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind locking	10 secs

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TECHNOLOGY IN MOTION

		point.	
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3a	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Vertically to disengage mushroom cam.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind locking point.	10 Secs

3b	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Horizontally to disengage mushroom cam.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind locking point.	10 Secs

3c	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Vertically to disengage mushroom cam.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind locking point.	10 Secs

4a	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Vertically to disengage mushroom cam.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind locking point.	10 Secs

4b	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Horizontally to disengage mushroom cam.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind locking point.	10 Secs

4c	(point of load)	KN	Direction	Time held

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Load applied in plane:	1.0	Vertically to disengage mushroom cam.	Duration
Load applied perpendicular to plane:	3.0	Perpendicular to plane behind locking point.	10 Secs

5a	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Vertically to disengage shoot bolt and mushroom cam.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind locking point.	10 secs

5b	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Horizontally to disengage shoot bolt and mushroom cam.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind locking point.	10 Secs

TEST SEQUENCE SECOND SASH

6a	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Vertically towards opposite stay.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind hinge.	10 Secs

6b	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Horizontally to disengage hinge protector.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind hinge.	10 Secs

7a	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Vertically to disengage shoot bolt and mushroom cam.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind locking	10 secs

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TECHNOLOGY IN MOTION

			point.	
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7b	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Horizontally to disengage shoot bolt and mushroom cam.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind locking point.	10 Secs

7c	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Vertically to disengage shoot bolt and mushroom cam.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind locking point.	10 secs

8a	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Vertically to disengage mushroom cam.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind locking point.	10 Secs

8b	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Horizontally to disengage mushroom cam.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind locking point.	10 Secs

8c	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Vertically to disengage mushroom cam.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind locking point.	10 Secs

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9a	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Vertically to disengage mushroom cam.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind locking point.	10 Secs

9b	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Horizontally to disengage mushroom cam.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind locking point.	10 Secs

9c	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Vertically to disengage mushroom cam.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind locking point.	10 Secs

10a	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Vertically to disengage shoot bolt and mushroom cam.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind locking point.	10 secs

10b	(point of load)	KN	Direction	Time held
	Load applied in plane:	1.0	Horizontally to disengage shoot bolt and mushroom cam.	Duration
	Load applied perpendicular to plane:	3.0	Perpendicular to plane behind locking point.	10 Secs

Conclusion – The window had no trouble meeting the requirements of the BS7950 type Test.

Destruction – The window was tested to destruction at the bottom corner hinge and hinge protector point 10a and reached 4Kn. It was then tested at the centre

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TECHNOLOGY IN MOTION

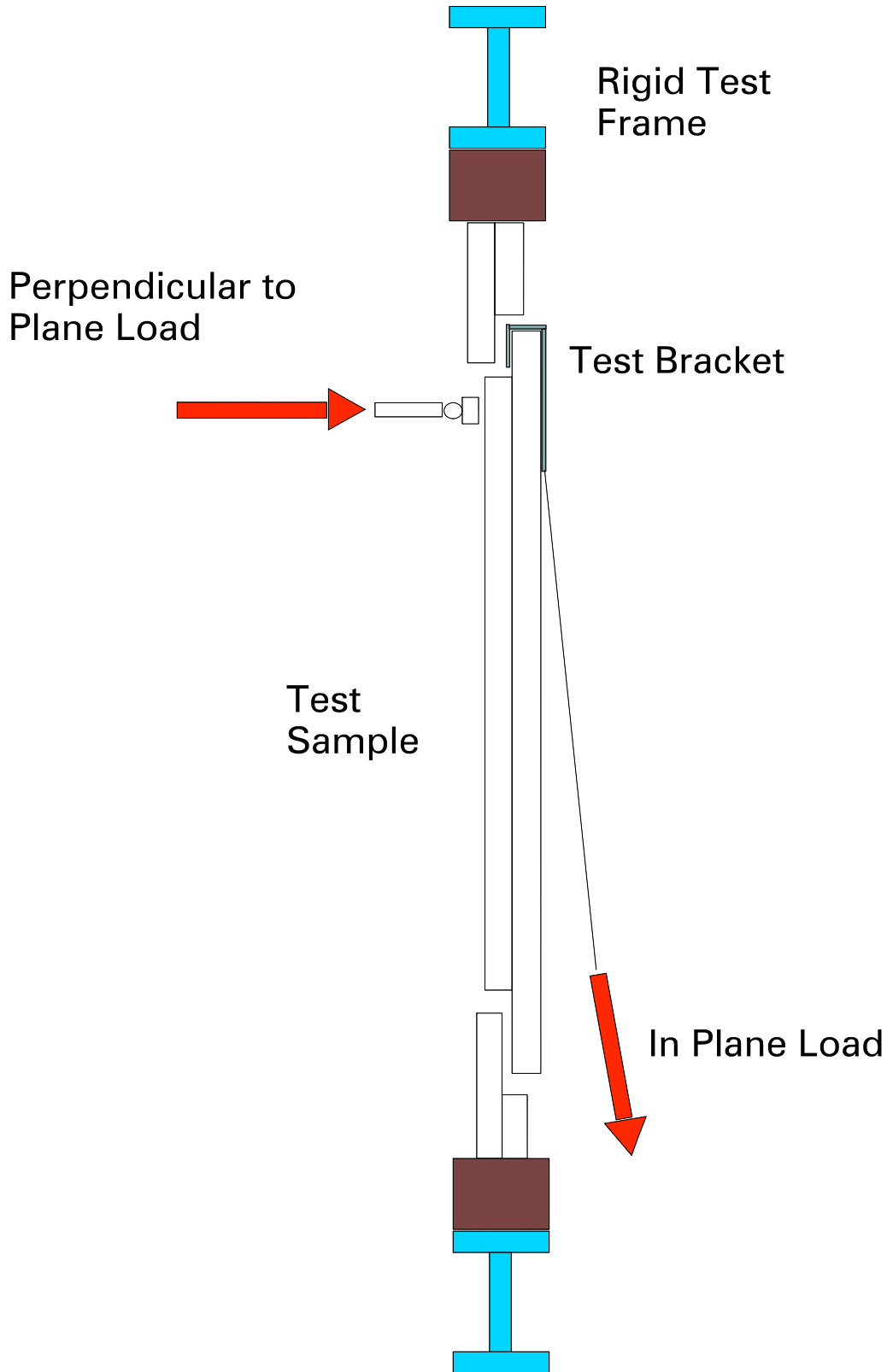
double mushroom and handle, point 3b and reached 6.3Kn, the test was stopped at the sealed unit broke.

Video Footage to follow

Appendix A

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