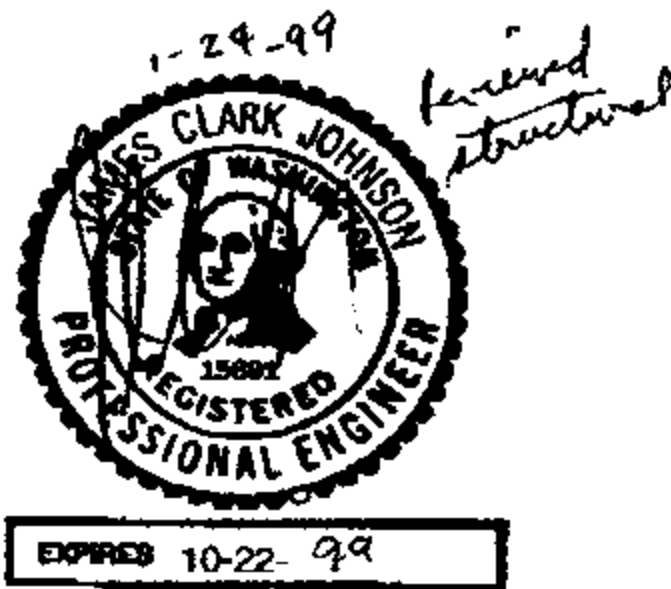


QUALITY TESTING INC.

3310 Hill Avenue, Everett, WA 98201
Phone: (425) 259-6799
FAX: (425) 259-4936
email: qualtest@premier1.net



AAMA MANUFACTURED HOUSING TEST REPORT

S98-280-MH

**REPORT TO: JELD-WEN, INC.
WILLIAMSON BUSINESS PARK
31725 HIGHWAY 97 NORTH,
SUITE C
CHILOQUIN, OR 97624**

**ORIGINAL REPORT NUMBER: S98-280-MH
ORIGINAL REPORT DATE: 08/13/1998**

**PRODUCT: CHALLENGE GLADIATOR XO INSWING
DOOR WITH SIDELIGHT.**

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Report No: S98-280-MH

REPORT TO: Jeld-Wen, Inc.
Williamson Business Park
31725 Highway 97 North, Suite C
Chiloquin, OR 97624

TEST DATE: 08/13/1998

SPECIFICATION: Federal Mobile Home Construction and Safety
Standard 3280.403, 404.

TEST STANDARD: AAMA 1702.2-85 Swinging Exterior Passage Door
Voluntary Standard for Utilization in
Manufactured Housing.

DESCRIPTION OF SAMPLE TESTED

MODEL/TYPE: Challenge Gladiator 6-Panel Inswing Door with
Sidelight.

CONFIGURATION: XO

FRAME SIZE: 52.375" wide by 82.0" high.

PANEL SIZE: 35.813" wide by 80" high.

SIDELIGHT SIZE: 13.813" wide by 80" high.

FRAME TYPE AND FINISH: Primed exterior, unfinished interior wood
head, jambs and mullion.

SILL TYPE: Solid aluminum with adjustable oak threshold.

JOINT CONSTRUCTION: All frame joints were sealed and screw-
connected. (See attached pattern).

DOOR LEAF CONSTRUCTION: 25 guage steel skins; high density
polystyrene lock block; wood rail and stiles;
EPS foam core.

GLAZING COMPONENTS: (Sidelight Only).

OVERALL: 1/2" nominal
GLASS THICKNESS: DS/DS, Tempered.
SPACER TYPE/SIZE: 1/4" Intercept spacer; butyl sealant.

DAYLIGHT OPENING: 6" wide by 63" high.

GLAZING SYSTEM: Rigid polystyrene, two-piece frame with screws from interior to exterior on approximate 12" centers around the entire perimeter. The glass was bedded in silicone on the interior and exterior sides.

WEATHERSTRIP:

TYPE: Q-lon door seal.
LOCATION: Interior faces of the head, sill and jamb/mullion stops.

TYPE: Four-finger vinyl sweep.
LOCATION: Under bottom rail (leaf and sidelight).

BUCK CONSTRUCTION: SPF (Spruce-Pine-Fir) 2x8 nominal; sealed and screwed at all four corners.

ANCHORING: Frame shimmed and screwed according to attached pattern.

OPERATING HARDWARE:

HANDLES: Keyed locking door knobs on active panel.
DEADBOLTS: Keyed deadbolt lock on active panel.
OTHER: Three butt hinges on the active panel.

WATER DRAINAGE SYSTEM: Water was drained by the slope of the sill.

SCREENS: None.

MULLIONS: Wood mullion, sealed and screw-connected to head and sill.

ASTRAGALS:

N/A

ADDITIONAL DESCRIPTION:

The sidelight was bedded in silicone around the entire perimeter of the panel and was screw-connected to the head, sill, jamb and mullion per the attached pattern. The mullion to sill joint and the fixed threshold were sealed with silicone.

TEST RESULTS

- 1.4.2.1.1 Structural Performance (Exterior Pressure)
ASTM E330-90
No damage after 10 seconds at positive 25.0 psf.
- 1.4.2.1.2 Structural Performance (Interior Pressure)
ASTM E330-90
No damage after 10 seconds at negative 12.5 psf.
- 1.4.2.2 Air Infiltration at 1.57 psf.
ASTM E283-91
- | | | |
|-------------------|---|--------------------------|
| Total Air Leakage | = | 2.00 CFM |
| Infiltration Rate | = | .07 CFM/Ft ² |
| Maximum Allowable | = | 1.00 CFM/Ft ² |
- 1.4.2.3 Water Resistance Test
ASTM E331-96
No leakage after 1 cycle of 15 minutes at 0 psf.

ADDITIONAL TEST RESULTS

1. WATER RESISTANCE TEST (Performed on Fixed Panel or Sidelight only).
ASTM E547-96

No Leakage after four cycles of 5 minutes each at 7.2 psf

2. STRUCTURAL LOAD TEST (Performed on Complete Test Sample).
ASTM E330-90

Design Pressure = 48.0 psf x 150% = 72.0 psf Test Pressure

No damage after 10 seconds at Positive 72.0 psf

No damage after 10 seconds at Negative 72.0 psf

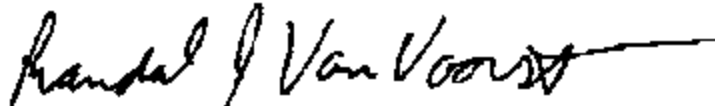
Maximum Permanent Set = .016"

Maximum Allowed (.4% of span) = .322"

Assembly drawings showing construction details and hardware application have been compared to the sample tested and are attached to this report.

The test results were secured by using the designated test methods and indicate compliance with the performance requirements of the referenced specification. This report does not constitute certification of this product, which may only be granted by an authorized administrator of an approved certification program.

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Randal J. Van Voorst
President



Baron H. Mathews
Vice President