



**TEST REPORT: LARGE BUS
CONSTRUCTION**
Directive 2001/85/EC
Regulation 107.02 up to and including
Supplement 5 ECE Regulation 107.04

| Paragraph | Requirement | Complies (Yes, No, N/A) |
|-----------|-------------|----------------------------|
|-----------|-------------|----------------------------|

REPORT/JOB NUMBER: VSN255138

| TEST DETAILS | |
|----------------------------------|---|
| Location of Test | VCA Midland Centre Watling Street Nuneaton Warwickshire United Kingdom CV10 0UA |
| Date of Test | 15 May 2012 |
| VCA Representative(s) | Brent Waddington |
| Manufacturer's Representative(s) | Stuart Taylor |
| Reason for Test | Test report only to ensure compliance with Paragraph 7.6.10.9 of EC Directive 2001/85/EEC or 7.6.10.9 of Regulation 107.02 / 107.03 |

| MANUFACTURER DETAILS | |
|-----------------------------|---|
| Manufacturer's Name | W S H Taylor Engineering |
| Manufacturer's Address | Unit 36-39 Radway Industrial Park Radway Green Crewe Cheshire United Kingdom CW2 5PR |
| Model Type & description | DL600S Single Manual step |
| Category | Separate Technical Unit |

| CONCLUSION | |
|---|------------------------|
| The above mentioned STU was tested in accordance with Paragraph 7.6.10.8 and 7.6.10.9 of Directive 2001/85/EC and ECE Regulation 107.04 and was found to comply in all respects | |
| Signature: | |
| Name: | Brent Waddington |
| Position: | Type Approval Engineer |
| Date: | 15 MAY 2012 |

| LIST OF ANNES | | |
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TEST SPECIFICATION AND WORST CASE RATIONALE

DL600S Single Manual step mounted as a Separate Technical Unit to a test rig and tested as worst case. The test involved loading the step via a calibrated load cell with a 100mm diameter disc at the centre of the extended step with a force of 136 kg and measuring the deflection.
 Additional models covered by Test: DL500S, DL400S
 Reason: All identical in construction to DL600S tested but less wide hence will be stiffer.
 Additional Models covered by Test: DM600S, DM500S and DM400S
 Reason: Have longer riser lengths but less outward overhang, generating less bending moment at the fulcrum point. Also have slightly longer length from the fulcrum point to the hook point hence generating less force and stress at the hook point. Narrower width models will be stiffer.

Tests required (if more than one is applicable)

- **Deflection test**

MANUFACTURER'S DOCUMENTATION

Manufacturer's documentation is complete and reflects the agreed specification for the component tested and covers all variants and versions agreed in the worst case rationale

Yes

FACILITY AND EQUIPMENT CHECKS

- | | | | |
|---|---|--|-----|
| 1 | Generic Risk assessment followed | <i>Insert RA identifier here</i> <input type="text"/> | Yes |
| | OR | Specific Risk assessment completed and stored in electronic job folder | No |
| 2 | Facilities and test equipment are appropriate | Brief description of test equipment: | Yes |
| 3 | Calibration certificates checked and valid, recorded in the following table | | Yes |

| Equipment | Serial No. | Calibration data |
|------------------------|-------------------|-------------------------|
| Load Cell/ Data reader | 165096/1075184 | 19/10/2011 |
| Measure | | Confirmed zero at start |

TEST REQUIREMENTS

| | |
|------------|-----------|
| Regulation | Directive |
|------------|-----------|



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*Ann 3
7.6.10*

Ann I 7.6.10

**TECHNICAL REQUIREMENTS FOR
RETRACTABLE STEPS**

| | | | |
|---------------------------|---------------------------|---|------------|
| <i>Ann 3 7.6.10.8</i> | <i>Ann I 7.6.10.8</i> | The corners of retractable steps facing forwards or rearwards shall be rounded to a radius of not less than 5mm; the edges shall be rounded to a radius of not less than 2.5mm | Yes |
| <i>Ann 3 7.6.10.9</i> | <i>Ann I 7.6.10.9</i> | When the passenger door is open, the retractable step shall be securely held in the extended position. When a mass of 136 kg is placed in the centre of a single step or a mass of 272 kg is placed in the centre of a double step the deflection at any point on the step, measured relative to the body of vehicle, shall not exceed 10 mm. | Yes |

Test Results:

| Step model | Load (kg) | Deflection (mm) |
|------------|-----------|-----------------|
| DL600S | 136.8 | 7.7 |



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Photographs of test set-up:

DL600S

