



The UK trade body for the caravan, motorhome, caravan holiday and park home industry.

Code of Practice 501

Minimum Specification of Undergear, Wheels and Tyre Configurations for Caravan Holiday Homes (BS EN 1647) & Residential Park Homes (BS 3632)

Forward

This code of practice has been drawn up by the NCC to provide a minimum standard of good manufacturing practice for the manufacture of chassis, undergear, wheels and tyres for Caravan Holiday Homes and Residential Park Homes.

The NCC's Caravan Holiday Home & Residential Park Home Technical Committee, with the co-operation of chassis manufacturers, has produced this Code of Practice.

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The NCC is the representative trade association for the U.K. Caravan Industry and was founded in 1939. Membership encompasses all sides of the industry, manufacturers, dealers, park owners and specialist suppliers of products and services.

The NCC founded and is now a key member of the European Caravan Federation, which promotes and strengthens the interests and influence of the industry within the European Community.

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1 Scope

This code of practice relates to Caravan Holiday Homes and Residential Park Homes (subsequently referred as Homes in this document) and specifies the minimum requirements for the chassis, including wheels, tyres, bearings, corner steadies and jockey wheel/support device. This document relates to products destined for both UK and export customers.

2 Normative references

This code of practice incorporates reference provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed in Annex A.

3 Definitions

For the purpose of this code the following definitions will apply:

Undergear	A chassis and all of its component parts.
Chassis	The steel framework.
Drawbar	A projection from the chassis carrying a coupling which enables the Home to be towed.
Support point	A point identified for supporting the Home in conjunction with other support points.
Jacking point	A strengthened point on the chassis identified for the location of a jack during transportation and siting of the Home.
Jacking zone	A strengthened area on the chassis identified for the location of a jack during the transportation and siting of the Home.
Jockey wheel	A wheeled assembly with adjustable height and swivelling wheel, designed to temporarily support the front end of a Home.
Support device	A non-wheeled device instead of a jockey wheel used for the purpose of loading and unloading the Home from the transporting vehicle.
Holding down point	A point on the main longitudinal member of the chassis designed to be used for securing the home to its base after it has been sited.
Corner steadies	Adjustable supports normally attached to the chassis at each corner of a Home.
Axle(s)	Fabrication(s)/assembly(s) including wheel bolt stubs, designed to withstand the load of the Home (and the load imposed during manufacture, transport, and siting), secured to the chassis, and onto which the wheels are mounted.

4 Weights

It is the responsibility of the Home manufacturer to advise the chassis manufacturer at the point of order the anticipated weight of the Home. Consideration should be given to the anticipated load of the Home when in use, i.e. number of occupants, personal effects, essential equipment, etc.

Caravan Holiday Home (BS EN 1647): If the weight of the Home is in excess of 5,500 kg the chassis manufacturer shall consult directly with the Home manufacturer to determine the specific design requirements in relation to the number of axles and the wheel & tyre configurations.

Residential Park Home (BS 3632:2015): If the weight of the Home is in excess of 5,400 kg the chassis manufacturer shall consult directly with the Home manufacturer to determine the specific design requirements in relation to the number of axles and the wheel & tyre configurations.

It is the responsibility of the chassis manufacturer to design the chassis to ensure that its loading capacity is rated to, or above, the weight specified by the Home manufacturer.

The imposed weight of the Home is to be clearly displayed on a permanent, non-removable label attached to the chassis in the vicinity of the drawbar and also on the NCC Chassis ID label fixed to the rear of the home.

5 Axle configurations

The Home manufacturer must liaise with the chassis manufacturer to determine the required axle configuration and location.

Caravan Holiday Homes (BS EN 1647): For units with a mass in excess of Band F (over 5,500 kg load rating per wheel – see Section 7), multiple axle configurations shall be employed.

Residential Park Homes (BS 3632:2015): For units with a mass in excess of Band F (over 5,400 kg load rating per wheel – see Section 7), multiple axle configurations shall be employed.

On Homes with two or more axles, the Home manufacturer is responsible for informing their customer that the Home will have limited manoeuvrability.

Where twin or multiple axles are to be fitted, the chassis manufacturer should ensure that the axles are placed close together for safety and manoeuvrability reasons. The maximum spacing between the axle centres should be no greater than twice the outside diameter of the tyre.

It is recommended that the axle configuration be arranged that the nose weight of the Home be no lighter than 25 kg and no heavier than 100 kg.

A permanent warning label shall be affixed to the drawbar stating:

CAUTION
Nose weight exceeds 25kg
Refer to Manual Handling Operations Regulations 1992

Note – Black text on a yellow background.

The Home manufacturer should affix a label to the rear of the Home advising if the Home can be towed from the rear by moving the drawbar.

6 Chassis

6.1 General

The chassis shall have a minimum design life as agreed between the chassis and Home manufacturers.

The track width of the axle is to be agreed between the chassis manufacturer and the Home manufacturer. Consideration must also be given to the maximum track width capability of the selected haulier.

Sharp edges on steelwork should be minimized. Particular consideration should be paid to any steel at extreme edges of the chassis.

NOTE: Sufficient ground clearance (approach & departure angles) should be accommodated particularly in respect of when loading or unloading the Home. The Home manufacturer should advise the transport company and the destination site if there are issues with the ground clearance of the Home. If a Home manufacturer has specified a particular jack, then consideration should also be given to the specific clearances it requires.

6.2 Longitudinal deflection

When the chassis is supplied to the Home manufacturer, it shall be provided with the longitudinal members either un-deflected, or with an upwards deflection (set), as specified by the Home manufacturer.

The chassis shall have stiffness, such that the completed Home in its “free position” (supported only by the wheels and jockey wheel/support device) shall not have a longitudinal deflection in excess of a ratio of 1:360.

Compliance with this requirement may be confirmed by placing the finished Home on a flat level surface and measuring the height of the chassis from the floor at each end and at each side in relation to the centre (see Figure 1).

NOTE:

To avoid damage to the Home, it is essential that it is correctly stored, transported, sited, and commissioned. Particular note should be taken of the Guidelines of Good Practice for the Transportation, Siting, and Commissioning of Caravan Holiday Homes and Residential Park Homes published by the NCC.

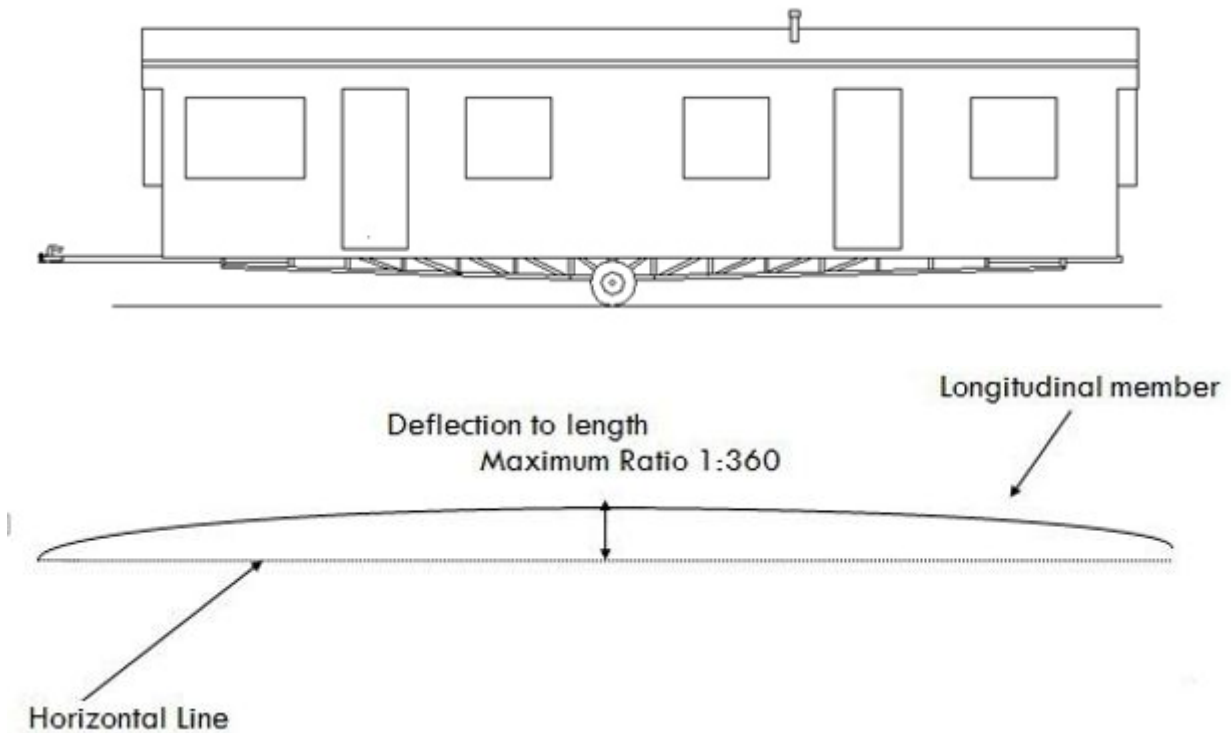


Fig 1. Measurement of longitudinal deflection.

6.3 Lateral deflection

The chassis shall have stiffness, such that the completed home in its “free position” (supported only by the wheels and jockey wheel/support device) shall not have a lateral deflection in excess of a ratio of 1:360.

Compliance with this requirement may be confirmed by placing the finished home on a flat level surface and measuring the height of the chassis from the floor at each end and at the centre of the lateral chassis members. (See Figure 2).

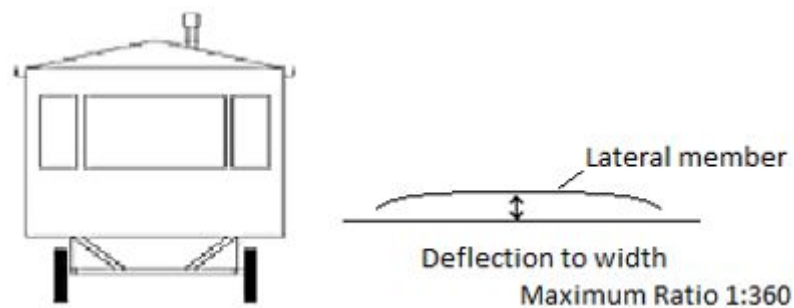


Fig 2. Measurement of lateral deflection.

6.4 Detail design

All steel used for the chassis including drawbar, shall be to an appropriate recognised British Standard (BS) or international equivalent specification. These include but are not limited to BS EN 10024, BS EN 10025, BS EN 10111, BS EN 10219, BS EN 10279 & BS EN 10346.

All materials used in the construction of the chassis must comply with the design specification agreed between the Home manufacturer and the chassis manufacturer. Tolerances for the sections will be to those quoted in the relevant British or European standards.

6.5 Drawbar

The coupling head shall be suitable for use with the coupling ball specified in BS ISO 1103, or be a coupling eye to BS AU 29.

Drawbars may be designed to be either detachable or retractable. A drawbar shall be fitted at each end of each chassis of the Home, or a single drawbar may be supplied with mountings fitted at each end of each chassis of the Home, in order to facilitate siting.

If for technical reasons a drawbar/mounting cannot be fitted to one end of a chassis (such as when an adverse load imposed by lifting the home on a drawbar located under large areas of screen glazing could cause structural issues, etc.), the manufacturer of the Home can choose to omit a drawbar/mounting from one end of the chassis. In such a case the manufacturer of the Home shall instruct the forward supply chain accordingly so that early consideration to siting complications can be given by them.

Where drawbars/mountings have been fitted to each end of each chassis of the Home, the Home manufacturer shall ensure that the balance is as neutral as practicable in accordance with clause 5. Homes with multiple axles may balance readily, but homes with a single axle will usually tip to the end which has the positive nose weight. In all cases, the slope of the ground could cause unexpected balance shift. The Home manufacturer shall advise the haulier and the siting team which drawbar has a negative nose weight, and the risks of balance shift when manoeuvring the Home up/down slopes and on uneven ground. This may be done by affixing a warning label at the end of the Home which has the negative nose weight:

<p style="text-align: center;">CAUTION Negative nose weight</p> <p style="text-align: center;">This is an additional drawbar facility designed for use to assist with the moving and siting of this home Before moving this home you should assess the risks of negative nose weight and the potential for a balance shift when manoeuvring this home up/down slopes and on uneven ground</p>

6.6 Support points

The chassis manufacturer shall provide support points in sufficient numbers and positions as agreed with the Home manufacturer and depending on the weight distribution of the specific layout of a particular model. To achieve the required snow-loading grade, (Caravan Holiday Homes only) it is recommended that the support points be in the areas as specified by the detail design.

For Homes up to 8 metres in length there should be a minimum of 2 support points on each longitudinal member (in addition to those either side of the axle support area).

For Homes between 8 & 12.2 metres in length there should be a minimum of 4 support points on each longitudinal member (in addition to those either side of the axle support area).

For Homes over 12.2 metres and up to the maximum legal length of 20.00 metres there should be a minimum of 6 support points on each longitudinal member (in addition to those either side of the axle support area).

The chassis manufacturer shall identify these points by means of a permanent yellow label (for example see Annex D).

6.7 Jacking points

The chassis manufacturer must declare the location of any jacking points or zones. A minimum of two points are to be provided on each side of the chassis. The jacking point or zone should be a strengthened position with a flat surface area and should have sufficient load capacity for the anticipated mass of the finished home.

The jacking points/zones should be identified by means of a permanent red label (for example see Annex D).

Where a Home manufacturer specifies the use of a specific jack for siting purposes then provision may be made for particular locating pins or devices.

6.8 Holding down points

The chassis manufacturers shall provide suitable holding down points, each capable of resisting 10 KN. Holding down points shall be located within a zone of $1000\text{mm} \pm 200\text{mm}$ from the end of the chassis longitudinal main members (see figure 1) on each corner of the home. If the holding down point is not located directly onto the main longitudinal members then the member used must also be capable of sustaining a 10 KN load.

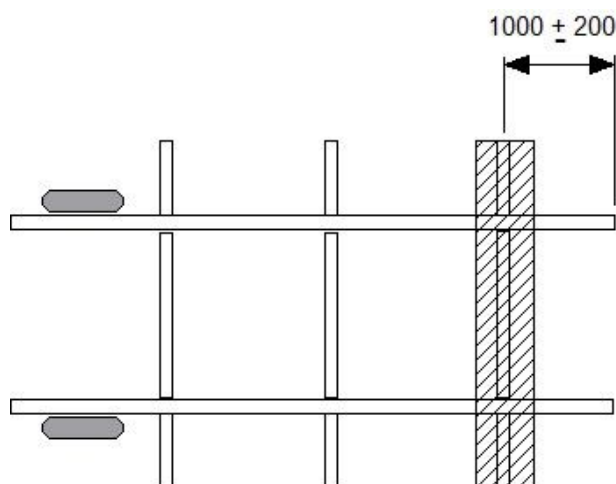


Figure 1

The holding down points shall be clearly identified by a permanent yellow label affixed in close proximity to the point provided.

The holding down points must comply with the detail design as specified by the Home manufacturer (see Annex E).

The NCC recommends that shackles rather than hooks are used on the holding down points although the park operator has the final decision on the most appropriate securing method.

6.9 Craning points

The Home manufacturer must liaise with the chassis manufacturer to ensure that the position of chassis lifting points is suitable for lifting a completed unit into position. In order to avoid damage to the chassis during lifting operations, the lifting arrangements for the completed home must also be made available to the siting team.

6.10 Corrosion protection

All chassis and external ferrous components should be protected either by hot-dip galvanizing in accordance with the requirements of BS EN ISO 14713-2 or in accordance with ISO 12944 Paint and varnish - Corrosion protection of steel structures by protective paint systems for the duration and corrosivity categories listed below:

Duration:	Medium (M) 5 to 15 years
Corrosivity category:	C3 Medium (for skirted park homes) C4 High (for non-skirted park homes and all caravan holiday homes)

To prevent premature deterioration due to the environmental conditions typically found on coastal parks, the protection system shall be agreed between the Home manufacturer and the chassis manufacturer.

Painted protection of the chassis shall be in accordance with Annex B.

6.11 Welding

All welding work must be carried out by approved welders. Approval testing should be carried out in accordance with Annex C.

The NCC may audit the welder approval on an occasional basis, to ensure welders are qualified and “in date” for the materials and welding process being used.

7 Wheels and tyres

7.1 Banding and weights

It is the responsibility of the Home manufacturer to advise the chassis manufacturer the maximum weight of the home. To help rationalise this process an associated code defines specific weight bands for chassis. The bands are as follows: -

Band A	0-1600 kg	Band D	0-3400 kg
Band B	0-2200 kg	Band E	0-4200 kg
Band C	0-2600 kg	Band F	0-5500 kg

7.2 Approval certification

It shall be an annual requirement (i.e. within 12 months of the last test) that suppliers of tyres and their component parts to the Caravan Holiday Home/Residential Park Home industry obtain approval certification from the NCC for each configuration.

Before registering a configuration the NCC must be in possession of a satisfactory report from an approved test house. This report shall show that the wheel and tyre configuration has successfully passed the load/speed drum test as defined in clause 7.9 & Annex F and that the wheel and tyre bear the markings specified in clause 7.

7.3 Register of approved configurations

The NCC will maintain a register of certified wheel & tyre configurations for which they hold satisfactory test house reports. The list will be available via the NCC web site (www.thencc.org.uk), and will be updated as new approvals are received.

7.4 Component parts

Suppliers should, as a matter of good practice, ensure that they have unambiguous written statements from the original component manufacturers (tyre, rim, bearing and tube) endorsing the loading capacities declared. For the purpose of the endorsement from the component manufacturer, the test parameters in Annex F should be used to define the use.

7.5 Tyre markings

These minimum markings must be permanently moulded into one sidewall and be legible:

- Tyre size designation including the type of structure symbol;
- Brand or manufacturer's name;
- Load carrying capacity;
- Maximum speed rating; *
- Maximum inflation pressure (bar/psi). (if pneumatic).

This minimum information should be visible from the valve side of the Wheel and Tyre assembly.

* Note – The speed rating is as stated on the sidewall. This rating does not have to be as high as the extreme speed to which the tyre will be subjected in the test. (See Annex F).

7.6 Wheel markings

The following information shall be permanently visible on the outer face of the wheel:

- Letter signifying weight band (see clause 7.1);
- Maximum inflation pressure (bar/psi) of the tyre fitted to the assembly (if pneumatic);
- Operating pressure (bar/psi).

7.7 Tyre pressures

It is essential that tyres are correctly inflated as low pressures can cause dangerous tyre failures. It is therefore important that tyre pressures are appropriate for the market and that all parties within the distribution chain (Home manufacturer, haulier, distributor, park operator) are capable of inflation to the correct pressure. For approval purposes, the maximum permitted pressure under this code is 6.895 bar (100 psi).

7.8 Load/speed drum test

An independent test house, in accordance with the test laid down in Annex F, must test all wheel & tyre configurations. The supplier and test house should use a similar approval application form to that as detailed in Annex G.

NOTE:

Independent Test Authority - The excessive loads that require to be applied during the test restricts the number of available test houses.

The NCC has identified and used the following test house for exploratory testing:

Rubber Consultants
Brickendonberry
Hertford
SG13 8NL

7.9 Unannounced spot check

The NCC reserves the right to conduct random tests from tyre assemblies as supplied to the industry. The supplier's configuration may be withdrawn from the register and all Home manufacturers notified if the tyre assemblies, as selected/tested, fail to meet the requirements and/or test parameters contained in this Code of Practice.

8 Corner steadies and axle stands

Corner steadies are designed to only provide temporary means of support. These should not be used for levelling purposes or as a permanent means of support.

Axle stands may be used as a permanent means of support. The supports should be sufficient in number and be capable of withstanding the load of the finished Home and all anticipated imposed loads. The Home must be supported in accordance with clause 6.6 of this code.

Axle stand manufacturers must have their stands independently tested and the maximum safe working load shall be clearly shown on the stands (e.g. stamped or permanent label).

If a concrete block is supplied as a means of support it must be certified as meeting the requirements of BS EN 771-3 for a Group I Category II component with adequate compressive strength to suit the anticipated imposed loading.

9 Jockey wheels and support devices

Every Home shall be fitted with either an adjustable jockey wheel or a support device. A support device should use the same clamping mechanism on the drawbar as the jockey wheel, and remain interchangeable. The jockey wheel/support device and its clamping mechanism shall be capable of sustaining a minimum load of 100 kg. The jockey wheel/support device should never be used as a permanent means of support. The manufacturer of the jockey wheel or support device shall have their product independently tested and the maximum safe working load shall be clearly shown on the jockey wheel/support device (e.g. stamped or permanent label).

A support device shall only be supplied where a home has two or more axles and is capable of standing freely without the need of a jockey wheel or support device.

A support device may take the form of a profiled base plate welded to an adjustable stem and used for the purpose of loading and unloading the home from the transporting vehicle. The support device shall be designed to prevent damage to the Home, drawbar, clamping mechanism, hitch and transporting vehicle during the loading and unloading procedure.

10 Chassis and wheel marking

The designed maximum loading capacity of the chassis shall be marked on the chassis manufacturers' identification plate.

The recommended inflation pressure of pneumatic tyres must be visibly marked on all wheel hubs.

Split rims fitted with pneumatic tyres must have the following statement visibly marked on all wheel hubs. "DO NOT DISMANTLE WITH TYRE INFLATED."

11 Information to be provided to Caravan Holiday Home and Residential Park Home manufacturers

The chassis manufacturer shall supply information to the Home manufacturers covering items (a - k) below:

- a) The weight band of the chassis or the designed maximum loading capacity of the chassis.
- b) The maximum vertical static load of the coupling head.
- c) The position of supporting points.
- d) The maximum safe working load of the support stands provided, if applicable.
- e) The position of holding down points.
- f) The maximum load that can be applied to the jockey wheel/support device.
- g) The recommended inflation pressure for pneumatic tyres fitted. Given that most Home tyres require an inflation pressure greater than 90psi advice should be given which advises that a risk assessment should be undertaken before tyres are inflated. A statement should be included which recommends when a Home tyre is to be inflated, the use of a safety cage or other suitable restraining device is strongly recommended.
- h) The specified category of exposure and the duration for the chassis corrosion protection.
- i) If corner steadies are attached, a warning that the steadies are intended to only provide a temporary means of support and should not be used for levelling of a Home or be part of the permanent support of a sited Home. The maximum loading capacity per steady shall be stated.
- j) Details of specific jacks to be used, where required.
- k) Details of all other maintenance requirements.

Annex A – Normative references

BS EN 1647	Caravan Holiday Homes – Habitation Standards.
BS 3632	Residential Park Homes – Specification.
BS EN ISO 12944 (series)	Paints and varnishes. Corrosion protection of steel structures by protective paint systems.
BS ISO 1103	Road vehicles. Coupling balls for caravans and light trailers. Dimensions.
BS AU 29	Drawbar eyes and fore carriage pins for connection between trailers of 5 – 35 tons gross weight and towing vehicle.
BS 3900 Series	Methods of test for paints.
BS 4782	Specification for approval testing of welders when welding procedure approval is not required.
BS EN 771-3	Specification for masonry units. Aggregate concrete masonry units (dense and lightweight aggregates).
BS EN 10111	Continuously hot rolled low carbon steel sheet and strip for cold forming.
BS EN 10326	Continuously hot-dip coated strip and sheet of structural steels.
BS EN 10024	Hot rolled taper flange I sections. Tolerances on shape and dimensions.
BS EN 10025 Series	Hot rolled products of structural steels.
BS EN 10219	Cold formed welded structural hollow sections of non-alloy and fine grain steels.
BS EN 10279	Hot rolled steel channels. Tolerances on shape, dimensions and mass.
NCC - Guidelines of Good Practice for the Transportation, Movement, Siting, De-siting and Commissioning of Caravan Holiday Homes & Residential Park Homes.	

Annex B – Chassis painting used for corrosion protection

1 NCC Minimum Requirement

This specification defines the minimum requirements for the selection, application, inspection, and testing for painted coatings used to protect chassis.

Duration: Medium (m) 5 to 15 Years.
Corrosivity Category: C3 Medium (for skirted Residential Park Homes).
C4 High (for all Caravan Holiday Homes and for non-skirted Residential Park Homes).

2 Demonstration of compliance

2.1 Codes and Standards - The NCC requires written assurance from both the paint supplier and the chassis manufacturer that the painting and corrosion protection is in accordance with the current edition of the following codes and standards:

International Standard ISO 12944 - Paint and Varnish – Corrosion protection of steel structures by protective paint systems.
BS 3900: F4 1991 – Methods of tests for Paints.

2.2 Environment and Durability – The NCC requires written assurance from both the paint supplier and the chassis manufacturer confirming that the minimum Duration and Corrosivity Category as detailed above have been met.

2.3 Performance Data - The NCC requires the following details from both the paint supplier and the chassis manufacturer:

Substrate Preparation - (e.g. degreased).
Paint specification.
Exposure - e.g. Environments, Salt Spray (BS 3900: F4 1968).
QUVa hour rating; Good condition.

3 General

The Chassis manufacturer shall develop painting and corrosion protection procedures to meet the standard. The procedures shall cover all inspection checks. A copy of the relevant procedures shall be submitted to the NCC.

3.1 Surface Preparation – Advice on surface preparation e.g. steel is to be free from oil, grease, water and other contaminants etc.

3.2 Coating Application – Advice on the Paint application.

3.3 Drying – Advice on the drying process.

3.4 Mechanical Damage – Advice on how to protect damaged areas.

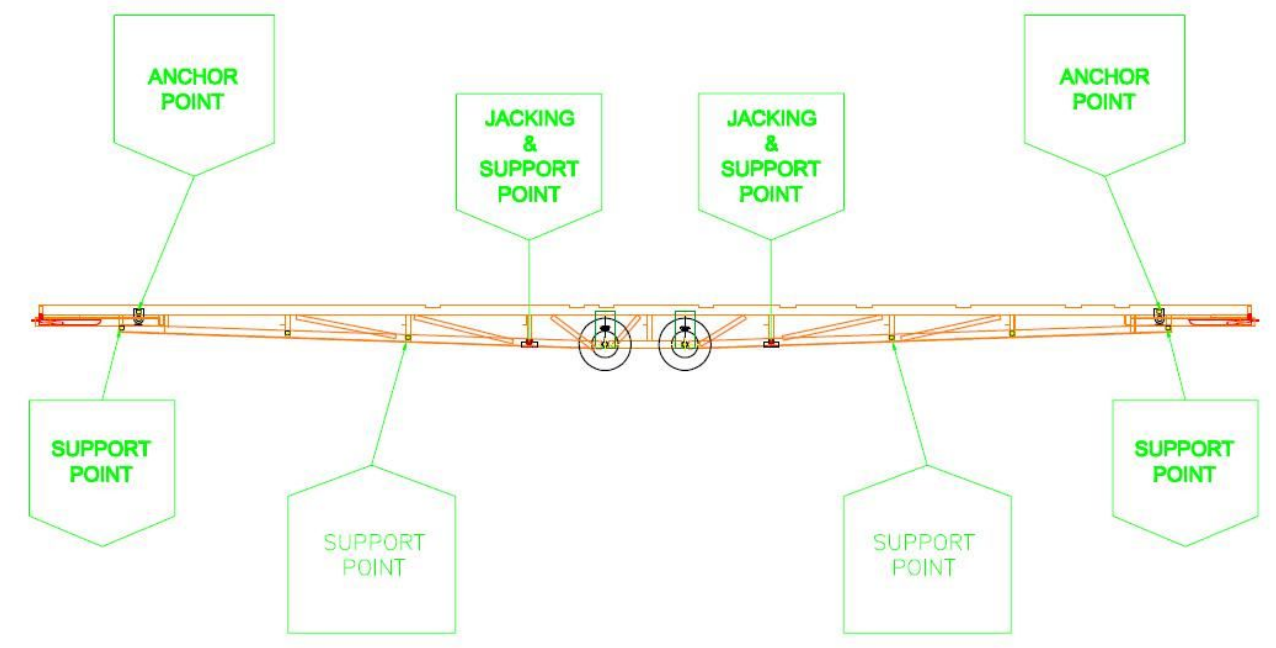
3.5 Warranty – The procedures should detail the terms of warranty between the paint manufacturer (supplier) and the chassis manufacturer.

Annex C – Welder approval: Procedure

To ensure that consistent quality of work is produced by welders the processes set out below should be employed:

- Welders are required to be tested against the appropriate sections of BS 4872 Part 1 Specification for approval testing of welders when welding procedure approval is not required. Fusion welding of steel.
- The welder is required to undergo weld tests according to the joint configuration(s) that is most representative of the type of work on which he/she is employed. This also requires the welder to use the thickness and type of material, welding process and consumables that he/she would encounter in his day to day duties.
- Rules for the tests are detailed in BS 4872 Part 1.
- A statement of the test results is made for each welder by the testing body. These results are then held by the employer as records of the employees' performance.
- Re-approval of welders should take place if any of the following apply:
 - The welder is to be employed on work outside the extent of his current approval(s).
 - The welder changes his employer without the transfer of his approval test certificate(s).
 - Six months or more have elapsed since the welder undertook any welding (the welders record should be signed every 6 months to indicate that he/she has regularly performed welding duties- this is to be undertaken by the welder's Line Manager).
 - There is any specific reason to question the welders' ability.
- Welders should be re-approved every 2 years.

Annex D – Chassis labelling



Support points are indicated by a yellow label. Axle stands shall be used here.



Holding down points are marked on the chassis by a yellow and black label.

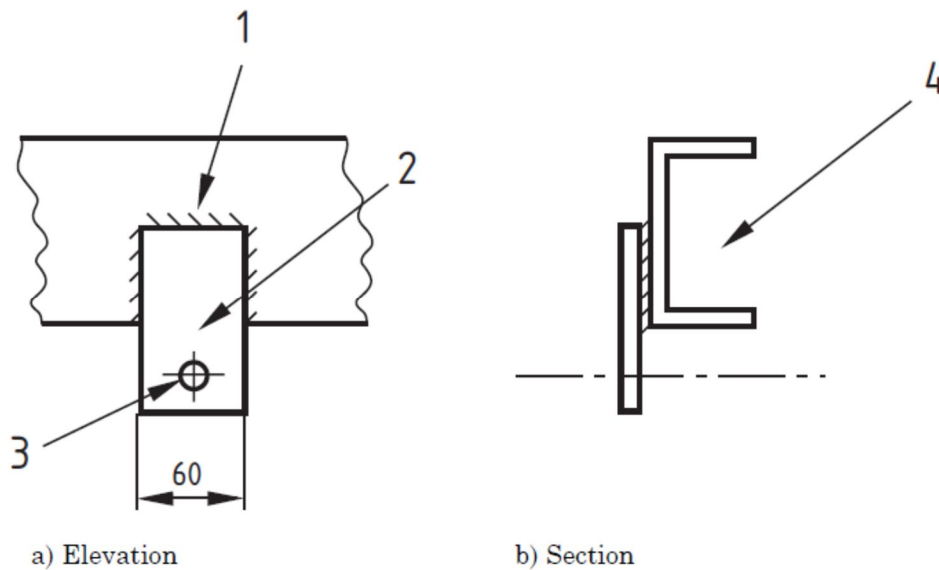


A jacking point should be identified by means of a red permanent label.

Annex E – Holding down points

Taken from BS 3632 – Residential Park Homes – Specification.

An example of a suitable chassis holding down point construction is shown below:



- 1 Minimum 60mm length of 6mm fillet weld evenly arranged around plate.
- 2 6mm thick mild steel plate.
- 3 15mm diameter hole to receive 13mm diameter shackle bolt with safe working load of at least 10kN.
- 4 Chassis member.

Annex F – Procedure for load/speed tests

1. Preparing the tyre assembly

- 1.1. The tyre shall be inflated to the pressure indicated by the manufacturer or supplier on the Drum Test Application Form.
- 1.2. Condition the tyre assembly at room temperature for not less than three hours.
- 1.3. Readjust the tyre pressure to that specified in paragraph 1.1.

2. Test procedure

- 2.1. Mount the tyre assembly on a test axle (35mm stub axle manufactured from wrought steel meeting the requirements of PD 970:2005) and press it against the outer face of a smooth surfaced power driven test drum either 1.70m \pm 1 percent or 2.0m \pm 1 percent diameter.
- 2.2. Apply to the test axle a load equal to the appropriate Load Band

Band A	800 kg	Band D	1700 kg
Band B	1100 kg	Band E	2100 kg
Band C	1300 kg	Band F	2750 kg

- 2.3. Throughout the test the tyre pressure must not be corrected and the test load kept constant.
- 2.4. During the uninterrupted test, the temperature in the test room must be maintained between 20° and 30°C.
- 2.5. The test program shall be:

5 minutes to 10 mph	} at 100% load
5 minutes at 10 mph	
5 minutes to 25 mph	
5 minutes at 25 mph	

3. Result

The test is considered successful if, on completion of the test schedule above, the assembly shows no signs of external failure and has the correct & legible wheel & tyre markings.

In the case of failure being recorded during tests, two further samples of the same specification shall be tested. If either or both of these second two samples fail, then a final submission of two samples shall be tested. If either or both of the final two samples fail, then the application for approval shall be rejected.

4. Equivalent test methods

If a method other than that described in Paragraph 2 is used, its equivalence must be demonstrated.

Annex G – Drum test application form

Please complete Section A of this form and submit it together with the corresponding wheel & tyre configuration to the independent test house.

SECTION A:

Company Name/Address: _____

Contact Name: _____ Telephone No: _____

Company Reference No (if applicable) _____

APPROVAL TESTING OR RESEARCH AND DEVELOPMENT

Tyre Size: _____ Type: _____ Brand Name: _____

Original Manufacturer: _____ Country of Origin: _____

Tube Details: _____

VALVE CAP: SEALING TYPE NON-SEALING TYPE

Rim Details: _____

Hub Tube Thickness: _____ mm. Rim Thickness: _____ mm. No of Bearings: _____

TYRE MARKINGS PERMANENTLY MOULDED INTO ONE SIDEWALL

-Tyre size designation including the type of structure symbol: _____

-Brand or manufacturer's name: _____

- Load carrying capacity: _____ Kg. Maximum speed rating: _____ Kph

-Maximum inflation pressure (if pneumatic): _____ bar/psi (this must not exceed 6.90 bar/100 psi)

WHEEL MARKINGS

- Letter signifying weight band: _____ (A, B, C, D, E, or F)

- Maximum inflation pressure (if pneumatic): _____ bar/psi (this must not exceed 6.895 bar/100 psi)

- Operating pressure: _____ (bar/psi)

ADDITIONAL INFORMATION/SPECIAL INSTRUCTIONS:

PLEASE TEST THE ABOVE TO:

LOAD BAND: _____ LOAD (Kg): _____ PRESSURE (BAR/PSI): _____

Signed: _____ Date: _____

SECTION B: NCC CoP 501 Drum test data form

This section to be completed by the testing laboratory and Sections A and B submitted to the NCC, Catherine House, Victoria Road, Aldershot, Hampshire, GU11 1SS.

Test schedule:

	Time (minutes)	Load (%)	Speed (mph)
Stage 1	5	100	0 to 10
Stage 2	5	100	At 10
Stage 3	5	100	10 to 25
Stage 4	5	100	At 25

	Test data
Bay temperature	
At start of test (°C)	
At end of test (°C)	

Circumference	
Before test (mm)	
After test (mm)	

Inflation pressure (bar/psi)	
At start of test	
At end of test	

Section width	
Before test (mm)	
After test (mm)	

Temperature in front shoulder (°C)	
Wheel & Tyre Markings Verification that the wheel & tyre markings are present and legible as detailed in Section A of this form	

RESULT:

- Tyre assembly **COMPLETED** test schedule as indicated and showed no signs of external failure and the wheel & tyre markings are present and legible.
- Tyre assembly completed test schedule as indicated and showed no signs of external failure, but the wheel & tyre markings were not correct/legible.
- Tyre assembly completed test schedule and the wheel & tyre markings are present and legible, but failed on visual examination.

FAILED after _____ minutes in Stage _____

COMMENTS/EXAMINATION DETAILS: (Tyre/Tube/Rim/Bearing)

Signed: _____ Date: _____