



# Horsebox and Trailer Tyres

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In partnership with  
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# Horsebox and Trailer Tyres and Your Safety



Your tyres are the only part of your horsebox or trailer that are in contact with the road surface. Safety in acceleration, braking, steering and cornering all depend on a relatively small contact area. It is therefore of paramount importance that tyres should be maintained properly and kept in a good condition at all times, and when it comes to changing them, the correct replacements are fitted.

The original tyres for your horsebox or trailer are determined by joint consultation between the vehicle and tyre manufacturers and take into account all aspects of its operation. It is recommended that changes in size or type should not be undertaken without seeking advice from either the vehicle or tyre manufacturer, as the effect on handling, safety and clearances must be taken into account.

## **FIT THE RIGHT TYRES**

Horseboxes and trailers are no different to any other road vehicle in that it is essential that tyres of the correct specification are fitted. It is dangerous and illegal

in the UK to mix tyres of different types on the same axle. It is advisable to have the same construction of tyres on all wheels. Only tyres of equal size and service description (load index and speed symbol) should be fitted across an axle. Equally, identical wheels should be fitted across an axle and carried as a spare if appropriate. Tyre pressures across an axle should also be equal.

Older trailers may be equipped with cross-ply tyres that are no longer available and when a change is required, radial ply tyres will have to be fitted. If a trailer is converted from cross-ply to tubeless radial tyres, the latter must only be fitted to safety type rims, i.e. those with a hump or flat ledge on the outer bead seat. Some older trailers have non-safety rims and the previous recommendation has been to fit tubes with radial ply tyres. **BEFORE DOING SO THE TYRE MANUFACTURER MUST BE CONSULTED**, as not all radial ply tyres are suitable for use with tubes.



## MAINTAIN CORRECT PRESSURES

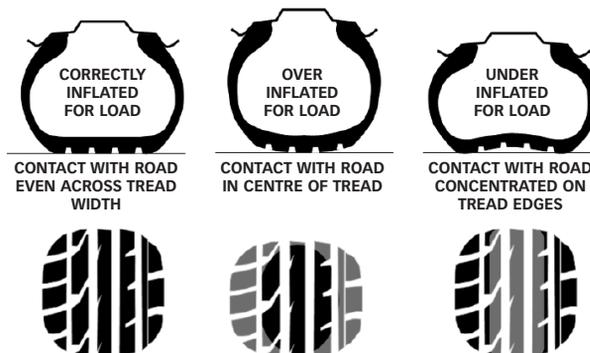
Whatever tyres are fitted to your vehicle, it is essential to your safety and stability that all tyres are correctly inflated for the applied loading. This is a golden rule of motoring and even more critical for towing combinations. Under or over-inflated tyres can not only adversely affect the handling of your vehicle, but can also lead to a dangerous tyre failure.

Pressures should be checked and adjusted prior to any journey when the tyres are cold – not during or after a run when they will be higher. Never reduce tyre pressures when the tyres are warm, as this could cause them to be too low when they cool down. After pressure checking, ensure the valve is not leaking and the valve cap is replaced.

Recommended tyre inflation pressures for your horsebox can be found in the vehicle handbook and/or on a placard mounted on the vehicle. In the absence of either of these, consult the tyre manufacturer.

Trailer tyres often require higher inflation pressures than are required for the same tyres on a car. It is essential that correct tyre pressures be determined and maintained. When towing, and in the absence of any recommendation in the vehicle handbook, increase the towing vehicle's rear tyre pressures by 4 to 6 psi (0.3 to 0.4 bar) to improve the stability of the unit.

Correct pressures are related to loads, speeds and vehicle handling and therefore are vital for maximum safety, braking, grip and extended tyre life.



Prolonged under-inflation causes excessive flexing, deterioration of the casing and rapid wear of the tread shoulders. The vehicle will also consume more fuel.

Over-inflation results in an uncomfortable ride, a reduced area of contact with the road, accelerated wear in the centre of the tread and makes the tyre more susceptible to impact damage.

Inflation pressures should be checked at least once a week or before any long journey. Pressures should be checked when the tyres are cold (i.e. travelled less than two miles) using an accurate and reliable pressure gauge.

## OVERLOADING

It is dangerous to overload tyres at any time. The police may take action against any driver whose horsebox or trailer is either overloaded or has a poorly distributed load. It is important to spread the load evenly around the vehicle and as low as possible, to reduce any negative impact on the vehicle's stability. Failure to heed this advice will invite tyre related problems and possible tyre failure.

## TREAD DEPTH

Tyre treads are designed to provide good grip on wet roads, but in general wet grip decreases as tyre tread pattern wears down or as the depth of water increases. Drivers should take this into consideration and reduce speed accordingly in wet conditions.

As most horsebox owners will be aware, different regulations apply to you and your vehicle depending upon its size or weight, and tread depth regulations are no exception.

For vehicles, including trailers, up to 3500Kg GVW, the minimum legal tread depth in the UK is 1.6mm throughout a continuous band comprising the central three-quarters of the breadth of tread and around the entire outer circumference of the tyre. For horseboxes and other vehicles above this weight limit, the minimum tread depth is 1mm of tread in a continuous band throughout the central three-quarters of the tread, around its entire circumference.

The driver of the vehicle is responsible for ensuring their tyres are legal and in a roadworthy condition. Drivers found to be in breach of these regulations face a fine of up to £2,500 and three penalty points per tyre.

## TYRE CARE

You should check your tyres regularly, but especially when your horsebox or trailer has not been used for some time or has stood on soft ground. If your vehicle is not used during the winter, it is essential that its tyres are given a thorough inspection prior to re-use during the spring and summer months.

Look particularly for signs of age deterioration in the tyres such as sidewall cracking and carcass deformation. Tyres on a stationary vehicle always age more quickly than those in regular and frequent use. If your horsebox

or trailer is going to stand for any significant length of time, it is wise to cover the tyres and shield them from direct sunlight. If possible, you should also jack the weight off your tyres.

If in doubt about the condition of your tyres have them checked before use by a tyre professional.

There is no known technical data that supports a specific tyre age for removal from service. However, in the interests of safety, a number of vehicle and tyre manufacturers recommend that tyres (including spare tyres) that were manufactured from a certain number of years previously be replaced with new tyres, even when they appear to be useable from their external appearance and the tread may not have reached the minimum tread depth.

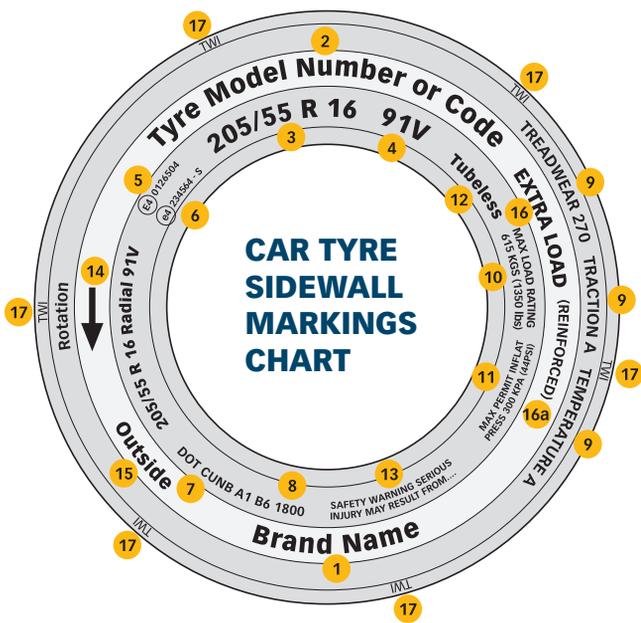
It is recommended that any such instruction be followed. Owners should note that most tyres would have to be removed for tread wear-out or other causes before any prescribed age is reached. A stated removal period in no way reduces the consumer's responsibility to replace tyres as needed.

## REPAIRS

Repairs to tyres must only be carried out by a specialist and in accordance with the current British Standard AU159.

Permanent repairs can only be carried out following removal of the tyre from the wheel to allow a thorough inspection internally as well as externally to ensure there is no hidden danger which could result in catastrophic failure.

To avoid such a hazard, neither externally applied plug repairs, nor liquid sealants may be considered as a permanent repair. Tyre manufacturers cannot be held responsible for problems resulting from their use.



- 1 Manufacturer's name or Brand name
- 2 Model or Pattern Code
- 3 Tyre Size, Nominal Section width(mm), Height to width aspect ratio, Rim diameter code
- 4 Service description (Load Index + Speed Symbol)
- 5 ECE R30 Conformity Approval Number
- 6 EEC Noise Approval Number
- 7 USA Dept of Transport Manufacturer's code
- 8 Date of Manufacture
- 9 USA UTQG Quality Grades \*\*
- 10 USA Maximum Tyre Loading \*\*
- 11 USA Maximum Tyre Inflation Pressure \*\*
- 12 Denotes Tubeless Construction
- 13 Safety Warning
- 14 Direction of Rotation [Directional Tyres only]
- 15 Outer (Inner) sidewall [Asymmetric Tyres Only]
- 16 Extra Load: Denotes higher load capacity than standard tyre.
- 16a "Reinforced" is an alternative marking to "Extra Load"
- 17 TWI-tread wear indicators- raised areas at the base of the tread grooves to serve as a visual warning of when the tyre is approaching or at the minimum legal limit.

\*\* These markings are required by North American legislation and have no significance in the UK & Europe

## CONDITION

The tyres on your horsebox or trailer should be examined regularly. Any stones or other objects embedded in the tread should be removed. If the tyre has any lumps, cuts or bulges, it should be inspected by a tyre specialist as these could indicate dangerous internal damage. Any oil or grease found on the tyre should be wiped away with a suitable diluted detergent.

## DUTY OF CARE

Equine professionals involved in the transport of horses should remember that they have a duty of care to their drivers and must ensure they are provided with a safe working environment, including the provision of safe and roadworthy vehicles. This is enforced under the Health and Safety (Offences) Act 2009, which gave UK courts greater authority to prosecute business for committing offences such as fitting illegal tyres or faulty brakes. The maximum penalty has now increased to £20,000.

## EXPLANATION OF TYRE SIZE DESIGNATIONS

**Radial Car Tyre Example: 205/55 R 16 91 V**

- 205** (S) Nominal Section Width (mm)
- /55** Nominal Aspect Ratio (H/S)
- R** Tyre Construction
- 16** Nominal Rim Diameter Code\*
- 91** Load Index (LI)\*\*
- V** Speed Symbol

**Radial Commercial Tyre Example: 195/70 R 15C 104/102**

- R**
- 195** (S) Nominal Section Width (mm)
- /70** Nominal Aspect Ratio (H/S)
- R** Tyre Construction
- 15C** Nominal Rim Diameter Code\*
- 104/102** Load Index (LI)\*\*
- R** Speed Symbol

Note \* The 'C' after the rim diameter code denotes light commercial vehicle tyres.  
 \*\* Where two load indices are shown, the first applies to tyres in single formation. The second index applies to tyres fitted in twin formation which do not normally apply to caravans.

**TABLE 1: LOAD INDICES AND RELATED MAXIMUM LOADS**

Load Index	Load KG								
50	190	65	290	80	450	95	690	110	1060
51	195	66	300	81	462	96	710	111	1090
52	200	67	307	82	475	97	730	112	1120
53	206	68	315	83	487	98	750	113	1150
54	212	69	325	84	500	99	775	114	1180
55	218	70	335	85	515	100	800	115	1215
56	224	71	345	86	530	101	825	116	1250
57	230	72	355	87	545	102	850	117	1285
58	236	73	365	88	560	103	875	118	1320
59	243	74	375	89	580	104	900	119	1360
60	250	75	387	90	600	105	925	120	1400
61	257	76	400	91	615	106	950	121	1450
62	265	77	412	92	630	107	975	122	1500
63	272	78	425	93	650	108	1000	123	1550
64	280	79	437	94	670	109	1030	124	1600

**TABLE 2: TYRE SPEED SYMBOL MARKING**

Speed Symbol	Maximum vehicle speed for which tyre is suitable	
M	81 mph	130 km/h
P	93 mph	150 km/h
Q	99 mph	160 km/h
R	106 mph	170 km/h
S	112 mph	180 km/h
T	118 mph	190 km/h
H	130 mph	210 km/h
V	150 mph	240 km/h
W	169 mph	270 km/h
Y	187 mph	300 km/h
ZR	over 150 mph	over 240 km/h

## HOW TO CHECK YOUR TYRE PRESSURES

- Check your tyre pressures on a weekly basis and before any long journeys.
- Pressures should be checked against the vehicle manufacturer's recommended level. This can be found in the vehicle handbook and on a plate which is often located inside the fuel filler flap or on the driver's door sill.
- Check the pressure when tyres are cold (i.e. when you have travelled less than two miles).
- If you are towing a trailer, tyre pressures of the tow vehicle should be increased in line with the vehicle manufacturer's recommendations. Details can be found in the vehicle handbook.
- Ensure a reliable and accurate pressure gauge is used.
- Check the pressure in all tyres not forgetting to check the spare tyre as well.
- While checking pressures, give the rest of the tyre a visual inspection. Remove any stones and other objects embedded in the tread. Look out for any bulges, lumps or cuts.
- If you are unsure on any aspect of tyre pressure or tyre condition take your vehicle to an approved fitting centre and speak to the experts.



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