

Tyre checks at charity car washes or other community events

Background

Fire and Rescue Services are a crucial component in the Safe System approach to road safety through their role in post-crash response and road safety education.

On average over the last five years, 163 people are killed or seriously injured in incidents related to 'defective tyres'. The latest 2025 figure of 201 tyre-related KSIs is especially alarming, as it is up 19% year-on-year and 38 higher than the 5-year average.

At 70 mph, a worn tyre adds 28% to the Highway Code baseline stopping distance. This means it can take 123 metres to stop. That is further than the length of a football pitch. (Source: Halfords plc and Professor Peter Wells of the Centre for Automotive Industry Research at Cardiff University, October 2023).

Over half the tyres on Britain's roads are underinflated, with 35% of tyres being driven at least 8psi below the vehicle manufacturers' recommendation.

One-in-five drivers (18%) have NEVER checked their tyre pressures, rising to one-in-four for young drivers aged 18-25.

Over 2 million MOT failures occur each year due to tyre defects, with one million classified as dangerous. Tyres are the primary cause of MOT failures in the first seven years of a vehicle's life.

Underinflated tyres have been found to cost an extra £1 billion per year in fuel consumption. Underinflation can increase fuel consumption by up to 10%.
(Source: <https://www.national.co.uk/blog/can-tyres-affect-fuel-consumption>)

Aims:

The aim of incorporating tyre checks into existing car wash events is to improve public:

- encouraging people to check the condition of their tyres more regularly
- educating on the importance of doing so
- demonstrating the necessary checks
- encouraging them to visit a local professional if they are concerned

This can all be done without affecting the running of the car wash.

Objectives:

- Help drivers identify tyres which are potentially unsafe.
- Offer the attendees the choice of checking their tyres using a tyre tread depth checker or manual gauge.
- Offer relevant advice based on the result of the check.

This guidance has been produced to provide a basic understanding of tyre checks and how to fit these into any car wash event. Any information highlighted in a red box is essential for the good running of tyre checks at car washes.

It should always be considered that a tyre check is not mandatory and members of the public may wish to decline.

Competencies and disclaimer

Individual Fire and Rescue Services are expected to conduct their own risk assessments prior to commencing any tyre checking activities at car wash or other community events. It is recommended that they check with their specific insurance company prior to undertaking this activity. The disclaimer in this document is produced as good practice but FRSs should get specific recommendations individually on liability.

Any colleague who is required to drive a Fire and Rescue Service vehicle, regardless of role, is expected to check tyres as part of the recognised daily vehicle checks. The tyre checks incorporated into the car wash events are no more detailed than what is usually expected and therefore no other tyre checking competencies are needed from colleagues when undertaking this specific activity at a car wash.

A key part to successful tyre checks is ensuring sufficient colleague numbers available to complete the checks.

Suggested colleagues:

- Fire Fighters
- Community Safety Advisors
- Fire Cadets (when supervised) *
- Volunteers
- Local Authority Road Safety Officers

* When young people are helping at events, they can assist with washing cars but should not be involved in any tyre checking activities. Refer to your own risk assessment around engaging with children and young people to ensure appropriate safeguarding measures are in place.

Any colleague who is not familiar with tyre checks should read the section on “How to complete a tyre check”, practicing tyre checks on several vehicle types to gain experience.

Colleagues must stress that they are giving basic tyre safety information only, and that checks are not binding.

Fire and Rescue Services do not have the statutory responsibility to enforce any illegal tread depths found and any advice should only be to visit a reputable retailer to seek professional advice.

The following disclaimer is recommended by the Fire and Rescue Indemnity Company Limited (FRIC)

All visual vehicle checks are performed in a non-professional, purely advisory capacity only to inform and educate you, the driver, about the best way to keep your vehicle safe on the road. These checks are limited to basic tyre safety (e.g., visible damage and tread depth) and do not constitute a full, diagnostic, or professional vehicle inspection.

The Fire and Rescue Service accepts no liability for any loss, damage or injury resulting from any actions or omissions you may make based on these limited visual checks or the information and advice given. This advice is not a substitute for a professional vehicle inspection or service.

If you are in any doubt about the safety of your vehicle or the information given to you, you must consult with a qualified technician through your dealership or an independent operator.

You should always service your vehicle in accordance with your vehicle manufacturer's instructions and professional advice

How to complete a tyre check

This section details how to complete a tyre check.

There are three main aspects to a tyre check:

Air pressure, Condition, and Tread depth (ACT**).**

Those conducting tyre checks should become familiar with these three aspects as well as the other information at the end of this section.

Air pressure

This is the most time-consuming and complex part of the tyre check and depending on the speed of the car wash may not be appropriate to measure.

COLD TYRE INFLATION PRESSURE

225/55 R16 99Y XL	2.4 35	2.1 30
225/55 R16 99H XL	2.6 38	2.7 39
245/45 R17 99Y XL	2.6 38	2.2 32
225/50 R17 98Y XL	2.8 41	3.0 44
225/50 R17 98H XL	3.0 44	2.6 38
245/40 R18 97Y XL	3.3 48	3.4 49
245/40 R18 97W XL		

- 1) List of suitable tyres for this vehicle. Identify the tyres on the vehicle by looking at the numbers and letters of the sidewall of the tyre.
- 2) Identify the tyre type and keep within the thick separating lines. Select the top half if the vehicle is lightly loaded, the bottom half if the vehicle is heavily loaded.
- 3) Column for front tyres in both Bar (9) and PSI (8). Identify the correct pressure for the tyre.
- 4) Column for rear tyres in both Bar (7) and PSI (6). Identify the correct pressure for the tyre.

The air pressure of a tyre determines how much of the rubber is in contact with the road surface, and thus the ability of the tyre to provide traction, remove surface water and brake effectively.

Pressure also affects fuel consumption and handling ability. Air pressures are measured using a pressure gauge (see resources required).

It is important to make sure that any dust caps are replaced once the pressure check has been completed.

The correct pressures for tyres can usually be found inside the fuel flap or the sill of the driver's door. Note that tyre pressures can be measured in PSI or Bar.

The tyre pressure recommended will depend on the specific tyre make and model, as well as the load of the car.

This image provides a detailed explanation of how to work out the correct tyre pressure.

If a tyre pressure sticker is absent, refer to the vehicle handbook. In absence of the handbook, it is possible to work out the correct tyre pressures from online checking tools that list the possible tyres for a car along with the recommended tyre pressures for each by simply inputting the license plate. TyreSafe are a recognised partner of the National Fire Chiefs Council, but local arrangements may apply. (www.tyresafe.org/car-tyre-pressure).

Condition

Condition refers to the wear and strength of the rubber and the tyre's structure. To check the condition, look for sidewall damage and cracks in the rubber. Inspect the sidewall for bulges, cuts, or tears, and check for foreign objects stuck in the grooves. Damaged tyres are more likely to blow out, so it is best to replace them as soon as possible, ideally the same day.

To check for cracks, inspect the visible rubber for any cracks, especially on the shoulder of the tyre, though they can appear anywhere.

Cracks are common on vehicles with low annual mileage, as the rubber deteriorates before the tread wears down.

Significantly cracked tyres may be illegal. We recommend that drivers seek professional tyre safety advice as soon as possible as failure to ACT can result in increased risk of road incidents or potential legal consequences such as fines or prosecutions.

Tread depth

Tread depth refers to the depth of the grooves that run around the circumference of the tyre and indicates how much usable rubber is left on the tyre.

The legal minimum tread depth is 1.6mm across the central three quarters of the tyre.

Most tyres have three main grooves, and if the tread in all three grooves is less than 1.6mm, the tyre is illegal.

There are two ways to easily measure the tread depth of a tyre on a car – use a tyre gauge or a 20 pence piece. In both cases, the gauge/coin is placed into the deep tread grooves and the tread measured.

Using a tread gauge, you can measure the remaining rubber on the tyre. New tyres typically have 10 mm of tread, and it is recommended to replace them when the tread goes below 3 mm.

Below 3 mm, the tyres lose performance in removing water and generating road traction, and an advisory notice will be given during an MOT test.

If the tread is under 3 mm, recommend that the driver consider replacing the tyres and inform them they may get an advisory notice on their next MOT. This allows them to plan for the cost of new tyres.



The 20p test for measuring car tyre tread depth. Insert the 20p into the deepest grooves of the tyre. If the raised edge of the

Cracking occurs due to the perishing of rubber after being exposed to UV light for many years. Cracks may be easier to identify once the tyre is washed.

Significantly cracked tyres are illegal. Recommend that the driver get new tyres ASAP, ideally that day. Discuss the penalty for illegal tyres and stress the dangerous nature of the tyres.

The raised edge of a 20 pence piece is 1.6mm deep, making it a simple tool to check if a tyre is legal.

If the tyre is close to or below the legal limit, advise the driver to ACT immediately and seek professional advice from a reputable tyre retailer, ideally the same day, and remind them it is an offence to not only drive with illegal tyres, but also stress the safety element of unsafe tyres.

Legal requirements for tyres:

- Tyres should be inflated according to the manufacturer's instructions.
- Tyres must be free from any visible signs of damage such as cuts, bulges, or foreign objects.
- Tyres must have 1.6mm of tread across the central $\frac{3}{4}$ of the tyre.

The penalty for an illegal tyre is 3 penalty points on the drivers' license and up to £2500 fine. This penalty is per tyre.

While checking tyre tread, it is also important to look for uneven wear, which can be seen as varying tread depth across the tyre. Uneven wear may signal problems with wheel alignment, so it is advisable to recommend the vehicle be checked by a qualified mechanic.



An example of extreme uneven wear of a tyre. The metal core of the tyre is visible on the left side which is the inside shoulder of the tyre. The wear was hidden from a casual glance at the tyre.

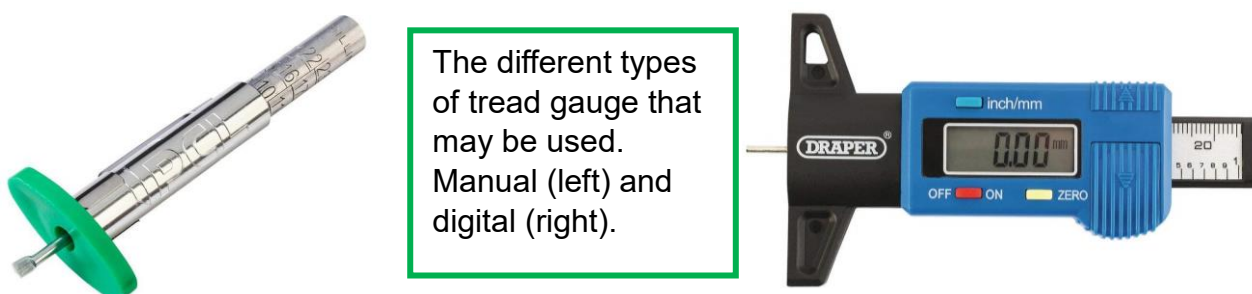
Resources required

Having the proper resources is vital to successful tyre checks, allowing checks to be completed safely and quickly to avoid disruption to the flow of the wash. Below are the recommended resources for a wash but these are for guidance only, the exact resources required will vary from station to station and service to service.

Equipment

The equipment needed to conduct tyre checks can be inexpensive and easily accessed through motoring retailers. More expensive equipment to enhance the tyre checks may be available through partners such as TyreSafe or any other local partner.

The first piece of recommended equipment is a tyre gauge. Tyre tread can be measured as legal/illegal using the 20 pence piece test, but as identified in the previous section, provides limited information. A tyre gauge is a cost-effective way of providing more detailed information on the tread condition of a tyre, including how close to an advisory notice (3 mm tread) the tyre is and whether any uneven wear is present.



The different types of tread gauge that may be used. Manual (left) and digital (right).

For those wishing to offer tyre pressure checks, a calibrated tyre pressure gauge will also be required. Tyre pressure gauges can measure in different units (usually Bar or PSI), have a digital or analogue dial, and can have additional tubing to make measuring pressures easier.



A typical tyre pressure gauge. Deluxe versions have a digital display and additional tubing that make measuring tyre pressures easier. Check what units the pressure gauge uses; Bar and PSI are the most common on tyre pressure stickers and in vehicle handbooks.

Additional, more technologically advanced equipment may be available for use at events. Contact local tyre safety partners for details.

Handouts

The provision of a simple handout enables a quick and easy way to pass on important tyre/road safety messaging.

Suggested handouts may include:

- The results of the tyre check, including a disclaimer. An example of these can be found at the end of this guidance.
- A National Highways leaflet explaining the key vehicle checks to be conducted. Contact your local National Highways partner.
- A small tread depth device such as a tread buddy - www.treadbuddy.co.uk or credit card style device.
- Useful checklists and educational materials can be found here: <https://www.tyresafe.org/resources/tyre-safety-resources/>

Effective delivery at the car wash

When attending a car wash:

- Seek permission from the organiser or station commander to attend the car wash unless there is prior agreement within the service.
- Ensure that your tyre checking doesn't disrupt the flow of the car wash. Cars should never be queueing onto the road or causing an obstruction.
- No enforcement activities should occur. Avoid having enforcement organisations present e.g., National Highways or Police.
- Consider what uniform is suitable for staff to wear. Uniforms that look similar to enforcement agencies e.g., police service should be avoided.

There are several stages in a car wash where tyre checks may be completed.

- **Upon entry:** When cars arrive, they may be waiting to start the wash, and drivers are open to engagement. However, tyres may be dirty, making it harder to check their condition.
- **After rinse:** The car is now clean and usually waiting for the drying stage. This may be a suitable time for tyre checks, although some washes may go straight to drying without a pause.
- **During drying:** The car is stationary, and the driver may be more willing to engage. However, with multiple people drying the car, it can be difficult to conduct a thorough tyre check.
- **Upon donation/exit:** This is the point where the driver expects interaction with colleagues.

Each location is different, so discuss and agree what works best during the organisation of the event.

Event checklist

Prior to the event
Confirm date and time of wash
Establish what resources are available
Order any promotional materials required
Inform social media team of your intention to provide tyre checks
Ensure risk assessment is in place
After the event
Collate evaluation data
Gather feedback from all areas and identify lessons learned

Evaluation

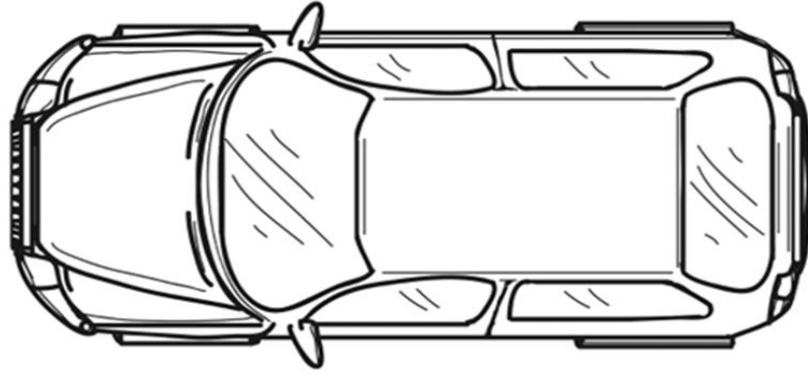
Evaluation is crucial to demonstrating the positive impact of the work.

An example of an evaluation form is included at the end of this guidance. The following should be recorded:

- Number of vehicles checked.
- Number of vehicles that refused a check.
- Number of vehicles found with an advisory (e.g., tread below 3 mm but not illegal)
- Number of vehicles found with illegal tyres including how many tyres and what issue was identified.

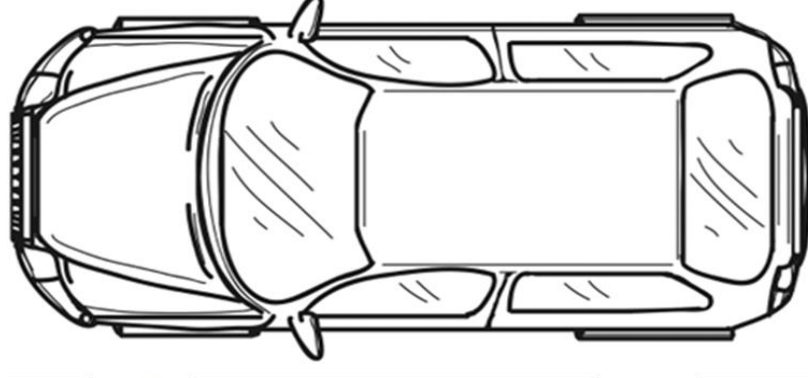
In addition, if possible, the following information should be recorded:

- Any comments made by drivers, positive or negative.
- Any additional advice provided on non-tyre matters (defective or broken lights, cracked windscreens etc).



Front left
current tread

Front right
current tread



Rear left
current tread

Rear right
current tread

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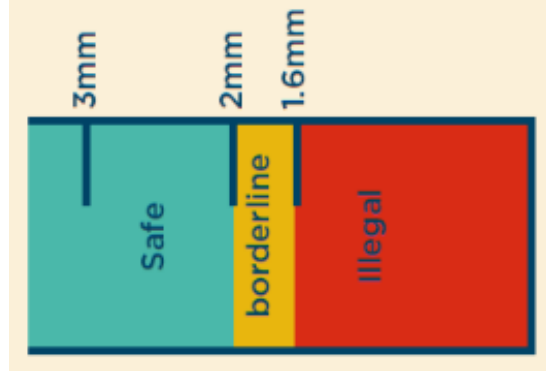
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For more information on tyres, and videos on how to conduct a tyre check, visit www.tyresafe.org.



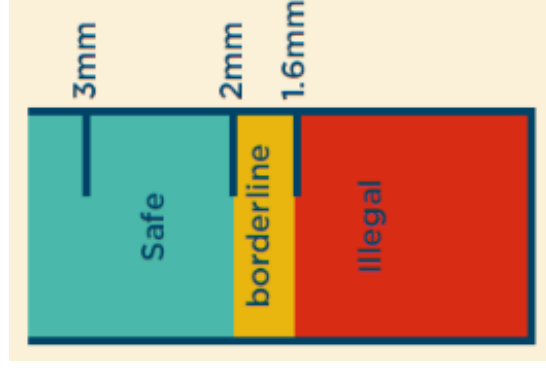
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Evaluation - Tyre checks at Car Washes

Condition of Tyre	Number of Vehicles (Tally)	Total
Healthy Above 3 mm of tread with no visible damage		
Advisory 1.6 mm – 3 mm tread/slight damage or cracking		
Illegal Below 1.6 mm tread/ damage or significant cracking		
Refusal		
Total number of cars checked		

Comments of note from members of the public:

Additional advice given (e.g., defective, or broken lights, cracked windscreens etc)