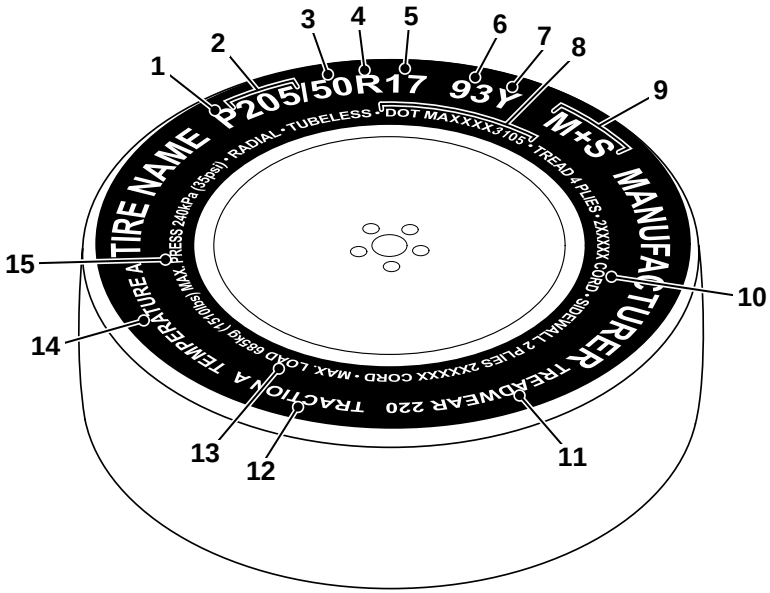
GENERAL INFORMATION

Tyre markings



E80640

1. **P** indicates that the tyre is for passenger use.
2. The width of the tyre from sidewall edge to sidewall edge in millimetres.
3. The aspect ratio, also know as profile, gives the sidewall height as a percentage of the tread width. If the tread width is 205 mm, and the aspect ratio is 50, the sidewall height is102 mm.
4. **R** indicates that the tyre is of Radial ply construction.
5. The diameter of the wheel rim given in inches.
6. The load index for the tyre. This index is not always shown.
7. The speed rating denotes the maximum speed at which the tyre should be used for extended periods. †
8. Tyre manufacturing standard information, which can be used for tyre recalls and other checking processes. Most of this information relates to the manufacturer, place of manufacture etc. The last four numbers are the date of manufacture. For example, if the number was **3106**, the tyre was made in the 31st week of 2006.
9. **M+S** or **M/S** indicates that the tyre has been designed with some capability for mud and snow.

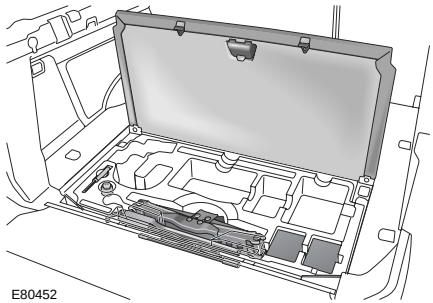
10. The number of plies in both the tread area, and the sidewall area, indicates how many layers of rubber coated material make up the structure of the tyre. Information is also provided on the type of materials used.
11. Wear rate indicator. A tyre rated at 400 for example, will last twice as long as a tyre rated at 200.
12. The traction rating grades a tyre's performance when stopping on a wet road surface. The higher the grade the better the braking performance. The grades from highest to lowest are, AA, A, B, and C.
13. The maximum load which can be carried by the tyre.
14. Heat resistance grading. The tyres resistance to heat is grade A, B, or C, with A indicating the greatest resistance to heat. This grading is provided for a correctly inflated tyre, which is being used within its speed and loading limits.
15. The maximum inflation pressure for the tyre. This pressure should not be used for normal driving.

† Speed ratings

Rating	Speed (mph)
Q	99
R	106
S	112
T	118
U	124
H	130
V	149
W	168
Y	186

TOOL KIT

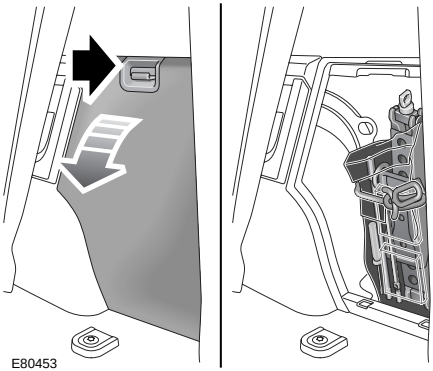
5-seat vehicles



On 5-seat vehicles, the tool kit is located under a panel set in the loadspace floor.

Note: *Tool types and positions, may vary from the illustrations.*

7-seat vehicles



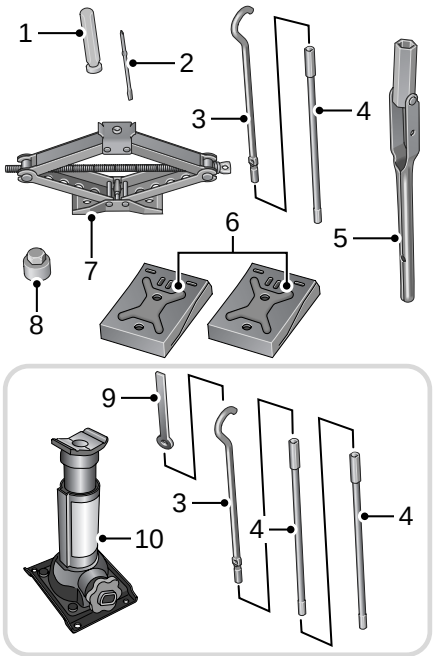
On 7-seat vehicles, the tool kit is stowed behind an access cover in the loadspace area.

Note: *Take careful note of the stowage position of each of the tools as it is important to return them to their correct position after use.*

Tool kit contents

WARNINGS

After use the tool kit should be returned to its storage area and correctly stowed. Do not leave the tool kit, or its components, loose in the storage area as they can prove hazardous during an impact or sudden manoeuvre.



E80454

1. Screwdriver handle
2. Screwdriver blade
3. Jack screw rotating hook
4. Extension piece
5. Wheel nut brace
6. Wheel chocks
7. Wheel change jack (air suspension)
8. Locking wheel nut adapter
9. Jack adapter (coil suspension)
10. Wheel change jack (coil suspension)

Care of the jack

The jack requires occasional maintenance. Examine the jack for wear, damage. Clean and grease the moving parts, particularly the screw thread, to prevent corrosion.

To avoid contamination, the jack should always be stowed in its fully closed position.

CHANGING A ROAD WHEEL

WARNINGS

The spare wheel is heavy and if handled incorrectly may cause injury. Use extreme caution when lifting or manoeuvring the wheels.

Always secure the spare wheel, or the removed wheel, in the correct position using the retaining bolt. Failure to do so may cause the spare wheel to move in the event of a sudden manoeuvre or accident, leading to death or serious injury.

Wheel changing safety

Before raising the vehicle or changing a wheel, ensure that you read and comply with the following warnings.

WARNINGS

Always find a safe place to stop, off of the highway and away from traffic.

Ensure that the vehicle is on firm level ground.

Disconnect any trailer/caravan from the vehicle.

Switch on the hazard warning lamps.

WARNINGS

Ensure that all passengers and animals are out of the vehicle and in a safe place away from the highway.

Place a warning triangle at a suitable distance behind the vehicle, facing towards oncoming traffic.

Ensure that the front wheels are in the straight ahead position and engage the steering lock.

Apply the parking brake and engage **P** (Park) in vehicles fitted with an automatic transmission,

Apply the parking brake and engage 1st or reverse gear in vehicles fitted with a manual transmission.

Remove the spare wheel before using the jack to avoid destabilising the vehicle when raised.

Ensure that the jack is on firm level ground.

Never place anything between the jack and the ground, or the jack and the vehicle.

Always chock the wheels using suitable wheels chocks. Place the chocks on both sides of the wheel diagonally opposite the wheel to be changed.

If jacking the vehicle on a slight slope is unavoidable, place the chocks on the downhill side of the two opposite wheels.

Take care when lifting the spare wheel, and removing the punctured wheel. The wheels are heavy and can cause injuries if not handled correctly.

Take care when loosening the wheel nuts. The wheel brace may slip off if not properly attached and the wheel nuts may give way suddenly. Either unexpected movement may cause injury.

Note: *Switch on the hazard warning lamps to alert other road users.*

Before changing a wheel, ensure the following:

- Front wheels are in the straight-ahead position.
- Electric parking brake is applied.
- **P** (Park) is selected on an automatic transmission vehicle or any gear on a manual transmission vehicle.
- Turn off the starter switch and remove the key.
- Engage the steering lock.

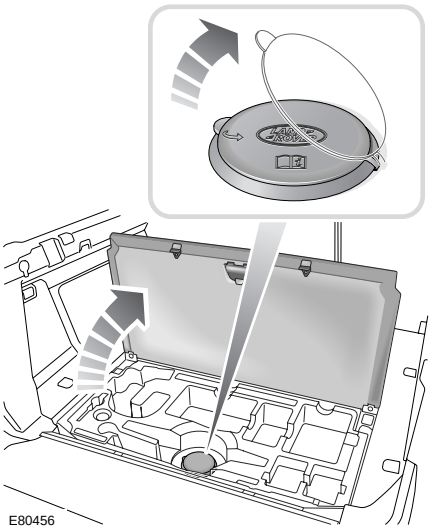
Spare wheel

WARNING

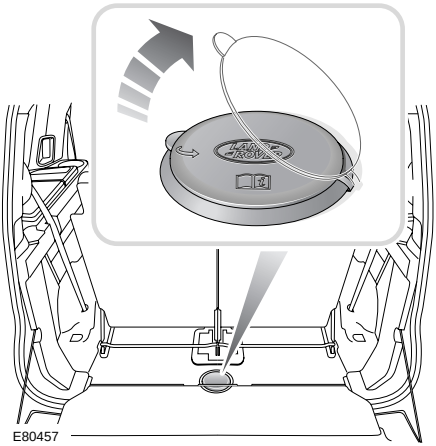
The wheels are extremely heavy. Take care when manoeuvring the spare wheel.

Always remove the spare wheel before jacking up the vehicle.

Spare wheel access - 5-seat vehicle

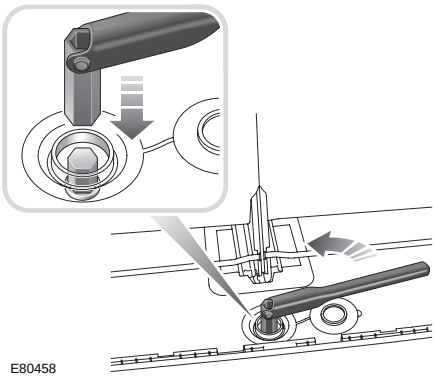


Spare wheel access - 7-seat vehicle

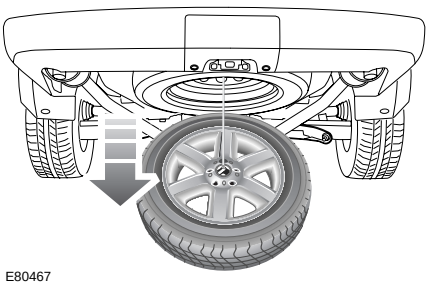


Note: *Before removing the spare wheel, make a note of the position that it is stowed in. The wheel which is to be removed from the vehicle must be correctly stowed in its place.*

Lowering the spare wheel



E80458

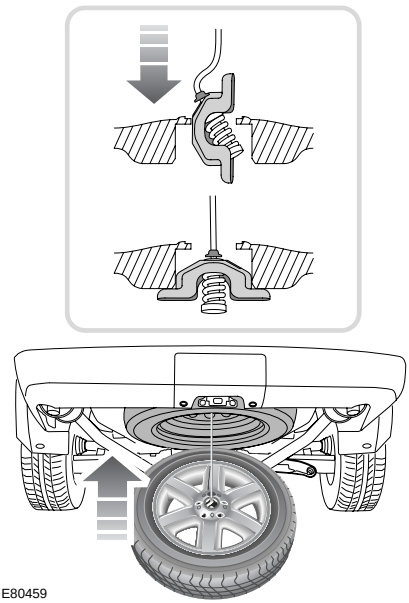


E80467

1. Open the spare wheel access hatch in the loadspace area.
   - 5-seat vehicles, remove the jack from the tool tray.
2. Lift the cap covering the spare wheel-hoist winch nut.
3. Fit the wheel nut brace to the wheel-hoist winch nut and rotate counterclockwise to lower the spare wheel. The mechanism has been designed for use with the wheel nut brace. Do not use power tools.
4. Continue to turn the wheel-hoist winch nut until the wheel is on the ground and the cable is slack. Do not attempt to turn the winch nut beyond the physical stop.

Note: *7-seat vehicles: The wheel-hoist winch nut is close to the back of the rear seats. Turn the wheel nut brace as far as possible counterclockwise and then rotate the handle over the top of the nut and continue to turn it.*

Releasing the wheel



E80459

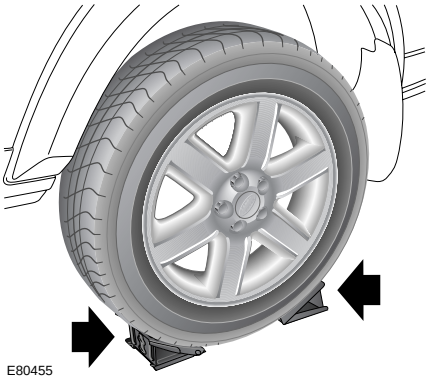
1. Hold the cable and tilt the lifting lug until it can be lifted through the hole in the wheel, as shown in the illustration.

Using wheel chocks

WARNING

Before raising the vehicle, chock the road wheels in two places.

The wheel chocks are stowed in the tool kit.



1. If possible, position the vehicle on level ground, chocking both sides of the wheel diagonally opposite the one to be removed.

Note: *If jacking the vehicle on a slight slope is unavoidable, place the chocks on the downhill side of the two opposite wheels.*

Raising the vehicle (Air suspension)

WARNINGS

Always remove the spare wheel before jacking up the vehicle.

The jack is designed for wheel changing only. Never work beneath the vehicle with the jack as the only means of support. Always use the vehicle support stands before putting any portion of your body beneath the vehicle.

Always place the jack on firm, level ground.

Always position the jack from the side of the vehicle, in line with the appropriate jacking point.

Always use the complete, two-piece, jack lever throughout to minimise any chance of accidental damage or injury.

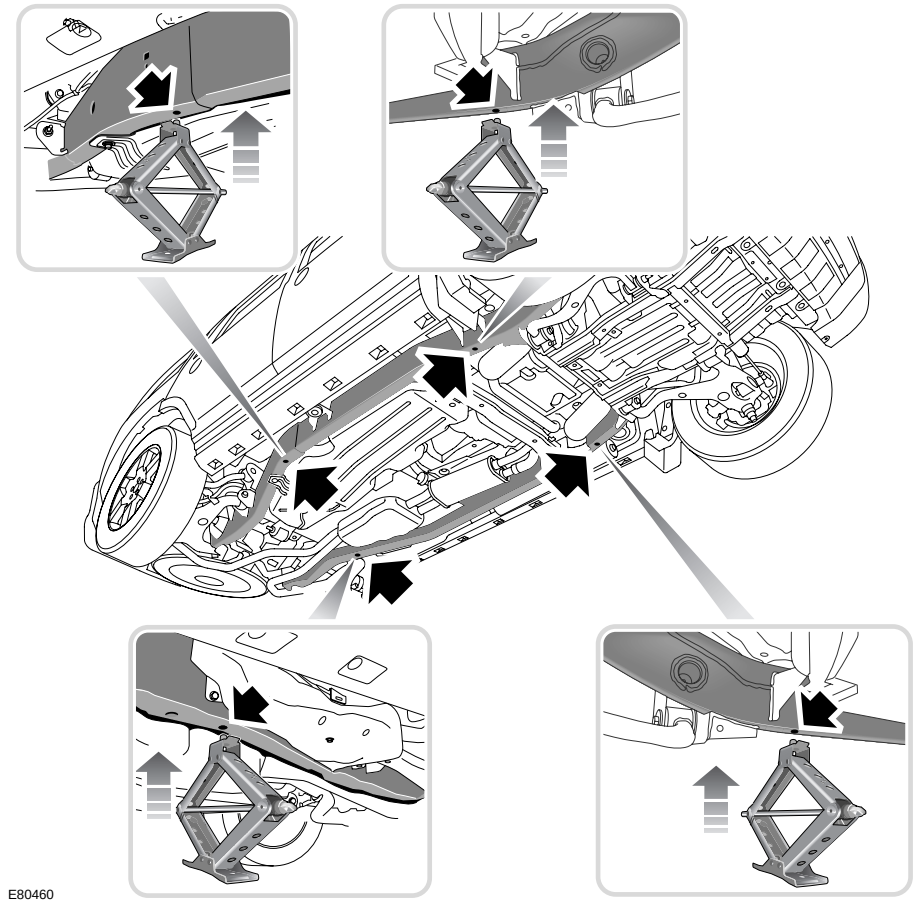
CAUTION

Only jack the vehicle using the jacking points described, or damage to the vehicle could occur.

Note: *Before positioning the jack under the vehicle, ensure that the air suspension is set to off-road height.*

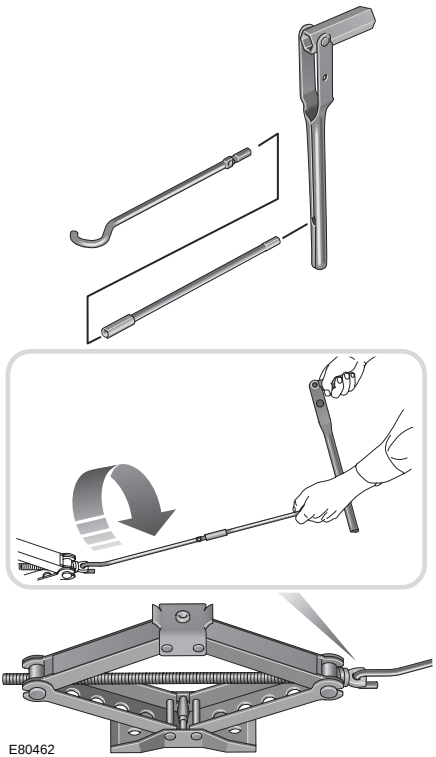
Note: *Your vehicle is fitted with a tilt sensor which activates the alarm if the vehicle is tilted in any direction after it has been locked. If you wish to have the doors locked while jacking up the vehicle, lock the doors by pressing the lock button on the remote control twice within three seconds.*

Jacking points



E80460

Operating the jack



1. Attach the jack cranking lever to the jack. Fit the wheel nut brace onto the end of the cranking lever.

Positioning the jack

WARNING

Never work beneath the vehicle, or place any part of your body beneath the vehicle with the jack as the only means of support. Always use suitable vehicle support stands which are approved for the weight of the vehicle.

Ensure that the jack is correctly located onto the jacking points.

1. Before raising the vehicle, use the wheel nut brace to slacken the wheel nuts half a turn counterclockwise.
2. Position the jack beneath the jacking point, ensuring that the pin on the jack head aligns with the hole in the chassis.
3. Turn the jack lever clockwise to raise the jack cradle until it engages with the jacking point. Ensure that the base of the jack is in full contact with the road surface.

Raising the vehicle (Coil suspension)

WARNINGS

Always remove the spare wheel before jacking up the vehicle.

Never work beneath the vehicle with the jack as the only means of support. Always use approved vehicle support stands before putting any portion of your body beneath the vehicle.

The jack is designed for wheel changing only.

Do not attempt to raise the vehicle using any position other than the jacking points illustrated.

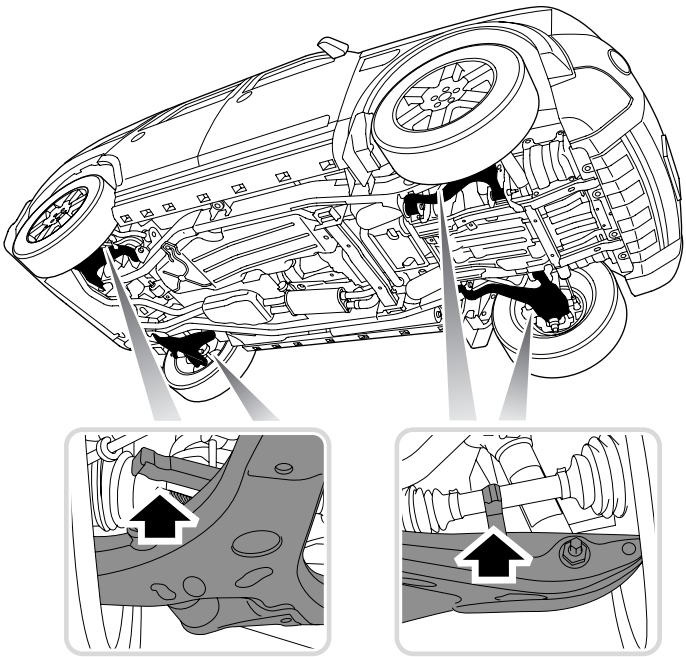
Due to the nature of coil suspension systems, it is not possible to raise the wheel clear of the road surface by jacking under the chassis.

Always place the jack on firm, level ground.

Always position the jack from the side of the vehicle, in line with the appropriate jacking point.

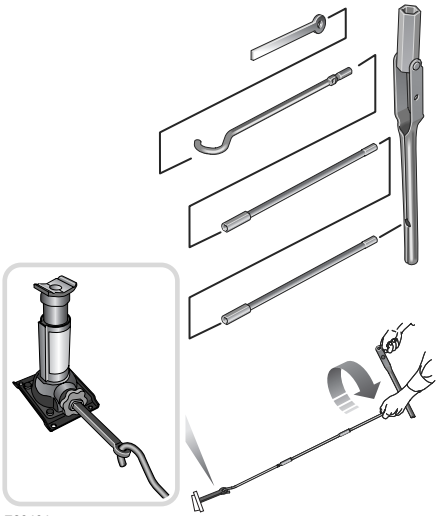
Note: *Your vehicle is fitted with a tilt sensor which activates the alarm if the vehicle is tilted fore and aft, or side to side, after it has been locked. If you wish to have the doors locked while jacking up the vehicle, lock the doors by pressing the lock button on the remote control twice within three seconds.*

Jacking points



E80463

Operating the jack



E80464

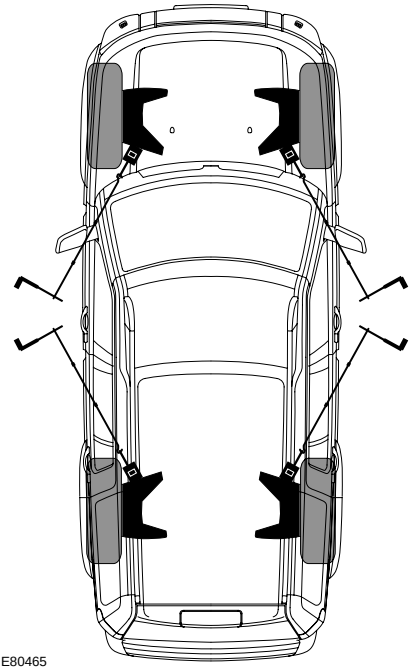
1. Attach the jack cranking lever to the jack using the adapter. Fit the wheel nut brace onto the end of the cranking lever.

Positioning the jack

WARNING

Never work beneath the vehicle, or place any part of your body beneath the vehicle with the jack as the only means of support. Always use suitable vehicle support stands which are approved for the weight of the vehicle.

Ensure that the jack is correctly located onto the jacking points.



E80465

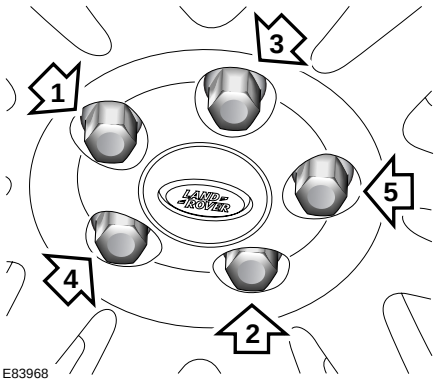
1. Before raising the vehicle, use the wheel nut brace to slacken the wheel nuts half a turn counterclockwise.
2. Position the jack beneath the relevant suspension arm.
3. Turn the jack lever clockwise to raise the jack cradle until it engages with the jacking point. Ensure that the base of the jack is in full contact with the road surface.

Wheel changing

1. Read and observe the warnings in **Wheel changing safety**.
2. Loosen the wheel nuts half a turn (counterclockwise).
3. Position the jack under the relevant jacking point.
4. Raise the vehicle using the jack with a slow steady operation. Avoid rapid, jerky actions as they may cause the vehicle/jack to become unstable.
5. Remove the wheel nuts and place them together where they cannot roll away.
6. Remove the wheel and place to one side. Do not lay the wheel on its face as this may damage the finish.
7. Fit the spare wheel to the hub.
8. Re-fit the wheel nuts and lightly tighten them. Ensure that the wheel is making contact with the hub evenly.
9. Ensure that the space under the vehicle is clear of obstructions and lower the vehicle slowly and smoothly.
10. With all the wheel on the ground and the jack removed, fully tighten the wheel nuts.
11. If an alloy spare wheel is to be fitted, using a suitable blunt tool, knock the centre cap out of the removed wheel. Using hand pressure only, press the centre cap into the newly fitted spare wheel.
12. Check and adjust the tyre pressure as soon as possible.

Note: *During jacking, the air suspension system may enter an automatic freeze state. See* ***AIR SUSPENSION MESSAGES*** *(page 181).*

Wheel nut tightening sequence



With all wheels on the ground and the jack removed, fully tighten the wheel nuts in the sequence shown to 140 Nm (103lb.ft)

Note: *If it not possible to torque the wheel nuts when a wheel is replaced, the wheel nuts should be set to the correct torque as soon as possible.*

Temporary spare wheel

WARNINGS

You must comply with the instructions given on the warning label affixed to the temporary spare wheel. Failure to do so may result in incorrect use of the temporary spare wheel. This may cause vehicle instability and/or tyre failure.

Drive with caution while the temporary spare wheel is fitted and ensure that an original size wheel and tyre are fitted as soon as possible.

Do not drive the vehicle with more than one temporary spare wheel fitted.

Do not exceed 80 km/h (50 mph) while the temporary spare wheel is fitted.

The tyre pressure in the temporary spare wheel/tyre should be 420 kPa (4.2 bar/60 lbf/in²).

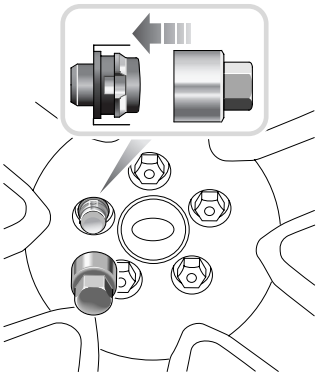
The use of snow chains is not permitted on a temporary spare wheel.

DSC must be switched on while the temporary spare wheel is in use.

Locking wheel nuts

Vehicles may be equipped with a locking wheel nut on each wheel. These can only be removed using the special adapter provided in the tool kit.

Note: *A code number is stamped on the underside of the adapter. Ensure the number is recorded on the Security Information card supplied with the literature pack. Quote this number if a replacement is required. Do not keep the Security Information card in the vehicle.*



E80466

Insert the adapter firmly onto the locking wheel nut.

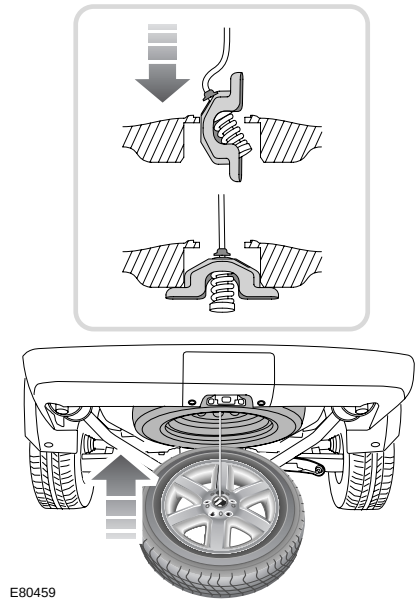
Using the wheel nut brace, unscrew the wheel nut and adapter.

Be sure to return the locking wheel nut adapter to the correct storage position.

Stowing the changed wheel

WARNING

Do not stow the wheel while the vehicle is still raised on the jack.



E80459

1. Place the wheel under the rear of the vehicle with its style surface uppermost.
2. Place the lifting lug through the wheel aperture and locate it in position.
3. Winch up the wheel using the wheel-hoist mechanism.

   Do not use power tools on the wheel-hoist winch.
4. Continue to wind up until the mechanism clutches out. This is confirmed by a clear physical indication from the wheel nut brace and an audible noise.
5. Check that the wheel has returned to the same position as the spare wheel as previously noted. If in any doubt, unwind the winch slightly and repeat the previous step.

   The wheel must be securely retained in its correct position by the winch mechanism or it could become loose.
6. Replace the locking cap over the wheel-hoist nut. As the underside of this cap is exposed to the same conditions as the underside of the vehicle, ensure that it is firmly in place.

Note: *If, for any reason, the spare wheel is not to be fitted back in its hoist, the wheel hoist should be rewound as follows.*

Position the lifting lug level on the cable and wind up the wheel hoist mechanism until it clutches out.

TYRE CARE

WARNINGS

Defective tyres are dangerous. Do not drive the vehicle if a tyre is damaged, excessively worn, or incorrectly inflated. Doing so may lead to premature tyre failure.

Avoid contaminating the tyres with vehicle fluids as they may cause damage to the tyre.

Avoid spinning the tyre. The forces released can damage the structure of t the tyre and cause it to fail. Doing so may lead to premature tyre failure.

If wheel spin is unavoidable due to loss of traction (in deep snow for example) do not exceed the 50 km/h (30 mph) point on the speedometer. Doing so may lead to premature tyre failure.

Note: *Tyre condition should be checked after the vehicle has been used off-road. As soon as the vehicle returns to a normal, hard, road surface stop the vehicle and check for damage to the tyres.*

All of the tyres (including the spare) should be checked regularly for damage, wear and distortion. If you are in any doubt about the condition of a tyre, have it checked immediately by a tyre centre, or your Dealer/Authorised Repairer.

Tyre wear

Good driving practise will improve the mileage you obtain from your tyres and avoid unnecessary damage.

- Always ensure that the tyre pressures are correctly adjusted.
- Always observe the posted speed limits and advisory speeds for bends.
- Avoid pulling away quickly, or hard acceleration.
- Avoid making fast turns or braking sharply.
- Where ever possible, avoid potholes, or obstacles on the road.
- Do not drive up kerbs, or rub the tyres against them when parking.

Wear indicators

WARNINGS

Wear indicators show the minimum tread depth recommended by the manufacturers. Tyres which have worn to this point will have reduced grip and poor water displacement characteristics.

CAUTIONS

If tread wear is uneven across a tyre, or the tyre wears excessively, the vehicle should be checked by your Dealer/Authorised Repairer as soon as possible.


E80377

When the tread has worn down to approximately 2 mm, wear indicators start to appear at the surface of the tread pattern. This produces a continuous band of rubber across the tread as a visual indicator.

To maintain performance and grip the tyre must be replaced as soon as the wear indicator becomes visible. Sooner, if legislation requires replacement at a greater tread depth.

Note: *Tread depth should be checked regularly, in some cases more frequently than the service intervals. For advice on checking tyres contact your Dealer/Authorised Repairer, or tyre dealer.*

Age degradation

Tyres degrade over time due to the effects of ultraviolet light, extreme temperatures, high loads and environmental conditions. Tyres should be replaced at least every six years, but they may require replacement more frequently. Even if unused, the spare tyre should be replaced at the same time as the four road tyres.

Punctured tyres

WARNING

Do not drive the vehicle with a punctured tyre. Even if the punctured tyre has not deflated, it is unsafe to use as the tyre may deflate suddenly at any time.

Not all punctures result in the tyre deflating immediately. Therefore, it is important to check the tyres for damage and foreign objects, regularly.

When driving, if a sudden vibration or change to the vehicle's handling is noticed, reduce speed immediately. Do not brake hard or make any sudden manoeuvres or direction changes. Drive slowly to an area off the main highway and stop the vehicle.

Note: *Driving the vehicle to a safe area may cause damage to the punctured tyre, but occupant safety is far more important.*

Inspect the tyres for signs of punctures, damage or under inflation. If any damage or deformity is detected, the tyre should be replaced. If a spare tyre is not available, then the vehicle should be recovered to a tyre centre, or to your Dealer/Authorised Repairer.

Replacement tyres

WARNINGS

Do not fit cross-ply tyres.

Do not fit tyres that require inner tubes.

Do not swap tyres around the vehicle. Tyres bed in to the specific characteristics of each wheel position. Swapping them around may affect the vehicle's handling and traction.

Always fit replacement tyres of the same type and wherever possible of the same make and tread pattern.

Replacement wheels should be genuine Land Rover parts. This will maintain the designed driving characteristics both on and off road.

If the use of tyres not recommended by Land Rover is unavoidable, ensure that you read and fully comply with the tyre manufacturer's instructions. Failure to do so may lead to tyre failure due to incorrect fitment or use.

Ideally, tyres should be replaced in sets of four. If this is not possible, replace the tyres in pairs (front and rear). When tyres are replaced, the wheels should always be re-balanced and alignment checked.

The correct tyre specification for your vehicle can be found on the tyre information label.

High performance wheel and tyre combinations

CAUTIONS

This vehicle may be fitted with a high performance wheel and low aspect ratio tyre combination designed to give enhanced dry road performance with consideration for aquaplaning resistance.

Low profile, high speed rated tyres have a softer tread compound. If driven aggressively they may suffer increased tread wear and a shorter life than can be expected from other tyre types.

This wheel and tyre combination is susceptible to damage if driven off road. This combination has less performance in snow or ice conditions than M and S tyres. High performance tyres must be replaced with winter tyres when weather conditions dictate.

Directional tyres



E80378

Directional tyres must be fitted so that they rotate in the direction that the arrow is pointing when the vehicle is moving forward.

Tyre pressures

WARNINGS

Never drive your vehicle if the tyre pressures are incorrect. Under-inflation causes excessive flexing and uneven wear to the tyre. This can lead to sudden tyre failure.

Over-inflation causes a harsh ride, uneven tyre wear and poor handling.

pressure checks should only be carried out when tyres are cold and the vehicle has been stationary for more than three hours. A hot tyre at or below the recommended cold inflation pressure is dangerously under-inflated.

If the vehicle has been parked in strong sunlight or used in high ambient temperatures, do not reduce tyre pressures. Move the vehicle into the shade and allow the tyres to cool before re-checking the pressures.

Tyre pressures (including the spare) should be checked at least once a week with normal on-road use, but should be checked daily if the vehicle is used off-road. Always check the tyre pressures before setting off on a long journey.

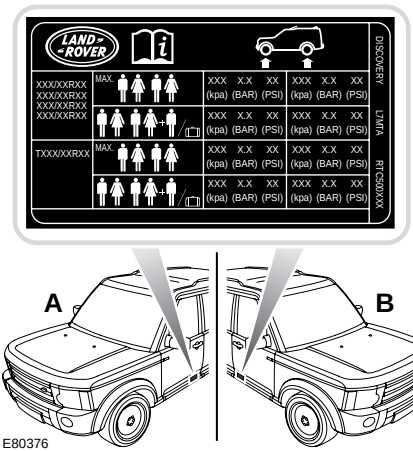
Use a reliable gauge to check the pressures when the tyres are cold. Driving as short a distance as 3 km (1 mile) can warm the tyres up sufficiently to affect the tyre pressures.

If it is necessary to check the tyres when they are warm, you should expect the pressures to have increased by up to 30 - 40 kPa (0.3- 0.4 bar) (4 - 6 lbf/in^2). Do not reduce the tyre to cold inflation pressures under these circumstances. Allow the tyres to cool fully before adjusting the pressures.

Checking the tyre pressures

WARNING

Tyre pressures must be checked regularly using an accurate pressure gauge when the tyres are cold. Failure to properly maintain your tyre pressures could increase the risk of tyre failure resulting in loss of vehicle control and personal injury.



A Left-hand drive vehicle

B Right-hand drive vehicle

The correct tyre pressures are shown on the label attached to the driver's door sill.

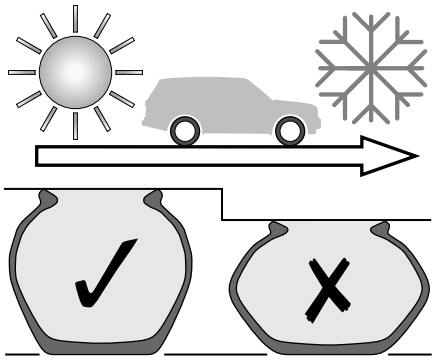
Use this procedure to check and adjust tyre pressures:

1. Remove the valve cap.
2. Firmly attach a tyre pressure gauge/inflator to the valve.
3. Read the tyre pressure from the gauge, and add air if required.
4. If air is added to the tyre, remove the gauge from the valve and re-attach it to check that the pressure is correct. Failure to remove and re-attach the gauge to the valve could cause the gauge to show an incorrect reading.
5. If too much air is added, remove the gauge from the valve and allow air out of the tyre by pressing the centre of the valve. Reconnect the gauge to the valve and check that the air pressure is correct.
6. If the pressure is still not correct, repeat this process and re-check.
7. Refit the valve cap. Ensure that the valve caps are firmly screwed down to prevent water or dirt entering the valve. Check the valves for leaks when checking the tyre pressures.

Note: *It is an offence in certain countries to drive a vehicle with incorrect tyre pressures.*

Note: *It is the driver's responsibility to ensure that the tyre pressures are correct.*

Pressure compensation for ambient temperature changes



E80321

If the ambient temperature drops, the tyre pressures will decrease, which may cause under inflation. This may happen when travelling to, or through, areas of significantly lower temperature.

Under inflation causes the tyre sidewall height to reduce, which in turn results in uneven tyre wear, and a risk of tyre failure.

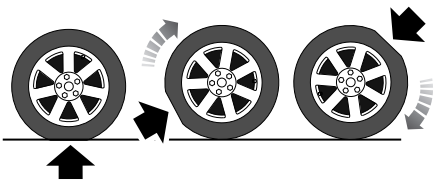
Tyre pressures may be adjusted before setting off on a journey to, or through, areas of low temperature. Alternatively, the tyre pressures can be adjusted when low temperature areas are reached.

Note: *If the tyre pressures are to be adjusted in the lower temperature area, the vehicle should be left standing for a least one hour prior to adjustment.*

Tyre pressures should be increased by 0.14 bar (14 kPa, 2 lbf/in²) for each 10°C (20°F) temperature decrease.

Flat spots

If the vehicle is stationary for a long period when the ambient temperature is high, the tyres may form flat spots. When the vehicle is driven these flat spots will cause a vibration which will steadily disappear as the tyres regain their original shape.



E80322

In order to minimise flat spotting, tyre pressures can be increased. Increase tyre pressures by 0.14 bar (14 kPa, 2 lbf/in²) for each 10°C (20°F) temperature increase above 20°C (68°F).

Long term storage

Flat spotting can be minimised during long term storage by increasing the tyre pressures to the maximum indicated on the tyre sidewall.

Note: *The tyre pressures must be reduced to the correct pressure before the vehicle is driven.*

USING WINTER TYRES

If winter tyres are fitted to the vehicle, the tyre manufacturer's instructions must be followed. Pay particular attention to instructions regarding:

- the maximum speed that the vehicle can be driven at and
- the correct tyre pressures.

USING SNOW CHAINS

WARNINGS

Only use traction devices in heavy snow conditions, on hard road surfaces.

Dynamic Stability Control (DSC) must be switched off when using traction devices. DSC limits wheel spin which is required to maintain traction in deep snow conditions.

Do not exceed 50 km/h (30 mph) when traction devices are fitted.

Do not fit traction devices to a temporary spare wheel.

Land Rover approved traction devices may be used to improve traction on a hard road surface in heavy snow conditions. They should not be used in off-road conditions.

If it is necessary to fit traction devices, the following points should be observed:

- Single sided Spike-spyder traction devices can only be fitted to the front wheels of vehicle fitted with 17, 18 or 19 inch diameter wheels.
- The wheels and tyres fitted must conform to the specifications of the original equipment.
- No traction devices should be fitted to the rear wheels.
- Only Land Rover approved traction devices should be used on the vehicle. Only Land Rover approved traction devices have been tested to ensure that they do not cause damage to the vehicle. Contact your Dealer/Authorised Repairer for information.
- Always read, understand, and follow the snow chain manufacturer's instructions. Pay particular attention to the maximum speed and fitting instructions.
- Avoid tyre/vehicle damage by removing the traction devices as soon as the conditions allow.

TYRE PRESSURE MONITORING SYSTEM

WARNINGS

The Tyre Pressure Monitoring (TPM) system is not a substitute for manually checking tyre pressures. The TPM system only provides a low tyre pressure warning and does not re-inflate the tyres.

The TPM system cannot monitor damage to a tyre. Regularly check the condition of your tyres, especially if the vehicle is driven off-road.

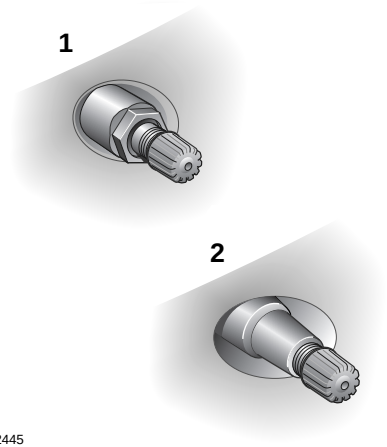
CAUTION

When inflating tyres, care must be taken to avoid bending or damaging the TPM system valves. Always ensure correct alignment of the inflation head to the valve stem.

Note: *Non-approved accessories may interfere with the system.*

Note: *Different types of tyre may affect the performance of the TPM system. Always replace tyres in accordance with recommendations.*

Your vehicle may be equipped with a TPM system which monitors pressure in each tyre, including the full-size spare tyre. Temporary spare tyres are not fitted with sensors and are not monitored.



E82445

Wheels fitted with a TPM system can be identified by the appearance of the external metal lock nut and valve **1**. All Land Rover non-TPM system wheels have a rubber valve fitted **2**.

TPM system operation

The TPM system monitors the pressure of the tyres via sensors located in each wheel and a receiver located within the vehicle. Communication between sensor and receiver is via Radio Frequency (RF) signals.

Check each tyre regularly when cold, including the spare. If necessary, inflate tyres to the recommended pressure.

If the tyre pressure warning lamp illuminates, stop and check your tyre pressures as soon as possible.

If necessary, inflate the tyres to the recommended pressure. If low pressure warnings occur frequently, the cause must be found and rectified.

Driving on an under-inflated tyre can cause the tyre to overheat and lead to tyre failure. Under-inflation reduces fuel efficiency and tyre tread life, and may also affect the vehicle's handling and stopping ability.

The TPM system also monitors the full size spare tyre pressure. If the pressure for the spare tyre is incorrect, the message **CHECK SPARE TYRE PRESSURE** is displayed, accompanied by illumination of the warning lamp.

Note: *The TPM system warnings may be intermittent under variable climatic conditions.*

TPM system malfunction

Your vehicle indicates a TPM system fault by first flashing and then continuous illumination of the warning lamp. The message **TYRE PRESSURE MONITORING SYSTEM FAULT** is also displayed in the message centre. The TPM system fault sequence will occur every time the vehicle is started until the fault is rectified. When a malfunction occurs, the system may not be able to detect or signal low tyre pressure as intended.

TPM system faults may occur for a variety of other reasons, including: other radio frequency systems causing interference or the installation of incompatible replacement tyres on the vehicle.

Spare tyre pressure

The full size spare tyre must always be inflated to the highest pressure for the specified tyre size.

Full size spare wheel and tyre change

The system will automatically recognise any changes in wheel positions. The vehicle must be stationary for 15 minutes during the wheel and tyre change, to ensure that the system can detect the change. After driving above 25 km/h (18 mph) any deflation warning should clear within a few minutes.

Temporary spare wheel and tyre change

If the temporary spare wheel is fitted, the system will automatically recognise the change in wheel positions. After approximately ten minutes of driving above 18 mph (25 km/h), the message **TYRE PRESSURE FRONT (REAR) RIGHT (LEFT) NOT MONITORED** will be displayed, accompanied by illumination of the warning lamp.

The warning lamp will first flash and then illuminate continuously. Extended use of the temporary spare wheel, will trigger the message **TYRE PRESSURE MONITORING SYSTEM FAULT**.

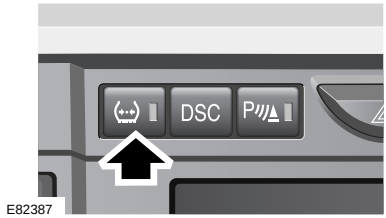
This TPM system display sequence will be activated at every ignition cycle until the temporary spare wheel is replaced by a full-size road wheel.

Note: *If in use, always replace the temporary spare wheel before having a TPM system fault investigated.*

Vehicle loading

You can select different target pressure levels that correspond to the recommended pressures for a lightly-laden and a heavily-laden vehicle. The indicator lamp on the TPM system button displays the system status.

If the indicator lamp is illuminated, the system is in lightly-laden mode, if not then the system is in heavily-laden mode. If the vehicle is to be used heavily-laden or for towing, the tyre pressures must be increased to cope with the additional load, and the tyre pressure monitoring system must be set to heavily laden mode.



1. Press the TPM system button for at least four seconds. The ignition switch must be in position **II** and the engine not running.
2. To indicate that the system has switched to heavily-laden mode, the indicator in the switch will extinguish, and the message **TYRE PRESSURE MONITORING SET FOR HEAVY LOAD** is displayed.
3. When the vehicle load is returned to normal and the tyre pressures are reset, press the button as before to put the system back into lightly-laden mode. The indicator lamp in the switch illuminates and the message **TYRE PRESSURE MONITORING SET FOR LIGHT LOAD** is displayed.

If a tyre needs to be changed

CAUTION

Damage to the vehicle may result if the following precautions are not taken:

The valve stem seal, washer, nut, valve core and cap should be replaced at every tyre change.

The valve stem seal, washer and nut must be replaced if the valve retention nut is loosened.

Sensor units and nuts must be refitted using correct torque figures and associated profile.

Sensors can be removed from the wheel by unscrewing the valve retention nut.

Always have your tyres serviced by a dealer or qualified technician. If a TPM system is fitted, each wheel and tyre assembly, with the exception of a temporary spare, is equipped with a tyre pressure sensor connected to the tyre valve stem.

Avoid contact between the bead of the tyre and the sensor during removal and refitting of the tyre, otherwise the sensor may become damaged and/or inoperable.

Replacement sensor fitment procedure

Sensor replacement should be carried out by a Land Rover Dealer/Authorised Repairer.

A replacement sensor must be fitted to a running wheel in order to be recognised by the TPM system. Recognition only occurs when the vehicle is driven above 25 km/h (18 mph) for at least ten minutes.

Should the TPM system warning for any wheel not clear, even after ensuring correct inflation and driving for more than ten minutes above 25 km/h (18 mph), consult your Land Rover Dealer/Authorised Repair.

Messages

The following table lists the TPM-related messages that may be displayed in the message centre. Market criteria mean that some messages will not apply to your vehicle and will therefore not appear.

Message	Meaning	What to do?
CHECK ALL TYRE PRESSURES	Pressure in a running tyre decreased to first warning threshold.	Check tyre pressures.
CHECK SPARE TYRE PRESSURE	Pressure in spare tyre decreased to warning threshold.	Check pressure of spare tyre.
TYRE PRESSURE NOT MONITORED	Possible loss of RF transmission or defective sensor battery.	Seek assistance immediately.
TYRE PRESSURE TOO HIGH	Pressure in a running tyre too high, threshold reached.	Adjust to correct pressure as soon as possible.
TYRE PRESSURE VERY LOW	Pressure in a running tyre decreased to warning threshold.	Adjust to correct pressure as soon as possible.
TYRE PRESSURE MONITORING SYSTEM FAULT	TPM system fault has occurred.	Seek qualified assistance immediately.
TYRE PRESSURES TOO HIGH		Adjust to correct pressure as soon as possible.
TYRE PRESSURES VERY LOW		Adjust to correct pressure as soon as possible.
TYRE PRESSURE MONITORING SET FOR HEAVY LOAD	Indicates the system is set to monitor the tyre pressures for a heavily-laden condition.	Ensure setting is correct for the current tyre pressures and loading conditions.
TYRE PRESSURE MONITORING SET FOR LIGHT LOAD	Indicates the system is set to monitor the tyre pressures for lightly-laden conditions.	Ensure setting is correct for the current tyre pressures and loading conditions.

TYRE GLOSSARY

lb/in^2 or PSI

Pounds per square inch, an imperial unit of measure for pressure.

kPa

Kilo Pascal, a metric unit of measure for pressure.

Cold tyre pressure

The air pressure in a tyre which has been standing in excess of three hours, or driven for less than one mile.

Maximum inflation pressure

The maximum pressure to which the tyre should be inflated. This pressure is given on the tyre side wall in lbf/in² and kPa.

Note: *This pressure is the maximum allowed by the tyre manufacturer. It is not the pressure recommended for use. See* ***TECHNICAL SPECIFICATIONS*** *(page 269).*

Kerb weight

The weight of a standard vehicle, including a full tank of fuel, any optional equipment fitted, and with the correct coolant and oil levels.

Gross vehicle weight

The maximum permissible weight of a vehicle with driver, passengers, load, luggage, equipment, and tow ball load.

Accessory weight

The combined weight (in excess of those items replaced) of items available as factory installed equipment.

Production options weight

The combined weight of options installed which weigh in excess of 1.4 kg (3 lb) more than the standard items that they replaced, and are not already considered in kerb or accessory weights. Items such as heavy duty brakes, high capacity battery, special trim etc.

Vehicle capacity weight

The number of seats multiplied by 68 kg (150lb) plus the rated amount of load/luggage.

Maximum loaded vehicle weight

The sum of kerb weight, accessory weight, vehicle capacity weight, and production options weight.

Rim

The metal support for a tyre, or tyre and tube, upon which the tyre beads are seated.

Bead

The inner edge of a tyre that is shaped to fit to the rim and form an air tight seal. The bead is constructed of steel wires which are wrapped, or reinforced, by the ply cords.

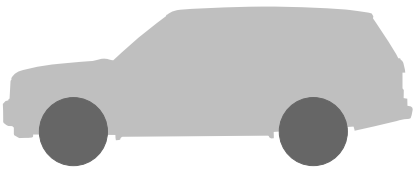
TECHNICAL SPECIFICATIONS

Original wheel and tyre combinations

Wheel and tyre specification

Wheel size	Tyre size	Load index
7J x 17	235/70 R17 H	111
8J x 18	255/60 R18 V	112
8J x 19	255/55 R19 V	111

Accessory wheels and tyres



1 _____ **2** _____

3 _____

_____

E82330

Note: *Use the diagram above to record accessory wheel and tyre information.*

1. Front tyre pressure.

2. Rear tyre pressure.

3. Accessory wheel and tyre specification.

WARNINGS

Contact your Land Rover Dealer/Authorised Repairer before fitting any accessory wheels or tyres. Your Dealer will be able to offer guidance regarding the correct accessories. Fitting incorrect wheel/tyre combinations can seriously affect the ride and handling of your vehicle. In extreme cases this may lead to loss of control of the vehicle.