

# Wheels and Tyres

## TYRE CARE

### Tyre pressures

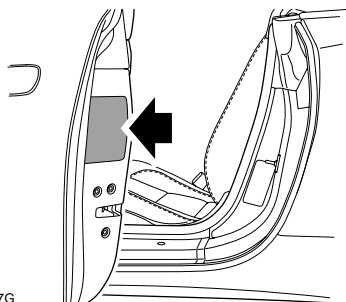


#### **WARNING:**

**Improperly inflated tyres can affect vehicle handling and can fail suddenly, possibly resulting in loss of vehicle control.**

**Caution: Never exceed the maximum pressure stated on the sidewall. Overinflation could cause the tyre to fail suddenly.**

The recommended tyre pressures are listed on a placard label fixed to the end of the left-hand side door (the driver's door). These pressures provide optimum ride and handling characteristics for all normal operating conditions.



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If winter tyre are fitted, please refer to the winter tyre pressure information on page 228.

In the interest of safety, reliability and fuel efficiency, check the tyres, including the spare, for condition and pressure on a weekly basis and before long journeys.

Pressure checks must be carried out when the tyres are cold and the vehicle has been standing in ambient local conditions for at least one hour.

Do not check tyre pressures immediately after the tyres has travelled in excess of 106 km (1.0 mile). Tyre temperatures and pressures increase when running. Deflating a warm tyre to the recommended pressure will result in under inflation.

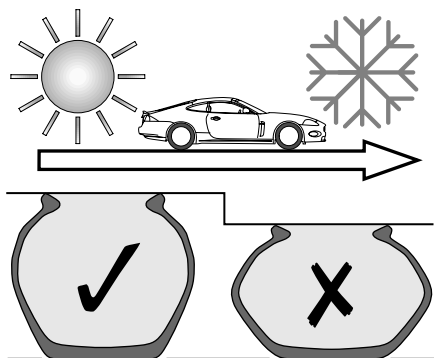
If tyre pressures are checked while the vehicle is inside a protected covered area, e.g. a garage, and subsequently driven in lower outdoor temperatures, tyre under inflation could occur.

A slight pressure loss occurs naturally with time. If this exceeds 0.14 bar ((2 lbf/in<sup>2</sup>, 14 kPa) per week, have the cause investigated and rectified qualified assistance.

### **Ambient temperature pressure compensation**

If the intended journey will take the vehicle into an area where the ambient local temperature is known to be lower than the journey start point, tyre pressure under inflation could occur.

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A colder ambient local temperature will reduce pressure within the tyre. An effect is to decrease sidewall height and to increase tyre shoulder wear with the potential for tyre failure. Vehicle dynamics could also be adversely affected.

In order to minimise this effect, tyre pressures can be adjusted to compensate before the start of the journey. Alternatively, tyre pressures can be adjusted when the area of lower ambient temperature is reached.

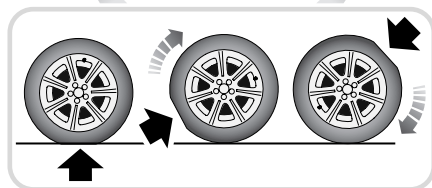
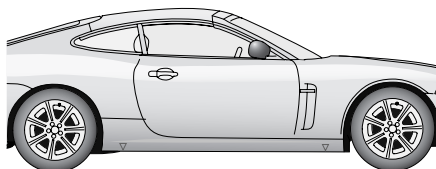
In this situation the vehicle must be left in the ambient local temperature for a least one hour before tyre pressure is adjusted.

To compensate for colder ambient temperatures, tyre pressures should be increased by 0.14 bar (2lbf/in<sup>2</sup>, 14 kPa) for each 10°C (20°F) decrease.

**Note:** Ensure that correct tyre pressures are maintained when moving to areas of differing ambient temperature.

The Tyre Pressure Monitoring system (TPM system) may issue a warning if the under inflation becomes significant. When driving through variable climatic conditions the TPM system warnings may be intermittent.

In areas of extended high ambient temperature, vehicle tyres can be affected by a softening of the tyre side wall. If the vehicle is stationary for long periods, the effect is to slightly deform the tyre at the point where the tyre meets the standing surface. This is known as a flat spot.



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This is normal tyre behaviour, however, when the vehicle is subsequently driven vibration may be experienced from the deformed tyre. The condition will steadily improve with additional mileage.

In order to minimise this effect, tyre pressures can be adjusted before the start of the journey to compensate.

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For each 10°C (20°F) increase in temperature above 20°C (68°F), tyre pressure should be increased by 14 kPa (2lbf/in<sup>2</sup>, 0.14 bar).

## Tyre pressure compensation chart - high ambient temperatures

Tyre Pressure Temperature Compensation	
Ambient Temperature °C (°F)	Pressure Compensation bar (lbf/in <sup>2</sup> , kPa)
20 (68)	use placard label
30 (86)	+ 0.14 (2, 14)
40 (104)	+ 0.28 (4, 28)
50 (122)	+ 0.41 (6, 41)

## Tyre pressures during long term vehicle storage

To minimise the possibility and effects of flat spots during storage, the tyres may be inflated to the maximum pressure indicated on the tyre wall.

**Note:** Before using the stored vehicle on the road again, ensure that correct tyre pressures are restored.

## Wear



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All tyres fitted as original equipment include Tread Wear Indicators (TWI) in their tread pattern. When the tread has worn to a remaining depth of 1.6 mm the indicators appear at the surface as bars which connect the tread pattern across the full width of the tyre.

It is illegal, in certain countries, to continue to use tyres after the tread has worn to less than 1.6 mm over three quarters of the width and the entire circumference of the tyre.

It should be noted that the properties of many tyres alter progressively with wear. In particular the wet grip and aquaplaning resistance are gradually but substantially reduced. Extra care and speed restriction should therefore be exercised on wet roads as the effective tread depth diminishes.

Incorrect wheel alignment will accelerate tyre wear. If there is wear on the inner or outer edges of the tread pattern it will be advantageous to have the cause detected by having the wheel alignment checked.

Do not interchange tyres from side to side, front to rear or vice versa.

## Note:

1. On all models the rear wheel and tyre assemblies are larger than the front. These larger assemblies must never be fitted to the front of the vehicle.
2. On certain models the tyres may be directional type. These tyres must be fitted so that when viewed from the side of the vehicle, direction of rotation arrow, on the tyre wall, points in the vehicle forward direction of travel when positioned at the top of the tyre.

# Wheels and Tyres

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## Damage

**Caution: Do not use paraffin (kerosene), because this has a detrimental effect on rubber.**

Excessive local distortion can cause the casing of a tyre to fracture and may lead to premature failure. Tyres should be examined especially for cracked walls, exposed cords, etc. Flints and other sharp objects must be removed from the tyre tread; if left in they may work through the cover. Clean off any oil or grease contamination by using a suitable cleaner.

## Tyre repair

Damaged tyres should be replaced with new tyres fitted. They must not be repaired in view of the high performance capability of the vehicle.

## Tyre replacement

When replacing tyres, it is preferable to fit a complete vehicle set. If either front or rear tyres only need to be renewed, new tyres must be fitted as axle sets.

After new tyres have been fitted the wheels need to be dynamically balanced.

Do not fit tyres with a different tread pattern, size or speed rating.

The installation of replacement tyres with steel cord body plies in the tyre sidewall may cause malfunction of the TPM system and is not recommended (cord material information is moulded on the tyre sidewall).

Additionally, if your vehicle was equipped with run-flat tyres, replacing them with tyres that are not identical to those originally fitted may cause malfunction of the TPM system, and is not recommended.

Always check your TPM system indicator after replacing one or more tyres on your vehicle. See TPM system, page 231.

## Tyre ageing

Tyres degrade over time, even when they are not being used. It is recommended that tyres generally be replaced after six years of normal service. Heat caused by hot climates or frequent high loading conditions can accelerate the ageing process.

You should replace the spare tyre when you replace the other road tyres due to the ageing of the spare tyre.

## USING WINTER TYRES

Winter tyres are more suitable during extremes of low temperatures, snow and ice and will considerably improve the vehicle's handling during these conditions.

Do not exceed 240 km/h (150 mph) when using Jaguar approved winter tyres.

Winter tyres must be fitted on all four wheels.

## Approved Winter tyre sizes

Front: 245/45R18, Dunlop Wintersport M3 96V.

Rear: 265/40R18, Dunlop Wintersport M3 97V.

## Winter tyre pressures:

### Up to 240km/h (150 mph)

Front (245)	2.0 bar (30 lbf/in <sup>2</sup> , 207 kPa)
Rear (265)	2.3 bar (33 lbf/in <sup>2</sup> , 230 kPa)

# Wheels and Tyres

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## USING SNOW CHAINS



### **WARNING:**

**Trac DSC must be switched ON when using snow chains. DSC would reduce the deep snow traction capability as it would limit wheel spin to a level below that which is required to generate maximum traction.**

**Caution: Do not fit snow chains to 20 inch tyres.**

Snow chains, of the recommended type, can only be fitted to rear wheels. They should not be used on temporary-use spare wheels.

You should contact your Jaguar Dealer/Authorised Repairer for details and availability of approved snow chains.

The maximum speed when using snow chains is 48 km/h (30 mph).

Remove the snow chains immediately the roads are clear of snow.

Ensure the fitting instructions supplied with the snow chains are kept in a safe place, for example, with this literature pack.

# Wheels and Tyres

## TECHNICAL SPECIFICATIONS

### Recommended tyre fitment

The following chart details the tyres recommended for use in the countries listed below:

- A.** Australia, Bahrain, Egypt, Israel, Jordan, Kuwait, Lebanon, Malaysia, Mexico, Morocco, Oman, Qatar, Saudi Arabia, South Africa, Syria, Thailand, United Arab Emirates.
- B.** Argentina, Belarus, Brazil, Bulgaria, Chile, Dominican Republic, Estonia, Guatemala, Indonesia, Kazakhstan, Panama, Philippines, Russia, Sri Lanka, Ukraine, Uzbekistan.

	Tyre size	Pattern	A	B
Front	245/45ZR18 100Z	Continental Sport Contact 2 Asymmetric	yes	yes
Rear	275/40ZR18 103Z	Continental Sport Contact 2 Asymmetric	yes	yes
Front	245/40ZR19 94Y	Dunlop Sport 01 Asymmetric	yes	yes
Rear	275/35ZR19 96Y	Dunlop Sport 01 Asymmetric	yes	yes
Front	255/35ZR20 97Y	Dunlop Sportmaxx Directional	yes	yes
Rear	285/30ZR20 99Y	Dunlop Sportmaxx Directional	yes	yes
19" Run-flat				
Front	245/40R19 RSC 94Y	Dunlop Sport 01 DSST	yes	yes
Rear	275/35R19 RSC 96Y	Dunlop Sport 01 DSST	yes	yes
Temporary-use spare wheel				
Front and Rear:				
Alloy 4 x 18	T135/80 R18	Pirelli	-	-
			-	-

**For all other countries you should refer to your local Jaguar Dealer/Authorised Repairer for specific tyre fitment.**

# Wheels and Tyres

## TYRE PRESSURE MONITORING SYSTEM



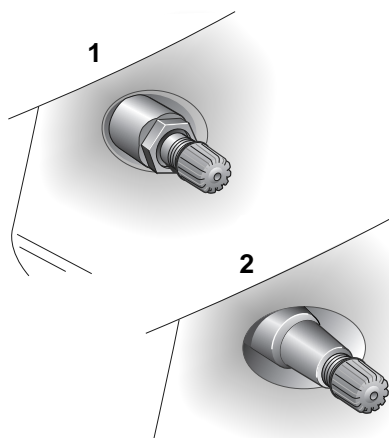
### WARNING:

- The Tyre Pressure Monitoring (TPM) system is **NOT** a substitute for manually checking tyre pressures. Tyre pressures should be checked regularly using an accurate pressure gauge when cold. Failure to properly maintain your pressures could increase the risk of tyre failure, with consequential loss of vehicle control and personal injury.
- The TPM system **CANNOT** register damage to a tyre. Regularly check the condition of your tyres, especially if the vehicle is driven off-road.

### Note:

1. *Non-approved accessories may interfere with the system. If this occurs, **TYRE PRESSURE SYSTEM FAULT** is displayed in the message centre.*
2. *Different types of tyre may affect the performance of the TPM system. Always replace tyres in accordance with recommendations, see page 230.*

Your vehicle may be equipped with a TPM System which monitors pressure in each tyre (temporary-use spare wheels are not fitted with sensors and are consequently not monitored).



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Wheels fitted with a TPM system can be easily visually identified by the external metal lock nut and valve **1**. All Jaguar non-TPM system wheels have a rubber valve fitted **2**.

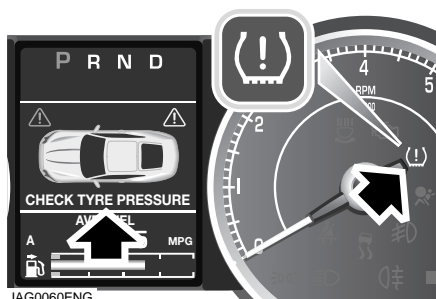
### TPM system operation

The TPM system monitors pressure of the tyres via sensors located in each wheel and a receiver within the vehicle.



The tyre pressure warning comprises a yellow warning telltale within the instrument cluster, and the associated message within the message centre, see pages 93.

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If the telltale light illuminates, you should stop and check your tyres as soon as possible and inflate them to the recommended pressure, see page 225. If low pressure warnings occur frequently, the cause must be determined and rectified.

When driving through variable climatic conditions the TPM system warnings may be intermittent.

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

Your vehicle will also indicate a TPM System malfunction by initially flashing and subsequent continuous illumination of the warning telltale. A text message will accompany the system malfunction and will display **TYRE PRESSURE SYSTEM FAULT**. The TPM system fault sequence will be activated at every ignition cycle 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 malfunctions may occur for a variety of reasons which may include other radio frequency systems that could cause interference or the installation of incompatible replacement tyres on the vehicle.

## Temporary use spare wheel and tyre change

If the temporary use spare wheel is fitted the system will automatically recognise the change in wheel positions. Then after approximately ten minutes of driving above 25 km/h (18 mph), a message **TYRE NOT MONITORED** will be displayed accompanied by illumination of the warning telltale and the corresponding block in the vehicle graphic.

The warning telltale will initially flash and will subsequently revert to continuous illumination. Extended use of the temporary use spare wheel will produce an additional text message **TYRE PRESSURE SYSTEM FAULT**.

This TPM system display sequence will be activated at every ignition cycle until the temporary use spare wheel is replaced by a fully operational full size wheel and tyre assembly.

Always replace the temporary use wheel before having TPM system faults investigated. The fault may well be rectified with the fitment of a fully operational full size running tyre in lieu of the temporary use spare wheel assembly.



# Wheels and Tyres

## Tyre changing

Always have your tyres serviced or changed by a qualified engineer.

Care must be taken to 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.

**Caution: Valve stem seal, washer, nut, valve core and cap should be replaced at every tyre change. Valve stem seal, washer and nut must be replaced if valve retention nut is loosened. Sensor units and nuts must be refitted using correct torque figures and associated profile. Damage to the vehicle may result if these precautions are not taken.**

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

## Replacement sensor

Should the sensor requires replacing, it should be carried out by a Jaguar 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 approximately ten minutes.

If the TPM system warning for any wheel does not clear, even after ensuring correct inflation and driving for more than ten minutes above 25 km/h (18 mph), seek qualified assistance as soon as possible.

## TPM System information messages

Message	Warning Light	Priority Indicator	Meaning
CHECK TYRE PRESSURE (Graphic indication displays which tyre is under inflated.)	TPM System	Amber	You should as soon as possible stop, check your tyre and inflate them to the recommended pressure.
CHECK ALL TYRE PRESSURES	TPM System	Amber	May be displayed when the vehicle is learning that a new sensor is fitted to the vehicle and one or more tyre has low pressure. You should as soon as possible stop, check your tyres and inflate them to the recommended pressure.

# Wheels and Tyres

## TPM System information messages

Message	Warning Light	Priority Indicator	Meaning
TYRE PRESSURE SYSTEM FAULT	TPM System	Amber	<ol style="list-style-type: none"> <li>1. The wheels do not have TPM System sensors fitted.</li> <li>2. The TPM System sensors have become defective, an unapproved accessory is interfering with the system or a general fault has been detected. Seek qualified assistance as soon as possible.</li> </ol>
TYRE NOT MONITORED (Graphic indication displays which tyre is not monitored.)	TPM System	Amber	<ol style="list-style-type: none"> <li>1. A temporary-use spare wheel is fitted. Vehicle speed should be limited to 80 km/h (50 mph).</li> <li>2. A TPM System sensor has become defective, an unapproved accessory is interfering with the system or a wheel has been fitted that does not have a sensor. Seek qualified assistance as soon as possible.</li> </ol>

# Wheels and Tyres

## WHEEL CHANGING



### WARNING:

- Always ensure replacement tyres have the correct rating and specifications (e.g. load index, size, speed rating) for your vehicle.
- When using tyres other than those recommended by Jaguar, do not exceed the speed capacity recommended by the manufacturer.
- Wheels are extremely heavy. Take care when lifting and particularly when removing and replacing a wheel in its storage position in the luggage compartment.

If a wheel change is required, pull off the road completely. Park on ground which is as level and solid as possible. Ensure that the vehicle is clear of any objects that will obstruct the safe removal of the wheel. Switch on hazard warning lights and, where legally required, display the warning triangle.

Regular maintenance of tyres contributes not only to safety, but to the designed function of the vehicle. Road-holding, steering and braking are especially vulnerable to incorrectly pressurised, badly fitted or worn tyres.

Tyres of the correct size and type, but of different make can have widely varying characteristics. It is therefore recommended that Jaguar approved tyres are fitted to all wheels.

**Caution: Ultra high performance tyres.**

This vehicle is equipped with an Ultra High Performance (UHP) tyre and wheel combination designed to give maximum dry road performance with consideration for aquaplaning resistance. UHP tyres have performance enhancing soft rubber tread compound. If driven aggressively they may suffer rapid tread wear and a shorter life than can be expected from other tyre types. This wheel and tyre combination is more susceptible to damage from road hazards.

Do not use this combination for driving on snow or ice. High performance tyres must be replaced with winter tyres when weather conditions dictate.



**Tyres with all season icon have a level of winter performance and need not be replaced.**

### Temporary use spare wheel

Observe the following warnings before using the wheel:



### WARNING:

- Please note temporary use spare wheel warning label. Adhere to instructions on the label. Failure to comply can be dangerous.
- When a temporary use spare wheel is fitted, drive with caution and replace with the specified wheel and tyre as soon as possible.

# Wheels and Tyres

- **Do not fit more than one temporary use spare wheel and tyre assembly at one time.**
- **The temporary use spare wheel must be inflated to 4.2 bar (60 lb/in<sup>2</sup>, 420 kPa) and cannot be repaired.**
- **Temporary use spare wheel, maximum speed is 80 km/h (50 mph).**
- **If the vehicle is fitted with Tyre Pressure Monitoring System (TPM System) refer to page 231**
- **DSC must be ON when the temporary use spare wheel is in use.**

## Run-flat tyres



### **WARNING:**

**If a run-flat tyre is deflated maximum vehicle speed must not exceed 80 km/h (80 mph).**



Run-flat tyres can be identified by the lettering **RSC** on the sidewall. The tyre construction utilises a specially reinforced sidewall which allows the vehicle to be driven at restricted speeds even when the tyre is depressurised. Run-flat tyres can only be fitted to special rims constructed for run-flat tyre use.

A tyre pressure monitoring system is mandatory when the vehicle is fitted with run-flat tyres, see page 231.

If the tyre is deflated the vehicle should be driven with caution, as the handling characteristics will be different compared to a fully inflated tyre.

If the vehicle is fully laden with passengers and luggage, the maximum distance that can be completed on a fully deflated tyre is approximately 80 kilometres (50 miles).

Stop immediately if the tyre construction begins to break down, or if the tyre dislodges from the wheel rim. Typically, this will be accompanied with excessive vibration.

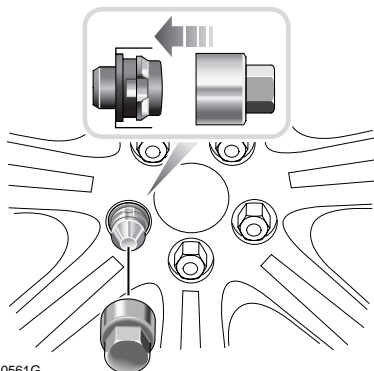
A tyre driven in a deflated condition must be replaced.

Vehicles fitted with run-flat tyres are not fitted with a spare wheel or jacking equipment. Therefore, run-flat tyres should be replaced with the same type of tyre.

# Wheels and Tyres

## Locking wheel nuts

Vehicles may be equipped with a locking wheel nut on each wheel. These are similar to standard wheel nuts, and can only be removed using the special adaptor provided with the jacking equipment.



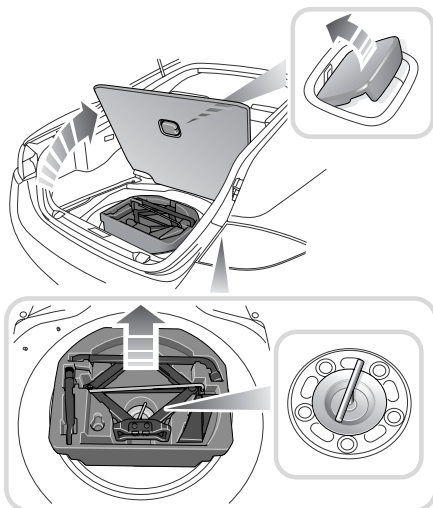
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1. Insert the adaptor firmly onto the locking wheel nut.
2. Using the wheel brace, unscrew the wheel nut and adaptor.
3. Return the locking wheel nut adaptor to the correct storage position.

**Note:** A code number is stamped on the side of the locking nut. Ensure the number is recorded on the Security Card supplied with the literature pack. Quote this number if a replacement is required. Do not keep the Security Card in the vehicle.

## Spare wheel location

The spare wheel and jacking equipment are stored under the luggage compartment floor panel.



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To remove the spare wheel, remove the luggage compartment floor panel and the tray containing the jacking equipment. Unscrew the spare wheel retaining Tee bolt and remove the spare wheel.

Remove the jack and wheel nut wrench from the stowage tray.

**Note:** Examine the jack occasionally and clean and grease the threads to ensure it is always ready for an emergency.

# Wheels and Tyres

## Wheel changing procedure



### WARNING:

- Before attempting to lift the vehicle with the jack, chock the wheel diagonally opposite to the wheel being replaced to prevent the vehicle from rolling when jacked up. A wheel chock is supplied with the jacking equipment for this purpose.
- Never work under the vehicle using only the jack as a support, always use axle stands or suitable supports under the jacking points.

**Note:** When one rear wheel is lifted off the ground the selection **P** (Park) position will not prevent the vehicle from moving and possibly slipping off the jack as the parkbrake only operates on the rear wheels.

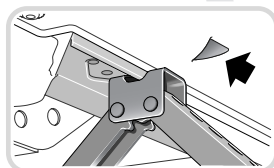
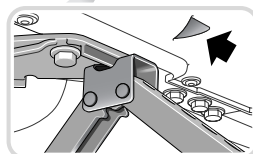
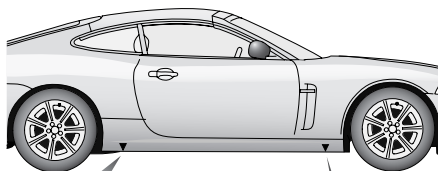
1. Ensure that all passengers are in a safe place, clear of the vehicle.
2. Apply the parkbrake and select gear position **P** (Park).
3. Ensure that the jack is placed on firm and level ground.

Observe the instructions printed on the jack.

Use the jack only for lifting the vehicle during wheel changing and only use the jack which is stored in the vehicle.

Before raising the vehicle slacken but do not remove the wheel nuts.

Do not start or run the engine while the vehicle is supported only by a jack.



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There are four jacking points on the underside of the floor. Two indented, triangular indicators are provided on each sill cover. These indicate the location for the jack.

The simplest way to correctly locate the jacking point is to feel along the sill panel to the triangular indentation and then fit the jack to the body, not to the sill panel.

# Wheels and Tyres

## Raising the vehicle



### WARNING:

- Do not attempt to lift the vehicle unless the jack head is fully engaged in the jacking point.
- Ensure that the parkbrake is applied.

**Caution:** Ensure before raising the vehicle that the jack is correctly positioned to avoid any damage to the vehicle sills or sill panels.

Carefully raise the vehicle by turning the jack handle. Stop jacking the vehicle when the tyre just clears the ground. Minimum tyre lift gives maximum vehicle stability.

Remove the wheel nuts and the wheel.

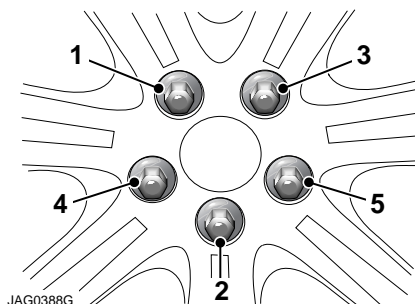
To remove the centre badge use the plastic tipped end of the wheel nut wrench handle, push the centre badge from its housing from the inside of the wheel.

Push the centre badge into the replacement wheel. If the temporary use spare wheel is to be fitted, keep the centre badge safely and fit it to the repaired full size wheel when it has been refitted.

Fit the spare wheel and loosely secure with the wheel nuts.

Using the wheel nut wrench, lightly tighten the wheel nuts alternately using the sequence shown in the illustration.

## Tightening the wheel nuts



Lower the jack and tighten the wheel nuts alternately. Do not overtighten by using foot pressure or extension bars on the wheel nut wrench.

At the earliest opportunity have the wheel nuts tightened with a torque wrench to 125 Nm (92 lb.ft).

This torque must not be exceeded.

### Stowing the equipment

Place the storage tray with the jack and wrench in the wheel well.

Reposition the luggage compartment floor panel.

Place the removed road wheel in the luggage compartment. The full size road wheel will not be able to be completely stowed in the wheel well.

**Caution: Convertible only. The luggage separator will required to be removed before stowing the wheel in the luggage compartment, see page 129.**