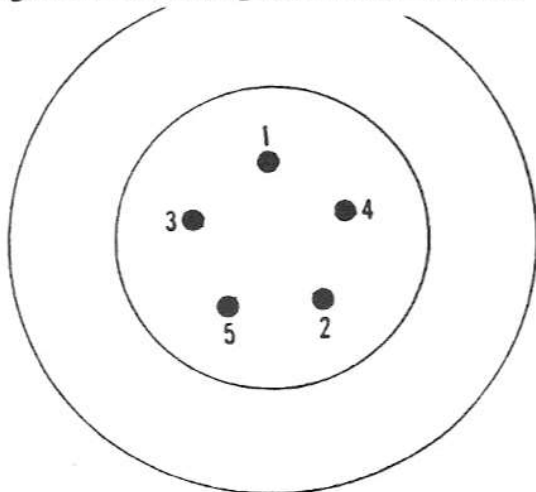


WHEELS AND TYRES

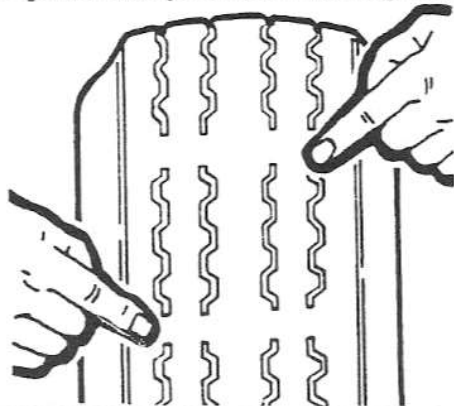
GENERAL INFORMATION.

When installing a wheel ensure that as the road wheel attaching nuts are gradually tightened in the order shown.
Torque for Road Wheel Attaching Nut: 100-125 Nm.

Tighten wheel attaching nuts in the order shown.

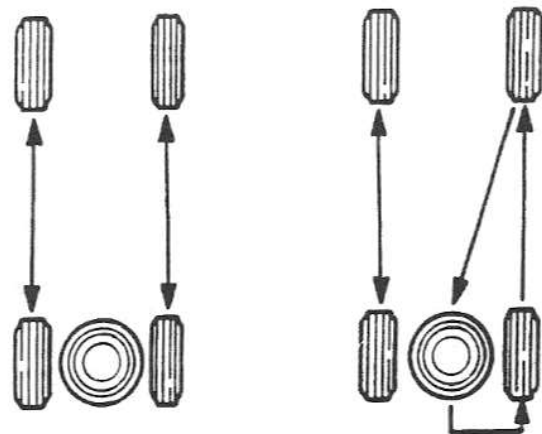


Tread patterns on tyres that are showing wear



Tyre rotation as shown will help correct uneven tyre wear, it is also recommended that the wheels are balanced at the time of tyre rotation.

Rotate tyres as shown will help correct uneven tyre wear

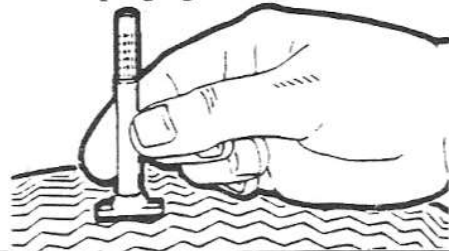


4 Wheel Rotation

5 Wheel Rotation

Tyres should be routinely checked for wear, there are special patterns that appear when the tyre tread is low as shown opposite. Also the depth of tread can be checked with a tyre tread depth gauge.

Tyre tread depth gauge.



The tyres fitted as original equipment have been selected for safety, handling and comfort characteristics. Therefore when replacing any tyres it must be noted that a tyre of a lesser rating must not be used.

Wheel and tyre specifications are displayed on a decal fitted on the rear section of the right side front door.

Inflation Pressure

Tyre inflation pressures should be checked with the tyres cold. Never reduce tyre pressure when the tyres are hot.

Low Tyre Pressure

Low tyre pressure is a common fault affecting tyre life.

Tyre air pressure that is too low will result in wear at the edge of the tread.



While driving in normal conditions a tyre flexes as it rolls along the road and this flexing in turn generates heat. If the tyre is correctly inflated this heat build-up is not detrimental to the tyre. However an under inflated tyre flexes far more than normal resulting in greater heat generation. Under these conditions the temperature of the tyre can rise to a point where the rubber compounds that bind the tyre together are softened and weakened. In extreme conditions this may result in the tread separating from the casing or the plies separating from each other.

Under inflation also reduces tyre life by causing excessive wear on the tyre edges.

Overloading has the same effect as under inflation causing excessive tyre flexing and subsequent heat generation.

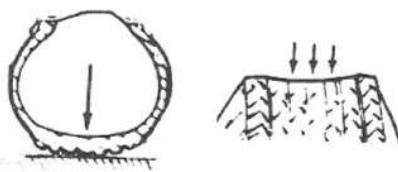
Tyre damage and wear is accelerated if the vehicle is driven at high speed or in an overloaded condition.

High Tyre Pressure

High tyre inflation pressure can result in damage to the casing and further reduces tyre life by causing excessive wear at the centre of the tyre tread.

Very high inflation pressure exerts increased strain on the casing which subsequently reduces resistance to impact shocks. Since the tyre tread is stretched tight, tread cracks can rapidly develop and the tread is likely to crack.

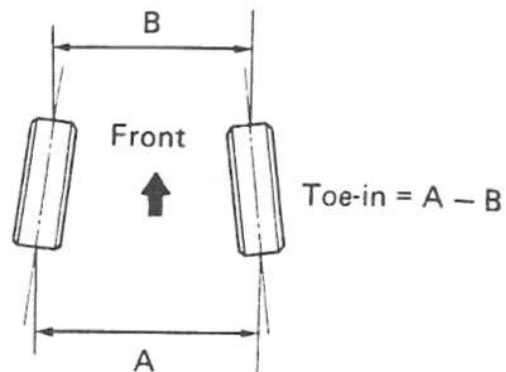
Tyre air pressure that is too high will result in wear in the centre of the tread.



Wheel Alignment

Toe-In

Toe-In



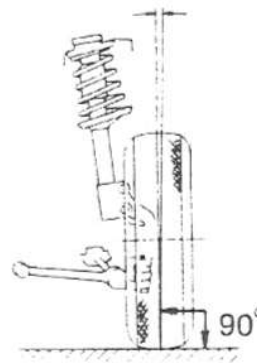
Excessive toe-in results in tapered or feathered wear on the outside edge of the tyre while excessive toe-out has the same result on the inside edge.

Toe-in setting is an important factor in tyre life. Excessive toe-in results in tapered or feathered wear on the outside edge of the tyre while excessive toe-out has the same result on the inside edge. Under these conditions the tyre is dragged along the road instead of rolling freely.

Check Front Suspension chapter for specifications and the correct procedure for adjusting toe-in.

Camber

Camber



Excessive wheel camber either positive or negative, results in one side of the tyre wearing faster than the other.

Excessive wheel camber either positive or negative, results in one side of the tyre wearing faster than the other.

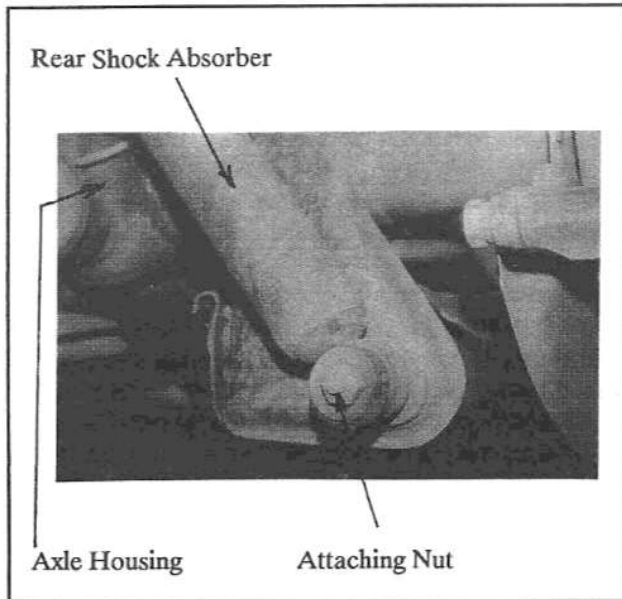
Wheel camber is adjustable, the setting may alter as a result of damage to the front end. In this event the damaged components must be replaced, and camber adjusted as described in Front Suspension chapter.

Wheel Balance.

Wheels out of balance can result in cupped or spotted wear around the tyre circumference. Usually an out of balance tyre will vibrate through the steering wheel when driving on smooth surfaces.

Shock Absorbers

Faulty or worn shock absorbers can also result in cupped or spotted wear. Faulty shock absorbers should be replaced in pairs.



It should be noted that in addition to the foregoing factors, driving habits, road conditions and the terrain over which the vehicle is operated will have a direct bearing on tyre life.

Wheels

The road wheels are of the double safety rim type. They may be steel or aluminium according to the model variant. The wheel nuts are not interchangeable between aluminium and steel wheels. It is essential that correct wheel nuts are used at all times.

Steel Wheels

Model variants are fitted with wheel trims. The press on type wheel trims are removed by inserting the small end of the wheel nut spanner or screw driver inside the outer edge of the trim and progressively prying the trim off. To install the trim, position trim on the wheel and using a rubber mallet or your hand gently knock the trim onto the wheel, hitting on the outer edge.

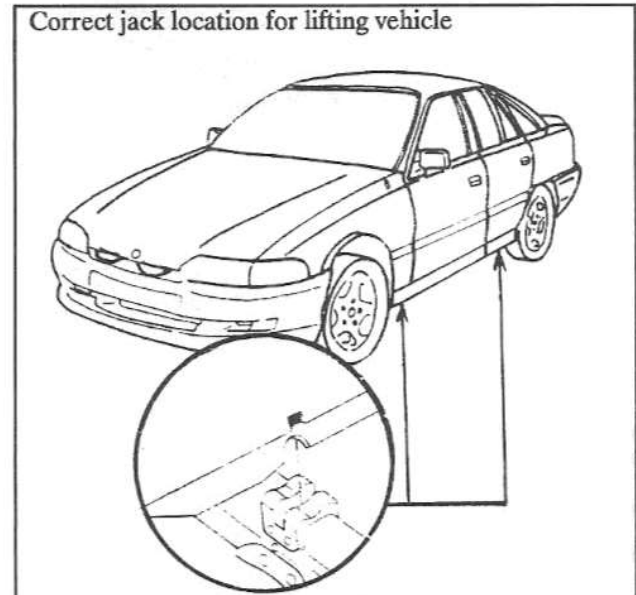
The wheel nuts are conventional wheel nuts.

Aluminium Wheels

The aluminium wheels are protected against corrosion by special coating. Care must be taken when either replacing a tyre or fitting wheel balance weights not to chip or score the protective coating. Wheels are retained by nuts which incorporate a spigot. The wheel incorporates

a captive steel conical tapered insert onto which the wheel nut tightens. The centre covers are removed by inserting the small end of the wheel nut spanner or screw driver into the recess provided in the wheel at the edge of the cover and prying the cover from the wheel. To install, place the centre cover in the correct location in the wheel and hand press the cover into the wheel.

Remove



1. Pry off the wheel trim or cover as described under Steel and Aluminium Wheels and loosen the wheel nuts one turn. Raise vehicle until tyre clears floor and remove the wheel nuts and the centre cover (where fitted).

Install

1. Clean dirt from the hub, and position the wheel on the hub, install the wheel centre cover (where fitted) on the wheel bolts.

2. Install the wheel nuts and tighten them alternatively as shown on 2 pages previously in order to draw the wheel evenly against the hub.

3. Lower vehicle, and tighten nuts. Locate the wheel cover (where fitted) and install as described under Steel and Aluminium Wheels.

Wheel and Tyre Assembly Balancing

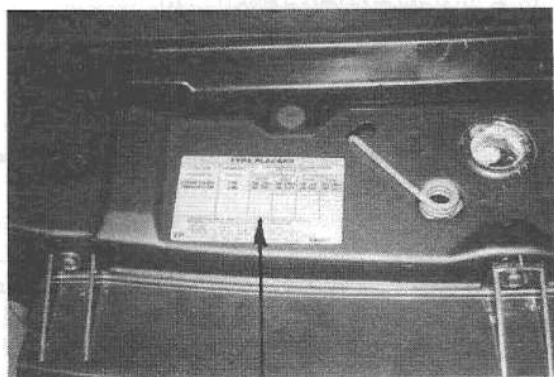
Wheel and tyre assemblies should be dynamically balanced. The wheel centre should be mounted and located on spigot and clamped against the mounting plate via the wheel stud holes.

Tyres

Radial tyres are fitted as standard equipment to all models. For tyre data refer to the decal attached to the panel in front of the radiator.

Tyre Care

It is essential that the recommended inflation pressures are always maintained as described previously. Radial ply tyres may appear under-inflated at the correct recom-



Tyre data refer to the decal attached to the panel in the front of the radiator.

mended pressures. This is normal and they should never be inflated beyond the recommended pressures.

Tyre Pressures

The tyre pressures quoted are cold pressures. In this context, the tyre temperature is considered 'hot' after extended motoring at speed. Under certain extreme conditions of operation a tyre may require up to one hour before it can be considered 'cold', i.e. not warm to touch, which is usual after operation.

Tyre Wear

If regular wear is noticed, check the wheel bearings and front suspension ball joints for excess play and also check the front suspension geometry.

Front Wheel, Hub and Bearings

See Front Axle Chapter for replacement and adjusting of wheel bearings.

Removing Tyre From Wheel

A new snap in valve should be fitted, when fitting a new tubeless tyre. The valve is made to last the life of the tyre, but beyond that time fatigue of the valve body rubber is likely to impair the air seal of the rim hole.

The tyre can be ascended or descended on a machine. A machine should always be used on aluminium alloy wheels.

Make sure that the outer side of the wheel is positioned upward.

1. It is O.K to use tyre irons on steel wheels using the following operation.

Deflate tyre completely once valve cap and core are deflated, break loose the tyre beads from the wheel, using the bead loosening tool.

2. Remove the wheel weights (if fitted).

* With the outer side of the wheel upward, insert two tyre irons about 200mm apart between the tyre outer bead and the wheel rim. Use only tyre irons with rounded edges or irons designed for demounting tubeless tyres.

* Lever the tyre bead over the wheel rim with one iron and hold it in this position. Pry the rest of the bead over the rim with the over iron. Take small 'bites' with the iron around the tyre in order to avoid damaging the sealing surface on the tyre bead.

* Stand the wheel and tyre upright with the tyre inner bead in the drop centre well at the bottom of the wheel. Position the tyre between the bead and the edge of the wheel rim, and pry the wheel out of the tyre.

SPECIFICATIONS

STEEL WHEEL DETAILS:

Diameter	15
Rim Width	6.0J
Wheel Radial Run-out Limit	0.6 mm
Wheel Lateral Run-out Limit	0.8 mm

ALLOY WHEELS:

Rim Width Code	6.0J or 7.0J
Diameter for all models	15
Wheel Radial Run-out Limit	0.25 mm
Wheel Lateral Run-out Limit	0.3 mm

TYRES:

Maximum Load Rating (per tyre):

P195/75 H15	690kg
P205/65R15 95H	690 kg

TORQUE WRENCH SPECIFICATIONS

	Nm
Steel Wheel - Attaching Nuts	100 - 125
Alloy Wheel- Attaching Nuts	100 - 125

