Wheels & Tires

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GROUP 28

WHEELS & TIRES

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GROUP 28

WHEELS & TIRES

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WHEELS & TIRES

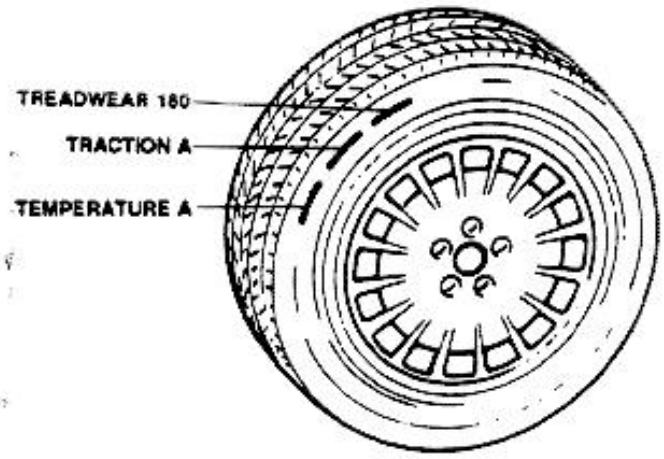
GENERAL

Tires are selected according to vehicle characteristics and performances.
A careful driving reduces tires wear and increases the grip of tires on road surface; the following table lists the most frequent causes that accelerate tread wear.

- high speed
- high speed while turning
- hot climates
- high loads
- irregular inflating pressure
- rough road surface
- sudden accelerations and decelerations
- sudden stops

It is then advisable to check periodically the tires wear (checking with a comparator the thread thickness), inflating pressure and general tire conditions (check for absence of damage).

UNIFORM TIRE GRADING



Quality grades can be found where applicable between tread shoulder and maximum section width. (See example).

All Passenger Car Tires Must Conform to Federal Safety Requirements In Addition to These Grades.

TREADWEAR

The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and a half (1.5) times as well on the government course as a tire graded 100. However, the relative performance of tires depends upon the actual conditions of their use, and may depart significantly from the norm due to variations in driving habits, service practices and differences in road characteristics and climate.

TRACTION A-B-C

The traction grades, from highest to lowest, are A, B, and C and they represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked 0 may have poor traction performance.

WARNING:
The traction grade assigned to this tire is based on braking (strightahead) traction tests and does not include cornering (turning) traction.

TEMPERATURE A-B-C

The temperature grades are A (the highest), B, and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under con-

trolled conditions on a specified indoor laboratory test

wheel. Sustained high temperatures can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car tires must meet under the Federal Motor Vehicle Safety Standard No. 109. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law.

WARNING:
The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure.

TIRES WEAR

Low inflating pressure can cause a quick wear to thread shoulders and inappropriate underinflation can deteriorate the tire ply; overinflation can cause a quick wear of thread center and a decrease of tire shock absorbing qualities. An incorrect inflating pressure can influence the drive, making it inaccurate, and can increase fuel consumption. Last page of this Group lists different cases of tires irregular wear and related causes.

TIRES CLEANING

Tires shall be stored in closed rooms to avoid contact with sun rays and bad weather; they are supplied covered by protective layer which, in case of long storage, maintains unchanged their initial characteristics. To remove protective layer plunge tire in warm water for about 1 minute and then clean surface using a soft bristle brush; as an alternate it can be used vapor or detergents.

CAUTION:
Do not use gasoline, metal brushes, solvent or mineral oils to clean tires.

TIRES AND RIMS

The sizes of rims and tires are listed in the TECHNICAL DATA table. It is unadvisable the use of tires different from those indicated, to avoid alteration to suspensions and steering system.

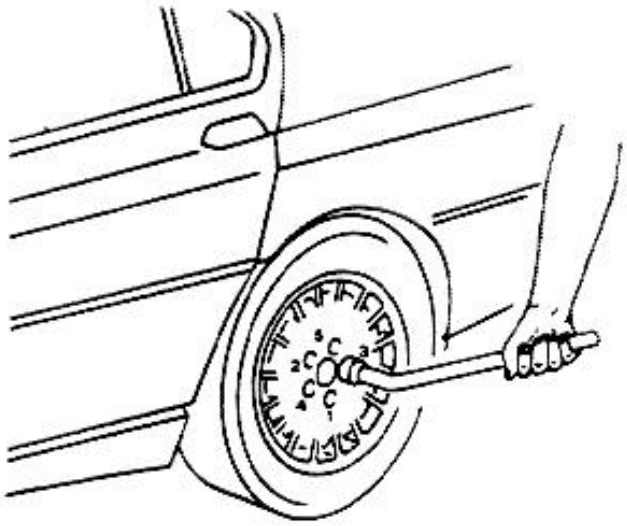
TIRES REPLACEMENT

REMOVAL

1. Position a hydraulic jack under the vehicle at the point corresponding to the tire to be removed.
2. Engage parking brake and first speed.
3. Remove cover hub (for metallic rims only.)
4. Loosen wheel fixing bolts by rotating the appropriate wrench in counterclockwise direction.
5. Lift vehicle.
6. Remove fixing bolts and then wheel.

INSTALLATION

1. Insert wheel on hub, align rim hole with the guide pin.
2. Screw fixing bolts to hub torquing them partially, using the appropriate wrench.
3. Lower vehicle.
4. Tighten bolts to the correct torque following order indicated in figure.

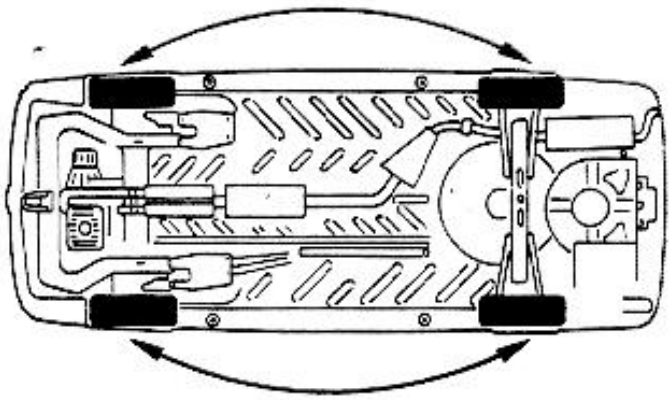


Vent of mineral oils to crash tires.

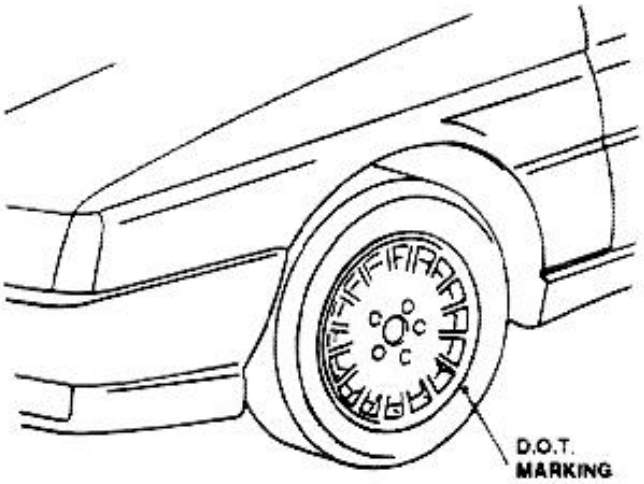
5. Install wheel hub cover (for metallic rims only).
6. Release parking brake and disengage first speed.

TIRES ROTATION

Tires rotation shall be carried-out following the indication of figure.



CAUTION:
Tire must be installed on the rim with identification mark (D.O.T.) toward vehicle outer side (valve side).



Carry-out tire rotation periodically, at short periods, checking wheels for correct angles and balance, to avoid unwanted thread wear.

CAUTION:
Replace rims if dents or damage are evidenced on rim external surface.

WHEEL BALANCE

Each wheel, together with its tire, is dynamically and statically balanced when installed at factory. Every time a rotation is operated, a puncture is repaired or a tire is replaced, it is necessary to balance wheel to avoid driving unstability, steering system components damage and irregular tire wear. For this purpose, two types of weights are used: a type to be installed on steel rims and the other for light alloy rims.

NOTE: **Pay attention to put weights on rim internal edge, applying no more than two weights on each side.**

CAUTION:
- **Avoid use of weights of different types.**
- **When balancing light alloy wheels, always use original Alfa Romeo weights.**

SPARE WHEELS (temporary use only)

The spare wheel is located in the trunk under trim. It is of reduced dimension, rim is 4J x 15" and tire is T115/70 R15, prepared to be used in emergency only and for short mileage (2.100 miles max); the inflating pressure is 60 psi (420 kPa).

WARNING:
Do not exceed speed of 50 MPH (80 Km/h) while using spare wheel.

TECHNICAL CHARACTERISTICS AND SPECIFICATIONS

FLUIDS AND LUBRICANTS

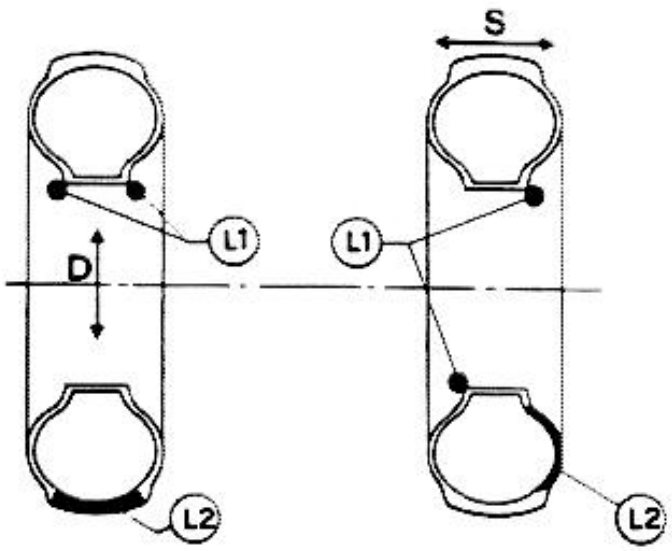
Application	Type	Name
Tire beads	FLUID	MILLOIL SC40/R (*) MASCO 203SVA (*)
		(*) (6 parts water to 1 part fluid)

CHECK AND ADJUSTMENTS

DYNAMIC BALANCE

Max. allowed residual unbalance	10 g. (0.35 oz)
Blance weights	70 g (2.47 oz) max. per side*

*(no more than two weights per side)



L_1 = location of balance weights
D = tramp direction
S = shimmy direction
L_2 = location of heavy area causing unbalance

TIGHTENING TORQUES

Bolts securing wheels	95 to 105 N·m	70.1 to 77.5 ft.lbs
Tire in flating valve (for alloy rims only)	9 to 11 N·m	6.6 to 8.1 ft.lbs

TECHNICAL DATA

RIMS			Steel	Alloy	Spare Wheel (1)
			6Jx15"	6Jx15"	4Jx15"
TIRES (2)			195/65 VR15	195/65 VR15	T115/70 R15
INFLATING PRESSURE (cold tire)	(3)	F	3.1 p.s.i. (216 kPa)		60 p.s.i. (420 kPa)
		R	28 p.s.i. (196 kPa)		
	(4)	F	35 p.s.i. (245 kPa)		
		R			

(1) = Temporary use only — Maximum speed: 50 MPH (80 km/h)

(2) = Tires installed on the vehicle are tubeless type

(3) = Reduced load and short time at maximum speed

(4) = Full load and continuous maximum speed

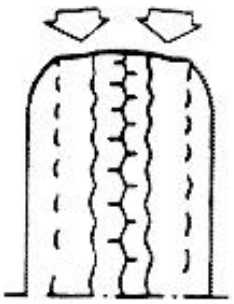
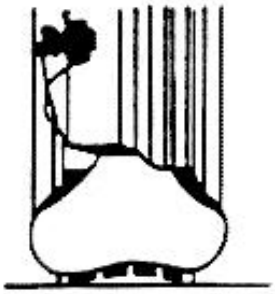
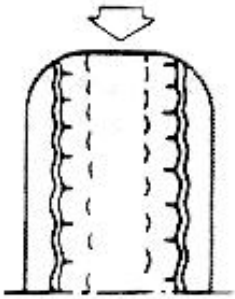
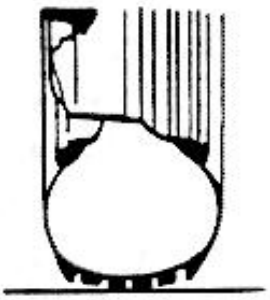
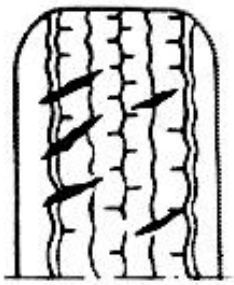
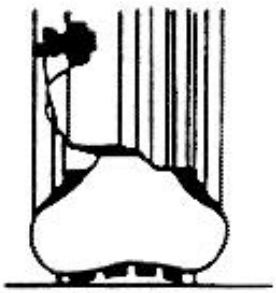
F = Front

R = Rear

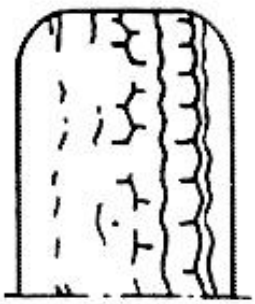
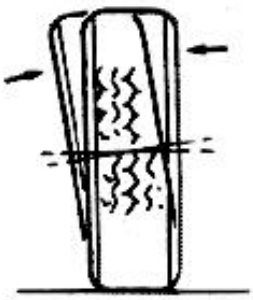
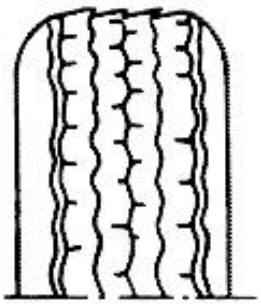
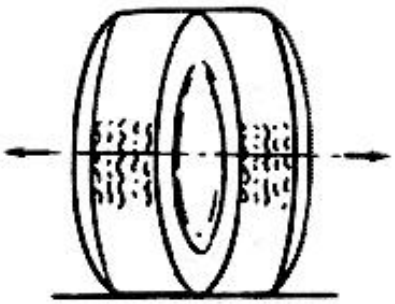
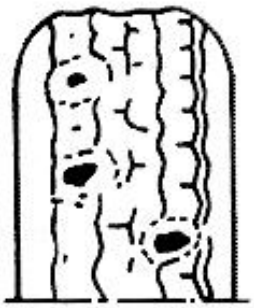
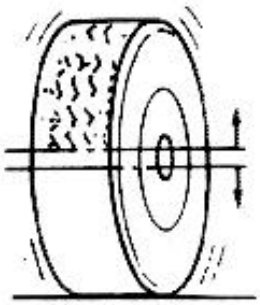
NOTE: Tires inflation operation shall be carried out at cold, before starting off.

CAUTION:
In case of tire repair, use of tube shall be avoiled.

TIRES WEAR

Malfunction	Cause	Corrective Action
QUICK SHOULDER WEAR 	 Low **inflation pressure**	 Restore correct **pressure** (at cold); replace both **tires** of affected axle if needed
QUICK CENTER WEAR 	 High **inflation pressure**	 Restore correct **pressure** (at cold); replace both **tires** of affected axle if needed
THREAD CRAKS 	 Low **inflation pressure** or **tire** not corresponding to the indicated type	 Restore correct **pressure** (at cold); replace both **tires** of affected axle if needed

TIRES WEAR

Malfunction	Cause	Corrective Action
UNEVEN WEAR 	 Incorrect **camber**	 Check for **body** integrity; replace both **tires** of affected axle if needed
FEATHERED WEAR 	 Incorrect **toe-in**	Restore correct **toe-in** value (see **Group 21**), replace both **tires** of affected axle if needed
WEAR SPOTS 	 Incorrect **balancing** or defective **tire**	Carry out correct **balancing**; replace both **tires** of affected axle if needed