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## Getting maximum tire life

suzanne m. tucker 1/

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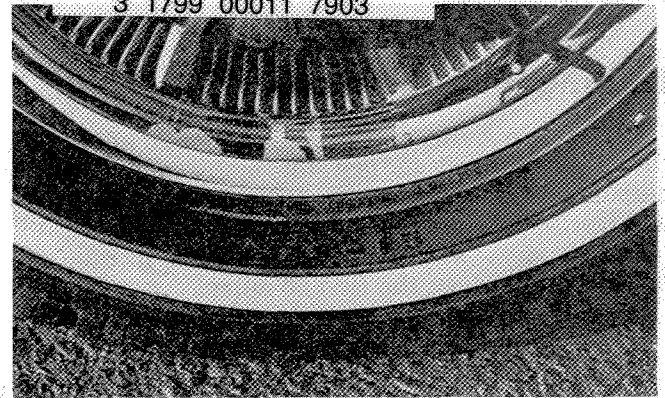


FIGURE 1: TIRE SIDEWALL

### Quick Facts

- Knowing about a car's tires can help in getting full mileage from these tires. Tires should not be underinflated or over-inflated.
- On the sidewall of every tire is printed the maximum load and maximum pressure which that tire can hold.
- Tires should be checked for correct pressure when they are cold; heat increases air pressure.
- Uneven tread wear patterns can reveal problems with brakes, shock absorbers, wheel alignment or balance, or tire inflation.
- Driving should be done for maximum tire life; fast turns, quick starts and stops, or speeding over bumpy roads reduces tire life.

No other part of an automobile is as misunderstood, abused and ignored—yet so dangerous if it fails—as the passenger car tire. Although some problems are due to poorly made tires, each year tens of thousands of tires are replaced long before they should wear out.

Knowing about a car's tires can help in getting full mileage from them.

### Air Pressure

Air pressure lets tires stand up straight to carry a car's load. It takes very few miles, with low pressure, to weaken the inside of tires. Tires also are weakened by too much pressure. By matching pressure with the load on the tires, problems of too much or too little pressure can be avoided.

On the sidewall of every tire is printed the maximum load and maximum pressure which that tire can hold. If the tire states "MAX. LOAD 1830 LBS. AT 40 P.S.I. MAX. PRESS," (see fig. 1) this means that the maximum load is 1830 pounds at 40 pounds per square inch maximum pressure, or that the tire can carry a top load of 1830 pounds only if the tire is inflated to 40 pounds of air pressure.

The maximum weight of the car, passengers and luggage to be carried by a set of four tires, then, would be 7,320 pounds (1830 lbs. times four).

If the tires are not carrying the maximum load, they still should be inflated to the correct air pressure. Auto manufacturers list recommended air pressures for both front and rear tires on the door post, dash board, glove box or in the owner's manual of the car.

If the car does not have this information, tire shop or service station personnel can help in deciding correct tire pressure. If the brand and size of the tires is known, as well as the weight load the car is to carry, the attendant should be able to use a "Load Range Table" to figure the correct air pressure.

Investing in an accurate tire-pressure gauge, and using it to check tires often, helps in keeping tires at correct pressure. The pressure should be checked when the tires are cold. Heat build-up from a long drive can increase air pressure from four to eight pounds. If pressure is lowered while tires are hot, the tires become underinflated when they cool.

It is also a wise idea to check the pressure of the spare tire frequently.

### Listen to Problem Tires

If one tire needs much more air than usual, it may be revealing a problem. A leak, a bent rim, or a cracked valve stem can cause air loss. The tire should be inflated to correct pressure and checked

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again after a few miles. If the pressure has dropped again, the tire should be examined and repaired.

Repairs, if done in time, will save the tire.

Tires should be inspected along the tread surfaces, shoulders and sidewalls. Uneven wear will tell of the need for front-end alignment, brake adjustment, change in air pressure, wheel balance or new shock absorbers. The cause of the uneven wear should be corrected and badly worn tires replaced.

If tires are replaced without correcting the problem, the new tires also will wear quickly.

## Driving for Tire Mileage

Tires are built to resist skidding and sliding on the highway and to last for many miles. But a person's driving habits also influence how long tires will last.

Most tires will have longer lives if they are not driven hard for the first 50 miles.

Tread mileage is decreased by making tight,

quick turns, squealing starts or speeding over rough roads. Skid marks left on the road are tread life left on the road.

Slowing to turn corners, gradual starts and stops, as well as a slower pace on rough roads, will save tread life.

A driver should notice the "feel" of the tires on the highway. Uneven front-tire pressures may cause pulling to one side during braking. A thumping sound during hard braking can be a warning of brake or tire problems. A rear-end swaying can mean a dangerously low rear tire.

A quick check at a service station may save a tire or prevent an accident.

It is up to the driver to be familiar with the tires on the automobile he or she is operating and to follow suggestions for their maintenance and care in order to receive maximum tire mileage from them.

NOTE: Information condensed with permission from "Three Rules for Maximum Tire Life," Consumer Affairs Fact Sheet, March 1973, U.S. Department of Transportation, Washington, D.C. 20590.

### TREAD WEAR PATTERNS

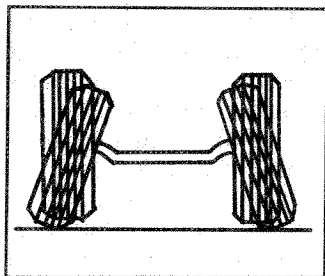
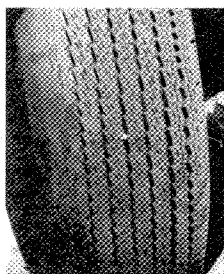
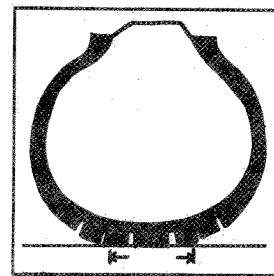
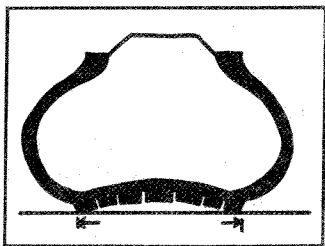
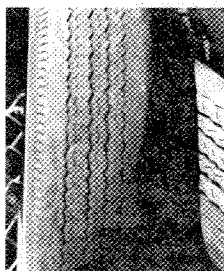


FIGURE 2: OUT-OF-LINE



Tread contact with road

FIGURE 4: OVERINFLATION



Tread contact with road

FIGURE 3: UNDERINFLATION



FIGURE 5: DANGEROUSLY OVER-WORN TIRES

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