

mended with a cold patch that you'll find in the tire-patch kit.

Select a patch of the right size, that is, large enough to extend  $\frac{3}{4}$  in. or an inch beyond the puncture in each direction. Wipe off every trace of moisture and roughen the surface to be patched. To roughen the area use the scraper included in the kit, or a piece of emery paper. Apply two coats of cement to the tube surface and to the patch, removing all superfluous cement with the fingers. The less of it there is, the quicker the repair. Allow the cement to dry for at least five minutes or until it adheres strongly to the fingers. Then apply the patch and press it down firmly making sure the edges are tight. Never try to join two surfaces while they are still damp, for rubber-cement joints are of no value unless everything is dry.

Even though a sound tube has been inserted on the road, the punctured tube should be vulcanized promptly to be ready for another emergency. There is scarcely a limit to the number of repairs a tube will bear, but patches applied with cement cannot safely be considered permanent repairs. It is a paying investment to make vulcanized repairs as soon as possible.

After the repair has been made, inflate the tube slightly and insert it in the casing. Position the tube so that the valve registers with the red dot on the sidewall. Place the casing and tube on the rim and insert the valve body through the hole in the rim. Then force one bead over the rim flange into the drop center. Be careful at this

point that the tube is not pinched between the bead and the rim. Then force the other bead over the rim flange with the tire tools. Inflate the tire slowly so that it will center and seat correctly, as shown in Fig. 3. Place the wheel back on the axle and tighten the nuts alternately to enable a safe fit.

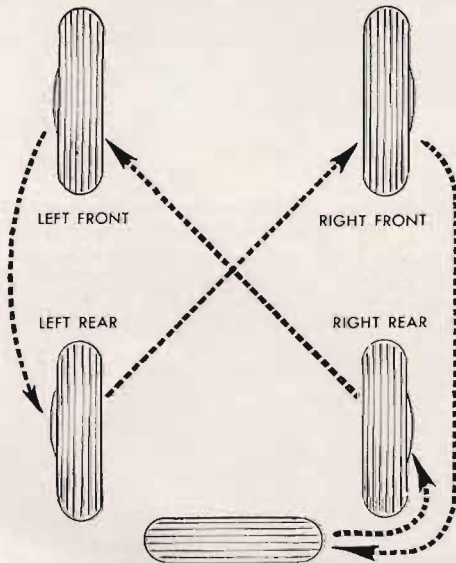
Fig. 4 shows graphically why proper inflation is of the greatest importance. Always test the tire pressure when the tires are cool. As shown in Fig. 4, overinflation causes rapid wear in the center of the tread. It places excessive strain on both casing beads and sidewalls and lessens the ability of the tire to resist cuts and snags and also breaks due to severe impact. An overinflated tire has less resiliency, and restricted tread contact with the road surface means reduced traction and less resistance to skidding.

On the other hand, underinflation, Fig. 4, is the cause of excessive wear on the shoulders of the tread. When the car is driven at moderately high speeds the tires heat up fast and the excessive bending of the sidewalls at the point where the tread meets the road results in ply separation and rapid breakdown of the sidewalls.

Tires should be switched regularly on the wheels as in the chart shown at the bottom of this page. The condition of brakes, springs and shock absorbers affects tire wear materially. Brakes that grab on application, or lock one wheel, will cause rapid tread wear on the tires that are affected. Keep the brakes correctly adjusted and shock absorbers and springs in good condition.

Driving habits have a direct effect on tire mileage. Fast getaways, fast driving on the turns and squealing stops are especially ruinous to tires. Such practices not only grind rubber off the treads, but place severe strains on the entire structure of the casing and tube. The careful driver avoids bumping or scuffing against curbs when parking, driving rapidly over obstructions and driving at high speeds on rough pavement or unsurfaced roads. All these special precautions must be carried out on schedule if tires are to give maximum service.

Retreading of tires can be recommended as an economical and safe practice when the casing is still in good condition without any major breaks. If the job is correctly done, using good materials, the usable life of the casing can be extended as much as 50 percent. Minor cuts or breaks in the sidewalls and treads usually can be satisfactorily repaired by vulcanizing before the tire is retreaded. Always install a new tube in a retreaded casing, even though the old tube appears to be in serviceable condition.



TIRES SHOULD BE SWITCHED AT LEAST TWICE A YEAR TO UTILIZE SPARE TIRE AND ALSO TO EVEN UP WEAR BY REVERSING DIRECTION OF ROTATION OF THE TIRES