Section XIII

WHEELS AND TIRES

DATA AND SPECIFICATIONS

Models	C-75	C-76	IM-1-2-4
WHEELS			
Type		Steel Disc	
Rim		Drop Center—Safety Wheel	
Size	14 x 6 in.	14 x 6½ in.	14 x 7 in.
Flange Type	K	K	L
No. of Nuts to Attach Wheel	5	5	5
Stud Hole Circle (diameter)	4½	4½	5½
Stud Size	½–20	½–20	9/16–18
TIRES			
Type	Super Soft Cushion Tubeless	Nylon Super Soft Cushion Tubeless	
Size	8.50 x 14	9.00 x 14	9.50 x 14
Cord Material	Rayon	Nylon	Nylon
TIRE PRESSURE			
Pounds—Cold	22	22	22

Section XIII
WHEELS AND TIRES

WHEELS

1. SAFETY-RIM WHEELS

Safety-rim wheels, as shown in Figure 1, "A" are designed to provide added protection in case a blow-out or rapid deflation of tire occurs. The raised rim section as shown in Figure 1, "A" tends to hold tire in place.

2. TIGHTENING WHEEL HUB NUTS

Tighten wheel hub nuts evenly while tire is off ground. Lower tire to ground to tighten nuts securely. **Make sure these nuts are tight.**

3. CHECKING WHEELS FOR ECCENTRICITY

Dismount tire and test with wheel mounted on brake drum. Position dial indicator on firm surface to prevent deflection. With the anvil of indicator bearing on the inner tire bead surface of wheel, as shown in Figure 2, slowly rotate wheel and note the total runout. Mark high and low spots and the amount on wheel. If radial runout of wheel exceeds .045 inch, replace the wheel.

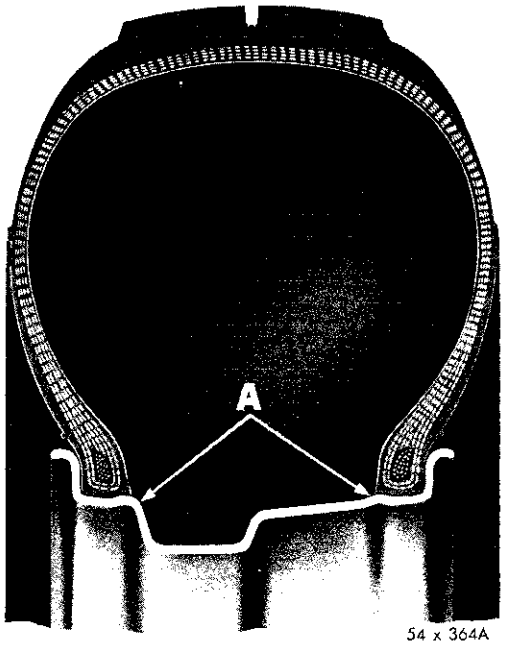

Fig. 1—Safety Type Rim

NOTE: Do not check runout on outside of wheel rim since this method can easily give a false reading.

4. CHECKING WHEEL FOR WOBBLE (LATERAL RUNOUT)

Before checking a wheel for wobble (lateral runout), make sure tire is properly mounted. Mount a dial indicator on firm base, with anvil of indicator resting against the flange of wheel. Rotate the wheel. If lateral runout is more than ⅛ inch (.125 inch), straighten or replace wheel.

5. BALANCING WHEEL AND TIRE ASSEMBLIES

Proper balance of wheel and tire assemblies promotes smooth steering action and is a safeguard against vibration and front end shake. To check froat wheels for balance, place jack under center of front of car and raise both front wheels off floor. **Do not place jack under lower control arms as this will tend to minimize vibration.**

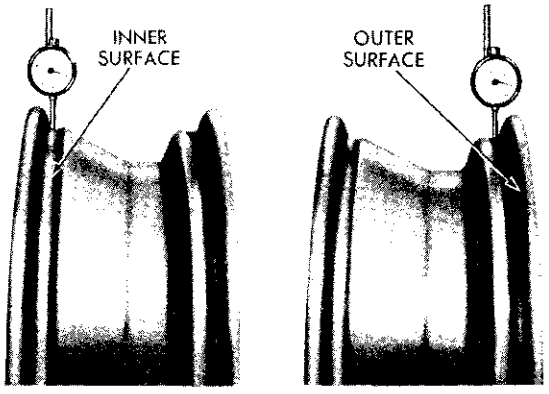

Fig. 2—If Radial Runout Exceeds .045 inch, replace Wheel

NOTE: Remove caked mud or tar from wheel so that balance condition will not be affected.

Using a spinner, rotate the wheel at a higher rate of speed than that encountered in actual highway driving. Place crumpled cloth or towel on front fender above center of wheel. Rotate the wheel up to high speeds. The wheel will vibrate profusely, if it is out of balance. If wheel is in balance, there will be no vibration at any speed.

If wheel is out of balance, mount it on master drum of wheel balancer to determine the proper location and amount of weight needed, or use wheel balancing equipment which checks balance with wheel on car. With this type of equipment, the balancing mechanism is clamped to the wheel assembly. When location and size of weights needed to balance wheel are determined, divide the amount and attach half of weight to inner rim and the other half to the outer rim of wheel.

To check balance of rear wheels, place jack under frame side rail about 12 inches forward of rear spring front hanger. Raise one wheel off the floor at a time. Block the other wheel. Place a crumpled cloth or towel on fender above wheel. With the engine running and transmission in direct drive, spin the wheels through speed ranges of 20, 30 and 40 miles per hours. **Do not exceed 40 miles per hour on the speedometer.**

The balance is correct if the cloth or towel does not vibrate. If wheel and tire assembly is out of balance, check with wheel balancing equipment and attach weights as needed.

TIRES

6. TUBELESS TIRES

The Tubeless Tires provide longer life and added protection against blowouts and punctures. A puncture can be repaired by using the repair plugs and other materials in the Tubeless Tire Repair Kit. Refer to Paragraph 10, for puncture repair procedures.

7. DISMOUNTING TIRES

Remove tire and wheel. Deflate tire. **When dismounting, do not use hammer or tire irons to loosen sealing bead from flange.**

8. MOUNTING TIRES

Clean rim flanges and bead seats with wire brush or steel wool. Install valve stem from inside the rim. The rubber stems snap into valve stem hole.

Apply MOPAR Ruglyde (or mixture of 12 parts water and one part liquid soap) to the tire beads to facilitate mounting. Mount the inside and outside in the usual manner. **Make sure the tire irons do not have sharp or burred edges and work with care to avoid damaging the tire beads.**

Apply a blast of air, after tire is mounted on rim. If beads do not seat sufficiently to hold the pressure, spread by constricting the centerline of tread with a tire mounting band, as shown in Figures 3 and 4 or a rope tourniquet. To make a tourniquet around the tire use one or more turns of rope. Tighten by twisting rope with tire tool, and pound on tread at various places to evenly distribute the tension.

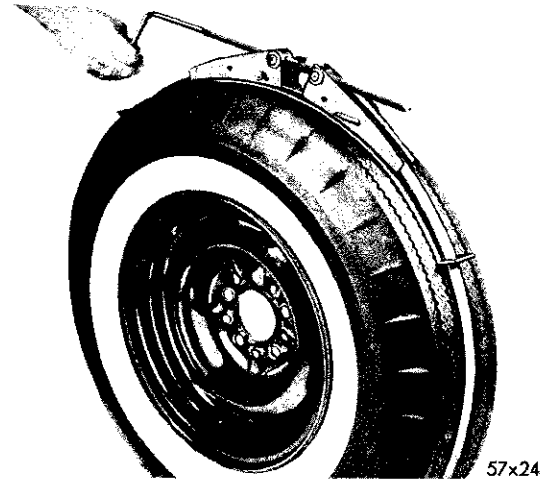

Fig. 3—Constricting Centerline of Tire with Mechanical Tool

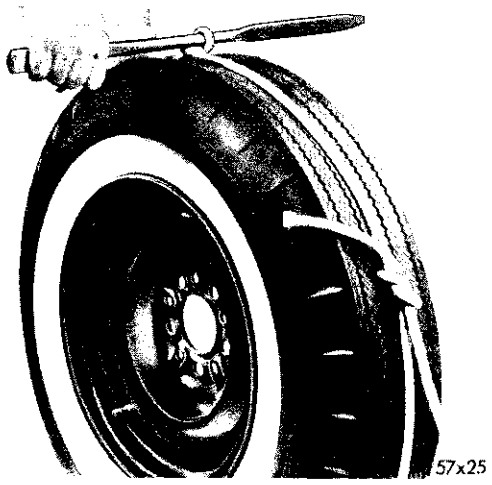

Fig. 4—Constricting Centerline of Tire with Rope Tourniquet

When the tire beads seat, remove the mounting band or rope tourniquet.

CAUTION

Release tension on mounting band or rope tourniquet when inflation takes effect and before pressure begins to build up.

Install valve core and inflate tire to recommended pressure. Test tire and wheel assembly for leakage, in Paragraph 9.

9. TESTING THE TIRE AND WHEEL ASSEMBLY FOR LEAKAGE

When testing for leakage, do not remove tire from rim. Examine tire carefully for puncturing object. If tire is flat, inflate and listen for first air leak. If air leakage is slow and cannot be heard, remove tire from car and submerge in water test tank.

Fig. 5—Lubricating Puncture with Cement

Apply a soap solution, if test tank is not available, covering surface of tire, the valve stem, and the juncture of tire and rim flange. A slow leak will be indicated by an accumulation of soap bubbles.

10. REPAIRING PUNCTURES

a. Tire on Wheel (Outside Method)

Simple punctures can usually be repaired with tire mounted on wheel, using items in repair kit. The operation can best be performed when tire is flat. It can also be accomplished while tire is inflated.

Remove the puncturing object. Dip needle inserting tool in the cement provided in repair kit, and carefully probe in hole to determine its direction. After direction of hole is determined, continue to probe until the rubber around the hole is well covered with cement, as shown in Figure 5.

CAUTION

If the needle appears to be blocked, do not force it into hole as otherwise, an additional hole may be made, and two holes will be difficult to seal. Twist and turn needle to find the hole, if needle does not insert freely.

Select a repair plug according to size of hole. The repair plug should have a diameter about twice the size of hole, because soft rubber will stretch when inserted with needle. Roll small end of repair plug into "eye" of needle, 3/8 inch from end of the plug, as shown in Figure 6.

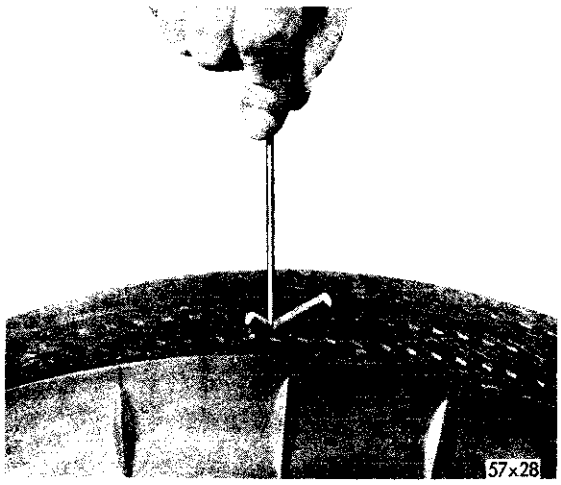

Fig. 6—Inserting Needle and Plug in Puncture

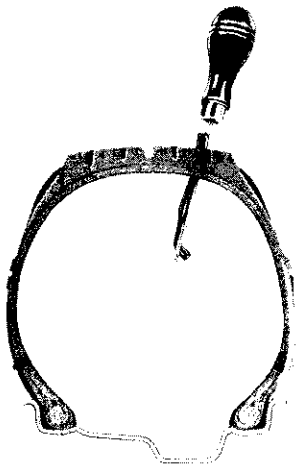

Fig. 7—Plug and Needle in Puncture (Sec. View)

Dip repair plug and needle into cement, and immediately insert in hole with a firm, steady motion, until short end of repair plug snaps through tire, as shown in Figure 7. Pull needle straight out of hole. The plug will automatically unhook from the needle as this is done. Trim plug about 1/8 inch above tread of tire. Inflate tire, check for leakage, and tire is ready for use.

The portion of plug, which protrudes slightly above the tire tread, will wear down to the tread surface. The portion of the plug inside the tire will not affect normal operation.

b. Tire Off Wheel (Inside Method)

When the tire has been punctured by an irregularly-shaped object, a slow leak may occur at the repair after an attempt has been made to seal the opening with a repair plug. If such is the case, repair as follows: Place tire in a spreader. Trim the inside end of repair plug flush with the liner, and buff the liner approximately one inch around the puncture. Leave the repair plug in hole to keep moisture out of the tire fabric. If a repair plug is not in tire, work a little extra repair gum into the hole before applying the patch. It is not necessary to use cement to obtain a good adhesion.

Two types of equipment are available for curing inside patches—the Electric and the Match Patch. The Electric type has a "fuse" plug that automatically cuts off the power when the curing is completed. The Match Patch, or powder burning type, depends upon the heat resulting from a slow fire. "C" clamps are used with both types of equipment to apply pressure during the curing process. **All inside patches used must be Hot Patches.** Peel the strip from the rubber patch on the metal curing plate and center it over puncture. Follow instructions provided with the equipment, apply pressure, and cure the patch.

11. CLEANING WHITE SIDEWALL TIRES

CAUTION

A protective, water-soluble coating is applied to the white sidewalls of tires at the factory. Wash the sidewalls with water ONLY to remove this coating. DO NOT USE gasoline or a wire brush.

To clean white sidewall tires, use a good kitchen cleanser and a stiff brush. **Do not use gasoline or any wire, metal, etc. brush, as they will scratch the sidewalls.**

12. RECOMMENDED TIRE PRESSURES

The tires must receive proper care to insure maximum tire lift. Under-inflation contributes to wear and causes excessive heat. Over-inflation causes excessive strain and, as a result, the tire is subject to break or bruise. Tire pressure should be checked at least once a week. 22 pounds is the recommended COLD tire pressure. Tire pressures will increase approximately

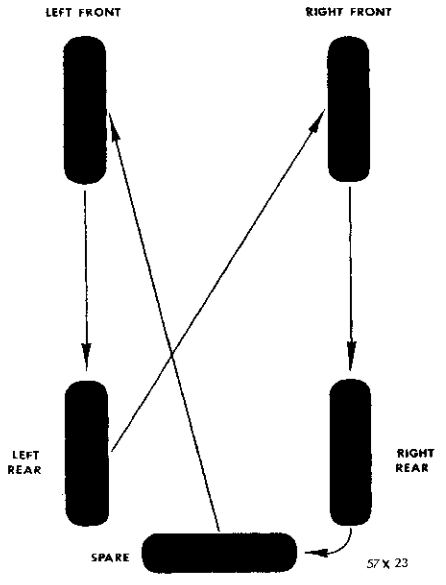

Fig. 8—Tire Rotation

3 psi in city driving and 5 psi for country driving. **NEVER BLEED BUILT UP PRESSURE IN A TIRE.**

CAUTION

Always use an accurate gauge when checking tire pressure. An inaccurate gauge can be in error as much as 2 or 3 pounds, which is approximately 10 per cent of the recommended tire pressure.

Make sure the valve caps are tight, after checking tire pressure.

13. TIRE ROTATION

Rotating tires at intervals of 3,000 miles is the only known method of controlling certain types of tire wear. Tire life (Fig. 8) can be increased as much as 25 per cent by regularly rotating the tires, including the spare.

SERVICE DIAGNOSIS

14. LEAKAGE CAUSES AND CORRECTIVE METHODS

Valve Leak—This type of leak is usually indicated by bubbles at the valve stem after soap solution is applied at this point. Make sure that the rim is clean around the valve hole. If a "snap-in" type rubber valve leaks, it must be replaced.

Rim Leaks—If the leak is at the top of rim flange (between flange and tire bead, mark location of leak on tire and rim, and dismount tire.)

Rusty Rim—Remove rust with scraper and finish the operation with wire brush or steel wool. Apply MOPAR Rubber Cement thickly to tire and rim flange. Mount tire to rim while cement is still wet.

Foreign Material Embedded In Sealing Grooves of Rim—Remove with wire brush or screwdriver blade. Apply MOPAR Rubber Cement thickly to the cleared area, and mount tire while cement is wet.

Bent Flange—Inspect flanges of wheel to determine if they are bent. A bent flange can be straightened if damage is not too severe.

Cracked Welds—Cover weld area with soap solution and check for pin hole leak. If leak is evident, repair or replace wheel as necessary. **(DO NOT WELD RIM.)**

Heavy Rim Weld—A slow leak may result if rim weld has not been dressed down. Use a flat file to smooth off the weld in the flange area. Apply MOPAR Rubber Cement in the area to help "make" the seal.

Cracked Rim—A rim seldom cracks unless it has been welded or badly overloaded. **Do not try to repair a welded rim, install a new wheel.**

15. TIRE THUMP

Tire thump is a pounding action that occurs each time a tire rotates. In most instances, tire thump is evident at speeds under 45 miles per hour on a smooth road, **and is usually restricted to a small speed range.** If the thump is slight and difficult to detect, the condition may be considered acceptable, and tire life will not be affected.

When checking for cause of tire thump, inspect all tires for uneven wear, and make sure the beads of all tires are properly seated in the wheel rims. Inflate all tires to 50 pounds pressure. This will eliminate or reduce thump, if it is due to tire irregularities.

Drive the car on a smooth road. If the thump still occurs while the tires are inflated to 50 pounds, the condition is caused by factors, such as brake drum circle eccentric in relation to center line of axle, wheel retaining bolt circle eccentric in relation to the wheel rim, large patch in tire, or excessive universal joint angularity can cause a condition similar to tire thump or roughness. However, if thump disappears when tires are inflated to 50 pounds pressure, make the following test:

Deflate one tire to 25 pounds and drive car on smooth road. If thump appears, the deflated tire is at fault. Repeat test until all tires, including spare, have been checked. Only one tire at a time should be deflated to 25 pounds pres-

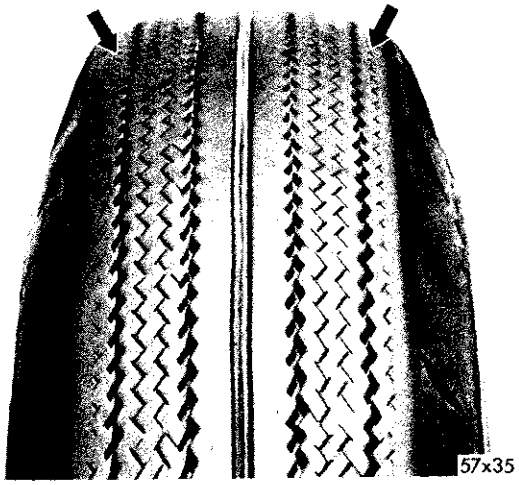

Fig. 9—Under-Inflation Wear

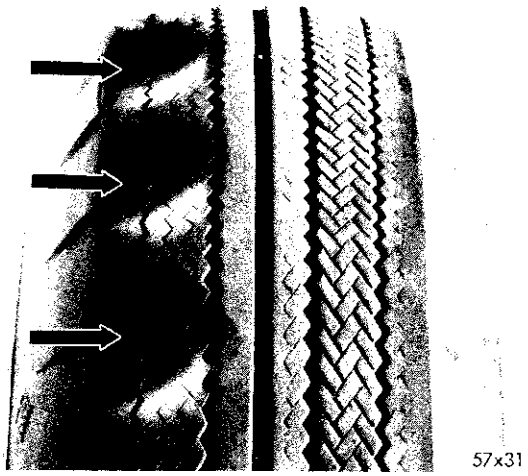

Fig. 10—Spotty Wear

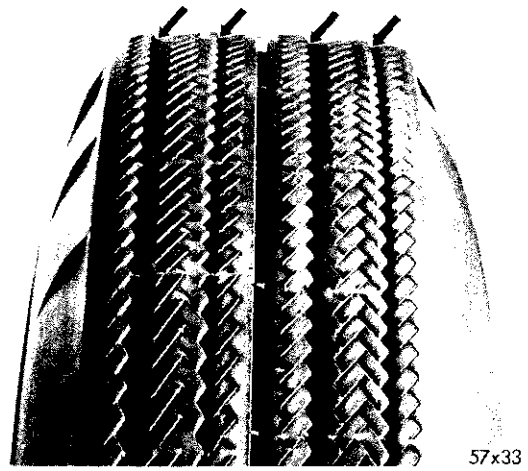

Fig. 11—Toe-In Wear

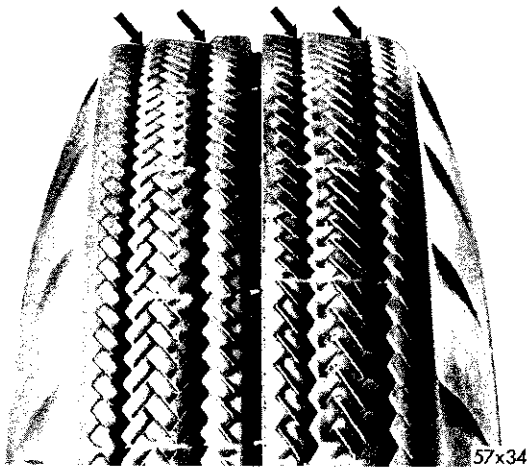

Fig. 12—Toe-Out Wear

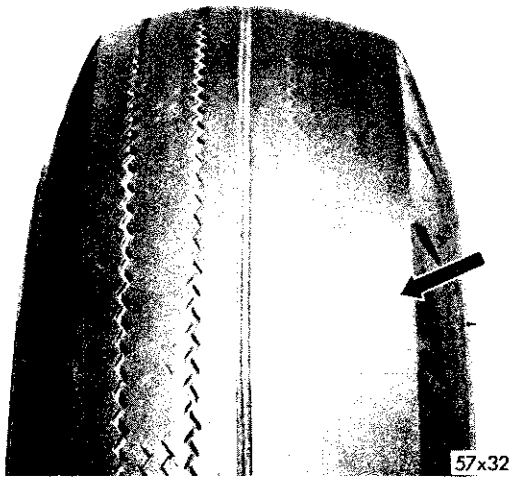

Fig. 13—Camber Wear

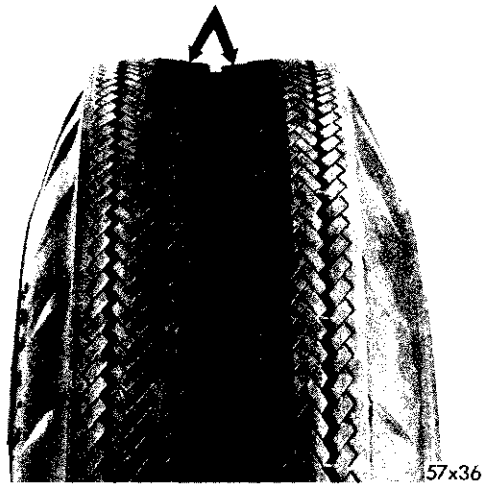

Fig. 14—Over-Inflation

sure for testing. Reinflate the tire already tested before proceeding to the next tire.

NOTE

Sometimes, a thumping tire will operate satisfactorily when changed from one side of the car to the other. This changes the direction of the tire's rotation. In severe cases of tire thump, it may be necessary to replace the tires in question.

16. TIRE WEAR

Inflate tires to proper pressure recommended in Paragraph 12. (Refer to Fig. 9). When tires are under-inflated, excessive wear occurs at the two tread ribs next to the inner and outer shoulder ribs. Wear occurs at center of tread when tire is driven over-inflated.

a. Spotty Wear (Fig. 10) usually becomes evident on front tires when tires are not rotated every 3,000 miles.

b. Excessive toe-in or toe-out (Figs. 11 and 12) of front wheels affects the rate of tire wear more than any other factor.

c. (Refer to Fig. 13). Excessive positive camber will develop noticeable wear on the outer ribs of tires. Excessive negative camber will result in noticeable wear on the inside ribs.

d. Check for wheel wobble. Straighten or replace wheel, if necessary.

e. Check for worn ball joints. Replace as necessary.

f. Check for wear caused by sustained high speed driving, and driving around corners too fast.

g. Check for over-inflation (Fig. 14).