



TIRE STORAGE RECOMMENDATIONS

INTRODUCTION & PURPOSE

Tires are designed and built to provide many thousands of miles of excellent service but must be maintained properly. Tires are composed of various materials, including rubber, that have performance properties essential to the proper functioning of the tire. Properties of tire materials can evolve due to their service and storage conditions. Tires can be damaged as a result of poor storage conditions and such damage may eventually lead to tire failure.

Stored tires should be protected against environmental effects such as sunlight, ozone, and other potentially damaging conditions. An important thing to remember about tire storage is to first use the tires that have been in stock the longest period of time.

The purpose of this bulletin is to outline recommendations—the “Do’s and Don’t’s”—for the proper storage of unmounted and mounted tires. Some specialty, application-restricted type tires (such as racing, or semi-racing tires) may require specific storage conditions. Please refer to the tire manufacturer’s storage recommendations for details.



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DOs

- Do store tires where the area is clean, dry and well ventilated, but with a minimum of circulating air.
- Do store tires in an area with temperate ambient conditions (mild temperatures, shaded or dark).
- Do store tires raised off the storage area's surface to minimize exposure to moisture or damage, such as on a pallet or a storage rack.
 - Pallets should be in good condition and free of protruding nails or sharp burrs from metal bracing. Damaged pallets should not be used.
 - Pallets should have flat, smooth surface—not a grated surface. Grated surfaces may leave an indentation on the tire if stored over long periods of time.
- Do store unmounted tires sidewall to sidewall to help maintain tires' shape; to prevent staining, store whitewall to whitewall; for example:
 - Stacked horizontally ("stovepipe") as illustrated in Figure 1. For stability, do not over stack unmounted tires. Too much weight can also damage the tires at the bottom of the stack.
 - OR—
 - Racked sidewall-to-side wall as illustrated in Figure 2.

FIGURE 1



FIGURE 2



FIGURE 3



Indoor storage is recommended, however—

If tires are outdoors—

- Do store tires where they are raised off the ground (or on storage racks).
- Do protect tires with an opaque, waterproof covering with some type of vent openings in order to avoid creating a "heat box" or "steam bath" effect. See Figure 3 for an example of an outdoor storage cover.

If tires are mounted on a vehicle—

- Do store the vehicle such that all weight is removed from the tires.
- If the vehicle cannot be stored with weight removed and off the storage surface, completely unload it so minimum

weight will rest on the tires. Be sure to maintain the recommended inflation pressure for all tires, including the spare. The surface where the vehicle is parked/stored should be firm, reasonably level, well drained, and clean. Move the vehicle at least every three months to prevent ozone cracking/weather checking in the sidewall flex area and also to prevent a “flat spot” from developing (due to strain from deflection). If tires do develop a temporary “flat spot,” it will usually disappear in a short period of time (for example, after about 25 miles of service).

- For vehicles equipped with high performance tires with a nylon belt overlay, to prevent “flat spotting” it is recommended that the vehicle be moved every 30 days and that the tires be temporarily inflated to the maximum inflation pressure molded on the tire sidewall. When the vehicle is returned to service, adjust the inflation pressure to the recommended inflation pressure printed on the vehicle tire placard.

DON'Ts

- Do not store tires where the area is dirty, wet, and poorly ventilated.
- Do not expose tires to petroleum-based products (such as gasoline or oil) as well as other volatile solvents/substances.
- Do not store tires in an area with extremely hot temperatures or exposed to direct sunlight.
- Do not store tires in an area with extremely cold temperatures.
- Do not store tires in the same area as electric motors, battery chargers, generators, welding equipment, or other ozone-generating sources. If there is a question, check ozone levels to be sure they do not exceed 0.08 ppm (parts per million).

If outdoors—

- Do not store tires in contact with black asphalt or other heat absorbent surfaces.
- Do not expose tires to highly reflective surfaces (e.g., sand or snow covered ground)
- Do not store tires unprotected on piers, ship decks, open fields or other exposed outdoor areas.



PLACING STORED TIRES IN SERVICE

Before placing stored tires in service, a professional tire dealer should conduct a visual and tactile inspection to be sure those tires are clean, dry, free of foreign objects, and/or do not show any signs of damage. Improper storage may result in various tire conditions, some examples of which are shown in the photos at right. For more information, refer to the *Passenger and Light Truck Tire Conditions Manual* published by the Tire Industry Association (see [RESOURCE](#)).

If vehicle and/or tire manufacturers make recommendations regarding tire service life, please contact those manufacturers with any questions regarding those recommendations in connection with stored tires. The last four digits of the DOT tire identification number (TIN) are the week and year the tire was manufactured.

Once mounted on the rim/wheel, the tire should be inflated to the vehicle's recommended inflation pressure, which is listed on the vehicle's tire placard. If placing a spare tire into service, be sure it is inflated to the recommended inflation pressure. Note that a compact, temporary spare (T-type) tire may have a higher operating inflation pressure.

RESOURCE

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TIA is an international association representing all segments of the tire industry, including those that sell, service, manufacture, repair, recycle, or use new or retreaded tires, and also those suppliers or individuals who furnish equipment, material or services to the industry.

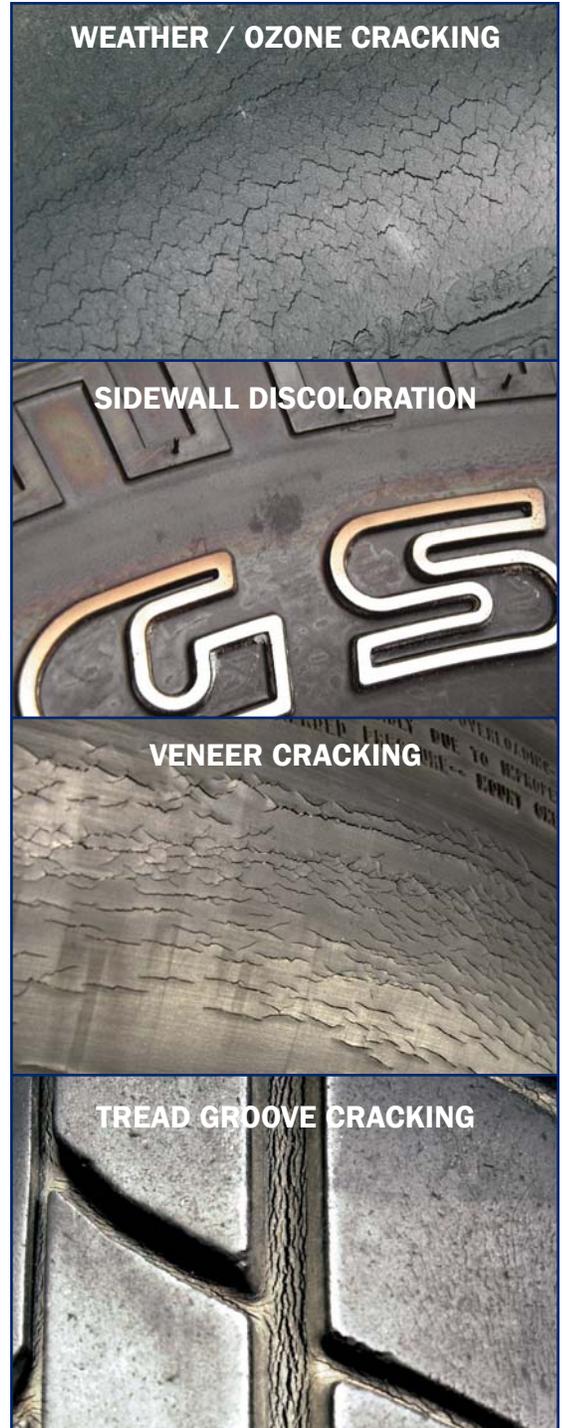


PHOTO SOURCE: *Passenger and Light Truck Tire Conditions Manual*
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