SAFETY WARNINGS

SAFETY WARNING FOR MOUNTING 15.5" DIAMETER RIMS AND TIRES

Certain Isuzu, Chevrolet, and General Motors light commercial trucks (11,050 lbs. Gross Vehicle Weight) are being imported into North America with 15.5" diameter rims and tires on the rear axle. This is a unique rim and tire size for which no North American produced replacement tire sizes are currently available. Toyo does not produce 15.5" tires, but is concerned that its 15" tires could be misapplied.

A MISMATCH OF TIRE SIZE AND RIM SIZE MAY RESULT IN TIRE FAILURE AND SERIOUS OR FATAL INJURY. ANY ATTEMPT TO MOUNT A 15" OR 16" BEAD DIAMETER TIRE ON A 15.5" DIAMETER RIM OR A 15.5" BEAD DIAMETER TIRE ON A 15" OR 16" DIAMETER RIM WOULD BE A MISMATCH.

WARNING EXCESSIVE SPEED IS DANGEROUS

Although a tire may be speed rated, we do not endorse the operation of any vehicle in an unsafe or unlawful manner. Speed ratings are based on laboratory tests which relate to performance on the road, but are not applicable if tires are underinflated, overloaded, worn out, retreaded, damaged, or altered. Furthermore, tire speed ratings do not imply that vehicles can be safely driven at the maximum speed for which the tire is rated, particularly under adverse road and weather conditions or if the vehicle has unusual characteristics.

OPERATION OF VEHICLES AT EXCESSIVE SPEEDS FOR OPERATING CONDITIONS MAY RESULT IN AN ACCIDENT AND DEATH OR INJURY.

WARNING UNDERINFLATION IS DANGEROUS

FAILURE TO MAINTAIN RECOMMENDED AIR PRESSURES MAY RESULT IN TIRE FAILURE AND POSSIBLE ACCIDENTAL DEATH OR INJURY.

SAFETY WARNINGS

FLAMMABLE SUBSTANCES IN TIRES WARNING

NEVER, under any circumstances, introduce a flammable substance into a tire. Igniting this substance in an effort to facilitate seating the beads is extremely unsafe. This may result in an explosion of the tire with force sufficient to cause serious personal injury or death.

This practice may also result in undetected damage to the tire or rim that could result in failure of the tire in service.

INSPECTION PROCEDURES TO IDENTIFY POTENTIAL SIDEWALL "ZIPPER RUPTURES" IN STEEL CORD RADIAL TRUCK, BUS AND LIGHT TRUCK TIRES

Tire and rim servicing can be dangerous and must only be performed by trained personnel using proper procedures and tools.

Failure to follow these procedures may result in serious injury or death.

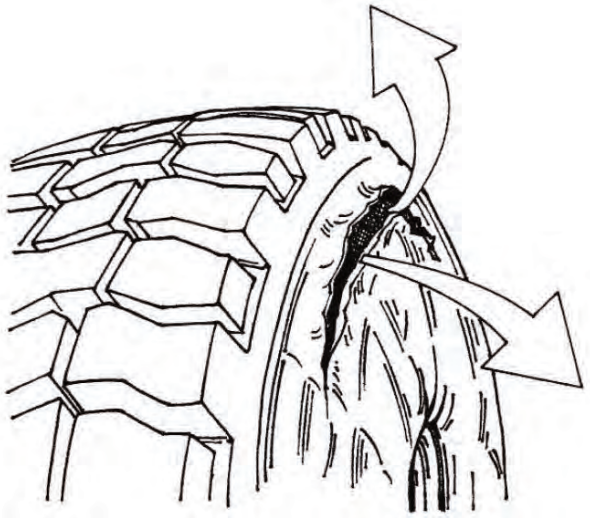
Any tire suspected of operating underinflated and/or overloaded must be approached with caution. Permanent damage due to operating a tire underinflated and/or overloaded cannot always be detected. Any tire known or suspected of being operated at 80 percent or less of normal operating inflation pressure and/or overloaded could possibly have permanent sidewall structural damage (steel cord fatigue). Ply cords weakened by underinflation and/or overloading may break one after another, until a rupture occurs in the upper sidewall with accompanying instantaneous air loss and explosive force.

This can result in serious injury or death.

STEP 1 – INSPECT TIRE

"SUSPECT" TIRE

When a vehicle equipped with steel cord radial truck/bus tires or light truck tires returns to its service facility and is suspected of operating with one or more tires underinflated and/or overloaded, the service personnel should approach such tires with caution. A trained tire technician must remove the valve core and completely deflate the tire before removing the tire/rim/wheel assembly from the vehicle. After the tire is removed from the vehicle, the technician should demount the tire from the rim/wheel and conduct a complete visual hands-on inspection of the tire.



For tires that have already been demounted and are being prepared to be repaired/retreaded, the same inspection procedure applies. If available, the technician could also utilize non-destructive inspection equipment, such as shearography, x-ray, or

other non-destructive testing to look for any anomalies present in the casing. For all tires returning to service, a trained tire technician should conduct a complete visual hands-on inspection of the tire in a well lighted area with a hand-held grazing light.

LOOK FOR:

- Punctures or other injuries
- Distortions or undulations (ripples and or bulges) in the sidewall
- Cuts, snags, or chips that expose any body (ply) cords or steel wire

FEEL FOR:

- Soft spots in the sidewall flex area
- Distortions or undulations (ripples and/or bulges) in the sidewall
- Protruding filaments (wire) indicating broken cords

LISTEN FOR:

- Any snapping, popping or crackling sounds

If tire contains punctures, cuts, snags or chips exposing body (ply) cords or steel wire, but does not exhibit any other potential zipper characteristics, it should be referred to a full-service repair facility for further inspection to determine if it is a repairable condition and not a source of a potential "zipper rupture".

If tire does exhibit potential zipper characteristics – it must be marked appropriately, made unserviceable and non-repairable and then scrapped!

If NONE of these conditions are present, with the valve core still removed, continue to step 2.

STEP 2 – INFLATE TIRE TO 20 PSI

PROPER INITIAL INFLATION

If none of the "zipper rupture" conditions are present during the initial inspection of the tire (Step 1), mount the tire on its rim/wheel assembly and inflate approximately 5 psi to seal the beads. Place the assembly in an OSHA-approved restraining device, such as a tire safety cage. Inflate the tire, with the valve core removed, using a clip-on air chuck with a pressure regulator and extension air hose.

- For light truck and medium truck tires inflate the tire up to 20 psi.
- For tires designed for bus and refuse applications, inflate tire to 40 psi.

Throughout initial inflation in Step 2, always –

LISTEN FOR:

- Any snapping, popping or crackling sounds

LOOK FOR:

- Distortions or undulations (ripples and/or bulges) in the sidewall

If ANY of these conditions are present during inflation – STOP! Do not approach tire. Before removing from restraining device completely deflate tire remotely.

Remove clip-on air chuck. Tire must be marked appropriately, made unserviceable and non-repairable and then scrapped!

If NONE of these conditions are present, with the valve core still removed, continue to step 3.

STEP 3 – INFLATE TIRE TO 20 PSI OVER MAXIMUM INFLATION PRESSURE ON SIDEWALL

CONTINUE INFLATION

If none of the "zipper rupture" conditions are present during Step 2 (*initial inflation 20 psi for LT and truck tires; 40 psi for bus and refuse tires*), then continue inflation process in the restraining device, with the valve core still removed, using a clip-on air chuck with a pressure regulator and an extension air hose.

- For light truck and medium truck tires, continue inflating the tire to 20 psi OVER the maximum inflation pressure molded on the sidewall – but do not exceed 120 psi.
- For tires designed for bus and refuse applications, continue inflating to 20 psi OVER the maximum inflation pressure molded on the sidewall – but do not exceed 140 psi.
- ALWAYS remain outside the tire's trajectory.

Throughout inflation process in Step 3, always –

LISTEN FOR:

- Any snapping, popping or crackling sounds

LOOK FOR:

- Distortions or undulations (ripples and/or bulges) in the sidewall

If ANY of these conditions are present during inflation of the tire – STOP! Do not approach tire. Before removing restraining device completely deflate tire remotely.

Remove clip-on air chuck. Tire must be marked appropriately, made unserviceable and non-repairable and then scrapped.

If NONE of these conditions are present, remove clip-on air chuck, install the valve core, and adjust the inflation pressure to the recommended operation inflation pressure.