

Firestone

Tire Warranty
Maintenance
& Safety Manual



Firestone

TIRE WARRANTY, MAINTENANCE and SAFETY MANUAL

FIRESTONE TRUCK TIRES

Congratulations on your purchase of quality FIRESTONE brand truck tires!

To ensure optimum tire performance and reduce the risk of a tire failure, Bridgestone Canada Inc. ("Bridgestone") strongly recommends you read and follow all maintenance and safety information contained in this manual. In addition, we recommend periodic inspection and maintenance, if necessary, by a qualified tire service professional.

LIMITED WARRANTY

FIRESTONE BRAND TRUCK TIRES

ELIGIBILITY

You are covered under the terms of this Limited Warranty if all of the following apply:

- You are the original owner, or original owner's authorized agent, of any new Firestone brand truck tire bearing a Department of Transportation (DOT) tire identification number indicating manufacture after January 1, 2011 (DOT serial 0111 or later). For tires covered prior to this time, please refer to the limited warranty that would have been in effect at the time of original sale.
- The tire was purchased after January 1, 2012.
- The tire size, load range, and speed rating are equivalent to, or greater than, that specified or recommended for use by the vehicle manufacturer or Bridgestone.
- The new tire was approved for sale in Canada, listed in the Canadian catalogue or data book, and purchased from an authorized Firestone brand truck tire retailer.

WHAT IS WARRANTED and FOR HOW LONG

If, before wearing down to 1.6 mm (2/32") remaining original tread depth (i.e. worn down to the top of the built-in indicators in the original tread grooves) and within six years from the date of tire manufacture, which ever occurs first, an examination by Bridgestone shows that any tire covered by this Limited Warranty has become unfit for the use (see items in the section entitled "What This Limited Warranty Does Not Cover") for which it was designed due to a manufacturing defect in workmanship or material, such tire will either be repaired at no charge or replaced with a comparable new Firestone tire on the basis set forth in this Limited Warranty.

WHAT THIS LIMITED WARRANTY DOES NOT COVER

This Limited Warranty does not cover the following:

1. Tire damage due to:

- A. Road hazards**, including, without limitation: Puncture, cut, impact break, stone drill, bruise, bulge, snag, etc.
- B. Improper use or operation**, including, without limitation: Improper inflation pressure, overloading, tire/wheel spinning, curbing, use of an improper rim/wheel, tire chain damage, misuse, misapplication,

negligence, tire alteration, or for racing or competition purposes.

- C. Insufficient or improper maintenance**, including, without limitation: Wheel misalignment, worn suspension components, improper tire mounting or demounting, tire/wheel assembly imbalance, improper brake adjustment, or other vehicle conditions, defects, or characteristics.
- D. Contamination or degradation** , by petroleum products or other chemicals, fire or other externally generated heat, or water or other material trapped inside the tire during mounting or inflation.
2. Irregular wear, rapid wear, or wear-out; no mileage warranty is expressed or implied.
 3. Weather/ozone cracking after four years from date of tire manufacture.
 4. Tires subjected to severe under-inflation or run-flat conditions.
 5. Tires that have been improperly repaired.
 6. Tires rendered unretreadable due to excessive tread wear or improper buffing.
 7. Tires improperly retreaded, including, without limitation: Improper or inadequate inspection, preparation, equipment, material, repair, etc.
 8. Ride disturbance or vibration after tread wear use beyond 10% of original usable tread depth.
 9. Tires with internally applied additives for balance, sealing, cooling, or any other alleged tire performance enhancement will not void the Limited Warranty unless an inspection of the tire reveals damage related to the use of the additive.
 10. Tires inflated with anything other than air or nitrogen.
 11. Tires purchased outside of Canada.
 12. The cost of applicable taxes.
 13. Failure to follow any of the safety and maintenance recommendations or warnings contained in this manual.

This Limited Warranty is in addition to and/or may be limited by any other applicable written warranty you may have received concerning special tires or situations.

NO-CHARGE REPLACEMENT – NEW TIRE

Firestone brand truck tires adjusted under this Limited Warranty will be replaced free of charge up to the first 10% of original usable tread depth or within 12 months from date of purchase with proof of purchase (if without proof of purchase, then within 12 months from the date of tire manufacture), whichever occurs first. The cost of mounting and balancing and other service charges, disposal fees, or applicable taxes are payable by you.

OWNER'S OBLIGATIONS

It is your obligation to maintain proper tire inflation pressures as specified by the vehicle manufacturer and to operate the vehicle within tire/vehicle load capacity and speed limitations. It is also your obligation to maintain proper wheel alignment and tire/wheel assembly balance.

To request an adjustment, you must present the tire to an authorized Firestone brand truck tire retailer. Your vehicle on which the tire was equipped must also be available for inspection. Complete and sign the customer section of the Bridgestone Canada Inc. Limited Warranty Adjustment Form or an electronic version of the Limited Warranty Form and pay appropriate replacement price, taxes, disposal fees, and service charges, if any. Tires accepted for warranty compensation become the property of Bridgestone Canada Inc.

GENERAL PROVISIONS AND EXCLUSIONS

Nothing in these warranties is intended to be a representation that tire failures cannot occur. To the extent permitted by applicable law, no other representations, warranties or conditions, whether express or implied, statutory or otherwise, including warranties of merchantability and fitness for a particular purpose, shall apply to the tires.

No one, including without limitation, any employee, dealer, retailer or representative, has the authority to make any representation, promise or agreement that in any way varies the terms or conditions hereof.

These limited warranties and protections give you specific legal rights and you may also have other rights that may vary from province to province. To the extent that the provisions of any applicable legislation expressly replace, eliminate, amend, extend or prohibit any term or terms shall be accordingly replaced, eliminated, amended or extended, as the case may be, in accordance with such legislation.

IMPORTANT SAFETY INFORMATION

Any tire, no matter how well constructed, may fail in use as a result of punctures, impact damage, improper inflation pressure, overloading, or other conditions resulting from use or misuse. Tire failure may create a risk of property damage, serious personal injury or death.

SAFETY WARNING

Serious personal injury or death may result from a tire failure. Many tire failures are preceded by vibration, bumps, bulges or irregular wear. If a vibration occurs while driving your vehicle or you notice a bump, bulge or irregular wear, have your tires and vehicle evaluated by a qualified tire service professional.

To reduce the risk of tire failure, Bridgestone Canada Inc. strongly recommends you read and follow all safety information contained in this manual, tire industry publications such as those published by the Rubber Manufacturer's Association (RMA), and tire mounting procedures published by the Occupational Safety and Health Administration (OSHA) of the U. S. Department of Labor and the Canadian Centre for Occupational Health and Safety. In addition, we recommend periodic inspection and maintenance, if necessary, by a qualified tire service professional.

TIRE INFLATION PRESSURE

Tires need proper inflation pressure to operate effectively and perform as intended. Tires carry the vehicle, passenger, and cargo loads and transmit the braking, acceleration, and turning forces. The vehicle manufacturer recommends the inflation pressures for the tires mounted on your vehicle.

SAFETY WARNING

Driving on tires with improper inflation pressure is dangerous.

- Under-inflation causes excessive tire heat build-up and internal structural damage.
- Over-inflation makes it more likely for tires to be cut, punctured, or broken by sudden impact.

These situations can cause a tire failure, even at a later date, which could lead to serious personal injury or death. Consult the vehicle tire information placard and/or owner's manual for the recommended inflation pressures.

In addition to tire damage, improper inflation pressure may also:

- Adversely affect vehicle ride and handling.
- Reduce tire tread wear.
- Affect fuel economy.

Therefore, follow these important recommendations for tire and vehicle safety, mileage, and economy:

- Always keep the vehicle manufacturer's recommended inflation pressure in all your tires, including inside duals.

- Check their pressure at preventative maintenance intervals and during pre-trip vehicle inspections.

Your vehicle's tire information placard and/or owner's manual will tell you the recommended cold inflation pressure for all your tires. For tractor/trailers, a placard is applied to each. For questions about locating or understanding the tire information placard(s), consult your vehicle owner's manual or ask a qualified tire service professional.

Maximum Pressure Indicated on the Tire Sidewall: This is the maximum permissible inflation pressure for the tire only. The vehicle manufacturer's recommended tire pressures may be lower than, or the same as, the maximum pressure indicated on the tire sidewall. The vehicle manufacturer's specification of tire pressure is limited to your particular vehicle and takes into account your vehicle's load, ride, and handling characteristics, among other criteria. Since there may be several possible vehicle applications for a given tire size, a vehicle manufacturer may choose a different inflation pressure specification for that same size tire on a different vehicle. Therefore, always refer to the inflation pressure specifications on the vehicle tire information placard and/or in your vehicle owner's manual.

Pressure Loss: Truck tires can lose 14 kPa (2 psi) per month under normal conditions and can lose 14 kPa (2 psi) for every 5.6°C (10 F) temperature drop. A puncture, leaking valve, or other damage could also cause inflation pressure loss. If a truck tire loses more than 28 kPa (4 PSI) per month, have it checked by a qualified tire service professional.

TIPS FOR SAFE TIRE INFLATION

SAFETY WARNING

Inflating an unsecured tire is dangerous. If it bursts, it could be hurled into the air with explosive force resulting in serious personal injury or death. Never adjust the inflation pressure of a truck tire unless it is placed in a safety cage or is secured to the vehicle or a tire mounting machine. Never stand or lean over the tire or in front of the valve when inflating.

SAFETY WARNING

Never re-inflate a truck tire that has been run at very low inflation pressure (i.e. 80% or less of normal operating pressure) without a complete inspection of the entire tire. Immediately have the tire demounted and inspected by a qualified tire service professional.

- The Provincial Transportation Ministries and National Safety Code requires a pre-trip vehicle inspection.

Pre-trip vehicle inspections and preventative maintenance should include cold-tire inflation pressure checks. Don't forget to check the inflation pressure of inside duals.

- The only correct method for checking inflation pressure is to use an accurate tire inflation pressure gauge. Kicking or thumping a tire will only tell you when a tire is totally flat.
- Check inflation pressure when the tires are "cold." Tires are considered "cold" when the vehicle has been parked for three hours or more, or if the vehicle has been driven less than a kilometre at moderate speed.
- Never release pressure from a hot tire in order to reach the recommended cold tire inflation pressure. Normal driving causes tires to run hotter and inflation pressure to increase. If you reduce inflation pressure when your tires are hot, you may dangerously under inflate your tires.
- If it is necessary to adjust inflation pressure when your tires are "hot," set their inflation pressure to 69 kPa (10 psi) above the recommended cold inflation pressure. Recheck the inflation pressure when the tires are cold.
- If your tires lose more than 28 kPa (4 psi) per month, the tire, tube (if applicable), valve, or rim/wheel may be damaged. Consult a qualified tire service professional for an inspection.
- A difference of 35 kPa (5 psi) or more between duals is not recommended.
- Use valve caps to keep the valves clear of debris and to help guard against inflation pressure loss.

SAFETY WARNING

Driving your vehicle in an overloaded condition is dangerous. Overloading causes excessive tire heat build-up and internal structural damage. This can cause a tire failure, even at a later date, which could lead to serious personal injury or death. Consult the vehicle tire information placard, certification label, and owner's manual for the recommended vehicle load limits and loading recommendations.

- Always keep the vehicle manufacturer's recommended inflation pressure in all your tires, including inside duals. Check their pressure at preventative maintenance intervals and during pre-trip vehicle inspections.
- Never exceed the maximum load rating stamped on the sidewall of your tire.
- Never exceed the gross vehicle weight rating (GVWR) or gross axle weight ratings (GAWR) of your vehicle.
- Never exceed the maximum load or inflation pressure

capacity of the rim/wheel.

- Consult your vehicle owner's manual for load recommendations and special instructions (such as for carrying unusually heavy loads).

TIRE DAMAGE AND INSPECTION

Evaluation and maintenance of your tires is important to their performance and the service they provide to you. Over time and/or through use, the condition of a tire can change from exposure to everyday road conditions, the environment, damaging events such as punctures, and other external factors.

SAFETY WARNING

Driving on damaged tires is dangerous. A damaged tire can suddenly fail causing serious personal injury or death. Have your tires regularly inspected by a qualified tire service professional.

You should visually inspect your tires during pre-trip vehicle inspections and inflation pressure checks. In addition, have your tires periodically evaluated by a qualified tire service professional when your vehicle is serviced such as routine maintenance intervals, oil changes, and tire rotations. In particular, note the following tips for spotting tire damage:

- After striking anything unusual in the roadway, have a qualified tire service professional demount the tire and inspect it for damage. A tire may not have visible signs of damage on the tire surface. Yet, the tire may suddenly fail without warning, a day, a week, or even months later.
- Inspect your tires for cuts, cracks, splits or bruises in the tread and sidewall areas. Bumps or bulges may indicate a separation within the tire body. Have your tire inspected by a qualified tire service professional. It may be necessary to have it removed from the rim/wheel for a complete inspection. Do not delay performing any necessary repair(s).
- Inspect your tires for adequate tread depth. When the tire is worn to the built-in indicators at 1.6 mm (2/32") or less tread groove depth, or the tire cord or fabric is exposed, the tire is dangerously worn and must be replaced immediately.
- Provincial regulations require steer axle tires to have 3.2 mm (4/32") or greater tread depth on vehicles over 4536 kg (10,000 lbs) GVWR.
- Inspect your tires for uneven wear. Wear on one side of the tread or flat spots in the tread may indicate a problem with the tire or vehicle. Consult a qualified tire

service professional.

- Inspect your rims/wheels also. If you have a bent, chipped, or cracked rim/wheel, it must be replaced.

TIRE MANUFACTURE DATE

The tire manufacture date is determined by examining the DOT tire identification number, also known as the DOT serial number or code, which can be found on at least one sidewall near the rim/wheel. It may be necessary to look on both sides of the tire to find the entire serial code.

Tires Produced Since 2000: The last four (4) digits of the serial code identify the week and year of production. For example, a tire with a serial code ending in “2406” would have been produced in the 24th week of 2006.

Tires Produced Prior to 2000: The last three (3) digits of the serial code identify the week and year of production. For example, a tire with a code ending in “329” would likely have been produced in the 32nd week of 1999, but possibly produced in 1989. If in doubt, consult a qualified tire service professional.

TIRE REPAIRS

SAFETY WARNING

Driving on an improperly repaired tire is dangerous. An improper repair can be unreliable or permit further damage to the tire. The tire may suddenly fail, causing serious personal injury or death. A complete inspection and repair of your tire in accordance with Rubber Manufacturers Association (RMA) procedures should be conducted by a qualified tire service professional.

The comprehensive procedures and recommendations for truck tire repair are beyond the scope of this manual; however, note the following:

- **The tire must be demounted from the rim/wheel for a complete inspection**, inside and out. Some damage to the tire may only be evident on the interior of the tire. Any tire repair done without removing the tire from the rim/wheel is improper.
- **A patch must be applied to the interior of the tire and the puncture hole filled with suitable plug/stem filler.** This helps ensure that the interior of the tire is adequately sealed to prevent inflation pressure loss and prevents contamination of the steel belts and other plies from the elements (such as water) in the outside world. Using only a plug/stem, or using only a

patch, is not a safe or proper repair.

- **The truck/bus tire puncture repair injury limit to the tread area is 10 mm (3/8”).** Larger injuries, or damage in areas outside the tread, should be evaluated and repaired, if possible, by qualified tire service professionals at a full-service repair facility using RMA-approved procedures.
- **Never substitute a tube for a proper repair or to remedy an improper repair.**
- **Not all punctured or damaged tires can be properly repaired;** consequently, they must be replaced.
- **Repair and retread, if possible, tires having a tread depth of 1.6 mm (2/32”) or less remaining in any tread groove.**
- **Tubes, like tires, should only be repaired by a qualified tire service professional.**
- **Any Improper repair voids the tire Limited Warranty.** See “Limited Warranty” in this manual.

REMOVING TIRE/WHEEL ASSEMBLY FROM VEHICLE

SAFETY WARNING

Always follow the manufacturer’s recommend procedure for securing and raising your vehicle prior to attempting to remove a tire.

SAFETY WARNING

If the tire has internal damage, it may burst with explosive force, causing serious personal injury or death. Always deflate a tire and wheel assembly completely before loosening any lug nut when removing a tire from a vehicle for service or demounting. On dual wheel assemblies, both tires should be deflated and removed before any work is started.

TIRE MOUNTING AND OTHER SERVICING

SAFETY WARNING

Removing and replacing tires on wheels can be dangerous. Attempting to mount tires with improper tools or procedures may result in a tire explosion causing serious personal injury or death. This is only a job for a qualified tire service professional. Never perform tire service procedures without proper training, tools, and equipment.

This manual is not intended to provide proper training or service procedures for tire mounting, demounting, balancing, rotation, or repair. Please leave these tasks to qualified tire service professionals.

Only specially trained persons should mount tires. For proper mounting procedures, consult the requirements of the Occupational Safety and Health Administration (OSHA) of the U S Department of Labor and procedures published by the Rubber Manufacturers Association, 1400 K Street, NW Washington, D. C. 20005 (www.rma.org).

SAFETY WARNING

Inflating an unsecured tire is dangerous. If it bursts, it could be hurled into the air with explosive force resulting in serious personal injury or death.

- Always stand well clear of any tire mounting operation. This is especially important when the service operator inflates the tire.
- When inflating a tire after mounting on a rim/wheel, always use a safety cage and an extension hose with pressure gauge and clip-on chuck.
- Never adjust the inflation pressure of a truck tire unless it is placed in a safety cage or is secured to the vehicle or a tire mounting machine.
- Never stand or lean over the tire or in front of the valve when inflating.

SAFETY WARNING

Never pour or spray any flammable substance into or onto a tire or rim/wheel for any purpose whatsoever. The residue left by the substance could result in a fire or explosion which may cause severe injury or death.

SAFETY WARNING

Never put flammable substances such as gasoline or ethyl ether into a tire and light with a match/flame so that the resulting explosion seats the beads of a tubeless tire. This practice is extremely dangerous and may result in a severe explosion or undetected damage to the tire or rim/wheel which may cause a failure resulting in severe injury or death.

- Tires must meet the width and diameter requirements of the wheels. For example, 22.5 inch diameter tires must only be mounted to 22.5 inch diameter rims/wheels. Radial tires must only be mounted to wheels approved for radial tires.
- Inspect the tire and rim/wheel. Rims/wheels must be free of cracks, dents, chips, and rust. Tires must be free of bead damage, cuts, punctures, foreign material, and moisture.
- For a tubeless truck tire, always install a new valve, or new valve core and cap, each time a new or retreaded tire is installed.

- For a tube-type truck tire, always use a new, proper size tube and flap each time a new or re-treaded tire is installed.
- Use only vegetable oil-based lubricants in mounting or demounting.
- Always ensure rim components fit properly before inflating.
 - Never tap component parts with a tool/hammer/mallet while tire is inflated.
 - Never attempt to disassemble multi-piece rims while inflated.
- Never inflate a tire beyond 275 kPa (40 psi) to seat the beads. Be absolutely certain beads are fully seated before adjusting inflation pressure to the level recommended for vehicle operation.
- Use valve caps to keep the valves clear of debris and to help guard against inflation pressure loss.
- Always stand well away from the work area when tires are being spin-balanced either on or off the vehicle.

TIRE MIXING

SAFETY WARNING

Driving your vehicle with an improper mix of tires is dangerous. Your vehicle's handling characteristics can be seriously affected. You could have an accident resulting in serious personal injury or death. Consult your vehicle owner's manual and a qualified tire service professional for proper tire replacement.

DUAL MATCHING

Tires paired in a dual assembly should be matched in tire construction and dimension. Improperly matched tires may result in irregular wear, rapid wear, and premature tire failure. Failure to match tires in a dual assembly may result in sudden tire destruction.

For radial tires, properly paired dimension tolerances are as follows:

- Diameter: within 6.4 mm ($\frac{1}{4}$ ") of each other
- Circumference: within 19 mm ($\frac{3}{4}$ ") of each other

HIGH SPEED DRIVING

SAFETY WARNING

Driving at high speed is dangerous and can cause a vehicle accident, including serious personal injury or death.

- Regardless of the speed and handling capabilities of your vehicle and its tires, a loss of vehicle control can

result from exceeding the maximum speed allowed by law or warranted by traffic, weather, vehicle, or road conditions.

- High-speed driving should be left to trained professionals operating under controlled conditions.
- No tire, regardless of its design or speed rating, has unlimited capacity for speed, and a sudden tire failure can occur if its limits are exceeded. See “Tire Speed Restrictions,” the next section in this manual.

Refer to your vehicle owner’s manual for any tire pressure recommendations for high speed driving.

TIRE SPEED RESTRICTIONS

Firestone brand truck tires have maximum recommended speeds. When replacing your tires, check your vehicle owner’s manual and tire information placard and consult with a Firestone brand truck tire retailer for recommendations and information about tire speed capability.

The speed capabilities of truck tires are based on standardized laboratory tests under specific, controlled conditions. While these tests may relate to performance on the road, real-world driving is rarely identical to any test conditions. Your tire’s actual speed capability may be less since it is affected by factors such as inflation pressure, load, tire condition (including damage), wear, vehicle condition (including alignment), driving conditions, and duration at which the speed is sustained.

TIRE SPINNING

SAFETY WARNING

Spinning a tire to remove a vehicle stuck in mud, ice, snow, or wet grass can be dangerous. A tire spinning at a speedometer reading above 55 km/h (35 mph) can in a matter of seconds reach a speed capable of disintegrating a tire with explosive force. Under some conditions, a tire may be spinning at a speed twice that shown on the speedometer. This could cause serious personal injury or death to a bystander or passenger. Never spin a tire above a speedometer reading of 55 km/h (35 mph)

TIRE STORAGE

Tires should be stored indoors in a cool, dry place where water cannot collect inside them. Tires should be placed away from electric generators/motors and sources of heat such as hot pipes. Storage surfaces should be clean and free

of grease, gasoline, diesel fuel, or other substances which can deteriorate the rubber.

SAFETY WARNING

Improper storage can damage your tires in ways that may not be visible and can lead to a failure resulting in serious personal injury or death.

The spare tire in your vehicle is intended to be used as a spare when needed. The spare tire carrier is not intended to be used for long term storage.

TIRE SERVICE CUSTOMER SATISFACTION

Normal tire maintenance and Limited Warranty services are available at locations across Canada. Visit us at www.firestonetrucktires.com, or call 1-800-815-9793 to find an authorized Firestone brand truck tire retailer nearest you.

Additional information on the care and service of truck tires is available from the following organizations:

Rubber Manufacturers Association
1400 K Street, N.W.
Washington, DC 20005-2403
www.rma.org

Rubber Association of Canada
2000 Argenta Road, Plaza 4, Suite 250
Mississauga, Ontario L5N 1W1

TIRE REGISTRATION

Registration of your tires is an important safety precaution since it enables the manufacturer to notify you in the event of a recall. In accordance with Canadian law, Bridgestone Canada Inc. maintains a registration system by which any person who has purchased tires who wishes to be identified may be identified. When you purchase replacement tires, the retailer can provide a registration card on which the tire identification numbers are recorded; fill in your name and address on the card and mail it promptly. Registration can also be completed online at www.bridgestonetire.com. Some retailers may submit the registration for you. You do not need to register tires which come as original equipment on new vehicles – the vehicle manufacturer will handle that for you.

For Assistance or Information

1. First contact the nearest Firestone truck tire Dealer by consulting the yellow pages of your local telephone book.
2. If additional assistance is required, call the Firestone Technical Service Center listed below.

FIRESTONE TOLL FREE NUMBER
1-800-267-1318

Bridgestone Canada Inc.
5770 Hurontario Street, Suite 400 Mississauga,
ON, L5R 3G5

www.firestonetrucktires.com

Effective January 2014

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Firestone Technical Service Centre

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Bridgestone Canada Inc.
5770 Hurontario Street, Suite 400
Mississauga, Ontario
L5R 3G5



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