MICHELIN® RV TIRES



- GUIDE FOR PROPER USE AND MAINTENANCE
- RV TIRE INFORMATION

www.michelinrvtires.com

MICHELIN

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MICHELIN® tires and tubes are subject to a continuous development program. Michelin North America, Inc. reserves the right to change product specifications at any time without notice or obligation.

DETERMINING MICHELIN® TIRE SIZE

1. **Tire Size:** MICHELIN® radial truck tire sizes are designated by the nominal section width in inches or millimeters and the wheel diameter (e.g. 11R22.5 or 275/80R22.5). The "R" indicates a radial tire. Truck tire sizes contain dimension and load index information and are marked in accordance with industry standards: FMVSS (Federal Motor Vehicle Safety Standard), TRA (The Tire and Rim Association, Inc.), ETRTO (European Tyre and Rim Technical Organisation), and ISO (International Standardization Organization). This index indicates the load capacity of the tire in single and in dual usage (e.g. 144/141K).
   Below are examples for tubeless tires.
   Example: 11R22.5
   11 = nominal cross section in inches
   R = radial
   22.5 = wheel diameter in inches
   Example: 275/80R22.5 LRG 144/141K
   275 = nominal cross section in mm (metric)
   80 = aspect ratio
   R = radial
   22.5 = wheel diameter in inches
   LRG = load range G



COMPARATIVE SIZES LOW-PROFILE SIZES – STANDARD PROFILE

MICHELIN	TRA	REPLACES
235/80R22.5	245/75R22.5	9R22.5
255/80R22.5	265/75R22.5	10R22.5
275/80R22.5	295/75R22.5	11R22.5

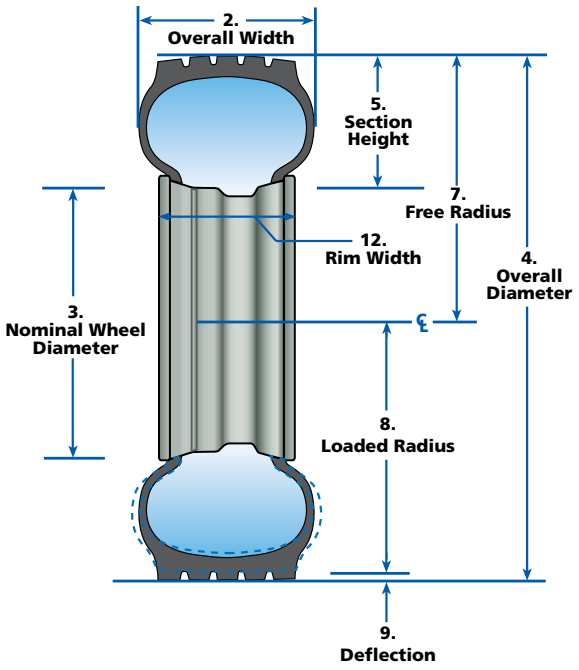
2. **Overall Width:** The maximum width (cross section) of the unloaded tires including protruding side ribs and decorations as measured on the preferred wheel. Overall width will change 0.1 inch (2.5 mm) for each 1/4 inch change in wheel width. Minimum dual spacing should be adjusted accordingly.
3. **Nominal Wheel Diameter:** Diameter of wheel seat supporting the tire bead given in nearest half-inch numbers, e.g. 22.5".
4. **Overall Diameter:** The diameter of the unloaded new tire (measured from opposite outer tread surfaces).
5. **Section Height:** The distance from wheel seat to outer tread surface of unloaded tire.
6. **Aspect Ratio:** A nominal number, which represents the section height, divided by the section width and expressed as a percentage.

Example:	Tire Size	Aspect Ratio
	11R22.5	90
	275/80R22.5	80

7. **Free Radius:** One-half the overall diameter of the unloaded new tire.
8. **Loaded Radius:** The distance from the wheel axle centerline to the supporting surface under a tire properly inflated for its load according to the load and inflation tables found in the application specific data books.
9. **Tire Deflection:** Free radius minus the loaded radius.
10. **Minimum Dual Spacing:** The minimum allowable lateral distance from tire tread centerline to tire tread centerline in a dual wheel arrangement.
11. **Tire Revolutions Per Mile:** Revolutions per mile for a tire size and tread is defined as the number of revolutions that the new tire will make in one mile. Data is normally presented for the loaded tire at its rated load and inflation in the drive position. Rolling circumference can be calculated from the revolutions per mile as follows:

$$\frac{63{,}360}{\text{Tire Revs./Mile}} = \text{Rolling circumference in inches}$$

    The tire revolutions per mile can be determined by measuring (using SAE J1025) or estimated by using a mathematical equation. The accuracy of the tire revolutions per mile number is ±1%.
12. **Wheels:** The approved/preferred wheels are designated for each tire size. MICHELIN® tires should only be mounted on the wheels shown. The wheel shown first is the preferred wheel. Be sure to check wheel manufacturer's specifications.



MAINTAINING RECREATIONAL VEHICLE TIRES

THE IMPORTANCE OF INFLATION PRESSURE

⚠WARNING **Never drive on an overloaded or underinflated tire.**

The most critical factor in tire maintenance is proper inflation. Driving on any tire that does not have the correct inflation pressure is dangerous and will cause tire damage. Improper pressure for the weight of the vehicle could cause premature wear, tire damage, or a harsher ride. The correct inflation pressure allows for full tread contact with the road surface and promotes traction, braking capability, and handling.

An underinflated or overloaded tire will build up more heat that could go beyond the endurance limits of the rubber, steel belts, and radial cords. This could cause sudden tire failure. Underinflation will cause poor handling, faster and/or irregular tire wear, and a reduction in fuel economy. Overinflation, on the other hand, will reduce the tire's contact area with the road surface, which reduces traction, braking ability, and handling. A tire that is overinflated for the weight it is carrying is more prone to a harsh ride, uneven tire wear, and impact damage.

INFLATION PRESSURE REQUIREMENTS

The amount of inflation pressure required in each tire depends on the weight of the fully loaded vehicle, to include passengers, cargo load, fuel, and water. To determine the correct inflation pressure, consider the various weight ratings that are posted on the recreational vehicle chassis, or within the recreational vehicle itself. The GVWR and the GAWR stickers are normally located on the support pillar next to the driver's seat.



MOTORHOME
WEIGHT INFORMATION

Model _____
GVWR _____
UVW _____
NCC _____
GCWR _____

GVWR (Gross Vehicle Weight Rating) means the maximum permissible weight of this motorhome. The GVWR is equal to or greater than the sum of the Unloaded Vehicle Weight plus the Net Carrying Capacity.

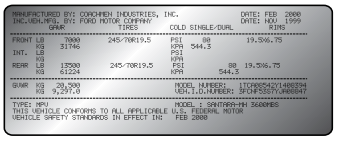
UVW (Unloaded Vehicle Weight) means the weight of this motorhome as built at the factory with full fuel, engine oil, and coolants. The UVW does not include cargo, fresh water, LP gas, occupants, or dealer installed accessories.

NCC (Net Carrying Capacity) means the maximum weight of all occupants including the driver, personal belongings, fuel, fresh water, LP gas, tools, tongue weight of towed vehicle, dealer installed accessories, etc., that can be carried by this motorhome. (NCC is equal to or less than GVWR minus UVW.)

GCWR (Gross Combination Weight Rating) means the value specified by the motorhome manufacturer as the maximum allowable loaded weight of this motorhome with its towed trailer or towed vehicle.

This motorhome is capable of carrying up to _____ gallons of fresh water (including water heater) for a total of _____ pounds.
Reference: Weight of fresh water is 8.33 lbs/gal. Weight of LP gas is 4.5 lbs/gal (average).

CONSULT OWNER'S MANUAL FOR SPECIFIC WEIGHING INSTRUCTIONS AND TOWING GUIDELINES.



MANUFACTURED BY: COACHMEN INDUSTRIES, INC. DATE: FEB 2000
INC.VEH.MFD. BY: FORD MOTOR COMPANY DATE: NOV 1999

		GAWR	TIRES	COLD SINGLE/DUAL	RIMS
FRONT	LB	7000	245-70R19.5	PSI 88	19.5X6.75
	KG	3174G		KPA 544.5	
INT.	LB			PSI	
	KG			KPA	
REAR	LB	13500	245-70R19.5	PSI 88	19.5X6.75
	KG	6124		KPA 544.5	

GVWR KG 20,200 MODEL NUMBER: LTCR0954Z/1A0025N
KG 9,297.0 VEH.I.D.NUMBER: 3FCHF5EG7YJA00047

TYPE: MPV MODEL : SANTARA-MH 3600MBS
THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON: FEB 2000

The GVWR (Gross Vehicle Weight Rating) is the maximum total weight rating for the recreational vehicle, to include passengers, fluids, and cargo.

The GAWR (Gross Axle Weight Rating) is the maximum weight allowed across a single axle.

The UVW (Unloaded Vehicle weight) is the weight of the recreational vehicle as built at the factory with full fuel, engine oil, and coolants. The UVW does not include cargo, fresh water, LP gas, passengers or dealer installed accessories.

The GCWR (Gross Combination Weight Rating) is the value specified by the recreational vehicle manufacturer at the maximum allowable loaded weight with a towed trailer or towed vehicle.

These ratings can vary based on the different components and vehicle options. To determine proper inflation pressure, Michelin recommends weighing each wheel position of the recreational vehicle individually. Weighing each axle end individually will give a clear indication of how the weight of the recreational vehicle is distributed across the axle. If there is a difference in the weight found from one side to the other, adjust personal cargo within the vehicle in order to redistribute the load more evenly across the axle.

For instructions on how to weigh a recreational vehicle, see pages 12-14.

NOTICE

REMEMBER: For control of the recreational vehicle, it is critical that the tire inflation pressures are set to the same inflation pressure across an axle.

WHEN TO CHECK RECREATIONAL VEHICLE TIRE PRESSURE

For optimum performance and handling, it is important to not only establish the proper inflation pressure, but it is also important to regularly inspect recreational vehicle tires for cuts, snags, and penetrations. Failure to maintain correct inflation pressure may result in sudden tire destruction and/or improper vehicle handling. Additionally, it will result in irregular tire wear. Check inflation pressures on all tires (including spares):

1. At a minimum, check weekly, and always before long distance trips.
2. On long trips, check every morning before driving.
3. Before and after storage, check and record tire pressures (a drop in pressure may indicate a slow leak).

The ideal time to check tire inflation pressures is early morning. Driving, even for a short distance, causes tires to generate heat, resulting in an increase in inflation pressure. The stated pressures found in published load inflation tables are based upon the cold tire inflation pressure at ambient outside temperature. A drop in ambient temperature results in a drop in tire pressure;

⚠WARNING

Never exceed the maximum load or pressure limits of the wheel. Exceeding the wheel limits can lead to component failure, serious accident, injury or death.

therefore, more frequent checks may be required during cold weather conditions. Avoid outdoor pressure checks when the temperature is below freezing, as ice can form in the valve stem and create a slow leak.

As a tire rotates during operation, it will naturally generate internal heat, resulting in an increase of inflation pressure. The pressure found in a "hot" tire may be as much as 10 – 15 psi higher than the inflation pressure found before operation. If checking tires after operation, compare the inflation pressure of all tires to ensure that they are within 2 - 3 pounds of each other across the axle.

NOTICE

Never bleed hot tires, or they will become underinflated.

Tire inflation pressures should be maintained across an axle at the same inflation pressure, especially in dual fitment. Make sure to check both tires in a dual fitment; pressures should be the same. The maximum allowable difference between tires across an axle is 5 psi. Use a quality, calibrated tire gauge to check inflation pressures, preferably a truck tire pressure gauge with a dual angled head. These gauges work best to check the inner and outer dual wheels. In addition, double seal valve caps and quality extension hoses simplify and expedite checking tire inflation pressures.

For example, if the recommended tire pressure across a rear dual axle is 80 psi, and one tire only has 64 psi, it is considered to be flat. This tire, as well as the tire in service next to it, should be removed from service by a tire technician immediately. A qualified tire technician should demount the tire to conduct a thorough tire and wheel inspection before returning them to service.



Underinflation in a dual configuration overloads the properly inflated tire. Both tires must be inspected.

TIRE REPAIRS

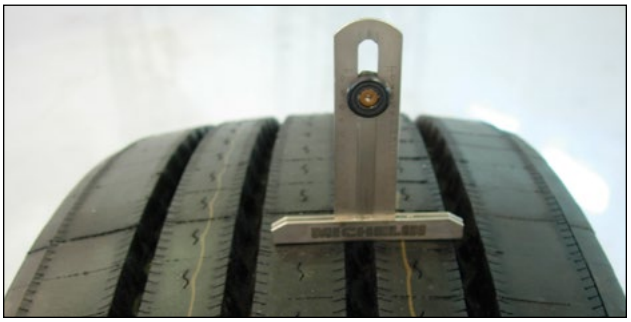
When a tire experiences a tread puncture, it may be safe to return it to service if it is properly repaired. A tire must be repaired from the inside so that a careful inspection can be made to the inner liner. The tire technician should use a combination plug and patch, where the rubber plug seals the damaged area from outside contaminants and moisture, and the patch reinforces the inner liner. Consult a Michelin tire dealer for a professional inspection and repair.

NOTICE

NEVER use a rope type string plug to repair a MICHELIN® tire. A rope plug is considered a temporary repair and often leaks over time. It is considered an improper repair and may void the MICHELIN® Truck Tire Limited Warranty.

TREAD DEPTH MEASUREMENTS AND WEAR BARS

Tires should be periodically measured for wear. This measurement should be taken in several spots across the tread, and around the circumference. If there is a variance in tread grooves greater than 2/32" across the face of the tire, consult a Michelin tire dealer for a professional inspection.



MICHELIN® tires contain "wear bars" in the tread grooves of the tire tread, which show up when there is only 2/32" remaining of tread rubber. When the tread is worn level with the wear bar indicator, the tire must be removed from service. Federal law requires that, "any tire on the front wheels of a bus, truck or truck tractor shall have a tread groove pattern depth of at least 4/32 of an inch when measured at any point on a major tread groove. The measurements shall not be made where tie bars, humps or fillets are located".



Tires mounted in dual must be matched so that the maximum difference between the diameters of the tires does not exceed 1/4" diameter, or a circumferential difference of 3/4". For tires of the same bead diameter and size, the maximum allowable difference in tread depth is 4/32". When there is a difference in tread wear, fit the least worn tire in the outside wheel position. Failure to properly match dual tires will result in the tire with the larger diameter carrying a disproportionate share of the load. Mismatched duals can lead to rapid tire wear, uneven tread wear, and possible casing failure.

DUAL SPACING

Sufficient space must be maintained between dual tires to allow airflow and to prevent the tires from rubbing against one another. To make sure dual spacing is correct, simply measure from the outside edge of the outer tire to the outside edge of the inner tire of the dual assembly, and cross reference this measurement to the "minimum dual spacing" found on the tire data page. For additional assistance, consult a Michelin tire dealer.

DIRECTIONAL TIRES



MICHELIN® X® LINE™ ENERGY Z Steer Tire

Several MICHELIN® tires feature directional tread designs to increase tread life and to reduce irregular wear. Directional tires have arrows molded into the shoulder/edge of the outer tread rib to indicate the intended direction of rotation. To maximize tire performance, directional tires should be mounted correctly on wheels to ensure that the directionality is respected when mounted on the recreational vehicle.

Once directional tires are worn greater than 50% of the original tread depth, there is generally no negative effect of running them in a direction opposite to the indicated direction of rotation.

Operating new directional tires in the opposite direction of that indicated on the tire will result in a premature onset of irregular wear, an increase in tire noise levels, and a significant reduction in tread life.

Explanation of the Meaning of the Arrows



The arrow with the larger head indicates the Michelin preferred direction of rotation for the tire, optimizing tread wear performance. We strongly recommend that, especially when new, MICHELIN® tires marked with a bi-directional arrow should be run in the direction of rotation indicated by the larger arrow head.

However, if a tire marked with the bi-directional arrow shows an irregular wear profile, (for example, a sloped wear pattern) then it may be turned on the rim and run in the direction of the smaller arrow head with no detriment to any other performance criteria. In cases such as this, Michelin recommends that all tires on the same axle should be turned on the rim such that all arrows face in the same direction.

When turning these tires on the rim or moving from side to side on a vehicle, they should be treated in the same way as any other. Please remember that tires on the same axle must always be compatible with each other.

TIRE PRESSURE MONITORING SYSTEMS (TPMS)

There are several manufacturers of Tire Pressure Monitoring Systems (TPMS) available for recreational vehicle usage. TPMS systems monitor internal tire pressure levels during vehicle operation; some also provide the actual internal tire temperature readings. Maintaining proper tire inflation will help maximize tire life and fuel efficiency, and may result in a reduction in irregular tire wear and tire costs. If your recreational vehicle is fitted with a TPMS system, consult your Original Equipment manufacturer or recreational vehicle dealer for specific service guidelines. While TPMS systems give an early warning of low inflation pressure, they should not be considered as a replacement for manual tire inspections.

NITROGEN

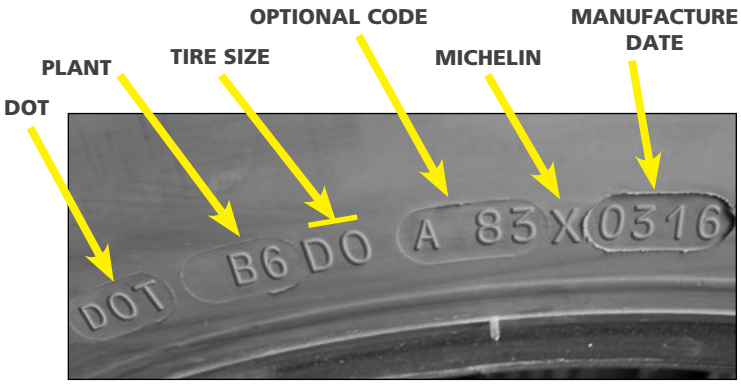
The earth's atmosphere is approximately 78% nitrogen, along with 21% oxygen, and 1% other gases. Nitrogen is a dry inert gas that does not retain moisture. While there are advantages for aircraft and large off-the-road earthmover tires to use 100% nitrogen systems, it is generally difficult to quantify the advantages for over-the-road highway operations. The predominant concern for proper tire inflation is moisture in the compressed air system. Moisture, when present in the tire, greatly accelerates the oxidation effects to the tire and the wheel. Using well maintained inflation equipment (compressor, inflation lines, and in-line air dryer) will minimize the moisture content of the compressed air in the tire. Increasing the nitrogen percentage to 100% with a nitrogen inflation system will not adversely affect the inner liner of the tires, nor impact tire performance. Regular tire pressure maintenance remains critical, and tire inflation check intervals should not be extended due to nitrogen use.

WORKMANSHIP AND MATERIALS

MICHELIN® truck tires bearing the Michelin name and complete serial or identification numbers, used in consumer service such as on a recreational vehicle, are covered by a limited warranty against defects in workmanship and materials for the life of the original tread or 7 years from the date of purchase, whichever occurs first. At that time, all warranties, expressed or implied, expire. Please visit www.michelinrvtires.com under "Reference Materials" for complete details about the MICHELIN® Truck Tire Warranty, and to complete the MICHELIN® Tire Registration. For tires that were fitted new on Original Equipment vehicles (i.e. acquired by the consumer on a new recreational vehicle), for warranty purposes, the purchase date of the brand new recreational vehicle serves as the date of tire purchase.

LOCATION OF TIRE IDENTIFICATION CODE

The Department of Transportation (DOT) requires that all tires produced for U.S. highways have a Tire Identification Number (TIN) imprinted on the tire. This unique identifier is referred to as the DOT code and is found on the lower sidewall of the tire. The DOT code begins with the letters "DOT"; the last four digits indicate the week and the year of manufacture. In the example below, the DOT code ending with "0316" indicates a tire made in the 3rd week (Jan) of 2016.



SERVICE LIFE FOR RECREATIONAL VEHICLE TIRES

MICHELIN® tires are designed to meet the highest criteria for quality, performance, and durability. In addition to natural rubber, MICHELIN® tires contain more than 200 different raw materials to provide superior strength and flexibility throughout the life of the tire. Over time, these components naturally evolve; the evolution depends upon many factors such as the environment, storage conditions, and conditions of use (load, speed, inflation pressure, and maintenance). Therefore, it is impossible to predict when tires should be replaced based on their calendar age alone.

Some recreational vehicle owners may choose to operate MICHELIN® tires after the tire warranty expires. For consumers who choose to operate tires beyond the tire's warranted life, Michelin recommends frequent tire inspections, especially before long trips. Michelin recommends that any tires, including spare tires, should be replaced after 10 years of service, even if they have not reached the legal wear limit.

In addition to frequent tire inspections and proper inflation pressure maintenance, Michelin recommends regular tire inspections by trained tire technicians. Consumers are strongly encouraged to be aware not only of their tire visual conditions and inflation pressures, but also of any changes in dynamic performances which could be an indication that the tires need to be removed from service. Indications include an increased level of noise or vibration, or an increased frequency in loss of inflation pressure (faster than 2 psi per month). For additional assistance, consult a Michelin tire dealer.

SELECTING ALTERNATIVE TIRE SIZES

Original Equipment manufacturers carefully select the proper tire and wheel for optimum performance and handling. When replacing tires on a recreational vehicle, follow the information found on the vehicle placard. Michelin recommends maintaining the original tire size recommended on the placard, as changing to a different size may impact the overall vehicle performance. Consult your recreational vehicle dealer or a Michelin tire dealer before changing tire sizes.

DRIVE AT PROPER SPEEDS

⚠WARNING

Do not drive at speeds faster than the speed ratings for your tires. Never exceed legal speed limits or speeds reasonable for the driving conditions.

High speed driving can be dangerous and may damage your tires. The maximum continuous speed at which MICHELIN® tires can be operated is indicated in the following data pages. Exceeding this maximum speed will cause the tire to build up excessive heat that can result in sudden tire destruction, property damage, and personal injury. When driving at highway speeds, correct inflation pressure is especially important. Michelin does not endorse exceeding legal speed limits.

LONG TERM STORAGE

When a tire is fitted to a wheel and put under load, but it is not regularly used, the tire does not have an opportunity to "exercise" and will prematurely age.

If a recreational vehicle is not driven regularly, care must be taken to preserve the remaining life of the tires. Best practices include:

1. Store the recreational vehicle in a cool, dry, sealed garage, away from electric generators or transformers. Do not store in an area where welding is performed, or in a garage that has frequently used electric motors.
2. Place a barrier between the tire and the storage surface. Suitable barriers include plastic, plywood, cardboard, or rubber floor mats.
3. Before storing the vehicles, thoroughly clean tires with soap and water.
4. If outdoors, cover tires to block direct sunlight and ultraviolet rays.
5. Inflate tires to the maximum inflation pressure indicated on the sidewall.
6. If long term storage exceeds 3 months, consider taking the recreational vehicle for monthly highway drives (about one hour of operational time). Driving the vehicle will give the tires an opportunity to generate internal heat which will promote long life.

Before removing the vehicle from long term storage, thoroughly inspect each tire, and restore all tires to the proper inflation pressure.

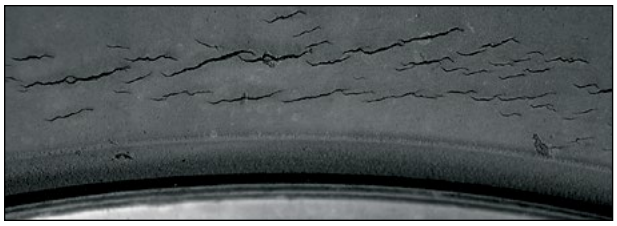
AGING, WEATHER CHECKING, AND OZONE CRACKING

During tire inspections, check the sidewalls for signs of aging, referred to as weather checking or ozone cracking. Aging appears as tiny cracks in the rubber surface of the sidewall. If the cracks are less than 2/32" deep, the tire is acceptable to keep in operation; when the cracks extend deeper than 2/32", the tire should be inspected by a Michelin tire dealer and possibly replaced.

To promote long life and prevent premature tire aging:

1. Keep tires properly inflated and rotated.
2. Keep tires clean, avoiding petroleum products, alcohol, and silicone.
4. Avoid prolonged exposure to high heat, extreme cold, and ultraviolet rays.
5. Cover the tires when the vehicle is not in use.
6. Follow the recommendations for long term storage (above).

An Ozone Scale template to evaluate the degree of ozone cracking is found on the back cover of this manual.



PROPER CLEANING OF RV TIRES

Proper cleaning of tires is important to obtain the maximum years of service. Road oil will cause deterioration of rubber, and dirt buildup will hold contaminants next to the tire. A soft brush and mild car wash soap is the best way to clean tires.

If a dressing product is used on a tire sidewall, use extra care and caution. Tire dressings that contain petroleum products, alcohol, or silicones may cause premature aging and sidewall cracking.

In many cases, it is not the dressing product itself that can be a problem, but rather, the chemical reaction that the product can have with the antioxidant waxes found in the tire. Heat can add to this negative reaction. When these same dressing products are applied to a passenger car tire that is replaced every three or four years, it is rare to see a problem. However, since Recreational Vehicle tires usually last much longer, there is more time for a chemical reaction to occur.

TIRE ROTATION, BALANCE, ALIGNMENT AND TIRE WEAR

When tires are properly mounted and maintained with the correct inflation pressure, they should wear in a smooth even wear pattern. To maximize tire wear, Michelin recommends the following best practices.

1. **Tire Rotation.** MICHELIN® tires should be rotated when necessary. If the tires are wearing evenly, there is no need to rotate. If tires begin to show an irregular wear pattern, or if the wear rate on the tires from axle to axle or side to side is perceptively different, the tires should be rotated. There is no restriction on criss-cross rotation; however, if the vehicle is equipped with a spare tire/wheel it should be included into the rotation pattern. If using directional tires, and if the tires are less than 50% worn, ensure tires are mounted to rotate in the proper direction. Once a directional tire has worn more than 50% of its tread, it is acceptable to rotate into any position.

   Considerations about tire rotations include:

   - The load carried by a particular tire in a particular wheel position varies. The inside tire in a dual position carries more load than the outside tire on the same axle.
   - Curbing damage and weather checking often occurs on the outside sidewall of the outside tire.
   - Tires in dual should not differ more than 1/4" diameter (4/32" tread wear). When there is a difference in tread wear, fit the least worn tire in the outside wheel position.
   - When there is irregular wear, rotate the tires so they turn in the opposite direction.

2. **Tire Balance and Runout.** Check with your recreational vehicle dealer for tire balance recommendations. It is customary to check tire and wheel assembly balance and runout if there is a ride complaint.

   If there is a ride disturbance, validate that tire inflation pressures are properly adjusted. If inflation pressures are correct, consult your recreational vehicle dealer or a Michelin tire dealer for assistance.

   In order to identify the source of the ride disturbance, consider the following factors to assist the servicing dealer:

   - Road conditions when the vibration occurs.
   - Vehicle speed and engine rpms when the vibration occurs.
   - Where the vibration seems to be coming from (front or rear of the vehicle).
   - Frequency of the vibration (Does it phase in/out, or is it constant?).

3. **Alignment.** The purpose of alignment is to minimize tire wear and to maximize predictable vehicle handling and driver control. Toe misalignment is the number one cause of steer tire irregular wear. In order to optimize tire wear, consider the following:

   - Tires that are not operated at a normal (perpendicular) angle to the road surface typically produce uneven tire wear. Tires that are aimed in contrasting directions (because of conflicting alignment angles) produce unfavorable and irregular tire wear.
   - Tires that are used on highly compliant suspensions will likely produce irregular tire wear.
   - Alignments should be conducted in the most representative loading condition of the recreational vehicle, to include cargo load, fuel, and water.
   - Check with your recreational vehicle dealer for specific alignment specifications.



Toe Wear



Toe Wear

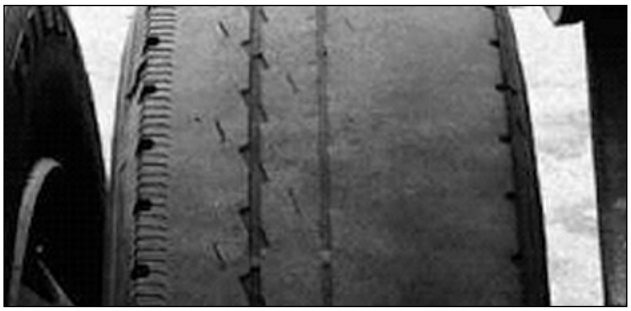
Toe Wear. A feathered wear pattern on the front tires typically indicates misalignment (toe-in or toe-out). Sometimes, a radial tire will not have this wear pattern unless the toe condition is severe. Instead of the feathered edge wear, the tire will be worn on the inside or outside shoulder, which could be confused with camber wear.

On a three axle recreational vehicle, a skewed rear axle and/or tag axle could cause feathered edge wear on one shoulder of one front tire, and feather edge wear on the opposite shoulder of the other front tire. In order to correctly diagnose a tire wear condition, the recreational vehicle should have an all-wheel alignment.

Camber Wear. Also known as edge wear, camber wear appears on the inside or outside shoulders of the tread. Wear on the inside edge of both tires may be due to negative camber or toe-out misalignment. If only one tire shows edge wear, check for worn kingpin bushings, bent or worn steering components, or excessive positive camber. For solid beam axles, excessive camber can result from axle over-load.



Camber Wear



Camber Wear

COMMON TIRE DAMAGES

No tire is indestructible. Certain conditions of use and abuse can stress a tire beyond its operating limits, causing it to be prematurely removed from service. Below are 4 tire damages observed on recreational vehicles. This list is not all inclusive; for additional information, consult your Michelin tire dealer.

1. **Underinflation.** Underinflation is often referred to as a "run-flat" tire and is caused by operating a tire at very low or zero pressure. A tire is considered to be flat when it has operated at less than 80% of the recommended inflation pressure. When a tire is underinflated for the load it is carrying, the sidewall flexes too much and it builds up heat. The tire is unable to effectively dissipate the heat, and the heat damages the inner liner, the casing, and the outer sidewall of the tire. When a tire is operated underinflated, the tire casing is irreversibly damaged.

   If a tire has been operated underinflated, there will be physical signs of damage. The inner liner will show signs of marbling or creasing. The sidewall may show signs of creasing or flexing damage. In some cases, if an extremely underinflated tire is operated at highway speeds, the tire may unseat itself and it will be destroyed as the wheel rolls on the uninflated sidewall.

   When one tire in a dual configuration comes out of service due to underinflation, the other tire in the dual configuration should be inspected immediately. If the unserviceable tire was underinflated, the serviceable dual tire was carrying more of the load for that wheel position. As a result, the properly inflated tire may have suffered casing damage. When performing tire service on MICHELIN® truck tires with steel casings, follow industry safety guidelines. Always use tire safety cages during the inflation process.

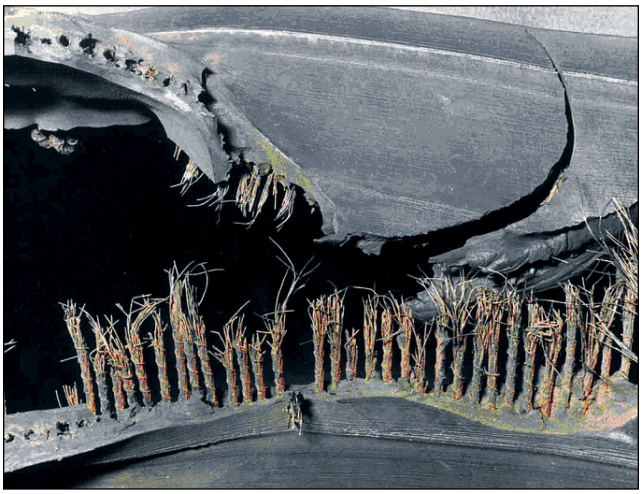


EFFECT: Inner Liner Marbling - Creasing
CAUSE: Underinflation

2. **Fatigue Rupture.** Fatigue Rupture damage is sometimes called a "zipper" because of the zipper-like effect it creates in the steel casing cords of the damaged tire. When casing cables are repeatedly bent due to overload and/or underinflation, they are damaged and will eventually break. Since all of the tire cables are exposed to the same amount of stress, many will rupture at the same time. This severe rupture is extremely dangerous and can happen unexpectedly: hours, days or even months after the initial overload happened. Whenever performing tire service on MICHELIN® truck tires with steel casings, follow industry safety guidelines. Always use tire safety cages during the inflation process.



Fatigue Rupture or "Zipper"



EFFECT: Any Damage That Will Allow the Casing to Oxidize
CAUSE: Moisture

⚠WARNING

Re-inflation of any type of tire and wheel assembly that has been operated in a run-flat or underinflated condition (80% or less of recommended operating pressure) can result in serious injury or death. The tire may be damaged on the inside and can explode during inflation. The wheel may be worn, damaged, or dislodged and can explosively separate.

3. **Dual Kissing.** Dual Kissing damage occurs when two tires in dual configuration make contact with each other while in operation. The heat generated by the friction between the two tires severely weakens the casing material of both tires. The condition may be caused by incorrect wheel width, incorrect wheel offset, or underinflation.



EFFECT: Friction Severely Weakens the Casing
CAUSE: Dual Kissing

4. **Dynamometer Damage.** Dynamometer type damage occurs in the crown area of tires when operated on dynamometers for extended periods of time. If a service provider does not adhere to recommended guidelines pertaining to the maximum time and permitted speed for dynamometer testing, irreversible tire damage may later appear on the tread surface. For additional information about the maximum time and permitted speeds, consult your Michelin tire dealer.





EFFECT: Internal Deterioration of the Tread Rubber
CAUSE: Prolonged Use of Dynamometer

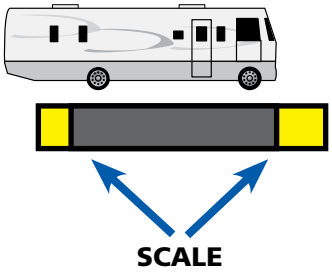
HOW TO WEIGH THE RECREATIONAL VEHICLE

NOTE: Michelin recommends using a professional weighing group or organization to perform the weighing of your Motorhome/RV. The Recreational Vehicle Safety Foundation (RVSEF) is an organization that performs weighing and other educational services. They can be contacted at www.rvsafety.com. If you are planning to do your own weighing, you should follow the procedures below. Michelin recommends checking with the scale operator to make sure there are no concerns on damage to the scale or to the vehicle if weighing side to side to determine individual wheel position weights.

HOW TO WEIGH THE RV

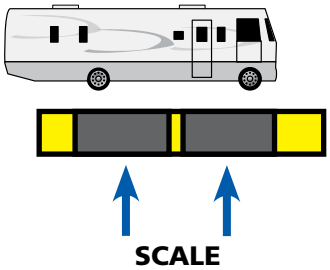
First, the RV must be weighed fully loaded — that includes passengers, food, clothing, fuel, water, propane, supplies, and anything else you can think of. Also, any towed vehicle (car, boat, or trailer) or item loaded on brackets on the back of the RV (like bikes or motorcycles) should be included in the weighing.

THREE DIFFERENT TYPES OF SCALES:



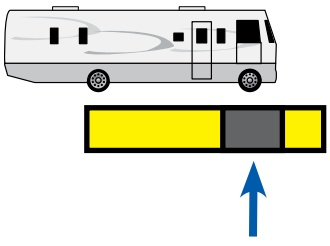
1) Platform – Platform scales are usually long enough to weigh the entire vehicle at once. Michelin suggests the following:

a) Pull onto the scale so that only the front axle is on the platform. The rear end of the scale needs to be midway between the front and rear axles. Record the weight.
b) Pull forward until the full unit is on the scale. Record the weight.
c) Pull forward until only the rear axle is on the platform. The front end of the scale needs to be midway between the front and rear axles. Record the weight.
d) If the RV has a rear tag axle, pull forward so only tag axle is on the scale. Record the weight.
e) To determine individual wheel position weights, repeat steps (a) through (d) with only one side of the vehicle actually on the scale and the vehicle centered over the side of the scale. See diagram on next page. Record the weights.
f) To calculate the opposite wheel positions' weights, subtract the weights recorded in step (e) from the weights recorded in steps (a) through (d). If there is not a towed vehicle, the tag axle weight derived from (d) will represent the actual weight on the tag axle.
g) If a vehicle is being towed, it should be weighed and combined with the GVW (Gross Vehicle Weight) to ensure the total weight doesn't exceed the GCWR (Gross Combined Weight Rating).



2) Segmented Platform – Platform scales with segmented sections can provide individual axle weights and total vehicle weights all at once when the vehicle is positioned properly. To do this, simply:

a) Position the vehicle on the scales so that each axle is centered as much as possible on the segments, and record the weight.
b) Reposition the vehicle so that only one side is on the scale – centered on the segment as much as possible.
c) Subtract the weighed wheel positions from the total axle weights to determine the unweighed wheel position weights.



3) Single Axle – Weighs one axle at a time. Follow these steps:

a) Drive the front axle onto the scale and stop long enough for the weight to be recorded.
b) Pull vehicle forward until the rear axle is on the scale.
c) For gross vehicle weight, add the two axle weights together.
d) To obtain the individual wheel position weights, repeat this process with only one side of the RV on the scale.

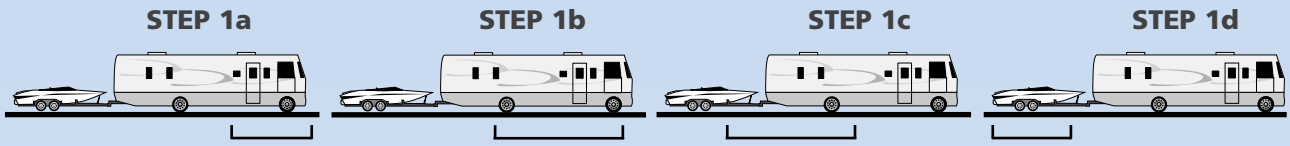
Note: Even though the weight of the total axle is within the axle rating, it may be overloaded on one side, which means an overloaded wheel position. That's why side-to-side weighing is required.

The RV must remain as level as possible on the scale (even when an axle or side isn't on the scale). Therefore, to obtain side-to-side weights, there must be enough space on either side of the scale to accommodate the RV being partially off the scale.

If there is a difference in the weights on one side of the vehicle as compared to the other, it is important to redistribute the load more evenly to avoid component failure and improve handling. These weights make it possible to compare against the GAWR (Gross Axle Weight Rating), GVWR (Gross Vehicle Weight Rating), and tire capacities. They also help determine proper tire pressure.

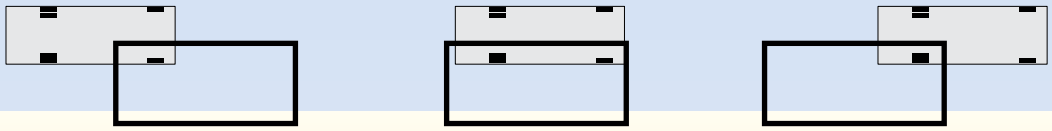
WEIGHING THE SINGLE AXLE RECREATIONAL VEHICLE

TO OBTAIN INDIVIDUAL AXLE AND GROSS VEHICLE WEIGHTS



	STEP 1a	STEP 1b	STEP 1c	STEP 1d
Scale Weight	_____ lbs. (Step 1a = Gross Axle Weight)	_____ lbs. (Step 1b = Gross Vehicle Weight)	_____ lbs. (Step 1c = Gross Axle Weight)	_____ lbs. (Step 1d)
From Owner's Manual	_____ lbs. Gross Axle Weight Rating	_____ lbs. Gross Vehicle Weight Rating	_____ lbs. Gross Axle Weight Rating	_____ lbs. Vehicle Weight (Gross Combined Weight Rating – Gross Vehicle Weight)

TO OBTAIN INDIVIDUAL WHEEL POSITION WEIGHTS

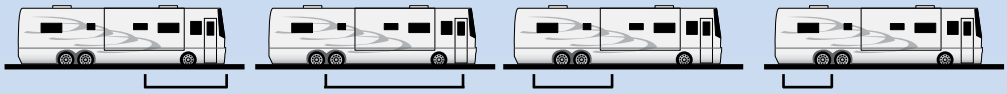


	STEP 2a	STEP 2b	STEP 2c
One Side Scale Weight	_____ lbs. (Step 2a)	_____ lbs. (Step 2b)	_____ lbs. (Step 2c)
Calculate Other Side Weight	_____ lbs. (Step 1a-2a)	_____ lbs. (Step 1b-2b)	_____ lbs. (Step 1c-2c)
Tire Load (lbs.)	_____ lbs. (See Note #1)	_____ lbs.	_____ lbs. (See Notes #1 & #2)
Inflation	_____ psi (See Note #1)		_____ psi (See Note #1)

1. From the tire manufacturer's load and inflation tables or the sidewall of the tires mounted on the vehicle.
2. If vehicle has duals, read dual capacity from tire and multiply by 2 to obtain dual assembly load capacity.

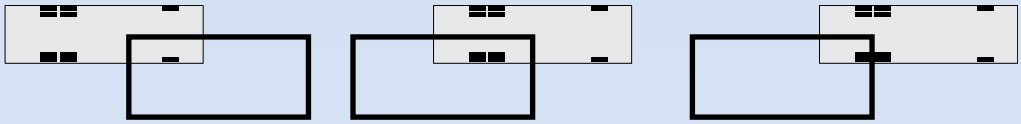
WEIGHING THE TANDEM AXLE RECREATIONAL VEHICLE

TO OBTAIN INDIVIDUAL AXLE AND GROSS VEHICLE WEIGHTS

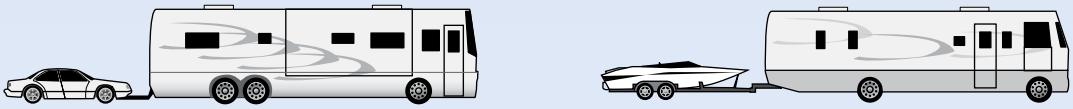


	STEP 1a	STEP 1b	STEP 1c	STEP 1d	STEP 1e (calculated)
Scale Weight	_____ lbs. (Step 1a = Gross Axle Weight)	_____ lbs. (Step 1b = Gross Vehicle Weight)	_____ lbs. (Step 1c)	_____ lbs. (Step 1d = Gross Axle Weight)	_____ lbs. Drive Axle Weight = (1c-1d)
From Owner's Manual	_____ lbs. Gross Axle Weight Rating	_____ lbs. Gross Vehicle Weight Rating		_____ lbs. Gross Axle Weight Rating	_____ lbs. Gross Axle Weight Rating

TO OBTAIN INDIVIDUAL WHEEL POSITION WEIGHTS



	STEP 2a	STEP 2b	STEP 2c	STEP 2d (calculated)
One Side Scale Weight	_____ lbs. (Step 2a)	_____ lbs. (Step 2b)	_____ lbs. (Step 2c)	_____ lbs. Step 2d: Right Duals = (2b-2c)
Calculate Other Side Weight	_____ lbs. (Step 1a-2a)	_____ lbs. (Step 1c-2b)	_____ lbs. (Step 1d-2c)	_____ lbs. Left Duals = (2d)
Tire Load (lbs.)	_____ lbs. (See Note #1)		_____ lbs. (See Note #1)	_____ lbs. (See Notes #1 & #2)
Inflation	_____ psi (See Note #1)		_____ psi (See Note #1)	_____ psi (See Note #1)



1. From the tire manufacturer's load and inflation tables or the sidewall of the tires mounted on the vehicle.
2. If vehicle has duals, read dual capacity from tire and multiply by 2 to obtain dual assembly load capacity.

THE EFFECT OF TOWED VEHICLES OR TRAILERS

If your RV is towing a vehicle, you need to know the RV's GCWR (Gross Combined Weight Rating), the total actual loaded weight of the RV, plus the total actual loaded weight of the towed vehicle. Even though the GCWR has more to do with the design limits of the drivetrain (engine, transmission, axle, brakes, and bearings), the additional weight can also affect the tires and the RV's handling. Also, always remember to consider the tongue weight of the trailer and its effect on handling.

HOW TO USE THE ACTUAL RV WEIGHT INFORMATION WITH THE TIRE DATA LOAD CHART

Let's consider an RV running on 275/80R22.5 MICHELIN® X® LINE ENERGY Z LRG tires, with actual corner weights of 5,400 lbs. on the left front tire, 5,175 lbs. on the right front tire, 8,500 lbs. on the left rear duals, and 9,200 lbs. on the right rear duals. For control of the RV, it is critical that the tire pressures be the same across an axle. Therefore, we must "overinflate" the right front tire and the left rear duals. Checking the load/inflation table below shows that a cold tire pressure of 95 psi will support 5,510 lbs. on a single front tire.

To determine the pressure for the rear duals, again take the heaviest position, in this instance the right rear weighs 9,200 lbs. The load/inflation table below shows that a cold pressure of 85 psi will support 9,380 lbs. on 2 dual tires. It is important to note that the cold inflation pressure for the tire must never exceed the maximum inflation rating that is stamped on the wheel.

NOTICE

REMEMBER: For control of the recreational vehicle, it is critical that the tire inflation pressures are set to the same inflation pressure across an axle.

To find the proper inflation pressure, refer to the load and inflation charts on Pages 24-26 or visit www.michelinrvtires.com. These charts have been altered for RV usage only.

S = 1 tire on 1 side of single axle Single Axle	[--------]
D = 2 tires on 1 side of dual axle Dual Axle	[[--------]]
For Tag axle, use applicable Single or Dual chart	

LOAD AND INFLATION TABLE

This chart is for RV wheel end use only.

275/80R22.5 LRG – MICHELIN® X® LINE ENERGY Z

PSI		70	75	80	85	90	95	100	105	110
kPa		480	520	550	590	620	660	690	720	760
LBS	S	4500	4725	4940	5155	5370	5510	5780	5980	6175
	D	8190	8600	9080	9380	9770	10140	10520	10880	11350
KG	S	2040	2140	2240	2340	2440	2500	2620	2710	2800
	D	3720	3900	4120	4260	4440	4600	4780	4940	5150

MAXIMUM LOAD AND PRESSURE ON SIDEWALL	
S	6175 LBS at 110 PSI
D	5675 LBS at 110 PSI
S	2800 KG at 760 kPa
D	2575 KG at 760 kPa

USING BLOCKS TO LEVEL MOTORHOMES AND RVS EQUIPPED WITH RADIAL TIRES

⚠WARNING

Assure that tires are properly supported during storage to avoid structural damage to the tire.

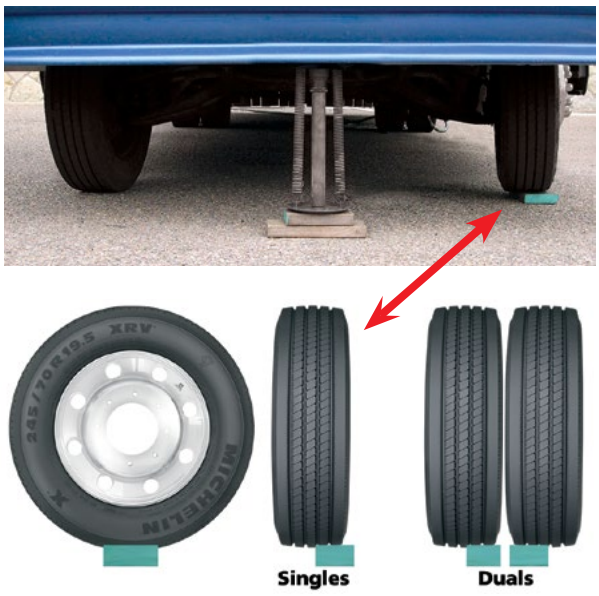
When using blocks to level motorhomes or RVs, extreme caution must be taken to make sure the tires are fully supported. The weight on the tire should be evenly distributed on the block. And in the case of duals, it should be evenly distributed on blocks for both tires. If not, the sidewall cables can become fatigued and damaged, resulting in a sidewall rupture and a complete, sudden loss of pressure.

Note in the correct method, the blocks are wider than the tread and longer than the tire's footprint. This provides maximum support to the tires and assures that the load is evenly distributed.

CORRECT – Evenly supporting the full load.



INCORRECT – One tire or only a portion of one tire is supporting the full load.



MICHELIN® RV TIRE REFERENCE CHART

SIZE	Load Range	Tread	Catalog Number	Tread Depth	Max. Load and Pressure – Single				Max. Load and Pressure – Dual			
				32nds	lbs.	psi	kg.	kPa	lbs.	psi	kg.	kPa
205/65R15C	C	AGILIS CROSSCLIMATE	04143	11.5	1875	54	850	375	1765	54	800	375
195/75R16C	D	AGILIS CROSSCLIMATE	56761	11.5	2150	69	975	475	2040	69	925	475
225/75R16C	E	AGILIS CROSSCLIMATE	70411	11.5	3195	83	1450	575	3085	83	1400	575
235/65R16C	E	AGILIS CROSSCLIMATE	09118	11.5	3195	83	1450	575	3000	83	1360	575
LT215/85R16	E	XPS RIB	39510	15	2680	80	1215	550	2470	80	1120	550
	E	AGILIS CROSSCLIMATE	80033	12.5	2680	80	1215	550	2470	80	1120	550
LT225/75R16	E	AGILIS CROSSCLIMATE	72022	12.5	2680	90	1215	620	2470	90	1120	620
	E	XPS RIB	08404	14	2680	80	1215	550	2470	80	1120	550
LT235/85R16	E	AGILIS CROSSCLIMATE	65681	12.5	3042	80	1380	550	2778	80	1260	550
	E	XPS RIB	13080	15	3042	80	1380	550	2778	80	1260	550
LT245/75R16	E	AGILIS CROSSCLIMATE	52347	12.5	3042	80	1380	550	2778	80	1260	550
	E	XPS RIB	26848	15	3042	80	1380	550	2778	80	1260	550
225/70R19.5	G	XZE	91043	17	3970	110	1800	760	3750	110	1700	760
245/70R19.5	H	XZE	75997	18	4940	120	2240	830	4675	120	2120	830
265/70R19.5	G	X MULTI Z	75319	16	5510	112	2500	775	5205	112	2360	775
285/70R19.5	H	X MULTI Z	31459	16	6610	123	3000	850	6175	123	2800	850
10R22.5	G	XZE	99141	21	5675	115	2575	790	5355	115	2430	790
11R22.5	G	X LINE ENERGY Z	03363	19	6175	105	2800	720	5840	105	2650	720
	G	XZE 2	78390	22	6175	105	2800	720	5840	105	2650	720
	H	X LINE ENERGY Z	06697	19	6610	120	3000	830	6005	120	2725	830
	H	XZE 2	67042	22	6610	120	3000	830	6005	120	2725	830
12R22.5	H	XZE ❀	85335	22	7390	120	3350	830	6780	120	3075	830
235/80R22.5	G	XRV	87511	16	4675	110	2120	760	4410	110	2000	760
255/70R22.5	H	XZE ❀	61737	18	5510	120	2500	830	5070	120	2300	830
255/80R22.5	G	XRV	59634	16	5205	110	2360	760	4805	110	2180	760
275/70R22.5	J	X MULTI Z	31513	18	6940	131	3150	900	6390	131	2900	900
275/80R22.5	G	X LINE ENERGY Z	03885	19	6175	110	2800	760	5675	110	2575	760
	G	XZE 2	55895	22	6175	110	2800	760	5675	110	2575	760
	H	X LINE ENERGY Z	66205	19	7160	120	3250	830	6610	120	3000	830
	H	XZE	01637	22	7160	120	3250	830	6610	120	3000	830
295/80R22.5	H	X COACH HL Z	31078	18	8270	123	3750	850	7160	123	3250	850
	H	X MULTIWAY 3D XZE	07719	19	7830	123	3550	850	6940	123	3150	850
	H	XZA2 ENERGY	76807	16	7830	120	3550	830	6940	120	3150	830
305/70R22.5	L	XRV	93499	16	7830	120	3550	830	6940	120	3150	830
315/80R22.5	L	X LINE ENERGY	09807	17	9090	130	4125	900	8270	130	3750	900
	L	X MULTIWAY 3D XZE	24903	21	9090	130	4125	900	8270	130	3750	900
365/70R22.5	L	XZA	52215	19	10500	125	4750	860	—	—	—	—

❀ With chip and cut resistant tread compound.

XRV®

BUS/RV & LINE HAUL

All-position radial designed specifically for exceptional performance on recreational vehicles and motorhomes(**)

- Wide, "see-through" grooves promote drainage efficiency to help improve traction on wet surfaces.
- Multi-siping helps deliver dependable grip and long, even wear.
- Enlarged sidewall characters makes load/pressure information easier to read, facilitating proper use and maintenance.
- Stable tread with cool running compound engineered to reduce squirm and lower heat for improved handling and durability.



Size	Load Range	Catalog Number	Tread Depth	Max. Speed (*)		Loaded Radius		Overall Diameter		Overall Width (‡)		Approved Wheels (Measuring wheel listed first.)	Min. Dual Spacing (‡)		Revs Per Mile	Max. Load and Pressure Single				Max. Load and Pressure Dual			
			32nds	mph	km/h	in.	mm	in.	mm	in.	mm		in	mm		lbs.	psi	kg.	kPa	lbs.	psi	kg.	kPa
235/80R22.5 (1)	G	87511	16	75	120	17.4	443	37.1	943	9.2	233	6.75, 7.50	10.3	262	556	4675	110	2120	760	4410	110	2000	760
255/80R22.5 (1)	G	59634	16	75	120	17.9	456	38.2	972	9.9	251	7.50, 8.25	11.2	284	541	5205	110	2360	760	4805	110	2180	760
305/70R22.5 (2)	L	93499	16	75	120	18.1	460	39.1	994	12.3	312	9.00, 8.25	13.5	343	531	7830	120	3550	830	6940	120	3150	830

(1, 2) Tread design as indicated above the tire picture.

X® COACH HL Z

REGIONAL & BUS/RV

Increased load capacity without compromising mileage, in an all-position tire designed for long-haul and regional bus applications.(**)

- Extended load capacity provided by Michelin patented Infini-Coil™ Technology, featuring up to 1/4 mile of steel cable for improved load capacity. In addition, wide shoulder ribs and an improved distribution of pressure across the tire width enable the greater load capacity.
- Exceptional handling comes from wide shoulder ribs and four longitudinal grooves that provide optimized traction in all conditions.
- Longer casing life and retreadability is also a benefit of the Infini-Coil Technology, along with the full width protector ply and rectangular bead bundles.



Size	Load Range	Catalog Number	Tread Depth	Max. Speed (*)		Loaded Radius		Overall Diameter		Overall Width (‡)		Approved Wheels (Measuring wheel listed first.)	Min. Dual Spacing (‡)		Revs Per Mile	Max. Load and Pressure Single				Max. Load and Pressure Dual			
			32nds	mph	km/h	in.	mm	in.	mm	in.	mm		in	mm		lbs.	psi	kg.	kPa	lbs.	psi	kg.	kPa
295/80R22.5	H	31078	18	75	120	19.3	491	41.5	1055	11.8	299	9.00, 8.25	12.8	326	499	8270	123	3750	850	7160	123	3250	850

(*) Exceeding the lawful speed limit is neither recommended nor endorsed.
(‡) Overall widths will change 0.1 inch (2.5 mm) for each 1/4 inch change in wheel width. Minimum dual spacing should be adjusted accordingly.
(**) **"No bus shall be operated with regrooved, recapped or retreaded tires on the front wheels." US Code of Federal Regulations: Title 49, Transportation; Part 393.75.**
MICHELIN® tires and tubes are subject to a continuous development program. Michelin North America, Inc. reserves the right to change product specifications at any time without notice or obligations.
Please consult wheel manufacturer's load and inflation limits. Never exceed wheel manufacturer's limits without permission of component manufacturer.

X® LINE ENERGY Z

LINE HAUL & BUS/RV

Our best just got better. Get 5% better rolling resistance than the MICHELIN® XZA3®+ EVERTREAD® tire it replaces.(1)

- 5% better rolling resistance than the ultra-fuel efficient MICHELIN® XZA3®+ EVERTREAD® tire.(1)
- Get more mileage without compromising fuel efficiency with the patent-pending Dual Compound Tread.
- Even wear to the end of tread life due to directional miniature sipes in the groove walls (directional to half life).

Directional tread



Size	Load Range	Catalog Number	Tread Depth	Max. Speed (*)	Loaded Radius		Overall Diameter		Overall Width (‡)		Approved Wheels (Measuring wheel listed first.)	Min. Dual Spacing (‡)		Revs Per Mile	Max. Load and Pressure Single				Max. Load and Pressure Dual			
			32nds	mph	in.	mm	in.	mm	in.	mm		in	mm		lbs.	psi	kg.	kPa	lbs.	psi	kg.	kPa
11R22.5 (2)	G	03363	19	75	19.3	489	41.3	1048	11.2	285	8.25, 7.50	12.5	318	502	6175	105	2800	720	5840	105	2650	720
11R22.5 (2)	H	06697	19	75	19.1	486	41.3	1049	11.2	285	8.25, 7.50	12.5	318	503	6610	120	3000	830	6005	120	2725	830
275/80R22.5 (2)	G	03885	19	75	18.7	475	40.1	1018	11.0	280	8.25, 7.50	12.2	311	517	6175	110	2800	760	5675	110	2575	760
275/80R22.5 (2)	H	66205	19	75	18.7	474	40.1	1018	11.0	280	8.25, 7.50	12.2	311	517	7160	120	3250	830	6610	120	3000	830

(1) Based on internal rolling resistance tests using ISO 28580 in tire size 275/80R22.5..
(2) Directional tread design.

X® LINE ENERGY Z

REGIONAL & BUS/RV

Improved fuel-efficient(1), all position service in long distance applications such as Highway Coach.(**)

- Improved Fuel Economy – The MICHELIN® X® LINE ENERGY Z tire new tread compound generated a 7% reduction in rolling resistance versus the MICHELIN® XZA®2 ENERGY 315/80R22.5 tire.
- Groove Wall Miniature Sipes – Helps fight irregular wear to improve mileage.
- Increased Net Contact Area – 3% greater contact area versus the MICHELIN® XZA®2 ENERGY tire meaning more rubber on the road.
- Zig-Zag Grooves – Improves traction in new and worn tire conditions.
- Full Width Elastic Protector Ply – Helps protect against penetrations, impacts breaks, and shocks for maximum casing durability.



Size	Load Range	Catalog Number	Tread Depth	Max. Speed (*)		Loaded Radius		Overall Diameter		Overall Width (‡)		Approved Wheel	Min. Dual Spacing (‡)		Revs Per Mile	Max. Load and Pressure Single				Max. Load and Pressure Dual			
			32nds	mph	km/h	in.	mm	in.	mm	in.	mm		in	mm		lbs.	psi	kg.	kPa	lbs.	psi	kg.	kPa
315/80R22.5 (2)	L	09807	17	75	120	19.6	497	42.3	1075	12.4	315	9.00	13.8	351	491	9090	130	4125	900	8270	130	3750	900

(1) Based on industry standard rolling resistance testing of comparable tires or retreads. Actual results may vary, and may be impacted by many factors, to include road conditions, weather and environment, driver performance, etc.
(2) Not approved for use with an 8.25" wheel. See Page 27 for addition information on the use of 315/80R22.5 tires on 8.25" wheels.

(*) Exceeding the lawful speed limit is neither recommended nor endorsed.
(‡) Overall widths will change 0.1 inch (2.5 mm) for each 1/4 inch change in wheel width. Minimum dual spacing should be adjusted accordingly.
(**) "No bus shall be operated with regrooved, recapped or retreaded tires on the front wheels." US Code of Federal Regulations: Title 49, Transportation; Part 393.75.
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Please consult wheel manufacturer's load and inflation limits. Never exceed wheel manufacturer's limits without permission of component manufacturer.

X® MULTIWAY 3D XZE®

REGIONAL & BUS/RV

Improved fuel economy and mileage in an all-position tire for regional and coach applications.(**)

- Outstanding driving safety from improved braking, that reduces braking distances by up to 25%(1) and excellent traction from full depth Delta Sipes that deliver improved grip(2) in challenging conditions.
- Outstanding fuel economy delivers 0.2 gallons per 100 miles in fuel savings(3), using an optimized tread design and materials.
- Tread life is improved up to 15% for front tires and 30% for rear tires(4) through the use of a directional tread and optimized tread design.
- Extended casing life through Michelin exclusive fill-width elastic protector ply, and rectangular bead bundles - providing added casing protection and reduced heat and fatigue.

Directional tread



Size	Load Range	Catalog Number	Tread Depth	Max. Speed (*)		Loaded Radius		Overall Diameter		Overall Width (‡)		Approved Wheels (Measuring wheel listed first.)	Min. Dual Spacing (‡)		Revs Per Mile	Max. Load and Pressure Single				Max. Load and Pressure Dual			
			32nds	mph	km/h	in.	mm	in.	mm	in.	mm		in	mm		lbs.	psi	kg.	kPa	lbs.	psi	kg.	kPa
295/80R22.5 (4)	H	07719	19	75	120	19.2	488	41.5	1054	11.7	297	9.00, 8.25	12.8	326	501	7830	123	3550	850	6940	123	3150	850
315/80R22.5 (5)	L	24903	21	75	120	19.7	502	42.6	1081	12.4	316	9.00	13.8	350	488	9090	130	4125	900	8270	130	3750	900

Note: Wheel listed first is the measuring wheel.
(1) Internal Michelin study. Vehicle fitted with MICHELIN® X® MULTIWAY™ 3D XZE® tires two-thirds worn compared with similarly worn MICHELIN® XZE®2+ tires for emergency braking (18 mph to 0 mph) on a wet, smooth, concrete surface.
(2) Compared to MICHELIN XZE®2+ tires.
(3) Internal Michelin simulation, MICHELIN® X® MULTIWAY™ 3D XZE® tires compared to MICHELIN® XZE®2+ tires.
(4) Directional tread design.
(5) Not approved for use with an 8.25" wheel. See Page 27 for addition information on the use of 315/80R22.5 tires on 8.25" wheels.

XZA2® ENERGY

LINE HAUL & BUS/RV

Fuel-efficient(1), all-position radial designed for long life in highway steer axle service(2)

- Unique intermediate rib design helps combat the onset of irregular wear in highway service
- Exceptional handling and responsiveness through optimized shoulder design
- Traction and lateral control offered by miniature sipes and variable groove angles



Size	Load Range	Catalog Number	Tread Depth	Max. Speed (*)		Loaded Radius		Overall Diameter		Overall Width (‡)		Approved Wheels (Measuring wheel listed first.)	Min. Dual Spacing (‡)		Revs Per Mile	Max. Load and Pressure Single				Max. Load and Pressure Dual			
			32nds	mph	km/h	in.	mm	in.	mm	in.	mm		in	mm		lbs.	psi	kg.	kPa	lbs.	psi	kg.	kPa
295/80R22.5 (1)	H	76807	16	75	120	19.1	486	41.3	1048	11.8	299	9.00, 8.25	13.2	335	503	7830	120	3550	830	6940	120	3150	830

(1) Based on industry standard rolling resistance testing of comparable tires or retreads. Actual results may vary, and may be impacted by many factors, to include road conditions, weather and environment, driver performance, etc.
(2) "No bus shall be operated with regrooved, recapped or retreaded tires on the front wheels." US Code of Federal Regulations: Title 49, Transportation; Part 393.75.

(*) Exceeding the lawful speed limit is neither recommended nor endorsed.
(‡) Overall widths will change 0.1 inch (2.5 mm) for each 1/4 inch change in wheel width. Minimum dual spacing should be adjusted accordingly.
(**) "No bus shall be operated with regrooved, recapped or retreaded tires on the front wheels." US Code of Federal Regulations: Title 49, Transportation; Part 393.75.
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X® MULTI Z 19.5”

REGIONAL & BUS/RV

An all position radial tire optimized for a wide spectrum of regional applications.

- Increased Fuel Efficiency(1) – New tread compound lowers rolling resistance by 9% versus the MICHELIN® XZE®2+ tire.(2)
- Reduced Irregular Wear – Directional tread design helps to reduce irregular wear.
- Enhanced Casing Life – Groove bottom protectors and stone ejectors help to reduce stone drilling to extend casing life.
- Extended Casing Life – Four-belt package helps to protect against shocks, impacts and road hazards.



Size	Load Range	Catalog Number	Tread Depth	Max. Speed (*)		Loaded Radius		Overall Diameter		Overall Width (‡)		Approved Wheels (Measuring wheel listed first.)	Min. Dual Spacing (‡)		Revs Per Mile	Max. Load and Pressure Single				Max. Load and Pressure Dual			
			32nds	mph	km/h	in.	mm	in.	mm	in.	mm		in	mm		lbs.	psi	kg.	kPa	lbs.	psi	kg.	kPa
265/70R19.5	G	75319	16	81*	130	15.8	400	34.0	864	10.2	259	7.50, 6.75	11.5	293	611	5510	112	2500	775	5205	112	2360	775
285/70R19.5	H	31459	16	81*	130	16.2	411	35.2	893	10.7	273	8.25, 7.50, 9.00	12.2	309	591	6610	123	3000	850	6175	123	2800	850

(1) Based on industry standard rolling resistance testing of comparable tires or retreads. Actual results may vary, and may be impacted by many factors, to include road conditions, weather and environment, driver performance, etc.
(2) 265/70R19.5 – 9% lower rolling resistance is in comparison to the 265/70R19.5 MICHELIN® XZE®2+ tire.
285/70R19.5 – 18% lower rolling resistance is in comparison to the 285/70R19.5 MICHELIN® XZE®2+ tire.

Explanation of the meaning of the arrows for MICHELIN® X® MULTI Z tire



The arrow with the larger head indicates the Michelin preferred direction of rotation for the tire, optimizing tread wear performance. We strongly recommend that, especially when new, MICHELIN® tires marked with a bi-directional arrow should be run in the direction of rotation indicated by the larger arrow head.

However, if a tire marked with the bi-directional arrow shows an irregular wear profile, (for example, a sloped wear pattern) then it may be turned on the rim and run in the direction of the smaller arrow head with no detriment to any other performance criteria. In cases such as this, Michelin recommends that all tires on the same axle should be turned on the rim such that all arrows face in the same direction.

When turning these tires on the rim or moving from side to side on a vehicle, they should be treated in the same way as any other. Please remember that tires on the same axle must always be compatible with each other.

X® MULTI Z 275

LINE HAUL & BUS/RV

Improved all-position radial optimized for RV chassis and specialty trailer in regional and line haul applications.

- Improved all-position radial optimized for RV chassis and specialty trailer in regional and line haul applications.
- 15% improvement in rolling resistance for improved wear and fuel savings.(1)
- 9% greater net contact area for improved grip.(2)
- Exceptional traction from zig zag sipe design which delivers outstanding wet grip on slippery surfaces.
- Outstanding resistance to stone damage due to groove bottom protectors as well as angled groove walls to reduce stone retention.



Size	Load Range	Catalog Number	Tread Depth	Max. Speed (*)		Loaded Radius		Overall Diameter		Overall Width (‡)		Approved Wheels (Measuring wheel listed first.)	Min. Dual Spacing (‡)		Revs Per Mile	Max. Load and Pressure Single				Max. Load and Pressure Dual			
			32nds	mph	km/h	in.	mm	in.	mm	in.	mm		in	mm		lbs.	psi	kg.	kPa	lbs.	psi	kg.	kPa
275/70R22.5	J	31513	18	75	120	17.6	448	37.8	959	10.9	278	8.25, 7.50	12.2	311	547	6940	131	3150	900	6390	131	2900	900

(1) Based on industry standard rolling resistance testing of comparable tires or retreads. Actual results may vary, and may be impacted by many factors, to include road conditions, weather and environment, driver performance, etc.

(*) Exceeding the lawful speed limit is neither recommended nor endorsed.
(‡) Overall widths will change 0.1 inch (2.5 mm) for each 1/4 inch change in wheel width. Minimum dual spacing should be adjusted accordingly.
(**) “No bus shall be operated with regrooved, recapped or retreaded tires on the front wheels.” US Code of Federal Regulations: Title 49, Transportation; Part 393.75.
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XZE 2

REGIONAL & BUS/RV

Exceptional regional, all-position radial with extra-wide, extra-deep tread designed to help deliver our best wear in high scrub applications



- Beefy, buttressed shoulders help resist tearing and accelerated wear in high scrub applications.
- Extra strong curb guards help protect sidewalls against most impacts and abrasions for long casing life.
- Groove bottom protectors help deliver additional defense against stone drilling.
- Application specific, high scrub compound (chip and cut resistant in versions with ⍟ designation) make the MICHELIN® XZE® our longest wearing regional steer tire.
- Deep, wide tread and optimized footprint shape help deliver long, even tread wear.

Size	Load Range	Catalog Number	Tread Depth	Max. Speed (*)		Loaded Radius		Overall Diameter		Overall Width (‡)		Approved Wheels (Measuring wheel listed first.)	Min. Dual Spacing (‡)		Revs Per Mile	Max. Load and Pressure Single				Max. Load and Pressure Dual			
			32nds	mph	km/h	in.	mm	in.	mm	in.	mm		in	mm		lbs.	psi	kg.	kPa	lbs.	psi	kg.	kPa
11R22.5	G	78390	22	75	120	19.3	491	41.3	1050	11.2	285	8.25, 7.50	12.5	318	501	6175	105	2800	720	5840	105	2650	720
11R22.5	H	67042	22	75	120	19.2	488	41.4	1051	11.3	286	8.25, 7.50	12.5	318	501	6610	120	3000	830	6005	120	2725	830
275/80R22.5	G	55895	22	75	120	18.6	473	40.2	1021	11.1	282	8.25, 7.50	12.2	311	517	6175	110	2800	760	5675	110	2575	760

(1) When compared to the MICHELIN® XZE® tire.

XZA® (365/70R22.5)

LINE HAUL & BUS/RV

Fuel-efficient[(1)], all-position radial designed for long life in highway steer axle service



- No compromise rolling resistance delivered with Advanced Technology Compound, offering low rolling resistance with no compromise in wet traction, mileage, durability and even wear.
- Wet traction is improved using 3,000 trapezoidal micro sipes on the groove edges to help break water surface tension.
- Extra casing protection and stability comes from a five steel belt construction.
- Infini-Coil™ incorporates over 1/4 mile of steel cable to help eliminate casing growth and ensure a consistent footprint.

Size	Load Range	Catalog Number	Tread Depth	Max. Speed (*)		Loaded Radius		Overall Diameter		Overall Width (‡)		Approved Wheel	Revs Per Mile	Max. Load and Pressure Single			
			32nds	mph	km/h	in.	mm	in.	mm	in.	mm			lbs.	psi	kg.	kPa
365/70R22.5	L	52215	19	75	120	19.6	497	42.5	1080	14.3	363	10.50	490	10500	125	4750	860

(1) Based on industry standard rolling resistance testing of comparable tires or retreads. Actual results may vary, and may be impacted by many factors, to include road conditions, weather and environment, driver performance, etc.

(*) Exceeding the lawful speed limit is neither recommended nor endorsed.
(‡) Overall widths will change 0.1 inch (2.5 mm) for each 1/4 inch change in wheel width. Minimum dual spacing should be adjusted accordingly.
(**) "No bus shall be operated with regrooved, recapped or retreaded tires on the front wheels." US Code of Federal Regulations: Title 49, Transportation; Part 393.75.
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XZE®

REGIONAL & BUS/RV

Exceptional all-position radial with extra-wide, extra-deep tread designed to help deliver our best wear in high scrub applications

- Beefy, buttressed shoulders help resist tearing and accelerated wear in high scrub applications.
- Extra strong curb guards help protect sidewalls against most impacts and abrasions for long casing life.
- Groove bottom protectors help deliver additional defense against stone drilling.
- Application specific high scrub compound (chip and cut resistance in LRH versions with ❀ designation) make the MICHELIN® XZE® tire our longest wearing regional steer tire.
- Deep, wide tread and optimized footprint shape help deliver long, even tread wear.



Size	Load Range	Catalog Number	Tread Depth	Max. Speed (*)		Loaded Radius		Overall Diameter		Overall Width (‡)		Approved Wheels (Measuring wheel listed first.)	Min. Dual Spacing (‡)		Revs Per Mile	Max. Load and Pressure Single				Max. Load and Pressure Dual			
			32nds	mph	km/h	in.	mm	in.	mm	in.	mm		in	mm		lbs.	psi	kg.	kPa	lbs.	psi	kg.	kPa
225/70R19.5	G	91043	17	75	120	15.2	385	32.2	819	9.3	237	6.75 , 6.00	9.7	246	640	3970	110	1800	760	3750	110	1700	760
245/70R19.5	H	75997	18	75	120	15.6	396	33.6	853	9.7	247	6.75, 7.50	10.7	272	619	4940	120	2240	830	4675	120	2120	830
10R22.5	G	99141	21	75	120	18.7	475	40.1	1018	10.2	259	6.75, 7.50, 8.25	11.1	282	517	5675	115	2575	790	5355	115	2430	790
12R22.5 ❀	H	85335	22	75	120	19.8	503	42.6	1082	11.4	290	8.25, 9.00	13.2	335	486	7390	120	3350	830	6780	120	3075	830
255/70R22.5 ❀	H	61737	18	75	120	17.2	437	36.7	932	10.2	260	8.25, 7.50	11.6	295	563	5510	120	2500	830	5070	120	2300	830
275/80R22.5	H	01637	22	75	120	18.7	475	40.2	1022	11.1	282	8.25, 7.50	12.2	311	516	7160	120	3250	830	6610	120	3000	830

❀ With chip and cut resistant tread compound.

XPS RIB®

REGIONAL & BUS/RV

All-steel, all-wheel-position highway rib light truck tire designed to deliver exceptional mileage and retreadability for commercial/fleet operations.

- Steel casing, reinforced steel bead helps deliver exceptional retreadability.
- Third steel belt helps provide puncture resistance for enhanced durability.
- Optimized rib tread designed to provide even tread wear and long mileage with low noise level.
- Sidewall protector helps provide resistance to sidewall damage from most curb scrubbing.



Size Load/Speed Rating	Load Range	Catalog Number	Tread Depth	Max. Speed (*)		Loaded Radius		Overall Diameter		Overall Width (‡)		Approved Wheels Measuring wheel listed first.	Min. Dual Spacing (‡)		Revs Per Mile (at 45 mph)	Max. Load and Pressure Single				Max. Load and Pressure Dual			
			32nds	mph	km/h	in.	mm	in.	mm	in.	mm		in	mm		lbs.	psi	kg.	kPa	lbs.	psi	kg.	kPa
LT215/85R16 115/112Q	E	39510	15	75	120	14.2	360	30.57	775	8.9	225	6.00, 5.50, 7.00	9.9	251	687	2680	80	1215	550	2470	80	1120	550
LT225/75R16 115/112Q	E	08404	14	75	120	13.7	347	29.4	746	9.0	229	6.50, 6.00, 7.00	10.4	264	706	2680	80	1215	550	2470	80	1120	550
LT235/85R16 120/116Q	E	13080	15	75	120	14.8	376	32.2	818	9.7	246	6.00, 7.00	10.6	269	655	3042	80	1380	550	2778	80	1260	550
LT245/75R16 120/116Q	E	26848	14	75	120	14.4	366	30.6	777	9.68	244	7.00, 6.50, 8.00	11.3	288	676	3042	80	1380	550	2778	80	1260	550

(*) Exceeding the lawful speed limit is neither recommended nor endorsed.
(‡) Overall widths will change 0.1 inch (2.5 mm) for each 1/4 inch change in wheel width. Minimum dual spacing should be adjusted accordingly.
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AGILIS® CROSSCLIMATE®

REGIONAL & BUS/RV

An all-weather Light Truck tire that offers exceptional durability, mileage, and wet braking for high stress commercial applications.

- **Our Most Durable Heavy Duty Light Commercial Truck Tire:** Professional-Grade Construction including CurbGard™ sidewall protectors that resist curb scrubbing in urban environments for improved sidewall durability.
- **Improved Tread Life Under Heavy Loads:** (2) The MICHELIN® Agilis® CrossClimate® tire lasted 10% to 19% longer under heavy loads than three leading competitive commercial tires. (2) MaxPressure Profile™ optimizes the tire footprint for better wear life under high pressure, heavy loads, high torque, and stop and go driving. Additionally, the StabiliBlok™ design provides wider and longer tread blocks, to resist extreme torque while providing cool operating temperatures under full load at high speed.
- **Excellent Wet and Snow Traction:** (3,4) The MICHELIN® Agilis® CrossClimate® tire offers shorter wet stopping distances and better snow traction than three leading competitive commercial tires. (3,4) SipeLock™ provides hundreds of biting edges for improved wet and snow traction without sacrificing tread block stability.

C-Metric **LT-Metric**



Directional tread

M&S 1

Size Load/Speed Rating	Load Range	Catalog Number	Tread Depth	Max Speed*		Loaded Radius		Overall Diameter (‡)		Overall Width		Approved Wheels Measuring wheel listed first.	Min. Dual Spacing (‡)		Revs Per Mile (at 45 mph)	Max. Load and Pressure Single				Max. Load and Pressure Dual			
			32nds	mph	km/h	in	mm	in	mm	in.	mm		in	mm		lbs.	psi	kg.	kPa	lbs.	psi	kg.	kPa
205/65R15C 102/100T (5)	C	04143	11.5	118*	190*	11.9	302	25.4	645	8.2	208	6.0 (5.5 - 6.5)	9.2	240	817	1875	54	850	375	1765	54	800	375
195/75R16C 107/105R (5)	D	56761	11.5	106*	170*	12.9	328	27.4	696	7.7	196	5.5 (5.0 - 6.0)	8.7	220	757	2150	69	975	475	2040	69	925	475
225/75R16C 121/120R (5)	E	70411	11.5	106*	170*	13.7	348	29.3	744	8.7	221	6.0 (6.0 - 7.0)	10.1	256	710	3195	83	1450	575	3085	83	1400	575
235/65R16C 121/119R (5)	E	09118	11.5	106*	170*	13.1	333	28.0	711	9.4	239	7.0 (6.5 - 7.5)	10.6	270	742	3195	83	1450	575	3000	83	1360	575
LT215/85R16 115/112R	E	80033	12.5	106*	170*	14.1	358	30.4	772	8.5	216	6.0 (5.5 - 7.0)	9.9	251	684	2680	80	1215	550	2470	80	1120	550
LT225/75R16 115/112R	E	72022	12.5	106*	170*	13.7	348	29.3	744	8.7	221	6.0 (6.0 - 7.0)	10.2	259	710	2680	90	1215	620	2470	90	1120	620
LT235/85R16 120/116R	E	65681	12.5	106*	170*	14.7	373	31.7	805	9.2	234	6.5 (6.0 - 7.5)	10.7	273	656	3042	80	1380	550	2778	80	1260	550
LT245/75R16 120/116R	E	52347	12.5	106*	170*	14.2	361	30.5	775	9.8	249	7.0 (6.5 - 8.0)	11.3	288	683	3042	80	1380	550	2778	80	1260	550

(1) Meets the USTMA (U.S. Tire Manufacturers Association) snow traction performance requirements. Meets the Tire and Rubber Association of Canada (TRAC) requirements for severe snow traction.
(2) Based on a treadwear test using tires in size LT265/70R17 121/118R on 2018 Ford F250 pickup trucks, loaded to 9800 lbs / 4,445 kilograms, versus the following competitors. Actual on-road results may vary. Average projected mileage to wearout: MICHELIN® Agilis® CrossClimate®: 24,500 miles / 39,429 kilometers, Bridgestone® Duravis™ M700 HD: 20,600 miles / 33,153 kilometers, Firestone® Transforce™ AT2: 22,000 miles / 35,406 kilometer, and Firestone® Transforce™ HT: 19,800 miles = 31,865 kilometer.
(3) Based on internal wet braking tests from 50 mph / 80 km/h using tires in size LT265/70R17 121/118R on a 2018 Ford F-250 versus the following competitors. Actual on-road results may vary. Average distance to stop: MICHELIN® Agilis® CrossClimate®: 147.5 ft / 45m, Bridgestone® Duravis™ M700 HD: 151.6 ft / 46m, Firestone® Transforce™ AT2: 158.0 ft / 48m, and Firestone® Transforce™ HT: 169.3 ft / 52m.
(4) Based on internal snow handling tests using tires in size LT265/70R17 121/118R on a 2018 Ford F-250 versus the following competitors. Actual on-road results may vary. Average acceleration performance (%): MICHELIN® Agilis® CrossClimate®: 100%, Bridgestone® Duravis™ M700 HD: 73%, Firestone® Transforce™ AT2: 91%, and Firestone® Transforce™ HT: 94%.
(5) Directional tread design.

(*) Exceeding the lawful speed limit is neither recommended nor endorsed.
(‡) Overall widths will change 0.1 inch (2.5 mm) for each 1/4 inch change in wheel width. Minimum dual spacing should be adjusted accordingly.
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MICHELIN INFLATION CHARTS FOR RV USAGE ONLY

For RV use only, Michelin displays tire loads **per axle end** in the load and inflation tables, as we recommend weighing each axle end separately and using the heaviest end weight to determine the axle's cold inflation tire pressure. **For control of your RV, it is critical the tire pressures be the same across an axle, while NEVER exceeding the maximum pressure limit stamped on the wheels.**

To select the proper load and inflation table, locate your tire size in the following pages, then match your tire's sidewall markings to the table with the same sidewall markings. If your tire's sidewall markings do not match any table listed, please contact your Michelin dealer for the applicable load and inflation table.*

Michelin continually updates its product information to reflect any changes in Industry Standards. Printed material may not reflect the current Load and Inflation information. Please visit www.michelintruck.com for the latest product information.

Note: The actual load and inflation pressure used must not exceed the wheel manufacturer's maximum conditions. Never exceed a wheel manufacturer's limits without permission from the component manufacturer.

In the load and inflation tables, SINGLE means an axle with one tire mounted on each end, while DUAL means an axle with two tires mounted on each end. In an RV application, the loads indicated represent the total weight of an axle end. When one axle end weighs more than the other, use the heaviest of the two end weights to determine the unique tire pressure for all tires on the axle. The maximum cold pressure for each axle may vary, depending on their weights. These tables are applicable for all RV axles, whether or not they are power-driven.

Wheel Diameter 15"	PSI	30	35	40	45	50	MAXIMUM LOAD AND PRESSURE ON SIDEWALL	
	kPa	210	240	280	310	340		
205/65R15C AGILIS CROSSCLIMATE	LBS SINGLE	1175	1310	1480	1605	1730	S	1875 LBS AT 54 PSI
	LBS DUAL	2215	2465	2785	3030	3260	D	850 LBS AT54 PSI
	KG SINGLE	535	595	675	730	785	S	1765 KG AT 375 kPa
	KG DUAL	1005	1120	1265	1375	1480	D	800 KG AT 375 kPa

Wheel Diameter 16"	PSI	35	40	45	50	55	60	65	70	75	80	MAXIMUM LOAD AND PRESSURE ON SIDEWALL	
	kPa	250	280	310	350	380	410	450	480	520	550		
195/75R16C AGILIS CROSSCLIMATE	LBS SINGLE	1585	1795	1950	2090	2290	2435	2620	2765	2950	3085	S	2150 LBS AT 69 PSI
	LBS DUAL	3060	3470	3765	4055	4430	4705	5070	5345	5695	5950	D	2040 LBS AT 69 PSI
	KG SINGLE	720	815	885	950	1040	1105	1190	1255	1340	1400	S	975 KG AT 475 kPa
	KG DUAL	1390	1575	1710	1840	2010	2135	2300	2425	2585	2700	D	925 KG AT 475 kPa
225/75R16C AGILIS CROSSCLIMATE	LBS SINGLE	1585	1795	1950	2090	2290	2435	2620	2765	2950	3085	S	3195 LBS AT 83 PSI
	LBS DUAL	3060	3470	3765	4055	4430	4705	5070	5345	5695	5950	D	3085 LBS AT 83 PSI
	KG SINGLE	720	815	885	950	1040	1105	1190	1255	1340	1400	S	1450 KG AT 575 kPa
	KG DUAL	1390	1575	1710	1840	2010	2135	2300	2425	2585	2700	D	1400 KG AT 575 kPa
235/65R16C AGILIS CROSSCLIMATE	LBS SINGLE	1585	1795	1950	2090	2290	2435	2620	2765	2950	3085	S	3195 LBS AT 83 PSI
	LBS DUAL	2975	3370	3655	3935	4305	4570	4925	5190	5530	5785	D	3085 LBS AT 83 PSI
	KG SINGLE	720	815	885	950	1040	1105	1190	1255	1340	1400	S	1450 KG AT 575 kPa
	KG DUAL	1350	1530	1660	1785	1955	2075	2235	2355	2510	2625	D	1400 KG AT 575 kPa
LT215/85R16 LRE XPS RIB AGILIS CROSSCLIMATE	LBS SINGLE	1495	1640	1785	1940	2055	2180	2335	2430	2550	2680	S	2680 LBS AT 80 PSI
	LBS DUAL	2720	2980	3250	3530	3723	3970	4300	4420	4640	4940	D	2470 LBS AT 80 PSI
	KG SINGLE	678	744	809	880	932	989	1059	1102	1156	1215	S	1215 KG AT 550 kPa
	KG DUAL	1234	1351	1474	1601	1689	1801	1950	2005	2104	2240	D	1120 KG AT 550 kPa
LT225/75R16 LRE XPS RIB AGILIS CROSSCLIMATE	LBS SINGLE		1650	1790	1940	2060	2190	2335	2440	2560	2680	S	2680 LBS AT 80 PSI
	LBS DUAL		3000	3260	3530	3750	3990	4300	4440	4660	4940	D	2470 LBS AT 80 PSI
	KG SINGLE		748	812	880	934	993	1059	1107	1161	1215	S	1215 KG AT 550 kPa
	KG DUAL		1361	1478	1601	1701	1810	1950	2014	2114	2241	D	1120 KG AT 550 kPa

Wheel Diameter 16”	PSI	35	40	45	50	55	60	65	70	75	80	MAXIMUM LOAD AND PRESSURE ON SIDEWALL	
	kPa	250	280	310	350	380	410	450	480	520	550		
LT235/85R16 LRE XPS RIB AGILIS CROSSCLIMATE	LBS SINGLE	1740	1862	1985	2205	2315	2425	2623	2755	2910	3042	S	3042 LBS AT 80 PSI
	LBS DUAL	3170	3390	3610	4012	4211	4410	4762	5014	5296	5556	D	2778 LBS AT 80 PSI
	KG SINGLE	790	845	900	1000	1050	1100	1190	1250	1320	1380	S	1380 KG AT 550 kPa
	KG DUAL	1440	1540	1640	1820	1910	2000	2160	2270	2400	2520	D	1260 KG AT 550 kPa
LT245/75R16 LRE XPS RIB AGILIS CROSSCLIMATE	LBS SINGLE	1700	1865	2030	2205	2335	2480	2625	2765	2900	3042	S	3042 LBS AT 80 PSI
	LBS DUAL	3090	3390	3690	4012	4250	4510	4762	5030	5280	5556	D	2778 LBS AT 80 PSI
	KG SINGLE	790	845	920	1000	1060	1125	1190	1255	1315	1380	S	1380 KG AT 550 kPa
	KG DUAL	1440	1537	1675	1820	1927	2045	2160	2280	2395	2520	D	1260 KG AT 550 kPa

Wheel Diameter 19.5”	PSI	65	70	75	80	85	90	95	100	105	110	115	120	MAXIMUM LOAD AND PRESSURE ON SIDEWALL	
	kPa	450	480	520	550	590	620	660	690	720	760	790	830		
225/70R19.5 LRG XZE	LBS SINGLE	2755	2895	3040	3195	3315	3450	3640	3715	3845	3970			S	3970 LBS AT 110 PSI
	LBS DUAL	5200	5440	5720	6000	6230	6490	6830	6980	7230	7500			D	3750 LBS AT 110 PSI
	KG SINGLE	1250	1310	1380	1450	1500	1570	1650	1690	1740	1800			S	1800 KG AT 760 kPa
	KG DUAL	2360	2460	2600	2720	2820	2940	3100	3160	3280	3400			D	1700 KG AT 760 kPa
245/70R19.5 LRH XZE	LBS SINGLE			3390	3570	3750	3925	4100	4270	4440	4610	4775	4940	S	4940 LBS AT 120 PSI
	LBS DUAL			6420	6760	7100	7430	7760	8080	8400	8720	9040	9350	D	4675 LBS AT 120 PSI
	KG SINGLE			1540	1610	1700	1770	1860	1930	2000	2090	2150	2240	S	2240 KG AT 830 kPa
	KG DUAL			2920	3060	3220	3360	3520	3660	3780	3960	4080	4240	D	2120 KG AT 830 kPa
265/70R19.5 LRG X MULTI Z	LBS SINGLE	3570	3755	4000	4185	4430	4605	4850	5025	5190	5420				5510 LBS AT 112 PSI
	LBS DUAL	6735	7085	7560	7900	8365	8705	9145	9475	9810	10240				5205 LBS AT 112 PSI
	KG SINGLE	1620	1705	1815	1900	2010	2090	2200	2280	2355	2460				2500 KG AT 775 kPa
	KG DUAL	3055	3215	3430	3585	3795	3950	4150	4300	4450	4645				2360 KG AT 775 kPa
285/70R19.5 LRH X MULTI Z	LBS SINGLE			4460	4670	4935	5135	5400	5595	5785	6050	6235	6490		6610 LBS AT 123 PSI
	LBS DUAL			8330	8715	9215	9590	10085	10445	10810	11285	11640	12110		6175 LBS AT 123 PSI
	KG SINGLE			2025	2120	2240	2330	2450	2540	2625	2745	2830	2945		3000 KG AT 850 kPa
	KG DUAL			3780	3955	4180	4350	4575	4740	4905	5120	5280	5495		2800 KG AT 850 kPa

Wheel Diameter 22.5”	PSI	70	75	80	85	90	95	100	105	110	115	120	125	130	MAXIMUM LOAD AND PRESSURE ON SIDEWALL	
	kPa	480	520	550	590	620	660	690	720	760	790	830	850	900		
10R22.5 LRG XZE	LBS SINGLE	4080	4280	4480	4685	4850	5025	5205	5360	5515	5675				S	5675 LBS AT 115 PSI
	LBS DUAL	7720	8090	8460	8820	9170	9520	9880	10150	10420	10710				D	5355 LBS AT 115 PSI
	KG SINGLE	1850	1940	22030	2120	2200	2280	2360	2430	2500	2575				S	2575 KG AT 790 kPa
	KG DUAL	3500	3660	3820	4000	4160	4320	4480	4600	4720	4860				D	2430 KG AT 790 kPa
11R22.5 LRG X LINE ENERGY Z XZE 2	LBS SINGLE	4530	4770	4990	5220	5510	5730	5950	6175						S	6175 LBS AT 105 PSI
	LBS DUAL	8760	9160	9520	9900	10410	10830	11250	11680						D	5840 LBS AT 105 PSI
	KG SINGLE	2050	2160	2260	2370	2500	2600	2700	2800						S	2800 KG AT 720 kPa
	KG DUAL	3980	4160	4320	4500	4720	4920	5120	5300						D	2650 KG AT 720 kPa
11R22.5 LRH X LINE ENERGY Z XZE 2	LBS SINGLE		4770	4990	5220	5510	5730	5950	6175	6320	6465	6610			S	6610 LBS AT 120 PSI
	LBS DUAL		9160	9520	9900	10410	10830	11250	11680	11790	11900	12010			D	6005 LBS AT 120 PSI
	KG SINGLE		2160	2260	2370	2500	2600	2700	2800	2870	2940	3000			S	3000 KG AT 830 kPa
	KG DUAL		4160	4320	4500	4720	4920	5120	5300	5360	5420	5450			D	2725 KG AT 830 kPa
12R22.5 LRH XZE ❀	LBS SINGLE		5200	5450	5690	6005	6205	6405	6610	6870	7130	7390			S	7390 LBS AT 120 PSI
	LBS DUAL		9980	10380	10780	11350	11570	11790	12010	12530	13050	13560			D	6780 LBS AT 120 PSI
	KG SINGLE		2360	2470	2580	2725	2820	2910	3000	3120	3240	3350			S	3350 KG AT 830 kPa
	KG DUAL		4520	4700	4880	5150	5260	5360	5450	5680	5920	6150			D	3075 KG AT 830 kPa

❀ With chip and cut resistant tread compound.
More Wheel Diameter 22.5” continues on the next page.

Wheel Diameter 22.5"	PSI	70	75	80	85	90	95	100	105	110	115	120	125	130	MAXIMUM LOAD AND PRESSURE ON SIDEWALL	
	kPa	480	520	550	590	620	660	690	720	760	790	830	850	900		
235/80R22.5 LRG XRV	LBS SINGLE	3470	3645	3860	3975	4140	4300	4455	4610	4675					S	4675 LBS AT 110 PSI
	LBS DUAL	6320	6630	7050	7230	7530	7940	8110	8390	8820					D	4410 LBS AT 110 PSI
	KG SINGLE	1570	1650	1750	1800	1880	1950	2020	2090	2120					S	2120 KG AT 760 kPa
	KG DUAL	2860	3000	3200	3280	3420	3600	3680	3800	4000					D	2000 KG AT 760 kPa
255/70R22.5 LRH XZE ⊛	LBS SINGLE			4190	4370	4550	4675	4895	5065	5205	5400	5510			S	5510 LBS AT 120 PSI
	LBS DUAL			7940	8220	8550	8820	8910	9220	9350	9830	10140			D	5070 LBS AT 120 PSI
	KG SINGLE			1900	1980	2060	2120	2220	2300	2360	2450	2500			S	2500 KG AT 830 kPa
	KG DUAL			3600	3720	3880	4000	4040	4180	4240	4460	4600			D	2300 KG AT 830 kPa
255/80R22.5 LRG XRV	LBS SINGLE	3875	4070	4300	4440	4620	4805	4975	5150	5205					S	5205 LBS AT 110 PSI
	LBS DUAL	7050	7410	7720	8080	8410	8820	9050	9370	9610					D	4805 LBS AT 110 PSI
	KG SINGLE	1760	1850	1950	2010	2100	2180	2260	2340	2360					S	2360 KG AT 760 kPa
	KG DUAL	3200	3360	3500	3660	3820	4000	4100	4260	4360					D	2180 KG AT 760 kPa
275/70R22.5 LRJ X MULTI Z	LBS SINGLE				4940	5170	5400	5625	5850	6070	6290	6510	6730	6940	S	6940 LBS AT 131 PSI
	LBS DUAL				9100	9530	9950	10370	10780	11190	11600	12000	12390	12790	D	6390 LBS AT 131 PSI
	KG SINGLE				2250	2340	2460	2550	2640	2750	2840	2950	3040	3150	S	3150 KG AT 900 kPa
	KG DUAL				4140	4300	4520	4680	4860	5060	5220	5440	5600	11600	D	2900 KG AT 900 kPa
275/80R22.5 LRG X LINE ENERGY Z XZE 2	LBS SINGLE	4500	4725	4940	5155	5370	5510	5780	5980	6175					S	6175 LBS AT 110 PSI
	LBS DUAL	8190	8600	9080	9380	9770	10140	10520	10880	11350					D	5675 LBS AT 110 PSI
	KG SINGLE	2040	2140	2240	2340	2440	2500	2620	2710	2800					S	2800 KG AT 760 kPa
	KG DUAL	3720	3900	4120	4260	4440	4600	4780	4940	5150					D	2575 KG AT 760 kPa
275/80R22.5 LRH X LINE ENERGY Z XZE	LBS SINGLE		4915	5175	5435	5690	5940	6190	6435	6680	6920	7160			S	7160 LBS AT 120 PSI
	LBS DUAL		9080	9560	10030	10500	10970	11430	11880	12330	12780	13220			D	6610 LBS AT 120 PSI
	KG SINGLE		2240	2340	2470	2570	2710	2800	2900	3030	3120	3250			S	3250 KG AT 830 kPa
	KG DUAL		4120	4320	4560	4760	5000	5180	5360	5600	5760	6000			D	3000 KG AT 830 kPa
295/80R22.5 LRH XZA2 ENERGY	LBS SINGLE		5375	5660	5940	6220	6495	6770	7040	7300	7570	7830			S	7830 LBS AT 120 PSI
	LBS DUAL		9530	10030	10530	11030	11510	12000	12470	12950	13420	13880			D	6940 LBS AT 120 PSI
	KG SINGLE		2440	2550	2700	2810	2960	3060	3170	3310	3410	3550			S	3550 KG AT 830 kPa
	KG DUAL		4340	4540	4800	4980	5240	5440	5620	5880	6060	6300			D	3150 KG AT 830 kPa
295/80R22.5 LRH X MULTIWAY 3D XZE	LBS SINGLE		5280	5520	5840	6080	6390	6620	6855	7150	7385	7680			S	7830 LBS AT 123 PSI
	LBS DUAL		9365	9795	10370	10790	11340	11750	12155	12695	13095	13620			D	6940 LBS AT 123 PSI
	KG SINGLE		2395	2505	2650	2760	2900	3005	3110	3245	3350	3485			S	3550 KG AT 850 kPa
	KG DUAL		4250	4445	4705	4895	5145	5330	5515	5760	5940	6180			D	3150 KG AT 850 kPa
295/80R22.5 LRH X COACH HL Z*	LBS SINGLE		5575	5830	6170	6425	6755	6995	7240	7560	7790	8110			S	8270 LBS at 123 PSI
	LBS DUAL		9665	10115	10700	11130	11705	12125	12546	13105	13510	14050			D	7160 LBS at 123 PSI
	KG SINGLE		2530	2645	2800	2915	3065	3175	3285	3430	3535	3680			S	3750 KG at 850 kPa
	KG DUAL		4385	4590	4855	5050	5310	5500	5690	5945	6130	6375			D	3250 LG at 850 kPa
305/70R22.5 LRL XRV	LBS SINGLE		5375	5660	5940	6220	6495	6770	7040	7300	7570	7830			S	7830 LBS AT 120 PSI
	LBS DUAL		9530	10030	10530	11030	11510	12000	12470	12950	13420	13880			D	6940 LBS AT 120 PSI
	KG SINGLE		2440	2550	2700	2810	2960	3060	3170	3310	3410	3550			S	3550 KG AT 830 kPa
	KG DUAL		4340	4540	4800	4980	5240	5440	5620	5880	6060	6300			D	3150 KG AT 830 kPa
315/80R22.5 LRL X MULTI WAY 3D XZE X LINE ENERGY	LBS SINGLE				6415	6670	6940	7190	7440	7610	7920	8270	8690	9090	S	9090 LBS AT 130 PSI
	LBS DUAL				11680	12140	12790	13090	13540	13880	14420	15220	15820	16540	D	8270 LBS AT 130 PSI
	KG SINGLE				2910	3030	3150	3260	3370	3450	3590	3750	3940	4125	S	4125 KG AT 900 kPa
	KG DUAL				5300	5500	5800	5940	6140	6300	6540	6900	7180	7500	D	3750 KG AT 900 kPa
365/70R22.5 LRL XZA	LBS SINGLE			7350	7710	8070	8430	8780	9130	9480	9820	10200	10500		S	10500 LBS AT 125 PSI
	LBS DUAL			3320	3510	3660	3840	3980	4120	4300	4400	4620	4750		D	4750 KG AT 860 kPa

⊛ With chip and cut resistant tread compound.

More Wheel Diameter 22.5" continues on the next page.

MICHELIN 315/80R22.5 LRL TIRES USED IN MOTOR COACH AND MOTOR HOME SERVICE

This notice addresses only replacement fitments on Motor Coach and Motor Home (commonly referred to as RVs) vehicles produced up to the end of 2017 where the FMVSS placard references the fitment of 315/80R22.5 on 8.25x22.5 wheels. Vehicles used in Urban service such as Transit Buses or Waste/Refuse vehicles are specifically excluded from this exception without special dispensation.

Michelin has rescinded its approval to use 8.25x22.5 wheels on 315/80R22.5 dimension tires for new vehicle production effective January 1, 2018.

Michelin's position is that these Motor Coach and Motor Home (commonly referred to as RVs) vehicles produced before the end of 2017 with 8.25x22.5 wheels may continue to be fitted with current 315/80R22.5 LRL products until the vehicles are retired from active service.

Note the reduced load capacity per wheel position when 315/80R22.5 tires are fitted on 8.25x22.5 wheels continues to apply, always ensuring that the maximum load and cold pressure rating of the wheel manufacturer are not exceeded.

In the load and inflation tables, SINGLE means an axle with one tire mounted on each end, while DUAL means an axle with two tires mounted on each end. In an RV application, the loads indicated represent the total weight of an axle end. When one axle end weighs more than the other, use the heaviest of the two end weights to determine the unique tire pressure for all tires on the axle. The maximum cold pressure for each axle may vary, depending on their weights. These tables are applicable for all RV axles, whether or not they are power-driven.

Load (Reduced) and Inflation Table per wheel position for 315/80R22.5 tires fitted on 8.25x22.5 wheels

Dimension	Load Range	PSI		75	80	85	90	95	100	105	110	115	120
		kPa		520	550	590	620	660	690	720	760	790	830
315/80R22.5 8.25" Wheel	L	lbs. Per Axle End	S	5490	5785	6075	6360	6635	6910	7185	7465	7725	8000
			D	10450	11000	11550	12090	12630	13150	13680	14200	14720	15220
		kg. Per Axle End	S	2490	2625	2755	2885	3010	3135	3260	3385	3505	3630
			D	4740	4990	5240	5485	5730	5965	6205	6440	6675	6905

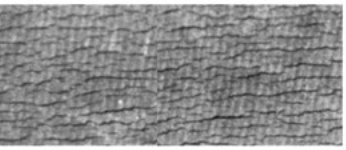
Owners are encouraged to adapt to 9.00x22.5 wheels wherever possible, however replacing 8.25x22.5 wheels with 9.00x22.5 wheels may cause tire/vehicle interference on certain vehicles in steer position and may exceed federal regulations for overall vehicle width on drive axles.

*An alternative fitment, when all tires on the vehicle are to be replaced at the same time, would be MICHELIN® 295/80R22.5 X® COACH HL Z tire (shown in table at the top). This tire is approved for use on 8.25x22.5 wheels with 16,540 lbs. maximum load capacity on steer axles and 28,640 lbs. on drive axles @ 850 kPa (123 psi) cold pressure.

OZONE SCALE



Acceptable



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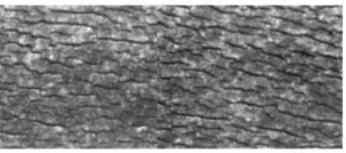

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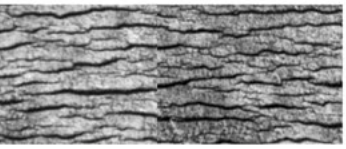

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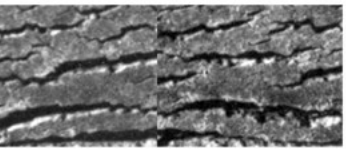

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