

# Original Equipment Passenger & Light Truck Tire Owner's Manual & Limited Warranty

Please register your tires.

Please be sure to visit **michelinman.ca** to find out how and why to register your new MICHELIN® tires. While you're there, check out our tire care and driving tips section to take full advantage of your new tires. You can also sign up for emails about Michelin news and special offers, at **michelinman.ca/newsletter**.



#### **ABOUT THIS WARRANTY**

As the original purchaser of a Michelin® passenger or light truck tire, you are covered by all the benefits and conditions (subject to the maintenance recommendations and safety warnings) contained in this booklet. To ensure your understanding of and compliance with the terms and conditions of this warranty, please read it carefully. It is essential that you also read and understand the safety and maintenance recommendations for tires contained in this booklet.

#### Limited mileage warranty:

Michelin® passenger and light truck tires – replacement and original equipment – are covered by a limited mileage warranty (hereafter referred to as limited warranty for tread wear). For the mileage warranty associated with each tire line, please see your Michelin tire retailer – or visit us at www.michelinman.ca/promise. Certain conditions and limitations apply. Mileage warranties vary by tire line and certain exclusions may apply.

#### **Self-Supporting Zero Pressure Tires (ZP)**

As the purchaser of a Michelin® Self-Supporting Zero Pressure (ZP) passenger tire, mounted on a vehicle approved for ZP tires, equipped with a properly operating low tire pressure warning system, you are covered by this warranty. Please pay close attention to the Owner's Manual part of this booklet since it

provides specific safety and maintenance information for your ZP tires.

Michelin® Self-Supporting Zero Pressure (ZP) tires are part of a very sophisticated system which is designed to provide a very simple benefit: Peace of Mind. With these tires, you can maneuver the vehicle up to 80 kilometers at 90 kph, unless otherwise specified in your vehicle owner's manual, even though the tire has lost all air! That means time to exit from the highway and get to a place where the tire can be inspected, replaced, or possibly returned to service. The distance that can safely be travelled following an air loss incident will depend upon the conditions under which the vehicle is operating, the degree of air loss, the extent of the damage causing the air loss, the ambient temperature, the load, and the operating speed of the vehicle. The fewer kilometers you travel after an air loss incident, the greater the likelihood that the tire can be re-inflated (or, if punctured, repaired) and returned to service.

#### WHAT IS COVERED AND FOR HOW LONG

#### **Passenger and Light Truck Tires**

Michelin® Passenger and Light Truck tires, used in normal service on the vehicle on which they were originally fitted and in accordance with the maintenance recommendations and safety warnings contained in this owner's manual, are covered by this warranty against defects in workmanship and materials for the life of the original usable tread, or 6 years from the date of purchase, whichever occurs first. At that time, all warranties, express or implied, expire. The usable

tread is the original tread down to the level of the tread wear indicators - 2/32nds of an inch (1.6 mm) of tread remaining. Date of purchase is documented by new vehicle registration or tire sales invoice. If no proof of purchase is available, coverage will be based on the date of manufacture.

Replacement will be made in accordance with the terms and conditions described under "How Replacement Charges are Calculated". Note: your vehicle manufacturer may provide additional tire warranty coverage over and above what is provided by Michelin\*. Consult your vehicle owner's manual for further information.

NOTE: Some Michelin® Self-Supporting Zero Pressure (ZP) tires can only be mounted on special SH-M (Symmetric Hump - Modified) wheels. These tires bear the special SH-M designation, molded into the sidewall of the tire, next to the ZP designation. DO NOT MOUNT A TIRE WITH THE SH-M DESIGNATION ON THE SIDEWALL ON A STANDARD WHEEL. DOING SO VOIDS THIS LIMITED WARRANTY AND COULD CAUSE THE TIRE TO BECOME UNSERVICEABLE AT LOW OR ZERO PRESSURE, RESULTING IN SERIOUS PERSONAL INJURY OR DEATH.

### Tread wear – mileage warranty coverage for MICHELIN® passenger and light truck tires:

MICHELIN® passenger and light truck tires are covered by a manufacturer's

limited warranty for tread wear. Also please note that mileage warranties apply to tires that come as original equipment on new vehicles purchased on or after September 1, 2011 (model year 2011 and later). For the mileage warranty associated with a specific tire line, please see your Michelin tire retailer or visit us at www.michelinman.ca/promise. Some vehicles come from the vehicle manufacturer with "split fitments" - meaning different size tires on the front and rear axles. Because these tires cannot be rotated as recommended by Michelin, the mileage warranty on each rear tire will cover half the number of kilometers as the standard mileage warranty for that particular tire design. MICHELIN® Self-Supporting Zero Pressure (ZP) tires have the same mileage warranty as the standard tire line of which they are a part, up to but not exceeding 50,000 kilometers. DOT-approved competition tires (e.g., MICHELIN® Pilot® Sport Cup tires) are excluded from any mileage warranty. MICHELIN® winter tires must be used during winter months only, defined as a period beginning on or after September 1 of a given year and ending no later than April 30 of the following year. MICHELIN® winter tires require documentation of the timing of the installation and removal of the tires each winter to maintain coverage under the limited warranty for tread wear.

#### An important reminder:

No tire manufacturer can unconditionally guarantee you a certain number of kilometers from a given tire. Driving habits, driving conditions, road conditions, and vehicle maintenance all play a part in the tread life of a tire. If a tire does

not reach the warranted mileage, and the owner of the tires has complied with the terms and conditions of the warranty, Michelin will replace the tires as described under "How Replacement Charges are calculated".

#### **Temporary Spares**

Michelin® temporary spare tires are covered by this warranty for 6 years from the date of purchase or until the first 2/32nds of an inch (1.6 mm) of the original tread is worn off. Date of purchase is documented by new vehicle registration or tire sales invoice. If no proof of purchase is available, coverage will be based on date of manufacture. At that time, all warranties, express or implied, expire.

#### WHAT IS NOT COVERED

#### Tires which become unserviceable due to:

- Road hazard injury (e.g., a cut, snag, bruise, impact damage or puncture);
- Incorrect mounting of the tire, tire/wheel imbalance or improper repair;
- Misapplication, improper maintenance, racing, underinflation, overinflation or other abuse;
- Uneven or rapid wear which is caused by mechanical irregularity in the vehicle such as wheel misalignment, (a measured tread difference of 2/32nds of an inch (1.6 mm) or more across the tread on the same tire);
- Accident, fire, chemical corrosion, tire alteration, or vandalism;

- Use in commercial applications for treadwear;
- Flat spotting caused by improper storage or brakelock;
- The addition of liquid, solid or gaseous materials other than air, nitrogen or carbon dioxide (for example, waterbase sealers or balancing substances);
- · Ozone or weather checking;
- Use of MICHELIN Self-Supporting Zero Pressure (ZP) tires without a properly operating low air pressure warning system.

### HOW REPLACEMENT CHARGES ARE CALCULATED Passenger and Light Truck Tires

A tire which becomes unserviceable due to a condition covered by this workmanship and materials limited warranty will be replaced with a comparable new Michelin tire, free of charge, when 2/32nds of an inch (1.6 mm) or less of the original tread is worn, (or 25% or less, whichever is more beneficial to the user) and within 12 months of the date of purchase. Mounting and balancing of the tire is included. **You pay the cost of any other service charges and applicable taxes.** 

When more than 2/32nds of an inch (1.6 mm) of original tread has been worn (or more than 25%, whichever is more beneficial to the user) or after 12 months from the date of purchase, you must pay the cost of a comparable new Michelin® passenger or light truck replacement tire on a *pro rata* basis. The retailer will determine the charge by multiplying the percentage of the original

usable tread worn, by the price in the current Michelin® Base Price List. This list is based on a predetermined price intended to fairly represent the actual selling price of the tire. You pay the cost of mounting, balancing and any other service charges and applicable taxes.

#### Tread wear

A tire meeting the conditions for *pro rata* replacement, which wears evenly across the tread, down to the tread wear indicators (2/32nds of an inch tread remaining) within six years of the date of purchase, and before delivering the warranted kilometers of service, will be replaced with a comparable new MICHELIN® tire based on mileage received. The participating Michelin tire retailer will determine the charge by multiplying the percent of mileage received by the price of the tire in the current MICHELIN® Base Price List. This list is based on a predetermined price intended to fairly represent the actual selling price of the tire. **You pay the cost of mounting, balancing and any other dealer services and applicable taxes or fees.** 

Tires which wear out evenly before delivering the warranted mileage will be replaced on a *pro rata* basis only if:

1) You are the original purchaser of the tires, you own the vehicle on which they were originally installed, and the tires have been used only on that vehicle; 2) The tires have been rotated and inspected by a participating Michelin tire retailer every 12,000 kilometers, and the attached Mounting and Rotation Service Record has been fully completed and signed;

- 3) The completed Service Record form, Original Owner/Tire Installation Information form, and the Original Invoice are presented to a participating Michelin tire retailer at the time of adjustment claim; and
- 4) The tires have not become unserviceable due to a condition listed under WHAT IS NOT COVERED.

#### **Temporary Spare Tires**

A Michelin® Temporary Spare used in temporary service on the vehicle in which it was originally installed, which becomes unserviceable due to a condition covered by this warranty, will be replaced with a comparable new Michelin® Temporary Spare tire, free of charge, when it is worn less than 1/32nd of an inch (0.8 mm). The cost of mounting and balancing is included. You pay the cost of any other service charge and applicable taxes.

When 1/32nd of an inch (0.8 mm) of the original tread has been worn but less than 2/32nds of an inch (1.6 mm) the tire will be replaced at 50% according to current actual selling price at the adjustment location. You pay the cost of mounting, balancing, and any other service charges and applicable taxes.

#### WHAT YOU MUST DO WHEN MAKING A CLAIM

When making a claim under the terms of this limited warranty, you must present your tire(s) to a participating Michelin® retailer. The vehicle on which the tires were used must be available for inspection.

Michelin® tire retailers are listed in the yellow pages under "Tire Dealers-Retail". Personal identification (i.e. Driver's License, etc.) and vehicle registration may be required.

You pay service charges for normal vehicle and tire maintenance.

#### **CONDITIONS AND EXCLUSIONS**

This limited warranty does not provide compensation for loss of time, loss of use of vehicle, inconvenience or incidental or consequential damages. Tires presented for claim remain the property of the consumer and Michelin® accepts no responsibility for loss or damage to tires which are in the custody or control of a Michelin® tire retailer for the purpose of inspection for warranty adjustment.

### In the event of a disputed claim, the consumer must make the tire available for further inspection.

Tires accepted for claim become the property of Michelin® North America, Inc.

No Michelin® representative, employee or retailer has the authority to make or imply any representation, promise or agreement, which in any way varies from the terms of this warranty.

This warranty applies only in the United States and Canada.

#### **SAFETY MAINTENANCE INFORMATION**

Read your Tire Owner's Manual, the information on the sidewall of your tires, your vehicle owner's manual and vehicle tire information placard for essential safety and maintenance information.

When service is required:

- 1 Contact a participating Michelin® tire retailer listed in your local yellow pages.
- 2 If additional assistance in locating a participating Michelin® tire retailer is required, please call the phone number listed for your area on page 22.

## **△ SAFETY WARNING**

DISREGARDING ANY OF THE SAFETY PRECAUTIONS AND INSTRUCTIONS CONTAINED IN THIS MANUAL MAY RESULT IN TIRE FAILURE OR EXPLOSION CAUSING SERIOUS PERSONAL INJURY OR DEATH.

### TIRE DISABLEMENT SAFETY WARNING

Any tire may fail as a result of an improperly repaired puncture, impact damage, improper inflation, overloading or other conditions resulting from use or misuse. Tire failures, such as a rapid air loss or a tread and belt detachment, may increase risk of injury or death and/or property damage. To reduce the risk of a tire failure, Michelin recommends you thoroughly read and follow the recommendations in this Michelin Limited Warranty/Owner's Manual, vehicle owner's manual, tire placard information, and tire sidewall information regarding safety warnings, proper tire use and maintenance.

#### CONTROLLABILITY

#### **CONTROLLING A VEHICLE WHEN A TIRE FAILURE OCCURS**

If a tire failure occurs, you may hear a loud noise, feel a vibration, and/or the vehicle may pull toward the side of the failed tire. If possible, step on the accelerator momentarily to maintain forward momentum and ensure vehicle control. It is important that you DO NOT BRAKE OR ABRUPTLY TURN THE STEERING WHEEL. Slowly remove your foot from the accelerator and hold the steering wheel firmly while steering to remain in your lane. Once the vehicle has slowed and is fully under control, apply the brakes gently; safely pull over to the shoulder and come to a stop. Inspect the tires. If one or more tires look flat or low, show detachment or other damage, remove tire assembly and replace it with a properly inflated spare. Bumps or bulges may indicate detachment within the tire body and require inspection by a qualified tire technician.

### DRIVING ON ANY TIRE THAT DOES NOT HAVE THE CORRECT INFLATION PRESSURE IS DANGEROUS

Any underinflated tire builds up excessive heat that may result in sudden tire destruction. If tires are supplied as original equipment, refer to the tire decal on the vehicle (check vehicle and/or vehicle owner's manual for decal location) for the recommended operating pressures. For replacement tires, the correct inflation pressure will be provided by your tire retailer; if not, refer to the vehicle decal.

These inflation pressures must be maintained as a minimum. However, do not exceed the maximum pressure rating indicated on the tire sidewall.

### SELF-SUPPORTING ZERO PRESSURE (ZP) TIRES AT LOW OR ZERO AIR PRESSURE

The handling characteristics of a vehicle with a deflated Self-Supporting Zero Pressure (ZP) tire (whether front or rear) are not the same as those of a vehicle with normally inflated tires. Avoid high speeds and hard cornering whenever a low pressure warning is activated.

Even a Michelin® Self-Supporting Zero Pressure (ZP) tire can build up excessive heat when run underinflated for an extended period of time. The length of time and distance a Self-Supporting Zero Pressure (ZP) tire will perform at low or zero air pressure will depend upon the severity of the event causing air loss, ambient temperature, speed at which the tire is operated, and the conditions under which the tire is operated (i.e. hard braking, cornering and

other sharp maneuvers will greatly reduce the length of time the tire can perform at low or zero air pressure.) Continuous use of an underinflated tire may lead to sudden tire destruction. If a tire at low or zero pressure begins to vibrate or cause difficulty in vehicle handling, remove the tire immediately and replace with the temporary spare. If Michelin® Self-Supporting Zero Pressure (ZP) tires are supplied as original equipment, refer to the vehicle owner's manual for complete details on the low air pressure warning system designed to alert you in the event of a low pressure condition.

NOTE: MICHELIN® SELF-SUPPORTING ZERO PRESSURE (ZP) TIRES ARE TO BE USED ONLY IN CONJUNCTION WITH AN OPERATIONAL, MICHELIN® APPROVED, LOW AIR PRESSURE WARNING SYSTEM. Otherwise, all provisions of the limited warranty are void. For a list of approved systems, see your participating Michelin® retailer, or call **1-800-847-3435** in the United States or **1-888-871-4444** in Canada.

NOTE: Some MICHELIN® Self-Supporting Zero Pressure (ZP) tires can only be mounted on special SH-M (Symmetric Hump - Modified) wheels. These tires bear the special SH-M designation, molded into the sidewall of the tire, next to the ZP designation. DO NOT MOUNT A TIRE WITH THE SH-M DESIGNATION ON THE SIDEWALL ON A STANDARD WHEEL. DOING SO VOIDS THIS LIMITED WARRANTY AND COULD CAUSE THE TIRE TO BECOME UNSERVICEABLE AT LOW OR ZERO PRESSURE, RESULTING IN SERIOUS PERSONAL INJURY OR DEATH.

For all types of tires, consult your vehicle tire placard or owner's manual for recommended operating pressures. If the tires are purchased as replacement tires, operating instructions for the low pressure warning system will be provided by the manufacturer of that system. Recommended operating pressures will be provided by a participating Michelin® retailer for self supporting ZP tires. These inflation pressures must be maintained as a minimum. However, do not exceed the maximum pressure rating indicated on the tire sidewall.

# CHECK THE COLD INFLATION PRESSURES IN ALL YOUR TIRES, INCLUDING THE SPARE, AT LEAST ONCE EACH MONTH

Failure to maintain correct inflation may result in improper vehicle handling and may cause rapid and irregular tire wear, sudden tire destruction, loss of vehicle control and serious personal injury. Therefore, inflation pressures should be checked at least once each month and always prior to long distance trips. This applies to all tires, including sealant types, and Self-Supporting Zero Pressure (ZP) tires which are as susceptible to losing air pressure as any other type of tire if not properly maintained.

#### UNDERINFLATION

It is impossible to determine whether tires are properly inflated by simply looking at them. It is almost impossible to "feel or hear" when a tire is being run underinflated or nearly flat. Tires must be checked monthly with a tire pressure gauge.

Pressures should be checked when tires are cold, in other words, before they have been driven on. Driving, even for a short distance, causes tires to heat up and air pressure to increase.

#### Checking pressure when tires are hot:

If pressures are checked after tires have been driven for more than three minutes or more than two kilometers the tires become hot and the pressures will increase by approximately 4 psi. Therefore when the tire pressure is adjusted under these conditions, it should be increased to a gauge reading of 4 psi greater than the recommended cold inflation pressure.

#### For Example Only:

Gauge reading of hot tire:	. 32 psi	(220 kPa)
If recommended cold inflation pressure is:	. 30 psi	(205 kPa)
Desired gauge reading of hot tire $30 + 4 \text{ psi} =$	. 34 psi	(205 + 30 = 235  kPa)
Therefore: add 2 psi	. (15 kPa	)

Check cold pressure as soon as possible, preferably within 24 hours. "Bleeding" air from hot tires could result in underinflation. Use an accurate tire gauge to check pressures. Never allow children to inflate or deflate tires.

# FOR SELF-SUPPORTING ZERO PRESSURE (ZP) TIRES CHECK INFLATION PRESSURES AS SOON AS POSSIBLE FOLLOWING A LOW PRESSURE WARNING

Low pressure warning systems are designed to alert the driver to a low air pressure situation in at least one tire on the vehicle. While your ZP tires are designed to provide continued mobility in the event of an air loss, the sooner you respond to a warning and take corrective action, the greater the likelihood that the tire can be returned to service.

Always visually inspect your Michelin® self-supporting tires and use a pressure gauge to check the air pressure in all 4 tires following any low pressure warning. (Unless advised to do otherwise by the manufacturer of your low pressure warning system.)

If the tire pressure is at or below 18 PSI, proceed to the nearest participating Michelin° retailer (or a representative of your vehicle manufacturer if advised to do so in your vehicle owner's manual) and have the tire demounted and thoroughly inspected for possible internal damage.

If you are unable to see any damage to the tire, and the tire pressure is more than 18 PSI, reinflate your tire to the proper air pressure. (See instructions for checking pressures when tires are hot.) When tires have cooled, check air pressure again. If any tire has lost more than 5 PSI from the previous pressure check, have the tire inspected at once by a participating Michelin° tire retailer (or representative of your vehicle manufacturer if your vehicle owner's manual so advises.) Failure to do so may cause irreparable damage to the tire and result in sudden tire destruction and personal injury.

#### **TIRE PRESSURE MONITORING SYSTEMS (TPMS):**

Your vehicle may be equipped with a Tire Pressure Monitoring System (TPMS) that is designed to monitor the pressure of tires mounted on your vehicle and sends a signal to the driver if a tire pressure falls below a predetermined level. A TPMS should not replace monthly manual pressure checks for all four (4) tires and the spare. We recommend that you manually monitor and check tire pressure inflation with a pressure gauge.

Your tires should have the recommended pressure listed by your vehicle's manufacturer. This information can be found in the vehicle owner's manual and often on a placard located in the vehicle's door jamb, inside the fuel hatch, or on the glove compartment door. If you have a plus size fitment that requires a higher inflation pressure, your tire pressure monitoring system will require re-

calibration to the new inflation pressure. Refer to your tire dealer/installer of plus size tires for proper inflation pressure.

We recommend checking air pressure once each month, and before a long trip. Whether you have a full-sized or mini-spare, make sure that it is properly inflated as well. If the TPMS generates improper monitoring or signals we recommend that you consult your owner's manual provided with your vehicle and follow-up with your vehicle's manufacturer.

#### TIRE SPINNING

Do not spin wheels in excess of 35 mph (55 km/h) as indicated on the speedometer. Excessive speed in a free-running, unloaded tire can cause it to "explode" from centrifugal force. The energy released by such an explosion is sufficient to cause serious physical injury or death. Never allow anyone to stand near or behind the spinning tire.

When in mud, sand, snow, ice or other slippery conditions, do not engage in excessive wheel spin. Accelerating the motor excessively, particularly with automatic transmission vehicles, may cause a drive tire that has lost traction to spin beyond its speed capability. This is also true when balancing a drive tire/wheel assembly on the vehicle using the vehicle engine to spin the tire/wheel assembly.

#### **HIGH SPEED DRIVING CAN BE DANGEROUS**

**Correct inflation pressure is especially important.** However, at high speeds, even with the correct inflation pressure, a road hazard, for example is more difficult to avoid and if contact is made, has a greater chance of causing tire damage than at a lower speed. Moreover, driving at high speed reduces the reaction time available to avoid accidents and bring your vehicle to a safe stop.

If you see any damage to a tire or wheel, replace it with the spare at once and visit a participating Michelin Tire Retailer.

Exceeding the maximum speeds shown on the following page for each type of Michelin® tire will cause the tire to build up excessive heat which can cause tire damage that could result in sudden tire destruction and rapid air loss. Failure to control a vehicle when one or more tires experience a sudden air loss can lead to an accident.

In any case, you should not exceed reasonable speeds as indicated by the legal limits and driving conditions.

#### **SPEED RATINGS**

Speed Symbols are shown on the sidewall of some Michelin® tires. The following table shows the maximum speed corresponding to the symbol.

\*Some V (or VR) rated tires may have a speed capacity greater than 149 mph (240 km/h). Consult your participating Michelin® tire retailer for maximum speed rating if your vehicle capability exceeds this speed.

\*\*Z (or ZR) rated tires are designed to use on cars with maximum speed capabilities in excess of 149 mph (240 km/h).

SPEED	Maximu	]	
Ratings	Km/hr mph		1
М	130	81	]
N	140	87	
Р	150	93	
Q	160	100	
R	170	106	]
S	180	112	
Т	190	118	
Н	210	130	
V	240	149	
V*	240+	149+	
W	270	168	ZR**
Υ	300	186	] ]
	300+	186+	🔻

(W and Y speed ratings are sub-categories of Z).

Consult your Michelin® tire retailer for maximum speed capabilities.

Although a tire may be speed-rated, we do not endorse the operation of any vehicle in an unsafe or unlawful manner. Speed ratings are based on laboratory tests which relate to performance on the road, but are not applicable if tires are

underinflated, overloaded, worn out, damaged, altered, improperly repaired, or retreaded. Furthermore, a tire's speed rating does not imply that vehicles can be safely driven at the maximum speed for which the tire is rated, particularly under adverse road and weather conditions or if the vehicle has unusual characteristics.

Michelin® highway passenger tires that do not have a speed symbol on the sidewall have a maximum speed rating of 105 mph (170 kph). Light truck highway tires that do not have a speed symbol on the sidewall of the tire have a maximum speed rating of 87 mph (140 kph).

The speed and other ratings of retreaded tires are assigned by the retreader and replace the original manufacturer's ratings.

IMPORTANT: In order to maintain the speed capability of the vehicle, replacement tires must have speed ratings equal to or higher than those fitted as original equipment (as indicated on the vehicle tire placard or owner's manual). If tires with lower speed ratings are fitted, the vehicle's handling may be affected and the speed capability of the vehicle will be lowered to the maximum speed capability of the replacement tires as indicated in the above table.

**REMEMBER...**High speed driving can be dangerous and may damage your tires.

**AND...**When driving at highway speeds, correct inflation pressure is especially important.

#### **SPEED RATINGS (CONT'D)**

#### **WINTER TIRES**

Michelin® winter tires that do not have a speed symbol on the sidewall or tires with Q symbols have a speed rating of 100 mph (160 km/h). Winter tires with a speed symbol have a maximum speed rating in accordance with the symbol.

### INSPECT YOUR TIRES, DO NOT DRIVE ON A DAMAGED TIRE OR WHEEL

#### **HAZARDS**

Objects in the road, such as potholes, glass, metal, rocks, wood, debris and the like, can damage a tire and should be safely avoided. Unavoidable contact with such objects should prompt a thorough tire inspection.

Anytime you see any damage to your tires or wheels, replace with the spare at once and immediately visit any Michelin® tire retailer.

#### IMPACT DAMAGE

A tire impacted by a road hazard (curb, pothole, debris) may be damaged but not have visible signs of damage on its surface. A tire damaged by an impact may sustain a sudden failure a day, week, or even months later. You may not recall hitting an object that damaged or injured your tires. Air loss, unusual tire wear, localized wear or vibrations can also be signs of internal tire damage.

If you suspect any damage to your tire or wheel from an impact with a curb, pothole, debris on the road or any other road hazard, or if you feel or hear any unusual vibration, replace with a properly inflated spare at once and immediately visit any qualified tire technician.

#### INSPECTION

When inspecting your tires, including the spare, check the air pressures. If the pressure check indicates that one of your tires has lost pressure of two pounds or more, look for signs of penetration, valve leakage or wheel damage that may account for the air loss.

Always look for bulges, cracks, cuts, penetrations and abnormal tire wear, particularly on the edges of the tire tread, which may be caused by misalignment or underinflation. If any such damage is found, the tire must be inspected by any Michelin® tire retailer at once. Use of a damaged tire could result in tire destruction.

All tires will wear out faster when subjected to high speeds as well as hard cornering, rapid starts, sudden stops, frequent driving on roads which are in poor condition, and off road use. Roads with holes and rocks or other objects can damage tires and cause misalignment of your vehicle. When driving on such roads, drive carefully and slowly, and before driving again at normal or highway speeds, examine your tires for any damage, such as cuts, bulges, penetrations, unusual wear patterns, etc.

14

#### **WEAR BARS**

Michelin® tires contain "Wear-Bars" in the grooves of the tire tread which show up when only 2/32nds of an inch (1.6 mm) of tread is remaining. At this stage, your tires must be replaced. Tires worn beyond this stage are extremely dangerous.

### DO NOT OVERLOAD - DRIVING ON ANY OVERLOADED TIRE IS DANGEROUS

The maximum load rating of your tires is molded on the tire sidewall. Do not exceed this rating. Follow the loading instructions of the manufacturer of your vehicle and this will ensure that your tires are not overloaded. Tires which are loaded beyond their maximum allowable loads for the particular application will build up excessive heat that may result in sudden tire destruction.

Do not exceed the gross axle weight rating for any axle on your vehicle.

#### TRAILER TOWING

If you anticipate towing a trailer, you should visit any Michelin® retailer for advice concerning the correct size tire and pressures. Tire size and pressures will depend upon the type and size of trailer and hitch utilized, but in no case must the maximum cold inflation pressure or tire load rating be exceeded. Check the tire decal and the owner's manual supplied by the manufacturer of your vehicle for further recommendations on trailer towing.

#### Self-Supporting Zero Pressure (ZP) Tires and Trailer Towing

Operation of ZP tires at low or zero air pressure with a trailer in tow, is dangerous and is not recommended. If the low pressure warning indicator is activated when a trailer is in tow, stop, disconnect the trailer, and do not continue to tow the trailer until the tire has been repaired and re-inflated to the proper air pressure. If the tire cannot be repaired, it must be replaced with a new full size ZP tire, and inflated to the proper air pressure, before the trailer can be safely towed again.

# WHEEL ALIGNMENT AND BALANCING ARE IMPORTANT FOR SAFETY AND MAXIMUM MILEAGE FROM YOUR TIRES

### CHECK HOW YOUR TIRES ARE WEARING AT LEAST ONCE EACH MONTH

If your tires are wearing unevenly, such as the inside shoulder of the tire wearing faster than the rest of the tread, or if you detect excessive vibration, your vehicle may be out of alignment or balance. These conditions not only shorten the life of your tires but adversely affect the handling characteristics of your vehicle, which could be dangerous. If you detect irregular wear or vibration, have your alignment and balance checked immediately. Tires which have been run underinflated will show more wear on the shoulders than in the center of the tread.

#### **TIRE MIXING**

Michelin® tires are radial tires and for best performance it is recommended that the same size and type of tire be used on all four wheel positions. Before mixing tires of different types in any configuration on any vehicle, be sure to check the vehicle manufacturer's Owner's Manual for its recommendations.

It is especially important to check the vehicle manufacturer's owner's manual when mixing, matching or replacing tires on 4-wheel drive vehicles, as this may require special precautions.

MICHELIN® DOES NOT RECOMMEND MIXING SELF-SUPPORTING ZERO PRESSURE (ZP) TIRES WITH NON-ZP TIRES OTHER THAN THE TEMPORARY USE OF THE SPARE TIRE.

#### WINTER DRIVING

Tires which meet the Rubber Manufacturers Association (RMA) definition of snow tires are marked M/S, M+S, or M&S. On such tires, this designation is molded into the sidewall. Tires without this notation are not recommended for winter driving.

While All-Season tires are designed to provide reliable performance in some winter conditions, the use of four (4) winter tires is recommended for optimum performance. Tires designated for use in severe winter conditions are marked on at least one

sidewall with the letter "M" and "S" plus a pictograph of a mountain with a snowflake on it.

#### TIRE ROTATION AND REPLACEMENT

To obtain maximum tire wear, it may be necessary to rotate your tires. Refer to your vehicle owner's manual for instructions on tire rotation. If you do not have an owner's manual for your vehicle, Michelin® recommends rotating your tires every 6,000 to 8,000 miles (10,000 to 12,000 km).

Monthly inspection for tire wear is recommended. Your tires should be rotated at the first sign of irregular wear, even if it occurs before 6,000 miles (10,000 km). This is true for all vehicles.

When rotating tires with a directional tread pattern, observe the arrows molded on the sidewall which show the direction the tire should turn. Care must be taken to maintain the proper turning direction.

Some Tire Pressure Monitoring Systems (TPMS) may not recognize that a tire has been moved to a different position on your vehicle. Make certain that your TPMS system is reset, if necessary, so as to correctly identify the location of each tire on your vehicle. Refer to your vehicle owner's manual or your vehicle dealer.

Determine whether rotated tires require tire inflation adjustment as front and rear position tire pressure may vary according to the vehicle manufacturer's specification due to the actual load on that wheel position.

Some vehicles may have different sized tires mounted on the front and rear axles, and these different sized tires have rotation restrictions. Always check the vehicle owner's manual for the proper rotation recommendations.

#### **FULL-SIZE SPARE**

Full-size spare tires (not temporary spares) of the same size and construction should be used in a five (5) tire rotation. Always check the inflation pressure of the full-size spare immediately before incorporating it into rotation. Follow the vehicle manufacturer's recommended pattern for rotation, or if not available, see a qualified tire technician.

#### **REPLACEMENT OF TWO (2) TIRES**

It is recommended that all four (4) tires are replaced at the same time. However, when only two tires are replaced, the new ones should be put on the rear. The new tires, with deeper tread, may provide better grip and water evacuation in wet driving conditions.

### CUSTOMIZATION OF TIRES, WHEELS, OR SUSPENSION ON SUVS AND LIGHT TRUCKS

Due to their size, weight and higher center of gravity, vehicles such as SUVs and light trucks <u>do not</u> have the same handling characteristics as automobiles. Because of these differing characteristics, failure to operate your SUV/truck in a proper and safe manner can increase the likelihood of vehicle rollover. Modifications to your SUV/truck tire size, tire type, wheels or suspension can change its handling characteristics and further increase

the likelihood of vehicle rollover. Whether your SUV/truck has the original equipment configuration for tires, wheels and suspension or whether any of these items have been modified, always drive safely, avoid sudden, sharp turns or lane changes and obey all traffic laws. Failure to do so may result in loss of vehicle control leading to an accident and serious injury or death.

#### **TIRE ALTERATIONS**

Do not make or allow to be made any alterations on your tires. Alterations may prevent proper performance, leading to tire damage which can result in an accident. Tires which become unserviceable due to alterations such as truing, whitewall inlays, addition of balancing or sealant liquids, or the use of tire dressing containing petroleum distillates are excluded from warranty coverage.

### REPAIRS - WHEREVER POSSIBLE, SEE YOUR MICHELIN® TIRE RETAILER AT ONCE

If any Michelin® tire sustains a puncture, have the tire demounted and thoroughly inspected by any Michelin® tire retailer for possible damage that may have occurred.

A tread area puncture in any Michelin® passenger or light truck tire can be repaired provided that the puncture hole is not more than 1/4" in diameter, and the tire has not been damaged further by the puncturing

object or by running underinflated. Tire punctures consistent with these guidelines can be repaired by following the Rubber Manufacturers Association (RMA) recommended repair procedures.

#### **TIRE REPAIRS**

Repairs of all tires must be of the combined plug and inside patch type. **Plug only repairs are improper.** A tire should be removed from the rim and inspected prior to repair. Any tire repair done without removing the tire from the rim is improper. An improperly repaired tire will cause further damage to the tire by either leaking air or allowing air, moisture and contaminants to enter the structure of the tire. An improperly repaired tire can fail suddenly or at a later date.

Never repair a tire with less than 2/32nds of an inch tread remaining. At this tread depth, the tire is worn out and must be replaced.

#### **STORAGE**

Tires contain waxes and emollients to protect their outer surfaces from ozone and weather checking. As the tire rolls and flexes, the waxes and emollients continually migrate to the surface, replenishing this protection throughout the normal use of the tire. Consequently, when tires sit outdoors, unused for long periods of time (a month or more) their surfaces become dry and more susceptible to ozone and weather checking and the casing becomes susceptible to flat spotting. For this reason, tires should always be stored in a cool, dry, clean, indoor environment. If storage is

for one month or more, eliminate the weight from the tires by raising the vehicle or by removing the tires from the vehicle. Failure to store tires in accordance with these instructions could result in damage to your tires or premature aging of the tires and sudden tire failure. When tires are stored, be sure they are placed away from sources of heat and ozone such as hot pipes and electric generators. Be sure that surfaces on which tires are stored are clean and free from grease, gasoline or other substances which could deteriorate the rubber. (Tires exposed to these materials during storage or driving could be subject to sudden failure.)

#### **FOLLOW THESE MOUNTING RECOMMENDATIONS**

Tire changing can be dangerous and must be done by professionally trained persons using proper tools and procedures as specified by the Rubber Manufacturers Association (RMA).

Your tires should be mounted on wheels of correct size and type and which are in good, clean condition. Wheels that are bent, chipped, rusted (steel wheels) or corroded (alloy wheels) may cause tire damage. The inside of the tire must be free from foreign material. Have your retailer check the wheels before mounting new tires. Mismatched tires and rims can explode during mounting. Also, mismatched tires and rims can result in dangerous tire failure on the road. If a tire is mounted by error on the wrong-sized rim, do not remount it on the proper rim - scrap it. It may have been damaged internally (which is not externally visible) by having been dangerously stretched and could fail on the highway.

Old valves may leak. When new tubeless tires are mounted, have new valves of the correct type installed. Tubeless tires must only be mounted on wheels designed for tubeless tires i.e., wheels which have safety humps or ledges.

It is recommended that you have your tires and wheels balanced. Tires and wheels which are not balanced may cause steering difficulties, a bumpy ride, and irregular tire wear.

Be sure that all your valves have suitable valve caps. The valve cap is the primary seal against air loss.

#### SPECIAL MOUNTING INSTRUCTIONS FOR SELF-SUPPORTING ZERO PRESSURE (ZP) TIRES

ZP tires can be more difficult to mount than conventional tires. They should be mounted and demounted only by a properly trained tire professional. ZP tires can generate a tremendous amount of heat when run at low or zero pressure. ALWAYS ALLOW A ZP TIRE TO COOL BEFORE ATTEMPTING TO HANDLE IT. FAILURE TO DO SO COULD RESULT IN INJURY. Michelin® ZP tires are tubeless tires designed to operate in emergency conditions at low or zero air pressure.

### MICHELIN® SELF-SUPPORTING ZERO PRESSURE (ZP) TIRES AND SPECIAL SH-M (SYMMETRIC HUMP-MODIFIED) WHEELS

Some Michelin® ZP tires can only perform with zero pressure capability

when mounted on special SH-M wheels. These tires bear the SH-M designation immediately following the ZP designation on the sidewall of the tire. DO NOT MOUNT ZP TIRES WITH THE SH-M DESIGNATION ON STANDARD WHEELS. IN SUCH APPLICATIONS, THE TIRES MAY BECOME UNSERVICEABLE AT LOW OR ZERO PRESSURE, CAUSING SERIOUS PERSONAL INJURY OR DEATH.

#### SPECIAL MOUNTING INSTRUCTIONS FOR TRX TIRES

The TRX tire is a tubeless tire that must only be mounted on special wheels (TR or JM type) with millimetric seat diameter. If TRX tires are mounted on standard wheels, they will not retain air due to an air escape feature designed into the bead area of these tires.

Do not try to override this feature by mounting TRX tires with tubes. The Michelin® TRX must be used on all wheel positions.

#### **TEMPORARY SPARE TIRES**

When using any temporary spare tire, be sure to follow the vehicle manufacturer's instructions.

#### **READING THE DOT**

DOT XXXX XXXX XXX (prior to August 2000) DOT XXXX XXXX XXX ◀ (1990-1999)

DOT XXXX XXXX XXXX (after July 2000)

#### THE DOT

The "DOT" symbol certifies tire manufacturer's compliance with U.S. Department of Transportation and Transport Canada tire safety standards. Next to the symbol is the tire identification or "serial number". The first two characters identify the plant where the tire was manufactured. The next two characters reflect the tire size. The following one to four digits may be used at the tire manufacturer's option as a descriptive code. The last three characters are numbers identifying the week and year of manufacture. (Example: "O25" means second week of the year of decade, eg.: 1995, 1985, etc.) For the 1990-1999 decade Michelin brand tires are marked with a triangle pointing to the last three numeric characters. Tires produced after July 2000 have an additional digit to identify a given decade. For example, 2800 means the tire was produced during the 28th week of 2000; 0201 during the 2nd week of 2001. If the last digits of your DOT number contain three numeric characters that are not marked with a triangle, consult a qualified tire technician to determine the year of manufacture.

### SERVICE LIFE FOR PASSENGER CAR AND LIGHT TRUCK TIRES INCLUDING SPARE TIRES

The following recommendation applies to passenger car and light truck tires. Tires are composed of various types of material and rubber compounds, having performance properties essential to the proper functioning of the tire itself. These component properties evolve over time. For each tire, this evolution depends upon many factors such as weather, storage conditions, and conditions of use (load, speed, inflation pressure, maintenance etc.) to which the tire is subjected throughout its life. This service-related evolution varies widely so that accurately predicting the serviceable life of any specific tire in advance is not possible.

That is why, in addition to regular inspections and inflation pressure maintenance by consumers, it is recommended to have passenger car and light truck tires, including spare tires, inspected regularly by a qualified tire specialist, such as a tire dealer, who will assess the tire's suitability for continued service. Tires which have been in use for 5 years or more should continue to be inspected by a specialist at least annually.

Consumers are strongly encouraged to be aware not only of their tires' visual condition and inflation pressure but also of any change in dynamic performance such as increased air loss, noise or vibration, which could be an indication that the tires need to be removed from service to prevent tire failure.

It is impossible to predict when tires should be replaced based on their calendar age alone. However the older a tire the greater the chance that it will need to be replaced due to the service-related evolution or other conditions found upon inspection or detected during use.

While most tires will need replacement before they achieve 10 years, it is recommended that any tires in service 10 years or more from the date of manufacture, including spare tires, be replaced with new tires as a simple precaution even if such tires appear serviceable and even if they have not reached the legal wear limit.

For tires that were on an original equipment vehicle (i.e., acquired by the consumer on a new vehicle), follow the vehicle manufacturer's tire replacement recommendations, when specified (but not to exceed 10 years).

The date when a tire was manufactured is located on the sidewall of each tire. Consumers should locate the Department of Transportation or DOT code on the tire which begins with DOT and ends with the week and year of manufacture. For example, a DOT code ending with "2204" indicates a tire made in the 22nd week (May) of 2004.

### REMEMBER... TO AVOID DAMAGE TO YOUR TIRES AND POSSIBLE ACCIDENT:

- CHECK TIRE PRESSURE AT LEAST ONCE EACH MONTH WHEN TIRES ARE COLD AND BEFORE LONG TRIPS;
- DO NOT UNDERINFLATE/OVERINFLATE;
- DO NOT OVERLOAD;
- DRIVE AT MODERATE SPEEDS, OBSERVE LEGAL LIMITS;
- AVOID DRIVING OVER POTHOLES, OBSTACLES, CURBS OR EDGES OF PAVEMENT:
- AVOID EXCESSIVE WHEEL SPINNING;
- IF YOU SEE ANY DAMAGE TO A TIRE, REPLACE WITH THE SPARE AND VISIT ANY MICHELIN® RETAILER AT ONCE;
- IF YOU HAVE ANY QUESTIONS. CONTACT YOUR MICHELIN® RETAILER.

FAILURE TO OBSERVE ANY OF THE RECOMMENDED PRECAUTIONS CONTAINED IN THIS OWNER'S MANUAL CAN LEAD TO ERRATIC VEHICLE BEHAVIOR AND/OR TIRE DAMAGE, POSSIBLY RESULTING IN AN ACCIDENT.

If you see any damage to your tires or wheels, contact your local participating Michelin° retailer listed in the Yellow Pages, or visit our web site listed below for dealer locations. If further assistance is required, contact:

#### **IN USA**

1-800-847-3435

#### or write:

Michelin North America, Inc. Attention: Consumer Relations Department Post Office Box 19001 Greenville, SC 29602-9001

#### or visit:

www.michelinman.com

#### **IN CANADA**

1-888-871-4444

#### or write:

Michelin North America (Canada) Inc. 2500 Daniel-Johnson Blvd., Suite 500 Laval, Quebec H7T 2P6

#### or visit:

www.michelinman.ca

#### **MOUNTING AND ROTATION SERVICE RECORD (For Mileage Limited Warranties Only)**

Installed Milea	ge			
DATE OF ROTATION	ODOMETER READING	RETAILER'S NAME AND ADDRESS	RETAILER SIGNATURE	PSI (check)
To validate the mile	eage portion of this	warranty, your tires must be inspected and rotated every 12,000 km and the P	SI set as recommended o	n the vehicle placard.

Owner Certification: I hereby certify that these services were performed as indicated and that I am the original purchaser of the tires and the owner of the vehicle on which they were originally installed and exclusively used.

onsumer Signature	 Date	

ORIGINAL OWNER/TIRE I	NSTALLATION INFORMATION	To be complete	ed at time of purchase	
Date of Purchase:Customer Information:  Name:		Make/Model:		
Address: City: Province: Phone No.: Vehicle Information: Year:	_ Postal Code:	Recommended Recommended DOT No:	n: Tire Pressure Front: Tire Pressure Rear:	PSI PSI Tire #1: Tire #2: Tire #3:
TIRE REMOVAL INFORMA	ATION			
Odometer reading	Date	Retailer	Retailer	

MICHELIN® NORTH AMERICA, INC., P.O. BOX 19001, GREENVILLE, SOUTH CAROLINA 29602-9001

when tires removed: -

\_\_\_\_\_ Removed: \_

Name: -

Signature: -