Safety Guidelines: Use of the Customer Competition Race Car Tires Michelin Group

1°- Introduction

We recommend that you follow the safety and use guidelines provided below.
These guidelines apply upon satisfaction of any more stringent regulatory requirements, developed or prescribed by competition, raid or circuit organizers with respect to tires.
Non-compliance with these guidelines or operating procedures can lead to improper equipment or mounting and cause premature tire wear and tear.
The use of circuits with high banking in the turns imposes specific tires and/or operating conditions. Prior to any use, consult the terms of use at www.michelinsport.com or contact Circuit Michelin technical department phone: + 33 (0) 4 73 30 13 03 and + 33 (0) 4 73 30 21 25.

2°- Recommendations

Before-use checklist

- Tire selection must correspond to vehicle equipment, as defined by the vehicle maker and manufacturer.
- Make sure that all tires on the same axle are of the same type (brand, commercial name or industrial reference, dimensions, structure).
- Prior to mounting make sure that:
- Diameter of the rim corresponds exactly to the inside diameter of the tire.
- Width of the rim corresponds to that recommended by the manufacturer or, failing that, to the standards mentionned (ETRTO, TRA, JATMA, etc.)
- The rim type (tubeless, tube type) corresponds to the type of tire.
- The rim must be able to support the necessary mounting pressure.
- The rim is in good condition and does not present wear-and-tear (cracks, deformation, etc.) and the valves are in proper condition and if not, have them replaced.
- The tires have not been repaired and the valves are in proper condition and if not, have them replaced

3°- Valves

- Follow the instructions for use provided by the manufacturers (adjustment and compatibility with the rim, type of alloys, geometry).
- Routinely screw down the polyamide valve cap with washer (polyamid is used for thermique reason) It protects the valve mechanism and ensures the complete sealing of the tire assembly.
- Make sure that the valve is in good condition (no ovalization, no impact trace, etc.).
- Regularly check torque settings of screwed-in valves.
- Use only metallic valves.

4°- Tire assembly and disassembly

- Tire assembly, disassembly, topping and balancing must be done on suitable good-condition equipment entrusted with qualified and trained personnel that would ensure, among other things:
- compliance with the manufacturer and legal rules in the selection of tires.
- Preliminary examination of the outside and inside aspect of the tire by the installer.
- Compliance with tire assembly, disassembly, balancing and toping procedures.
- Proper positioning of the tire on the vehicle (left, right, front, rear).
- Proper working pressure.
- Measuring equipment such as pressure gauges, dynamometric keys must be standardized and inspected at least once a year by a certified body or, failing that, by the supplier or manufacturer.

Assembly – Disassembly

- Make sure that all assembly equipment is suitable for the type of assembly. For how to use this equipment, refer to the manufacturer's user guide. Comply with the direction of assembly for directional tires.
- Lubricate the tire rim seats and beads with a suitable product.
- For tube type assemblies (with an air tube), the dimension of the air tube must correspond to that of the tire (section and diameter) and the rim must be in a condition that can accept the air tube without damaging it.

Topping

- Important note: only use topping installations intended for that purpose. Under no circumstances can the operator remain in the immediate proximity of a tire assembly. Therefore, make sure that the compressed air hose attached to the valve is equipped with a safety clip and that it is sufficiently long for the operator to be situated outside of the trajectory of flying particles, if any, in case of an incident. Remove people not involved in the topping procedure from the location in which it is performed.
- Remove the inside of the valve, start topping and check that tire beads are properly centered with respect to the rim flange.
- If the tire beads are not properly centered, let the air out and start the entire procedure over including the lubrication step.

- Continue topping until 3.5 bars in order to obtain a good placement of the tire beads. For higher pressure, use a safety cage during tire topping.
- Replace the inside of the valve and adjust it to working pressure. Replace the polyamide valve cap with washer to ensure complete sealing.

Balancing

- Balancing the four tires is recommended for use on a circuit.
- The balancing machines must be standardized in accordance with manufacturers' recommendations.
- Specific attention must be given to the devices (cone / screw board) used for centering the assembly on the machine.

5°- Tire regrooving

- Regrooving changes the characteristics and performance of tires. This procedure requires the use of appropriate equipment and tools and compliance with instructions.
- Regrooving of a tire that has already been used (not new) is prohibited.
- Prior to any regrooving procedure, contact Circuit Michelin technical department phone: + 33 (0) 4 73 30 13 03 and + 33 (0) 4 73 30 21 25.
  Reminder: regrooving or tread deepening of ECE R30 certified tires, i.e. those designed for use on public roads, is prohibited.

6°- Storage and Carriage

There are some important rules to be observed during the storage and the freight like the temperature which must be higher than.

Range	Temperature minimum of freight and storage
Slick (Track) et Asphalt (Rally)	**0℃**
Other tires	**-10℃**

Moreover, the tires should not be subjected to:

- Direct and prolonged exposure to sunlight,
- sources of high heat and humidity (Tropical condition storage)
- Long-term storage in stacks.
- Solvents, lubricants, fuel and other chemical products.
- Ozone emission from equipment like transformer, welding unit, electric motor, etc.

These recommendations must be applied in order to preserve the performance of tires

The storage space must be dry, well-ventilated, without direct light and reserved for tires. Racks suitable for storing tires vertically should be used to avoid exercising pressure on the carcasses.

7°- Tire aging

- Tires age even when not used or if they are only used occasionally; excessive aging of tires may lead to loss of grip.
- Remove from usage tires presenting clear signs of aging or fatigue (cracking of the rubber of the outer tread, of the shoulder, of the bead side, deformation, etc.). When in doubt, contact a tire professional.
- We recommand you to use the Michelin competition tires within a delay of 24 months following their purchase date (if the tires are stored in severe conditions like tropical conditions it is limited to 3 months)

8°- Monitoring and maintenance

Check tire pressure prior to any run and adjust pressure if it does not correspond to the recommended working pressure.
Tire pressure must be checked they are cold (the tires have not been driven, they have not been warmed).
Inflating tires with nitrogen does not exempt you from having to check tire pressure routinely.

In case of unusual loss of pressure, check the outside and inside condition of the tire as well as the condition of the wheel and of the valve.
Any visible perforation, cut or deformation must be checked in-depth by a tire professional. Never use damaged tires or tires that have run flat without the help of a professional.

9°- Terms of use

Never treat the rubber of the outer tread chemically.
Never use tires with unknown past.
When using heated containers never put the mounted assemblies in contact with the metallic parts and/or in direct exposition from the heat source
Make sure that the pressure, camber angle, speed and axle load values are those recommended by Michelin for the intended use (check recommendations depending on use).
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