

## Michelin Metro Tire Usage, Maintenance and Inspection Recommendations

Michelin, the first company to apply rubber-tire technology to metro applications, considers the design and manufacture of our MICHELIN® Metro tires and the services we provide to our metro customers to be strongly linked. MICHELIN® Metro tires are unique and experience usage conditions much different than other tires. They are subjected to much stronger solicitations, especially in terms of loads, accelerations and decelerations which can lead to potentially higher levels of casing fatigue not accurately detected through standard visual inspection. For these reasons, Michelin desires to maintain a direct and close relationship with our metro customers and to provide close follow-up of our MICHELIN® Metro tires throughout the entire product lifecycle.

### MICHELIN FIELD ENGINEER

Since MICHELIN® Metro tires are unique, each tire is followed by a trained metro tire expert known as the Michelin Field Engineer. These engineers provide the following services:

- Training
- Tire technical assistance
- Tire performance reports
- Claims assistance

### MAXIMUM MILEAGE (LOC)

To support a high safety standard during metro operations, the customer should contact Michelin before using a tire in a metro application to define a maximum distance a tire can travel before demounting and inspection. This is called the Limit of Course - LOC. Adhering to this limit is a key factor to achieve the best tire life possible.

The LOC is defined by Michelin technical & quality experts based on models of usage conditions and casing analysis performed on tires removed from operation. The three main factors used to establish the LOC are:

- The tire itself (size, design load capacity...),
- The vehicle type (monorail, APM, heavy metro...),
- The local usage conditions (track profile, number of people transported, maintenance cycles actual load, speed & acceleration cycles...).

Each time one of the above factors is modified, contact your Michelin representative to update the LOC.

### INFLATION PRESSURE

Maintaining the proper inflation pressure in tires used in metro applications is key to maximizing tire life. Incorrect pressure can cause:

- Reduced removal mileage
- Abnormal wear
- Insufficient fatigue resistance

It is highly recommended to inflate metro tires with nitrogen and to request the assistance of the Michelin Field Engineer to recommend the correct pressure for the desired usage.

### TIRE MAINTENANCE & FOLLOW-UP

During the period of usage of Michelin tires, it is highly recommended by Michelin that:

- Customers should consult the Metro Tire Service Manual & Tire Removal Guide (PMR) for guidance on such items as tire inflation requirements, proper tire storage, vehicle system set-up and understanding of out-of-service conditions.
- Michelin tires sold for metro application be made accessible to a Michelin Field Engineer for periodic inspections and usage characterization.
- All tires removed from a metro operation should be inspected by a Michelin Field Engineer. Information gathered during this inspection such as tire ID, tire manufacturing date, vehicle ID, wheel position, mileage, mount and removal dates, and reasons for removal will assist the Michelin technical and quality teams to provide better tire usage recommendations.

Michelin is committed to helping our customers make their operations as efficient and safe as possible and provides these services to assure your success. The insight we can provide will help reduce unexpected downtime and ensure the maximum performance of our products.

MICHELIN NORTH AMERICA, INC., Greenville, South Carolina, USA  
MICHELIN NORTH AMERICA (CANADA) INC., Laval, Quebec, Canada

An Equal Opportunity Employer © 2021 MNA, Inc. (03/21)

