



PRESS RELEASE

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Paris (France), 16 september 2024

IAA Transportation Trade Fair in Hannover:

Michelin unveils the MICHELIN X® LINE ENERGY™ 3 and MICHELIN X® MULTI ENERGY™ 2

- These new products are positioned to be market leaders for fuel savings⁽¹⁾ and lateral grip⁽²⁾ without sacrificing the other performance metrics.
- Their performance is bolstered by Michelin's range of connected services tailored to meet the most demanding requirements of its customers.
- For over 100 years, Michelin has been leveraging its innovative power to secure long-lasting and uncompromising performance.

Delivering optimum uncompromising performance

Specifically designed for long-distance and regional journeys, the **MICHELIN X® LINE ENERGY™ 3** and **MICHELIN X® MULTI ENERGY™ 2** deliver excellent results in terms of fuel savings⁽¹⁾ and lateral grip⁽²⁾ without compromising on other key performance metrics such as mileage, robustness and retreadability.

- **MICHELIN X® LINE ENERGY™ 3:** This range is best-in-class in the long-distance market in terms of fuel savings⁽¹⁾ beating premium brands' average by 0.62 L/100km which represents a cost saving of between €700 and €2,200 per truck and per year. Lateral grip performance is also improved by 4.42% for new tires and 2.02% for two-thirds worn tires.



- **MICHELIN X® MULTI ENERGY™ 2:** This range is best-in-class in the regional and highway market in terms of fuel savings⁽¹⁾ outperforming premium brands' average by 0.16 L/100km which represents a cost saving

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of between €100 and €380 per truck and per year. Lateral grip performance is also improved by 5.06% for new tires and 5.67% for two-thirds worn tires.



Overall performance backed by a range of connected services

The overall performance of Michelin truck tires is bolstered by **MICHELIN Connected Mobility**, a range of connected services based on the assessment and analysis of fleet data (vehicle, drivers, etc.) together with personalized customer support for safer, more efficient and more sustainable operations.

MICHELIN Connected Mobility makes it possible to reduce maintenance time and vehicle downtime. Operations on tires are more efficiently scheduled, unnecessary tire changes are avoided and the costs are significantly lower with fuel savings⁽³⁾ of as much as 12%.

MICHELIN Connected Mobility is underpinned by four main priorities:

- The provision of high-tech tires;
- The management and optimization of tire performances;
- Access to fleet-management solutions through *MICHELIN Connected Fleet*, which combines vehicle data with driver behavior;
- Access to a new, automated solution for predictive maintenance and alerts: *MICHELIN Smart Predictive Tire*.

For over 100 years, Michelin has been leveraging its innovative power to secure long-lasting and uncompromising performance

Michelin has been committed to designing long-lasting high-performance tires for over 100 years. A pioneer in retreading since 1923, Michelin has given tires multiple lives, extending their lifespan and ensuring cost savings for fleets.

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Since then, Michelin has never stopped innovating, helping fleet managers address the many challenges they face in operational, human or environmental terms. The Group offers solutions capable of meeting seemingly contradictory challenges such as mileage versus energy efficiency, or the environment versus safety.

To keep pace with a fast-changing sector, Michelin is continuing to pursue its strategy with more than 80% of its truck tire ranges due to be renewed in the next five years. Furthermore, the Group remains a steadfast partner for road haulage companies, offering high-tech products and innovative connected solutions designed for optimum performance.

¹ Fuel savings:

XLE3: Michelin internal fuel consumption tests by comparison with the competitors. Duration: 65,975 km on an open toll road in the south of Spain. April - June 2024 under Dekra supervision (Report 23CPA11-239 - Lorca - CR Final). MICHELIN X® Line Energy™ Z3 & X® Line Energy™ D3, Continental Ecoplus HS3+ & HD3+, Bridgestone Ecopia H-Steer 002 & Ecopia H-Drive 002, Goodyear FUELMAX S Endurance & FUELMAX D mounted on the same Volvo FH500 I-Save trucks, carrying a 40 tons load. Fuel savings measured on the basis of fuel consumption while the vehicle was being driven (Source: Volvo Connect KPI = fuel L/100 km). Actual consumption during testing: with MICHELIN X® Line Energy™ Z3 & X® Line Energy™ D3 = 30.30L/100km Continental Ecoplus HS3+ & HD3+ 30.90L/100km. Bridgestone Ecopia H-Steer 002 & Ecopia H-Drive 002 = 30.60L/100km and Goodyear FUELMAX S Endurance & FUELMAX D = 31.25L/100km, therefore competitor's average consumption: 30.92L/100km. Average difference in consumption by comparison with the competitors 30.92 - 30.30 = 0.62L/100km. Based on the cost of diesel at €1.65/L and an average distance per truck and per year in long-distance usage of 150,000 km, estimated savings per truck = calculated at €1,534. $0.62 \times 1,500 \times €1.65 = €1,534$.

XME2: Michelin internal fuel consumption tests by comparison with the competitors. Duration 53,933 km, south of Spain on open roads, April - July 2024, under Dekra supervision (Report 23CPA11-239 - Sorbas - Final Report). Identical Volvo FH500 I-Save trucks, fully charged at 40 tonnes, fitted with 315/70R22.5 MICHELIN X® Multi Energy™ Z2 & D2 tires vs competitors: Continental EcoRégional HS3+ & HD3+, Bridgestone Duravis R-Steer 002 & Duravis R-Drive 002, Goodyear FUELMAX S Endurance & FUELMAX D Endurance et Hankook Smartflex AL51 & DL51. Fuel savings are measured on the basis of the fuel consumption when the vehicle is driven (Source Volvo Connect KPI = fuel consumption L/100 km).

Actual consumption during testing: MICHELIN ® Multi Energy™ Z2 & D2: 33.7L/100km. Continental EcoRégional HS3+ & HD3+: 33.9L/100km. Bridgestone Duravis R-Steer 002 & Durvis R-Drive 002: 33.8L/100km. Goodyear FUELMAX S Endurance & FUELMAX D Endurance: 33.9L/100km. Hankook Smartflex AL51 & Smartflex DL51: 33.9L/100km. Competitors' average consumption: 33.9L/100km $(33.9 + 33.8 + 33.9 + 33.9)/4$. XMulti Energy 2: 0.2L/100km less than the average of the competitors (33.9 L/100km - 33.7 L/100km)

² Lateral grip:

XLE3: MI 6%* better lateral grip than the average of the competitors, with new and worn tires
MI 10%* better lateral grip than the average of the competitors, with worn tires

* Internal MICHELIN study conducted at the MICHELIN TECHNOLOGY CENTER Ladoux (France) in May 2024 under DEKRA supervision (Report 23CPAEXT - 239). 110 m diameter ring on a wet surface, water height 2.5mm, with three identical Volvo FM12 rigid trucks carrying a full load (19 tons) fitted with 315/60R22.5 & 295/60R22.5 tires in new and worn conditions at the same stage of wear (approximately 5mm) with identical pressure (front 9.0b; rear: 8.0.b). MICHELIN X® Line Energy™ Z3 & X® Line Energy™ D3 vs the following competitors: Continental Ecoplus HS3+ &



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HD3+. Bridgestone Ecopia H-Steer 002 & Ecopia H-Drive 002, Goodyear FUELMAX S Endurance & FUELMAX D.

Lap time in seconds: **On average, with new tires:** Michelin X® Line Energy™ Z3 & X® Line Energy™ D3 in 36.7 seconds, on average, with the competitors' tires in 39 seconds. Michelin is therefore 6% faster. In the same driving conditions as during the tests, extrapolating these results over 100 km would yield the following results: Michelin X® Line Energy™ Z3 & X® Line Energy™ D3 saves 35 minutes by comparison with the average of the competitors. **On average, with worn tires:** Michelin X® Line Energy™ Z3 & X® Line Energy™ D3 in 38.2 seconds, on average, with the competitors' tires in 42 seconds. Michelin is therefore 10% faster. In the same driving conditions as during the tests, extrapolating these results over 100 km would yield the following results: Michelin X® Line Energy™ Z3 & X® Line Energy™ D3 can save 57 minutes by comparison with the average of the competitors. The actual results may vary in real conditions/depending on road conditions and/or weather conditions.

XME2: MI 5%* better lateral grip than the average of the competitors, with new & worn tires. MI 10%* better lateral grip than the average of the competitors, with worn tires.

* Internal MICHELIN study conducted at the MICHELIN TECHNOLOGY CENTER Ladoux (France) in May 2024 under DEKRA supervision (Report 23CPAEXT - 239). 110 m diameter ring on a wet surface, water height 2.5mm, with three identical Volvo FM12 rigid trucks with a full load (19 tons) fitted with 315/70R22.5 tires in new and worn conditions at the same stage of wear (approximately 5mm) with identical pressure (front 8.5b; rear: 7.5.b). MICHELIN X® Multi Energy™ Z2 & D2 vs the following competitors: Continental EcoRégional HS3+ & HD3+. Bridgestone Duravis R-Steer 002 & Duravis R-Drive 002, Goodyear FUELMAX S Endurance & FUELMAX D Endurance et Hankook Smartflex AL51 & DL51.

Lap time in seconds: **With new tires:** Michelin X® Multi Energy™ Z2 & D2 in 36.5 seconds, on average, with the competitors' tires in 38.4 seconds. Michelin is therefore 5% faster. In the same driving conditions as during the tests, extrapolating these results over 100 km would yield the following results: Michelin X® Multi Energy™ Z2 & D2 save 28 minutes by comparison with the average of the competitors. **With worn tires:** Michelin X® Multi Energy™ Z2 & D2 in 37.9 seconds, on average, with the competitors' tires in 41.6 seconds. Michelin is therefore 10% faster. In the same driving conditions as during the tests, extrapolating these results over 100 km would yield the following results: Michelin X® Multi Energy™ Z2 & D2 save 56 minutes by comparison with the average of the competitors. The actual results may vary in real conditions/depending on road conditions and/or weather conditions.

³MICHELIN Connected Mobility reduces the carbon footprint by up to 12%:

Fuel consumption is reduced by up to 5% by fitting the fleet with MICHELIN X LINE Energy tires. Simulation conducted on April 4, 2023 using the VECTO (Vehicle Energy Consumption Calculation Tool) method, comparing a convoy (fitted with MICHELIN X LINE Energy Z2 & D2 315/70 R22.5 tires on the towing vehicle and MICHELIN X LINE Energy T 385/55R22.5 tires on the trailer axles) with another convoy (fitted with MICHELIN X MULTI Z & D 315/70 R22.5 tires on the towing vehicle and MICHELIN X MULTI T2 385/55R22.5 tires on the trailer axles), for 100% long-distance use and a total weight of 29 tons (towing vehicle + trailer + load).

Usage up to an additional 1.3* mm of rubber and a 1% reduction in fuel consumption. Maximum gain in mm measured by regular use of Michelin QuickScan and the necessary maintenance. Comparative measurements, before and after installation of the Michelin QuickScan technology, involving 6,806 tires withdrawn between 2020 and 2022 at five sites belonging to six French carriers using the Michelin QuickScan technology. * Michelin internal estimate based on a simulation of the fuel savings resulting from the use of the tires, conducted in 2022 using the following method: comparison of the fuel consumption of a convoy fitted with new tires and a convoy fitted with worn tires (minimum legal tread depth of 1.6 mm) in identical driving conditions (weather, road and driver behavior). Both convoys were fitted with MICHELIN X MULTI Z & D 315/70



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R22.5 tires on the towing vehicle and MICHELIN X MULTI T2 385/55R22.5 tires on the trailer axles for 100% long-distance use and a total weight of 40 tons (towing vehicle + trailer + load), and a benchmark fuel consumption of 32.42 l/100. The fuel saving for an additional 1 mm of rubber used was 0.8%, i.e. a 1% reduction in fuel consumption for an additional 1.3 mm of rubber.

A reduction in fuel consumption of up to 2% achieved by measuring tire pressure in real time and during servicing. Michelin internal estimate in 2022 calculated on a simulation of the fuel savings using the following method: comparison of the fuel consumption of a convoy fitted with new tires at the recommended pressure and a convoy fitted with new tires under-inflated by 30% below the recommended pressure, in identical driving conditions (weather, road and driver behavior). Both convoys were fitted with MICHELIN X MULTI Z & D 315/70 R22.5 tires on the towing vehicle and MICHELIN X MULTI T2 385/55R22.5 tires on the trailer axles for 100% long-distance use, with a total weight of 40 tons (towing vehicle + trailer + load) and a benchmark fuel consumption of 32.42 l/100.

A reduction in fuel consumption of up to 4% with Michelin Connected Fleet. Minimum reduction in fuel consumption detected after 11 transport operations by Michelin Connected Fleet's European customers, involving their entire truck fleet, from 2019 to 2023.

Photos and videos available here:

<https://contentcenter.michelin.com:443/portal/shared-board/eaac2955-dd0a-4aa5-b7ea-48adea38fbf4>

About Michelin

Michelin is building a world-leading manufacturer of composites and experiences that transform our everyday life. Pioneering engineered materials for more than 130 years, Michelin is uniquely positioned to make decisive contributions to human progress and a more sustainable world.

Drawing on its technological leadership in polymer composites, Michelin is constantly innovating to manufacture high-quality tires and critical components for such demanding and varied fields as mobility, construction, aeronautics, low-carbon energies and healthcare

The care taken with its products and its deep knowledge of their applications equip the Group to offer its customers unparalleled experiences, whether in data-driven, artificial intelligence-based solutions for business fleets, or by finding remarkable restaurants and hotels recommended by the MICHELIN Guide.

MICHELIN GROUP PRESS OFFICE

+33 (0) 1 45 66 22 22
7J/7J

www.michelin.com
 [@MichelinNews](https://twitter.com/MichelinNews)

112, avenue Kléber – 75016 Paris