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Climate-friendly and economical: MAN Lion with new PowerLion driveline

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- MAN semitrailer tractors from model year 2025 with up to 3.7 percent less fuel consumption and CO₂ emissions
- Economical and inexpensive in the CO₂ toll: New D30 engine, new transmission, optimised aerodynamics, new brakes
- User-friendly: Improved acoustic insulation, new display functions, new interior colours
- Optimised for use: Simplified vehicle configuration and over-the-air programming of body functions
- SimplePay: Clear cost transparency for the entire fleet

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The MAN Lion is taking a powerful leap into model year 2025 at the IAA Transportation 2024 - with even greater efficiency and driving comfort. The focus of the innovations is on reducing fuel consumption by up to 3.7 percent. The MAN engineers have achieved this primarily with the help of the new D30 PowerLion driveline and aerodynamic measures.

This offers double savings potential: With regard to the CO_2 -based toll classification valid in Germany, Austria and Denmark, for example, since 1 January 2024, a correspondingly reduced toll rate for a fuel-efficient vehicle can mean savings of several thousand euros over the term.

"Our new highly efficient PowerLion driveline with the new D30 engine and the new MAN TipMatic 14 gearbox is the key to the profitability of our customers' transport business. It is based on the common engine platform of the TRATON GROUP and is the tangible result of intensive cooperation between our development departments. Even though we see the electric drive as the main technology in road freight transport in the long term, diesel continues to play an important role on the way there. Every litre of fuel we save reduces CO₂emissions and costs for transport companies. This in turn makes it easier for our customers to switch their fleets to zero-emission technologies," says Friedrich Baumann, Board Member for Sales & Customer Solutions, MAN Truck & Bus SE.

MAN Truck & Bus is one of Europe's leading commercial vehicle manufacturers and transport solution providers, with an annual revenue of about 14,8 billion euros (2023). The company's product portfolio includes vans, trucks, buses/coaches and diesel and gas engines along with services related to passenger and cargo transport. MAN Truck & Bus is a company of TRATON GROUP and employs approx. 33,000 people worldwide.

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D30 engine: Top marks for economic efficiency

The new D3066 (in short: D30 engine) with a maximum efficiency of over 50% and one of the best-in-class fuel consumption is one of the most advanced commercial vehicle engines in the world. The completely newly developed engine benefits from the combined engineering expertise of the TRATON GROUP and will replace the previously available D26 and D15 engine series in all MAN 4x2 semitrailer tractors in normal and low design heights. The D30 is available in six output levels from 380 to 560 hp (2,100 to 2,800 Nm).

The harmonious interaction between XPI common rail injection with an injection pressure of up to 1,800 bar and 10-hole injection nozzles on the one hand and optimised turbocharging by means of two power-range-dependent charging geometries on the other contributes significantly to achieving the high engine efficiency in the D30.

The new diesel heart with dual SCR exhaust gas aftertreatment is always combined with the newly developed MAN TipMatic 14 gearbox and the new hypoid axle portfolio. The high-performance engine brake CRB (Compression Release Brake) with up to 355 kW, the decouplable retarder 47 with up to 4700 Nm braking power for additional consumption reduction and an extensive engine and gearbox-side PTO portfolio for a wide range of additional applications such as hydraulic pumps or compressors are available as options exclusively for the D30 PowerLion drivetrain.

MAN TipMatic 14: Smart gearshifts

The new MAN TipMatic 14 gearbox also benefited from the combined technology expertise of the TRATON GROUP in its development and will replace the previous MAN TipMatic 12 gearbox in all standard MAN heavy-duty semitrailer tractors in the future. Compared to this, the new generation is around 60 kg lighter.

The new TipMatic gearbox has 14 forward gears and two reverse gears, with six additional reverse gears that can be activated over the air via MAN Now if required. If necessary, higher reversing speeds are also possible. At the same time, the MAN TipMatic 14 offers very sensitive manoeuvring at low speeds with the clutch closed. The automated manual transmission automatically takes over clutch operation and gearshifts. The system is software-controlled and, in conjunction with load and inclination detection, always determines the optimum moving-off and gearshift strategy. The new MOTION

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transmission oil (SAE classification: 75W) saves fuel thanks to its optimised lubrication properties and also keeps wear low. The new MAN EasyStart hill holder with crawl function additionally supports smooth forward travel.

The innovative SmartShifting function enables particularly fast gear changes with minimal interruptions in tractive power when required, thus increasing efficiency. Another major game-changer for the potential savings in fuel consumption is the move away from the Direct Drive design and instead the design as an overdrive gearbox - above all in conjunction with the MAN EfficientCruise GPS cruise control and the particularly anticipatory Predictive Drive driving function.

With the new MAN TipMatic 14 gearbox, customers also benefit from a long service life, low maintenance costs and a high continuous braking torque of up to 4,700 Nm with the Retarder 47.

New disc brakes and optimised aerodynamics

At the IAA, MAN is also presenting a new brake version with lower friction loss for truck variants with a permissible gross vehicle weight of 18 tonnes or more. The internally ventilated brake disks of the pneumatically actuated disc brakes ensure consistently high braking performance with optimum heat dissipation. With the new brake lining reset function, the brake linings are automatically pushed away from the brake disk with the help of spring elements after the brake is released, so that no residual friction torque is generated. This can further reduce wear, noise and fuel consumption.

The MAN development team also gave the heavy lions a new dress for the frame and floor in favour of low fuel consumption: The rubber lips of the new optional frame cladding for TGX and TGS semitrailer tractors on the right and left side reduce the air gap at the top and bottom. This reduces air turbulence and drag, and consequently fuel consumption. The new aerodynamic underbody panelling in front of the front axle also improves the airflow around the ground of D30 semitrailer tractors from the TGX series. On vehicles without underbody panelling, the extended spoiler lip on the front underride guard ensures better air flow around the underbody. A new radiator protection is also available as an option.

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Interior care: Updates for ergonomics, functionality and design

The fully digital main instrument offers new functions such as the gross train weight display in model year 2025. The 12.3-inch colour display of the Professional instrumentation also features a newly designed needle design. Also new: The start-up info sequence provides the most important information as soon as you get in - without switching on the ignition. Thanks to the new calm display mode with reduced information display, you can concentrate even better on the traffic at the wheel.

In addition, the improved sound insulation provides even more peace and quiet in the driver's cab: The noise-insulating windscreen reduces the noise level inside thanks to 0.81 mm thick acoustic intermediate film, while the encapsulation of the D30 PowerLion driveline reduces the noise radiation of the engine to the inside and outside. Last but not least, new colour combinations and accents are being introduced into the interior of the cab with Desert Beige, Tuscan Red and Moon Grey with silver.

Uniform framework: Standards for the arrangement of detachable parts

From model year 2025 onwards, 16 standardised basic layouts are also available for the uniform structuring of the components on the frame, based on the typical application cases of a 4x2 semitrailer tractor in normal-height and low design. This makes configuration, maintenance, repair, tank arrangement and retrofitting even easier. The new combination tanks with internally separated areas for 690 litres of diesel and 165 litres of AdBlue also make optimum use of the installation space. Another design innovation: With model year 2025, a newly designed front underride guard and the robust pendulum suspension of the lowest entry step, previously reserved for traction model series, are available for vehicles with normal height design.

Application fit: Body integration over the air with MAN PAL

Switching the engine on and off, activating and deactivating the PTO or activating the rotating beacons and rear flashing lights of a tipper in operation: Up to 10 specific body functions can be placed on the new body button panel in the centre console or the Easy Control button panel in the driver's door, which can be easily installed on the vehicle with MAN PAL over the air. The body manufacturer can simply adapt the parameters and function logic of the electronic body interfaces and control panels independently to the respective

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body function, without a diagnostic tool or time-consuming visit to the workshop. MAN PAL can be accessed quickly and directly via the ABBI body manufacturer portal from MAN.

SimplePay: Easy handling and transparency of fleet costs

With SimplePay, fleet managers have control over the costs of an MAN or mixed fleet by storing the fuel and charging cards digitally on the platform and assigning them to each vehicle (emission standards 5 and 6). The service is available in numerous countries and offers a user-friendly overview on the RIO platform. From the IAA 2024, there will be the services of refuelling, parking, washing, cleaning the inside of the tank and a digitally stored framework for breakdown management. With SimplePay, refuelling can be authorised via the MAN Driver App or the MAN media system, as well as parking spaces and car washes can be pre-booked and paid for via the Driver App. In the event of a breakdown, a digital budget can also be stored in SimplePay to cover the repair costs incurred.

The individual equipment items of model year 2025 will be available for order gradually starting in October2024.