

# Truckner

Career | Technology | Passion

SPECIAL

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Karel Seřma

**EXCLUSIVE TEST**

**The New MAN TGX 510**



# The lion roars again

The brand-new MAN TGX featuring the GM cab and a 510 horsepower engine is put to its first extensive test drive. And puts on a mostly convincing performance. ▶



## TEST VEHICLE **TGX 18.510**

**Model:** MAN TGX 18.510 GM  
**Displacement:** 12,419 cm<sup>3</sup>  
**Horsepower (kW):** 510 (375) at 1800 rpm  
**Torque (Nm):** 2600 at 930-1350 rpm  
**Unladen weight:** 7365 kg (400 l diesel, 60 l AdBlue)





**SUPERTEST MAN TGX 18.510 GM**

Top steering wheel adjustment; the Smart Select Button is highly user-friendly



The bed remains a plus point of the MAN, also because of its slatted frame



MAN now also offers an electronic parking brake - though as an option

**B**rand-new truck models on test frequently catch the eye. Other drivers in oncoming or overtaking trucks can't resist taking a peek, and on rest breaks at service stations the vehicle is quickly surrounded by curious onlookers.

That's not the case with the new MAN. It's certainly not that there's no interest in the new TGX among other truckers, it's just that very few actually realise what they're seeing. The new model just looks too much like its predecessor to really stand out from the mass of Lion trucks.

#### ON THE INSIDE, MAN HAS RADICALLY MODERNISED THE TGX

While the innovations - including much improved aerodynamics, according to MAN - may be barely visible on the outside, they are immediately noticeable on the inside. Firstly, there are the new digital instruments, which prove to be razor-sharp in definition and easy to read in all lighting conditions.

Secondly, there's the new steering wheel, with its neater layout of cruise control, on-board computer and telephone buttons. MAN drivers will be even more pleased with the wheel's now enormous adjustment range, which easily matches that of the group's sister company Scania - even if one might have expected a rather more elegant locking and unlocking action from a new truck model.



Coolbox next to the driver, storage box next to it

Also new from MAN: Drawers in the console



Thirdly, MAN has finally done away with the fiddly right-hand side control stalk! The new version combines the retarder/engine brake and manual gear selector, as well as all the other transmission functions, and yet is still much more user-friendly.

And fourthly, there's the rotary pushbutton control with integrated touchpad - called the "Smart Select Button" - to the driver's right, which can be used to control the navigation or audio functions for example. It's an excellent addition in our view. The operating logic becomes second nature after just a few minutes, allowing the driver to find what he or she is looking for quickly and, above all, without taking his or her eyes off the road.

Another new feature is not a visible enhancement, but a technical one: the launch of the new model has seen MAN



**2600 Nm is a high figure in this class**



The digital instruments are razor-sharp in come in a new look

add extra-long rear axle ratios to its range. The 2.31 axle on the test vehicle transfers the engine power to the rear wheels at just 1050 rpm, while cruising at 85 km/h.

Nevertheless, the Tipmatic electronic transmission - actually the Opticruise box from sister company Scania - initially prefers not changing down on hills. The downshift comes only once the engine speed drops to 950 rpm, revving back up to 1150 rpm. That equates to about 435 horsepower, which is enough to climb most hills even when pulling 40 tonnes.

So in terms of performance the low revs are no problem for the 510 hp D26 in-line six-cylinder engine, which delivers its substantial 2600 Newton metres of torque from as low as 930 rpm. One negative aspect, however, is the loud hum and vibration the power unit tends to emit under full load, which sometimes even makes itself felt in the driver's seat. Things only slowly start to improve once the revs climb above 1200 rpm - a range that the single-turbocharged engine, in combination with the long axle ratio, rarely gets into however. As a result, the GM cab is relatively noisy. MAN's engineers might have liked to devote a little more attention to noise insulation.

On the other hand, they have revisited the cab mounting system compared to

the initial launch vehicles (see TRUCKER 4/2020). The fine-tuning has had a positive effect on the handling and steering of the TGX. Whereas we had complained about the lack of directness of the steering in the early versions of the new model issued, the steering of the test vehicle elicited no negative findings. Especially once you disable the active lane departure warning system (a feature that takes some getting used to) using the button in the centre console - though of course that is not advisable for safety's sake ...

#### GOOD HANDLING ALSO WITH SINGLE-LEAF PARABOLIC SPRINGS

The active steering is complemented by the traditionally good-quality chassis of the TGX. Despite the single-leaf parabolic springs on the front axle, MAN has found a good compromise between comfort and agility, so there's no need for the more expensive (and heavier) two-leaf parabolic springs - or even the air-sprung variant.

MAN has found ways to save in other ways too: It claims the fuel consumption of the new TGX has been cut by as much as 8 percent compared to its predecessor. One way of achieving that, alongside the accustomed precision of the GPS cruise control system, is the newly installed "dynamic coasting" feature. On the flat, the electronic system accelerates 3 km/h above ►



**ENGINE PROS AND CONS**

**+** In the 510 hp power output version, the D26 develops a substantial 2600 Nm of torque which is fully available from 930 rpm

**-** The engine tends to vibrate and hum under load



Finally better visibility between A-pillar and mirror



the selected cruising speed, then shifts into neutral and allows the vehicle to coast. The coasting speed is limited to 3 km/h below the set cruise control speed. The system then accelerates 6 km/h back up, and the whole process starts all over again.

LOW CONSUMPTION ON THE TEST ROUTE

There's no doubt the process takes some getting used to. But we would advise drivers to give the system a chance before irritably scrolling through the submenus of the on-board computer system to disable it.

The first reason is because, as we found in the test, the dynamic coasting feature does not reduce the vehicle's average speed. Above all, however, it does seem to play a role in cutting consumption. Other factors in enhancing fuel economy include the improved aerodynamics already mentioned at the beginning, as well as the latest internal improvements to the D26 engine on upgrading to the Euro 6d emissions standard.

The result is an efficient overall package: The 18.510 achieved 26.17 litres per 100 km pulling our unladen Fliegl trailer around the standardised test route, placing it well ahead of the field. And there is even potential for further improvement, because with just 5,500 kilometres on the clock the test truck was by no means beyond its running-in phase. But this was without doubt not the last test of the New TGX!



The good things have been retained: The MAN chassis is one of the best in the new TGX too

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**Pascal F.** The new MAN is not bad at all inside. But from the outside it's much the same as in past years, except for a few small things. I wouldn't even really take much notice of it on the road.

**Sascha We.** Thank goodness the new MAN still has mirrors!

**Günther Sch.** Sadly it's still got mirrors! They're far too clunky, and should have been got rid of. The future looks different. Our company is getting eight new Daimlers without mirrors this year, and I'm very excited to check out the new technology and the improved visibility, with its added safety.

**Thomas W.** The foreman in our MAN workshop told me that cameras were being developed, though it would be some time before they were on the market. But the system is claimed to be much better

than the one from Mercedes. We'll have to wait and see!

**Marcel L.** It'll probably be just like back in 2016 with the new Scania. Everyone initially says how ugly it looks, but in the end most people like it. I think the new MAN is great. It's just a pity that it still has the full-length mirror casings, which impair the view.

**Christian B.** Unfortunately, the MAN still doesn't have a flat floor all through the cab. And why extend the centre console so far into the interior? It's to be hoped the right-side outside cubby is finally usable properly, without loads of "bobbles"!

**Tim F.** Finally, the big MAN cab doesn't have that huge windscreen any more! Everything about it was a negative. You felt like you were on display, and the air-conditioning system struggled to cope with the amount of sun heating up the cab in Spain!

MAN has finally done it!

It was about time! It took no less than 13 years for MAN finally to move the exterior mirrors back a bit, and so greatly improve visibility when entering a roundabout!

A good idea (why didn't they think of it before?) is the new module in the driver's door that controls key functions such as the hazard warning lights without having to enter the vehicle. I have my doubts about the dynamic coasting feature.

Not so much about the efficacy of the system; I'm just not sure whether the repeated cycle of acceleration and coasting will be something drivers will like.



TRUCKER tester Wolfgang Obermaier

CAB RATING



200 litres of storage capacity above the windscreen

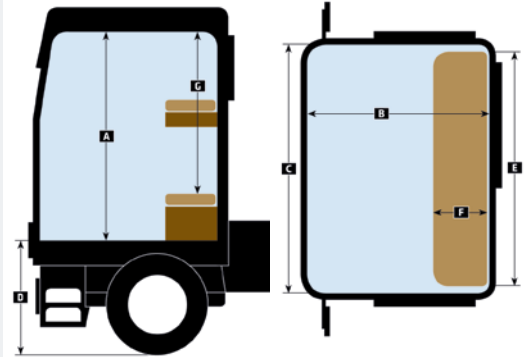


Option: Folding table in front of the passenger

The GM cab is basically the XLX cab from the predecessor model. In the TGX, the mid-size cab represents the best compromise between spaciousness and good aerodynamics, which is why the majority of MAN customers are likely to choose it. However, the headroom on the 12 centimetre high engine tunnel is just 1.86 metres, so most drivers will probably prefer the largest GX cab with its 2.07 metre interior height. As an option, MAN now also offers a swivelling passenger seat, which creates a cosy relaxation area when the day's driving is done. At night, the seat can even be folded down to convert into a bedside table by the bottom bunk. The bottom bunk itself is recessed 10 centimetres behind the seats, so as to provide them with a bigger adjustment range. Nevertheless, the sleeping accommodation among the best on the market, especially as MAN once again includes a slatted wood frame that is easy on the back.

CAB DIMENSIONS

	(cm)		(cm)
<b>A</b> Cab, interior height*	198	<b>E</b> Bottom bunk, length	200
<b>B</b> Cab, length	228	<b>F</b> Bottom bunk, width	70 - 80
<b>C</b> Cab, width	244	<b>G</b> Bottom bunk, headroom	140
<b>D</b> Entry, height	153	Steering wheel adjustment range, height	11
Seat adjustment range, height	16	Steering wheel adjustment range, tilt	20-55°
Seat adjustment range, depth	20	*On engine tunnel	186



CUBBIES

Capacity in litres (l)	
Above windscreen, right .....	75
Above windscreen, centre.....	60
Above windscreen, left .....	75
Drawer (under bed).....	55
Fridge (under bed) .....	40
Tray below bed (right/left) .....	10/10
Drawer, centre console, top .....	11
Drawer, centre console, bottom ..	17
Bottom bunk, head end .....	4
Door pockets (right/left) .....	each
Outside cubby, right .....	290
Outside cubby, left .....	230



Headroom 1.86 metres

SHELVES

Length x width (cm)	
Table on passenger side	.....26 x 34
Shelf on dash	.....73 x 26
Shelf in centre console	.....45 x 14
2 x power sockets by bottom bunk, 2 x in centre console, 2 x above windscreen, 3 x USB, 1 x AUX-in, 1 x bottle holder in each door, 4 x adjustable bottle/cup holders in centre console, 2 x main interior lights in centre of cabin, 2 x red light dimmable, bottom bunk reading light, 2 x gooseneck lamps for top bunk	



TECHNICAL SPECIFICATIONS

**ENGINE**  
Water-cooled six-cylinder in-line engine; single turbocharger with wastegate, four valves per cylinder, SCR cat., "Soft" exhaust gas recirculation, particulate filter, Euro 6d  
**Type**..... MAN D2676  
**Displacement**.....12,419 cm³  
**Bore x stroke**.....126 x 166 mm  
**Compression ratio**.....15.5:1  
**Fuel injection**.....Common-Rail  
**Nominal power output** .510 hp (375 kW) at 1800 rpm  
**Max. torque**.....2600 Nm at 930-1350 rpm

**TRANSMISSION**  
**Clutch:** Pneumatically operated ZF Sachs MFZ 430 single-disc clutch  
**Transmission:** Tipmatic 14.27 DD, synchronised three-speed basic transmission, range and splitter box, 12 forward gears, 2 reverse gears, 2 crawlers  
**Spread:** 16.41 to 1.00  
**Reverse gears:** 14.77 / 11.95  
**Rear axle:** i=2.31

**CHASSIS**  
**Front:** Cranked rigid axle; 7.5 t with stabiliser, single-leaf parabolic spring suspension  
**Rear:** Hypoid axle (MAN HY-1344) 13.0 t; four-bellows air suspension with four-point link  
**Tyres (in test):** Front 315/70 R 22.5; Rear 315/70 R 22.5  
**Wheels (in test):** 9.00 x 22.5 aluminium (option; standard: steel)

**BRAKE SYSTEM**  
**Front:** Dual-circuit air brake system with disc brakes  
**Rear:** Disc brakes, EBS  
**Engine brake** EVBec engine brake 325 kW at 2400 rpm  
**Retarder**.....Option (installed in test truck)  
4100 Nm/500 kW

**STEERING**  
**Type**..... MAN Comfort Steering  
**Steering wheel diameter**.....450 mm

**MASS + WEIGHTS**  
**Wheelbase**..... 3600 mm  
**L x W x H**.....6007 x 2500 x 3854 mm  
**Unladen weight**.....7365 kg (ready to drive)

**FILL QUANTITY**  
**Engine oil**.....40.0 l (incl. filter)  
**Tank**.....400 l diesel; 60 l AdBlue  
**Coolant**.....70.0 l  
**Rear axle/transmission oil**.....21.0 l / 14.5 l

**PRICES** (NET, DEALER QUOTES)  
Base price of MAN TGX 18.510 .....on request  
Price of test vehicle.....on request

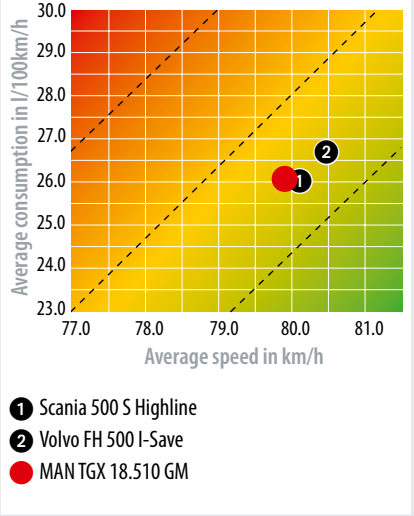


**Recommended option: LED headlights**

**Standard equipment / Optional extras**  
including automated gearshift, cruise control, Hillholder, Eco-Roll, on-board computer/diagnostic system, front spoiler, electric roof hatch, electric windows, manual air-conditioning, radio system, heated and electrically adjustable mirrors, central locking, fog lights, fleet management system

**TRUCKER recommends:**  
"Stowage Plus" package: including 230 V power socket, stowage compartment in rear bulkhead, drawer in instrument panel, folding table in front of passenger, additional cup holder  
"Driver Assistance" package: including emergency brake signal, turning + lane change support LCS, electronically controlled steering incorporating lane return assist LRA, electronic parking brake

CONSUMPTION COMPARED



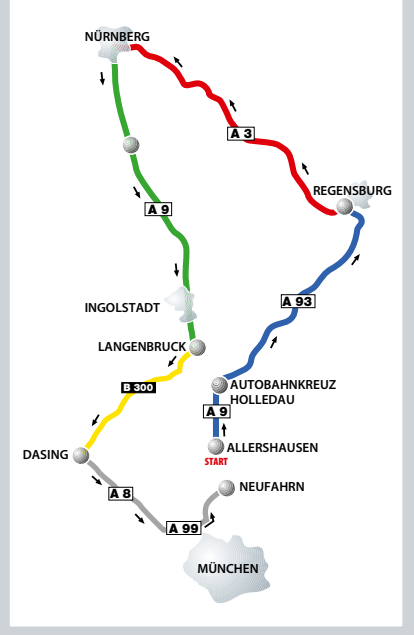
SERVICE AND MAINTENANCE

Like its predecessor, the New TGX needs a lubricant change after a maximum 140,000 kilometres. The on-board computer dictates the interval, and may well stipulate a much earlier check depending on how the vehicle is driven. Customers who do not do so much mileage will be glad to see the interval extended to 18 months. The rear axle oil only needs topping up after half a million kilometres. The previous lock of the front panel



The oil and water top-up points are located behind the panel.  
has been eliminated in the new model. To prevent unauthorised tipping of the cab, MAN has integrated a switch inside the cab that has to be pressed in order to activate the pump before tipping. Tilting without first opening the front panel is also prevented electronically.

TEST ROUTE



**Klimaneutral Transport**  
ClimatePartner.com/11232-1306-1001

**Setting a good example:**  
TRUCKER compensates for the CO<sub>2</sub> emissions of its testing by means of certificates. The compensation is fed into a wind power project through the contractor Climate Partner. We owe that to the environment – even when we are driving to help you save!



CONSUMPTION AND SPEED

Tonnage 40 t each	1st leg 74.3 km Medium	2nd leg 80.8 km Hilly	3rd leg 100.2 km Rolling leg	4th leg 50.5 km Country road	5th leg 52.7 km Easy	Total 342.8 km
<b>Litres/100 km</b>	25.70	27.71	26.27	23.34	27.26	26.17
<b>km/h</b>	84.16	83.62	83.71	62.54	83.58	79.79

HILL RATINGS

	Gradient/length	Time	Gear at rpm	V <sub>min</sub>	Consumption
1	max. 5 %, 1.5 km	1.16 min	10 at 1250 rpm	64 km/h	86.0 l/100 km
2	max. 6 %, 1.5 km	1.13 min	12 at 1080 rpm	70 km/h	84.0 l/100 km
3	Kinding hill on A9	3.33 min	11 at 1000 rpm	66 km/h	83.33 l/100 km

Testing by reference

Every test is accompanied by our 38 tonne reference vehicle, an MB Actros 1845 pulling a Schmitz-Cargobull curtainsider. We have gathered consumption data under good conditions. If the data changes during the test, we know that the test truck was subject to different conditions. By calculating the ratio of change, we are able to analyse the data of the test truck on a standardised basis. The advantage: our data is comparable. We think it would not be legitimate



to compare data gathered with no reference under varying conditions. We are the only trade journal to test using a reference truck. It's also the method practised by the industry. AdBlue consumption is calculated into the individual leg results on a pro rata basis.

NOISE MEASUREMENTS COMPARED

Measurement in dB(A)	Engine on Idling	85 km/h Roof hatch closed	Engine off Driver/bed
<b>MAN TGX 18.510 GM</b>	<b>59</b>	<b>68</b>	<b>51/53</b>
Best in test *3	48*4	61	48/47
	<b>Uphill</b>	<b>Full throttle</b>	<b>Engine brake running</b>
<b>MAN TGX 18.510 GM</b>	<b>72</b>	<b>72</b>	<b>73</b>
Best in test *3	62	62	60

\*3: Scania 730 S, \*4: Volvo FH 460

SCORES

Engine (max. 140) .....122  
Transmission (max. 140) .....124  
Brakes (max. 120).....104  
Steering (max. 40).....34  
Pedals (max. 20).....16  
Handling (max. 60).....50  
Visibility (max. 50).....40

AC/ventilation (max. 50).....41  
Seats (max. 40).....33  
Instruments (max. 50).....45  
Windscreen wipers (max. 30).....24  
Cab (max. 240).....203

**Total points: .....836**  
(maximum .....980)

Low consumption on test, clear and intuitive operation, comfortable and active suspension, wide steering wheel adjustment range

Relatively noisy, clearly noticeable vibration at low revs under load

**Rating: Excellent**

COMPETITION



<b>MAN TGX 18.510</b>	<b>MB ACTROS 1851</b>	<b>VOLVO FH 500 TC</b>	<b>SCANIA 500 S</b>
Driver rating .....836	Driver rating .....818	Driver rating .....845	Driver rating .....842
Economy .....564	Economy .....565	Economy .....555	Economy .....567
Consumption (with Ad-Blue).....26.2	Consumption (with Ad-Blue).....26.3	Consumption (with Ad-Blue).....26.7	Consumption (with Ad-Blue).....25.9
Speed .....79.8	Speed .....80.2	Speed .....80.5	Speed .....80.2
<b>Points 1400</b>	<b>Points 1383</b>	<b>Points 1400</b>	<b>Points 1409</b>
<b>Overall ratingExcellent</b>	<b>Overall rating Very good</b>	<b>Overall rating Excellent</b>	<b>Overall rating Excellent</b>

CONCLUSION

A significant improvement

While the new MAN is not revolutionary in looks, it has been improved noticeably. The new, cleverly designed operator control concept is accompanied by long-awaited improvements - specifically in relation to the exterior mirrors and the right-side steering column control stalk. The new truck also impresses in terms of fuel consumption. Well roared, lion!



TRUCKER tester Jan Burgdorf