# Key Safety Features of SafetyMAN:

# MAN TGX 26.640 Euro6 Tractor unit, 640hp



## **MAN Brakematic**

On applying the brake pedal Brakematic decides the most effective and efficient braking tool, utilising not just service brakes but also exhaust brake, Intarder and gears. The driver brakes to a constant speed brakematic automatically takes over to hold that constant speed when going down a hill brakematic automatically holds that speed.

## Adaptive Cruise Control (ACC)

Radar detects the distance to the vehicle in front, if the vehicle in front slows down it automatically slows the cruise control to maintain a safe following distance, using brakes if necessary. Radar ensures this system works even at night or in poor weather conditions.

## Lane Guard System (LGS)

Cameras monitor the marking on the road, if the vehicle veers to a side, there is an audible noise on that side of the vehicle, prompting the driver to intuitively correct the road position.

### **Emergency Braking Assistant (EBA2)**

Warns the driver when there is a risk of collision with the vehicle in front or a stationary vehicle, and automatically initiates emergency braking when necessary. It thereby helps to prevent, or at least reduce, the seriousness of rear-end collisions. Uses both radar and cameras.

### **Electronic Stability Program (ESP):**

ESP protects against unpleasant surprises, for example when suddenly avoiding obstacles, when cornering too fast, or if there are changes in the road surface. ESP sensors constantly monitor the driving dynamics. ESP comprises two main functions: DSP (dynamic stability program) and ROP (rollover prevention). DSP mainly ensures that the vehicle remains stable (e.g. on wet roads, ice and snow). It intervenes only in the event of a low coefficient of friction when there is a noticeable difference between the direction the driver wants to take and the actual movement of the vehicle. Roll Over Prevention (ROP) reduces the risk of the vehicle's overturning in the event of a high coefficient of friction on dry roads. If there is a risk of skidding or overturning, individual wheels of a semitrailer unit are efficiently braked and if necessary engine torque is reduced. In this way ESP stabilizes the unit and keeps it safely on track. 44 percent of all single-truck accidents can be avoided by equipping a vehicle with an ESP.

## Dual revolution reverse lighting (DRR)

When reversing, brake and indicator lights switch to white when not in use, to give three time the reversing light, improving visibility.

## **Emergency brake Signal (ESS)**

In the event of emergency braking, in addition to the brake lights the hazard warning lights flash rapidly signalling an emergency situation to vehicles behind.

#### Monitored and recorded driver camera system:

Front, rear and in cab recording, camera system. Secured recording to onboard "blackbox" in camera that can only be accessed moved or removed with special tooling, continuously records all cameras to onboard large memory cards, when one is full switching to the other for continuous storage to allow going back in time to view footage. Camera and recordings can be remotely accessed via Simcard. In cab sound is also recorded. Camera can also be used as 24-hour security recording.

#### 360 Degree birds eye camera system:

An onboard computer combines multiple down view cameras into one surrounding image, to give a360 degree view of the truck and trailers surroundings as if you were looking down from above. Hugely increasing visibility and removing blind spots.

#### **Continuous braking**

EVBec<sup>®</sup>: As a further development of the MAN EVB engine brake (Exhaust Valve Brake), the EVBec<sup>®</sup> has many advantages, e.g. an improved braking effect by controlling the exhaust gas back pressure, significantly increased brake output especially in the lower engine speed range, overheating protection during long braking operations and constant brake output whether the engine speed is rising or falling. Three brake output stages are available. The retarder is a hydrodynamic continuous brake integrated into the gearbox housing. Its brake output depends on the driving speed, with the best performance achieved in the medium to high speed range. The brake output level does not depend on gearshifts or clutch operation. This increases driving safety during long descents by relieving the load on the service brake system.

## **Brake assistant**

The brake assistant registers speed and pressure when the brake pedal is operated and optimises the applied brake pressure through to full brake force. It recognises an emergency stop when it is initiated and immediately develops the largest possible brake pressure.

## Xenon light for better vision

The combination of Xenon light and free-form reflectors casts a whole new light on the road. The luminance of the long-lasting Xenon lamps results in a wide stretch of road being illuminated. Illumination in this area is bright and homogeneous without dazzling oncoming traffic.

## Automatic low-beam headlights and automatic wiper system with sensors

The automatic low-beam headlights with light sensors activate and deactivate the front, side and rear lights as needed. Dawn and dusk, tunnels and bridges are also detected and the lighting is regulated accordingly. The automatic wipers with rain sensor are activated as soon as visibility is affected by water or dirt. The optimum wiper speed is then set automatically depending on the situation. The control system can detect all kinds of visibility conditions such as rain, splashes, streaks or dirt.

## **Cornering light**

The cornering light supplements the normal low-beam headlights at speeds of up to 40 km/h. It is activated when the driver operates the indicator or – on vehicles fitted with ESP – when the Cornering light for a better visibility LED daytime driving lights LED rear lights steering wheel is turned far enough. This improves visibility in the dark and in foggy cond steering wheel is turned far enough. This improves visibility as well as providing additional lighting on the side of the vehicle to prevent injuring persons or causing damage when cornering.

# LED daytime driving lights

Twin headlights with integrated LED daytime driving lights (in compliance with the requirements of Directive ECE R-87) make the MAN TGX easier to see during the day compared to daytime driving lights with H7 lamps, thereby improving active safety. The lights are turned on and off automatically with the ignition and are dimmed to the maximum permitted luminance if other lights such as the low-beam headlights or indicators are switched on – not however if only the headlight flasher is actuated. The high level of light intensity of the long-lasting LED daytime driving lights give the vehicle a modern look.

## Manoeuvring light

A manoeuvring light is available as an option to assist night-time manoeuvring and cornering. The illuminated area coincides with the field of vision of the ramp mirror. This enables the driver to safely establish the condition and edge of the road and any obstacles in the dark. Active safety during manoeuvring is improved.

## Tyre pressure monitoring system

Monitors all tyre pressures of the combined unit and relays the tyre pressure and temperature of each wheel back to the drivers tablet or dispatch office. It will also alert the driver or dispatch office if a tyre loses air pressure. It will also send an alert if the temperature gets too hot in a wheel. This is beneficial as it can indicate binding brakes or potential wheel bearing failure.

## **Other Safety Features**

Anti-lock brakes (ABS), Anti-spin regulator (ASR), Electronic stability program (ESP), Emergency Brake Assist 2 (EBA2), Disc Brakes, day running lights, automatic headlights with light sensor, automatic wipers with rain sensor, Exhaust Valve Brake (EVBec), Intarder, manoeuvrability light and automatic cornering light, Easy Start to prevent rollbacks on hills, ETA Electric cut out to prevent electrical fires, speed limited to 90kmh, multifunction steering wheel with integrated handsfree to keep drivers hands on the wheel and eyes on the road, Driver's Cab safety cell to help absorb & dissipate energy in a collision, designed to allow the door to open after impact, LED safety market lights along truck and trailer, Battery isolation safety switch, Anti-fatigue light for driving at night to help keep the driver awake and help reduce impact of oncoming vehicle accidentally leaving high beam lights on from blinding you, Air pressure monitoring on truck and trailer.