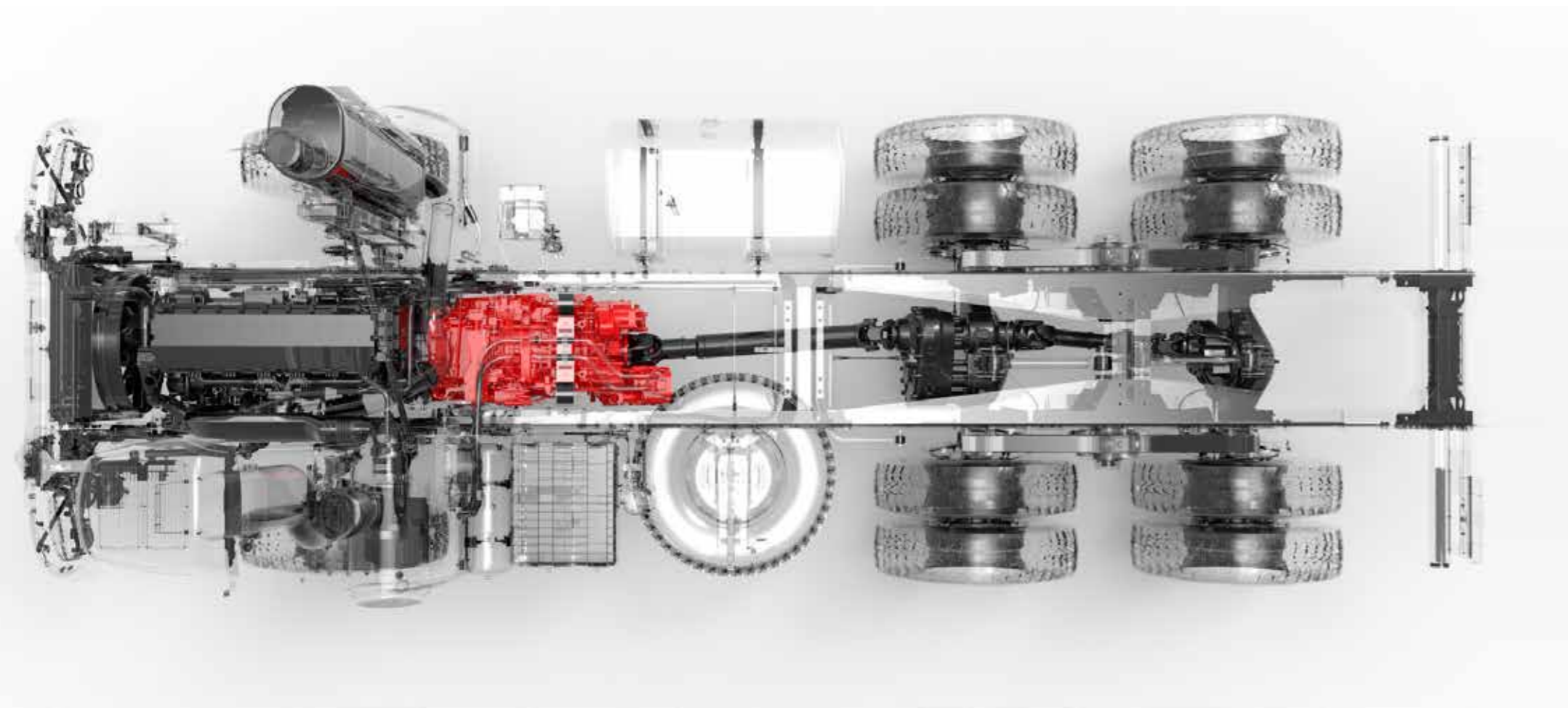


# HIGH PERFORMANCE DRIVELINE



# GEARBOX

The driveline of the HD9 has been designed for the most demanding and arduous tasks. Astra is always your 'working hard' Partner featuring the following wide range of transmission solutions in order to satisfy every requirement with the most adequate product:

- The strong and reliable **Manual gearbox**, with its 16 synchronized gears, is the perfect ally to face even the heaviest off road missions. With the pneumatic shifting assistance, the driver can select the optimal gear quickly and with low expenditure of energy. The light weight of the gearbox allows higher payload capacity and the integrated retarder (optional) improves the deceleration, preserves the brakes and increases safety.

- The **Automated gearbox**, with its 16 fine-tuned gears, is the perfect choice when reduced cost of exercise and high driving comfort are needed. The electronic control unit ensures an optimal communication among the engine, clutch and gearbox, preserving the entire driveline, extending the

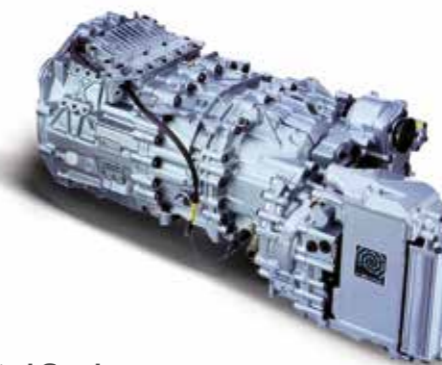
life of the components and reducing the fuel consumption. The additional integrated retarder (optional) is also available to assist the driver in the hardest off road missions.

- The **Automatic gearbox**, with 7 forward gears is ideal when top performance is required for heavy haulage and extreme off-road conditions. The hydraulic converter allows flexible engine/transmission connection for an uninterrupted engine power to the wheels, which means superior acceleration and smooth drive, effortless shifting and precise traction control, even in harsh or rugged conditions.

- The **Manual gearbox with torque converter (only Euro3)**, is suitable for particularly heavy tasks, such as large cranes or heavy haulage tractors with extreme total combinations or whenever there is difficult terrain that demands everything from the driver and the vehicle. Launching and maneuvering are performed in a wear-free manner by the torque converter.



**Manual Gearbox**  
image rendering



**Automated Gearbox**  
image rendering



**Manual Gearbox with torque converter**  
image rendering



**Automatic Gearbox**  
image rendering