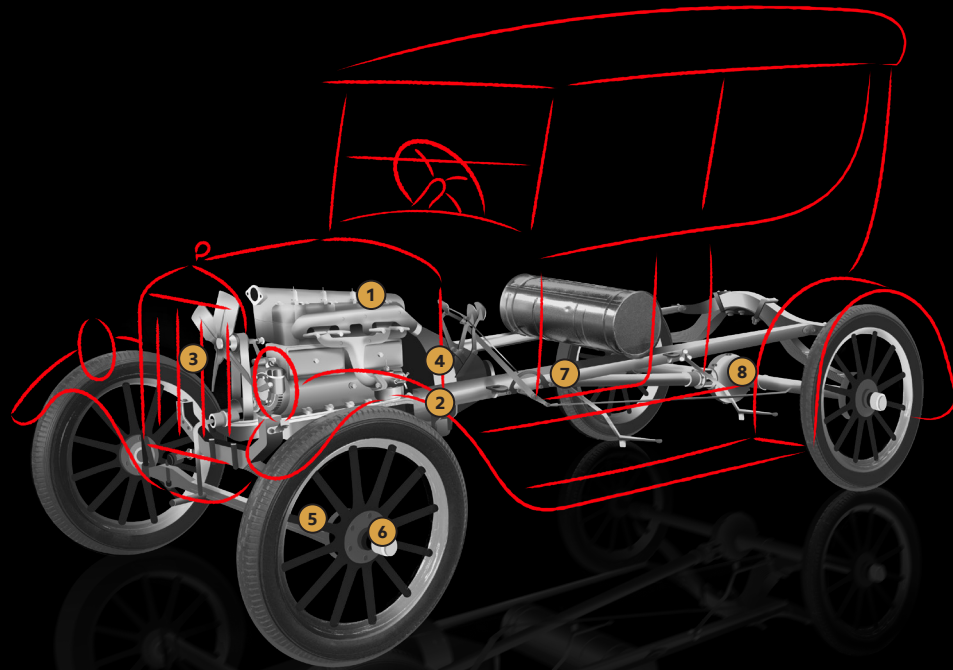


# Then and now: Mobil Delvac™ lubricants in diesel engines

This visual schematic showcases technological evolution over the last 100 years and the role Mobil Delvac™ lubricants have had in helping keep engines running from 1925 to today.



## 1925 Engine

- 1 Engine**

Early internal combustion engines often used an inline four-cylinder engine and used a carburetor to mix air and fuel. The engine was lubricated with oil to prevent overheating and wear and tear in the engine's moving parts.
- 2 Clutch throw-out bearings**

Clutch throw-out bearings at this time were round, flat and housed inside clutch assembly, between the transmission and clutch pressure plate. Regular lubrication was essential to reduce wear from heat and friction that could lead to a noisy clutch operation or clutch failure.
- 3 Engine radiator**

Engine radiators, commonly made from brass or copper, were typically designed in a honeycomb or tube-and-fin style and mounted in front of the engine with a fan for air circulation.
- 4 Transmission**

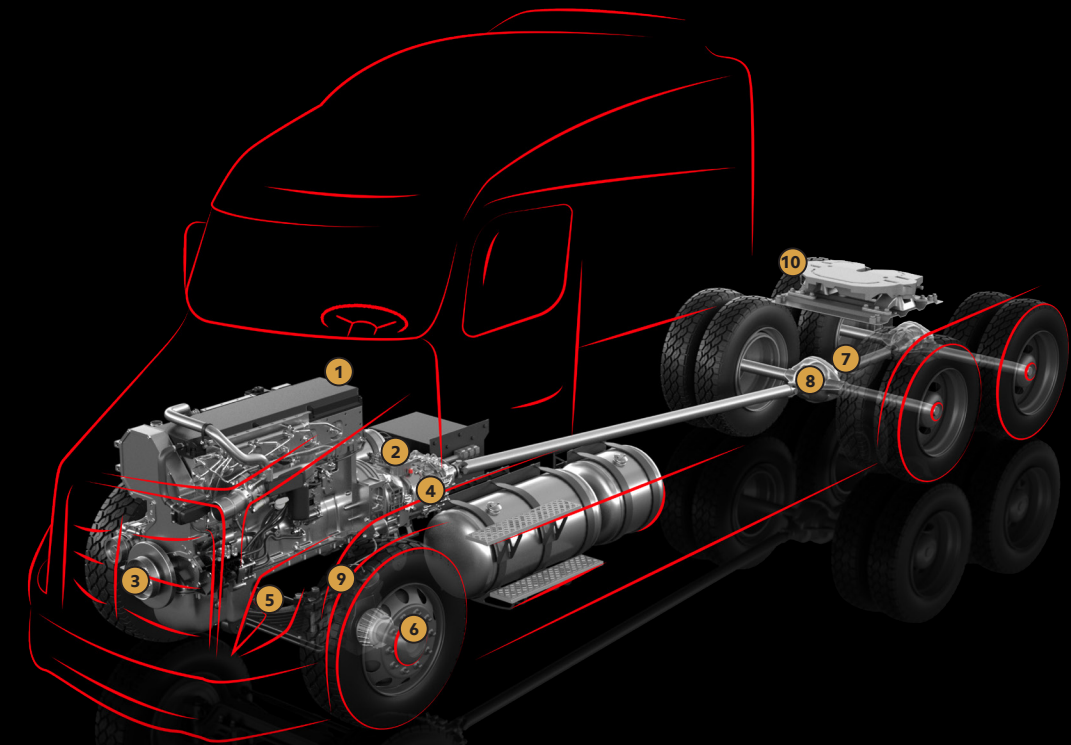
Transmissions shift power from the engine to the wheels of the vehicle, adjusting the engine's power to the desired speed by shifting gears. Lubrication is essential to the operation of a vehicle's transmission system because it reduces friction and wear between the moving parts.
- 5 Greasing points**

The chassis and its greasing points supported the vehicle's weight and housed the frame, suspension system, braking system, and wheels. With many of these parts constantly moving, consistent lubrication was important to reduce friction damage, wear and corrosion.
- 6 Steer axle wheel bearings**

Steer axle wheel bearings at this time were typically made from steel and followed a simple design to reduce friction between the wheel and the axle. Lubrication was essential to prevent overheating, protect against corrosion and seal out contaminants.
- 7 Universal Joints**

Universal joints were crucial components for connecting different parts of the drivetrain, they allowed for the transfer of power from the engine to the wheels while accommodating the changes in angle between the driveshaft and the wheels. Regular lubrication was required to prevent wear and maintain smooth operation.
- 8 Differential/Final Drives**

Differentials and the final drive ensures power is evenly distributed to the wheels. In 1925, both the differential and final drives were heavily reliant on lubrication to function properly, as they involved several moving parts that needed to operate smoothly and withstand wear.



## 2025 Engine

- 1 Engine**

The engine's primary role is power generation. Today's engines are still lubricated with oil to reduce friction and wear and extend your engine life.
- 2 Clutch throw-out bearings**

Clutch throw out bearings allow the driver to disconnect the engine from the transmission and change gears. Lubrication is still essential to protect against friction, heat and rust in this part.
- 3 Engine radiator**

The engine radiator cools the engine and ensures it operates at peak efficiency. The modern radiator still does not require lubrication but is important to extending your engine life.
- 4 Transmission**

Most modern vehicles have automatic transmissions, which shift gears automatically based on speed and engine load. Lubrication is essential to modern transmissions for them to run smoothly, reduce friction, and prevent wear and corrosion.
- 5 Greasing points**

In most modern vehicles, the chassis and its greasing points are sealed closed with permanent lubricating parts.
- 6 Steer axle wheel bearings**

Steer axle wheel bearings reduce friction and heat to ensure the wheel rotates smoothly. In many modern vehicles, the steer axle wheel bearings often were pre-lubricated and sealed at the factory. often were pre-lubri-cated and sealed at the factory.
- 7 Universal Joints**

Modern vehicles may use additional types of joints, such as constant velocity (CV) joints, which provide smoother power transfer at higher angles and speeds compared to the U-joints used in 1925 vehicles.
- 8 Differential/Final Drive**

Modern differentials and final drives have electric controls which allow vehicles to automatically adjust how power is shared amongst wheels. Lubrication is still essential to reduce friction, wear and tear, and ensure efficient power transmission.
- 9 Steering gearbox**

Steering gearboxes convert the steering wheels' rotational movement into the linear motion required to turn the wheels to steer the vehicle. Gearboxes still rely on lubrication to reduce wear and friction.
- 10 Fifth wheel**

Modern Fifth Wheels often include hydraulic or air-operated systems for easier coupling and uncoupling, as well as more sophisticated safety locks and adjustments. Lubrication is essential for the proper functioning of modern fifth-wheel hitches.