



# TATRA TRUCKS

Introduction of purely Czech  
manufacturer of unique trucks



## Car manufacturing factory **TATRA TRUCKS** - Czech legend

There are not many car manufacturers whose roots reach so far in the past, as is the case of TATRA brand. The Kopřivnice factory was founded in 1850 by Ignác Šustala with the intention of producing carriages and barouches. The company has grown with the development of technology and from constructing carriages and railway wagons developed the first car with an internal combustion engine in 1897. This famous Präsident car was the first car in then the Austro-Hungarian Empire and Kopřivnice factory not only became the first car manufacturing factory in Central Europe but is among the three oldest car manufacturers in the world.



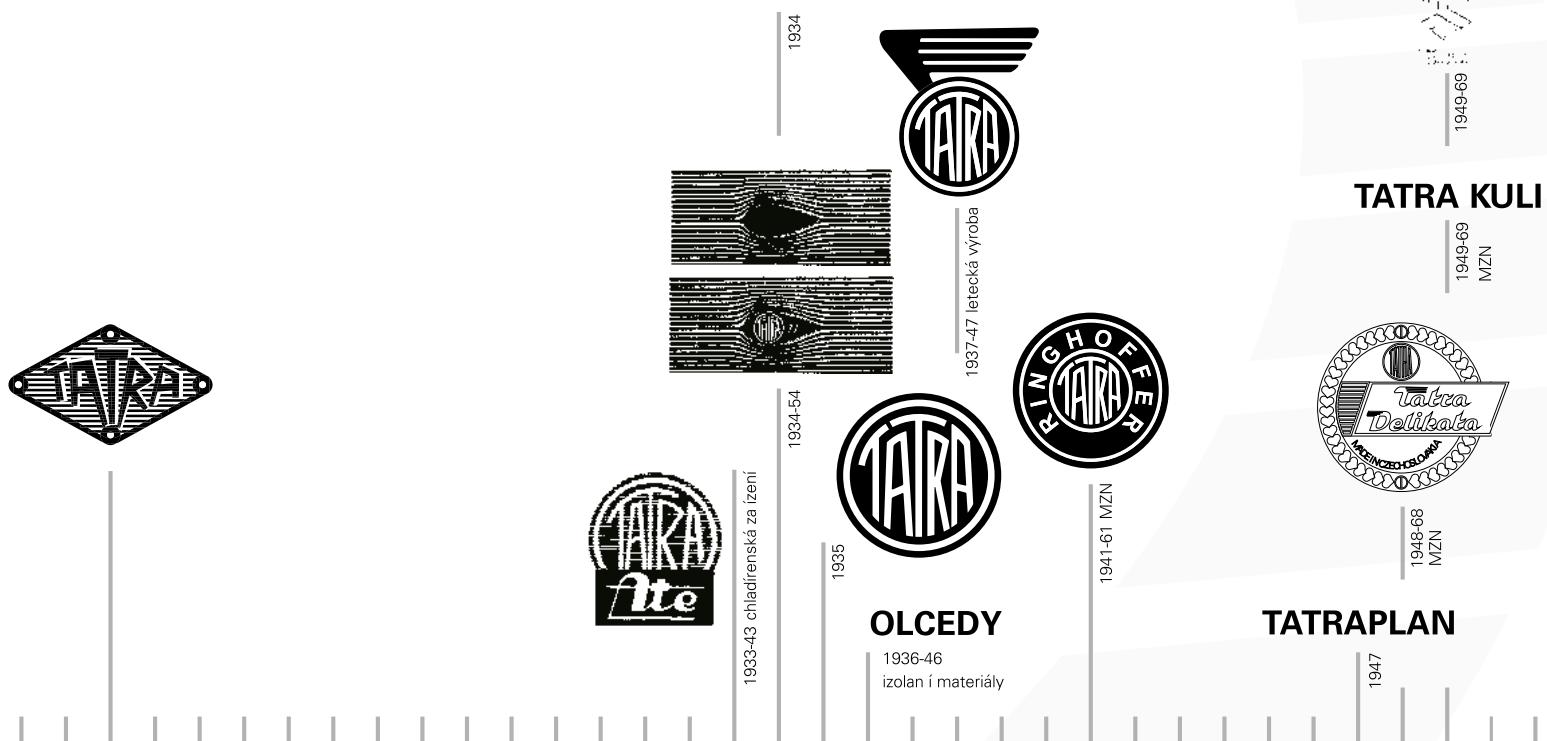
- **1850** / Ignác Šustala with his two apprentices started production of carriages and barouches in Kopřivnice (Nesselsdorf)
- **1882/1886** / Commencement of production of freight wagons and passenger railway carriages
- **1891** / The creation of Nesselsdorfer-Wagenbau-Fabriks Gesellschaft
- **1897** / Construction of the first passenger car NW PRÄSIDENT
- **1898** / Construction of the first truck
- **1903** / First small locomotive for field tracks
- **1906** / Ignition engine of own design with OHC distribution, half-shell combustion space
- **1907** / First omnibus - type L
- **1908** / First four-wheel drive tractor - type R (Jaguar)
- **1914** / First NW-TL2 and NW-TL4 series trucks
- **1915** / First passenger car with brakes on all four wheels - type U

# The first TATRA and Tatra Concept

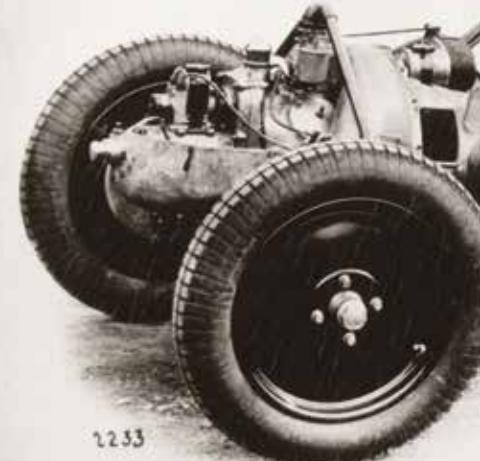
When Czechoslovakia was founded in 1918, the Kopřivnice company had began using its TATRA brand instead of its original designation NW on its cars.

One of the milestones of TATRA's history is 1923. A constructor Hans Ledvinka then breathed life into **the world's unique chassis system, now known as the „Tatra Concept“**, which is made up of a central load-carrying tube and swinging independent suspended half-axles which is typical for TATRA trucks today.

## TATRA

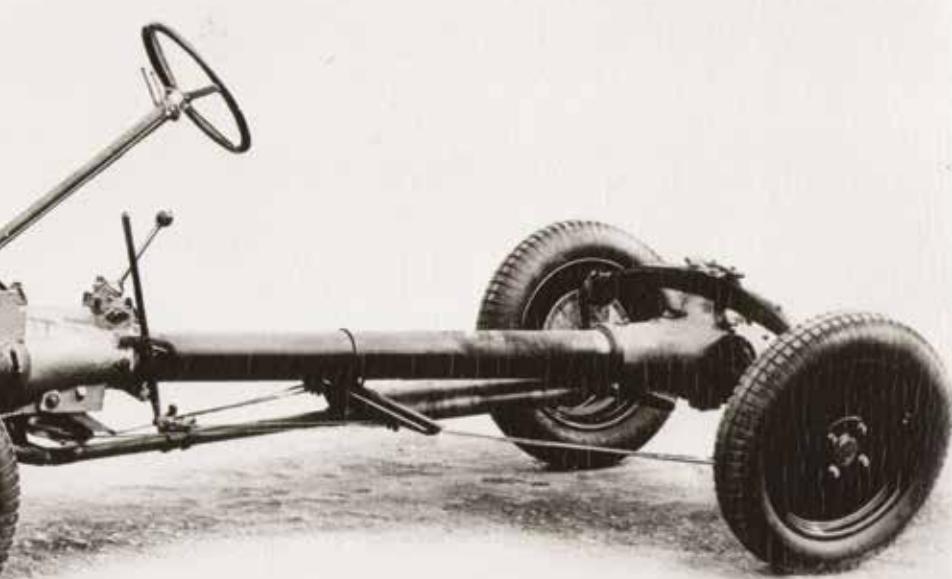
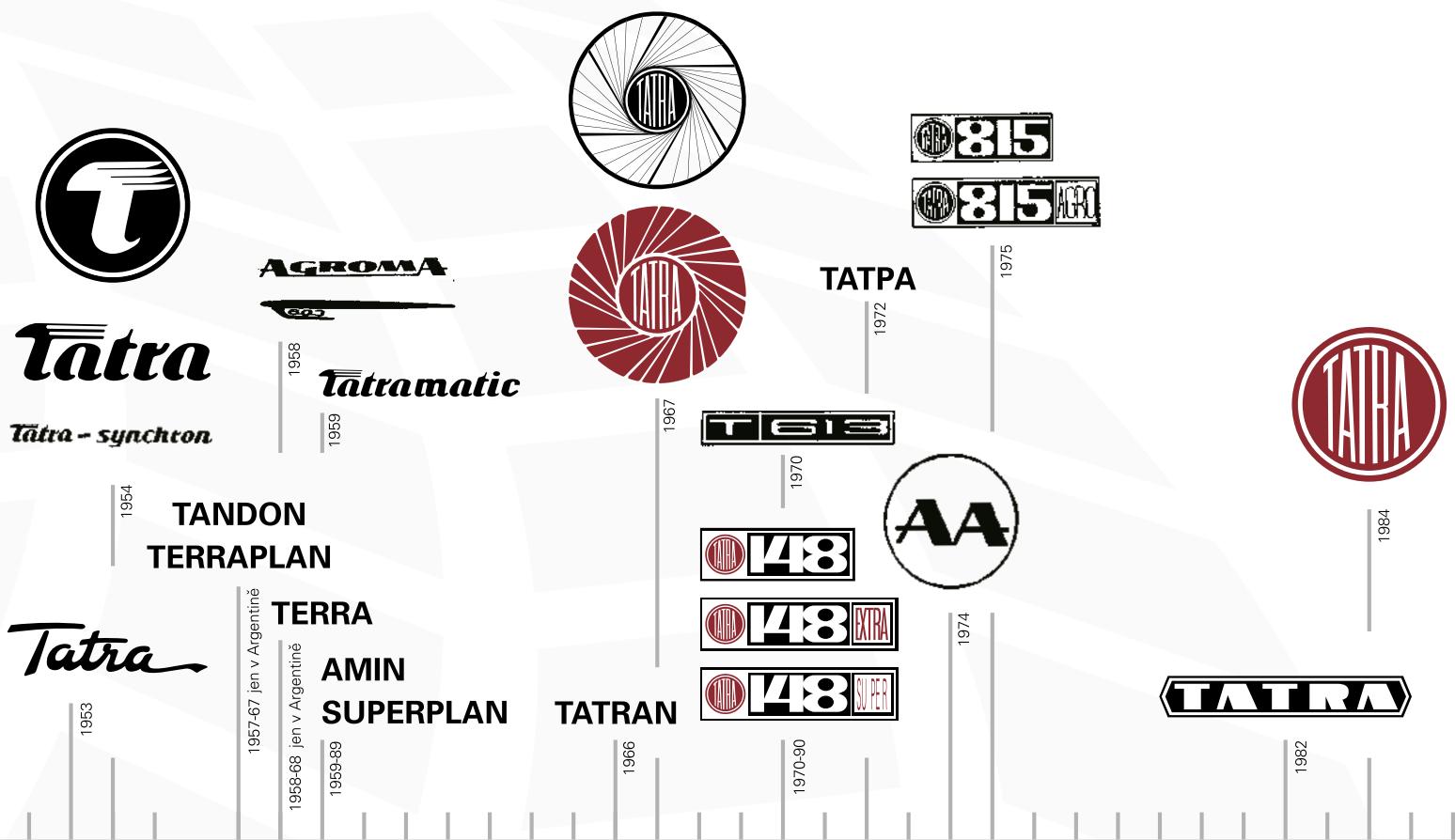


NW TL4



1233

- 1918 / Change of name to Kopřivnice car factory (Nesselsdorfer Wagenbau)
- 1919 / TATRA branding was first used on NW-TL4 trucks
- 1921 / Brand name NW replaced with TATRA brand
- 1923 / Creation of Tatra car concept (central load carrying tube incorporating the drive shaft and swinging half-axles of the chassis) - the constructor and designer Hans Ledvinka used it for the first time for the TATRA T 11
- 1924 / Tatra car concept was first applied to the heavy truck TATRA T 24
- 1929 / First air suspension of rear axles, TATRA T 24 type



## 1930s - 1940s

In the thirties, TATRA was the first in the world to produce and sell passenger cars with **aerodynamic bodywork**, these were the famous models T 77, T 87 and T 97. TATRA also had trucks in their portfolio, such as the very popular types T 27, T 82, T 85 or T 72. These together with other equipment were the backbone of the Czechoslovak army and were also used to a large extent in other countries. TATRA also produced vehicles for rail transport, for example the unique M290 Slovenská strela, which has survived until today, or the elegant sport aircraft such as T 101/201.

TATRA 77



M290 Slovenská strela



TATRA T101



- **1930** / Production of the most successful type of TATRA T 27 heavy-duty truck commences
- **1934** / Premiere of the TATRA T 77 passenger car, the first passenger car with an aerodynamic body produced on a production line
- **1934** / The Aircraft division is established in Vagónka TATRA Studénka
- **1935** / Special TATRA M290 express train also called Slovenská strela
- **1936** / New company name - Ringhoffer TATRA, a.s.

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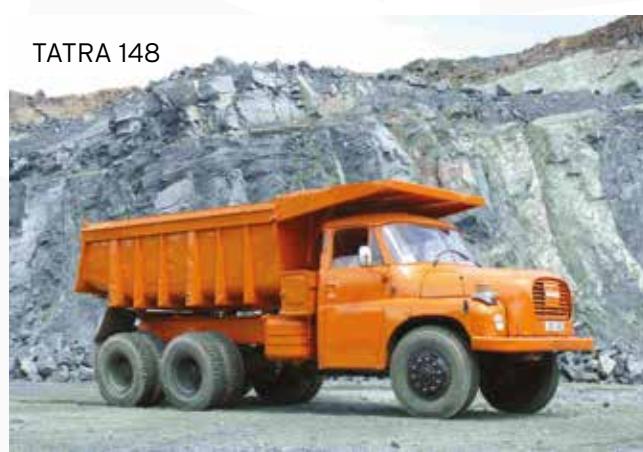
- **1942** / Production of TATRA T 111, a three-axle heavy duty vehicle with air-cooled diesel twelve-cylinder engine commences
- **1946** / Establishment of TATRA State Enterprise
- **1946** / Production of TATRA T 57 passenger cars and TATRA T 111 trucks re-commences
- **1947** / Prototype passenger car T 600 Tatraplán was introduced

# 1945 - present

After World War II, TATRA became the major manufacturer of heavy trucks for both civil and military use in Czechoslovakia and delivering tens of thousands of cars to countries of almost all continents. Very good reputation of the TATRA brand was spread to dozens of countries by famous T 111, T 138, T 148, T 813 or T 815 models. As well as the production of heavy trucks the manufacture of luxurious limousines with exceptional technical solutions and original bodyworks continued. This was primarily the T 600 Tatraplán, T 603 or T 613 models.

TATRA also built racing cars that were successful on many racing tracks. Most notable was the T 607 Monopost built according to the specifications applicable to F1, T 602 Sport or T 605 cars.

In 1998 the production of passenger cars ceased and since then the company has been focusing exclusively on trucks and special vehicles for the civilian market and the army. Since the 1980s TATRA special racing trucks have been participating in prestigious long distance competitions such as the Dakar Rally, the Silk Way Rally or the Africa Eco Race.



- **1951** / Production of railway wagons ceased, specialization only in automotive production
- **1956** / Torsion bars for front axle suspension were first used
- **1956** / TATRA T 603 passenger car started to be produced on a production line
- **1959** / TATRA T 138 truck started to be produced on a production line

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- **1968** / TATRA T 813 started to be produced on a production line
- **1968** / Construction of the factory test polygon started (various phases lasted until the 1990s)

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- **1970** / TATRA T 148 started to be produced on a production line
- **1974** / TATRA T 613 started to be produced on a production line
- **1975** / Production of TATRA T 603 passenger cars ceased

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- **1982** / The one hundred thousandth TATRA T 148 truck was manufactured
- **1983** / TATRA T 815 started to be produced on a production line

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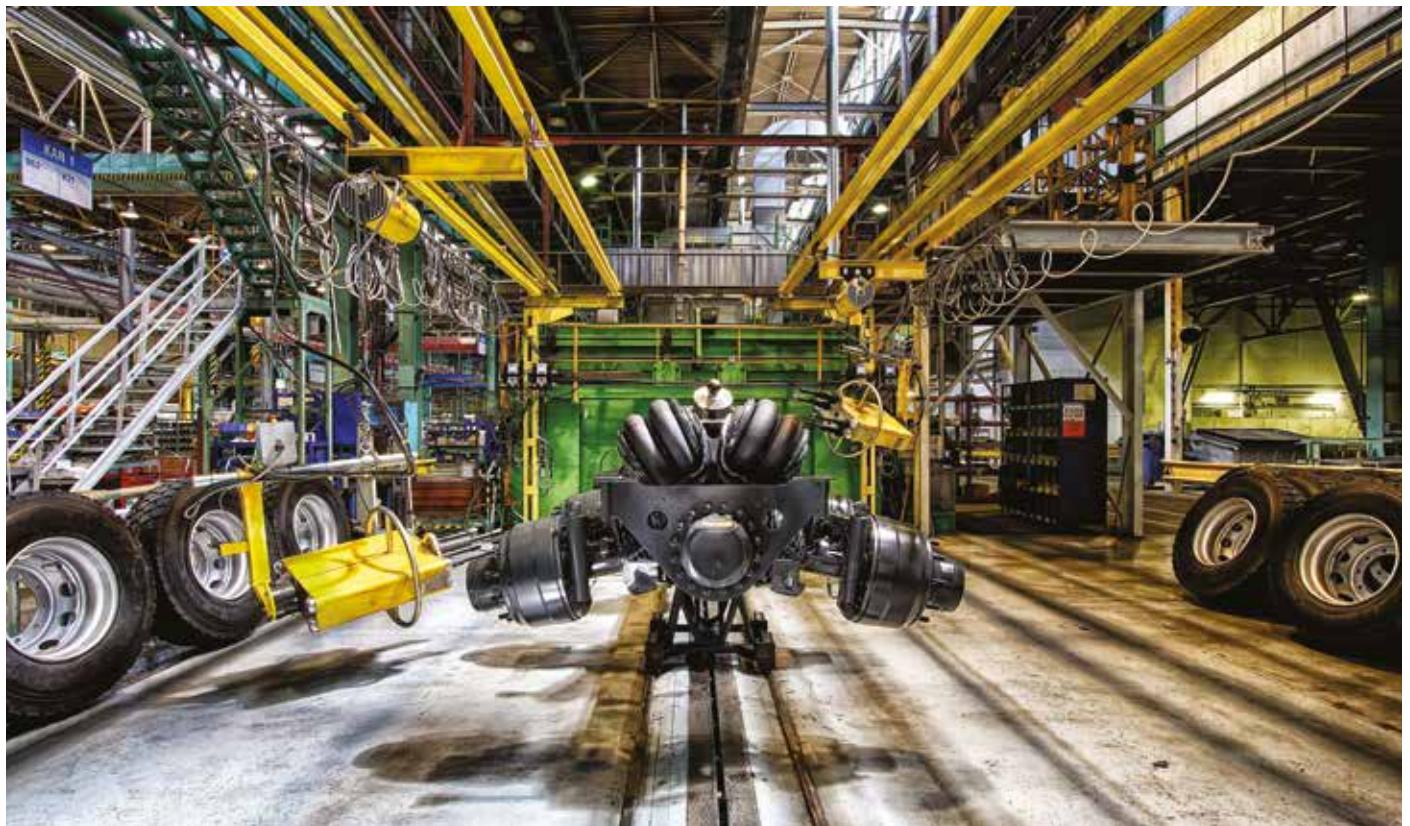
- **1992** / Establishment of TATRA, a.s.
- **1997** / Model TATRA T 815-2 modernized and renamed to TATRA TERRN°1
- **1997** / Production of the combined rear wheel suspension system on a production line - KING FRAME
- **1997** / Start of the production of bonnets for heavy trucks TATRA T 163 (JAMAL)
- **1997** / Production of passenger cars ceased, the last modification of TATRA T 700
- **1999** / Specialized trucks TATRA T 815 ARMAX model series introduced
- **1999** / Specialized trucks TATRA T 816 FORCE model series introduced

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- **2000** / Air-cooled engine of own construction conforming to the Euro 3 emission specification
- **2006** / Own engine with emission specification Euro 4 SCR
- **2006** / Presentation of the TATRA T 810 type to the Army of the Czech Republic
- **2007** / Production of TATRA T 815-7 FORCE with newly developed cab started on a production line
- **2008** / TATRA developed the world's only air-cooled V8 engine conforming to the Euro 5 SCR emission spec.
- **2010** / A semi-automatic TATRA-Norgren shift gearshift system developed
- **2010** / The first civil versions of TATRA T 810 and T 815-7 were produced
- **2010** / Facelift of TATRA TERRN°1 model series
- **2011** / The new TATRA PHOENIX range introduced, a collaboration with DAF launched
- **2013** / Changing the ownership structure and starting a comprehensive restructuring of the company. There is a change of business name to TATRA TRUCKS a.s. and the economic stabilization of the company, the car manufacturer becomes again a Czech owned company.
- **2015** / Production of the TATRA PHOENIX EURO 6 series starts
- **2015** / The TITUS armored vehicle which was developed in cooperation with the French Nexter Systems Corporation was introduced
- **2017** / Presentation and launch ceremony of the limited edition of TATRA PHOENIX EURO 6 PRÄSIDENT to mark the 120th anniversary of the start of motor vehicle production in Kopřivnice
- **2017** / Delivery of the one thousandth TATRA PHOENIX series truck to the customer
- **2018** / Introduction of the new TATRA TERRA range and the modernized TATRA FORCE range

# Current production

In the vast majority of mobile platform models the current production program uses the original Tatra concept which is combined with specific features that are characteristic of individual series and customer sectors. In our range customers can find configurations where the front drive disengages as standard - 4x4, 6x6, 8x8, 8x6, 10x10, 10x8, 12x12, 12x10, 12x8. Multi-axle chassis can be supplied with rear axles steering.



The backbone of the current production program is the TATRA PHOENIX civil model range, based on strategic cooperation with DAF TRUCKS N.V., a Dutch truck manufacturer with a leading position in the European market. For this model they deliver comfortable ergonomic cabs and powerful and economical PACCAR MX engines. Cooperation with DAF TRUCKS started in 2011.

Special purpose vehicles - fire and military vehicles are made up of the FORCE and TERRA series, an important and proven model for military logistics is the TATRA TACTIC.

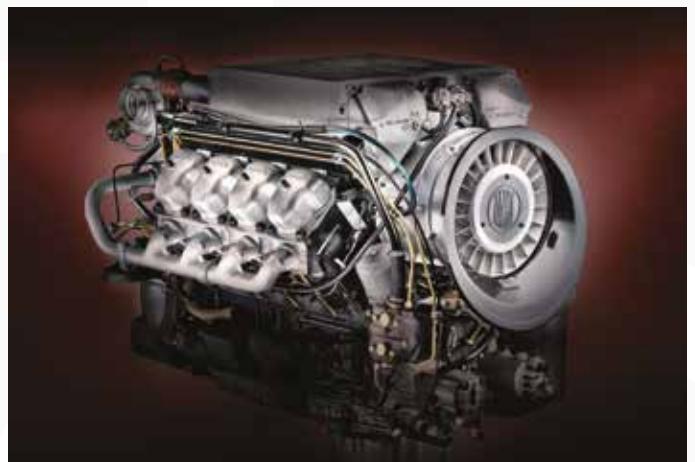
## TATRA engine

It is an air-cooled direct-injection 8-cylinder diesel engine with 12.7 litre displacement cylinders in a V formation (displacement angle of 90 degrees), turbo charged by a turbocharger and equipped with an intercooler located directly above the engine.

The engine is equipped with a mechanically controlled in-line injection pump. Its roller crankshaft bolted together from individual segments belong to unique technical solutions.

The engine is offered in Euro 2 to Euro 5 emissions specifications. To meet stringent limits of pollutants, the SCR selective catalytic reduction system is used, when an oxidizing agent known as AdBlue is injected into the exhaust tract.

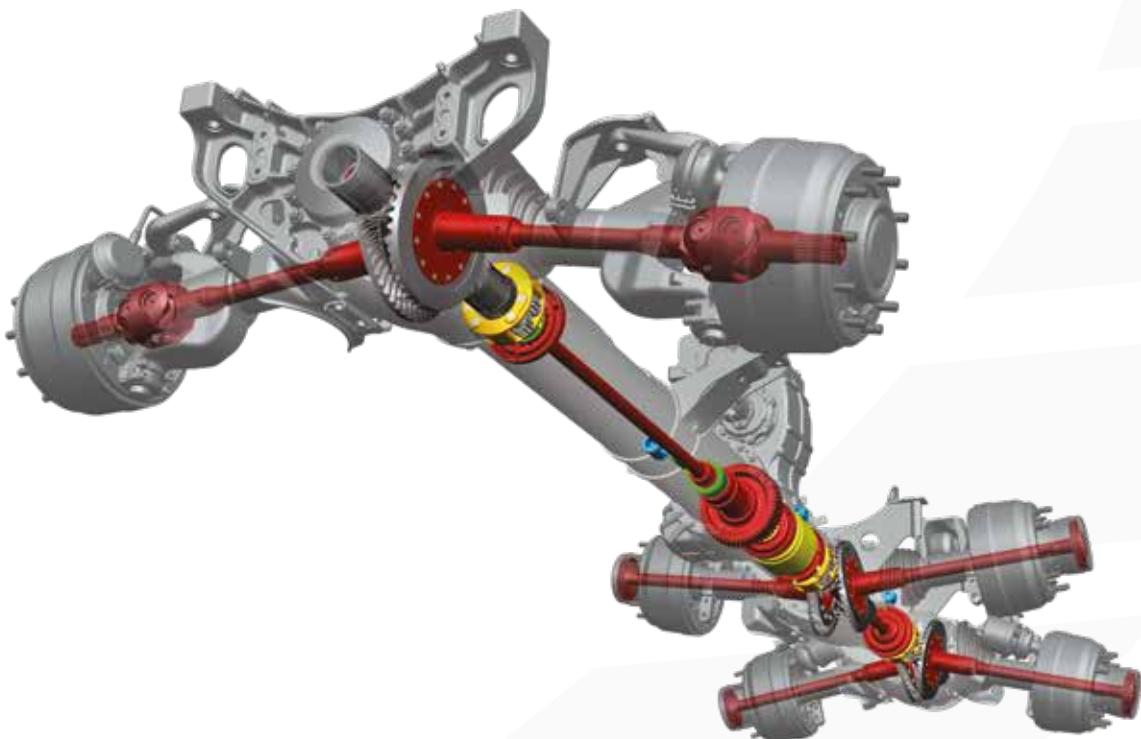
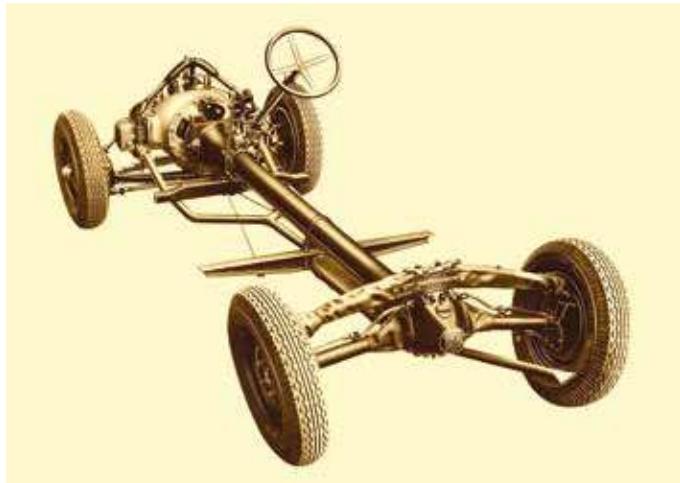
The power output of the original TATRA air cooled engines is in the range of 230 kW - 325 kW. The advantage of TATRA engines is the absence of complex electronic control and easy maintenance and serviceability.



# Tatra Concept

The unique chassis concept that was designed in the 1920s and has not yet been surpassed. The principle is the use of a central load-carrying tube and axles with independently hinged swing half axles bolted together into one piece.

Over the years, this so-called „Tatra vehicle concept“ has led to today's original solution which gives TATRA trucks the **exceptional ability to pass through even the most challenging terrain.**



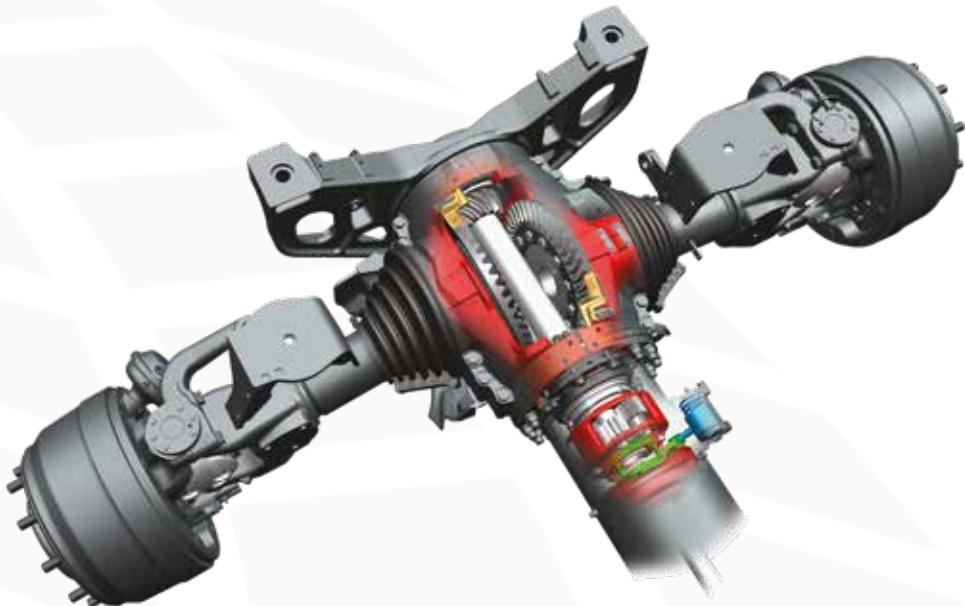
## Central load-carrying tube

- High torsional and bending rigidity protects the bodywork from transmitted loads
- Modular system allows the build of 2, 3, 4, 5 and multi-axle vehicles with all-axle drive
- The drive shafts are placed in the bearing tube and are therefore protected from external influences
- Thanks to this, we can offer high durability and low service costs

# Axles

The TATRA rear axles are always powered and always fitted with caps in their basic version. The front axle drive is standardly attached and can be used when needed. A pair of driving wheel discs (one for each half-axle) and a pair of pinion gears transmitting torque from the differential are mounted within the axle box. This is located outside the axle in the central load-carrying tube unlike the classic axle solutions with a conical differential called the crown or cylindrical type. The interior of the box is adapted for the swing of the half-axle.

The axles are fitted with either air drum brakes supplied with Perrot wedge openers or disc brakes on the front axle wheels as required by the customer. The wheels are also equipped with sensors for ABS assembly.



## Benefits of Tatra Concept

- designed for difficult terrain conditions
- high passage through terrain
- high driving comfort
- high transport speed in challenging terrain
- high stability of the vehicle while driving in bends and on slopes
- minimal maintenance and minimal damage to the drive
- high rigidity of chassis with central load-carrying tube



# TATRA PHOENIX EURO6





# TATRA FORCE



**TATRA  
FORCE**

**TATRA  
FORCE**



**TATRA  
TACTIC**



**TATRA**  
**TAKES YOU**  
**FURTHER**



**TATRA TRUCKS a.s.**  
Areál Tatry 1450/1, 742 21 Kopřivnice  
Czech Republic

[www.tatratrucks.com](http://www.tatratrucks.com)