

History of biodiesel

Adapted from the Biorenewables Curriculum Modules,
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biotech.iastate.edu/biorenewables-curriculum-modules





Rudolf Diesel

- Lived 1858–1913
- German inventor and mechanical engineer
- Developed the first engine to run on peanut oil
- Introduced it at World's Exhibition in Paris in 1900

Rudolf Diesel

- Believed the utilization of a biomass fuel to be the future of his engine
- Wanted to provide farmers the opportunity to produce their own fuel
- Died in 1913, before his vision of a vegetable oil-powered engine was realized

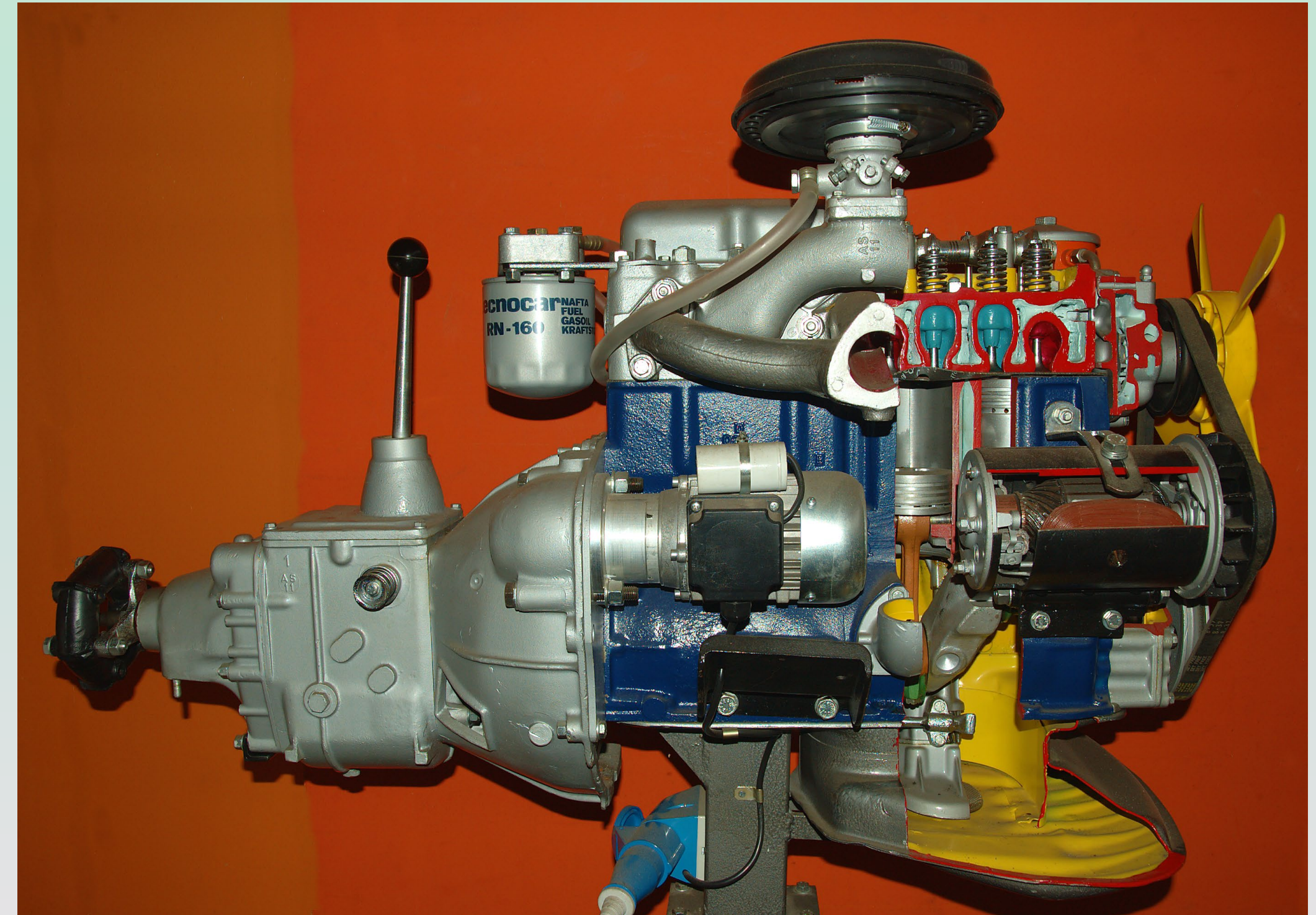
What happened?

- The petroleum industry rapidly developed and produced a cheap by-product called “diesel fuel” that would power a modified “diesel engine.”
- Clean vegetable oil was forgotten as a renewable source of power.



After World War 2

- Modern diesel engines run on a less viscous (easier flowing) fuel than straight vegetable oil.
- However, in times of fuel shortages, cars and trucks were successfully run on preheated peanut oil and animal fat.



Energy crisis

- In the mid 1970s, fuel shortages spurred interest in diversifying fuel resources.
- Biodiesel as fatty esters was developed as an alternative to petroleum diesel.



Climate change

- In the 1990s, interest rose due to the pollution reduction benefits coming from the use of biodiesel.
- Today's diesel engines require a clean-burning, stable fuel that will operate under a variety of conditions.
- The resurgence of biodiesel is affected by legislation and regulations in all countries: promoting the agricultural economy, national security, and reducing climate pollution/change.



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