



Technical report of scientific research work

Independent laboratory at one of the best Russian
State Universities tested iMagnet P14



**PETER THE GREAT ST. PETERSBURG
STATE NATIONAL RESEARCH
POLYTECHNIC UNIVERSITY**

1899

About research

Equipment and methods of work processes in engine, developed at the Department of Engineering Power Units and Vehicles of St. Petersburg Peter the Great Polytechnic University, were used.

In 2016 Polytechnic University entered the rating of the best universities in Europe by the British edition of Times Higher Education, and it took the 2nd place in the rating of Russian universities.

The test was performed using the Castrol 0w20 (base oil) and with the addition of a iMagnet P14 at a concentration of 2.5% into it.

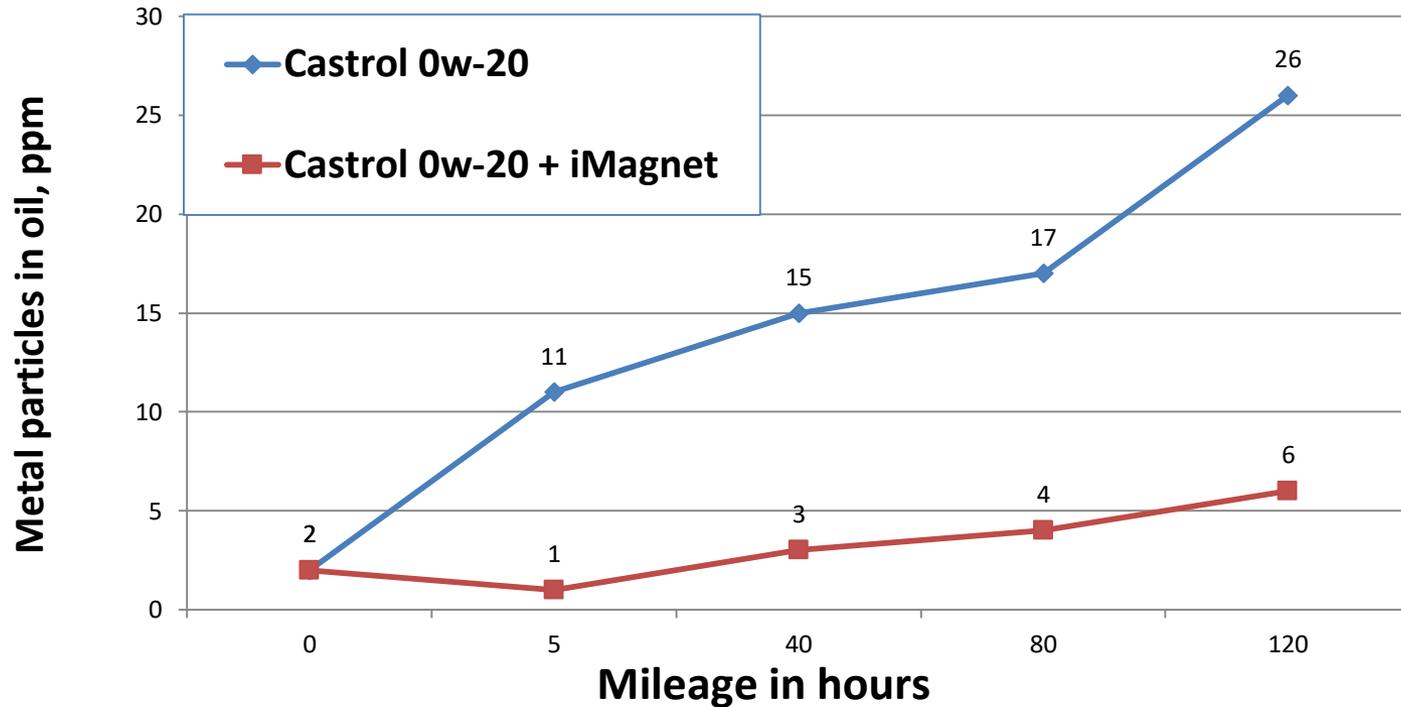


Engine stand



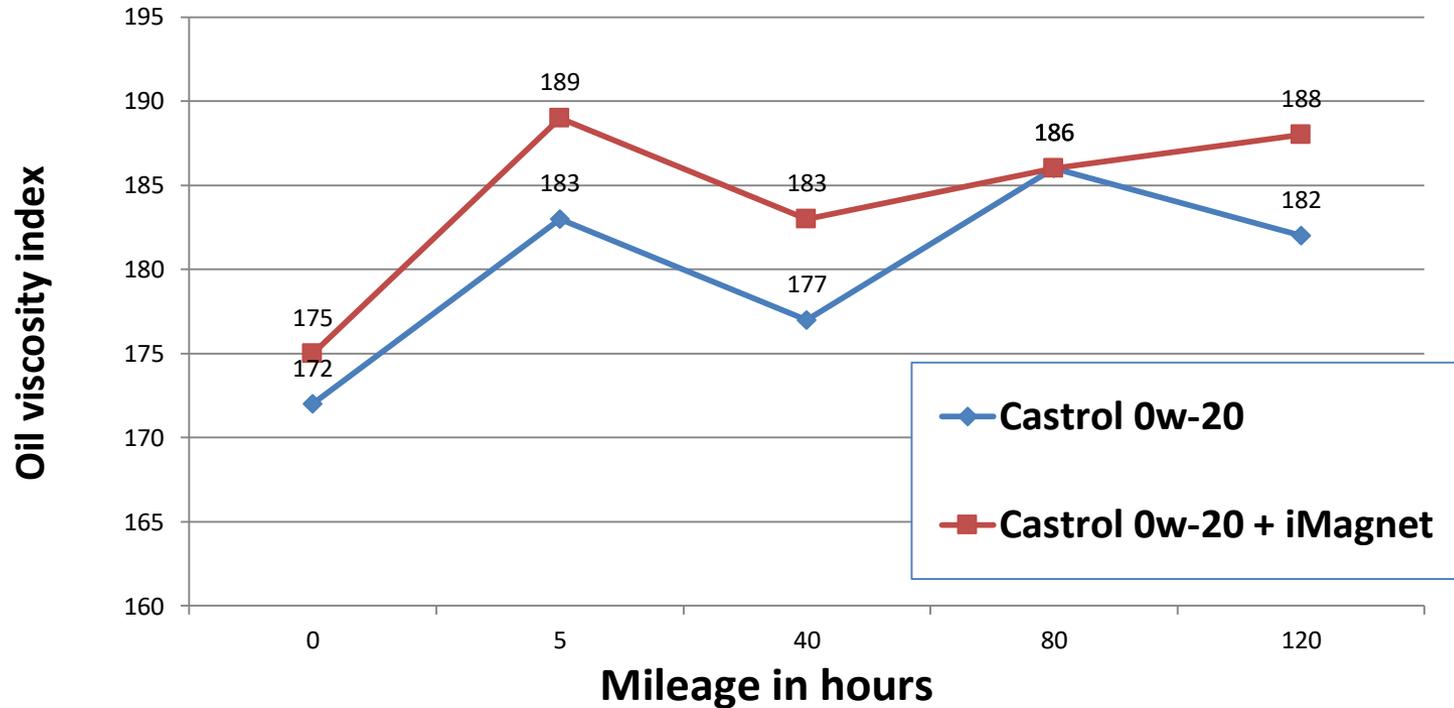
**Stand remote control.
Fuel flowmeter and gas analyzer**

Engine wear



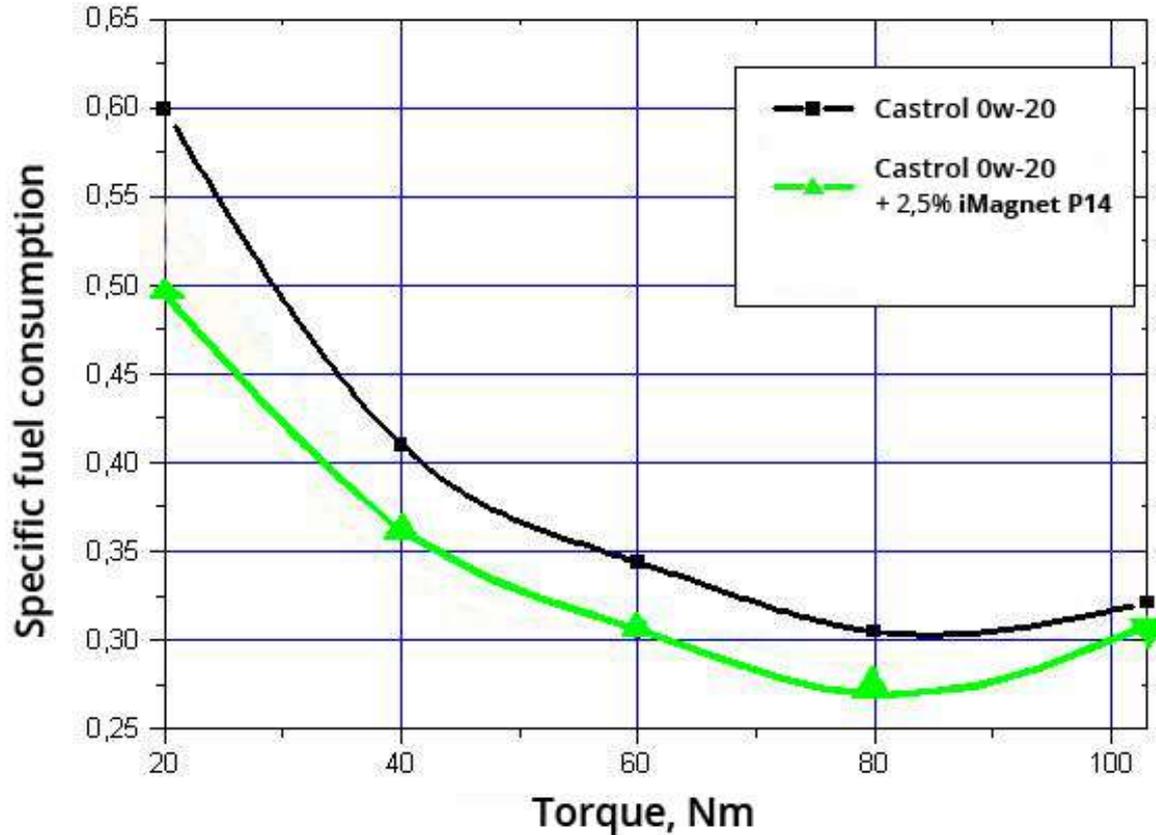
Reducing of engine wear was proved and the contamination of metal particles was reduced **by 5 times** during using of **iMagnet P14**.

Oil viscosity index



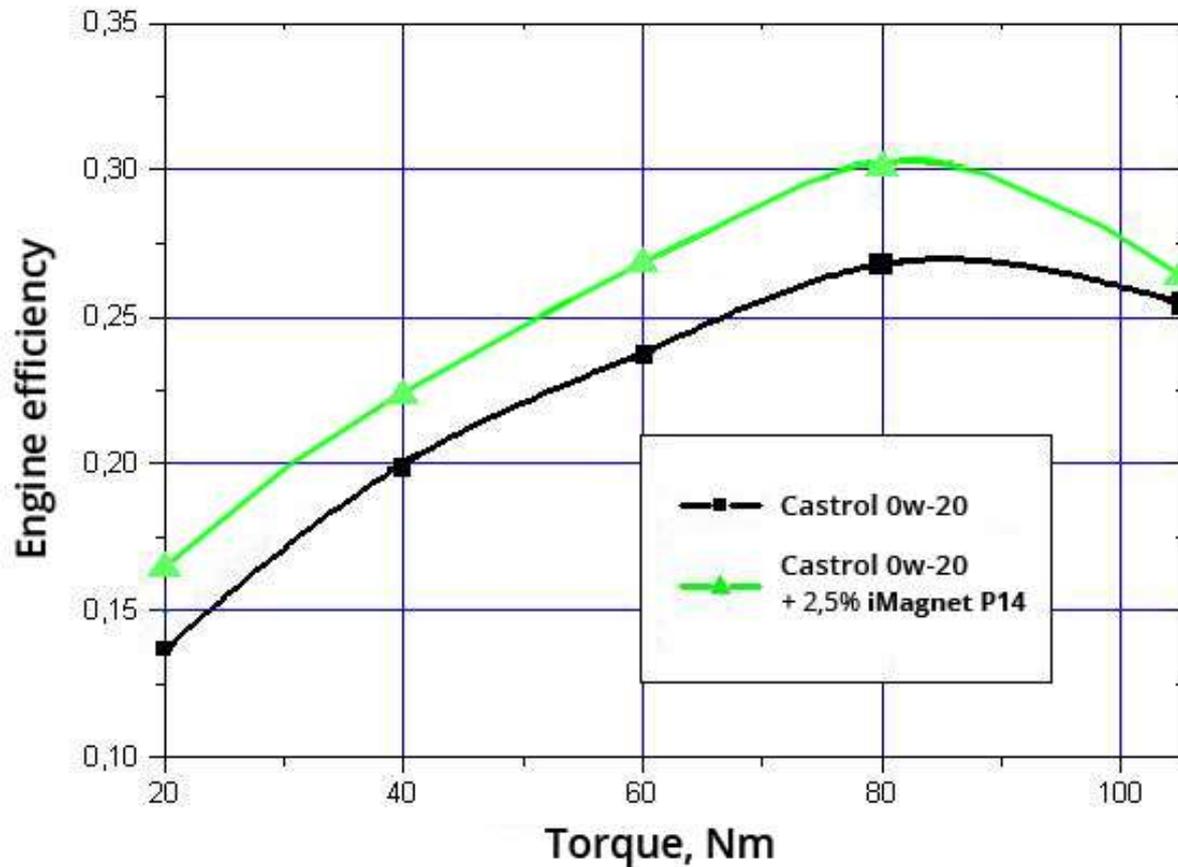
The oil viscosity index is increased with adding of iMagnet P14 which increases the protection of the engine over a wide range of operating conditions. Including extreme conditions (cold start and high rpm).

Fuel consumption



Fuel consumption reduced by **8-11,9%** (depending on the operating mode) due to adding of **iMagnet P14** into **Castrol Edge 0w-20** base oil.

Engine efficiency



During the test, engine efficiency was increased by **10-12%** with the addition of **iMagnet P14** in comparison with the base oil.

Deposits and pollution



Castrol 0W-20 - Base oil



Castrol 0W-20 + iMagnet P14

Engine pistons after **120 hours** of operating
Flushing additives in **iMagnet P14** allowed to reduce engine pollution and
formation of deposits.

Test results

The research confirmed the effectiveness of using **iMagnet P14** in engine, especially during operating in extreme conditions.

Benefits of using iMagnet:

- The decrease of the wear of parts and the amount of metal particles in oil is reduced by 5 times.
 - Fuel consumption decreased by **11,9%**
 - Engine efficiency increased by **11,4%**
 - Deposits for 120 hours of engine operating (~12,000 km of running), due to the detergent additives, significantly decreased in comparison with the base oil
 - The viscosity index has risen - the cold start of the engine has become easier, and the viscosity is stable over the entire operating temperature range
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