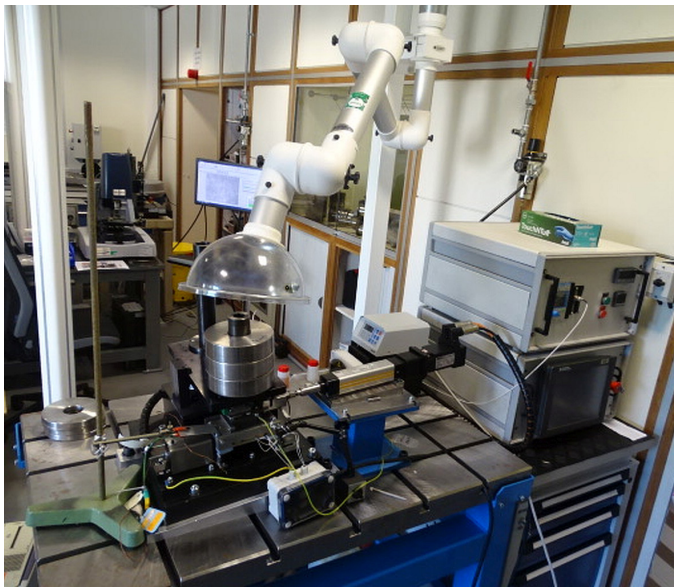


Renault Duplication of a wear test bench

Cetim has duplicated a test bench for the characterisation of friction and wear phenomena that was initially developed by the Renault Technocentre. The duplicated test bench uses the same measurement methodology and delivers identical results.



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OUR CUSTOMER

Corporate name
Groupe Renault

Turnover
EUR 55,537 million in 2019

Workforce
Approximately 180,000
employees in 39 countries

Business activity
Car manufacturer

Production
3.8 million passenger cars and
utility vehicles sold worldwide
in 2019

Duplicating a test bench is far more complex than simply copying and pasting. It is already highly challenging to create a clone of a bench using the identical components. The task becomes even more arduous when one of the main equipment items such as an actuator is changed. This is further compounded if it involves a test bench used to characterise friction and wear phenomena where a large number of the parameters affect the end results. Cetim rose to this challenge for Renault. The goal was to duplicate a wear test bench for a key gearbox component designed by the manufacturer in order to subsequently carry

out tests on behalf of the manufacturers of gearbox synchronisers and lubricant suppliers.

Close cooperation

“We developed a test methodology specifically suited to our needs. We supplied Cetim with the drawings of our bench and its technical characteristics. We also provided their engineers with all the information needed to understand and control the intricacies of our setup, the measuring methods and the process for exploiting the results. Their mission was to design a bench providing the same results as ours”, disclosed Marc Jousset, Tribologist at Renault. Renault and Cetim’s experts had to work closely together to understand the causes of the

initially noted measurement differences. When it comes to characterising wear phenomena of a few dozen micrometres, subtle details and complex adjustments play a critical role: preparing and measuring the surface condition of the samples, lubricant supply and disposal, etc. This tedious and time-consuming work has paid off. *“Our engineering departments, the manufacturers of synchronisers and the lubricant suppliers can now carry out their tests at Cetim on a bench that we have approved”,* explained Marc Jousset.

Cetim's asset



Cetim has a wide range of standard tribometers and test benches developed in house based on tribological features. They are backed by sound experience in the design and implementation of testing methods that meet specific requirements and high expertise in the analysis of results.