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PARAMETERS THAT INFLUENCE THE MEASUREMENT WITH A SIDESLIP TESTER

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ABSTRACT -

This paper presents a theoretical and experimental work to study those parameters that can have an influence on the measurement result with a sideslip tester, in the context of Periodic Motor Vehicle Inspections (PMVI). The first step of this work was to analyze the mechanisms of production of the lateral displacement at the sideslip tester plate. Besides the displacement of the plate, the trajectories of the two wheels were registered, with respect to a fixed reference, and to the sideslip plate. Then, a series of test measurements was made with different vehicles, where a number of parameters were studied (i.e. tyre pressure, vertical load, etc.).

The conclusions obtained provide a good knowledge about what represents exactly the lateral displacement of the plate, which for the moment is not present in the bibliography, and may allow developing a clear criterion for the PMVI operators. The sideslip tester shows to be a robust method to measure mainly the toe-in angle, as there is little influence from the other various parameters that could affect the results.