

Abstract

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Comparison of Performance between several Vehicle Windshield Defrosting and Demisting Mechanisms

The safety and comfort aspects of passenger cars are significant sales argument and have become a topic of rising importance during the development process of a new car. The objective of this study is to compare the performance of several current model vehicles, highlight the drawbacks of current defrosting/demisting systems and point the way to improved passive mechanisms. The investigation is experimental. The experiments are carried out using full-scale current vehicle models. The results show that the current designs of the defroster nozzle give maximum airflow rates in the vicinity of the lower part of the windshield, which decrease gradually towards the upper parts of the windshield. This hinders and limits the vision of the driver, particularly at the top of the windshield, which can be uncomfortable and indeed dangerous.