

An Experimental Study of Automotive Drum Brake Vibrations

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Abstract : The present paper investigates experimentally the effect coefficient of friction at different operation conditions on the variation of the brake temperature, brake force, and brake vibration with the braking time. All the experimental tests were carried out using brake dynamometer which designed and constructed in Vehicle Dynamic Laboratory. The results indicate that the brake temperature increases with the increase of the normal force and sliding speed especially with the increase of the braking time. The normal force has the effect on increasing the brake force. On the contrary, the vehicle speed has the effect on decreasing the brake force. Both the normal force and sliding speed affect the brake vibration according to the friction behavior.

Keywords : brake dynamometer, coefficient of friction, drum brake vibrations, friction behavior

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