Footbrake Pedal Force Measurement

Customer:

UK based automotive company

Loadcell:

F268-Z3503 2kN

Generic Type:

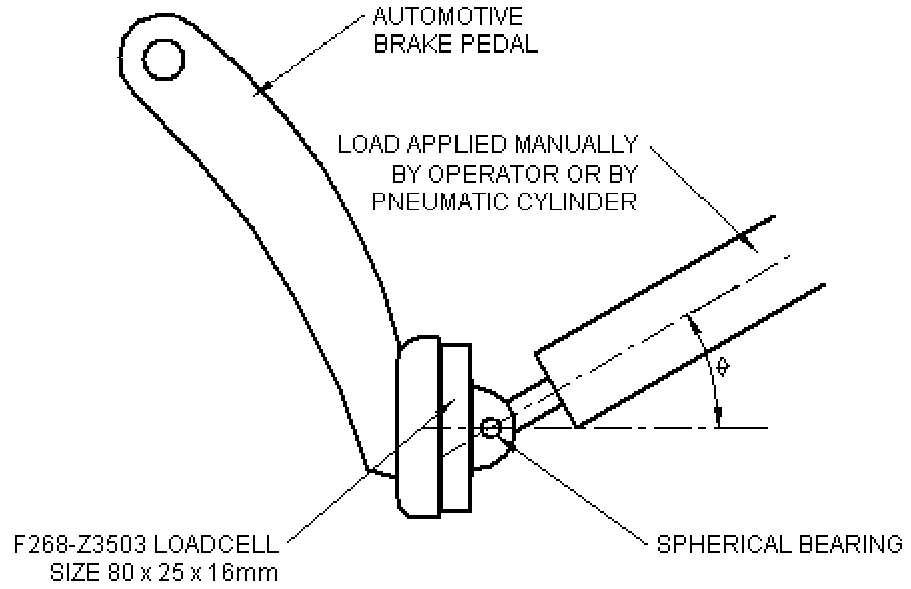
Shear beam

Special Features:

Extraneous force immunity

Project: A robotic actuator designed to replicate the action of a human foot on a brake pedal with the measurement of the force normal to a brake pedal required through the complete arc of pedal travel. The actuator applies a force via a universal joint to the loadcell. As the brake pedal rotates around its pivot, the angle at which the force is applied through the loadcell changes. This angle can be up to 40° dependant on the vehicle type.

The design used a double-ended shear beam of lightweight aluminium construction. Tests carried out by the customer showed errors at angles of up to 40° to be less than 5% of the applied load.



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