

Design of Break Pedal Assembly for Challenge X Chevy Equinox

Abstract

Torsion springs are used in a wide range of applications. A patented Compliant Iris has a number of beam elements that undergo large deformation as the tabs on the outside surface of the two rings are rotated relative to one another. The device offers a means to (a) store significant elastic energy per unit volume and (b) optimize torque as a function of angle. The goal of this project is to (i) design and fabricate next-generation torsion springs and (ii) optimize a manufacturing process to determine if the Iris is a marketable torsion spring.

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