Name(s)	Project Number
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Project Title

The Effect of the Mount Point of a Parachute on the Ride Height of an Acura RSX Land Speed Vehicle

Abstract

Objectives/Goals

The purpose of my experiment was to determine the best location for the mounting point of a parachute in a Landspeed racing configured Acura RSX. The best location would be determined by the least movement of the front and rear ride heights under parachute deployment.

Methods/Materials

I predicted that mount point three, the mount point that appeared to line up with the center of gravity, would have the least movement as measured by the ride height sensors. I tested my hypothesis by creating an adjustable parachute mount assembly and tested five different mount height points under parachute deployment at 100mph. The testing was conducted at the El Mirage Dry Lake Bed, 40 min from Victorville on Jan 5th and 18th.

Results

I found out that my hypothesis was correct; mount point three located 22.25 in (56.515cm) above the ground delivered the most stable results. Mount point three pulled straight through the center of gravity, so when the car unloaded, there was less of a weight transfer.

Conclusions/Discussion

I concluded that mount point three pulling through the center of gravity would unload the vehicle in such a way the ride heights remain constant. The parachute, being lined up with the center of gravity does not force the rear either up or down.

My findings can be applied directly to other Landspeed racing vehicles and in fact there are two other vehicles waiting to apply my results to their parachute mounts. The findings are also relevant to drag racing, especially the import drag scene that also use front wheel driven vehicles, similar to the RSX.

Summary Statement

My project investigates the change in ride height of an Acura RSX land speed vehicle as the parachute is pulled.

Help Received

My father drove the vehicle, Steve Davis fabricated the parachute mount device from my design