From: gmclist-bounces@temp.gmcnet.org on behalf of Charles Aulgur
To: GMCnet
Subject: [GMCnet] JUST WONDERING
Date: Tuesday, October 06, 2009 11:23:01 PM

Date: Tue, 06 Oct 2009 22:19:43 -0400
From: Ken Henderson <ken0henderson@gmail.com>

Huh?

The problem with the OEM system is the pole-vaulting about the center wheels under braking moments. Without that problem, the rear wheels would have no adverse reaction to braking. Braking would, in fact, counteract the moment generated by the CG.

With the reaction arms on the center wheels, pole-vaulting is eliminated. The rear wheels still generate no adverse moment and reaction arms might even be detrimental since they would eliminate the beneficial moment they contribute.

I doubt that any of us will ever agree except those few who draw and understand free body vector diagrams. Empirical data is the only way to satisfy skeptics.

Ken,

I don't often disagree with with what you have to say, but I don't agree with you statements relative to the rear wheel braking. When I first started this project I only considered the mid axle. When I installed my system on the mid axle I was very excited as it stopped the mid axle lifting the rear of the coach but I was totally surpassed that the rear wheel still slide almost as bad as it did before I modified the mid axle. After further evaluation of what is going with the rear wheels, and doing the vector analysis, I realized that braking torque on the rear axle is reacted by the torque generated by the rear tire friction with the road surface. The two torques have to be equal and opposite so fore the rear brake to generate torque, it has to push down on the suspension arm pen. It cannot lower the rear of the coach enough to equalize the two opposite torques around the rear axle so it starts taking weight off of the rear wheels until the two opposite torques are no longer balanced and that is when the rear tire starts screeching. Therefore, in my humble opinion, you gain more braking capability on the rear wheels with the torque reaction bar installed then you gain with the mid axle. With the total system installed, you gain approximately 50 % on the mid axle and 100 % on the real axle under maximum braking condition. If you look at my video frame-by-frame you can hear the rear tire screeching long before it is lifted off the ground. I would like to hear you analysis if you disagree.

Chuck

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