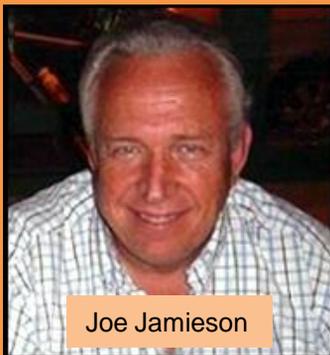


RVing with Mark Polk & friends

Towing a trailer that weighs twice as much as the tow vehicle requires proper equipment to do it safely. You are already at a disadvantage because the brakes on the



Joe Jamieson

trailer are electric drum brakes rather than disc brakes. In addition to brakes on the trailer and tow vehicle you need a properly sized & equipped truck, and the proper hitch-work.

I recently met someone as concerned about trailer towing safety as I am. He was not only concerned about it, he actually did something about it. His name is Joe Jamieson. Joe is a Federal Aviation Agency certified Airframe and Powerplant Mechanic, a former Air Force Pilot, a Federal Aviation Agency certified Air Transport Pilot and an Inventor and Industrialist, who focuses his efforts on enhancing the safety of transportation systems. From designing and manufacturing autopilot control systems for jet-powered helicopters, his inventions are aimed at keeping people safer when operating aircraft, vehicles and equipment.

Fortunately for RV owners his latest brainchild is the Automated Safety Hitch™ System for trailers.

This invention eliminates all the trouble, inconvenience and hazards of hitching up, driving and unhitching traditional gooseneck trailers, 5th wheel trailers and soon conventional trailers. Let's talk to Joe right now.



MP: Hi Joe. Thanks for joining me today and for the opportunity to sit down and talk about an important topic like trailer towing safety.

JJ: Hi Mark. Thank you, I appreciate you asking.

MP: I guess the first question would be what exactly is the Automated Safety Hitch?

JJ: The Automated Safety Hitch System is much more than a hitch. It is a system to eliminate the short comings of towing trailers in the back of pickup trucks and a smarter option for owners of long bed trucks, short bed trucks, lifted trucks, and SUVs to pull the safer and more stable 5th wheel and gooseneck trailers instead of bumper pull trailers. The Automated Safety Hitch System is not a trailer. It is classified as a lift or drop axle that better distributes the load of the vehicle.

When I first started to buy a gooseneck trailer, during 2003, I looked for structural soundness, accommodations and comfort.

After my first demonstration ride I added safety to my shopping list instead of assuming that the truck and trailer industries were addressing safety. During the demonstration ride, the truck in front of us had stopped short due to a vehicle pulling out in front of it. While it looked as though we had sufficient room to stop, with my foot applying steady pressure on the brake pedal, I sat there watching the back of the truck in front of us getting closer and closer until I had steered right to make use of the wide shoulder of the road and came to a stop well past the truck.

My next stop was checking with my automobile insurance company. There I found that they only cover the liability of pulling a trailer. In other words, my automobile insurance would only cover the damage done by the trailer to people and property if I had an accident or incident. The damage to the trailer would not be covered. When I went to the insurance agency that insured my horses, I was told that there were only insurance policies on the trailer if I financed it. However, the insurance would end when I paid off the note. Wanting to know why, I decided to find out.

With my Aerospace business, we had a number of large Insurance companies' flight departments as customers. Calls to the Chief Pilots, of two of these companies, yielded face to face meetings with their officials. Both meetings yielded essentially the same reasons not to insure these trailers. Their main reasons were:

- 1) There being a lack of training of the driver.
- 2) There is probably a lack of experience of the driver.
- 3) Their assessment of the trailer electric drum brakes.

- 4) Their belief that the electric drum brakes can be unreliable due to improper maintenance.
- 5) The geometry of the gooseneck trailer cutting to the inside of the turn.

Wanting to diversify my business from being so much aviation related and seeing that finding a solution to their concerns would fit our focus to make transportation systems safer, we decided to work on the problems.

When we went back to these insurance companies with The Automated Safety Hitch System we were congratulated for addressing all of their concerns. Even their concern of a lack of training of the driver. During the demonstrations, they saw that with The Automated Safety Hitch System, one can essentially just drive the truck normally with The Automated Safety Hitch System taking care of the braking and turning. The demonstrations of maneuverability and controllability were very much appreciated also. Two individuals of one group and one individual of the other group bought an Automated Safety Hitch System for themselves.

While the main reasons for The Automated Safety Hitch System was to increase safety by enhancing braking, controllability and maneuverability, the automation came about as an afterthought. While attending a rodeo, I happened to observe this very happy couple approaching their disconnected rig. It had rained quite a bit so the field was muddy. By the time this once happy couple hooked up to their trailer with one driving and the other directing, they were quite annoyed and their once happy daughter was upset. Even with their four wheel drive dually, a good size tractor had to pull the rig ten feet to the pavement. By the time I arrived home, I decided to automate the process of attachment and enable the trailer to pull itself out of the mud.

MP: Wow, what an interesting back story. I have always said two of the biggest concerns when

towing a trailer are a tow vehicle that can safely handle the load and safely stopping all of that weight behind the tow vehicle. How does your hitch system help solve these two major concerns?

JJ: What you are addressing is the importance of the tow vehicle's braking capacity, braking effectiveness and controllability.

The first issue addressed during the beginning phase of The Automated Safety Hitch System's design effort was why did the trailer rig, of the demonstration ride mentioned in answering your first question, not stop effectively. The tow vehicle was a one ton dually in very good condition and we spent time adjusting the brakes of the trailer. After analyzing all the dynamics involved, we realized that the weight shifting of the trailer is the big part of the problem and more braking capacity with braking integration would be very helpful.

Having been talking to many people who have been pulling trailers for a good number of years, there have not been many people who have heard of the weight shifting phenomenon when stopping. **So, what is weight shifting?** Without taking a lot of your time now and not drawing dynamic engineering diagrams, let me explain how everyone driving an automobile, pickup truck, van or SUV has experienced the effects of weight shifting every time they stop when not pulling a trailer. The faster you are traveling, and the faster you apply the brakes, the more you notice the front of the vehicle move downward. That downward movement is caused by the weight shifting of the vehicle while stopping. This is why automobile manufacturers place at least 75% of the braking capacity on the front axle. The weight shifting phenomenon is also providing maximum steering effectiveness when you need it the most.

Now, the trailer you are pulling is likely weighing as much or more than the vehicle pulling it.

The weight shift of the trailer causes the pin weight of the trailer to increase significantly. With the pin weight of the trailer being placed a few inches in front of the pickup truck's rear axle, the more you are you are trying to stop and the more effective your trailer brakes are the more the pin weight of the trailer is increasing. You have a more serious problem when you have hydraulic trailer brakes with the front of the trailer in the back of the truck. This pushes down on the rear of your truck's frame causing there to be less weight on your front axle where 75% of your braking is and all of your directional control steering. When you see a rig, having a trailer that is too heavy for the truck pulling it stopped at a traffic light with the weight raised off of the front axle and think that you would never be that foolish, you may be looking somewhat the same when braking, especially if your trailer has hydraulic brakes and the trailer's king pin or hitch ball is in the back of your truck.

The Automated Safety Hitch System design enables you to more safely handle the load and more safely stop all of that weight behind the tow vehicle. This is accomplished by removing most of the trailer's pin weight off of the frame of the vehicle, placing the pin weight slightly in front of its own full size truck's steerable axle having 75% of the braking capacity of a one ton truck. What we are addressing, by doing this, is the "weight shifting" of the trailer when you are trying to stop.

We also increase stability by lengthening the vehicle's wheel base while you are pulling the trailer and automatically integrating the vehicles brakes, the full hydraulic vented disc brakes of the Automated Safety Hitch System and the trailer's brakes. The Automated Safety Hitch System brakes are adjusted by your vehicle's brake controller when you adjust your trailer brakes.

After assessing The Automated Safety Hitch System, a group of automotive engineers stated, "We saw that with this system, you have nearly 100% braking effectiveness and nearly 100% steering effectiveness of the tow vehicle while the weight shifting of the trailer is now an asset, making the full hydraulic disc brakes of The Automated Safety Hitch System more effective." "The Automated Safety Hitch System should be part of every heavy tow package". "With the increased wheel base, longitudinal stability and controllability is also phenomenal".

MP: Wow again! It's interesting to learn the dynamics, and from a safety aspect that's incredible. Adding another axle into the mix is like extending the wheelbase of the tow vehicle. This of course provides greater stability when towing the trailer. Can you tell our readers a little about this axle and its benefits where towing is concerned?

JJ: Sure. We wanted to utilize a steering axle having a high load rating, with a heavy duty, full hydraulic, vented disc braking system and a proven track record for both on and off road usage. Our Dana 70 series axle fulfilled our search criteria nicely. Its load bearing and brake system shows to have long distinguished service experience in vehicles ranging from one ton Dodge trucks to greater than one ton large aircraft de-icing trucks.

The biggest features this axle gives to The Automated Safety Hitch System are its structural strength, the additional braking capacity, the additional braking effectiveness, additional maneuvering capability and enabling the additional wheel base length for better controllability. Our full size truck front steerable axle has the equivalent full hydraulic vented disc brake system of the front steerable axle of at least a one ton truck. Most small, medium and large trucks, SUVs and vans have at least

75% of their braking capacity on the front axle. With The Automated Safety Hitch System; you are adding at least 75% of the braking capacity of one ton trucks and greater to your tow vehicle. After researching numerous other ways to safely deal with the weight shifting of the trailer when stopping, as discussed while answering your previous question, the most effective, most reliable system and economical design requiring the least amount of maintenance is to put the pin weight of the trailer on its own proven heavy duty, steering and braking axle.

The weight ratings of the industry seem to consider static rather than dynamic situations. The acronym for how heavy a trailer you can tow simply assumes serviceable brakes of the tow vehicle and serviceable brakes of the trailer. There is no mention of the realities of the trailer having to be raised in front to clear the tailgate which diminishes the trailers natural stability and diminishes the trailers braking effectiveness. Blocking up the trailer axle lessens lateral stability. There is no mention of the realities of the reduced braking effectiveness of the tow vehicle due to the weight shifting of the trailer. The automotive industry likely knows about these negative braking effects and the trailer industry should know about them. **Unfortunately for the consumer, what you do not know can hurt you.** So, The Automated Safety Hitch System does improve braking capacity by increasing it, improves braking effectiveness by increasing it and addresses controllability by increasing it.

The reason for calling our product The Automated Safety Hitch System instead of The Automated Safety Hitch is because it is so much more than a hitch. It is a towing system. The best towing system to more safely pull your trailers.

The truck industry likely knows that the longer the wheel base of the truck the more control you have of the trailer, yet how often do you see short bed trucks pulling trailers?

The truck industry likely is aware of the realities of jackknifing the trailer or making sharp turns and what happens when the trailer and truck cab collide, but dealers still sell short bed trucks to people ordering the heavy tow package. There are too many trailer dealers who sell trailers to customers telling them, “sure you can pull this trailer with your truck”, but since the customer did not ask, “can my truck stop this trailer?” the dealer does not mention it or maybe does not have the customers best interest at heart or the salesperson does not know. The customer likely discovers the less than desirable braking performance during their first trip.

We do not yet seem to have influence with neither the truck nor trailer manufacturers to right the present deficiencies but we do have the ability to make up for their deficiencies. The last attribute of our Safety Hitch System axle is its automatic steering ability. It was essential to have a steering axle to enable The Automated Safety Hitch System to effectively lengthen the wheel base of the tow vehicle for greater controllability and effectively increase maneuverability. Having a non-steering axle was not an option because you would then have scuffing of the tires and other more serious problems.

MP: Well it’s clear to see that your Automated Safety Hitch System is packed with great features and benefits to help make the task of towing a trailer safe and easy for the consumer. From the auto alignment and auto connect features to the braking, controllability, turning and maneuvering features, which features, in your opinion, are the best attributes your Safety Hitch System has to offer the consumer?

JJ: In my opinion, the increased braking ability, the increased controllability, the increased maneuverability and having so few maintenance requirements are the best attributes The Automated Safety Hitch System has to offer.

It is wonderful to hear from very experienced drivers that, for the first time, they are relaxed and confident while pulling their trailers with the Automated Safety Hitch System. Most customers mention that the increased stopping ability is the greatest attribute. Remember, it is the extra wheel base length, the trailers front weight now riding on its own axle instead off the rear chassis of the tow vehicle and the Safety Hitch System automatically integrating the tow vehicle brakes, the Safety Hitch System brakes and the trailer brakes that enable you to stop in shorter distances and being less likely to jackknife. It is the most important feature for the attorneys who buy our product because they know that when you are pulling a trailer and you fail to stop before hitting something or someone, there is no excuse/defense. It becomes a very unhealthy and a very expensive accident.

Bob Zagami said it right. “Instead of what you can pull, it is what you can stop that is most important.”

Another money saving attribute is the Safety Hitch System’s maneuverability. By enabling nearly 40 foot trailers to make the 90 degree turn staying within the single lane of the road they are turning on to, and have the trailer tires still missing the curb by approximately a foot saves money. Without the safety hitch system you usually have to swing out into the left lane to make a 90 degree right turn when pulling a 5th wheel or gooseneck trailer. It is surprising how few people know that, no matter how cautious you are when you swing out into the left lane, if someone in that left lane decides to squeeze by resulting in a side swiping incident, you get the ticket. This enhanced maneuverability can keep you from sideswiping incidents.

The Automated Safety Hitch System is as user friendly as your tow vehicle. You do not

have maintenance to do before each trip. By not having many maintenance items there is a much less chance of you forgetting to do something. The only maintenance items are keeping 80 pounds of pressure in the main tires when cool and periodically, easily service the battery and easily check the hydraulic pump fluid level. A lot of attention has been given to accessibility, maintainability and reliability. The retractable support tires are foam filled so they never need airing up. They will never be flat. The Dana 70 series axle has the same lubrication features as your tow vehicle axels. After the first few years, take the Automated Safety Hitch System with you when you take your vehicle to the lube rack.

MP: That's an incredible hitch system that is packed with great features and benefits for the consumer! From braking to controllability and maneuverability The Automated Safety Hitch System does it all. I really appreciate you explaining your product to our readers today.

Where can a person go to learn more about the Automated Safety Hitch System?

JJ: Thanks for having me today Mark. Our website offers several comprehensive videos illustrating all of the features we just discussed. Sometimes it's easier to watch how a product works rather than read about it. Folks can [visit our website to learn more.](#)

Mark's RV Garage 4-DVD Set



BEFORE



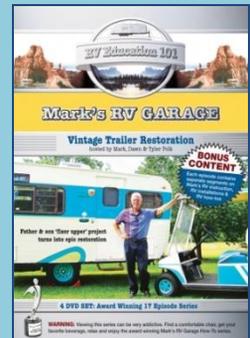
AFTER

I have always been a hands on type of guy. After being cooped up in an office for a while I need to get out and work on something. One winter day, I had cabin fever and decided I was going to produce an RV How-To TV series titled Mark's RV Garage.

Mark's RV Garage 17 episode award winning series is an entertaining and educational RV how-to series presented by RV Education 101. Host Mark Polk gives you an inside look into RV's, RV Products, RV product installations, RV upgrades, RV destinations, RV Trivia, & much more.

The highlight throughout the series is a vintage trailer restoration project. Mark and his son Tyler decide a "fixer upper" project would be fun, but soon discover their project trailer would require more than a few weekends to complete. Follow the epic 7 month-long fun educational and entertaining journey as Mark and Tyler demo the vintage trailer down to the frame and then rebuild to its former glory.

[**More Info**](#)



WARNING: Viewing this series can be very addictive. Find a comfortable chair, get your favorite beverage, relax and enjoy the award winning Mark's RV Garage RV How-To series:

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