

Tie Down Engineering, Inc.

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September 2013

Tie Down's Eliminator Torsion Axle Information

Benefits

Independent Suspension: Each wheel acts independently, moving and absorbing shocks. This offers a smoother ride for the boat/trailer.

Progressive Rate Shock Absorption: The rubber cords in the torsion axle apply more resistance with additional travel. Less bottoming out on rough roads.

Corrosion Resistance:

Galvanized torsion axle tube is galvanized inside and out. Since there is no metal-to-metal contact as with springs, bare metal is not exposed that promotes corrosion..

OR

Powder Coat: Coating option is Power Coat. A black hard finish superior to paint. Provides corrosion resistance and a chip resistance finish.

The torsion arms are available with E-coat or with GalvX. Longer life with fewer problems

Fewer Moving Parts: The Eliminator torsion axle is a solid mount to the frame. This design does away with springs, spring mounts, spring bushings, spring hangers.

Torsion Axle becomes a cross member: The Eliminator torsion axle mounts directly to the frame. This stiffens the frame reducing flex.

Reduces un-sprung weight: The Eliminator torsion axle tube is bolted to the frame. The moving parts are reduced, lowering the weight that the "spring action" must move. This results in a smoother shock action.

Removable Spindle: Tie Down's Eliminator torsion axle is the only axle that has a replaceable spindle. This greatly reduces the chance of ruined trips due to an accident, bearing failure or spindle damage. The trailer owner can carry a spare tire carrier that also mounts a spare hub and spare spindle. The removable spindle saves the trailer owner the cost of replacing an entire axle should damage occur to one or both spindles.

SuperLube Standard: Every Eliminator torsion axle comes with SuperLube spindles as standard equipment. SuperLube has been proven to be the best method to change grease in the hub cavity.

Stainless Steel Wear Sleeves: Rear oil seals ride on stainless steel sleeves on the 3500 series and 5000/6000 series axles. This reduces the chance of worn seals due to corrosion build up on the spindle surface where the oil seal meets the spindle surface.

Brake Flanges are built into the casting design of the torsion arms. All surfaces are machined to assure the backing plate and spindle are "square" to each other. This assures a better fitting brake assembly.

Torsion Axle Maintenance

Torsion axles do not require any regular maintenance, unlike springs that need constant review for worn or loose parts. Spring axles must be checked regularly to make sure the spring surfaces are not corroded, creating a weak point in the suspension.

It is always a good idea to tow any trailer in a level position with the load balanced over the axle or axles. Trailers with dual or triple torsion axles require that the trailer be towed level. On multi axle torsion axle trailers, excessive tire wear will occur from the coupler being too high or too low. Trailers with two or more torsion axles do not have a self-leveling or load balancing feature.

If the hitch/coupler/actuator position is too high, too much load will be transferred to the rear axle. If the hitch/coupler/actuator is too low, too much load will be placed on the front axle.

Either situation will create excessive tire wear and loss of braking power. Excessive tire or brake wear due to the trailer being towed improperly is not covered under manufacturer's warranty programs.