# Storm body installation

Updated 5/26/20

## WARNING

More than a few parts I offer do not met DOT or SAE guidelines for safety. This is especially true of my fiberglass gas tanks. Metal tanks crush upon impact. Fiberglass can break and leak upon impact. This of course is a source of fire and a danger to you and others. By purchasing any of my tanks (and other non-compliant DOT and SAE parts) you are assuming the risks of; danger, injury and death. If you will not accept the risks, don't purchase my products or return them unaltered for a refund.

## Storm tank mounting

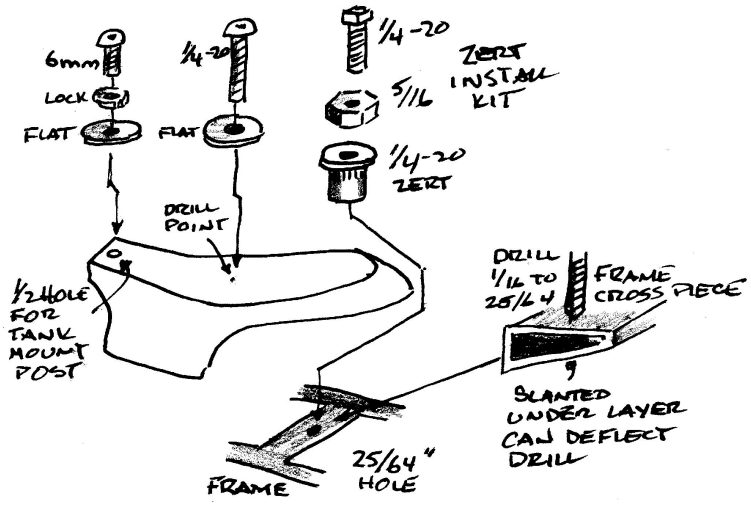
This tank mounts just like the stock tank. Snap the OEM rubber tank cushions and over my rubber protuberances on tank front. Sometimes my stubs are angled because the inside of the tank has a draft angle. If this is the case with your tank just shave the rubber until everything fits. The hole in the rear of the tan slips on the tank mount post. The tank goes on first then the tail.

## Storm tail mounting

Place the tail on frame on the ½" rear tank mount post. If binding between tank and tail occurs simply grind away a bit of tail tab or elongate the hole, attack the tail leading edge first. If the tail is not level with the tank, shim the tail with a stack rubber washers. Rubber fenders between tank and tail isn't a dumb idea either.

NOTE

I had one report from a customer who said he had to shim the entire tail section to get a kiss fit between tank and tail. This mystified me because the body was made for the frame. Just a warning-this may be the case for you too.




***Tricky tail instructions, follow closely***

[ ] With tank and tail on the bike, center the tail with centerline of the bike. You'll notice a small drill point molded in the tail about ½ way back (see drawing above). Lift the tail off to see where you are going to drill your mounting hole. Place a bit of masking tape on the frame cross section.

[ ] Reinstall and reline the tail. Now drill a 1/16" hole through the drill point and just into the tape on the frame. Pop off the tail and look at your drill mark. Is there enough frame material around the drill mark for a 25/64" hole? If not make a new hole in the fiberglass to put a new drill point on the tape.

[ ] Pop off the tail again. Ultimately you will need 25/64" hole. Don't start drilling this with a big drill. Start the hole with a new 1/16" drill and work up to 25/64." **Warning**. Just below the surface you are drilling through is another frame piece BUT this piece is at an angle (see cross section drawing above). If you are not careful, your drill is going to be deflected or snap off- so drill slowly with great care. You want a straight hole for the threaded insert I provided you. You now have a 25/64" hole in your frame and the tail is off.

[ ] Find the nifty little threaded insert assembly kit which is a ¼-20 thread-zert, a 5/16" nut and a ¼-20 bolt holding it all together. Insert the thread-zert into the 25/64" frame hole and make sure its flush on the frame. Hold the 5/16" nut with ½" wrench. Start tightening the ¼-20 bolt with a 7/16" wrench. Longer wrenches are easier. What you are doing is squeezing the

thread-zert so it fills the hole and swells out underneath the frame metal. This will lock the zert's threads into the frame. Tighten until you feel resistance. Overtighten beyond this point and you'll distort the threads-then you'll have to chase them with a ¼-20 bit. This is your anchor for the rear of the tail. Save my little tool pieces-if the zert loosens up-you can just crank it tight again.

[ ] I have provided two mounting screws with fender washers and a split washer. The short black screw is 6mm for the rear tank mount post and the other longer ¼-20 one goes into the zert threads. Don't over tighten either of these two bolts they are not going anywhere because the seat cushion traps them in place

[ ] These two mounts will hold your tail in place. The fender is shaped to sit on the frame rails for weight support. If you have cut off your loop never allow a passenger on the bike because the only thing counter balancing the rider is a 6mm screw and something is gonna give--the screw and your passenger. If you are going to ride two up, use rubber padding between the tail and frame.

### *Attaching the seat cushion*

This is the easy. Create your own Velcro pattern. Use all the available flat spaces you can. Deploy Velcro at the 'four corners' of your seat for max holding power. Start with either seat or tail and layout your pattern. Cut and apply a corresponding pattern on the other part. You will find your scissors all gummed up with adhesive when you are done. Lacquer thinner cleans them jiffy quick. You will be surprised at the holding power of 2" wide Velcro. Sometimes you will make back-of-the-pants sound attempting to lift off the seat

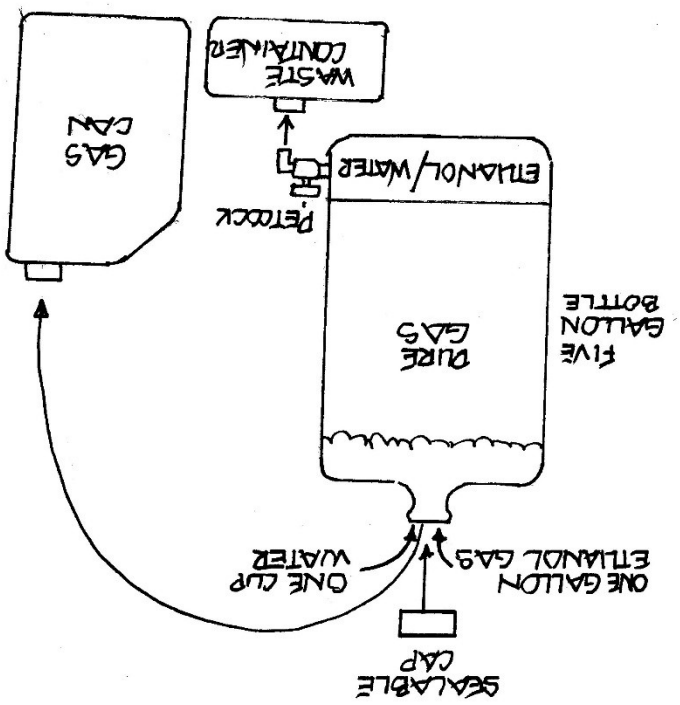
## *Ethanol fuel*

### *This tank is not warranted in California, Washington or New York*

We progressively used four different coating systems to protect tanks from ethanol fuel. Largely we were successful but we're getting repetitive issues from three states; California, Washington and New York. Ironically, these liberal states are requiring some wicked fuel. Every time we would make a coating change, it seemed like these states kept reformulating their fuel.

We have now starting using Phenol Novolac Epoxy. This is a 2-part coating that has been 100% successful to date. I believe ethanol is a historical issue for us but until I know different the above three states are off the warranty list. If you live in these states, make a giant effort to track down sources of non-ethanol premium fuel. Some stations may sell this fuel for vintage machines. You could check the availability of aviation fuel, maybe marine fuel or perhaps a racing fuel without ethanol. For practical purposes, if you find such a fuel (without ethanol), you could blend it 50/50 with your purist grade pump fuel and minimize tank problems, Junk ethanol gas just sitting dormant in your scooter for longish periods will totally screw up your engine with gummed up carbs and stuck lifters. Expensive engine disassembly is the only cure.

### *Make your own ethanol from pump gas-at home*




We motorcyclists know how evil ethanol is to fiberglass tanks, engine parts and long term storage in a motorcycle. It gums up carbs and fouls tanks. To those who live on the east or west coast-your gas is worse than ethanol in other parts of the country. Here's simple fix and cheaper, long term, than the cost of high octane premium-non-ethanol gas where it's available.
The ratio of gas to water is one gallon gas to one cup of water.

**Gather these items**
[ ] Sealable 5 gallon bottle
[ ] Petcock
[ ] Tube of JB Weld epoxy
[ ] Hoses, funnels, gloves and eye protection

5 gallon reusable polycarbonate water bottle, about 25 bucks at Walmart and other places


Buy a petcock valve at your hardware store-What, ten bucks!

**Basics**
When gas and water are mixed, they separate. Water on top/gas below. When the mixture is shaken for 30 seconds, ethanol molecules combine with the water

**Operation**
[ ] Drill a hole in the bottom or low on the side of the 5 gallon bottle for the male threads of your petcock. Seal the petcock in the bottle with a liberal amount of epoxy putty like JB Weld. Let cure.
[ ] Place your 5 gallon bottle on a platform, some bricks or level surface to allow space for a container to catch the waste water/ethanol mix below.
[ ] Pour ethanol gasoline into your 5 gallon bottle. Fill bottle to 95% full. The extra space allows for gasoline expansion
[ ] Pour water into the gasoline. The ratio is 1 cup-to-one gallon.
[ ] Seal the bottle with a tight fitting cap
[ ] Shake the bottle for 30 seconds to fully mix the water and gas
[ ] Wait at least 4 hours (better overnight) for settling
[ ] When done, you will see 2 distinct clear layers
[ ] Drain off the bottom water/ethanol layer into a container to be disposed later at a recycling center
[ ] What is left is ethanol free gasoline. Pour it into a gasoline container. The higher the octane you originally purchased will now power your happy bike

Add a few drops of food coloring allows you to clearly see the layers. Wear eye protection and gloves, Avoid splashing. Do out-of-doors so the fumes don't combust. Avoid any open flame

How easy was that?

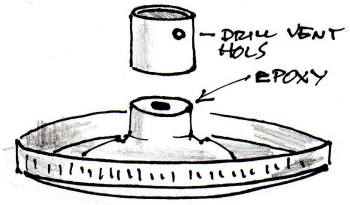
***Do not use fuel additives*** with Methylene Chloride (Lucas Gas treatment) or Mineral Spirits (Marvel Mystery Oil.) If I see a tank with derogation from these chemicals-no warranty.

## Warning filters

**ALWAYS USE AN INLINE FUEL FILTER** to trap particulates. Keep an eye on the filter and change it when junk appears. Keep filter(s) away from hot engine parts

## Tank cap warning

The cap seals fuel two ways. A cork gasket seals on filler neck and there is a spring loaded check-valve under the cap. The check valve closes when a fuel surge is detected by the floating ball valve. If you fill your tank completely the cap can weep fuel onto your stickers and paint because the ball doesn't close when fuel sloshes latterly (side-to-side). The solution is, One) don't fill your tank to the very top or, Two) epoxy a ½" length of aluminum pipe over the valve surround. Drill two tiny 1/16" holes in the sides of this short pipe. This remedy stops fuel weeping from sloshing even with a full tank. I had a customer who rested his bike with a full tank and it leaked and lifted his stickers. I don't know whether the valve extension will cure this but a less than full tank will. Use 12 ton epoxy-that stuff is strong but requires curing overnight.




## Fuel cap aside

I've never been a fan of this Stant gas cap they are making now. They used to make a smooth chrome cap which was wonderful but this replacement-not so good. It may help in a small way to take a heat gun after the sticker and remove adhesive residue with lacquer thinner!

Thanks Phil Little
Phil Little Racing.com

Cell 952-607-6063