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EFI Gas tank options for handling?

07/26/12 08:09 AM #1274279

moparAL  OP
super stock

Please don't re-list my post in another section. What options are available for a baffled gas tank for a 70 EFI Challenger. I have looked at ads from Rock Valley, Ricks gas tanks, Modern Muscle, Hot-rod City, XV Motorsports, and others. I am setting up my car to handle well and don't want to worry about fuel starvation going around corners. I have read some Chevy forms about this and most like Ricks stainless tanks (vapor works version with 2 fuel pick ups) great idea, but silly expensive. Mopar guys that autocross what ways have you dealt with this issue? I need a new tank anyway so what do you suggest?

M

Joined: Jun 2003
Posts: 1,196

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Re: EFI Gas tank options? [Re: moparAL]

07/26/12 08:46 AM #1274280

jcc 
Liberal Arts Major

The simplest and least expensive option is use any tank full, if extra weight is an issue, use a smaller full tank, most other options that allow you to run from a full tank down to The last drop use internal trap door sumps and cost a few bucks. Whats your intended use?

Last edited by jcc; 07/26/12 01:41 PM.

J

Joined: Dec 2003
Posts: 19,035
Trumussia

Reply Quote Report

Re: EFI Gas tank options? [Re: moparAL]

07/26/12 12:42 PM #1274281

DJVCuda 
I Live Here

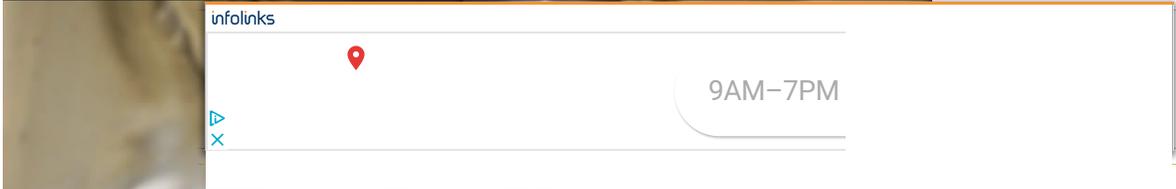


Joined: Aug 2003
Posts: 11,171
Atco NJ

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mine is just a street car, but after researching a few the hot rod one needs a new sending unit, filler tube adapted, etc.

The rock valley unit was a bolt in deal, that added a spiral around the pump = I have driven it under 1/8th of a tank and cant get it to starve - i doubt you could sustain corners for an extended amount of time but i've been completely happy with my purchase.



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Re: EFI Gas tank options? [Re: DJVCuda]

07/26/12 12:42 PM #1274282

Burkenator
enthusiast

Rock Valley as well. Works great.

7308375-tankbefore.JPG (389 downloads)

B

Joined: Jan 2003
Posts: 305
East Tennessee

Reply Quote Report

Re: EFI Gas tank options? [Re: Burkenator]

07/26/12 05:01 PM #1274283

moparAL OP
super stock



- Moparts N**
- Stock Hemi by dragon sla
- Retrofit In T by 6PakBee.
- Lutz new NF by justinp61.
- AGM battery by moparx. 0

- Moparts R**
- AGM battery

M

This is the type of feedback I am looking for. Yes, the cheapest solution is to run close to a full tank. If I get down to say 1/8 of a tank and I don't want fuel starvation I want to be prepared. There are several members that run auto cross and a ton members that drag race what do you do with regards to fuel starvation? Steve, Autoxcuda any thoughts?

Joined: Jun 2003
Posts: 1,196

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by AndyF. 06,
All original J
"Survivor" -
by OhioMopa
Tire guys, is
by moparx. 0
OBD scanne
by moparx. 0

Re: EFI Gas tank options? [Re: moparAL]

07/26/12 05:16 PM #1274284

Truck Y'all!
member



Joined: Feb 2006
Posts: 81
Michigan

Here's what I did in my '68 A-body (Valiant). Just submitting this for reference...

I found a huge (32 Gallons!) Jaz fuel cell that would fit between frame rails and went for it. This way, I could run just a little bit of fuel or a full tank for touring and be all set.

Here's the one I used: "PART # 286-432-06

Designed to fit between the frame rails of 1984-2001 Jeep Cherokees. 32 Gallon fuel cell with a 45 degree 2-1/2" Fill Valve and Oval Fill Plate. Also includes cast aluminum Bat Wing pick-up, -10 Tip Over vent, -8 Return Fitting and -8 Pick-up. This fuel cell is also foam filled. Great for Truck Pre-Runners!"

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Re: EFI Gas tank options? [Re: moparAL]

07/26/12 05:18 PM #1274285

Mopar_Rich
top fuel



Joined: Jan 2003
Posts: 1,921
Sonora CA

When I sell EFI systems to the "rock crawler" guys they have the same problem, only worse, because they can sit at weird angles for a long time.

So the ultimate solution, that's also fairly inexpensive, is to use a tall narrow intermediate tank. This approach allows you to keep the stock tank since it only used as a reservoir.

One local guy fit the intermediate tank in the front of his trunk. He can now run down to the last drop while sitting at a 45 degree angle.

[7308670-IntermediateEFISumpapproach.JPG](#) (283 downloads)

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Re: EFI Gas tank options? [Re: moparAL]

07/26/12 05:24 PM #1274286

Mopar Mitch
super stock



Joined: Jan 2010
Posts: 1,195
NW Chicago suburban area

I've autocrossed my Chall T/A since 1975 in the SCCA Solo II events... car is currently nationally prepared to run in class E/Street Prepared (since its class inception ~1986). Although I've always run a mechanical fuel pump, I've never had any fuel starvation problems.. In fact, I've always preferred to run the auto-x events with as little weight as possible... typically starting the event's day with about 1/3 tank of gas... ending up with about 1/8 tank... tank is factory stock. One note -- if you run a Challenger with more than 1/2 tank of gas, or worse with a full tank, you'll not only have all that extra weight (bad!) but the fuel will probably spill out of the side-filler onto the quarter panels unless you have a very good sealing gas cap, and perhaps wrapped with small cloth soak to it up.... The g-force in such events can be pretty high to force the fuel up the filler and beyond the gas cap... from my experience!

Mopar Mitch "Road racers and autocrossers go in deeper and come out harder!"... and rain never stops us from having fun with our cars... in fact, it makes us better drivers! Check out MOPAR ACTION MAGAZINE, August 2006 issue for feature article and specs on my autocross T/A!

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Re: EFI Gas tank options? [Re: Mopar Mitch]

07/26/12 05:33 PM #1274287

DJVCuda
I Live Here



Joined: Aug 2003
Posts: 11,171
Atco NJ

it has been my experience that the carb'd motors will not show fuel starvation for brief moments, like going around corners.

a cab has two fuel bowls for reserve in that instance where the pickup cannot get the fuel to the pump -

EFI has no such " reserve" the second the pump has no pressure, the injectors have no pressure as well - no pressure and they do not supply the engine with fuel - it is more instantaneous then with a carb.



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Re: EFI Gas tank options? [Re: Mopar Mitch]

07/26/12 05:35 PM #1274288

Supercuda
About to go away



Joined: Sep 2007
Posts: 14,889
up yours

Quote:

I've autocrossed my Chall T/A since 1975 in the SCCA Solo II events... car is currently nationally prepared to run in class E/Street Prepared (since its class inception ~1986). Although I've always run a mechanical fuel pump, I've never had any fuel starvation problems.. In fact, I've always preferred to run the auto-x events with as little weight as possible... typically starting the event's day with about 1/3 tank of gas... ending up with about 1/8 tank... tank is factory stock. One note -- if you run a Challenger with more than 1/2 tank of gas, or worse with a full tank, you'll not only have all that extra weight (bad!) but the fuel will probably spill out of the side-filler onto the quarter panels unless you have a very good sealing gas cap, and perhaps wrapped with small cloth soak to it up.... The g-force in such events can be pretty high to force the fuel up the filler and beyond the gas cap... from my experience!

Your Challenger is obviously not fuel injected, I suspect you missed that difference between your setup and the op's.

When I FI'd my Diplomat the in tank pump would suck air at anything under a half tank if I drove it hard. Under a quarter tank it would suck air in almost any turn at any speed above grandma speed.

Same basic tank design. My solution was a small surge tank fed by the mechanical pump, the surge tank would feed the EFI pump.

They say there are no such thing as a stupid question.
They say there is always the exception that proves the rule.
Don't be the exception.

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Re: EFI Gas tank options? [Re: Supercuda] 07/26/12 08:04 PM #1274289

72Swinger 
master

Joined: Feb 2011
Posts: 4,302
Nebraska

I installed one of these at the rear of my aluminum boat tank in my car. And I used a Walbro GSS340 inside of it mounted to one of these..
<http://www.tanksinc.com/index.cfm/page/p...prod/prd253.htm> and it has so far been flawless.

 7308863-019.JPG (305 downloads)
Last edited by 72Swinger; 07/26/12 08:06 PM.

Mopar to the bone!!!

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Re: EFI Gas tank options? [Re: Mopar_Rich] 07/26/12 08:50 PM #1274290

brads70 
super stock

Joined: Jan 2009
Posts: 810
Ontario,Canada

Quote:

When I sell EFI systems to the "rock crawler" guys they have the same problem, only worse, because they can sit at weird angles for a long time.

So the ultimate solution, that's also fairly inexpensive, is to use a tall narrow intermediate tank. This approach allows you to keep the stock tank since it only used as a reservoir.

One local guy fit the intermediate tank in the front of his trunk. He can now run down to the last drop while sitting at a 45 degree angle.

Same idea as this! 
<http://www.ratdat.com/?p=168>

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Re: EFI Gas tank options? [Re: brads70] 07/28/12 02:39 AM #1274291

ahy 
master

A
Joined: Jan 2007
Posts: 7,664
IN

Quote:

Quote:

When I sell EFI systems to the "rock crawler" guys they have the same problem, only worse, because they can sit at weird angles for a long time.

So the ultimate solution, that's also fairly inexpensive, is to use a tall narrow intermediate tank. This approach allows you to keep the stock tank since it only used as a reservoir.

One local guy fit the intermediate tank in the front of his trunk. He can now run down to the last drop while sitting at a 45 degree angle.

Same idea as this! 
<http://www.ratdat.com/?p=168>

Nice way to make a sump! I run "in tank" on my hotrod but am planning a sump on another project. I will likley use the CO2 tank starting point.

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Re: EFI Gas tank options? [Re: ahy] 07/28/12 05:20 PM #1274292

Uhcoog1 
super stock

Joined: May 2005
Posts: 723
Houston Tx

Here is my set-up. Carter for lift pump, BC Bronco's surge tank fuel filter, and Walbro GSL392. There is a Wix 33737 filter/regulator not in the picture.



Here is the BC Bronco's link:
http://www.bcbrncos.com/store/product_info.php?products_id=119

-'02 Dodge Viper Ex-World Challenge racecar
-'73 Duster, 6.1 based 392 hilborn hemi, tko600, full floater rear 9", Hellwig custom bars, viper brakes, built for road course

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Re: EFI Gas tank options? [Re: 72Swinger]

07/28/12 05:22 PM #1274293

Uhcoog1
super stock



Joined: May 2005
Posts: 723
Houston Tx

Quote:

I installed one of these at the rear of my aluminum boat tank in my car. And I used a Walbro GSS340 inside of it mounted to one of these..
<http://www.tanksinc.com/index.cfm/page/p...prod/prd253.htm> and it has so far been flawless.

Where did you get this? That's a nice set-up!

-'02 Dodge Viper Ex-World Challenge racecar
-'73 Duster, 6.1 based 392 hilborn hemi, tko600, full floater rear 9", Hellwig custom bars, viper brakes, built for road course

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Re: EFI Gas tank options? [Re: Uhcoog1] 07/28/12 09:11 PM #1274294

72Swinger  master



Joined: Feb 2011
Posts: 4,302
Nebraska

I got the trap doors from Fuel Safe and had the box made out of aluminum. Your setup should work good too with that big filter. I wanted a bigger tank anyway,mine is now 25 gal,and knew an access door with an in tank pump was always the plan so thats why I chose the route I did.

Mopar to the bone!!!

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Re: EFI Gas tank options? [Re: 72Swinger] 07/30/12 07:34 PM #1274295

moparAL  OP super stock

M

Hotrod City Garage has a interesting aluminum EFI tank. It has a lower sump (1 inch lower) at the bottom front of the tank, a internal perforated 5 inch tall open box surrounding the pickup, and internal front and side baffling. They have a choice of pumps, and a drain plug option. What do you think? Picture 1

 7313906-6759656-100_2143.jpg (266 downloads)
Last edited by moparAL; 08/04/12 05:09 PM.

Joined: Jun 2003
Posts: 1,196

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Re: EFI Gas tank options? [Re: moparAL] 07/30/12 07:36 PM #1274296

moparAL  OP super stock

M

Hotrod City Garage gas tank (right picture), picture 2

 7313907-h8.jpg (291 downloads)

Joined: Jun 2003
Posts: 1,196

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Re: EFI Gas tank options? [Re: moparAL] 07/30/12 07:45 PM #1274297

72Swinger  master



Joined: Feb 2011
Posts: 4,302
Nebraska

Those are nice and are a bolt in option. They were more \$\$\$ than I had available when the time came for my fuel setup.

Mopar to the bone!!!

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Re: EFI Gas tank options? [Re: 72Swinger] 07/31/12 06:00 AM #1274298

moparAL  OP super stock

M

Hotrod city garage gas tank picture 3

 7314782-42979219.jpg (341 downloads)

Joined: Jun 2003
Posts: 1,196

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Re: EFI Gas tank options? [Re: moparAL] 07/31/12 06:04 AM #1274299

moparAL  OP super stock

M

Hotrod city garage, picture 4, of internal baffling. I don't think going to a external efi sump tank in California is legal. I don't want to go with a fuel cell either. This had a lot of features that some of the real big buck tanks have and are cheaper. It is also is made of aluminum. What issues, if any, might a aluminum tank might have? Any more thoughts about this tank?

 7314786-38726509.jpg (129 downloads)

Joined: Jun 2003
Posts: 1,196

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Re: EFI Gas tank options? [Re: moparAL] 08/12/12 08:00 PM #1274300

DaytonaTurbo 

Too Many Posts



Joined: Feb 2003
 Posts: 21,267
 Manitoba, Canada

How about buying a new stock tank, cutting a big access hole in the top and welding in a bowl shaped baffle/sump around the area where the stock fuel pickup draws it's fuel from? After you weld the top back on the tank it would look bone stock from the outside. You would of course need to run an external in-line EFI pump but overall this looks like the most straightforward option to me.

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Re: EFI Gas tank options for handling? [Re: moparAL]

08/18/12 07:39 PM #1274301

Rick_Ehrenberg

top fuel

R

Not that I've done this (except in my fantasies...), but:

Stock Mopar '90s-'00s pumps are 2-stage, keeping a reservoir filled ('prox 3 qts.) then pumping pressure from that. If only there were an easy way to mount one of these in a muscle-era tank, we'd be set!

Ideas...?

Rick

Joined: Sep 2003
 Posts: 1,686
 Marlboro, NY, USA

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Re: EFI Gas tank options? [Re: DaytonaTurbo]

08/22/12 04:28 PM #1274302

wrenchinrandy
 member

W

That is exactly what I did on my '67 Charger. I used two common bread pans for internal sump boxes (I have dual pumps) and installed trap doors on the all four sides. In practice, I should have fabricated boxes with much taller sides, as at a quarter tank it will starve for fuel pretty readily. However, the basic idea of modifying a stock tank has worked very well. I used JIC (37 degree flare = AN) bulkhead fittings with seals and wire passthrough fittings obtained from ATL for electrical and fuel line plumbing.

Joined: Mar 2006
 Posts: 49
 Borden, Indiana,
 U.S.A.

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Re: EFI Gas tank options? [Re: wrenchinrandy]

08/22/12 06:41 PM #1274303

moparAL
 super stock

M

I appreciate all the ideas, but other than Ricks idea (which no one has done with a older Mopar tank yet), the small external sump tank, double pump system, I haven't seen a reasonable priced system and I would not use that on the street! With all the Auto X members I thought you would have solved this issue. Ricks tanks has this tank called a Vaporworx tank. It is stainless inside and out, lots of baffling, and get this multiple fuel pickups. In the Vaporworx ad Mary Pozzi (Auto x driver) tested this tank with much success. But it is stupid, silly, crazy, expensive!

[7345989-vaporworxgastanks.jpg](#) (249 downloads)

Joined: Jun 2003
 Posts: 1,196

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Re: EFI Gas tank options for handling? [Re: moparAL]

06/15/20 06:54 PM #2785747

72440CUDA
 super stock



Joined: Jul 2003
 Posts: 889
 Georgia

I wanted to re-visit this post instead of starting a new one (I don't mean to hijack).

What is everyone using for a vent system?

I currently have a Hot Rod City Garage aluminum baffled tank (now out of business?) with an external electric fuel pump. I originally had a vent line routed into the frame rail and it just pissed fuel out (NOT GOOD!) So for the mean time, I've just capped it off (not good either!).

I've been doing some research... want an operating vent as to not cavitate/blow out tank seams with sealed filler cap so it doesn't spill fuel out the back, and I don't want the garage to fill with fumes.

Current plan is to run a vertically mounted in-line roll over valve to a II Much vent mounted in the truck (under the package tray?) at a level higher than the filler neck, with the inlet/outlet mounted externally. Other option is to run a Newton TPV6 valve. Should have about \$300 tied into it when all said and done.

Thoughts?



Last edited by 72440CUDA; 06/15/20 07:08 PM.

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Re: EFI Gas tank options for handling? [Re: 72440CUDA]

06/15/20 11:29 PM #2785824

AndyF 😊
Too Many Posts

A

I'm not familiar with the Newton setup. I have seen the II Much vent system before. I think the key is what II Much has in their instructions about having a 10% volume vapor dome in the tank. Your custom built tank might not have been equipped with a vapor dome. I've run into this same problem when using fuel cells in a passenger car. The typical fuel cell doesn't have a vapor dome so if the fuel cell is full it will push fuel out the vent on a hot day. The chassis builder I work with has used expansion tanks in the past to solve the issue. I'm a little surprised that the fuel cell mfgs haven't figured out a solution. The shop that fabricated your tank should've had some sort of vapor solution but if they didn't you'll have to work around it. Take a look at your tank design and see if there is any sort of a vapor dome or if the tank can be filled to the brim with no space left for expansion. If that is the case you might need to add an expansion tank for the vapor and then hook the vent into the expansion tank.

Joined: Jan 2003
Posts: 27,089
Oregon

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Re: EFI Gas tank options for handling? [Re: 72440CUDA]

06/16/20 07:00 PM #2786047

AndyF 😊
Too Many Posts

A

Boyd welding has a slick little adapter plate that allows you to use a factory Ford vent on a custom tank. You could use the Boyd vent plate on a custom expansion tank. Build a one gallon expansion tank and plumb it to the existing vent on your tank and then use the Ford vent on the expansion tank. Or if your existing tank has a vapor dome in it then you could use the Ford vent right in the vapor dome.

<https://fueltankparts.com/collectio...ucts/ford-oem-vent-weld-in-bung-aluminum>

Last edited by AndyF; 06/16/20 07:03 PM.

Joined: Jan 2003
Posts: 27,089
Oregon

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Re: EFI Gas tank options for handling? [Re: AndyF] 06/18/20 01:10 PM #2786702

72440CUDA super stock

 Joined: Jul 2003
 Posts: 889
 Georgia

Thanks for the advice, definitely something to consider 😊👍

My tank doesn't have a vapor dome, just (if I remember correctly) a 1/4" NTP vent bung on the side at the top left corner. I was looking at something like this overflow tank to help with expansion:

<https://www.jegs.com/i/JEGS/555/51145/10002/-1>

Possibly mount at an incline up between the two rear shock mounts, or vertically in the truck followed by an in-line rollover valve (mounted straight up and down) thinking it will help with fuel slosh (weight of the fuel pushing against a check ball) but still allow fumes to vent and air to enter as the fuel is consumed. Finally, having the vent line run up into the trunk as high up as I can get it (under package tray, above the level of the filler cap) and then back down terminating under the trunk to some type of filter, all the while making sure there isn't a low spot that could collect fuel and act as a "trap" that would cause the system to burp. 💡

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Re: EFI Gas tank options for handling? [Re: moparAL] 06/18/20 04:51 PM #2786784

Mr.Yuck Too Many Posts

 Joined: Jan 2003
 Posts: 24,359
 Brookeville, Md

Hydromat or a swinging pick-up.

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Re: EFI Gas tank options for handling? [Re: 72440CUDA] 06/18/20 06:44 PM #2786847

AndyF Too Many Posts
 A
 Joined: Jan 2003
 Posts: 27,089
 Oregon

If the tank doesn't have a vapor dome then you will just have to remember to not fill it full. Or only fill it full when you are driving somewhere. The gas comes out of the ground tank at 60 degrees so on a hot day the gas will expand once it gets into the tank. Without an expansion tank the gas will just push out the vent. I ran into this same issue when I had a fuel cell in a race car. The fuel cell was just a box with no expansion area. I filled it up on a cool day and then on the next hot day I had a mess when gas started to push out the vent tube.

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Re: EFI Gas tank options? [Re: moparAL] 06/22/20 02:42 AM #2787929

dangina pro stock

 Joined: Nov 2008
 Posts: 1,466
 Lethbridge, AB, Canada

Originally Posted by moparAL

Hotrod city garage, picture 4, of internal baffling. I don't think going to an external efi sump tank in California is legal. I don't want to go with a fuel cell either. This had a lot of features that some of the real big buck tanks have and are cheaper. It is also made of aluminum. What issues, if any, might an aluminum tank might have? Any more thoughts about this tank?

hope i'm not too late for ya - i have one - first the seal leaked as they used the wrong seal for gas (go figure) - would not send me a new one - had to make one up from the local parts store and cut out my own gasket - then had nothing but fuel issues spilling out of the tank - problem is the fuel pump is below the the top of the tank so it always wants to siphon - I had to weld a bung on top of the tank and on the filler neck and install a one way valve in it and add a separate air vent with a filter on it - the tank is cheap and for these reasons...I bought through some one else (mopardan?) but it was built by hotrodcity garage
 I should also mention I used a hydromat when I last took out the pump

Last edited by dangina; 06/22/20 02:44 AM.

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