



### Main Menu

[Home](#)  
[Message Board](#)  
[Photography](#)  
[Most Accessed](#)  
[PC Backgrounds](#)  
[Tulsa Performance](#)  
[Site Awards](#)  
[Advertising Info](#)  
[Database Linking](#)  
[About this Site](#)  
[Link-back Logos](#)  
[E-Mail Me!](#)

### Site Links

[Clubs & Orgs](#)  
[Businesses](#)  
[Personal Websites](#)  
[LT1 Edit Sites](#)  
[SCCA Sites](#)  
[Submit Your Link](#)

### Install Guides

[Engine Related](#)  
[Intake Related](#)  
[Valvetrain/Cam](#)  
[Supercharging](#)  
[Fuel System/NOS](#)  
[Cooling System](#)  
[Exhaust Related](#)  
[Computer/Sensors](#)  
[Electrical System](#)  
[Drivetrain/Gears](#)  
[Suspension](#)  
[Brakes/Rotors](#)  
[Bodywork](#)  
[Cosmetic/Looks](#)  
[Stereo/Acoustic](#)

## Meziere Electric Water Pump Install

I decided to install an electric water pump on the car and take advantage of the fact that my old factory water pump had failed. It made a subtle grinding noise that wasn't too audible over the other noises, but with a mechanic's stethoscope, it was obvious. That was also producing some false knock on the knock sensor, and that's what originally attracted my attention to it.

I purchased mine from [Internet Racer's Supply](#) for \$199.00. The ad for this pump states that it is suitable for street use, and is rated at 2500 hours. I figured that if I drove the car for 2 hours a day, every day for a year, it would last for over 3.4 years at that rate. That's longer than my factory pump lasted! That's good enough for me. I'll just proactively replace it every 4 to 5 years along with the OptiSpark. *(I don't drive my car 2 hours every day of the year.)*

All I can say is I absolutely love this pump. At the time of this writing, I've been driving the car around in 100+ degree heat for the last week with the air on high, in stop-n-go traffic, and the engine has yet to get above 190 degrees. (I have the Hypertech 160 degree thermostat installed.) It also provides a noticeable seat-of-the-pants improvement in horsepower, particularly on the top end. Later on I'll rig the fans and the pump so that I can turn them both on without the engine running for some extra cooling at the track. That will be really nice! Enough babbling, on to the install!

Here's a shot of the stock water pump before I got started on it. Some of these pictures might not look exactly like what you have, since I have a supercharger. There were a couple additional steps that I had to take that you won't, and a few you'll probably have to take that I didn't. For example, you may have to remove the air pump and bracket from the front of the engine. Mine



## Miscellaneous

[Search Database](#)  
[What's New?](#)  
[Submit your Project](#)  
[Author Listing](#)  
[Website Listing](#)

## Tech Articles

[General Tech](#)  
[Engine Related](#)  
[Specifications](#)  
[Computer/Codes](#)  
[Racing/AutoX](#)

Supported  
F-Body Clubs

[Tulsa, OK TFCC](#)  
[OK City COFBA](#)  
[MidAtlantic MAFBA](#)



has been relocated to the fender well.

The first thing I noticed after I got the pump out of the box, is that the impeller seemed to be binding. It was set too far down on the spindle and was binding against the housing. To fix it I loosened the set screw and pulled it out slightly to where it wasn't binding any more. You may not have this problem but you should check it to be sure anyway. Mine would probably not have turned with it binding like it was. You can see the allen set screw in the picture.



In addition, I bought a Barry Grant Relay at the local speed shop to activate the pump. When you buy this pump, all you get is the pump, a brass freeze plug, and a sheet of paper that says if you don't know how to disassemble your old water pump, seek a professional. It was terribly lacking to say the least. The pump only draws 6 amps and this relay is rated for quite a bit more then that. It's the same one I used for my second fuel pump on the car. It cost approximately \$24 with tax. You may not need this relay depending on how you hook your power up, but I highly recommend it.



I won't go into great detail on removing the water pump since it's fairly straight forward. You may want to cover the OptiSpark to prevent it from getting soaked with coolant though. It is a messy job.

Basically drain the radiator via the petcock at the bottom, remove the hoses from the water pump, and remove the 6 bolts that hold the pump in place. There will be a spindle at the back of the pump. After removing the pump, you should find a small pipe with splines in it that connect the water pump to the spindle on the engine. It'll probably either be on the pump, or on the engine. Remove it. You won't need it anymore.



Once you get the pump off, clean the gasket surfaces on both the pump and the engine real good. I used my cordless drill and a fine wire wheel to finish cleaning the surfaces after scraping the gasket material off. I then used a rag soaked with brake cleaner to clean off any oil or anti-freeze residue.



---

Ok, let's get on to rebuilding the pump. Remove the cover off the front of the water pump by removing the bolts that hold it down. Carefully pry the cover off. The reason you need to be careful is that there is a rubber seal inside the cover that you are going to re-use. The cover should come off easily and the seal should remove from the cover quite easily as well. If you break it, you should be able to make a gasket from gasket paper to seal back the front cover. But it's not too likely.



---

To remove the impeller, I used a punch and a hammer to pound it out towards the back. It's stuck in there pretty good so you'll have to give it a few good wacks. Special thanks goes to Dave Wendland for letting me know how this pump came apart before I started! (*He's been through this once.*)



---

Once you drive the shaft and bearing out through the back, flip it over and drive the seal out towards the front. It should come out pretty easy.



---

Here's what it all looks like once it's apart. You can see what all the pieces look like here in one shot. To me the water impeller looks like it's not very efficient. The electric water pump's impeller looks like it's far more efficient than this one.



---

After making sure that the water pump is all clean on the inside, the first thing to do is to install the freeze plug in the hole that the shaft came through. You'll do that from the front, as shown. I used a socket and short extension to pound the plug into place.



It should fit firmly and neatly into the hole. The sides of the brass plug should be pretty much level with the edges of the pump housing. The Meziere kit came with the necessary 1 1/8" freeze plug for this.



---

After the plug is in place, remove that black rubber seal from the old cover, and place it on the Meziere pump. The instructions did say to put a little bit of grease on the rubber before the install. I did that. It also says that if you want to, you can put some sealant around the lid before putting the pump back on. I chose not to do this. The rubber seal seems to work just fine for keeping it sealed up. Be careful not to over tighten the bolts when you put it back together.



Note: Before I installed the pump, I tested it by applying

power to it. The instructions say to check to make sure it's running counter clockwise. I guess this pump will run either direction depending on the polarity. I also wanted to check to make sure it wasn't binding since I had to adjust the impeller.

---

That's it - you're all done with the pump assembly. Now all you have to do is assemble it back on the car. Once it's all back in place, we'll hook the power up for it.



---

Before you can install the fan shroud back on, you'll have to cut a good-sized notch out of it in order for it to clear the new pump. Here's two different angles showing the notch I took out of mine. You might have to fit the fan shroud up into place once or twice to make sure you are notching it where it needs it. I used my Dremel tool with a cutting bit to make quick work of it. You could also use a hacksaw blade or a Notcher to remove the necessary material. I had to make a couple final "carves" once I got the fan shroud installed for a little bit more clearance. I didn't want the shroud to contact the pump housing. A rattle here might be picked up by the knock sensor. (Even with the LT4KM).



---

Here's how I hooked my electrical connections up. Using the Barry Grant Relay, I wired power directly from the battery into the relay for the pump. To activate the relay, I needed a power "reference". The relay takes very little power to activate so you can safely hook it up in a variety of different places. That's why I like using the relays! Since I wanted the pump to be on only when the key was in the IGN position (not the ACCY position), and not to run and draw power while the engine was cranking, I chose the cooling fan power line as shown in the picture.



To get to it, I removed the fuse box from it's holder. There a plastic "pressure clip" on the bottom that you can press, and it will slide out towards the passenger side. Once you have it out, you can open the back cover easily. I used a simple splicer connector on mine to hook it in.

That's it. You're all done with the install. Now you can add water and anti-freeze back into the radiator and "burp" the system of air using the brass bleed screw on the top hose. You can see it pictured here at the top center of the picture. Enjoy!



**Additional Info:** When completed, the pump sticks out 2 3/8 inches from the housing if you were to measure your existing housing with the plate in front. There's a dimple approximately 1" in diameter in the middle that sticks out an additional 3/8 inch. Total - the pump sticks out an additional 2 3/4 inches from your existing pump face.

Here's a Dyno run that was performed by [Morgan MotorSports](#) showing what you should expect from the Meziere Water Pump installation, horsepower-wise. This graph shows about 9.6rwhp gain and 10.7rwtq gain from the install. The faster you turn your motor, the more benefit you receive. It's not a huge amount, but this HP is in addition to the fact that your engine is going to run so much cooler. This really wasn't a HP mod so much as it is a cooling mod. But, every little bit helps!



**DYNORUN.005** Rocker/Gears RO 12/11/99 11:55:02 AM  
 Moroso cold air, Flowmaster cat back (single outlet),  
 changed air filter, no cat, 2 1/2" y-pipe, knock disabled  
 added rockerarms and 4.10 gears

**DYNORUN.006** Water Pump RO 12/11/99 1:52:32 PM  
 Moroso cold air, Flowmaster cat back (single outlet),  
 changed air filter, no cat, 2 1/2" y-pipe, knock disabled  
 rocker arms and 4.10 gears  
 added Electric water pump

This site and all its content is Copyright (C)1998,1999 by Kelly Drown. All photographs are copyrighted under a separate copyright (C)1998, 1999. Please do not reproduce in whole or in part without express permission from the author.

