

9-000-UX1, 9-201-UX1, 9-301-UX1, and 9-401-UX1 DeatschWerks Universal X1 Series Module



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Included Parts:

- Billet Aluminum Top Hat
- Billet Aluminum Mounting Ring
- 2x Stainless Mounting Half Rings
- Sheet Aluminum Bucket
- Billet Center Section
- Billet 39mm to 46mm Pump Adapter
- 6AN 400mm Stainless Return Tube
- 6AN Tube Nut
- 6AN Tube Sleeve
- 2x M5 Bulkhead Terminals
- 8AN ORB to 11/32" Barb Fitting
- 6AN ORB to 5/16" Barb Fitting
- 6AN ORB 90° Low Profile Swivel
- 8AN ORB 90° Low Profile Swivel
- 6AN ORB to 6AN Male Adapter
- 4AN ORB to 5/16" Barb Vent Fitting
- 39mm Fuel Pump Pre-Filter
- 46mm Fuel Pump Pre-Filter
- 12" Rubber In-tank rated hose
- 3x EFI Style Fuel Hose Clamp
- 2x 13.3mm Pinch Clamps
- 40" x 5/16" Convuluted Siphon Tube
- 8" Zip Tie
- 5x Ring Terminals

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PLEASE READ: This guide is intended to help with installing our products. It is recommended that factory manuals or instructions be followed to remove the fuel tank assembly from the vehicle. Instructions in this guide are generic and intended to aid in the installation of a UX1 pump module. The factory manual should supersede any contradiction.

Below are some of the suggested tools that will make the installation process easier.



Important Notes:

This product will require modification of the fuel tank. Removing all fuel is important; never use anything that produces sparks near fuel.

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1. Remove the module and components from the box and make sure all the pieces that are in the "Included parts" are there. If you purchased this module with a pump, it should be included as well. Pump not shown below.



2. This module requires a 3.5" hole saw to make the port for the module and lock ring. Be sure to pick out a place on your tank where the module can be as low as possible. This will help with scavenging fuel in low-level scenarios. If not possible, the module does have a built-in siphon function. This will be explained later. Make sure you do not interfere with the fill tube or factory level sender if applicable.



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3. We would strongly recommend that the tank be removed and emptied of all fuel and cleared of vapors. You will be cutting and drilling the tank in order for this module to be installed. Once you have found a good location that has some depth and can have a relatively straight path to the lowest point, mark it using a center punch.



4. Drill out your 3.5" hole and then clean up and burrs or flakes in the tank. A vacuum can be used to remove the unwanted burrs or flakes. Again, for safety's sake, ensure there is no fuel or fuel vapors left in the tank before using the vacuum.

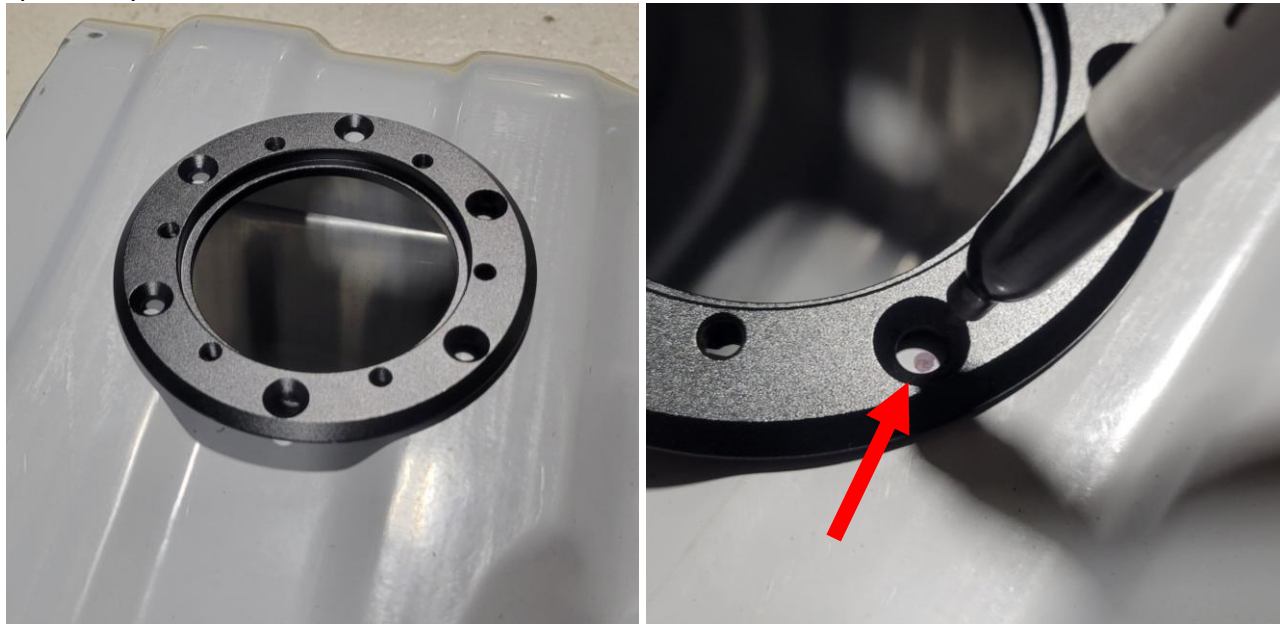


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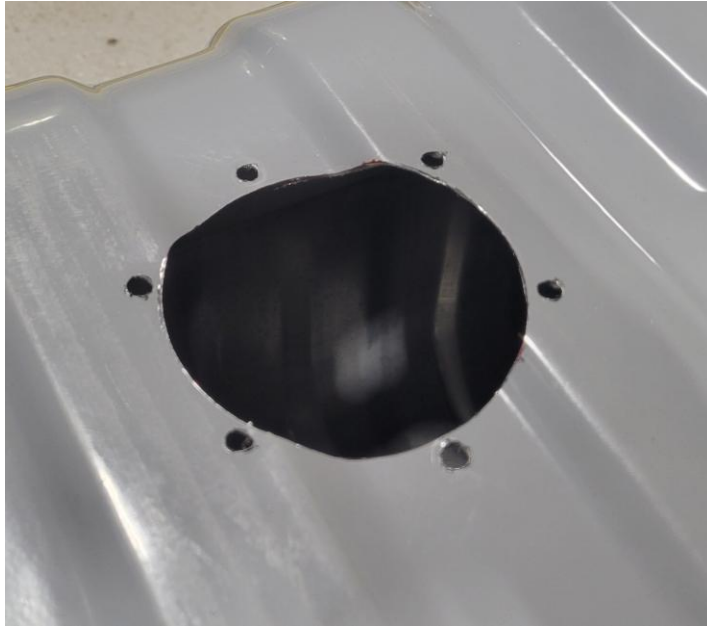
5. Now you will need the top hat assembly. It will be mostly assembled in the box. Grab it and begin taking it apart. We specifically need the outer bolt ring on top. We will use this as a drill guide for the mounting bolts. It can be disassembled using a 4mm Allen wrench.



6. Set the bolt ring in the hole that you cut out of the tank. There is a lower portion that should sit directly into the 3.5" hole you drilled. Now, grab a marker or center punch and mark each hole. Orientation does not matter as the module can be clocked in any direction when installed. Try not to place any bolts in the bends of the tank, as those will be difficult to drill.



7. Drill each hole out using a 1/4" or 6mm drill bit. If desired, a slightly larger bit can be used, which will make ring assembly a bit easier. We would not recommend using any drill bit above 5/16" or 8mm.



8. You will now need all the pieces below. The smaller 6mm Allen bolts with the PTFE washers can be set aside for later use.

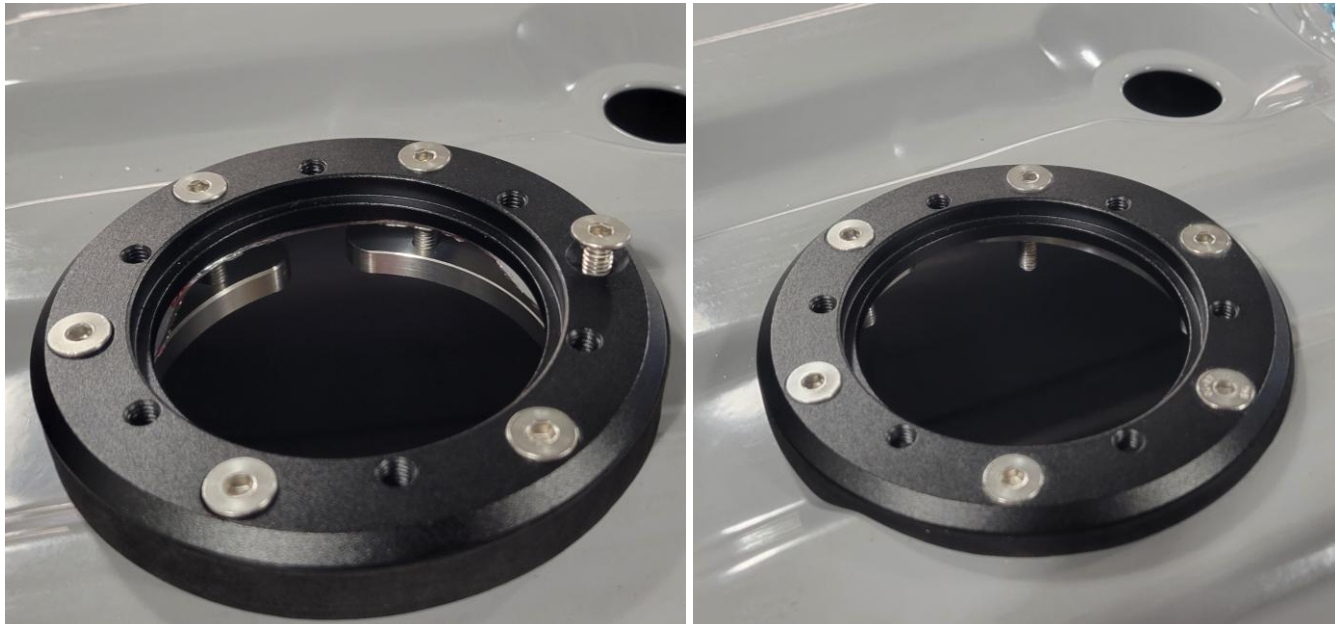


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9. Take the top bolt ring, foam gasket, and 6 countersunk bolts and place the bolts in their corresponding spots. Slide on the foam gasket. Then set the gasket and bolt ring into the tank. Grab the stainless half ring and use one hand to hold it, use the other and thread one of the bolts in. Then line up the remaining 2 and screw them in. Repeat the process for the other half ring.



10. Tighten all bolts to 50 inch lbs. Tighten bolts in a star pattern to evenly press down the gasket. Once tightened down, the gasket should be evenly compressed, minus the corrugations. With the lock ring installed, we can move on to the module.



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11A. Grab the pump you purchased for the module. The only thing you will need is the pump itself and its harness. The provided filter sock in the kit will be used. It comes with the 39mm pump pre-filter, which is shown below.



11B. If this kit is being used with a DW400, you will only need the pump, harness, and the provided 46mm pre-filter that comes with the module.



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11C. If you are using a 39mm pump (DW200/DW300), then you will need the 39mm to 46mm pump adapter shown below.



12. Now locate the sheet metal bucket with the center section and then the rubber one-way valves. A pick with a 90° point can help ease this installation. The one-way valve has a hole on the back side, and the pick can be used to hold the one-way valve and push it in.



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13. Install the one-way valve into its two spots on the bottom of the bucket. Applying some lube can aid with keeping them in during the rest of the installation. Only apply lube on the perimeter of the one-way valve. You can also apply some super glue to the center knob to keep it retained.



14. Locate your pump and install the pre-filter. Install the pump without the adapter sleeve into the bucket.



15. Now install the adapter sleeve over the pump. Applying lube to the sleeves o-rings will make this installation much easier. You can now set the bucket with the pump to the side. If you are installing a DW400, this step can be skipped.



16. Locate the top hat, fittings, terminals, and return tube. We will now begin assembling the top hat.



17. Disassemble the terminals by removing the lower nut, lock washer, and PTFE washer. This can now be inserted into the top hat. Be sure to press the terminals all the way into the top hat.



18. Now flip over the top hat and reinstall the washers and nut.

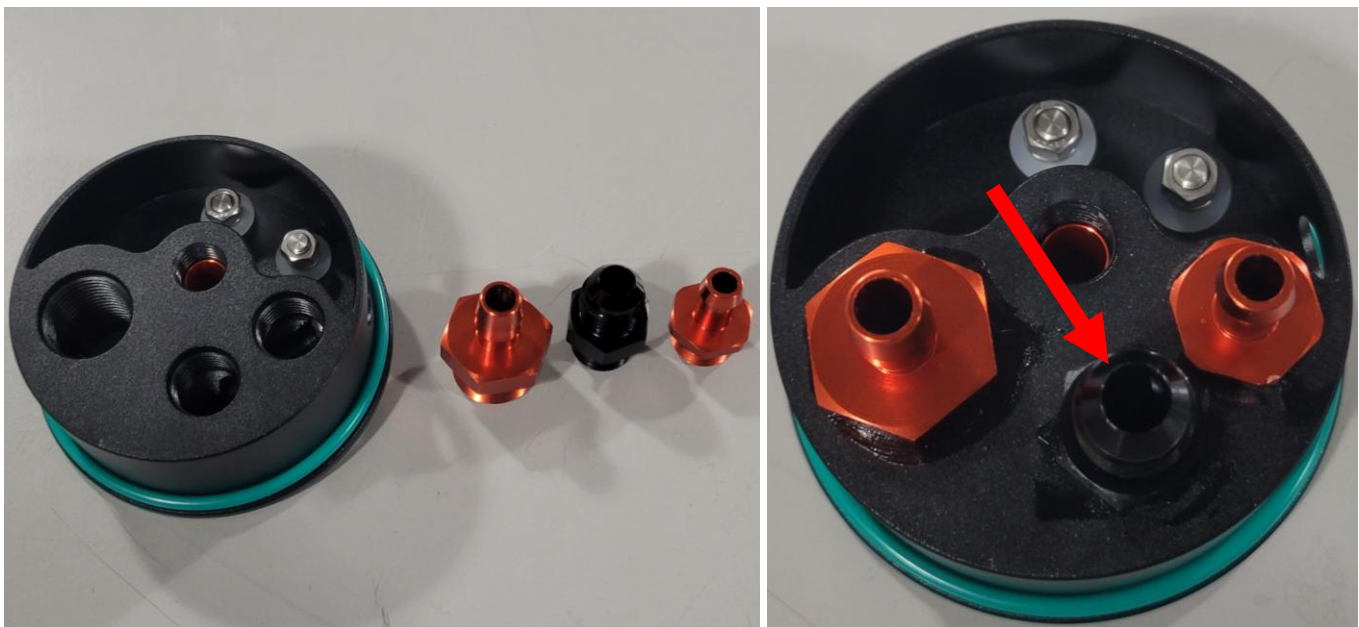


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19. Grab the -4 AN ORB to 5/16" Hose barb vent fitting. You will also need a 14mm or 9/16" socket to install it. Install it into the center port on the top hat. If your tank already has provisions for a vent or doesn't need it, you can either cap off the fitting or replace it with a -4 AN ORB plug.



20. Locate the -8 AN ORB to 11/32" barb fitting, the 6AN ORB to -6 AN adapter, and the 6AN ORB to 5/16" barb fitting. The -8 fitting is the main feed tube, the -6 AN ORB to -6 AN adapter pointed out below **MUST** go in this location for the return tube. If you cannot see through the -6 AN flare where the red arrow is pointing, it is in the wrong location.



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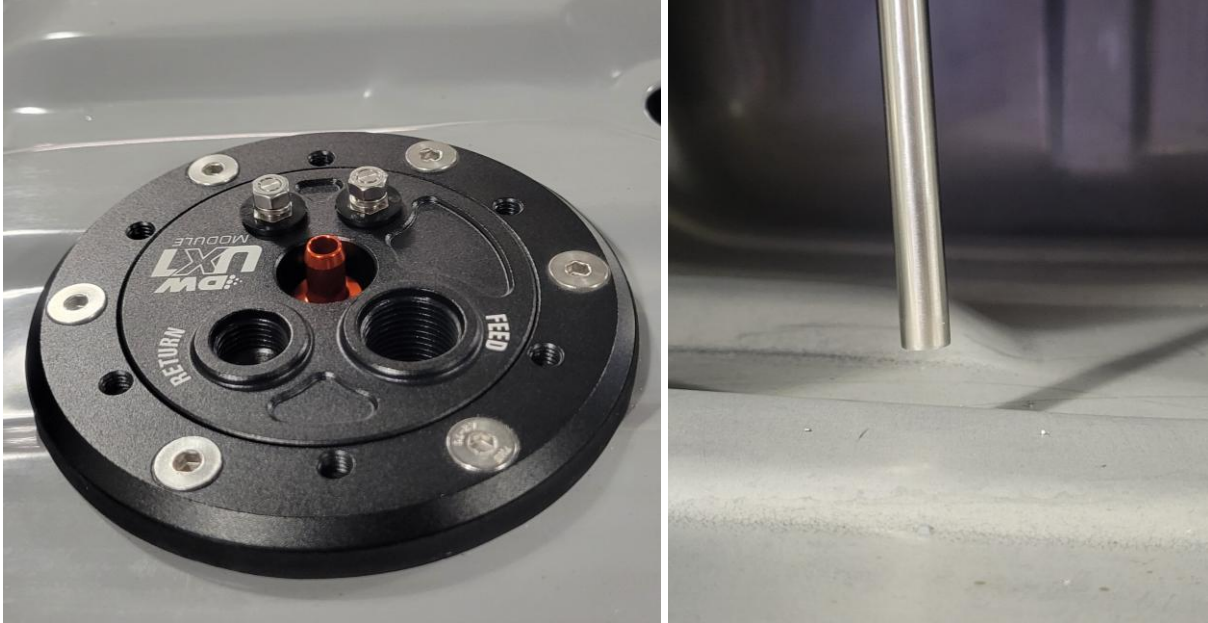
21. Locate the return tube. This will act as the return flow, the bucket locating rod, and the siphon fill to the bucket. Install the sleeve on the tube first, and then the nut. Then install and tighten it to the top hat.



22. With the tube installed on the top hat, slide the top hat and tube into the hole you made in the tank. With this tank, we are measuring 2 ½ inches from the mounting ring to the bottom of the lip on the top hat. We don't want the tube to be completely bottomed out on the tank. So, we are going to remove an extra ½ inch. You can remove up to 1 ½ inches and still be fine. Do not remove more than you need, as it will no longer hold the bucket in place.



23. Reinsert the top hat with the tube installed. If it doesn't sit flat, the rod is still too long and more will need to be removed.



24. Now that the tank depth is set via the return tube, we can start building the module.

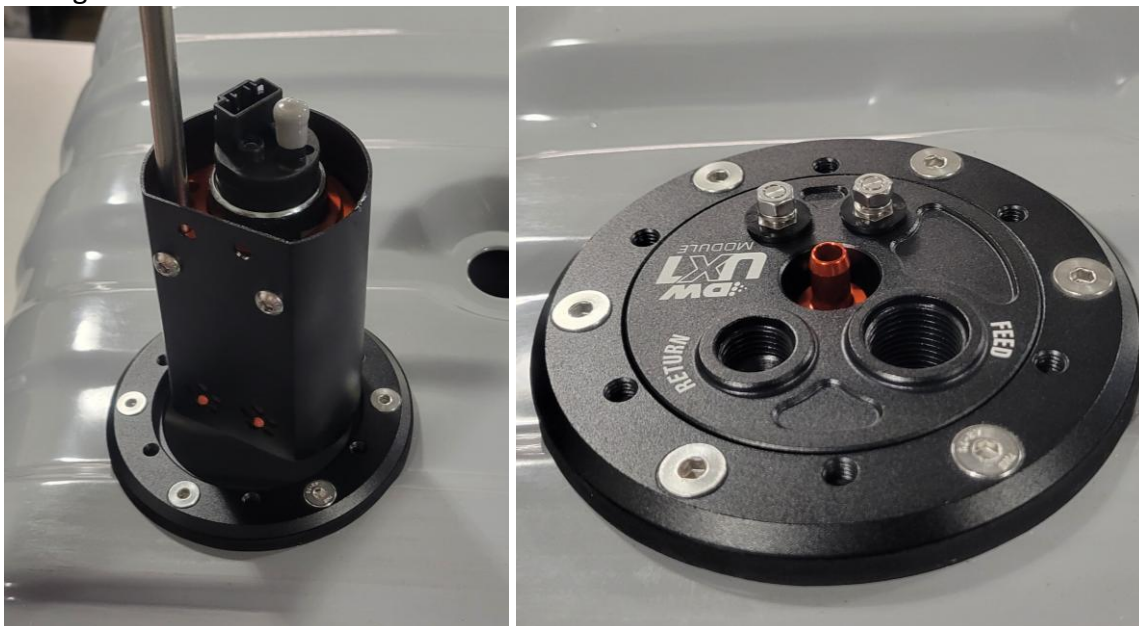


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25. If you grab the bucket and look inside, you will see there are holes. The top 2 in the picture below are to allow fuel in and overflow out. The lowest hole is marked with the arrow. That is for the return tube. Either hole can be used. This can also be used to offset the bucket if needed. Whichever hole is chosen. The corresponding bolt will need to be loosened and then tightened to secure the rod.



26. Insert the rod into the module bucket via the hole shown above. Then set the approximate height needed. Remember, this will set the height for the module overall. Recheck your height with the bucket installed. If the top hat does not sit flush, the height will need to be adjusted. If the tube is bottoming out in the bucket. You will need to remove more from the tube.

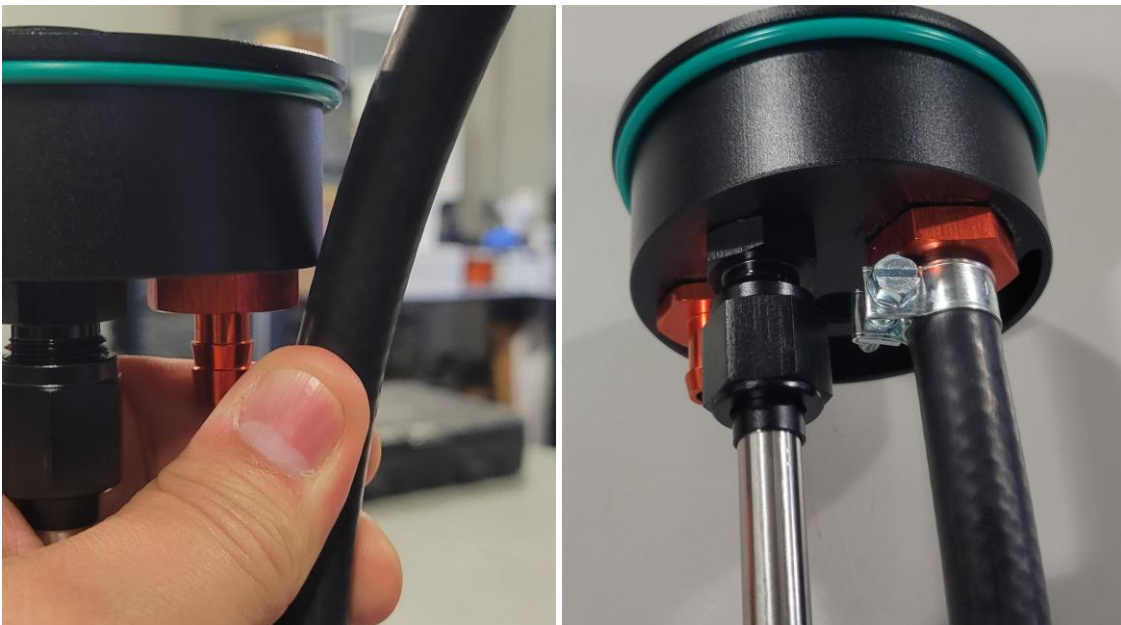


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27. Now that the height is set, we can install the feed hose from the pump. Gather the hose and EFI clamps.

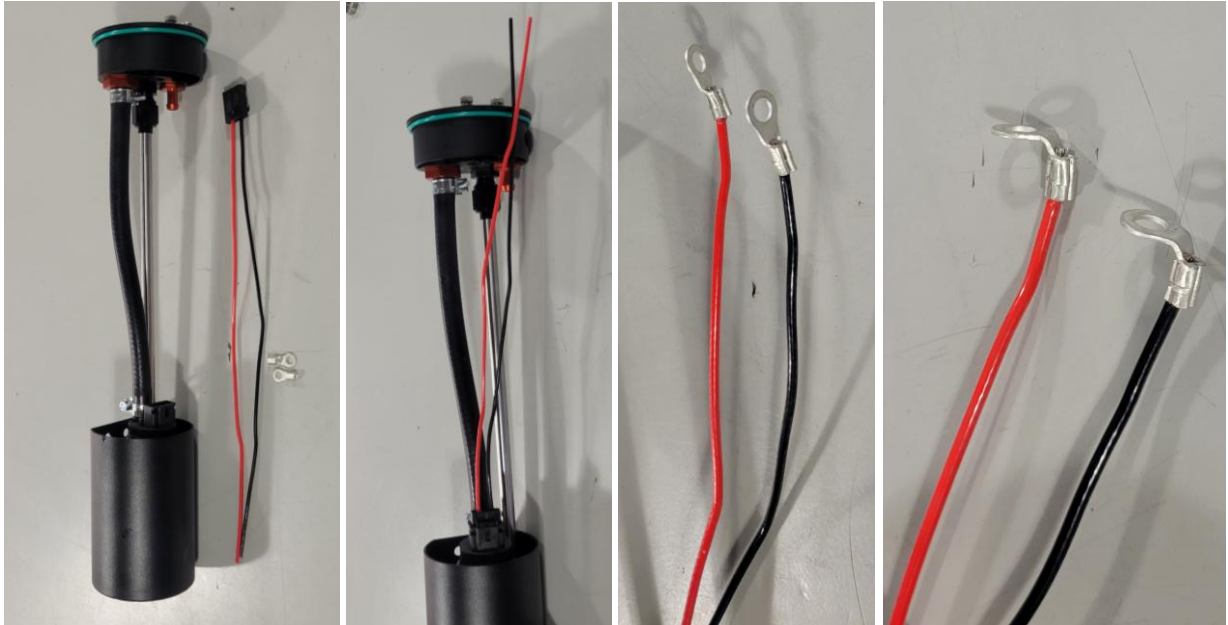


28. Install the hose on the pump with a clamp. Then measure the height from the pump to the top hat feed barb. Cut the hose and then install it with a clamp.

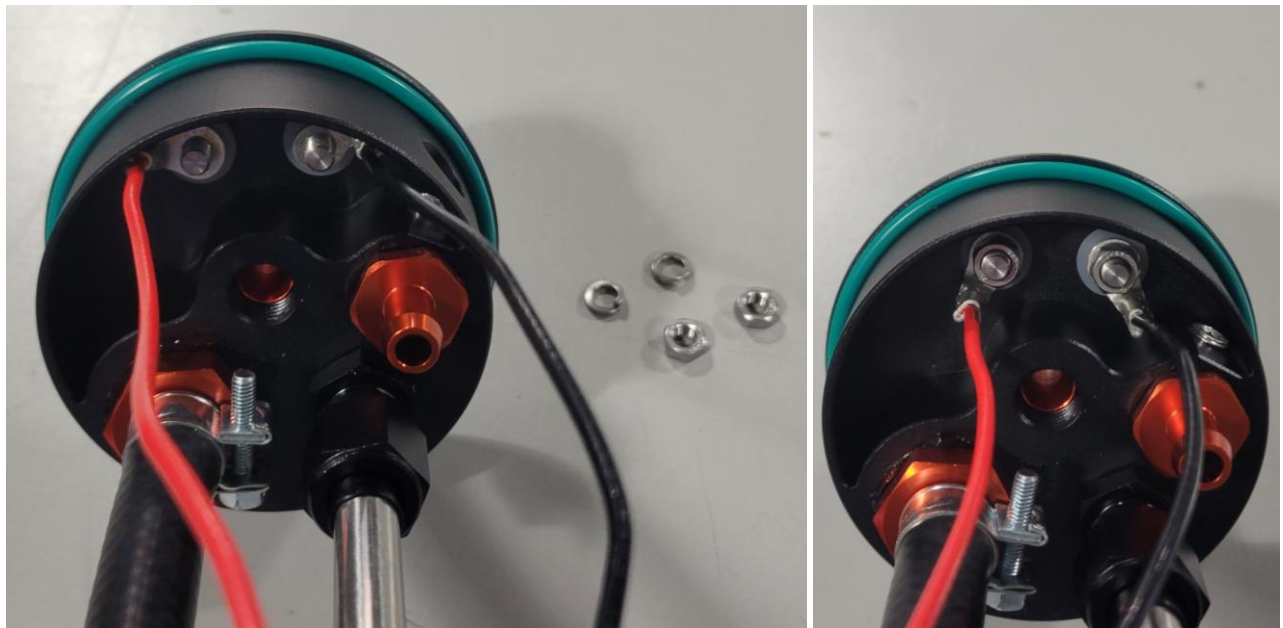


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29. Locate the pump harness and plug it into the pump. Now use the wire to measure what is needed. Having excess will not cause any issues here. We would recommend bending the ring terminals to aid with installation.

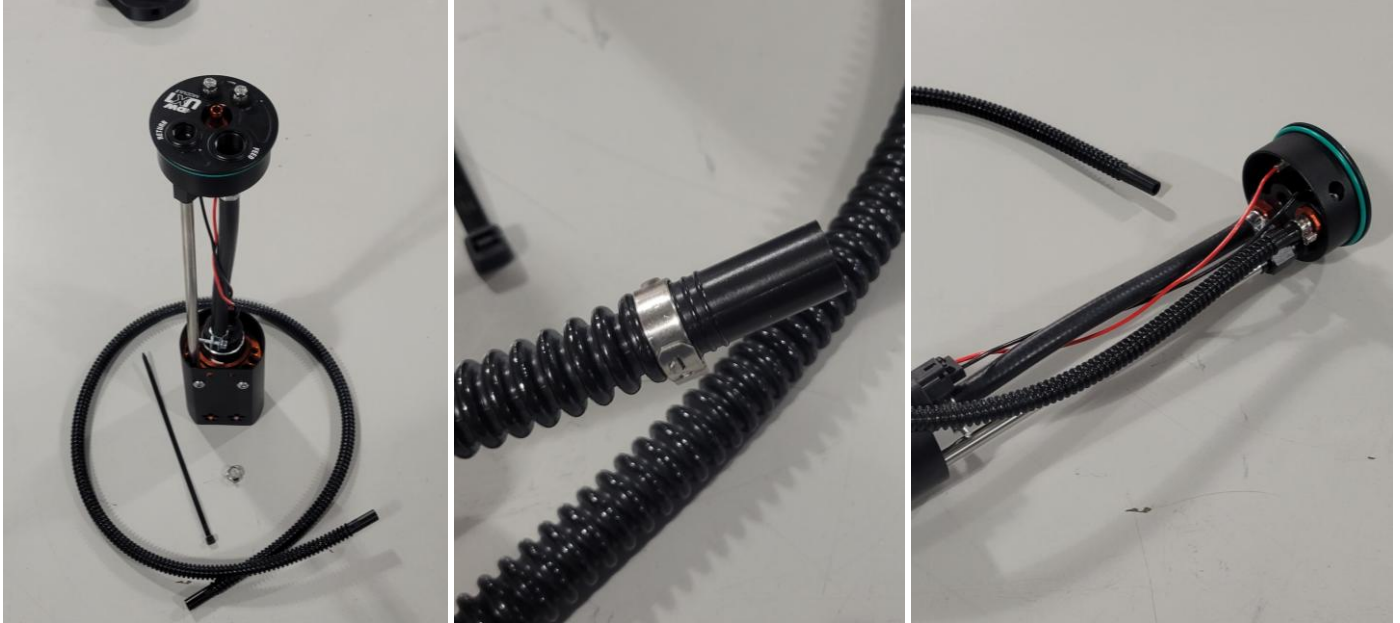


30. Remove the nuts and lock washers and install the wiring onto the terminals. Tighten terminals with an 8mm socket or nut driver. **DO NOT OVER TIGHTEN.** We recommend 15 inch/lbs.

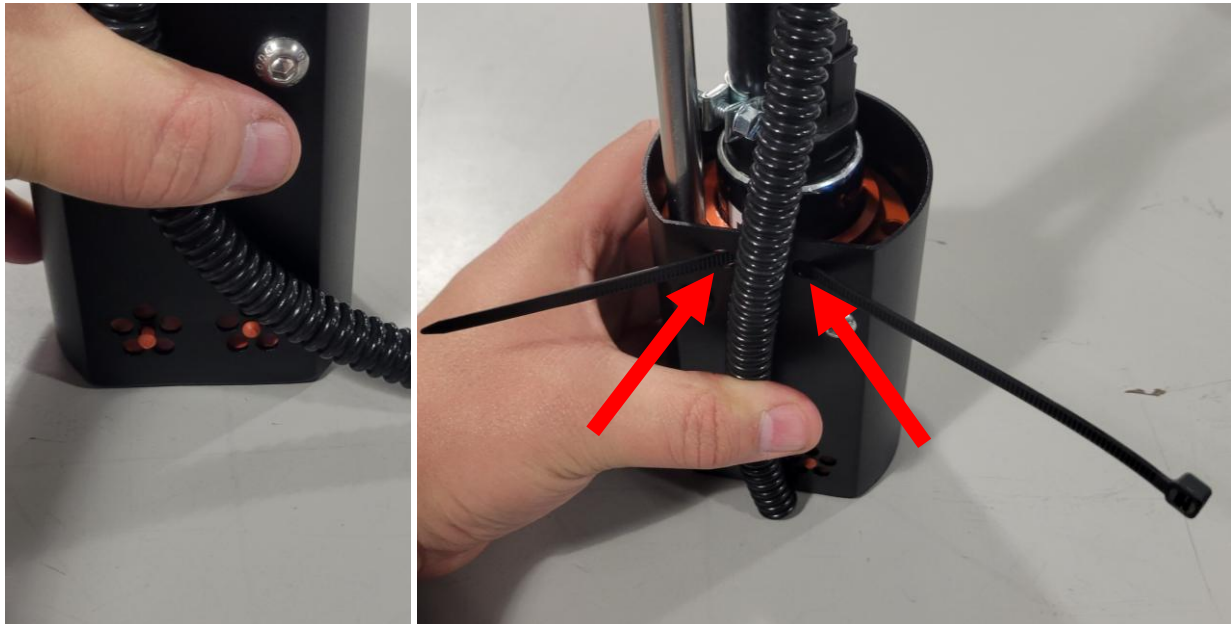


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31. Locate the 40-inch 5/16" convoluted tube, zip tie, and a 13.3mm clamp. Slide the hose onto the orange -6 AN ORB to 5/16" barb. This hose can be left at length or cut to the bottom of the tank. This is the siphon hose to help fill the bucket. This can be used to grab fuel lower in the tank or just from around the bucket.

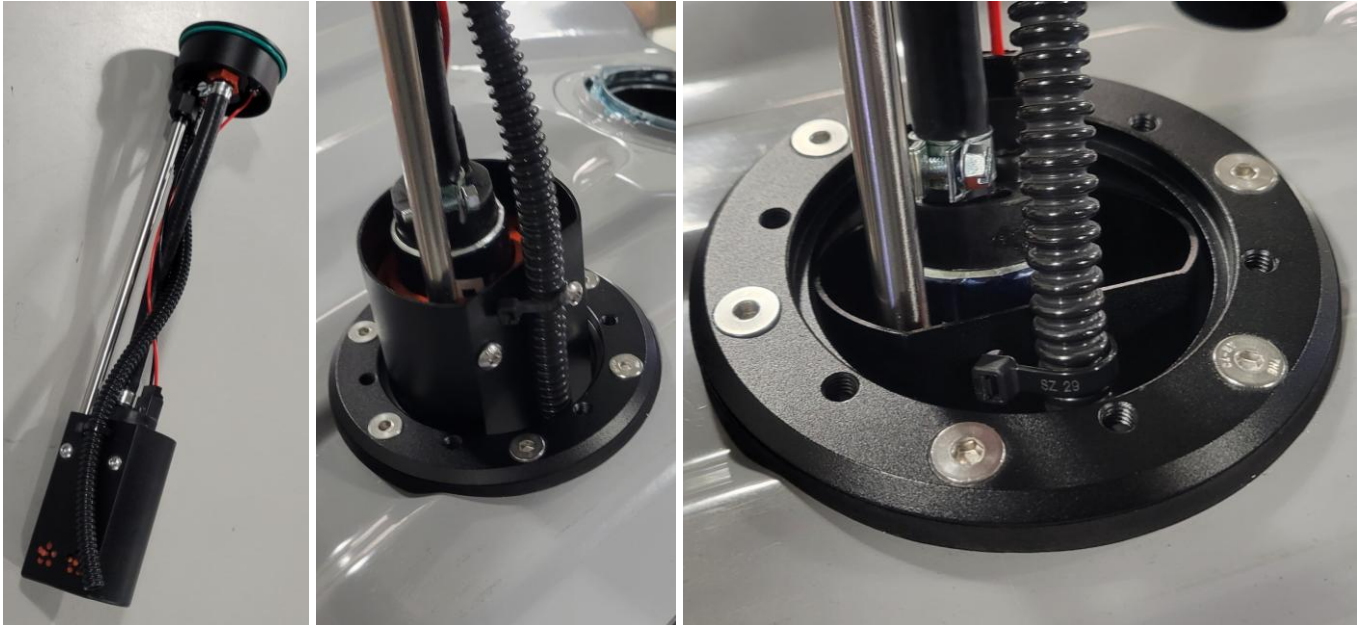


32. If you are using it to pull fuel from around the bucket. Cut the tube so that it bottoms out in the tank. There are two holes in the bucket for the zip tie to pass through, shown below. Tighten the zip tie down to retain the hose. Make sure not to push the one-way check valves into the bucket.

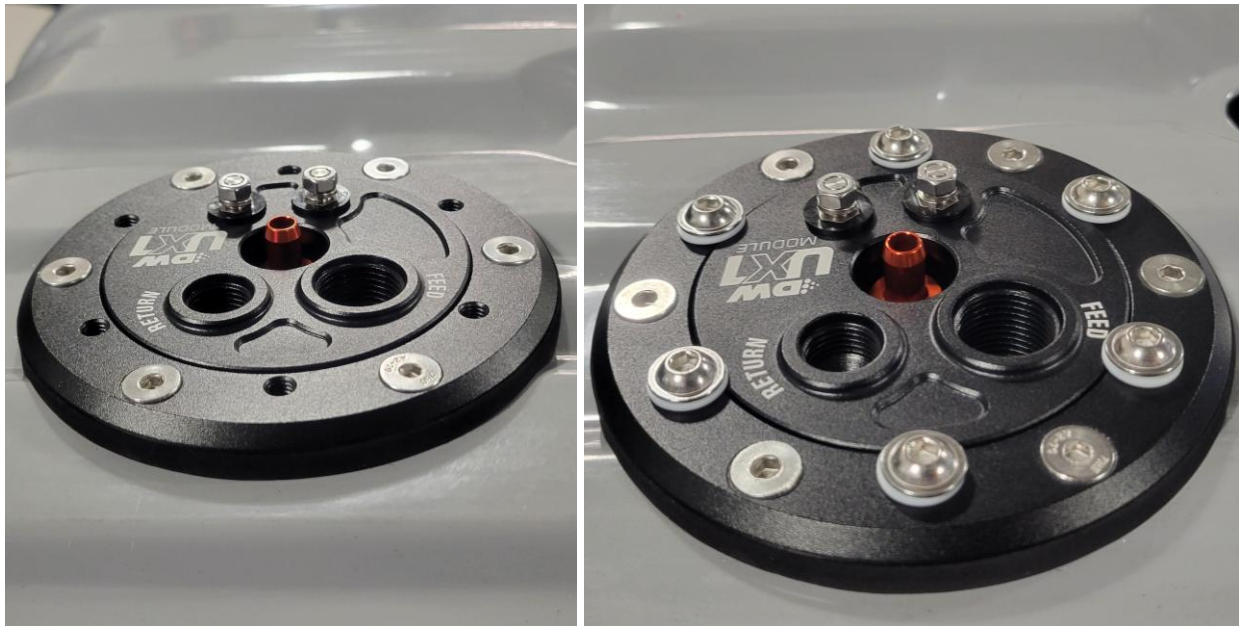


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33. With the module completely assembled, you can now install it into the tank. The siphon tube will be tight, but it will fit. Once you make it to the zip tie, tilt the module towards the pump side and then it will clear the zip tie. Again, make sure the module top hat sits flush.



34. Now find the six 6mm Allen bolts with PTFE washers. Tighten them to 40 inch/lbs. This will secure the module in the tank.



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35. Locate the low-profile -6 return fitting, -8 feed fitting, and 2 ring terminals. The -8 feed fitting requires an 8mm Allen head to install, the -6 return fitting requires a 6mm Allen head, and the ring terminals require an 8mm nut driver or socket.



36. With that, the module build is complete; hook the feed, return, and vent up accordingly.



For additional technical support please contact us at: TechSupport@Deatschwerks.com or 405.233.3991