



# **UNIVERSAL FUEL SUMP INSTALLATION MANUAL**

**PLEASE READ THIS MANUAL AND CHECK  
CONTENTS OF THE KIT BEFORE  
BEGINNING THE INSTALLATION**



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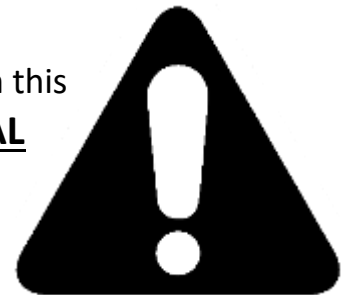
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## SAFETY INSTRUCTIONS

### LEARN TO RECOGNIZE SAFETY INFORMATION

This is the safety alert symbol. When you see this symbol in this manual, **BE ALERT TO THE POTENTIAL FOR PERSONAL INJURY!**



Follow recommended precautions and safe operating practices.

### UNDERSTANDING SIGNAL WORDS

A signal word-**DANGER**, **WARNING**, or **CAUTION** is used with the safety alert symbol.

**DANGER** indicates a hazardous situation which, if not avoided, **WILL** result in death or serious injury.



**WARNING** indicates a hazardous situation which, if not avoided, **COULD** result in death or serious injury.



**CAUTION** indicates a hazardous situation which, if not avoided, **COULD** result in minor or moderate injury.



## PRE-INSTALLATION CHECKS



The installation of your **AirDog® Sump** can be made relatively easy by following the steps outlined in this manual, and:

1. Inventory the package components completely. Notify AirDog® immediately of any parts missing or damaged.
2. Read the installation manual completely. Understand how the system operates and installation recommendations before beginning installation.
3. The installation recommendations contained herein are suggested installation guidelines only. Individual installations may vary.
4. If any installation procedure is uncertain, contact AirDog® for technical assistance.
5. [When installing the AirDog® Sump be sure to keep the ORIGINAL ENGINE RETURN LINE connected as it is from the factory!](#)

## SAFETY GUIDELINES!



**WARNING**

Please be sure to chock the vehicle's tires to prevent rolling.



**WARNING**

Please use proper supports when working beneath an elevated vehicle.



**WARNING**

Vehicle frame rails should not be drilled into or welded upon.



**CAUTION**

Wear safety glasses or shield when operating power tools such as drills and grinders or when using a punch or chisel.



**CAUTION**

Prolonged exposure to loud noise can cause impairment or loss of hearing. Wear suitable hearing protective devices such as ear muffs or earplugs to protect against objectionable or uncomfortable loud noises.



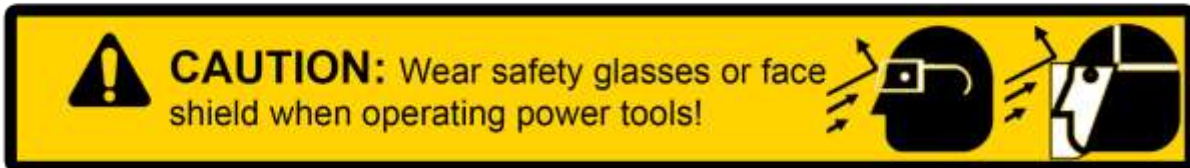
**CAUTION**

Use common sense when routing fuel lines. Keep them away from hot exhaust components and/or moving parts. Properly secure lines to prevent chaffing.

### SUMP PARTS LIST

QUANTITY	DESCRIPTION	PART NUMBER	IMAGE
1	SUMP BOWL	002-SMP-001	
1	SANDWICH PLATE	002-SMP-002	
1	INNER O-RING	1U-2-1-228	
1	OUTER O-RING	1U-2-1-233	
1	CENTER BOLT	1L-38-2.5	
1	SEALING WASHER	1P-5-GS	
1	3/4-16 PLUG	4A-3-01-ORB	
2	4A-1-02-08-08-S	3/4-16 ORB TO -8AN	
2	4A-1-09-08-08-B	-8 PUSH TO LOCK	

## DRILLING THE FUEL TANK



**NOTE:** Choosing a place to drill the 2” hole is critical to the performance of the sump! Too far forward will starve the fuel system of fuel on hard acceleration. Too far rearward will starve the fuel system during heavy braking. A surface not flat enough for the surface area of the sump will cause leaks. Drilling below the sending arm may make fuel tank level off. Drilling below the fuel module may damage the module and may also restrict flow into the sump. AirDog® is NOT responsible for any issues caused from improper installation!!!



- 4-1. Have a bucket ready to catch the remaining fuel in the fuel tank. Source a 2" hole saw to cut a hole in the bottom of the fuel tank in the desired location. Use the pilot bit to drill the small hole and remove it before the hole saw starts cutting. Let the fuel drain into the bucket before continuing to cut the rest of the hole. To speed up the fuel draining, loosen the fuel cap to let it vent faster. Once the fuel stops draining, finish drilling the 2" hole.



**Figure 1**



**Figure 2**

- 4-2. Once the hole is drilled, be sure to clean the debris out as best as possible and deburr the hole.



**Figure 3**

## INSTALLING THE SANDWICH PLATE

- 5-1. Feed the sandwich plate up into the hole with the grooves facing downward. Let it rest on the bottom of the tank.



Figure 4



Figure 5



Figure 6



## O-RING INSTALLATION

- 6-1. There are two O-rings to install. Set the O-rings in the grooves and make sure they set down in the grooves to avoid pinching them during installation.



Figure 7



Figure 8



Figure 9



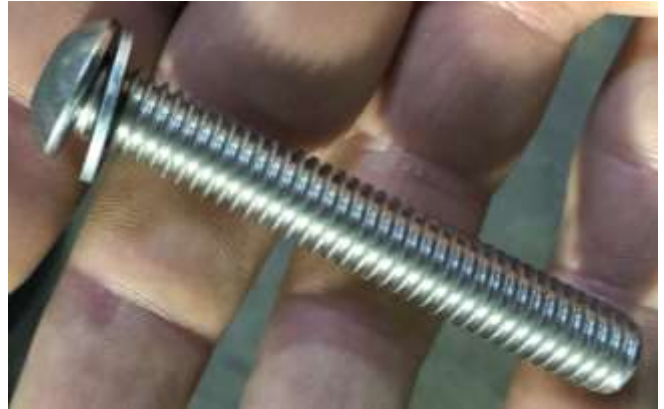
Figure 10

## SUMP BOWL INSTALLATION

- 7-1. Install the sealing washer onto the bolt.



**Figure 11**



**Figure 12**

- 7-2. When installing the sump, be sure the dowel pin goes through the small hole in the sandwich plate. This will keep the plate from spinning when the bolt is tightened.



**Figure 13**

- 7-3. Orient the sump to how you prefer and start hand threading the bolt into the plate. Push up on the sump once the bolt is starting to thread to seat the lip of the sump in the 2" hole. **Failure to seat the sump before final tightening will result in damage to the tank and cause fuel leaks!** Using a 7/32" Allen wrench, tighten the Allen head cap screw until the sump bowl is close to flush with the bottom of the tank. **Do not overtighten or you may strip out the threads on the plate!**



Figure 14

## INSTALLING THE FITTINGS

This kit comes with -8 fittings. If you have an AirDog II-5G DF-220 or similar pump, you will need to use the adapter fitting that comes in the AirDog kit to adapt to -10 lines for the feed line.

- 8-1. Install the -8 fittings (4A-1-02-08-08-S) into the sump using a 7/8" wrench. Once the O-rings are no longer visible and the fittings are snug, they are properly installed. If you are only using the feed side of the sump, refer to step 9-1.



Figure 15

- 8-2. The brass swivel fittings (4A-1-09-08-08-B ) are -8 and press into 1/2 in fuel line. Use clean motor oil or ATF to press the hose onto the barbs until the barbs are no longer visible. **Do not use hose clamps!!! Hose clamps will damage the hose and cause leaks!!!** Once the hose is installed, install the return of the fuel pump onto the return side (right port) and the inlet line to the fuel pump onto the feed side (left port) using a 7/8" wrench.



Figure 16



## AFTER INSTALLATION INFORMATION

- 9-1. This sump is a feed and return design, but if you have no use for the return side, there is a plug provided to block it off. If this is the case, use a 5/16 Allen wrench to tighten the plug. It is an O-ring seal so once the fitting bottoms out, the hole is sealed.



Figure 17

- 9-2. The threads in both sides of the sump are a 3/4-16 O-ring Boss. For higher flowing pumps, you will need a -8ORB to -10AN fitting to adapt up to a -10 fuel line on the feed side. For 165GPH pumps and below, you will need a -8ORB to -8AN fitting on the feed side. The return side, if you choose to use it, will be a -8ORB to -8AN. Tighten the fittings till the O-ring is no longer visible and the fitting is snug.
- 9-3. There is a drain on this sump to easily drain the fuel from the tank in case you get bad fuel from a filling station. You will need a 3/16 Allen wrench to loosen the 7/16-20 ORB plug.



Figure 18



Figure 19



## ***1 YEAR LIMITED EXPRESS WARRANTY*** **FOR** **UNIVERSAL FUEL SUMP KIT (DRX09SMP)**

AirDog® (hereafter collectively, “SELLER”) warrants and guarantees only to the Original Purchaser (hereafter collectively, BUYER) that the AirDog® UNIVERSAL FUEL SUMP KIT (hereafter collectively, PRODUCT) shall be free from defects of materials and workmanship in the manufacturing process for 1 (one) year from date of purchase.

The 1 Year Limited Express Warranty is limited to the PRODUCT purchased by the original BUYER of the PRODUCT and limited solely to the parts contained within the PRODUCT and EXCLUDES ALL ELSE. Any PRODUCT that is in question of Warranty must be returned, shipped prepaid, to PureFlow AirDog®. All Warranty claims are subject to the approval of AirDog®. If it is determined that a Warranty claim exists, AirDog® will, at its sole discretion, replace the defective PRODUCT with a comparable PRODUCT, or repair the defective PRODUCT. Repairs or replacements are warranted for only the remainder of the original warranty period and only to the original BUYER.

Under no circumstances shall the SELLER be liable for any labor charged or travel time incurred in the diagnosis for defects, removal, or reinstallation of the PRODUCT, or any contingent expense.

Under no circumstances will the SELLER be liable for any damage or expense incurred by reason of the use or sale of the PRODUCT.

Other than expressly set forth herein, the SELLER shall in no way be responsible for the proper or improper use and service of the PRODUCT. In no event shall the SELLER be liable for any special, incidental, indirect or consequential damages of any kind or nature, whether or not the BUYER of the PRODUCT was advised of the possibility of damage or harm, arising or resulting from the use or performance of the PRODUCT and BUYER hereby waives the right to any and all such claims.

BUYER, acknowledges that he/she is not relying on SELLER’S skill or judgment to select or furnish goods suitable for any particular purpose and that SELLER has no liability that will extend beyond the scope of the LIMITED EXPRESS WARRANTY contained herein, and BUYER hereby waives all remedies or liabilities, expressed or implied, arising by operation of law or otherwise.(including, without limitation, any obligation of SELLER with respect to fitness for any particular purpose; merchantability; and special, incidental, indirect or consequential damages) or whether or not occasioned by SELLER’S negligence.

SELLER disclaims any warranty and expressly disclaims any liability for personal inquiry or damages related to BUYER’S use of the PRODUCT. BUYER acknowledges and agrees that the disclaimer of any liability for personal injury is a material term for this agreement and BUYER agrees to indemnify SELLER and hold SELLER harmless from any claim related to the PRODUCT and its use or performance. Under no circumstances will SELLER be liable for any damages, liabilities, costs or expenses incurred as a result of or by reason of use, performance or sale of the PRODUCT, including without limitation, any damages, liabilities, costs or expenses incurred by reason of BUYER’S negligence related to those uses of the PRODUCT.

The proper installation of the PRODUCT is the sole responsibility of the BUYER. The SELLER assumes no liability regarding improper installation or misapplication of the PRODUCT.

SELLER hereby provides the following limited warranty as to description, quality, merchantability, fitness for the PRODUCT’S purpose, productiveness, or any other matter of SELLER’S PRODUCT sold herewith. The SELLER shall be in no way responsible for the open use and service of the PRODUCT and the BUYER hereby waives all rights other than those expressly written herein. This Warranty shall not be extended or varied except by a written instrument signed by SELLER and BUYER.

IN THE EVENT THAT THE BUYER DOES NOT AGREE WITH THIS AGREEMENT, THE BUYER MAY PROMPTLY RETURN THE PRODUCT, IN A NEW AND UNUSED CONDITION, WITH A DATED PROOF OF PURCHASE, TO THE PLACE OF PURCHASE WITHIN THIRTY (30) DAYS FROM THE DATE OF PURCHASE FOR A FULL REFUND. THE BUYER AGREES THAT THE INSTALLATION OF THIS PRODUCT CONFIRMS THE BUYER HAS READ AND UNDERSTANDS THIS AGREEMENT AND ACCEPTS THE TERMS AND CONDITIONS OF THIS AGREEMENT.

REVISED 3/19/2024