



FILL-RITE Df Series DEF Transfer Pump Instruction Manual

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DF SERIES DEF TRANSFER PUMP
Installation and Operation Manual



MADE IN
USA 
WITH GLOBAL MATERIALS

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Thank You!

Thank you for your purchase of the DF series DEF pump! Your Fill-Rite® product comes with over 80 years of pump manufacturing experience behind it, providing you the value that comes with superior performance, user friendly design, outstanding durability, and solid, simple engineering.

Protect yourself as well as those around you by observing all safety instructions and adhering to all danger, warning, and caution symbols.

Please save these instructions for future reference and record the model, serial number, and purchase date of your Fill-Rite pump. Please register your Fill-Rite product via info.fillrite.com/product_registration.

IMPORTANT RETURN POLICY

Please do not return this product to the store. For all warranty and product questions, please contact Technical Support at 1 (800) 720-5192 or via email at FillRiteTech@fillrite.com (M-F, 8 AM – 5 PM ET).

MODEL# ____
SERIAL# ____
PURCHASE DATE: ____

About This Manual

From initial concept and design through final production, your Fill-Rite product is built to provide years of trouble-free use. To ensure the safety of yourself and those around you, it is critical that this manual is read in its entirety prior to attempting to install or operate your new purchase. We strongly urge that any installer and operator become familiar with the terms, diagrams, and technical data in this manual and pay close attention to any DANGER, WARNING, CAUTION, or NOTICE information. At Fill-Rite, your satisfaction with our products is paramount to us. If you have questions or need assistance with your product, please contact us at 1 (800) 720-5192 or via email at FillriteTech@fillrite.com (M-F, 8 AM – 5 PM ET).

Symbols and Definitions



DANGER

Emphasizes an area in which personal injury or even death will result from failure to follow instructions properly. Mechanical damage may also occur.



WARNING

Emphasizes an area in which personal injury or even death may result from failure to follow instructions properly. Mechanical damage may also occur.



CAUTION

Failure to observe a "Caution" may cause damage to the equipment.



NOTICE

These boxes contain information that illustrates a point that may save time, or be key to proper operation, or clarifies a step.

Safety Information



DANGER

Electrical wiring should be performed with extreme caution and in compliance with local, state, and national electrical code NEC/ANSI/NFPA 70, NFPA 30, and NFPA 30A, as appropriate for the intended use of the pump. The pump must be properly grounded. If installing in deviation of this manual, a licensed electrician must perform the installation. Improper installation or use of this product could result in serious bodily injury, or death!



DANGER

To ensure safe and proper operation of your equipment, it is critical to read and adhere to all of the following safety warnings and precautions.

Failure to follow instructions below, improper installation, or use of this product, will cause serious bodily injury or death!

- DO NOT use the pump near flammable liquids! Fire can result!
- This product shall not be used to transfer fluids into any type of aircraft.



WARNING

Threaded pipe joints and connections should be sealed with the appropriate sealant or sealant tape to minimize the possibility of leaks.

Leaking fluids may cause a hazard.



WARNING

On Fill-Rite DEF pumps equipped with AC motors, the pump motor is equipped with thermal overload protection. If overheated, the motor will shut off to prevent damage to the windings. If this happens, **TURN THE PUMP OFF!** When the motor cools, it will restart without warning if the power is on.



CAUTION

This product is not suited for use with fluids intended for human consumption. Materials of construction are not food grade.

About Diesel Exhaust Fluid

(DEF / AdBlue)

The Fill-Rite DEF pump is designed to pump AUS32 (Aqueous Urea Solution 32.5%), better known as Diesel Exhaust Fluid, often called “DEF”, or “AdBlue”.

DEF / AdBlue is used by modern diesel engines which are equipped with an SCR (Selective Catalytic Reduction) system. The common misconception is that it is an additive to the fuel, but DEF / AdBlue never comes into contact with the fuel. DEF / AdBlue is carried onboard the vehicle in its own storage tank. It is injected into the exhaust gases as a post combustion process through an SCR (Selective Catalytic Reduction) where it breaks harmful NOx (Nitrous Oxide) emissions down into mostly nitrogen and oxygen.

Because the specific purity of the DEF / AdBlue solution is critical to the catalytic reaction, the Fill-Rite DEF pump is designed to maintain the integrity by using components made of materials that will not taint or alter the solutions chemical structure.

NOTICE

To maintain the purity of DEF / AdBlue, it is important the dispensing system is a “closed loop”, or sealed system. DEF / AdBlue will crystalize on contact with oxygen, so having sealed containers, sealed lines and equipment, and a dispensing nozzle immersed in water are all paramount to maintaining the integrity of the DEF / AdBlue solution.

NOTICE

After initial assembly and installation, flush the entire dispensing system by pumping 5 – 10 gallons of DEF through it. This purges the system of air, and insures any impurities that may have been in the system are washed out. Dispose of the DEF used to flush the system using approved DEF handling procedures; do not return the fluid to the drum or tote, or use it in a vehicle.



WARNING

To ensure safe and proper operation of your equipment, it is critical to read and adhere to all of the following safety warnings and precautions.

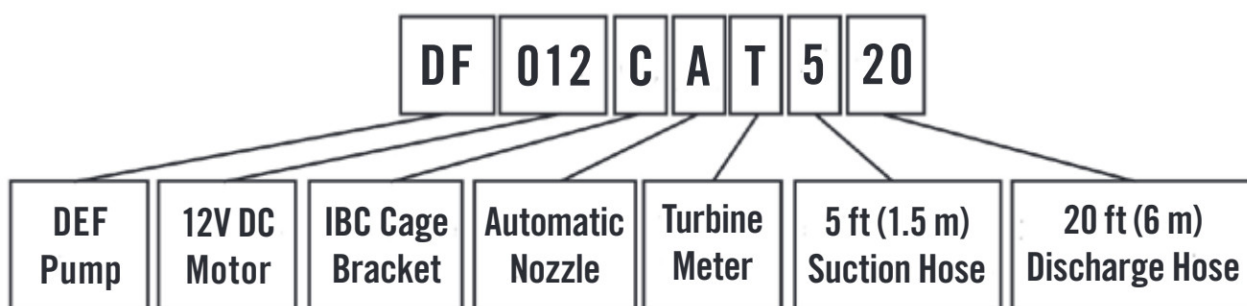
- Improper installation or use of this product can cause serious bodily injury or death!
- Maintaining the purity of Diesel Exhaust Fluid is critical; it is imperative once the system is assembled, it must remain sealed to insure the integrity of the fluid. Breaking the seal on the system can lead to fluid contamination.
- After dispensing DEF be certain to drain all the fluid from the nozzle, making sure it is pointing downward with the nozzle tip submerged in water when stored in the nozzle boot. DEF remaining in the nozzle tip that is exposed to air will crystallize and can plug the nozzle.
- DO NOT lay the dispensing nozzle on the ground or any surface that may contaminate the nozzle tip as this can compromise the purity of the DEF.
- Inlet and outlet threads are BSPP style and seals against O-rings, so no special sealant is required.
- Storage tanks must be securely anchored to prevent shifting or tipping when full or empty.
- On Fill-Rite DEF pumps equipped with AC motors, the pump motor is equipped with thermal overload protection. If overheated, the motor will shut off to prevent damage to the windings. If this happens, TURN THE PUMP OFF! When the motor cools, it will restart without warning if the power is on.

Model Nomenclature

Fill-Rite DEF Dispensing Systems are offered in a wide variety of pre-packaged kits. Model numbers reflect the content of the kits. Please reference the chart below to determine what pump and accessories are included in your kit:

DF (DEF)	XXX (Motor Power)		X (Mount Config.)		X (Nozzle)		X (Meter)		X (Suction)		XX (Discharge)		XX (Additional Accessories)	
Fill-Rite DEF Dispensing System	0	12V DC	N	Pump Only	A	Automatic Nozzle	N	No Meter	5	5' (1.5 m)	2	20' (6 m)		
	1	120V AC	D	IBC Cage Bracket	M	Manual Nozzle	T	Turbine Meter						
	2	Pump	C	Drum Bracket										

Using that chart, a DF012CAT520 (as an example) breaks down like this down as follows:



Installation

If your pump comes as part of a system, regardless of whether it is AC or DC powered, it will be pre-mounted to either a IBC / tote mount bracket or a drum mounting bracket. Both systems are designed for quick mounting and dismounting from either IBC's and totes, or standard drums from 30 – 55 gallons. Both systems provide for secure attachment, hose and nozzle storage, and simple fluid connection.

Pump only installations can be securely mounted using the foot bracket on the bottom of the pump. Dimensions for the mounting holes are viewed on page 15.

IBC/Tote Installation

NOTICE

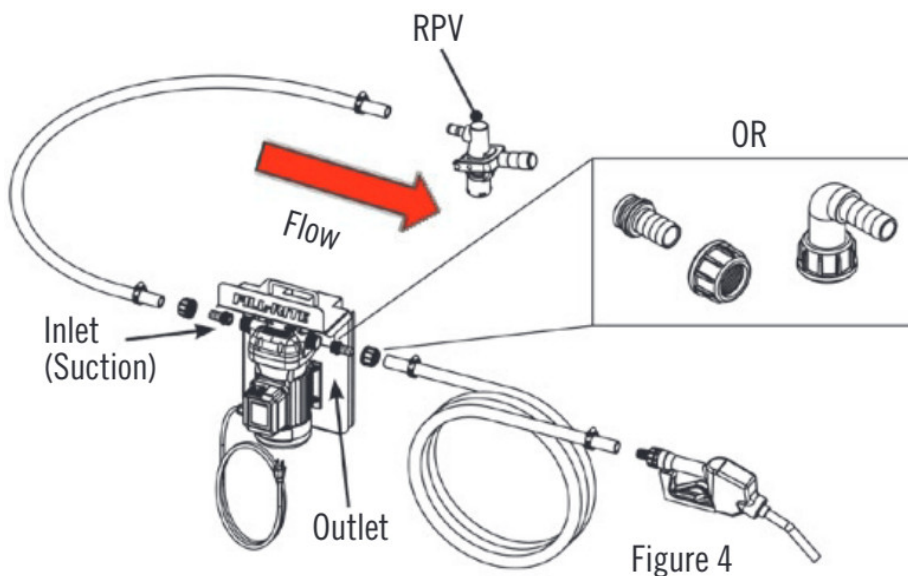
After initial assembly and installation, flush the entire dispensing system by pumping 5 – 10 gallons of DEF through it. This purges the system of air, and insures any impurities that may have been in the system are washed out. Dispose of the DEF used to flush the system using approved DEF handling procedures; do not return the fluid to the drum or tote, or use it in a vehicle.



WARNING

DO NOT overtorque the threaded collars that seal the barbed fittings to the inlet and outlet ports of the pump. The design features BSPP threads and an o-ring seal that does not require excessive torque to provide a liquid / air tight seal.

1. Hang Pump Bracket onto IBC.
2. Install Suction Hose to suction side of pump with included barb fittings and hose clamp (Figure 4). Suction side is left side when facing mounted pump.
3. Install the opposite end of suction hose to closed loop suction device with appropriate fittings (Models DF120CAT520, DF012CAT520, DF120CAN520-RP, and DF012CAN520-RP include an RPV to attach) (Figure 4).
4. Install Discharge Hose with nozzle to discharge side of pump with included barb fittings and hose clamp (Figure 4).
5. Tighten each hose clamp to secure suction and discharge hoses to all barb fittings to prevent fluid leaks (Figure 5a – 5c). Hook Nozzle Bracket to IBC Cage at preferred location.



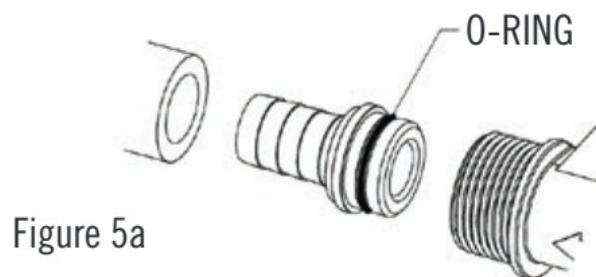


Figure 5a

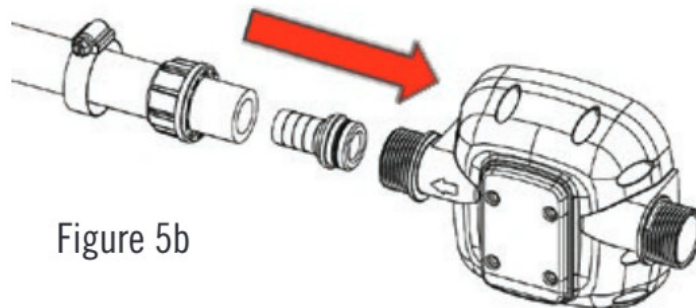


Figure 5b

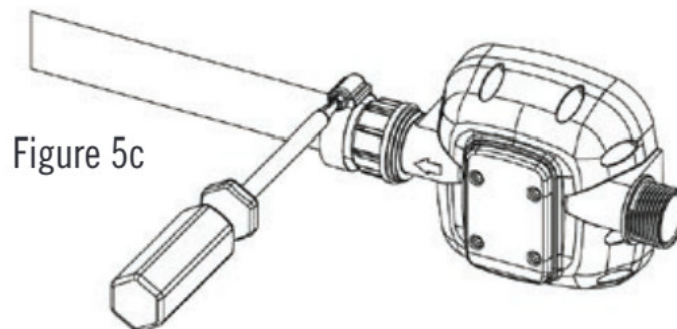


Figure 5c

6. Secure to cage with included tie strap (Figure 6a).
 7. Insert Nozzle Reservoir into Nozzle Bracket and snap into opening. Add water to reservoir to prevent urea crystallization in nozzle (Figure 6a).
 8. Wrap Discharge Hose around the Pump Bracket behind Fill-Rite Ledge.
- Final installation should look like the image below (Figure 6b):

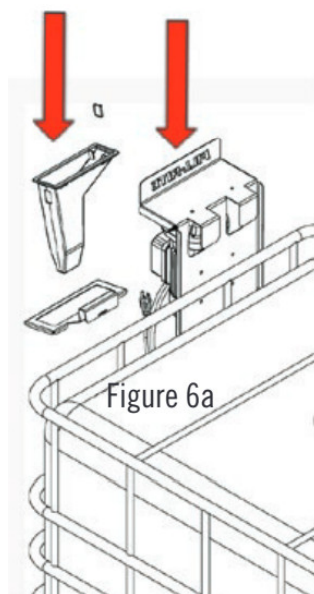


Figure 6a



Figure 6b

Drum / Barrel Installation

NOTICE

After initial assembly and installation, flush the entire dispensing system by pumping 5 – 10 gallons of DEF through it. This purges the system of air, and insures any impurities that may have been in the system are washed out. Dispose of the DEF used to flush the system using approved DEF handling procedures; do not return the fluid to the drum or tote, or use it in a vehicle.



WARNING

DO NOT overtorque the threaded collars that seal the barbed fittings to the inlet and outlet ports of the pump. The design features BSPP threads and an o-ring seal that does not require excessive torque to provide a liquid / air tight seal.

1. Adjust Drum Kit to fit a 30 or 55 Gallon drum by unlocking both wing nuts and sliding bracket to adjust for with drum diameter (Figure 7).
2. Adjust length of suction tube to reach within 2" of the bottom of drum once tightened into bung adapter. Insert Drum Suction Tube (sold seperately, item 6, page 11). Place Pump with Drum Bracket over drum lip. Compress sliding bracket to securely wrap around drum lip. Secure bracket by tightening wing nuts (Figure 8).

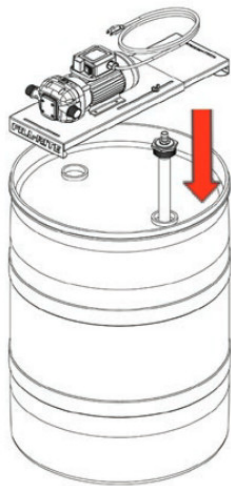


Figure 8

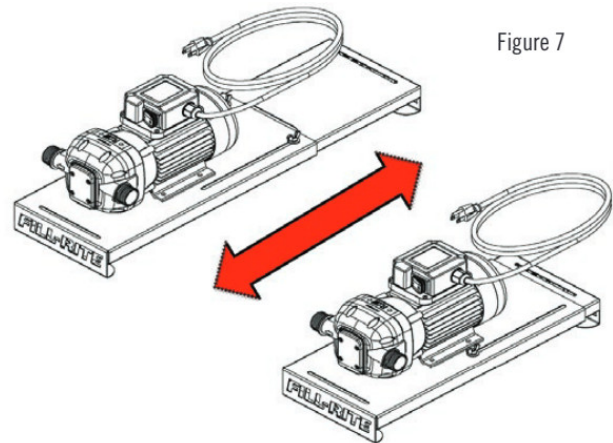
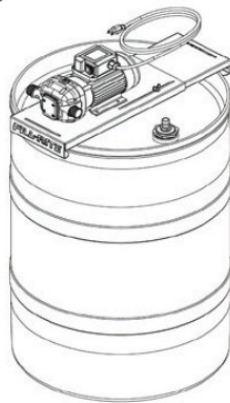
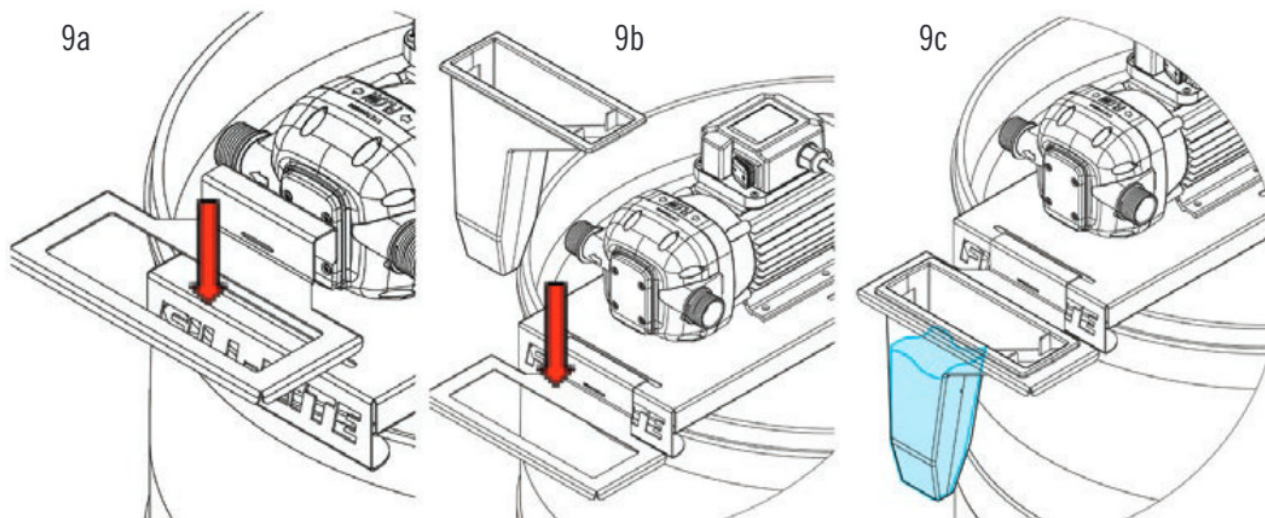


Figure 7

3. Install Suction Hose to suction side of pump with included barb fittings and hose clamp (see Figure 4. page 4).
4. Install the opposite end of suction hose to suction device with appropriate fittings (see Figure 4, page 4).
5. Install Discharge Hose with nozzle to discharge side of pump with included barb fittings and hose clamp (see Figure 5a-b, page 5).
6. Tighten each hose clamp to secure suction and discharge hoses to all barb fittings to prevent fluid leaks (see Figure 5c, page 5).
7. Install nozzle boot bracket and nozzle boot (Figure 9a – 9c).
8. Insert nozzle boot bracket into slot at top front of drum mount. Use supplied zip-tie to secure bracket to drum mount. (9a).
9. Insert Nozzle Reservoir into Nozzle Bracket and snap into opening. 10. Fill half full with water to prevent DEF crystalization in nozzle (9c).

Figure 9



Electrical Wiring



WARNING

Electrical wiring should be performed **ONLY** by a licensed electrician in compliance with local, state, and national electrical code NEC/ANSI/ NFPA 70, NFPA30, and NFPA 30A, as appropriate to the intended use of the pump. The pump must be properly grounded. Improper installation or use of this pump can result in serious bodily injury, or death!



CAUTION

All pumps should operate at the rated voltage. Power should be supplied to the pump from a 15 amp circuit breaker. No other equipment should be powered by this circuit. Wiring must be of sufficient size to carry the correct current for the pump. Voltage drop will vary with distance to pump and size of wire; refer to the National Electrical Code (NEC), or local codes, for voltage drop compensation to be sure you are using the correct size wire for your application.



WARNING

Be certain the power switch is “OFF” prior to connecting to the power source (AC or DC) to prevent unexpected starting of the motor. Unexpected motor start can cause unintended discharge of uid, creating a potential hazard.

AC Power Connection



WARNING

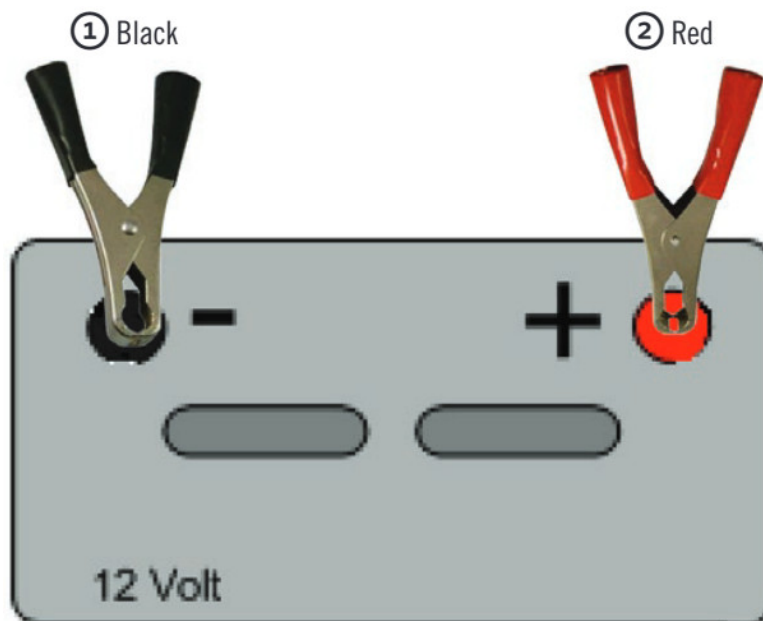
THIS PRODUCT MUST BE GROUNDED! DO NOT defeat the ground prong on the plug by using an adapter, or otherwise modifying the plug.
DO NOT plug this appliance into an ungrounded receptacle.



AC pumps come pre-wired for 120V AC, 60 Hz operation. These pumps are equipped with a conventional 120V AC 3-prong grounded plug that can be inserted into any conventional grounded receptacle. For safety and proper operation, do not remove or in any way bypass the ground prong.

DC Power Connection

Inspect power cable before each use! Damage to the outer jacket of the cable that exposes wiring requires replacement of the power cable.



The power cable terminates in black and red clamps.

1. Connect the black (negative) clamp to the negative post of the DC power source first.
2. Connect the red (positive) clamp to the positive post last.

Clamps should be disconnected in reverse order.

Pump Operation



CAUTION

Your Fill-Rite DEF pump has a 30 minute Duty Cycle. After a 30 minute cycle of continuous operation, turn the pump off for 30 minutes. Failure to observe this duty cycle can damage the motor in your pump.

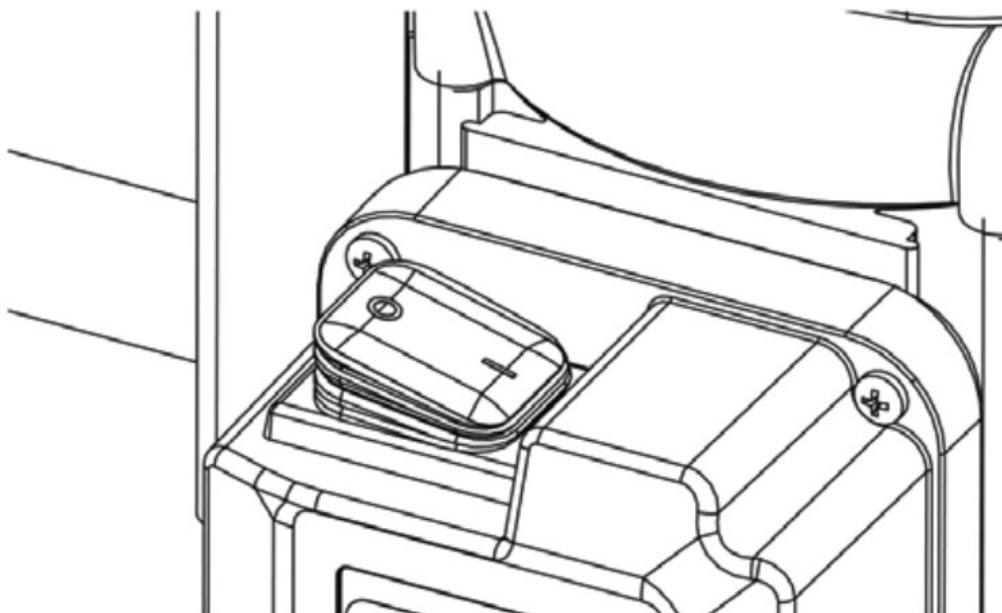
CAUTION

DO NOT operate your pump for more than 3 minutes without dispensing fluid. Extended periods of operation without dispensing fluid will damage the pump.

CAUTION

Before operating your pump, take a moment to make sure everything is ready. Do not proceed until you have verified the following:

- Verify the power switch is in the “OFF” position (O)
- Verify the water in the nozzle boot is clean and free of debris, and is deep enough to cover the spout
- Inspect nozzle spout to make sure it is clean and free of debris, and crystalized DEF
- Verify hoses and suction tube connection are clear and free of pinches or other restrictions
- Verify there is sufficient DEF in the supply tank to operate the pump



1. Connect the pump to the appropriate power supply (120VAC = Wall Receptical / 12V DC = battery or DC power supply).
2. Turn pump Power Switch to “ON” (I) position.
3. Remove Nozzle from Nozzle Reservoir and insert Nozzle Spout into tank or container to be filled.
4. Squeeze Nozzle Trigger to dispense fluid until the desired amount has been dispensed.
5. Release Nozzle Trigger, and return the Nozzle to the Nozzle Reservoir (be certain reservoir contains sufficient fluid to emerse the nozzle spout as illustrated in Figure 9c on page 6).
6. Turn pump off and coil discharge hose onto bracket.

Troubleshooting Guide

The following “Troubleshooting” guide is provided to offer basic diagnostic assistance in the event you encounter abnormal service from your Fill-Rite product. Typical repairs can be accomplished with simple hand tools following

the basic diagnostic information below.



WARNING

DO NOT open or attempt to repair the motor on your Fill-Rite pump. Return it to the place of purchase for service. Opening the motor case will compromise the integrity of the construction and will void any existing warranty.



WARNING

Be certain all power to the pump is turned off, and is disconnected from its power source prior to performing any service or maintenance.



CAUTION

Be certain the DEF system remains sealed while performing any service or maintenance to the pump. DEF crystalizes when it contacts air, causing potential issues in the pump, and an open system creates the opportunity for contamination of the DEF.

Problem	Possible Cause	Solution
Pump will not prime	1. Suction line problem 2. Closed loop coupler not properly engaged 3. Bypass valve open / sticking 4. Outlet blocked	1. Check suction line for leaks or restrictions / kinks; too small, too long, or not airtight. RPV not locked. 2. RPV or similar coupler not properly engaged. Refer to coupler manufacturers instructions. 3. Remove and inspect valve (page 10, item 24) ; valve must move freely & be free of debris. 4. Check pump outlet, hose, nozzle & filter for blockage.
Pump runs slowly	1. Incorrect voltage 2. Motor problem	1. Check incoming line voltage while pump is running. 2. Return to place of purchase.
Motor stalls	1. Bypass valve sticking 2. Low voltage 3. Restricted suction 4. Debris in pump cavity 5. Motor failure	1. Remove and inspect valve (page 10, item 24) ; valve must move freely & be free of debris. 2. Check incoming line voltage while pump is running. 3. Remove and clean suction line. 4. Clean debris from pump cavity. 5. Return to place of purchase.
Motor inoperative	1. No power 2. Switch failure 3. Motor failure 4. Incorrect / loose wiring	1. Check incoming power / Fuse (DC) / Breaker (AC). 2. Return to place of purchase. 3. Return to place of purchase. 4. Check wiring and connections.
Fluid leakage	1. Bad o-ring seal 2. Incompatible fluid 3. Loose fasteners	1. Check all o-ring gaskets. 2. USE ONLY with DEF or water. 3. Tighten fasteners.

Low or no flow rate	<ol style="list-style-type: none"> 1. Low level in tank 2. Excessive suction requirements 3. Pump running in bypass 4. Bypass valve open 5. Air entering suction side 6. Suction line restriction 7. Low rotation speed 8. Suction tube is resting on the bottom of the tank 9. Pump or motor frozen 10. Leaks in pump outlet plumbing 11. Bypass valve open / sticking 12. Crystallization in pump cavity 13. Check valve sticking 14. Tote / barrel / tank not properly vented 	<ol style="list-style-type: none"> 1. Refill tank. 2. Minimum 3/4" diameter suction line not to exceed rated lift. Suction line to be 2" off bottom of tank. 3. Use shorter discharge hose, or greater diameter. 4. Remove and inspect valve (page 10, item 24) ; valve must move freely & be free of debris. 5. Check suction side seals and connections. 6. Use tubing suitable with for working with suction pressure.
		<ol style="list-style-type: none"> 7. Check voltage at the pump. Adjust voltage and / or use cables with larger gauge wire. 8. Modify suction tube to correct length. 9. Thaw pump and check for damage. Starting a frozen pump can damage the motor and / or pump. 10. Check the seal at the pump connection and inspect for damage. 11. Remove and inspect valve (page 10, item 24) ; valve must move freely & be free of debris. 12. Flush and clean pump. 13. Remove and inspect valve (page 10, item 27 & 31); valve must move freely & be free of debris. 14. Properly vent system.
Increased pump noise	<ol style="list-style-type: none"> 1. Irregular bypass function 2. Presence of air in liquid being pumped 	<ol style="list-style-type: none"> 1. Remove and inspect valve (page 10, item 24) ; valve must move freely & be free of debris. 2. Verify suction connections and suction line. Purge system of air.
Automatic nozzle malfunctions	<ol style="list-style-type: none"> 1. Crystallization in spout 2. Flow too high 	<ol style="list-style-type: none"> 1. Dip nozzle spout in warm water. 2. Decrease flow rate by using lower lock setting on handle.

Parts and Kits

A wide variety of parts and kits are available to maintain and accessorize your Fill-Rite DEF system. To insure proper performance and long service life, always use genuine Fill-Rite parts when servicing your DEF system. The following pages contain kit information; additional information is also available on-line at fillrite.com. You can also consult our world class Technical Support at 1 (800) 720-5192 or via email at FillRiteTech@fillrite.com (M-F, 8 AM – 5 PM ET).

NOTICE

Always have your model, serial number, and date of purchase available when you are ordering kits and replacement parts for your Fill-Rite DEF pump.



CAUTION

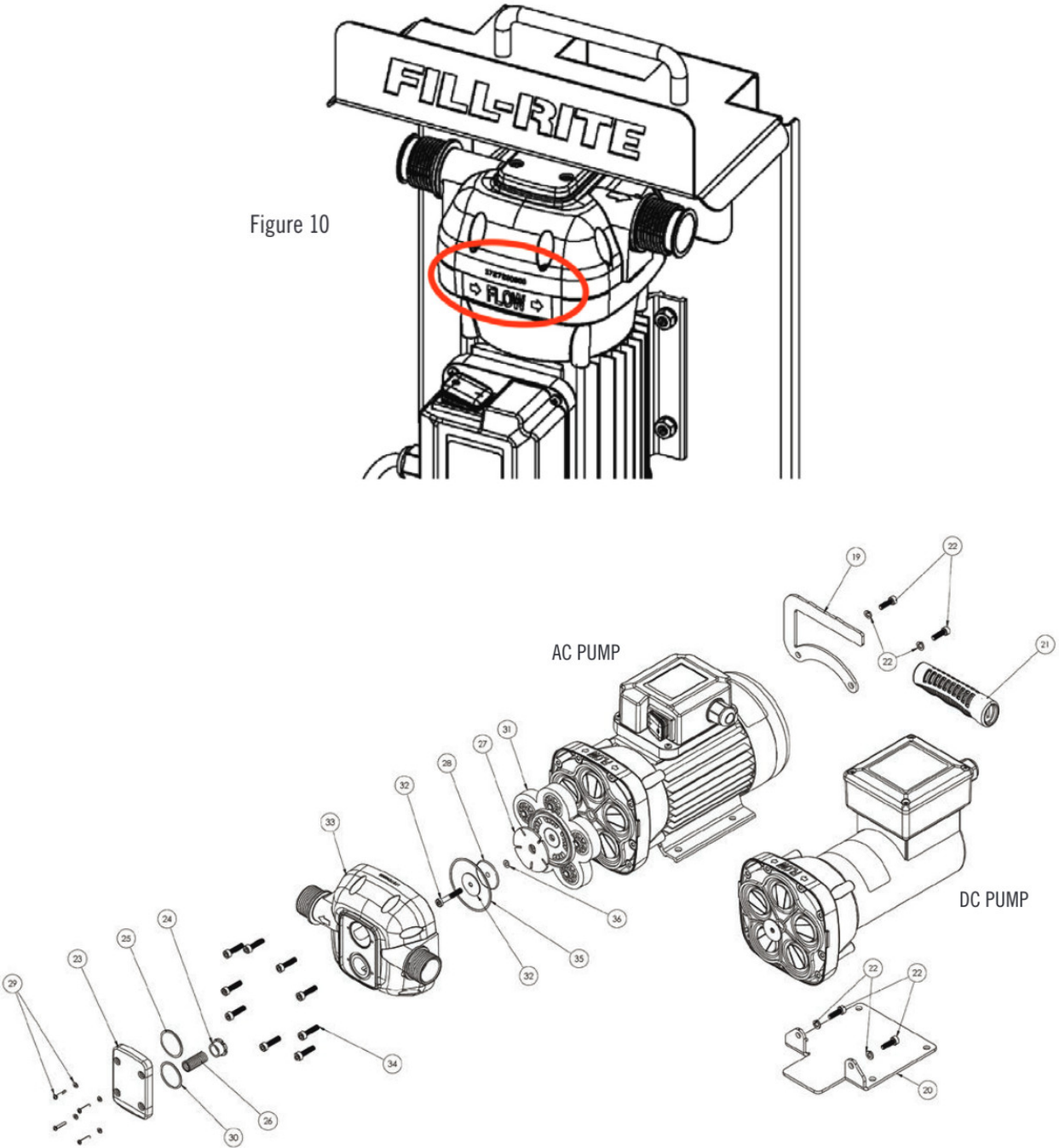
Always wear protective clothing and safety equipment when working with Diesel Exhaust Fluid. Even small amounts you may encounter while servicing your pump can be caustic and harmful!

Serial number information for your Fill-Rite DEF system is located on the pump. The serial number is located on the front of the pump, at the base of the pump housing assembly (Figure 10). It is the number located above the word "FLOW".

Refer to the Nomenclature information on page 4 to decode specifics regarding what components were included

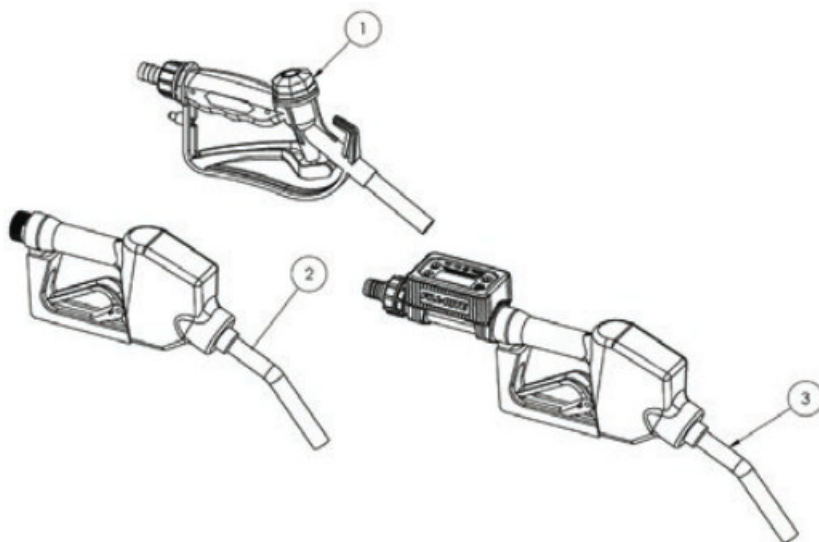
in your system.

Figure 10



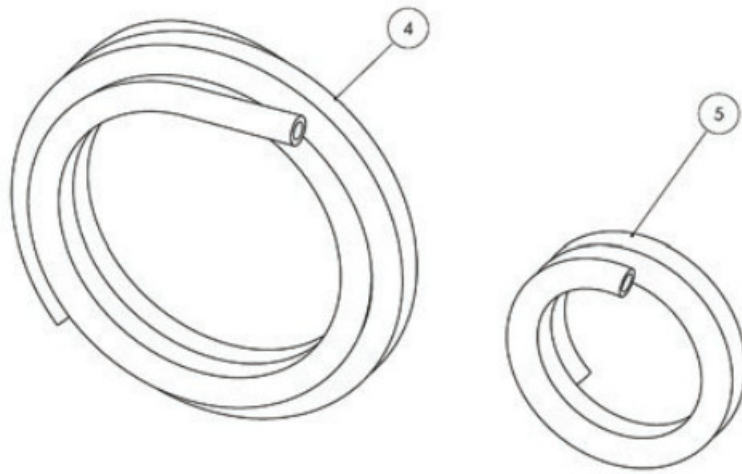
Kit	Description	Qty	Item
KITDFHF DC Pump Replacement Bracket	Metal Handle Bracket	1	19
	Metal Foot Bracket	1	20
	Rubber Grip	1	21
	Mounting Hardware	12	22
KITDFPK DEF Pump Replacement Parts	Bypass Poppet	1	24
	Outlet Dampener	1	25
	Bypass Spring	1	26
	Flap Valve	1	27
	Flap Valve Washer	1	28
	Bypass Mounting Hardware	4	29
	Bypass Seal	1	30
	Check Valve Assembly	1	31
	Check Valve Mounting Bolt	1	32
	Check Valve Assembly Seal	1	35
	Motor Seal	1	36

Nozzles



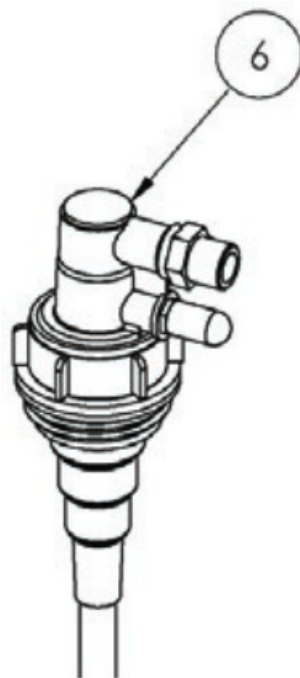
Kit	Description	Item
FRDFM075CDEF	Manual Nozzle	1
FRDFA075BDEF	Automatic Nozzle	2
KITDFMNDEF	Automatic Metering Nozzle	3

Hoses



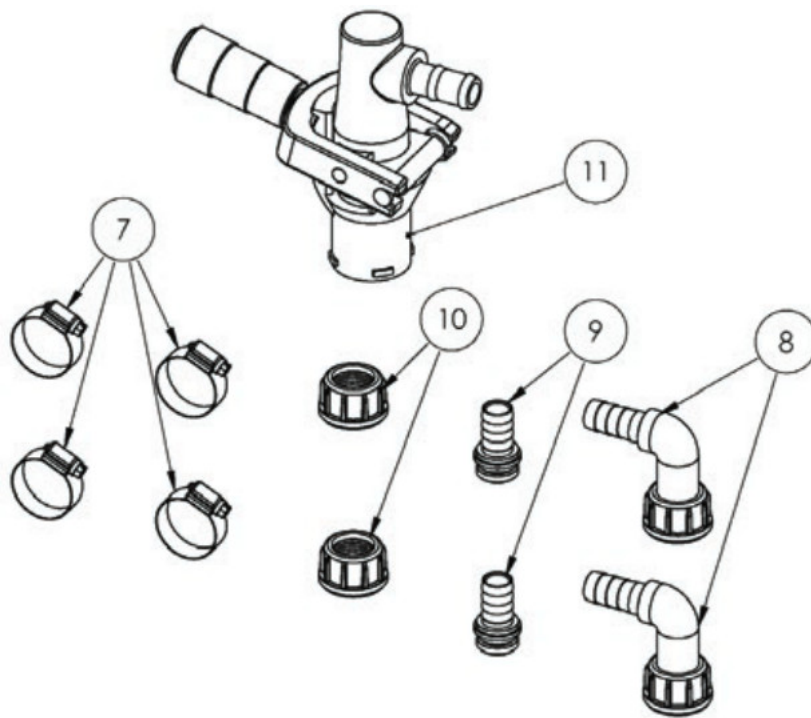
Kit	Description	Item
KITDFH20	Discharge Hose, 20'	4
KITDFH05	Suction Hose, 5'	5

Suction Tubes

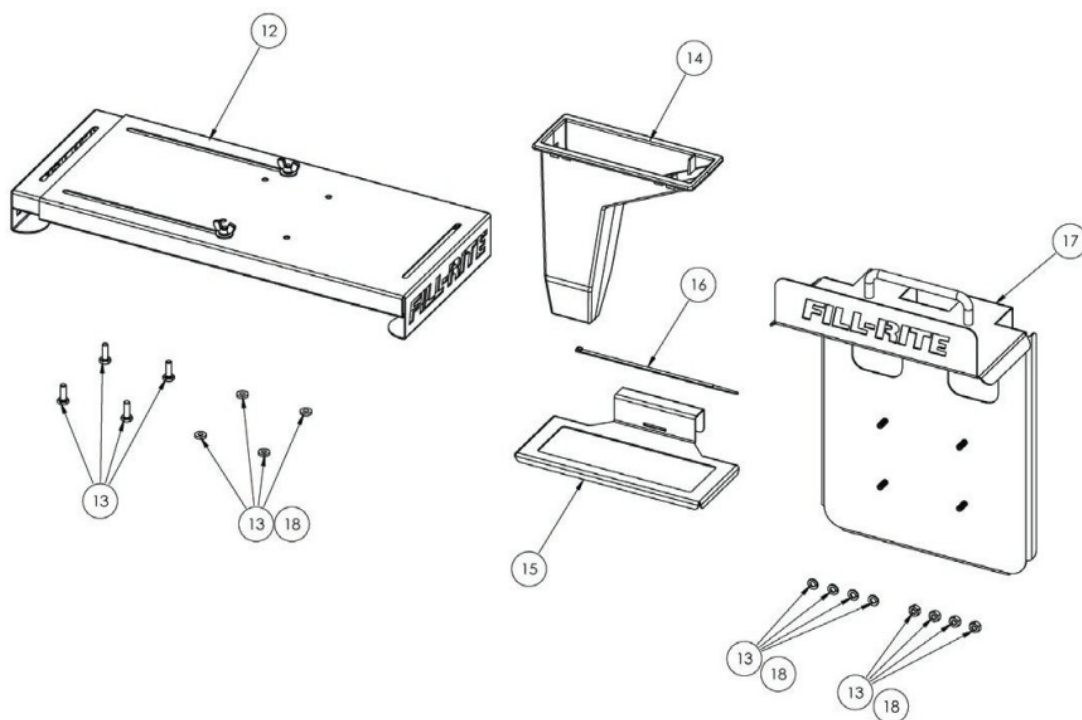


Kit	Description		Item
KIT180DTPS3/4in	Hose Barb Suction Tube	6	

Fittings



Kit	Description	Item
KITDFFK 3/4in DEF Hose Barb Kit	Hose Clamps	7
	Elbow Fittings	8
	Straight Barb Fittings	9
	Straight Barb Retaining Nuts	10
MMNM075RPV	Non-Metallic, 4-Pin, RPV Coupler	11



Kit	Description	Qty	Item
KITDFDB Drum Bracket DEF Kit	Fill-Rite Adjustable Drum Bracket	1	12
	Mounting Hardware	16	13
	Plastic Nozzle Reservoir	1	14
	Nozzle Reservoir Bracket	1	15
	Zip Tie	1	16
KITDFCB IBC/ Tote Bracket DEF Kit	Fill-Rite IBC/Tote Bracket	1	17
	Mounting Hardware	12	18
	Plastic Nozzle Reservoir	1	14
	Nozzle Reservoir Bracket	1	15
	Zip Tie	1	16
KITDFNB Nozzle Reservoir Kit	Plastic Nozzle Reservoir	1	14
	Nozzle Reservoir Bracket	1	15
	Zip Tie	1	16

DEF Accessories

Fill-Rite offers a wide variety of products for handling Diesel Exhaust Fluid. From meters, to nozzles, to hand pumps, there is a Fill-Rite product available to meet your DEF needs. Contact your distributor for additional information, or visit us on the web at fillrite.com.

Part No.	Description
FRNS075A	Premium Auto DEF Nozzle (Stainless Steel Body)
MMSS075RSV	Stainless Steel RSV Dispense Coupler
MMSS075EPV	Stainless Steel EPV Dispense Coupler
TT10P	Fill-Rite Turbine Meter
TS06C	Weights & Measures Meter
825/825P	Nutating Disc Meter
FR1118P	In-Line Meter
FRHP32V	DEF Hand Pump
FRAP32V	DEF Air Pump
SP100-05N-PP-SSS	1/2" AODD Polypropylene / Santoprene
SP100-10F-PP-SSS	1" AODD Polypropylene / Santoprene

Technical Information

Motor	AC	DC
Power – AC or DC	120V AC	12V DC
HZ – (AC only)	60 Hz	N/A
HP (Horsepower) Rating	1/4 HP	1/4 HP
Power Cord Length	6 ft	20 ft
Power Cord Gauge	16 / 3	14 / 2
AMPS (FLA)	2.4 Amps	22 Amps
RPM	3400 RPM	2800 RPM
Duty Cycle	30 minutes ON / 30 minutes OFF	30 minutes ON / 30 minutes OFF
Thermal Protection	Yes	No
Circuit Protection	N/A	25 Amp Fuse
Certifications (Regulatory)	N/A	N/A

Pump	
Pump Type	Diaphragm Wobble Plate
GPM in Supplied Configuration (with hose and nozzle)	8 GPM
GPM Open Flow	10 GPM
Bypass Pressure Rating (Max)	38 psi
Certifications (Regulatory)	N/A
Dry Vac (in-Hg)	6
Wetted Materials	Nylon, EPDM, Stainless Steel, Santoprene
Fluid Compatibility	Diesel Exhaust Fluid, Water

Service Instructions

NOTE: All item numbers reference Page 11 image of AC and DC Pump Components.

Tools Required

- M4 Hex Driver Bit
- M3 Hex Driver Bit
- #1 Philips Driver Bit
- Power Drill or Bit Screwdriver
- Needle Nose Plier

Clean / Inspect Bypass

1. To open the bypass cover (item 23), use a #1 Philips bit/screwdriver to remove the screws and washers (Items 29).

NOTE: Bypass cover is under spring pressure and will spring open after screws are disengaged from pump housing (Item 33).

2. Once the screws and washers of the bypass are removed, carefully check the bypass O-ring (Item 30) and outlet dampener (Item 25) for damage or debris.
3. Remove bypass spring (Item 26) from bypass cavity.
4. Using needle nose pliers, remove the bypass poppet (item 24) from bypass cavity, inspect bypass poppet and cavity for debris or damage.
5. Reverse the disassembly to return the bypass back to normal operation.

NOTE: Verify all seals have are properly seated before tightening bypass cover with bypass cover mounting hardware.

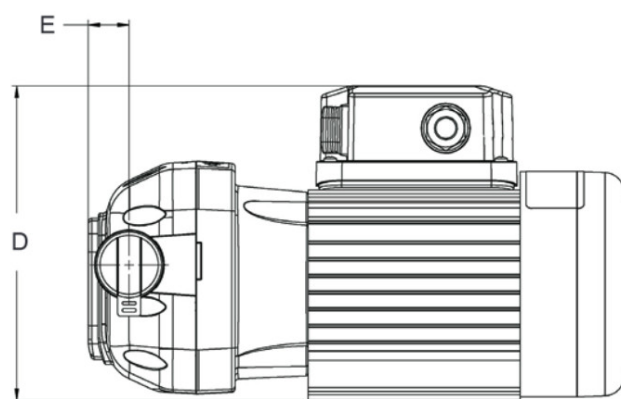
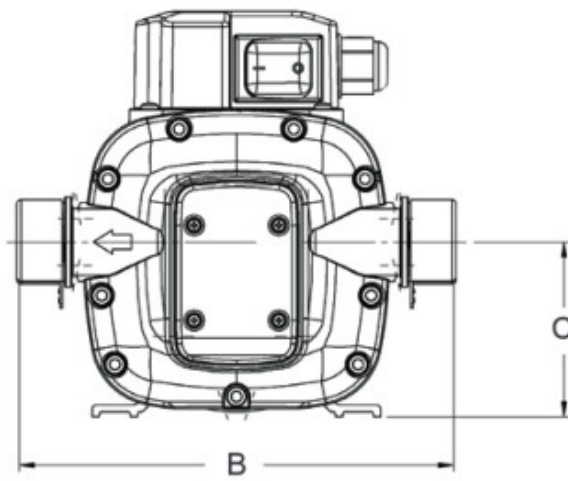
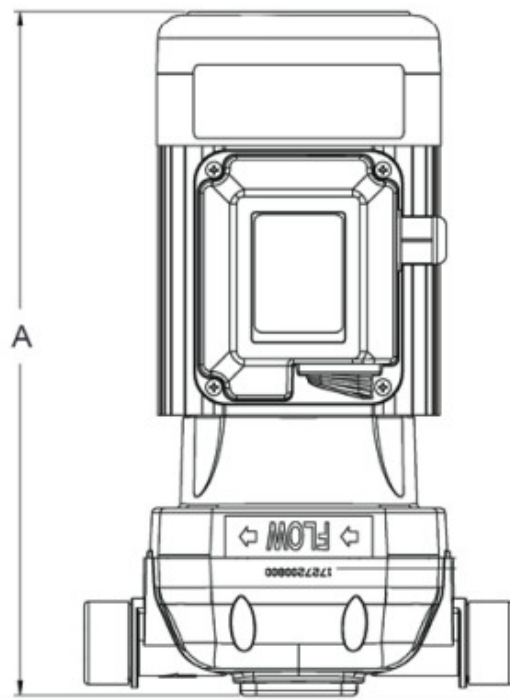
Clean / Inspect Fluid Chamber

1. To open the fluid chamber, use a M4 hex driver bit in a power drill or bit screwdriver to remove all nine of the pump housing mounting bolts (Item 34).
2. Once the bolts have been removed, lift the pump housing from the motor.
3. Inspect for debris or damage in the flap check (Item 27) and the five black check valves in Item 31.
4. To continue inspection, use a M3 hex driver bit in a power drill or bit screwdriver to remove the check valve mounting bolt (Item 32)
5. Lift check valve mounting washers (Item 28 & 32) and flap valve (Item 27) from motor. Verify small motor O-ring seal (Item 36) is free of debris/damage and still mounted to check valve mounting bolt (Item 32).
6. Carefully check for debris or damage of flap valve (Item 27).
7. Lift check valve assembly (Item 31) from motor and verify no debris is inside the assembly. Inspect for debris or damage to any of the five black check valves included in Item 31.
8. After debris and damage evaluation is complete, reverse the disassembly to return the check valves and pump housing back to normal operations.

NOTE: Realign the flap valve (Item 27) to cover all check valve ports of the check valve assembly (Item 31).

NOTE: Verify all seals are properly seated before tightening hardware.

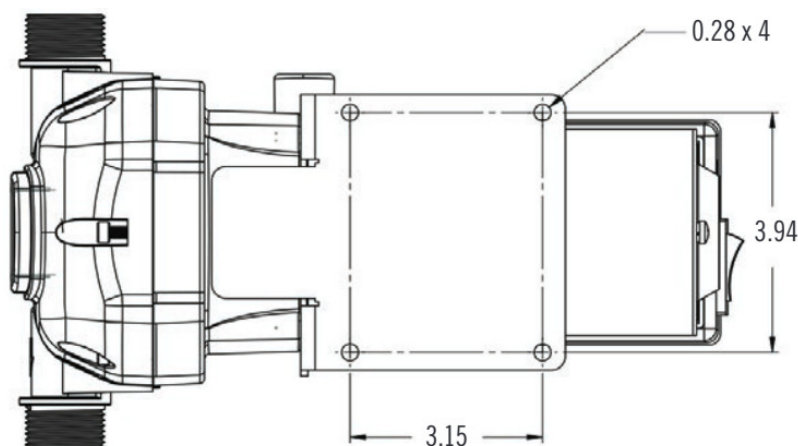
Dimensional Information



Dimension	AC Pump	DC Pump
A	11.6 in / 295 mm	12.5 in / 318 mm
B	7.2 in / 183 mm	7.2 in / 183 mm
C	2.9 in / 74 mm	2.91 in / 74 mm
D	6.7 in / 17 mm	7.2 in* / 183 mm*
E	.9 in / 23 mm	.9 in / 23mm

* Overall height includes carrying handle (DC models only – not pictured)

Mounting Bracket



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[FILL-RITE Df Series DEF Transfer Pump](#) [pdf] Instruction Manual
Df Series DEF Transfer Pump, DEF Transfer Pump, Df Series, DF012CAN520

References

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