Owners Installation, Operation, and Safety Manual

FILL-RITE®

FR1200G / FR2400G / FR4200G / FR4400G
SD1200G / Series DC Transfer Pumps

FR600G Series AC Transfer Pumps

Tuthill
PUMP YOUR HEART INTO IT

Tuthill Transfer Systems 8825 Aviation Drive Ft. Wayne, IN 46809 (260) 747-7529 www.tuthill.com

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Thank You!

Thank you for your purchase! 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, long service life, and solid, simple engineering. Experience that gives you peace of mind.

Pump Your Heart Into It

About This Manual

From initial concept and design through its final production, your Fill-Rite pump is built to give you years of trouble free use. To ensure it provides that service, **it is critical that you read this entire manual prior to attempting to install or operate your new pump.** Become familiar with the terms and diagrams, and pay close attention to the highlighted areas with the following labels:

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

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

CAUTION! Failure to observe a “Caution” can cause damage to the equipment.

At Tuthill, your satisfaction with our products is paramount to us. If you have questions or need assistance with your product, please contact us at 1-800-634-2695 (M-F 8 AM–5 PM ET).

Safety Information

WARNING! Electrical wiring should be performed ONLY by a licensed electrician in compliance with local, state, and national electrical code NEC/ANSI/ NFPA 70, NFPA 30, and NFPA 30A, as appropriate to the intended use of the pump. Threaded rigid conduit, sealed fittings, and conductor seal should be used where applicable. The pump must be properly grounded. Improper installation or use of this pump can result in serious bodily injury, or death!

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!

- **NEVER** smoke near the pump, or use the pump near open flames when pumping a flammable liquid! Fire can result!
- A filter should be used on the pump outlet to ensure no foreign material is transferred to the fuel tank. We recommend Fill-Rite filters for best results.
- Threaded pipe joints and connections must be sealed with the appropriate sealant or sealant tape to minimize the possibility of leaks.
- Storage tanks must be securely anchored to prevent shifting or tipping when full or empty.
- To minimize static electricity build up, use only static wire conductive hose when pumping flammable fluids, and keep the fill nozzle in contact with the container being filled during the filling process.
- 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:
  - → 2400, 4400, 600, and SD600 series pumps will reset automatically when the pump cools down.
  - → 1200 & 4200 series pumps must be reset manually to operate again. Wait until the motor cools down and turn the power switch off to reset.

WARNING! This product shall not be used to transfer fluids into any type of aircraft.

WARNING! This product is not suited for use with fluids intended for human consumption or fluids containing water.

Installation

Your Fill-Rite pump is designed to be mounted on a skid tank using the threaded inlet flange supplied with the pump (see attached diagrams). Your pump features an integral bypass valve to recirculate the fluid when the pump is operating with the nozzle closed.

WARNING! In Skid Tank applications, be sure the tank is properly secured so it cannot shift or move whether the tank is empty or full.

CAUTION! Do not use additional check valves or foot valves unless they have a proper pressure relief valve built into them. Note that additional check valves will reduce rate of flow.

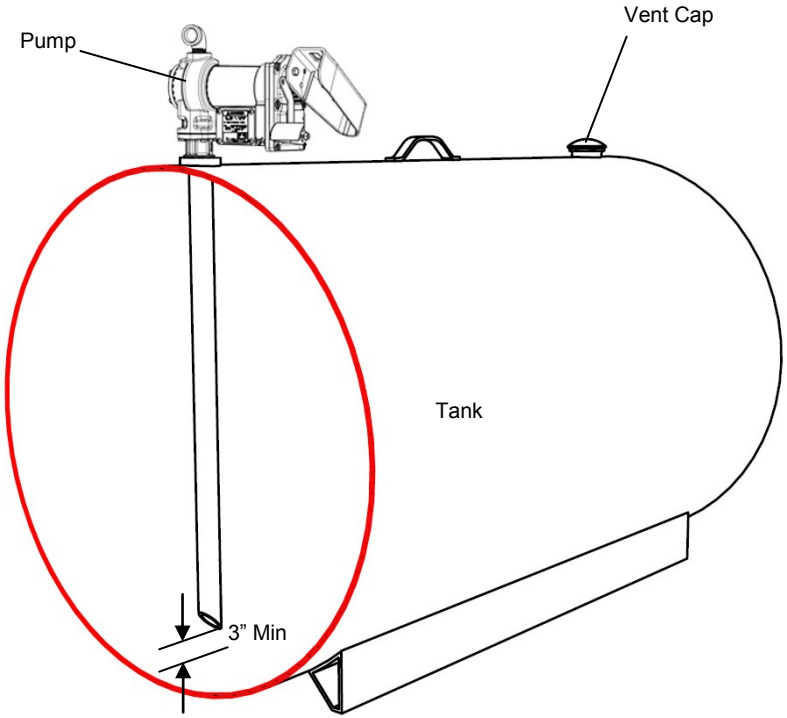
CAUTION! A pressure retaining fill cap can be used to reduce fuel loss through evaporation, but note that it will reduce the flow rate.

CAUTION! Threaded pipe joints and connections must be sealed with the appropriate sealant or sealant tape to prevent the possibility of leaks.

WARNING! Fill-Rite pumps are designed for use with stationary and mobile tank applications. While DC powered units are excellent choice for mobile applications, anchoring the tank to which the pump is mounted is paramount to ensure no movement in transit. Failure to secure the tank to the vehicle can cause uncontrolled movement, resulting in damage, injury, and potential fire.

Typical Skid Tank Installation

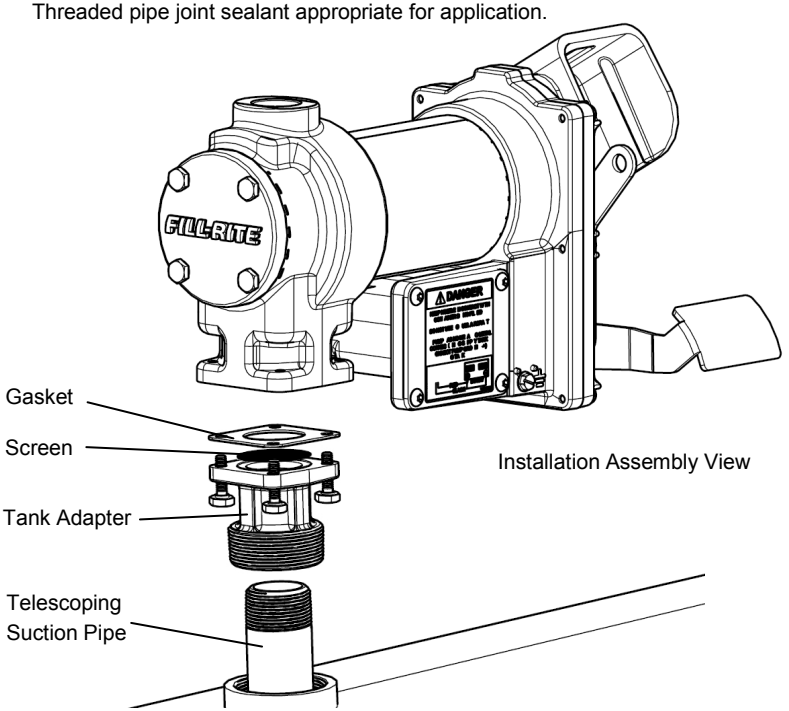
The pump mounts to the bung of a skid tank by way of the inlet flange. The suction tube threads into the bottom of the inlet flange, and must extend to a length that positions it at least 3" from the bottom of the tank. The skid tank should be equipped with a vent cap.



Typical Skid Tank Installation

Materials:

- 1” telescoping suction pipe extended to a length that will extend to within 3” of the bottom of the tank when screwed into the tank adapter with the tank adapter screwed into the tank flange (see **SKID TANK INSTALLATION** diagram).
- Threaded pipe joint sealant appropriate for application.



Installation Assembly View

Installation Procedure:

1. Thread the 1” pipe into the tank adapter. Seal threads liquid tight with appropriate sealant.

   (Figure 1)

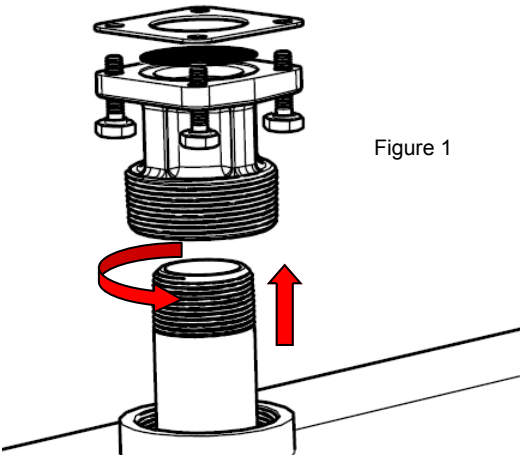


Figure 1

Typical Skid Tank Installation (cont'd)

2. Screw the inlet flange (with suction pipe) into the tank bung; seal threads liquid tight with appropriate thread sealant (Figure 2).

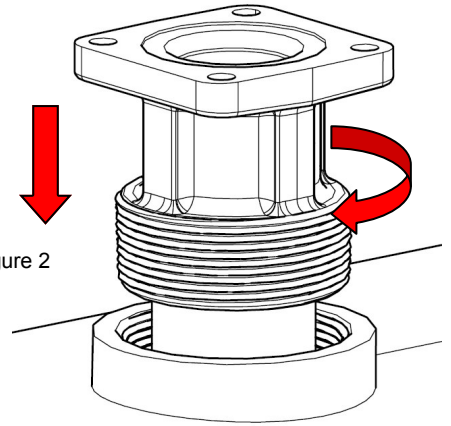


Figure 2

3. Mount the pump on the adapter; making sure the seal and screen are installed as shown. (Figure 3).

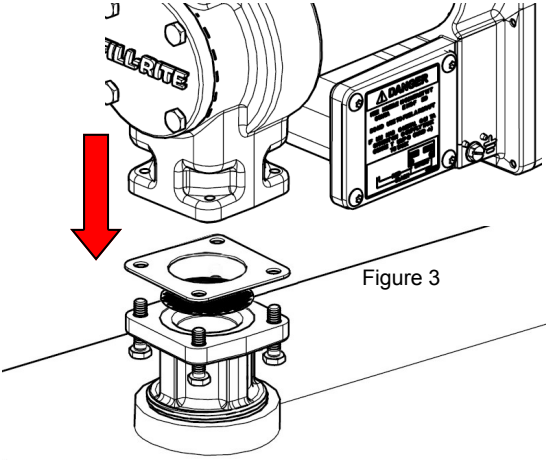


Figure 3

Electrical Wiring

DC Wiring Procedure

FR1200G / FR2400G / FR4200G / FR4400G / SD1202G Series DC Transfer Pumps

CAUTION! DC powered pumps are designed to operate on either 12 or 24 VDC (depending on model). Where applicable, use the supplied battery cable to supply power to the pump from a 12 or 24 VDC battery. A 30 amp fuse (20 amp fuse on 24 VDC motors) should be installed on the battery cable (see wiring diagram page 9) to protect the wire in case of electrical short.

CAUTION! Voltage drop in wiring varies depending on the distance from the battery to the pump and the gauge of the wire used. If the distance is greater than 20', refer to national, international, or local electrical codes to ensure the wire is of the correct size for this application.

Instructions Before Proceeding With DC Wiring

The pump needs to be electrically bonded to supply tank or vehicle frame. To electrically bond pump, remove green bonding screw located next to junction box cover. Insert this screw through eyelet of furnished green bonding wire assembly and refasten it securely to the pump. The other end of the wire is to be stripped of insulation and the bare wire securely bonded to the vehicle / trailer frame or skid tank.

WARNING! Do not connect the positive or negative power to the green screw or wire as this could cause a fire.

Wiring Instructions (see Figure 4, Page 8)

1. Remove pump's electrical junction box cover and straighten the 2 wires to make the stripped wire ends accessible outside of the junction box.
2. Screw furnished cable connector into NPT* conduit opening in pump junction box.
3. Strip 6 inches of the outer covering from one end of the furnished electrical cable being careful not to damage the black and red wire insulation.
4. Loosen cable connector nut and pass the stripped end of the furnished cable through the cable connector. Tighten the cable connector nut.
5. Strip ½ inch of the insulation from the ends of the red and black cable wires. Using the furnished wire nuts, connect these wires to the pump wires matching the colors. Be sure no bare wire is exposed.
6. Fold wires into junction box and replace cover making sure the gasket is in place. Make sure all screws are seated so there is no space between the cover and the junction box (see "IMPORTANT!" information box and diagram page 10).

Wiring To A Vehicle Electrical System (see wiring diagram, page 9)

1. Pass the electrical wires to the source of the vehicle power system, supporting the wires as necessary and protecting them from sharp edges, heat, and anything that could damage the wires.
2. To determine if the vehicle electrical system is ***negative* (-)** or ***positive* (+)** ground, check the battery marking of the terminal that is wired to the vehicle frame or motor block. The red wire from the pump will connect to positive battery post and the black wire from the pump will connect to negative battery post.
3. Attach one end of the fuse holder to the end of the ungrounded wire. Make a solid electrical connection with the other end of the fuse holder to the ungrounded side of the battery, **as close to the battery as possible**. Make a solid electrical connection to the grounded side of the battery with the remaining wire. The battery terminal or the end of the battery cable is recommended.
4. Check all connections to make sure they are connected per instructions and all electrical codes. Install the 30 amp fuse (20 amp fuse in 24 VDC installations) in the fuse holder. The installation is now complete.

WARNING! Do not attempt to power the pump from vehicle wiring smaller than 12 gage such as the cigarette lighter wire because these thin wires could overheat and cause a fire.

*M20 Conduit entry on GE models

DC Wiring (cont'd)

For Skid Mounted Tanks

1. Pass the electrical wires to the power source, supporting the wires as necessary and protecting them from sharp edges, heat and anything that could damage the wires.
2. Attach one end of the fuse holder to the ***red*** pump wire, ***as close to the battery / power source as possible.*** Make a solid electrical connection to the ***positive*** terminal of the power source with the other end of the fuse holder. Make a solid connection with the ***black*** pump wire to the ***negative*** terminal of the power source.
3. Check all connections to make sure they are connected per instructions and all electrical codes. Install the 30 amp fuse (20 amp fuse in 24 VDC installations) in the fuse holder. The installation is now complete.

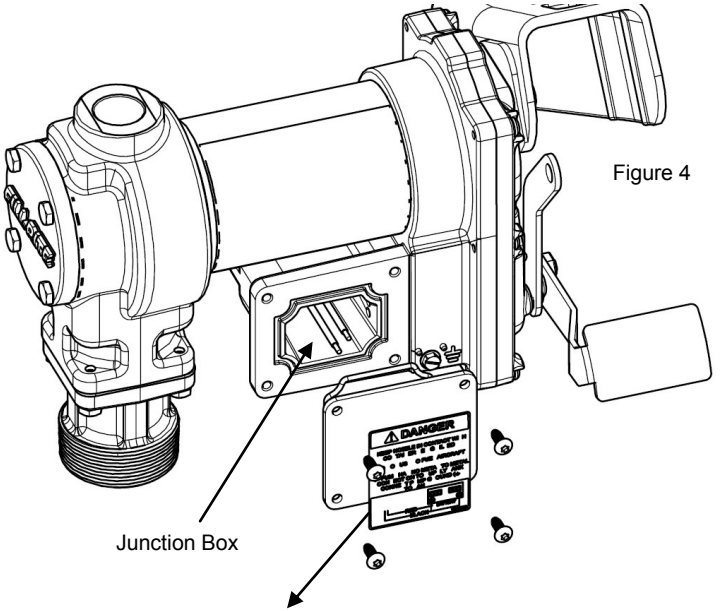
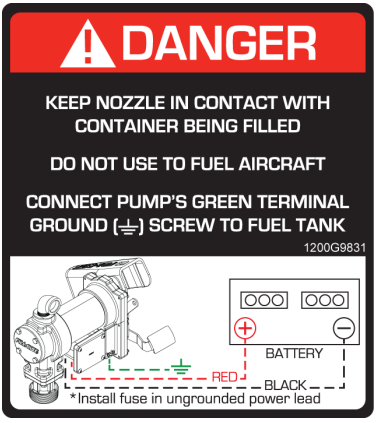
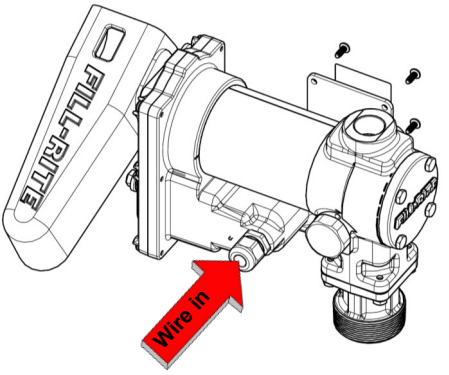
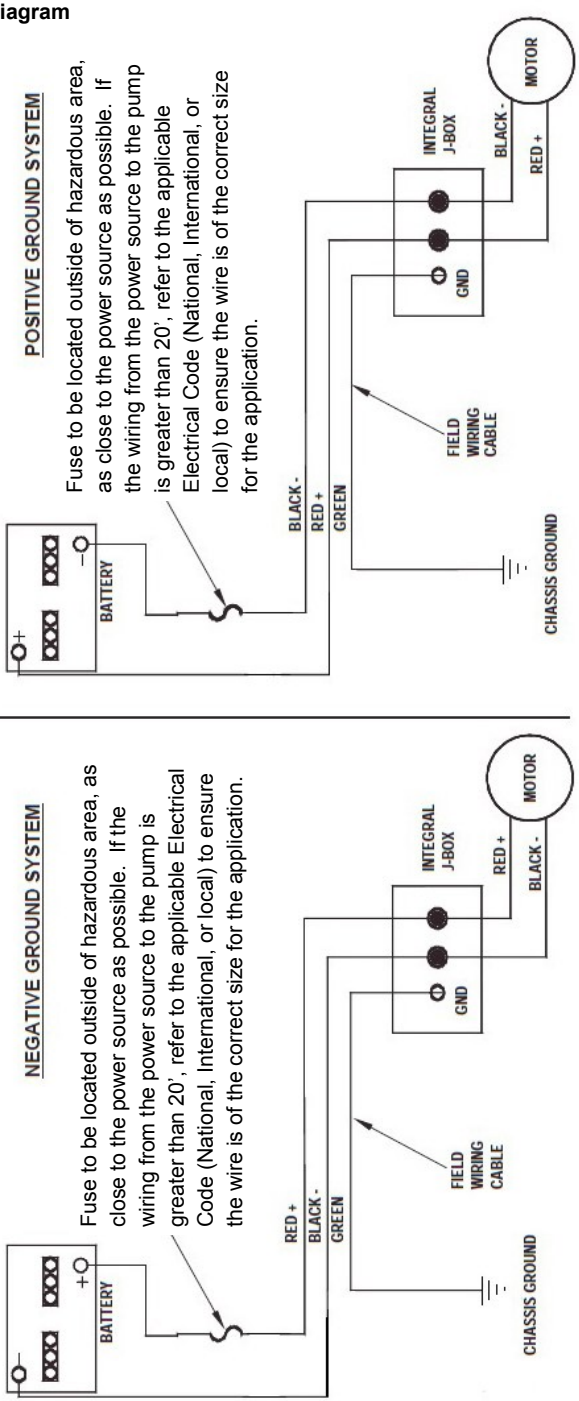


Figure 4





DC Wiring Diagram



AC Wiring Instructions

FR600G / SD602G AC Transfer Pumps

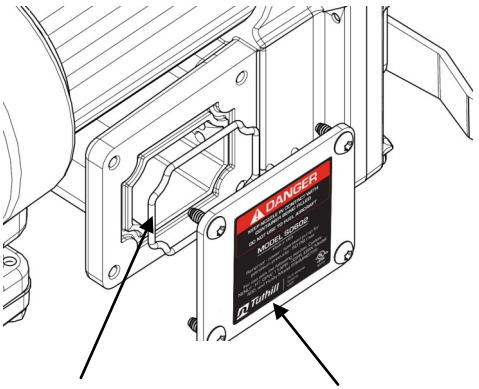
WARNING! Electrical wiring should be performed ONLY by a licensed electrician in compliance with local, state, and national electrical code NEC/ ANSI/NFPA 70, NFPA30, and NFPA 30A, as appropriate to the intended use of the pump. The pump must be properly grounded. Improper installation or use of this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

CAUTION! All pumps should operate at the rated nameplate voltage. AC power should be supplied to the pump from a dedicated circuit with 15 amp circuit protection. No other equipment should be powered by this circuit. Wiring must be of sufficient size to carry the correct current for the pump (minimum 12 gauge). 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.

AC Wiring Procedure

1. Remove the junction box cover and straighten the wires to make sure the stripped wire ends are accessible outside the junction box.
2. Install rigid conduit and appropriate wiring from power source to the junction box to maintain the explosion proof integrity. Power should be supplied from a dedicated 15 amp circuit breaker; no other equipment should be powered by this circuit.
3. Connect the pump wires to the power supply lines according to the wiring diagram (page 11). Be certain to properly insulate the connections with the appropriate wire nuts or other connectors. Note that the ground wire **MUST** be connected (ground wire connection is inside the junction box; see figure 5, page 11).
4. Fold the wires back into the junction box and replace the cover, making sure the cover gasket is in place.

IMPORTANT! Be certain the gasket for the junction box cover is in place, and the screws draw the cover down tight over the junction box. There must be no gap between the junction box and it's cover. The seal should be weather tight to prevent moisture from entering the junction box.



AC Pump Junction Box (FR600G Series AC Transfer Pumps)

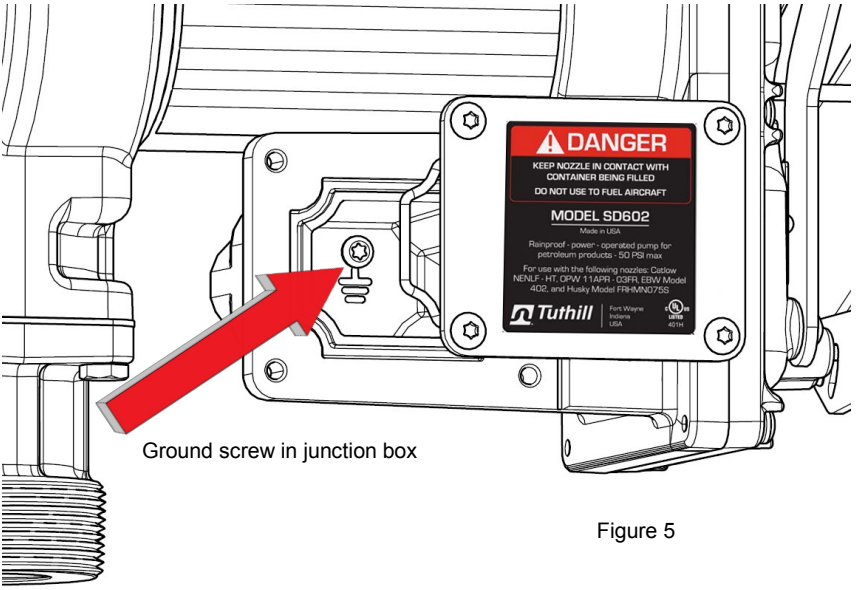
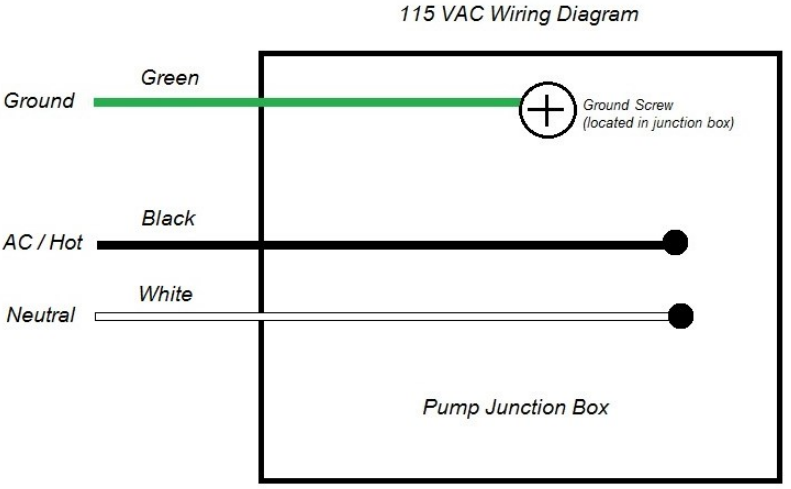


Figure 5

AC Wiring Diagram (FR600G Series AC Transfer Pumps)



WARNING! Ground wire in supply wiring MUST be connected to the ground screw inside the junction box.

Operating Instructions

WARNING! Always keep the nozzle in contact with the container being filled **during the filling process** to minimize the possibility of static electricity build up.

1. If so equipped, reset meter to “0” (do not reset while in use as this will cause damage to the meter).
2. Remove dispensing nozzle from nozzle boot.
3. Move the switch lever to the “ON” position to power the pump (figure 5).
4. Insert the dispensing nozzle into the container to be filled.
5. Operate the nozzle to dispense fluid; release nozzle when the desired amount of fluid has been dispensed.

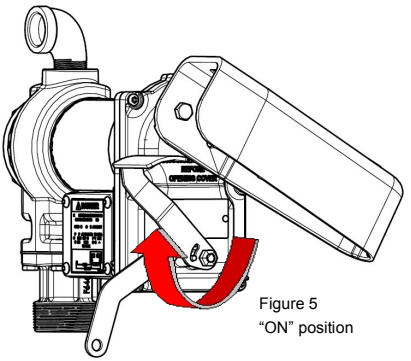


Figure 5
“ON” position

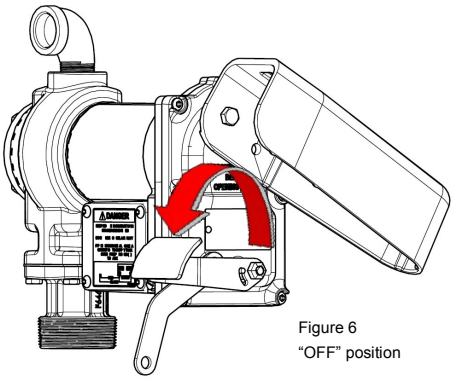


Figure 6
“OFF” position

6. Move switch lever to the “OFF” position (Figure 6) to turn off the pump.
7. Remove the dispensing nozzle from the container being filled and store it in the nozzle boot.

Padlocking

Your Fill-Rite pump nozzle can be padlocked to the pump for added security. With the pump turned off, and the nozzle in the stored position, a padlock can be inserted through the locking link and the nozzle handle.

The locking link is located on the nozzle side of the pump, and can be pivoted into position to work with a variety of nozzles (Figure 7).

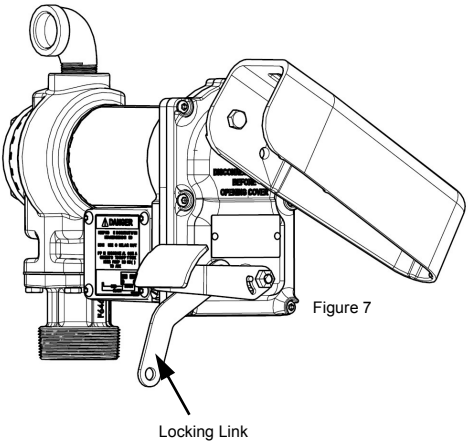


Figure 7

Troubleshooting

The following troubleshooting guide is provided to offer basic diagnostic assistance in the event you encounter abnormal service from your Fill-Rite product.

If you have questions regarding installing, operating, or servicing your product, please feel free to contact our Customer Service Department at 1-800-634-2695 (M-F 8 AM–5 PM ET). You can also reach us on the World Wide Web at “www.fillrite.com”.

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 can compromise the integrity of the Explosion Proof construction and will void any existing warranty and certification.

WARNING! Be certain all power to the pump is disconnected prior to performing any service or maintenance.

Symptom	Cause	Cure
Pump won't prime.	1. Suction line problem.	Check for leaks or obstructions in suction line.
	2. Bypass valve open.	Remove and inspect valve; must move freely & be free of debris.
	3. Vanes sticking.	Check vanes and slots for nicks, burrs and wear.*
	4. Excessive rotor or vane wear.	Inspect rotor & vanes for excessive wear or damage; replace if necessary.*
	5. Vapor Lock.	Reduce vertical and horizontal distance from pump to liquid; remove automatic nozzle.
Low capacity.	1. Excessive dirt in screen.	Remove and clean screen.
	2. Suction line problem.	Check suction line for leaks or restrictions; it may be too small, too long or not airtight.
	3. Bypass valve sticking.	Remove and inspect valve; must move freely & be free of debris.
	4. Outlet blocked.	Check pump outlet, hose, nozzle & filter for blockage.
	5. Vanes sticking.	Check vanes and slots for wear.*
	6. Excessive rotor or vane wear.	Inspect rotor & vanes for excessive wear or damage; replace if necessary.*
	7. Hose or nozzle damage.	Replace hose or nozzle.
	8. Plugged filter.	Replace filter.
	9. Low fluid level.	Fill tank.
Pump runs slowly.	1. Incorrect voltage.	Check incoming line voltage while pump is running.
	2. Vanes sticking.	Inspect vanes and slots for nicks, burrs and wear.*
	3. Wiring problem.	Check for loose connections.
	4. Motor problem.	**Return to place of purchase.**

See page 14 for explanation of **Bold text** and * items.

Troubleshooting (cont'd)

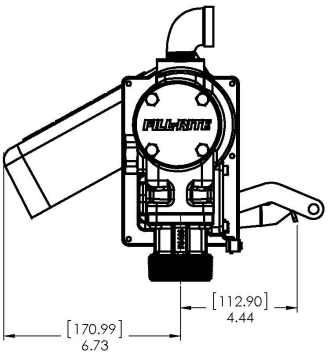
Motor stalls / fuse blows or thermal protector trips repeatedly.	1. Bypass valve sticking.	Remove and inspect valve; must move freely & be free of debris.
	2. Low voltage.	Check incoming line voltage while pump is running.
	3. Excessive rotor or vane wear.	Check rotor & vanes for excessive wear or damage.*
	4. Debris in pump cavity.	Clean debris from pump cavity.
Motor overheats.	1. Pumping high viscosity fluids.	These fluids can only be pumped for short periods of time (less than 30 minutes duty cycle).
	2. Clogged screen.	Remove and clean screen.
	3. Restricted suction pipe.	Remove and clean pipe.
	4. Motor failure.	**Return to place of purchase.**
	5. Pump rotor lock-up.	Clean and check pump rotor and vanes.*
Motor Inoperative.	1. No power	Check incoming power.
	2. Switch failure.	Replace switch (KIT120SW).
	3. Motor failure.	**Return to place of purchase.**
	4. Thermal protector failure.	**Return to place of purchase.**
	5. Incorrect/loose wiring.	Check wiring.
Fluid leakage.	1. Bad o-ring gasket.	Check all o-ring gaskets.
	2. Dirty shaft seal.	Clean seal & seal cavity.
	3. Bad shaft seal.	Replace seal.
	4. Incompatible fluid.	Refer wetted parts list to fluid manufacturer.
	5. Loose fasteners.	Tighten fasteners.
Pump hums but will not operate.	**1. Motor failure.**	**Return to place of purchase.**
	2. Broken rotor key.	Remove all debris & replace key.

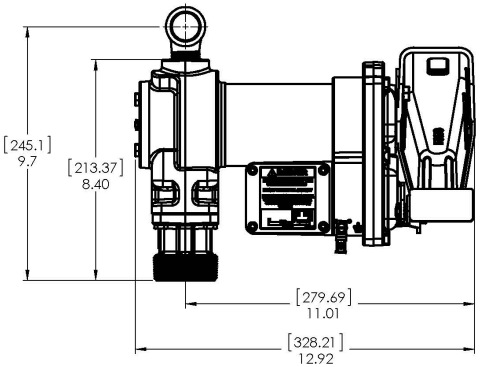
Bold text indicates service that cannot be performed by the owner; pump must be returned to the point of purchase for this type of service.

* Repairs marked with an asterisk (*) will require Repair Kit KIT120RG Kit includes replacement rotor and new vanes, as well as a number of other important seals and components to complete the repair. Details of this kit are on page 18.

WARNING! Disconnect electrical power and relieve any pressure in the lines prior to servicing this pump! Failure to do so can result in damage to the equipment and personal injury or death!

Dimensional Information





Technical Information DC pumps (G/GE models)

Motor	FR1200 Series	FR2400 Series
Power - AC 115, 230, 115/230 VAC	N/A	N/A
HZ 50, 60, 50/60	N/A	N/A
Power - DC 12, 24, 12/24	12	24
HP (horsepower) rating	1/4 HP	1/4 HP
Power cord length (feet)	18'	18'
Power cord gauge (AWG)	12 AWG	12 AWG
DC Power cord connectors	NONE	NONE
Amps (FLA)	20	10
RPM	2600	2600
Duty cycle	30 min.	30 min.
Thermal protection switch	Yes	Yes
Circuit protection fuse	NONE	NONE
Certification	UL, cUL Motor, ATEX, CE*, ANZEx, INMETRO	UL, cUL Motor, ATEX, CE*, ANZEx, INMETRO
Pump	**FR1200 Series**	**FR2400 Series**
Type- rotary, diaphragm, gear, vane	Rotary Vane	Rotary Vane
GPM in supplied configuration	Up to 15	Up to 15
GPM open flow - no hose or nozzle	Up to 18.5	Up to 18.5
By-pass pressure rating (psi) - Max	16 psi	16 psi
Dry vac (in Hg)	5	5
Head- Max (Ft.)	37	37
Anti-siphon valve	None	None
Inlet - Size / Thread	1" NPT / 1" BSPP*	1" NPT / 1" BSPP*
Outlet – Size / Thread	3/4" NPT / 3/4" BSPP*	3/4" NPT / 3/4" BSPP*
Mount	2" Bung NPT / 2" BSPT*	2" Bung NPT / 2" BSPT*
Material -pump housing	Cast Iron	Cast Iron
Material- wetted material	BUNA-N	BUNA-N
Rotor material	Powdered Iron	Powdered Iron
Rotor vane material	Sintered Bronze	Sintered Bronze
Compatible fluids	Diesel, gasoline, BioDiesel to B20, E15, Kerosene	Diesel, gasoline, BioDiesel to B20, E15, Kerosene
Strainer Mesh Size	20 x 20	20 x 20
Warranty	2 Years	2 Years
Certification	ATEX, CE*, ANZEx, INMETRO	ATEX, CE*, ANZEx, INMETRO

* CE certified models: see page 20

Technical Information DC pumps (G/GE models)

Motor	FR4200 Series	FR4400 Series
Power - AC 115, 230, 115/230	N/A	N/A
HZ 50, 60, 50/60	N/A	N/A
Power - DC 12, 24, 12/24	12	24
HP (horsepower) rating	1/4 HP	1/4 HP
Power cord length (feet)	18'	18'
Power cord gauge (AWG)	12 AWG	12 AWG
DC Power cord connectors	NONE	NONE
Amps (FLA)	20	10
RPM	2600	2600
Duty cycle	30 min.	30 min.
Thermal protection switch	Yes	Yes
Circuit protection fuse	NONE	NONE
Certification	UL, cUL Motor, ATEX, CE*, ANZEx, INMETRO	ATEX, CE*, ANZEx, INMETRO
Pump	**FR4200 Series**	**FR4400 Series**
Type- rotary, diaphragm, gear, vane	Rotary Vane	Rotary Vane
GPM in supplied configuration	Up to 20	Up to 20
GPM open flow - no hose or nozzle	21	Up to 20
By-pass pressure rating (psi) - Max	16 psi	16 psi
Dry vac (in Hg)	5	5
Head- Max (Ft.)	37	37
Anti-siphon valve	None	None
Inlet - Size / Thread	1" NPT / 1" BSPP*	1" NPT / 1" BSPP*
Outlet – Size / Thread	1" NPT / 1" BSPP*	1" NPT / 1" BSPP*
Mount	2" Bung NPT / 2" BSPT*	2" Bung NPT / 2" BSPT*
Material -pump housing	Cast Iron	Cast Iron
Material- wetted material	BUNA-N	BUNA-N
Rotor material	Powdered Iron	Powdered Iron
Rotor vane material	Sintered Bronze	Sintered Bronze
Compatible fluids	Diesel, gasoline, BioDiesel to B20, E15, Kerosene	Diesel, gasoline, BioDiesel to B20, E15, Kerosene
Strainer Mesh Size	20 x 20	20 x 20
Warranty	2 Years	2 Years
Certification	ATEX, CE*, ANZEx, INMETRO	ATEX, CE*, ANZEx, INMETRO

* CE certified models: see page 20

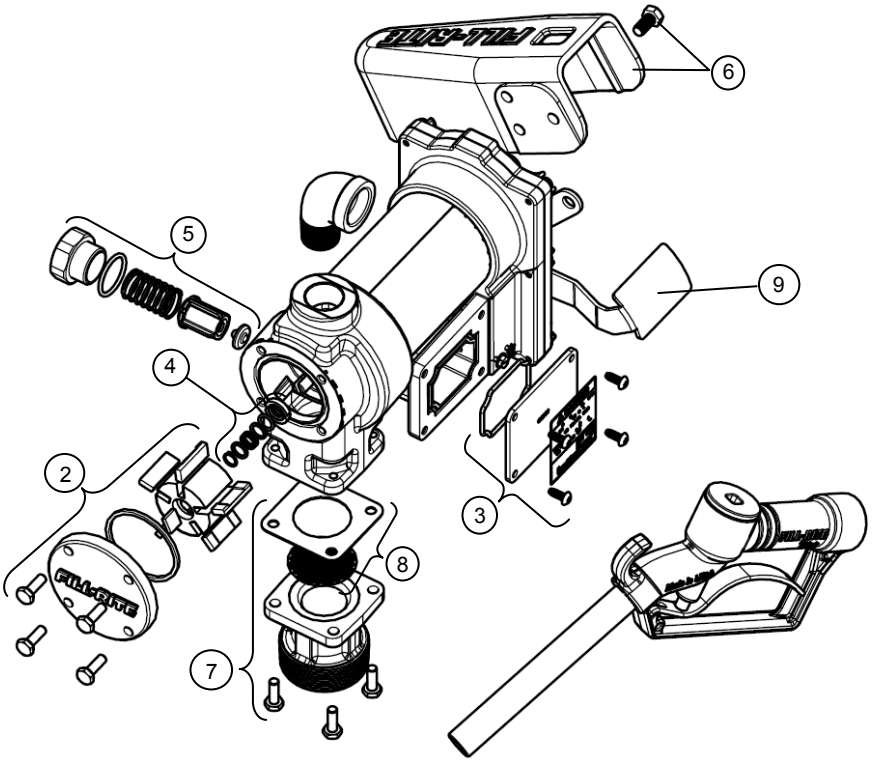
Technical Information AC Pumps

Motor	FR600	SD600
Power -AC 115, 230, 115/230	115 VAC	115 VAC
HZ 50, 60, 50/60	60 HZ	60 HZ
Power - DC 12, 24, 12/24	N/A	N/A
HP (horsepower) rating	1/6 HP	1/6 HP
Power cord length (feet)	N/A	N/A
Power cord gauge (AWG)	N/A	N/A
DC Power cord	N/A	N/A
Amps (FLA)	2.0 A	2.0 A
RPM	2000	2000
Duty cycle	30 min.	30 min.
Thermal protection switch	Yes	Yes
Circuit protection fuse	None	None
Certification	UL/cUL	UL/cUL
Pump	**FR600**	**SD600**
Type- rotary, diaphragm, gear, vane	Rotary Vane	Rotary Vane
GPM in supplied configuration	Up to 14.8	Up to 14.8
GPM open flow - no hose or nozzle	Up to 17.4	Up to 17.4
By-pass pressure rating (psi) - Max	16 psi	16 psi
Dry vac (in Hg)	5	5
Head- Max (Ft.)	37	37
Anti-siphon valve	None	None
Inlet - Size / Thread	1” NPT	1” NPT
Outlet – Size / Thread	1” NPT	1” NPT
Mount	2” Bung (NPT)	2” Bung (NPT)
Material -pump housing	Cast Iron	Cast Iron
Material- wetted material	BUNA-N	BUNA-N
Rotor material	Powdered Iron	Powdered Iron
Rotor vane material	Sintered Bronze	Sintered Bronze
Compatible fluids	Diesel, gasoline, BioDiesel up to B20, E15, Kerosene	Diesel, gasoline, BioDiesel up to B20, E15, Kerosene
Strainer Mesh Size	20 x 20	20 x 20
Warranty	2 Years	1 Years
Certification	UL/cUL	UL/cUL

Kits and Parts

#	Kit	Description	Parts
1	KIT120BD*	BioDiesel Kit*	O-ring seal, bypass valve poppet, bypass cap seal, inlet seal
2	KIT120RG	Rotor & Vane Kit	Rotor cover, rotor, vanes, rotor key, O-ring seal, attaching hardware
3	KIT120JC	Junction Cover Kit	Junction cover, seal, fasteners
4	KIT120SL	Seal Kit	O-ring, shaft seals, retainer clip
5	KIT120BV	By-Pass Service Kit	Screen, bypass valve, valve spring, bypass cap, O-ring seal
6	KIT120NB	Nozzle Boot Kit	Nozzle boot, attaching hardware
7	KIT120BG	Inlet Flange Kit	Inlet flange (bung), attaching hardware, inlet seal, screen
8	KIT120SG	Inlet Gasket and Screen	Gasket for inlet (bung) and screen
9	KIT120SW	Switch Lever Kit	Switch lever, mounting hardware

*KIT120BD not called out in diagram below.



Accessories

3/4” Accessories	Description
FRHMN075S	3/4” Manual Aluminum Nozzle
N075DAU10	3/4” Automatic Nozzle
807CMK	800 Series Mechanical Meter (Gallons)
807CLMK	800 Series Mechanical Meter (Liters)
700F3135	3/4” x 12’ Hose, UL
FRH07512	3/4” x 12 Hose
FRH07514	3/4” x 14’ Hose
FRH07520	3/4” x 20’ Hose
S075H1314	3/4” Multi-Plane Swivel
1200KTG9075	3/4” Filter Head (for use with F18 filters)
1” Accessories	**Description**
FRHMN100S	1” Manual Aluminum Nozzle
N100DAU10	1” Automatic Nozzle
N100DAU13	1” Ultra-High Flow Automatic Nozzle
901CMK4200	900 Series Mechanical Meter (Gallons)
901CLMK4200	900 Series Mechanical Meter (Liters)
900CD	900 Series Digital Meter (Programmable)
900CDP	900 Series Digital Meter with Integral Pulsar (Programmable)
300F7773	1” x 12’ Hose, UL
FRH10012	1” x 12 Hose
FRH10014	1” x 14’ Hose
FRH10020	1” x 20’ Hose
S100H1315	1” Multi-Plane Swivel
700ACCF7017	1” Filter Head (for use with F40 filters)

900CD


N100DAU13


700ACCF7017

Safety Testing Approvals

The ***Fill-Rite*** line of pumps have been safety tested for compliance to the standards set forth by Underwriters Laboratories, ATEX, ANZEx, INMETRO, and IEx.

Model Series	ATEX	ANZEx	IEx
	94/9/EC	AS 2380.1 AS 2380.2 AS 1939	IEC 60079-0 IEC 60079-1
FR1200GE	X	X	X
FR2400GE	X	X	X
FR4200GE	X	X	X
FR4400GE	X	X	X
Certification Date	24-May-12	30-May-12	31-Aug-12

94/9/EC (until April 19, 2016), and 2014/34/EU (after April 20,2016): Equipment and Protective Systems Intended for Use In Potentially Explosive Atmospheres.

AS2380.1: Electrical Equipment for Explosive Atmospheres - Explosion - Protection Techniques - Part 1: General Requirements.

AS2380.2: Electrical Equipment for Explosive Atmospheres - Explosion - Protection Techniques - Part 2: Flameproof enclosure d. (Class I Group D)

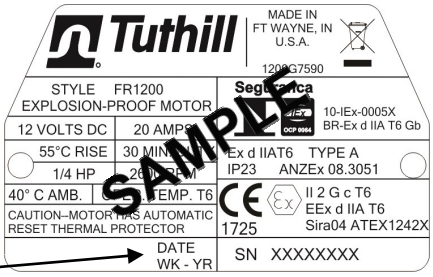
AS1939: Degrees of Protection Provided by Enclosures of Electrical Equipment.

IEC 60079-0: Explosive Atmospheres - Part 0: Equipment - General Requirements.

IEC 60079-0: Explosive Atmospheres - Part 1: Equipment Protection by Flameproof Enclosures d. (Class I Group D)

Motor Tag Information

The Motor Tag on your Fill-Rite pump contains important technical and performance information. Be certain this label remains affixed to the pump at all times.



Date stamp location

Visit us on the web at:

www.fillrite.com

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www.tuthill.com

FILL-RITE®

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