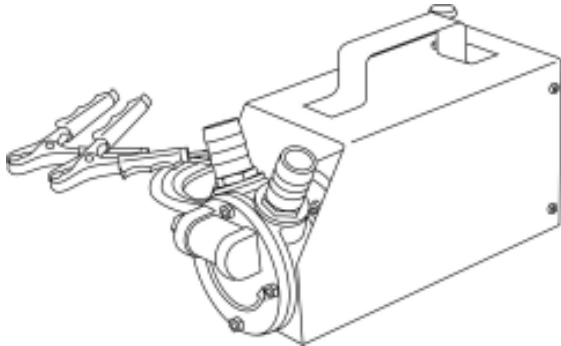


FILL-RITE

Economy Diesel
One Year Warranty

FR1604 12/24 VOLT DC PUMP

OWNER'S OPERATION & SAFETY MANUAL



DANGER

DANGER: Not for use with fluids that have a flash point below 100°F (38°C, examples: gasoline, alcohol). Sparking could result in an explosion which could result in death.

DANGER: No doit pas être utilisé avec des fluides dont le point éclair est en dessous de 38°C (par ex.: essence ou alcool). Une zétincelle peut provoquer une explosion.

PERICOLO: Non utilizzaro con fluidi aventi il punto di infiammabilità inferiore a 38°C (100°F) (Esempio: benzina, alcol). Eventuali scintille potrebbero provocare un'esplosione che può causare la morte.

PELIGRO: No usar con líquidos con punto de inflamación inferior a 38°C, como gasolina, alcohol, etc. por riesgo de explosión.



SAFETY INSTRUCTIONS

To ensure safe and efficient operation, it is essential to read and follow each of these warnings and precautions.

1. **Improper use or installation of this product can cause serious bodily injury or death.**
2. Do NOT smoke near pump or use pump near an open flame. Fire could result.
3. This product should not be used for fluid transfer into aircraft.
4. This product is not suited for use with medical products, water, or fluids for human consumption.
5. Tank or barrel should be anchored to prevent tipping in the full and empty conditions.
6. **Motor is NOT explosion proof. Do not use within 20 feet (6 m) of a hazardous location where explosive vapors may be present. Explosion and death could result.**

SAFETY



The FR1604 complies with applicable European standards.

GENERAL DESCRIPTION

The Fill-Rite Economy Diesel FR1604 pump is a positive displacement, direct drive, eccentric type pump. Depending on installation and product viscosity, these pumps can deliver up to 7 GPM (26 LPM) at 12 volt DC and 10 GPM (40 LPM) at 24 volt DC.

TECHNICAL INFORMATION

- Self priming
- Integral bypass valve
- Carrying handle
- ON/OFF switch
- Battery cable with clamps
- 2800 RPM, 16 Amp (12 V), 26 Amp (24 V) permanent magnet motor
- Cast iron pump housing
- Dimensions: 8" x 5" x 4.75" (203 x 127 x 121 mm)
- Duty cycle: 12 VDC - 30 minutes
24 VDC - 10 minutes
- Not for continuous operation
- 3/4" hose barb

Fluid Compatibility

The FR1604 pump is compatible with diesel fuel and kerosene.

The FR1604 pump is NOT compatible with water or any explosive fluid.

If in doubt about compatibility of a specific fluid, contact supplier of fluid to check for any adverse reactions to the wetted materials shown in the parts list.

TROUBLESHOOTING


IF PUMP FAILS TO PRIME: Check suction line for leaks or obstructions. Check bypass valve for obstruction.

PUMP DOES NOT WORK: Check and replace fuse if necessary. Check that free end of suction line is immersed in liquid.

LOW PUMPING CAPACITY: Bypass valve not seating properly, obstruction in suction line or low voltage from power source.

FR1604 WETTED MATERIALS LIST

ITM. NO.	DESCRIPTION	MATERIAL OF CONSTRUCTION	QTY
1	Bypass Kit	Polypropylene, nylon, stainless steel	1
2	Rotor Cover	Zytel	1
3	Pump Housing (FR1604)	Aluminum	1
4	Rotor	Acetal	1
5	O-Ring	Fluorocarbon	1
6	Shaft Seal	Fluorocarbon	2
7	Cam	Stainless steel	1
8	Hose Barb	Polypropylene	2



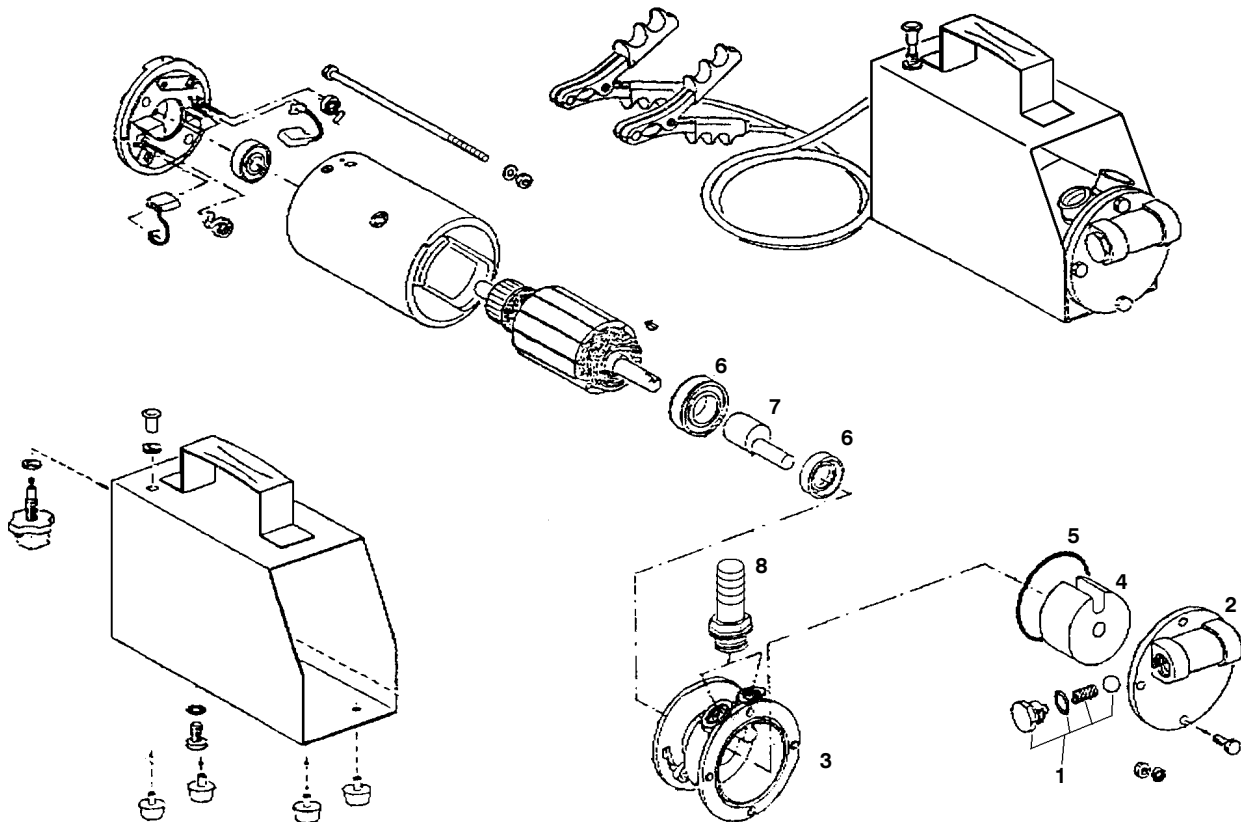
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Tuthill Transfer Systems ("Manufacturer") warrants to each consumer buyer of its Fill-Rite products (the "Buyer"), from the date of invoice or sales receipt, that goods of its manufacture ("Goods") will be free from defects of material and workmanship. Duration of this warranty is as follows:

- Heavy Duty Products - Two years
- Standard Duty Products - One year
- Economy Diesel Products - One year
- Cabinet pumps, Parts, and Accessories - One year

Manufacturer's sole obligation under the foregoing warranties will be limited to either, at Manufacturer's option, replacing or repairing defective Goods (subject to limitations hereinafter provided) or refunding the purchase price for such Goods theretofore paid by the Buyer, and Buyer's exclusive remedy for breach of any such warranties will be enforcement of such obligations of Manufacturer. If Manufacturer so requests the return of the Goods, the Goods will be redelivered to Manufacturer in accordance with Manufacturer's instructions F.O.B. Factory. The remedies contained herein shall constitute the sole recourse of the Buyer against Manufacturer for breach of warranty. IN NO EVENT SHALL MANUFACTURER'S LIABILITY ON ANY CLAIM FOR DAMAGES ARISING OUT OF THE MANUFACTURE SALE, DELIVERY OR USE OF THE GOODS EXCEED THE PURCHASE PRICE OF

THE GOODS. The foregoing warranties will not extend to Goods subjected to misuse, neglect, accident or improper installation or maintenance, or which have been altered or repaired by anyone other than Manufacturer or its authorized representative. THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OF MERCHANTABILITY, FITNESS FOR PURPOSE OF ANY OTHER TYPE, WHETHER EXPRESS OR IMPLIED. No person may vary the foregoing warranties and remedies except in writing signed by a duly authorized officer of Manufacturer. Warranties or remedies that differ from the foregoing shall not otherwise be binding on Manufacturer. The Buyer's acceptance of delivery of the Goods constitutes acceptance of the foregoing warranties and remedies, and all conditions and limitations thereof.



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