



The Most Trusted Name in Pumps and Meters

# FR100 Series Rotary Hand Pump FR110, FR112, FR112C, FR113 Installation and Operation Manual

## Thank You!

On behalf of every employee at Tuthill, thank you for choosing Fill-Rite for your fluid transfer needs! Your Fill-Rite pump comes with over 50 years of pump design and construction experience. If this is your first Fill-Rite pump, welcome to the family; if it isn't, welcome back! Our commitment to excellence provides the quality, performance, and durability you expect and deserve. We look forward to serving your fluid transfer needs!

**WARNING!** The FR100 Series hand pump shall not be used to pump fuel into any type of aircraft!

**WARNING!** The FR100 Series hand pump is not suitable to pump fluids for human consumption, or fluids containing water.

Fluid Compatibility	
Compatible Fluids (Okay to pump)	Gasoline, Diesel, Heptane, Kerosene, Stoddard Solvents, Light Oils, Mineral Spirits
Non-Compatible Fluids (DO NOT pump)	Water, Sulfuric Acid, Naptha, Methanol, Methyl Ethyl Ketone (MEK), Acetone, Ammonia, Benzene, Bleach, Chlorine

## 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 when pumping flammable fluids. Fire could result.
3. A Fill-Rite filter should be used on pump outlet to ensure that no foreign material is transferred to fuel tank.
4. Use gasoline and oil resistant thread sealant or sealant tape on all threaded joints to protect against leakage.
5. Storage tank or barrel should be anchored to prevent tipping in both the full and empty conditions.
6. To minimize static electricity build-up, keep nozzle in contact with container being filled.

## Safety Certification



## Pump Installation

**IMPORTANT!** All pipe threads must have a sealant to protect against leaks. Use sealant tape provided with the pump, or use a gasoline and oil resistant pipe sealant.

1. Screw suction pipe into pump inlet flange and tighten.
2. Extend suction pipe into tank or barrel opening to within 3" of bottom of tank or barrel. Do not rest suction pipe on bottom.
3. Screw inlet flange of pump completely and securely into undamaged tank or barrel bung.

### Pumps with Hoses and Nozzles

4. Screw one end of hose into pump discharge opening and the nozzle to other end of hose.

### Pumps with Discharge Spouts

4. Screw discharge spout assembly into top of pump.

### Pumps with Meter, Hose, and Nozzle

4. Screw street elbow into top of pump, nipple into street elbow, meter onto nipple. Note: Position the meter to the right of the handle facing operator for ease of operator viewing. Screw one end of hose into meter outlet and the nozzle to the other end of hose.

## Installation of Counter

1. Remove crank from shaft.
2. Remove two screws directly above horizontal centerline of pump.  
Push drive gear onto shaft with flat in gear hole located on longer flat of shaft.
3. Position counter on pump and attach with two screws and two washers.
4. Reattach crank.

## Troubleshooting

**If Pump Fails to Prime:** Check suction line for leaks or obstructions. Check vanes and slots for nicks, burrs or wear. Check rotor for excessive wear or damage.

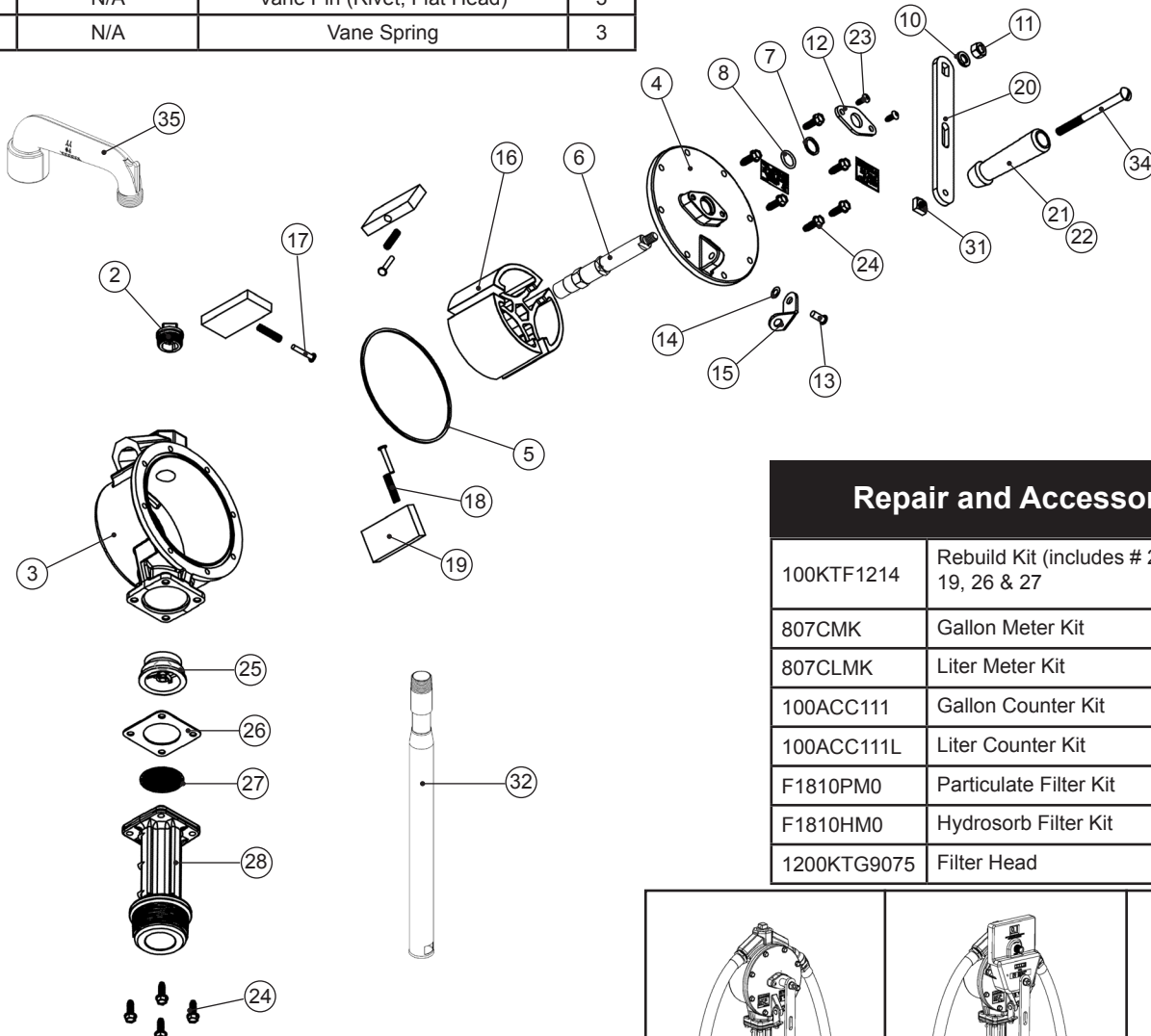
**Low Pumping Capacity:** Remove and clean screen. Check for leaks in suction line. Check rotor and vanes for excessive wear and damage. Check for dirty filter on outlet side.

**Pump Fluid Leakage:** Clean O-ring seal and seat area. Replace seal. Replace vacuum breaker. Tighten covers and joints. Check for dirty filter on outlet side.

## 100 Series Pump Parts and Kits

Item	Part #	Description	Qty
1	H058G9054	8' Hose - UL Listed	1
2	N/A	Vacuum Breaker	1
3	100F0640	Pump Body	1
4	100F0660	Cover	1
5	N/A	O-Ring (-159)	1
6	MF001049-000	Shaft	1
7	N/A	Seal Washer	1
8	N/A	O-Ring (-114) Washer	1
9	N/A	Washer	1
10	N/A	3/8 Lockwasher	1
11	N/A	3/8-16 Hex Nut	1
12	5200F1360	Bearing Plate	1
13	N/A	1/4 x 5/8 Rivet	1
14	N/A	1/4 Spring Washer	1
15	N/A	Locking Link	1
16	MF002104-000	Rotor	1
17	N/A	Vane Pin (Rivet, Flat Head)	3
18	N/A	Vane Spring	3

Item	Part #	Description	Qty
19	N/A	Vane	3
20	30F4541	Crank	1
21	N/A	Wood Grip	1
22	100F1086	Grip Assy (Includes items 21, 31, 34)	1
23	N/A	#10-24 x 1/2 TORX PH	2
24	N/A	1/4-20 x 3/4 HWHTRS	12
25	100F0741	Check Valve Assembly	1
26	100F0790	Inlet Gasket	1
27	100F0760	Screen	1
28	100G9283	Inlet Flange	1
29	5200G9596	Nozzle	1
31	N/A	5/16-18 S quare Nut	1
32	5200F1839	Suction Pipe	1
34	N/A	5/16-18 x 4 RHMS	1
35	5200F1619	Discharge Spout Assembly	Opt.



### Repair and Accessory Kits

100KTF1214	Rebuild Kit (includes # 2, 5, 7, 8, 17, 18, 19, 26 & 27)
807CMK	Gallon Meter Kit
807CLMK	Liter Meter Kit
100ACC111	Gallon Counter Kit
100ACC111L	Liter Counter Kit
F1810PM0	Particulate Filter Kit
F1810HM0	Hydrosorb Filter Kit
1200KTG9075	Filter Head

