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GREAT PLAINS INDUSTRIES, INC.

"A Great Plains Ventures Subsidiary"

www.gpi.net

1-800-835-0113

Owners Manual for Model FM100H Meter

GENERAL INFORMATION

To the Owner:

Please read the manual carefully before using your new meter. The information provided will help you achieve years of dependable performance and trouble-free operation.

SPECIFICATIONS

- Lightweight, corrosion resistant cast aluminum body
- Burnished aluminum finish
- Registers up to 999.9 gallons (9,999 litres) per delivery
- Totalizer registers up to 99,999 gallons (999,999 litres)
- 50 psi (3.4 bar) maximum working pressure
- Large reset knob
- Operating range: 4-20 GPM (15-75 LPM)
- Inlet and outlet thread: 1" NPT or (1" BSPP)

Approved Chemicals for Model FM100H Herbicide Meter

The GPI Herbicide Meter has been tested and approved for most mini-bulk herbicides and other chemicals that are compatible with aluminum, Viton[®], thermoplastic polyester, stainless steel and Delrin[®].

INSTALLATION

Thread pipe nipple into pump outlet. Using bushing if required, install meter by applying Teflon[®] tape to threads and turning meter onto nipple.

NOTE: Meter outlet is marked on meter housing.

Attach hose and nozzle to meter outlet using Teflon[®] tape on all threads.

⚠ WARNING

GPI Herbicide Meter is approved to handle only herbicides that are compatible with meter materials. Meter is not approved for gasoline, diesel and other fuels.

⚠ CAUTION

Always wear goggles, protective gloves, and any other protection required for handling herbicides. Observe all safety instructions for herbicides when handling or servicing equipment.

CALIBRATION

NOTE: Verify your calibration. Use full flow when calibrating. Meter accuracy is based on proper calibration for each herbicide and fluid temperature.

1. Fill pump, meter, hose and system by turning pump on, holding nozzle open, and filling a container until a full solid flow occurs. Close nozzle.
2. Reset main meter dial to 000.0. Turn counter reset knob counterclockwise.
3. Fill a carefully measured 5 gallon container (GPI Calibration Container P/N 116000-1) up to marked point.
4. Note meter counter reading. If the meter registers less than the container volume, remove seal screw (111039-2) and turn the calibration screw (111014-3) clockwise. If main counter reading is more than container volume, turn calibration screw counterclockwise.
5. Continue calibration steps above until counter reading is equal to measurement container volume. Reinstall seal screw.

MAINTENANCE

Proper cleaning is mandatory for long life. Herbicide equipment requires cleaning much like spray paint equipment. Many herbicides will harden in a very short period of time and cause severe damage. Improper cleaning will also void the warranty.

The meter should be flushed with water at the end of each day.

NOTE: Meter reading will change as meter is flushed.

Remove the pump and meter from herbicide container. Insert suction pipe into water. Turn pump on and alternate opening and closing nozzle until water is free of herbicide residue. After flushing, let water drain out of suction pipe and open nozzle to clear most of the water out of the hose and meter.

⚠ WARNING

DO NOT STORE METER WITH WATER IN CAVITIES. For prolonged periods of storage, flush and drain as outlined above. See Assembly/Disassembly instructions for inspection of counter assembly and nutator disc assembly. Inspect and clean any remaining herbicide residue from meter interior, reinstall covers and fill meter with ethylene glycol (antifreeze).

NOTE: For best results, disassemble, clean and inspect annually and replace seals.

ASSEMBLY / DISASSEMBLY

Drain herbicide from meter and flush with water as described under maintenance.

1. To replace counter and gear assembly, nutating disc and corresponding seals; remove knob (111028-2).
2. Remove 2 screws (904002-13) connecting the coverplate to the main housing. Then remove coverplate.
3. Remove 4 screws (904002-12) which hold counter assembly and then remove this assembly.
4. Remove 2 screws (904003-37) to remove the nutator disc assembly (if needed).
5. To reassemble, reverse the above procedure, ensuring that all seals are carefully in place.

SERVICE

For warranty consideration, parts, or other servicing information, please contact your local distributor. If you need further assistance, call the GPI Customer Service Department in Wichita, Kansas, during normal business hours.

1-800-835-0113

To obtain prompt, efficient service, always be prepared with the following information:

1. The model number of your meter.
2. The serial number or manufacturing date code of your meter.
3. Specific information about part numbers and descriptions.

For warranty work always be prepared with your original sales slip or other evidence of purchase date.

Returning Parts

Please contact the factory before returning any parts. It may be possible to diagnose the trouble and identify needed parts in a telephone call or letter. GPI can also inform you of any special handling requirements you will need to follow covering the transportation and handling of equipment which has been used to transfer hazardous liquids.

CAUTION: Do not return meters without specific authority from the GPI Customer Service Department. Due to strict regulations governing transportation, handling, and disposal of hazardous liquids, GPI will not accept meters for rework unless they are completely free of chemical.

TROUBLESHOOTING

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
A. LEAKAGE INTO COUNTER	1. Shaft seal leaking.	Return to manufacturer for repair.
B. EXTERNAL LEAKAGE	1. Pipe fitting installed without sealer. 2. Fasteners loose. 3. O-ring deleted or improperly installed. 4. Cracked assembly.	Seal pipe ends with suitable sealer. Tighten fasteners. Install O-ring or correct faulty installation. Replace defective part.
C. METER RUNS IN REVERSE	1. Piping incorrectly installed.	Install piping in accordance with flow direction on meter.
D. DUST COLLECTING INSIDE COUNTER COVER	1. Dust seals, O-ring or knob seal not installed, incorrectly installed or damaged. 2. Fastener loose or missing.	Install seals or correct seal installation. Tighten or replace fastener.
E. DELIVERY NORMAL BUT METER DOES NOT MOVE	1. Broken counter assembly. 2. Foreign material in counter assembly. 3. Misaligned nutator assembly. 4. Debris in nutator assembly. 5. Defective nutator assembly.	Return unit to manufacturer for repair. Clean meter cavity. Correct alignment. Make certain lip is engaged in inlet hole, O-ring is properly installed and hold down screws are secured. Clean nutator assembly. Replace nutator assembly.
F. METER REGISTER DOES NOT OPERATE, LITTLE OR NO FLOW	1. Faulty meter – clogged strainer. 2. No strainer. Foreign material in nutator assembly. 3. System components other than meter may be at fault.	Clean or replace strainer. Clean or replace counter assembly. Remove foreign material. Install new strainer. Isolate cause.

Limited Warranty Policy

Great Plains Industries, Inc. 5252 E. 36th Street North, Wichita, KS USA 67220-3205, hereby provides a limited warranty against defects in material and workmanship on all products manufactured by Great Plains Industries, Inc. This product includes a 2 year warranty. 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. The warranty shall extend to the purchaser of this product and to any person to whom such product is transferred during the warranty period.

The warranty period shall begin on the date of manufacture or on the date of purchase with an original sales receipt. This warranty shall not apply if:

- A. the product has been altered or modified outside the warrantor's duly appointed representative;
- B. the product has been subjected to neglect, misuse, abuse or damage or has been installed or operated other than in accordance with the manufacturer's operating instructions.

To make a claim against this warranty, contact the GPI Customer Service Department at 316-686-7361 or 1-800-835-0113. Or by mail at:
 Great Plains Industries, Inc.
 5252 E. 36th St. North
 Wichita, KS, USA 67220-3205

The company shall, notify the customer to either send the product, transportation prepaid, to the company at its office in Wichita, Kansas, or to a duly authorized service center. The company shall perform all obligations imposed on it by the terms of this warranty within 60 days of receipt of the defective product.

GREAT PLAINS INDUSTRIES, INC., EXCLUDES LIABILITY UNDER THIS WARRANTY FOR DIRECT, INDIRECT, INCIDENTAL AND CONSEQUENTIAL DAMAGES INCURRED IN THE USE OR LOSS OF USE OF THE PRODUCT WARRANTED HEREUNDER.

The company herewith expressly disclaims any warranty of merchantability or fitness for any particular purpose other than for which it was designed.

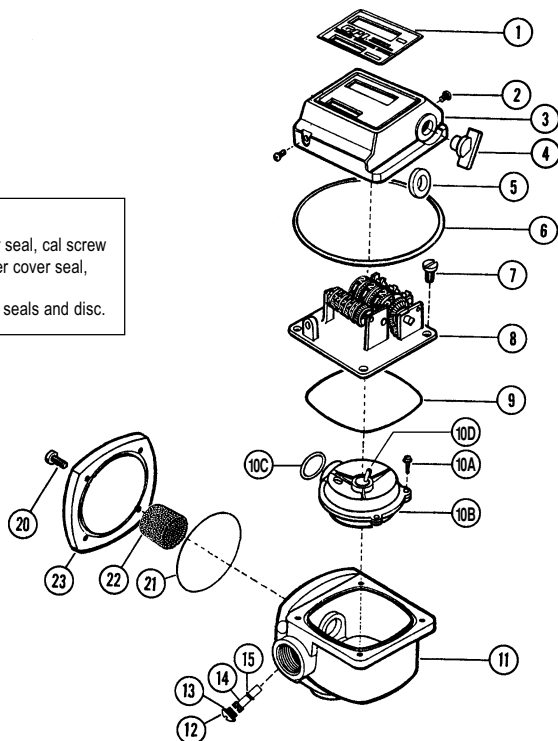
This warranty gives you specific rights and you may also have other rights which vary from U.S. state to U.S. state.

Note: In compliance with MAGNUSON MOSS CONSUMER WARRANTY ACT – Part 702 (governs the resale availability of the warranty terms).

ILLUSTRATED PARTS DRAWING

Replacement Kits

- 111504-1 Seat Kit includes nutator seal, cal screw seal, housing seal, center cover seal, and strainer cover seal.
- 111507-1 Overhaul Kit includes all seals and disc.



Item No.	Part No.	Description	No. Req'd.
1	111034-1	Decal, Gallon	1
	111034-3	Decal, Litre, NPT	1
2	904002-13	Screw, Sems (8-32 x 5/16 in.)	2
3	111006-1	Counter Cover, Gallon	1
	111006-2	Counter Cover, Litre	1
4	111028-2	Reset Knob	1
5	111107-1	Grommet	1
6	111024-1	Cover O-ring	1
7	904002-12	Screw, Sems (1/4-20 x 1/2 in.) ...	4
8	111047-3	Counter Assembly, Gallon	1
	111047-5	Counter Assembly, Litre	1
9	118017-1	Housing O-ring	1
10A	904003-37	Screw, Sems (6-32 x 1/2 in.)	2

Item No.	Part No.	Description	No. Req'd.
10B	111008-4	Nutator	1
10C	111045-4	O-ring	1
10D	111009-2	Disc	1
11	111021-3	Housing, 1 in. NPT	1
	111021-4	Housing, 1 in. BSPP	1
12	111039-2	Calibration Cover Screw	1
13	904002-19	Calibration Cover Collar	1
14	111014-3	Calibration Screw	1
15	111045-1	Calibration Screw Seal	1
20	904002-15	Screw, Sems (1/4-20 x 5/8 in.) ...	4
21	901001-78	Strainer Coverplate Seal	1
22	111032-2	Strainer	1
23	111029-1	Strainer Coverplate	1



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