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INSTALLATION & INSTRUCTION MANUAL

MODEL 1100 TURBINE METER REPAIR KITS

Rev. B

GENERAL DESCRIPTION:

The Blancett Model 1100 turbine flow meter is designed with wear resistant moving parts to provide trouble free operation and long service life. The kit allows easy field repair of a damaged flow meter, rather than replacing the entire flow meter. Repair parts are constructed of stainless steel alloy and tungsten carbide.

Fluid moving through the turbine flow meter causes the rotor to turn at a speed proportional to the flow rate. The rotor blade cuts the magnetic field of the magnetic pick-up, which in turn generates a frequency output signal that is directly proportional to the speed. The signal is used to represent flow rate and/or totalization of fluid passing through the turbine flow meter. See **Figure 1** for typical turbine meter assembly.

Each turbine meter repair kit is factory calibrated to ensure accuracy throughout the entire flow range. Each kit is complete and includes a new K-Factor, which is the calibrated number of pulses generated by each gallon of liquid. This K-factor will be used to recalibrate the monitor, or other electronics, to provide accurate output data.

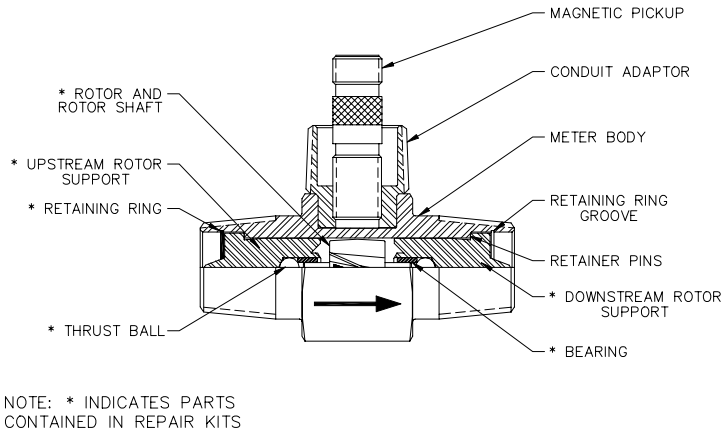

Figure 1

REPAIR KIT INFORMAION			
		Repair Kit Fits Meter	
Repair Kit Part Number	**Flow Meter Size**	**Model Number**	**Part Number**
B251-102	3/8”	W11.375	B110-375 & B110-375-1/2
B251-105	½”	W11.500	B110-500 & B110-500-1/2
B251-108	¾”	W11.750	B110-750 & B110-750-1/2
B251-109	7/8”	W11.875	B110-875
B251-112	1”	W1110	B111-110
B251-116	1-1/2”	W1115	B111-115
B251-121	2’ Low	W1120L	B111-121
B251-120	2”	W1120	B111-120
B251-131	3”	W1130	B111-130
B251-141	4”	W1140	B111-140
B251-161	6”	W1160	B111-160
B251-181	8”	W1180	B111-180
B251-200	10”	W1100	B111-200
B111109	Standard Magnetic Pick-up	All Meter Sizes	

TURBINE METER REMOVAL

WARNING: High-pressure leaks are dangerous and cause personal injury. Make sure that fluid flow has been shut off and pressure in the line released before attempting to remove the meter.

DISASSEMBLY

Refer to Figures 2, 3, and 4 for relative positions of repair kit components.

1. Remove the magnetic pick-up from the meter body to avoid damage during repair.
2. Remove the retaining ring from one end of the meter.
3. Remove the rotor support from the body. If the rotor support is jammed in the body, use a pair of pliers or vice-grips to break the rotor support free.
4. The rotor may also be removed at this time. Note: 4 inch and larger meters have two retaining rings (one on either side of the rotor) that need to be removed before the rotor can be removed (**Figure 4**).
5. Remove the retaining ring from the opposite side of the meter.
6. Remove the second rotor support.

INSTALLATION OF NEW KIT:

IMPORTANT: Before reassembly, note that an arrow is cast or engraved on each component *. The arrow indicates the direction of flow. The meter must be reassembled with arrowheads pointed in the direction, and must agree with the direction of fluid flow. The arrows are to be oriented in the up position on both rotor supports. The magnetic pick-up side of the body signifies the up position. This is the position that the repair kit was calibrated, and this is the position it is to be used to ensure meter accuracy. Figure 2 (Figure 3 and 4) shows the proper alignment and orientation of the repair kit.

* Fractional sizes (3/8”, 1/2”, 3/4”& 7/8”) rotors do not contain a cast or engraved arrow, however Blancett provides a colored cap on the **down stream side** of the rotor shaft to indicate flow direction. Remove this cap before assembly, noting flow direction.

1. Install one of the rotor support into the body bore, noting the orientation of the arrow.

2. Secure a retaining ring in the groove provided. Be sure that retaining rings are completely installed in each groove. Note: 4 inch and larger meters have a retaining ring at both ends of the rotor (Fig. 4).
3. Insert the rotor and second rotor support in the opposite side of the body, noting the orientation of the arrow.
4. Secure the second retaining ring(s) in the opposite groove, as noted in Step 2 above.
5. Check the meter by blowing air through the assembly. If the rotor does not turn freely, the meter should be dissembled and checked for anything that would obstruct movement of the rotor.

CAUTION: Excess air pressure may damage the rotor and bearings by overspinning.

6. Install the magnet pick-up.

Note: At this time electronics will need recalibration. Refer to the proper installation and operation manual. If there are any questions on recalibration, contact Blancett factory toll free number 1.800.235.1638, or the manufacturer of the associated electronics.

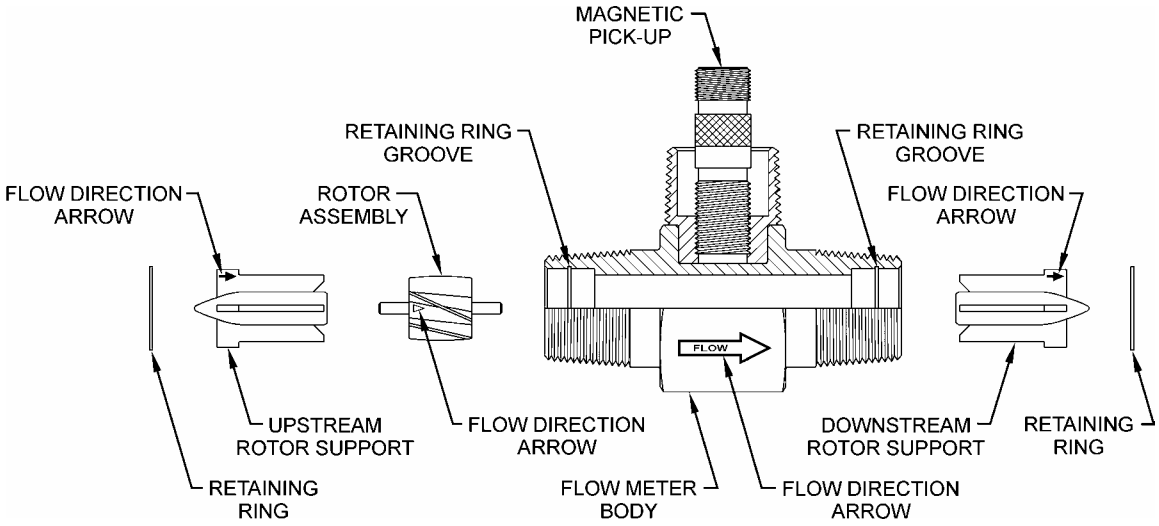

Figure 2: Relative positions of internal components for turbine meter sizes B110-375 through B111-115 and B111-121.

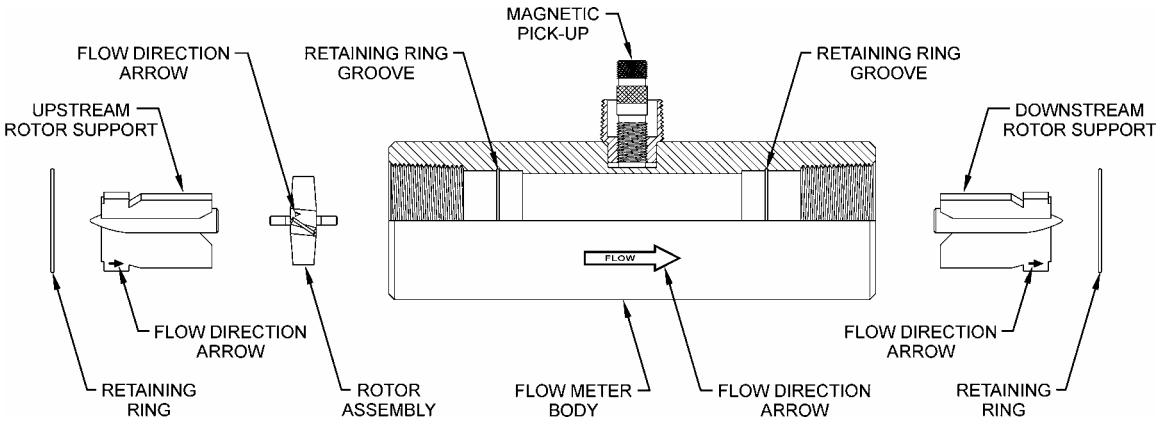

Figure 3: Relative positions of internal components for turbine meter sizes B111-120 through B111-130.

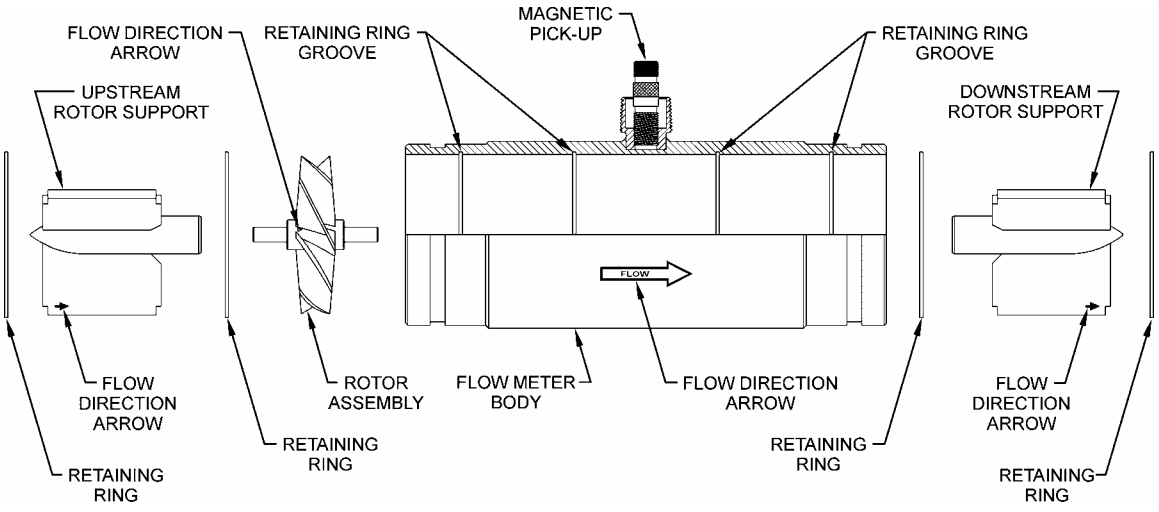

Figure 4: Relative positions of internal components for turbine meter sizes B111-140 through B111-200.