

PRODUCT SERVICES DEPARTMENT

DESCRIPTION OF METER BODY REPAIR SERVICES

Series A & B Basic Meter, Aluminum Body Repair Classifications

Meter Body Level I Repair

This is the most simple and inexpensive repair service level for a Basic Meter body that requires a major cleaning and bearing replacement, but otherwise is in relatively good condition. This repair level does not cover Accessory Units, cylinders, headplates, impellers, or timing gears. After receipt of meters, along with a Purchase Order authorizing repair, all line mounted version, aluminum body Series A & Series B basic meters will be repaired at the Level 1 Repair service level, when feasible as per the following stipulations:

- Disassemble meter and thoroughly clean all components
- Replace all four precision main shaft bearings
- Replace headplate and end cover O-rings
- Replace oil level sight gauges and O-rings, if required
- Replace miscellaneous screws, washers, pipe plugs, and shims, as required.
- Mag-coupled Accessory Units are cleaned and inspected. No parts are included.

NOTE: Meters that cannot be repaired under the terms of Level 1 will be considered for repair under Level 2. Repairs under this repair Level will be completed, when feasible.

Meter Body Repair Level 2

Same as Level 1 Repair, plus the replacement of timing gears. Headplates, impellers and cylinders are not included.

Meter Body Repair Level 3

This repair Level includes the same service as a Level 2 repair, plus the replacement of two impellers, as required. If the headplates and/or the cylinder need to be replaced, these will incur an additional expense. The added cost of these major components may approach 75-80% of a new meter price. Some customers wish to spend this amount as it is still less than a new meter. Others often wish to scrap and replace.

NOTE: Before proceeding with a Level 3 repair, we will contact you for authorization to repair or scrap.

All meters will also receive the following at no additional cost:

- All meters will be leak tested to original specifications
- All meters will be tested on a transfer prover at 10% and 100% of the meter's maximum rated capacity, or up to the prover's maximum flow capacity
- All meters will receive accuracy data printed from the Model 5 Prover software
- All meters will be returned painted to original specifications
- All 8C-16M mount meters will be boxed and shipped freight Prepaid & Allowed
- A one year warranty in accordance with our standard Terms & Conditions

DESCRIPTION OF MAG-COUPLED ACCESSORY UNIT REPAIR SERVICES

Mag-Coupled Accessory Unit Repair Classifications

CLEANING

The Mag-Coupled Accessory Unit is thoroughly cleaned and inspected. No parts are replaced. This service is provided at no charge with Meter Repair Level 1. Depending on condition of unit some Level 1 meter repairs may require a Repair class "A" or "B".

Repair Class "A"

This Class includes a thorough cleaning and inspection of the gear reduction unit, a gear ratio check, and TC probe calibration (if applicable).

The following parts will be inspected and replaced, as required:

Series 1 (LM-MA)

- CTR or TC Lexan® cover, gaskets and O-rings, as required.
- Replacement of window(s) and/or sight glass on CD or TD Units, as required.
- Replacement of bevel gears on CD or TD Units, as required.
- Adapter plates are not replaced.

Series 3 (Life-Lubed)

- CTR or TC Lexan® cover and O-ring, as required.
- Replacement of outboard bevel gear module on CD or TD Units, as required.
- Check the ID Assembly for proper operation and repair, if required.

Repair Class "B"

The determination of whether an Accessory Unit can be adequately repaired under this Class is based upon the over all condition of the gear reduction unit. Significant corrosion or excessive wear usually dictates the need for a replacement. If a feasible repair cannot be completed at the standard charge, we will recommend scrap and replace.

A new mechanical Assembly #400 can be purchased at a discount of 10% off current published List Price. Optionally, we will be glad to consider a quantity-based special exchange or trade-in program for you to upgrade from the mechanical gear reduction unit to any of our IMC series of correctors on Series A and Series B body meters.

Class B includes a thorough cleaning and inspection of the gear reduction unit and a gear ratio check.

Mag-Coupled Accessory Unit Repair Classifications (continued)

The following parts will be inspected and replaced, as required:

Series 1 (LM-MA)

- CTR or TC Lexan® cover, gaskets and O-rings.
- Replacement of window(s) and/or sight glass on CD or TD Units.
- Replacement of bevel gears on CD or TD Units, and bushings in the ID support housing.
- TC probe and calibration
- Adapter plates are not replaced due to the labor involved for disassembly and reassembly, approaching or equal to the price of a new unit. A 10% discount is applicable for a new replacement.

Series 3 (Life-Lubed)

- CTR or TC Lexan® cover and O-ring.
- Replacement of outboard bevel gear module on CD or TD Units.
- Check the ID Assembly for proper operation and repair, if required.
- TC probe and calibration

NOTE: Lexan® is a registered trademark of the General Electric Company

Model 5 ROOTS® Prover Recertification

ROOTS® prover recertification is required as dictated by local or State regulatory agencies or frequency and conditions of use, or every two to three years – depending upon frequency of use and condition. For additional information, please request document “Transfer Proving: Best Practices”.

Standard Recertification includes:

- Replacement of the Master Meter four special main shaft bearings
- Accuracy test on a bell or piston-type prover dimensionally traceable to the National Institute of Standards and Technology (NIST) and Certified/Accredited by NMI, with:
- CD with Software update to MS-Windows with new Master Meter presets and calibration files.
- Test and calibrate the electronic Controller and automated flow rate control system
- Test and calibrate the pressure transducers and temperature probes
- Inspect the Field and Master Meter pulsers
- Replace standard cable assemblies
- New paint
- 1-year limited warranty on replaced or repaired components. Refer to General Terms of Sale – Repair and Maintenance Services.

Shipping Instructions

Refer to the Return Material Authorization procedure.

Ship freight Prepaid and Allowed. Return shipments will be freight Collect (shipper invoices customer).

Master Meter Remanufacture and Recertification

Service for 2M and 10M Model 5 ROOTS® Master Meters includes the following:

- Inspection of internal components for wear and refurbishing as described under Prover Recertification.
- Accuracy test with certified curve and CD with new Master Meter presets and calibration files.
- 1-year limited warranty.

NOTE: Major parts such as impellers, headplates, cylinder, pulsers and cables are not included.

Prover Program Options

Master Meter In-Test

ROOTS® Master Meter accuracy test prior to inspection, remanufacture and certification is available upon request and at an additional cost.

Prover In-Test

ROOTS® Prover system accuracy test prior to inspection, remanufacture and certification is available upon request and at an additional cost.

Discontinued Provers

Model 3 & Model 4 service has been discontinued.
TO SCHEDULE SERVICE, PLEASE CALL 1-800-521-1114.