

Metering control valve

Model 871, series "A"



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Explanation of signal words for safety

NOTE

Emphasizes useful hints and recommendations as well as information to prevent property damage and ensure efficient trouble-free operation.

⚠ CAUTION

Indicates a dangerous situation that can lead to light personal injury if precautionary measures are ignored.

⚠ WARNING

Indicates a dangerous situation that could lead to death or serious injury if precautionary measures are ignored.

⚠ DANGER

Indicates a dangerous situation that will lead to death or serious injury if precautionary measures are ignored.

Safety

Read and carefully observe these operating instructions before unpacking and operating equipment. Equipment must be operated, maintained and repaired exclusively by persons familiar with operating instructions. Local safety regulations regarding installation, operation and maintenance must be followed.

Operate equipment only after safety instructions and this service manual are fully understood.

Specifications

Dial capacity outer (graduations)	4 quarts (1/4 quart) (3,8 l (0,23 l))
Dial capacity inner	16 quarts (15,1 l)
Totalizer	Yes
Flow (maximum)	4 gal/min (15 l/min)
Flow (minimum)	0.4 gal/min (1,5 l/min)
Operating pressure (maximum)	1 000 psi (69 bar)
Operating temperature (maximum)	150 °F (70 °C)
Accuracy	± 0.65%
Weight	3.3 lbs (1,5 kg)
Inlet and outlet connections	1/2 in NPTF

⚠ CAUTION

Before meter can be placed in service after repair, meter must be tested and approved in accordance with U.S. government's weights and measure standards.

Failure to comply may result in personal injury or damage to equipment.

⚠ CAUTION

Do not turn knob clockwise. Always reset knob to zero by turning counter-clockwise. If turned clockwise, severe internal damage will occur.

Failure to comply may result in personal injury or damage to equipment.

⚠ CAUTION

New metering systems must be purged prior to installation of metering control valve to free system of contaminants.

Failure to comply may result in personal injury or damage to equipment.

Outlet port positions (in relation to dial)

Outlet port can be set at any one of four positions, namely, 3, 6, 9 or 12 o'clock. Four positions are illustrated on **Fig. IPB 1, page 7**, all in relation to cipher on dial. All meters, unless otherwise specified at time ordered, will be set at 6 o'clock position.

To change positions in field, simply remove shroud, reset knob and diameter. Rotate dial until outlet port is in desired position, and reassemble parts in reverse sequence.

Operation

Meter can handle petroleum products such as automatic transmission fluid, S.A.E. 5 to 50 weight motor oil, S.A.E. 80 to 240 weight gear oil and antifreeze fluid (ethylene glycol). Used primarily as an inventory control device in lubricant dispensing systems, it is accurate, rugged and light weight.

Pointer knob affixed to output shaft rotates around graduated dial, indicating amount dispensed. After delivery, knob is then reset to zero by turning it counter-clockwise.

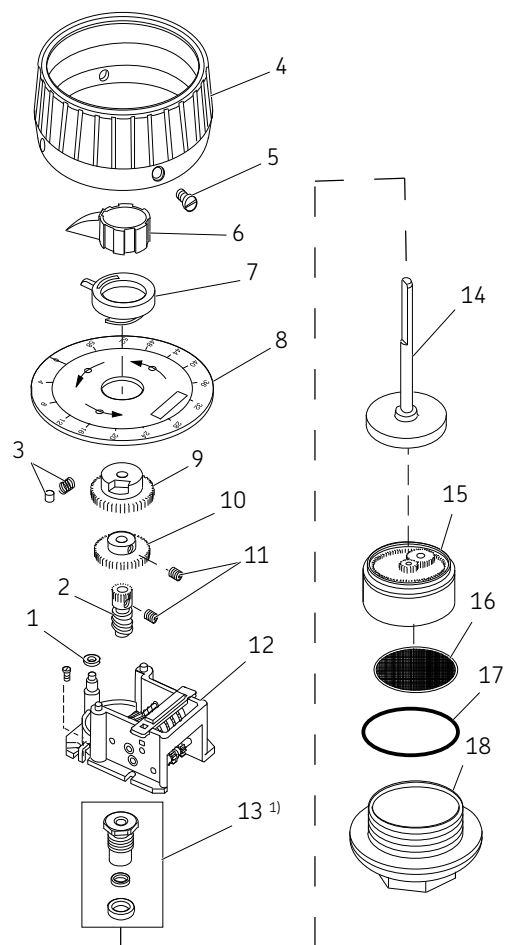
Troubleshooting

Problem	Solution
No material flow.	Check pump. Check air supply. Check for obstruction in supply hose. Check screens.
Partial material flow.	Check screens.
Material flowing, odometer not registering and meter indicator turning.	Check for broken odometer gears.
Oil leakage in odometer.	Check gland packing.
Material flowing odometer not registering and metering indicator not turning.	Check piston and chamber for foreign particles. Check reset knob (6) is tight on shaft of driver pawl gear.
Material flowing, odometer registering and meter indicator not turning.	Check set screw (11) on indicator. Check stem on upper driver gear (14) to ensure not loose from gear body.
Preset only, no auto shut-off.	Check lock pawl not bent and bypassing indicator.

Service parts

Item	Description	Part number	Quantity	Item	Description	Part number	Quantity
1	Spacer	69304-23	1*	10	Inner circle pointer gear	66871-17	1*
2	Upper drive pawl worm gear	66871-54	1*	11	Set screw	50541	2*
3	Clutch kit	272155	1	12	Register assembly	69795-3	1
4	Shroud	66871-13	1	13	Packing kit	237388	1
5	Shroud screw	66871-5	2	14	Upper driving pawl worm gear	66871-111	1
6	Knob assembly	242912	1	15	Chamber and piston assembly	66871-25	1
7	Pointer inner circle	66871-53	1	16	Screen	66871-92	1
8	Dial assembly	66410-26	1	17	O-ring	66871-12	1
9	Inner circle pointer cam	66871-50	1*	18	Housing cap	41204	1

* Indicates change.



¹⁾ Tighten to 60 - 80 in.lbf (6,7 - 9 Nm).
 * Indicates change.

Warranty

The instructions do not contain any information on the warranty. This can be found in the General Conditions of Sales, available at: www.lincolnindustrial.com/technicalservice or www.skf.com/lubrication.

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