



Electronic Meter

Description

CAUTION

Do not operate this meter with an antifreeze and water mixture. Meter will not register properly.

Meter model 3579 is designed to measure a variety of fluids that include engine oils, diesel oils and hydraulic oils.

The meter is totally electronic except for the oval gear metering mechanism. The electronic register is powered by two 1-1/2 Volt AAA alkaline batteries.

The meter can be programmed to register in:

- pints, quarts, or gallons, and totalize in gallons
- liters and totalize in liters

NOTE: The meter is factory programmed to register in quarts and totalize in gallons.

A liquid-crystal display shows the following amounts of fluid dispensed by volume:

- Current delivery
- **RESET TOTAL** (momentary)
- **TOTAL**

All three amounts display with a floating decimal point.

- Current delivery (0.000 to 99999)
- **RESET TOTAL** and **TOTAL** (0.0 to 999999)

The meter's non-volatile memory retains the unit of measure, totals, and calibration factor during battery replacement.

Operation

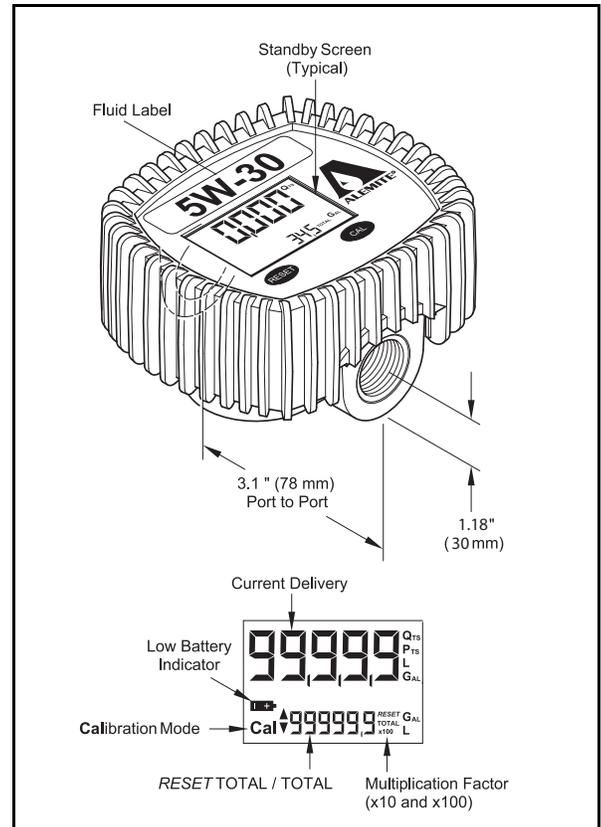
To zero the current delivery and **RESET TOTAL** the meter must be in Standby. See **Figure 1**.

Press the **Reset** button to zero the current delivery.

When the **RESET TOTAL** is required to be reset:

1. Press the **Reset** button.
 - The **RESET TOTAL** displays for 5 seconds.
2. Press and hold the **Reset** button while the **RESET TOTAL** displays.
 - The **RESET TOTAL** is reset to zero.

The **RESET TOTAL** and **TOTAL** update automatically during fluid delivery.



Model		Thread Type	
3759-		3/4" NPT	
393792-6		3/4" GAS	
Programmable Units of Measure		Flow Rate in Units / Min.	
Current	Totalizer	Min.	Max.
pint	gallon	1.5 gallons	16 gallons
quart			
gallon			
liter	liter	6 liters	60 liters

Figure 1 Electronic Meter Model 3579

Max. Operating Pressure		Storage Temperature		Operating Temperature		Accuracy*	Repeatability*	Dimensions (w/ Guard) L x W x H		Weight	
psi	bar	° F	° C	° F	° C			in.	cm	lbs	kg
1000	70	-4 to 158	-20 to 70	23 to 122	-5 to 50	± 1%	1%	3.7 x 4.2 x 3.1	9.4 x 10.7 x 7.9	1.46	0.6

* With SAE 10W Oil at 68° F (20° C)

Table 1 Electronic Meter Model 3579 Specifications

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Meter Programming

*IMPORTANT: The meter must be in Standby to begin any programming function. See **Figure 1**.*

Change Unit of Measure

1. Press and hold the **Cal** and **Reset** buttons at the same time.
 - The **Unit** screen appears.
2. Repeatedly press the **Reset** button.
 - The screen scrolls through the available units of measure (see **Figure 1**).

Once the desired units of measure appear:

3. Press and hold the **Cal** button.
 - The chosen units of measure are stored in memory and active.
 - The meter cycles to Standby.

Calibration Factor Determination

To determine the meter's calibration factor* in use:

1. Press and hold the **Cal** button.
 - The calibration factor screen appears.

The word **Fact** (short for factory) indicates the calibration set at the factory is in use (1.000). **User** indicates the **Factory** calibration factor has been superseded and is in use.

If the meter indicates **User** but the **Factory** calibration factor (1.000) is required:

2. Press the **Reset** button.
 - The screen changes from the **User** calibration factor to the **Factory** calibration factor.
3. Press the **Cal** button.
 - The meter cycles to Standby.
 - The **Factory** calibration factor (1.000) is active.
 - The **User** calibration factor is deleted from memory.

* The calibration factor is a value that the meter uses to calculate the amount of fluid dispensed.

User Calibration

Variables that cause a meter to require recalibration are:

- fluid viscosity
- fluid flow rate
- back-pressure

Field Calibration

This method of programming the meter requires dispensing a known quantity of fluid.

1. Press and hold the **Cal** button.
 - The calibration factor screen appears.
2. Press and hold the **Reset** button.
 - The **Field** screen appears.
3. Dispense any amount of fluid greater than 5 quarts or liters into an appropriate-sized graduated beaker.
 - Dispense the fluid at the normal flow rate.

Should the field value match the dispensed value:

4. Press the **Reset** button.
 - An upward arrow appears.
5. Press and hold the **Reset** button.
 - The meter cycles to Standby.

The calibration factor remains the same.

If the field value does not match the actual amount:

6. Press the **Reset** button.
 - An upward arrow appears.

This arrow enables the user to increase the field value.

7. Press the **Reset** button again to change the direction of the arrow.
 - A downward arrow appears.

This arrow enables the user to decrease the value.

With the proper arrow chosen:

8. Press the **Cal** button.
 - The value changes one digit.

NOTE: Press and hold the **Cal** button to change the value at a faster rate.

Once the required value displays:

9. Press and hold the **Reset** button.
 - The **User** calibration factor is stored in memory and active.
 - The meter cycles to Standby.

Direct Calibration

This method of calibration is useful to correct an inaccuracy of a known percentage.

For example, if the calibration factor is set at 1.000 and the meter registers more than the actual amount dispensed by 5%:

- the calibration factor should be decreased to 0.950 ($1.000 \times 0.95 = 0.950$).

Conversely, if the meter registers less than the actual amount dispensed by 5%:

- the calibration factor should be increased to 1.050 ($1.000 \times 1.05 = 1.050$).

To program a calculated calibration factor into the meter:

1. Press and hold the **Cal** button.
 - The calibration factor screen appears.
2. Press and hold the **Reset** button.
 - The **Field** screen appears.
3. Press and hold the **Reset** button once again.
 - The **Direct** screen appears with an upward arrow.

This arrow enables the user to increase the direct value.

4. Repeat steps **7** through **9** above.

Installation



WARNING

Prior to installation, the following safety precautions must be observed. Personal injury can occur.

Do not exceed the pressure rating of any component in the system.

Protect all fluid and air supply lines from puncture or damage. Check all lines for weak or worn conditions prior to use.

Never point a control valve at any portion of your body or another person. Accidental discharge of pressure and/or material can result in personal injury.

Read each step of the instructions carefully. Make sure a proper understanding is achieved before proceeding.

CAUTION

Install a 40-micron or finer filter at the inlet side of this meter. Jammed gears, damage to components, or inaccurate readings can occur.

Prior to meter installation, flush all contaminants by pumping fluid through the system.

Apply thread sealant to all male pipe threads upon installation.

Maintenance



WARNING

Release all pressure within the system prior to performing any maintenance procedure.

Repairs should only be performed by a qualified person using original repair parts.

Read each step of the instructions carefully. Make sure a proper understanding is achieved before proceeding.

Battery Replacement

NOTE: All meter values remain in memory.

The batteries should be replaced once the battery icon appears on the display. See **Figure 1**.

IMPORTANT: The meter will no longer register should the battery icon begin to flash.



WARNING

Recycle or discard the used batteries properly. Do not burn or puncture the batteries. Toxic materials may be emitted which can cause personal injury.

CAUTION

Avoid touching the flat surfaces of the new batteries. Skin oils can cause battery deterioration. Clean any suspect battery with alcohol prior to installation.

Install the new Batteries as indicated on the bottom of the meter.

All values remain the same including the Current delivery.

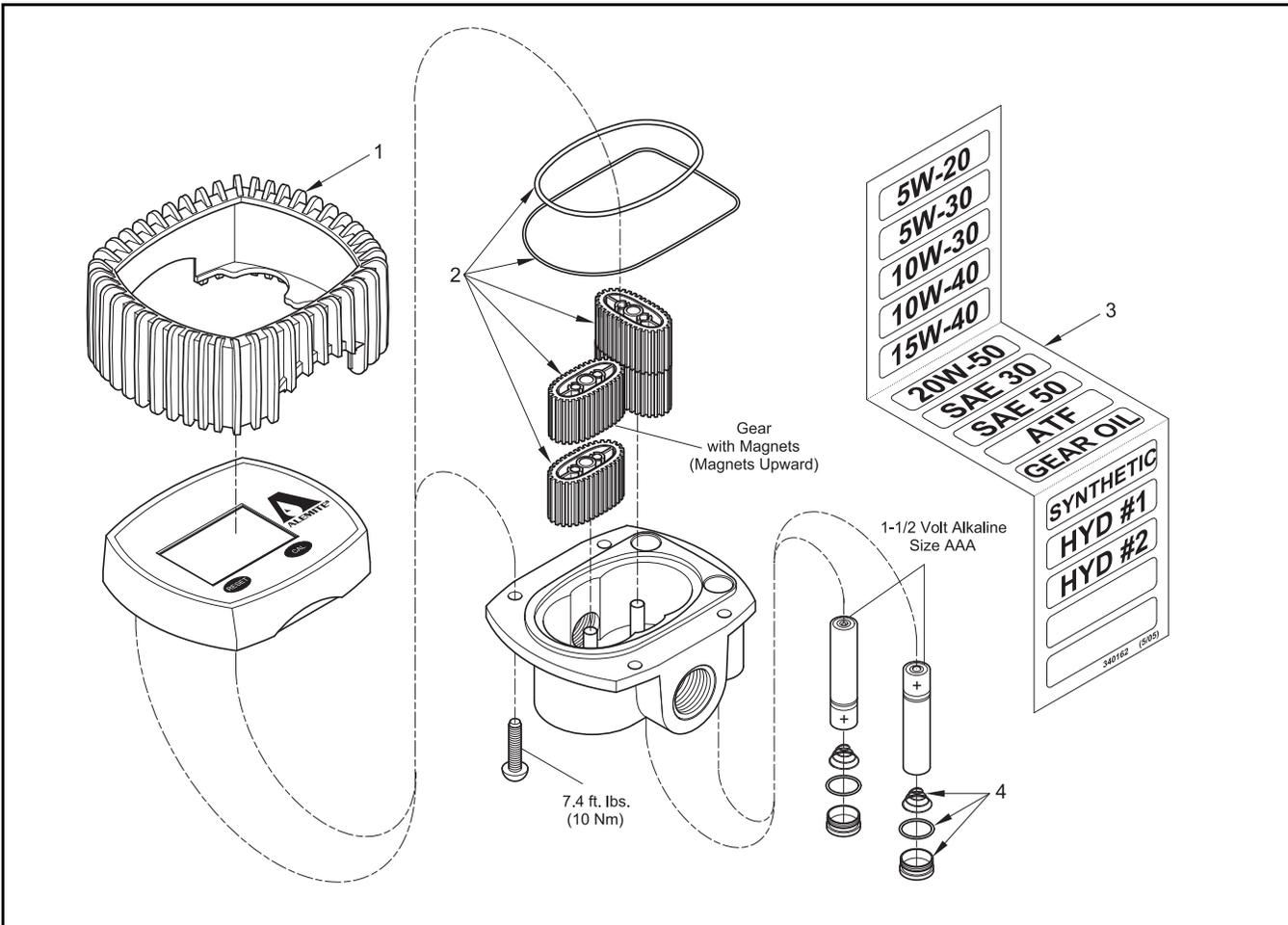
Metering Gear Replacement

*IMPORTANT: Install the gear with the magnets (magnets upward) onto the left post of the body as shown on **Figure 2**.*

Install the additional gear perpendicular to the magnet gear. Rotate the gear assembly to ensure the gears are properly positioned.

Changes Since Last Printing

Kit part number updated



Item No.	Part No.	Description	Quantity
1	393772-10	Guard	1
2	393772-11	Kit, Oval Gear	1
3	340162	Labels, Fluid	1
4	393772-12	Kit, Battery Cap	2

Figure 2 Electronic Meter Model 3579 - Exploded View

Troubleshooting Chart

Meter Indications	Possible Problems	Solution
Battery icon appears solid or flashes on display or LCD values are faded	1. Weak batteries 2. Dirty contacts	1. Replace batteries 2. Clean batteries and terminals
Meter does not measure accurately	Incorrect calibration factor	Recalibrate the meter
Display blank	Batteries installed incorrectly	Install the batteries as indicated on the bottom of the meter
Reduced or zero flow	1. Gears jammed 2. Clogged system	1. Overhaul metering gear cavity 2. Clean system filter
Meter does not count and the flow rate is normal	1. Gears installed incorrectly 2. Register defective	1. Install the magnet gear (magnets upward) onto the left post of the body. See Figure 2 . 2. Replace meter
Err 1 flashing	Damaged register	Replace meter
Err 2 displays	Temporary lapse in data calculation	Wait until the register updates automatically