Thank you for purchasing a Sealey product. Manufactured to a high standard this product will give you years of trouble free performance if these instructions are carefully followed and the product is correctly maintained.

⚠ **IMPORTANT:** PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS AND CAUTIONS. USE THIS PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. PLEASE RETAIN THESE INSTRUCTIONS FOR FUTURE USE.

1. SAFETY INSTRUCTIONS

p **WARNING!** *Ensure health & safety, local authority, and general workshop practice regulations are strictly adhered to when using this equipment.*

3 Familiarise yourself with product application and limitations, as well as the specific potential hazards peculiar to this product.

3 Maintain the pump station in good condition (use an authorised service agent).

3 Check the meter daily, replace or repair damaged parts. *Use genuine parts only. Non authorised parts will invalidate the warranty.*

3 The Meter is designed specifically to dispense motor oils (S.A.E.5-50), gear oils (S.A.E.80-240), automatic transmission fluid, antifreeze (Ethylene Glycol) solution, and hydraulic fluid, it is **NOT** suitable for brake fluid, or windshield wiper fluid.

3 Ensure safety eye protection and protective clothing are worn when using this product.

3 Keep the work area clean, uncluttered and ensure there is adequate lighting.

3 Maintain correct balance and footing. Ensure the floor is not slippery and wear non slip shoes.

3 Keep children and unauthorised persons away from the working area.

3 After use, drain any fluids from the equipment before storage.

3 Dispose of waste liquids in accordance with local authority regulations.

3 Only use extensions and nozzles, which are designed to work with this meter.

7 **DO NOT** exceed the maximum working pressure of 1000psi (67bar).

7 **DO NOT** exceed the maximum working pressure of the lowest rated system component.

7 **DO NOT** leave the meter unattended.

7 **DO NOT** point the nozzle at people or animals.

7 **DO NOT** place hands or fingers over the end of the dispenser nozzle.

7 **DO NOT** try to stop or deflect leaks with hands, gloves or rags.

7 **DO NOT** use the equipment near open flames.

7 **DO NOT** smoke whilst using this equipment.

7 **DO NOT** use to extract corrosive fluids.

7 **DO NOT** dismantle, tamper with or adapt the pump for any purpose other than for which it is designed.

7 **DO NOT** use the unit if it has been dropped or mishandled, check the unit to ensure there is no damage.

3 Keep the pump clean and store in a safe dry, childproof location.

p **WARNING! DO NOT** *allow uncontrolled discharge of fluids thus polluting the environment. All liquids must be disposed of according to local authority regulations.*

2. INTRODUCTION

Robust oil dispensing gun incorporating digital meter, auto shut off and tough rubber protection guard. Fitted with flexible extension and non-drip nozzle. Auto function allows up to 4 preset figures to be programmed, automatically cutting off delivery when desired capacity is reached. Easy to read LCD display with option to reset individual or cumulative totals.

*Please note that this gun is not approved for resale of oil.

Maximum Flow	35 ltr/min
Minimum Flow	1 ltr/min
Operating Pressure (Maximum)	67 bar
Operating Pressure (Minimum)	0.35 bar
Operating Temperature (Maximum)	50°C
Operating Temperature (Minimum)	-5°C
Accuracy-Oils	±5%
Accuracy-Anti-Freeze	±1.5%
Inlet and Outlet Connections	1/2" BSP

Factory Settings

Each meter is preprogrammed and calibrated at the Factory. Each meter is programmed in litres for use with motor oil as standard. The meter is shipped in the Manual Mode.

The factory Preset can not be changed, if a special requirement is needed, please contact your Sealey dealer.
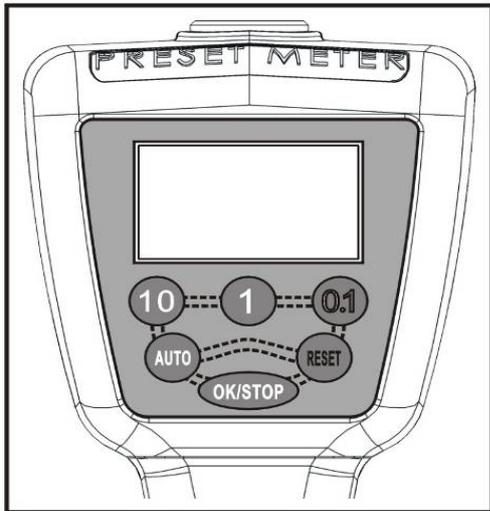
Overhead view of Display and Keypad

Keypad Buttons

Used to enter the quantity to be dispensed

AUTO (AUTO)

Used to enter and exit the AUTO Mode

RESET (RESET)

Used in Manual or AUTO Mode to clear the previously programmed batch and to reset the meter.

OK/STOP (OK/STOP)

Used to confirm the Value and to stop the flow through a mechanical override.

3. INSTALLATION

Pre-installation Procedure

3.1. Relieve the system pressure

3.1.1 Turn off the power or air supply to the pump or close the shut-off valve.

3.1.2 Dispense any fluid in the system into a waste container by opening the dispenser valve.

3.2 Close the shut-off valve.

3.3 Ground hoses and reels.

Grounding reduces the risk of static sparking; ground all system components according to local legislation. Consult the user's manual on the pump and other system components to ground the following:

i. Pump follow manufacture's recommendations.
ii. Air and Fluid Hoses use only grounded hoses.
iii. Air Compressor follow manufacture's recommendations.
iv. Fluid Supply Container follow the local regulations.

❒ **WARNING! DO NOT** use Teflon tape on pipe joints, it may cause a loss of grounding across the joint.

3.4 Installation Procedure

Note: Before connecting the meter, ensure the system is clean, flush the system into a suitable container if required. If the system has multiple dispenser positions, start at the position farthest from the pump and move towards the pump.

3.4.1 Turn off the power or air supply to the system pump and ensure that there is no pressure in the supply hose.

3.4.2 Check the threads on the male 1/2" BSP threaded end of the hose are clean and apply a small amount of liquid thread sealant.

3.4.3 Connect the hose to the swivel connection located at the end of the handle and tighten it completely with an open ended wrench.

Note: **DO NOT** overtighten the joint as this may damage the swivel and take care not to apply too much thread sealant as this may enter the metering device.

Connecting the hose

3.4.4 Apply a small amount of liquid thread sealant onto the thread of the male 1/2" BSP end of the nozzle screw into the end of the meter and tighten with an open ended wrench.
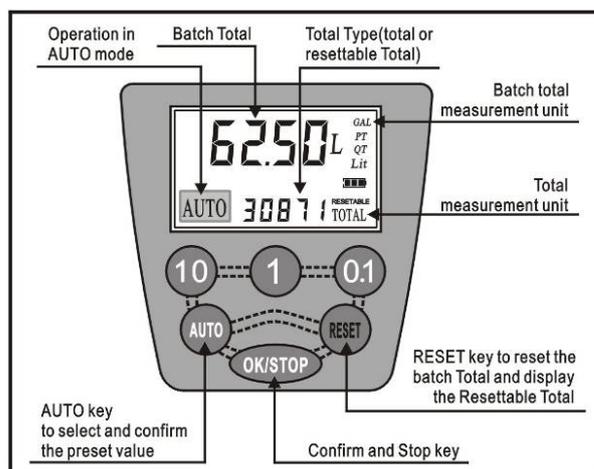

Installing the nozzle

3.4.5 Turn on the power or air supply to the pump to pressurize the system.

3.4.6 Insert the end of the automatic nozzle into a suitable container and gently depress the trigger to start dispensing, continue until all the air has been purged from the system.

Note: Check all connections for leaks and reseal joints if required.

4. OPERATION

□ **WARNING!** To access the various customizing functions and to select the desired options, **two different actions are indicated on the keys.**

This symbol indicates that it is necessary **to press the key briefly,** and afterwards release it.

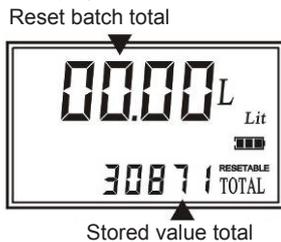This symbol indicates that it is necessary **to press and hold on the key** for a few seconds.

To exit from the customization menu, regardless of the activity in progress, press **RESET**.
The settings displayed at that moment immediately become operational.

4.1   Display Mode

4.1.1   Start-up the Meter by selecting (RESET).
         The Meter displays:
                    Last amount dispensed

62.50 L Lit
30871 TOTAL
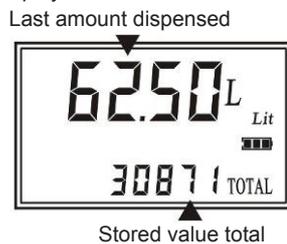
                    Stored value total

4.1.2   Push and hold on until default value zero.
         The Meter will display:
                    Reset batch total

00.00 L Lit
30871 RESETABLE TOTAL

                    Stored value total

□ **WARNING!** The Stored value total is set as default in factory, it cannot be changed to default again by yourself, if changes are required, contact your Sealey dealer.
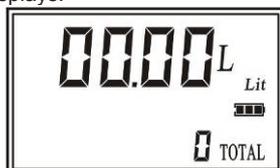
□ **CAUTION!**

Pull the trigger to dispense.
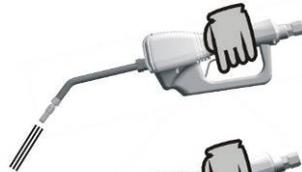
Release the trigger to stop dispensing.

Operation Mode
4.2   Manual Mode
         Program the Meter to Manual Mode by selecting (RESET).
         The Meter displays:

00.00 L Lit
0 TOTAL

                    Manual Mode
4.2.1   Pull the trigger to begin the flow.

4.2.2   When the desired amount has been pumped, release the trigger to stop the flow.

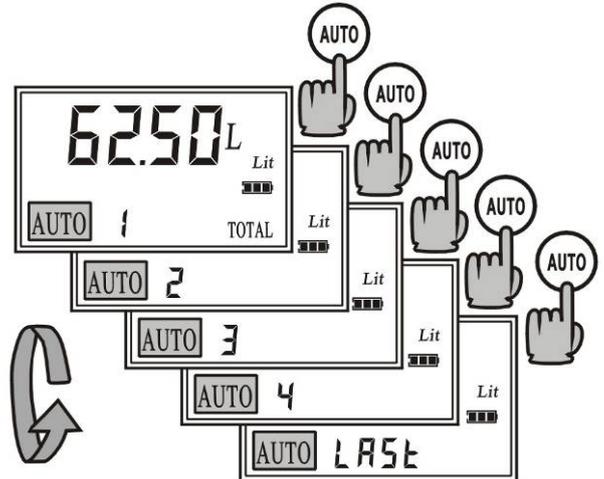   Press (RESET) to reset counter display to zero.

4.3   AUTO Mode
         METER stores:
         AUTO   1-2-3-4-last:
         Five different PRESET values which are frequently used.

         Press (AUTO) as many times as necessary to reach the desired values and the values are repeated.

         Blinking message will be:

62.50 L Lit
AUTO 1   TOTAL   Lit
AUTO 2   Lit
AUTO 3   Lit
AUTO 4   Lit
AUTO LASt

4.3.1   To confirm a PRESET value, press and hold the (OK/STOP) until the METER displays:

                    Reset batch total

AUTO message not blinking
00.00 L Lit
AUTO **308.70**

                    Selected value

4.3.2   Start dispensing by pulling the trigger completely and then releasing.

         The trigger remains locked in open position.
         Dispensing continues in AUTO mode.

4.3.3   The supply automatically stops when the preset value is reached.
Note: **To stop the dispensing before the preset value is reached, just press** (OK/STOP) **to stop.**

□ **WARNING! DO NOT** leave the METER unattended while dispensing in AUTO.
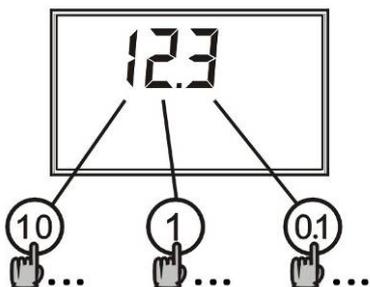
4.4   User Mode

4.4.1   If the METER is off, press RESET to re-start it.
The value is last amount dispensed.
The Meter will display:

Stored value total.

4.4.2   To select a new PRESET value (for example 12.3) , use the
appropriate numeric keys until the desired amount is shown
on the display, the unit automatically selects the LAST mode.

The METER displays:

Select value

4.4.3   Press OK/STOP and hold on until counter is zero.

Reset batch total

Selected value

4.4.4   Start dispensing by pulling the trigger completely and
then releasing.
The supply automatically stops when the preset value is
reached.

**Note: To stop dispensing before the preset value is reached,
just press OK/STOP to stop.**

4.5   Preset Values Setting
4.5.1   Numeric Function
Press and hold on OK/STOP to set the function.

Selective key   AUTO

Numeric keys   10   1   0.1

Confirm and quit key   RESET

☐   **CAUTION!** Press and hold on OK/STOP to set the function:
It contains Value setting, Unit setting, Decimal Digits setting,
Reset setting, Auto Precision Stop setting and Calibration
setting.

4.5.2   Value Setting
The METER allows the Operator
to store 4 different user PRESET
values (AUTO 1...AUTO 4), which
can be rapidly recalled without
having to set them each time by
means of the numeric keys.

Press and hold OK/STOP once to set the function.
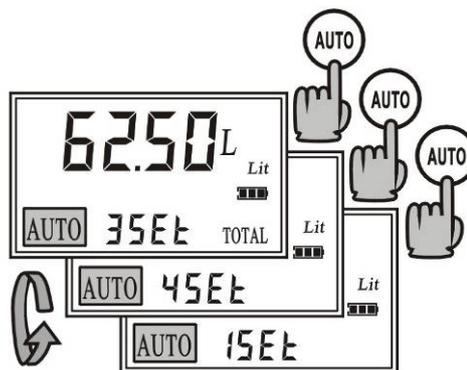
The METER will display:

Blinking

Index of the PRESET value AUTO 1.

4.5.3   When the value is blinking, press AUTO to select preset 1-4.

4.5.4   Press the numeric button to set the value.
Blinking message will be:

Press RESET to confirm the value and quit the
setting mode, the set value will be stored.

☐   **WARNING!** By holding on the keys the value continues to
vary.

4.6   Unit Setting
The METER allows the user to select one of the following
measurement Units:
QTS = QUARTS
PTS = PINTS
LIT = LITRES
GAL = GALLONS (U.S. Gallons)

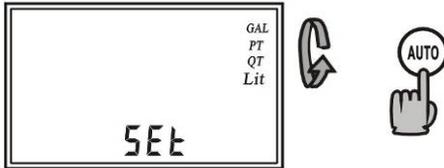4.6.1   Press and hold OK/STOP twice to set the function.

The METER displays:

4.6.2 When the Unit is blinking, press (AUTO) to select unit L, GAL, PT or QT.

```
        GAL
        PT
        QT
        Lit


     5Et
```

4.6.3 Press (RESET) to confirm the value and quit the setting mode. The set value will be stored.
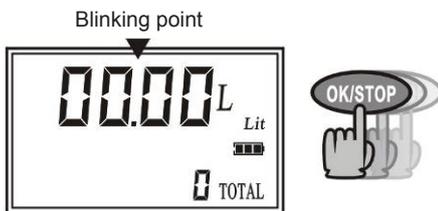
☐ **WARNING!**
The above mentioned measurement Units refer to the **Batch** total indication.
T**he TOTALS will be displayed in Unit selected.**
e.g. If you select the unit LITRES, **the TOTALS will be displayed in LITRES.**

Note: The modification of the Unit of Measurement does **NOT** require a new Calibration.
If the **TOTAL** indicates a value other than zero, this value is automatically converted into the selected Unit.

4.7 Decimal Digits Setting

4.7.1 Press and hold (OK/STOP) three times to set the function.

Blinking point

```
     00.00 L
              Lit
          ▬▬▬
        0 TOTAL
```

4.7.2 When the number point is blinking, press (AUTO) to select location of the point to confirm the number of decimal digits setting.

Press (RESET) to confirm the value and quit the setting mode, the set value will be stored.

☐ **WARNING! The METER displays the FLOATING POINT Batch total dispensed.** Independent of the selection carried out (two or three decimal digits):
As soon as the amount dispensed exceeds 10 units, the METER displays only **two decimal digits**.
As soon as the amount dispensed exceeds 99 units, the METER displays only **one decimal digit**.

4.8 Reset Setting

4.8.1 Press and hold (OK/STOP) four times to set the function. The METER displays:

Blinking

```
     YES
   AUTO  1SEt
```

4.8.2 Press (AUTO) to select **YES** or **NO**.

To reset the Batch Total to zero, select **YES** and hold the (OK/STOP) button for 10 seconds. Select **NO** to cancel.

Press (RESET) to confirm the value and quit the setting mode. The set value will be stored.

☐ **WARNING!** the Batch Total cannot be reset if the dispensing operation has been carried out in **AUTO** mode.

4.9 Auto Precision Stop Function

☐ **WARNING!** This function allows the user to obtain the maximum dispensing stop accuracy in **AUTO** mode.
If a slight excess of the pre-set value does not cause any problem, **Section 4.9 can be ignored**.

The meter in **AUTO** mode allows the user to obtain a high precision stop, thus dispensing exactly the pre-set amount without exceeding the **PRESET** value.
When the unit operates at the maximum allowed flow-rates the valve does not close when the **PRESET** value is reached, but closes within a few hundredths of the **PRESET** value.
To allow the operator to obtain the highest stop precision, the unit has been equipped with a Precision Stop factor, **PS factor**.
The operator, during the setting of the meter, can select a PS factor between **ZERO** and **FIVE**.
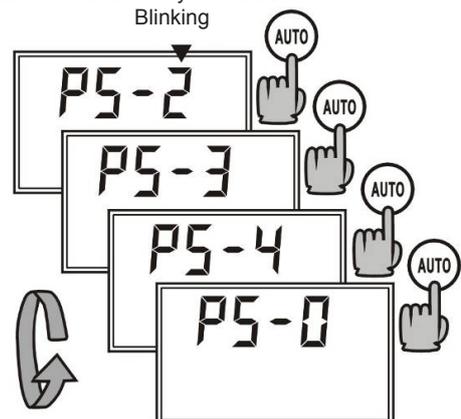**By selection:**
PS=0   a pre-closing equal to **ZERO** is set.
PS=1
PS=2
PS=3
PS=4
PS=5   the **MAXIMUM** pre-closing is set.

4.9.1 Press and hold (OK/STOP) five times to set the function. The METER displays:

Blinking

```
     PS-0
     SEt
```

4.9.2 When PS factor is blinking, press (AUTO) to select PS 0-4 to increase the PS factor by one unit.

Blinking

```
     PS-2
     PS-3
     PS-4
     PS-0
```

4.9.3 Press (RESET) to confirm the value and quit the setting mode. The set value will be stored.

☐ **WARNING! The higher the flow rate, the higher the selected PS value**. Selecting too high a PS factor on lower flow rates, the dispensed amount may be slightly lower than the pre-set value.

5. CALIBRATION

Calibration Setting
The METER is equipped with high-precision gears, pre-calibrated in the factory.

The METER should be calibrated when the fluid type and/or viscosity are changed.

The METER allows the user to carry out a rapid electronic calibration by modifying the **Calibration factor (K Factor)**.

☐ **WARNING!** The unit is factory set with a calibration factor:
K factor = 1,000
This calibration factor guarantees the best accuracy in the following operating conditions:
Fluid: motor oil type 10W 30;
Temperature: 20°C;
Flow-rate: 10 l/min.

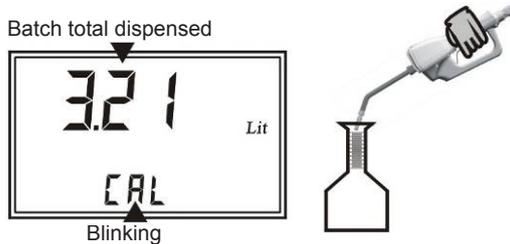**5.1 Calibration by dispensing into a calibrated container:**

5.1.1 Press and hold down OK/STOP six times to set the function.
The METER displays:

Blinking

CAL
Lit
1-000

5.1.2 Press key AUTO:

5.1.3 Start the calibration by dispensing the fluid into a calibrated container.

During dispensing the METER displays:

Batch total dispensed

3.21
Lit
CAL
Blinking

Note: The dispensing operation may be freely interrupted and resumed. The Calibration dispensing will be finished when the level of the fluid reaches the graduated area of the Calibrated container.

Indicated value

6.90
Lit
CAL
Blinking

6.95

☐ **WARNING!** In order to get a correct calibrated K Factor from meter, ensure calibration capacity is set to more than 5 litres. Purge all air from the unit before carrying out the calibration.

☐ **WARNING! Carry out the calibration dispensing at a steady flow-rate** by pulling the trigger completely and keeping it in open position until the container is full.
DO NOT reduce the flow-rate to reach the graduated area of the calibrated container.
The correct technique to be used at the final stages of the filling operation into the calibrated container is short sharp top ups. This is achieved by rapidly pulling the trigger of the meter and then releasing it very quickly.

5.1.4 Press AUTO again to modify the indicated value to equal the real value in the container.

| METER	Calibrated Container
INDICATED VALUE Blinking	REAL VALUE
6.90 Lit	6.95
CAL	
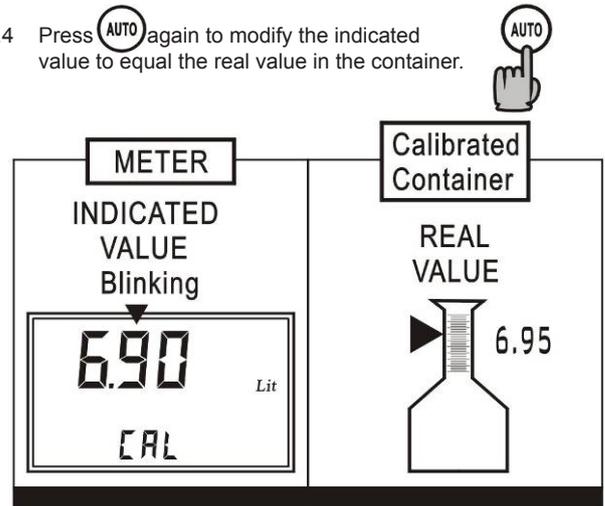
Press key "10" to increase the indicated value.

Press key "0.1" to decrease the indicated value.

☐ **WARNING!** After dispensing, wait a few minutes to allow the removal of possible air bubbles from the Calibrated Container.
Read the real value only at the end of this phase as the level in the container may decrease.

☐ **WARNING! DO NOT** wait more than 15 minutes as the meter will exit from menu and it will no longer be possible to complete the calibration operation.

The meter is ready to accept the modification of the **indicated** value to make it correspond to the **real value**. After correction:

METER	Calibrated Container
INDICATED VALUE Blinking	REAL VALUE
6.95 Lit	6.95
CAL	
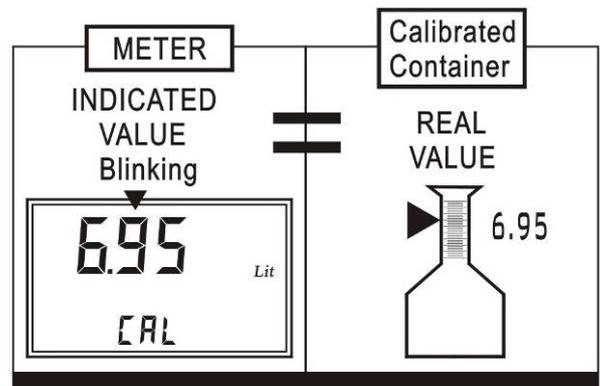
Each time a key is pressed, the last digit on the right is modified by one unit.

Note: By holding down the keys, the value changed, slowly at first and then rapidly.

5.1.5 Press AUTO again, the Meter will calculate the K Factor automatically which is blinking.
The METER stores the new Calibration Factor (K Factor) and displays:

CAL
Lit
1-003
Blinking
New K Factor
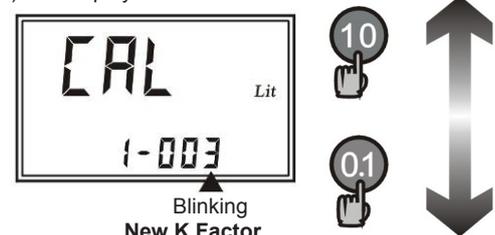
After a few seconds, the meter automatically exits from the calibration mode and starts using the new Calibration Factor.

Note: One dispensing operation is enough to carry out the on-site calibration of the meter.
The result of this calibration can be verified, by carrying out a normal dispensing operation into the same calibrated container without re-entering the calibration function in the menu.

6. MAINTENANCE

Battery
The METER continuously displays the battery charge state. As soon as the battery goes below a given level, the METER displays:
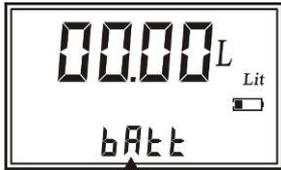
Blinking message
"bAtt"

❐   **WARNING!** As soon as the message "bAtt" appears, the AUTO mode display is immediately stopped and it is no longer possible to lock the trigger in open position.

This prevents the unit from continuing to dispense in AUTO mode even if the PRESET value has been reached, due to an insufficient battery charge.

Note: **Even when the message "bAtt" is displayed, it is still possible to carry out dispensing operations in MANUAL mode.**

Although it is possible to carry out several dispensing operations in MANUAL mode even when the message "bAtt" is being displayed, the batteries must be replaced as soon as possible to resume the full functioning capacity of this meter and to avoid the quality of the image on the LCD from deteriorating, thus causing metering errors.

Note: When the message "bAtt" blinks, the total is constantly updated, although not displayed.
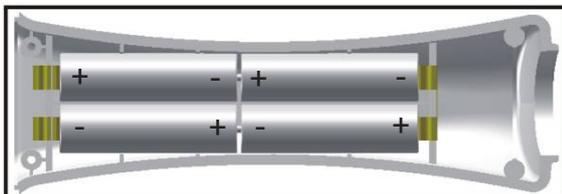
6.1 Replacing the batteries:

6.1.1   Using a small phillips screwdriver, unscrew the four screws securing the battery pack and remove it.

6.1.2   Open the battery pack by removing the cover.

6.1.3   Remove the discharged batteries.

6.1.4   Install four new AA 1.5 Volt Alkaline batteries, ensure that the batteries are installed as shown on the cover.

6.1.5   Place the cover again and fix the battery pack by screwing the four screws.

❐   **WARNING!** The meter will start automatically as soon as the battery pack is fixed and will automatically carry out a short SELF-TEST:
Complete lighting of LCD.
Complete stop of LCD.
Display of serial number of electronic board.
Normal operation mode.
Replacement of the batteries will not cause any data loss. The meter settings, previously set, remain operational at the next re-starting.

❐   **WARNING!**
Leaving the Meter without operation more than 20 seconds, it will turn into standby mode.
If the battery condition monitor shows ▭, the Preset Mode will not work, replace the batteries. The Manual Mode still works.
Each time of using AUTO mode, pause for more than 30 seconds between reusing AUTO mode.

7. TROUBLESHOOTING

❒ **WARNING!** Relieve the pressure prior to checking or repairing the meter. Make sure all valves, controls and pumps are operating correctly.

Symptom	Fault	Remedy
Battery symbol flashing	Batteries are low	Replace batteries
Blank display	Meter Inactive	Press RESET button
	Batteries exhausted	Replace Batteries / Press RESET button
	Program error	Remove and replace battery pack / Press RESET button
	Loose battery connection	Remove battery pack and check battery connection / Press RESET button
Meter will not operate in Auto Mode	Meter not in Auto Mode	Press AUTO button and program batch size
	Meter not reset after prior batching	Press RESET button
	Low batteries	Replace batteries
	Pump pressure low	Increase pump pressure
	Meter blocked by foreign object	Return to Sealey
Meter inaccurate	Incorrect calibration for fluid type	Refer to Section 5 and re-calibrate for the fluid
Batch overruns program value	PS value set incorrectly	Refer to Section 4.9 and set PS to a higher value

8. DECLARATION OF CONFORMITY

Declaration of Conformity We, the sole importer into the UK, declare that the product listed below is in conformity with the following standards and directives

Oil Hose End Meter Digital Automatic
Model: AK4566D
2002/95/EC RoHS Directive
2002/96/EEC WEEE Directive

Signed by Steve Buckle   *Buckle*   6th November 2008

For Jack Sealey Ltd. Sole importer into the UK of Sealey Power Products.

The construction file for this product is held by the Manufacturer and may be inspected on request by contacting Jack Sealey Ltd.

NOTE: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.
IMPORTANT: No liability is accepted for incorrect use of product.
WARRANTY: Guarantee is 12 months from purchase date, proof of which will be required for any claim.
INFORMATION: Call us for a copy of our latest catalogue on 01284 757525 and leave your full name and address including your postcode.

SEALEY POWER PRODUCTS

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