Encore 300 Units

Encore 300 units are not precalibrated at the factory. They must be calibrated during installation.

Verify calibration after recalibrating a unit.

Error code 26 on the main display means a unit does not have a calibration factor.

A conversion factor (CC 17) must be programmed previously into a unit before it can be calibrated.

Purge a minimum of 50 gallons for new units, 25 gallons after major dispenser service (meter replacement, and so on) or 10 gallons for minor service (filter change, hose change, and so on) prior to any calibration verification or recalibration. For instructions on entering the purge mode for new units, refer to the respective installation manual.

Follow steps 1 through 12 exactly.

If ATC is installed, product must be dispensed to **exactly 20 liters** in a 20-liter test measure with no offset entered. Failure to do so **will** result in **SIGNIFICANT MEASUREMENT ERRORS IN THE NET VOLUME IN THE NORMAL OPERATING MODE** (200 and 300 modes).

1. Turn ON (to right) the W&M switch.
2. Press **F1** on the manager keypad (inside the door).
3. Press **9** > **0** > **ENTER** to calibrate side 1 or press **9** > **1** > **ENTER** to calibrate side 2. When facing side 1, the Federal Communications Commission (FCC) label is on the inner column sheathing to the right.
4. Enter calibration can size and press **ENTER**.
5. Remove the nozzle, and select grade or lift lever. Only unblended grades can be calibrated.
6. **Units without ATC only**: Dispense product in calibration can close to the zero mark. The volume display will show number of uncalibrated pulses.
   Units with ATC only: Dispense exactly 20 liters of the product in the calibration can. The volume display will show the number of uncalibrated pulses.
7. Lower pump handle or return nozzle to boot.
8. **Units without ATC only**: If you have hit EXACTLY zero on the calibration can, you do not need to enter a number and can press **ENTER** and then **ENTER** and proceed directly to step 10.
   Units with ATC only: Press **ENTER** and then **ENTER** and proceed directly to step 10.
9. If the reading is above 0 (positive), press **0**, or if the reading is below 0 (negative), press **9**. Then press **ENTER**.
10. If calibrating another meter, press **ENTER** to return to step 2.
11. Enter the calibration can reading as a whole number and then press **ENTER**. For metric units, ensure that you enter the number in "cl" and not "ml". If you have completed calibration, turn OFF (to left) and seal W&M switch.
12. Press **F2** on the manager keypad to return the unit to service.

GILBARCO VEEDER-ROOT

MDE-4281N
Calibration Quick Reference Card
Encore® 300/500/500 S/700 S and Eclipse® Units
December 2024

Encore® and Eclipse® Calibration
This card is intended for Authorized Service Contractors (ASCs) calibrating Encore 300/500/500 S/700 S and Eclipse dispensers. For additional information, refer to *MDE-3804 Encore and Eclipse Start-up/Service Manual* and *MDE-5413 Multi-Hose Universal Blender (NF Series) Quick Reference.*

Encore 500/500 S/700 S and Eclipse Units

You must know what pump node software is installed, as the procedures are software-specific. The pump software is shown on the volume display during power up.

Current Encore 500/500 S/700 S and Eclipse units are precalibrated at the factory, but calibration must be verified during installation.

Verify calibration after recalibrating a unit.

Error code 26 on the Price Per Unit (PPU) display means a unit does not have a calibration factor.

A unit type (CC 90) and volume units (CC 71) must be programmed into a unit before it can be calibrated.

Purge a minimum of 35 gallons for new units (refer to the respective installation manual), 25 gallons after major dispenser service (meter replacement and so on), or 10 gallons for minor service (filter change, hose change, and so on) prior to any calibration verification or recalibration.
For Ultra-Hi dispensers with encrypted pulsers only:
Whenever a pulser or magnet cup is replaced, 10 or more gallons must be dispensed prior to any calibration verification or re-calibration. This also applies after an encrypted pulser retrofit. Dispensing 10 or more gallons is required to ensure proper magnetic field mapping to the magnetic sensor inside the pulser.

Turning the Weights and Measures (W&M) switch ON or OFF at a different time than specified in the following instructions will cause the calibration to fail.

The W&M switch must be sealed after calibration.

Calibration of SMART Meters™, Ecometers™, and C+ meters follow the same procedure.
Note: For a blender, only unblended grades can be calibrated. If no unblended grade exists for a product, it is necessary to temporarily convert one of the grades to 100% of that product, so that the meter can be calibrated. This is especially critical for the NF Series and NJ model dispensers.

For Units with Pump Software 1.7.20 or Lower

1. Turn ON (to right) the W&M switch.

2. Press **F1** on the manager keypad (inside the door).

3. Enter the level 4 PIN code.

4. Press **7** > **8** > **ENTER**.

5. Enter calibration can size and press **ENTER**.

6. Enter side number (**1** or **2**) and then press **ENTER**. When facing side 1, the FCC label is on the inner column sheathing to the right for the Encore and the model plate is on the right tuxedo stripe for the Eclipse.

7. Remove nozzle, and select grade or lift lever.
   Note: Only unblended grades (products) can be calibrated.

8. Dispense product in the calibration can close to the zero mark.

9. Lower pump handle or return nozzle to boot.

10. The volume display will show the pulse count. Press **ENTER**.

11. Enter the calibration can reading as a whole number and then press **ENTER**.
    For metric units, ensure that you enter the number in "cl" and not "ml".
    If you have completed calibration, turn OFF (to left) and seal the W&M switch.
    If you have hit EXACTLY zero on the calibration can, you do not need to enter a number and can press **ENTER** > **ENTER** and proceed directly to step 14.

12. If the reading is 0 or above (positive), press **0**; if the reading is below 0 (negative), press **9** > **ENTER**.

13. The volume display will be flashing the amount in the can reflecting the level of fuel in the can.
    • If correct, press **ENTER**.
    • If incorrect, press **CLEAR** and you will return to step 12.
    Note: Approximately .004 gallons equals one cubic inch.

14. If calibrating another meter, press **ENTER** again to return to step 5.

15. If calibration is complete, turn OFF (to left) and seal the W&M switch.

16. Press **F2** on the manager keypad to return the unit to service.

For Units with Pump Software V01.7.58 to V01.8.14 or for Units with V01.8.20 or Later with Meters Having No Calibration Factor Entered (EC 26 Shown)

Note: Turning the W&M switch ON will put unit in calibration mode. Ensure that the level 3 and level 4 programming is entered before turning on the W&M switch. Turn OFF the W&M switch before exiting the programming mode.

1. Turn ON (unseal) the W&M switch.
   The Price Per Unit (PPU) displays contain the number of days since the last calibration for each meter. The Least Significant Digit (LSD) of money display contains the Volume Unit Type (1 = USG, 2 = Liters) and the 3 Most Significant Digits (MSD) of money display contain the calibration can size. Alternate can size can be programmed in CC 82.
   (The W&M switch must be ON to program this function).

2. If pump software is V01.8.00 or later, enter the level 4 PIN code.

3. Remove the nozzle, and select grade of meter to be calibrated.

4. Dispense product in calibration can exactly to the zero mark. The volume display will show number of uncalibrated pulses.

5. Lower pump handle or return nozzle to boot. The meter is now calibrated. The volume display will show what should be in the can.

6. Calibrate all remaining meters by repeating the steps 3 through 5.

7. When calibration is complete, turn OFF (seal) the W&M switch and press F1/F2. The PCN will reboot.
   Note: Electronic totals are not updated when this method is used.

Primary Method for V01.8.20 or Later, Alternate Method for V01.7.58 to V01.8.14 Suggested When Not All Meters Are Being Recalibrated in a Unit

1. Ensure that the can size in CC 82 matches calibration can being used. The W&M switch <u>does not</u> have to be ON to check this function but must be ON to change it.

2. Remove nozzle, and select grade of meter to be calibrated.

3. Dispense the product in calibration can exactly to the zero mark.

4. Do not hang up nozzle. Turn ON the W&M switch.

5. Wait for a double beep.

6. Hang up nozzle.

7. Turn OFF the W&M switch.

8. Enter the level 4 PIN code. You **do not** need to press F1.

9. Press **ENTER** and wait for a double beep. The meter is now calibrated.

Following notes are applicable only to this section:

Notes: 1) The above method will not be affected if steps 6 and 7 are reversed.
*2) For Automatic Temperature Compensation (ATC) units, gross volume can be displayed on the money display by pressing **7** on the manager keypad.*
3) Electronic totals ARE updated when this method is used. The message, "MOC CRIND DEVICES WILL REBOOT" appears when this method is used.