

# 12v Diesel Bowser unit

If you have purchased a stationary, trailer, flowbin or horizontal unit then the process remains the same

## Components:

1. Tank Ball Valve
2. Nozzle
3. Mechanical flow meter
4. Crocodile clips and power cord for 12v battery
5. On / off switch
6. 12v pump
7. Inline filter



## How to operate unit: NB! Open tank lid

1. Reset flowmeter to zero if required
2. Open tank ball valve (1)
3. Connect cables (4) to battery
4. Insert nozzle into receiving tank
5. Switch pump on (5)
6. Press nozzle lever (2)

## Calibration of the flow meter:

The Flow meter is pre-calibrated to be used with Diesel. As specific operating conditions (such as real flow rate, nature and temperature of the measured fluid) may affect the meter accuracy, a re-calibration should be carried out.

We recommend a simple test whereby you fill an accurately marked 25l container to the mark and compare with your flowmeter. If the value is not near or on 25l then you need to recalibrate.

## Calibration Procedure

1. Remove brass dust cap/screw to expose the brass adjusting screw.
2. Purge the system (pump, pipelines, meter) of air by dispensing back into the flowbin until the flow stream is full and steady.
3. Stop the flow by shutting off the nozzle but let the pump run.
4. Reset the flowmeter by means of the reset knob
5. Dispense into your accurately marked container. Keep a constant steady flow. Remember the flowmeter needs a minimum flow rate of 20l/m to register accurately. The correct method is to start and stop the full flow repeatedly until the required filling is obtained.
6. Compare the indication of the calibration container (real value) with the one of the meters (indicated value)
  - a. if the indicated value is higher than the real value, loosen the adjusting screw 1/8<sup>th</sup> of a turn at a time.
  - b. if the indicated value is lower than the real value, tighten the adjusting screw 1/8<sup>th</sup> of a turn at a time.
7. Repeat the operations 4 to 6 until accuracy is satisfactory
8. If not successful, then you need to reset and start from the beginning – Turn adjusting screw until lock and restart sequence.

## Problem Solving

The pump flowrate can reduce due to the following reasons:

- Dirty filter / dirt restrictions.
- Low battery voltage
- Vane / pump failure

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*We tank, pump and pipe anything*

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1. Dirty filter / dirt restrictions - You run the risk of overloading the pump that will eventually lead to failure.
  - a. Loosen filter assembly (7) by turning the housing clockwise, it will screw loose in the middle at the ribbed section.
  - b. Remove the screen inside the housing and clean.
  - c. Check for any sediment or solids remaining in the housing and clean out.
  - d. Replace screen filter and housing in reverse
2. Low battery voltage.
  - a. Run your vehicles engine while pumping as this will assist with less drain on your battery
  - b. Check the health of the battery being used.
  - c. Recharge battery to full state and maintain.
3. Vane / pump failure
  - a. Return unit to Flowbins for assessment.

If pump is not dispensing through nozzle, you should check the following:

1. Polarity – ensure positive is connected to positive and negative is connected to negative
2. Connections – If you have an extension cable make sure the Anderson plug is all the way in and the crocodile clips are securely connected to the power source.
3. Tank ball valve (1) – confirm the valve is open.
4. If all is correct, then refer to Flowbins.

**The 12v diesel bowsers have a duty cycle, which means they can only pump continuous for the duration of the cycle then they need to “rest” for that same period.**

- **DB40 – 15min duty cycle**
- **YB40 – 30min duty cycle**
- **Piusi50 – 30min duty cycle**
- **YB70 – 30min duty cycle**
- **DB80 – 15min duty cycle**
- **Piusi85 – 30min duty cycle**

**NB!! DO NOT LEAVE THE NOZZLE CLOSED WHILE PUMP IS RUNNING**

**DO NOT RUN THE PUMP DRY**

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