



Instructions for the Water Test

ZEMATRA MARINA



Order code 1001100

Contents of the kit:

Reactionvessel water test complete	1001101
Waterfree diluent, can of 1000 mL	1001103
Water test solution, bottle of 50 mL	1001104
Syringe 1 mL, box of 100 pieces	O100251
Syringe 5 mL, box of 100 pieces	O120405
Magnetic stirrer, including 2 magnets	61019, 5700427

Order code:

Optional consumables:

Water free cleaning spray, aerosol of 400 mL	1001124
Set of sealing rings (<i>replace once a year</i>)	1001132

Objective: Determination of volume percentage of water in fuels and lubricants by pressure test cell method.

Accuracy: Water measuring is conform the reproducibility limits of ISO 3733 / ASTM D 95

Advantages: Monitoring the specification of bunkered oils on site.
Monitoring efficient operation of separators. (Daily check strongly recommended)

Effect: More useful energy
Complete combustion
Clean engine
Less corrosive and abrasive wear
Specific fuel consumption

Version 9 / 2011



Instructions for the Water Test

1. Shake the sample thoroughly to obtain a homogeneous mixture and open the reaction vessel by unscrewing the lid. Immediately add 5 ml of oil to the reaction vessel using a 5 ml syringe.
2. Add 5 ml water-free diluent using a 5 ml syringe. **If the magnetic stirrer is used also add a magnet.**



3. Close the reaction vessel tightly. Open the valve in the lid of the reaction vessel by turning the notched lid under the manometer to "O".
4. Shake the bottle with the Water Test Solution **thoroughly** to obtain a homogeneous mixture. Take 1 ml Water Test Solution with the 1 ml syringe and inject to the reaction vessel.

5. Remove the syringe and immediately close the valve by turning the notched wheel to "S" (clockwise) assuring the pressure is zero.
6. Place the reaction vessel on the magnetic stirrer and switch the stirrer on. **If a heater / stirrer is used, turn off the heater.** Read the manometer after 10-12 minutes.



7. Clean the reaction vessel with the optional Zematra Water Free Cleaning Spray.

NOTE:

If the water content of the sample is above 1,24% volume, open the cover, reduce the sample and repeat the test with a smaller amount of oil. Calculate the results as follows: Water % vol. = meter reading x 5/ sample volume taken in ml.

SAFETY

1. It is strongly recommended to wear gloves and spectacles during the test.
2. The relevant MSDS-sheet provided with each kit should be read.

IMPORTANT NOTE ABOUT THE REACTION VESSEL:

In any case where the pressure reading of the manometer exceeds the scale of the manometer the valve should be opened immediately, by turning the notched lid anti-clockwise, in order to protect the manometer. Make sure that the injection aperture is turned away from people, pressure may vent Water Test Solution. **In case you will note notice the over pressure only the manometer will be damaged. The pressure vessel itself can resist up to 6 bars, under normal test conditions this high pressure will never be reached.**