

Compatibility Test

Measuring stability of fuel oil

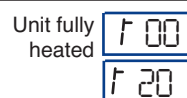
- Obtain a representative sample. Shake thoroughly just before testing.
Heat in hot water if necessary to aid pouring.

- Pour a sample of oil into a beaker. Transfer about 10ml of oil from the beaker into a sample tube (to a height of about 30mm).

Note: For equipment setup see 'Timer' section. (see over page)



- With the unit fully heated to 100°C, place the tube in one of the preheat holes. Press **Reset** and allow the timer to count to 20 (takes 20 minutes).



- Stir the oil for 5 seconds with one of the supplied rods. Remove the rod without touching the side of the tube. Allow the first drop to fall back in to the tube and the second drop to fall onto the centre of a test paper.



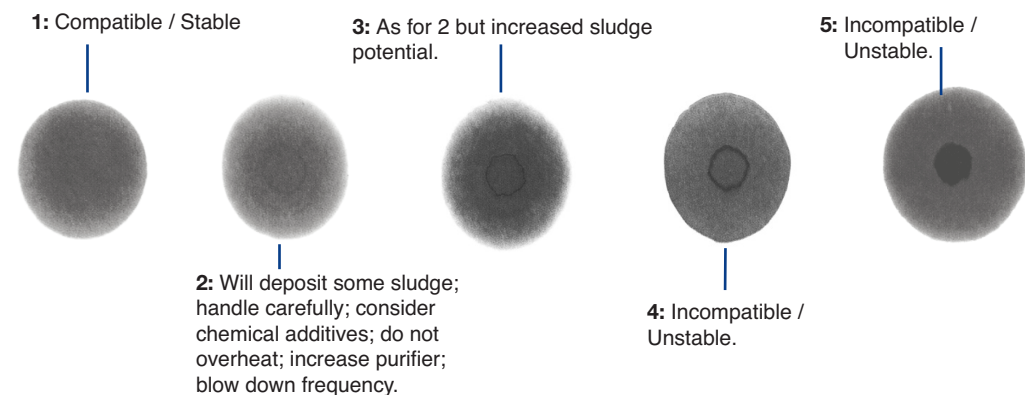
- Place the paper in the removable tray section and replace in the oven. Press **Reset** and allow the timer to count to 20. During this time the spot will develop and dry.



- Remove the paper and compare the spot against the "Spot reference chart"

Spot reference chart

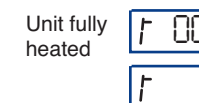
When the dried sample is removed from the oven, it can be compared against the "Spot reference chart". Differences in colour, overall darkness, spot size and appearance of outer edges should be ignored. Only the characteristics of the centre ring should be examined when determining compatibility rating.



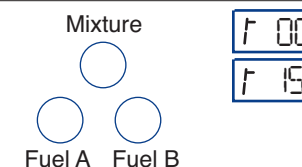
Measuring compatibility of fuel oils

- Repeat the sample preparation procedure used in the 'Measuring stability of fuel oil' method, using one tube for each fuel to be tested (fuel A and B).

- With the unit fully heated, place the tubes into two of the preheat holes. Press **Reset** and allow the timer to count to 5.



- Carefully syringe samples of fuel A and B into a third sample tube in the same ratio as the oils are to be mixed in the bunker tank. Stir to mix well, using one of the supplied rods.



- Place the third tube (containing the mixture) in the remaining preheat hole. Press **Reset** and allow the timer to count to 15.

- Stir the oil for 5 seconds using one of the supplied rods. Remove the rod without touching the side of the tube. Allow the first drop of oil to fall back and the second drop to fall onto the centre of a test paper. A spot may also be made of fuel A and B at this stage, if required.



- Place the paper(s) on the removable tray section. Replace in the oven. Reset and allow the timer to count to 20. Both the mixture and each individual fuel can be tested for stability.



- Remove the paper(s) using the tweezers and compare the spot against the "Spot reference chart."

Cleaning after use

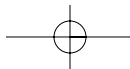
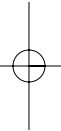
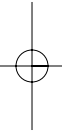
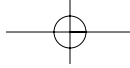
- After a measurement is taken, turn off the power supply and disconnect the mains lead from the Unitor Compatibility Oven.

- When cool, remove the sample tubes and dispose of oil and tube.

CAUTION The oil samples and oven will be hot (up to 100°C). Handle with care.

Test Kits, Spares and Reagents

555771	Compatibility Tubes (Pack of 25)
555789	Compatibility Test Paper (Pack of 100)



Specifications

Range:	As per ASTM D4740
Accuracy:	Variation of 1 rating in 20 repeat tests
Power:	110 to 250VAC Autoselected 50/60Hz 150VA
Fuse rating	2.5A 20mm 250VAC HBS A/S (T) Ceramic

Intended use

The Unitor Compatibility Oven is used to pre-heat a sample and then dry sample test paper prior to analysis. It contains a chamber heated to 100°C. It must not be used for heating any other materials.

Setting the mains voltage

The meter auto selects the heating and power supply to match the supplied mains voltage.

Connecting the power supply

- Connect the mains lead into the socket on the top of the unit.
- Turn on the mains power and then turn on the power supply using the switch next to the socket, the timer display should illuminate.

Lead to mains supply

On/off switch

Fuse



To Change Fuse



Remove fuse box using a screwdriver



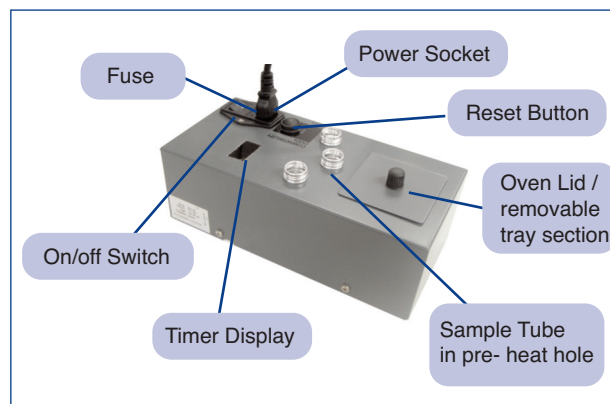
Replace Fuse

Location

The unit is designed to operate on a flat level surface such as a workbench. The unit when operating contains hot oil heated up to 100 °C It is essential for safe operation that it is on a stable surface with the power cable running backwards from the unit where it cannot be accidentally snagged.

Controls and features

The instrument is designed to prepare oil sample for performing a visual oil compatibility analysis. It automatically controls the oven temperature to 100°C and has a timer feature to allow the preparation time to be measured.



General cleaning

Make sure the power supply is disconnected from the mains. Wipe down the instrument with a clean dry soft cloth. Do not immerse in water, if necessary to remove stubborn marks use a cloth soaked in warm soapy water.

Maintenance

If the unit fails to power up, disconnect the power lead and check that the fuse is OK. Replacement fuses of the correct type are supplied in the spares pack. Do not use any other type of fuse.

There are no other user serviceable parts inside the unit, if the unit still does not operate return to the supplier for repair.

Note: If the equipment is used in a manner or for a purpose other than that described above then any safety protection may be impaired

Theory of operation

Measure stability of pre-blended oils on delivery and storage:

- Test each new bunker fuel.
- Check after purifier.
- Check effectiveness of fuel additives used to improve fuel stability.

Measure compatibility of two component oils:

- Test when fuels are mixed on transfer or bunkering.

Timer

The equipment is provided with a small display that will indicate as follows:

- Equipment in heating mode, not yet up to temperature.

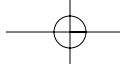
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- Equipment heated to 100°C and ready for use, when timer starts to count in 0 - 99. The timer counts in minutes

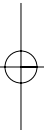
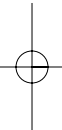
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- The timer can be reset by pressing the Reset button.

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Adhesive Strip



Adhesive Strip

