

FO COMPATIBILITY TESTER



DESCRIPTION

The FO COMPATIBILITY TESTER provides an easy method to determine fuel oil compatibility and stability. As new fuel oil is bunkered, the compatibility of the fuel oil remaining onboard (ROB) with new fuel oil can be determined. The FO COMPATIBILITY TESTER can also be used to determine a single fuel oil's inherent stability and likelihood to create sludge.

Mixing of fuel oils typically occurs arbitrarily as new bunkers are loaded on top of old fuel oil in "empty" storage tanks. Onshore fuel testing laboratories may test for compatibility between submitted samples if requested, but this takes time. The FO COMPATIBILITY TESTER allows this capability conveniently onboard to provide immediate results to eliminate any uncertainty regarding compatibility of fuel oils loaded.

Since fuel oil is loaded from different suppliers and different ports, the possibility of having two incompatible fuel oils is always present due to inevitable mixing of stocks. When different fuel oil grades (i.e., HSFO, LSFO, MGO, biodiesel, etc.) are mixed during fuel switchover, required for entering or leaving an Emission Control Area (ECA), the likelihood for compatibility problems increases significantly.

Whether a single fuel is inherently unstable or two mixed fuel oils are incompatible, the result is often the same – sludge formation. Without knowing the likelihood of instability or incompatibility, the first notion of fuel oil sludge problems are encountered immediately with overloaded centrifuges and choked fuel oil filters. More extensive problems may lead to plant shutdown due to the lack of fuel oil supply to the engine or boiler.

APPLICATION

The FO COMPATIBILITY TESTER uses a dry heating bath to



FO COMPATIBILITY TESTER
(PCN 1AB2185)

heat the oil in test vials and to dry the test paper to determine fuel oil compatibility and stability. The heated drying block has six compartments to allow parallel heating and drying of multiple fuel oil samples.

A sample of each fuel oil delivery and grade should be tested by itself for stability and mixed with fuel ROB sample for compatibility. Testing the compatibility between HSFO, LSFO, biodiesel, and MGO samples is also recommended to determine problems during fuel switchover for ECA or during maneuvering.

Fuel oil in extended storage should be tested for stability after three months as part of good fuel management practice.

Testing stability and compatibility onboard using the FO COMPATIBILITY TESTER allows operators to take appropriate actions to mitigate sludge formation such as isolating or minimizing the mixing of bunker deliveries known

FEATURES

- Six compartments allow simultaneous heating and drying of multiple fuel oil samples.
- Average heating time of 20 minutes for residual fuel samples
- Typical drying times between 20-40 minutes

BENEFITS

- Provides indication and degree of sludge formation tendency of all fuels bunkered
- Allows immediate testing of compatibility and stability
- Provides the stability and compatibility of new fuels mixed with old fuels in less than one hour

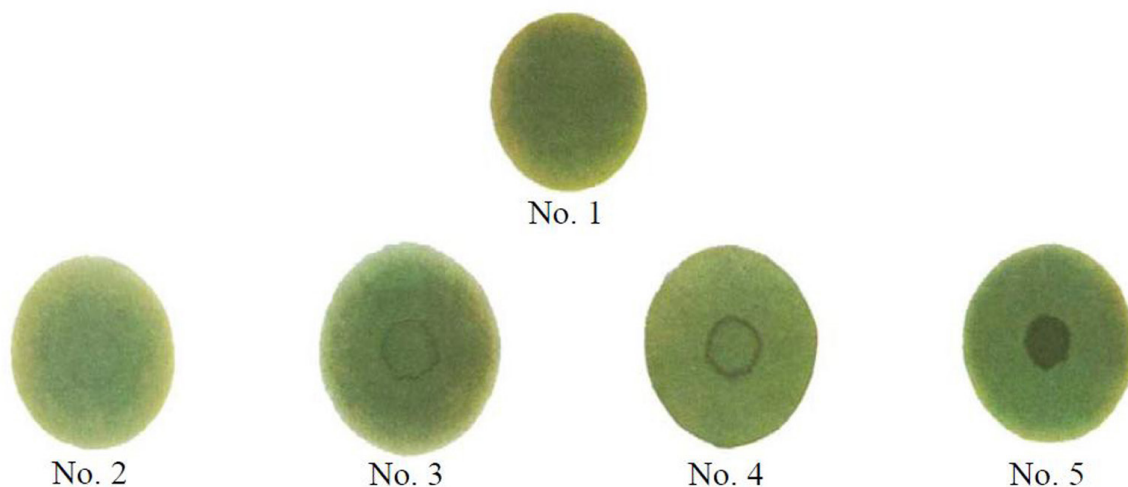


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to be incompatible or the use of fuel additives to disperse any sludge formation.

The following page shows Reference Spot Numbers that are used to interpret the analysis results.

ASTM D4740 REFERENCE SPOT ADJUNCT



Reference Spot No.	Characterizing Features	Analysis Results
1	Homogeneous spot (no inner ring)	Sufficiently stable or compatible fuel
2	Faint or poorly defined inner ring	Sufficiently stable or compatible fuel
3	Well- defined inner ring, only slightly darker than the background	Slightly unstable or incompatible fuel
4	Well-defined inner ring, thicker than the ring in reference spot No.3 and somewhat darker than the background	Unstable or incompatible fuel
5	Very dark solid or nearly solid area in the center. The central area is much darker than the background	Grossly unstable or incompatible fuel

If Spot No. results 3 or 4 are obtained, it is prudent to segregate the fuels in question.

If Spot No. results 5 is obtained, use extreme caution in handling. Engine damage may occur.

CLEAN UP AND DISPOSAL

After each test, properly dispose of the sample, vials, beakers, and syringes (as petroleum product) and clean the dry heating bath and drying block with cleaning reagent (e.g., Test Kit Cleaner PCN 1AB2738) and a dry cloth.

HEALTH AND SAFETY ADVICE

Do not smoke or use petroleum distillates near an open flame. When using, wear protective equipment e.g., safety goggles

and gloves. Avoid contact with skin, inhaling vapors, mists or fumes during use. Use in a well ventilated area.

ORDER INFORMATION

FO COMPATIBILITY TESTER: PCN 1AB2185

SPECIFICATION

Dimensions/Weight
Voltage/Frequency

265x220x185/5kg
115/230V / 50/60Hz



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SPARES

Description	PCN
Test Paper, Chromatography	1AB2807
Test Kit Cleaner (2x500ml)	1AB2738
Gloves, nitrile (set of 100)	1AB2186
Sample vials, capped (set of 72)	1AB2187
Sample beaker, 125ml (set of 40)	1AB2188
Sample syringe, 30ml (set of 40)	1AB2189

IMPORTANT INFORMATION

Drew Marine maintains Safety Data Sheets on all of its products. Material Safety Data Sheets contain health and safety information for your development of appropriate product handling procedures to protect your employees.

Our Safety Data Sheets should be read and understood by all of your supervisory personnel and employees before using Drew Marine products.



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