

DREW XP COMPATIBILITY TESTER



DESCRIPTION

The DREW XP COMPATIBILITY TESTER provides an easy method to assess fuel oil compatibility in order to make appropriate handling decisions when bunkering or mixing fuels during switchovers. It can also be used to determine the inherent stability of a single fuel oil and its potential to create sludge. The test kit includes a compatibility heating oven with enough heating bays to handle 3 samples at one time, test paper, test tubes, stirring rods, syringes, and an easy-to-use manual. Test results are available in minutes.

Mixing of fuel oils typically occurs arbitrarily as new bunkers are loaded on top of old fuel oil in “empty” storage tanks. While it takes time to obtain readings on samples submitted to shore-based laboratories, this test kit allows non-technical personnel to obtain immediate answers regarding the compatibility of fuel oil remaining onboard (ROB) with the new fuel as it is bunkered.

The DREW XP COMPATIBILITY TESTER is available only as part of the DREW XP FUEL & LUBE OIL TEST CABINET (PCN 1AB2757), which integrates the most essential onboard testing capabilities for cost-effective fuel and lube oil management. Compatibility testing is also offered separately as a stand-alone test kit called the FO COMPATIBILITY TESTER (PCN 1AB2185), providing double the testing capability.

In addition to fuel oil stability and compatibility testing, the DREW XP FUEL & LUBE OIL TEST CABINET provides all components needed to determine density, viscosity, water content, sea water contamination, and pour point for fuel and lube oil; and total base number and insolubles in lube oil.

COMPATIBILITY – VALUE OF ONBOARD TESTING

When bunkering from different suppliers and different ports, the possibility of incompatible fuel oils is always present in the inevitable mixing of stocks. And when different fuel oil grades (e.g., HSFO, LSFO, MGO, etc.) are mixed during fuel switchover, as required for entering or leaving Emission Control Areas (ECAs), the likelihood of incompatibility and related operating problems increases significantly.

Whether a single fuel is inherently unstable or two mixed fuel oils are incompatible, sludge formation is the likely result. And for operators without timely access to reliable data about unstable or incompatible fuel oils before using or mixing them, overloaded centrifuges and choked fuel filters are often the first indicators of fuel oil sludge problems. More severe problems can lead to plant shutdown due to reduced fuel oil supply to engines or boilers.



DREW XP COMPATIBILITY TESTER

DREW XP COMPATIBILITY TESTER ONBOARD ANALYSIS ALLOWS OPERATORS TO:

- **Minimize sludge potential through regular and periodic testing.** A sample of each fuel oil grade bunkered should be tested by itself for stability, and then mixed with fuel ROB sample to determine compatibility. Testing all fuel grades involved is also recommended during fuel switchovers for ECA compliance or maneuvering. In addition, fuel oil after the centrifuge, as well as fuel oil in extended storage, should be checked for stability every three months as part of good fuel-management practice.
- **Take appropriate actions to mitigate sludge formation.** Isolating or minimizing the mixing of fuel is recommended when different bunker deliveries are known to be incompatible. Treatment with fuel additives (e.g., Drew Marine’s AMERGY 222 fuel conditioner – PCN 4757409) can help disperse sludge formation. And comparative results provided by the test kit can further assist in optimizing the application of such treatment to maximize the recovery of fuel energy otherwise lost as sludge, while saving on fuel additive costs.

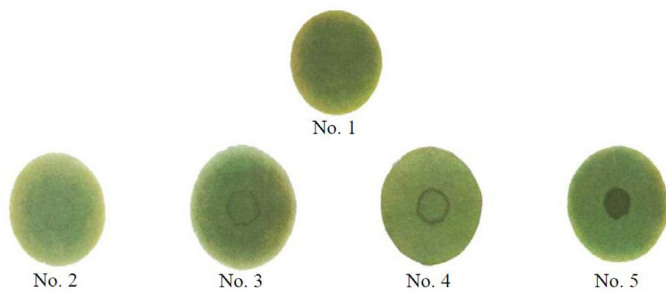


Contact your Drew Marine representative for more information

TECHNICAL SPECIFICATIONS AND OPERATING FEATURES

- The DREW XP COMPATIBILITY TESTER oven has separate test tube slots to heat three sample oils and a separate compartment to dry three test papers simultaneously.
- A reference chart showing representative samples – shown here and provided in the Drew Marine Operating Manual – is used to compare completed test results. Guidelines are included for interpreting results for stability and compatibility.

ASTM D4740 REFERENCE SPOT ADJUNCT



Ref. Spot #	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 background	Unstable or incompatible fuel
5	Very dark solid or nearly solid area in the center. The central area is much darker than 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.

- Step-by-step testing procedures are easy to follow

- Results with accuracy to laboratory standards are provided in 20 minutes or less.

BENEFITS AT A GLANCE

- Provides immediate data to assist operators in minimizing sludge formation to avoid related problems, including overloaded centrifuges, choked fuel filters, and engine or boiler shut-down.
- Supports decision-making for application of additives to help disperse sludge and maximize fuel-energy recovery.

CLEANUP AND HANDLING

The use of harsh chemicals for cleaning test kit instruments and accessories is not advisable. Use only approved cleaning agents (e.g. Drew Marine's TEST KIT CLEANER — PCN 1AB2738) to clean test kit components, and wipe clean using a dry rag. Dispose of the used rag as used oil.

TEST PROCEDURES

For step-by-step operating procedures and precautions, refer to the Compatibility section of the Operating Manual for the DREW XP FUEL & LUBE OIL TEST CABINET.

CONTENTS AND ORDERING INFORMATION

The DREW XP COMPATIBILITY TESTER is standard as part of: the DREW XP FUEL & LUBE OIL TEST CABINET (PCN 1AB2757)

Spares and Replacements

Description	PCN
DREW XP COMPATIBILITY TESTER	On Request
DREW XP-COM Test Tubes, 25 CT.	1AB2742
Test Paper, Chromatography	1AB2807
Test Syringe, 5ML, 40 CT.	1AB2812

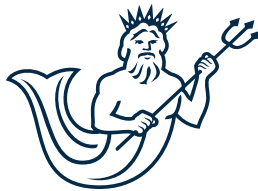
Stand-Alone Unit (Available for Separate Orders)

Description	PCN
FO COMPATIBILITY TESTER	1AB2185



Contact your Drew Marine representative for more information

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