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**Best Practices for Fuel Compatibility**

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Reference: **Emission Control Area (ECA)**

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**Best Practices for Fuel Compatibility**

Changes in legislation such as the Emission Control Area (ECA) 0.1 percent sulphur cap and the impending 0.5 percent IMO global sulphur limit are complicating the use, storage and handling of marine fuels.

There are two very different categories of marine fuel with distinctly separate operational characteristics.

***Compatibility testing***

There are two basic types of marine fuels – distillate and residual.

When switching fuels, it is important to consider the unique characteristics held by each fuel to avoid compatibility issues. Vessel operators should also ensure that the service tank is at its lowest safe operating level before introducing a new fuel to the system.

To aid this, there are two main tests, which can be run before fuels can be injected into the engine – sediment testing and spot testing.

With sediment testing, a fuel sample is sent to a fuel-testing laboratory, which uses the hot filtration test method, to define the total amount of sediments contained in a fuel sample.

Spot testing on the other hand, is done on board by a crew member, and uses a blend composed of representative volumes of the sample fuel and the blend stock which is heated and homogenized.

A drop of the blend is put on a test paper and heated to 100°C. After 1 hour, the test paper is removed from the oven and the resultant spot is examined for evidence of precipitation and rated for compatibility against D4740 reference spots.

***Conclusion***

When it comes to the blending of marine fuels, industry best practice is not to mix fuels in the storage and settling tanks. However, this is not always possible and in cases where comingling

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is unavoidable, it's best to carry out compatibility tests, either on board or via an independent lab, in order to help evade any compatibility issues.

REFERENCES:

- Emission Control Area (ECA)

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