CLUB CIRCULAR

Monday, December 22, 2014

BSM-RM-10/006/14

To: All Members

Lifeboat Engine Used in Areas of Low Ambient Temperature

(Part II / II)

Measurement A: Regarding Clod Filter Plugging Point (CFPP) Instructions for Marine Diesel Fuel in Cold Climates

To ensure proper operation of the lifeboat engines in very cold climates, it is essential to ensure that the diesel fuel in the fuel tank of the lifeboat is suitable to the lowest temperature possible in the area of operation of the ship. The temperature where the fuel is no more filterable is called “CFPP” in the specifications for the particular fuel.

To improve the CFPP point, a dilution with kerosene is recommended. A maximum dilution of 40% kerosene is possible. If 50% or more are necessary, 2-stroke lubricating oil must be added to protect the fuel injection pump and nozzles from seizure. If no information is available onboard the ship about the particular fuel to the fact that the diesel oil might be winter-type and already diluted from the oil company. The reason for the necessity of 2-stroke lubricating oil is that it is self-mixing with the fuel. In ship storage tanks a maximum of 25% dilution is the limit, in order to ensure that minimum flame point of fuel = 55° C.

Example:

Diesel Oil without Dilution	CFPP/-18° C
90 liters diesel + 10 liters kerosene	-20° C
80 liters diesel + 20 liters kerosene	-22° C
70 liters diesel + 30 liters kerosene	-24° C
60 liters diesel + 40 liters kerosene	-26° C
50 liters diesel + 50 liters kerosene	-28° C

Measurement B: Lifeboat Engine Storage in Winter Time

1. Carry out the following whilst the boat is still in the water:
   1.) Run the engine until normal working temperature is reached
   2.) Drain off engine and gear oil with oil bilge pump
   3.) Fill the engine and gearbox with preservative lubricating oil of a recognized make up to the upper mark on the dipstick
   4.) Fill the fuel tank with fuel preservative oil in the rate of mixture prescribed by oil manufacture
   5.) Start the engine and let it run for about 10 minutes to be sure that the fuel mixed with preservative oil has been flushed through the fuel system of the engine
   6.) Fill the fuel tank completely with fuel. Pay no special attention to the preservative oil added to the fuel as this is consume normally and properly when service is resumed in spring

2. On land the following procedure has to be carried out:
   1.) Remove the engine cooling water drain plugs, drain off the sea water from the engine and refit plugs
   2.) For direct sea water cooled engines: Remove the suction hose from the cooling water pump at the bottom cock and the hose into a bucket with freshwater containing preservative oil in the rate of mixture prescribed by the oil manufacturer
   3.) The outlet hose for the cooling water which goes into the exhausted elbow may be removed and returned to the bucket via a length of hose so that the freshwater is able to circulate. Start the engine and the freshwater containing preservative oil will be flushed through the engine.
   4.) Stop the engine after 5-10 minutes and drain off the water. Ensure that after removing the drain plug all the water is drained off. This is done by cleaning the drain holes with a nail, a steel wire or the like, so that any remaining water may drain out. Remove the impeller from the cooling water pump, which will allow water in pump and pipes to be drained off. Keep the impeller separately in a dry place during the winter.
   5.) For freshwater-cooled engines: Drain the freshwater from the engine by removing the plugs as indicated for seawater cooled engines. It is not necessary to flush this system with freshwater containing preservative oil. If the engine is to be used in period of frost, it must be protection to the freshwater system against the risk of frost – by removing the recover of the impeller pump and turning the engine manually or with the starter motor.
   6.) Remove the battery and store it separately during the winter in a dry and frost – free place. Fill up and charge the battery before storing.
   7.) Remove the air filter and turn the engine manually until each inlet valve opens alternately, during which about1/2 cup of preservative oil is

injected into each piston head. Turn the engine backwards and forwards manually in order to spread the preservative oil.

8.) Insert a clean, oil moistened rag (not cotton waste) into the inlet manifold.
9.) Insert another clean, oil moistened rag into the exhaust elbow aperture.
10.) Treat electrical connections with grease free from acid. Fill the multiple plugs with grease from the wire side.

The engine is now preserved for winter storage and can be further protected by covering of polythen sheeting, under which a bucket of silicagel should be placed

3. Preparation of engine before launching
   1.) Remove the oil moistened rags from the inlet manifold and the aperture of the exhaust elbow
   2.) Fit the cooling water pump impeller
   3.) Fit cooling water drain plugs
   4.) Drain the preservative lubricating oil from both engine and gearbox and fill up with fresh oil to the upper mark of the dipstick
   5.) Change the lubricating oil filter
   6.) Make sure – before starting up – that the oil on the piston heads is drained off. This is checked by turning the engine manually without operating the decompression lever.
   7.) Examine the stern tube stuffing box and fill up with stern tube oil
   8.) Fit the battery after re-charging
   9.) Lubricate all moveable parts with oil
   10.) Check the anode
   11.) Check that there is electrical contact at the stern tube at the internal connection to the gearbox

If our valued member has any doubt, please contact our Risk Management Department at riskmanagement@britishsteamship.com.

Yours faithfully
British Steamship Management Limited
Manager of
British Steamship P&I Association (Bermuda) Limited
www.britishsteamship.com