

BRONZEWING – STARTING THE AUXILIARY ENGINE V2

[These notes are 'informal' in the sense that they reflect the current techniques to start and operate the auxiliary diesel engine [AE] on the Bronzewing as at July 2020. Responsibility for the accuracy these notes is entirely due to the scribe.]

1. Before commencing any work on the AE take the [approximate] 10 metres of black plastic flexible irrigation pipe, with a diameter of about 4 inches, from the stern compartment and push one end over the exhaust outlet of the AE. The exhaust is attached to the forward side of the port funnel. You will need to push it on firmly but it will fit. Due to the condition of the AE, which needs to be decarbonized, considerable volumes of soot are released when it is operating and this makes a black mess on the white paintwork. The other end of the irrigation pipe will reach just under water, thus discharges of the soot go into the water.
2. Open the seawater inlet valve located on the stern side of the AE.
3. Open the discharge valve located more or less above the inlet valve. Obviously when using the seawater for another purpose different valves are opened/closed.
4. Diesel fuel. Ideally the tank should be more than three quarters full. There is a measuring stick located near the tank. The reason is to maintain a sufficient head of diesel to ensure a smooth flow of diesel to the engine. Diesel pumped from hand pump at entrance to Engine room. Valve below deck plates below hand pump.
5. Check oil levels. Dipstick is on front portside of engine.
6. Open the fuel valve located at the base of the tank. The engine will start most easily if the valve is opened almost exactly to the half way position. Fully opened it takes 14 half turns, therefore 7 half turns are the ideal number. [Check the maths with your Grandchildren.]
7. On the top dead centre of the engine block of the AE is the 'compression lever', which is about 8 cms long and is in either the vertical or horizontal position. For starting, the lever is vertical.
8. Electrics. All switches should be in the same position as if the main engines were operating or indeed are still operating, as the AE is about to be started.
9. The starter button is red in colour in a small box attached to the hull beside the AE. The purpose of the starter motor is to turn the flywheel until the flywheel has developed a reasonable number of revolutions. Hold the starter button in until the engine starts or release it after about 10 seconds.
10. When you stop pressing the starter button, quickly flick the compression lever down to the horizontal position. The engine should start.
11. The speed of the engine is regulated by a governor mechanism. When looking at the starboard side of the engine the fuel rack [part of the governor mechanism] moves in and out and varies the fuel volume going to the engine and hence its speed.
12. To stop the AE, manually push the fuel rack 'towards the stern' which closes down the engine.

SAFETY

There are v belts, fly wheels and other moving parts which could easily catch loose items of clothing, rags etc. Special care and attention is required especially when working near the AE.

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