

- c. Open all hatches and ports to ventilate the boat.
- d. Switch on battery.
- e. Operate bilge blower for at least 5 minutes. Check blower exhaust for fumes.
- f. The engine should be started only when it is certain that no potentially hazardous condition exists.

3.2.7 OPERATOR MAINTENANCE. Whether maintenance of the power system is to be performed by the owner, or delegated to a mechanic, it is the owner who must first initiate any action that is to take place. He must either perform the maintenance or decide to call someone to do the job, and a working knowledge of the power system is essential in the first case, and desirable in the second. The Universal engine manual is, of course, the prime source for engine information and should be consulted, preferably before the fact. The following paragraphs are included as a supplement to cover any required maintenance procedures that are not a part of the engine manual.

3.2.7.1 Fuel Sanitation. The fact that a diesel engine does not require an ignition system can, and usually does, result in an engine that is far superior to a gasoline engine in regards to dependability. Whether this is actually the case, depends greatly on the cleanliness of the fuel that is supplied to the engine, since the close tolerances required by the engines fuel delivery system make it extremely intolerant of any form of dirt or water contamination. The engine is supplied with primary and secondary filters that prevent contaminants from reaching the engine where they could cause damage, but a clogged filter, although providing this protection, can also stop an engine. Keeping the filters free of dirt and water is an obvious answer to this problem, and the cleaning schedules set forth in the engine manual will in most cases keep filters clean enough to prevent stoppage.

3.2.7.2 A factor that can cause additional problems is bacterial contamination of the diesel fuel. The bacteria involved need both water and fuel to exist, and if present, will thrive at the fuel/water interface in a fuel tank. As they multiply they form more water and a filter choking brown slime. Often their presence will not be known until rough weather churns up the fuel tank, causing clogged filters at a most inopportune time.

3.2.7.3 Keeping water out of the fuel will, of course, prevent the problem entirely, and while every effort should be made toward this end, such as obtaining fuel