

## **DIRTY FUEL AND WHAT TO DO**

### **Summary Results of Dickerson Owners Fuel Forum**

In the fall of 2007 we conducted a survey of Dickerson Owners to determine how they dealt with problems of dirty diesel fuel and what steps they took to ensure that they were not stuck in the water somewhere in a stormy night with a dead engine.

Eleven Dickerson Owners responded to the survey which was conducted using former Commodore Bruce Franz's e-mail mailing list. The response of over 16 percent included input from sailors that have traveled the globe as well as veterans of Chesapeake Bay. The comments received are summarized below.

Really interesting are the views of the different experiences. Some say I have not cleaned my tank in 20 years and have never had a problem. One Dickerson owner told me verbally that he never had a problem because when he sailed on long distant trips he had enough fuel movement to get rid of any slime etc,

The rest of us have not been so fortunate. So what are the real mysteries behind dirty diesel fuel and what did Dickerson Owners do? This is their story.

**First on fuel into the tank.** Many think that marina fuel supplies cannot be trusted. Some pump it from Marinas into a jug so it can settle while others pump it into a jug from truck stops.. In our survey 33% did not trust marinas and used Jug fuel—one with a disposable strainer. So the message here is beware of marina fuel particularly in foreign ports or when it is raining.

**Next on fuel tank cleaning.** Some say they never had their tank cleaned. Others like Randy Bruns religiously clean their tanks every 3-5 years. Others like me have them pumped out every 4-5 years, but wonder how clean they really are. Interesting that 44% of Dickerson owners surveyed have their fuel tanks cleaned every 4-5 years. As mentioned earlier, one owner never had his tank cleaned in 20 years and never had a fuel problem.

To facilitate cleaning several owners have replaced their old cast iron tanks with new aluminum ones with inspection ports. Others have incorporated a sump into their new tanks with a drain valve—which, according to Chapman Piloting 57<sup>th</sup> Edition, is legal for diesel provided there is a positive means of removing any accumulation from the deck.

Before we leave fuel tanks a very important point was made by Mike and Karen Riley from Guatemala—**“We are careful to make sure the tank deck fitting is waterproof. How many of you use a rubber gasket-mine was just a steel fitting screw on cap”**. **Another key point made by several is: Always keep your tank full”**.

**Now how about filters.** All respondents have a primary and secondary filter. A few use a 2 micron primary filter—but 55 % use a primary filter of 10 microns or more. Some talked to experts who said the primary should never be less than the secondary filter. Westerbeke said if you have a 10 micron next to the engine the primary should be the same. Racor experts said primary should be higher than secondary or at least equal. So if you are using a 2 micron primary with a 10 micron secondary you may have problems.

Another significant comment on filters was made by Beau Soleil who said it is important to drain the filters of water periodically. Water does tend to really block the filter.

Another word on filters is that some—those that experience fuel problems like Irish Mist—have installed two sets of primary filters so in case of a problem you can readily switch over from contaminated to fresh filters. In our survey only 33% have two sets of primary filters. Personally I think it is good insurance.

**Next point was on electric fuel pumps in addition to lift pump on engine.** Some that have had fuel problems, installed electric pumps to polish up the fuel in the tank by re-circulating it through the filter as did Randy Bruns or as a purge booster to the lift pump. In any event 44% of those surveyed installed electric pumps and found them helpful.

**Most all respondents used an additive which they hoped would keep the tank free of sludge.** Some used West Marine Star Tron and others used Biocides. The question on additives is still out—I think. Good to use it but where are the scientific analyses. Need more information on this. But meanwhile keep doing what you are doing. I am using an organic dispersant and will let you know what happens.

**Common Sense Operation.** Bill and Chris Burry—who have sailed Plover around the world and who do not use additives-- offered the following excellent suggestions. Always keep the tank full, check the filter glass before starting the engine and every two hours when underway, use a strainer—just a fine screen in the bottom of a funnel—if you have questions about the fuel, check the filter more often if you suspect dirty fuel, change filters at least every 300 hours or earlier if you suspect dirty fuel, never leave both tanks open in the cross feed in case one has dirty fuel and always keep spare filters on board

Our thanks to the following Dickerson Owners who cooperated in this Survey  
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