

On money and motors.

This last year I have seen an increase in the number of boat owners electing to do major repairs to their boat engines or even replace their boat engines in lieu of buying a new boat. Re-powering a boat is not a cheap proposition by any means. And your options are wide and varied depending on a myriad of circumstances, the least of which being budget.

Of course the favored option may be to go with brand new engines. I have come to the conclusion that unless your engines are seriously broken that replacing them for the sake gas mileage doesn't make (cents). About efficiency; Firstly it is true that new engines, be they gas, diesel or outboard use less fuel per mile than their older counterparts. But how much less fuel? And how does that play into the economics of the thing? I will site some examples from recent experience; the first is about a nice 34' offshore powerboat that I manage and run for the owner. It has a pair of 2 cycle 250HP outboard engines that are quite fond of gasoline and two-cycle oil. These engines run like brand new and make gobs of power but as I said, they are very thirsty. The owner and I have been kicking about the idea of replacing them with 300hp four cycle engines that are actually lighter, use less fuel and eliminate the need for two cycle oil. This would increase our range and lessen the fuel expense at every outing. So during the Miami Boat Show the owner and I approached the desired engine brand representative at the show and requested a quote. The number he quoted was a staggeringly good deal. Allowing a trade in of our existing (good running) engines it would cost \$25,000 to have the new 300 hp engines installed and running. Out-the-door as they say. That is a great deal and although the owner is financially well off we decided to just run what we have for a few more seasons. With the existing engines we cruise at around 33 kts while burning 29 gallons per hour. This roughly translates to around 1.3 miles a gallon, plus oil. The new power would have given us an estimated cruise of 36 kts and about 20GPH. Rough math puts the estimated fuel burn at around 2 miles a gallon. So lets see....7/10ths of a gallon and 4 miles an hour is a vast improvement. Granted. During a typical trip we burn 100 gallons of fuel and two gallons of oil. So the savings would add up to 30 gallons at lets say \$4 a gallon plus \$40 in oil. So by spending \$25,000 up front we could save approximately \$160.00 every time we go fishing. That is actually only 156 trips and we fish this boat in the winter only, maybe 20 times so it would, in theory pay for itself in 7.8 years all things being relative. Our thinking is that the existing engines run perfectly and they given zero problems in the last two seasons. The daily spend is not an issue for the owner. And so we decided to just run them for another few years to let technology catch up and get some more use from our initial investment. In our case the cost did not justify the expense. A caveat would be if one or both engines were in need of overhaul. The five to eight thousand dollars expense to overhaul would defiantly tip the scales in favor of new engines. So now I'm just trying to blow up a pair of really good engines so I can get new ones! (j/k).

Then there is the case of a local captain and very good friend of mine who finally just slap wore out his inboard diesel engines after 8,000 hours. He did a huge amount of research and really wanted to upgrade to the new common rail technology for reliability and fuel usage concerns. The difference in price between new engines of a different

brand and re-building his old engines was about \$15,000. The fuel burn savings would be in the 12% range and the new engines came with a great warranty and reputation for reliability. Unfortunately after much figuring and scratching of heads we determined that because of the way the new engines were designed that they would not fit in the boat without gross surgery to the decks and one fuel tank. It seems his boat was basically built around the existing engines and barring great expense; those engines would just have to be re-built and put back in. There was some disappointment initially but he has his engines back from the mechanic now. They look and run well and he spent a lot less money. All is well that ends well.

Every situation is different but my observations have been that as far as old outboards and gas inboards go. A new engine replacement when the old ones are worn out or broken seems to be the cost effective move. Diesel inboard boats may not provide enough pay back to cover the expense of upgrading. Your mileage may vary!

On a side note, I have room for a few more yachts in our management program. Call my office for details.