

Inboard vs Outboard



by CHRIS HIGHAM
pics by BARRY WISEMAN

For its modest share of the cost of big boat ownership, fuel consumption gets a remarkably large share of attention from boat buyers. Chris Higham has looked into the numbers for his 11 metre Given Power Catamaran range which offer both inboard and outboard power options.

Back in 2003 the first Ron Given outboard powered 11m catamaran arrived in Perth sporting a pair of Yamaha 225 4 strokes and it turned plenty of heads.

The sight of a big power catamaran nosing into the crowded bays of Rottnest Island on a long weekend was unusual enough in 2003 but it was the big grey outboards that had everyone scrambling for the binoculars.

Back then you just had to get used to dinghies diverting from across the bay to do the beach run via the back end of your boat and the flotilla's of canoes and kayaks circling like herring in the berley trail were part and parcel of being a bit different.

Catamarans it seemed had escaped from the confines of Queensland and everyone wanted to know what they offered for the average boatie. Over time catamarans grabbed their market share as their inherent design advantages won the skeptics over. However the use of

The great debate

outboard power on big boats still has people scratching their chins as they grapple with the image of an outboard motor anywhere other than on a trailer boat.

Over the years one constant topic of enquiry from buyers has been about fuel consumption, speed and efficiency. Its not that fuel consumption is not a valid component of a boat buying decision. Its just that the arithmetic's are pretty simple.

After 400 engine hours and 7500NM of boating the averages for the Ron Given outboard powered flybridge catamaran are well established at 65LPH at 18kts and 3.6L per nautical mile. While this boat is well travelled with voyages up and down the coast from the Abrohlos to Mandurah, the average boat owner only manages about 40 engine hours a year after the initial flush of ownership subsides. This costs at the bowser in today's prices about \$2,800 per annum.

Running inboard diesel 230's drops consumption to around 45LPH in a cat and about 55 in a mono hull over the course of a year. This equates to about \$2,200 per annum at today's prices so it can't be a diesel vs petrol issue, so lets have look at the overall costs to see where the differences occur:

Beside is an analysis of the cost of diesel inboard's vs petrol outboards over a 10 year period.



ASSUMPTIONS		
	Petrol 4 ST	Diesel
Motors (Twin)	225hp	230 HP
Vessel Size	11m	11m
Flybridge	Yes	Yes
Cabins	3	3
Annual running Hours	40	40
Litres Per Hour	65	55
	\$	
Petrol Price (premium)	1.10	
		\$
Diesel Price		1.20
Annual Maintenance Cost	900	3000
Motor Cost (Installed)	45000	75000
Depreciation Rate	20 Years	30 Years
Residual worth @ 10 Yrs	15000	25000
Cruising Speed	18	18
Top Speed	30	30
10 YEAR COST ANALYSIS		
Depreciation	30000	50000
Maintenance	9000	30000
Fuel	28600	21600
Total	67600	101600
Repower Cost after 10 Years	30000	50000

The conclusions drawn are that the diesel inboards might last longer but cost a lot more initially and cost more in maintenance throughout their life.

Assuming that the cost of new motors, like cars don't go up, they just get better every year, then you are able to fully fund the replacement cost for your outboards after ten years from the running cost savings alone and keep your vessel up to date with technology and efficiency. The reality is that, when well maintained, outboards will run efficiently into thousands of hours and will see out 20 years and you are not going to repower your inboards or outboards after ten years unless they have been damaged. Five years ago the biggest outboard on the market was 225hp and now its 400hp. Just what will be available to be bolted on the back in another five to ten

Given Power Catamarans

- West Australian built
- Custom finishes available
- Sedan & flybridge versions
- Survey compliance optional
- Inboard or outboard powered
- Stage one to completion options
- Well priced demonstrators available for immediate delivery

Elegant. Efficient. Innovative

M: 0408 954 820 sales@givencats.com.au www.givencats.com.au



years time is anyone's guess, but it will certainly be bigger and better than today's options. The most likely time for a boat to be repowered is after damage or for resale and at least repowering a set of outboards is pretty straight forward.

When the new Given T11 was launched in January 2009 it was 1000kg heavier than the 6000kg original vessel due to the increased level of fit out. It was fitted with 300hp Mercury Verado's and is showing a 10% improvement in fuel efficiency despite the lift in engine size and vessel weight. This is a testament to the improvement in technology over the last five years alone.

The reality with fuel costs for a moderately used pleasure boat is that it is comparable to the households motor vehicle fuel bill for the year. Overall the cost of running your motors on your ocean cruiser can be significantly reduced by considering the outboard option.

Contact: Chris Higham

Phone: 0408 954 820

Email: sales@givencats.com.au