DIESEL STERNDRIVES

Have come of age how do they compare with an outboard?



PWC BUYERS GUIDE

We look at what the PWC manufacturers are offering for 2013.



CRUISE OF THE ENVOY

Cruising the western islands of the Aegean Sea and Greece.



PACIFIC DOMESTICATION OF THE PROPERTY OF THE P

00% DEDICATED TO POWER BOATING

30 HP OUTBOARD

CSB Huntsman
engines is the fastest, quietest, cheapest and most fuel efficient?

Which of our 12 engines is the fastest, quietest, cheapest and most fuel efficient?

Also Reviewed

MAEVE - UPFOLD 16m RIVIERA 445SUV REGAL 2000 BR MUSTANG 43 DNA 821 HT

Reviewed MAEVE - UPFOLD 16m RIVIERA 445SUV

GREAT BARRIER ISLAND

Could this be New Zealand's best cruising destination.



POWER BOAT FISHING SECTION

30hp Outboard

Portables that Pack a Punch

WE TOOK TWELVE

30HP OUTBOARDS.

BOTH 2-STROKES AND

4-STROKES, AND PUT

THEM THROUGH THEIR

PACES. THE RESULTS MAY

SURPRISE YOU.

ORAKEI BASIN PROVED A GREAT PLACE TO TEST THE ENGINES.

Packed with features, 30hp outboards are engines that are well suited to smaller tinnies, inflatables and other boats that are used for inshore fishing, family fun and as tenders. Which one is best for you and is there really that much difference between them? Well, we set out to find out just what makes each one different from the other. Interestingly, in some cases only the decals and colours on the outside were different.

Outboards around 30hp have been around since the late 1920s. The Elto Quad in 1928 was the world's first 4-cylinder outboard and was sold as a 30hp engine. A truly ground-breaking motor! In 1929 OMC (Evinrude, Elto and Lockwood) offered a 4-cylinder 35hp under the three brand names. In 1948 the largest production outboard engine was the 33.4hp Evinrude Speedifour, an engine which OMC built between 1939 and 1950. In 1956



FISH CITY'S CRAIG ARCHER WAS ON HAND TO RUN THE TWO OUTBOARDS FROM MERCURY MARINE.

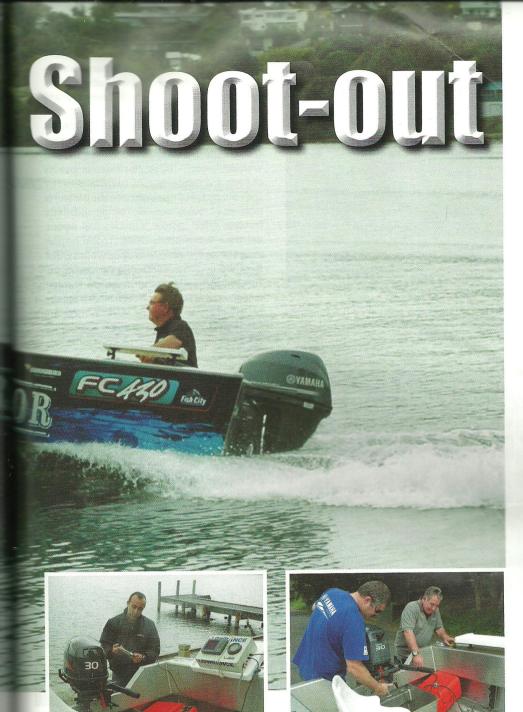
OMC introduced the 30hp Lark with electric start and the 30hp Big Twin and the following year the 35hp Golden Javelin. Mercury, which was founded in 1939, was not to be left out of the game and counter punched with its versions of similar horsepower, beginning in 1948 with the 655cc Thunderbolt, conservatively rated at 25hp but performing to match the best that OMC then had on offer.

Whereas in those years an outboard around 30hp was considered a 'big' engine, today the 30hp is reduced to the lower end of the horsepower spectrum and even rates by some as a portable. If you're considering your next 30hp as a portable then as expected the 2-strokes are the lightest. The Mercury 30LW, Tohatsu M30 and Yamaha CV30 are the lightest at around 51kg for the short shaft tiller steer manual package. Four strokes could hardly be classified as portable with weights in



OUR TEST BOAT WAS AN FC430 WHICH WAS IDEALLY MATCHED TO THE 30HP RANGE OF OUTBOARDS

exces of 70 kgs for all three models we tested. For our review we picked 13 engines and were able to fully test 12. There are certainly a few more 30hp outboards available on the Australian and New Zealand market, as it seems at every boat show another brand pops up. Mostly built in Chinese factories, some even have identical power heads and lower units, with just the decals and cowling colours changed and blatantly say they are carbon copies of existing brands. However, they are usually copies of obsolete models, more often than not Yamaha's. Look up Chinese outboards on the web and you'll find brand names such as Star, Zongshen, Hyfong, Shunfeng, Sail, Sprint and Yamabishi that in time will probably all be available on the local market, albeit under some other name to more reflect the 'image' of the Kiwi and Aussie buyer. The dominance of Japanese and



PAUL RICKS HOOKS UP THE FUEL LINE FOR THE HIDEA OUTBOARD.

American outboards is being challenged! Mercury Marine's 30hp outboards are built by Tohatsu in Japan and while the 2-stroke Tohatsu M30 and Mercury 30LW are the same engine, the companies' 30hp 4-strokes are quite different and independently built.

The new kids on the block – Parsun, Hidea and the just introduced Waterman – are all built in China and their 30hp models are all based on a previous model Yamaha powerhead but again sport different external colours and decals. Waterman and Parsun are out of the same factory.

Of the 13 engines, only four brands, Honda, Mercury, Yamaha and Tohatsu, offer 4-stroke 30hp engines. The Evinrude ETEC is a direct injected 2-stroke and all the rest are conventional carburetted engines.

Prices vary from engine to engine, with the more basic 2-strokes less expensive than the

WITH 3 YAMAHA ENGINES TO RUN, HUGH STEWART (RIGHT) AND BRENDAN GRANT WERE KEPT BUSY CHANGING ENGINES.

more technically advanced 4-strokes. Prices range from under \$Aus2300/\$NZ3500 and go right up to nearly \$Aus6500/\$NZ10000.

Most are available in manual or electric and tiller steer or remote and all, apart from the Suzuki DT30, in long or short shaft. The Tohatsu engines however also have the option of a kit for an extra-long shaft (635mm). Interestingly what one manufacturer calls a long shaft or a short shaft engine may differ from the next, so while it's only a few mm it can make a difference to how you set your boat up.

The Test

Firstly it was important to compare the engines on an even basis so apart from one engine, we used out of the box three blade thru hub exhaust alloy propellers and set the engines hard down on the transom. While all the outboards tested offer something a little different, the one thing they all have in common is excellent fuel efficiency. When you look at high end horsepower outboards you are talking some serious fuel consumption numbers and it matters. But really, how much does it make a difference in your buying equation when looking at a small compact 30hp outboard.

However we thought it would still be interesting to know just how much fuel each of our outboards used at a given speed. We chose speed over rpm as in many cases the engines are tiller steer (as were all of ours) and come with no instruments at all. Whether your engine runs a maximum of 6000 rpm or 5500 rpm or cruises best at 3500rpm or 4000 rpm didn't seem as important as what the engine burns at any given speed. Okay so you don't have a speedo, but experience will tell you that when the tiller twist grip is just in gear that's going to be a good trolling speed, (5-10 km/h) at half twist a reasonable cruise speed (25-35km/h) and at wide open throttle (40-45 km/h) when it's all about hanging on and enjoying the ride. The difference in top end speed between the fastest and slowest 30hp outboard on test was only 4 km/h. The maximum fuel burn also only differed by 4.2 lph for the 2 stoke engines and 3 lph for the 4 strokes. Not really something that's going to cause your wallet too much grief.

We took each engine and ran our Lowrance fuel flow gear and recorded fuel usage at set speeds. The published figures are an average of what the fuel computer was telling us at the time and not a high or low peak. A change of prop or engine height would have an effect on the fuel figures.

We also did acceleration runs to see what sort of torque the engines had and we also ran our decibel meter to register the dB of each engine at mid-range and at WOT. The acceleration figures were an average of three runs and like the fuel figures carried out with two aboard. For the decibel readings we also averaged the highs and lows and used the forward passenger seat as the point of reference. As expected the 4 strokes were noticeably quieter than the 2 strokes,

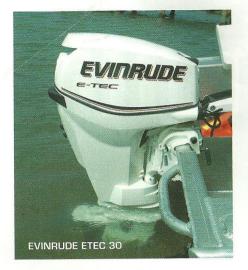
For each test we used two test crew, the same boat, an FC430 and in each case a full 25L tote tank. We also ran every boat with just one person aboard to see if there was any signifigant difference. In every case the speed increased only around 1–2 km/h.

All figures should be read with some allowance in mind and are not accurate to the final decimal point. Our test gear is not that good, but it does give you a good indication of the differences in the engines. Also everything can change with the choice of a propeller, as we discovered with the Parsun 30 that ran a stainless steel Solas, as opposed to the standard 3 blade alloy. This was done on purpose to show the difference a good prop can make on the same outboard, even one as small as a 30hp. Given that the Waterman and Parsun are the same engine it was a good way to make a point of difference.

EVINRUDE E-TEC 30

Released in the 2009 model year, this 30hp model is the smallest member of the E-TEC family of low emission outboard motors. It's not only the smallest E-TEC but also the world's smallest production direct-injection outboard engine, and there are a lot of big new features in this very small package.

For example, it's a twin-cylinder 576 cc engine, the biggest capacity in this category, but at 66-68 kg it is also the heaviest of the 2-stroke engines. For this new E-TEC, Evinrude's designers had a long, hard look at how outboards of this size have traditionally been made and they challenged many perceptions. A sister company to Evinrude in BRP is Rotax, whose engineers designed the new 25/30 E-TEC crankshaft using single piece conrods for the smallest mass, and a pressed together crank design to allow optimum coun-



terweight shape and best balance.

E-TEC designers also redesigned the mounting system with the mounts "focused" towards the steering pivot. This design also requires

only 4 mounts to handle both steering and thrust forces.

The E-TEC 25/30 is a loop-charged twocylinder direct-injected 2-stroke with thin iron cylinder liners featuring a temperature and pressure controlled cooling system for best economy and lowest emissions. Engine sensors for throttle opening, air temperature, engine temperature and crank position are also shared with the larger E-TEC models for commonality of parts and reliability.

The 30hp E-TEC powerhead also features multi-point oiling and like all other E-TECs, features a fuel system with two fuel pumps, an inline fuel filter, a water cooled vapour separator and an electronically controlled E-TEC Direct Injection fuel injector for each cylinder. The 25/30hp E-TEC electrical system features modularised accessories. Not all models require battery charging or electric start, so these are not fitted to all models. When required they can be easily fitted as bolt-on accessories.

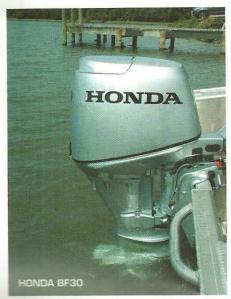
EVINRUDE E-TEC 30 / 2 STROKE HIDEA 30F / 2 STROKE						1	HONDA BF30 / 4 STROKE						URY 30	EFI / 4 S	STROK	E	MERC	URY M	E30 / 2 S	STROK	(E	PARSI	PARSUN T30 / 2 STROKE						
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	31	2.7	1.50	45	5	3.1	2.7	1.50	45	5	3.1	2.7	1.20	56	5	3.1	2.7	1.20	56	5	3.1	2.7	1.50	45	5	3.1	2.7	1,40	48
0	62	5.4	1.50	84	10	6.2	5.4	4.10	33	10	6.2	5.4	3.10	44	10	6.2	5.4	2.50	54	10	6.2	5.4	2.50	54	10	6.2	5.4	3.50	39
9	124	112.5	3.50	777	20	124	10.8	5.10	53	20	12.4	10.8	6.10	44	20	12.4	10.8	4.90	55	20	12.4	10.8	4.30	63	20	12.4	10.8	4.90	55
5	15.5	13.5	4.70	72	25	15.5	13.5	5.50	61	25	15.5	13.5	6.50	52	25	15.5	13.5	5.20	65	25	15.5	13.5	5.20	65	25	15.5	13.5	6.10	55
0	18.6	16.2	5.30	76	30	18.5	16.2	6.70	60	30	18.6	16.2	7.10	57	30	18.6	16.2	5.90	69	30	18.6	16.2	6.50	62	30	18.6	16.2	7.30	55
5	21.7	18.9	6.70	70	35	21.7	18.9	8.50	55	35	21.7	18.9	7.70	61	35	21.7	18.9	7.30	65	35	21.7	18.9	8.50	56	35	21.7	18.9	8.10	58
0	24.9	21.6	8.90	61	40	24.9	21.6	10.40	52	40	24.9	21.6	9.60	56	40	24.9	21.6	8.60	63	40	24.9	21.6	10.50	51	40	24.9	21.6	9.60	56
13	26.7	23.2	9.20	63	41	25.5	22.1	11.20	49	45	28.0	24.3	12.40	49	43	26.7	23.2	9.40	62	45	28.0	24.3	13.40	45	45	28.0	24.3	12.20	50
44	27.3	23.7	7 10.00	0 59	42	26.1	22.7	12.60	45	46	28.6	24.8	12.90	48	45	28.0	24.3	9.90	61	46	28.6	24.8	14.40	43	46	28.6	24.8	12.80	48
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dB @ idle: 69db			dB @ idle: 79 db			dB@	idle:	62 db			dB @ idle: 64 db			b		dB @ idle:		75 dB			dB@	idle:	76 db						
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^{*} Prop on Parsun 30 was 3 blade S/S Solas so not standard. Did show what difference a good prop makes on an engine. Same engine as Waterman. * Hidea 30 hitting rpm limiter with tested prop.

SUZUKI DT30 / 2 STROKE TOHATSU M30 / 2 STROKE								YAMAHA F30B / 4 STROKE						YAMAHA CV30 / 2 STROKE					HA 30E) / 2 ST	WATERMAN T30 / 2 STROKE								
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5	3.1	2.7	1.40	48	5	3.1	2.7	1.50	45	5	3.1	2.7	1.20	56	5	3.1	2.7	1.30	52	5	3.1	2.7	2.20	31	5	3.1	2.7	1.80	37
10	6.2	5.4	4.00	34	10	6.2	5.4	2.60	52	10	6.2	5.4	2.70	50	10	6.2	5.4	4.50	30	10	6.2	5.4	4.30	31	10	6.2	5.4	4.10	33
20	12.4	10.8	5.50	49	20	12.4	10.8	4.20	64	20	12.4	10.8	3.10	87	20	12.4	10.8	5.50	49	20	12.4	10.8	5.70	47	20	12.4	10.8	5.20	52
25	15.5	13.5	6.10	55	25	15.5	13.5	5.20	65	25	15.5	13.5	4.30	78	25	15.5	13.5	6.50	52	25	15.5	13.5	6.70	50	25	15.5	13.5	5.90	57
30	18.6	16.2	7.30	55	30	18.6	16.2	6.60	61	30	18.6	16.2	5.40	75	30	18.6	16.2	7.50	54	30	18.6	16.2	7.10	57	30	18.6	16.2	6.50	62
35	21.7	18.9	7.70	61	35	21.7	18.9	8.80	54	35	21.7	18.9	6.50	73	35	21.7	18.9	8.75	54	35	21.7	18.9	8.20	58	35	21.7	18.9	7.10	67
40	24.9	21.6	12.90	42	40	24.9	21.6	10.40	52	40	24.9	21.6	8.80	61	40	24.9	21.6	10.20	53	40	24.9	21.6	9.50	57	40	24.9	21.6	10.20	53
41	25.5	22.1	13.20	42	42	26.1	22.7	13.70	41	44	27.3	23.7	10.60	56	43	26.7	23.2	11.10	52	43	26.7	23.2	12.80	45	42	26.1	22.7	11.40	50
42	26.1	22.7	13.40	42	44	27.3	23.7	14.10	42	46	28.6	24.8	11.10	56	44	27.3	23.7	11.90	50	45	28.0	24.3	13.10	46	44	27.3	23.7	12.20	49
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db@V												db @ WOT:		HISBOATAG	98 db			NOT:	98 (98 db			db @ WOT:			99 db			

stainless steel, in addition to a unique pretreatment that is applied for extra durability. The engine is available in short or long shaft, manual or electric start, and tiller or remote steering.

HONDA BF30



Honda Marine's 4-stroke BF30 incorporate a number of innovative features, including: Auto Start Enrichment; Centre-Mount Tiller; PGM Ignition; 3-to-3 Induction; 4-Front Corrosion Protection; Engine Alert System; and Gas Assist Tilt for running in shallow water. At 72.5kg, the BF30 the heaviest engine in the 30hp line-up.

The BF30 offers a host of features designed for improving fuel efficiency and durability. Its microprocessor-controlled Auto-Start Enrichment System allows it to be started with the simple turn of a key while automatically adjusting the air/fuel mixture for quick and easy starting. Similarly, PGM ignition employs microprocessor technology to accurately control ignition timing during start-up and across the entire rpm range.

The 3-cylinder engine utilises a 3-to-3 induction system, employing one carburettor per cylinder for instant throttle response and increased fuel efficiency. The design, Honda claims, is considerably more responsive than throttle bodies with long intake runners.

An innovative engine alert system uses audio and visual cues, as well as rpm reduction circuits to alert the operator of any issues, while throttle friction control, power tilt/ trim control and engine alert indicators are located at the operator's fingertips for quick, comfortable adjustment at a glance.

A generous -4 to +12-degree trim angle provides maximum performance and handling, and the patented, Non-Linear Mounting System incorporates rubber mounts for reduced vibration and smooth operation at all engine speeds. The Gas Assist Tilt function makes it easy to tilt the engine for running in shallow water, or to raise it completely out of the water for protection.

The BF30 as sold for recreational use offers an industry-best True 5-year, non-declining limited factory warranty that is the same on the last day as it is on the first.

MERCURY 30 EFI



With models ranging from 2.5hp to 30hp, the Mercury Four-stroke Portables are suited for everything from small inflatables to alloy dinghies. The top-of-the-line 30hp is also available in detuned form as a 25hp model. The engine is a 3-cylinder, 526cc 4-stroke with a 2-valve single overhead cam induction., electronic fuel injection. It is available in electric or manual start.

The 25/30 has a battery-free ignition system,



meaning you can start the engine manually by using the rope starter (recoil). The first pull charges the electrical system and the next starts ignition. Mercury offers electric start versions, but all have manual start capability. Features include a 13A high-output alternator (electric start models), CD ignition, dual water inlets to ensure proper cooling for all key powerhead and gearcase components and a water cooled fuel cooler. This helps to minimise vapour lock and hot fuel issues. The 30EFI also comes with safety features such as a low oil pressure warning system, over-rev protection and thermostatically controlled water cooling. The multi-function handle offers one-hand operation and total control over shifting, throttle, steering, engine stop, throttle friction and tilting. There are five trim positions, as well as the shallow water drive option.

Mercury backs the engine with a 3-year corrosion warranty based on Mercury Marine's exclusive XK360 anti-corrosion alloy.

MERCURY 30LW



Like the Mercury 4-stroke 30, the 2-stroke 30 is also available in a 25hp version. Both engines come under the Mercury portable 2-stroke family, which extends from 2.5hp to 30hp.

The basis of the 30hp 2-stroke is a two cylinder, loop charged, single carb, 430cc engine. This is the only carburetted 2-stroke 30hp now available from Mercury and is built for the company by Tohatsu Marine Corporation.

The 30LW is a simple premix engine with mechanical ignition timing advance and a side gearshift. It also has an auxiliary cooling water intake, rod-operated throttle control and a large capacity fuel filter. Unlike some of the direct competition electric start versions, it retains the manual overhead recoil starter. Other features include unique one handed operation, modular electronic CD ignition, shallow water drive, thru-prop exhaust and

The 30 is available in either manual or manual/electric and comes in either long or short shaft and remote or tiller steering. At 52kg it is also one of the lightest 2-stroke engines.

separate fuel tank.

PARSUN T30



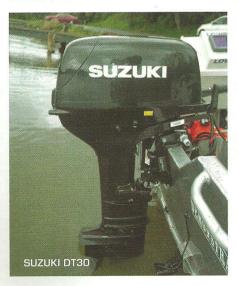
Parsun outboards are designed and engineered by Mars Electric LLC USA and come with a full factory 3-year warranty. Parsun products also meet USA EPA emission standard, specifically EPA 2010 and the latest European CE standards. As did Mercury Marine, the Parsun brand has invested in China as a cost-effective location to produce high volume products.

The Parsun 30hp is based on the older Yamaha E25B and E30 engines and is available in two shaft lengths, with either manual or electric start, tiller steer or with remotes.

Features include, manual tilt and trim with shallow water drive, twist grip throttle, thermostat controlled water cooling system, start-in-gear protection for increased safety, adjustable steering friction for easier manoeuvrability and CDI ignition system for trouble-free starting.

Overall weight is between 52 – 57kg depending on shaft length and the T30 produces its maximum output of 30hp @ 5000 rpm.

SUZUKI DT30



While Suzuki is certainly known for its 4-stroke range of engines, it still offers four 2-stroke engines, including the DT30. Currently there is no 4-stroke 30hp Suzuki.

There are many features on the DT30 such as Suzuki's exclusive pointless electronic ignition

system provides a powerful spark for every start. Suzuki's loop charge intake system is designed with domed pistons and cylinder heads for better fuel economy and greater overall performance.

Another feature is specially designed keystone piston rings that are designed to provide more power to the crankshaft with less energy loss. The Suzuki DT30 has dual water intakes to ensure the engine receives ample water flow for cooling in the event that one intake should become blocked.

Suzuki 2-stroke 30DT comes loaded with features that offer convenience plus easy handling and operation. Tiller handle models come with a steering tension adjustment for simple adjustment of steering control. High output coils offer convenient battery charging, and electric choke systems are standard on all electric start models.

Running a small engine on a small boat usually means you are going to be traveling in shallow water at some time. The DT30 is equipped with a shaft angle adjustment to reduce the possibility of damaging the propeller or motor when motoring in shallow water or near shoals and rocks.

Suzuki's 2-stroke outboards are equipped with a stainless steel water pump housing that offers excellent durability and corrosion resistance for longer life and reduced maintenance.

TOHATSU M30



Tohatsu's M30 is just one of a stable of 23 2-stroke engines in the Tohatsu line-up, ranging in horsepower from 2hp to 140hp. The M30 is one of the lighter 2-strokes and one of the few that is available in three transom lengths, 431mm, 508mm and, with the extension kit fitted, 635mm.

The Tohatsu M30 comes standard with loop charged induction for smooth operation and fuel economy, CD ignition system for quicker starts and a thermostatically controlled cooling system for consistent engine temperature.

Tohatsu also uses a stainless steel water pump housing for durability and high grade marine aluminium alloy that provides the ultimate protection against corrosion. Zinc coating on internal water passages also provides for excellent corrosion resistance.

TOHATSU MFS30

Tohatsu has turned its tried and true 3-cylinder 30hp into a 4-stroke and added electronic fuel injection to give the best possible fuel economy without compromising performance. This is a unique system that is battery-less and provides quick throttle response and very smooth rides on the water. This means that an external battery is not required to power the electric fuel pump or engine management computer. The 30B requires only a 70Ah or 350 cold cranking amps battery for electric

In electric start versions the manual overhead recoil starter is omitted, necessitating a rope around the flywheel should the battery be flat.

The engine is a cross-flow, SOHC four-stroke with multiport sequential EFI, an operating range of 5250-6250 rpm and produces its maximum power at 5750rpm

The MFS30 runs a 16-bit ECU that precisely controls the fuel injection and ignition timing. The tuned intake manifold provides increased low- and mid-speed torque and quieter operation. The tubular structure of the air intake, originally developed by Tohatsu, helps to take in necessary airflow to the engine while preventing water from entering into the motor cover.

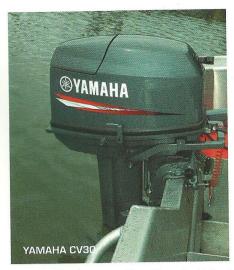
Although Tohatsu MFS30 and its rebadged Mercury 30 EFI outboards have the same powerheads and lower unit, they differ from each other in cowl and bracket design.

YAMAHA CV30 (also called 30HM)

According to Yamaha, CV stands forCustomer Value of course. Built around a proven formula, the CV range provides excellent value and no frills reliability. The CV30 is a 2-stroke, two-cylinder loop charged engine that runs pre-mixed fuel through carburettors.

Standard features include CDI ignition, a 6A alternator output and manual tilt. The CV30 is available in manual or manual/electric and with tiller or remote controls. At 51kg for the short shaft manual version it is also one of the lightest in the group.

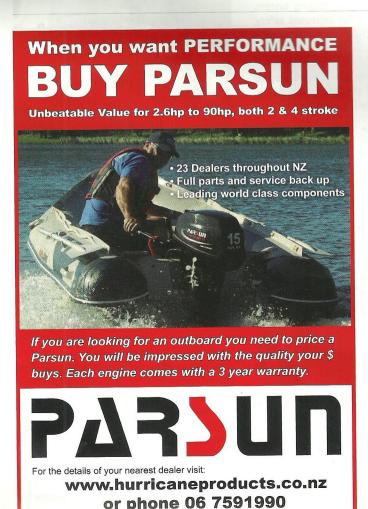
Key features include manual trim & tilt, steering friction adjustment, shallow water drive and start-in-gear prevention. The CV30



is also built tough inside with only highest quality components used, from the extremely durable crankshaft and long-life piston/piston rings to the sturdy gears and gear case. A 5-stage multiple coating system and self-sacrificing anodes help fight corrosion.

YAMAHA 30D

Released on the market in 1986 following the success of the three-cylinder 40 and 50, the 30D was the first three-cylinder 30 available. When first released, apart from the three cylinders, what really separated the 30D from the competition was the multipoint oil injection. (Not available on the manual start engines) Yamaha's "Precision Blend" varies the fuel/oil ratios from around 200:1 when trolling,







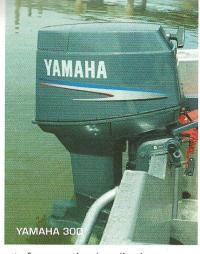




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the model. This enables Yamahas to run very cleanly for a carburetted two-stroke and dramatically reduces oil costs in everyday usage. The 596cc, 2-stroke engines run 100:1 for manual start units and oil injection, and power trim and tilt for the electric start models.

The 30D has CDI ignition to provide automatic spark advance, loop charging for better power and fuel efficiency and is rated as a 1 Star under the Australian OEDA exhaust emission star



ratings. It has a two-year warranty for recreational applications. Depending on the model, the Yamaha 30D has an all-up weight between 59-66kg and is available in electric or manual, tiller or remote steering, long or short shaft and with power trim and tilt or manual.

YAMAHA F30B

The F30B shares the same 3 cylinder block as the F40B and at 747cm3 is the largest displcement engine of all the 30hp outboards and at 97 kgs also the heaviest.

Two model variants are available F30BEHTL and F30BETL - both engines feature electric start (E), power trim & tilt (T), long shaft (L); the difference is forward controls and tiller steer versions.

The Yamaha F30B comes standard with electric starting. Shaft length is 20'



while the choice of tiller steer or forward control models are also available. Furthermore, boaters will appreciate the power trim and tilt system.

The most significant system fitted under the cowl is Yamaha's proven ECM - controlled multi-point electronic fuel injection system. Low exhaust emissions have for many years been a benchmark of Yamaha four stroke outboards. The Yamaha F30B is no exception. This engine exceeds the 2006 USA EPA emission standards and meets the US CARB emission standards and EU marine exhaust emission regulations.

And whether under maximum power or trolling along the riverbank, the Yamaha F30B is a quiet and smooth operator. The variable trolling switch in the tiller handle allows the trolling speed to be adjusted between 650 rpm and 900 rpm in 50 rpm increments.

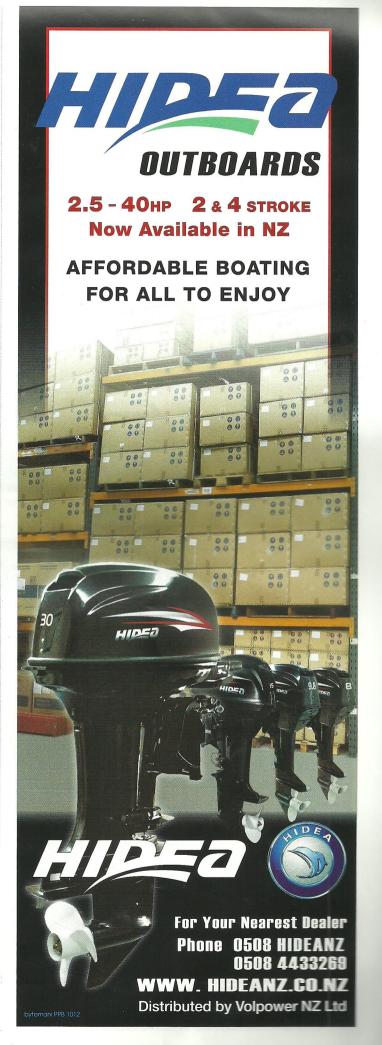
The Yamaha F30B will accept the optional advanced digital network gauges (on models with forward controls), a suite of electronic instrumentation that is widely acknowledged as the best in the industry. And for tiller steer models, the F30B is fitted with the large multi-function tiller handle with all the functions required for engine control mounted on the tiller handle.

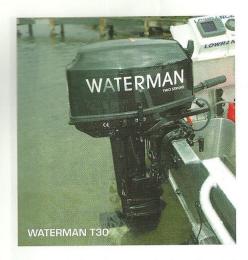
Like all Yamaha outboards, the Yamaha F30B incorporates a leading edge anti-corrosion system which provides exceptional protection of cooling passages and external components against saltwater and harsh UV rays. The freshwater flushing device is also standard.

Yamaha 4-stroke outboards are supported with a full four-year manufacturer's warranty and all two-stroke outboards are backed by a three year warranty - standard conditions apply.

WATERMAN T30

While the newest outboard brand to arrive on our transoms comes with a name that dates back to the very first outboard in 1906, that's where the relationship ends. Cameron Waterman is credited with 'inventing' or





at least cloning the words 'outboard motor' in 1906 and with it the start of a whole new era in boat propulsion. Soon to be dubbed the Waterman Porto, it improved over the years before the company was sold in 1917 to the Arrow Motor and Machine Co, which closed in 1924.

While the brand has only just reached our shores, they have been in production by Waterman Outboards in China since 1974. Simple, reliable and durable, they are based on proven technology pioneered by Yamaha. In fact Waterman says that its parts are completely interchangeable with the equivalent Yamaha models.

The T30 is a two-cylinder 2-stroke, weighing just 53.5kg, is available in long or short shaft, electric or manual, tiller or remote steer and

comes with a manual tilt and trim. Twin carburettors feed the pre-mixed fuel into the 496cc engine. CDI ignition is standard, as is the tiller control and three-blade alloy propeller.

If you actually take the time to check out the specification sheet you will soon understand that the Waterman T30 is actually a Parsun T30 in disguise.

The Result

While we ran twelve engines on the same boat it is really hard to say if one was better than the other. There were some that shone in the fuel consumption area and others that had the top end speed. However overall there wasn't a huge amount of difference.

The four stroke engines, of which we tested three were all at the top end of the speed range around 45 km/h with two up. They were surprisingly quick off the mark and reached maximum speed just as quick as some of the 2 strokes.

As expected they were also the quietest throughout the rpm range. The 4-strokes were the heaviest, all being based on 3 cylinder blocks and also the most expensive, but then that's to be expected. Whether the extra cost is worth it for a 30hp outboard is perhaps debatable and certainly adds a lot to your 'budget' boat package. However they all come with a lot of cool features, especially the advanced tiller steer handles, such as on the Yamaha and Mercury that incorporate so much. With power assist they proved surprisingly light to use when you needed to tilt them

out of the water.

The nine 2-Strokes mostly ran into the mid 90db, which was around 10db more than the 4-Strokes and at idle they were noticeably noiser than the 4-Strokes. However in most cases they could be called portables with an average weight around 55 kgs. The lighest were the Yamaha CV30, Tohatsu M30 and Mercury 30LW which have a listed weight for the tiller steer, rope start engine of 51 kgs. Heaviest was the 2 cylinder Evinrude ETEC at 68 kgs.

Acceleration and top end speed has a lot to do with propeller choice and there was an interesting mix. Propeller sizes varied from 9.5" x 11" on the Mercury EFI to 10 1/4" x 13" on the Evinrude E30. As already mentioned, all but one were three blade out of the box standard alloy. We allowed three of the participants to have a second run as in each case the engines reached the rpm limiters. The small diameter props were allowing the engines to over rev and not reach full potential. Interestingly when we re-tested, in all cases, the Mercury 30EFI, Waterman T30 and Hidea 30F improved and their performance and fuel economy made more sense aginst the competition.

As for engine longetivity, especially of the new brand of outboards the jury is still out. Warranty's range from 5 years in the case of Honda and Mercury to 2 years as offered by Tohatsu and Hidea.

The choice at the end of the day is yours and that will undoubtably depend on which is more important; price, fuel economy or performance.

