



The Yamaha Difference

What is 'The Yamaha Difference'?

A great many exciting, exclusive features set a Yamaha apart from every other brand and they have helped create the unique Yamaha reputation for user-friendly performance, turnkey reliability and matchless durability. It is impossible to list them all, particularly in the detail required for more technically advanced or specialist types of engine, but the following selection offers a brief summary of the more important and helpful features, many of which are to be found on all, or most Yamaha outboards; they are some of the special ingredients which add up to create the magical Yamaha Difference - and to make it ... **The World's Favourite Outboard!**



Yamaha's 4-stroke technology – it's the Number One difference!

In recent years, our driving ambition has been to combine the lightness and compactness of the incredibly reliable, high performance 2-strokes that made us so famous, with the superior economy, smoothness, sophistication and environment-friendliness of 4-stroke engine technology. It's been an elusive goal, but those years of intensive research and on-water testing have proved truly worthwhile and the new-generation Yamaha range is now exclusively 4-stroke, offering the previously impossible - a complete line-up of ultra-modern, advanced-technology engines, all of which are comparable in weight and size to their original 2-stroke predecessors.

So how did we achieve this? Purely and simply by innovating. Look at our Four Stroke range and you'll see technologies like **CDI** ignition, advanced **EFI** (Electronic Fuel Injection) systems, revolutionary and unique engine layouts, ingenious intake and exhaust systems ... even **VCT** (Variable Camshaft Timing). Overseeing all this is a ruthlessly efficient system of

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micro-computer control, monitoring every aspect - from fuel mixture, to combustion efficiency, to maintenance scheduling.

Above all, Yamaha's 4-stroke development has been so successful because from the very start, we never tried to adapt ordinary, everyday automotive engines, as most others have done. We build only pure, marine-specification 4-stroke engines from scratch. Every cubic centimetre, inside and out, designed with total, all-round performance in mind - and dedicated to your pleasure on the water!



Micro-computer ECM (Engine Control Module)

Standard on most **Yamaha** models, this sophisticated, reliable micro-computer is the 'brain' behind many functions that make your Yamaha so reliable, and user-friendly. In reality, it is the 'heart' of a **Yamaha** as well as the 'brain'. An Authorised Yamaha Dealer can simply hook up to a laptop computer via the convenient access port for instant engine diagnosis on models from 50hp upwards.

- Constant monitoring of all data inputs and settings
- Maintains smooth running, trouble-free performance
- Advanced software optimises ignition timing in all conditions
- Monitors and activates warning and protection systems

Start-in-gear' Protection

Prevents engine start when Forward or Reverse is selected. On Manual Start models, the starter is locked when in gears other than Neutral. On Electric Start versions, the power supply to the starter motor is isolated until Neutral is selected.

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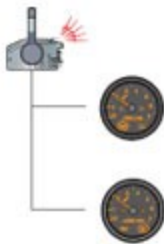
PrimeStart™

Exclusive to Yamaha, the **PrimeStart™** Auto-choke feature is standard on many models. As easy as in your car - start from cold by simply turning the key! Eliminates the need for a conventional choke and the engine 'warms up' automatically, so no need for 'revving-up' in Neutral.

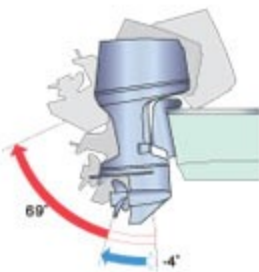
CDI/TCI Ignition Systems

Yamaha ignition systems are 'solid state' components with no moving parts – playing a vital role in the long history of easy starting, reliability and consistent performance for which **Yamaha** outboards are renowned.

- Strong, steady spark generation at all speeds
- Consistency of spark allows longer plug life
- Maintenance-free system



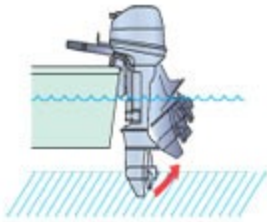
Warning Systems for engine protection and safety
Oil pressure, engine temperature and other conditions are monitored and various audio/visual warning devices are fitted. If a fault occurs, available engine rpm is automatically reduced while the fault exists, providing maximum protection for the engine while running the boat to shore.



Wide Range Power Trim & Tilt

Standard or an option on models 30hp and above, this compact, light and powerful system is unique to Yamaha. Quick response from a convenient push-button control makes trim and tilt swift, smooth and easy. The -4° to $+16^{\circ}$ range offers best possible hull performance in all conditions. Negative trim setting (-4°) improves acceleration and brings the boat onto the plane quickly.

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Shallow Water Drive

Enables safe manoeuvring in shallow water and protects the propeller.

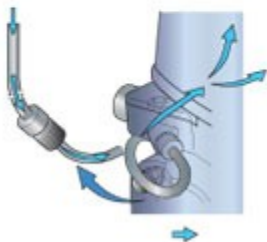


Digital Instruments and NEW Digital Network Gauges

Digital instruments are available as standard or as options on many Yamaha outboards. Designed for optimum visibility and durability, they provide accurate information to help maximise engine performance and efficiency.

- Multifunction Tachometer: RPM - Hours - Trim angle - Oil pressure - Warning lamps
- Multifunction Speedometer: Speed - Trip - Time - Fuel - Battery voltage
- Fuel Management Gauge: Fuel consumption - Fuel economy

For 2007 (and later models) with Electronic Fuel Injection systems, Yamaha have created an exciting range of Digital Network Gauges, which work together with a sophisticated digital network control system.



Fresh Water Flushing System

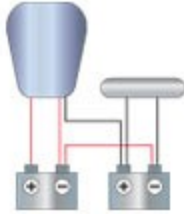
Standard on all models 6hp and above. No need to start or run the engine - just connect a hose to the easy-access, front-mounted connector and flush salt and dirt from the engine waterways. Reduces corrosion and extends engine life.

High-output Alternators

Standard on most Yamaha models. Plenty of power is always available to start the engine, even after

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prolonged periods of idling or running at low revs using multiple accessories.



Dual Battery Charging System

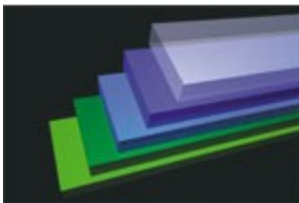
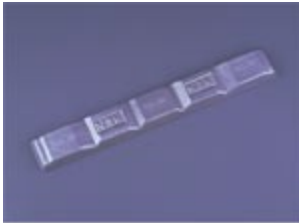
Charges 2 batteries at the same time, keeping plenty of power available for engine starts, even after long periods at low rpm. Available as an option on F150 and above.



Counter-rotating Propeller Models

A standard twin-engine installation (both propellers turning clockwise) 'pulls' the boat towards the port side, making steering difficult, especially at higher speeds. All models 115hp and above are available with a counter-rotating propeller, offering perfect 'neutral helm' control when fitted alongside a standard mode.

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Yamaha's Ideal Anti-corrosion Protection

A unique 50-year long programme of dedicated research, development and testing has resulted in the most comprehensive, well-proven coating and protection system ever created for an outboard.

YDC-30

The unique, anti-corrosion aluminium alloy developed by Yamaha to protect exterior engine components.

Self-sacrificing anodes

Fitted in carefully calculated positions on engine casings, mounting brackets, lower units - and inside the engine block and waterways of some engines - high-grade alloys are used to help control and minimise the effects of saltwater.

Special zinc coating

Applied to all non-moving stainless steel parts to increase resistance to galvanic corrosion - also acts as a back-up to the sacrificial anode system.

High quality stainless steel

Special anti-corrosion steel is used for many components such as drive and prop shafts, steering arms and through-tubes.

5-Stage exterior coating

After being oven-baked for ultimate adhesion and hardness, a build-up sequence of tough primers, undercoats and acrylic resins are sealed in by a final coat of clear urethane lacquer. This gives every Yamaha its unique lustre and long-lasting, easy-maintenance gloss finish.