

XTO OFFSHORE[®]

5.6L V8 INTEGRATED POWER SYSTEM

XTO Offshore[®] Re-designed with More Convenience, Technology and Power

Yamaha takes the next step forward in premium outboard power with the introduction of the upgraded XTO Offshore 450. Featuring the same 5.6L of big block displacement and long list of features as the original XTO 425, Yamaha improves upon the outboard that took the world by storm.

Thanks to the tremendous torque and power coming from its 5.6 liters of V8 displacement, Yamaha's XTO Offshore outboard has found a home maneuvering today's larger single- through quint-powered boats across the water with ease. At the same time, it continues to astound operators with its convenience and ease of operation with features like built-in digital electric steering and Thrust Enhancing Reverse Exhaust.



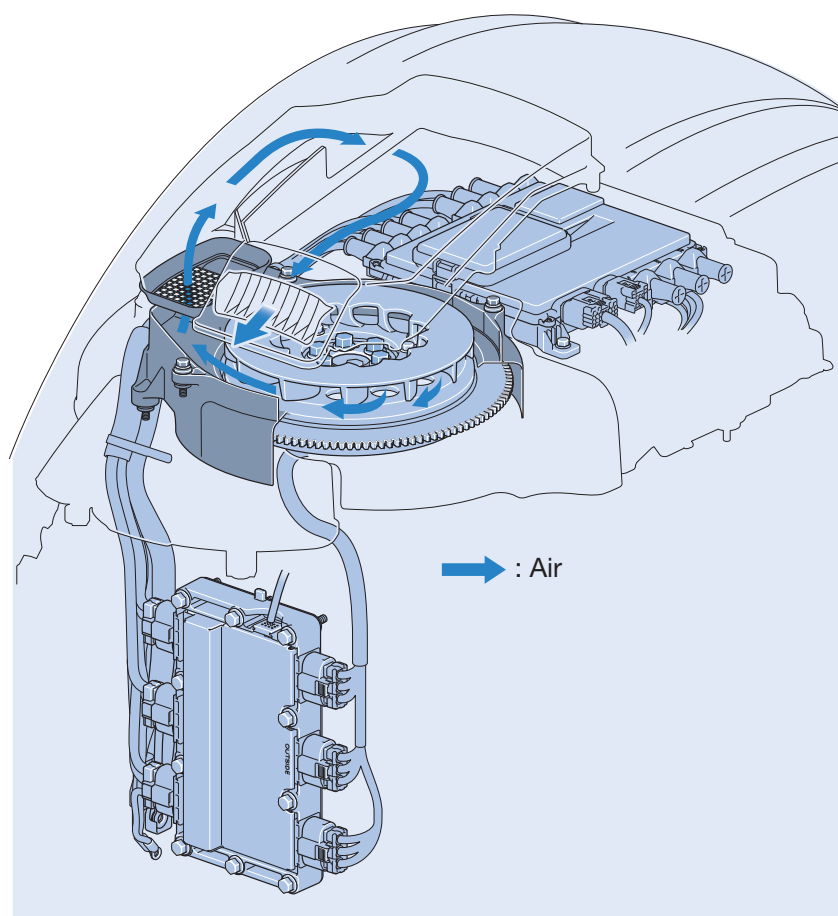
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REMEMBER to always observe all applicable boating laws. Never drink and drive. Dress properly with a USCG-approved personal flotation device and protective gear. Boat smart from the start. Take a boating safety course and get a free vessel safety check annually for your boat. For more information, contact: United States Coast Guard Auxiliary online at www.cgaux.org, or United States Power Squadrons at 888-for-usps or www.usps.org.

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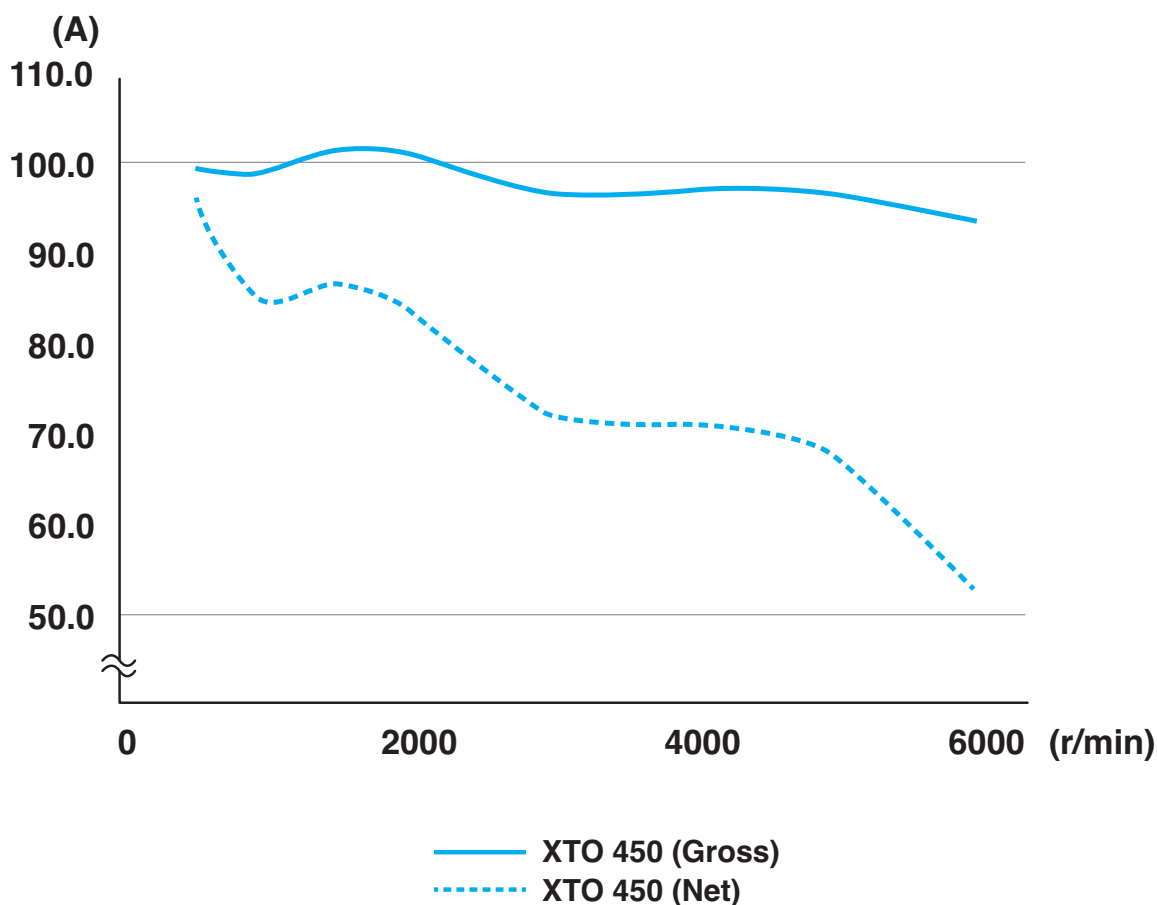
WHAT'S CHANGED?

More charging power – To help meet the extreme electrical demands of today's larger boats, the Yamaha XTO Offshore 450 features a three-phase, simultaneous charging system that delivers an incredible amount of net* amps at lower rpm, where it's needed most. Using Phase Angle Control (PAC) componentry and a super-strong magnetic field, XTO Offshore 450 models produce up to 96 net amps per engine in neutral. That's plenty of power for today's popular, high-demand devices like gyro stabilizers, air conditioning, sound systems and more. In fact, the Phase Angle Control charging system on the new XTO Offshore 450 is so powerful, it can even eliminate the need for an on-board generator in many applications. The system also prioritizes charging to the starting batteries, keeping them charged and ready for action at all times. Now, boaters can relax and enjoy being on the water with the confidence they've got the most innovative charging system available in an outboard.



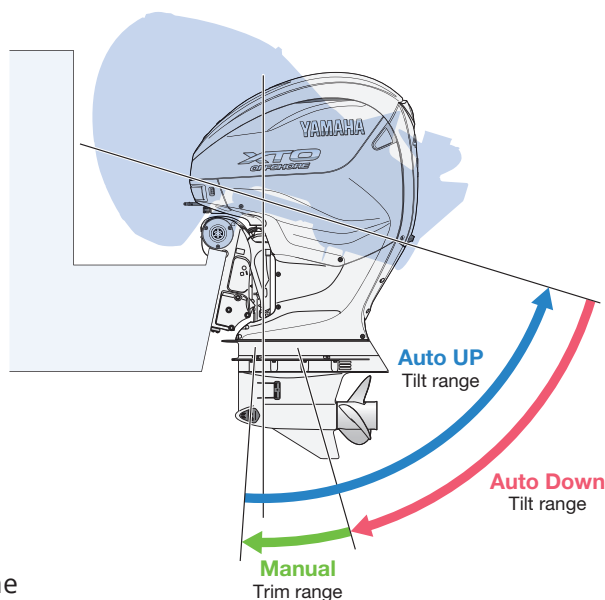
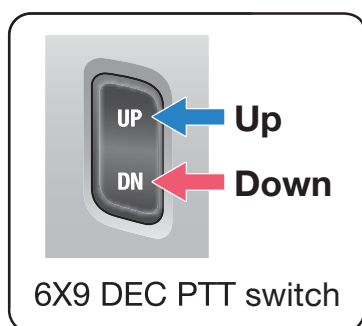
**Amps remaining after steering and all engine functions are subtracted.*

GENERATOR OUTPUT AND CHARGING PERFORMANCE

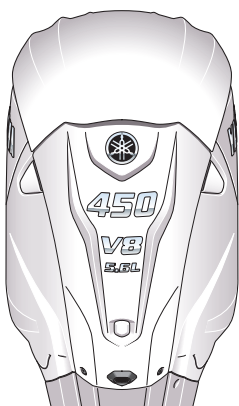
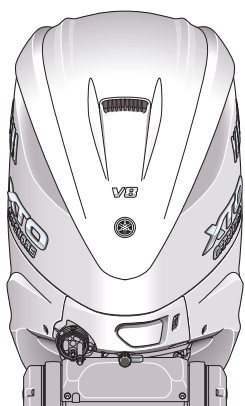


- Up to 96 amps of NET charging power, and at low rpm where it's needed most
- Net output is per outboard and is stackable, multiplying amperage output by the number of outboards. That means up to 480 net amps in quint configuration, at idle
- Starting power is always maintained. Full charging power goes first to starting batteries until charged, then it's directed to the house batteries
- Built-in protection against accidental reverse polarity connections

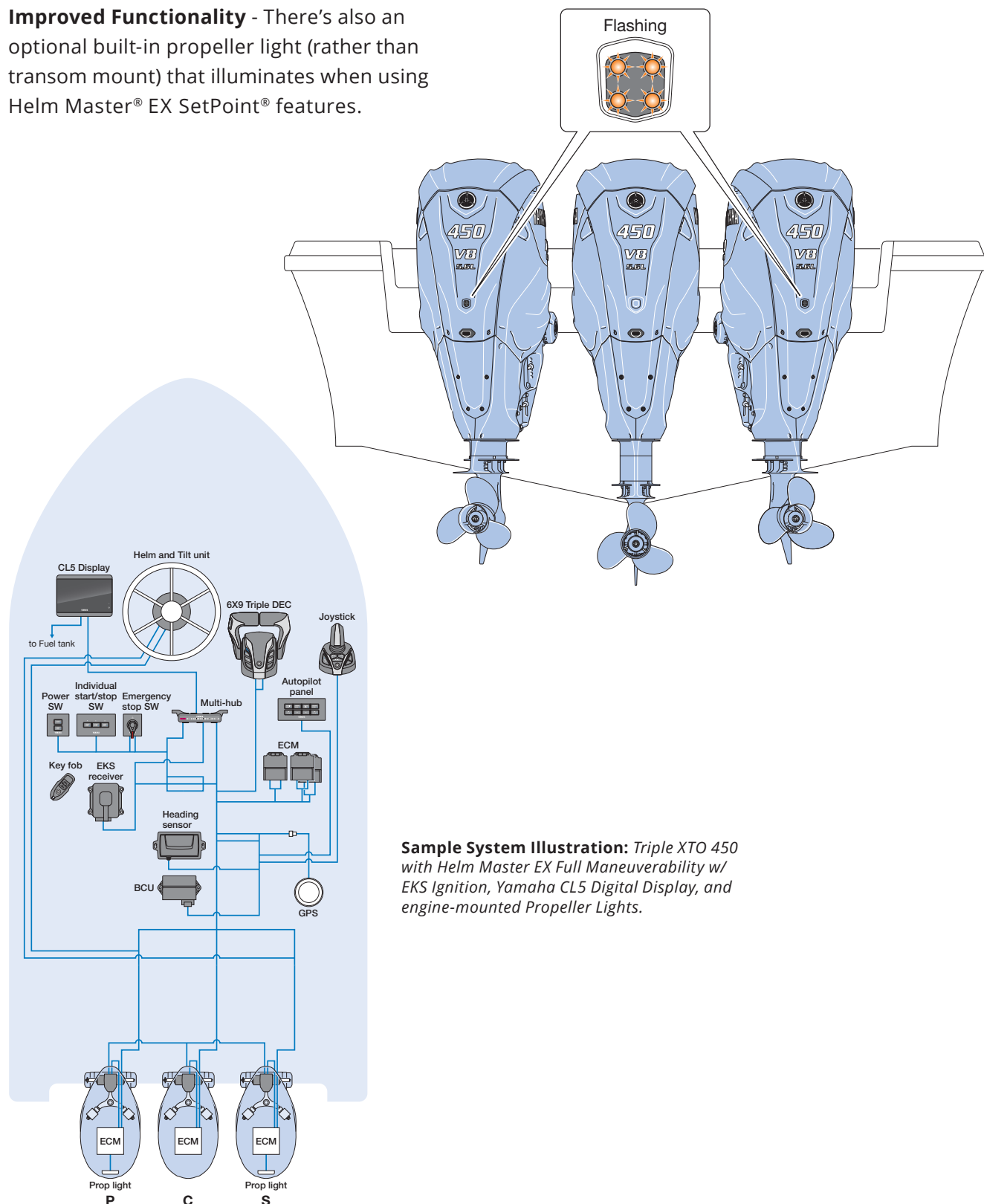
More Convenience – Now, every XTO Offshore 450 is equipped with Yamaha’s exclusive TotalTilt® feature for faster, easier engine tilting. When enabled, it allows complete tilt up from any position with a simple double-push of the “UP” trim/tilt button, or full tilt down (until trim ram contact) by the same double push of the “DOWN” trim/tilt button. A warning horn will sound just before and during these operations. Movement and the horn can be stopped anywhere in between by pressing the tilt button again. It’s worth noting that TotalTilt® comes the factory defaulted to “OFF”. Use the Yamaha CL5 or MFDI-equipped display to change the default setting if this function is desired. Be sure to consult the owner’s manual for instructions.



Improved Appearance – New raised chrome graphics on the sides, a re-styled panel in back, a new flush-mounted manual flush connection up front and hidden external wiring near the bracket add to the premium look of this powerful outboard.



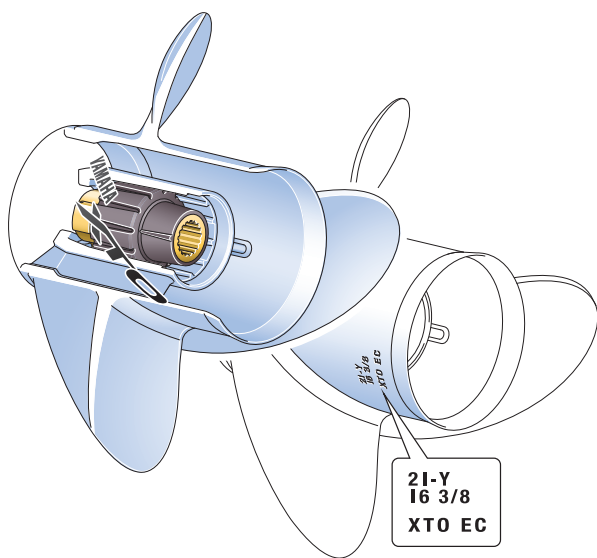
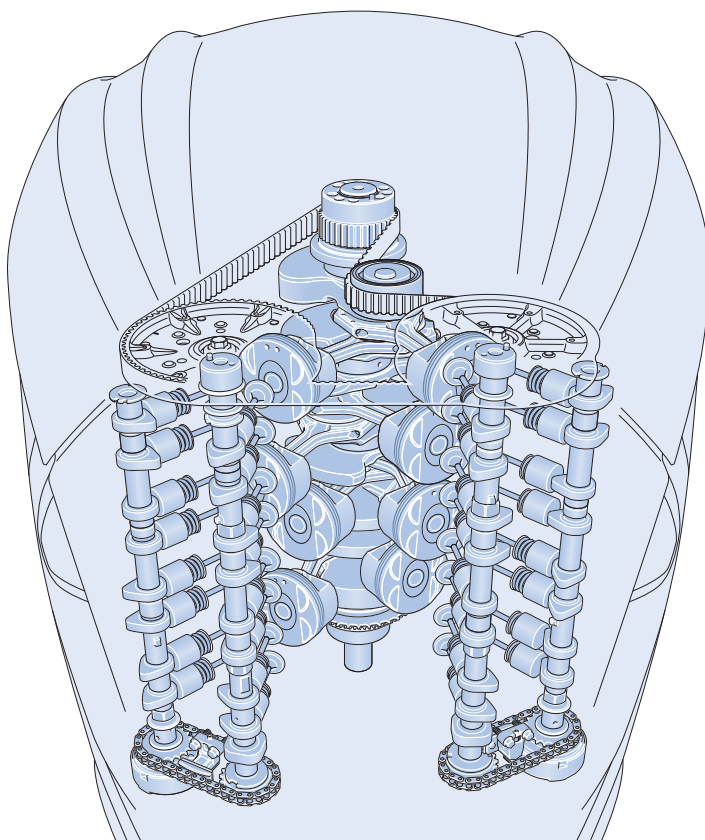
Improved Functionality - There's also an optional built-in propeller light (rather than transom mount) that illuminates when using Helm Master® EX SetPoint® features.



Sample System Illustration: Triple XTO 450 with Helm Master EX Full Maneuverability w/ EKS Ignition, Yamaha CL5 Digital Display, and engine-mounted Propeller Lights.

More horsepower, smoother shifting

The upgraded XTO Offshore now delivers 450 horsepower to push today's bigger boats more efficiently, with increased civility in and around the docks.



New propeller options – New XTO EC® propellers are specifically created for applications where propeller ventilation may be an issue due to the power and torque of XTO Offshore outboards.*

Yamaha also added a 27-inch pitch to its XTO OS® line of propellers for lighter weight XTO applications that have the available wide-open throttle rpm to potentially drive more top speed.

**See separate XTO EC Propellers and XTO OS Propellers Hot Sheets for more information.*

FEATURES



ECM control system



Variable trolling RPM



Digital electronic throttle and shift



Power Management System



102 Amp high output alternator



2.5 inch Rigging Tube



Built-in Digital Electric Steering (DES)



TotalTilt function with integrated tilt stop limit



Wide-span engine mounting system



Wide Tilt Range



Durable lower unit



Thrust Enhancing Reverse Exhaust



XTO EC Series (SDS) (optional)



Counter rotation system

NEW



Elegant, sleek, lightweight design



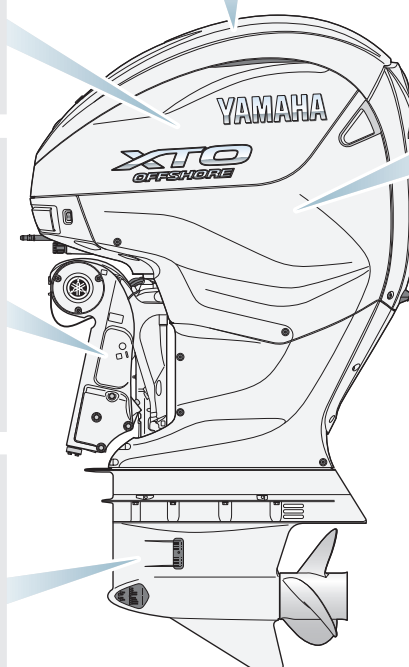
2 factory colors



Multi-part cowling system



Exhaust fan and outlet



32-valve, DOHC, 60-deg. V5 5.6L



Direct ignition



Diamond-like carbon (DLC) lifters



Variable camshaft timing (VCT)



Chain-driven camshafts



Plasma-fused sleeveless cylinders



High-pressure fuel delivery system



Twin electric fuel pumps



Dual chamber oil pump



Dual chamber water pump



Large oil drain plug and strainer



Compact in-bank exhaust



Closed fuel vapor system



Blow-by gas reburning system



In-water gear lube change system

Rigging Accessories



Helm Master EX compatibility

NEW



Engine mount propeller light (optional)

Warning & Protection



Over-heat warning



Over-rev limiter



Low oil pressure warning



Knock control



Fail-safe system



YDIS



YAMAHA immobilizer

YAMAHA Ideal Anti-Corrosion System



Self-sacrificing anodes



Electrodeposited inside/outside paint process



Anodized treatment



Dual flush system

SPECIFICATIONS

ENGINE

Type	4-Stroke, DOHC V8 - 32 valves
Displacement	5559 cm ³
Bore x Stroke	96.0 x 96.0 mm
Full Throttle RPM Range	5000 – 6000
Variable Trolling RPM Range	600 – 1000 RPM
Horsepower Rating at Propshaft	450hp @ 6000 RPM
Compression Ratio	12.3:1
Fuel Induction/Scavenging	DOHC, DI, 4 Valves per Cylinder
Alternator Output	Gross: 102 Amps, Max Net: 96 Amps, Max
Starting Method	Electric w/ PTT
Ignition	TCI Microcomputer
Lubrication	Wet Sump
Degree of Trim	-4° through +16°
Degree of Tilt	-4° through +77°
Exhaust	Through Propeller (Except in Reverse Under 2500 RPM)
Cooling	Water, Thermostatic Control
Steering	Integrated, Electric Actuation

DRIVE

Gear Shift	F-N-R
Gear Ratio	(25/14) 1.79
Control Method	Digital Electronic Control

SHAFT LENGTH

See Model Code	X = 25", U = 30", E = 35"
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FUEL AND LUBRICATION

Recommended Fuel	Regular Unleaded (Minimum Pump Octane 89)
Recommended Oil	Yamalube Marine Lower Unit Gear Lube HD
Engine Oil Capacity	7.8L / 8.2 U.S. Quarts (with filter) 7.5L / 7.9 U.S. Quarts (without filter)

LIMITED WARRANTY

Pleasure	Five Years
Government	Three Years
Commercial	One Year

WEIGHT*

XF450XSA = 437 kg / 963 lbs, LXF450XSA = 437 kg / 963 lbs, XF450USA = 448 kg / 988 lbs, LXF450USA = 448 kg / 988 lbs,
XF450ESA = 458 kg / 1010 lbs, LXF450ESA = 458 kg / 1010 lbs, XF450XSA2 = 437 kg / 963 lbs, LXF450XSA2 = 437 kg / 963 lbs,
XF450USA2 = 448 kg / 988 lbs, LXF450USA2 = 448 kg / 988 lbs, XF450ESA2 = 458 kg / 1010 lbs, LXF450ESA2 = 458 kg / 1010 lbs

*Weight is measured without motor oil, gearcase oil and propeller.

POWER/PERFORMANCE

- 5.6-Liter Naturally-aspirated V8
- Direct Injection
- Highest Compression Ratio of Any Naturally-aspirated Gasoline Outboard (12.3:1)
- Unique Fuel System with Five Pumps and Up to 2900 PSI of Fuel Pressure
- In-Bank Exhaust
- Dedicated, Large-diameter XTO Propellers
- Iridium Spark Plugs

RELIABILITY/DURABILITY

- Endurance Driven Camshafts
- DLC (Diamond-like Carbon) Coated Lifters
- Dual Chamber Oil Pump
- Two-stage Water Pump
- Quad Thermostats
- Plasma-fused Sleeveless Cylinders

CONVENIENCE/CONTROL

- In-water Gear Lube Change
- Thrust Enhancing Reverse Exhaust
- Multi-part Cowling
- Pump Stop Power Tilt Limit
- TotalTilt System
- Semi-conductor Power Trim and Tilt Relay
- Wider Tilt Range
- Dual Flush System with In-Boat Flush
- Wide-span Powerhead Mounting
- High-output Net Charging Amps
- Improved Rigging Tube and Grommet
- Color Choice