Boats and motors come in a large variety of combinations. See your authorized dealer for correct prop. selection to meet recommended RPM range at W.O.T.

DF300AP/250AP SPECIFICATIONS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DF300AP</th>
<th>DF250AP</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGINE TYPE</td>
<td>4-Stroke DOHC 24-Valve</td>
<td>Electric</td>
</tr>
<tr>
<td>FUEL DELIVERY SYSTEM</td>
<td>Multi-Point Sequential</td>
<td>Electronic Fuel Injection</td>
</tr>
<tr>
<td>TRANSMISSION</td>
<td>X: 635 (25), XX: 762 (30)</td>
<td>Electric</td>
</tr>
<tr>
<td>STARTING SYSTEM</td>
<td>Electric</td>
<td>Electric</td>
</tr>
<tr>
<td>DRY WEIGHT (kg.)</td>
<td>X: 274 (60), XX: 279 (61.5)</td>
<td>X: 274 (60), XX: 279 (61.5)</td>
</tr>
<tr>
<td>NO. OF CYLINDERS</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>PISTON DISPLACEMENT (cm³)</td>
<td>4,028 (245.6)</td>
<td>4,028 (245.6)</td>
</tr>
<tr>
<td>BORE x STROKE (mm.)</td>
<td>98 x 89 (3.87 x 3.50)</td>
<td>98 x 89 (3.87 x 3.50)</td>
</tr>
<tr>
<td>MAXIMUM OUTPUT kW(PS)/rpm</td>
<td>154 (6.1) / 5,800</td>
<td>154 (6.1) / 5,800</td>
</tr>
<tr>
<td>FULL THROTTLE OPERATING RANGE rpm</td>
<td>5600-6300</td>
<td>5600-6300</td>
</tr>
<tr>
<td>STEERING</td>
<td>Remote</td>
<td>Remote</td>
</tr>
<tr>
<td>OIL PAN CAPACITY L (U.S./Imp. qt.)</td>
<td>3.2 (US.)/2.6 (Imp.)</td>
<td>2.5 (US.)/2.0 (Imp.)</td>
</tr>
<tr>
<td>IGNITION SYSTEM</td>
<td>Fully-Transistorized</td>
<td>Fully-Transistorized</td>
</tr>
<tr>
<td>ALTERNATOR</td>
<td>12V 55A</td>
<td>12V 55A</td>
</tr>
<tr>
<td>ENGINE MOUNTING</td>
<td>Shear Mount</td>
<td>Shear Mount</td>
</tr>
<tr>
<td>TILT METHOD</td>
<td>Power Tilt and Trim</td>
<td>Power Tilt and Trim</td>
</tr>
<tr>
<td>GEAR RATIO</td>
<td>2.06:1 (Two-stage Reduction Gear)</td>
<td>2.06:1 (Two-stage Reduction Gear)</td>
</tr>
<tr>
<td>GEAR SHIFT</td>
<td>F-W (Direct)</td>
<td>F-W (Direct)</td>
</tr>
<tr>
<td>EXHAUST</td>
<td>Through Prop Hub Exhaust</td>
<td>Through Prop Hub Exhaust</td>
</tr>
<tr>
<td>DRIVE PROTECTION</td>
<td>Rubber Hub</td>
<td>Rubber Hub</td>
</tr>
<tr>
<td>Propeller Diameter (in.)</td>
<td>16 x 15”</td>
<td>16 x 15”</td>
</tr>
<tr>
<td>Propeller Pitch</td>
<td>16-17</td>
<td>16-17</td>
</tr>
<tr>
<td>3-BLADE STAINLESS STEEL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TYPE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STEEL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STRUCTURAL MATERIAL</td>
<td>Stainless steel</td>
<td>Stainless steel</td>
</tr>
<tr>
<td><strong>Regular Rotation only</strong></td>
<td><strong>Regular Rotation only</strong></td>
<td><strong>Regular Rotation only</strong></td>
</tr>
</tbody>
</table>

Masahiro Nishiba (Development Design Group)
In charge of Strength Analysis. Suzuki Employee for 5 years.

I adapted the troll control introduced on the DF90A for use on the DF300AP/250AP. With the DF90A, multi-outboard installations could provide troll control to all engines in the group (Boat Control Module), which allows control of multiple engines individually. With the DF300AP however, the BCM (Boat Control Module) cannot provide troll control to all engines simultaneously, so we had to find another way to solve the problem. To achieve this, we focused on how we could make the lower unit stronger and more rigid. We found that by using a single bearing system, we could increase durability with multi-outboard installations. We focused on making sure the drive shafts on the same plane as much as possible, which is significantly more durable. At the same time we made sure that the gear case was rigid enough to accommodate the drive shafts. When their support structures are stable, the fundamentals. For example, gears deliver needed function and gear durability. To achieve success, we stuck to the fundamentals. For instance, when developing new systems, we focused on keeping the drive shaft and propeller shafts as far apart as possible. We focused on making sure the drive shafts were far apart, which is the world's most advanced outboard technology. With this, we are more confident that we will look back on outboard motor design and recall “those old motors and multi-outboard systems that they used to make”.

Shuichi Sugiyama (Development Design Group)
In charge of Experiment. Suzuki Employee for 4 years.

On the DF300AP, we created a more advanced Suzuki Selective Rotation System. The finished design is slightly larger than the conventional but making full use of computer analysis of the lower unit gears. We focused a lot on how we could make the gear case stronger and more rigid. At the same time we made sure that the support structure was stable, so with the Suzuki Selective Rotation System we could achieve durability when their support structures are stable. To achieve success, we stuck to the fundamentals. For example, gears deliver needed function and gear durability. To achieve success, we stuck to the fundamentals. For instance, when developing new systems, we focused on keeping the drive shaft and propeller shafts as far apart as possible. We focused on making sure the drive shafts were far apart, which is the world's most advanced outboard technology. With this, we are more confident that we will look back on outboard motor design and recall “those old motors and multi-outboard systems that they used to make”.

Suzuki encourages you to operate your boat safely and with respect for the marine environment.

Please read your owner's manual carefully. Remember, boating and alcohol or other drugs don't mix. Always wear a personal flotation device.

A word from Suzuki engineers

Keiji Sasaki (Product Planning Group)
In charge of Strength Analysis. Suzuki Employee for 5 years.

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The World’s First Selective Rotation Outboards

Award Winning Design Integrates Both Regular and Counter-Rotation Operation into a Single Unit

Showcasing Suzuki’s advanced technologies and designs, Suzuki’s flagship DF300 outboard has been recognized twice as the most innovative outboard in the industry. The original DF300 was launched as the world’s first 220.7kW (300PS) 4-stroke outboard and was acknowledged for this by the National Marine Manufacturers Association (NMMA) with its 2006 Innovation Award. The new DF300AP incorporates several new features, the most notable being Suzuki Selective Rotation. By strengthening the lower unit’s forward and reverse gearing, Suzuki engineers have designed a lower unit for the DF300AP that will run in either right or left rotation. With this world’s first feature, the DF300AP was recognized once again with the 2012 NMMA Innovation Award.

The DF250AP is based on the DF300AP and shares the same award winning innovations and designs of Suzuki’s flagship outboard. Advanced features like Suzuki Selective Rotation, Suzuki Precision Control, and Suzuki Lean Burn Control, plus big V6 power combine to provide boaters with outstanding performance and great convenience.

Main Features of the New DF300AP/250AP

- Rated at 220.7kW (300PS)/184kW (250PS), the 4.0-liter, DOHC V6 24-valve flagship DF300AP/250AP delivers plenty of power and torque.
- New lower unit features the Suzuki Selective Rotation system—the world’s first selective rotation outboard—and a new two-way water inlet.
- Suzuki’s Precision Control (Electronic Throttle and Shift System) offers smooth and positive gear operation.
- Suzuki’s Lean Burn Control system combined with Suzuki Precision Control delivers remarkable fuel economy over a wide operating range and smooth power transitions when power is required.
- Suzuki’s O2 Sensor Feedback Control system delivers low exhaust emissions.

Suzuki Receives Seventh NMMA Innovation Award

When it comes to leading edge technology, Suzuki has time and again, delivered technological advancements that put Suzuki outboards at the forefront of advanced outboard motor design. Recognizing the DF300AP as the most innovative outboard introduced over the past year, the National Marine Manufacturers Association (NMMA) awarded the DF300AP with its prestigious NMMA Innovation Award for 2012 making an unprecedented seventh win for Suzuki and following last year’s award with the new DF300AP, a second, unprecedented back-to-back win for Suzuki. The number of awards that Suzuki has garnered over the years reflects the company’s strong desire to provide its customers with the very best, most innovative and most reliable products possible and acknowledges the outstanding work of the company’s engineering staff.

New Lower Unit

Compared to the original DF300, the biggest changes you’ll find on these outboards are in the lower unit, which was redesigned for the Suzuki Selective Rotation system—the world’s first integration of regular and counter-rotation mechanisms into a single unit. The system consists of a new drive gear layout in the lower unit that allows the outboard to operate in either regular or counter-rotation mode, and a switch that connects to a circuit in the engine compartment that engages the counter-rotation mode. Like the DF300, the new DF300AP/250AP utilizes an aggressive final drive ratio of 2.08:1 allowing it to turn a 450mm (18-inch) diameter propeller available in various pitch sizes for optimum performance on a wide variety of boats. Changes to gear designs provide greater durability, and adding a two-way water inlet changes water flow into the cooling system for increased cooling efficiency.

Suzuki Selective Rotation

In multi-outboard installations on large boats, a counter-rotation outboard is usually paired with a regular rotation model to help keep the boat traveling on an even keel and in a straight line. The DF300AP/250AP is built with special counter rotating gearing in the lower unit, which causes the prop to rotate in the opposite direction. Suzuki Selective Rotation eliminates the need to purchase a dedicated counter-rotation outboard by using a special switch that when connected to a circuit inside of the engine compartment, turns a regular rotation outboard into a counter-rotation model with a counter rotational propeller.** This industry first is made possible through a special, unified design of gears, shaft, and bearings in the lower unit that are designed to operate reliably and efficiently in either regular or counter-rotation directions.

Counter-rotation vs. Regular Rotation

- Regular Rotation: The lower unit's forward and reverse gearing, Suzuki engineers have designed a lower unit that are designed to operate reliably and efficiently in either regular or counter-rotation directions.

Superior Durability

With the addition of Suzuki Selective Rotation, gears in the lower unit were redesigned using a different alloy and slightly larger diameters delivering greater longevity. The gears are specially heat treated creating gears that are highly durable.

Two-way Water Inlet

The engine’s cooling system relies on water supplied through low water intakes located on the lower unit, utilizing this dual low water inlet configuration increases water flow into the lower unit, which delivers greater cooling efficiency. Positioning the forward inlet at the gear case nose delivers a greater water supply especially at high speeds. The second inlet is also positioned lower allowing the DF300AP/250AP to operate in shallow water conditions.

Newly Designed Low Drag Gear Case

The new DF300AP/250AP features a redesigned low drag gear case developed to accommodate the new gears utilized in the Suzuki Selective Rotation system. The case itself is actually larger than the previous model to provide increased gear durability, however it is designed with a smoother, more hydrodynamic shape that allows it to move through the water with less drag and greater efficiency. Areas with the highest drag are indicated in red in the illustrations below. The comparison shows that the new design allows the lower unit to slice through the water with less drag.

Bottom Line

There is a difference of 101.86mm.

There is a difference of 101.86mm.

There is a difference of 101.86mm.
Suzuki’s Lean Burn Control System

Suzuki’s innovative Lean Burn Control System was first introduced on the DF300AP/250A to great acclaim from boaters and the media alike. It predicts fuel needs according to operating conditions allowing the engine to run on a more efficient fuel mixture through the use of a lean-air/fuel ratio. It delivers its benefits over a wide operating range, providing significant improvements in fuel economy from low-speed operation into the cruising range. Combining this system with the Suzuki Precision Control, electronic throttle and shift system, allows the operator precise control to increase or decrease the engine RPM for improved fuel economy over a wider operating range. This combination also delivers smooth power transitions throughout the entire RPM range. In-house testing shows that while cruising, the DF300AP is 2% more economical than the original non-Lean Burn DF300 without sacrificing any power of the original DF300.

### Comparison of Fuel Consumption per 1 Liter of Fuel

<table>
<thead>
<tr>
<th>Conditions</th>
<th>DF300AP vs. Original DF300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>Uses 14% less fuel compared to the original DF300</td>
</tr>
<tr>
<td>High</td>
<td>Uses 14% less fuel compared to the original DF300</td>
</tr>
<tr>
<td>Torque Curve (DF300AP)</td>
<td>Uses 14% less fuel compared to the original DF300</td>
</tr>
</tbody>
</table>

32-Bit ECM and Suzuki’s Multi Point Sequential Electronic Fuel Injection

Suzuki pioneered the use of multi-point sequential electronic fuel injection in four stroke outboards with the introduction of the original DF300 and DF350. At the heart of the DF300AP/250AP’s multi point sequential fuel injection system is the ECM (Engine Control Module), which constantly monitors a large amount of data, in real-time, from a series of sensors placed in critical areas on the engine. This comprehensive network of sensors includes the Manifold Absolute Pressure Sensor, Crankshaft Position Sensor, Intake Air Temperature Sensor, Cylinder Wall Temperature Sensor, Camshaft Position Sensor, and Exhaust Jacket Temperature Sensor. Using a very powerful 32-bit computer, the ECM processes data from all of these sensors and instantly calculates the optimum amount of fuel to be injected at high pressure into each of the vehicle’s cylinders by the multi point sequential fuel injection system. Benefits of this system include reduced exhaust emissions, which allow the DF300AP/250AP to comply with the California Air Resource Board (CARB) 3-Star emission requirements, lower fuel consumption, smoother starts, crisper acceleration, smoother performance, and maximum efficiency.

### Suzuki Moduarl Instrument System (SMS)

Suzuki’s Modular Instrument System (SMS) is a state-of-the-art electronic display screen on the face of the high-speed control. It shows digital data to monitor real-time graphic and numerical data.

#### SMS Multi-Function Gauge

The 4” multi-function gauge is an easy-to-locate and expandable display system to present graphical and numerical data to Multi-Function controls. This easy to install and set-up system can be used with nearly any engine and the DF300AP/250AP outboard. When connected to an “SMA2300” Smart Marine Instrument System, the four gauge readsouts from computer electronics, probes and the exclusive SMS engine sensors into convenient functions. (Engine Model with 4” gauge only)

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**Suzuki’s Advanced Technology Delivers the Most in Performance VVT (Variable Valve Timing)**

Suzuki engineers designed the 4.0 liter V6 engine with an aggressive intake timing with the camshaft increased or decreased by altering the timing of the intake and exhaust valves are fully closed, creating a momentary overlap in the timing where both sets of valves are open. Using VVT, this overlap can be increased or decreased by altering intake timing with the camshaft resulting in optimum timing for low and mid-range operation.

### Suzuki’s Precision Control (Electronic Throttle and Shift Systems)

Suzuki Precision Control is a technologically advanced computer-based control system that replaces the mechanical control cables found in conventional control systems with electronic wiring that eliminates the source of friction and resistance. While you enjoy smooth, little friction throttle and shift operation, the system’s computer is processing and transmitting commands in real-time to actuators at the engine that deliver precise throttle controls with smoother, decisive shifting. This is most evident in the low rpm range where operation isnoticeably smooth and accurate. When combined with Suzuki’s Lean Burn Control System it allows control of fuel and air flow to boost the limit of the controllable revolution range improving fuel economy over a wide operating range. Suzuki Precision Control also features built-in systems that help guard the engine and drive against damage due to mishandling, and its design and simple wiring make installation easy, reducing the time required for rigging and adjustment. The system offers precision control for single, twin or triple installation as well as dual station operation.

#### Control Panel

Suzuki’s Remote Control System puts precision operation right at your fingertips.
**DF300AP/250AP LEAN BURN PRODUCT INFORMATION**

**Long Track Intake Manifold**
Another performance enhancing feature on the DF300AP/250AP is a tuned long track intake manifold. Using long intake pipes tuned to provide smooth airflow into the engine the system provides the DF300AP/250AP with enhanced low-end power.

**Large Air Intake with Water Separator**
The DF300AP/250AP is designed with a large air induction port to maximize airflow into the engine in order to obtain maximum power output. The increased airflow produces more low- to mid-range torque and provides a wider power band that is necessary in an outboard engine. Suzuki also designed the system with a water separator, which aids in keeping water out of the electronic throttle body and a heat shield to keep intake air from being heated by the engine.

**Spherical Bore Throttle Body**
An 81mm spherical bore throttle body smooths the turbulent airflow into the engine that occurs as the throttle begins to open. Providing a smoother airflow during acceleration results in increased throttle control and stable engine operation at low rpm.

**Fuel Cooler**
The fuel cooler the fuel the denser it is, and the denser it is the better performance it delivers. Incorporating a fuel cooler in the DF300AP/250AP’s fuel delivery system cools the fuel before it enters the engine. Providing the engine with an optimum fuel supply results in better combustion and more performance.

**Strengthened Forged Pistons**
The upper portion of pistons used in the big V6 engine is treated with an alumite coating that increases heat resistance. A rain coating applied to the piston skirt increases resistance to wear and reduces friction.

**Offset Driveshaft**
Suzuki outboards are among the compact outboards in their respective classes. That’s due in part to the utilization of Suzuki’s proven offset driveshaft system. This design places the crankshaft in front of the driveshaft through the use of intermediate gear reduction. In addition to providing an increase in power performance and adding to the compactness of the outboard, this system moves the outboard’s center of gravity forward, resulting in contribution to weight distribution, balance, directional stability, and less vibration.

**Two-Stage Cam Drive System**
The DF300AP/250AP utilizes a two-stage cam drive system that incorporates both gears and a chain. First stage gears transfer power between the crankshaft and the drive shaft from which a second stage utilizes a chain to deliver power from the driveshaft to the camshaft. This system allows for the use of smaller cam sprockets, which in turn allow for a reduction in valve angles and reducing the size of the cylinder head. An automatic hydraulic tensioner incorporated into the timing chain system keeps the chain properly tensioned and provides years of maintenance-free operation.

**Suzuki Water Detecting System**
Water in the fuel can be the source of poor combustion, lower power output, and corrosion. To help protect the engine from moisture in the fuel, the DF300AP/250AP is equipped with a water detecting fuel filter that alerts the operator with both visual and audio warnings when water is present in the fuel.

**Water-Cooled Voltage Regulator**
The outboard’s electric system includes a water-cooled voltage regulator that dissipates heat in the regulator to enhance engine durability.

**Fuse Box**
Fuses protecting the DF300AP/250AP’s electric system are assembled into a single fuse box located under the cowling on the side front-port of the outboard motor, which provides convenient access while offering a clean exterior.

**Highly Reliable Direct Ignition System**
Supplying spark to the big V6 engine is an advanced ignition system that utilizes integral type spark plug caps with built-in ignition coils. The system is controlled by the outboard’s powerful 32-bit computer and provides each cylinder with optimum spark timing. In addition to reducing the number of parts and simplifying the wiring system, this arrangement greatly reduces electronic engine “noise” that can interfere with VHF radios, fish finders, and other marine electronics.

**Easier Maintenance Dual Engine Flush Ports**
The buildup of sand and salt in the engine’s cooling system can lead to engine damage. To aid in reducing such buildup, the DF300AP/250AP is designed with two freshwater flush ports that make flushing of the cooling system as convenient and easy as possible. With one port located on the rear panel and the second on the front panel, access is easy and flushing out the system is possible whether the boat is on or out of the water.

**Suzuki’s Anti Corrosion Finish**
The outside of the DF300AP/250AP is covered with Suzuki’s anti-corrosion finish that is specially formulated to increase the durability of the engine and help protect parts of the aluminum exterior that are constantly exposed to saltwater. This advanced finish offers maximum bonding to the outboard’s aluminum surface, creating an effective treatment against corrosion.

**Convenient Dual Circuit Charging System**
The DF300AP/250AP incorporates a dual circuit charging system that can be adapted* to accommodate the dual-battery configurations often used on large boats. When used in this configuration the system is designed to charge both the main and auxiliary batteries simultaneously but on independent circuits. With this you can drain down the accessory battery powering your electronics and still have a fully charged main battery for starting the motor.

* Utilization of this system requires the purchase of an optional wiring harness.