# A word from Suzuki engineers

# Hideto Nakamura (Development and Design Group) In charge of engine design and overall design coordinator. Suzuki Employee for 16 years.

Career in company: PWC engine development, snowmobile engine development, outboard engine design I worked on development and design of the outboard motor with a focus on reducing the total weight of the outboard engine.

When we were developing the outboard, we wanted to reduce weight so we looked not only at the large parts, but at the smallest of parts, component shapes, processes, even the materials as well. We also used combus-tion and flow analysis extensively to determine the optimum shape of each part so as to obtain the desired

power output from the engine. The new DF20A/15A/9.9B are extremely lightweight and produce great power output from low rpm. I'm very satisfied with the results.

#### Yukihiro Yoshikawa (Development and Design Group) In charge of the design of electronics. Suzuki Employee for 15 years.

Since the DF20A/15A/9.9B are the smallest output outboards to be equipped with fuel-injection, it was a challenge obtaining the same level of performance found in larger outboards while reducing the size of the

In regard to the ECM (Engine Control Module), we designed it to operate without a battery, and incorporated a variety of devices to improve fuel efficiency so you can fully enjoy the features of fuel injection.

### Akinori Yamazaki (Experiment Group) In charge of experimental development. Suzuki Employee for 8 years.

When developing the DF20A/15A/9.9B, we focused on the features of a battery-less fuel injection system. A number of engine functions can be controlled electronically, startup performance is not influenced by the operating environment, idle rpm is very stable, and by taking advantage of the lean burn system, it delivers superior fuel efficiency.

system, giving priority to the function of each part so that the resulting system was the same size and weight of a carburetor. Compared to the simple structure of a carburetor, we completely rethought the layout of the fuel injection

# Hiromichi Takewaki (Production Design Group)

In charge of engine rigging. Suzuki Employee for 8 years. When we started developing the new DF20A/15A/9.9B, we made a conscious decision to develop as a compact

and lightweight outboard as possible. In particular, the new fuel injection system enabled us to reduce the size of the outboard, and the use of resins

allowed us to reduce its overall weight. While incorporating fuel injection increased the number of parts compared to a carbureted system, through careful consideration we could fit everything into an engine cover that is nearly the same size as the previous outboard.



# **SPECIFICATIONS**

	DF20A/15A		DF9.9B	DF20AR/15AR/9.9BR	DF20AT	DF9.9BT	DF20ATH/15ATH	
ENGINE TYPE	4-STROKE OHC 4-VALVE							
FUEL DELIVERY SYSTEM	ELECTRONIC FUEL INJECTION							
RECOMMENDED TRANSOM HEIGHT mm (in.)	S: 381 (15) L: 508 (20)		S: 381 (15) L: 508 (20)	S: 381 (15) L: 508 (20)	S: 381 (15) L: 508 (20)	L: 508 (20)	L: 508 (20)	
STARTING SYSTEM	ELECTRIC/MANUAL	MANUAL	MANUAL	ELECTRIC/MANUAL	ELECTRIC/MANUAL	ELECTRIC/MANUAL	ELECTRIC/MANUAL	
WEIGHT kg (lbs) *with battery cable, without propeller & engine oil	S: 48 (106) L: 49 (108)	S: 44 (97) L: 45 (99)	S: 44 (97) L: 45 (99)	S: 47 (104) L: 48 (106)	S: 52.5 (116) L: 54 (119)	L: 54.5 (120)	L: 55.5 (122)	
NO. OF CYLINDERS	IN-LINE 2							
PISTON DISPLACEMENT cm3 (cu. In.)	327 (20.0)							
BORE X STROKE m/m (in.)	60.4 X 57 (2.38 X 2.24)							
MAXIMUM OUTPUT kW (PS)/rpm	DF20A: 14.7(20)/5,800 DF15A: 11.0(15)/5,500		7.3(9.9)/5,200	DF20AR: 14.7(20)/5,800 DF15AR: 11.0(15)/5,500 DF9.9BR: 7.3 (9.9)/5,200	14.7(20)/5,800	7.3(9.9)/5,200	DF20ATH: 14.7(20)/5,800 DF15ATH: 11.0(15)/5,500	
FULL THROTTLE OPERATING RANGE rpm	DF20A: 5,300-6,300 DF15A: 5,000-6,000		4,700-5,700	DF20A: 5,300-6,300 DF15A: 5,000-6,000 DF9.9BR: 4,700-5,700	5,300-6,300	4,700-5,700	DF20ATH: 5,300-6,300 DF15ATH: 5,000-6,000	
STEERING	TILLER		TILLER	REMOTE	REMOTE	REMOTE	TILLER	
CHOKE	-							
OIL PAN CAPACITY lit. (US/Imp. qt.)	1.0 (1.06/0.88)							
IGNITION SYSTEM	DIGITAL CDI							
ALTERNATOR	12V 12A	12V 6A	12V 6A	12V 12A	12V 12A	12V 12A	12V 12A	
ENGINE MOUNTING	SHEAR MOUNT							
TRIM METHOD	MANUAL TRIM & TILT					POWER TILT		
GEAR RATIO	2.08 : 1							
GEAR SHIFT	F-N-R							
EXHAUST	THROUGH PROP HUB EXHAUST							
DRIVE PROTECTION	RUBBER HUB							
PROPELLER SIZE (in.) All propellers are the 3-blade type : Standard •: Optional	$\begin{array}{c c} 9 - 1/4 \times 7 & \bigcirc 9 - 1/4 \times 8 \ (THICK) \\ \bigcirc 9 - 1/4 \times 9 & 9 - 1/4 \times 9 \ (THICK) \\ \bigcirc 9 - 1/4 \times 10 & 9 - 1/4 \times 10 \ (THICK) \\ \hline \end{array}$							
Select the propeller which fits within the range of the engine rpm of each model.		• 9-1/4 X 11 • 9-1/4 X 12 4-blade type propeller 4 x 10 x 5 available.						

Please read your owner's manual carefully. Remember, boating and alcohol or other drugs don't mix. Always use a personal flotation device. Please operate your outboard safely and responsibly. Suzuki encourages you to operate your boat safely and with respect for the marine environment.

Specifications, appearances, equipment, colors, materials and other items of "SUZUKI" products shown on this catalogue are subject to change by manufacturers at any time without notice and they may vary depending on local conditions or requirements. Some models are not available in some territories. Each model might be discontinued without notice. Please inquire at your local dealer for details of any such changes. Actual body color might differ from the colors in this brochure.



#### 99999-C2042-011 DF20A/15A/9.9B LEAN BURN PRODUCT INFORMATION (美) Printed in Japan 1309



# The World's First 14.7kW (20PS)/11.0kW (15PS)/7.3kW (9.9PS) **Outboards designed with Lean Burn and Battery-less Fuel Injection**

State-of-the-art designs make Suzuki's portable lineup among the most technologically advanced outboards available on the market. The DF20A, 15A and 9.9B hold claim to being the world's first battery-less electronic fuel injection four-strokes in each of their power classes. Using all-new fuel injection system components designed smaller and lighter than those found in any previous system, Suzuki engineers succeeded in creating the lightest four-stroke in the 14.7kW (20PS)/11.0kW (15PS) class. And adding Suzuki's proven Lean Burn Control technology to their design, these outboards deliver remarkable fuel economy and reduced emissions throughout their operating range.

In addition to the DF20A/15A/9.9B. Suzuki's portable lineup also includes four power tilt models which are the DF20AT and 9.9BT remote control models, and the DF20ATH and 15ATH tiller handle models.

# **Features**

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- First outboards in the 14.7kW (20PS), 11.0kW (15PS) and 7.3kW (9.9PS) class equipped with a battery-less fuel injection system.
- Suzuki's Lean Burn Control system delivers outstanding fuel economy. Easy start recoil starter offers reduced effort and guicker starts.
- Among outboards equipped with remote control and power tilt, the 52.5kg DF20AT S-Shaft model is the lightest in its power class.\*
- Power tilt models also available. (DF20AT/9.9BT/20ATH/15ATH) \* According to in-house investigations as of July 2013.

# **New Generation Fuel Injection System**

These are the first outboards in their respective classes to offer fuel injection, and the DF20A/15A/9.9B engineering team did an incredible job designing the outboard without adding unneeded bulk or weight. All new components, including the inline high-pressure fuel pump, fuel cooler, vapor separator, fuel injectors, and a new throttle body, were designed as compact and lightweight as possible. The entire system was designed to fit in as little space as possible. The system operates battery-less, which is another industry first in the 14.7kW

(20PS), 11.0kW (15PS) and 7.3kW (9.9PS) class. While fuel injection systems normally require battery power to deliver quicker starts, smoother running performance, and more acceleration in all conditions, Suzuki's Battery-Less system does this all without the need of battery power.



Fuel injection system (Electric Start Model)



# **Light Weight & Compact**

The DF20A/15A's lightest in class title is the result of a complete redesign of parts and components, striving to create the smallest and lightest parts possible without compromising integrity. Succeeding in this, our engineers have delivered an outboard that even when configured with a power tilt system still weighs less than the any other outboard in the 4-stroke 14.7kW (20PS) /11.0kW (15PS) class.



## Superior Fuel Economy - Suzuki's Lean **Burn Control System**

First introduced on our DF90A/80A/70A, the Suzuki Lean Burn system is an intelligent system that monitors engine performance and operating conditions to predict fuel needs and deliver a leaner fuel mixture to the engine. The system delivers remarkable improvements in fuel economy over the engine's entire operating range. This system is found on 14 Suzuki models from the DF9.9B up to the flagship DF300A, providing boaters with top-level fuel

economy at all operating speeds.

LEAN BURN



# **Power Tilt Models Available**

A number of portable models are now available with a power tilt system that provides smooth tilting of the outboard. The system offers greater convenience and improved easier operation. (DF20AT/9.9BT, DF20ATH/ 15ATH)



Suzuki's advanced four-stroke technology delivers cleaner and efficient outboard operation that conforms to the Recreational Craft Directive (RCD) - Directive 2003/44EC of the European Parliament and of the Council, and have received "Three-Star Ultra Low Emission" ratings from the California Air Resources Board (CARB).

### Easy to Use

Along with better fuel economy, fuel injection also offers easier and more dependable starts in nearly any operating condition or environment. While our carburetor models are some of the finest outboards available, fuel injection gives these outboards even smoother operation with reduced engine vibration.

# **Easy Start Recoil Starter**

These outboards are equipped with starters specially designed with very light recoil loads. Combining the easy to pull starter with fuel injection makes starts exceptionally easy for almost everyone.



# Suzuki's Anti Corrosion System

Suzuki protects the outboard's exterior from harmful corrosion with its own specially formulated anti-corrosion finish. Applying the finish directly to the outboard's aluminum surface, allows maximum bonding of the finish to the surface to increase durability and help protect parts that are constantly exposed to saltwater.

Acrylic Resin Clear Top

Acrylic Resin Black Epoxy Pri

# **Cleaner, Efficient Operation**





Electronic Fuel Injection

LEAN BURN

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