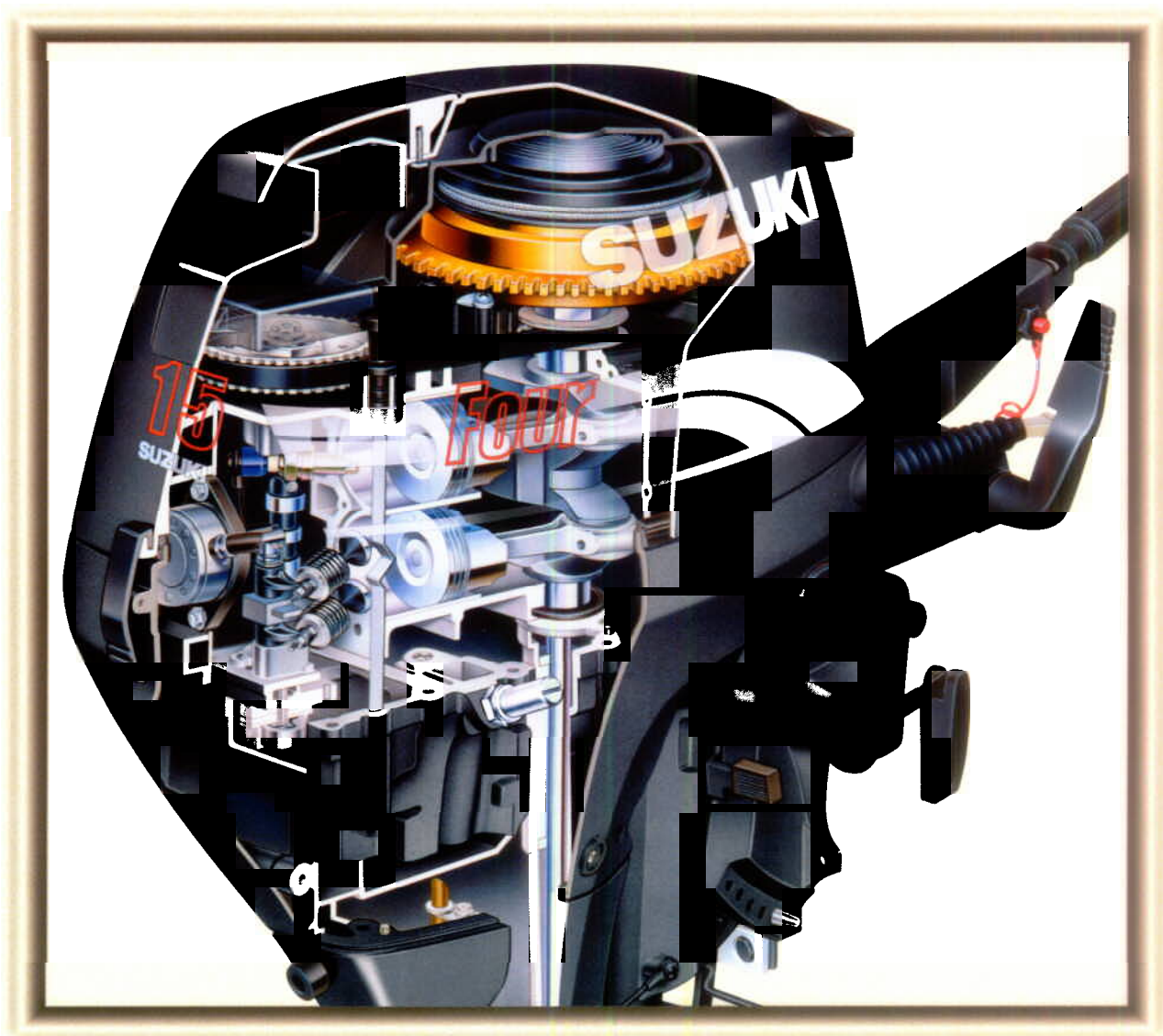


PRODUCT INFORMATION

FOUR STROKE

DF9.9/15



 **SUZUKI**

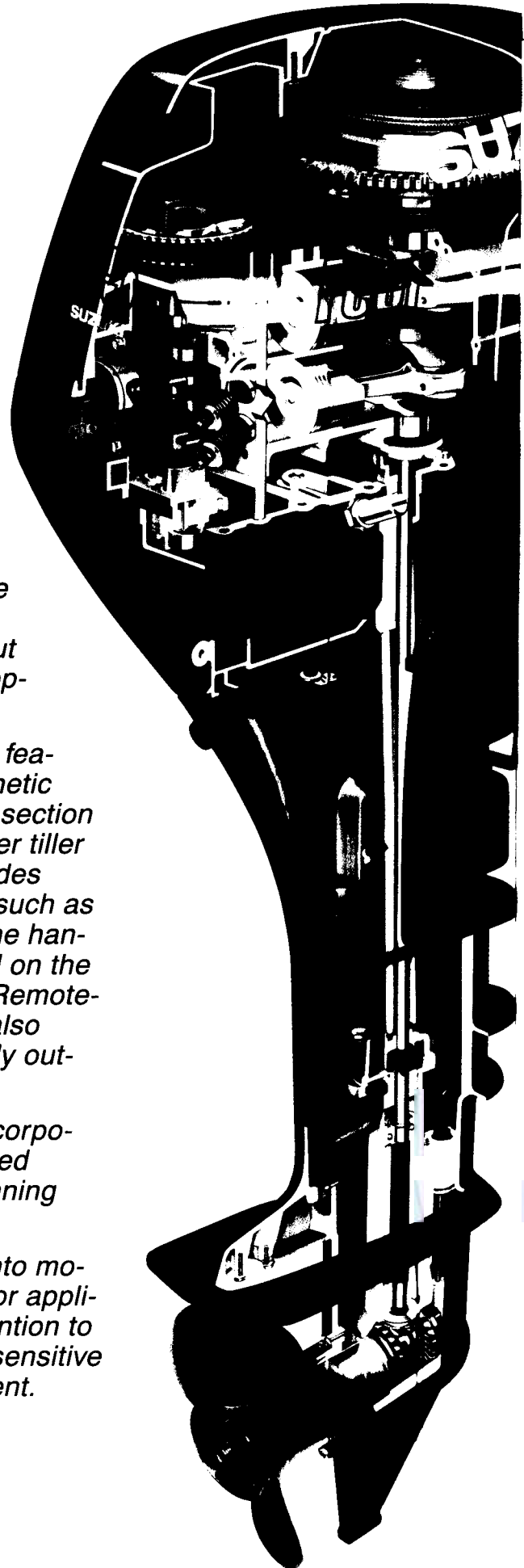
Suzuki's DF15 and DF9.9, a new breed of outboard motors for today's needs.

The first thing that sets the SUZUKI DF15 and DF9.9 apart from other outboards is their unique styling. Simple lines, slim profile and an overall clean appearance. But the advanced design of these outboards does not stop there. At the heart of this clean running duo lies a specially developed 302cc 4-stroke engine which provides the user with the highest level of reliability possible. This unit not only provides excellent power throughout its entire range but provides that power at some of the cleanest levels of operation yet to be achieved.

This duo is also equipped with a full complement of features that improve performance, ease of use and aesthetic appeal. Maintenance is made easy by means of a two-section lower plastic cover which is also light in weight. A center tiller handle creates a more rigid steering system that provides increased performance through ease of use. Controls such as the clutch lever, start switch and LED are located on the handle's bracket and the emergency stop switch is located on the handle itself for quick monitoring and easy operation. Remote-control operated motors, the DF15R and DF9.9R are also available. Overall, these features provide a user friendly outboard that is both functional and reliable.

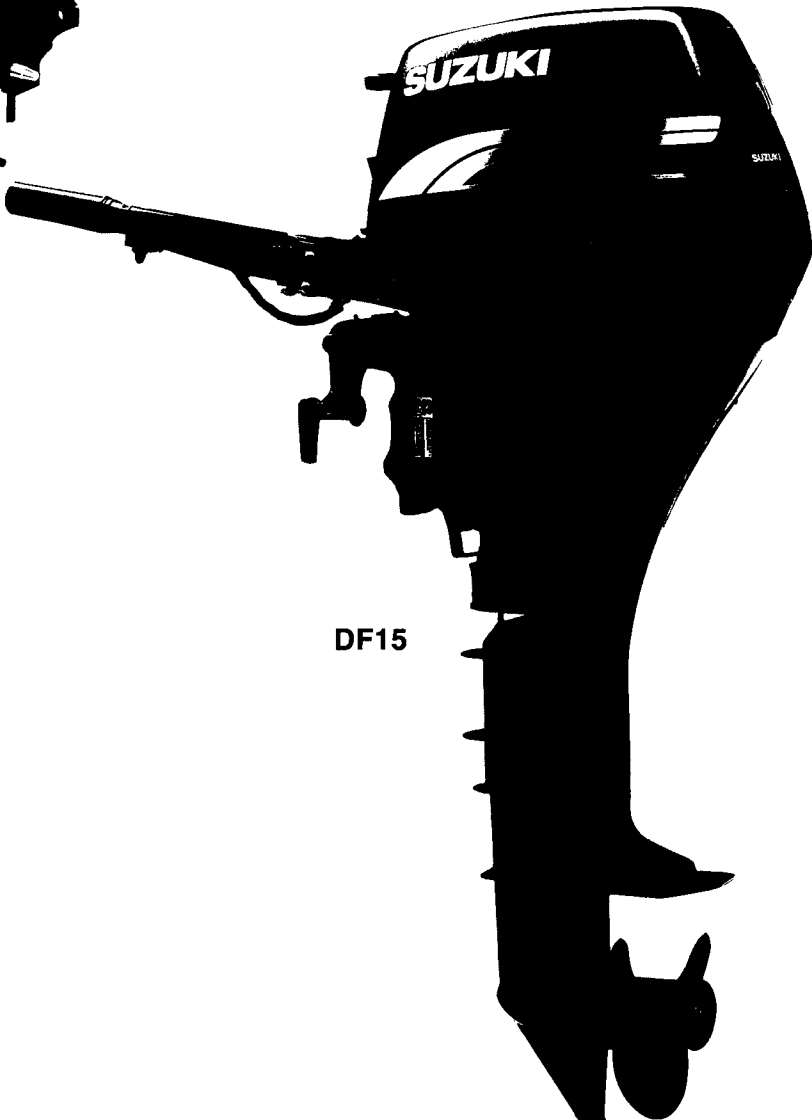
An automatic decompression mechanism is also incorporated to make starting less strenuous, and a re-designed mounting system which provides smooth and quiet running that is vibration free.

Suzuki has adapted many years of solid research into motorcycle and automobile technology into outboard motor applications. Both the DF15 and DF9.9 reflect Suzuki's intention to stay at the forefront in developing products which are sensitive to the continual need to preserve our global environment.





DF9.9



DF15



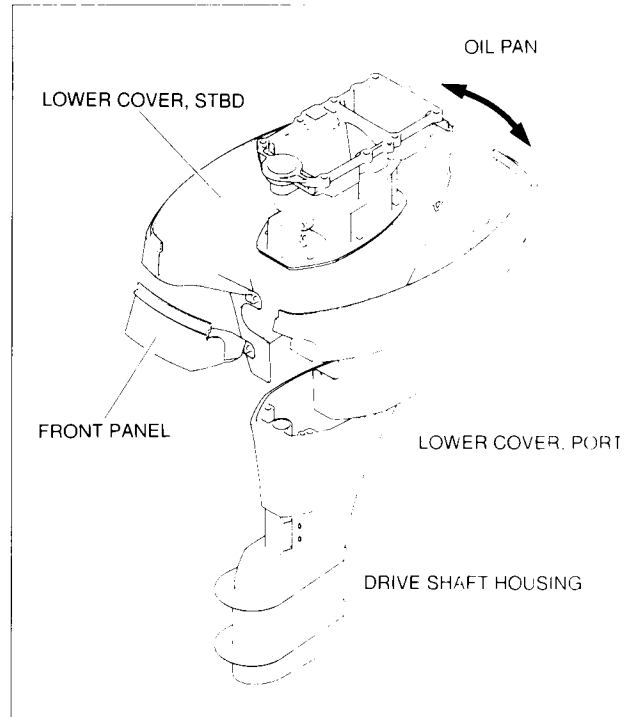
The following points have been kept in mind to design the DF15 and DF9.9 four-stroke outboard motors.

- ① Distinctive styling, with a “simple”, “slim” and “clean” emphasis
- ② Sufficient torque through the entire speed range from low to high speeds
- ③ Low noise level and low fuel consumption
- ④ Compliance with the first stage of the Bodensee exhaust emission regulation

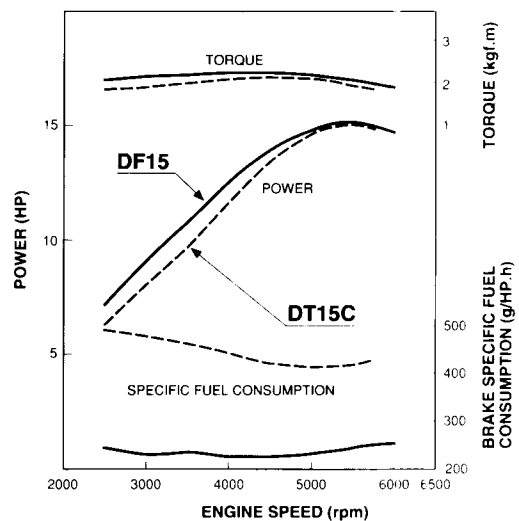


The first thing that is noticeable about the DF15 and the DF9.9 is their distinctive design. There are a number of ways in which the design of these outboard motors has broken out of the conventional style. The engine lower cover is made of plastic, and separates into two, the port and starboard side sections. By doing this, it becomes much easier to maintain and repair the four-stroke engine. Moreover, the clutch lever, start switch and LED are concentrated on the tiller handle's bracket, and the emergency stop switch is on the tiller handle itself, so all controls are easily accessible for operation and monitoring. A carrying handle located on the rear of the unit also makes transport easier.

The graph at the right shows a comparison of the performance of the DF15 engine with the previous DT15C engine. The bore and stroke ratio is 1.02, which makes the relationship almost square, and the diameters of the intake and exhaust valves have also been made as large as possible so that intake and exhaust resistance would be reduced to minimum levels at high engine speeds. It also contributes to ensuring that the optimum timing is selected, so that volumetric efficiency is improved over all speed ranges. At maximum performance levels, the fuel consumption of the DF15 is 38% lower than for the DT15C.

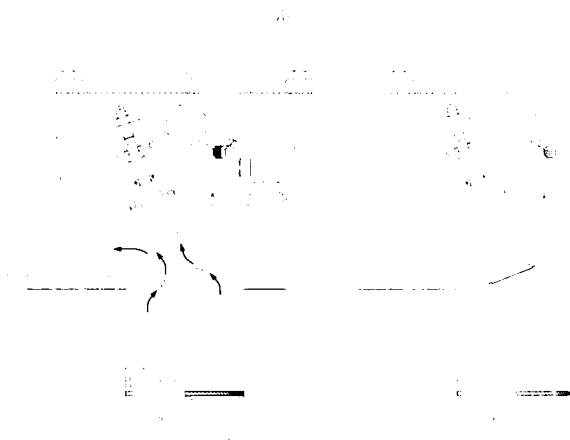


PERFORMANCE CURVES



DECOMPRESSION SYSTEM

Starting is made easier by means of an automatic decompression mechanism. When the recoil starter is pulled, a decompression cam slightly raises the rocker arm to release some of the pressure in the cylinder. The result is a recoil starter that is much easier to pull. After the engine starts, centrifugal force causes the arm to open and the decompression cam to rotate, thus restoring normal engine operation.



At start.

Under normal operation

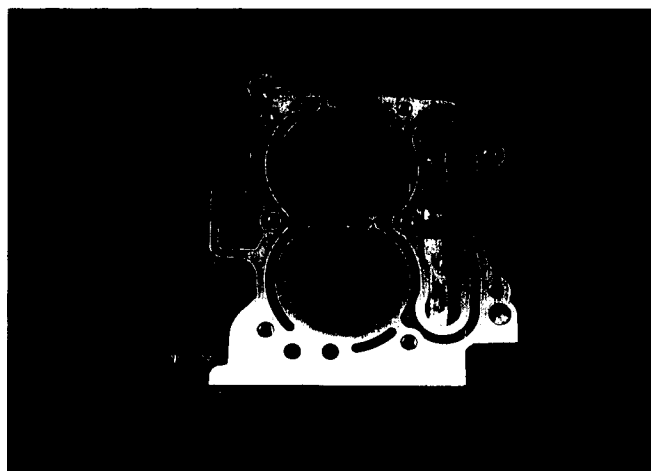
Structural parts are designed and strengthened for increased durability. The cast-in-sleeve liners are covered with a cylinder block which has been manufactured using a die-cast method. This contributes to an overall reduction in engine weight.

The crank shaft is made of forged carbon steel and the manufacturing process is based on a boundary element method, giving the shaft the necessary and sufficient degree of strength to ensure precision, trouble-free operation over a long period of use.

An optimum squish area has been provided on the crown of the piston. This improves the mixing of the air and fuel to provide improved combustion, which not only gives better performance, but also helps to reduce the amount of unwanted exhaust emissions. The material is special aluminum alloy. Furthermore, the oil hole in the oil ring groove is round-shaped and provides thermal flow characteristics.

The piston ring is chromium plated, with an outside surface that has been finished off to a barrel shape. The second ring is made of cast iron. The oil ring is a three-piece type with a rail that has been manufactured from special carbon steel and a spacer which is manufactured from special stainless steel.

The connecting rod is made of forged aluminum, which contributes to an overall reduction in weight of the engine, while also making it possible to abolish the plane bearings at the big end. There has never been a SUZUKI engine that has had such a special connecting rod, as this is the first time that SUZUKI has manufactured a connecting rod from forged aluminum.



Cylinder Block



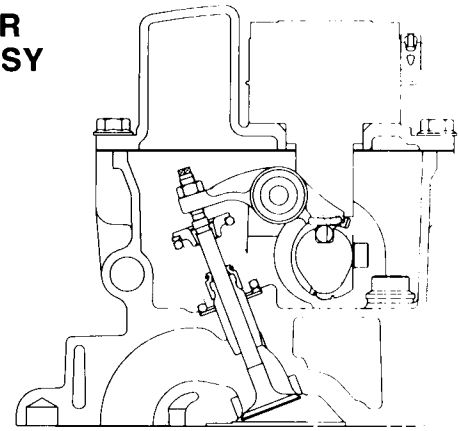
Piston & Piston Rings



Connecting Rod

The cylinder head is a SOHC (Single Over Head Camshaft) design with two valves. In order to optimize combustion efficiency and engine compactness, the angle of both intake and exhaust valves has been set to 21 degrees, and the intake valve diameter is 26mm, while the exhaust valve diameter is 21mm. This serves to reduce the intake resistance at high speeds to the lowest levels possible.

CYLINDER HEAD ASSY

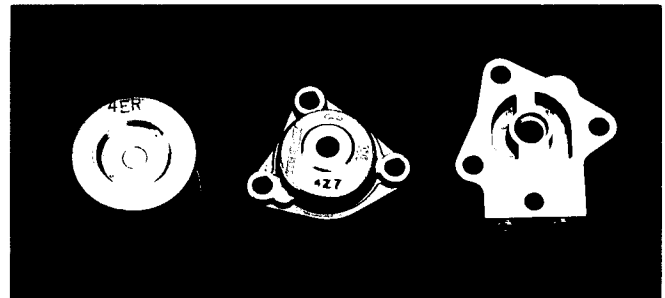
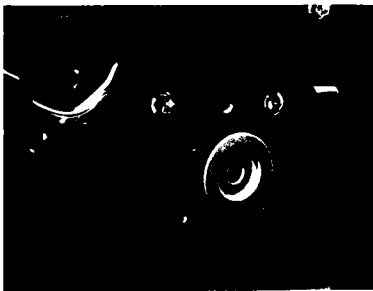


The crank pulley and the camshaft pulley have been made using an aluminum die-cast method. Their surfaces have been treated with alumite, which gives them excellent resistance to abrasion and corrosion. Additional reliability is also provided by the water-resistant timing belt.



Timing Belt & Timing Pulleys

A camshaft-driven lubrication system with a trochoid type oil pump has been adopted. By placing a paper oil filter in front of the main gallery, the durability of the crank journal and big end have been greatly improved.

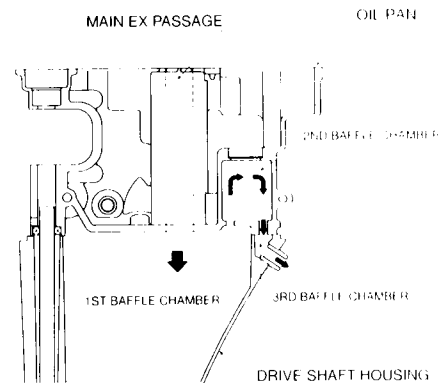


Oil Filter, Oil Pump & Oil Gallery Block

The cooling system employed is a water direct cooling system which is identical to the system currently used in two-stroke outboard motors. This has made it possible to use the same water pump and other parts as those which are used in the two-stroke motors.

A prop-hub exhaust system has been adopted. This is basically the same as the exhaust system which is employed in two-stroke engines. A three-stage baffle chamber is located in the exhaust release circuit to reduce noise while trolling.

3-STAGE BAFFLE CHAMBER EXHAUST RELEASE SYSTEM



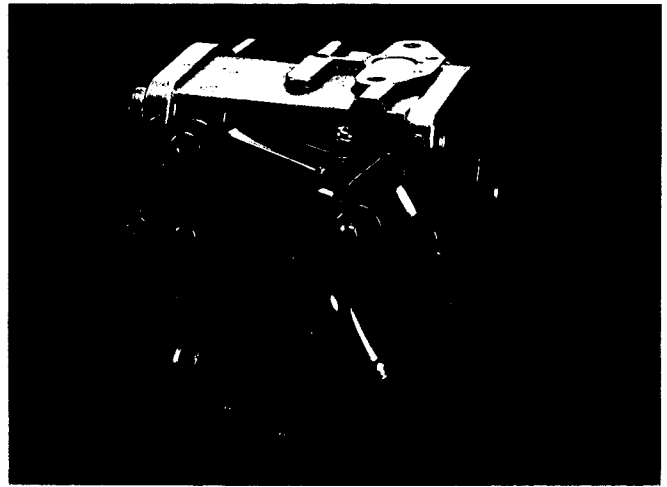
The carburetor has been specially designed for use with the DF15 and DF9.9. It is equipped with a fuel accelerator pump which provides better response during acceleration and better reliability.

The DF9.9 and DF15 are equipped with a specially developed CDI ignition system which automatically adjusts the ignition timing in accordance with the current engine speed. In doing so, these engines are able to achieve a high state of balance between torque, responsiveness and exhaust gas emission control.

In order to prevent damage to the engine due to over-revving, an over-rev limiter is provided as a standard feature for both engines. As a result, the engine speed is limited to a maximum of 6,500 rpm during normal engine operation or while in neutral, and to 2,000 rpm when the low oil pressure indicator is on.

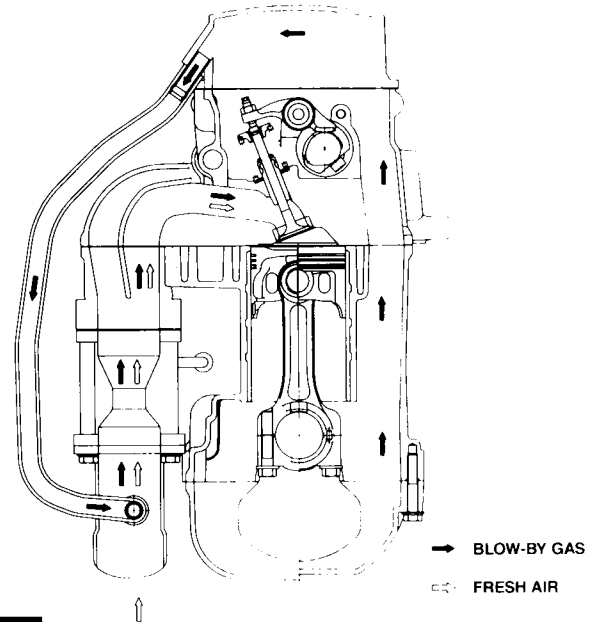
It also incorporates a delayed advance function to keep the engine running properly while under quick deceleration of the engine.

The blow-by gas which is generated inside the crankcase is separated into the liquid and gas components inside the space which is bounded by the head cover and the head cover gasket. Only the resulting gas component is sent via the breather hose to the silencer. After this, it is mixed with fresh air, and the resulting mixture is drawn into the combustion chamber and burnt instead of being released as pollution into the atmosphere.



High Performance Carburetor

CRANK CASE VENTILATION SYSTEM



DF15/DF9.9 FEATURES

- Low Oil Pressure Caution
- Over-rev Limiter
- Emergency Stop Switch
- Through Tube Bracket
- Turn Flow Combustion Chamber
- Start-in-gear Protection
- Shallow Water Drive
- Tilt Stopper
- Anti Corrosion System



DF15/DF9.9 SPECIFICATIONS

MODEL	DF9.9		DF9.9R	DF15		DF15R
TYPE OF ENGINE	4-STROKE, WATER COOLED ENGINE			4-STROKE, WATER COOLED ENGINE		
STARTING SYSTEM	MANUAL	ELECTRIC		MANUAL	ELECTRIC	
TRANSOM HEIGHT in.	S:15, L:20			S:15, L:20		
WEIGHT kg (lbs.)	S:44.0 (97.0) L:45.0 (99.2)	S:47.5 (104.7) L:48.5 (106.9)	S:46.5 (102.5) L:47.5 (104.7)	S:44.0 (97.0) L:45.0 (99.2)	S:47.5 (104.7) L:48.5 (106.9)	S:46.5 (102.5) L:47.5 (104.7)
NO. OF CYLINDERS	2			2		
PISTON DISPLACEMENT cm ³ (cu. in.)	302 (18.4)			302 (18.4)		
BORE × STROKE m/m (in.)	58 × 57 (2.28 × 2.24)			58 × 57 (2.28 × 2.24)		
MAXIMUM OUTPUT kw (HP)	7.3 (9.9)			11.0 (15)		
FULL THROTTLE OPERATING RANGE rpm	4500 - 5500			5400 - 6000		
STEERING	TILLER HANDLE/ REMOTE CONTROL (OP.)		REMOTE CONTROL	TILLER HANDLE/ REMOTE CONTROL (OP.)		REMOTE CONTROL
CHOKE	MANUAL / ELECTRIC (OP.)		ELECTRIC	MANUAL / ELECTRIC (OP.)		ELECTRIC
OIL PAN CAPACITY ℓ (US/Imp. pt.)	1.0 (2.1/1.8)			1.0 (2.1/1.8)		
FUEL TANK CAPACITY ℓ (US/Imp. gal.)	12 (3.2/2.6)			12 (3.2/2.6)		
IGNITION SYSTEM	SUZUKI P. E. I.			SUZUKI P. E. I.		
BATTERY CHARGING COIL	12V 80W OR 30W	12V 80W		12V 80W OR 30W	12V 80W	
ENGINE MOUNTING	SHEAR MOUNT			SHEAR MOUNT		
TRIM METHOD (POSITIONS)	MANUAL TRIM AND TILT (5)			MANUAL TRIM AND TILT (5)		
GEAR RATIO	12 : 23 (1.92)			12 : 23 (1.92)		
GEAR SHIFT	F. N. R.			F. N. R.		
EXHAUST	THROUGH PROP HUB EXHAUST			THROUGH PROP HUB EXHAUST		
DRIVE PROTECTION	RUBBER HUB			RUBBER HUB		
PROPELLER SIZE in.* ○THICK BLADE TYPE PROPELLER	9-1/4 × 7 (M701) 9-1/4 × 9 (M901) 9-1/4 × 10 (M1001) 9-1/4 × 11 (M1101) ○9-1/4 × 8 (M811) ○9-1/4 × 9 (M911) ○9-1/4 × 10 (M1011)			9-1/4 × 7 (M701) 9-1/4 × 9 (M901) 9-1/4 × 10 (M1001) 9-1/4 × 11 (M1101) ○9-1/4 × 8 (M811) ○9-1/4 × 9 (M911) ○9-1/4 × 10 (M1011)		



Winner of 1997 (DF60/70)
& 1998 (DF40/50)
IMTEC Innovation
Award.

* 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.

Please read your owners manual carefully. Remember, boating and alcohol or other drugs don't mix. Please operate your outboard safely and responsibly.

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

SUZUKI MOTOR CORPORATION reserves the right to change, without notice, equipment, specifications, colors, materials and other items to apply to local conditions. Each model may be discontinued without notice. Please inquire at your local dealer for details of any such changes.

Actual body colors may differ slightly from the colors in this brochure.



AMERICAN SUZUKI MOTOR CORPORATION
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http://www.suzuki.com

DF9.9/15 Product Information 1904
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