



DF2.5

OWNER'S MANUAL

Part No. 99011-97J01-053
August, 2006 (TK)
Eng.

DF2.5

OWNER'S MANUAL

FOREWORD

Thank you for choosing a Suzuki outboard motor. Please read this manual carefully and review it from time to time. It contains important information on safety, operation, and maintenance. A thorough understanding of the information presented in this manual will help you experience safe, enjoyable boating.

All information in this manual is based on the latest product information available at the time of publication. Due to improvements or other changes, there may be

TABLE OF CONTENTS

WARNING/CAUTION/NOTE.....	3
IMPORTANT NOTICE TO OWNERS.....	3
IDENTIFICATION NUMBER	
LOCATION.....	4
FUEL AND OIL.....	4
LOCATION OF SAFETY LABELS	6
LOCATION OF PARTS.....	7
MOTOR MOUNTING.....	8
PROPELLER SELECTION AND	
INSTALLATION.....	9
ADJUSTMENT.....	10
OPERATION OF TILTING	
SYSTEMS.....	12
INSPECTION BEFORE BOATING.....	14
BREAK-IN.....	15
OPERATION.....	16
MOTOR REMOVAL AND	
TRANSPORTING.....	21
INSPECTION AND	
MAINTENANCE.....	23
FLUSHING THE WATER	
PASSAGES.....	29
SUBMERGED MOTOR.....	30
STORAGE PROCEDURE.....	30
AFTER STORAGE.....	31
TROUBLESHOOTING.....	32
SPECIFICATIONS.....	32

IMPORTANT

WARNING/CAUTION/NOTE

Please read this manual and follow its instructions carefully. To emphasize special information, the symbol  and the words WARNING, CAUTION and NOTE have special meanings. Pay special attention to the messages highlighted by these signal words.

WARNING

 **WARNING** indicates a potential hazard that could result in death or injury.

CAUTION

CAUTION indicates a potential hazard that could result in motor damage.

NOTE:

Indicates special information to make maintenance easier or instructions clearer.

IMPORTANT NOTICE TO OWNERS

WARNING

You must take precautions to reduce the chance of accidents and injuries resulting from the use of your outboard motor and boat. Some of the important safety precautions you should take are:

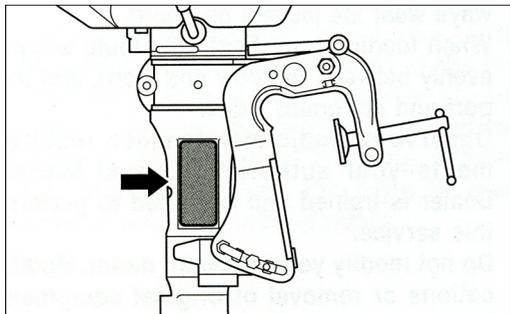
- Before first use of your outboard motor, read this owner's manual carefully to become familiar with the outboard motor's features, safety requirements, and maintenance requirements.
- Before each use of your boat, perform a daily inspection. Specific items to check are listed in the INSPECTION BEFORE BOATING section.
- Never run the outboard motor indoors or in an enclosed area. Exhaust emissions contain poisonous carbon monoxide fumes which can cause unconsciousness and may lead to death.
- Never operate your boat while under the

influence of alcohol or other drugs.

- Practice operating your boat at slow and moderate speeds until you become thoroughly familiar with the operating and handling characteristics of your motor/boat combination. Do not operate your outboard motor at maximum performance until you are thoroughly familiar with these characteristics.
- Be sure that you and your passengers always wear life jackets on board.
- When loading your boat, distribute weight evenly between the bow and stern, and the port and starboard sides.
- Observe periodic maintenance requirements—your authorized Suzuki Marine Dealer is trained and equipped to perform this service.
- Do not modify your outboard motor. Modifications or removal of original equipment may make the motor unsafe.
- Learn and obey the navigation rules of the locality in which you operate your boat.
- Make sure you have the necessary emergency equipment on board such as a flotation device for each passenger, fire extinguisher, signaling devices, anchor, paddles, bilge pump, rope, first-aid kit, tool kit, emergency starter rope, flashlight, extra fuel and oil, etc.
- Instruct your passengers about emergency procedures. Make sure they understand the basics of how to operate the boat, how to use emergency equipment, and what to do in case of trouble.
- Do not hold onto the motor cover or any other parts of your outboard motor while getting on or off your boat.
- Check the weather forecast before boating to avoid bad weather.
- Use extreme caution when replacing a part on your outboard motor or selecting and installing accessories. Use of inappropriate or poor quality replacement parts or accessories can create unsafe operating conditions, or result in damage to the motor. Suzuki strongly recommends that you use genuine Suzuki replacement parts and accessories as damage caused by use of parts and accessories other than genuine Suzuki replacement parts and accessories will not be covered under warranty.

IDENTIFICATION NUMBER LOCATION

The model and identification numbers of your outboard motor are stamped on a plate attached to the clamp bracket. It is important to know these numbers when you place a parts order or if your motor is stolen.



FUEL AND OIL

GASOLINE

Suzuki highly recommends that you use alcohol-free unleaded gasoline whenever possible, with a minimum octane rating of 91 (Research method). However, blends of unleaded gasoline and alcohol with equivalent octane content may be used, provided the guidelines that follow are met.

CAUTION

If leaded gasoline is used, engine damage may result. Use only unleaded gasoline.

Gasoline Containing MTBE

Unleaded gasoline containing MTBE (Methyl Tertiary Butyl Ether) may be used in your outboard motor if the MTBE content is not greater than 15%. This oxygenated fuel does not contain alcohol.

Gasoline/Ethanol Blends

Blends of unleaded gasoline and ethanol (grain alcohol), also known as gasohol, are commercially available in some areas. Gasoline containing a maximum of 10% ethanol may be used in your outboard motor without jeopardizing the New Outboard Motor Limited Warranty.

Gasoline/Methanol Blends

Blends of unleaded gasoline and methanol (wood alcohol) are also commercially available in some areas. DO NOT USE fuels containing more than 5% methanol under any circumstances. Fuel system damage or outboard motor performance problems resulting from the use of such fuels are not the responsibility of Suzuki and may not be covered under the New Outboard Motor Limited Warranty. Fuel containing 5% or less methanol may be suitable for use in your outboard motor if they contain cosolvents and corrosion inhibitors.

Pump Labelling for Gasoline/Alcohol Blends

In some states, pumps that dispense gasoline/alcohol blends are required to be labelled for the type and percentage of alcohol content, and whether important additives are present. Such labels may provide enough information for you to determine if a particular blend of fuel meets the requirements listed above. In other states, pumps may not be clearly labeled as to the content or type of alcohol and additives. If you are not sure that the fuel you intend to use meets these requirements, check with the service station operator or the fuel suppliers.

NOTE:

If you are not satisfied with the operation or fuel economy of your outboard motor when you are using gasoline/alcohol blends, you should switch back to unleaded gasoline containing no alcohol. Be sure that any gasoline/alcohol blend you use has octane ratings of at least 91 octane (Research method).

If engine pinging is experienced, substitute another brand as there are differences

CAUTION

Be careful not to spill fuel containing alcohol while refuelling. Fuels containing alcohol can cause paint damage, which is not covered under warranty.

⚠ WARNING

Gasoline is extremely flammable and toxic. Always observe the following precautions when refuelling.

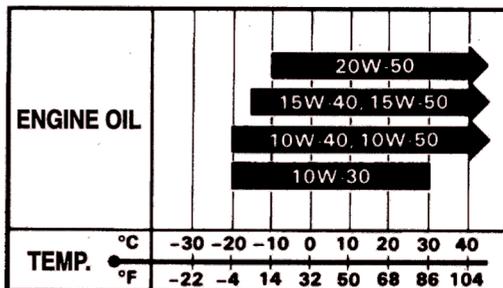
- Never permit anyone other than an adult to refill the fuel tank.
- To refill the fuel tank, always stop the motor.
- Do not fill the fuel tank all the way to the top or fuel may overflow when it expands due to heating by the sun.
- Be careful not to spill fuel. If you do, wipe it up immediately.
- Do not smoke, and keep away from open flames and sparks.
- Refuel in a well ventilated area.
- Avoid prolonged contact with skin and

CAUTION

Always use fresh gasoline. Gasoline kept in the fuel tank for long periods of time will produce varnish and gum, which can damage the engine.

ENGINE OIL

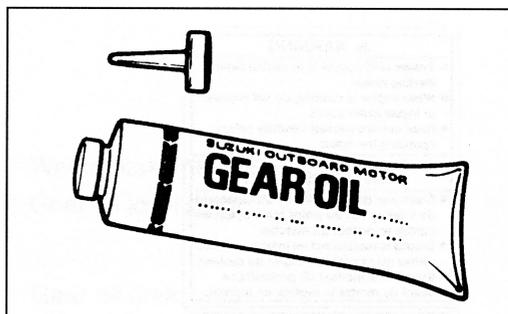
Using a premium quality four stroke motor oil will increase the service life of your motor. Use only oils which are rated SE, SF, SG, SH or SJ under the API classification system. The viscosity rating should be SAE 10W-40. If an SAE 10W-40 motor oil is not available, select an alternative according to the chart below.



CAUTION

The choice of engine oil is major factor affecting engine performance and life.

GEAR OIL

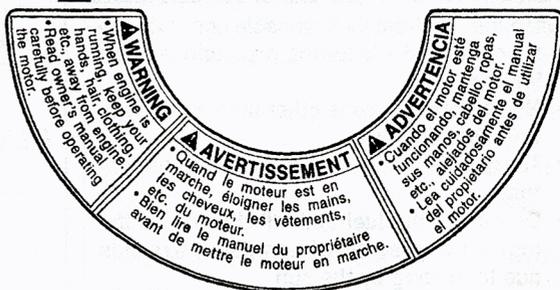
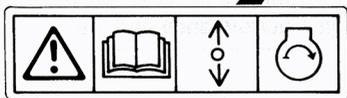
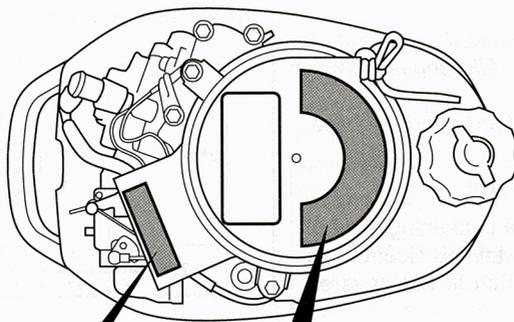


Use SUZUKI OUTBOARD MOTOR GEAR OIL, or an equivalent high quality SAE90 hypoid gear oil.

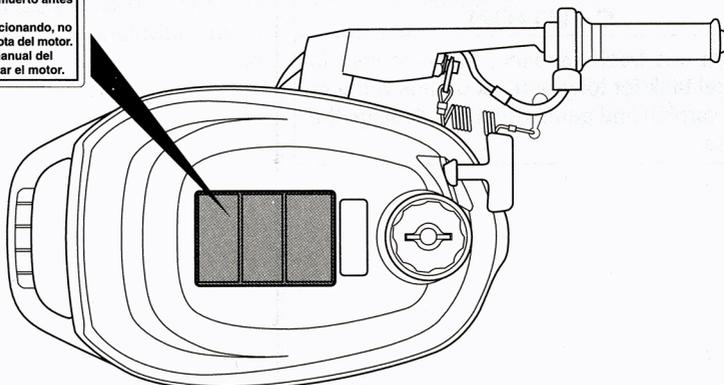
LOCATION OF SAFETY LABELS

Read and follow all of the labels on your outboard motor or fuel tank. Make sure you understand all of the labels.

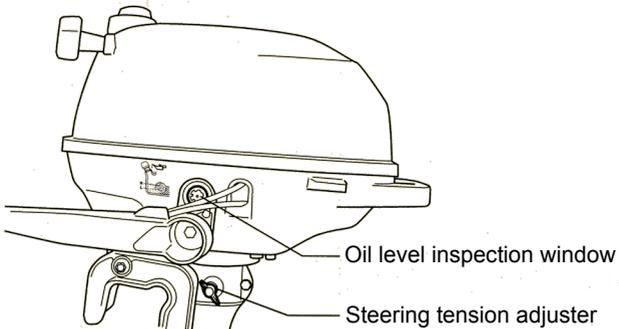
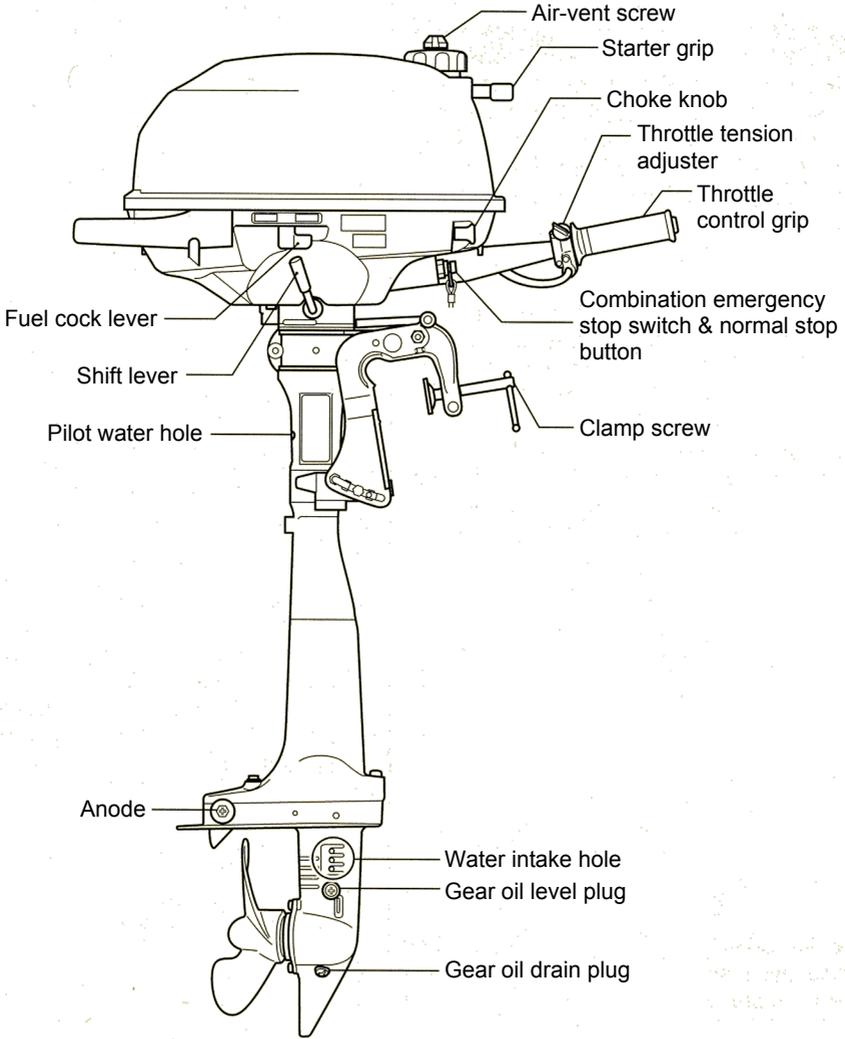
Keep the labels on your outboard motor or fuel tank. Do not remove them for any reason.



<p>▲ WARNING</p> <ul style="list-style-type: none"> • Ensure shift control is in neutral before starting motor. • When engine is running, do not remove or install motor cover. • Read owner's manual carefully before operating the motor.
<p>▲ AVERTISSEMENT</p> <ul style="list-style-type: none"> • S'assurer que le levier de changement de vitesse est au point mort avant de mettre le moteur en marche. • Quand le moteur est en marche, ne pas retirer ou remettre le capot du moteur. • Bien lire le manuel du propriétaire avant de mettre le moteur en marche.
<p>▲ ADVERTENCIA</p> <ul style="list-style-type: none"> • Asegúrese de que el control de cambio de marcha esté en punto muerto antes de arrancar el motor. • Cuando el motor esté funcionando, no monte ni desmonte la capota del motor. • Lea cuidadosamente el manual del propietario antes de utilizar el motor.



LOCATION OF PARTS

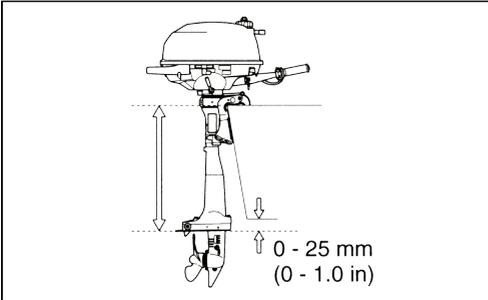


MOTOR MOUNTING

⚠ WARNING

Never overpower your boat. Do not install an outboard motor that exceeds the maximum horsepower listed on the boat's "Certification Plate". If you are unable to locate the "Certification Plate", consult your authorized Suzuki Marine Dealer.

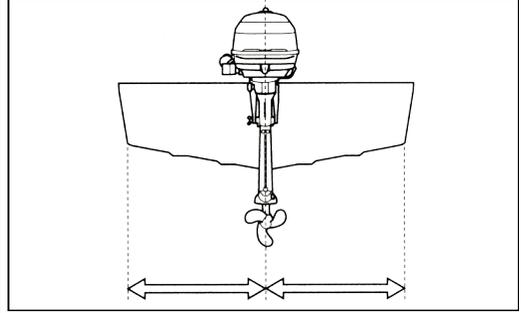
Proper transom height is important for good performance. A motor mounted on a transom that is too high causes the propeller to slip resulting in wasted power or overheating. A motor mounted on a transom that is too low will increase drag, causing reduced speed. Make sure that when the motor is lowered all the way down, the anti-cavitation plate is located 0 -25 mm (0 - 1.0 in) below the bottom of of



CAUTION

If the anti-cavitation plate is above the water surface, this may induce overheating and the outboard motor will sustain damage.

Center the motor on the transom and secure it by alternately tightening the clamp bracket screws by hand. Make sure you accurately center the motor, or the boat will pull to one side during operation.

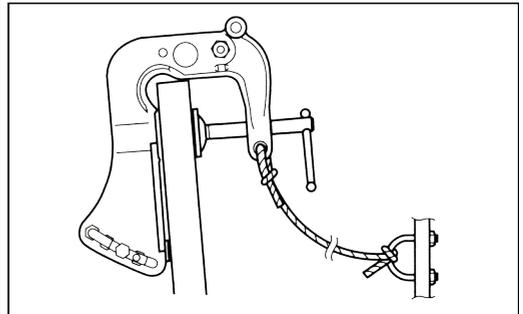


After installing the motor, check to make sure that steering and tilt movement are not obstructed by any part of the boat.

CAUTION

The motor may come off if it is held only by the clamp screws. Occasionally check the clamp screws for tightness.

Run a sturdy rope or cable through the hole on the clamp bracket and fasten the ends securely to the boat.



PROPELLER SELECTION AND INSTALLATION

PROPELLER SELECTION

It is essential to use a propeller on your outboard motor that is properly matched to your boat's operating characteristics. The speed of the engine when you operate your boat at full throttle depends on the propeller you use.

CAUTION

Installing a propeller with much or too little pitch will cause incorrect maximum engine RPM, which may result in severe damage to the motor.

Full throttle operating range	5250 - 5750 r/min. (min ⁻¹)
-------------------------------	---

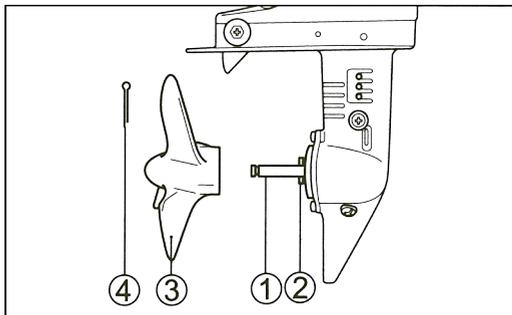
PROPELLER INSTALLATION

⚠ WARNING

When installing or removing the propeller, be sure to shift into "NEUTRAL" and disconnect the spark plug wires so the motor can't accidentally be started. To prevent being cut by the propeller blades, wear gloves and place a block of wood between the anti-cavitation plate and propeller to hold the propeller in place.

To install a propeller on your outboard motor, use the following procedure:

1. Coat the propeller shaft (1) liberally with Suzuki water resistant grease to help prevent corrosion.
2. Install the shear pin (2) as illustrated.
3. Slide the propeller (3) onto the shaft.
4. Insert the cotter pin (4) and bend it so that the propeller can not come off.

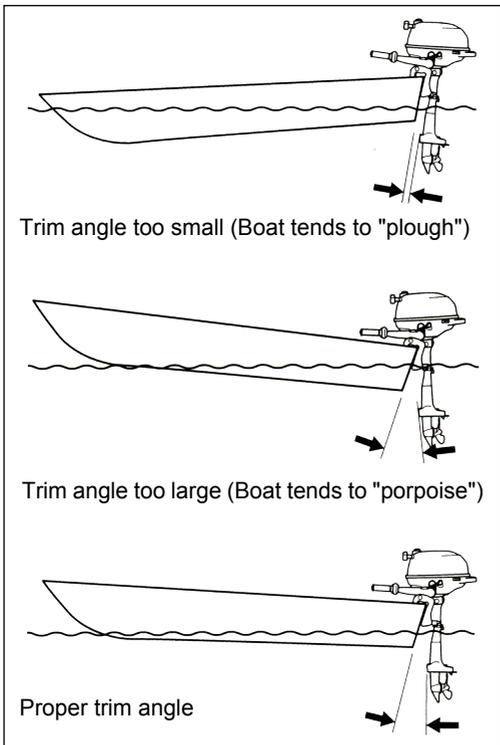


To remove the propeller, reverse the above procedure.

ADJUSTMENT

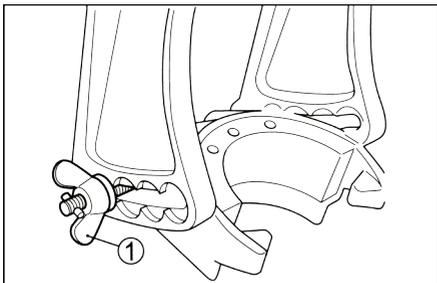
TRIM ANGLE ADJUSTMENT

To help maintain steering stability and good performance, always maintain the proper trim angle as shown in the illustration. The appropriate trim angle varies depending on the combination of the boat, engine, and propeller, as well as operating conditions.

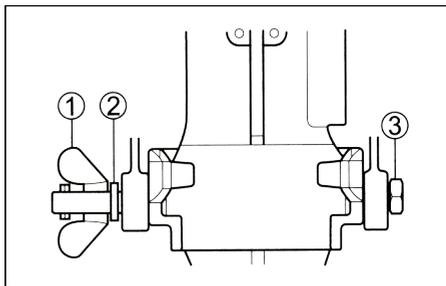


To adjust the trim angle;

1. Hold the motor in the fully tilted up position. (Refer to the TILT UP LOCK ARM section.)
2. Turn the nut ① counterclockwise.



3. Pull the spacer ② and tilt pin ③ out to the limit on both sides of the swivel bracket.

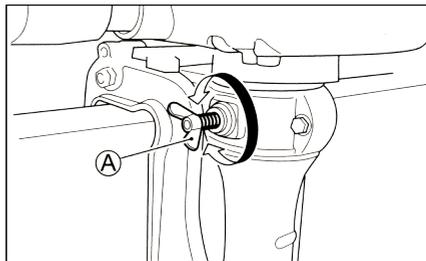


4. Reposition the tilt pin in the desired holes.
 5. Push the spacer ② and tilt pin ③ back in and tighten the nut ①.
 6. Lower the motor back down.
- To lower the bow, move the pin towards the boat.
To raise the bow, move the pin away from the boat.

STEERING TENSION ADJUSTMENT

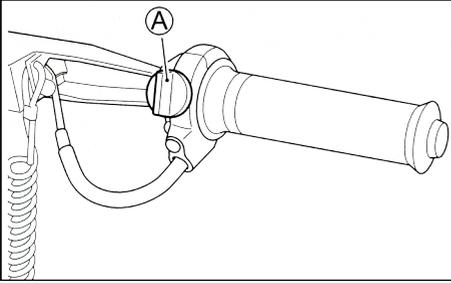
The steering on your outboard motor should be smooth and not tight. Adjust the steering tension so that there is only a slight resistance to steering movement.

To increase the steering tension, turn the steering tension adjuster Ⓐ clockwise. To decrease the steering tension, turn the steering tension adjuster counterclockwise.



THROTTLE TENSION ADJUSTMENT

The tension of the throttle control grip can be adjusted according to your preference. To increase the tension, turn the throttle tension adjuster Ⓐ clockwise. To decrease the tension, turn the adjuster counterclockwise.

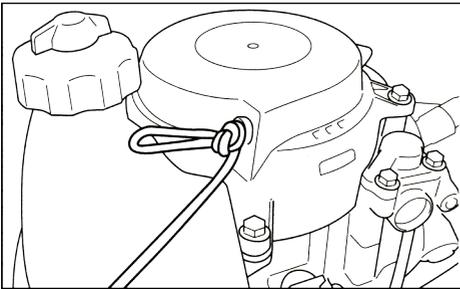


IDLE SPEED ADJUSTMENT

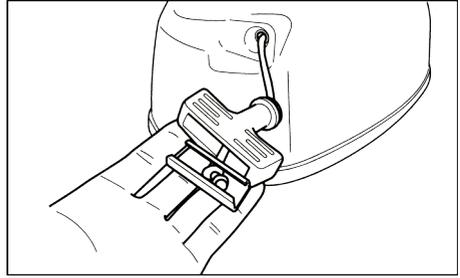
The idle speed of your outboard motor has been set by your dealer. If it is necessary to adjust the idle speed, use the following procedure:

The part of motor cover on DF2.5 is used as the holder of recoil starter grip, too. Idle speed adjustment is recommended to be made by the Suzuki authorized dealer. The motor cover can not be completely removed unless you first remove the starter grip. Please refer to the steps mentioned below.

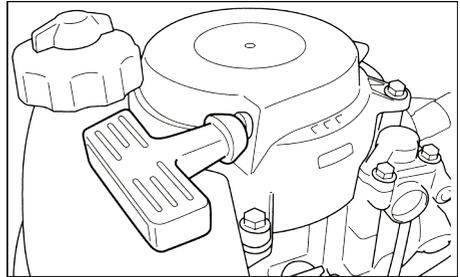
1. Slightly remove the motor cover.
2. Tie a knot in the rope inside of the motor cover, in order to prevent the rope binding onto the recoil reel when the starter grip is off.



3. Take off the starter grip.
4. Completely remove the motor cover.

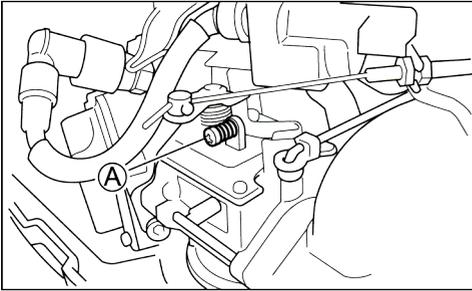


5. Install the starter grip holder to the end of rope.
6. Loosen a knot in the rope.



7. Start the engine. (Refer to starting the engine section)
8. Warm up the engine for about 5 minutes.

9. Turn the idle adjustment screw (A) clockwise to increase idle speed or counterclockwise to decrease idle speed.



10. Stop the engine.

11. Reinstall the motor cover by the opposite steps of the above 1 to 6.

NOTE:

If idle speed cannot be set within the specified range, contact your authorized Suzuki Marine Dealer.

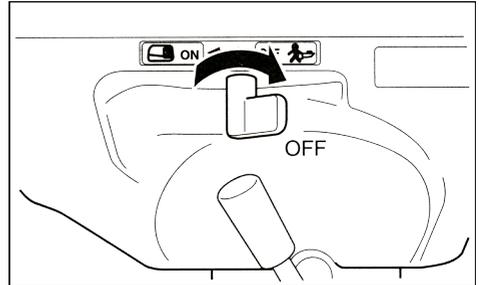
OPERATION OF TILTING SYSTEMS

TILT UP LOCK ARM

The tilt up lock arm is used to hold the motor in the fully tilted up position.

⚠ WARNING

Before tilting up the motor, be sure to turn the fuel cock lever to the right and tighten the air-vent screw on the fuel filler cap of the built-in tank to prevent fuel from leaking out.



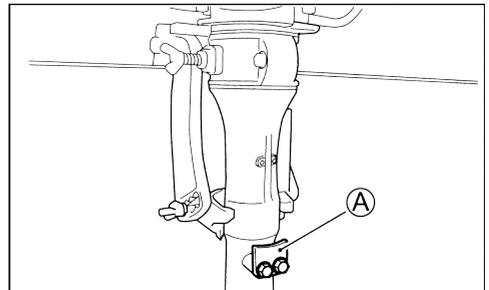
FULL TILT UP POSITION

To hold the motor in the fully raised position:

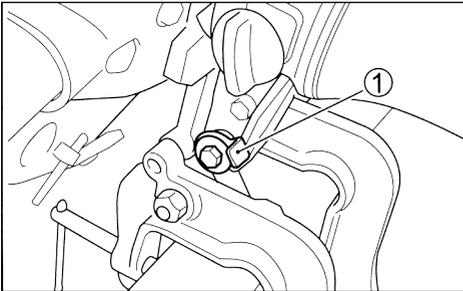
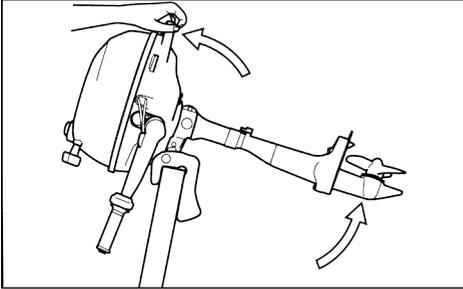
⚠ WARNING

Never place your hands near the mounting bracket or under the motor when tilting, or they could be crushed if the motor slips from your grasp.

1. Shift into "NEUTRAL".
2. Turn the motor to the front, to free the reverse thrust stopper (A) .



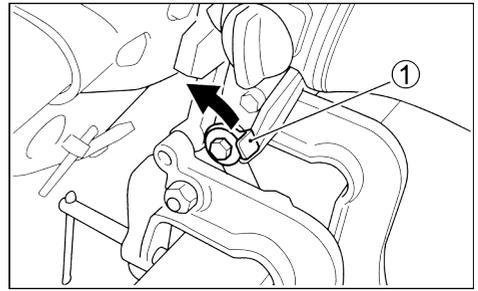
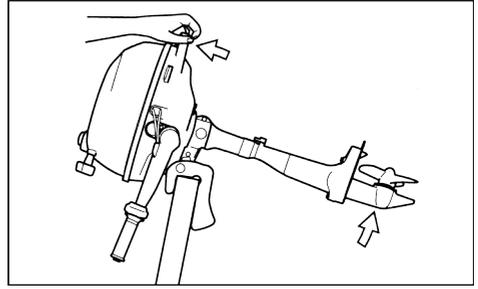
3. Grab the handle on the back of the motor lower cover and tilt the motor all the way up until it is automatically locked in the fully tilted up position by the tilt up lock arm ① .



CAUTION

Never use the throttle grip handle to raise or lower the motor. The handle may break.

To lower the motor back down, pull the motor slightly toward you, pull up on the till up lock arm ① and slowly let the motor down.



CAUTION

Never use the throttle grip handle to raise or lower the motor. The handle may break.

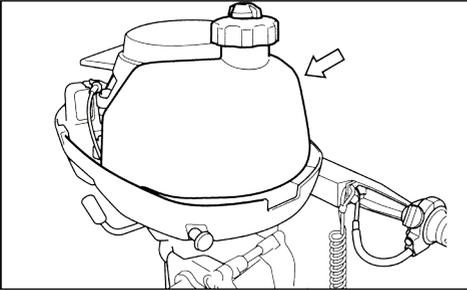
INSPECTION BEFORE BOATING

⚠ WARNING

For the safety of you and your passengers, always perform an inspection as described below before you begin boating.

Make sure that you have enough fuel for the intended run.

Fuel capacity : 1.0 L (0.26/0.22 US/Imp.gal.)



Check the level of engine oil in the sump.

CAUTION

Running the engine with insufficient oil can cause serious engine damage.

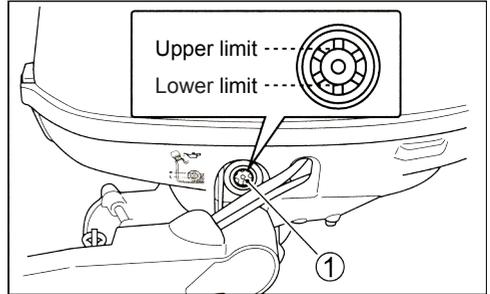
To check the engine oil level:

NOTE:

To avoid an incorrect assessment of engine oil level, check the level only when the engine has cooled.

1. Place the motor in a vertical position.
2. Check the engine oil level through the oil level inspection window ①.

The oil should be between the upper and lower



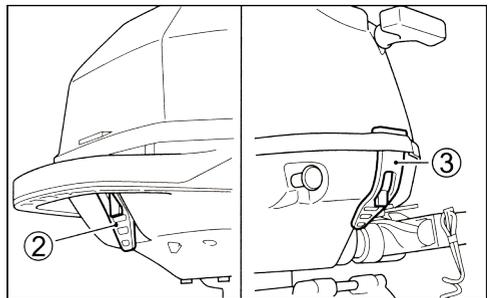
NOTE:

If the engine oil is contaminated or discoloured, replace with fresh engine oil (Refer to INSPECTION AND MAINTENANCE/Engine oil section).

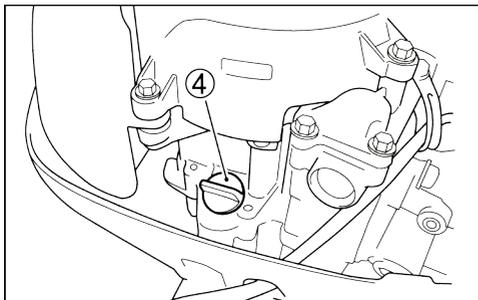
Seeing the window ①, add enough oil to raise the level to the upper limit.

To add the engine oil:

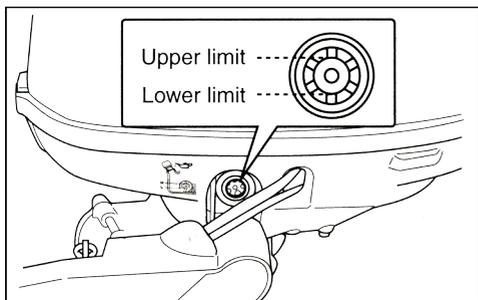
1. Remove the motor cover by unlocking the fasteners ② and ③.



2. Remove the oil filler cap ④ .



3. Add the recommended engine oil until the oil level reaches the upper limit.



CAUTION

Do not overfill, as excessive oil can damage the engine.

4. Tighten the oil filler cap securely.

- Visually check the propeller to make sure it is not damaged.
- Make sure that the motor is securely mounted to the transom.
- Make sure that the tilt pin is securely installed in the proper position.
- Make sure the starter rope is free from any evidence of fraying or wear.
- Make sure you have the boating safety and emergency equipment on board.

BREAK-IN

Proper operation during the break-in period will help ensure maximum life and performance from your engine. The following guidelines will explain proper break-in procedures.

CAUTION

Failure to follow the break-in procedures described below can result in severe engine damage.

Break-in period: 10 hours

Break-in procedure

1. For the initial 2 hours:
Allow sufficient idling time (about 5 minutes) for the engine to warm up after cold engine starting.

CAUTION

High rpm without sufficient warm-up may cause severe engine damage such as piston seizure.

After warming up, run the engine at idling speed or the lowest in-gear speed for about 15 minutes. During the remaining 1 hour and 45 minutes, if safe boating conditions permit, operate the engine in gear at less than 1/2 (half) throttle (3000 r/min.).

NOTE:

You may throttle up beyond the recommended operating range to plane your boat, then immediately reduce the throttle to the recommended operating range.

2. For the next 1 hour:

Safe boating conditions permitting, operate the engine in gear at 4000 r/min. or at three-quarter throttle. Avoid running the engine at full throttle.

3. Remaining 7 hours:

Safe boating conditions permitting, operate the engine in gear at the desired engine speed. You may occasionally use full throttle; however do not operate the engine continuously at full throttle for more than 5 minutes at any time.

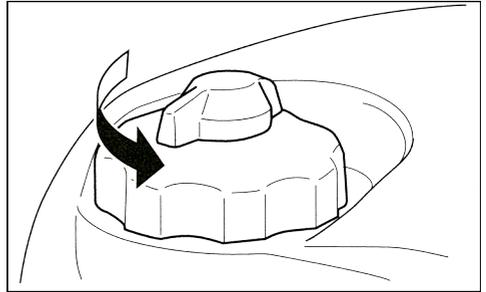
NOTE:

For the remaining 7 hours of break-in operation, you may use full throttle however do not operate the engine continuously at full throttle for more than 5 minutes at a time or severe engine damage such as seizure may result.

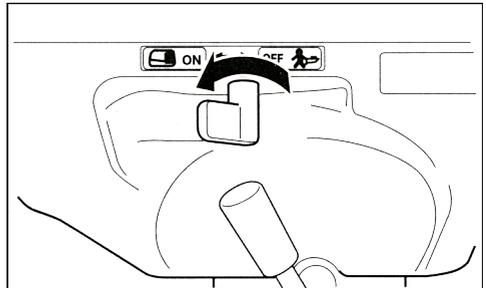
OPERATION

BEFORE ATTEMPTING TO START THE ENGINE

1. Make sure the motor has been lowered into the water.
2. Twist the air-vent screw on the fuel tank cap counterclockwise to open the vent.



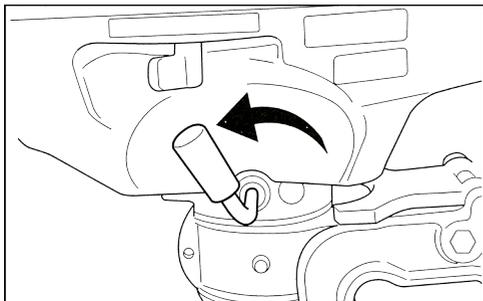
3. Turn the fuel cock lever to the left.



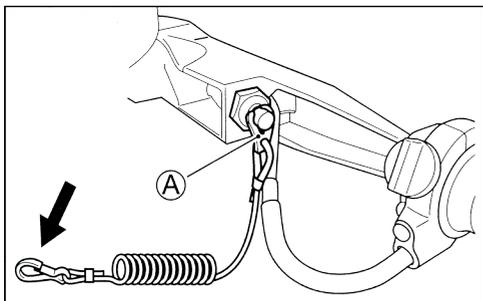
NOTE:

When turning the fuel cock lever to the left, fuel can flow from the built-in tank.

4. Shift the motor into "NEUTRAL".



5. The lock plate (A) is in place and the end of the lanyard is attached to a part of your body.



▲ WARNING

The operator of your boat should always tie the end of the emergency stop switch cord around a part of his or her body before operating the boat. This way, if the operator is thrown overboard or an emergency occurs, the engine can be stopped quickly by pulling on the cord.

NOTE:

A spare plastic lock plate is provided for temporary use only. Remove it from the cord and place it in a safe place on board your boat. If you lose or break the emergency stop switch cord/lock plate assembly, replace it as soon as possible so that you can resume normal use of the emergency stop switch.

STARTING THE ENGINE

▲ WARNING

Never run the outboard motor indoors or in an enclosed area. Exhaust emissions contain poisonous carbon monoxide fumes which can cause unconsciousness and may lead to death.

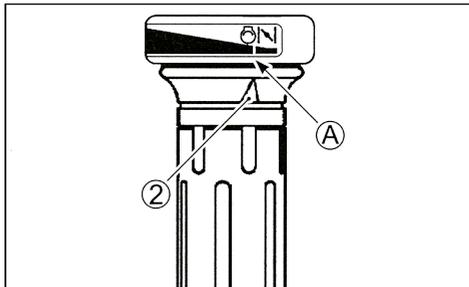
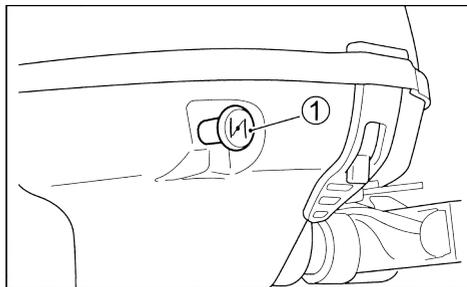
Before starting the engine, make sure that you have enough fuel to complete your intended trip.

NOTE:

If the engine fails to start, check the emergency stop switch lock plate. If the lock plate is not in position, the engine cannot be started.

If the engine is cold:

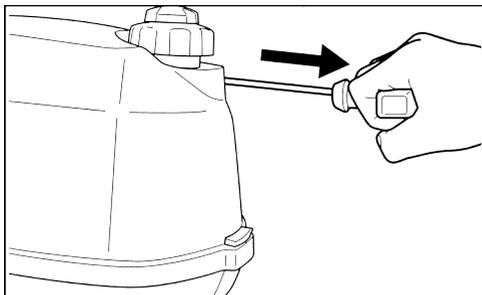
Pull the choke knob (1) fully out. Align the arrow mark (2) on the throttle control grip with the position (A). If the engine is warm: Align the arrow mark (2) on the throttle control grip with the position (A). Do not use the choke.



NOTE:

You may need to use the choke when restarting a warm engine. If your engine does not start quickly when warm, follow the procedure for cold starting.

2. Firmly grasp the starter grip and pull slowly until resistance is felt. When you feel it engage, pull the rope sharply to start the engine. Do not release the rope when it is pulled out. Hold the rope and allow it to recoil slowly.



⚠ WARNING

This outboard motor does not have a start-in-gear protection system. If the shift lever is not in the "NEUTRAL" position, the boat can start off unexpectedly when the engine is started, causing personal injury.

CAUTION

Never pull the starter grip while the engine is running, as the starter system could be damaged.

3. After starting, use the throttle control grip to bring the engine to idle.
4. Push the choke knob in.

NOTE:

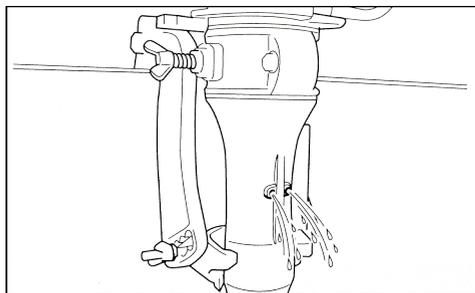
In cold weather, you may have to leave the choke knob out for a longer period of time for the engine to warm up.

5. Warm up the engine for about 5 minutes.

Cooling water check

Cooling water is intermittently discharged from the pilot water hole at medium engine speeds. Water is not normally discharged at other speeds even when the engine is operating properly. However, cooling system operation can be confirmed as follows:

Place the shift selector lever in the "Neutral Position" with the motor idling. Increase and decrease the engine speed five or six times in succession by opening and closing the throttle smoothly and without stopping in any one throttle position. If water is discharged from the pilot water hole under this operating condition, the cooling system is working properly. If water is not discharged, stop the engine as soon as possible and consult your authorized Suzuki Marine Dealer.



CAUTION

Never operate your outboard motor when there is no water coming out of the pilot water hole, or severe damage can result.

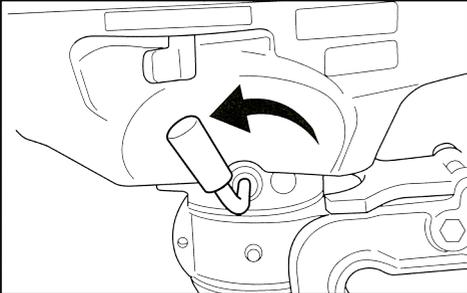
EMERGENCY STARTING

⚠ WARNING

When rope-starting the engine, do not touch electrical components such as the igniter or spark plug lead. Contact with these items may result in a severe electric shock.

To start the engine when the starter system fails:

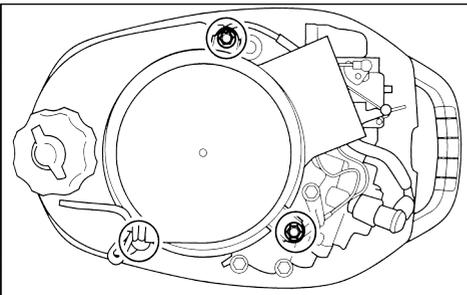
1. Shift the motor into "NEUTRAL".



⚠ WARNING

This outboard motor does not have a start-in-gear protection system. If the shift lever is not in the "NEUTRAL" position, the boat can start off unexpectedly when the engine is started, causing personal injury.

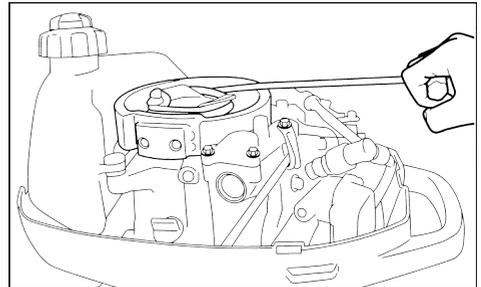
2. Remove the motor cover.
3. Remove the bolts securing the recoil starter in place.



Lift off the recoil starter assembly. Re-tighten the fuel tank by using the recoil starter bolts removed.

Tie a knot in one end of the emergency starter rope located in the tool kit. Tie the other end around the screw-driver handle in the tool kit. Hook the knotted end of the rope in the pulley notch and wind the rope around the pulley in a clockwise direction.

Put the emergency stop switch lock plate in place. After following the steps of the normal starting procedure, pull the emergency starter rope sharply to start the engine.



⚠ WARNING

Do not re-install the recoil starter or motor cover after starting the engine, or you may be injured.

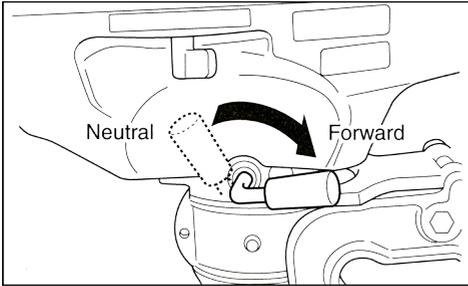
When the engine is running, keep your hands, hair, clothing, etc., away from the engine.

Be sure to have the starter system repaired as soon as possible. You should not continue to use the emergency starting procedure for routine engine starting.

SHIFTING AND SPEED CONTROL

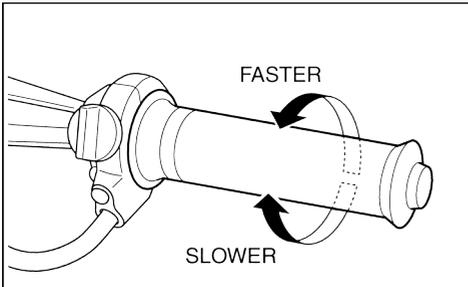
Shifting

To shift the motor into "FORWARD", set the throttle control grip to the idle position and pull the shift lever towards you firmly.



Speed Control

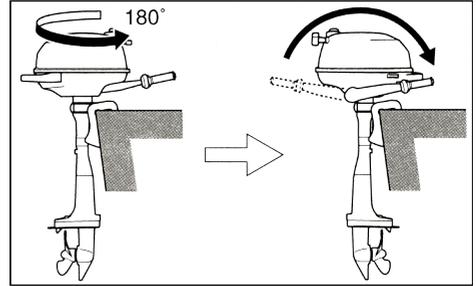
After shifting, control the engine speed by twisting the throttle control grip.



REVERSE OPERATION

To operate the boat in the reverse direction:

1. Set the throttle control grip to the idle position.
2. Turn the motor completely around with the steering handle and then fold it towards you.



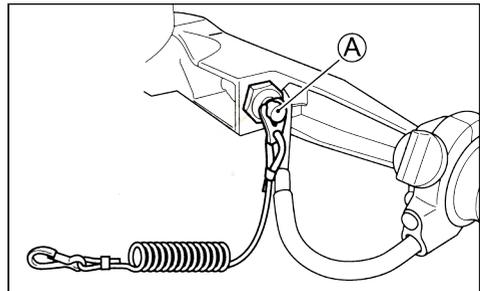
3. Operate the motor at a low speed.

CAUTION

Do not allow your motor to hit bottom, particularly when operating it in the reverse direction, or serious damage can result. When the motor hits bottom while operating in the reverse direction, the shock acts directly on the transom, and both the motor and boat could be damaged.

STOPPING THE ENGINE

To stop the engine, twist the throttle control grip to the idle position, shift into "NEUTRAL", and hold in the stop button **A** until the engine stops,



NOTE:

To make sure that the emergency stop switch operates properly, stop the engine occasionally by pulling out the lock plate, while operating the engine at idling speed.

MOORING

The motor should be tilted up out of the water when you moor the boat in shallow water or if the motor will not be used for some time, to protect it from damage by underwater obstacles at low tide or corrosion from salt water. Refer to the TILT UP LOCK ARM section for details on how to tilt up the motor.

OPERATION IN SHALLOW WATER

When operating your outboard motor in shallow water, you should only operate the motor at slow speeds.

CAUTION

Do not allow your motor to hit bottom. Serious damage can result. If the motor does strike bottom, inspect it immediately for damage.

OPERATION IN SALT WATER

After operating the motor in salt water, you should flush the water passages with clean, fresh water as outlined in the FLUSHING THE WATER PASSAGES section. If you do not flush the water passages, salt can corrode the motor and shorten its life.

OPERATION IN FREEZING WEATHER

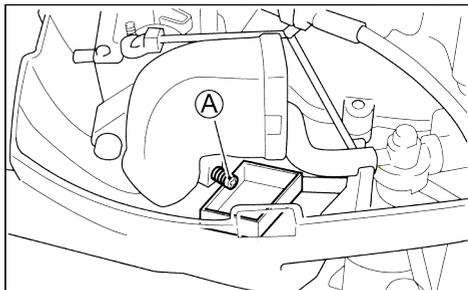
When operating your outboard motor in freezing temperatures, you should keep the lower unit submerged in the water at all times. When taking the motor out of the water, stand it up in a vertical position until the cooling system drains completely.

CAUTION

If you leave your outboard motor out of the water in freezing temperatures with water still in the cooling system, the water can freeze and expand, causing severe damages to the motor.

MOTOR REMOVAL

1. Make sure that the engine has stopped completely.
2. Turn the fuel cock lever to the right.
3. Tighten the built-in fuel tank cap and its air-vent screw.
4. Drain the gasoline from the carburettor as follows:
 - (1) Remove the motor cover.
 - (2) Loosen the carburettor drain screw (A) and drain the gasoline into a suitable container.

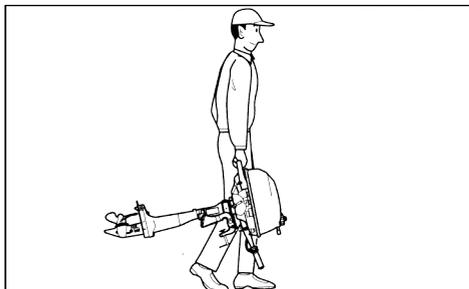


⚠ WARNING

Use a proper, safe container to store any gasoline drained from the outboard motor.

- (3) After draining, re-tighten the drain screw.

5. Loosen the clamp screws.
6. Lift the motor off the transom.
7. Stand the motor vertically and drain the water from the lower unit.
8. To carry, hold the motor by gripping the lower cover handle.

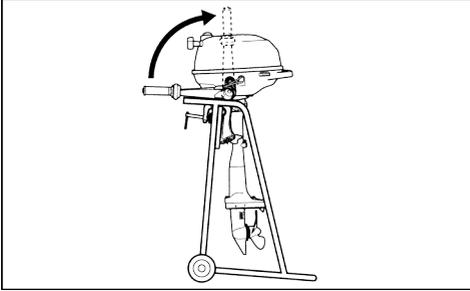


MOTOR TRANSPORTING

When transporting the motor, place the motor in either a vertical or horizontal position.

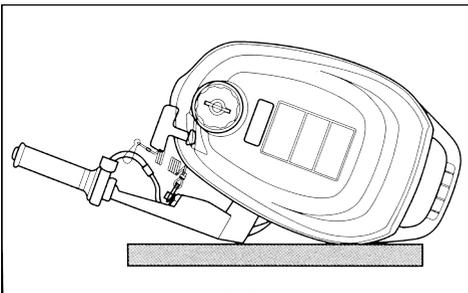
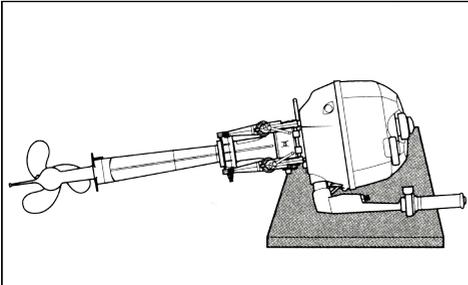
Vertical transport:

Raise the tiller handle and attach the clamp bracket to a stand by securing the two clamp screws.



Horizontal transport:

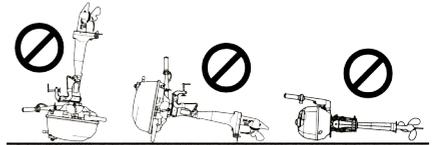
Raise the tiller handle and rest the motor on a case protector with the port side downwards as shown.



CAUTION

Do not rest the engine in any of the positions shown below, as oil may enter the cylinder from the sump or the outer casings may be damaged.

INCORRECT



Do not place the engine on its side before the cooling water has drained from it completely, as water may enter the cylinder through the exhaust port and cause problems.

CAUTION

Do not let the lower unit of the outboard sit higher than the power head during transporting or storing, or water may trickle into the power head, causing damage to the engine.

INSPECTION AND MAINTENANCE

MAINTENANCE SCHEDULE

It is important to inspect and maintain your outboard motor regularly. Follow the chart below. At each interval, be sure to perform the indicated service. Maintenance intervals should be judged by number of hours or number of months, whichever comes first.

WARNING

Stop the engine before carrying out maintenance. If the engine has to be run, make sure that it is in a well ventilated area. Do not under any circumstances run the engine indoors or in an enclosed area. Exhaust emissions contain poisonous carbon monoxide and exposure to these fumes can cause loss of consciousness or even death.

Item to be serviced \ Interval	Initial 20 hrs. or 1 month	Every 50 hrs. or 3 months	Every 100 hrs. or 6 months	Every 200 hrs. or 12 months
Spark plug	-	-	I	R
Breather & Fuel line	I	I	I	I
	*Replace every 2 years.			
Engine oil	R	-	R	R
Gear oil	R	-	R	R
Lubrication	-	I	I	I
Anode	-	I	I	I
*Fuel filter	-	I	I	I
*Ignition timing	-	-	-	I
*Carburetor	I	-	I	I
*Idle speed	I	-	-	I
*Valve clearance	I	-	-	I
*Water pump	-	-	-	I
*Water pump impeller	-	-	-	R
*Propeller pin	I	-	I	I
*Bolts & Nuts	T	-	T	T

I: Inspect and clean, adjust, lubricate, or replace, if necessary T: Tighten R: Replace

⚠ WARNING

Suzuki recommends that only your authorized Suzuki Marine Dealer or a qualified service mechanic perform maintenance on those items in the chart above which are marked with an asterisk (*). You may perform maintenance on the unmarked items by referring to the instructions in this section if you have mechanical experience. If you are not sure whether you can successfully complete any of the unmarked maintenance jobs, ask your authorized Suzuki Marine Dealer to do the maintenance for you.

⚠ WARNING

The safety of you and your passengers depends on how well you maintain your outboard motor. Follow all inspection and maintenance instructions carefully. Do not attempt to perform maintenance on this outboard motor if you do not have prior mechanical experience. You could be injured or may damage the motor.

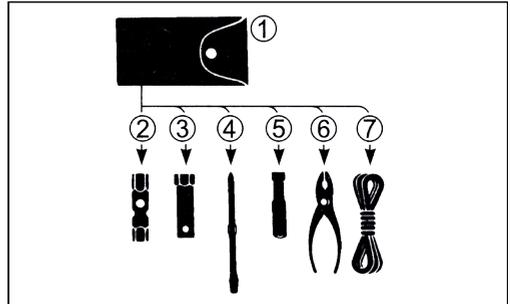
CAUTION

The maintenance intervals in the chart were established for normal usage of your outboard motor. If your outboard motor is used under severe conditions such as frequent full throttle operation or frequent operation in muddy water, you should perform maintenance more often than indicated in the chart. If you have any questions regarding appropriate maintenance intervals, consult your authorized Suzuki Marine Dealer. When replacing parts on your outboard motor, Suzuki strongly recommends that you use Suzuki genuine parts. Damage to Suzuki outboards caused by the use and/or fault of other parts than Suzuki genuine parts can not be covered under warranty.

TOOL KIT

A tool kit is provided with your outboard motor. Keep the kit on board your boat and make sure that all of the items provided remain in the kit. The tool kit contains the following items:

- ① Tool bag
- ② 12x10 mm Box wrench
- ③ 21 mm Box wrench
- ④ Combination screw driver
- ⑤ Screwdriver handle
- ⑥ Pliers
- ⑦ Emergency starter rope



SPARK PLUG

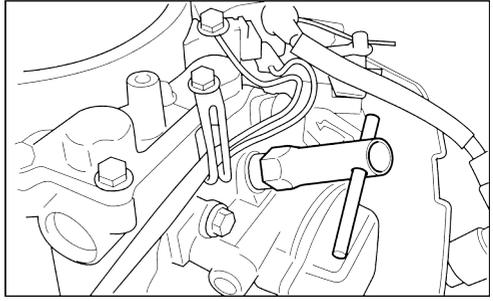
Your outboard motor comes equipped with the following "standard" spark plug for normal usage.

NGK CR6HSA	Standard
------------	----------

CAUTION

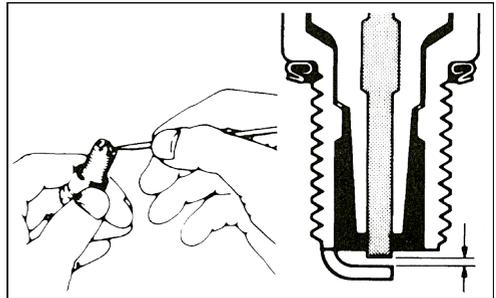
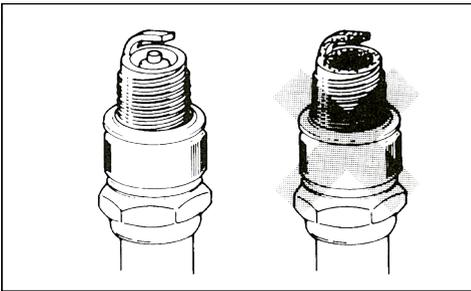
It is important that you use **ONLY** a resistor type spark plug. Non-resistor type will interfere with the function of the electronic ignition, causing misfiring, or cause problems with other electronic boat equipment and accessories.

A normally operating spark plug is very light-brown in colour. If the standard plug is not suitable for your operating, consult your authorized Suzuki Marine Dealer.



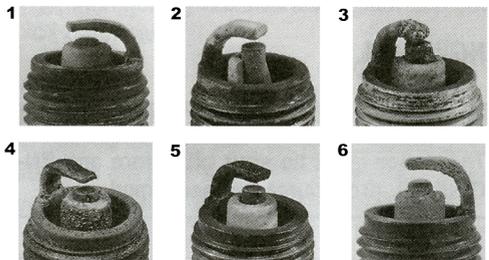
To maintain a strong spark, you should clean and adjust the plug at the intervals shown in the maintenance chart. Remove carbon deposits from the spark plug using a small wire brush or spark plug cleaner, and adjust the gap according to the following chart:

Spark plug gap	0.6 - 0.7 mm (0.024 - 0.028 in.)
----------------	-------------------------------------



CAUTION

- Whitening or blackening of a spark plug insulator can be caused by incorrect engine adjustments as well as use of an incorrect spark plug. Consult your authorized Suzuki Marine Dealer before using a spark plug of a different heat range. Use of an improper spark plug can lead to severe engine damage.
- Do not experiment with other spark plug brands unless you can determine that they are equivalent to the specified brand or you may experience engine damage which may not be covered under warranty.
- To install a spark plug, turn it in as far as possible with your fingers, then tighten it with a wrench. Do not overtighten or cross thread the spark plug or the threads of the cylinder head will be damaged.



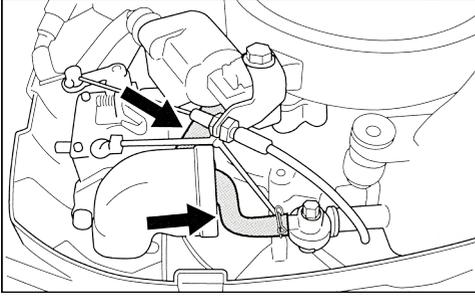
1. Excessive wear
2. Breakage
3. Melting
4. Erosion
5. Yellow deposits
6. Oxidation

CAUTION

If the spark plug condition is found as shown in the illustration above, ensure it is replaced with new one. Otherwise, it will cause difficulty in starting the engine, increase fuel consumption, and result in engine troubles.

BREATHER AND FUEL LINE

Inspect the breather and fuel line for leaks, cracks, swelling, or other damage. If the breather and fuel line is damaged in any way, it must be replaced. Consult your authorized Suzuki Marine Dealer if it is necessary to replace them.



⚠ WARNING

Fuel leakage can contribute to an explosion or fire, causing serious personal injury. Have your authorized Suzuki Marine Dealer replace the fuel line if there is any evidence of leaking, cracking or swelling.

CAUTION

Take utmost care to prevent the ingress of water to the fuel system.

ENGINE OIL

⚠ WARNING

The motor must be shut off before any ENGINE OIL procedures are performed.

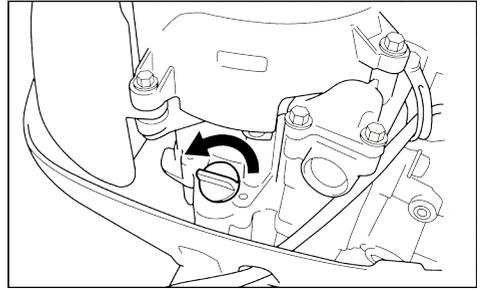
Engine oil change

The oil should be changed when engine is warm so that the oil will drain thoroughly from the engine.

To change the engine oil:

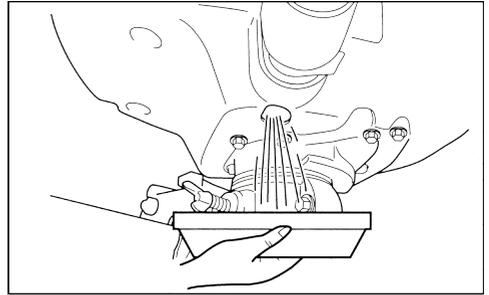
1. Place the motor in a vertical position and remove the motor cover.

2. Remove the oil filler cap.



3. Place a drain pan under the engine oil drain plug.

4. Remove the engine oil drain plug and gasket, then let the engine oil drain.



5. After draining, secure the engine oil drain plug with a new gasket.

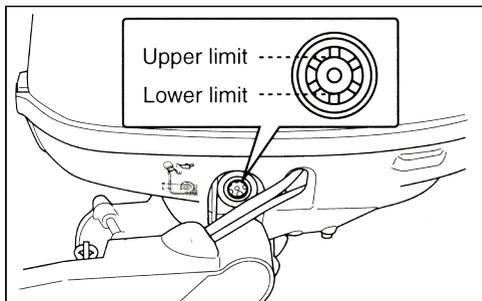
CAUTION

Do not re-use the removed gasket. Be sure to use a new gasket.

6. Fill with recommended engine oil to the upper limit.

Oil capacity	0.38 L
--------------	--------

7. Check the engine oil level. Refer to the INSPECTION BEFORE BOATING section.



NOTE:

To avoid incorrect measurement of engine oil level, check oil level only when the engine has cooled.

8. Reinstall the oil filler cap.

⚠ WARNING

The engine oil temperature may be high enough to burn your fingers when the drain plug is loosened. Wait until the drain plug is cool enough to touch with bare hands. New and used oil can be hazardous. Children and pets may be harmed by swallowing new or used oil. Continuous contact with used engine oil has been found to cause skin cancer in laboratory animals. Brief contact with used oil may irritate skin. Keep new and used oil away from children and pets. To minimize your exposure to oil, wear a long-sleeve shirt and waterproof gloves (such as dishwashing gloves) when changing oil. If oil contacts your skin, wash thoroughly with soap and water. Launder any clothing or rags if wet with oil.

NOTE:

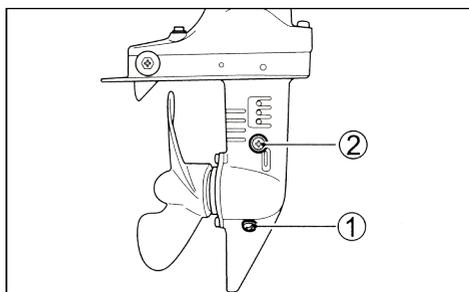
Recycle or properly dispose of used engine oil. Do not throw it in the trash, pour it on the ground, down a drain, or into the water.

GEAR OIL

To check the gear oil level, remove the upper oil level plug and look into the hole. The oil level should be at the bottom edge of the hole. If the oil level is low, add the specified gear oil until the level reaches the bottom edge of the hole. Then, reinstall and tighten the plug.

To change the gear oil:

1. Make sure the motor is in an upright position. Place a drain pan under the lower casing.
2. Remove the gear oil drain plug ①, then remove the gear oil level plug ②.



3. After the oil has drained completely, inject the specified gear oil into the lower drain hole until it just starts to come out of the upper hole. Approximately 60 ml (2.0/2.1 US/Imp oz.) of oil will be required.
4. Reinstall and tighten the gear oil level plug ②, then quickly reinstall and tighten the gear oil drain plug ①.

NOTE:

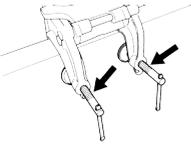
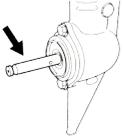
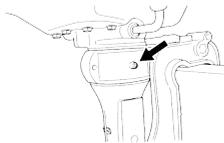
To avoid insufficient injection of gear oil, check the gear oil level 10 minutes after doing the procedure in the step 4. If the oil level is low, slowly inject the gear oil up to the correct level.

CAUTION

Operation of the motor with water in the gear case can cause severe mechanical damage. Gear oil contaminated with water will have a milky colour. If you notice any water in the gear oil immediately contact your authorized Suzuki Marine Dealer.

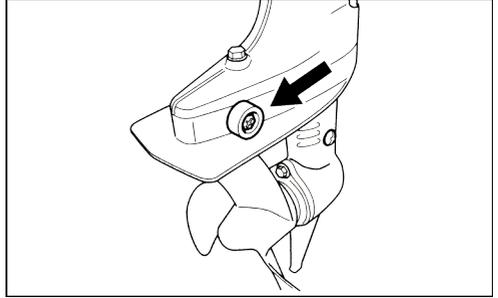
LUBRICATION

Proper lubrication is important for the safe, smooth operation and long life of each working part of your outboard motor. The following chart shows the lubrication points of your motor and the recommended lubricant:

LOCATION	LUBRICANT
 Clamp screw	Marine-grade water resistant grease
 Propeller shaft	
 Swivel bracket	Marine-grade water resistant grease (Grease Gun)

ANODE

The motor is protected from exterior corrosion by an anode. This anode controls electrolysis and prevent corrosion. The anode will corrode in place of the parts they are protecting. You should periodically inspect the anode and replace it when 2/3 of the metal has corroded away.



CAUTION

If the anode is not fitted to the motor or corroded away, the aluminium parts (for example, Drive unit) are not protected from galvanic corrosion by salt water and will sustain damage. Do not paint the anode, or the painted anode has no effect.

FLUSHING THE WATER PASSAGES

After operation in muddy, brackish, or salt water, you should flush the water passages and motor surface with clean, fresh water. If you do not flush the water passages, salt can corrode the motor and shorten its life. Flush the water passages as follows.

ENGINE RUNNING - Vertical position -

Suzuki recommends that you flush the water passages by using this method.

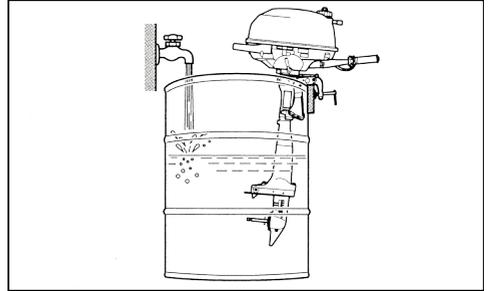
▲ WARNING

Never start the engine or let it run indoors or where there is little or no ventilation. Exhaust gas contains carbon monoxide, a gas that is colourless and odourless and can cause death or severe injury. Make sure the engine remains in NEUTRAL while flushing out the water passages. If shifted into gear, the propeller shaft will turn, possibly resulting in personal injury. Make sure the motor is properly clamped to a secure stand or boat and remain in attendance until flushing is completed. Keep children and pets away from the area, and stay clear of all moving parts during this procedure.

CAUTION

Never start the engine without supplying water to the cooling system as water pump damage could result in as little as 15 seconds. Severe engine damage could result from no water supply.

1. Shift the motor into "NEUTRAL".
2. Remove the propeller from the motor. Refer to the PROPELLER SELECTION AND INSTALLATION section.
3. Install the motor on a large container such as an empty 200 litre drum.



4. Fill the container with clean, fresh water as illustrated.
5. Start the motor and let it idle for about five minutes. This will clean the salt water out of the cooling system.
6. Shut off the motor. Remove the motor from the container and keep the motor in a vertical position until the engine has drained completely. Reinstall the propeller as outlined in the PROPELLER SELECTION AND INSTALLATION section.
7. Clean the motor surface and apply a coat of automotive wax on the external finish of the motor.

SUBMERGED MOTOR

A motor that has been accidentally submerged in water must be overhauled as soon as possible to prevent corrosion. In the event that your motor is accidentally submerged, take the following steps:

1. Get the motor out of the water as soon as possible.
2. Wash it thoroughly with fresh water to completely remove all salt, mud, and seaweed.
3. Remove the spark plug. Drain the water from the cylinder through the spark plug hole by manually turning the flywheel several times.
4. Check if any water is evident in the engine oil. If water is seen, remove the oil drain plug and drain the oil. After draining, tighten the oil drain plug.
5. Drain the fuel line and the carburettor

⚠ WARNING

Keep flames and sparks away from gasoline. Dispose of unwanted fuel properly.

6. Pour engine oil into the engine through the spark plug hole and carburettor. Coat the engine inner parts with oil by turning the engine over with the emergency starter rope or recoil starter.

CAUTION

If you encounter friction or resistance while cranking the engine, stop at once and do not attempt to start the engine until it is inspected or repaired.

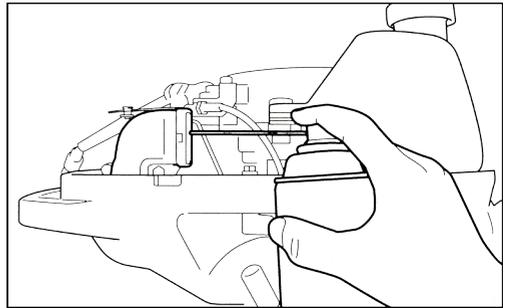
7. Take the motor to your authorized Suzuki Marine Dealer as soon as possible to be overhauled.

STORAGE PROCEDURE

MOTOR STORAGE

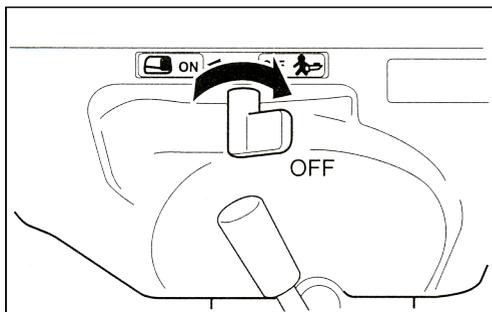
When storing your motor for a long period of time (for example, at the end of the boating season), it is recommended that you take your motor to your authorized Suzuki Marine Dealer. However, if you choose to prepare the motor for storage yourself, follow the procedure outlined below:

1. Change the gear oil as outlined in the GEAR OIL section.
2. Change the engine oil as outlined in the ENGINE OIL section.
3. Add a fuel stabilizer to the fuel tank according to the instructions on the stabilizer can.
4. Flush the water passages in the motor thoroughly. Refer to the FLUSHING THE WATER PASSAGES section.
5. Readjust the water flow, run the engine at about 2500 r/min in neutral for five minutes to distribute the stabilized fuel through the engine.
6. Spray a fogging oil into the air inlet hole as illustrated until the engine starts to smoke.



7. Stop the engine.
8. Remove the spark plug and spray a fogging oil into the plug hole. Rotate the flywheel several rotations by hand to distribute the oil and to drain water from the water pump. Reinstall the spark plug.

9. Turn the fuel cock lever to the right.



10. Tighten the air-vent screw on the fuel filter cap of the built-in tank.

11. Lubricate all other specified parts. Refer to the LUBRICATION section.

12. Apply a coat of automotive wax on the external finish of the motor. If paint damage is evident, apply touch up paint before waxing.

13. Store the motor in an upright position in a dry, well-ventilated area.

⚠ WARNING

When the engine is running, keep your hands, hair, clothing, etc., away from the engine.

CAUTION

Never start the motor without supplying water to the cooling system as water pump damage could result in as little as 15 seconds. Severe engine damage could result from no water supply.

AFTER STORAGE

When taking your motor out of storage, follow the procedure below to return it to operating condition:

1. Thoroughly clean the spark plug. Replace them if necessary.
2. Check the gear-case oil level and if necessary, add gear oil according to the procedure outlined in the GEAR OIL section.
3. Lubricate all moving parts according to the LUBRICATION section.
4. Check the engine oil level.
5. Clean the motor and wax the painted surfaces.

TROUBLESHOOTING

This troubleshooting guide provided to help you find the cause of common complaints.

CAUTION

Failure to troubleshoot a problem correctly can damage your outboard motor. Improper repairs or adjustments may damage the outboard motor instead of fixing it. Such damage may not be covered under warranty. If you are not sure about the proper action, consult your authorized Suzuki Marine Dealer about the problem.

Engine will not start (hard to start):

- Emergency stop switch lock plate is not in position.
- Fuel tank is empty.
- Fuel hose is kinked or pinched.
- Spark plug is fouled.

Engine idles unstably or stalls:

- Choke knob is not pushed in securely.
- Fuel hose is kinked or pinched.
- Spark plug is fouled.

Engine speed will not increase (Engine power is low):

- Engine is overloaded.
- Propeller is damaged.
- Propeller is not properly matched to loads.

Engine vibrates excessively:

- Clamp screws are loose.
- Foreign object (seaweed etc.) is tangled on propeller.
- Propeller is damaged.

Engine overheats:

- Cooling water intake(s) are blocked.
- Engine is overloaded.
- Propeller is not properly matched to loads.

SPECIFICATIONS

Item	DF2.5
Engine Type	4 Stroke
Number of Cylinders	1
Bore and Stroke	48.0 x 38.0 mm (1 .89 x 1 .50 in.)
Piston Displacement	68 cm ³ (4.1 cu. in.)
Maximum output	1 .8 kW (2.5PS)
Full Throttle Operating Range	5250 - 5750 r/min. (min ⁻¹)
Ignition System	SUZUKI PEI
Engine Lubrication	Trochoid pump lubrication
Engine Oil Capacity	0.38 L (0.40/0.33 US/Imp, qt.)
Gear Oil Capacity	60 cm ³ (ml) (2.0/2.1 US/Imp oz.)
Built-in Fuel Tank Capacity	1 .0 L (0.26 /0.22 US/Imp gal.)



* 9 9 0 1 1 - 9 7 J 0 1 - 0 5 3 *

K7

SUZUKI MOTOR CORPORATION
300 TAKATSUKA, HAMAMATSU, JAPAN

Printed in Thailand