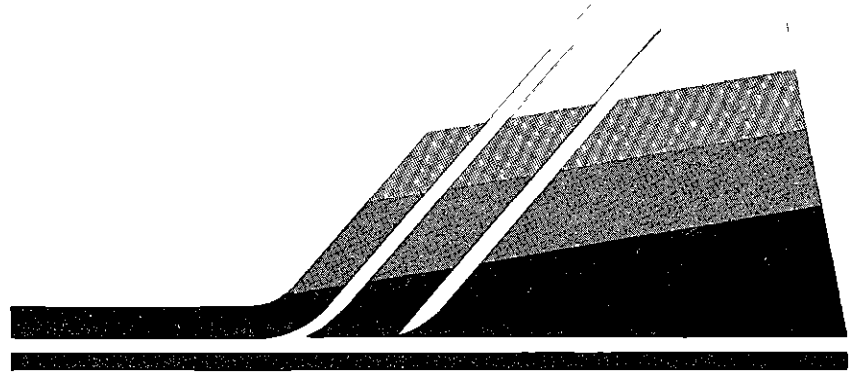
NISSAN OUTBOARD MOTOR

NS 3.5B



OWNER'S OPERATING MANUAL

NISSAN NS3.5B

IMPORTANT
PLEASE PAY SPECIAL ATTENTION TO THE WORDS AND SYMBOLS LISTED BELOW FOR SAFE OPERATION AND PROTECTION FROM DANGER.

⚠⚠⚠ DANGER If the operator neglects to read and observe this instruction, a serious accident may occur which could result in severe personal injury or death.

⚠⚠ WARNING This instruction is provided for the safety of the operator and bystanders. Negligence in observing this instruction could result in personal injury.

⚠ CAUTION This instruction is to be observed when operating, checking, and maintaining the outboard. If this instruction is neglected, the outboard may be damaged.

★ Boxed item with no special indication
This item provides instructions or advice on using the outboard so as to maintain it in good condition and prolong its life.

Symbols

1  Warning, fire risk

2  Warning, electrical hazard

3  Choke

4  Throttle

5  Refer to Owner's Manual

6  Fuel

7  Engine oil

8  Engine start

9 

Engine stop

10  Clutch

PREFACE

Thank you very much for selecting a Nissan Marine Outboard Motor.

This operator's manual contains information on the operating procedures, preventive maintenance and inspection procedures of the Nissan Marine Outboard Motor Model NS3.5B.

Please read this manual thoroughly before operating your Nissan outboard motor. You should become familiar with correct operating procedures so as to assure many years of safe and pleasant boating.

CONTENTS

Page

1. IMPORTANT NOTICE TO OWNERS AND OPERATORS 6

2. SPECIFICATIONS 9

3. NOMENCLATURE 11

4. INSTALLING THE OUTBOARD 12

(1) Position 12

(2) Transom Height 12

(3) Securing the Outboard 13

(4) Adjustment of Outboard Angle 13

5. FUEL AND ENGINE OIL 15

6. OPERATION 17

(1) Running-In 17

(2) Starting 18

(3) Starting if Recoil Starter is Out of Order 22

(4) Warm-Up 24

(5) Moving Forward 24

(6) Reversing 25

(7) Speed Control 26

(8) Running in Shallow Water 26

(9) Stopping 26

(10) Mooring the Boat 28

(11) Dismounting and Transporting the Outboard 29

(12) Precautions during Operation 30

7. ADJUSTING THE STEERING RESISTANCE ····· 31
8. INSPECTION AND MAINTENANCE ····· 32
(1) Inspection Before and After Operation ····· 32
(2) Periodic Inspection ····· 37
(3) Preparing the Outboard for Long-Term Storage ····· 40
(4) Inspection After Long-Term Storage ····· 41
(5) If the Engine is Submerged in Water ····· 41
9. TROUBLESHOOTING ····· 42
10. ACCESSORIES ····· 44
11. WIRING DIAGRAM ····· 45

1. IMPORTANT NOTICE TO OWNER'S AND OPERATORS

⚠⚠ WARNING

(1) Make sure you have the necessary equipment and spare parts for emergency use.

* Equipment: Life jackets, life buoys, anchor, ropes, bucket, tools, paddles, fire extinguisher, whistle, smoke candles, extra fuel, etc.
* Spare parts: Spare propeller, shear pins, split pins, etc.

(2) The maximum horsepower rating of the engine is indicated on the Certification Plate on the engine. Be sure that the maximum engine horsepower rating does not exceed that recommended for your boat. It is highly dangerous to operate a boat with an overpowered engine.

(3) Make sure the operator understands how to operate the engine and boat, how to use emergency equipment, and how to replace the emergency spare parts. The operator should also know basic emergency procedures for the safety of the passengers.

Read the Owner's Manual carefully and ensure that you fully understand the contents before operating the engine. Whether you are a first-time operator or have considerable experience with outboard motors and boats, pay careful attention to the method of operation and handling of the engine since there are variations between different models and outboards made by different manufacturers.

Keep the Owner's Manual in a secure and convenient place after reading it, so that it is readily available when the operator needs to refer to a particular operation or in the case of engine trouble.

If the outboard is transferred to a third party, supply this manual together with the outboard without fail.

⚠⚠ WARNING

(4) Perform a daily inspection and periodic inspections on the outboard.
Engine trouble while at sea is dangerous and may lead to a serious accident for the driver and passangers. Carry out the inspections referring Section 8, Inspection and Maintenance, on pages 32 to 41.

(5) Do not modify the outboard motor. Modifications may cause a reduction in the motor's functions and lead to a dangerous condition.

(6) The engine serial number and the model name are shown on the nameplate attached to the stern bracket. When placing an order for a part for the outboard, confirm the serial number and model name to ensure that you receive the correct part.
For safe operation, never use an improper, poor-quality, or nongenuine part.

(7) To ensure safe sailing, always pay attention to the following:
① Learn and obey the rules of navigation and related regulation, and observe the appropriate customs and courtesies while at sea.
② Never operate the boat while under the influence of alcohol or drugs.
③ Sudden acceleration or deceleration places a strain on the engine, operator, and passangers, while turning the boat at high speed may cause it to overturn. Always operate the engine at a safe speed.
④ Make sure that each of the operator and passangers always wears a life jacket while on board.

⚠⚠ WARNING

⑤ Do not load the boat with excessive passangers or cargo, and make sure that the load is properly balanced. Take special care when the operator and passangers get on and off the boat.

⑥ Before sailing, make sure to inform the family of the operator and passangers, friends, marina, etc. of your boating schedule in case of emergency.

⑦ The weather at sea is changeable. Check the weather forecast when making your boating plans and before setting out to avoid being caught by bad weather.

⑧ Many problems can be prevented in advance by making the appropriate prechecks and adjustments. Please ask your dealer to perform a thorough check and carry out the necessary repairs if you have any uncertainty about how the outboard is running.

⑨ The operator of the outboard should instruct the passangers on the basics of how to operate the engine and boat in case of emergency.

2. SPECIFICATIONS

Model	M3.5B
Overall Length mm (in)	Approx. 550 (21.7)
Overall Width mm (in)	Approx. 220 (8.7)
Overall Height mm (in)	S: Approx. 955 (37.6)
	L: Approx. 1,082 (42.6)
Transom Height mm (in)	S: Approx. 380 (15.0)
	L: Approx. 510 (20.1)
Weight kg (lbs)	S: Approx. 13.0 (28.7)
	L: Approx. 13.5 (29.8)
Max. Output kW (PS)	2.58 (3.5)
Full Throttle Speed Range rpm	4,200 − 5,300
No. of Cylinders	1
Piston Displacement cc (in^2)	74.6 (4.6)
Bore & Stroke mm (in)	47 × 43 (1.85 × 1.69)
Exhaust System	Underwater exhaust
Lubrication	Fuel mixture
Fuel	Mixed gasoline (Regular gasoline and genuine 2-stroke engine oil)
Fuel Tank Capacity	Approx. 1.4 (0.37 US gal)[Integral tank]
Fuel Mixing Ratio	50:1 (After running-in)
Fuel Consumption (at full throttle)(ℓ/hr)	1.7
Starting System	Recoil starter & pull rope
Engine Rotation Direction	Clockwise
Ignition	CD Ignition

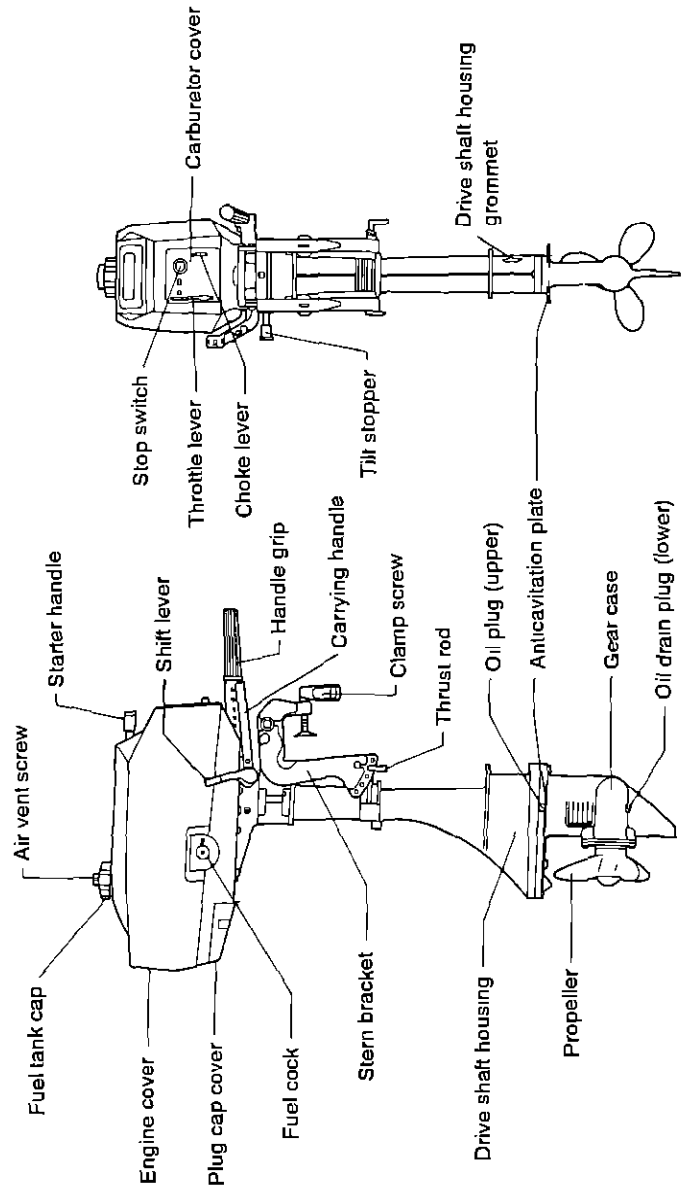
Spark Plug	NGK BP6HS-10 or Champion L87YC10
Gear Reduction Ratio	13:28
Gear Oil	Gear Oil GL5 SEA #80 or manufacturer's recommended oil
Speed Control	Throttle lever
Propeller mm (Blade × Diameter × Pitch)	3 × 188 × 178
Steering Method	Bar handle

OPTIONAL PARTS

Propeller	Pitch	Mark	Part No.
	6"	F	309-64106-0
	6"	G	3F0-64102-0

Note: A stainless steel shear pin must be used for Propeller G.

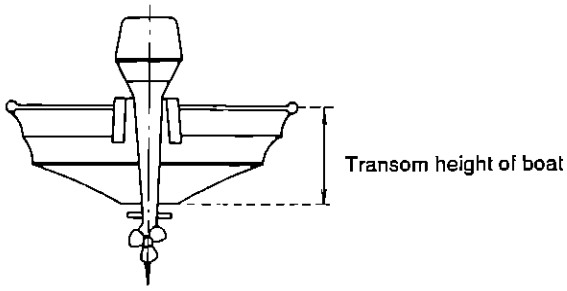
3. NOMENCLATURE



4. INSTALLING THE OUTBOARD

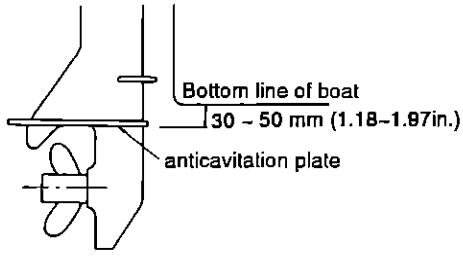
(1) Position

Position the outboard at the exact center of the transom board.



(2) Transom Height

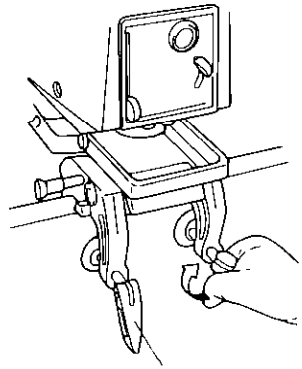
Install the outboard so that the anticavitation plate is at a level of 30 ~ 50 mm (1.18 ~1.97in.)below the bottom line of the boat.



NOTE
When purchasing a boat, check and confirm the transom height of the boat and the recommended horsepower of the outboard for the boat.

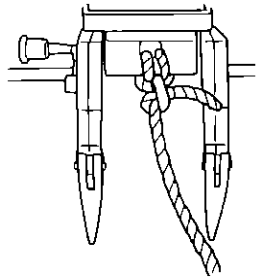
(3) Securing the Outboard

Tighten the clamp screws by hand to secure the outboard to the boat.



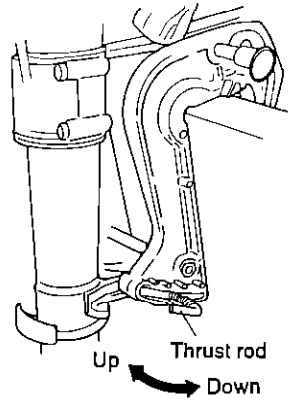
⚠ CAUTION

During boating, retighten the screws from time to time to ensure safety.
In addition, attach a safety rope or chain to the outboard to prevent possible loss overboard.



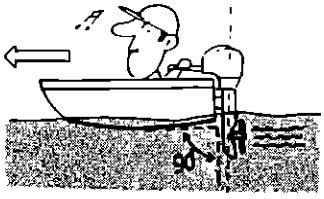
(4) Adjustment of Outboard Angle

The angle of the outboard can be adjusted by changing the position of the thrust rod in the holes provided in the stern brackets, according to the angle of the transom board of the boat, the weight of the load, etc. The angle should be adjusted so that the anticavitation plate is parallel to the water surface when the boat is running.



* Correct angle of tilt

The optimum angle of tilt is obtained when the boat is parallel to the water surface while running.



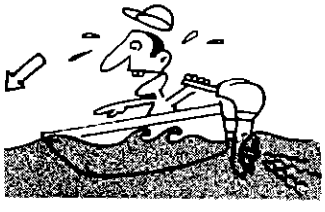
* Incorrect angle of tilt (bow rises too high)

If the angle of tilt is excessive, the bow will rise out of the water and the speed will decrease. In this case, decrease the angle by setting the thrust rod in a lower hole.

* Incorrect angle of tilt (bow dips into the water)

If the tilt angle is too small, the bow will dip into water, the speed will decrease, and water may enter the boat.

In this case, increase the angle by setting the thrust rod in a higher hole.



5. FUEL AND ENGINE OIL

(1) Use fuel mixed at the ratio of 50 parts regular gasoline to 1 part genuine 2-stroke engine oil.

During running-in: 2-stroke Engine Oil 1 + Gasoline 20 → (20:1)

After running-in : 2-stroke Engine Oil 1 + Gasoline 50 → (50:1)

Engine Oil---Use genuine Engine Oil. If this oil is not available, use another NMMA TC-W II certified outboard engine oil from another manufacturer.

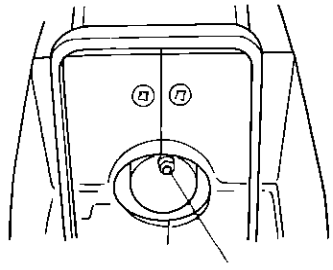
(2) If a general type 2-stroke engine oil is used, mix at the ratio of Engine Oil 1 + Gasoline 30. During running-in, the fuel should be mixed at the ratio of 15 .1.

⚠⚠⚠ DANGER

* Refill the fuel tank only when the engine is stopped.
  When refilling the tank on board, be careful not to spill any fuel. If any fuel is spilled, wipe it off immediately to avoid the possibility of explosion or fire. Keep used rags in a safe place where there is no danger of fire, and dispose of them by burning at an appropriate location.
* Use only tanks approved as fuel containers for carrying or storing fuel.
* The fuel tank should be refilled only by an adult.
* Do not smoke when refilling the fuel tank, and keep away from open flames and sparks.

⚠ CAUTION

(1) Do not use unsuitable or poor-grade gasoline or oil. These may cause serious damage to the outboard and shorten its life span, as well as causing starting problems and other troubles.
(2) Always use fresh gasoline. Fuel kept in the fuel tank for a long period will produce varnish and gum, which can damage the outboard and create problems in running.
(3) Use only fuel in which the gasoline and oil have been well-mixed.
(4) When Filling the fuel tank, be careful that no dust, water or other foreign matter enters the tank.
(5) Do not fill the fuel tank up to the top of the mouth ring.
(6) After filling the tank, close the tank cap securely.
(7) When carrying the fuel tank, close the air vent screw and fuel cock securely, and drain the fuel in the carburetor oil chamber completely by removing the drain plug with a screwdriver.



Fuel drain plug of carburetor

6. OPERATION

(1) Running

The purpose of running-in the engine is to ensure the initial smooth operation of the moving and sliding parts (cylinder, piston, gears, bearings, etc.) so as to protect them from irregular abrasion.

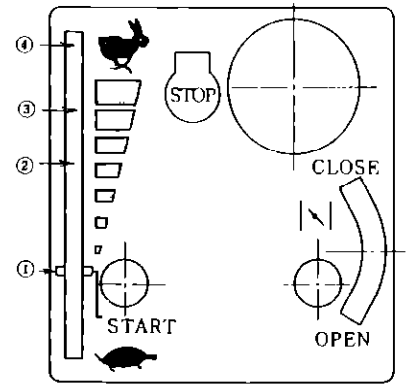
NOTE
Running-in period: 5 hours *Fuel (Mixing ratio): Gasoline 20 : Genuine 2-stroke engine oil 1* *Gasoline 15 : Other types of 2-stroke engine oil 1*

Operate the outboard during the running-in period according to the table below:

Time	0 min. ~	10 min. ~	3 hrs. ~	5 hrs. ~	10 hrs. ~
Throttle position	Cruising at minimum speed	Approx. 500 ~ 3,500 rpm	Approx. 4,000 rpm	Approx. 4,300 ~ 5,300 rpm	Available to operate at wide open throttle.

⚠⚠ WARNING

(1) During the running-in period, never run the engine continuously at high speed.
(2) After running-in is completed, select the correct propeller so that the engine speed is 4,300 ~ 5,300 rpm at the wide-open throttle.



⚠ CAUTION

(1) If the operator fails to follow the running-in procedures, the engine life may be shortened and engine troubles may occur.
(2) After completing 5 hours of running-in, replace the gear oil with new oil.
Refer to "Changing the gear oil" in subsection (2), Periodic Inspection, on page 37.

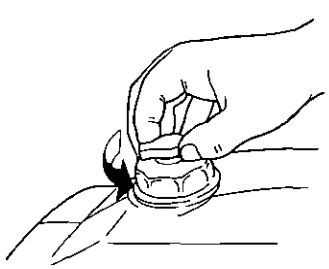
(2) Starting

⚠ CAUTION

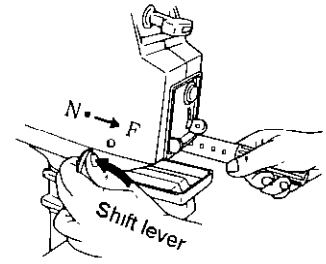
* Do not operate the engine unless the anticavitation plate on the gear case is underwater. If the cooling water is not circulating, serious problems will arise and damage may be caused to the impeller, water pump, engine, etc.

① Fill the fuel tank with the correct fuel mixture. The tank has a capacity of approx. 1.4 liters, permitting the engine to be operated for 30 to 40 minutes. Be careful not to spill any fuel on board. If any fuel or gasoline is spilled, wipe it up thoroughly for safety.

② Loosen the air vent screw on the fuel tank cap (2 ~ 3 turns).

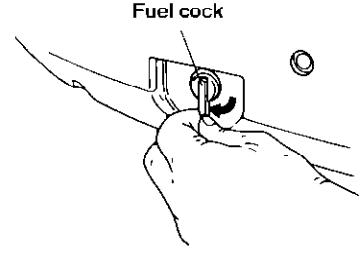


③ Make sure that the shift lever is in the "NEUTRAL" position.

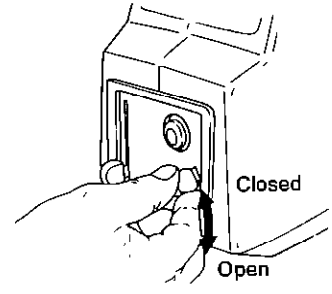


④ Turn the fuel cock lever to the "OPEN" position.

NOTE
If fuel is not supplied immediately to the carburetor (new engine or after cleaning), wait for about 15 seconds for the proper quantity of fuel to flow into the carburetor after opening the fuel cock.



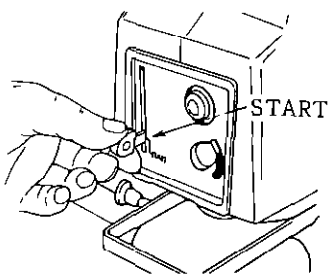
⑤ Set the choke lever to the "CLOSED" position.



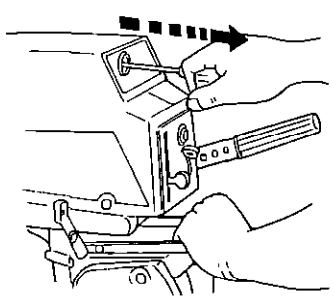
⚠ CAUTION

(1) If the engine is still warm from previous running, set the choke lever to the "OPEN" position to restart.
(2) When restarting the engine just after the engine has stopped, never set the choke lever to the "CLOSED" position. If the choke lever is set to the "CLOSED" position, excess fuel will be supplied to the carburetor leading to difficulty in starting the engine.

⑥ Set the throttle lever to the "START" position.



⑦ Ease out the recoil starter grip slowly until you feel the ratchet engage, then give it a sharp tug.



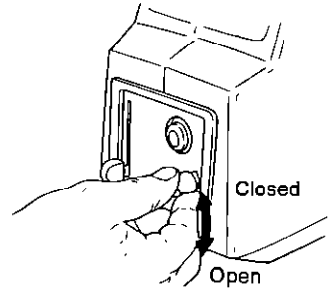
⚠ CAUTION

* Return the recoil starter grip slowly when the engine has started. Releasing the starter grip at the extended position may cause a trouble in the starting system.

NOTE

* *In cold weather, pull the starter handle 2 or 3 times while moving up the choke lever to choke the engine.*

⑧ When the engine has started, immediately return the choke lever to the "OPEN" position then move the throttle lever downward to slow speed.



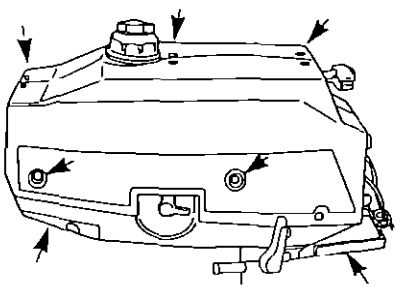
⚠ CAUTION

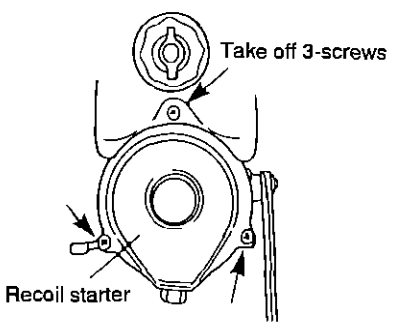
* When the shift lever is at the "NEUTRAL" position, never move the throttle lever to medium or high speeds. This may cause serious damage to the engine by rotating it at excessively high speed.

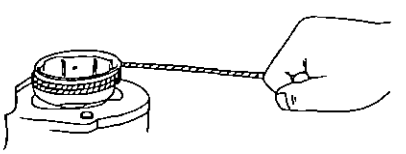
NOTE
* *If the engine stops soon after having been started with the choke lever at the "CLOSED" position, set the choke lever to the "OPEN" position and perform the starting procedure again.*

(3) Starting if Recoil Starter is Out of Order

Remove the engine cover by releasing the screws, then remove the recoil starter from the top of the fuel tank. Wind the spare starter rope clockwise around the starter pulley about 3 times, and pull the rope to start the engine in same manner as when starting with the recoil starter.







⚠⚠ WARNING

(1) When the engine cover and recoil starter have been removed for emergency starting, take extreme care that the operator's clothes or other items do not get caught in the rope or other engine parts once the engine starts running.
(2) Never touch the spark plug or high-tension cable when the engine is running, since they are carrying high-voltage electricity.
(3) Avoid high-speed running for safety. A medium or low speed is recommended, taking care not to splash water on the fuel tank or electrical parts.
(4) Once the engine has been started, never attach the engine cover, etc. to avoid danger.
(5) If the recoil starter is out of order, have it repaired immediately by your dealer. Emergency rope starting should be performed only in the case of emergency.

⚠ CAUTION

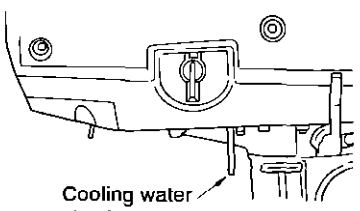
(1) Never remove the carburetor cover.
(2) Do not leave the connectors of the electrical lead wires in a disconnected condition. The engine cannot be stopped if the lead wire of the stop switch is disconnected. Never disconnect the lead wire connector or touch the lead wires while the engine is running.
(3) When removing the engine cover, place the screws, etc. in a bag to avoid losing them.
(4) Take care not to drop the plug cap cover. It is recommended to remove it first.
(5) When starting using an emergency starting rope, make sure that nobody else is in the vicinity of the engine.

(4) Warm-Up

Before operating the boat, allow the engine to run at low speed for approx. 3 minutes to warm it up and circulate the oil through the engine. If the engine is not warmed up beforehand, the engine life will be greatly shortened During the warm-up operation, confirm that cooling water is discharged from the check port.

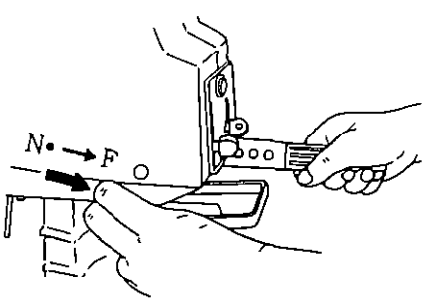
⚠⚠ WARNING

* If cooling water is not discharged and engine operation is continued, the engine will overheat and damage may occur.



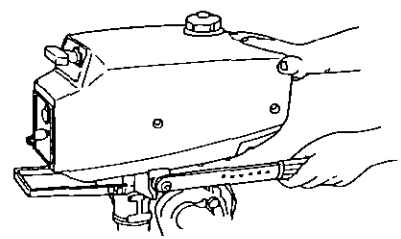
(5) Moving Forward

Reduce the engine speed by pushing the throttle lever down, and move the shift lever quickly to the "FORWARD" (F) position when the engine speed has reached the lowest rpm.



(6) Reversing

Return the throttle lever to the "SLOW" position and when the engine speed has reached the lowest rpm, move the shift lever to the "NEUTRAL" (N) position. Stand the steering handle upright and turn the motor 180 ° . Move the shift lever to "FORWARD" (F) for reverse running



⚠ CAUTION

(1) Before shifting "FORWARD," reduce the engine speed to the idling (low) speed.
(2) It is dangerous to run at high speed while reversing. Be sure to operate the engine at low speed.
(3) If the motor hits an obstruction while reversing, the shock is directly applied to the motor and the boat. This may result in the driver and passangers being thrown out of the boat and may damage both the engine and the boat. Operate the engine carefully to avoid hitting any obstruction when reversing.

(7) Speed Control

The speed is controlled by operating the throttle lever. Moving the throttle lever upward increases the speed, and moving it downward decreases the speed.

⚠ CAUTION

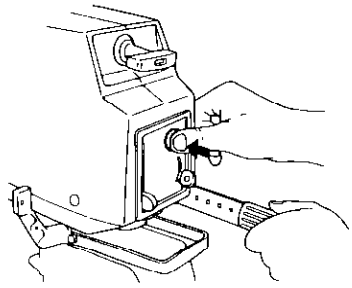
(1) Quick shifting of the throttle lever is dangerous, and may cause a serious accident such as throwing the driver and passangers out of the boat, etc.
(2) Always decrease the speed of the boat when making a sharp turn.

(8) Running in Shallow Water

Always proceed at a slow speed in shallow water to prevent damage to the motor due to hitting underwater obstacles.

(9) Stopping

① Reduce the engine speed to idling rpm, and press the stop switch continuously until the engine stops completely.

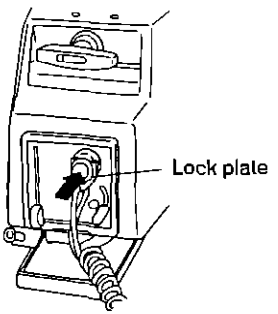


② Close the fuel cock and air vent screw on the fuel tank cap.

⚠ CAUTION

* Never stop the engine immediately after running with the throttle wide open. Leave the engine running for 2 or 3 minutes at idling (low) speed to allow it to cool down.

* Emergency Stop Switch (Optional)
If it is necessary to stop the engine immediately, release the lock of the emergency stop switch or press the emergency stop switch until the engine stops completely.



⚠⚠ WARNING

(1) This safety switch is provided for the safety of the driver. If the lock is released from the safety switch, the engine will stop. The engine will not start if the lock is in released condition. The emergency stop line should be connected to the driver's wrist, so that the engine will shut down if the emergency stop line is disconnected from the switch in the event of an accident such as the driver being thrown overboard or the boat capsizing.
(2) Be careful not to entangle the emergency stop line when operating the handle or while running in reverse. If the lock is released when running at high speed, the engine and the boat will stop suddenly. This is dangerous and may cause injury to the driver and passangers.

⚠ CAUTION

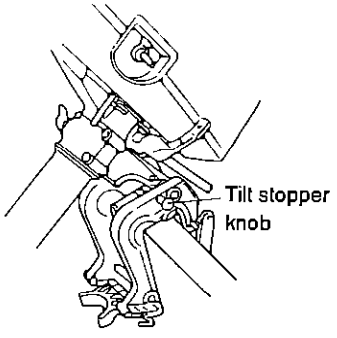
(1) The emergency stop switch should be installed only by your dealer.
(2) Confirm that the emergency stop switch works properly every time before boating.

(10) Mooring the Boat

If the engine will not be operated for a period of time or the boat is moored in shallow water, tilt up the motor to prevent damage to the propeller, gear case, etc. due to hitting rocks in the water or low tide.

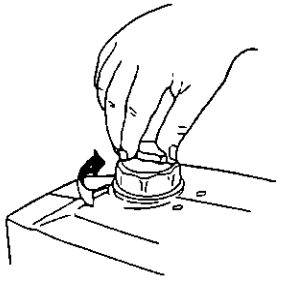
⚠ CAUTION

Tilt the motor up so that the propeller is facing upwards and secure the motor with the tilt stopper knob.



* Tilt-up

① Close the fuel cock and air vent screw on the fuel tank cap.



② After stopping the engine, tilt the motor up fully toward you by hand and lock the tilt stopper knob in the tilt-up position on the stern bracket.

* Tilt-down

Pull the motor fully toward you and release the tilt stopper knob from the tilt-up position.

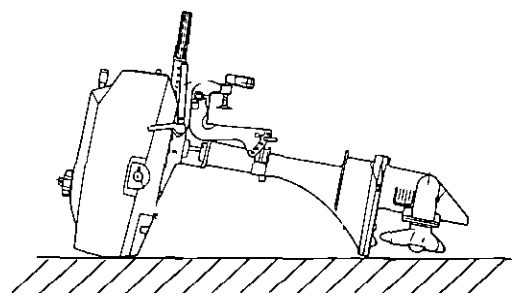
(11) Dismounting and Transporting the outboard

The following precautions should be taken when dismounting the outboard from the boat. (Do not begin dismounting the outboard unless the engine has stopped completely.)

① Remove the outboard from the boat keeping it in an upright position until the internal water has been drained completely. Never lay the outboard down before draining the water completely.

② When transporting the outboard, never position it so that the engine unit is lower than the propeller.

③ When laying the outboard horizontally, place it so that the propeller is facing down . Do not position the engine unit lower than the propeller to protect against water entering the cylinder.



⚠ CAUTION

(1) When transporting the outboard after it has been dismounted from the boat, be sure to close both the air vent screw on the fuel tank cap and the fuel cock, and drain the fuel in the carburetor. (See page 16.)

(2) When transporting the boat by trailer, remove the outboard from the boat.

(12) Precautions during Operetion

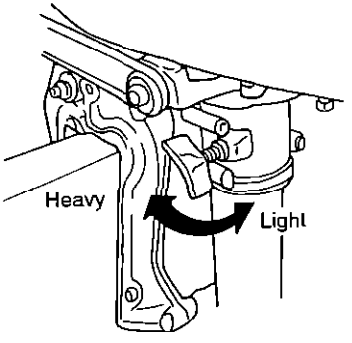
Before boating and while at sea, check the weather and sea conditions, etc. to ensure safety. In the following cases, stop the engine and perform checks as required:

Condition requiring emergency stop	Action to be taken	Items to be checked
* Outboard hits floating wood, a rock, etc.	Stop the engine.	Check damage to the propeller, shear pin, propeller shaft, drive shaft housing, etc.
Engine rpm suddenly increases due to a sharp turn, wave conditions, etc.	Reduce the engine speed and run at medium or low speed.	
Vinyl sheet, debris, etc. becomes entangled in the propeller.	Stop the engine.	Remove entangled vinyl sheet, etc.
* Abnormally little or no cooling water is discharged.	Stop the engine.	Check whether cooling water intake port is blocked and clear as required.
Abnormal vibration or noise occurs.	Stop the engine.	Check clamp screws, bolts and nuts for looseness and propeller for deformation.
* Sudden decrease in engine rpm occurs.	Stop the engine.	Check engine overheating, cooling water discharge, and propeller for irregularity.

Star mark(*) : Return to the nearest marina or port at the lowest possible speed to perform the necessary inspections, and have your dealer carry out repairs if required.

7. ADJUSTING THE STEERING RESISTANCE

Adjust the steering resistance with the slide adjusting screw.
Turning the screw clockwise increases the resistance, while turning it counterclockwise decreases the resistance. This will facilitate smooth steering.



8. INSPECTION AND MAINTENANCE

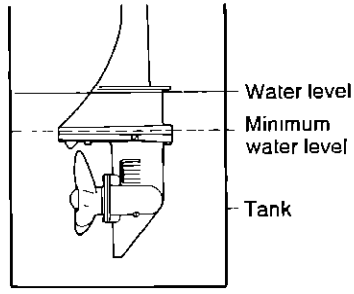
(1) Inspection Before and After Operation

Perform the following checks before and after use to ensure safe boating.

Item	Check	Action if required
Fuel System	* Check the amount of fuel in the tank. * Check for dust or water in the fuel filter.	Replenish.
Cooling System	* After starting the engine, confirm that cooling water is discharged at the cooling water check port.	If no water is discharged, stop the engine and have your dealer repair it.
Electrical Equipment	* Check the spark plug for dirt and wear. * Check that the stop switch and/or emergency switch functions normally and make sure the lock plate is present.	Clean or replace. Remedy or replace.
Starter Rope	* Check if the rope is worn out.	Replace.
Propeller	* Check the propeller for bent or damaged blades.	Replace. (See page 34.)
Mounting of Outboard	* Check the thrust rod for proper position. * Check the clamp screws for tightness.	Adjust. Tighten.
Anode	Check the anode for wear and/or deformation.	Replace.

① Washing with fresh water

When the engine has been used in salt water or polluted water, wash the exterior and flush the cooling water passage with fresh water. The cooling water passage is flushed by placing the propeller section of the outboard in a bucket filled with fresh water, and operating the engine for about 3 minutes to circulate the water in the passage.



⚠ CAUTION

(1) Set the shift lever to the "NEUTRAL" postion before washing.
(2) When removing the propeller, remove the plug cap from the spark plug beforehand for safety.
(3) Wash the exterior of the outboard before long-term storage.
(4) Run the engine at low speed when flushing the cooling system.

② Precautions in cold weather

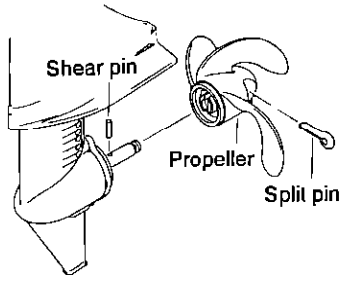
When the engine has been used in cold weather below 0℃ (32°F), completely drain the cooling water in the engine by standing the engine vertically to prevent trouble due to freezing, then store it. When mooring the boat with the outboard mounted, leave the propeller section submerged in the water.

③ Replacing the propeller and shear pin

(a) Pull out the split pin from the propeller boss and remove the propeller from the shaft.

(b) Remove the shear pin from the shaft.

(c) Install a new shear pin.



⚠⚠ WARNING

When removing the propeller, dosconnect the plug cap from the spark plug for safety.

⚠ CAUTION

(1) When removing the plug cap cover, take care not to drop it into the water.

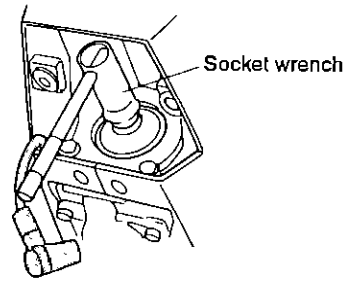
(2) Always carry a spare split pin and shear pin. When the spare has been used, supply a new one. A damaged or worn split pin or shear pin should be replaced with a new one.

④ Replacing the spark plug

Replace the spark plug if there is dirt or carbon deposits around the electrode, if the insulator is damaged.

(a) Remove the plug cap cover and remove the spark plug.

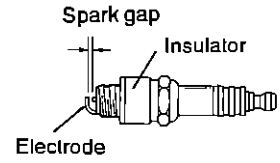
(b) To remove the spark plug, turn it counterclockwise with the socket wrench provided (21mm). Tap lightly on the spark plug if it is hard to turn.



(c) When fitting the spark plug, screw it in by hand first then tighten it using the socket wrench.

NOTE
Tightening torque 2.5 ~ 3.0 kg-m

NOTE
Tighten the spark plug by 1/2 ~ 3/4 turn to secure it after it touches the washer on the cylinder head.



Spark plug	NGK BP6HS – 10
Spark gap	0.9 ~ 1.0 mm

(d) Fit the plug cap cover securely so that it will not come loose when the engine is running.

⚠⚠⚠ DANGER

Never remove the plug cap cover when the engine is running.
It is dangerous to touch the high-tension cable inside the plug cap cover.

Item	First 10 hours or 1 month	Every 50 hours or 3 months	Every 100 hours or 6 months	Every year	Action	Remarks
Carburetor	★		★	★	Strip, clean and adjust.	
Fuel Filter		★	★	★	Check and clean.	
Piping			★	★	Check pipes for damage, and for any leaks at connections.	
Fuel Tank		★	★	★	Clean.	
Spark Plug		○	○	○	Check the spark gap.	See page 35.
Starter Rope	○	○	○	○	Check for wear or damage.	
Propeller	○	○	○	○	Check propeller for bending, damage or blade wear.	See page 34.
Shear Pin & Split Pin	○	○	○	○	Check for bending or damage.	See page 34.
Gear Oil	★ Renew	★	★	★	Replenish or change if required.	
Bolts and Nuts	★	★	★	★	Tighten properly.	
Sliding and Moving Parts		★	★	★	Apply grease.	
Outer Surfaces	○	○	○	○	Check for corrosion.	

Notes

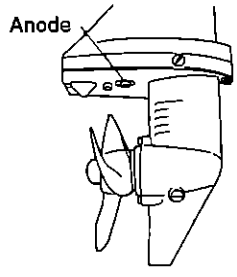
(○) mark : Items for which inspection and the necessary action should be performed by the owner or operator.

(★) mark : Consult your dealer.

The inspection periods shown in this table are applicable only in the case of normal use. If the outboard is subjected to severe use such as for commercial purposes, the inspections should be carried out more frequently.

① Replacing the anode

The outboard is equipped with a sacrificial anode on the lower side of the gear case to protect the motor from corrosion.



⚠⚠ WARNING

When removing the anode, disconnect the plug cap from the spark plug to prevent injury due to accidental starting of the propeller.

⚠ CAUTION

(1) If the anode has worn out or is not fitted, the aluminum material of the outboard may become corroded resulting in peeling of the paint and damage to the motor.

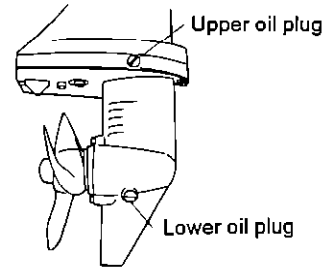
(2) Never apply paint or grease to the anode.

② Changing the gear oil

(a) Set the outboard in an upright position. Place a drain pan under the gear case. Remove the lower drain plug first, and then remove the upper oil plug. Drain the oil completely.

(b) Insert the oil tube nozzle into the lower oil plug hole, and squeeze the tube until the oil flows out of the upper plug hole.

(c) Install the upper oil plug. Then remove the oil tube nozzle and install the lower oil plug.



⚠ CAUTION

(1) Use only genuine gear oil or, if not available, use an API(American Petroleum Institute) oil grade of GL5, SAE #80 or SAE #80W).

(2) Required volume: Approx. 180cc (6.08 US fluid oz)

⚠ CAUTION

(1) Treat the drained gear oil in the proper way as an industrial waste.

(2) If the drain oil is found to be a milky color when changing the gear oil, this indicates water leakage into the gear case. In this case, contact your dealer immediately to make an inspection and perform any repairs necessary so as to avoid serious mechanical damage.

(3) Preparing the Outboard for a Long-Term Storage

① Wash the engine exterior and flush the cooling water system thoroughly with fresh water. Allow the water to drain completely. Wipe off any water on the surface with an oil rag.

② Drain all fuel from the fuel pipes, fuel cock and carburetor, and clean the parts including the mesh in the fuel cock.

③ Disassemble the carburetor, remove any internal dust, and clean it using gasoline and air.

④ Remove the spark plug and feed engine oil or storage fogging oil through the spark plug hole. Pull the recoil starter handle a few times to circulate the oil to the internal parts.

⑤ Apply grease to the propeller shaft.

⑥ Change the gear oil in the gear case. (See page 39.)

⑦ Apply grease to all sliding parts, bolts and nuts.

⑧ Wipe off any water and salt on the electrical components using a dry cloth.

⑨ Attach a vinyl cover to protect the engine from dust, and stand the outboard vertically in a dry and ventilated place.

Note: Treat the fuel and oil drained from the fuel tank, carburetor, gear case, etc. in the proper way.

(4) Inspection After a Long-Term Storage

① When using the outboard for the first time after a long period of storage, it is recommended to:
- warm-up the engine for about 3 minutes.
- run the engine at slow speed for about 5 minutes, then.
- run the engine at medium speed for about 10 minutes.

② Use fresh fuel mixed at a ratio of 25:1

(5) If the Engine is Submerged in Water

In case the engine becomes completely submerged in water, take the following countermeasures before handing it in for service at your dealer.

① Take it out of the water immediately and wash it with fresh water to remove all traces of salt and dirt.

② Remove the spark plug, and drain the engine completely of water. Turn the flywheel several times by pulling the starter rope handle to drain any remaining water in the engine.
Drain the fuel line and the carburetor.
Inject a plentiful amount of engine oil or storage fogging oil into the engine through the spark plug hole and the air silencer.

③ After the above steps, it may be possible to start the engine. However, the electrical components and carburetor will soon deteriorate and become inoperative. Therefore, be sure to have the engine overhauled by your dealer as soon as possible.

9. TROUBLESHOOTING

If you encounter a problem, consult the checklist below to locate the cause and then take the appropriate measures.
Regular checks and servicing by your dealer are recommended, to ensure maximum safety and optimum performance.

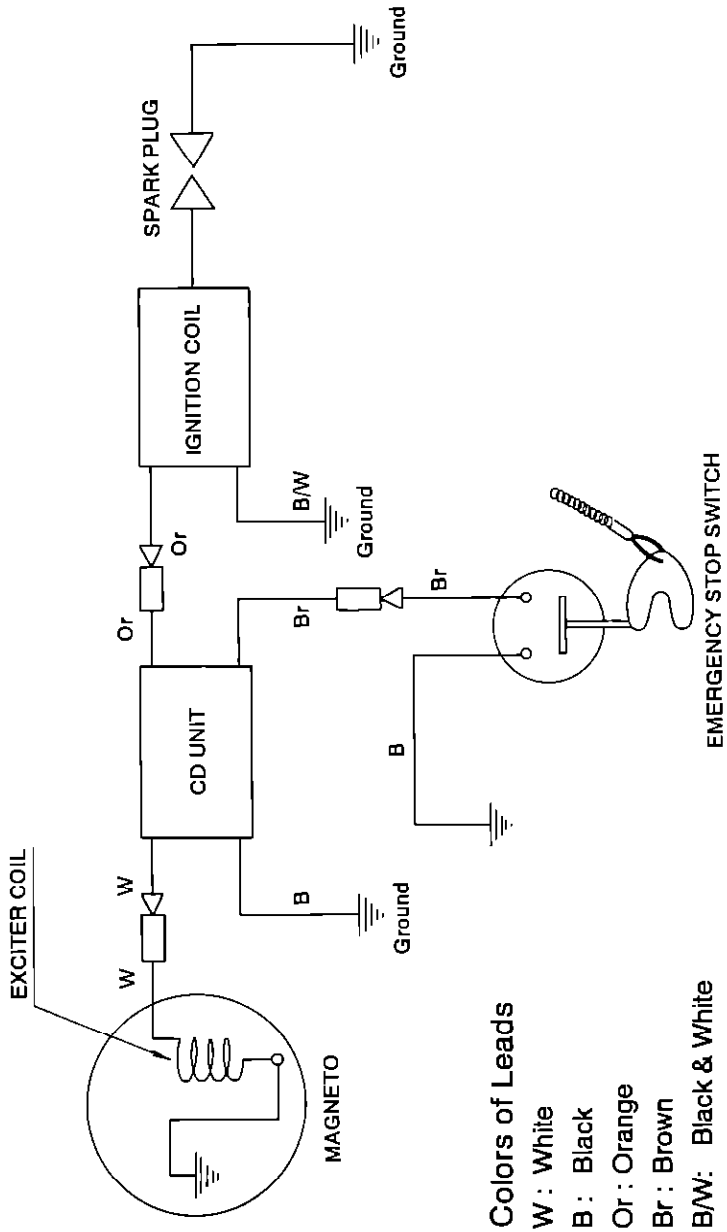
Possible cause	Overheating of engine	Slow speed	Engine speed abnormally low	Engine speed abnormally high	Poor idling	Engine starts but stops soon.	Engine fails to start.
Empty fuel tank						●	●
Incorrect connection of fuel system						●	●
Air entering fuel line	●	●	●		●	●	●
Deformed or damaged fuel pipe	●	●	●		●	●	●
Closed fuel tank cock or air vent on fuel tank	●	●	●		●	●	●
Clogged fuel filter, fuel pump or carburetor	●	●	●		●	●	●
Use of improper engine oil	●	●	●		●		
Use of improper gasoline	●	●	●		●		●
Excessive oil in mixture		●	●		●		
Insufficient oil in mixture	●						
Excessive supply of fuel/Spark plug wet with fuel							●
Poor carburetor adjustment	●	●	●		●	●	●
Spark plug other than specified	●	●	●		●	●	
Dirt or bridge on spark plug		●	●		●	●	●
No or weak spark		●	●		●	●	●

Engine fails to start.	Engine starts but stops soon.	Poor idling	Engine speed abnormally high	Engine speed abnormally low	Slow speed	Overheating of engine	Possible cause
				●	●	●	Insufficient cooling water flow/Clogged or defective pump
			●		●	●	Anticavitation plate damaged or deformed
			●	●	●	●	Incorrect propeller selection
		●	●	●	●	●	Damaged or bent propeller
			●		●	●	Improper thrust rod position
			●	●	●	●	Unbalanced load position on boat
			●	●	●	●	Transom too high or too low
●							Short-circuit of engine stop switch
●							Emergency switch lock released

10. ACCESSORIES

Name	Quantity	Remarks
Servicing Tools		
Tool Bag	1	
Pliers	1	
Socket Wrench	1	21 mm
Handle for Socket Wrench	1	
Phillips Screwdriver	1	No. 2
Spare Parts		
Spark Plug	1	NGK BP6HS-10
Shear Pin	1	
Split Pin	1	
Safety Rope	1	

11. WIRING DIAGRAM



Note:

NISSAN MOTOR CO., LTD.

Tokyo, Japan

Edition: May 1992

Printing: May 1992

Printed in Japan

Pub. No. M-455

T-2040-1000-S