

**HONDA**

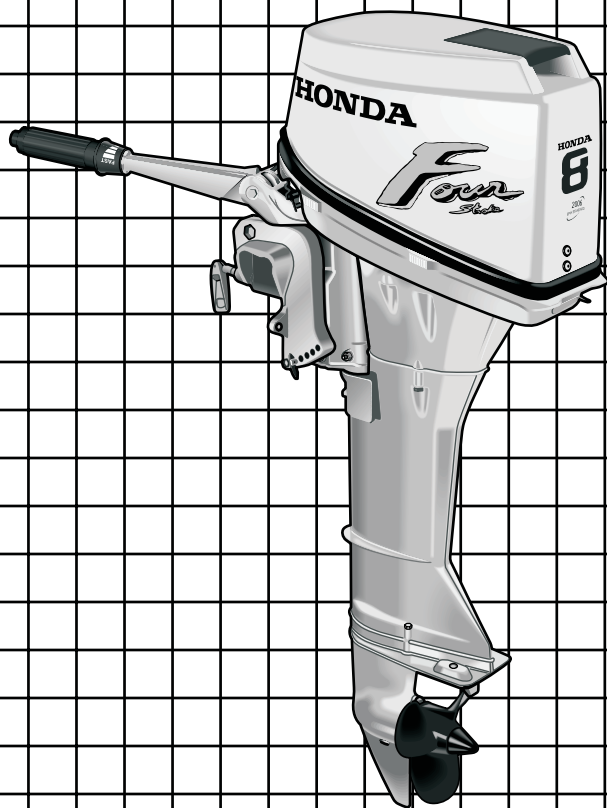
**Power**

**Equipment**

# Owner's Manual

## Outboard Motor

### BF8A



**WARNING:**

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

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Thank you for purchasing a Honda Outboard Motor.

This manual describes the operation and maintenance of the Honda Outboard Motor: BF8A

All information in this publication is based on the latest product information available at the time of printing.

Honda Motor Co., Ltd. reserves the right to make changes at any time without notice and without incurring any obligation.

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This manual should be considered a permanent part of the Outboard Motor and it must stay with the Outboard motor if resold.

**READ THIS OWNER'S MANUAL CAREFULLY.** Pay special attention to these symbols and any instructions that follow.

**▲DANGER** You **WILL** be **KILLED** or **SERIOUSLY HURT** if you don't follow instructions.

**▲WARNING** You **CAN** be **KILLED** or **SERIOUSLY HURT** if you don't follow instructions.

**CAUTION:** You **CAN** be **HURT** if you don't follow instructions.

**NOTICE** Your outboard motor or other property could be damaged if you don't follow instructions.

Honda Outboard Motors are designed to give safe and dependable service if operated according to instructions. Operating this Outboard Motor requires special effort on your part to ensure your safety and the safety of others.

**▲WARNING**  
Careless operation or misuse may cause injury or property damage. Read and understand this owner's manual before operating the Outboard Motor.

If a problem should arise, or if you have any questions about your Outboard Motor, see an authorized Honda Outboard Motor dealer.

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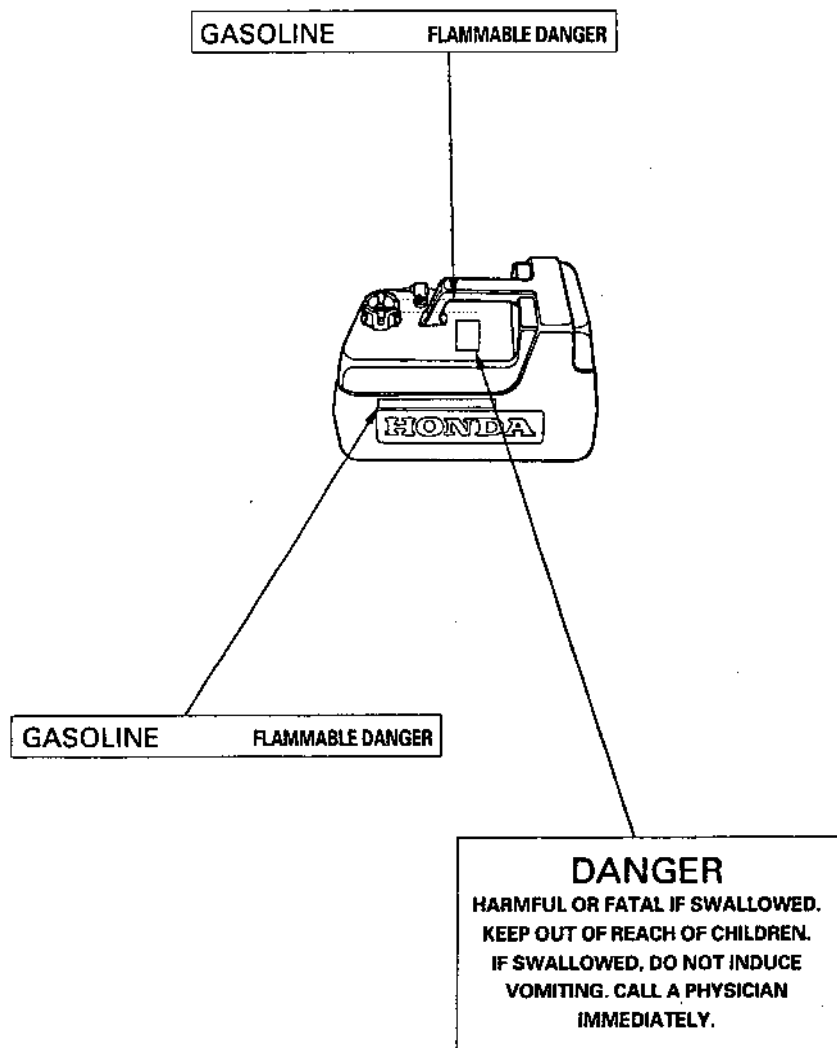
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## Safety label locations

Read all safety instructions before using the Outboard Motor.



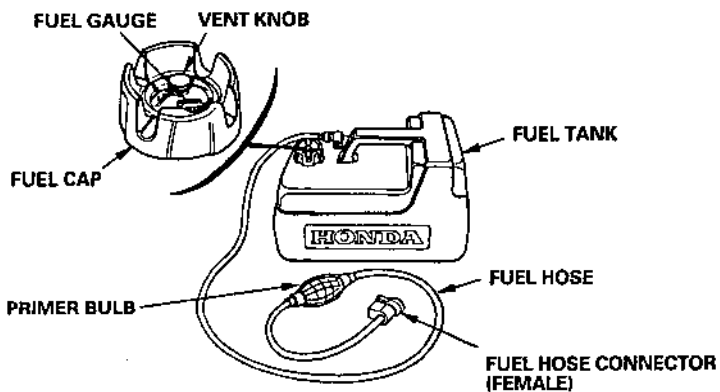
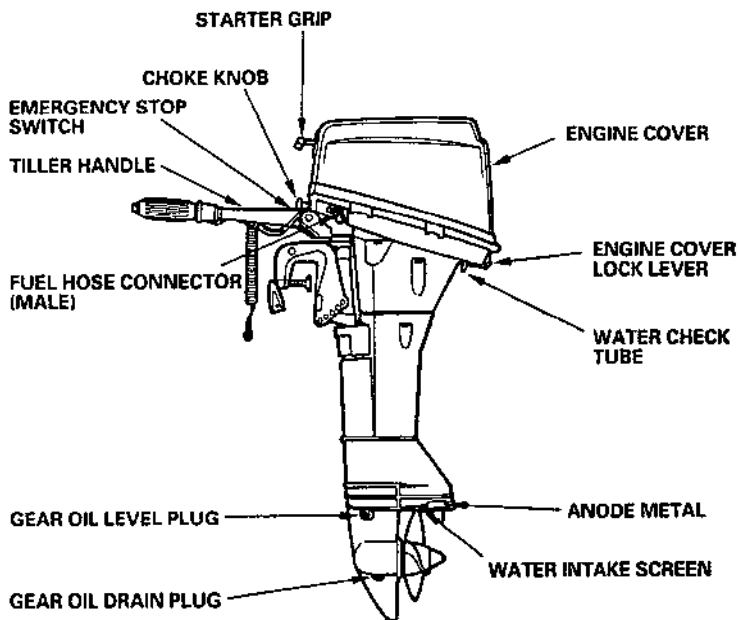
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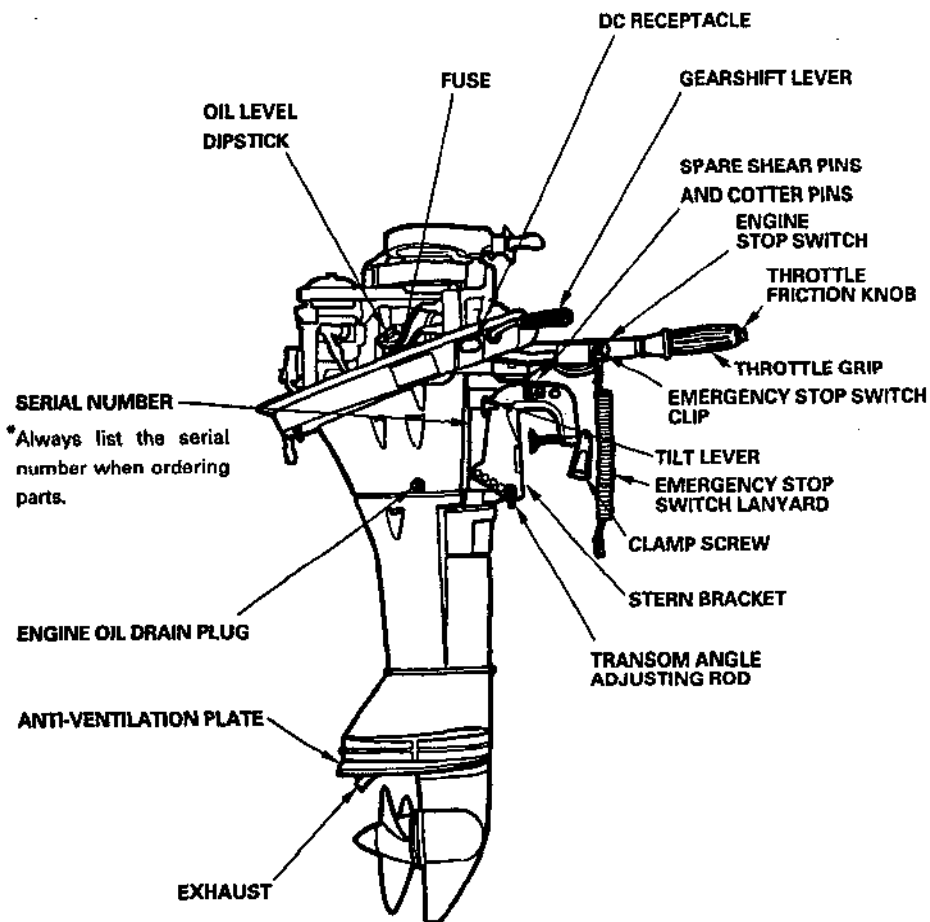
## **SAFETY INFORMATION**

**For your safety and the safety of others, pay special attention to these precautions.**

- **Know how to stop the engine quickly in case of emergency. Understand the use of all controls.**
- **Do not exceed the boat manufacturer's power recommendation, and be sure the outboard motor is properly mounted.**
- **Never permit anyone to operate the outboard motor without proper instruction.**
- **Stop the engine immediately if anyone falls overboard.**
- **Do not run the motor while the boat is near anyone in the water.**
- **Attach the emergency stop switch lanyard securely to the operator.**
- **Before operating the outboard motor, familiarize yourself with all laws and regulations relating to boating and the use of outboard motors.**
- **Do not attempt to modify the outboard motor.**
- **Always wear a PERSONAL FLOTATION DEVICE (PFD) when on board.**
- **Exhaust contains poisonous carbon monoxide which can cause unconsciousness and may lead to death. Never run the outboard in a closed garage or confined area.**
- **Gasoline is extremely flammable and is explosive under certain conditions. Refuel in a well ventilated area with the engine stopped.**
- **Do not smoke or allow flames or sparks where the engine is refueled or where gasoline is stored.**
- **Do not overfill the fuel tank. After refueling make sure that the fuel tank cap is closed properly and securely.**
- **Be careful not to spill any fuel while refueling. Spilled fuel or fuel vapor may ignite. If any fuel is spilled make sure that the area is dry before starting the engine.**
- **Do not remove any guards, labels, shields, covers or safety devices; they are installed for your safety.**

## 2. COMPONENT IDENTIFICATION







## 3. INSTALLATION

It is your responsibility to choose a boat suitable for the engine.

8.0 HP (6.0 kW)

### ▲WARNING

**Do not exceed the boat manufacturer's power recommendation. Damage and injury may result.**

#### 1. Installation position

Install at the stern, at the center line of the boat.

#### 2. Installation height

For proper propeller depth and engine cooling, the boat and outboard motor transom height must match.

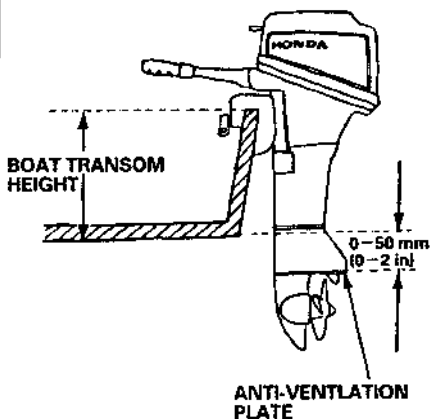
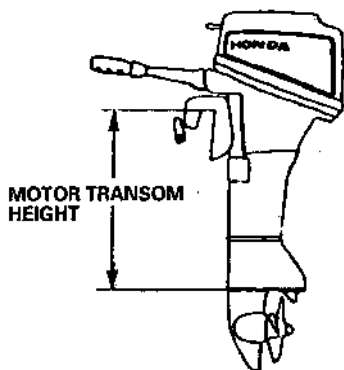
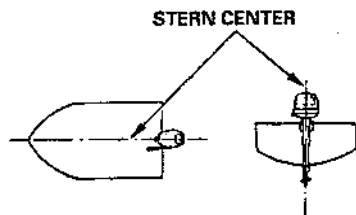
Three outboard motor transom heights are available. Match your boat's transom height to the outboard motor transom height shown below.

Outboard Motor	
Type	Transom Height
Short : S	420 mm (16.5 in)
Long : L	570 mm (22.4 in)
Extra Long : X	648 mm (25.5 in)

The anti-ventilation plate should be 0–50 mm (0–2 in) below the bottom of the boat. With the boat in the water, loaded and motor off, the anti-ventilation plate should be about 100 mm (3.9 in) below the surface of the water.

### NOTICE

**Running the outboard motor without sufficient cooling water will damage the water pump and overheat the engine.**

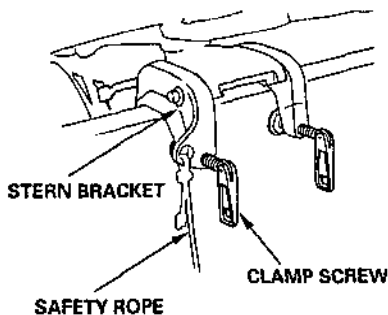


### 3. Motor attachment

Attach the stern bracket to the transom and tighten the clamp screws.

#### NOTICE

- Before operating the boat, check the tightness of the clamp screws.
- Tie a rope through the hole in the stern bracket and secure the other end of the rope to the boat. This will prevent accidental loss of the motor.



### 4. Motor angle (cruising)

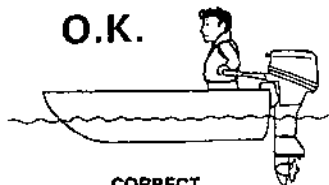
Adjust the motor so the propeller shaft is parallel with the water surface.



INCORRECT  
CAUSES BOAT TO  
"SQUAT"



INCORRECT  
CAUSES BOAT TO  
"PLOW"



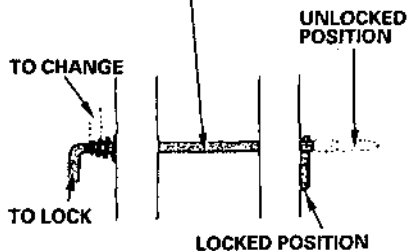
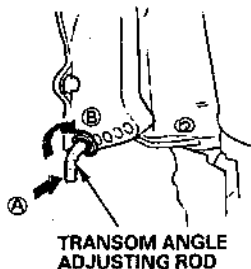
GIVES MAXIMUM PERFORMANCE

### 5. Motor angle adjustment

If the propeller shaft is not parallel with the water surface, adjust by changing the transom angle adjusting rod position.

There are four adjusting stages.

1. Push in (A) the adjusting rod, twist upwards (B) and pull out to remove.
2. Inserting the rod in the proper hole, twist it down to lock.



#### NOTICE

To prevent damage to the motor or boat, make sure the transom angle adjusting rod is locked.

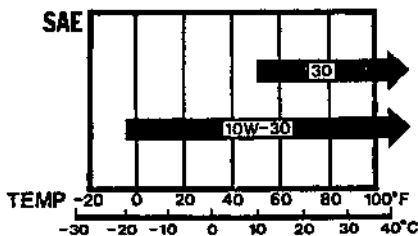
## 4. PRE-OPERATION CHECK

### 1. Engine oil

#### NOTICE

- Engine oil is a major factor affecting engine performance and service life. Nondetergent and low quality oils are not recommended, because they have inadequate lubricating properties.
- Running the engine with insufficient oil can cause serious engine damage.

Use Honda 4-stroke oil, or an equivalent high detergent, premium quality motor oil certified to meet or exceed U.S. automobile manufacturer's requirements for Service Classification SG, SF. Motor oils classified SG, SF will show this designation on the container.



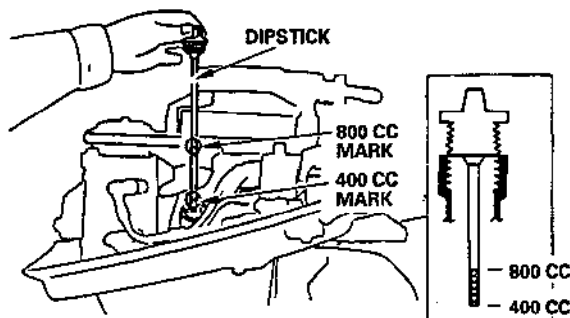
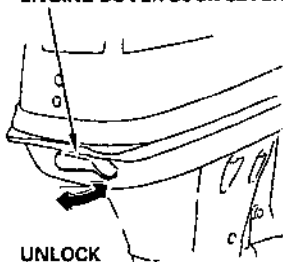
SAE 10W/30 is recommended for general, all-temperature use. Other viscosities shown in the chart may be used when the average temperature in your area is within the indicated range.

1. Position the outboard motor vertically, then push down the engine cover lock lever and remove the engine cover.
2. Remove the oil level dipstick and wipe with a clean rag.
3. Reinsert the dipstick, and check the oil level with the dipstick resting on the filler opening (do not screw in).

If the oil level is down toward the lower level mark, fill to the upper level mark.

**Oil capacity:** 0.80 ℓ (0.85 US qt, 0.70 Imp qt)

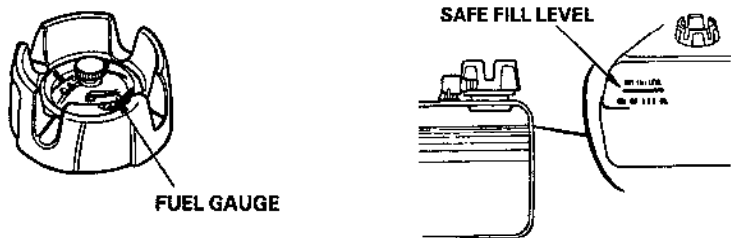
ENGINE COVER LOCK LEVER



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## 2. Fuel level

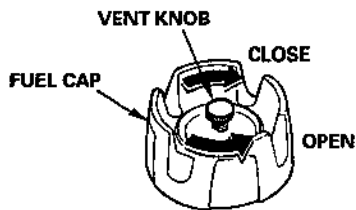
Fuel tank capacity: 12 ℓ (3.0 US gal, 2.6 Imp gal)



Check the fuel gauge and refill the tank to the SAFE FILL LEVEL mark if necessary.

### **⚠WARNING**

**Gasoline is extremely flammable, and gasoline vapor can explode, causing serious injury or death. Do not smoke or allow flames or sparks in your working area. KEEP OUT OF REACH OF CHILDREN.**



## Refilling

Remove the fuel tank from the boat for refilling. Turn the vent knob counterclockwise to the open position and remove the fuel cap. Refuel in a well-ventilated area. Fill the fuel tank up to the SAFE FILL LEVEL mark only. Inspect the condition of the fuel cap gasket and replace if necessary.

After refilling, install and tighten the fuel cap securely. Turn the vent knob clockwise to the closed position. Return the fuel tank to the boat.

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## Fuel Recommendations

**Use unleaded gasoline with a pump octane rating of 86 or higher.**

This engine is designed to operate on unleaded gasoline. Unleaded gasoline produces fewer engine and spark plug deposits and extends exhaust system life.

Never use stale or contaminated gasoline or an oil/gasoline mixture. Avoid getting dirt or water in the fuel tank.

Occasionally you may hear light "spark knock" or "pinging" (metallic rapping noise) while operating under heavy loads. This is no cause for concern.

If spark knock or pinging occurs at a steady engine speed, under normal load, change brands of gasoline. If spark knock or pinging persists, see an authorized Honda dealer.

**NOTICE**

**Running the engine with persistent spark knock or pinging can cause engine damage.**

Running the engine with persistent spark knock or pinging is misuse, and the Distributor's Limited Warranty does not cover parts damaged by misuse.

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## OXYGENATED FUELS

Some conventional gasolines are being blended with alcohol or an ether compound. These gasolines are collectively referred to as oxygenated fuels. To meet clean air standards, some areas of the United States and Canada use oxygenated fuels to help reduce emissions.

If you use an oxygenated fuel, be sure it is unleaded and meets the minimum octane rating requirement.

Before using an oxygenated fuel, try to confirm the fuel's contents. Some states/provinces require this information to be posted on the pump.

The following are the EPA approved percentages of oxygenates:

**ETHANOL** — (ethyl or grain alcohol) 10% by volume  
You may use gasoline containing up to 10% ethanol by volume. Gasoline containing ethanol may be marketed under the name "Gasohol".

**MTBE** — (Methyl Tertiary Butyl Ether) 15% by volume  
You may use gasoline containing up to 15% MTBE by volume.

**METHANOL** — (methyl or wood alcohol) 5% by volume  
You may use gasoline containing up to 5% methanol by volume, as long as it also contains cosolvents and corrosion inhibitors to protect the fuel system. Gasoline containing more than 5% methanol by volume may cause starting and/or performance problems. It may also damage metal, rubber, and plastic parts of your fuel system.

If you notice any undesirable operating symptoms, try another service station, or switch to another brand of gasoline.

Fuel system damage or performance problems resulting from the use of an oxygenated fuel containing more than the percentages of oxygenates mentioned above are not covered under warranty.

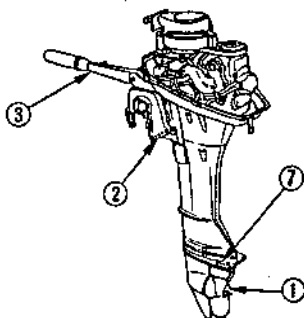
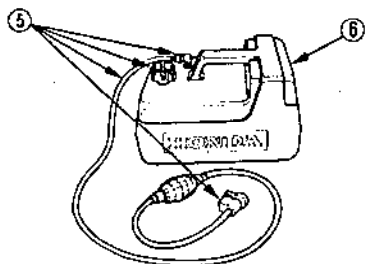
### 3. Pre-operation check list:

- ① Check the propeller, the shear pin, and the cotter pin to be sure they are secure and undamaged.
- ② Check the stern bracket to be sure the motor is securely installed.
- ③ Check tiller handle operation.
- ④ Make sure you have the tool kit and spare parts with you (P. 27).
- ⑤ Check the condition of the fuel cap, fuel cap gasket, fuel hose, or fuel hose connectors. Replace if they are cracked or damaged. Replace the fuel hose connectors if they leak. Be sure the fuel hose is not kinked, collapsed, or has any loose connections.
- ⑥ Make sure the fuel tank is properly secured in the boat. This will protect the fuel tank from mechanical damage caused by the fuel tank shifting. Also make sure the fuel tank is in a well ventilated area to reduce the chance of a gasoline vapor explosion. Avoid direct sunlight on the fuel tank.
- ⑦ Check the anode metal for damage, looseness or excessive corrosion.

The anode metal helps to protect the outboard motor from corrosion damage; it must be exposed directly to the water whenever the motor is in use. Replace the anode metal when it has been reduced to approximately one half of its original size.

#### NOTICE

**The possibility of corrosion damage increases if the anode metal is painted over or allowed to deteriorate.**



The following materials should be kept with the boat:

1. Owner's Manual.
2. Tool Kit.
3. Spare engine oil, spark plugs, propeller and propeller cotter pins.
4. Required information regarding boating laws and regulations.

## 5. STARTING THE ENGINE

### Fuel line connection

Check the fuel tank related components and fuel tank positioning (refer step ⑤ and ⑥ on page 12 ).

Due to the fuel pump capacity, do not place the fuel tank more than 6 feet away from the motor or lower than 3 feet below the outboard end fuel hose connector.

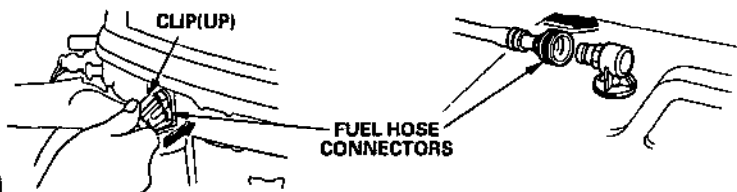
#### **⚠WARNING**

**Be careful not to spill any fuel while refueling. Spilled fuel or fuel vapor may ignite. If any fuel is spilled make sure that the area is dry before starting the engine.**

1. Connect the fuel hose connectors to the outboard motor and fuel tank as shown. The outboard end fuel hose connector must be installed with the clip toward the outside or the fuel hose connector O-ring seal can be damaged. Replace the fuel hose connectors if they leak. Check to be sure that both connectors are securely snapped in place.

(OUTBOARD)

(FUEL TANK END)



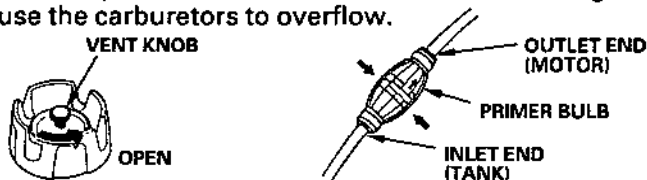
#### **NOTICE**

If the outboard end fuel hose connector is installed in the reversed direction, the fuel hose connector O-ring seal can be damaged. A damaged O-ring seal can cause a fuel leak.

2. Open the fuel cap vent knob 2 to 3 turns.
3. Hold the primer bulb so that the outlet end is higher than the inlet, and squeeze it until it feels firm, indicating that fuel has reached the motor. Check for leaks.

#### **NOTE:**

Do not squeeze the primer bulb when the motor is running because this could cause the carburetors to overflow.





## Starting

### **▲WARNING**

Exhaust contains poisonous carbon monoxide which can cause unconsciousness and may lead to death. Never run the outboard in a closed garage or confined area.

### **NOTICE**

The anti-ventilation plate must be lowered into the water and be at least 2 inches below the surface. Running the outboard motor out of the water will damage the water pump and overheat the engine.

1. Engage the emergency stop switch clip located at one end of the emergency stop switch lanyard with the engine stop switch. Attach the other end of the emergency stop switch lanyard securely to the operator.

### **▲WARNING**

If the operator does not attach the emergency stop switch lanyard, and is thrown from his seat or out of the boat, the out-of-control boat can seriously injure the operator, passengers, or bystanders. Always properly attach the lanyard before starting the motor.

#### NOTE:

The engine will not start unless the emergency stop switch clip is engaged with the engine stop switch.

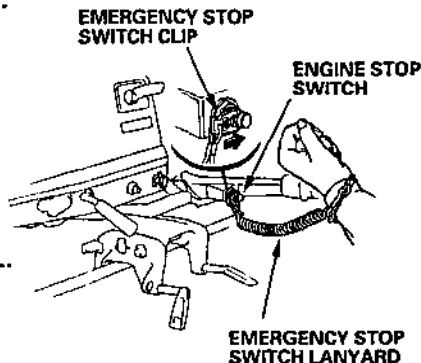
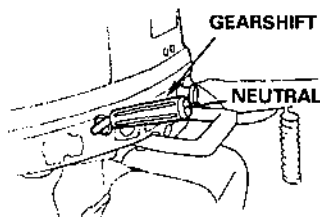
#### NOTE:

A spare emergency stop switch clip is provided in the tool bag.

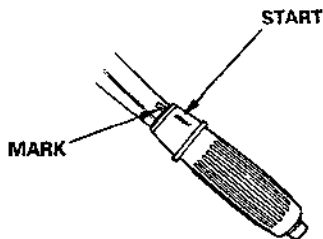
SPARE EMERGENCY STOP SWITCH CLIP



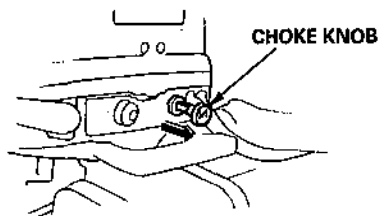
2. Put the gearshift lever in NEUTRAL.



- 
3. Align the throttle grip START position with the mark on the tiller handle.



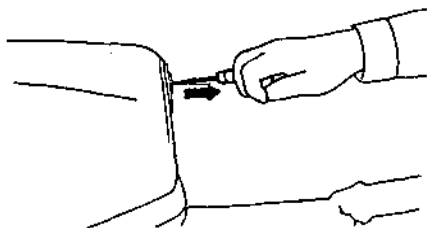
4. If the engine is "cold", pull out the choke knob for starting and then push it in gradually as the engine warms up.



5. Pull the starter rope slowly until a resistance is felt, then pull briskly.

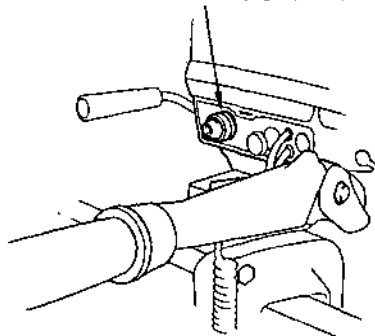
**NOTICE**

- Do not allow the starter grip to snap back against the engine. Return it gently to prevent damage to the starter.
- Do not pull the starter grip while the engine is running, as that may damage the starter.



6. The oil pressure indicator light should be ON while the engine is running. If the light goes off, stop the engine immediately, check the engine oil level and inspect engine for oil leaks.

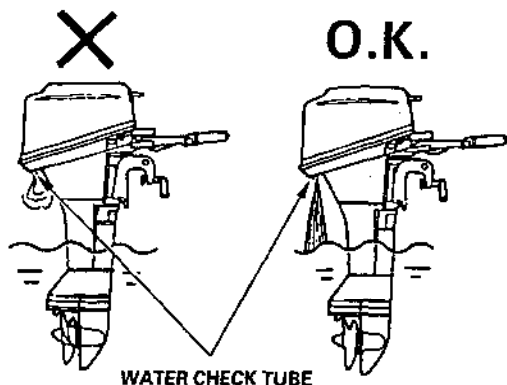
OIL PRESSURE INDICATOR LIGHT



7. After starting, be sure water is flowing out of the water check tube.

**NOTICE**

If water does not flow out, or if steam comes out, stop the engine. Check to see if the screen in the cooling water inlet is obstructed. Do not operate the engine until the problem has been corrected.



8. If the choke was used, push it in gradually as the engine warms up.

## Emergency starting

If the recoil starter is not working properly, the engine can be started with the spare starter rope in the tool kit.

1. Remove the engine cover.
2. Remove the recoil starter by removing the three 6 mm bolts.
3. Wind the spare rope clockwise around the pulley, and then pull it straight out to start the engine.

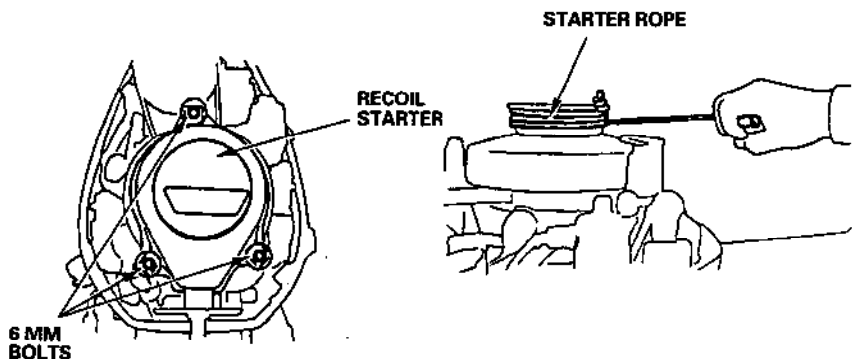
### NOTICE

Keep clear of moving parts.

4. Leave the recoil starter off and reinstall engine cover.

### WARNING

Exposed moving parts can cause injury. Use extreme care when installing the engine cover. Do not operate the outboard motor without the engine cover.



## 6. OPERATION

For the first 10 hours of operation, run the outboard motor at low speed, and avoid abrupt operation of the throttle.

### 1. Gear shifting

Put the tilt lever in the RUN position to prevent the outboard motor from tilting up, when operating in reverse (refer to page 22 ).

The gearshift lever has 3 positions : FORWARD, NEUTRAL, and REVERSE. An indicator at the base of the gearshift lever aligns with letters F, N, or R on the engine case to show the gear that has been selected.

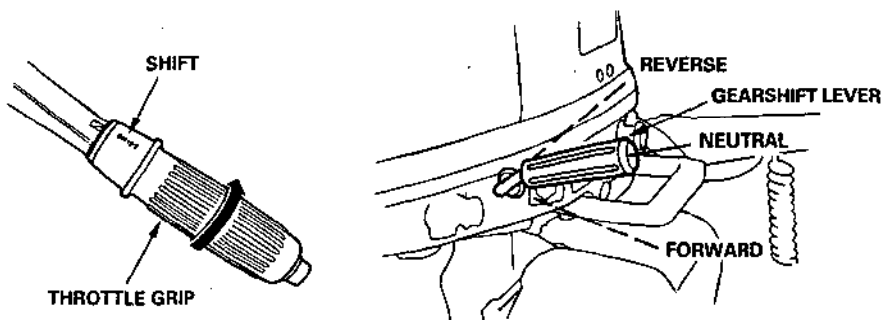
Turn the throttle grip to SHIFT to decrease engine speed before moving the gearshift lever.

#### NOTICE

**When operating in reverse, proceed with caution to avoid hitting any underwater obstructions with the propeller.**

#### NOTE:

The throttle mechanism is designed to limit throttle opening in REVERSE and NEUTRAL. The throttle can be opened to FAST only in FORWARD gear.



---

## 2. Steering

To turn to the right, swing the tiller handle to the left. To turn to the left, swing the tiller handle to the right.

Boats equipped with a remote control steering wheel are controlled in the same way as a car.

LEFT TURN



Swing the tiller handle to the right.

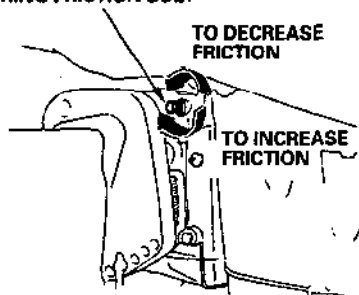
RIGHT TURN



Swing the tiller handle to the left.

The steering friction should be adjusted so that stable boat operation is maintained with a minimum of operator effort.

STEERING FRICTION BOLT



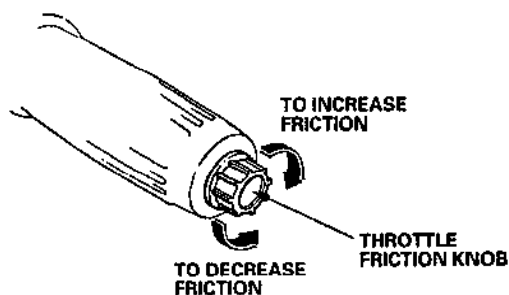
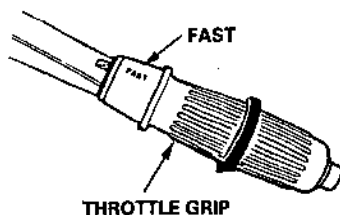
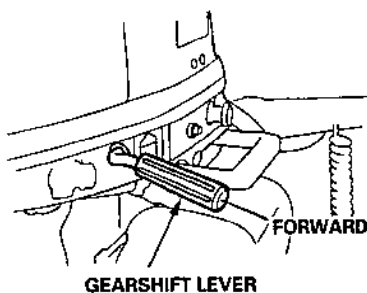
### 3. Cruising

With the gearshift lever in the forward position F, turn the throttle grip toward FAST to increase speed. For normal cruising, open the throttle about 3/4.

To hold the throttle at a steady setting, turn the throttle friction knob clockwise. To free the throttle grip for manual speed control, turn the friction knob counterclockwise.

#### NOTICE

For best performance, passengers and equipment should be distributed evenly to balance the boat.



#### 4. Tilting the motor

Tilt the motor to prevent the propeller and gear case from hitting bottom when the boat is beached or stopped in shallow water.

1. Stop the engine and put the gearshift lever into NEUTRAL.
2. Pull the tilt lever toward you, set the lever in the TILT position, and raise the engine to either the 30°, 45° and 70° tilt position.

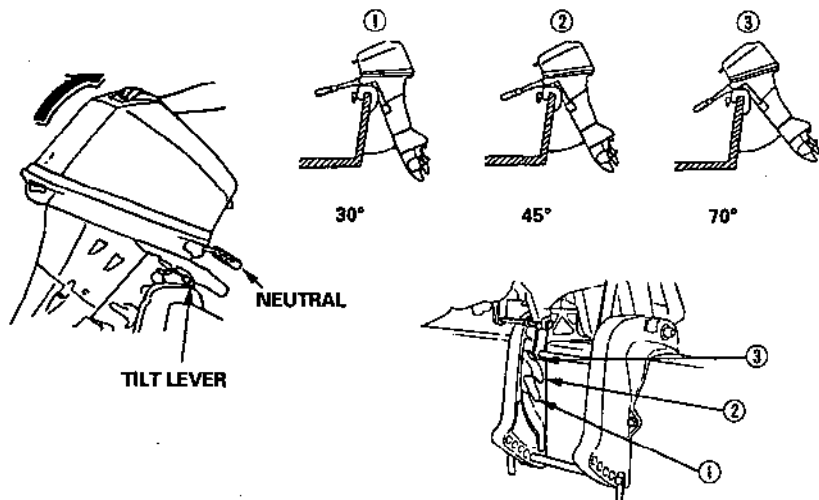
#### NOTICE

**Do not use the throttle grip to tilt the outboard motor.**

3. To return the engine to the normal RUN position, move the tilt lever away from you until it stops, tilt the engine up slightly, then lower the engine slowly.

#### NOTICE

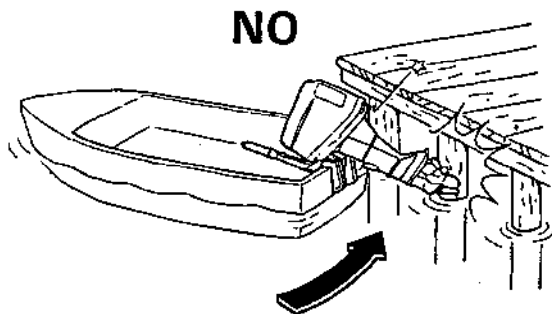
**Do not transport the motor in the tilted position; it may drop suddenly causing damage to the boat or the motor.**





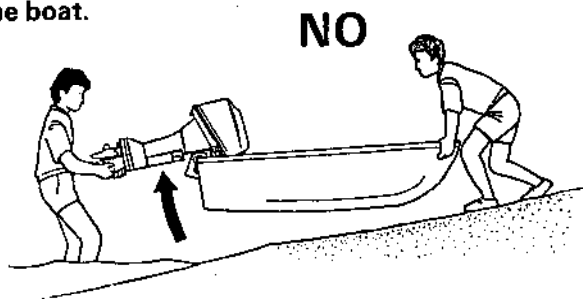
**NOTICE**

To avoid damaging the motor, use the utmost care when mooring a boat, especially when its motor is tilted up. Don't allow the motor to strike against the pier or other boats.



**NOTICE**

To avoid damaging the motor, never use it as a handle for lifting or moving the boat.



**Trailing**

When trailering or transporting the boat with the motor attached, it is recommended that the motor remain in normal running position with the steering friction bolt tightened securely.

**NOTICE**

Do not trailer or transport the boat with the motor in the tilted position. The boat or motor could be severely damaged if the motor drops.

The motor should be trailered in the normal running position. If there is insufficient road clearance in this position, then trailer the motor in the tilted position using a motor support device such as a transom saver bar, or remove the motor from the boat.

## 5. Battery charging

The DC receptacle provides 12 V, 5 A current for 12 V battery charging. The circuit is protected by a 5 A fuse that is accessible by removing the engine cover.

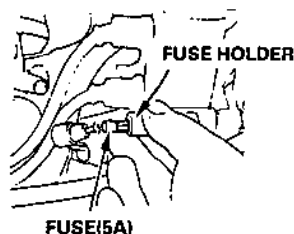
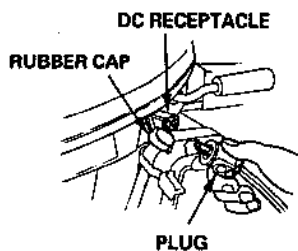
An electrical plug for the DC receptacle is supplied with your motor. Wire your charging cord to this plug.

### ▲WARNING

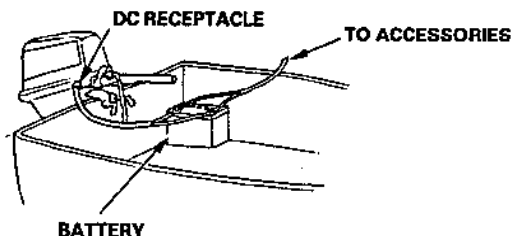
**Batteries produce explosive gases. Keep sparks, flames, and cigarettes away. To prevent the possibility of creating a spark near the battery, connect the charging cord first to the battery and then to the outboard motor; when disconnecting the charging cord remove it from the outboard first.**

### NOTICE

- **Connect the positive battery terminal to the positive charging cord. Do not reverse the charging cords, or serious damage to the outboard motor's charging circuit and/or battery may occur.**
- **When it is not in use, keep the DC receptacle dry and clean by covering it with the rubber cap provided.**



The outboard motor's 12 volt output is intended for battery charging only. Electrical accessories should be connected to the battery as shown.



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### ● High altitude operation

At high altitude, the standard carburetor air-fuel mixture will be excessively rich. Performance will decrease, and fuel consumption will increase.

High altitude performance can be improved by installing a smaller diameter main fuel jet in the carburetor and readjusting the pilot screw. If you always operate the outboard motor at altitudes higher than 6,000 feet above sea level, have your authorized Honda Outboard Motor dealer perform these carburetor modifications.

Even with suitable carburetor jetting, engine horsepower will decrease approximately 3.5% for each 1,000 foot increase in altitude. The effect of altitude on horsepower will be greater than this if no carburetor modification is made.

**NOTICE**

**Operation of the outboard motor at an altitude lower than the carburetor is jetted for may result in reduced performance, overheating, and serious engine damage caused by an excessively lean air/fuel mixture.**

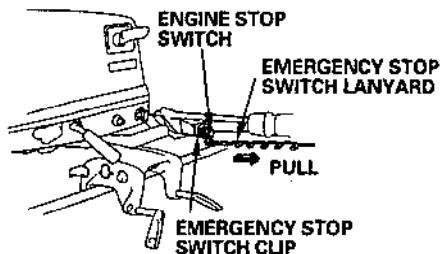
## 7. STOPPING THE ENGINE

### • In an emergency

Disengage the emergency stop switch clip from the engine stop switch by pulling the emergency stop switch lanyard.

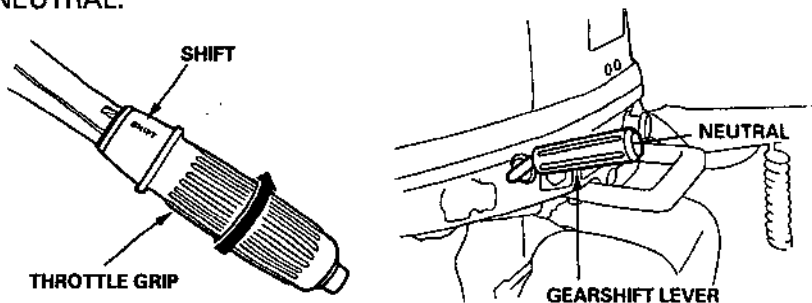
#### NOTE:

It is a good idea to stop the engine with the emergency stop switch lanyard from time to time to be sure that the switch is operating properly.

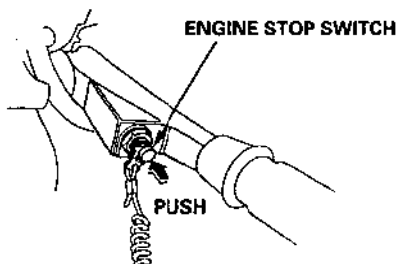


### • In normal use

1. Turn the throttle grip to **SHIFT** and move the gearshift lever to **NEUTRAL**.



2. Push the engine stop switch until the engine stops.



#### CAUTION:

In the event that the engine does not stop when you depressed the engine stop switch, pull the emergency stop switch lanyard. If the engine continues to run, pull the choke knob to stop the engine.

## 8. MAINTENANCE

Periodic maintenance and adjustment are important to keep the motor in the best operating condition. Inspect or service as scheduled below.

### ▲WARNING

Shut off the engine before performing any maintenance. If the engine must be run, make sure the area is well ventilated. Never run the engine in an enclosed or confined area. Exhaust contains poisonous carbon monoxide gas; exposure can cause loss of consciousness and may lead to death.

### NOTICE

- If the engine must be run, make sure there is water at least 2 inches above the anti-ventilation plate, otherwise the water pump may not receive sufficient cooling water, and the engine will overheat.
- To maintain cooling system efficiency, flush the outboard motor with fresh water after each use in salt water or dirty water.
- Use only genuine HONDA parts or their equivalent. The use of replacement parts which are not of equivalent quality may damage the motor.

REGULAR SERVICE PERIOD		EACH USE	FIRST MONTH OR 20 HRS (3)	EVERY 6 MONTHS OR 100 HRS (3)	EVERY YEAR OR 200 HRS (3)
ITEM	Performed at every indicated month or operating hour intervals, whichever comes first.				
Engine oil	Check level	○			
	Change		○	○	
Gear case oil	Check level			○	
	Change		○		○
	Check for water contamination			○	
Starter rope	Check			○	
Carburetor linkage	Check		○(2)	○(2)	
Valve clearance	Check-Adjust		○(2)		○(2)
Spark plug	Check-clean			○	
Shear pin	Check			○	
Lubrication	Grease		○(1)	○(1)	
Fuel tank and filter	Clean				○
Thermostat	Check				○(2)
Fuel filter	Change				○
Fuel hose	Check (Replace if necessary)	○	Every 2 years(2)		

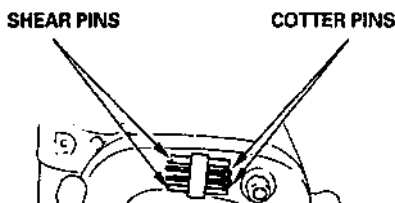
NOTE: (1) Lubricate more frequently when used in salt water.

(2) These items should be serviced by an authorized Honda outboard dealer, unless the owner has the proper tools and is mechanically proficient. See the Honda Shop Manual.

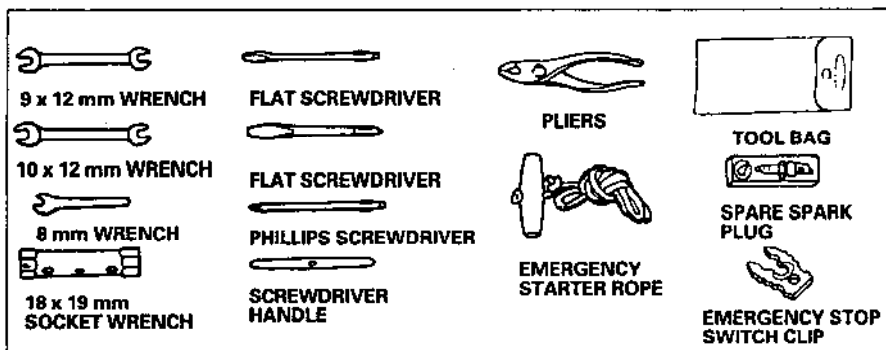
(3) For professional commercial use, log hours of operation to determine proper maintenance intervals.

## Tool kit and spare parts

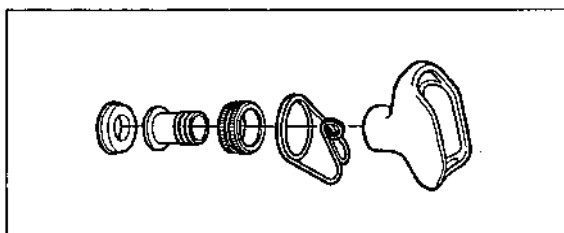
The following tools and spare parts are supplied with the outboard motor for maintenance, adjustment, and emergency repairs.  
Spare shear pins and cotter pins are located on the stern bracket.



## Tool kit



## Flush kit

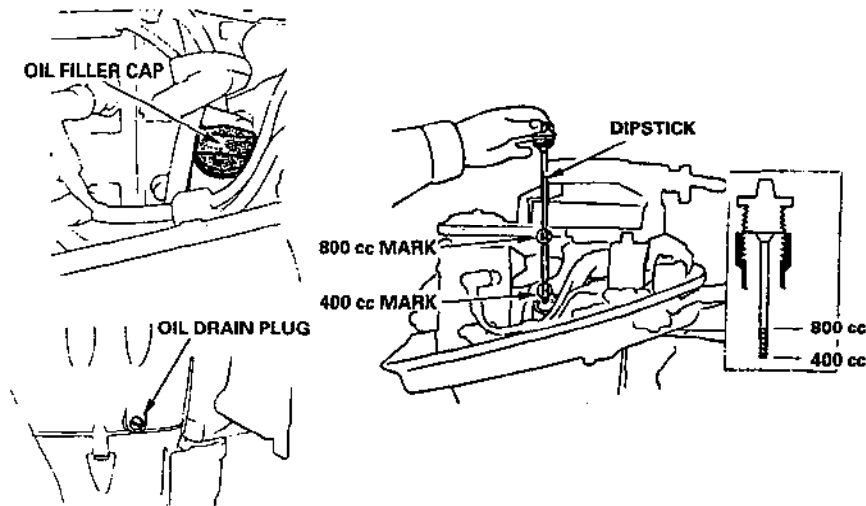


## Engine oil change

The engine must be stopped. Drain the oil while the engine is still warm to assure rapid and complete draining.

1. Remove the engine cover. Remove the oil drain plug and oil filler cap, and drain the oil into a suitable container. Install a new sealing washer on the oil drain plug and install the oil drain plug securely.
2. Fill the crankcase with the recommended oil (see page 9 ) and check the oil level with the dipstick resting on the filler opening (do not screw in). Fill to the upper level mark.

**Oil capacity:** 0.80 ℓ (0.85 US qt , 0.70 Imp qt)



Always wash your hands after handling used oil.

Also, please dispose of used motor oil in a manner that is compatible with the environment. We suggest you take it in a sealed container to your local service station reclamation center. Do not throw it in the trash, pour it on the ground, down a drain, or into the water.

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## Gear oil check/change

**Recommended oil:** Marine SAE 90 hypoid gear oil  
API Service Classification (GL-4 or GL-5)

**Oil Capacity:** 0.23 ℓ (0.24 US qt , 0.20 Imp qt)

### Oil level check

Check the oil level when the motor is in the vertical position. Remove the level plug and see if oil flows out.

If no oil flows out, use a commercially available oil pump or squeeze tube to fill the gear case with the recommended gear oil. Pump or squeeze fresh oil through the OIL DRAIN plug hole until oil begins flowing out through the OIL LEVEL plug hole.

If there is water in the oil, the water will flow out first when the drain plug is removed, or the oil will be a milky color.

#### NOTICE

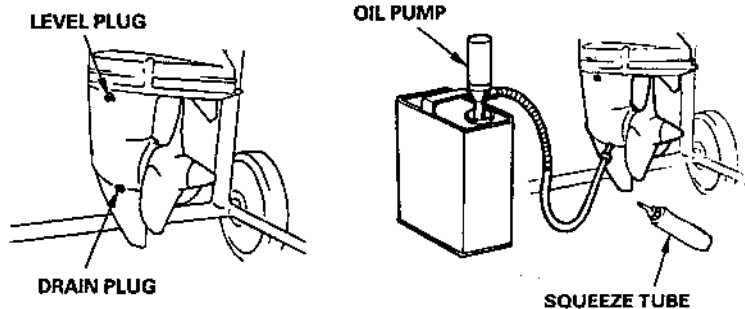
**If water is detected in the oil, the outboard motor should be inspected by an authorized Honda Outboard Motor dealer.**

### Oil change

Remove the level plug and drain plug and allow the gear oil to thoroughly drain into a suitable container.

Pump or squeeze the recommended gear oil through the OIL DRAIN plug hole until oil starts flowing out through the OIL LEVEL plug hole.

Use new sealing washers and install the oil level plug first and then the oil drain plug. Tighten securely.



### Starter rope check

Check the starter rope every 6 months or after every 100 hours of outboard motor operation. Replace the rope if it is frayed. Always keep a replacement starter rope in your kit.



## Spark plug service

**Recommended spark plug:** DR-5HS(NGK), X16FSR-U(NIPPONDENSO)

1. Remove the engine cover.
2. Remove the spark plug caps.
3. Use the wrench supplied in the tool kit to remove the spark plugs.
4. Visually inspect the spark plugs. Discard the spark plugs if there is apparent wear, or if the insulators are cracked or chipped. Clean the spark plugs with a wire brush if they are to be reused.
5. Measure the plug gaps with a feeler gauge.  
Correct as necessary by carefully bending the side electrode.  
The gaps should be:  
0.60–0.70 mm (0.024–0.028 in)
6. Check that the spark plug washers are in good condition, and thread the spark plugs in by hand to prevent cross-threading.
7. After the spark plugs are seated, tighten with a spark plug wrench to compress the washers.

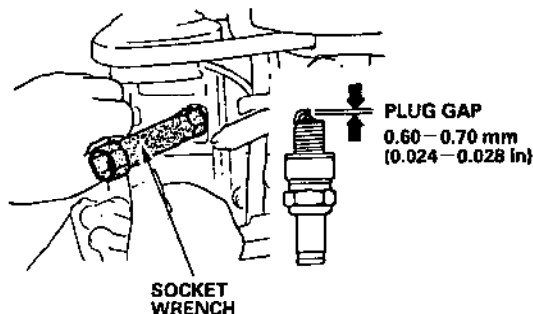
### NOTE:

If installing a new spark plug, tighten 1/2 turn after the spark plug seats to compress the washer. If reinstalling a used spark plug, tighten 1/8–1/4 turn after the spark plug seats to compress the washer.

8. Install the engine cover.

### NOTICE

- The spark plugs must be securely tightened. Improperly tightened plugs can become very hot and may cause engine damage.
- Use only the recommended spark plugs or equivalent. Spark plugs which have an improper heat range may cause engine damage.



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## Cleaning and flushing

After each use in salt water or dirty water, thoroughly clean and flush the outboard motor.

### **▲WARNING**

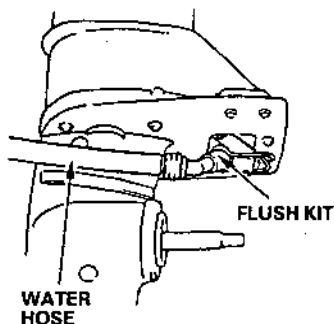
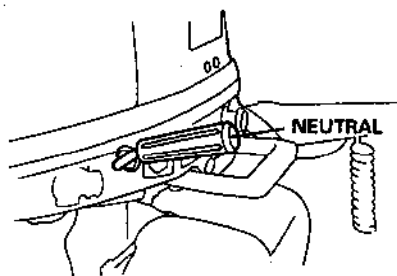
- For safety, the propeller must be removed.
- Be sure the outboard motor is securely mounted, and do not leave it unattended while running.
- Keep children and pets away from the area, and stay clear of moving parts during this procedure.

### **NOTICE**

Running the engine without water can cause serious engine damage due to overheating. Be sure that water flows from the water check tube while the engine is running. If not, stop the engine and determine the cause of the problem.

(With Honda flush kit)

1. Wash the outside of the outboard motor with clean, fresh water.
2. Flush the cooling system, using the Honda flush kit (optional).
  - a. Attach a hose from a fresh water faucet to the flush kit hose coupler.
  - b. Remove the propeller, and clip the flush kit rubber fitting over the water intake as shown.
  - c. Turn on the fresh water supply to the hose.
  - d. Start the engine and run in neutral for 10 minutes.



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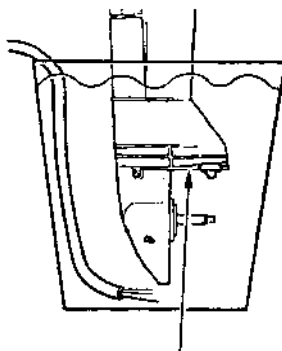
**(Without Honda flush kit)**

1. Wash the outside of the outboard motor with clean, fresh water.
2. Remove the propeller.
3. Stand the motor in a suitable container of water. The water level must be at least 2 inches above the anti-ventilation plate.

**NOTE:**

Maintain the water level at least 2 inches above the anti-ventilation plate.

4. Start the engine and run slowly for at least 10 minutes.

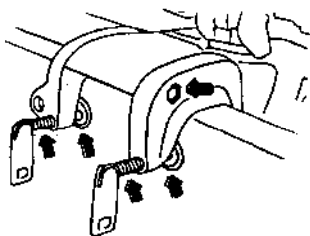


**ANTI-VENTILATION PLATE**

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## Lubrication

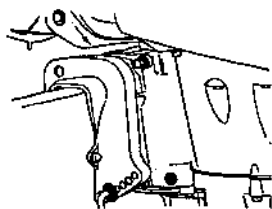
Apply marine anti-corrosion grease to the following areas:



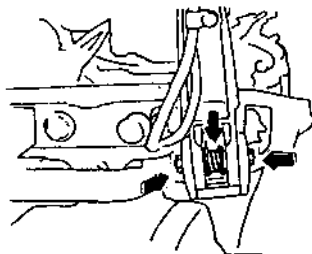
**CLAMP SCREWS**



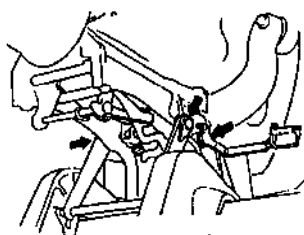
**THROTTLE CABLE AND PIVOT  
SHIFT SHAFT AND PIVOT**



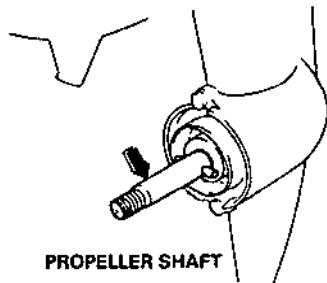
**SWIVEL CASE**



**HANDLE PIVOT**



**TILT LINKAGE**



**PROPELLER SHAFT**

### NOTE:

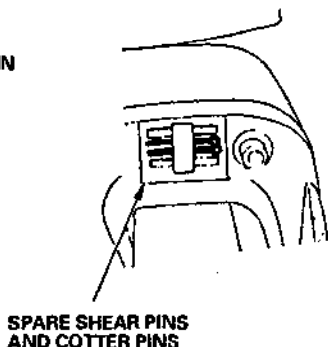
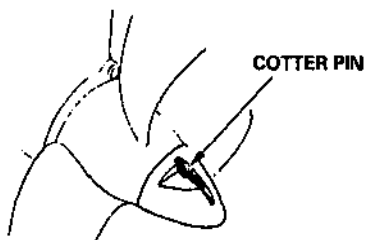
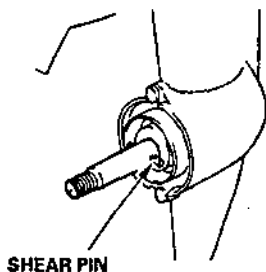
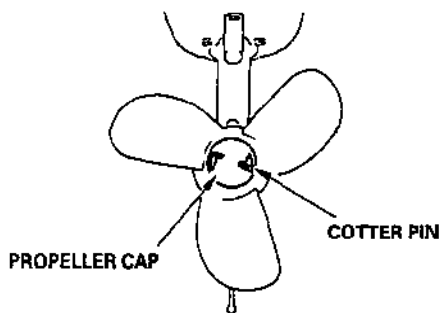
Apply anti-corrosion oil to pivot surfaces where grease cannot penetrate.

---

## Shear pin change

A shear pin is used to protect the propeller and drive mechanism from damage when the propeller strikes an obstruction.

1. Remove the cotter pin, the propeller cap, and the propeller.
2. Remove the broken shear pin and replace it with a new one.
3. Install the propeller, then install the propeller cap finger tight.
4. Install a new cotter pin, and spread the ends as shown in the illustration.



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## Fuel filter replacement

The fuel filter is located between the fuel pump and the carburetor. Water or sediment accumulated in the fuel filter can cause loss of power or hard starting. To prevent engine malfunction, replace the fuel filter regularly.

(SERVICE PERIOD) Every 200 operating hours or every one year.

### **▲WARNING**

- Gasoline is extremely flammable and explosive under certain conditions. Do not smoke or allow flames or sparks near the outboard motor while draining fuel.
- Always work in a well-ventilated area.
- Be sure that any fuel drained from the outboard motor is stored in a safe container.
- Be careful not to spill fuel when replacing the filter. Spilled fuel or fuel vapor may ignite. If any fuel is spilled, make sure the area is dry before starting the engine.

1. Disconnect the fuel tank line from the motor.
2. Remove the engine cover, and remove the fuel filter.
3. Install the new fuel filter with the arrow mark pointing toward the carburetor.

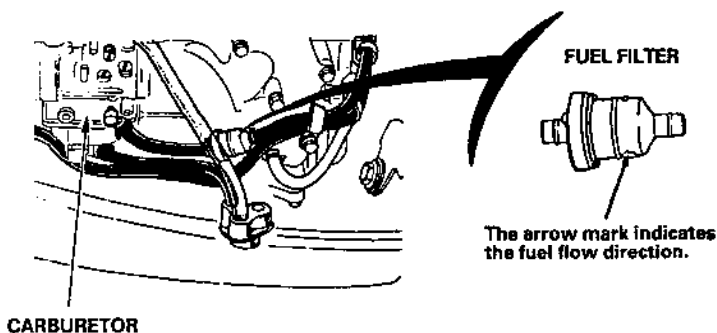
### NOTE:

- Before removing the filter, place clamps on the fuel tubes on each side of the filter to prevent fuel leakage.
- Fuel flow will be impeded if the filter is installed backward.

- 
4. Remove the clamps used to close the fuel tubes. Connect the fuel tank line to the motor. Turn the fuel tank vent knob to the ON position, pump the primer bulb, and check for leaks.

**NOTE:**

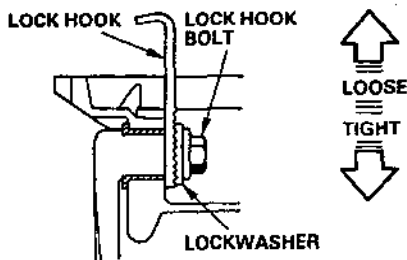
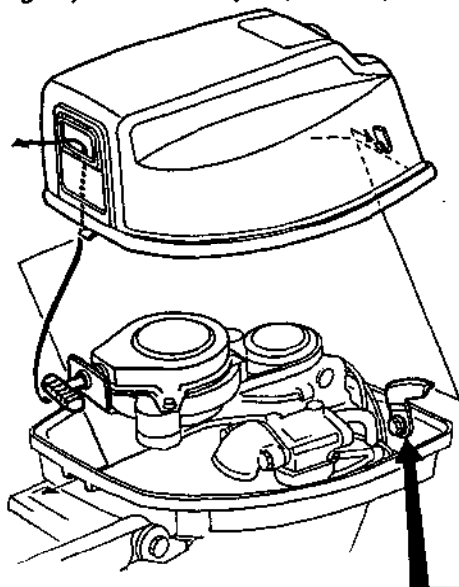
If loss of power or hard starting is found to be caused by excessive water or sediment accumulated in the fuel filter, inspect the fuel tank. Clean the fuel tank if necessary.



## Engine cover lock adjustment

The engine cover should fit tightly to keep the engine compartment dry. If adjustment is needed, reposition the lock hook.

1. Remove the engine cover, and loosen the lock hook bolt with a 10 mm wrench.
2. Reposition the lock hook, and retighten the bolt. Be sure the lockwasher serrations align with the hook serrations when tightening the bolt.
3. Install and lock the engine cover. Check whether the engine cover fits tightly. If necessary, repeat steps 1 and 2 to achieve a tight fit.





### Servicing a submerged motor

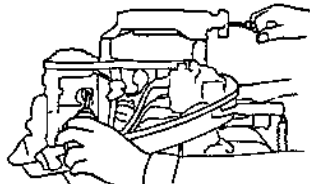
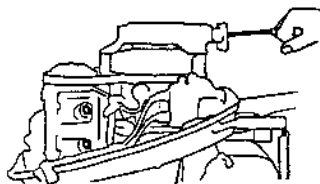
A submerged motor must be serviced immediately after it is recovered from the water in order to minimize corrosion.

If there is a Honda outboard motor dealership nearby, take the motor immediately to the dealer. If you are far from a dealership, proceed as follows:

1. Remove the engine cover, and rinse the motor with fresh water to remove salt water, sand, mud, etc.
2. Loosen the carburetor drain screw (p. 41 ), drain the contents of the carburetor into a suitable container, then tighten the drain screw.
3. Change the engine oil (p. 29 ). If there was water in the engine crankcase, or the used engine oil showed signs of water contamination, then a second engine oil change should be performed after running the engine for 1/2 hour.
4. Remove the spark plugs. Disengage the emergency stop switch clip from the engine stop switch and pull the recoil starter several times to completely expel water from the cylinders.

#### NOTICE

- When cranking the engine with an open ignition circuit (spark plugs removed from the ignition circuit), disengage the emergency stop switch clip from the engine stop switch to prevent electrical damage to the ignition system.
  - If the motor was running when it submerged, there may be mechanical damage, such as bent connecting rods. If the engine binds when cranked, do not attempt to run the motor until it has been repaired.
5. Pour a teaspoon of engine oil into each spark plug hole, then pull the recoil starter several times to lubricate the inside of the cylinders. Reinstall the spark plugs and engage the emergency stop switch clip with the engine stop switch.
  6. Attempt to start the engine.
    - If the engine fails to start, remove the spark plugs, clean and dry the electrodes, then reinstall the spark plugs and attempt to start the engine again.
    - If the engine starts, and no mechanical damage is evident, continue to run the engine for 1/2 hour or longer (be sure the water level is at least 2 inches above the anti-ventilation plate).
  7. As soon as possible, take the motor to a Honda outboard motor dealer for inspection and service.

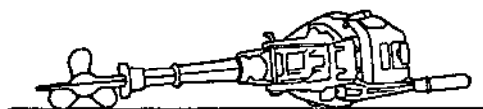
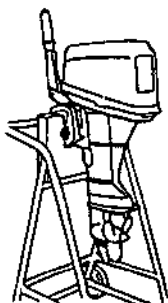


## 9. TRANSPORTING/STORAGE

1. To carry, hold the motor by the carrying handle, and engine cover lock lever as shown here. Do not carry by the engine cover.

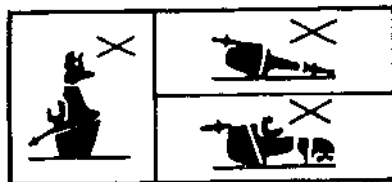


2. Transport and store the motor either vertically or horizontally, as shown below, with the tiller handle raised.



CASE PROTECTOR

INCORRECT



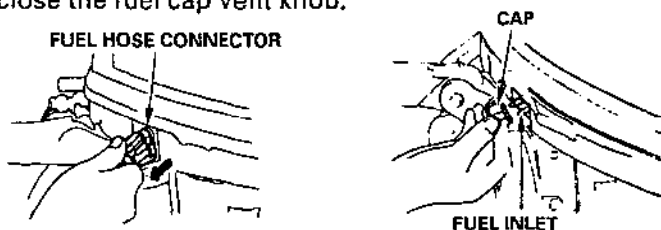
Vertical transport or storage: Attach the stern bracket to a stand.

### NOTICE

Any other transport or storage position may cause damage or oil leakage.

## Preparation for storage

1. Disconnect the fuel line and install the cap on the engine fuel inlet. Firmly close the fuel cap vent knob.



2. Loosen the carburetor drain screw, and drain the gasoline into a suitable container. After draining, tighten the drain screw.

### **▲WARNING**

- Be careful not to spill fuel. Spilled fuel or fuel vapor may ignite. If any fuel is spilled, make sure the area is dry before storing or transporting the motor.
- Do not smoke or allow flames or sparks where fuel is drained or stored.

### **NOTICE**

In cold weather, to prevent ice from forming inside the water pump, raise the motor out of the water. Disengage the emergency stop switch clip from the engine stop switch and pull the recoil starter several times to flush out the water.



3. Tilt the outboard motor and remove the plug caps. Disengage the emergency stop switch clip from the engine stop switch and pull the recoil starter several times and completely drain the cooling water.

### **NOTICE**

If the outboard motor is put on its side immediately after stopping it without completely draining the cooling water, water may enter the engine from the exhaust port. Be sure to drain the cooling water before putting the outboard motor on its side.

- 
4. Change the engine oil.
  5. Remove the spark plugs, and pour about a tablespoon of clean engine oil into the cylinders. Crank the engine several revolutions to distribute the oil, then install the spark plugs.
  6. Store the outboard motor in a clean, dry area.

**NOTE:**

Before storing, clean, flush, and lubricate the outboard motor as described on pages 31 and 33 .

## 10. TROUBLESHOOTING

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### Engine will not start:

1. Is the emergency stop switch clip in place?
2. Is the gearshift lever in neutral?
3. Is there fuel in the fuel tank?
4. Is the fuel cap vent knob turned to ON?
5. Is the fuel system primed by squeezing the primer bulb?
6. Is fuel reaching the carburetor?

Loosen the carburetor drain screw to see if there is fuel in the carburetor float bowl.

#### **▲WARNING**

**If any fuel is spilled, make sure the area is dry before testing the spark plug or starting the engine. Spilled fuel or fuel vapor may ignite.**

7. Are the spark plugs firing?
  - a. Remove and inspect the spark plugs. Clean and dry the plugs, and check the electrode gaps (P. 31).
  - b. Install the spark plugs in their caps, and ground the side electrode to any engine ground away from the spark plug holes.
  - c. Pull the recoil starter briskly, and see if the plug sparks.
  - d. If the spark plugs are OK, reinstall them, and try to start the engine.

### Engine overheats:

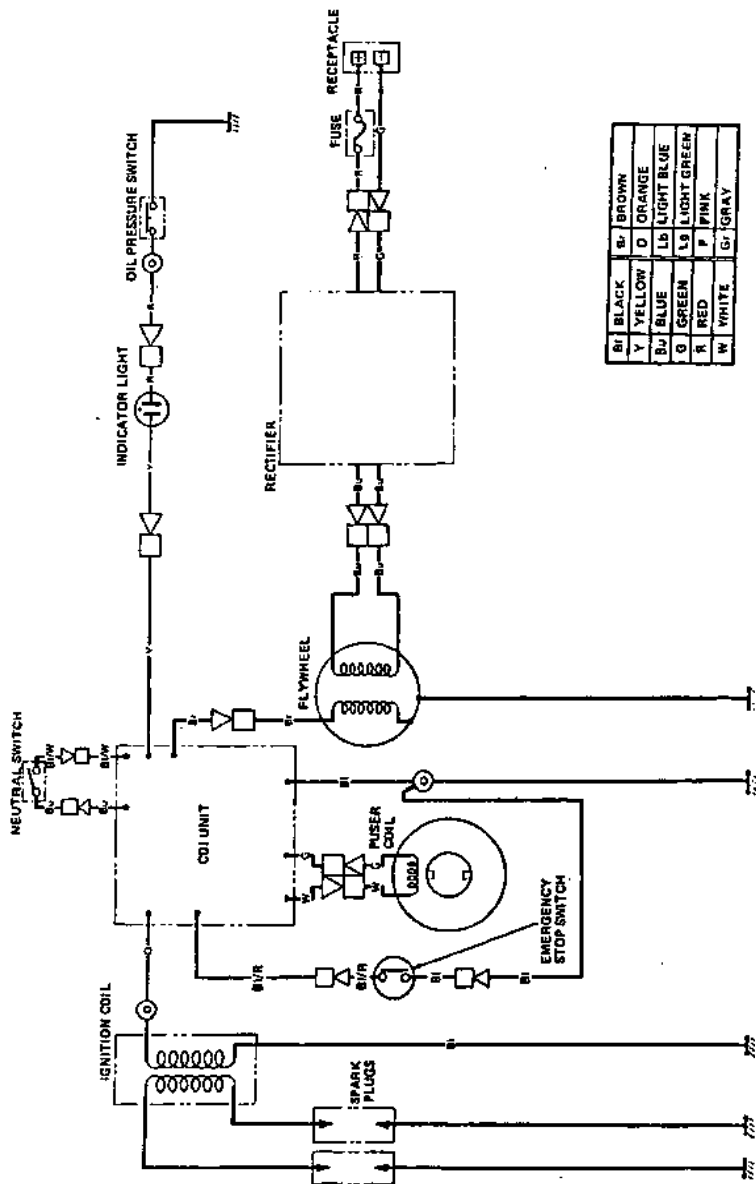
1. Is the water intake screen clogged?
2. Is the thermostat faulty?

## 11. SPECIFICATIONS

Model	BF8A			
Description code	S Model BACS L Model BACL      X Model BACU			
Rated power	8.0 HP (6.0 kW)			
Full throttle range	4,950 – 5,500 rpm			
Engine type	4-stroke OHC in-line twin cylinder			
Displacement	197 cm <sup>3</sup> (12.0 cu-in)			
Spark plug gap	0.60 – 0.70 mm (0.024 – 0.028 in)			
Starter system	Recoil starter			
Ignition system	C.D.I.			
Lubrication system	Trochoid pump pressure lubrication			
Specified oil	Engine: API standard (SG, SF) SAE 10W-30 Gear case: Marine SAE 90 hypoid gear oil API Service Classification (GL-4 or GL-5)			
Oil capacity	Engine: 0.80 ℓ (0.85 US qt, 0.70 Imp qt) Gear case: 0.23 ℓ (0.24 US qt, 0.20 Imp qt)			
D.C. output	12V – 5A			
Cooling system	Water cooling with thermostat (volumetric pump)			
Exhaust system	Underwater exhaust			
Spark plug	DR-5HS(NGK), X16FSR-U(NIPPONDENSO)			
Fuel pump	Diaphragm type fuel pump			
Fuel	Automotive gasoline (86 pump octane)			
Tank capacity	12 ℓ (3.0 US gal, 2.6 Imp gal)			
Steering equipment	Tiller handle			
Tilt angle	3-stage adjustment (30°, 45° and 70°)			
Angle of rotation	40°(both sides)			
Dimensions	S Model	L Model	X Model	
	Length	525 mm (20.7 in)	525 mm (20.7 in)	525 mm (20.7 in)
	Height	1,010 mm (39.8 in)	1,160 mm (45.7 in)	1,240 mm (48.8 in)
Width	315 mm (12.4 in)	315 mm (12.4 in)	315 mm (12.4 in)	
Outboard motor transom height	S Model	L Model	X Model	
	420 mm (16.5 in)	570 mm (22.4 in)	648 mm (25.5 in)	
	Standard propeller (No. of blades-diameter x pitch)			
Gear change	Forward-Neutral-Reverse(dog type)			
Dry weight	S Model	35.0 kg (77.2 lbs)		
	L Model	36.0 kg (79.4 lbs)		
	X Model	37.0 kg (81.6 lbs)		

Honda outboards are power rated in accordance with NMMA procedures and using the ICOMIA standard 28/23.

# 12. WIRING DIAGRAM

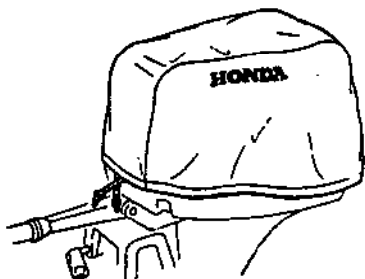


B	BLACK	B	BROWN
Y	YELLOW	D	ORANGE
B <sub>1</sub>	BLUE	LB	LIGHT BLUE
G	GREEN	LG	LIGHT GREEN
R	RED	P	PINK
W	WHITE	G <sub>1</sub>	GRAY

## 13. OPTIONAL PARTS

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ENGINE COVER





## 14. WARRANTY SERVICE

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### Owner Satisfaction

Your satisfaction and goodwill are important to your dealer and to us. All Honda warranty details are explained in the Distributor's Limited Warranty, which you should have received from your dealer at the time of delivery. Normally, any problems concerning the product will be handled by your dealer's service department. If you have a warranty problem that has not been handled to your satisfaction, we suggest you take the following action:

- Discuss your problem with a member of dealership management. Often complaints can be quickly resolved at that level. If the problem has already been reviewed with the Service Manager, contact the owner of the dealership or the General Manager.
- If you are dissatisfied with the decision made by the dealership's management, contact the Honda Power Equipment Customer Service Office. You can write to:

**American Honda Motor Co., Inc.**  
Honda Power Equipment Division  
Customer Service Office  
4475 River Green Parkway  
Duluth, GA 30136-2565

Or telephone: (404) 497-6400

We will need the following information in order to assist you:

- You name, address, and telephone number
- Product model and serial number
- Date of purchase
- Dealer name and address
- Nature of the problem

Your purchase of a Honda product is greatly appreciated by both your dealer and American Honda Motor Co., Inc. We want to assist you in every way possible to assure your complete satisfaction with your purchase.

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MEMO



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