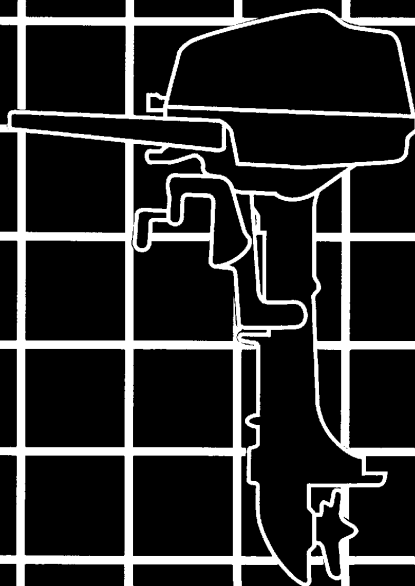


HONDA
MARINE

BF5A•BF4.5B

OWNER'S MANUAL



Honda Motor Co., Ltd. 2003



ECOLOGY CONSCIOUS TECHNOLOGY

The “e-SPEC” mark symbolizes environmentally responsible technologies applied to Honda power equipment, which contains our wish to “preserve nature for generations to come.”

Thank you for purchasing a Honda Outboard Motor.

This manual covers operation and maintenance of the Honda BF5A/BF4.5B Outboard Motor. All information in this publication is based on the latest product information available at the time of approval for 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 should remain with it if it is resold.

Throughout this manual, you will see safety messages preceded by the following words and symbols. Here's what they mean:

▲ DANGER

Indicates serious injury or death WILL result if instructions are not followed.

▲ WARNING

Indicates a strong possibility that serious personal injury or death may result if instructions are not followed.

▲ CAUTION

Indicates a possibility that personal injury or equipment damage could result if instructions are not followed.

NOTICE

Indicates that equipment or property damage could result if instructions are not followed.

NOTE: Gives helpful information.

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

▲ WARNING

Honda Outboard Motors are designed to give safe and dependable service if operated according to instructions. Read and understand the Owner's Manual before operating the Outboard Motor. Failure to do so could result in personal injury or equipment damage.

- The illustration may vary according to the type.

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Model		BF5A								BF4.5B	
Type	Europe					SU	LU	SBU	LBU		
	General export	SD	LD	SB	LB						
	Bodensee									SBK	LBK
Shaft Length		S	L	S	L	S	L	S	L	S	L
Charging System		*	*	B	B	*	*	B	B	B	B

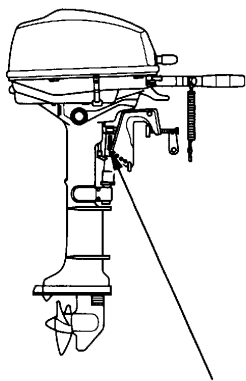
NOTE: Note that the types of the outboard motor differ according to the countries where they are sold.

BF5A/4.5B is provided with the following types according to the shaft length, charging system.

BF4.5B is an outboard motor which meets all the requirements of the emission control regulations established for Bodensee Constance.

- According to Shaft Length
S: Short Shaft
L: Long Shaft
- According to Charging System
B: With System
*: Without System
(Optional Equipment)

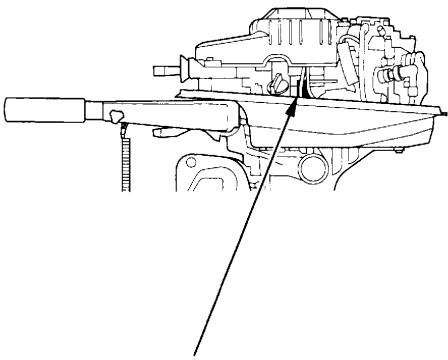
Check the type of your outboard motor and read this Owner's Manual thoroughly before operation. Texts with no type indication are the information and/or procedures common to all types.



FRAME SERIAL NUMBER

Record the frame and engine serial numbers for your reference. Refer to the serial numbers when ordering parts, and when making technical or warranty inquiries.

Frame serial number:



ENGINE SERIAL NUMBER

The frame serial number is stamped on the swivel case.
The engine serial number is stamped on the cylinder block.

Engine serial number:

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1. SAFETY

SAFETY INFORMATION

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

Operator Responsibility

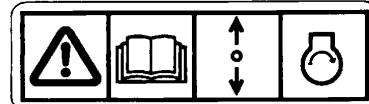


- Honda outboard motor is designed to give safe and dependable service if operated according to instructions. Read and understand the Owner's Manual before operating the outboard motor. Failure to do so could result in personal injury or equipment damage.



- Gasoline is harmful or fatal if swallowed. Keep the fuel tank out of reach of children.
- 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.



(Europe and Bodensee type)

- The engine can be started even if the gearshift position is in FORWARD or REVERSE when it is cranked by rope in emergency. To prevent start-in-gear, be sure to set the gearshift position to the NEUTRAL before starting the engine. Read and understand the Owner's Manual before starting the engine in emergency.

SAFETY

- 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 that 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 life-jacket when on board.
- Do not operate the outboard motor without the engine cover. Exposed moving parts can cause injury.
- Do not remove any guards, labels, shields, covers or safety devices; they are installed for your safety.

Fire and Burn Hazards

Gasoline is extremely flammable, and gasoline vapor can explode. Use extreme care when handling gasoline. **KEEP OUT OF REACH OF CHILDREN.**

- Remove the fuel tank from the boat for refueling.
- Refuel in a well-ventilated area with the engine stopped. Keep flames and sparks away, and do not smoke in the area.

- Refuel carefully to avoid spilling fuel. Avoid overfilling the fuel tank (there should be no fuel in the filler neck). After refueling, tighten the fuel filler cap securely. If any fuel is spilled, make sure the area is dry before starting the engine.

The engine and exhaust system become very hot during operation and remain hot for a while after stopping. Contact with hot engine components can cause burns and may ignite some materials.

- Avoid touching a hot engine or exhaust system.
- Allow the engine to cool before performing maintenance or transporting.

SAFETY

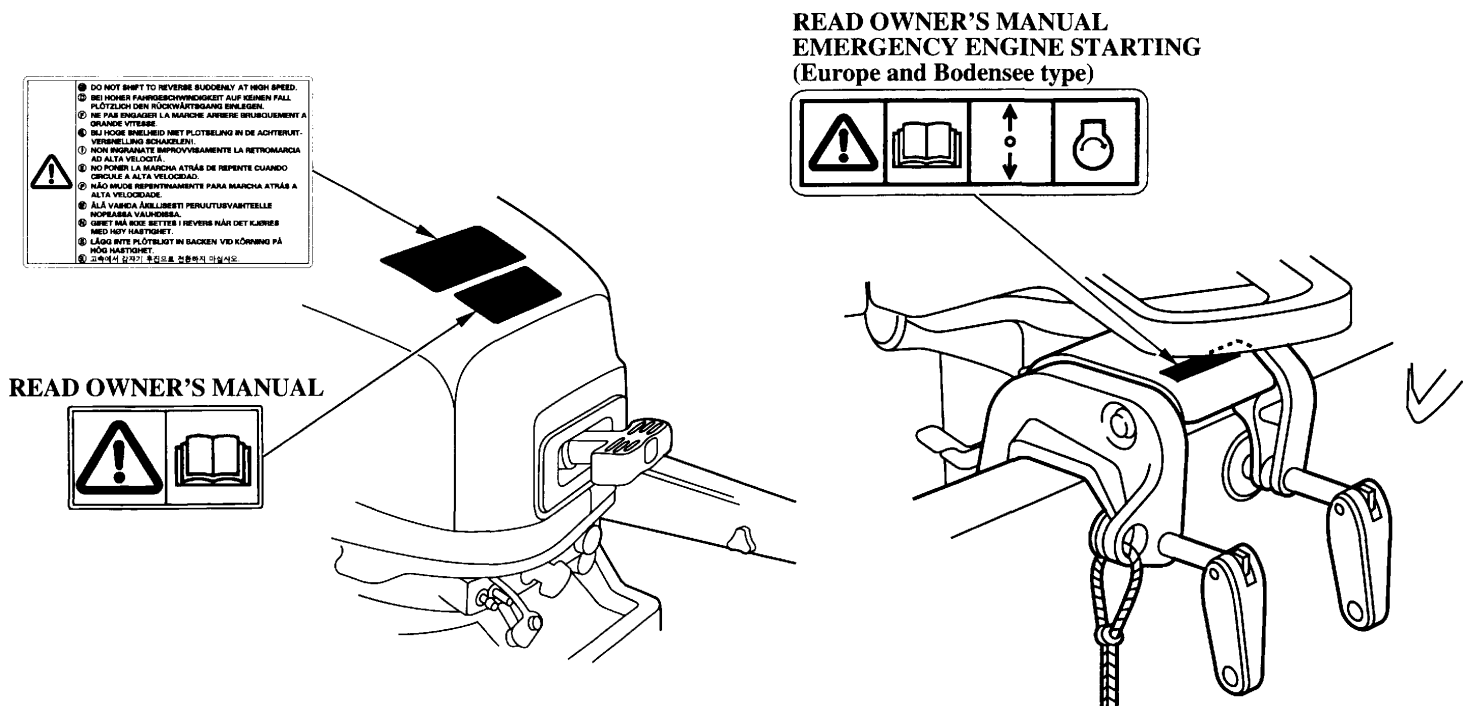
Carbon Monoxide Poisoning Hazard

Exhaust contains poisonous carbon monoxide, a colorless and odorless gas. Breathing exhaust can cause loss of consciousness and may lead to death.

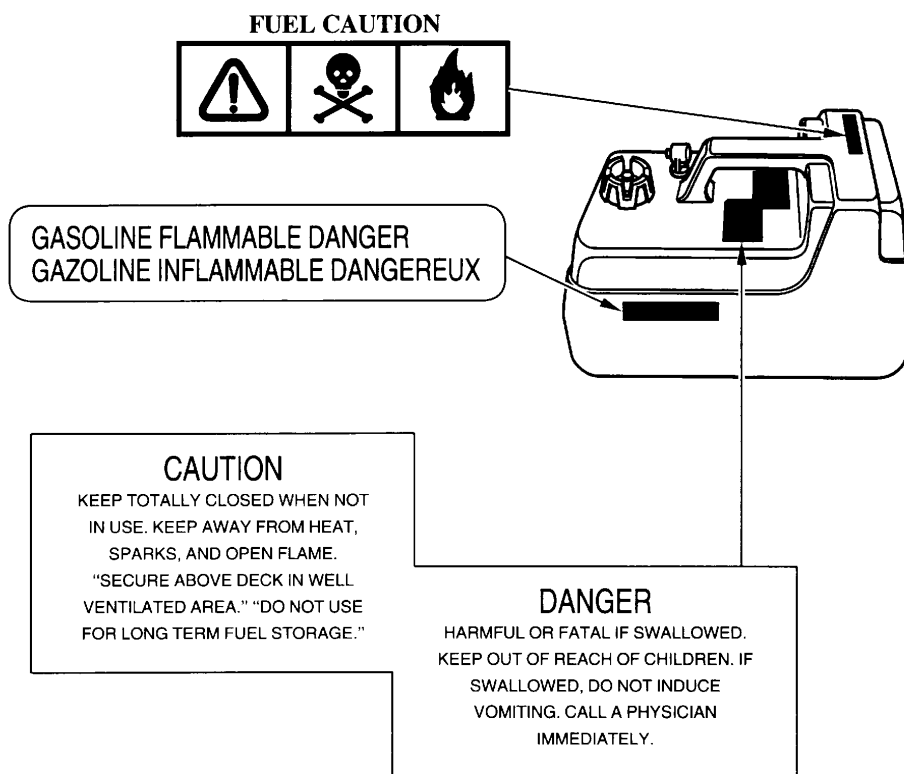
- If you run the engine in an area that is confined, or even partially enclosed, the air can become contaminated with a dangerous amount of exhaust gas. To keep exhaust gas from building up, provide adequate ventilation.

2. SAFETY LABEL LOCATIONS

These labels and indications warn you of potential hazards that can cause serious injury.
Read the labels, indications and safety notes and precautions described in this manual carefully.
If a label comes off or becomes hard to read, contact your Honda outboard motor dealer for a replacement.



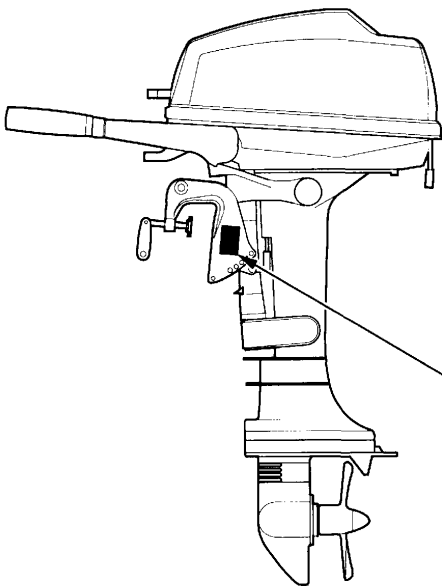
SAFETY LABEL LOCATIONS



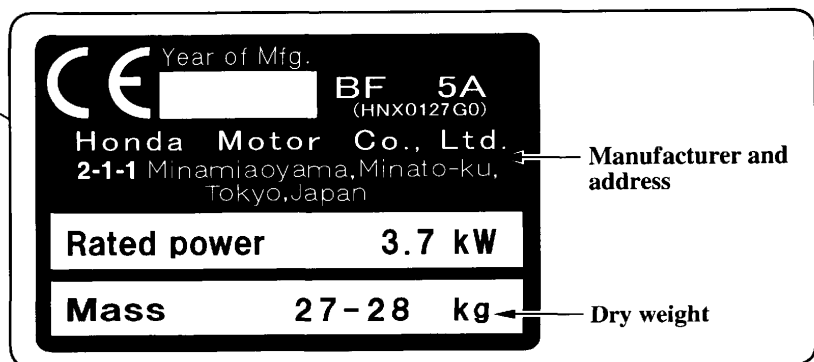
SAFETY LABEL LOCATIONS

CE mark location

[SBK, LBK, SU, LU, SBU and LBU types]

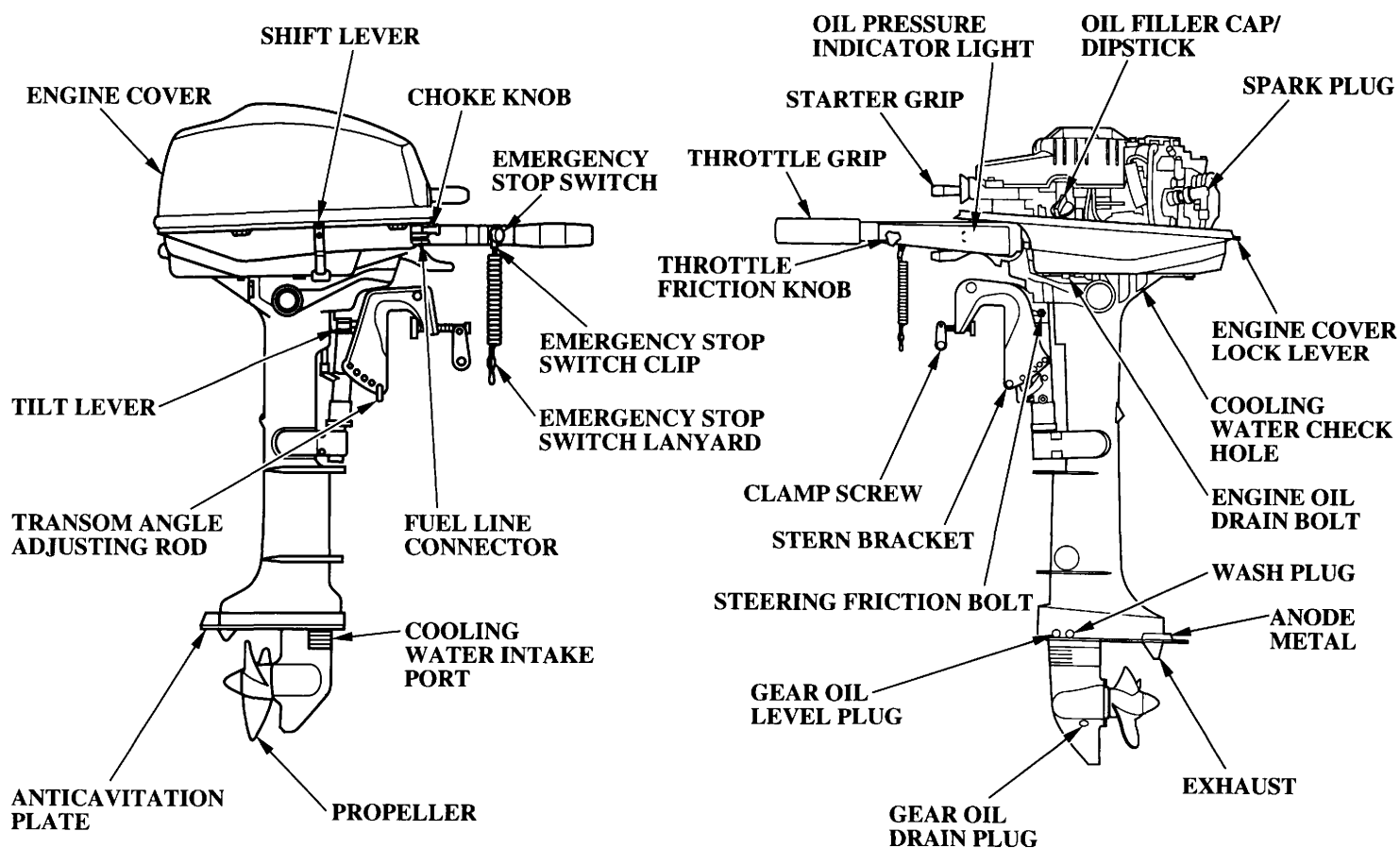


CE MARK

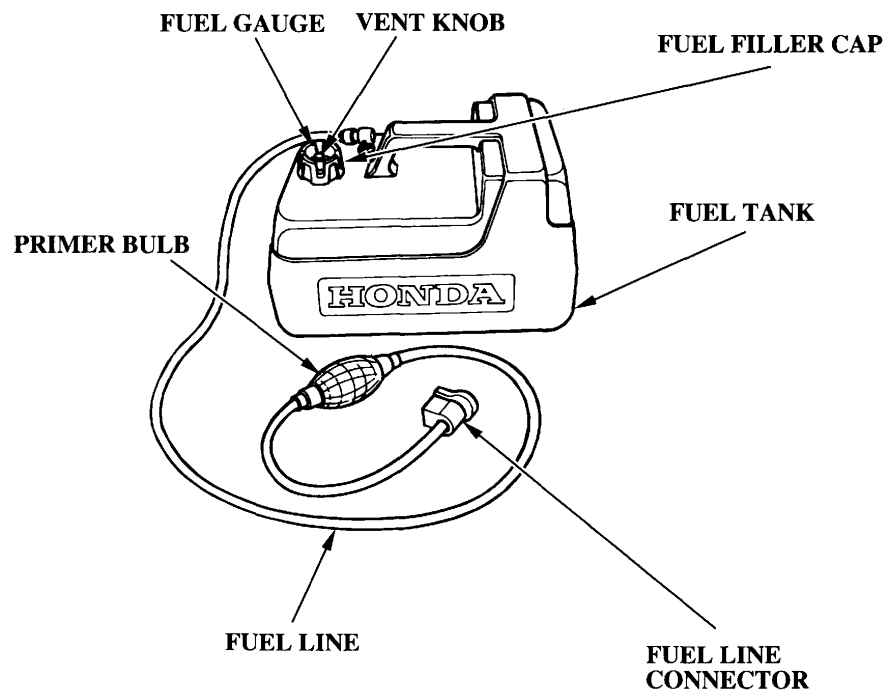


[Example: BF5A]

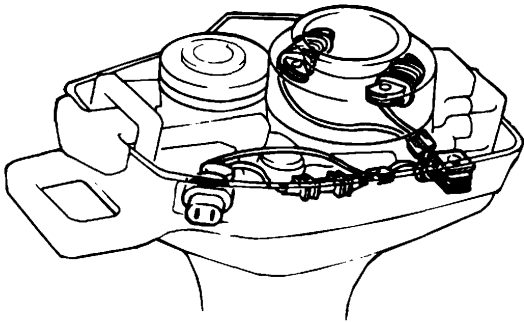
3. COMPONENT IDENTIFICATION



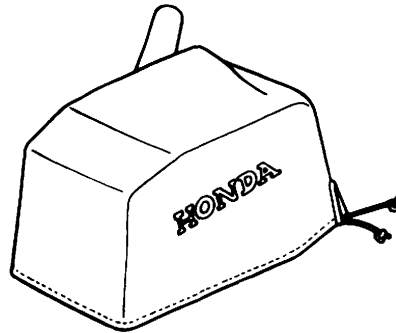
COMPONENT IDENTIFICATION



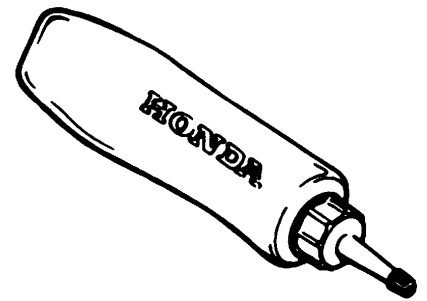
COMPONENT IDENTIFICATION



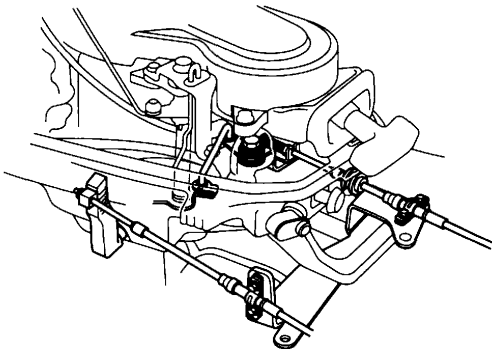
CHARGING AND LIGHTING COIL KIT
(Optional equipment)



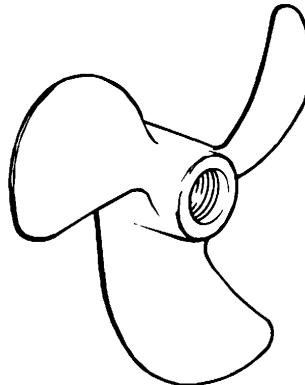
ENGINE COVER
(Optional equipment)



GEAR OIL
(Optional equipment)



REMOTE CONTROL BRACKET KIT
(Optional equipment)

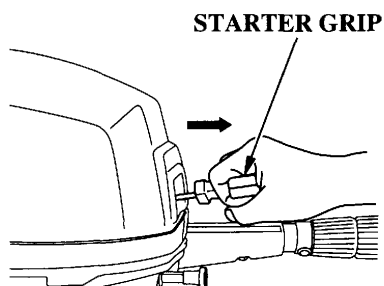


PROPELLER

Number of blades-diameter × pitch
3—200 × 190 mm (3—7-25/32 × 7-31/64 in)
(Optional equipment: SU, LU, SBU, LBU types)
3—200 × 170 mm (3—7-25/32 × 6-11/16 in)
(Optional equipment: Others type)

4. CONTROLS

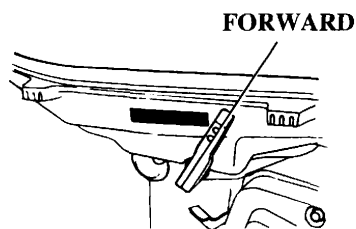
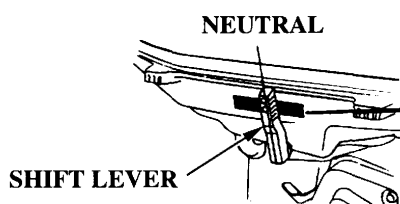
Starter Grip



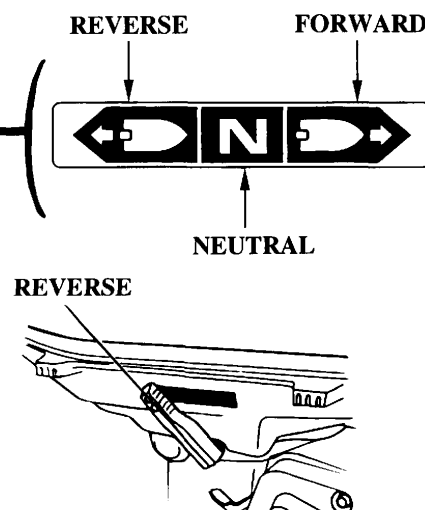
Pulling the starter grip operates the recoil starter to crank the engine for starting. Set the shift lever in the NEUTRAL position before starting.

NOTE:
The "Neutral Starting System" prevents the starter rope from being pulled out for starting the engine unless the shift lever is set in the NEUTRAL position.

Shift Lever



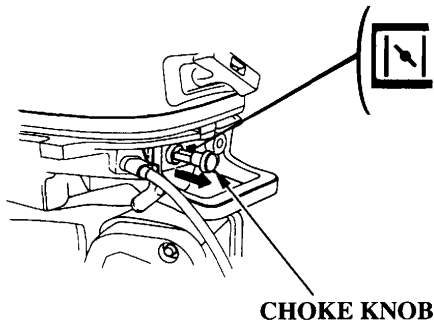
Use the shift lever to run the boat in forward or reverse gear, or to cut off the engine power from the propeller. There are the three positions for the shift lever. The engine can be started with the gearshift lever in the NEUTRAL position only.



FORWARD: The boat moves ahead.
NEUTRAL: The engine power is cut off from the propeller. The boat does not move.
REVERSE: The boat reverses.

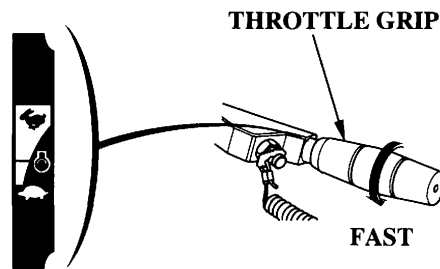
CONTROLS

Choke Knob



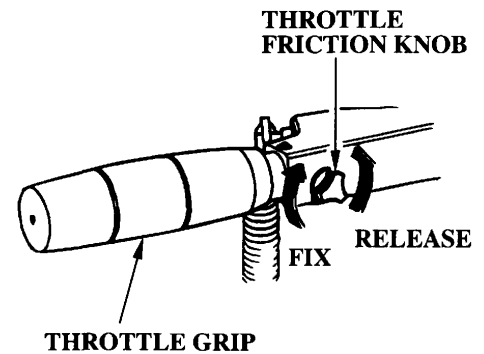
When the engine is cold, pull the choke knob to start easily. Rich fuel mixture is provided to the engine by pulling the choke knob.

Throttle Grip



Turn the grip clockwise or counterclockwise to adjust the engine speed. Turning the grip in the direction shown by arrow increases the engine speed.

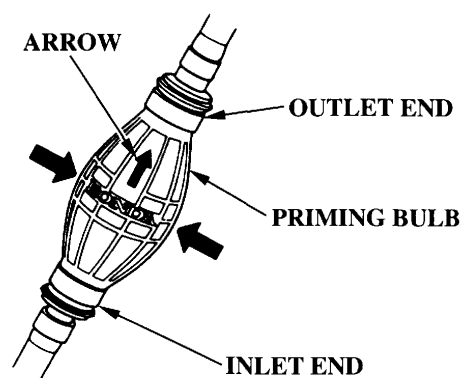
Throttle Friction Knob



The throttle friction knob adjusts resistance to throttle grip rotation. Turn the knob clockwise to increase friction for holding a throttle setting while cruising. Turn the knob counterclockwise to decrease friction for easy throttle grip rotation.

CONTROLS

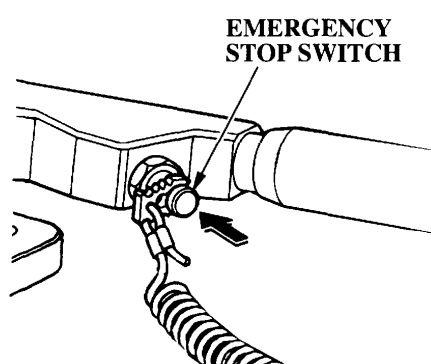
Fuel Priming Bulb



A priming bulb is built into the fuel hose that connects the portable fuel tank to the outboard motor.

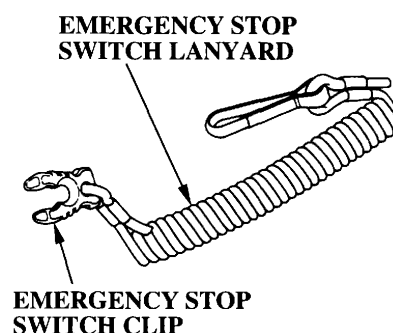
Before operating the outboard motor, hold the priming bulb so that the outlet end is higher than the inlet end with the arrow mark pointed upward and squeeze the priming bulb until it feels firm. This will ensure that fuel is supplied to the engine.

Emergency Stop Switch



Press the emergency stop switch to stop the engine.

Emergency Stop Switch Lanyard/Clip

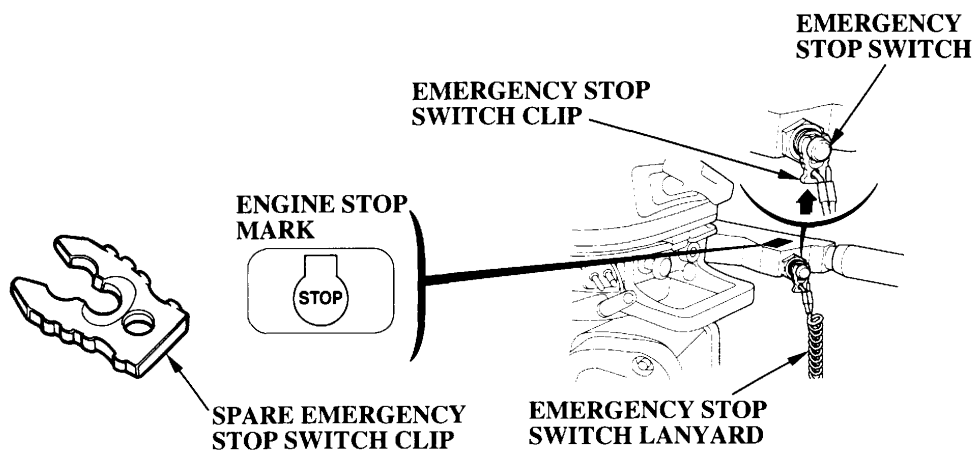


The emergency stop switch lanyard is provided to stop the engine immediately when the operator falls overboard or away from the outboard motor.

The engine stops when the clip at the end of the emergency stop switch lanyard is pulled out of the emergency stop switch.

When operating the outboard motor, be sure to attach one end of the emergency stop switch lanyard securely to the operator.

CONTROLS



⚠ WARNING

If the emergency stop switch lanyard is not set, the boat might run out of control when the operator, for example, falls overboard and is not able to operate the outboard motor.

For the sake of the operator's and the passengers' safety, be sure to set the emergency stop switch clip located at one end of the emergency stop switch lanyard with the emergency stop switch. Attach the other end of

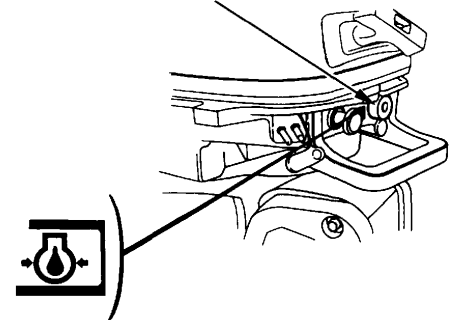
the emergency stop switch lanyard securely to the operator.

NOTE:

The engine does not start unless the emergency stop switch clip is set on the emergency stop switch. A spare emergency stop switch clip is provided in the tool bag. Use the spare emergency stop switch clip to make the emergency engine start when the emergency stop switch lanyard is not available as, for example, the operator falls outboard.

Oil Pressure Indicator Light

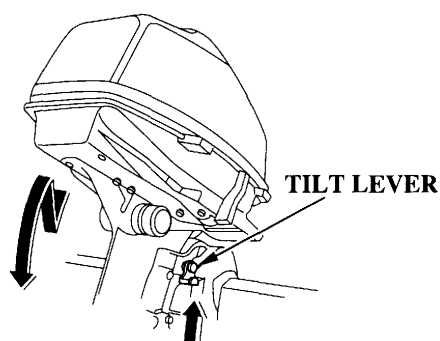
OIL PRESSURE INDICATOR LIGHT



When the engine oil level is low or the engine lubrication system is faulty, the oil pressure indicator light turns off.

CONTROLS

Tilt Lever

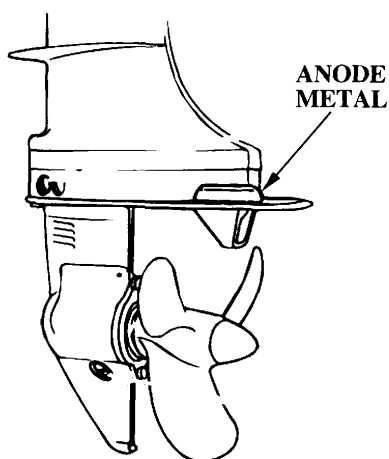


Use the tilt lever to temporarily raise the motor when the boat is running in the shallows, or mooring or anchoring in the shallows. Raising the tilt lever unlocks the motor and the motor can be tilted. Lowering the tilt lever locks the motor.

⚠ WARNING

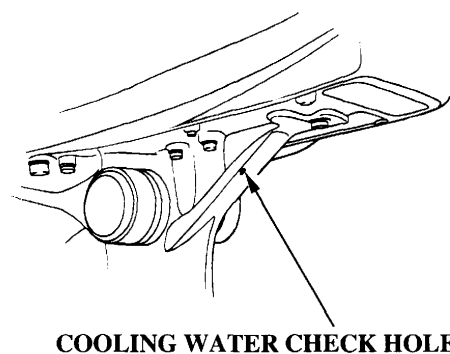
Be sure to lower the tilt lever and lock the motor before sailing. The motor could rise when sailing in the reverse gear, resulting in an accidental injury to the passenger(s).

Anode Metal



The anode metal is a sacrificed metal which protects the outboard from corrosion.

Cooling Water Check Hole

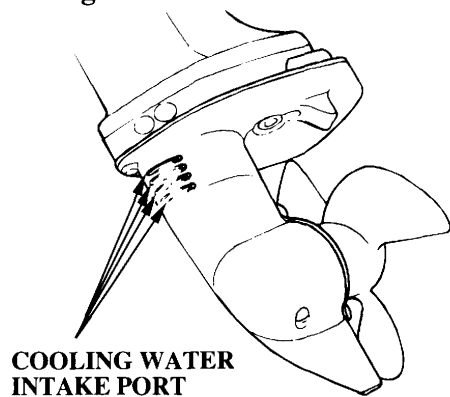


The cooling water is checked here to see whether it is circulating inside the engine properly.

After starting the engine, check at the cooling water check hole whether the cooling water is circulating through the engine.

CONTROLS

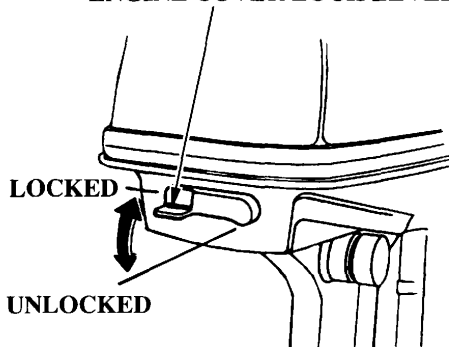
Cooling Water Intake Port



The engine cooling water is drawn into the engine through this port.

Engine Cover Lock Lever

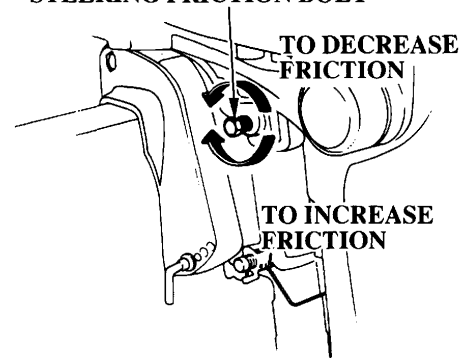
ENGINE COVER LOCK LEVER



Lock/unlock the engine cover lock lever to install or remove the engine cover.

Steering Friction Bolt

STEERING FRICTION BOLT



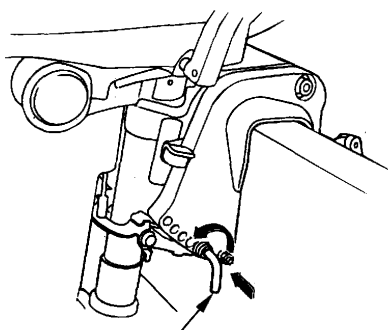
The steering friction bolt adjusts steering resistance.

Turn the bolt clockwise to increase friction for holding a steady course while cruising or to prevent the outboard motor from swinging while trailering the boat.

Turn the bolt counterclockwise to reduce steering friction.

CONTROLS

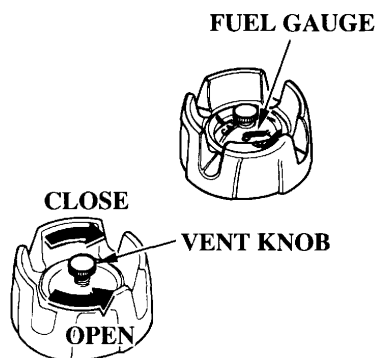
Transom Angle Adjusting Rod



**TRANSOM ANGLE
ADJUSTING ROD**

Use the transom angle adjusting rod to adjust the motor angle properly. The motor angle can be adjusted to the five angles by changing the adjusting rod position. (page 25)

Fuel Filler Cap Vent Knob/Fuel Gauge



The vent knob shuts off the fuel tank from the open air. When refilling the fuel tank, turn the vent knob counterclockwise to open and remove the fuel filler cap. Open the vent knob 2 or 3 turns before starting engine. Turn the vent knob clockwise and close it securely before transporting or storing the outboard motor.

The fuel gauge indicates the fuel level in the tank.

5. INSTALLATION

NOTICE

Improperly installed outboard motor can result in the motor dropped into the water, boat not able to cruise straight ahead, engine speed not increase, and much fuel consumption.

We recommend that the outboard motor be installed by an authorized Honda outboard motor dealer. Consult the authorized Honda dealer in your area for the Y-OP (User Optional Parts)/equipments installation and operation.

Applicable Boat

Select the boat suitable for the engine power.

Engine power:

BF5A: 3.7 kW (5.0 PS)

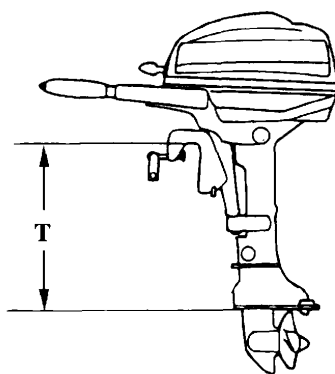
BF4.5B: 3.3 kW (4.5 PS)

Power recommendation is indicated on most of the boats.

▲WARNING

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

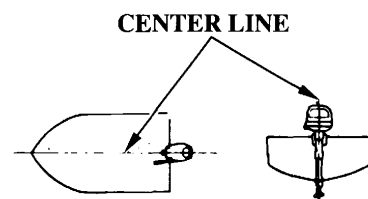
Transom Height



Type:	T (Motor Transom Height)
S:	434 mm (17.1 in)
L:	561 mm (22.1 in)

Select the outboard motor which is correct for the boat transom height of your boat.

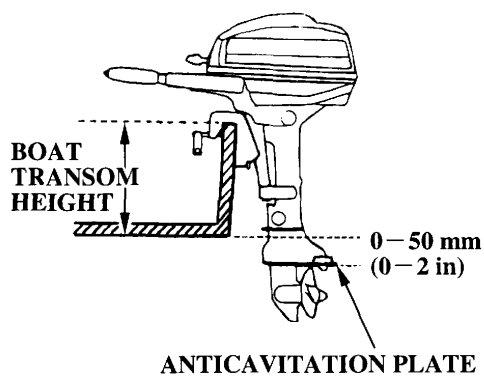
Location



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

INSTALLATION

Installation Height

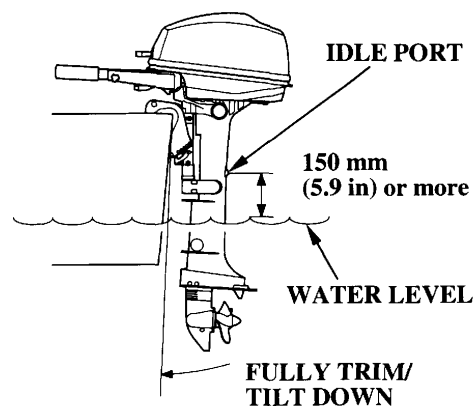


The anticavitation plate of the outboard motor should be 0 — 50 mm (0 — 2 in) below the bottom of the boat.

The correct dimensions differ according to the type of the boats and the configuration of the bottom of the boats. Follow the manufacture's recommended installation height.

If the outboard motor is installed too low, the boat will squat and be hard to plane, and the motor will spray water that may enter the boat. It will tend to porpoise, and high-speed stability will be reduced.

If the outboard motor is installed too high, that will cause propeller ventilation.

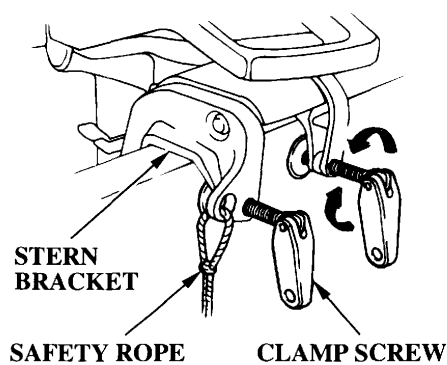


NOTICE

- The water level must be at least 100 mm (4 in) above the anticavitation plate, otherwise the water pump may not receive sufficient cooling water, and the engine will overheat.
- Adverse effect to the engine can occur if the installation position of the outboard motor is too low. Trim/tilt down the outboard motor with the boat fully loaded and stop the engine. Check that the idle port is 150 mm (5.9 in) or more above the water level.

INSTALLATION

Motor Attachment

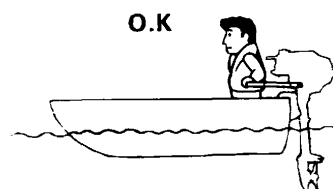
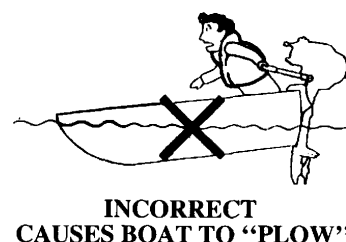
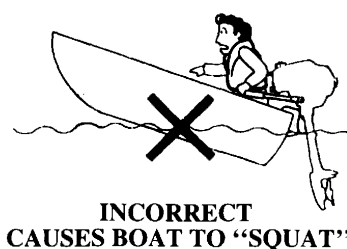


Attach the stern bracket to the transom and tighten the clamp screws.

NOTICE

- While operating the boat, check the tightness of the clamp screws occasionally.
- 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.

Motor Angle (Cruising)



Install the outboard motor at the best trim angle for stable cruising and maximum power.

Trim angle too large: Incorrect causes boat to "squat."

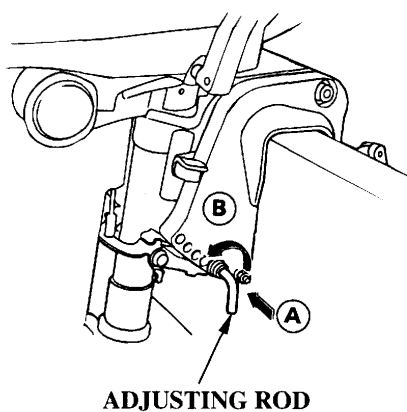
Trim angle too small: Incorrect causes boat to "plow."

The trim angle differs according to the combination of the boat, outboard motor, and propeller, and the operating conditions.

INSTALLATION

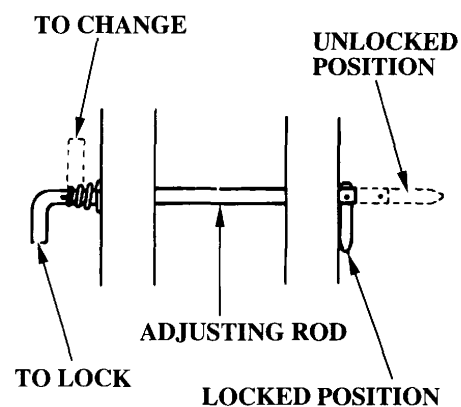
< Motor Angle Adjustment >

Adjust the outboard motor so that it is perpendicular to the water surface (i.e. axis of the propeller is parallel with the water surface).



There are five adjusting stages.

1. Push in (A) the adjusting rod, twist upwards (B) and pull out to remove.



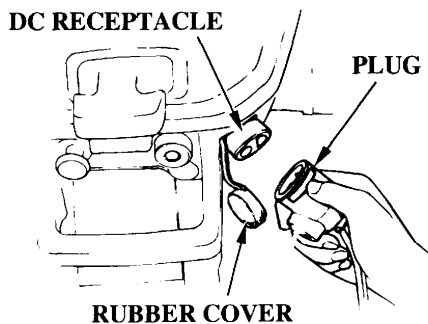
2. Inserting the adjusting rod in the proper hole, twist it down to lock. After locking, pull the adjusting rod and be sure it is not withdrawn.

NOTICE

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

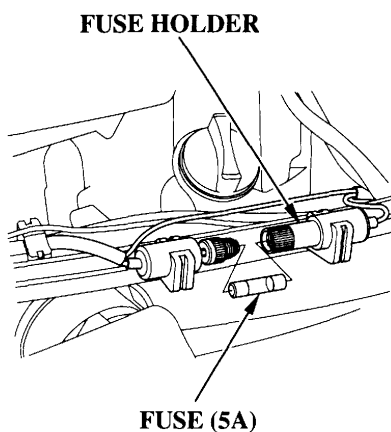
INSTALLATION

Battery charging DC receptacle
(Optional parts except SB, LB,
SBK, LBK, SBU and LBU types)

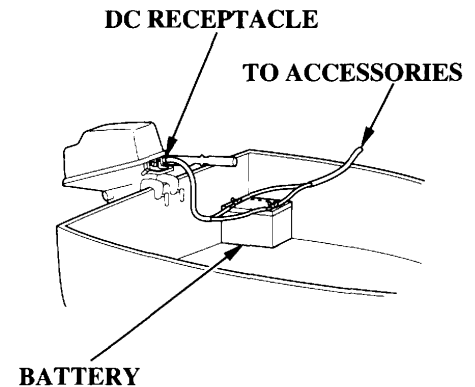


⚠ WARNING

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



The DC receptacle provides a 12 volt, 3 amp output for battery charging. The charging circuit is protected by a 5 amp fuse that is accessible by removing the engine cover. A male plug for the DC receptacle is provided with the outboard motor; connect your battery charging wires to that plug (Refer to the wiring diagram on page 82). Be sure that the positive (Red) battery cable is connected to the (+) plug terminal.



NOTICE

- Reversing the battery cables will damage the charging system and/or the battery.
- 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.

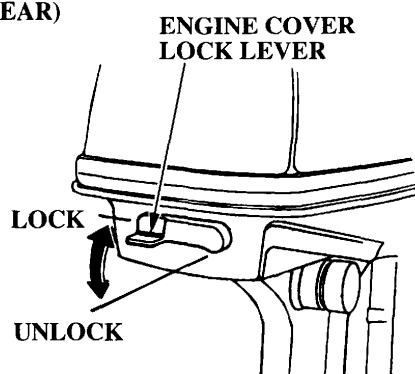
6. PRE-OPERATION CHECKS

BF5A/BF4.5B is the 4-stroke, water cooled outboard motor which uses unleaded regular gasoline for fuel. It also requires the engine oil. Check the following before operating the outboard motor.

⚠ CAUTION

Perform the following pre-operation checks with the engine stopped.

Removing/Installing Engine Cover (REAR)



- To remove, push down the engine cover lock lever and remove the engine cover.
- To install, set the engine cover and pull up the engine cover lock lever to lock it.

⚠ WARNING

Do not operate the outboard motor without the engine cover. Exposed moving parts can cause injury.

PRE-OPERATION CHECKS

Engine Oil Level

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.**

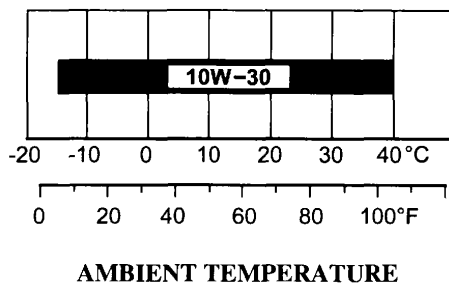
NOTE:

To avoid incorrect gauging of the engine oil level, inspect the oil level when the engine has cooled.

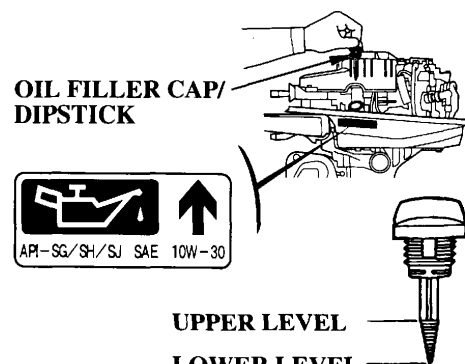
〈 Recommended oil 〉

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, SH or SJ. Motor oils classified SG, SH or SJ will show this designation on the container.

SAE 10W-30 is recommended for general, all-temperature use.



〈 Inspection and Refilling 〉



1. Position the outboard motor vertically, and remove the engine cover by pushing down the engine cover lock lever.
2. Remove the oil filler cap/dipstick and wipe it with a clean rag.
3. Insert and remove the dipstick without screwing it into the oil filler neck.

Check the oil level shown on the dipstick.

If near or below the lower level mark, fill to the upper level mark with the recommended oil. Tighten the oil filler cap securely.

PRE-OPERATION CHECKS

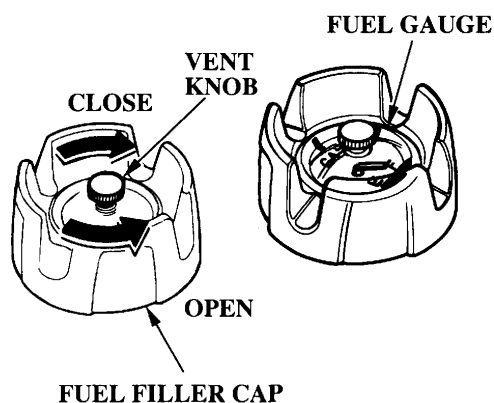
When the engine oil is contaminated or discolored, replace with the fresh engine oil (see pages 59 and 61 for replacement interval and procedure).

4. Install the engine cover and lock it securely by pulling up the engine cover lock lever.

NOTICE

Do not overfill the engine oil. Check the engine oil after refilling. Excessive engine oil as well as the insufficient oil could cause damage to the engine.

Fuel Level



Check the fuel gauge and refill the tank if the fuel level is low.

NOTE:

Open the vent knob before removing the fuel filler cap. When the vent knob is firmly closed, the cap will be difficult to remove.

After refueling, be sure to tighten the fuel cap firmly.

Use unleaded gasoline with a Research Octane Number of 91 or

higher (a Pump Octane Number of 86 or higher). Use of leaded gasoline may cause damage to the engine.

Never use an oil/gasoline mixture or dirty gasoline. Avoid getting dirt, dust or water in the fuel tank.

Fuel tank capacity (separate tank):
12 L (3.2 US gal, 2.6 Imp gal)

PRE-OPERATION CHECKS

▲ WARNING

- **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 in the area where the engine is refueled or where gasoline is stored.**
- **Do not overfill the fuel tank (there should be no fuel in the filler neck). After refueling, make sure the tank cap is closed properly and securely.**
- **Be careful not to spill fuel when refueling. Spilled fuel or fuel vapor may ignite. If any fuel is spilled, make sure the area is dry before starting the engine.**
- **Avoid repeated or prolonged contact with skin or breathing of vapor.**
- **KEEP OUT OF REACH OF CHILDREN.**

Gasoline Containing Alcohol

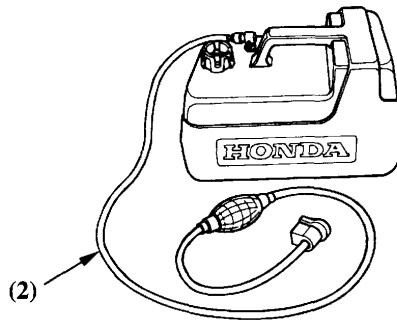
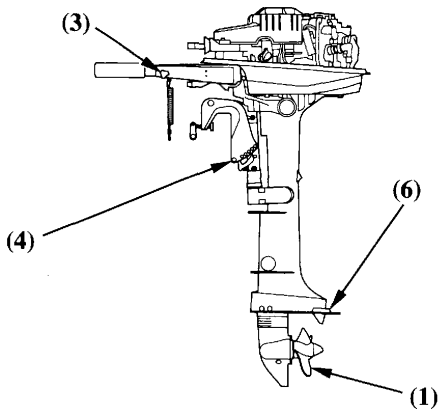
If you decide to use a gasoline containing alcohol (gasohol), be sure its octane rating is at least as high as that recommended by Honda. There are two types of "gasohol": one containing ethanol, and the other containing methanol. Do not use gasohol that contains more than 10% ethanol. Do not use gasoline containing methanol (methyl or wood alcohol) that does not also contain cosolvents and corrosion inhibitors for methanol. Never use gasoline containing more than 5% methanol, even if it has cosolvents and corrosion inhibitors.

NOTE:

- Fuel system damage or engine performance problems resulting from the use of fuels that contain alcohol is not covered under the warranty. Honda cannot endorse the use of the fuels containing methanol since evidence of their suitability is as yet incomplete.
- Before buying fuel from an unfamiliar station, try to find out if the fuel contains alcohol, if it does, confirm the type and percentage of alcohol used. If you notice any undesirable operating symptoms while using gasoline that contains alcohol, or one that you think contains alcohol, switch to a gasoline that you know does not contain alcohol.

PRE-OPERATION CHECKS

Other Checks



Check the following items:

- (1) The propeller and cotter pin for damage or looseness.
- (2) The fuel line for kinking, collapsing or a loose connection.
- (3) The steering handle for impaired operation.
- (4) The stern bracket for damage and looseness.
- (5) The tool kit for missing spare parts and tools. (page 58)
- (6) 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

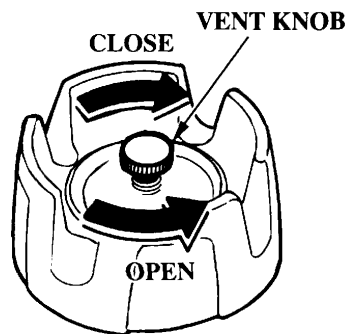
The possibility of corrosion damage is increased if the anode metal is painted over or allowed to deteriorate.

Parts/materials which should be installed on board:

- (1) Owner's Manual
- (2) Tool kit
- (3) Spare spark plugs, engine oil, propeller, shear pin and cotter pin.
- (4) Required information regarding boating laws and regulations.

7. STARTING THE ENGINE

Fuel Tank and Vent Knob



The fuel tank must be properly secured in the boat. This will protect the fuel tank from mechanical damage caused by the fuel tank shifting.

The fuel tank must be in a well-ventilated area to reduce the chance of a gasoline vapor explosion. Avoid direct sunlight on the fuel tank.

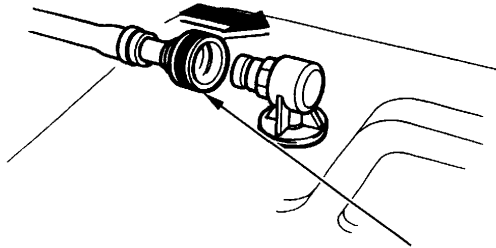
Due to the fuel pump capacity, do not place the fuel tank more than 2 meters (6.6 feet) away from the motor or lower than 1 meter (3.3 feet) below the outboard motor end

fuel hose connector.

1. Open the fuel tank vent by turning the vent knob at least 2 or 3 turns counterclockwise. Allow the air pressure inside the fuel tank to equalize with the outside air. With the vent open, air can enter the fuel tank to displace the fuel as the fuel level goes down.
2. Remove the fuel cap and inspect the condition of the fuel cap and gasket. Replace the fuel cap or gasket if they are cracked, damaged or leak fuel.

STARTING THE ENGINE

Fuel Line Connection



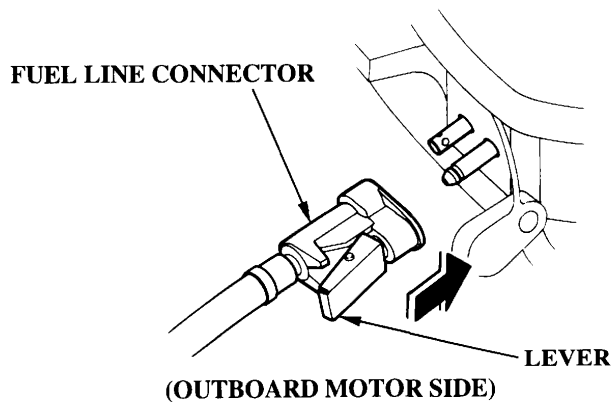
FUEL LINE CONNECTOR

(FUEL TANK SIDE)

Inspect the fuel line, and the O-ring seals in the fuel line connectors. Replace the fuel line, or fuel line connectors if they are cracked, damaged or leak fuel. Be sure the fuel line is not kinked.

1. Connect the fuel line connector to the fuel tank. Be sure the fuel line connector is securely snapped in place.

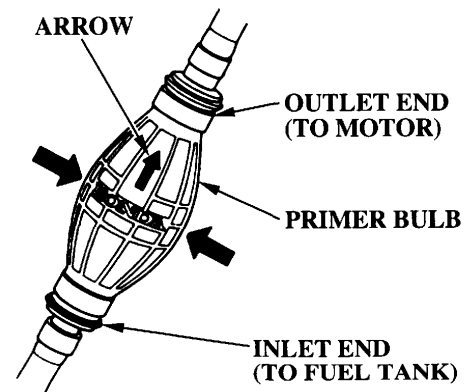
STARTING THE ENGINE



2. Connect the fuel line connector to the outboard motor. Install the outboard end fuel line connector with the lever toward the right side. Be sure the fuel line connector is securely snapped in place.

NOTICE

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



3. Hold the primer bulb so that the outlet end is higher than the inlet end. The arrow on the primer bulb points upward. Squeeze the primer bulb several times until it feels firm, indicating that fuel has reached the carburetors. Check for fuel leaks and repair any leaks before starting the motor.

NOTICE

Do not touch the priming bulb with the engine running or when tilting up the outboard motor. The carburetors could overflow.

STARTING THE ENGINE

Starting the Engine

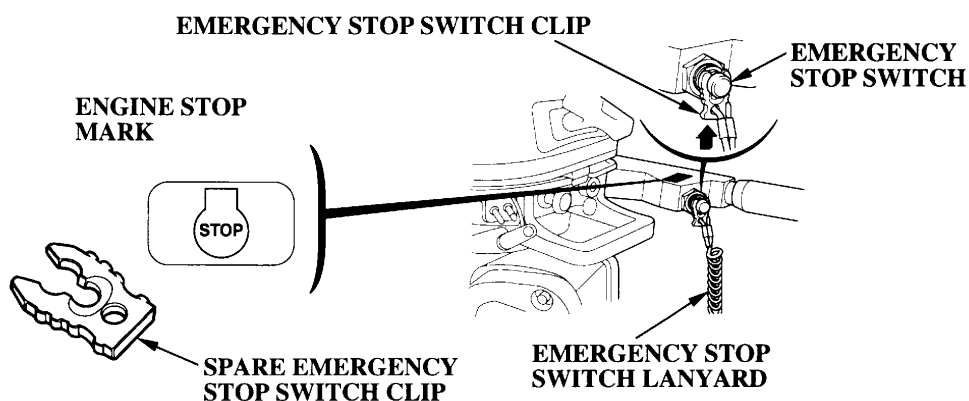
⚠ WARNING

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

NOTICE

The propeller must be lowered into the water, running the outboard motor out of the water will damage the water pump and overheat the engine.

1. Insert the emergency stop switch clip at one end of the emergency stop switch lanyard into the emergency stop switch. Attach the other end of the lanyard securely to the operator.



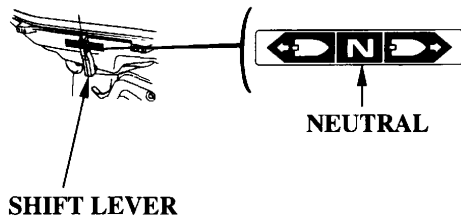
⚠ WARNING

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.

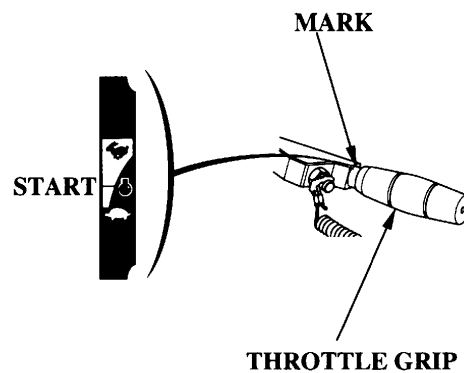
NOTE:

- The engine will not start unless the emergency stop switch clip is engaged with the engine stop switch.
- A spare emergency stop switch clip is provided in the tool bag. Use the spare emergency stop switch clip to make the emergency engine start when the emergency stop switch lanyard is not available as, for example, the operator falls outboard.

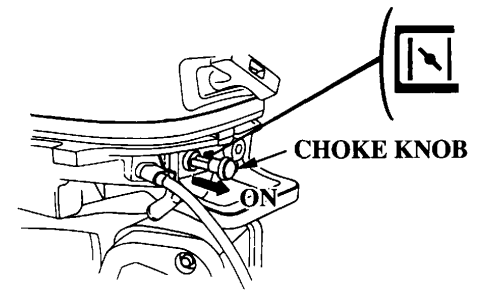
STARTING THE ENGINE



2. Move the shift lever to the NEUTRAL position. The recoil starter cannot be operated unless the shift lever is set in the NEUTRAL position.

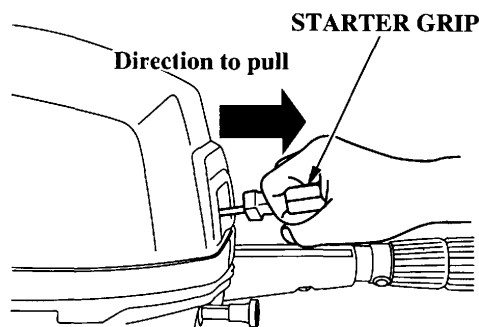


3. Align the "⊕" mark on the throttle grip with the projected end of the "►" mark on the handle.



4. When the engine is cold or ambient temperature is low, pull the choke knob to the ON position. (It provides rich fuel mixture to the engine.)

STARTING THE ENGINE



5. Pull the starter grip lightly until you feel resistance, then pull briskly in the direction of the arrow as shown above.

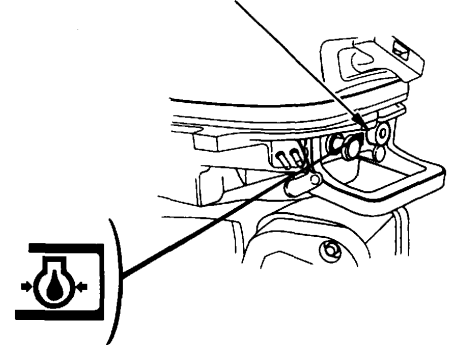
NOTICE

- 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.

NOTE:

- The "Neutral Starting System" prevents the starter rope from being pulled out for starting the engine unless the shift lever is set in the NEUTRAL position.
- If the engine fails to start, check the emergency stop switch clip.

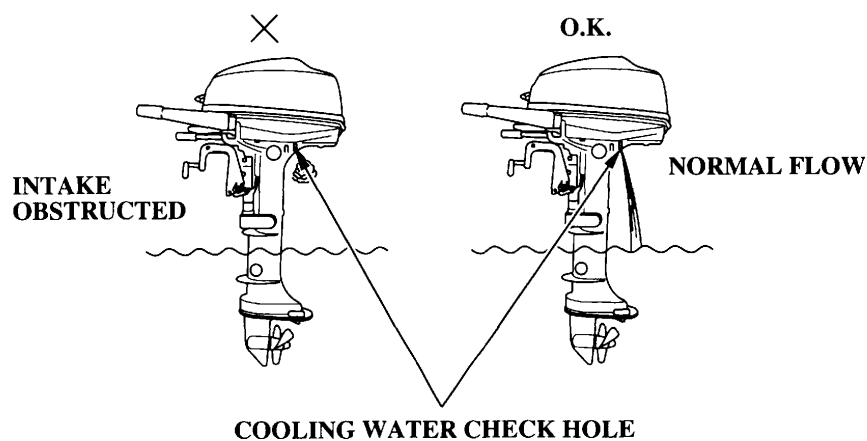
OIL PRESSURE INDICATOR LIGHT



6. After the engine starts, confirm that the engine oil pressure indicator light is lit. In the event that the indicator is not lit, stop the engine and perform the following checks.

- 1) Is the oil quantity normal?
- 2) If the oil quantity is correct but the indicator lamp is not lit, have the outboard motor checked by the shop where you purchased it.

STARTING THE ENGINE



7. After starting, check whether the cooling water is flowing out of the cooling water check hole. Amount of water flowing out of the check hole might vary due to the thermostat operation, but this is normal.

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 intake port is obstructed and remove foreign

materials if necessary. Check the cooling water check hole for clogging. If water still does not flow out, have your outboard motor checked by an authorized Honda outboard motor dealer. 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.

STARTING THE ENGINE

Emergency Starting

If the recoil starter does not operate properly for some reasons, the engine can be started using the spare starter rope in the tool kit.

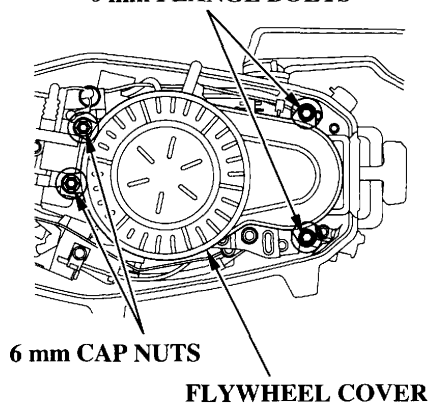
1. Move the shift lever in the NEUTRAL position.

⚠ WARNING

The “Neutral Starting System” will not work in emergency starting. Be sure to set the shift lever into NEUTRAL position to prevent start-in-gear when starting the engine in emergency. Sudden unexpected acceleration could result in serious injury or death.

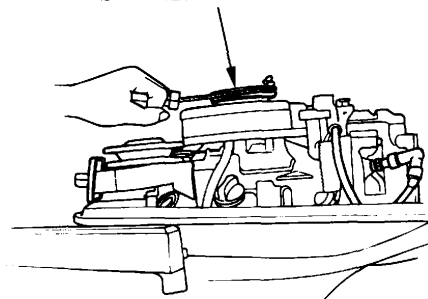
2. Remove the engine cover.

6 mm FLANGE BOLTS



3. Remove the two 6 mm cap nuts and 6 mm flange bolts, and remove the flywheel cover.

STARTER ROPE



4. Wind the spare starter rope clockwise around the pulley, and then pull it straight out to start the engine.

⚠ WARNING

Keep clear of moving parts.

5. Reinstall the 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.

STARTING THE ENGINE

Troubleshooting Starting Problems

SYMPTOM	POSSIBLE CAUSE	REMEDY
The engine doesn't start.	Starter grip cannot be pulled out for starting the engine.	Set shift lever in NEUTRAL position. (page 36)
	Emergency stop switch clip is not engaged.	Engage the emergency stop switch clip. (page 35)
	Vent knob not open.	Open vent knob. (page 32)
	Priming bulb not squeezed.	Squeeze priming bulb to supply fuel. (page 34)
	Engine flooded.	Clean and dry spark plug. (page 65)
	No sparks across spark plug.	Install plug cap securely. (page 65)
	Fuel does not reach the carburetor.	Loosen the carburetor drain screw to see if there is fuel in the carburetor float bowl. (page 75)

8. OPERATION

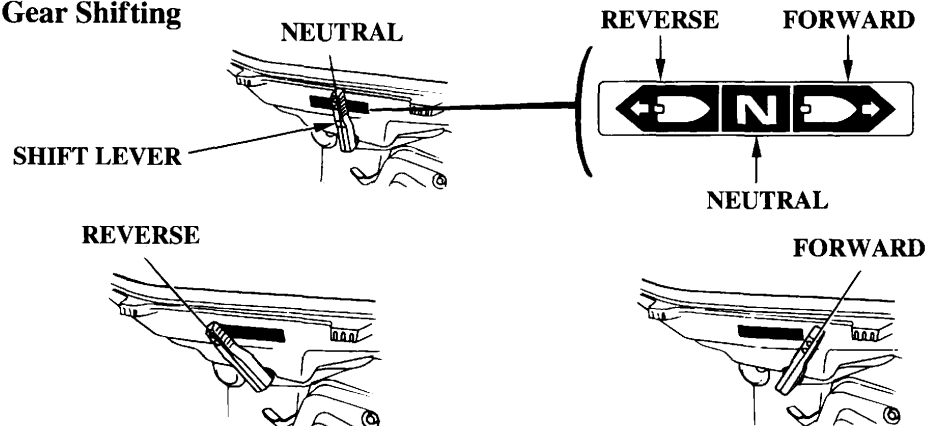
Break-in Procedure

Break-in operation allows the mating surfaces of the moving parts to wear evenly and thus ensures proper performance and longer outboard motor life.

Break-in your new outboard motor as follows.

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

Gear Shifting



The gearshift lever has 3 positions: FORWARD, NEUTRAL, and REVERSE.

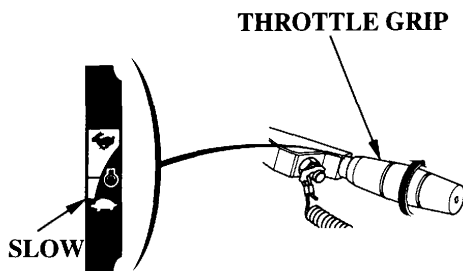
An indicator at the base of the gearshift lever aligns with the icon attached at the base of the gearshift lever.

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

NOTE:

The throttle mechanism is designed to limit throttle opening in REVERSE and NEUTRAL. Do not turn the throttle grip with force in the FAST direction. The throttle can be opened to FAST only in FORWARD gear.

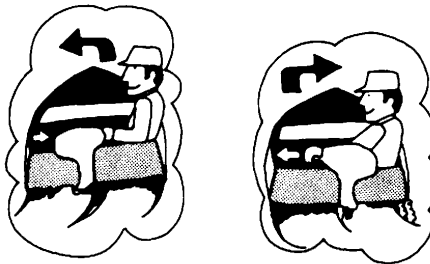
OPERATION



NOTICE

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

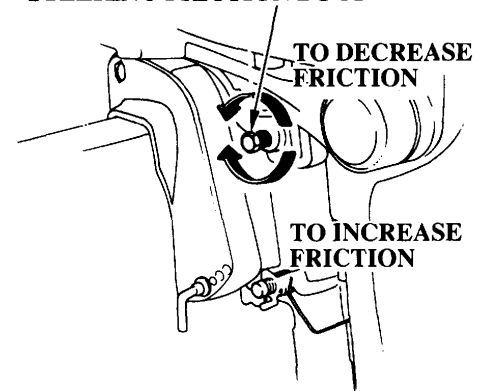
Steering



The boat swings its stern in the opposite direction in which it is to turn. To turn to the right, swing the steering handle to the left. To turn to the left, swing the steering handle to the right.

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

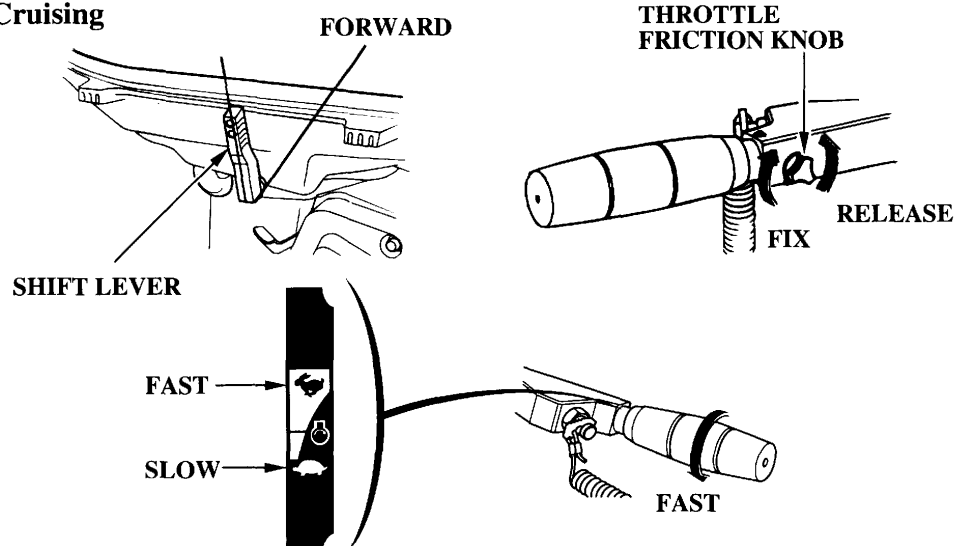
STEERING FRICTION BOLT



For smooth steering, adjust the steering friction bolt so that a slight drag is felt when turning.

OPERATION

Cruising



1. With the shift lever in the FORWARD position, turn the throttle grip in the FAST direction to increase the speed.
2. For normal cruising, open the throttle about 3/4.

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

CAUTION

- Do not operate without the engine cover. Exposed moving parts could cause injury; water may damage the engine.
- Confirm that the tilt lever is in the "RUN" position.

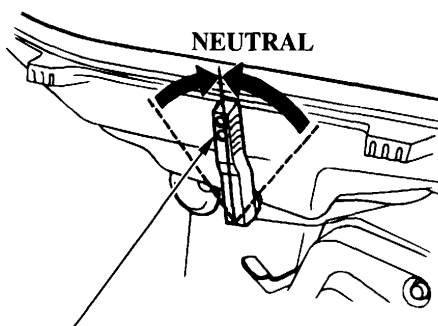
NOTE:

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

OPERATION

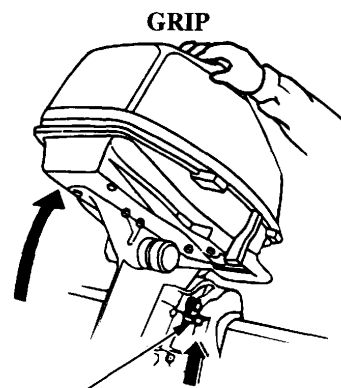
Tilting the Motor

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



SHIFT LEVER

1. Move the shift lever to the NEUTRAL position and stop the engine.



TILT LEVER

2. Move the tilt lever to the "TILT" position. Hold the engine cover grip and raise the motor.

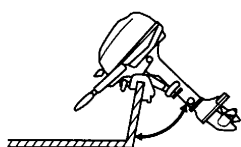
CAUTION

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

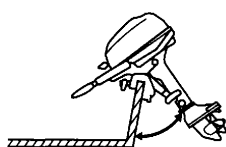
NOTE:

Before tilting up, leave the outboard motor in the running position for one minute after stopping the engine to drain the water inside the engine.

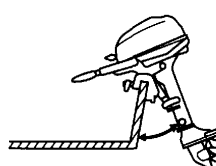
OPERATION



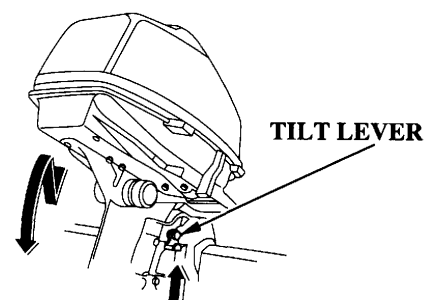
70° (when mooring)



45°



30° (when cruising in shallow water)



3. Set the tilt lever in the “TILT” position, and raise the outboard motor to any of the 30°, 45° and 70° tilt position.

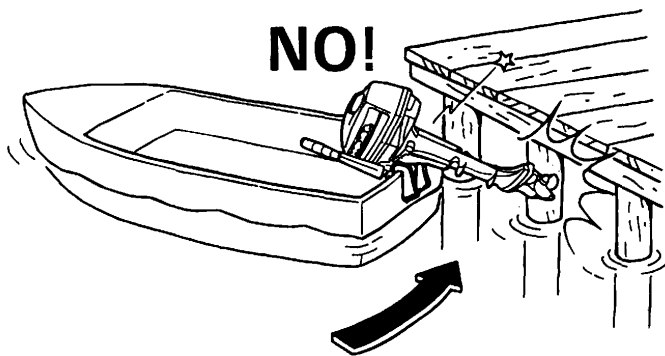
4. To return the motor to the normal “RUN” position, move the tilt lever away from you until it stops, tilt the motor slightly, then lower the motor slowly.

▲ CAUTION

- Make sure water comes out from the cooling water check hole.
- When the outboard motor is tilted up, cruise at low speed.
- Never operate in reverse when the outboard motor is tilted up. The outboard motor will rise up, causing an accident.

OPERATION

〈 Mooring 〉



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.

〈 Over-rev Limiter 〉

This outboard motor is equipped with an engine over-rev limiter which activates when the engine speed increases excessively. The over-rev limiter can be activated while cruising, tilting up the motor, or when ventilation occurs during a sharp turn.

When the over-rev limiter is activated:

1. Reduce the throttle opening immediately and check the trim angle.
2. If the trim angle is correct but the over-rev limiter stays activated, stop the engine, check the condition of the outboard motor, check to see if the correct propeller is installed and check it for damage.
Correct or service as necessary, by contacting your authorized Honda outboard motor dealer.

Cruising in Shallows

When cruising in shallows, tilt up the motor to prevent the propeller and gear case from hitting bottom. Refer to "Tilting the motor" (page 44) for the procedure.

NOTICE

- **Be sure that the water is coming out of the cooling water check hole.**
- **When the outboard motor is tilted up, cruise at low speed.**

High Altitude Operation

At high altitude, the standard carburetor air-fuel mixture will be too rich. Performance will decrease, and fuel consumption will increase. A very rich mixture will also foul the spark plug and cause hard starting.

High altitude performance can be improved by specific modifications to the carburetor. If you always operate the outboard motor at altitudes higher than 1,500 m (5,000 feet) above sea level, have your authorized Honda dealer perform these carburetor modifications.

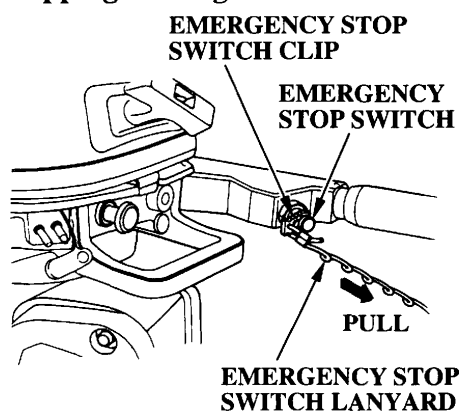
Even with suitable carburetor jetting, engine horsepower will decrease approximately 3.5 % for each 300 m (1,000 feet) increase in altitude. The effect of altitude on horsepower will be greater than this if no carburetor modification is made.

NOTICE

When the carburetor have been modified for high altitude operation, the air-fuel mixture will be too lean for low altitude use. Operation at altitudes below 1,500 m (5,000 feet) with modified carburetor may cause the engine to overheat and result in serious engine damage. For use at low altitudes, have an authorized Honda outboard motor dealer return the carburetor to original factory specifications.

9. STOPPING THE ENGINE

Stopping the Engine

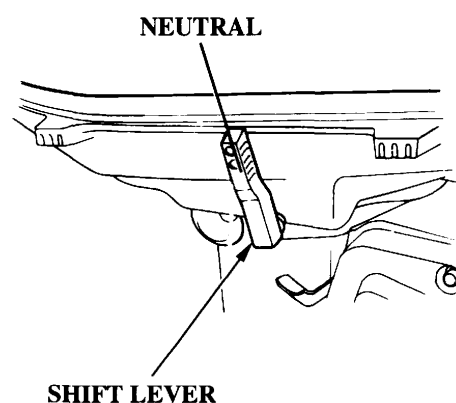
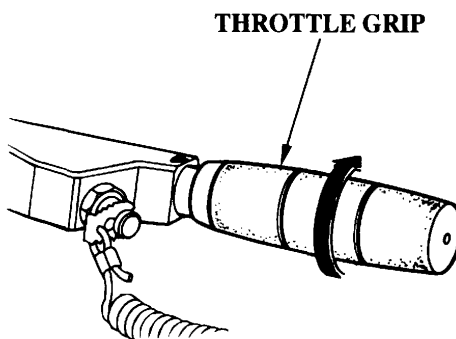


- **In an emergency;**

Disengage the emergency stop switch clip from the emergency 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 emergency stop switch is operating properly.



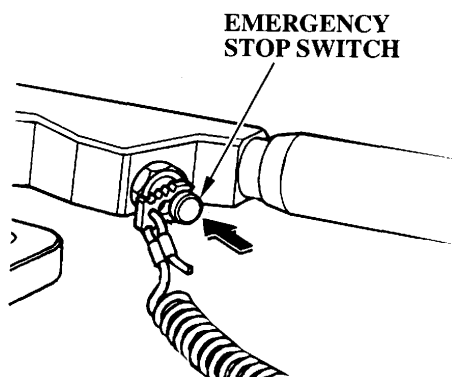
- **In normal use;**

1. Turn the throttle grip to SLOW position and move the shift lever to NEUTRAL.

NOTE:

After sailing with the throttle fully open, cool down the engine by running it at the idle speed for a few minutes.

STOPPING THE ENGINE



2. Press the emergency stop switch until the engine stops.

NOTE:

After sailing with the throttle fully open, cool down the engine by running it at the idle speed for a few minutes.

NOTE:

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

3. Remove the emergency stop switch lanyard and store it.

10. TRANSPORTING

Before transporting the motor, disconnect and remove the fuel line in the following procedure.

⚠ WARNING

Gasoline is extremely flammable, and gasoline vapor can explode, causing serious injury or death.

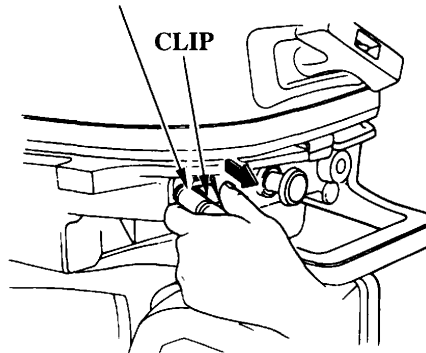
- **Be careful not to spill fuel.** Spilled fuel or fuel vapor may ignite. If any fuel is spilled, make sure the area is dry before storing or transporting the motor.
- **Do not smoke or allow flames or sparks where fuel is drained or stored.**

NOTICE

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

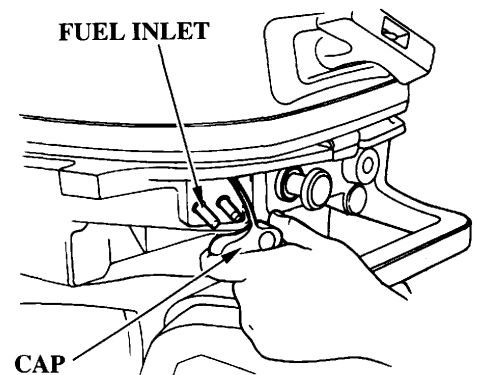
Fuel Line Removal

FUEL LINE CONNECTOR



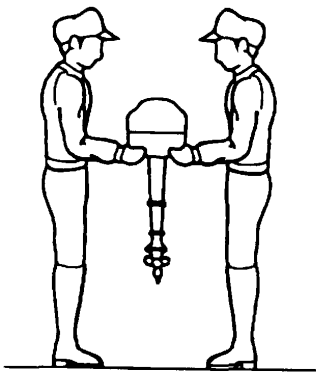
While pressing the fuel line connector clip, pull the fuel line connector and disconnect it from the outboard side joint. Install the cap on the engine fuel inlet. Firmly close the fuel cap vent knob.

FUEL INLET



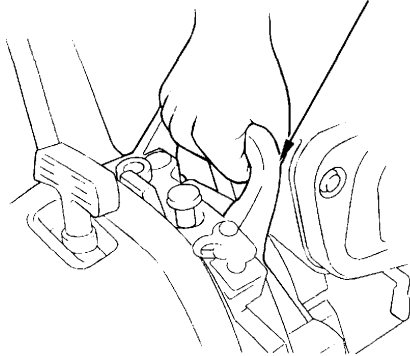
TRANSPORTING

Transporting



Carry the outboard motor with more than two people. To carry, hold the motor by the carrying handle, or hold by the carrying handle and the lug beneath the engine cover lock lever as shown here. Do not carry by the engine cover.

CARRYING HANDLE



⚠ CAUTION

Do not carry the outboard motor by the engine cover. The engine cover can be unlatched and outboard motor can drop, resulting in an accidental injury and damage.

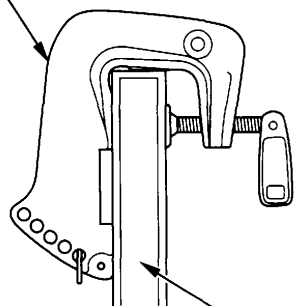
NOTICE

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

TRANSPORTING

Transport the motor either vertically or horizontally as follows with the steering handle raised.

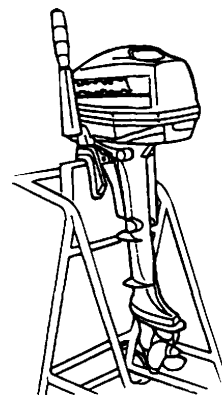
STERN BRACKET



**MOTOR
STAND**

1. Attach the stern brackets to a motor stand and mount the motor to the brackets.

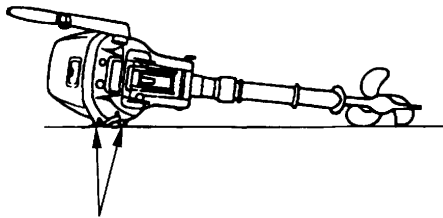
Vertical transport



2. Move the shift lever to the REVERSE position and lock the tilt lever.
3. Transport the motor with the steering handle raised.

TRANSPORTING

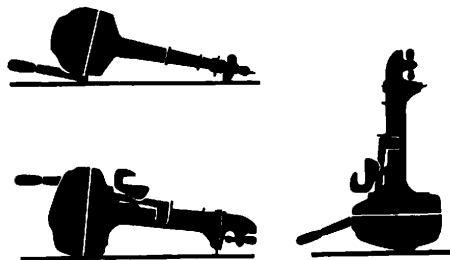
Horizontal transport



CASE PROTECTOR

Rest the motor on the case protector.
(With steering handle side of the
motor upward)

INCORRECT

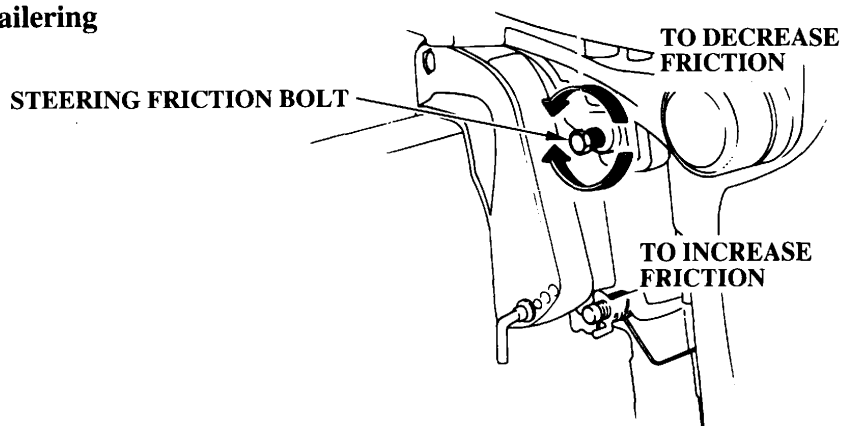


NOTICE

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

TRANSPORTING

Trailer



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 trailed 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. Tilt lever should be in the tilted position.

11. CLEANING AND FLUSHING

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

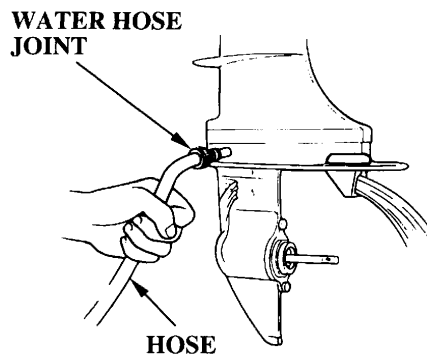
⚠ WARNING

- 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.

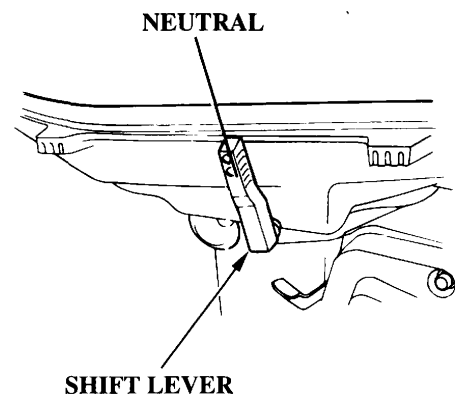
NOTICE

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

With Water Hose Joint (Optional part)



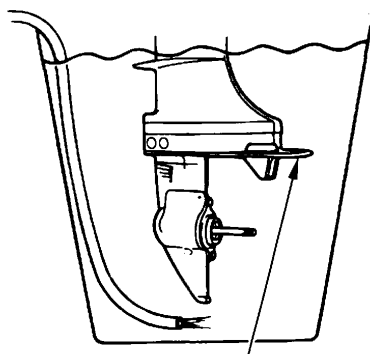
1. Tilt down the outboard motor.
2. Wash the outside of the outboard motor with clean, fresh water.
3. Remove the wash plug.
4. Flush the cooling system, using the water hose joint.
 - a. Attach a hose from a fresh water faucet to the water hose joint.
 - b. Remove the propeller (see page 72).
 - c. Turn on the fresh water supply to the hose.



- d. Start the engine and run in neutral position for at least 10 minutes to clean inside of the motor.
5. After flushing, stop the engine, remove the hose joint, and reinstall the wash plug and the propeller (see page 72).
 6. Tilt up the outboard motor and move the tilt lever to the TILT position.

CLEANING AND FLUSHING

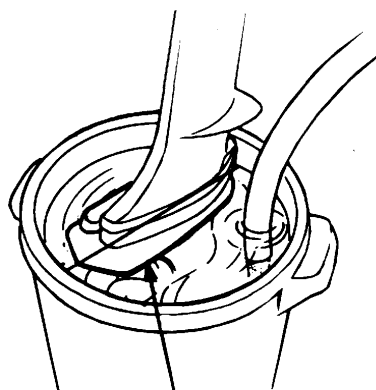
Without Water Hose Joint



ANTICAVITATION PLATE

When the water hose joint is not used, stand the outboard in a suitable container of fresh water.

1. Tilt down the outboard motor.
2. Wash the outside of the outboard motor with clean, fresh water.
3. Remove the propeller (see page 72).
4. Stand the motor in a suitable container of water. The water level must be at least 100 mm (4 in) above the anticavitation plate.
5. Start the engine and run slowly for at least 5 minutes.



ANTICAVITATION PLATE

6. After flushing, stop the engine, remove the water container, and reinstall the propeller (see page 72).
7. Tilt up the outboard motor and move the tilt lever to the TILT position.

12. MAINTENANCE

Periodic maintenance and adjustment are important to keep the motor in the best operating condition. Service and inspect according to the MAINTENANCE SCHEDULE.

▲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.

Be sure to reinstall the engine cover, if it was removed, before starting the engine. Lock it securely by pulling up the lock lever.

NOTICE

- **If the engine must be run, make sure there is water at least 100 mm (4 in) above the anticavitation plate, otherwise the water pump may not receive sufficient cooling water, and the engine will overheat.**
- **Use only Honda Genuine parts or their equivalents for maintenance or repair. The use of replacement parts which are not of equivalent quality may damage the motor.**
- **To maintain cooling system efficiently, flush the outboard motor with fresh water after each use in salt water or dirty water.**

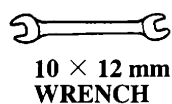
MAINTENANCE

Tool Kit and Spare Parts

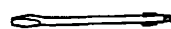
The following tools and spare parts are supplied with the outboard motor for maintenance, adjustment, and emergency repairs.

Spare shear pins and cotter pins are located inside the engine compartment above the stern bracket.

TOOL KIT



10 × 12 mm
WRENCH



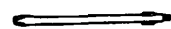
FLAT SCREWDRIVER



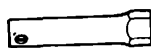
PLIERS



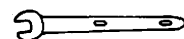
TOOL BAG



PHILLIPS SCREWDRIVER



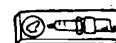
SPARK PLUG
WRENCH



8 mm WRENCH



EMERGENCY
STARTER ROPE

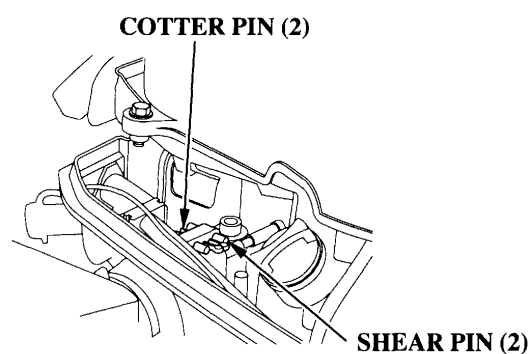


SPARE
SPARK
PLUG



EMERGENCY STOP
SWITCH CLIP

Spare Parts



MAINTENANCE

MAINTENANCE SCHEDULE

REGULAR SERVICE PERIOD (3) Perform at every indicated month or operating hour interval, whichever comes first.		Each use	After use	First month or 20 hrs.	Every 6 months or 100 hrs.	Every year or 200 hrs.
ITEM						
*Engine oil	Check level	○				
	Change			○	○	
Gear case oil	Change			○	○	
Starter rope	Check				○	
*Carburetor linkage	Check-adjust			○ (2)	○ (2)	
*Valve clearance	Check-adjust					○ (2)
*Spark plug	Check-adjust				○	
	Replace					○
Propeller and cotter pin	Check	○				
Anode	Check	○				
Idling speed	Check-adjust			○ (2)	○ (2)	
Lubrication	Grease			○ (1)	○ (1)	
*Fuel tank and tank filter	Clean					○
*Thermostat	Check					○ (2)

*Emission related items (For BF4.5B only)

NOTE:

- (1) Lubricate more frequently when used in salt water.
- (2) These items should be serviced by an authorized Honda Outboard Motor dealer, unless the owner has the proper tools and is mechanically proficient. Refer to Honda Shop Manual for service procedures.
- (3) For professional commercial use, log hours of operation to determine proper maintenance intervals.

MAINTENANCE

REGULAR SERVICE PERIOD (3) Perform at every indicated month or operating hour interval, which comes first.		Each use	After use	First month or 20 hrs.	Every 6 months or 100 hrs.	Every year or 200 hrs.
ITEM						
*Fuel filter	Check				○	
	Replace					○
*Fuel line	Check	○				
	Replace		Every 2 years (If necessary) (2)			
Bolts and Nuts	Check-tightness			○ (2)	○ (2)	
*Crankcase breather tube	Check					○ (2)
Cooling water passages	Clean		○ (4)			
Water pump	Check					○ (2)
Emergency stop switch	Check	○				

*Emission related items (For BF4.5B only)

NOTE:

- (1) Lubricate more frequently when used in salt water.
- (2) These items should be serviced by an authorized Honda Outboard Motor dealer, unless the owner has the proper tools and is mechanically proficient. Refer to Honda Shop Manual for service procedures.
- (3) For professional commercial use, log hours of operation to determine proper maintenance intervals.
- (4) When operating in salt water, turbid or muddy water, the engine should be flushed with clean water after each use.

MAINTENANCE

Engine Oil Change

Insufficient or contaminated engine oil adversely affects the service life of the sliding and moving parts.

Oil change interval:

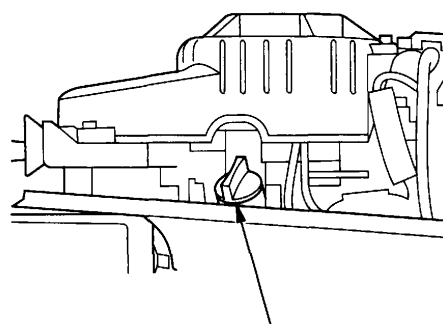
20 operating hours after the date of purchase or first month for initial replacement, then every 100 operating hours or 6 months.

Oil capacity:

0.55 L (0.58 US qt, 0.48 Imp qt)

Recommended oil: SAE 10W-30 engine oil or equivalent, API Service classification SG, SH or SJ.

〈 Engine Oil Replacement 〉

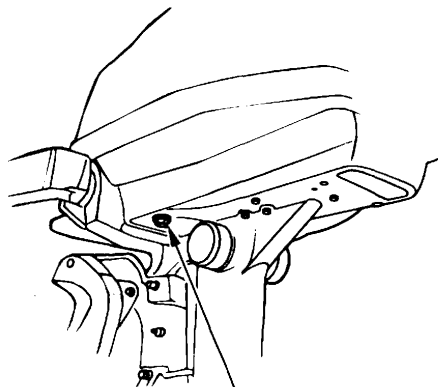


OIL FILLER CAP/DIPSTICK

Drain the oil while the engine is still warm to assure rapid and complete draining.

1. Position the outboard motor vertically, and remove the engine cover. Remove the oil filler cap/dipstick.

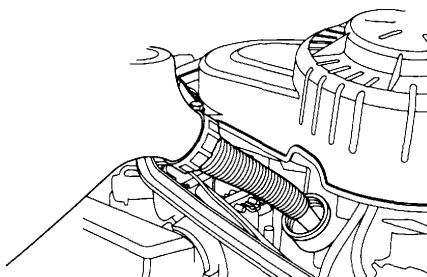
MAINTENANCE



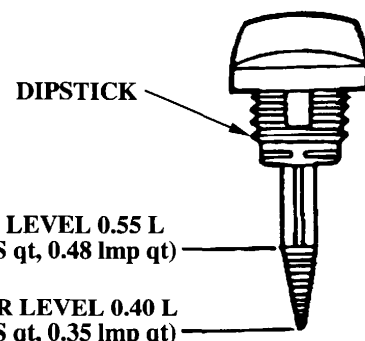
DRAIN BOLT

2. Remove the engine oil drain bolt and sealing washer, and drain the engine oil.

Install a new sealing washer and drain bolt and tighten bolt securely.



3. Refill to the upper level mark on the dipstick with the recommended oil. Insert the dipstick without screwing it in, then remove it and check the oil level shown on the dipstick.



4. Reinstall the oil filler cap securely.

NOTE:

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 for reclamation. Do not throw it in the trash or pour it on the ground.

Wash your hands with soap and water after handling used oil.

MAINTENANCE

Gear Oil Check/Change

Oil change interval:

20 hours or first month after initial use for initial change, then every 6 months or 100 hours.

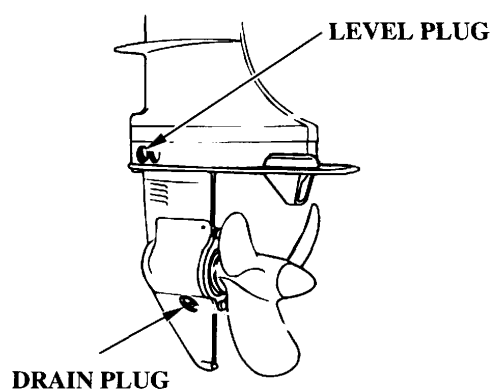
Oil capacity:

0.10 L (0.11 US qt, 0.09 Imp qt)

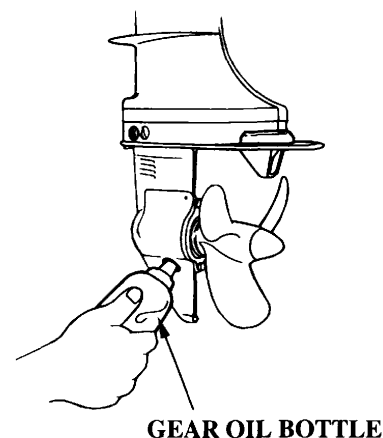
Recommended Oil:

SAE #90 Hypoid gear oil or equivalent, API Service Classification (GL-4)

< Oil Level Check/Refilling >



1. Position the outboard motor vertically.
 2. Remove the level plug and see if oil flows out.
- If no oil comes out, fill through the drain plug hole until the oil starts to flow out through the 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. If water is detected in the oil, consult with an authorized Honda outboard motor dealer.

**NOTE:**

- We recommend that you use the optional gear oil bottle to fill the gear oil easily.
3. Install and tighten the drain plug and level plug securely.

MAINTENANCE

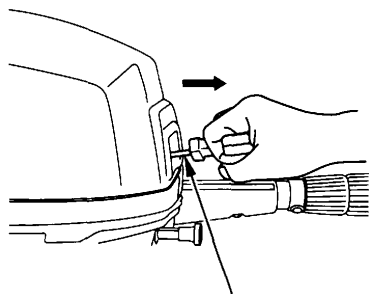
〈 Oil Change 〉

Replacement procedure is the same as that of the refilling.

Remove the level plug and drain plug to drain the oil. Inject oil through the drain plug hole until it starts flowing out through the level plug hole.

Reinstall and tighten the level plug first and then the drain plug 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.

MAINTENANCE

Spark Plug Service

To ensure proper engine operation, the spark plug must be properly gapped and free of deposits.

⚠ CAUTION

The spark plug becomes very hot during operation and will remain hot to awhile after stopping the engine.

Check-Adjust interval:

Every 100 operating hours or 6 months.

Replace interval:

Every 200 operating hours or every year.

Recommended spark plug:

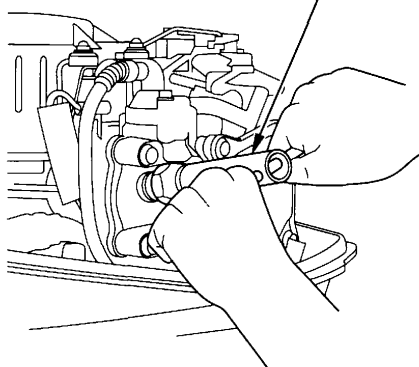
BPR5ES (NGK)

W16EPR-U (DENSO)

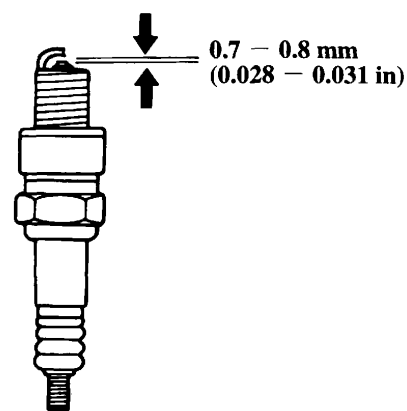
NOTICE

Use only the recommended spark plugs or equivalent. Spark plugs which have an improper heat range may cause engine damage.

SPARK PLUG WRENCH



1. Remove the engine cover.
2. Remove the spark plug cap.
3. Use the wrench and screwdriver supplied in the tool kit to remove the spark plug.
4. Visually inspect the spark plug. Discard the spark plug if there is apparent wear, or if the insulator is cracked or chipped. Clean the spark plug with a wire brush if it is to be reused.



5. Measure the plug gap with a feeler gauge. The gap should be 0.7–0.8 mm (0.028–0.031 in). Correct as necessary by carefully bending the side electrode.

MAINTENANCE

6. Check the spark plug washer is in good condition, and thread the plug in by hand to prevent cross threading.
7. After the spark plug is seated, tighten with a spark plug wrench to compress the washer.

NOTE:

If installing 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.

NOTICE

The spark plug must be securely tightened. An improperly tightened plug can become very hot and may cause engine damage.

8. Reinstall the engine cover.

MAINTENANCE

Lubrication

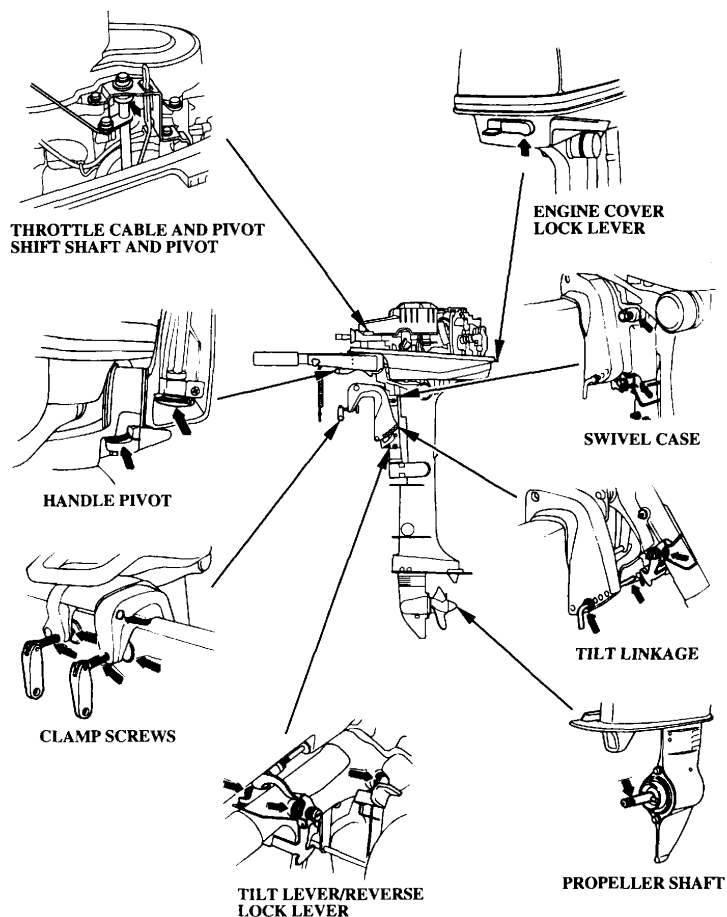
Wipe the outside of the engine with a cloth dipped in clean oil. Apply marine anticorrosion grease to the following parts:

Lubrication interval:

20 hours or a month after the date of purchase for initial lubrication, then every 100 hours or 6 months.

NOTE:

Apply anticorrosion oil to pivot surfaces where grease cannot penetrate.



MAINTENANCE

Fuel Filter Replacement

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

Replacement interval:

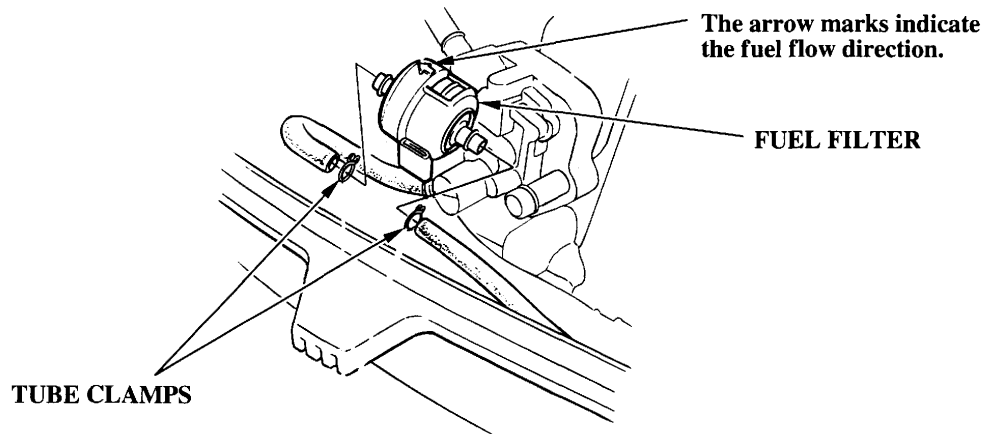
Every 200 operating hours or one year

⚠ 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.**
- **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.**

MAINTENANCE

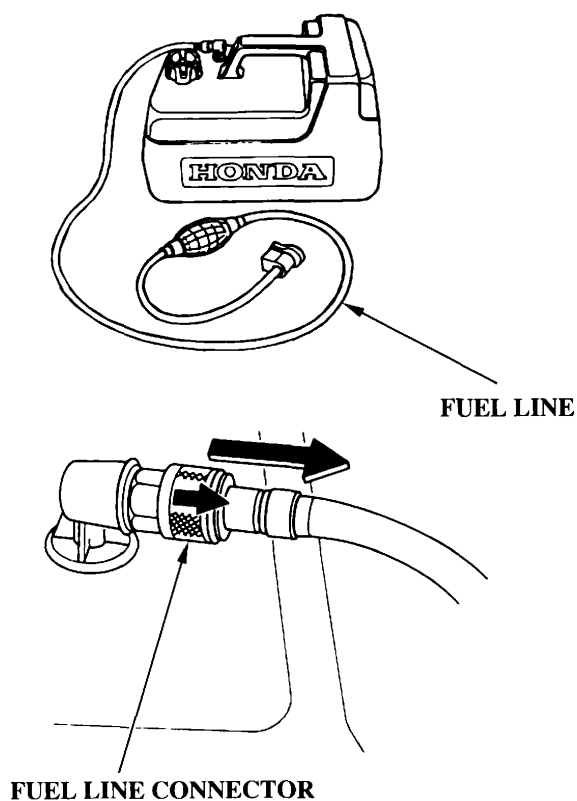
〈 Replacement 〉



1. Disconnect the fuel tank line from the motor.
2. Remove the engine cover, and remove the fuel filter. Before removing the filter, place clamps on the fuel tubes on each side of the filter to prevent fuel leakage.
3. Install the new fuel filter so that the arrow mark on the fuel filter is toward the fuel pump side. 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 counterclockwise to the open position, pump the priming bulb, and check for leaks.
5. If loss of power or hard starting is found caused by excessive water or sediment accumulated in the fuel filter, inspect the fuel tank. Clean the fuel tank if necessary.

MAINTENANCE

Fuel Tank and Tank Filter Cleaning



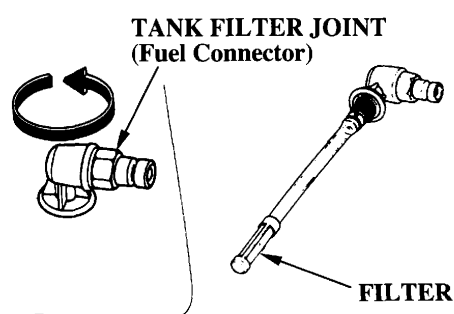
Clean the fuel tank and tank filter every year or after every 200 hours of outboard motor operation.

〈Fuel Tank Cleaning〉

1. Disconnect the fuel line from fuel tank.
2. Empty the tank, pour in a small quantity of gasoline, and clean the tank thoroughly by shaking it. Drain and dispose of the gasoline properly.

MAINTENANCE

< Tank Filter Cleaning >



1. Turn the tank filter joint counterclockwise and remove the tank filter.
2. Clean the filter with gasoline or by blowing with compressed air.
3. After cleaning, reinstall the tank filter securely.

EMISSION CONTROL SYSTEM (For BF4.5B)

The combustion process produces carbon monoxide and hydrocarbons. Control of hydrocarbons is very important because under certain conditions, they react to form photochemical smog when subjected to sunlight. Carbon monoxide does not react in the same way, but it is toxic. Honda Motor Co., Ltd. utilizes lean carburetor settings and other system to reduce carbon monoxide and hydrocarbons.

Problems that May Affect Outboard Motor Emissions

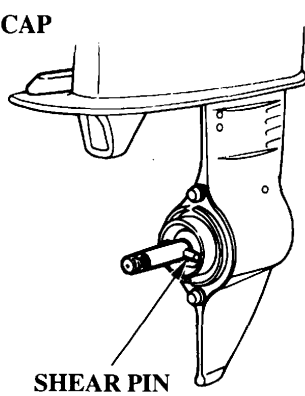
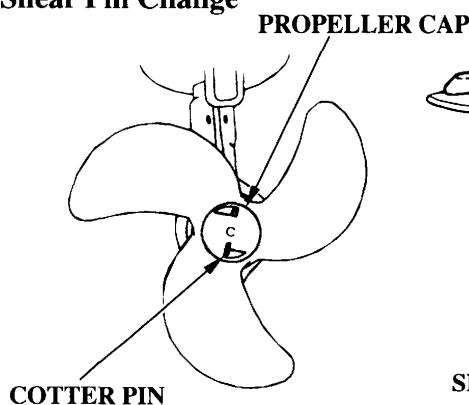
If you are aware of any of the following symptoms, have the outboard motor inspected and repaired by your authorized Honda Dealer:

1. Hard starting or stalling after starting
2. Rough idle
3. Misfiring or backfiring during acceleration

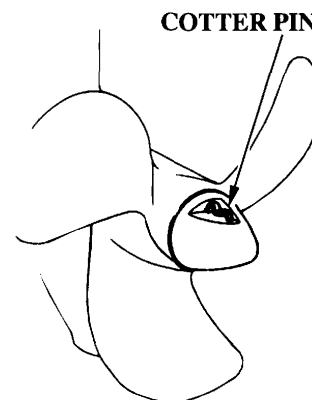
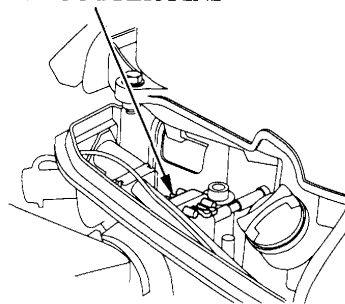
4. Poor performance (driveability) and poor fuel economy

MAINTENANCE

Shear Pin Change



SPARE SHEAR PINS AND COTTER PINS



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

⚠ WARNING

- When replacing, remove the emergency stop switch clip to prevent an accidental startup of the engine.
- The propeller is thin and sharp. To protect your hands, wear the heavy gloves during replacement.

Replacement

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 of it as shown.

NOTE:

Use a Honda Genuine shear pin and cotter pin.

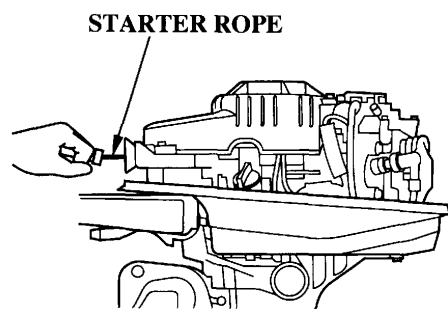
MAINTENANCE

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, drain the contents of the carburetor into a suitable container, then retighten the drain screw (see page 75).



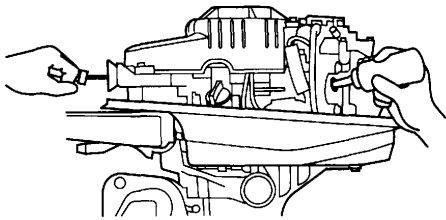
3. Remove the spark plug.
Disengage the emergency stop switch clip from the emergency stop switch and pull the recoil starter rope several times to completely expel water from the cylinders.

NOTICE

- When cranking the engine with an open ignition circuit (spark plug removed from the ignition circuit), disengage the emergency stop switch clip 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.

MAINTENANCE



4. Change the engine oil (see page 61). If there was water in the engine crankcase, or if 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.
5. Pour a teaspoon of engine oil into the spark plug hole, then pull the starter rope several times to lubricate the inside of the cylinder. Reinstall the spark plug.

6. Attempt to start the engine.

▲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.

- If the engine fails to start, remove the spark plug, clean and dry the electrode, then reinstall the spark plug 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 4 inches above the anticavitation plate).
7. As soon as possible, take the motor to a Honda outboard motor dealer for inspection and service.

13. STORAGE

For longer service life of the outboard motor, have your outboard motor serviced by an authorized Honda outboard motor dealer before storage. However, the following procedures can be performed by you, the owner, with a minimum of tools.

NOTE:

Gasoline spoils very quickly depending on factors such as light exposure, temperature and time. In worst cases, gasoline can be contaminated within 30 days. Using contaminated gasoline can seriously damage the engine (carburetor clogged, valve stuck). Such damage due to spoiled fuel is disallowed from coverage by the warranty.

To avoid this please strictly follow these recommendations:

- Only use specified gasoline (see page 29).
- Use fresh and clean gasoline.
- To slow deterioration, keep gasoline in a certified fuel container.

- If long storage (more than 30 days) is foreseen, drain fuel tank and carburetor.

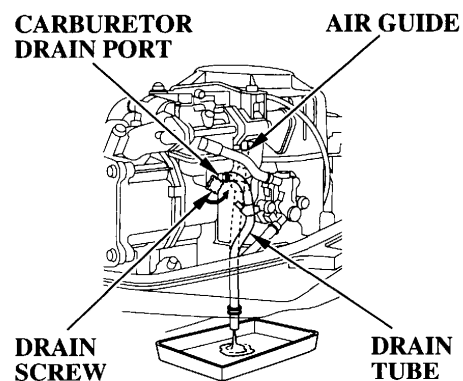
Draining the Gasoline

⚠ 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.

- 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.

1. Disconnect the fuel line connector and install the cap on the engine fuel inlet. Firmly close the fuel cap vent knob. (see page 32).
2. Remove the engine cover.
3. Disconnect the drain tube from the air guide, then connect it to the carburetor drain port as shown above.



4. Loosen the carburetor drain screw, and drain the gasoline into a suitable container.

STORAGE

5. After draining thoroughly, tighten the drain screws securely. Be sure to drain thoroughly as the gasoline deteriorates as time goes by.
6. Reconnect the drain tube to the air guide.

NOTE:

Before storing the outboard motor for a prolonged period, we recommend that you remove the fuel line connector and operate the engine at 2,000 to 3,000 min⁻¹ (rpm) until it stops.

Motor Storage

1. Tilt the outboard motor, remove the plug caps, pull the recoil starter several times and completely drain off the cooling water.

⚠ CAUTION

- **If the outboard motor is put on its side without completely draining off the cooling water immediately after stopping it, water may enter the engine from the exhaust port. Be sure, therefore, to drain off the cooling water before putting the outboard motor on its side.**
- **When pulling the starter grip, be careful not to touch the spark plug wire.**

2. Change the engine oil.
3. Remove the spark plug, and pour about a tablespoon of clean engine oil into the cylinder. Crank the engine several revolutions to distribute the oil, then reinstall the

spark plug.

4. Slowly pull the starter grip until resistance is felt. At this point, the piston is coming up on its compression stroke and both the intake and exhaust valves are close. Storing the engine in this position will help to protect it from internal corrosion.
5. Store the outboard motor in a clean and dry area.

NOTE:

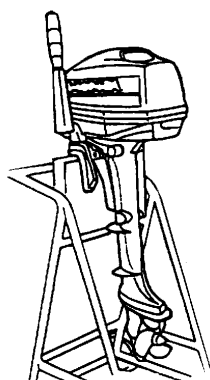
Before storing, clean, flush and lubricate the outboard motor as described on pages 55, 56 and 67.

Transport/Storage Position of the Outboard

Store the motor either vertically or horizontally as follows with the steering handle raised.

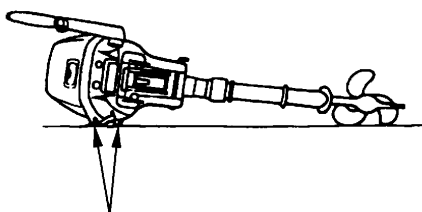
STORAGE

Vertical storage



1. Attach the stern brackets to a motor stand and mount the motor to the brackets. (page 24).
2. Store the motor with the steering handle raised.

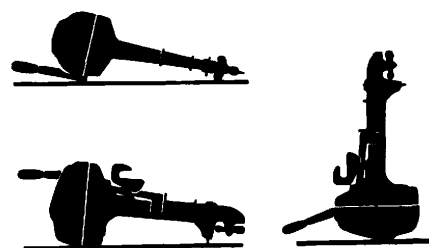
Horizontal storage



CASE PROTECTOR

Rest the motor on the case protector.
(With steering handle side of the motor upward)

INCORRECT



NOTICE

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

14. TROUBLESHOOTING

〈 Engine fails to start 〉

1. Emergency stop switch clip is not engaged. → Engage the emergency stop switch clip in place. (page 35)
2. Recoil starter cannot be operated. → Set the shift lever in NEUTRAL position. (page 36)
3. Out of fuel. → Supply fuel. (page 33)
4. Fuel line is flattened or kinked. → Check for bent or pinched fuel line.
5. Fuel connectors are not connected properly. → Connect properly. (pages 33 and 34)
6. Fuel filler cap vent knob is not turned ON. → Open the fuel filler cap vent knob. (page 32)
7. Fuel system is not primed by squeezing the priming bulb? → Squeeze the priming bulb to supply fuel. (page 34)
8. Fuel is not reaching the carburetor? → Loosen the carburetor drain screw to see if there is fuel in the carburetor float bowl. (page 75)
9. Engine is flooded. → Clean and dry the spark plug. (page 65)

〈 Engine speed fluctuates or engine stalls 〉

1. Fuel level is low. → Add fuel. (page 29)
2. Fuel line is flattened or

- kinked.
3. Fuel filter is clogged. → bent or pinched fuel line. Replace fuel filter. (page 68)
4. Spark plug is fouled. → Remove spark plug and dry and clean it. (page 65)
5. Spark plug heat range is incorrect. → Replace with spark plug of proper heat range. (page 65)
6. Spark plug gap is incorrect. → Adjust to proper gap. (page 65)

〈 Engine speed does not increase 〉

1. Fuel line is flattened or kinked. → Check for excessively bent or pinched fuel line.
2. Fuel filter is clogged. → Replace fuel filter. (page 68)
3. Engine oil level is low. → Check engine oil and add to specified level. (page 28)
4. Unmatched propeller is selected. → Consult with an authorized Honda outboard motor dealer.
5. Passengers are not distributed equally. → Distribute the passengers equally.
6. Outboard motor is not installed properly. → Install the outboard motor in proper position. (page 22 to 25)

TROUBLESHOOTING

〈 Engine overheats 〉

1. Water intake and/or water check tube are/is clogged. → Clean water intake and/or water check tube.
2. Engine is overloaded because of unequally distributed passengers or excessive load on the boat. → Distribute the passengers equally. Do not load on the boat excessively.
3. Thermostat is faulty. → Consult with an authorized Honda outboard motor dealer.
4. Cavitation. → Install outboard motor proper position. (page 22 to 25)

〈 Engine overrevs 〉

1. Cavitation. → Install outboard motor in the proper position. (page 22 to 25)
2. Propeller is damaged. → Replace propeller. (page 72)
3. Unmatched propeller is selected. → Consult with an authorized Honda outboard motor dealer.
4. Trim angle is not correct. → Trim to correct angle. (page 24)

15. SPECIFICATIONS

MODEL	BF5A							
Description	BAD5							
Code	SD	SB	SU	SBU	LD	LB	LU	LBU
Overall length	525 mm (20.7 in)				525 mm (20.7 in)			
Overall width	350 mm (13.8 in)				350 mm (13.8 in)			
Overall height	1,005 mm (39.6 in)				1,135 mm (44.7 in)			
Transom height (when transom angle at 12°)	434 mm (17.1 in)				561 mm (22.1 in)			
Dry mass (weight)	27 kg (60 lbs)	27.5 kg (60.6 lbs)	27 kg (60 lbs)	27.5 kg (60.6 lbs)	27.5 kg (60.6 lbs)	28 kg (62 lbs)	27.5 kg (60.6 lbs)	28 kg (62 lbs)
Rated power	3.7 kW (5 PS)							
Full throttle range	4,500–5,000 min ⁻¹ (rpm)							
Engine type	4-stroke, vertical, single cylinder, OHV type							
Displacement	127 cm ³ (7.7 cu-in)							
Spark plug gap	0.7–0.8 mm (0.028–0.031 in)							
Starter system	Recoil starter							
Ignition system	C.D.I.							
Lubrication system	Trochoid pump pressure lubrication							
Specified oil	Engine: API standard (SG, SH, SJ) SAE 10W-30 Gear case: API standard (GL-4) SAE 90 outboard motor gear oil							
Oil capacity	Engine: 0.55 L (0.58 US qt, 0.48 Imp qt) Gear case: 0.10 L (0.11 US qt, 0.09 Imp qt)							
D.C. output	12V–3A							
Cooling system	Water cooling with thermostat (volumetric pump)							
Exhaust system	Underwater exhaust							

Spark plugs	BPR5ES (NGK) , W16EPR-U (DENSO)
Fuel pump	Mechanical type
Fuel	Unleaded gasoline (91 research octane, 86 pump octane or higher)
Tank capacity	12 L (3.2 US gal, 2.6 Imp gal)
Gear change	Forward–Neutral–Reverse (dog type)
Steering equipment	Bar handle
Steering angle	45° (right and left)
Transom angle	5 stages (4°, 8°, 12°, 16°, 20°)
Tilt up angle (when transom angle at 12°)	3-stage adjustment (18°, 38° and 58°)
Standard propeller (No. of blades – diameter × pitch)	3–200 × 190 mm (3–7-25/32 × 7-31/64 in)

Noise and Vibration

MODEL	BF5A
CONTROL SYSTEM	H
Sound Pressure Level At Operator's Ear (98/37/EC, ICOMIA 39-94)	79 dB
Vibration (98/37/EC, ICOMIA 38-94)	4.6 (m/s ²) rms

Reference to: ICOMIA Standard: as it specifies the engine operating conditions and measurement conditions.

Honda outboards are power rated in accordance with ISO8665 (propeller shaft output).

SPECIFICATIONS

MODEL	BF4.5B	
Description	BASS	
Code	SBK	LBK
Overall length	525 mm (20.7 in)	525 mm (20.7 in)
Overall width	350 mm (13.8 in)	350 mm (13.8 in)
Overall height	1,005 mm (39.6 in)	1,135 mm (44.7 in)
Transom height (when transom angle at 12°)	434 mm (17.1 in)	561 mm (22.1 in)
Dry mass (weight)	27.5 kg (60.6 lbs)	28 kg (62 lbs)
Rated power	3.3 kW (4.5 PS)	
Full throttle range	4,000 – 5,000 min ⁻¹ (rpm)	
Engine type	4-stroke, vertical, single cylinder, OHV type	
Displacement	127 cm ³ (7.7 cu-in)	
Spark plug gap	0.7 – 0.8 mm (0.028 – 0.031 in)	
Starter system	Recoil starter	
Ignition system	C.D.I.	
Lubrication system	Trochoid pump pressure lubrication	
Specified oil	Engine: API standard (SG, SH, SJ) SAE 10W-30 Gear case: API standard (GL-4) SAE 90 outboard motor gear oil	
Oil capacity	Engine: 0.55 L (0.58 US qt, 0.48 Imp qt) Gear case: 0.10 L (0.11 US qt, 0.09 Imp qt)	
D.C. output	12V – 3A	
Cooling system	Water cooling with thermostat (volumetric pump)	
Exhaust system	Underwater exhaust	

Spark plugs	BPR5ES (NGK) , W16EPR-U (DENSO)
Fuel pump	Mechanical type
Fuel	Unleaded gasoline (91 research octane, 86 pump octane or higher)
Tank capacity	12 L (3.2 US gal, 2.6 Imp gal)
Gear change	Forward – Neutral – Reverse (dog type)
Steering equipment	Bar handle
Steering angle	45° (right and left)
Transom angle	5 stages (4°, 8°, 12°, 16°, 20°)
Tilt up angle (when transom angle at 12°)	3-stage adjustment (18°, 38° and 58°)
Standard propeller (No. of blades – diameter × pitch)	3 – 200 × 190 mm (3 – 7-25/32 × 7-31/64 in)

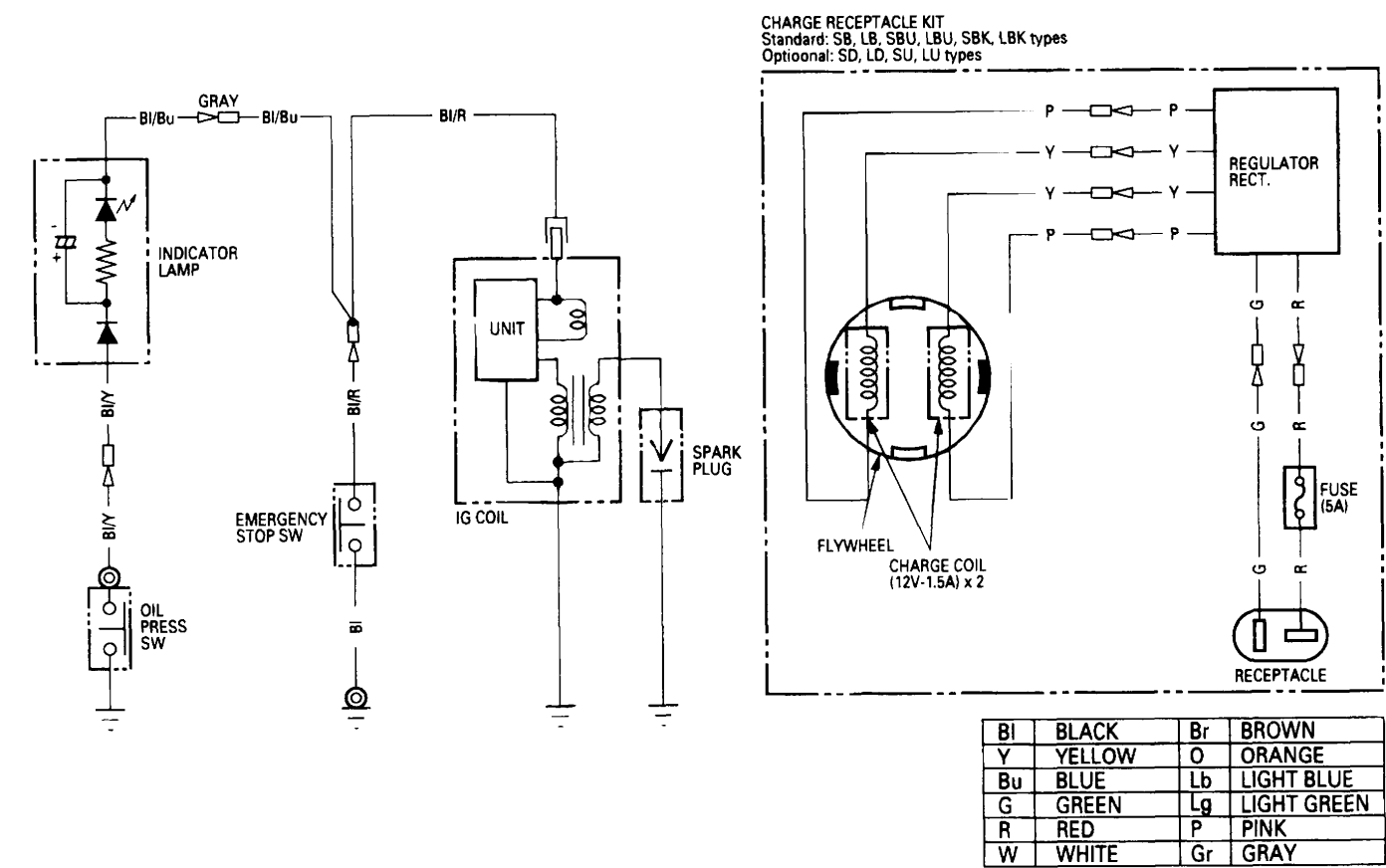
Noise and Vibration

MODEL	BF4.5B
CONTROL SYSTEM	H
Sound Pressure Level At Operator's Ear (98/37/EC, ICOMIA 39-94)	78 dB
Vibration (98/37/EC, ICOMIA 38-94)	4.8 (m/s ²) rms

Reference to: ICOMIA Standard: as it specifies the engine operating conditions and measurement conditions.

Honda outboards are power rated in accordance with ISO8665 (propeller shaft output).

16. WIRING DIAGRAM



17. MAJOR Honda DISTRIBUTOR ADDRESSES

For further information, please contact Honda Customer Information Centre at the following address or telephone number:

For European

AUSTRIA

**Honda Austria Gesellschaft
Mbh.**
Hondastraße 1
2351 Wiener Neudorf
Tel. : +43 (0)2236 690 0
Fax : +43 (0)2236 690 480
<http://www.honda.at>

BELGIUM

Honda Motor Europe (North)
Doornveld 180-184
1731 Zellik
Tel. : +32 2620 10 00
Fax : +32 2620 10 01
<http://www.honda.be>
✉ BH_PE@HONDA-EU.COM

BULGARIA

Kirov Ltd.
49 Tsaritsa Yoana Blvd
1324 Sofia
Tel. : +359 2 93 30 892
Fax : +359 2 93 30 814
<http://www.kirov.net>
✉ honda@kirov.net

CANARY ISLANDS

Automocion Canarias, S.A.
Carretera General del Sur, KM. 8,8
38107 Santa Cruz de Tenerife
Tel. : +34 (922) 620 617
Fax : +34 (922) 618 042
<http://www.aucasa.com>
✉ ventas@aucasa.com
✉ taller@aucasa.com

CROATIA

Fred Bobek d.o.o.
Honda-Marine Croatia - Trg. - Ind.
zona bb
22211 Vodice
Tel. : +385 22 44 33 00/33 10
Fax : +385 22 44 05 00
<http://www.honda-marine.hr>

CYPRUS

Alexander Dimitriou & Sons Ltd.
162, Yiannos Kranidiotis
Avenue
2235 Latsia, Nicosia
Tel. : +357 22 715 300
Fax : +357 22 715 400
<http://www.dimitriou.com>

CZECH REPUBLIC

BG Technik cs, a.s
U Zavodiste 251/8
15900 Prague 5 - Velka Chuchle
Tel. : +420 2 838 70 850
Fax : +420 2 667 111 45
<http://www.hondamarine.cz>

DENMARK

Tima Products A/S
Tårnfalkevej 16 - Postboks 511
2650 Hvidovre
Tel. : +45 36 34 25 50
Fax : +45 36 77 16 30
<http://www.tima.dk>

FINLAND

OY Brandt AB.
Tuupakantie 7B
01740 Vantaa
Tel. : +358 207757200
Fax : +358 (0)9 878 5276
<http://www.brandt.fi>

FRANCE

HONDA RELATIONS CLIENTS
TSA 80627
45146 St Jean de la Ruelle CEDEX
Tel. : 02 38 81 33 90
Fax : 02 38 81 33 91
<http://www.honda.fr>
✉ relationsclientele.produits-equipement@honda-eu.com

GERMANY

**Honda Motor Europe (North)
GmbH**
Sprendlinger Landstraße 166
63069 Offenbach am Main
Tel. : +49 (0)69 8300 60
Fax : +49 (0)69 8300 65100
<http://www.honda.de>
✉ info@post.honda.de

GREECE

General Automotive Co S.A.
71, Leoforos Athinon
10173 Athens
Tel. : +30 210 3483582
Fax : +30 210 3418092
<http://www.honda.gr>
✉ info@saracakis.gr

MAJOR Honda DISTRIBUTOR ADDRESSES

For further information, please contact Honda Customer Information Centre at the following address or telephone number:

For European (continued)

HUNGARY

Mo.Tor.Pedo Co., Ltd.
Kamaraerdei út 3
2040 Budaörs
Tel. : +36 23 444 971
Fax : +36 23 444 972
<http://www.hondamarine.hu>
✉ info@hondamarine.hu

IRELAND

Two Wheels Ltd.
Crosslands Business Park -
Ballymount Rd
Dublin 12
Tel. : +353 (0)1 460 2111
Fax : +353 (0)1 456 6539
<http://www.hondaireland.ie>

ITALY

Honda Italia Industriale S.p.A.
Via della Cecchignola, 5/7
00143 Roma
Tel. : +848 846 632
Fax : +39 065 4928 400
<http://www.hondaitalia.com>
✉ info.marine@honda-eu.com

LITHUANIA

JP Motors Ltd
Kubiliaus str. 6
08234 Vilnius
Tel. : +370 5 2765259
Fax : +370 5 2765250
<http://www.hondamarine.lt>

MALTA

Associated Motors Company Ltd.
New Street in San Gwakkinn Road -
Mrieħel Bypass
Mrieħel QRM17
Tel. : +356 21 498 561
Fax : +356 21 480 150

NETHERLANDS

Honda Nederland Bv
Capronilaan 1
1119 NN Schiphol-Rijk
Tel. : +31 (0)20 7070000
Fax : +31 (0)20 7070001
<http://www.honda.nl>

NORWAY

AS Kellox
Boks 170 - Nygårdsvæien 67
1401 Ski
Tel. : +47 64 97 61 00
Fax : +47 64 97 61 92
<http://www.kellox.no>

POLAND

Aries Power Equipment Ltd.
25A Wrocławska Str.
01-493 Warsaw
Tel. : +48 (22) 685 17 06
Fax : +48 (22) 685 16 03
<http://www.ariespower.com.pl>

PORTUGAL

Honda Portugal S.A.
Abrunheira
2714-506 Sintra
Tel. : +351 21 915 53 33
Fax : +351 21 915 23 54
<http://www.honda.pt>
✉ honda.produtos@honda-eu.com

REPUBLIC OF BELARUS

Scanlink Ltd.
Kozlova Drive, 9
220037 Minsk
Tel. : +375 172 999090
Fax : +375 172 999900

RUSSIA

Honda Motor Rus LLC
17/2, Krylatskaya Str.
Moscow 121614
Tel. : +7 (0 95) 745 20 80
Fax : +7 (0 95) 745 20 81
<http://www.honda.co.ru>

SLOVAK REPUBLIC (SLOVAKIA)

Honda Slovakia, s.r.o.
Prievozká 6 - 821 09 Bratislava
Slovak Republic
Tel. : +421 2 32131112
Fax : +421 2 32131111
<http://www.honda.sk>

MAJOR Honda DISTRIBUTOR ADDRESSES

For further information, please contact Honda Customer Information Centre at the following address or telephone number:

For European (continued)

SPAIN

Greens Power Products S.L.
Poligono Industrial Congost -
Avda. Ramon Cuirans n°2
08530 La Garriga (Barcelona)
Tel. : +34 (93) 860 50 25
Fax : +34 (93) 871 81 80
<http://www.hondaencasa.com>

SWEDEN

**Honda Power Equipment
Sweden AB**
Box 50583-Västkustvägen 17
20215 Malmö
Tel. : +46 (0)40 600 23 07
Fax : +46 (0)40 600 23 19
<http://www.hondapower.se>

SWITZERLAND

Honda Suisse S.A.
10 Route des Moulières
1214 Vernier-Genève
Tel. : +41 (0)22 939 09 09
Fax : +41 (0)22 939 09 97
<http://www.honda.ch>

UKRAINE

Honda Ukraine LLC
101 Volodymyrska Str. - Build. 2
Kiev 01033
Tel. : +380 44 390 14 14
Fax : +380 44 390 14 10
<http://www.honda.ua>

UNITED KINGDOM

Honda (UK) Power Equipment
470 London Road
Slough - Berkshire, SL3 8QY
Tel. : +44 (0)845 200 8000
Fax : +44 (0)1 753 590 732
<http://www.honda.co.uk>
✉ customer.service@honda-eu.com

For Australian

AUSTRALIA

**Honda Australia Motorcycle
and Power Equipment Pty. Ltd**
1954-1956 Hume Highway
Campbellfield Victoria 3061
Tel. : (03) 9270 1111
Fax : (03) 9270 1133
<http://www.hondampe.com.au/>

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