

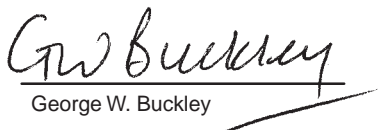
Mercury Marine, W6250 W. Pioneer Road
P.O. Box 1939, Fond du Lac, WI 54936-1939

120XR²

90-10156990 698

© 1998, Mercury Marine

This outboard motor manufactured by Mercury Marine, Fond du Lac, Wisconsin, USA, or Marine Power Europe Inc., Park Industriel Petit-Rechain B4800 Verviers (Belgium) complies with requirements of directive 89/392/EEC as amended.


George W. Buckley

President, Mercury Marine, Fond du Lac, WI USA

Warranty Message

The product you have purchased comes with a **limited warranty** from Mercury Marine, the terms of the warranty are set forth in the *Warranty Information* Section of this manual. The warranty statement contains a description of what is covered, what is not covered, the duration of coverage, how to best obtain warranty coverage, **important disclaimers and limitations of damages**, and other related information. Please review this important information.

The description and specifications contained herein were in effect at the time this manual was approved for printing. Mercury Marine, whose policy is one of continued improvement, reserves the right to discontinue models at any time, to change specifications, designs, methods, or procedures without notice and without incurring obligation.

Mercury Marine, Fond du Lac, Wisconsin U.S.A. Litho in U.S.A.

© 1998, Mercury Marine

The following are registered trademarks of Brunswick Corporation: AutoBlend, Force, Jet-Prop, Mariner, Merc, MerCathode, MerCruiser, Mercury, Mercury Marine, Quicksilver, RideGuide and Thruster.

TABLE OF CONTENTS

General Information

Boater's Responsibilities	4
Before Operating Your Sport Jet	4
Exhaust Emissions	6
Lanyard Stop Switch	8
Protecting People In The Water	11
Wave and Wake Jumping	12
Stopping The Boat In An Emergency	13
Sport Jet Remote Control	14
Selecting Accessories For Your Sport Jet	14
Safe Boating Suggestions	14
Recording Serial Numbers	17
Specifications	18
Component Identification	19

Fuel & Oil

Gasoline Recommendations	20
Oil Recommendation	21
New Engine Gasoline/Oil Break-in Mixture	21
Filling Oil Injection System	21
Bleeding Oil Injection System	22
Filling Fuel Tank	22

Features & Controls

Warning System	23
Bilge Siphon	24

TABLE OF CONTENTS

Operation

Pre-starting Check List	25
Special Operating Instructions	26
Engine Break-in Procedure	29
Starting The Engine	30
Shifting	32
Stopping The Engine	32

Maintenance

Sport Jet Care	33
Selecting Replacement Parts For Your Sport Jet	33
EPA Emissions Regulations	33
Inspection And Maintenance Schedule	34
Clearing A Clogged Water Intake	36
Fuel System	38
Fuse Replacement	39
Corrosion Control Anodes	39
Spark Plug Inspection	40
Testing Overheat Warning Horn	40
Battery Inspection	41
Bilge Siphon Inspection	41
Flushing The Cooling System	42
Draining Lubricant - Drive Housing	43
Adding/Refilling Lubricant - Drive Housing	43
Draining Lubricant - Stator Assembly	44
Adding/Refilling Lubricant - Stator Assembly	45
Submerged Engine	46

TABLE OF CONTENTS

Storage

Storage Preparation	47
---------------------------	----

Troubleshooting

Troubleshooting	49
-----------------------	----

Warranty Information

Warranty Registration

United States and Canada	52
Outside United States and Canada	53

Limited Sport Jet Warranty

United States and Canada	54
Outside United States and Canada	56

Warranty Coverage	58
-------------------------	----

Transfer of Warranty	60
----------------------------	----

Owner Service Assistance

Local Repair Service	61
Service Away From Home	61
Parts And Accessories Inquires	61
Service Assistance	62
Mercury Marine Service Offices	63

Maintenance Log

Maintenance Log	64
-----------------------	----

GENERAL INFORMATION

oba3

Boater's Responsibilities

The operator (driver) is responsible for the correct and safe operation of the boat and safety of its occupants and general public. It is strongly recommended that each operator (driver) read and understand this entire manual before operating the boat.

Be sure at least one additional person on board is instructed in the basics of starting and operating the Sport Jet and boat handling in case the driver is unable to operate the boat.

obq1

Before Operating Your Sport Jet

Read this manual carefully. Learn how to operate your Sport Jet properly. If you have any questions, contact your dealer.

Safety and operating information that is practiced along with using good common sense can help prevent personal injury and product damage.

This manual as well as safety labels posted on the Sport Jet use the following safety alerts to draw your attention to special safety instructions that should be followed.

DANGER

DANGER – Immediate hazards which **WILL** result in severe personal injury or death.

WARNING

WARNING – Hazards or unsafe practices which **COULD** result in severe personal injury or death.

CAUTION

CAUTION – Hazards or unsafe practices which could result in minor injury or product or property damage.

GENERAL INFORMATION

obq2

Before Operating Your Sport Jet (Continued)

Read this manual carefully. Learn the difference in handling characteristics between a Sport Jet boat and a propeller driven boat including:

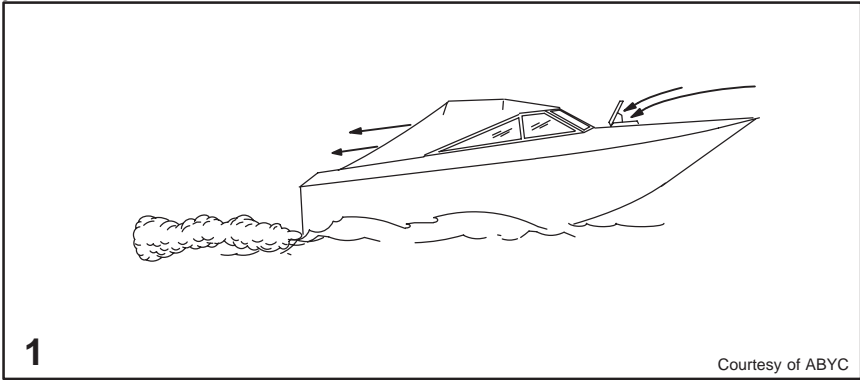
- *Steering at low speeds* - unlike propeller driven boats, the Sport Jet boat tends to lose steering control as less water is drawn in and expelled. Increase speed slightly to regain steering.
- *Maneuverability* - the Sport Jet is highly maneuverable at higher speeds; more so, than propeller driven boats. Use caution when turning to prevent spin-outs.
- *Steering in reverse* - unlike propeller driven boats, turning the steering wheel turns the bow of the boat in the *same direction*.

If you have any questions, contact your dealer.

Safety and operating information that is practiced along with using good common sense can help prevent personal injury and product damage.

GENERAL INFORMATION

gob4



obi2

Exhaust Emissions

BE ALERT TO CARBON MONOXIDE POISONING

Carbon monoxide is present in the exhaust fumes of all internal combustion engines including the outboards, stern drives and in-board engines that propel boats, as well as the generators that power various boat accessories. Carbon monoxide is a deadly gas that is odorless, colorless and tasteless.

Early symptoms of carbon monoxide poisoning which should not be confused with seasickness or intoxication, include headache, dizziness, drowsiness, and nausea.

WARNING

Avoid the combination of a running engine and poor ventilation. Prolonged exposure to carbon monoxide in sufficient concentration can lead to unconsciousness, brain damage, or death.

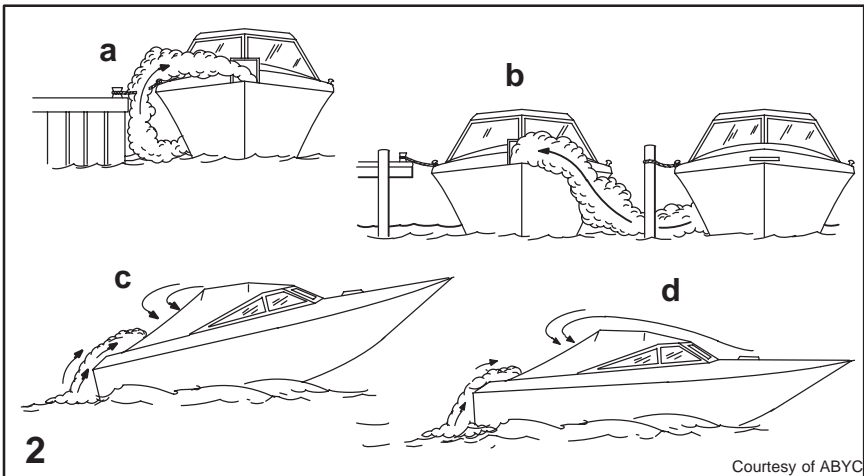
GOOD VENTILATION

Ventilate passenger area, open side curtains, or forward hatches to remove fumes.

1 Example of desired air flow through the boat.

GENERAL INFORMATION

gob39



obi3

Exhaust Emissions (Continued)

POOR VENTILATION

Under certain running and/or wind conditions, permanently enclosed or canvas enclosed cabins or cockpits with insufficient ventilation may draw in carbon monoxide. Install one or more carbon monoxide detectors in your boat.

Although the occurrence is rare, on a very calm day, swimmers and passengers in an unclosed area of a stationary boat that contains or is near a running engine may be exposed to a hazardous level of carbon monoxide.

2 Examples of Poor Ventilation:

While boat is stationary

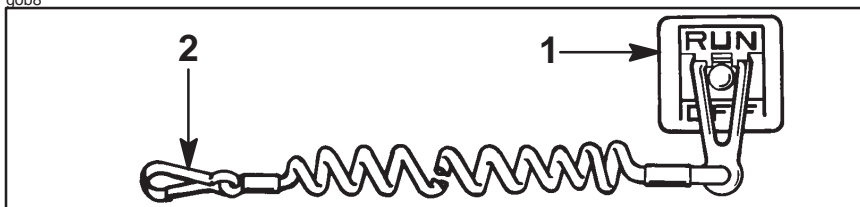
- a. Running the engine when the boat is moored in a confined space.
- b. Mooring close to another boat that has its engine running.

While boat is moving

- c. Running the boat with the trim angle of the bow too high.
- d. Running the boat with no forward hatches open (station wagon effect).

GENERAL INFORMATION

gob8



obg1

Lanyard Stop Switch

- 1** Some remote controls are equipped with a lanyard stop switch. A lanyard stop switch can also be installed as an accessory. The purpose of this switch is to turn off the engine ignition whenever the operator (when attached to the lanyard) moves far enough away from the operator's position to activate the switch.
- 2** The lanyard is a cord usually between 4 and 5 feet (1220 and 1524 mm) in length when stretched out with an element on one end made to be inserted into the switch and a metal snap on the other end for attaching to the operator. It is coiled to make its at-rest condition as short as possible so as to minimize the likelihood of lanyard entanglement with nearby objects. It is made as long as it is in its stretched condition to minimize the likelihood of accidental activation should the operator choose to move around in an area close to the normal operator's position. If for any reason it is desired to have a shorter functional lanyard, this may be accomplished by using up length in the way the lanyard and clip are attached to the operator (such as wrapping the lanyard around the operator's wrist or leg) or by tying a simple knot in the lanyard.

Read the Safety Warning on the next two pages before electing to install, use, or not to use such a switch.

(continued on next page)

GENERAL INFORMATION

Lanyard Stop Switch (Continued)

WARNING

The following advantages and disadvantages of a lanyard stop switch should be considered before electing to use, or not to use, such a switch.

ADVANTAGES: The purpose of a lanyard stop switch is to stop the engine ignition whenever the operator (when attached to the lanyard) moves far enough away from the operator's position to activate the switch. This would occur if the operator falls or moves within the boat a sufficient distance from the operator's position. This type of accident is most likely in certain types of boats such as low-sided bass boats, high-performance boats and light, sensitive-handling fishing boats operated by hand-tiller. It is also likely as a result of poor operating practices such as sitting on the back of the seat at planing speeds, standing at planing speeds, operating at high speeds in shallow or obstacle-infested waters, releasing your grip on a steering wheel that is pulling in one direction, drinking and driving, or daring, high-speed boat maneuvers.

DISADVANTAGES: Inadvertent activation of the switch is also a possibility. This could cause any, or all, of the following potentially hazardous situations:

1. Loss of balance and falling forward of unstable boat passengers – a particular concern in bow rider type boats.
2. Loss of power and directional control in heavy seas, strong current or high winds.
3. Loss of control when docking.

(continued on next page)

GENERAL INFORMATION

Lanyard Stop Switch (Continued)

WARNING

continued:

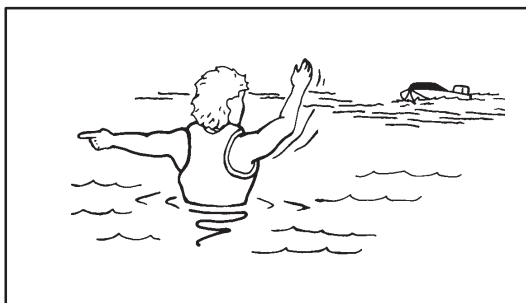
While activation of the lanyard stop switch will result in immediate power shut-down, a boat can continue to coast for some distance depending upon the velocity and degree of any turn at shut-down. However, the boat will not complete a full circle. While the boat is coasting, it can cause injury to anyone in the boat's path as seriously as the boat would when under power.

As we cannot possibly know of and advise the boating public of all conceivable boat/motor types and/or poor operating practices, the final decision of whether to use a lanyard stop switch rests with you, the owner/driver.

We strongly recommend that other occupants be instructed on proper starting and operating procedures should they be required to operate the Sport Jet and boat in an emergency.

GENERAL INFORMATION

gob3



obh1

Protecting People In The Water

WHILE YOU ARE CRUISING

It is very difficult for a person standing or floating in the water to take quick action to avoid a boat heading in their direction even at slow speed.

Always slow down and exercise extreme caution any time you are boating in an area where there might be people in the water.

Avoid shallow water or where any loose material such as sand, shells, seaweed, grass, tree branches, etc. can be sucked in and expelled from the the pump as a high speed projectile.

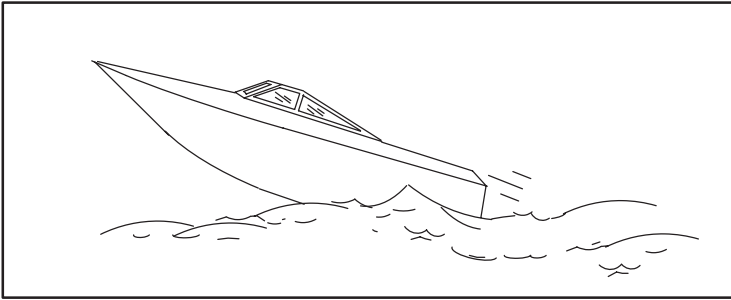
WHILE BOAT IS STATIONARY

Stop the Sport Jet engine immediately whenever anyone in the water is near your boat. The Sport Jet is always drawing water through the water intake grate when the engine is running. Stay away from the water intake located under the stern (back) of the boat and never insert an object into the water intake or water outlet nozzle when the engine is running.

WARNING

Avoid injury resulting from contacting the rotating impeller or having your hair, clothing or loose objects drawn into the water intake and wrapping around the impeller shaft. Stay away from the water intake and never insert an object into the water intake or water outlet nozzle when the engine is running.

GENERAL INFORMATION



Wave And Wake Jumping

Operating recreational boats over waves and wakes is a natural part of boating. However, when this activity is done with sufficient speed to force the boat hull partially or completely out of the water, certain hazards arise, particularly when the boat re-enters the water.

The primary concern is the boat changing direction while in the midst of the jump. In such case the landing may cause the boat to veer violently in a new direction. Such a sharp change in direction can cause occupants to be thrown out of their seats, or out of the boat.

There is another less common hazardous result from allowing your boat to launch off a wave or wake. If the bow of your boat pitches down far enough while airborne, upon water contact it may penetrate under the water surface and “submarine” for an instant. This will bring the boat to a nearly instantaneous stop and can send the occupants flying forward. The boat may also steer sharply to one side.

WARNING

Avoid serious injury or death from being thrown within or out of a boat when it lands after jumping a wave or wake. Avoid wave or wake jumping whenever possible. Instruct all occupants that if a wake or wave jump occurs, get low and hang on to any boat hand hold.

GENERAL INFORMATION

obo2

Stopping The Boat In An Emergency

Your jet powered boat has emergency stopping capability unique to this form of propulsion.

In an emergency, putting the remote control handle into reverse and applying reverse throttle can rapidly slow down your boat and reduce the stopping distance. Keep in mind, however, that such a maneuver may cause occupants in the boat to be thrown forward or even out of the boat.

WARNING

Using the emergency stopping capability of your Sport Jet will slow down your boat in an emergency. However keep in mind, sudden stopping may cause the occupants in the boat to be thrown forward or even out of the boat. This action may result in serious injury or death.

GENERAL INFORMATION

obr1

Sport Jet Remote Control

The remote control connected to your Sport Jet must be equipped with a start-in-gear protection device. This prevents the engine from starting when the Sport Jet is in forward or reverse.

WARNING

Avoid serious injury or death from a sudden unexpected acceleration when starting your Sport Jet. The design of this Sport Jet requires that the remote control used with it must have a built in “start-in-gear” protection device.

obs1

Selecting Accessories For Your Sport Jet

Genuine Mercury Marine Quicksilver Accessories have been specifically designed and tested for your Sport Jet.

Mercury Marine Quicksilver accessories are available from Mercury Marine dealers.

Some accessories not manufactured or sold by Mercury Marine are not designed to be safely used with your Sport Jet or Sport Jet operating system. Acquire and read the installation, operation and maintenance manuals for all your selected accessories.

WARNING

Check with your dealer before installation of accessories. The misuse of acceptable accessories or the use of unacceptable accessories can result in serious injury, death or product failure.

obk3

Safe Boating Suggestions

In order to safely enjoy the waterways, familiarize yourself with local and other government boating regulations and restrictions, and consider the following suggestions.

Use flotation devices. Have an approved personal flotation device of suitable size for each person aboard (it is the law) and have it readily accessible.

(continued on next page)

GENERAL INFORMATION

Safe Boating Suggestions (Continued)

Do not overload your boat. Most boats are rated and certified for maximum load (weight) capacities (refer to your boat capacity plate). If in doubt, contact your dealer or the boats manufacturer.

Perform safety checks and required maintenance. Follow a regular schedule and ensure that all repairs are properly made.

Know and obey all nautical rules and laws of the waterways. Boat operators should complete a boating safety course. Courses are offered in the U.S.A. by (1) The U.S. Coast Guard Auxiliary, (2) The Power Squadron, (3) The Red Cross and (4) your state boating law enforcement agency. Inquiries may be made to the Boating Hotline, 1-800-368-5647 or the Boat U.S. Foundation information number 1-800-336-BOAT

Make sure everyone in the boat is properly seated. Don't allow anyone to sit or ride on any part of the boat that was not intended for such use. This includes backs of seats, gunwales, transom, bow, decks, raised fishing seats, any rotating fishing seat; anywhere that sudden unexpected acceleration, sudden stopping, unexpected loss of boat control or sudden boat movement could cause a person to be thrown overboard or into the boat.

Never be under the influence of alcohol or drugs while boating (it is the law). They impair your judgment and greatly reduce your ability to react quickly.

Prepare other boat operators. Instruct at least one person on board in the basics of starting and operating the Sport Jet and boat handling in case the driver becomes disabled or falls overboard.

Passenger boarding. Stop the engine whenever passengers are boarding, unloading or are near the back (stern) of the boat. Just shifting the Sport Jet into neutral is not sufficient.

Be alert. The operator of the boat is responsible by law to "maintain a proper lookout by sight (and hearing)." The operator must have an unobstructed view particularly to the front. No passengers, load, or fishing seats should block the operators view when operating the boat above idle speed.

(continued on next page)

GENERAL INFORMATION

Safe Boating Suggestions (Continued)

Never drive your boat directly behind a water skier in case the skier falls. As an example, your boat traveling at 25 miles per hour (40 km/hr) in 5 seconds will overtake a fallen skier who was 200 feet (61m) in front of you.

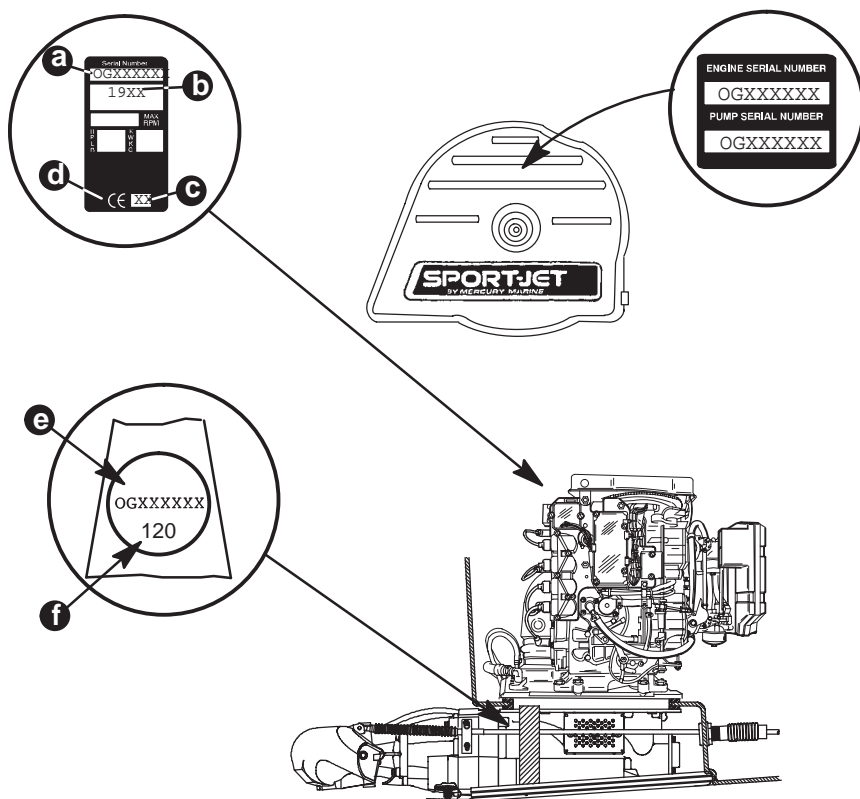
Watch fallen skiers. When using your boat for water skiing or similar activities, always keep a down skier on the operator's side of the boat while returning to attend the skier. The operator should always have the down skier in sight and never back up to the skier or anyone in the water.

Report accidents. Boat operators are required by law to file a Boating Accident Report with their state boating law enforcement agency when their boat is involved in certain boating accidents. A boating accident must be reported if (1) there is loss of life or probable loss of life, (2) there is personal injury requiring medical treatment beyond first aid, (3) there is damage to boats or other property where the damage value exceeds \$500.00 or (4) there is complete loss of the boat. Seek further assistance from local law enforcement.

Avoid shallow water conditions. Avoid operating your Sport Jet in very shallow water or where there is a noticeable amount of floating debris or weeds. Always be in at least 2 to 3 feet of water, especially when accelerating from idle speeds. Any loose material such as sand, shells, stones, seaweed, grass, etc. can be drawn up by the pump and may cause any of the following problems:

- engine overheat
- loss of steering
- objects expelled from the pump as high-speed projectiles

GENERAL INFORMATION



obl4

- a. Engine Serial Number
- b. Model Year
- c. Year Manufactured
- d. Certified Europe Insignia
- e. Pump Serial Number
- f. Horsepower

obl3

Recording Serial Numbers

ENGINE AND JET PUMP

It is important to record these numbers for future reference. The serial number location is shown above. The jet pump and engine serial numbers are different and unique. For convenience a decal listing the powerhead serial number and pump serial number is located on the flywheel cover.

GENERAL INFORMATION

obm44

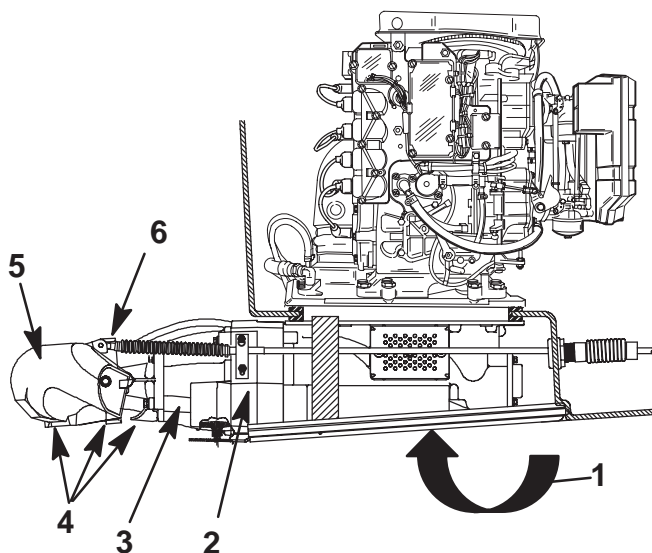
Specifications

Model	Sport Jet 120XR ²
Horsepower	120
Kilowatts	89.4
Full Throttle RPM Range	4700-5300
Idle Speed	950-1100 RPM
Number of Cylinders	4
Piston Displacement	102.9 cu. in. (1686 cc)
Cylinder Bore	3.375 in. (85.7 mm)
Stroke	2.87 in. (73.1 mm)
Spark Plug	Champion L77JC4 *
Recommended Gasoline	Refer to Fuel Section
Recommended Oil	Refer to Fuel Section
Battery Rating (minimum)	670 Marine Cranking Amps (MCA) or 520 Cold Cranking Amps (CCA)

*Use Champion QL77JC4 Spark Plugs where Radio Frequency Interference (RFI) suppression is required.

GENERAL INFORMATION

gob47



obn11

Component Identification

1. Water Intake
2. Wear Ring
3. Stator
4. Anodes
5. Reverse Gate
6. Rudder

FUEL & OIL

oeb5

Gasoline Recommendations

UNITED STATES AND CANADA

Use a major brand of automotive unleaded gasoline with a minimum posted octane rating of 87. Mid-grade automotive gasolines that contain fuel injector cleaner are preferred for added internal engine cleanliness. Leaded gasoline is not recommended.

INTERNATIONAL

Use a major brand of automotive unleaded gasoline with a minimum posted octane rating of 90RON. Automotive gasolines that contain fuel injector cleaner are preferred for added internal engine cleanliness. Leaded gasoline is acceptable in areas where unleaded gasoline is not available.

ALCOHOL IN GASOLINE

We do not recommend the use of gasoline which contains alcohol because of the possible adverse effect the alcohol may have on the fuel system. In general, if only gasoline containing alcohol is available, it must not contain more than 10% ethanol or 5% methanol, and the addition of a Quicksilver Water Separating Fuel Filter is recommended.

If gasoline containing alcohol is used or if you suspect the presence of alcohol in your gasoline, increase your inspection of the fuel system, visually checking for fuel leaks or abnormalities.

Gasoline containing alcohol may cause the following problems to your engine and fuel system:

- Corrosion of metal parts.
- Deterioration of elastomers and plastic parts.
- Wear and damage of internal engine parts.
- Starting and operating difficulties.
- Vapor lock or fuel starvation.

Some of these adverse effects are due to the tendency of gasoline containing alcohol to absorb moisture from the air, resulting in a phase of water and alcohol which separates from the gasoline in the fuel tank.

The adverse effects of alcohol are more severe with methanol and are worse with increasing content of alcohol.

FUEL & OIL

oec5

Oil Recommendation

Use Quicksilver NMMA/BIA Certified TC-W3 2-Cycle Outboard Oil. Periodically consult with your dealer to get the latest gasoline and oil recommendations. If Quicksilver Outboard Oil is not available, substitute another brand of 2-Cycle outboard oil that is NMMA Certified TC-W3. The use of an inferior 2-Cycle outboard oil can reduce engine durability. Damage from use of inferior oil may not be covered under the limited warranty.

oeg4

New Engine Gasoline/Oil Break-in Mixture

During Break-in, use a **50:1 (2% oil)** gasoline/oil mixture in the first tank of fuel. Follow the table below for mixing ratios. Use of this fuel mixture combined with oil from the oil injection system will supply adequate lubrication during engine break-in.

After the break-in fuel mixture is used up, it is no longer necessary to add oil with the gasoline.

NOTE: At the end of the break-in period, visually check to see if the oil level in the oil injection tank has dropped. Oil usage indicates the oil injection system is functioning correctly.

GASOLINE/OIL MIXING RATIO CHART

Gas/Oil Ratio	1 U.S. gallon (3.8 Liters)	3 U.S. gallons (11.5 Liters)	6 U.S. gallons (23 Liters)
50:1 (2%)	3 fl. oz. (89 ml) of oil	8 fl. oz. (237 ml) of oil	16 fl. oz. (474 ml) of oil

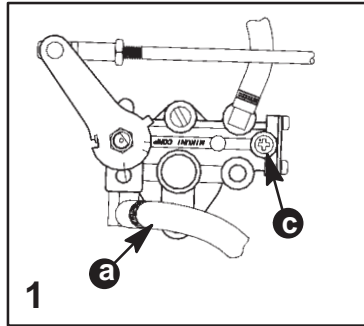
oem6

Filling Oil Injection System

Locate the oil reservoir in the engine compartment. Remove the fill cap and fill tank with oil. The oil tank capacity is 3 qt. 26 oz. (3.6 liters).

FUEL & OIL

goe11



oe11

Bleeding Oil Injection System

- 1 Follow the oil line from the reservoir to the oil pump (a). There should be no air in the line. If air is present, disconnect the oil-in line and bleed into a clean container until air is removed. Connect hose back to pump and strap securely. Once air has been removed from the oil-in line, loosen bleed screw (c) and bleed oil out until no air is present in the oil. Tighten bleed screw. The oil injection system is now operational.

oe5

Filling Fuel Tank

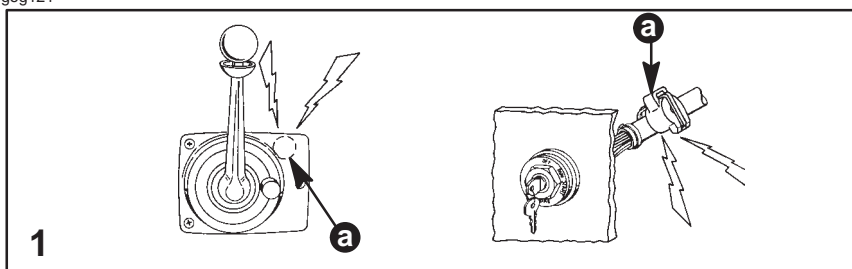
WARNING

Avoid serious injury or death from a gasoline fire or explosion. Always stop the engine and DO NOT smoke or allow open flames or sparks in the area while filling fuel tanks.

Fill fuel tanks outdoors away from heat, sparks and open flames.
Remove portable fuel tanks from boat to refill them.
Always stop engine before refilling tanks.
Do not over-fill the fuel tanks. Fuel in tanks can expand and leak under pressure.

FEATURES & CONTROLS

gog121



ogb28

Warning System

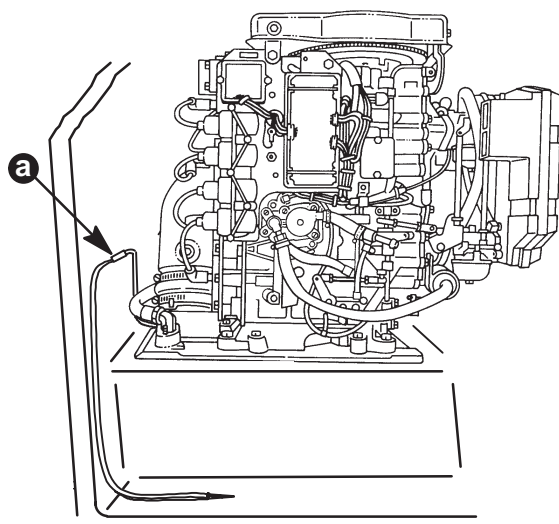
- 1** The Sport Jet warning system incorporates a warning horn (a). The warning horn may be located inside the remote control or under the dash connected to the ignition key switch. The warning horn will sound if the engine temperature is too hot, or if the oil reservoir is low on oil.
- 2** In the event of the warning horn sounding, immediately reduce engine speed to idle and stop the engine. Visually inspect the oil reservoir to determine if the horn is sounding due to low oil or an overheat condition. The horn will sound when the oil level drops to approximately 25% of reservoir capacity. At the low oil sound, approximately 1 hr. of full speed operation remains. Refill the oil reservoir as necessary.
- 3** If the engine overheats, immediately reduce engine speed to idle and stop the engine. Have the engine checked by your dealer. Operating the engine while overheated will cause engine damage. See NOTE following.

NOTE: *If you are in a stranded situation, stopping the engine and allowing it to cool back down will give you some low speed (idle) running time before the engine starts to overheat again.*

The overheat problem must be corrected before you can resume normal operation.

FEATURES & CONTROLS

gog122



osa2

Bilge Siphon

The Sport Jet incorporates an automatic bilge siphoning feature. The bilge siphon is working whenever the engine is running above idle speeds. Maximum performance of the bilge siphon is realized above 3,000 rpm.

Water exiting the jet pump nozzle creates a suction or vacuum in the hose attached to the nozzle. The hose is routed to and positioned in the bilge, on the side of the jet tunnel.

The bilge siphon system incorporates a siphon break which prevents water from siphoning back into the boat when the engine is turned off.

The siphon break (a) requires periodic inspection to insure proper operation. The air hole (0.020 in.) must remain open and free from obstruction. The siphon break must be located above the waterline.

OPERATION

ofa5

Pre-Starting Check List

- ☐ Operator knows safe navigation, boating and operating procedures.
- ☐ An approved personal flotation device of suitable size for each person aboard and readily accessible (it is the law).
- ☐ Know your boats maximum load capacity. Look at the boat capacity plate.
- ☐ Check fuel supply.
- ☐ Check oil level in oil reservoir on oil injected models.
- ☐ Make sure the boat drain plug is installed.
- ☐ Tell someone where you are going and when you expect to return.
- ☐ It is illegal to operate a boat while under the influence of alcohol or drugs.
- ☐ Know the waters you will be using; tides, currents, sand bars, rocks and other hazards.
- ☐ Make inspection checks listed in the Inspection and Maintenance Schedule. Refer to Maintenance Section.
- ☐ Operate the bilge blower for at least 4 minutes to remove any explosive fumes from the engine compartment. If boat is not equipped with a bilge blower, open engine hatch and leave open while starting engine.
- ☐ Before launching, examine the Sport Jet water intake for obstructions which may prevent pumping of water.
- ☐ Check steering for free operation.
- ☐ Check for debris around the rudder and reverse gate which may jam or hinder operation.

OPERATION

offb10

Special Operating Instructions

OPERATING ON THE WATER

A Sport Jet boat has substantially different handling characteristics compared to a propeller driven boat. It is suggested that you adjust yourself to these characteristics by experimentation in open water at both high and low speeds.

Although Sport Jet applications do not have some of the risks associated with exposed propeller driven systems, the following steps must always be kept in mind.

- 1** The Sport Jet works by drawing water up through the water intake and redirects it to the rear for forward thrust. The Sport Jet has a steerable rudder that can direct the jet thrust to the right or left. If the engine stops or the water flow is blocked, this will stop the jet thrust causing the boat to slow to a stop. However, while slowing there will be no ability to steer as steering is dependent on jet thrust.
- 2** Avoid operating your Sport Jet in very shallow water or where there is a noticeable amount of floating debris or weeds. Always be in at least 2 to 3 feet of water, especially when idling or accelerating from idle. Any loose material such as sand, shells, stones, seaweed, grass, etc. can be drawn up by the pump and cause the following problems:
 - engine overheat
 - loss of steering
 - impeller wear ring and stator damage
 - objects expelled from the pump as high-speed projectiles

CAUTION

If Sport Jet is tied to a dock, make sure that long ropes are not in the water when starting the engine. Ropes can be drawn up into the jet pump intake causing damage.

- 3** Avoid the use of neutral when skiing to minimize the chance that the ski rope will be drawn up into the jet pump intake. Turn the engine off when waiting for skiers. Make sure ski rope is clear before starting engine.

(continued on next page)

OPERATION

Special Operating Instructions (Continued)

OPERATING ON THE WATER (CONTINUED)

WARNING

Avoid injury, death or property damage resulting from collision due to loss of directional control. Directional control is derived from the water jet thrust. Thus, caution should be exercised when maneuvering at higher speeds in areas where debris (weeds, sand, gravel, etc.) could be picked up into the Sport Jet. This can cut off or reduce the jet thrust, thereby directly affecting boat directional control. Boat directional control can also be substantially reduced or lost altogether by a sudden loss of power such as running out of gas, by quickly backing off throttle, turning off ignition switch or activating lanyard stop switch. Remember your ability to take evasive action is dependent on sufficient jet thrust to control your boat.

- 4 The Sport Jet is always drawing water into the housing when the engine is running. DO NOT operate the Sport Jet with the grate removed from the water intake. Keep your hands, feet, hair, loose clothing, life jackets, etc. away from the water intake in the bottom of the boat. Never insert an object into the water intake or water outlet nozzle when the engine is running.

WARNING

Avoid injury resulting from contacting the rotating impeller or having your hair, clothing or loose objects drawn into the water intake and wrapping around the impeller shaft. Stay away from the water intake and never insert an object into the water intake or water outlet nozzle when the engine is running.

- 5 Avoid weed areas or traverse weed areas at high speeds. If unavoidable, keep the boat on plane until cleared of weeded area.
- 6 When beaching the boat, idle in forward to reach the beach. Turn the engine off without shifting to neutral. When leaving, push the boat into approximately 2 to 3 feet of deep water. Start engine and shift to forward, avoid the use of neutral and reverse in shallow water.

OPERATION

Special Operating Instructions (Continued)

OPERATING IN FREEZING TEMPERATURES

If there is a chance of ice forming on the water, the boat should be removed from the water and the Sport Jet drained completely of water. If ice should form at the water level inside the Sport Jet, it will block water flow to the engine causing possible damage.

OPERATING IN SALT WATER OR POLLUTED WATER

We recommend that you flush the internal water passages of your engine with fresh water after each time you operate in salt or polluted water. This will prevent a build up of deposits from clogging the water passages. Refer to flushing procedure in the Maintenance Section.

Your boat and Sport Jet should be removed from the water when not in use.

Wash down exterior and interior of the Sport Jet with fresh water after each use. Spray Quicksilver Corrosion Guard on the engine exterior, electrical components and other metal surfaces monthly (do not spray on corrosion control anodes as this will reduce the effectiveness of the anodes).

OPERATING AT HIGH ALTITUDES

Operating your Sport Jet at an elevation higher than 2500 ft. (762 m) above sea level may require a carburetor jet change. Consult your dealer. This will reduce the normal performance loss experienced as a result of lack of oxygen causing an overly rich fuel mixture at high altitudes.

IMPORTANT: To prevent serious damage to the engine caused by a lean fuel mixture, **DO NOT** operate your Sport Jet (if the carburetor jets were changed for high altitude operation) at a lower altitude unless the carburetor jets are changed again to correspond to the new altitude.

OPERATION

ofd4

Engine Break-in Procedure

CAUTION

Severe damage to the engine can result by not complying with the Engine Break-in Procedure.

ENGINE BREAK-IN FUEL MIXTURE

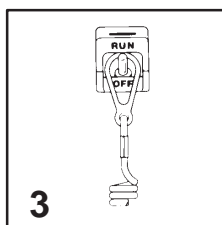
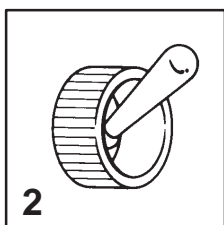
Use a 50:1 (2%) gasoline/oil mixture in the first tank of fuel. Use of this mixture combined with oil from the oil injection system will supply adequate lubrication during engine break-in.

ENGINE BREAK-IN PROCEDURE

Vary the throttle setting during the first hour of operation. During the first hour of operation, avoid remaining at a constant speed for more than two minutes and avoid sustained wide open throttle.

OPERATION

gof117



ofe30

Starting The Engine

Before starting, read Pre-Starting Check List, Special Operating Instructions and Engine Break-in Procedure on the first five pages in this Operation Section.

- 1 Do not start the Sport Jet out of water. Make sure the water intake is submerged.

CAUTION

Never start or run the Sport Jet (even momentarily) without water circulating through the cooling system to prevent damage to the unit.

- 2 Before starting, operate bilge blower for at least 4 minutes to remove any explosive fumes from the engine compartment. If boat is not equipped with a bilge blower, open engine hatch or cover and leave open while starting engine.

WARNING

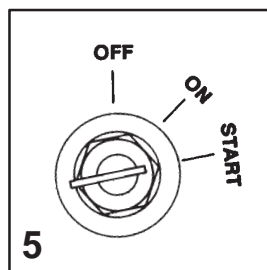
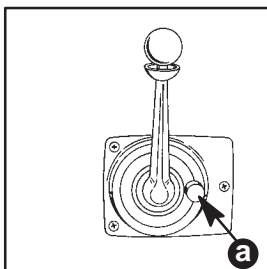
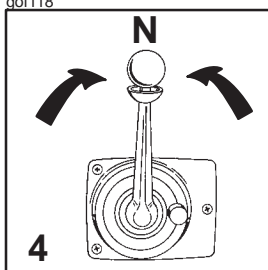
To prevent a possible explosion, operate the bilge blower for at least 4 minutes before starting the engine. If the engine compartment is not equipped with a blower, open the engine cover and leave open while starting engine.

It is also advisable to use your nose to detect any fuel fumes. Should fuel fumes be detected, the open fuel source should be located and eliminated.

- 3 Insure that the lanyard stop switch is properly connected at both ends (to operator and switch) and switch is in the RUN position.

OPERATION

gof118



of31

Starting The Engine (Continued)

- 4** Move remote control handle to the neutral (N) position. **DO NOT** advance the throttle.

NOTE: The Sport Jet utilizes an automatic enricher to start a cold engine. Advancing the throttle will disable the auto enricher. A "throttle only" feature is available by pulling out knob (a) and advancing the shift/throttle lever.

- 5** Turn ignition key to the START position. If engine fails to start in ten seconds, return key to "ON" position, wait 30 seconds and try again.

CAUTION

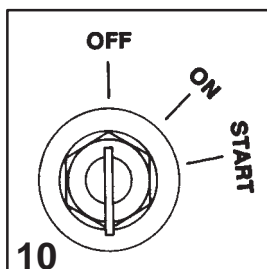
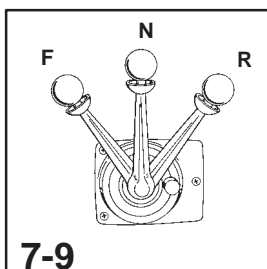
At high neutral rpms, the boat may creep forward.

- 6** Allow engine to warm up for several minutes before shifting and advancing throttle.

NOTE: If engine does not continue to run after starting, advance throttle lever and restart engine.

OPERATION

gof119



onc1

Shifting

- 7 Your Sport Jet has three shift positions to provide operation in Forward, Neutral and Reverse:
 - a. **Forward (F)** - has all the water clearing the water outlet nozzle for forward thrust and forward boat motion.
 - b. **Neutral (N)** - has the reverse gate covering half the water outlet nozzle to distribute thrust *both* forward and backward. The drive impeller continues to rotate and the boat may tend to creep in one direction. This is normal for a direct-drive jet-driven boat. **Use caution whenever the engine is running.**
 - c. **Reverse (R)** - has the reverse gate covering the entire water outlet nozzle to divert the exiting water stream forward to reverse boat motion.
- 8 After shifting into forward or reverse, advance the lever further to increase speed.

NOTE: Operators must practice the stopping maneuver to become familiar with jet-drive handling.

- 9 To stop the boat normally, shift Sport Jet to neutral position. **Use caution when shifting and turning since some loss of steering control will result.** Remember, steering control is dependent on thrust produced.

ofm6

Stopping The Engine

- 10 Reduce engine speed and shift Sport Jet to neutral position. Turn ignition key to OFF position.

MAINTENANCE

omw2

Sport Jet Care

To keep your Sport Jet in the best operating condition, it is important that the Sport Jet receive the periodic inspections and maintenance listed in the Inspection and Maintenance Schedule. We urge you to have it maintained properly to ensure your safety and that of your passengers and also to retain its dependability.

Record maintenance performed in Maintenance Log at the back of this book. Save all maintenance work orders and receipts.

WARNING

Neglected inspection and maintenance service of your Sport Jet or attempting to perform maintenance or repair on your Sport Jet if you are not familiar with the correct service and safety procedures could cause personal injury, death or product failure.

Selecting Replacement Parts For Your Sport Jet

We recommend using original Mercury Marine Quicksilver replacement parts.

WARNING

Using a replacement part that is inferior to the original part could result in personal injury, death or product failure.

oti4

EPA Emissions Regulations

All new Sport Jets manufactured by Mercury Marine are certified to the United States Environmental Protection Agency as conforming to the requirements of the regulations for the control of air pollution from new outboard motors. This certification is contingent on certain adjustments being set to factory standards, to include high altitude recommendations. For this reason, the factory procedure for servicing the product must be strictly followed and, wherever practicable, returned to the original intent of the design. The EPA provides allowances for non-standard high altitude adjustments which are outlined in the Mercury Marine Service Manual. Please consult your Mercury Marine Dealer. **Maintenance, replacement, or repair of the emission control devices and systems may be performed by any marine SI engine repair establishment or individual.**

MAINTENANCE

ohd22

Inspection And Maintenance Schedule

BEFORE EACH USE

1. Check that lanyard stop switch stops the engine.
2. Visually inspect the fuel system for deterioration or leaks.
3. Check throttle, shift and steering system for binding or loose components.

AFTER EACH USE

1. Wash off all salt deposits with fresh water if operating in salt water.
2. Flush out the engine cooling system if operating in salt or polluted water. (page 42)

EVERY 10 HOURS OR ONCE A MONTH

1. Check operation of warning horn. (page 40)
2. Check bilge siphon system. (page 41)

EVERY 50 HOURS OF USE OR ONCE A MONTH

1. Check engine fuel pump filter for contaminants. (page 38)
2. Check level and condition of drive housing lubricant.
3. Inspect battery. (page 41)
4. Check corrosion control anodes. (page 39)
5. Check tightness of bolts, nuts and other fasteners.

MAINTENANCE

FRESHWATER INTERVALS - EVERY 100 HOURS OF USE OR 120 DAYS

SALTWATER INTERVALS - EVERY 50 HOURS OF USE OR 60 DAYS

1. Remove impeller and lubricate impeller shaft with Quicksilver 2-4-C w/Teflon to prevent impeller from seizing to the shaft.
2. Lubricate steering cable and shift cable pivot points.

EVERY 100 HOURS OF USE OR ONCE A SEASON

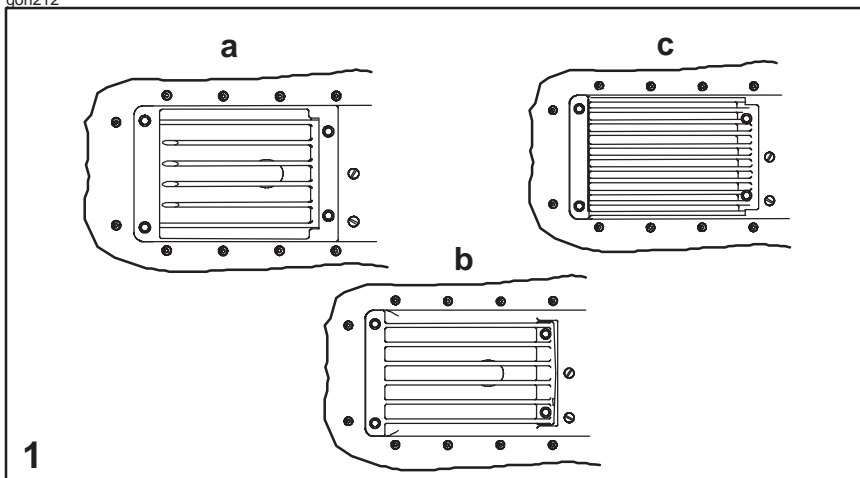
1. Inspect and clean spark plugs. (page 40)
2. Adjust carburetors (if required).
3. Check engine timing setup.
4. Drain and replace drive housing lubricant. (page 43)
5. Drain and replace stator housing lubricant. (page 44)
6. Lubricate pinion shaft splines.
7. Remove engine deposits with Quicksilver Power Tune Engine Cleaner.
8. Replace engine fuel line filter. (page 38)

BEFORE PERIODS OF STORAGE

1. Refer to Storage Preparation. (page 47)

MAINTENANCE

goh212



omx3

Clearing A Clogged Water Intake

- 1 The standard Hydro-Surge (weed) grate (a) is intended for general use. The optional Rock grate (b) should be used if running in rocky, shallow conditions. An optional (non spring loaded) grate (c) is also available.

HYDRO-SURGE GRATE

The Hydro-Surge grate is spring loaded. If the intake gets plugged, the pump suction will pull open the grate and the water will push the blockage pass the grate and clear the intake.

If operating your boat at slow speeds in weedy areas, the intake grate can become plugged with weeds. A plugged grate will cause the pump to cavitate during acceleration (over-revving without thrusting the boat).

If the grate becomes plugged, slowly advance the throttle to get the boat up on plane, making sure not to cavitate the pump. Continue to advance the throttle until the boat is running at top speed. The force of the water should clear the pump of any remaining weeds.

However, in extreme cases, a weed rake or manual clearing may be required. Refer to Manual Clearing on following page.

(continued on next page)

MAINTENANCE

omx4

Clearing A Clogged Water Intake (Continued)

MANUAL CLEARING

If weeds or debris clog the water intake, the blockage must be completely cleaned out to return the unit to proper running order.

WARNING

Avoid injury or death resulting from contacting the rotating impeller or having your hair, clothing or loose objects drawn into the water intake and wrapping around the impeller shaft. Do not attempt to clean debris from the Sport Jet while the engine is running.

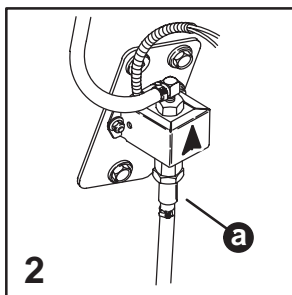
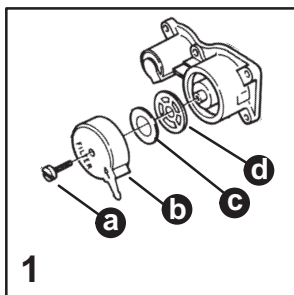
NOTE: When operating in weed infested areas carry a Quicksilver Weed Rake P/N 830116A1.

1. Turn off the engine because the pump impeller is still spinning and pumping water while in neutral. Remove the key from the ignition switch to prevent accidental starting.
2. Use a weed rake or manually remove the blockage from the water intake grate.
3. Clean debris from the entire Sport Jet unit (water intake, impeller and nozzle). If the Sport Jet cannot be easily cleaned, the boat should be returned to the trailer or to a boat lift for haul out before further work is performed.
4. It may be necessary to remove the water intake grate from the bottom of the Sport Jet to clean debris from the water intake. Remove the water intake grate by removing four screws. Reinstall the water intake grate with four screws. Apply Loctite 242 to the threads of the screws. Torque front screws to 200 lb. in. (23 N·m), torque rear screws to 75 lb. in. (8.5 N·m).

IMPORTANT: DO NOT operate the Sport Jet without the water intake grate installed.

MAINTENANCE

goh187



ohh15

Fuel System

Before servicing any part of the fuel system, stop engine and disconnect the battery. Drain the fuel system completely. Use an approved container to collect/store fuel. Wipe up any spillage immediately. Material used to contain spillage must be disposed of in an approved receptacle. Any fuel system service must be performed in a well ventilated area. Inspect completed service work for signs of fuel leakage.

WARNING

Avoid fire or explosion resulting from careless handling of fuel. Carefully follow all fuel system service instructions.

FUEL PUMP FILTER

- 1 For inspection, remove screw (a), cover (b), screen (c) and gas-ket (d) from fuel pump. Clean or replace screen. Reinstall gas-ket, screen, cover and screw.

FUEL LINE FILTER

- 2 Replace the fuel line filter (a) once a season or every 100 hours of use.

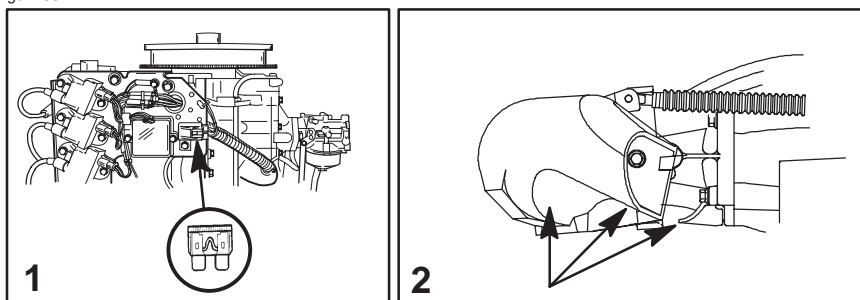
IMPORTANT: Visually inspect for fuel leakage from the fuel pump filter connections.

FUEL LINE INSPECTION

Visually inspect the fuel line for cracks, swelling, leaks, hardness or other signs of deterioration or damage. If any of these conditions are found, the fuel line must be replaced.

MAINTENANCE

goh188



omh4

Fuse Replacement

IMPORTANT: Always carry spare SFE 20 AMP fuses.

The electric starting circuit is protected from overload by an SFE 20 AMP fuse. If the fuse is blown, the electric starter motor will not operate. Try to locate and correct the cause of the overload. If the cause is not found, the fuse may blow again. Replace the fuse with a fuse of the same rating.

- 1** Replace with a new SFE 20 AMP rated fuse.

ohk10

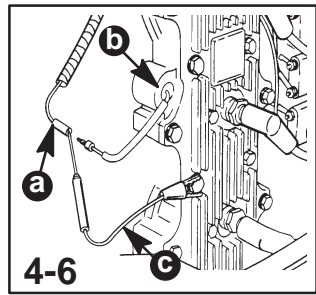
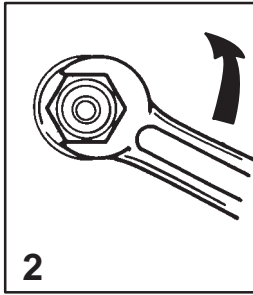
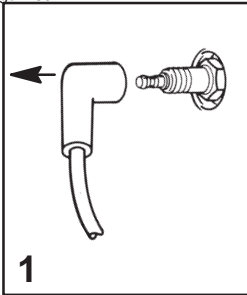
Corrosion Control Anodes

- 2** Your Sport Jet has three corrosion control anodes. One of the anodes is installed on the bottom of the nozzle, one installed on the reverse gate and one is installed under the rudder. An anode helps protect the Sport Jet against galvanic corrosion by sacrificing its metal to be slowly eroded instead of the Sport Jet metals.

Each anode requires periodic inspection especially in salt water which will accelerate the erosion. To maintain this corrosion protection, always replace the anode before it is completely eroded. Never paint or apply a protective coating on the anode as this will reduce effectiveness of the anode.

MAINTENANCE

goh189



ohm4

Spark Plug Inspection

Inspect spark plugs at the recommended intervals.

- 1** To remove the spark plugs, disconnect the spark plugs leads by twisting the rubber boots slightly and pull off.
- 2** Remove the spark plugs to inspect and clean. Replace spark plug if electrode is worn or the insulator is rough, cracked, broken, blistered or fouled.
- 3** Before reinstalling spark plugs, clean away dirt on the spark plug seats. Install plugs finger tight, and tighten 1/4 turn, or torque to 20 lb. ft. (27 N·m).

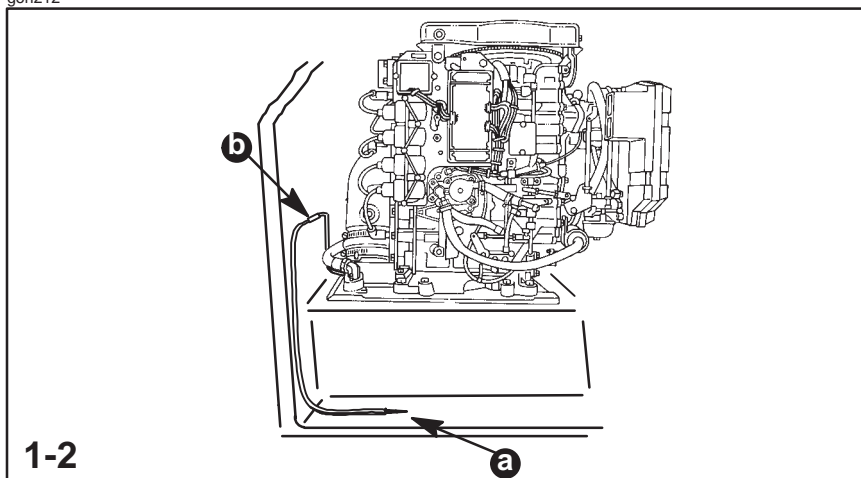
omt1

Testing Overheat Warning Horn

- 4** Disconnect tan lead (a) from the overheat sender assembly (b). To avoid wire being pulled from bullet connector, twist and pull on connector only.
- 5** Connect a jumper wire (c) between tan lead (a) and a good engine ground.
- 6** Turn ignition key to “ON” position. The warning horn should sound. If warning horn fails to sound, have engine checked by an authorized dealer. DO NOT operate the engine.

MAINTENANCE

goh212



1-2

omy2

Bilge Siphon Inspection

The bilge siphon system should be inspected at periodic intervals to insure maximum performance.

- 1 Inspect pickup screen (a) for foreign material. Clean if necessary.
- 2 Inspect for blockage inside the siphon break (b). Clean with small wire if necessary.

ohn1

Battery Inspection

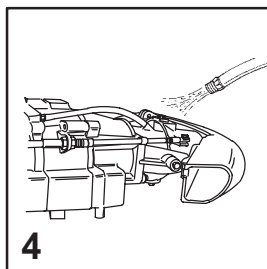
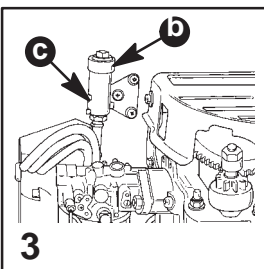
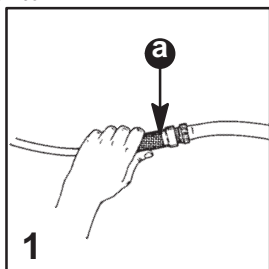
The battery should be inspected at periodic intervals to ensure proper engine starting capability.

IMPORTANT: Read the safety and maintenance instructions which accompany your battery.

1. Turn off the engine before servicing the battery.
2. Add water as necessary to keep the battery full.
3. Make sure the battery is secure against movement.
4. Battery cable terminals should be clean, tight and correctly installed. Positive to positive and negative to negative.
5. Make sure the battery is equipped with a nonconductive shield to prevent accidental shorting of battery terminals.

MAINTENANCE

goh190



ohel0

Flushing The Cooling System

Flushing the cooling system is essential after each use in salt water, after the boat has run aground, or when the overheat warning horn sounds (debris in jet powerhead). We recommend using Quicksilver Flushing Kit (Part Number 22-820543A1).

Refer to instructions included with the kit for permanent kit installation.

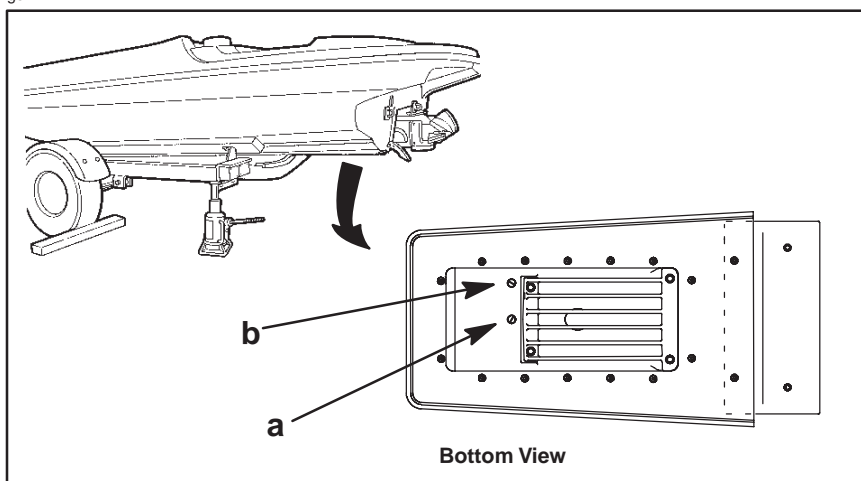
WARNING

DO NOT run engine on flushing kit. Lack of sufficient water intake could cause overheating and damage to engine and pump.

- 1** With kit installed and **engine off**, remove flush adapter plug and attach water hose (a).
- 2** Turn water on and flush engine block for at least 10 minutes.
- 3** Remove water hose from flush adapter and install adapter plug. Tighten plug securely. Place flush adapter (b) into adapter bracket (c).
- 4** Flush outer surfaces of water outlet nozzle with water stream.

MAINTENANCE

goh217



omz1

Draining Lubricant - Drive Housing

NOTE: When draining drive housing lubricant, visually check for presence of water in the lubricant. It may have settled to the bottom and will drain before the lubricant or it may have mixed with the lubricant giving it a milky color. In either case, have the drive housing checked by your dealer. Water in the lubricant can cause premature bearing failure or, in freezing weather, damage to the drive housing.

- 1 Remove fill/drain screw (a).
- 2 Remove vent screw (b).

ota2

Adding Or Refilling Lubricant - Drive Housing

NOTE: Use Quicksilver Hi Performance gear lube in the drive housing and stator.

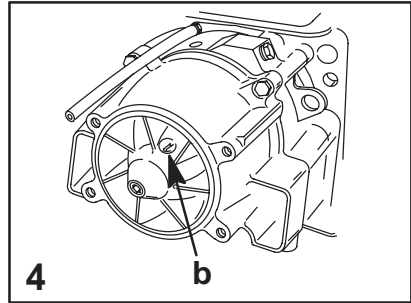
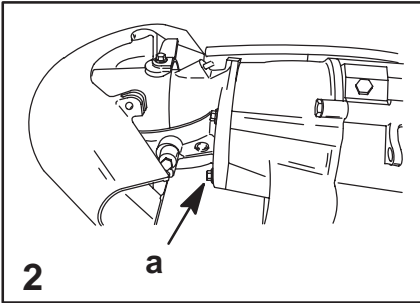
- 1 Insert nozzle of Hi Performance Gear Lubricant tube in fill/drain hole (a) of drive housing. Add lubricant until it appears at the oil vent adapter hole (b). Install vent screw.

NOTE: Capacity of drive housing is 24 oz. (709 ml).

- 2 Remove nozzle of tube and install fill/drain screw in bottom of drive housing.

MAINTENANCE

goh218



otb1

Draining Lubricant - Stator Assembly

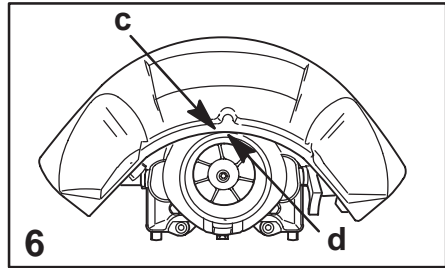
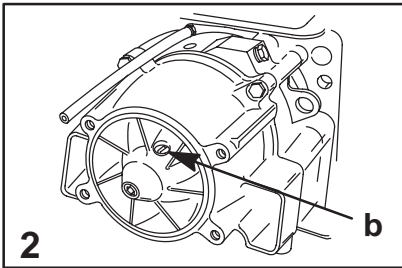
NOTE: When draining stator lubricant, visually check for presence of water in the lubricant. It may have settled to the bottom and will drain before the lubricant or it may have mixed with the lubricant giving it a milky color. In either case, have the stator checked by your dealer. Water in the lubricant can cause premature bearing failure or, in freezing weather, damage to the stator.

- 1** Disconnect shift and steering cables from the reverse gate and rudder. Be careful not to change adjustments.
- 2** Remove four screws (a) securing nozzle assembly to stator. Remove nozzle.
- 3** Remove four screws securing stator assembly to drive housing and two screws from the drive plate. Remove stator.
- 4** Remove fill/vent screw from fill hole (b) at rear of stator.
- 5** Tip stator forward to drain lubricant initially.
- 6** Tip the stator to drain remaining lubricant out the fill hole.

(continued on next page)

MAINTENANCE

goh218



otc3

Adding Or Refilling Lubricant - Stator Assembly

NOTE: Use Quicksilver Hi Performance gear lube in the stator and the drive housing.

- 1** Reinstall stator to pump. Be careful when sliding shaft past seals to prevent damage to seals. Apply Loctite 242 to stator bolts and torque to 35 lb. ft. (47 N·m).
- 2** Insert nozzle of Hi Performance Gear Lubricant tube in hole on stator. Add lubricant until it appears at the fill/vent hole (b). Capacity is 19 fl. oz. (562 ml). Install fill screw and washer.
- 3** Apply loctite 271 to four nozzle screws. Install nozzle assembly and anode and secure with four screws. Torque to 35 lb. ft. (47.5 N·m).
- 4** Connect steering and shift cables. Shift and steer unit through the entire range and check for any binding or stiffness.
- 5** Shift to forward gear position. Check that reverse gate is not pre-loaded; you should be able to slightly rock reverse gate up and down. Excessive play requires shift cable adjustment. Check that bottom edge of reverse gate (c) is above outside diameter of rudder (d). If reverse gate is below the outer diameter of the rudder (d), DO NOT operate the boat. See an authorized dealer for proper adjustment.

IMPORTANT: Shift cable must be correctly adjusted so that reverse gate does not interfere with water flow coming out of rudder. If reverse gate is hanging in water flow, a strong (severe) vibration may be felt in the control box and failure of forward stop and/or other components will result.

MAINTENANCE

otd1

Submerged Engine

A submerged Sport Jet will require service within a few hours by an authorized dealer once the Sport Jet is recovered from the water. This immediate attention by a servicing dealer is necessary once the engine is exposed to the atmosphere to minimize internal corrosion damage to the engine.

STORAGE

oia4

Storage Preparation

The major consideration in preparing your Sport Jet for storage is to protect it from rust, corrosion, and damage caused by freezing of trapped water.

The following storage procedures should be followed to prepare your Sport Jet for out-of-season storage or prolonged storage (two months or longer).

CAUTION

Never start or run your Sport Jet (even momentarily) out of the water. Damage to the pump and engine will occur.

oib7

FUEL SYSTEM

IMPORTANT: Gasoline containing alcohol (ethanol or methanol) can cause a formation of acid during storage and can damage the fuel system. If the gasoline being use contains alcohol, It is advisable to drain as much of the remaining gasoline as possible from the fuel tank, remote fuel line, and engine fuel system.

Fill the fuel system (tank, hoses, fuel pump, and carburetors) with treated (stabilized) fuel to help prevent formation of varnish and gum. Proceed with following instructions.

1. Portable Fuel Tank – Pour the required amount of Quicksilver Gasoline Stabilizer (follow instructions on container) into fuel tank. Tip fuel tank back and forth to mix stabilizer with the fuel.
2. Permanently Installed Fuel Tank – Pour the required amount of Quicksilver Gasoline Stabilizer (follow instructions on container) into a separate container and mix with approximately one quart (one liter) of gasoline. Pour this mixture into fuel tank.
3. Place the Sport Jet in water. Run the engine for ten minutes to allow treated fuel to reach the carburetors.

STORAGE

Storage Preparation (continued)

oid8

PROTECTING INTERNAL ENGINE COMPONENTS

1. With Sport Jet in water, start engine and let it run in neutral to warm up.
2. With engine running at fast idle, stop the fuel flow by kinking the remote fuel line. When engine begins to stall, quickly spray Quicksilver Storage Seal into carburetors until engine stops from lack of fuel.
3. Remove the spark plugs and inject a five second spray of Quicksilver Storage Seal around the inside of each cylinder.
4. Rotate the flywheel manually several times to distribute the storage seal in the cylinders. Reinstall spark plugs.

oil1

DRIVE HOUSING AND SPORT JET STATOR HOUSING

1. Drain and refill the lubricant. (pages 43 and 45)

oil1

BATTERY STORAGE

1. Follow the battery manufacturers instructions for storage and recharging.
2. Remove the battery from the boat and check water level. Recharge if necessary.
3. Store the battery in a cool, dry place.
4. Periodically check the water level and recharge the battery during storage.

TROUBLESHOOTING

1 – STARTER MOTOR WILL NOT CRANK THE ENGINE

POSSIBLE CAUSES

- Blown 20 Amp fuse in the starting circuit. Refer to Maintenance Section. (page 39)
- Sport Jet is not shifted to neutral position.
- Weak battery or battery connections are loose or corroded.
- Ignition key switch failure.
- Wiring or electrical connection faulty.
- Starter motor or starter solenoid failure.

2 – ENGINE WILL NOT START

POSSIBLE CAUSES

- Lanyard stop switch not in RUN position.
- Incorrect starting procedure. Refer to Operating Section.
- Old or contaminated gasoline.
- Engine flooded. Refer to Operating Section.
- Fuel is not reaching the engine.
 - a. Fuel tank is empty.
 - b. Fuel tank vent not open or restricted.
 - c. Fuel line is disconnected or kinked.
 - d. Fuel filter is obstructed. Refer to Maintenance Section.
 - e. Fuel pump failure.
 - f. Fuel tank filter obstructed.
 - g. Faulty anti-siphon valve on fuel tank.
- Ignition system component failure.
- Spark plugs fouled or defective. Refer to Maintenance Section.

TROUBLESHOOTING

3 – ENGINE RUNS ERRATICALLY

POSSIBLE CAUSES

- Spark plugs fouled or defective. Refer to Maintenance Section.
- Incorrect setup and adjustments.
- Fuel is being restricted to the engine.
 - a. Engine Fuel filter is obstructed. Refer to Maintenance Section.
 - b. Fuel tank filter obstructed.
 - c. Stuck anti-siphon valve located on permanently built in type fuel tanks.
 - d. Fuel line is kinked or pinched.
- Fuel pump failure.
- Ignition system component failure.
- Water in fuel.

4 – BATTERY WILL NOT HOLD CHARGE

POSSIBLE CAUSES

- Battery connections are loose or corroded.
- Low electrolyte level in battery.
- Worn out or inefficient battery.
- Excessive use of electrical accessories.
- Defective rectifier, alternator, or voltage regulator.

TROUBLESHOOTING

5 – PERFORMANCE LOSS AT NORMAL RPM

POSSIBLE CAUSES

- Boat overloaded or load improperly distributed.
- Excessive water in bilge.
- Boat bottom is dirty or damaged.

6 – PERFORMANCE LOSS AT WIDE OPEN THROTTLE

LOW RPM (USUALLY ENGINE RELATED) - POSSIBLE CAUSES

- Throttle not fully open.
- Incorrect engine timing, adjustments, or setup.
- Exhaust system blocked.

7 – PERFORMANCE LOSS AT WIDE OPEN THROTTLE

HIGH RPM (USUALLY PUMP RELATED) - POSSIBLE CAUSES

- Damaged impeller.
- Worn impeller or worn wear ring.
- Fouled impeller, inlet and/or stator.
- Ride plate seal is allowing water into tunnel (exhaust system).

WARRANTY INFORMATION

Warranty Registration

UNITED STATES AND CANADA

1. It is important that your selling dealer fills out the Warranty Registration Card completely and mails it to the factory immediately upon sale of the new product.
2. It identifies name and address of the original purchaser, product model and serial number(s), date of sale, type of use and selling dealer's code, name and address. The dealer also certifies that you are the original purchaser and user of the product.
3. Upon receipt of the Warranty Registration Card at the factory, you will be issued a plastic Owner Warranty Registration Card which is your only valid registration identification. It must be presented to the servicing dealer should warranty service be required. Warranty claims will not be accepted without presentation of this card.
4. A temporary Owner Warranty Registration Card will be presented to you when you purchase the product. It is valid only for 30 days from date of sale while your plastic Owner Warranty Registration Card is being processed. Should your product need service during this period, present the temporary registration card to the dealer. He will attach it to your warranty claim form.
5. Because of your selling dealer's continuing personal interest in your satisfaction, the product should be returned to him for warranty service.
6. If your plastic card is not received within 30 days from date of new product sale, please contact your selling dealer.
7. The limited warranty is not effective until the product is registered at the factory.

NOTE: Registration lists must be maintained by factory and dealer on marine products sold in the United States, should notification under the Federal Boat Safety Act be required.

WARRANTY INFORMATION

Warranty Registration

OUTSIDE THE UNITED STATES AND CANADA

1. It is important that your selling dealer fills out the Warranty Registration Card completely and mails it to the distributor or Marine Power Service Center responsible for administering the warranty registration/claim program for your area.
2. The Warranty Registration Card identifies your name and address, product model and serial number(s), date of sale, type of use and the selling distributor's/dealer's code number, name and address. The distributor/dealer also certifies that you are the original purchaser and user of the product.
3. A copy of the Warranty Registration Card, designated as the "Purchaser's Copy", MUST be given to you immediately after the card has been completely filled out by the selling distributor/dealer. This card represents your factory registration identification, and should be retained by you for future use when required. Should you ever require warranty service on this product, your dealer may ask you for the Warranty Registration Card to verify date of purchase and to use the information on the card to prepare the warranty claim form(s).
4. In some countries, the Marine Power Service Center will issue you a permanent (plastic) Warranty Registration Card within 30 days after receiving the "Factory Copy" of the Warranty Registration Card from your distributor/dealer. If you receive a plastic Warranty Registration Card, you may discard the "Purchaser's Copy" that you received from the distributor/dealer when you purchased the product. Ask your distributor/dealer if this plastic card program applies to you.
5. For further information concerning the Warranty Registration Card and its relationship to Warranty Claim processing, refer to the "International Warranty".

IMPORTANT: Registration lists must be maintained by the factory and dealer in some countries by law. It is our desire to have ALL products registered at the factory should it ever be necessary to contact you. Make sure your dealer/distributor fills out the warranty registration card immediately and sends the factory copy to the Marine Power International Service Center for your area.

WARRANTY INFORMATION

Limited Sport Jet Warranty

UNITED STATES AND CANADA

1. We warrant each new production (not those made for high performance purposes) Sport Jet Motor and accessories attached thereto, (hereafter referred to as "Product") to be free from defects in material and workmanship, but only when the customer purchases or obtains pre-delivery service from a Dealer authorized by us to distribute Mercury, Mariner or Force Outboards, as the case may be, in the country in which the sale or pre-delivery service occurred.
2. This warranty shall become effective only upon our receipt of a completed Warranty Registration Card which shall identify the Product so registered by serial number. This warranty shall remain in effect for a period of one (1) year from date of purchase.
3. Since this warranty applies to defects in material and workmanship, it does not apply to normal worn parts, adjustments, tune-ups or to damage caused by: 1) Neglect, lack of maintenance, accident, abnormal operation or improper installation or service; 2) Use of an accessory or part not manufactured or sold by us; 3) Operation with fuels, oils or lubricants which are not suitable for use with the Product; 4) Participating in or preparing for racing or other competitive activity or operating with a racing type lower unit; 5) Alteration or removal of parts; or 6) Water entering engine through the fuel intake, air intake or exhaust system.

For additional information regarding events and circumstance covered by warranty, and those that are not, see the Warranty Coverage section in the pages following this warranty. The terms and provisions of the Warranty Coverage section are incorporated by reference into this warranty.

4. Reasonable access must be provided to the product for warranty service. This warranty will not apply to: 1) Haul-out, launch, towing and storage charges, telephone or rental charges of any type, inconvenience, or loss of time or income, or other consequential damages; or 2) Removal and/or replacement of boat partitions or material because of boat design for necessary access to the Product.
5. Claim shall be made under this warranty by delivering the Product for inspection to a Mercury Marine dealer authorized to service the Purchaser's Product. If purchaser cannot deliver Product to such authorized dealer, he may give notice in writing to the company. We shall then arrange for the inspection and repair, provided such service is covered under this warranty. Purchaser shall pay for all related transportation charges and/or travel time. If the service is not covered by this warranty, purchaser shall pay for all related labor and material, and any other expenses associated with that service. Do not ship product or parts directly to the company. The Warranty Registration Card is the only valid registration identification and must be presented at the time warranty service is required. Warranty claims will not be accepted without presentation of the Warranty Registration Card.

WARRANTY INFORMATION

Limited Sport Jet Warranty

UNITED STATES AND CANADA

6. Our obligation under this Warranty shall be limited to repairing a defective part, or at our option, refunding the purchase price or replacing such part or parts with new or Mercury Marine certified remanufactured parts as shall be necessary to remedy any malfunction resulting from defects in material or workmanship as covered by this Warranty. The repair or replacement of parts, or the performance of service, under this warranty, does not extend the period of this warranty beyond its original expiration date. We reserve the right to improve the design of any Product without assuming any obligation to modify any Product previously manufactured.

- | |
|---|
| <ol style="list-style-type: none">7. THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS ARE EXPRESSLY DISCLAIMED. TO THE EXTENT THAT THEY CANNOT BE DISCLAIMED, THE IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE LIFE OF THE LIMITED SPORT JET WARRANTY. ALL INCIDENTAL AND CONSEQUENTIAL DAMAGES ARE EXCLUDED FROM COVERAGE UNDER THIS WARRANTY. SOME STATES/COUNTRIES DO NOT ALLOW THE DISCLAIMERS, LIMITATIONS AND EXCLUSIONS IDENTIFIED ABOVE, AS A RESULT, THEY MAY NOT APPLY TO YOU. |
|---|

8. This warranty gives you specific legal rights, and you may also have other legal rights which vary from state to state.

WARRANTY INFORMATION

Limited Sport Jet Warranty

INTERNATIONAL WARRANTY (OUTSIDE THE UNITED STATES AND CANADA)

1. We warrant each new production (not those made for high performance purposes) Sport Jet Motor and accessories attached thereto, (hereafter referred to as "Product") to be free from defects in material and workmanship, but only when the consumer sale is made in the country to which distribution is authorized by us. This warranty shall remain in effect for a period of one (1) year from date of purchase.
2. Since this warranty applies to defects in material and workmanship, it does not apply to normal worn parts, adjustments, tune-ups or to damage caused by: 1) Neglect, lack of maintenance, accident, abnormal operation or improper installation or service; 2) Use of an accessory or part not manufactured or sold by us; 3) Operation with fuels, oils or lubricants which are not suitable for use with the Product; 4) Participating in or preparing for racing or other competitive activity or operating with a racing type lower unit; 5) Alteration or removal of parts; or 6) Water entering engine through the fuel intake, air intake or exhaust system.

For additional information regarding events and circumstance covered by warranty, and those that are not, see the Warranty Coverage section in the pages following this warranty. The terms and provisions of the Warranty Coverage section are incorporated by reference into this warranty.

3. Reasonable access must be provided to the product for warranty service. This warranty will not apply to: 1) Haul-out, launch, towing and storage charges, telephone or rental charges of any type, inconvenience, or loss of time or income, or other consequential damages; or 2) Removal and/or replacement of boat partitions or material because of boat design for necessary access to the Product.
4. Claim shall be made under this warranty by delivering the Product for inspection to a Mercury Outboard Dealer, Mariner Outboard Dealer, or Force Outboard Dealer authorized to service the Product. If purchaser cannot deliver Product to such authorized Dealer, he may give notice in writing to the nearest Marine Power Service Office or Distributor. The Marine Power Service Office or Distributor shall then arrange for the inspection and repair, provided such service is covered under this warranty. Purchaser shall pay for all related transportation charges and/or travel time. If the service is not covered by this warranty, purchaser shall pay for all related labor and material and any other expenses associated with that service. Any Product or parts shipped by purchaser for inspection or repair must be shipped with transportation charges prepaid.

WARRANTY INFORMATION

ou17

Limited Sport Jet Warranty

INTERNATIONAL WARRANTY (OUTSIDE THE UNITED STATES AND CANADA)

5. Purchaser must provide “proof of purchase” and substantiate “date of purchase” by presenting the “Purchaser’s Copy” of the “Warranty Registration Card” or the plastic “Warranty Registration Card” to the dealer authorized to service the Product. If either of these items is not available, purchaser must provide a copy of the original “Bill of Sale” (Sales Contract) for the product to be serviced. Warranty Claims will not be accepted until adequate “proof of purchase” is presented by purchaser and the “date of purchase” has been substantiated.
 6. Our obligation under this Warranty shall be limited to repairing a defective part, or at our option, refunding the purchase price or replacing such part or parts with new or Mercury Marine certified remanufactured parts as shall be necessary to remedy any malfunction resulting from defects in material or workmanship as covered by this Warranty. The repair or replacement of parts, or the performance of service, under this warranty, does not extend the period of this warranty beyond its original expiration date. We reserve the right to improve the design of any Product without assuming any obligation to modify any Product previously manufactured.
7. **THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS ARE EXPRESSLY DISCLAIMED. TO THE EXTENT THAT THEY CANNOT BE DISCLAIMED, THE IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE LIFE OF THE LIMITED SPORT JET WARRANTY. ALL INCIDENTAL AND CONSEQUENTIAL DAMAGES ARE EXCLUDED FROM COVERAGE UNDER THIS WARRANTY. SOME STATES/COUNTRIES DO NOT ALLOW THE DISCLAIMERS, LIMITATIONS AND EXCLUSIONS IDENTIFIED ABOVE, AS A RESULT, THEY MAY NOT APPLY TO YOU.**
8. This warranty gives you specific legal rights, and you may also have other legal rights which vary from country to country.

WARRANTY INFORMATION

op3

Warranty Coverage

The purpose of this section is to help eliminate some of the more common misunderstandings regarding warranty coverage. The following information explains some of the types of services that are not covered by warranty.

Keep in mind that warranty covers repairs that are needed within the warranty period because of defects in material and workmanship. Installation errors, accidents, normal wear, and a variety of other causes that affect the product are not covered.

Warranty is limited to defects in material or workmanship, but only when the consumer sale is made in the country to which distribution is authorized by us.

Should you have any questions concerning warranty coverage, contact your authorized dealer. They will be pleased to answer any questions that you may have.

WARRANTY DOES NOT APPLY TO THE FOLLOWING

1. Minor adjustments and tune-ups, including checking, cleaning or adjusting spark plugs, ignition components, carburetor settings, filters, belts, controls, and checking lubrication made in connection with normal services.
2. Damage caused by neglect, lack of maintenance, accident, abnormal operation or improper installation or service.
3. Haul-out, launch, towing charges, removal and/or replacement of boat partitions or material because of boat design for necessary access to the product, all related transportation charges and/or travel time, etc. Reasonable access must be provided to the product for warranty service. Customer must deliver product to an authorized dealer.
4. Additional service work requested by customer other than that necessary to satisfy the warranty obligation.
5. Labor performed by other than an authorized dealer may be covered only under following circumstances: When performed on emergency basis (providing there are no authorized dealers in the area who can perform the work required or have no facilities to haul out, etc., and prior factory approval has been given to have the work performed at this facility).
6. All incidental and/or consequential damages (storage charges, telephone or rental charges of any type, inconvenience or loss of time or income) are the owner's responsibility.

WARRANTY INFORMATION

op2

Warranty Coverage

7. Use of other than Quicksilver replacement parts when making warranty repairs.
8. Oils, lubricants or fluids changed as a matter of normal maintenance is customer's responsibility unless loss or contamination of same is caused by product failure that would be eligible for warranty consideration.
9. Participating in or preparing for racing or other competitive activity or operating with a racing type lower unit.
10. Engine noise does not necessarily indicate a serious engine problem. If diagnosis indicates a serious internal engine condition which could result in a failure, condition responsible for noise should be corrected under the warranty.
11. Pump unit and/or impeller damage caused by striking a submerged object is considered a marine hazard.
12. Water entering engine through the fuel intake, air intake or exhaust system. or submersion.
13. Failure of any parts caused by lack of cooling water, which results from starting engine out of water, foreign material blocking inlet or ingestion of sand and/or mud.
14. Use of fuels and lubricants which are not suitable for use with or on the product. Refer to the Maintenance Section.
15. Our limited warranty does not apply to any damage to our products caused by the installation or use of parts and accessories which are not manufactured or sold by us. Failures which are not related to the use of those parts or accessories are covered under warranty if they otherwise meet the terms of the limited warranty for that product.

WARRANTY INFORMATION

oq2

Transfer Of Warranty

The limited warranty is transferable to a subsequent purchaser, but only for the remainder of the unused portion of the limited warranty. This will not apply to products used for commercial applications.

DIRECT SALE BY OWNER

The second owner can be registered as the new owner and retain the unused portion of the limited warranty by sending the former owner's plastic Owner Warranty Registration Card and a copy of the bill of sale to show proof of ownership. In the United States and Canada, mail to:

Mercury Marine

W6250 W. Pioneer Road

P.O. Box 1939

Fond du Lac, WI 54936-1939

Attn: Warranty Registration Department

A new Owner Warranty Registration Card will be issued with the new owner's name and address. Registration records will be changed on the factory computer registration file.

There is no charge for this service.

For products purchased outside the United States and Canada, contact the distributor in your country, or the Mercury Marine Service Office closest to you.

OWNER SERVICE ASSISTANCE

or1

Local Repair Service

Always return your Sport Jet to your local authorized dealer should the need for service arise. Only he has the factory-trained mechanics, knowledge, special tools and equipment and the genuine Quicksilver parts and accessories to properly service your engine should the need occur. He knows your engine best.

or2

Service Away From Home

If you are away from your local dealer and the need arises for service, contact the nearest authorized dealer. Refer to the Yellow Pages of the telephone directory. If, for any reason, you cannot obtain service, contact the nearest Mercury Marine Service Office.

or3

Parts and Accessories Inquires

All inquiries concerning Quicksilver replacement parts and accessories should be directed to your local authorized dealer. The dealer has the necessary information to order parts and accessories for you should he not have them in stock. Only authorized dealers can purchase genuine Quicksilver parts and accessories from the factory. Mercury Marine does not sell to unauthorized dealers or retail customers. When inquiring on parts and accessories, the dealer requires the model and serial number to order the correct parts.

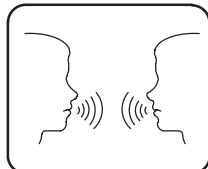
OWNER SERVICE ASSISTANCE

or4

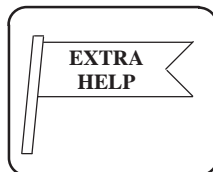
Service Assistance

Your satisfaction with your Sport Jet product is very important to your dealer and to us. If you ever have a problem, question or concern about your outboard product, contact your dealer or any Authorized Mercury Marine Dealership. If additional assistance is required, take these steps.

- 1.** *Talk with the dealership's sales manager or service manager. If this has already been done, then contact the owner of the dealership.*



- 2.** *Should you have a question, concern or problem that cannot be resolved by your dealership, please contact Mercury Marine Service Office for assistance. Mercury Marine will work with you and your dealership to resolve all problems.*



The following information will be needed by the service office:

- Your name and address
- Daytime telephone number
- Model and serial number of your engine and pump unit
- The name and address of your dealership
- Nature of problem

Mercury Marine Service Offices are listed on the next page.

OWNER SERVICE ASSISTANCE

or5

Mercury Marine Service Offices

For assistance, call, fax, or write. *Please include your daytime telephone number with mail and fax correspondence.*

Telephone 	Fax 	Mail 
United States		
(920) 929-5040	(920) 929-5893	Mercury Marine W6250 W. Pioneer Road P.O. Box 1939 Fond du Lac, WI 54936-1939
Canada		
(905) 270-4481	(905) 270-4510	Mercury Marine Ltd. 1156 Dundas Hwy. E. Mississauga, Ontario Canada L4Y 2C2
Australia, Pacific		
(61) (3) 9791-5822	(61) (3) 9793-5880	Mercury Marine Australia 132-140 Frankston Road Dandenong, Victoria 3164 Australia
Europe, Middle East, Africa		
(32) (87) 32 • 32 • 11	(32) (87) 31 • 19 • 65	Marine Power - Europe, Inc. Parc Industriel de Petit-Rechain B-4800 Verviers Belgium
Mexico, Central America, South America, Caribbean		
(305) 385-9585	(305) 385-5507	Mercury Marine - Latin America & Caribbean 9010 S.W. 137th Ave. Suite 226 Miami, FL 33186 U.S.A.
Japan		
(81) 543/34-2500	(81) 543/34-2022	Mercury Marine - Japan No. 27-2 Muramatsu Chisaki-Shinden Shimizu City Shizuoka Prefecture Japan 424
Asia, Singapore		
(65) 270-7680	(65) 270-7898	Marine Power International, Ltd. Block 1002 Jalan Bukit Merah #07-08 Redhill Industrial Estate JTC Flatted Factories Singapore 0315

oka1

Maintenance Log

[illegible]

ok

MAINTENANCE LOG

[illegible]