



# SEA-DOO® JET BOATS



**SPEEDSTER**

5 8 9 4

**SPORTSTER**

5 8 9 5

**CHALLENGER**

5 8 9 6

**OPERATOR'S  
GUIDE**

2 1 9 0 0 0 0 8 7

## SAFETY WARNING

Disregarding any of the safety precautions and instructions contained in this *Operator's Guide* and on *Product Warnings* could cause injury, including the possibility of death.

This *Operator's Guide*, the *Safety Handbook* and videocassette should remain with the jet boat at the time of resale.

AFTER-SALES SERVICE  
BOMBARDIER INC.  
VALCOURT (QUÉBEC)  
CANADA J0E 2L0



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Bombardier Inc. :

SEA-DOO®

Sea-Doo Lube®

Sea-Doo Jet Pump Synthetic Oil

Sea-Doo Synthetic Grease

Gelcote® is a trademark of Gelcote International

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## **Doin'it on your new Sea-Doo Jet Boat**

Congratulations, you are now the proud owner of a jet boat. Whether you are an experienced boater or are new to the sport of boating, we ask you to take the time to view the videocassette provided with your jet boat, to read this *Operator Guide* and the *Safety Handbook* and familiarize yourself with the contents. The Guide contains pertinent information which if followed, will provide you with the necessary knowledge to help you fully enjoy the pleasures of this craft.

We strongly recommend that any boat operator complete a safety boating course. Check with your local Coast Guard or Power and Sail Squadron in your area for course availability. More serious boaters may want to obtain "Chapman Piloting" by Elbert S. Maloney, available at most book stores.

When introducing your family or friends to the sport, be sure they fully understand the controls and operation of the jet boat and the importance of courteous, responsible riding.

Each jet boat operator has a responsibility to ensure the safety of its passengers and other water users. Please follow all safety instruction and drive with care.

We encourage you to have an Annual Safety Inspection of your jet boat. Please, contact your dealer for further details.

Finally, we urge you to visit your dealer regularly for regular and safety maintenance as well as any boating accessories you may require.

Have fun and .....Bon Voyage.

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# FOREWORD

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The *Operator's Guide* has been prepared to acquaint the owner / operator or passenger of this jet boat with the various jet boat controls, maintenance and safe riding instructions. It is indispensable for the proper use of the product, and should be kept in a waterproof bag in the jet boat at all times.

For any questions pertaining to the warranty and its application, please consult the WARRANTY QUESTIONS AND ANSWERS section in this guide, or an authorized SEA-DOO jet boat dealer.

This guide uses the following symbols to emphasize particular information.

◆ **WARNING** : Identifies an instruction which, if not followed, might cause serious personal injuries including the possibility of death.

▼ **CAUTION** : Denotes an instruction which, if not followed, might severely damage the jet boat and / or components.

○ **NOTE** : Indicates supplementary information needed to fully complete an instruction.

Although the mere reading of such information does not eliminate the hazard, the understanding and application of the information will promote its correct use.

The information and components / system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, it may have some differences between the manufactured product and the descriptions and / or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

It is understood that this guide may be translated into another language. In the event of any discrepancy, the English version shall prevail.

Specifications are given in the SI metric system with the SAE U.S. equivalent in parenthesis. Where precise accuracy is not required, some conversions are rounded off for easier use.

A *Shop Manual* can be obtained for complete service, maintenance and more repair information.

◆ **WARNING** : The engines and the corresponding components identified in this guide should not be utilized on product(s) other than those they were designed for. Maintenance procedures and specified tightening torques must be strictly adhered to. Never attempt repairs unless the appropriate tools are available. This jet boat is designed with parts dimensioned in both the metric and the imperial systems. When replacing fasteners, make sure to use only those recommended by Bombardier. Mismatched or incorrect fasteners could cause damage to the jet boat or possible personal injury.

○ **NOTE** : The following list gives the equivalent of terms commonly used to designate boat references.

Port : LH side  
Starboard : RH side  
Bow : Front  
Stern : Rear

This manual applies to different models of Sea-Doo Jet boat. It includes description and explanations of standard equipment. As a result you may find material in this manual that does not apply to your specific jet boat.

## ◆ SAFETY WARNING

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To fully appreciate the pleasures, enjoyment and excitement of boating there are some basic rules that **MUST** be observed and followed by any boater. Some rules may be new to you while others may be common sense or obvious, irrespective, we ask that you please take a few minutes of your time to read these safety instructions completely before you operate your boat. **Failure to follow this safety information and safe boating rules could result in injury, including the possibility of death to you, your passenger(s), or other water users.**

Information in this Guide is limited. It is strongly recommended that you obtain further boating information from the local Coast Guard or Power Squadron. We further recommend you take a safe boating course. Check local and federal boating laws applicable to the waterways where you intend to use the boat. Learn the local rules of the road.

Become completely familiar with the controls and operation of the boat before taking on a passenger(s) or embarking on a trip. If you have not had the opportunity to do so with your dealer, practice driving solo in a suitable area and feel the response of each control. Start, accelerate then stop using one then both engines (if equipped). Be fully familiar with all controls before fully pushing the throttle(s).

The performance of this jet boat may significantly exceed that of other jet boats you may have operated. Therefore, use of this jet boat by a novice or inexperienced operator is not recommended.

Observe and follow all on-product warning labels and the content of this Guide.

An operator and passenger(s) should wear suitable eye and body protection as well as deck shoes or booties.

Coast Guard approved personal floatation devices (PFD) must be worn by all aboard.

Operation of this boat by a minor or disabled person is NOT recommended.

Do not operate the boat after consuming alcohol or drugs.

Store or tie-down any loose articles or necessary boating equipment before operating the boat.

Always perform the pre-operation checks as specified in this Guide. This includes :

- Attaching the safety lanyard to your PFD.
- Verification of throttle lever(s), shifter and steering movement.
- Verification of start / stop button operation.
- Oil and fuel levels.
- Use of blower.
- Adequate water depth.
- Functional navigation lights.
- Required boating equipment. (Know how to use each).

The operator and passenger(s) must be properly seated in their designated seats before starting or moving the boat. Do not permit a passenger to use the sun seat except in calm waters and at very low speeds. Never allow anyone to sit on the engine compartment or boarding platform while the boat is operational. Allow no one to jump into the boat at anytime, or move during boat operation. The risk of an accidental fall or slip is always present.

Ensure operator all-round visibility is unrestricted.

While the engine(s) can be stopped by depressing the start / stop button(s), good habit recommends that the safety lanyard be used to stop the engine(s) at all times.



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Wave or wake jumping is dangerous and in many regions illegal.

Most boating accidents occur as a result of the failure of the operator to keep a lookout for other water users or other potential hazards. Keep a safe distance from other boats or watercraft. Do not attempt to splash others with your wake. Do not ride the surf line.

This boat is equipped with bow and stern navigation lights which should be used as required after dark or before dusk. Lower speed and do not operate the boat in reduced visibility. The boat is not equipped with spot-lights.

To prevent accidental starting or unauthorized use, always detach the safety lanyard from the boat especially during maintenance, cleaning of the intake grill(s), or when swimmers are nearby.

Ensure that all passengers know how to reboard the boat from the water.

Always have an observer while towing a skier.

Know the waters in which the boat is to be operated. Current, tides, rapids, shallow water, hidden obstacles etc., can effect safe operation.

When boating, apply the principle of 1/3 fuel to destination, 1/3 back and 1/3 reserve fuel supply.

Maintain the boat and equipment in top condition at all times. Adhere to the prescribed maintenance schedules. Use a protective cover when not in use. After salt or foul water use, the boat should be thoroughly rinsed and protected from corrosion. If you suspect water ingestion into the engine, contact your dealer for proper servicing.

The bilge must be kept clean of oil, water or other foreign materials. Do not carry spare fuel and inflammable liquids in any of the storage or engine compartments.

Avoid adding on accessories, carrying equipment or passengers which may alter the boat's configuration or balance.

Only perform servicing procedures which are detailed in this Guide. Further assistance or information can be obtained from your dealer. In many instances proper tools and training is required for certain servicing or repair procedures.

Gasoline fumes are flammable and explosive. Always adhere to the fueling and starting procedures contained in this Guide and those given to you by the marina.

Never operate the engine more than one minute without adequate water supply. (Garden hose installed, or in water).

Always keep in mind that as the throttle lever(s) are brought to idle position, less directional control is available. To turn the boat, both steering and throttle(s) are necessary. This boat has the capability of turning more sharply than other boats, however, unless in an emergency, do not negotiate sharp, high speed turns.

Like any other boat, this boat has no brake. Stopping distance will vary depending on initial speed, load, wind, and water conditions. Practice stopping and docking in a safe area to have an idea of how long it will take to stop the boat under varying conditions.

Prolonged exposure to the sun, wind etc., causes fatigue and may affect your reaction time.

Do not overload the boat or take on more passengers than designated for the intended type of boating. Load and altitude will also affect boat performance.

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Proceed with caution and at very low speeds in shallow water. Grounding or abrupt stops may result, or debris may be picked up and be jettisoned rearward towards people or property. The impellers are turning even when the shift lever is at neutral.

As the "skipper" of a boat you are responsible for damage to other boats and property caused by the wake of your boat. Respect no wake zones.

Respect the rights of other water users and the environment. Allow no one to throw refuse overboard.

Do not operate the boat in inclement weather.

Except when necessary during docking, always use both throttle levers (if equipped) simultaneously. If one lever is advanced more than the other, or if one engine is shut off during operation, directional control will be affected. Steering compensation may be required. Constant attention and control of the boat is required by the operator for safe operation.

Use of the bilge blower should never replace "smelling" for gasoline fumes. Blower and bilge pump must be off during boat operation.

The ski tow-universal eyelet can be used to attach a ski-rope. Do not use this ring for para-sailing or other uses which may overstress the transom.

Lifting the boat requires special equipment and experience. Do not attempt to lift the boat without such experience or equipment.

Respect the safety and comfort of your passenger(s) and persons being towed on skis.

Always carry the regulatory required safety items onboard. Check with local regulations or your dealer.

Drive prudently and have fun.

# **THE 1996 BOMBARDIER JET BOAT LIMITED WARRANTY**

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## **1. WARRANTY COVERAGE PERIOD**

BOMBARDIER INC. ("Bombardier"), as manufacturer, warrants FROM THE DATE OF DELIVERY TO THE FIRST CONSUMER that each 1996 SEA-DOO jet boat sold, as NEW and UNUSED and PREDELIVERED by an authorized North American SEA-DOO jet boat dealer, will be free from any defects in material and/or workmanship for a PERIOD of:

a) For private use:

TWELVE (12) CONSECUTIVE MONTHS, with the exception for the deck and hull fiberglass structure; and

SIXTY (60) CONSECUTIVE MONTHS for the deck and hull fiberglass structure.

b) For commercial Use:

FOUR (4) CONSECUTIVE MONTHS, with the exception for the deck and hull fiberglass structure; and

TWELVE (12) CONSECUTIVE MONTHS for the deck and hull fiberglass structure.

The Warranty Coverage Period on all genuine Bombardier accessories installed by an authorized SEA-DOO jet boat dealer at the time of delivery of the new and unused SEA-DOO jet boat, carry the same Warranty Coverage Period as the SEA-DOO jet boat.

## **2. WHAT BOMBARDIER WILL DO**

BOMBARDIER will repair or replace, at its option, all genuine BOMBARDIER part found defective in material and/or workmanship, under normal use, maintenance and service, with a genuine BOMBARDIER part without charge for parts and labor, at any authorized SEA-DOO jet boat dealer during the Warranty Coverage Period.

## **3. CONDITION TO HAVE WARRANTY WORK VALIDATED**

Whenever warranty work is claimed, the customer must notify an authorized SEA-DOO jet boat dealer within two (2) days of the appearance of the defect in material and/or workmanship and present to the servicing authorized SEA-DOO jet boat dealer the SEA-DOO Warranty Registration Card or a proof of purchase of the NEW and UNUSED 1996 SEA-DOO jet boat. The customer must prior to completion of all warranty work sign the repair/work order. All parts replaced under warranty become the property of BOMBARDIER.

## **4. EXCLUSIONS - ARE NOT WARRANTED**

- Normal wear and tear items;
- Labor, parts and lubricant costs of all maintenance services;
- Damage caused by failure to provide proper maintenance and/or storage, as described in the 1996 SEA-DOO jet boat Operator's Guide;
- Damage resulting from improper repairs, modifications or use of non-approved parts or repairs done by a non-authorized SEA-DOO jet boat dealer;
- Damage resulting from abuse, misuse, neglect, racing;
- Damage resulting from accident, fire, theft, vandalism or any act of God;
- Incidental or consequential damages, or damages of any kind as but not limited to towing charges, telephone calls or taxi;
- Water damages caused by water ingestion and improper service or maintenance; and
- Damage related to gel coat finish including but not limited to cosmetic gel coat finish, blisters or fiberglass delamination caused by blisters, crazing, spider or hairline cracks.

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## 5. LIMITATIONS OF LIABILITY

This warranty gives you specific rights, and you may also have other legal rights which may vary from state to state, or province to province. **WHERE APPLICABLE, THIS WARRANTY IS EXPRESSLY GIVEN AND ACCEPTED IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.**

Neither the distributor, any authorized SEA-DOO jet boat dealer nor any other person has been authorized to make any affirmation, representation or warranty other than those contained in this warranty, and if made, such affirmation, representation or warranty shall not be enforceable against BOMBARDIER or any other person.

In no event shall BOMBARDIER be liable for special, consequential or incidental damages, including but not limited to loss of use and transportation costs. Some states or provinces do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitation or exclusion may not apply.

BOMBARDIER reserves the right to modify this warranty at any time, being understood that such modification will not alter the warranty conditions applicable to the SEA-DOO jet boat sold while this warranty is in effect.

## 6. CONSUMER ASSISTANCE

- a) In the event of a controversy or a dispute arising in connection with this BOMBARDIER LIMITED WARRANTY, BOMBARDIER suggests that you try to resolve the issue at the dealership level. We recommend discussing the issue with the authorized dealer's service manager or owner.
- b) If further assistance is required, the DISTRIBUTOR's service department should be contacted in order to resolve the matter.
- c) If the issue has still not been resolved, please submit in writing your complaint to:

In Canada  
BOMBARDIER INC.  
SEA-DOO/SKI-DOO Division  
Customer Assistance Center  
Valcourt, Québec  
CANADA J0E 2L0

Tel: 514-532-5000

In USA:  
BOMBARDIER CORPORATION  
SEA-DOO/SKI-DOO Division  
Customer Assistance Center  
P.O. Box 8035  
7575 Bombardier Court  
Wausau, WI 54402-8035  
Tel: 715-848-4957

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SEA-DOO/SKI-DOO Division  
June 1995

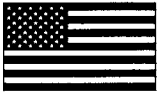
# LIST OF DISTRIBUTORS

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## CANADA

**BOMBARDIER INC.**  
726 St-Joseph Street  
Valcourt, Quebec, Canada  
J0E 2L0  
(514) 532-2211



## USA

**BOMBARDIER CORPORATION**  
7575 Bombardier Court  
P.O. Box 8035, Wausau, WI  
54402-8035, USA  
(715) 842-8886

If your SEA-DOO Jet boat requires warranty service, you must take it to any authorized SEA-DOO Jet boat dealer. Be sure to bring your warranty registration card or other valid proof of the original date of purchase. If a question or problem arises regarding warranty, first contact the service manager or owner of the SEA-DOO Jet boat dealership.

To find the nearest authorized Sea-Doo Jet Boat dealer, dial : 1-800-882-2900.

# WARRANTY QUESTIONS AND ANSWERS

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Q. Why must my jet boat be registered at the factory ? After all I do have my original invoice as proof of when I purchased my jet boat.

A. *Your warranty is valid at any authorized dealer of the product. Your registration is the key element in providing the servicing dealer with the necessary data to complete warranty claim forms.*

*The federal government requires each manufacturer and dealer to maintain a complete up-to-date list of all first purchasers in case of a safety-related defect and recall. This list is compiled from the warranty registrations sent to BOMBARDIER INC. by the selling dealer at the time of your purchase. If you have a change of address after the purchase of your new SEA-DOO jet boat, please advise us of your new address by sending the Change of Address / Ownership Card in this book or, a postcard listing your model number, dealer number (or dealer's name) as it is shown on your warranty card, your name and new mailing address.*

Q. What costs are my responsibility during the warranty period ?

A. *The customer's responsibility includes all costs of normal maintenance services, non-warranty repairs, accident and collision damage.*

Q. What is cavitation ?

A. *This phenomenon is caused by a part travelling at high speed in a fluid (ex. : an impeller in water). The heat / bubbles generated in some areas are enough to draw microscopic particles from the material. Cavitation will increase if there are scratches or dents in the housing / impeller or if the wear ring is worn.*

Q. Does the warranty cover the jet drive system components ?

A. *Yes, if components replacement is not due to cavitation or normal wear.*

*Ex. : The impeller has to be considered a wear item since tiny particles and sand contained in the water will eventually cause some wear. This situation occurs most often when the jet boat is driven in shallow water where rocks and debris can be drawn into the pump.*

*In order to extend the service life of the impeller housing, we have developed a replaceable wear ring around the impeller. It is made of plastic, therefore it may wear with use and should be replaced. This is a convenient feature and inexpensive to replace. This replacement is considered normal maintenance and not covered by warranty.*

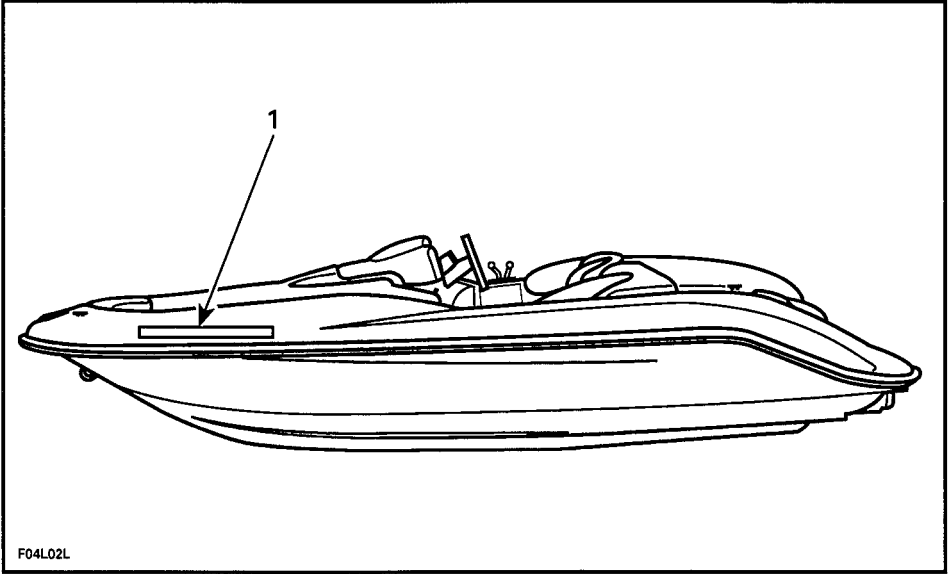
Q. What are some examples of neglect or abuse ?

A. *These terms are general and overlap each other in areas. Specific examples include ; the engine running out of oil, operating the jet boat with a broken or damaged part, which causes another part to fail and so on. If you have any specific questions on operation or maintenance, please contact your SEA-DOO jet boat dealer for advice.*

- 
- Q. Does the warranty cover incidental costs such as transportation due to a failure ?
- A. *No. The warranty is limited to the repair of the SEA-DOO jet boat itself.*
- Q. May I perform any or all of the recommended maintenance shown in the *Operator's Guide* instead of having the dealer do them ?
- A. *Yes, if you are a qualified mechanic and follow the procedures specified in the Operator's Guide and Shop Manual. We do recommend however that the critical adjustments to timing and carburetion be done by a SEA-DOO jet boat dealer.*
- Q. Will the warranty be voided or cancelled if I do not operate or maintain my new SEA-DOO exactly as specified in the *Operator's Guide* ?
- A. *No. The warranty on a new SEA-DOO jet boat cannot be "voided" or "cancelled". However, if a particular failure is caused by operation or maintenance other than as shown in the Operator's Guide, that failure may not be covered under warranty.*
- Q. What responsibility does my dealer have under this warranty ?
- 1. Completely set up every new SEA-DOO jet boat before sale ;*
  - 2. Explain the operation, maintenance and warranty requirements to your satisfaction at the time of sale. In addition, each SEA-DOO jet boat dealer is responsible for set-up, service and warranty repair work.*

# REGISTRATION NUMBER LOCATION \_\_\_\_\_

All jet boats are required by federal law to be registered and legally numbered. Due to space availability for proper display of registration number, refer to the following illustration for location. The registration number must appear on each side of the jet boat.



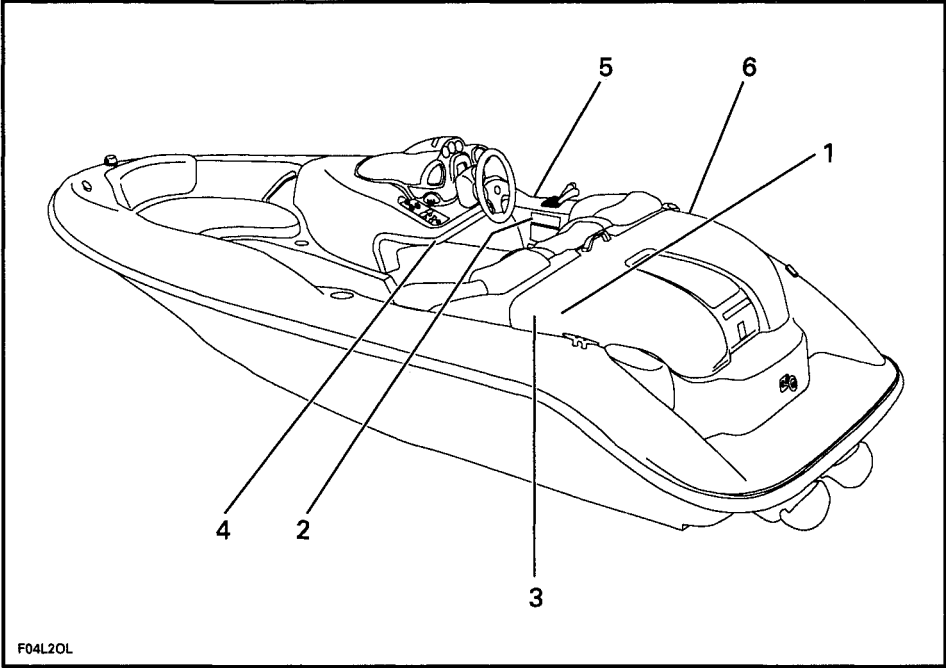
*TYPICAL*

1. Registration number location



# LOCATION OF THE IMPORTANT LABELS

Please read the following labels carefully before operating this boat.



TYPICAL

1

**◆ WARNING**

**DO NOT BOOST BATTERY.  
SERVICING OF ELECTRICAL COMPONENTS  
SHOULD BE DONE BY DEALER ONLY.**

F02L2CZ

4

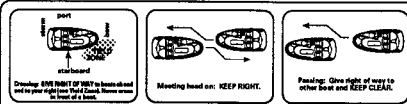
**◆ WARNING**

Gasoline vapors can explode. Before starting engine, operate blower for 4 minutes and check engine compartment bilge for gasoline vapors.

F04L2QY

2

**REMEMBER THESE RULES OF THE ROAD**



**◆ WARNING**

Read and follow warning labels and operator guide/safety handbook before operation. Severe injury or death can result from ignoring warnings or through improper use of this jet boat. The performance of this jet boat may significantly exceed that of other jet boats you may have operated. Therefore, use of this jet boat by novice or inexperienced operators is not recommended.

- Check throttle/shifter controls and steering position before starting engine.
- Directional control is lost when throttle or engine are off.
- Do not splash others or jump waves or wakes with the jet boat.
- Operator and passengers should always wear approved life vests and recommended clothing.
- Do not operate if passengers are not properly seated and using handgrips, or if visibility is obstructed.
- Properly attach safety lanyard to your life vest.
- Keep a safe distance from all other water users. Be aware of all boating regulations.

**MADE IN CANADA BOMBARDIER INC. 5894**

**U.S. COAST GUARD  
MAXIMUM CAPACITIES  
4 PERSONS OR 650 LBS**

**THIS BOAT COMPLIES WITH U.S. COAST GUARD SAFETY STANDARDS IN EFFECT ON DATE OF MANUFACTURE**

F04L2PY

5

**◆ WARNING**

- Use electronic tether key only.
- Shifter must be in neutral to start engine.
- To operate shifter, throttle lever must be at idle position.

F04L2RY

6

**◆ WARNING**

**WHILE FUELING, STOP ENGINE. FUEL TANK MAY BE PRESSURIZED, SLOWLY TURN CAP WHEN OPENING. KEEP WATERCRAFT LEVEL. DO NOT OVERFILL. CHECK OIL LEVEL. PERIODICALLY, VERIFY FUEL SYSTEM.**

F01L6VZ

**TYPICAL**

3

**▼ CAUTION**

**OIL ONLY**

**Oil fill capacity 2 US gallons  
Use Bombardier Rotax oil when refilling  
Do not use ashless NMMA oils**

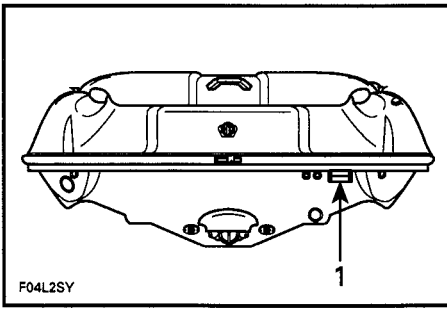
F04L39Y

# IDENTIFICATION NUMBERS

The main components of the jet boat (engine(s) and hull) are identified by different serial numbers. It may sometimes become necessary to locate these numbers for warranty purposes or to trace the jet boat in the event of theft.

## Hull

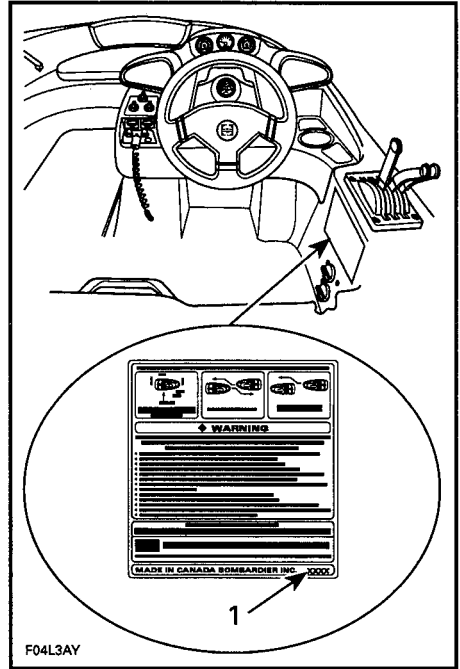
The Hull Identification Number (H.I.N.) is located at right hand rear side of the hull.



### TYPICAL

1. Hull Identification (H.I.N.)

The jet boat model number can be found on RH side of operator position.



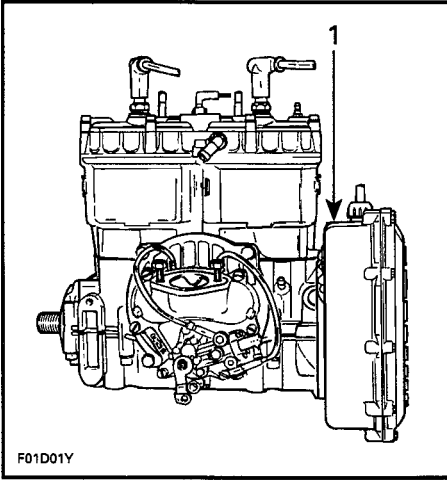
### TYPICAL

1. Model number

## Engine

The Engine Identification Number (E.I.N.) is located where shown in the following illustrations.

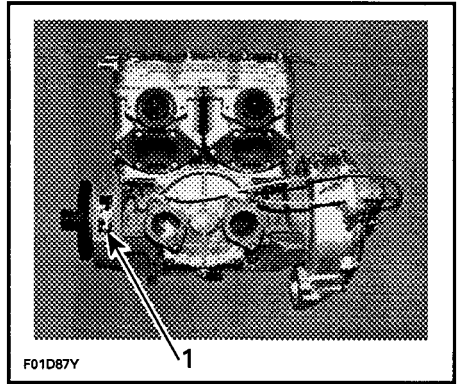
### All Models Except Challenger



**TYPICAL**

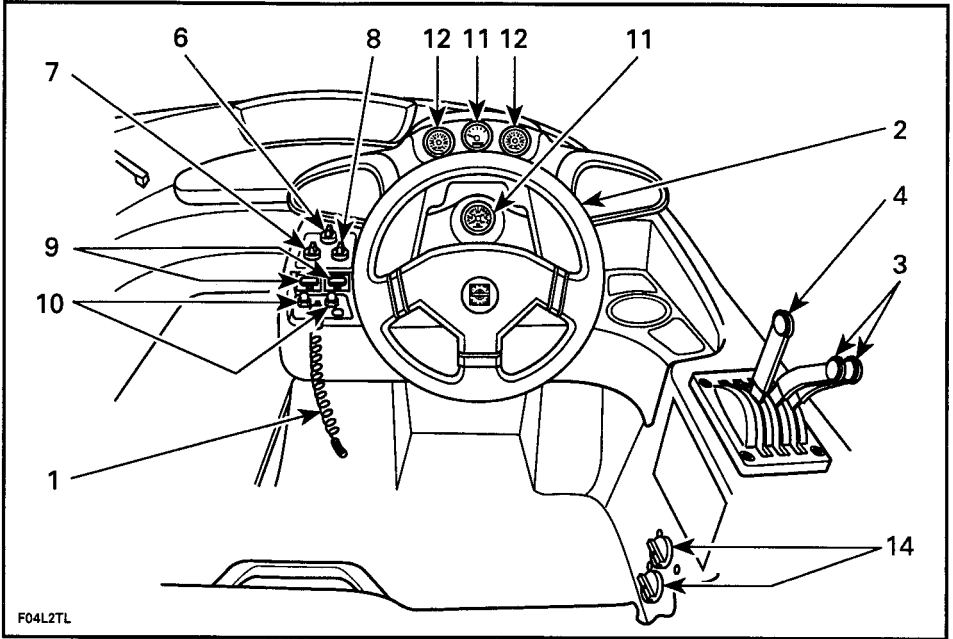
1. Engine Identification Number (E.I.N.)

### Challenger Only

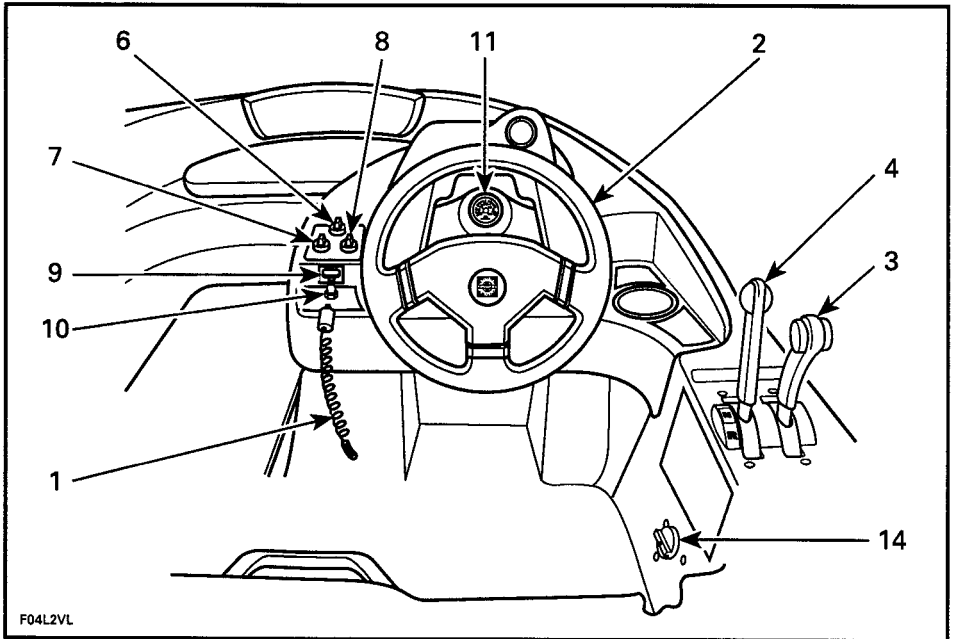


1. Engine Identification Number (E.I.N.)

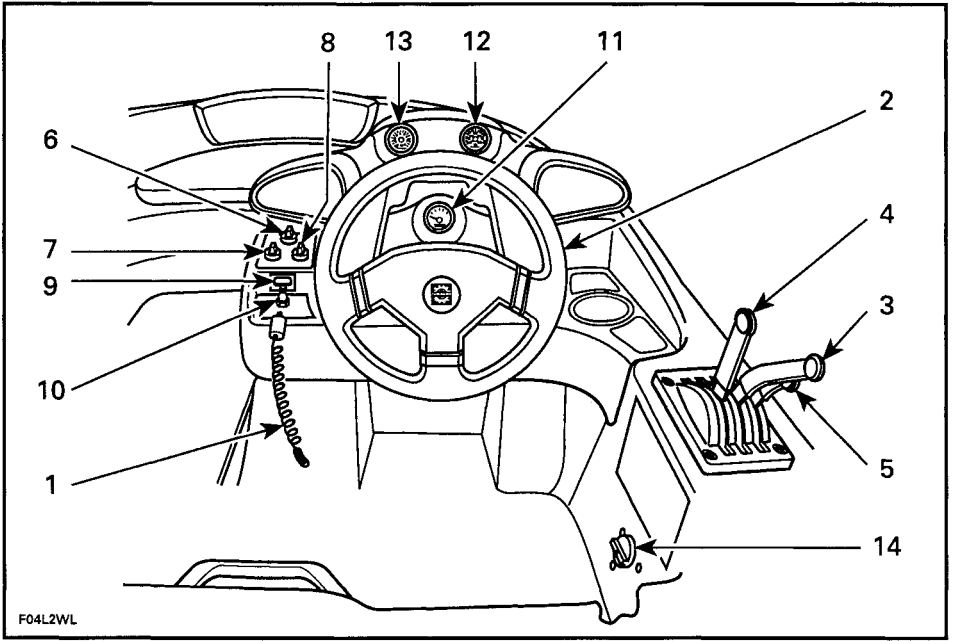
# CONTROLS AND COMPONENTS LOCATION



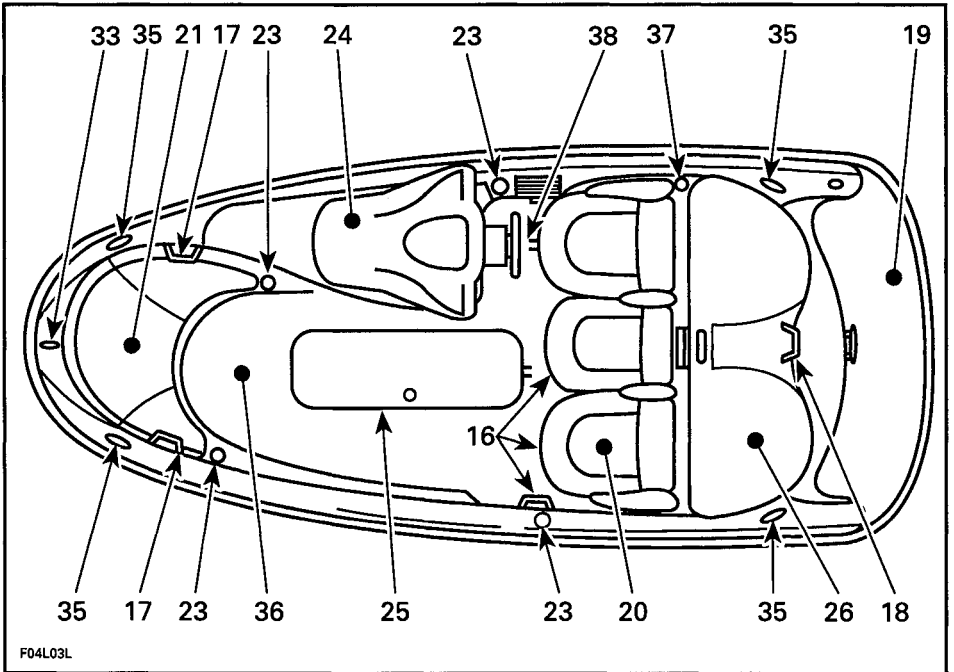
SPEEDSTER MODEL



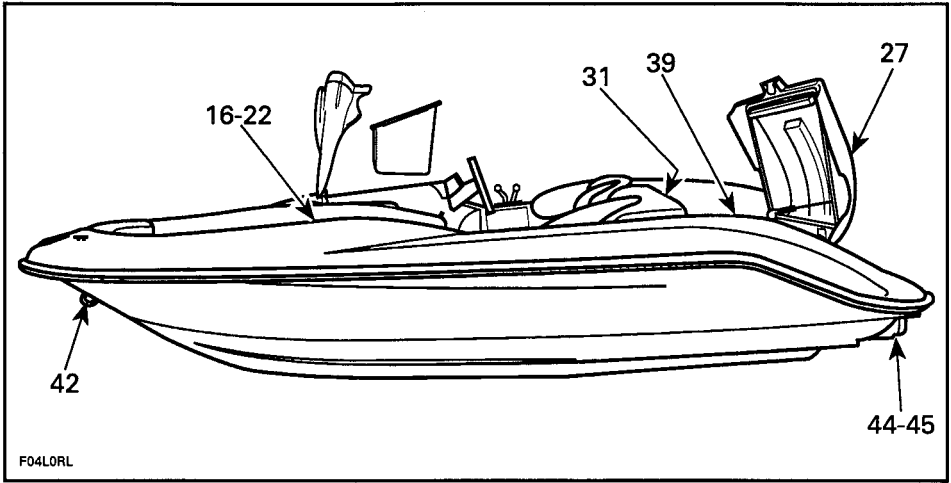
SPORTSTER MODEL



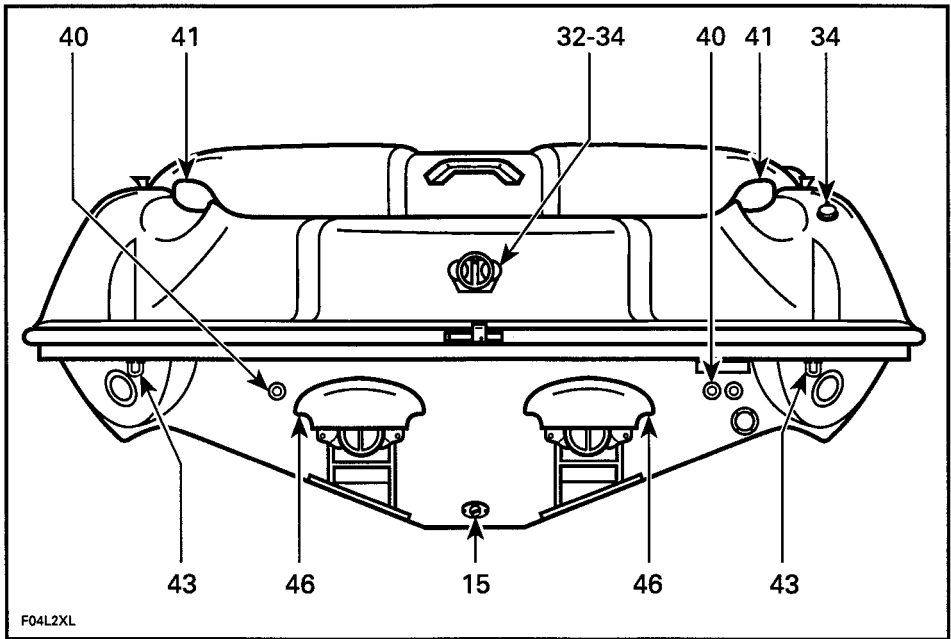
CHALLENGER MODEL



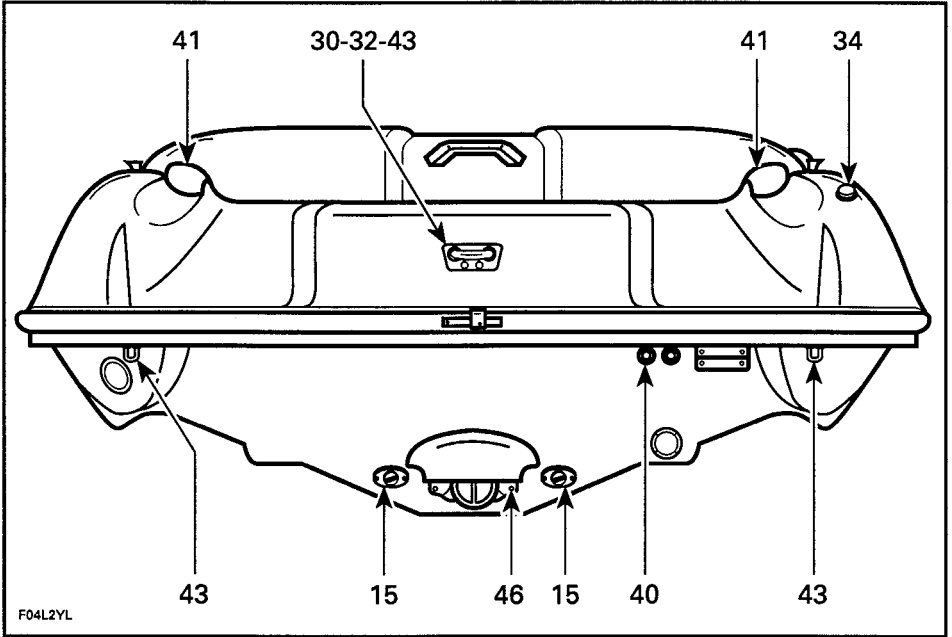
(TYPICAL) TOP VIEW



(TYPICAL) SIDE VIEW

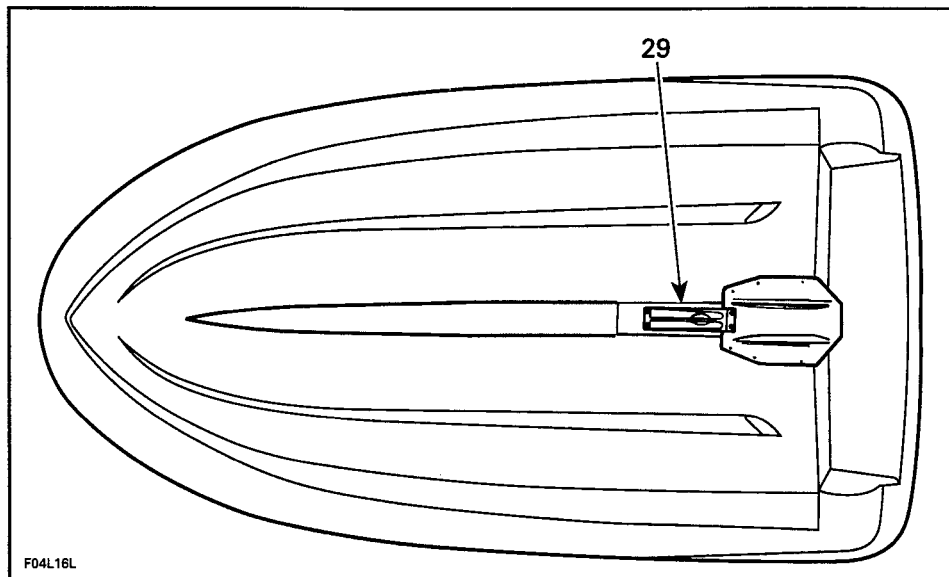


(SPEEDSTER MODEL) REAR VIEW



(SPORTSTER AND CHALLENGER MODELS) REAR VIEW





F04L16L

*TYPICAL - UNDERNEATH VIEW*

- |   |                                      |
|---|--------------------------------------|
| 1. Safety Lanyard                               | 25. Deck Storage Compartment         |
| 2. Steering                                     | 26. Rear Storage Compartment         |
| 3. Throttle Lever(s)                            | 27. Ski Rope Storage Compartment     |
| 4. Shifter Lever                                | 28. Spotter Seat Storage Compartment |
| 5. VTS Lever                                    | 29. Jet Pump Water Intake            |
| 6. Light Switch                                 | 30. Tow Hook                         |
| 7. Bilge Pump Switch                            | 31. Ski Post                         |
| 8. Bilge Air Blower Switch                      | 32. Cooling System Bleed Outlet(s)   |
| 9. Choke Lever(s)                               | 33. Navigation Light                 |
| 10. Start / Stop Button(s)                      | 34. Removable Stern Light            |
| 11. Fuel Gauge / Injection Oil Level Pilot Lamp | 35. Mooring Cleats                   |
| 12. Tachometers                                 | 36. Deck                             |
| 13. Speedometer                                 | 37. Fuel Tank Cap                    |
| 14. Fuel Tank Valve(s)                          | 38. Deck Drain Hole                  |
| 15. Bilge Drain Plugs                           | 39. Oil Injection Tank Cap           |
| 16.-17. Passenger Grab Handles                  | 40. Flushing Connector(s)            |
| 18. Rear Grab Handle                            | 41. Ventilation Ducts                |
| 19. Swim Platform                               | 42.-43. Bow / Stern Eyelets          |
| 20. Operator / Rear Passenger Seats             | 44. Jet Pump Nozzle(s)               |
| 21. Sun Seat                                    | 45. Sacrificial Zinc Anodes          |
| 22. Spotter Seat                                | 46. Reverse Gate(s)                  |
| 23. Cup Holders                                 |                                      |
| 24. Front Storage Compartment                   |                                      |

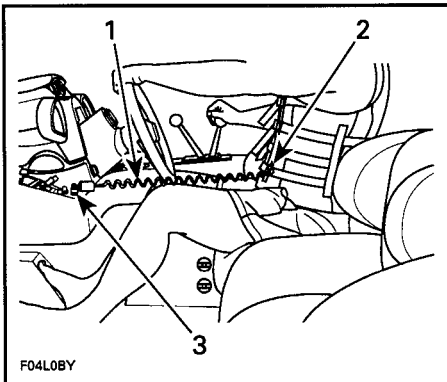
## 1) Safety Lanyard

The safety lanyard must be installed on the boat's DESS post to allow engine starting. Pull it to stop the engine(s). Always attach the safety lanyard to the operator's Personal Flotation Device and snap the cap to the DESS post.

◆ **WARNING** : Should lanyard cap become loose or fails to remain on its post, replace immediately.

After stopping the engine with the start / stop button while the safety lanyard remains on the DESS post, it can be restarted as usual within approximately 10 minutes by pressing again the start / stop button. After this delay, it may be necessary to push and turn the safety lanyard on the DESS post until 2 short beeps are heard to indicate the system is ready to allow engine starting.

◆ **WARNING** : While the boat engine can be stopped using the start / stop button, good driving habits recommend that the safety lanyard also be disconnected when stopping.



1. Safety lanyard
2. Secure to PFD
3. Snap to DESS post

◆ **WARNING** : With jet propulsion systems, no directional control is available when engine(s) are stopped.

## Monitoring System

To assist you when using the boat, a system monitors some components of the boat and sends audible signals through a beeper to warn you of a particular condition. The following chart gives the coded signals related to the safety lanyard only. For other possible codes, refer to the troubleshooting section.

NUMBER OF BEEPS	POSSIBLE CAUSE	REMEDY
<p><b>2 shorts</b> (while installing safety lanyard on DESS post.</p>	<ul style="list-style-type: none"> <li>• Everything is correct with the safety lanyard (good contact and the right lanyard cap).</li> </ul>	<ul style="list-style-type: none"> <li>• Engine can be started normally.</li> </ul>
<p><b>1 long</b> (while installing safety lanyard on DESS post or when pressing start / stop button in some cases).</p>	<ul style="list-style-type: none"> <li>• Bad connection between safety lanyard cap and DESS post.</li> <li>• Wrong safety lanyard.</li> <li>• Salt water in safety lanyard cap.</li> <li>• Improper operation of MPEM or defective wiring harness.</li> </ul>	<ul style="list-style-type: none"> <li>• Push and turn the safety lanyard on the DESS post until you hear 2 short beeps. This indicates the system is now ready to allow engine starting.</li> <li>• Use the safety lanyard that has been programmed for the boat. If it does not work, refer to an authorized dealer.</li> <li>• Shake safety lanyard cap to remove salt water.</li> <li>• Refer to an authorized dealer.</li> </ul>

### DIGITALLY ENCODED SECURITY SYSTEM (DESS)

This system allows an anti-start protection against unauthorized use of the boat. The DESS safety lanyard cap specifically contains an electronic circuit that gives it a unique electronic serial number so no other safety lanyard can be used. Other type of non DESS safety lanyard will not work on a DESS system.

When you buy a new boat, only one safety lanyard allows starting the engine(s) on your boat. At this point, this safety lanyard can not be used on another boat and conversely, the one from another boat can not be used on your boat unless otherwise programmed as explained below.

However, the DESS brings a great flexibility. You can buy additional safety lanyard(s) and have it (them) programmed to a boat so that more than one safety lanyard can be usable on a particular boat. To have additional safety lanyard(s) programmed to your convenience, refer to an authorized dealer. Up to 8 safety lanyards can be programmed to a boat. The same safety lanyard can not be programmed 2 times on a particular boat.

You can have a safety lanyard programmed to operate other boats (if equipped with the DESS). The same safety lanyard can be programmed to as many boats as desired.

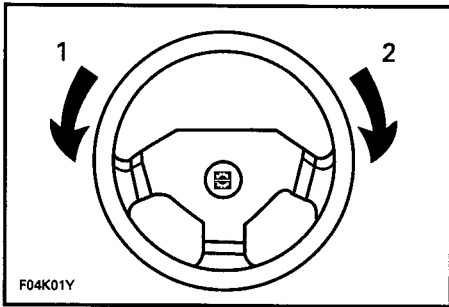
You can have a safety lanyard(s) programmed for other boats (if equipped with the DESS) operate your boat.

The boat MPEM feature a permanent (non-volatile) memory and keeps programmed safety lanyard(s) active even when boat's battery is disconnected.

## 2) Steering

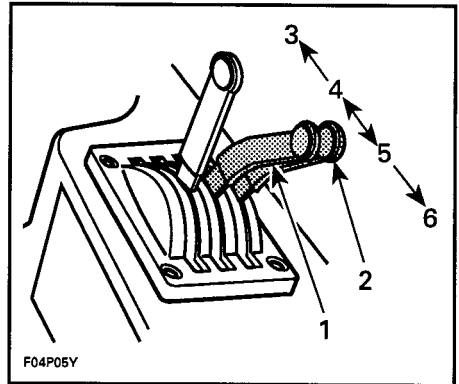
The steering controls the direction of the jet boat. Turning the steering clockwise steers the jet boat to the right and turning it counterclockwise steers to the left.

◆ **WARNING** : Check steering and movement of steering nozzle(s) operation before starting.



1. Turns boat LEFT
2. Turns boat RIGHT

## Speedster Model



### THROTTLE LEVERS

1. Port engine
2. Starboard engine
3. Full throttle
4. Increase speed
5. Decrease speed
6. Idle speed

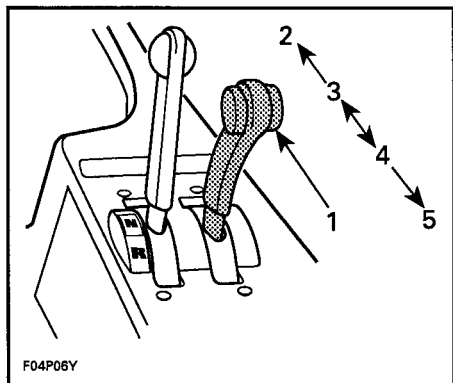
The port throttle lever controls the RPM of the port engine and the starboard lever controls the starboard engine. Although each engine RPM can be controlled individually, we recommend to move both levers simultaneously.

## 3) Throttle Lever(s)

It controls the speed of the engine and therefore, the speed of the jet boat. When pushed forward, the jet boat accelerates. When fully pulled back, engine return to idle speed and the jet boat is gradually stopped by water drag.

◆ **WARNING** : Check throttle(s) lever operation before starting the engine(s).

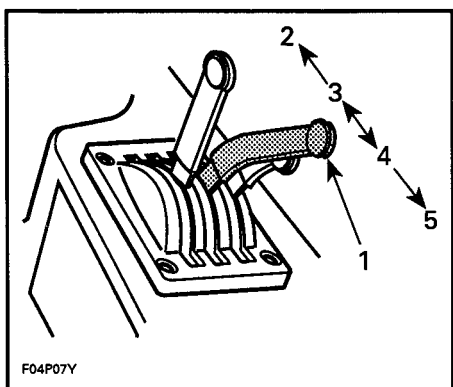
## Sportster Model



### THROTTLE LEVER

1. Throttle lever
2. Full throttle
3. Increase speed
4. Decrease speed
5. Idle speed

## Challenger Model



### THROTTLE LEVER

1. Full throttle
2. Increase speed
3. Decrease speed
4. Idle speed
5. Throttle lever

The throttle lever controls the RPM of the engine.

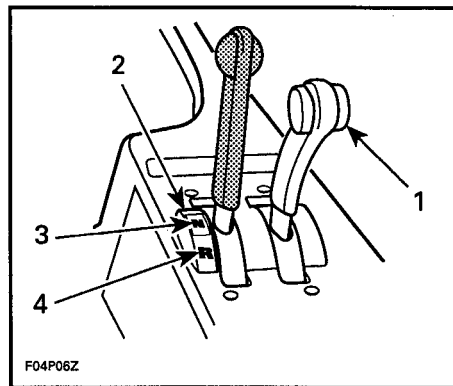
## 4) Shifter Lever

A 3-position lever :

- Forward
- Neutral
- Reverse

In order to shift, throttle lever(s) must be fully pulled back to idle speed. Shifter must be in neutral position to allow engine starting.

**NOTE :** Four short beeps will signal that it is not in neutral (with the safety lanyard on the DESS post while pressing the start / stop button). Thereafter, 1 short beep will confirm the neutral position (while shifting).



### TYPICAL (SHIFTER LEVER)

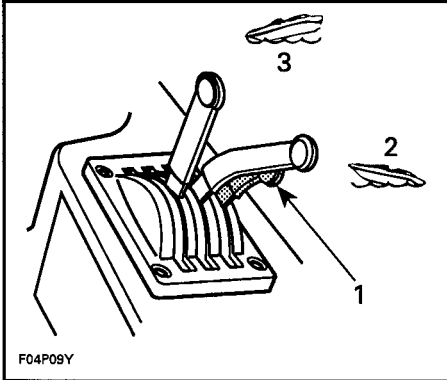
1. Throttle lever(s) must be fully pulled back (idle speed) to shift
2. Forward
3. Neutral
4. Reverse

**CAUTION :** Do not force lever, ensure throttle lever(s) are in idle position.

**WARNING :** Only use reverse at slow speed and for the shortest time possible. Always ensure the path behind is clear of obstacles, swimmers and children playing in shallow water. If engine stop is required, pull safety lanyard from the DESS post.

## 5) VTS Lever (If Equipped)

The Variable Trim System lever is used to change the jet pump nozzle position and thus lower or raise the bow to suit the boat load and water conditions. Pushing the lever forward, lowers the bow and conversely, pulling the lever rearward raises the bow.



1. VTS lever
2. Bow up
3. Bow down

## 6) Light Switch

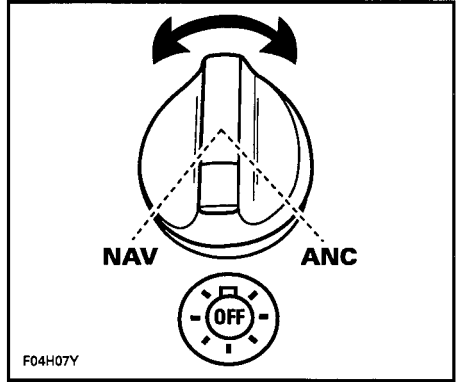
A 3-position rotary switch.

**NOTE** : The safety lanyard must be snapped to the DESS post to have navigation lights working.

**ANC** : Turns on the anchorage light when the boat is anchored. Only the rear light is lit.

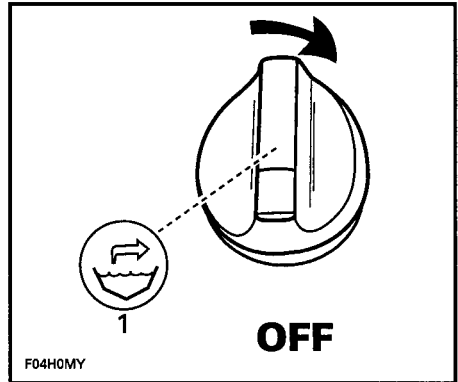
**OFF** : Turns off all lights.

**NAV** : Turns on both bow and stern lights.



Lights should always be used between sunset and sunrise. Ensure that stern light post is installed and working. See further in this section for location and installation.

## 7) Bilge Pump Switch



1. Bilge

A 2-position OFF / bilge switch.

Turn to bilge position when a manual operation is required (after cleaning, storage, etc.).

Turn it to OFF when finished.

▼ **CAUTION** : Do not operate for prolonged time if the bilge is dry.

The bilge pump can be operated when engine(s) are not running.

It is not required that the safety lanyard be secured on the DESS post.

Using this equipment for a prolonged time without engine running will discharge battery.

▼ **CAUTION** : Ensure to always turn OFF pump after starting engine(s) and before operating the engine(s) above idle.

### **AUTOMATIC BILGER PUMP**

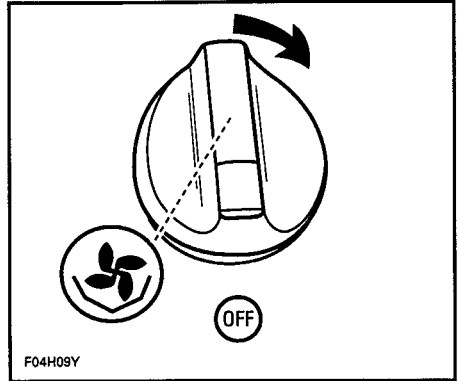
Whenever the safety lanyard is on the DESS post whether engine(s) is (are) running or not, an automatic bilge pump will evacuate water from the bilge. A water sensor detects the water which activates the pump. After the water is pumped out, the pump shuts-off automatically.

### **8) Bilge Air Blower Switch**

A 2-position ON / OFF rotary switch. When ON, it ventilates the engine compartment.

To start the air blower turn to the ON position. The air blower must be started 4 minutes prior to starting the engine.

◆ **WARNING** : Always use blower for a minimum of 4 minutes prior to all engine starting then, turn it OFF before operating the jet boat above idle.



The bilge air blower can be operated when engine(s) are not running.

It is not required that the safety lanyard be secured on its switch.

Using this equipment for a prolonged time without engine running will discharge battery.

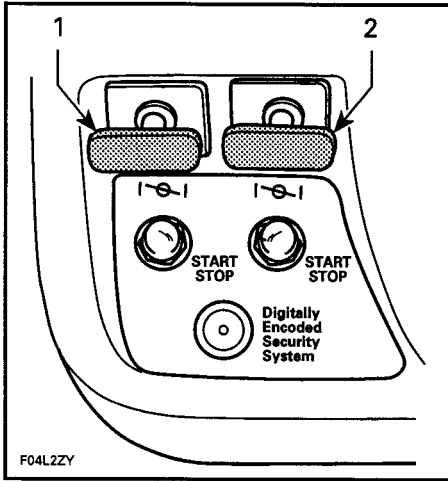
▼ **CAUTION** : Ensure to always turn OFF blower switch after use.

### **9) Choke Lever(s)**

The choke(s) are provided to supply a richer fuel / air mixture when starting cold engine(s). When the lever(s) are completely pulled, the choke(s) are fully applied. The use of the choke(s) is not required with warm engine(s).

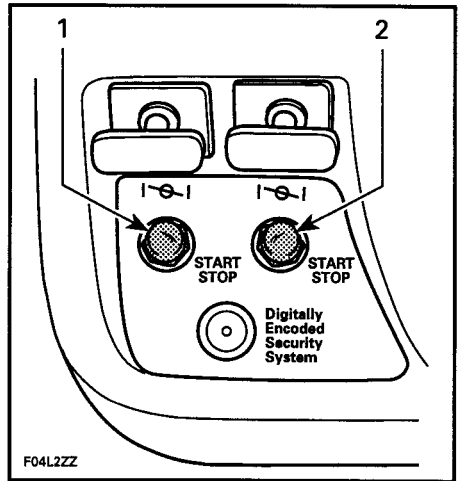
Choke lever must be pulled and held to operate. It will automatically return to its normal position when released.

### Speedster Model



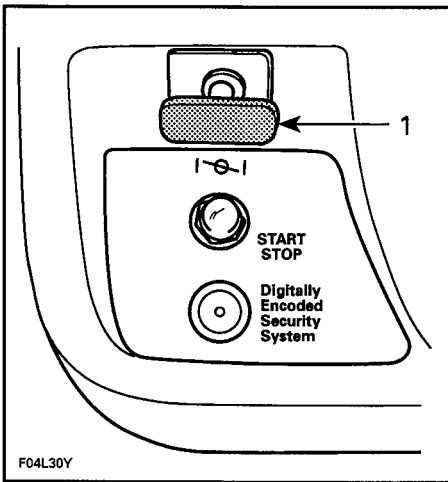
1. For port engine
2. For starboard engine

### Speedster Model



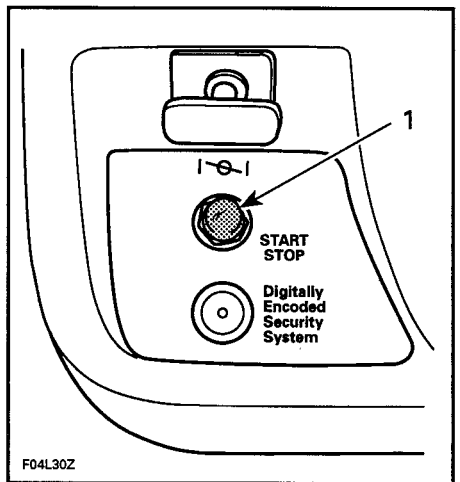
1. For port engine
2. For starboard engine

### Sportster and Challenger Models



1. Choke lever

### Sportster and Challenger Models



1. Start / stop button

## 10) Start / Stop Button(s)

Dual function push switch(es). Work to start as well as to stop engine(s).

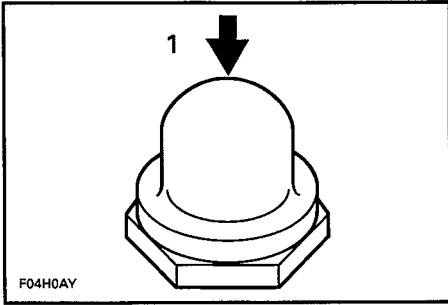
## Starting

○ NOTE : Shifter must be in neutral position and the safety lanyard must be on the DESS post to allow engine starting.



To start engine, press and hold the button. Release immediately after engine is started. Proceed the same way for other engine (if equipped).

○ **NOTE** : Twin-engine models : It does not matter which engine is started first. Start one engine at a time.

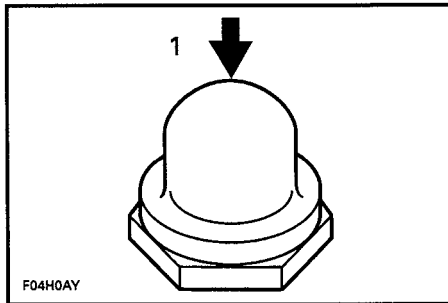


1. Start when engine is **NOT** running

### Stopping

◆ **WARNING** : While engine(s) can be stopped by pressing the stop button, we strongly recommend the engine(s) be stopped by removing the safety lanyard. This will instill good habits.

Pressing button(s) when engine(s) are running will stop the engine(s).



1. **STOP** when engine **IS** running

○ **NOTE** : For complete step by step engine starting procedure, see **Starting the Engines** in OPERATING INSTRUCTIONS section.

◆ **WARNING** : With jet propulsion systems, directional control is not available when engine(s) are stopped.

## 11) Fuel Gauge / Injection Oil Level Pilot Lamp

### Fuel Gauge

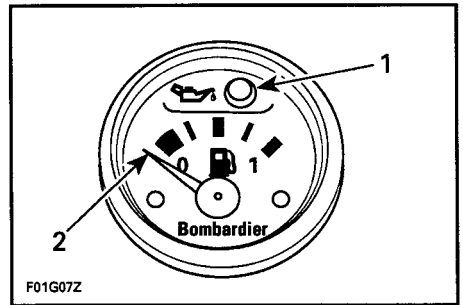
Located in dashboard, the analog gauge continuously indicates the amount of fuel in fuel tank when engine(s) is running.

○ **NOTE** : The fuel level can also be verified without having engine(s) running. With the safety lanyard disconnected, push the starting button; the gauge will be activated for approximately 30 seconds.

### Injection Oil Level Pilot Lamp

The pilot lamp turns on when the injection oil level is low in oil reservoir or if a wire / connector of this electrical circuit is not properly connected. Fill reservoir as soon as possible or contact an authorized dealer.

▼ **CAUTION** : Do not run engine(s) out of oil. Serious engine damage will occur.

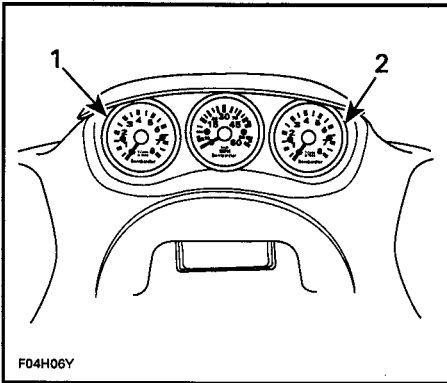


1. Injection oil level pilot lamp  
2. Fuel level

## 12) Tachometer(s) (If Equipped)

Analog tachometer(s) indicate the revolutions per minute (RPM) of the engine(s). Multiply reading by 1000 to obtain actual RPM.

### Speedster Shown

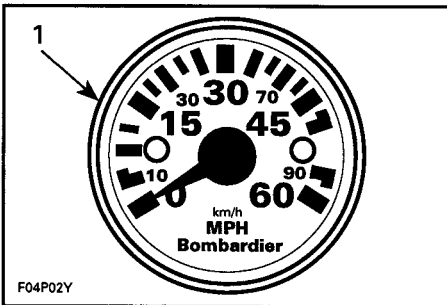


1. Port engine
2. Starboard engine

## 13) Speedometer (If Equipped)

Analog speedometer indicates the speed of jet boat in miles per hour (MPH) and kilometers per hour (km / h). See illustration below.

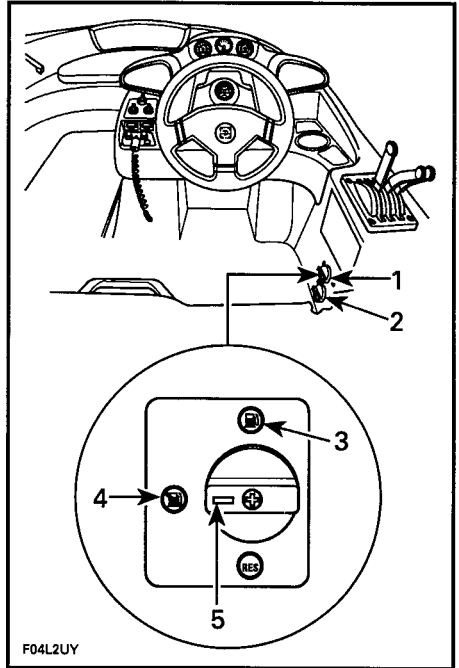
A speed sensor mounted on the rear transom or on ride shoe sends the signal to the speedometer.



1. Speedometer

## 14) Fuel Tank Valve(s)

3-position rotary valve(s) : OFF, ON, RESERVE. Rotate the knob to align its notch with ON, OFF or RESERVE.



### SPEEDSTER SHOWN

1. Port engine
2. Starboard engine
3. ON
4. OFF
5. Turn to align notch with ON, OFF or RESERVE

OFF : Stops fuel supply to carburetors.

**CAUTION :** Turn valve(s) to OFF position when jet boat is not operated and for transportation on the trailer.

ON : Allows fuel to flow to carburetors. This is the normal position for operation of the jet boat.

RESERVE : When fuel is exhausted in the main tank, an emergency supply of fuel is available in the reserve tank by turning the knob to RESERVE. The re-

serve tank is integral with the main tank. It is automatically replenished when the main tank is filled. The reserve contains approximately 10% of the fuel tank capacity.

▼ **CAUTION** : Improper opening of fuel valve(s) may restrict flow of fuel. Make sure valve(s) are fully opened while running.

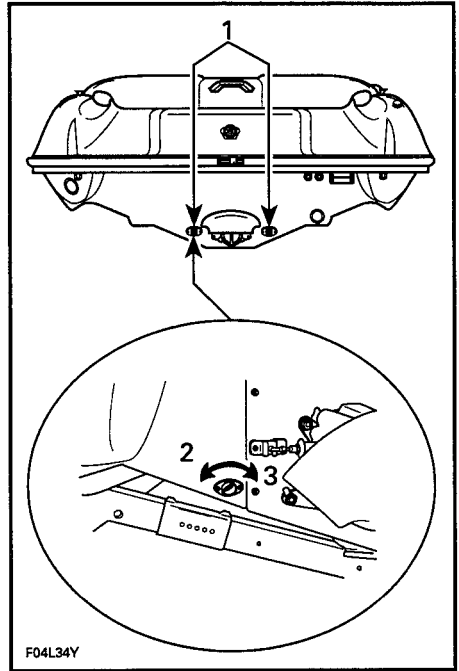
## 15) Bilge Drain Plug(s)

Should water be found in the bilge, it can be easily drained by unscrewing these plug(s).

▼ **CAUTION** : Remove jet boat from water prior to unscrewing the drain plugs.

Tilt the jet boat slightly to the rear so that the water can completely flow out of the bilge.

It is suggested to drain bilge on a ramp.



### TYPICAL

1. Drain plugs
2. Loosen
3. Tighten

◆ **WARNING** : Always make sure bilge drain plugs are properly tightened.

## 16-17) Passenger Grab Handles

Provides a handhold for the passengers.

▼ **CAUTION** : Never use the grab handles to pull anything or to lift the jet boat.

Sun seat : 2 grab handles positioned each side.

Port seat : 1 grab handle on left, one under seat incorporated to the seat molding.

Central seat : 2 grab handles under seat incorporated to the seat molding.

Spotter seat (if equipped) : 1 grab handle on the right, one under the left side of the seat incorporated to the seat molding.

### 18) Rear Grab Handle

Provides a handhold for boarding when needed.

▼ **CAUTION** : Never use the grab handle to tow anything or to lift the jet boat.

### 19) Swim Platform

Provides a large antiskid surface for easy boarding from rear of jet boat.

◆ **WARNING** : To avoid risk of injury, swim platform should not be used when engine(s) are running.

### 20) Operator / Rear Passenger Seats

Each passenger should be seated while underway.

◆ **WARNING** : Allow no one to sit on edge of boat or stand up while in operation.

### 21) Sun Seat

Provided as a sun seat while at anchor.

◆ **WARNING** : No passenger should use this seat except at idle speed in calm water or when the jet boat is stopped. Allow no one to sit on bow or sides of the boat while in operation.

### Boarding Step

Beside the sun seat, it is provided to help boarding.

### 22) Spotter Seat (if equipped)

Provided to watch the water skier in tow.

### 23) Cup Holders

Convenient locations for non-alcoholic beverages.

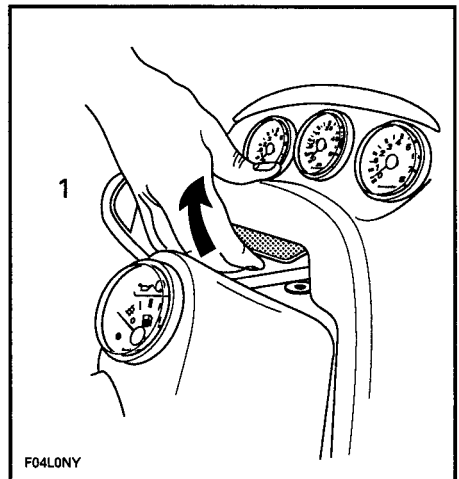
◆ **WARNING** : Do not drink alcoholic beverages while aboard. Do not keep bottles, cans etc. in cup holders while riding at high speed and / or on rough water.

### 24) Front Storage Compartment

A convenient watertight, removable basket to carry personal articles. Ideal location for spare spark plugs, tow-rope, first aid kit, etc.

Pull the latch lever upward in order to open the storage compartment cover.

○ **NOTE** : Verify periodically the lock pin tightness of storage cover. Tighten if needed and make sure storage cover latches properly.

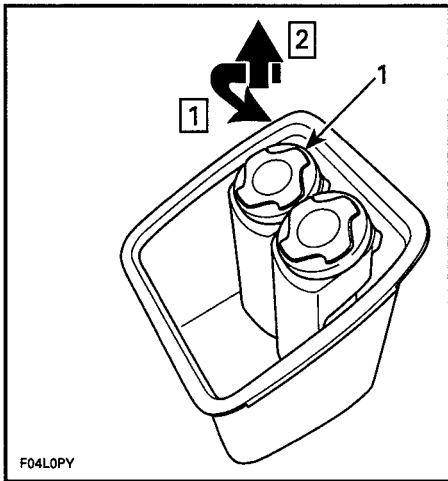


TYPICAL

1. Pull latch lever upward

◆ **WARNING** : Never leave any heavy or loose breakable objects in the storage basket. Never store or carry anything below basket.

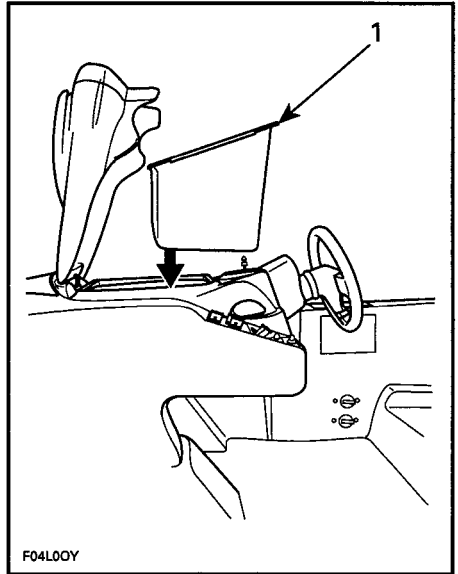
The basket is provided with a holder to store an approved fire extinguisher and tool kit. A second holder contains *Operator's Guide* and can be used to carry personal articles. Fire extinguisher (sold separately) should not be loose in the storage compartment.



F04L0PY

Step 1 : Turn covers counterclockwise to unlock  
Step 2 : Lift  
1. Extinguisher holder

Reinstall basket as shown. Always relatch cover.



F04L00Y

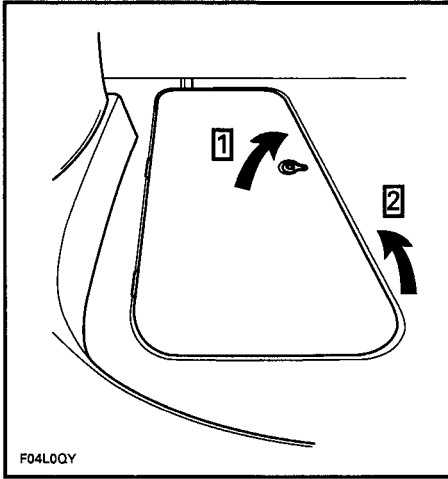
#### TYPICAL - BASKET INSTALLATION

1. Higher corner at rear

### 25) Deck Storage Compartment

Convenient location for water-skis, paddles, anchor and rope, etc.

Lift the latch ring and open cover gently until stopped by retaining device.



- Step 1 : Pull latch  
 Step 2 : Lift cover

When completely opened, the cover remains in that position.

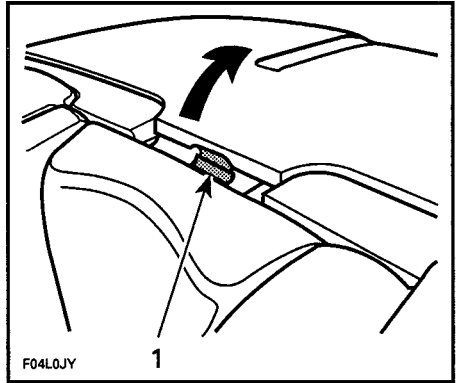
To close, gently push on the side of the retaining device to release it and lower the cover.

Always relock after closing and lowering the latch ring.

## 26) Rear Storage Compartment

Convenient rear storage location to be used to carry large personal articles. Ideal location for towels, lunch etc.

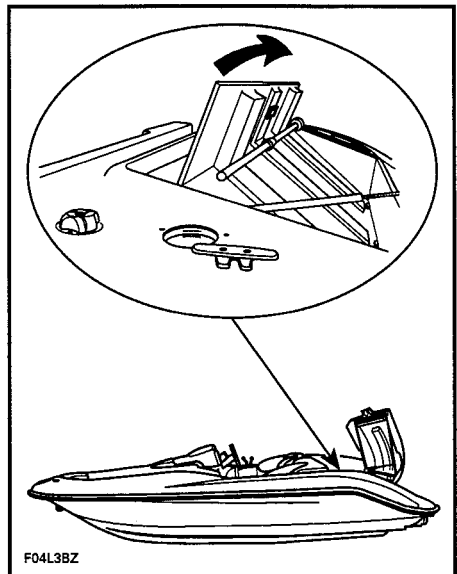
Pull the latch lever upward and open cover gently until stopped. The gas assist cylinder will complete the opening and hold cover open.



1. Pull latch lever upward

The storage tray is removable to give access to engine compartment. Grab the front center handle and lift in a rearward movement until opposite holders release.

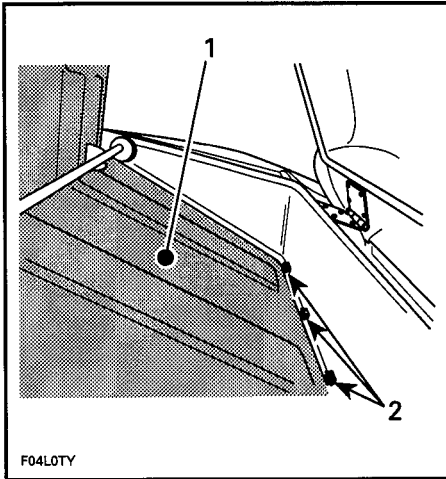
**WARNING :** When storage tray is lifted or removed, never touch any electrical part when starting engine(s) or while in operation.



◆ **WARNING** : Never leave any object, rag, tool, etc., in the engine compartment or in the bilge.

When reinstalling storage tray, ensure to properly locate it just below holders, gently lower tray then firmly push it downward to lock.

▼ **CAUTION** : If the rear storage compartment cover is not correctly latched, damage may occur.



1. Rear storage compartment tray
2. Slide tray under holders

Gently close storage compartment cover and ensure to relatch.

## 27) Ski Rope Storage Compartment (If Equipped)

Convenient location for the ski tow rope.

Lift the latch ring and open cover. Always relock after closing and lowering the latch ring.

## 28) Spotter Seat Storage Compartment (If Equipped)

Convenient location to carry personal articles. Ideal location to keep a lunch or beverages cool since the area is surrounded by insulating foam.

◆ **WARNING** : Never leave any loose breakable objects in this storage area.

Lift the latch ring and open cover. Always relock after closing and lowering the latch ring.

## 29) Jet Pump Water Intake(s)

The water is drawn up by the impeller(s) through this opening. The impeller(s) and the drive shaft(s) are protected by a grate.

## 30) Tow Hook (If Equipped)

The hook is provided for your convenience.

The universal eyelet allow a rope with a hook, a closed end or an open end to be attached.

## 31) Ski Post (If Equipped)

Pull up the post to allow hooking a ski rope. Push down when finished.

Always have 1 person other than the operator as an observer.

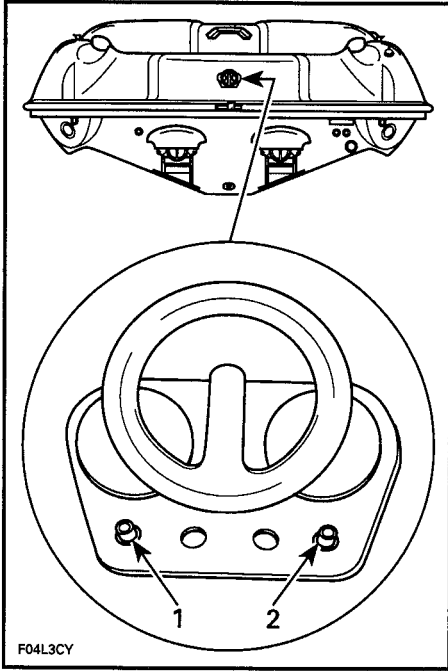
▼ **CAUTION** : Never use the ski post to tow other boats.

◆ **WARNING** : Use caution with skier in tow as tow rope may backlash into cockpit when released.

## 32) Cooling System Bleed Outlet(s)

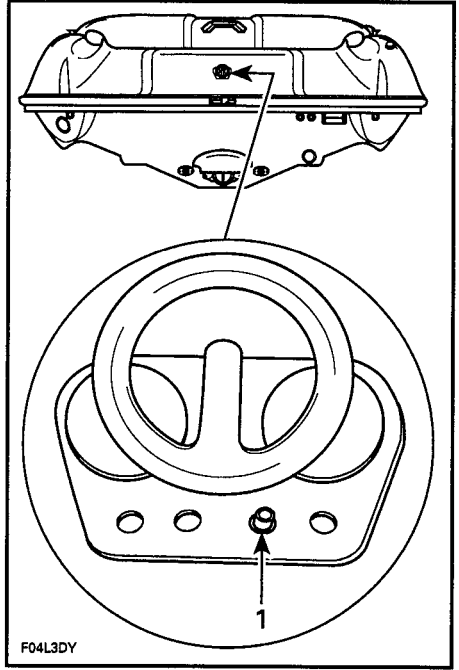
When engine(s) are running, water must flow through these hole(s). This allows air in engine water jacket to escape. It may be required to slightly increase the engine speed to see the water flowing out.

**Speedster Model**



1. Port engine bleed outlet
2. Star board engine bleed outlet

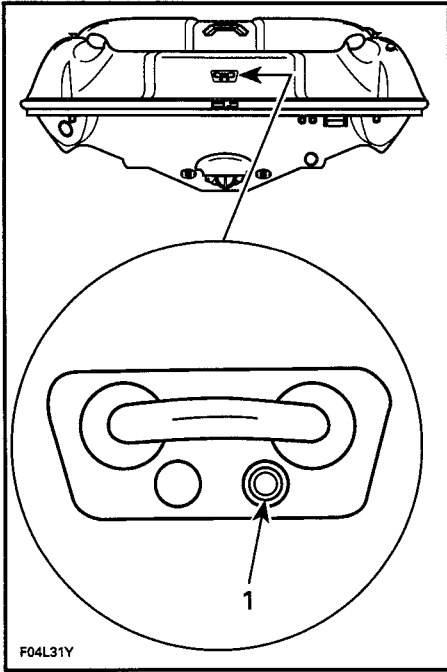
**Sportster Model**



1. Bleed outlet



## Challenger Model



1. Bleed outlet

▼ **CAUTION:** Should water not flow from those outlet(s) a few seconds after engine starts, immediately stop engine and refer to **POST-OPERATION CARE** and look for cooling system flushing or refer to an authorized dealer for servicing.

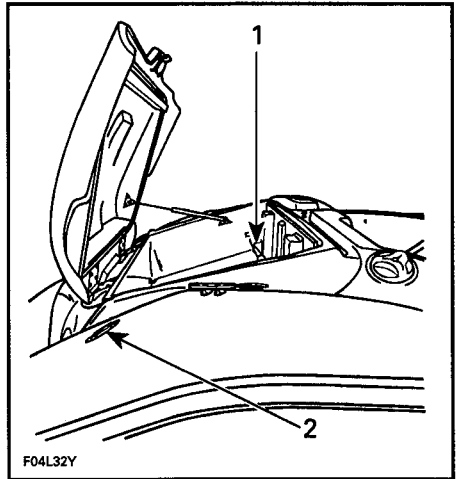
### 33) Navigation Light

Reglementary red / green light. Refer to **Light Switch** in this section.

### 34) Removable Stern Light

It is recommended to keep it in rear storage compartment at all times except when needed in darkness, reduced visibility conditions, or at anchor (nighttime).

To remove from storage, pull it out. Resnap to store again.

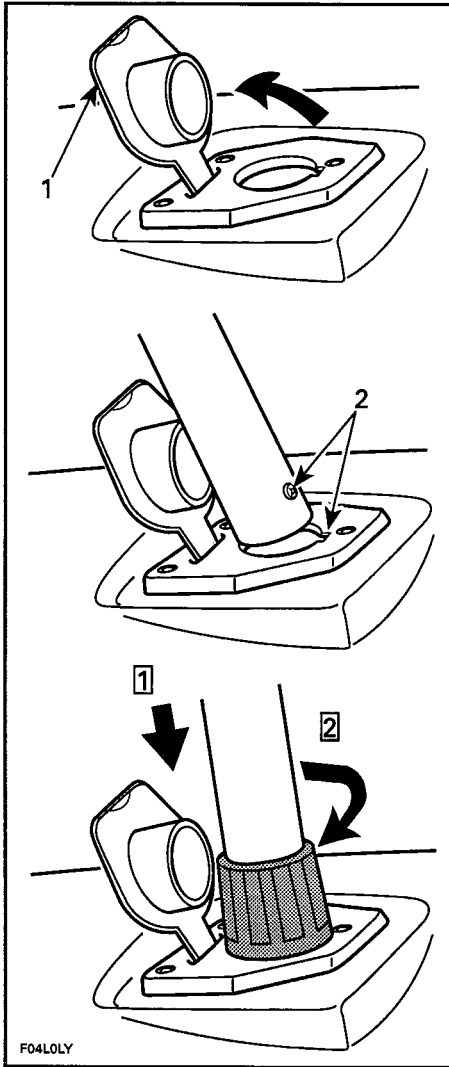


1. Stern light storage location  
2. Stern light operation position

### Installation

- Lift connector cap.
- Insert post in connector hole. Ensure to align hole keyway with post screw head.
- Firmly push downward to engage terminals.
- Push lock ring downward. Turn until locked. It may be necessary to slightly turn it to allow its insertion in the hole.
- Check light operation. Refer to **Light Switch** in this section.

◆ **WARNING:** The jet boat is not equipped with headlights or spotlights.



### 35) Mooring Cleats

When mooring to a dock, it is recommended to secure with both front and rear cleats. The use of dock lines with sealed air fenders is recommended to protect your boat.

▼ **CAUTION** : Never use mooring cleats to pull anything or to lift the jet boat.

### 36) Deck

Flat surface of boat, should be kept clean and clear.

### 37) Fuel Tank Cap

Unscrew the cap counterclockwise to allow fuel tank filling. Fully tighten when finished.

◆ **WARNING** : Never use a lit match or open flame to check fuel level. Refer to **Fuel and Lubrication** for fuel specification.

### 38) Deck Drain Hole

Operator's drain is located at its seat base. It provides drainage for rain, deck washing, watersplashing, etc., outside of jet boat.

Keep clean to avoid clogging.

### 39) Oil Injection Tank Cap

Located in rear storage compartment on port side. Open cover to access cap. Unscrew cap by turning counterclockwise and when finished, firmly tighten by turning clockwise. Close engine cover. Refer to **Fuel and Lubrication** for injection oil specification.

### 40) Flushing Connector(s)

Refer to POST-OPERATION CARE section for proper use.

○ **NOTE** : On twin-engine model, each engine is provided with a flushing. Port connector is for port engine and starboard connector is for starboard engine.

Step 1 : Push downward

Step 2 : Turn to lock

1. Lift

2. Align screw in groove

▼ **CAUTION** : Ensure dielectric grease is present in connector area of light to prevent corrosion.

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## 41) Ventilation Ducts

This is where air flows to supply engine and ventilate engine compartment.

◆ **WARNING** : Never obstruct the ducts.

## 42-43) Bow / Stern Eyelets

Eyelets can be used for mooring, towing and as a tie-down point during transportation.

## 44) Jet Pump Nozzle(s)

It (they) are turned from side to side via operator input from the steering. This provides jet boat directional control when engine(s) are running.

## 45) Sacrificial Zinc Anodes

Located on jet pump gate support and on ride shoe, they protect the jet drive against galvanic corrosion by sacrificing its metal to be slowly eroded instead of the jet drive metals. Refer to MAINTENANCE section.

## 46) Reverse Gate(s)

Move(s) from upward to downward position to get Forward, Neutral, Reverse and inversely. These positions are obtained by moving shifter lever.

▼ **CAUTION** : Never use reverse gate as a supporting point to board the jet boat.

## Fuses

The electrical system is protected with fuses.

The MPEM (Multi-Purpose Electric Module) is located in the engine compartment inside the electrical box and it contains fuses for the MPEM supply, the DC-CDI ignition system (if equipped) and for the charging system.

The fuse block is located in the front storage compartment under the storage basket. It is protected by a fuse that

is located in the electrical box. It contains the fuses for the bilge pump, bilge air blower, lights, gauges and accessories.

If the boat engine does not start or an electrical accessory is not working, check condition of the fuses. Refer to MAINTENANCE section.

## Tool Kit

It is located in one container in front storage compartment. Tool kit contains the tools needed to perform basic jet boat maintenance.

## Operator's Guide

Should be kept in waterproof bag and remain with the jet boat at all times.

# FUEL AND LUBRICATION

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## Fueling Procedure

◆ **WARNING** : Follow these safe boating fueling instructions explicitly.

Make sure the jet boat is tied securely to the fueling pier.

Use bilge blower for a minimum of 4 minutes.

Turn off engine(s), bilge air blower, bilge pump and any other devices that could produce a spark.

Close rear storage cover to prevent fumes from entering the engine compartment.

Disembark all people.

Do not smoke or allow open flames in the vicinity.

Have a fire extinguisher close at hand.

Do not insert the spout too far in filler neck.

Pour fuel slowly so that air can escape from the reservoir and prevent fuel flowback.

Fill fuel tank to bottom of filler neck. Do not overfill.

Fully tighten fuel tank cap and wipe off any fuel spillage.

Ensure there are no fuel fumes in the engine compartment, ventilate using the blower as necessary.

## Recommended Fuel

Use regular unleaded gasoline with 87 octane (Ron + Mon / 2) specification.

○ **NOTE** : Look on service station pump sticker for octane specification. Do not mix oil with fuel except at engine break-in. Refer to BREAK-IN PERIOD. Always check oil injection reservoir level when refueling.

The use of good quality fuel is necessary. A well known fuel brand is highly recommended.

▼ **CAUTION** : The use of a poor quality fuel can result in jet boat performance deterioration and damage to fuel system and engine components. Never experiment with other fuels or fuel ratios. Never use fuel containing alcohol, methanol or similar products including naphtha.

## Recommended Oil

Use only BOMBARDIER ROTAX INJECTION OIL which is available from authorized dealers. It is a blend of specially selected base oils and additives which provides outstanding lubrication, engine cleanliness and minimum spark plug fouling.

○ **NOTE** : High quality low ash API TC injection oil for 2-cycle engines can be used if BOMBARDIER ROTAX INJECTION OIL is not available.

▼ **CAUTION** : Never use 4-cycle petroleum or synthetic motor oil and never mix these with outboard motor oil. Do not use NMMA TC-W, TC-W2 or TC-W3 outboard motor oils or other ashless type 2-cycle oil. Avoid mixing different brands of API TC oil as resulting chemical reaction may cause severe engine damage.

## Oil Injection System

A sufficient amount of injection oil should be maintained in the reservoir. To check, open rear storage cover then lift and hold the tray. Look oil level through the translucent reservoir.

The use of a funnel is recommended to pour the oil into the reservoir. Stop filling as soon as oil appears at approximately 13 mm (1/2 in) from top of reservoir. Do not overfill. Wipe off any oil spillage.

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○ **NOTE** : Always carry a spare 1-liter of BOMBARDIER ROTAX INJECTION OIL.

▼ **CAUTION** : Always maintain a sufficient amount of injection oil in the oil reservoir. Check and refill every time you refuel. Do not overfill. If the engine(s) run out of oil, severe engine damage will occur. If the oil reservoir is allowed to almost empty, air can enter into the system and it must be bled. Immediately refer to an authorized dealer to have the oil injection system inspected.

# BREAK-IN PERIOD

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## Engine

With Bombardier-Rotax® jet boat engine(s), a break-in period is required before operating the engine at full throttle. Engine manufacturer recommendation is about 10 operating hours.

During this period, maximum throttle should not exceed 3/4, however, brief full acceleration and speed variations contribute to a good break-in. Continued wide open throttle accelerations, prolonged cruising speeds and overloading the engine(s) are detrimental during the break-in period.

To assure additional protection during the initial break-in period, it is recommended to add 2 liters (1/2 gal) of BOMBARDIER ROTAX INJECTION OIL in the fuel tank. The oil should be added **for the first full fuel tank filling only.**

To add injection oil in the fuel tank, proceed as follows :

Fill fuel tank with approximately 50 liters (12 gal) of gasoline ; then, add the required quantity of injection oil in the fuel tank.

Fill up fuel tank with gasoline. Do not overfill.

**○ NOTE :** It is important to proceed in this order to allow a proper mixing of the oil in the gasoline. If oil is added first in an empty fuel tank, fuel lines will be filled up with injection oil leading in a no start condition of the engine(s) and possible engine failure (hydrolock).

**▼ CAUTION :** Remove and clean spark plugs after engine break-in.

## 10-Hour Inspection


It is highly recommended that after the first 10 hours of operation, the jet boat be checked by an authorized dealer. This inspection will also provide the opportunity to discuss any unanswered questions you may have encountered during the first hours of operation.

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**The 10-hour inspection is at the expense of the jet boat owner.**

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<b>10-HOUR INSPECTION CHECK LIST</b>	<input checked="" type="checkbox"/>
Engine ignition timing if required	
Spark plug inspection, cleaning and adjustment	
Fuel system lines and fasteners / pressurization test	
Carburetor adjustment including throttle / choke cables if required	
Oil lines and filters	
Oil injection pump adjustment if required	
Engine support and engine rubber mounts	
Mufflers, batteries and reservoir fastening devices	
Exhaust system hose clamps torque	
Carburetor flange screws and flame arrester support	
Steering system	
Steering cable adjustment if required	
Shifter cable adjustment if required	
VTS adjustment if required (if equipped)	
Ensure that throttle lever(s) keep the selected position. Adjust lever(s) friction as necessary	
Hose condition and fasteners	
Bilge pump and bilge air blower	
DESS system and start / stop button operation	
Engine overheating beeper	
Electrical connections (starter, batteries, etc.)	
Lighting system inspection	
Impeller shaft reservoir oil replacement	
Impeller condition, impeller / wear ring clearance	
PTO flywheel lubrication	
Water intake grill / hull condition	
Inspection of fasteners for tightness	
Inspect / clean engine drain tube	

 **NOTE** : Inspection applies for both engine systems where applicable.

**We recommend that this inspection chart be signed by an authorized dealer**

\_\_\_\_\_  
Date of 10-hour inspection

\_\_\_\_\_  
Authorized dealer signature

\_\_\_\_\_  
Dealer code

# PRE-OPERATION CHECKS

Some of the following items may not have been previously covered in this guide, however they will be described in the MAINTENANCE or SPECIAL PROCEDURES section. Please refer to these portions to have more detailed information.

**Prior to operating the Jet boat, verify the following :**

◆ **WARNING :** Except otherwise specified, safety lanyard must always be removed from switch prior to verify any of the following.

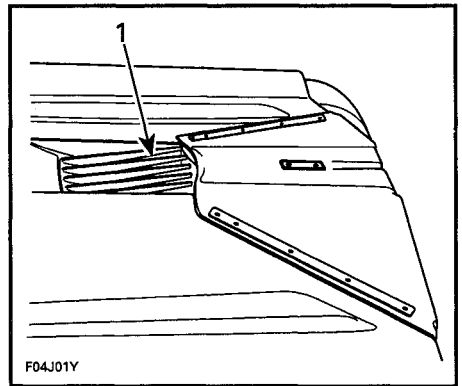
ITEM	OPERATION	✓
Hull	Inspect.	
Jet pump water intake	Inspect / clean.	
Bilge	Drain. Ensure plugs are secured.	
Battery	Inspect tightness of cables and retaining straps.	
Navigation / anchor lights	Check operation (with safety lanyard installed)	
Fuel / oil reservoirs	Refill.	
Engine compartment	Verify fuel / oil system components.	
Fire extinguisher	Inspect condition / mounting.	
Steering	Check operation.	
Throttle / shifter system	Check operation.	
VTS system (if equipped)	Check operation.	
Bilger air blower and bilge pump	Check operation.	
Safety lanyard / engine start / stop button(s)	Check operation.	
Mandatory safety boating equipment	Check operation.	

## Hull

Inspect hull for cracks or damage.

## Jet Pump Water Intake

Remove weeds, shells, debris or anything else that could restrict the flow of water and damage the cooling system or propulsion unit(s). Clean as necessary. If any obstruction can not be removed, refer to an authorized dealer for servicing.



TYPICAL

1. Inspect this area



---

Inspect leading edges of the impeller(s), if they have nicks or bends, performance will be greatly reduced.

## **Bilge**

Should water be present in the bilge, turn on pump switch to completely empty the bilge.

▼ **CAUTION**: Do not run the pump dry for a prolonged period of time.

## **Battery**

◆ **WARNING**: Verify tightness of battery cables and retaining straps.

## **Fuel / Oil Reservoirs**

With the jet boat horizontal, fill the fuel tank.

Check the oil level and refill reservoir as necessary.

## **Engine Compartment**

Check condition of fuel/oil system components.

◆ **WARNING**: Should any leak or gasoline odor be present, do not start the engine(s). Immediately refer to an authorized dealer.

## **Fire Extinguisher**

Make sure it is full, in good condition and well secured.

## **Steering System**

Assisted by another person, check steering operation for free movement. When the steering is centered, the jet pump nozzle(s) should be in the straight ahead position. Ensure the jet pump nozzle(s) pivot easily while steering is turned.

## **Throttle System**

Check throttle lever(s) several times for free and smooth operation.

## **Shifter System**

Check reverse gate operation for free movement. With shift lever in forward position, the gate(s) must be in upward position. With the shift lever in neutral position, gate(s) must be in middle position. With shift lever in reverse position, gate(s) must be in downward position.

## **VTS (Variable Trim System) (if equipped)**

Move lever completely in both directions to check nozzle movement.

## **Safety Lanyard and Engine Start / Stop Button(s)**

Ensure that switch(es) operate properly. Start engine(s) and stop them using each switch individually (if equipped).

◆ **WARNING**: If engine does not shut-off when pushing engine start / stop button or by disconnecting the safety lanyard, stop the engine by applying the choke and turning fuel valve to OFF position. Do not operate the jet boat further, see an authorized dealer.

◆ **WARNING**: Only start the jet boat once all items have been checked and operate properly.

# OPERATING INSTRUCTIONS

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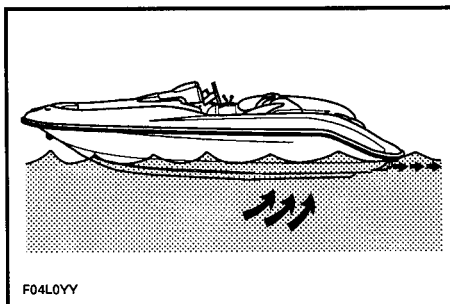
◆ **WARNING** : Always perform **PRE-OPERATION CHECKS** before operating the jet boat. Become thoroughly familiar with all controls and the function of each. Should any control or instruction be not fully understood, refer to an authorized dealer.

## Principle of Operation

### Propulsion

Engine is directly coupled to a drive shaft which, in turn, rotates an impeller. This impeller is accurately adjusted in a housing where the water is drawn up from underneath the jet boat. Then, the water flows through the impeller to a venturi. The venturi accelerates the water and produces thrust to move the jet boat. Pushing the throttle lever(s) forward increases engine speed and therefore jet boat speed.

With shifter lever pushed forward, the jet boat moves forward. In pulled back position, the jet boat moves backward. The middle position is neutral and the jet boat is at the minimum thrust for most conditions. Neutral and reverse are achieved by means of a gate, which is installed on jet pump venturi housing. This gate directs the water flow to obtain the desired direction.



◆ **WARNING** : Whenever an engine is to be started, the operator and passengers should always be sitting in the jet boat with the shifter lever in neutral position and throttle lever(s) in idle position.

### Turning

Turning the steering pivots the jet pump nozzle(s) which controls the jet boat direction. Turning the steering clockwise will turn the jet boat to the right and inversely. The throttle must be applied to turn the jet boat.

◆ **WARNING** : With jet propulsion systems, directional control is lost when the throttle(s) are pulled back. Throttle(s) must be engaged and steering turned to change the direction of the jet boat. Steering efficiency will differ depending on the number of passengers, load and water conditions.

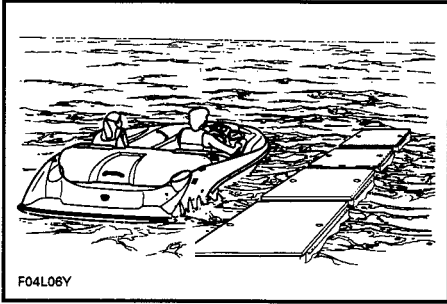
The more the throttle is applied while turning the steering, the more responsive the boat will be.

The jet boat may behave differently when carrying passengers. The passengers should grip the grab handles. Reduce speed and avoid sharp turns. Avoid excessive speeds and choppy water conditions when carrying passengers.

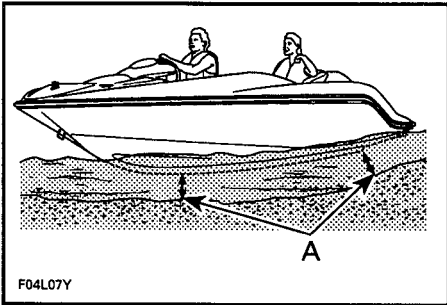
## Boarding from a Dock or in Shallow Water

As with any boat, getting aboard should be done carefully and engine(s) must not be running.

When boarding from a dock, slowly place 1 foot on the jet boat deck nearest to the dock and then move the other foot inside the boat. Push the jet boat away from the dock.



**CAUTION:** Although the boat requires only 30 cm (1 ft) of water to float, the engine should be started with at least 90 cm (3 ft) of water below the hull to protect the propulsion system.



A. 90 cm (3 ft)

In shallow water, board the jet boat either from the side or the swim platform.

## Variable Trim System (if equipped)

The variable trim system (VTS) changes the angle of the jet pump nozzle (up/down) to provide the operator with a fast, effective system to compensate for load, thrust number and position of passengers and water conditions. Correctly adjusted, it can improve handling, reduce porpoising, and position the boat at its best riding angle to attain maximum performance.

When first using the boat, the operator should become familiar with the use of the variable trim system (VTS) at varying speeds and water conditions. A mid-range trim is generally used when cruising. Experience alone will dictate the best trim for the conditions. During the boat break-in period, when lower speeds are recommended, it is an excellent opportunity to gain familiarity of trim adjustment and its effects.

## Starting the Engine(s)

Shifter lever must be in neutral position to allow engine starting.

Always activate bilge air blower switch 4 minutes minimum before starting the engine. The bilge air blower will ventilate the bilge.

**WARNING:** Bilge air blower must be turned off during jet boat operation.

Before unloading the jet boat from the trailer, engine(s) can be started for about 10 seconds to verify proper operation. Remove stern (rear) straps before starting the engine(s).

**WARNING:** Do not touch electrical parts or jet pump area when engine(s) are running.

Attach the safety lanyard to the operator's PFD and snap the cap to the DESS post.

Operator and passengers should be sitting in the jet boat seats prior to starting the engine(s).

Turn the fuel valve(s) to ON position.

Grip steering with your right hand and place both feet on the floorboard. Shut off bilge air blower switch.

Start one engine at a time (if equipped). Check tachometer to monitor engine.

**NOTE** : If you hear some beeper signals other than 2 short beeps, it indicates a particular condition that must be corrected. Refer to the TROUBLESHOOTING section for the meaning of the coded signal.

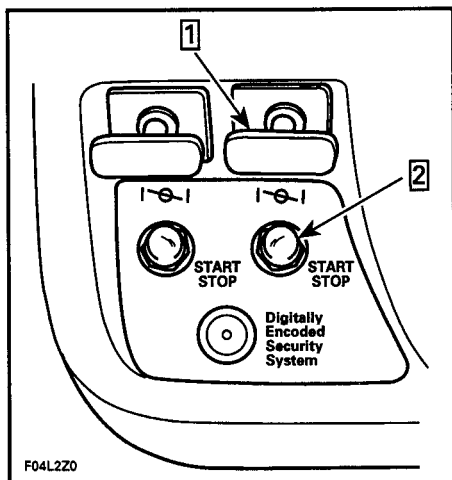
### Cold Engine

Fully pull back throttle lever(s) to idle position.

#### First Engine (twin engine model)

Fully pull one choke lever and depress the starting button just below it.

Either engine can be started first. It does not make a difference.



#### TYPICAL

Step 1: Fully pull and hold

Step 2: Press the button below the choke lever pulled

Immediately after engine is started, release starting button and release choke lever half way.

**NOTE** : Do not push the throttle lever forward while starting a cold engine.

**CAUTION** : To avoid starter motor overheating, the cranking period should not exceed 5-10 seconds and a rest period should be observed between cranking cycles to let the starter cool down and its mechanism disengage.

A few seconds after, completely release the choke lever and if necessary, slightly push throttle forward to keep engine running.

**NOTE** : In an emergency, the twin-engine model may be operated with one engine.

#### Second Engine (twin engine model)

Start the second engine following the same procedure but use the other choke lever, start button and throttle lever. Always monitor engines with tachometers.

#### Leaving the Shore (All models)

Slowly accelerate to reach deeper water. Do not apply full throttle until the engine(s) are warm.

**NOTE** : Throttle(s) must be in idle position in order to be able to shift in forward.

**WARNING** : In shallow water, shells, sand, pebbles or other objects could be drawn up by the jet pump(s) and be thrown rearward. This could damage impeller(s), components or clog the cooling system(s). Also could injure bystanders.

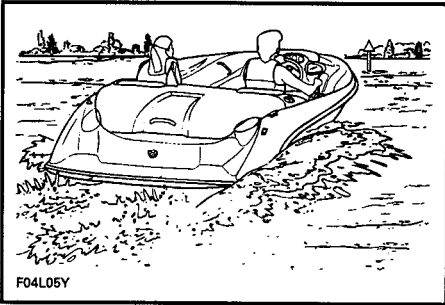
## Warm Engine(s)

The same procedure as a cold engine applies, except the choke does not need to be applied and throttle lever has to be slightly pushed forward to approximately 1/4.

## Obstacles

Verify that the path ahead of the jet boat is clear of other craft or obstacles. Avoid riding close to swimmers. Check local boating laws for safe operational areas.

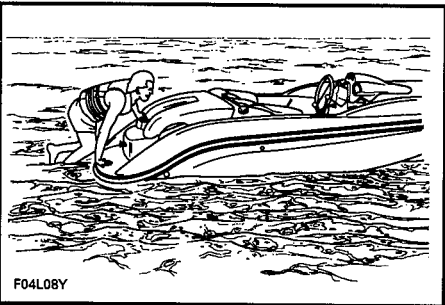
◆ **WARNING:** Collision with objects, other boaters, etc., is the most common cause of accidents resulting in injury.



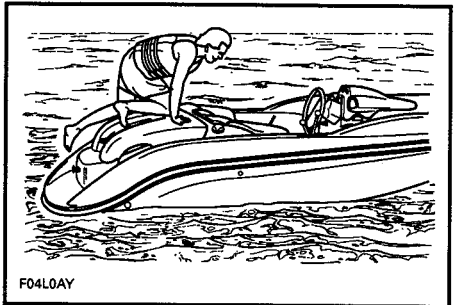
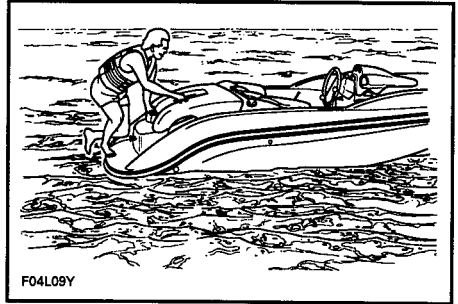
## Boarding in Deep Water

Swim to the rear of the jet boat.

Grip the grab bar and pull yourself upward until your knee can reach the swim platform.



▼ **CAUTION:** Never use reverse gate as a supporting point to board the jet boat, it may damage reverse system components.



◆ **WARNING:** Do not start engine(s) until all passengers are properly seated.

## Rough Water or Poor Visibility Operation

Avoid operation in these conditions. If you must do so, proceed with caution and prudence using minimum speed. Turn on lights if necessary.

## Crossing Waves

Substantially reduce speed and cross the wave head on to assist steering.

◆ **WARNING:** When crossing waves, operator and passengers should brace themselves. Wave or wake jumping can be dangerous and illegal.

## Stopping / Docking

The jet boat is slowed by water drag. The stopping distance will vary depending on weight, speed, water surface condition, presence and direction of wind and current.

The operator should familiarize himself with the stopping distance under different conditions.

Reduce speed, reduce RPM to idle and shift to neutral, reverse or forward as required when approaching a dock then shut off the engine(s) just before coming alongside.

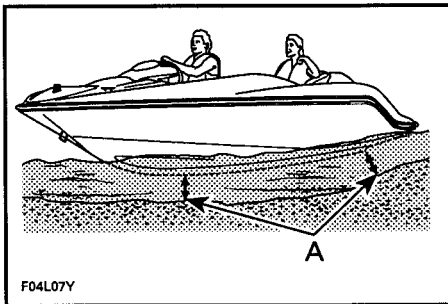
◆ **WARNING :** With jet propulsion systems, no directional control is available when the throttle(s) are closed or engine(s) are shut off.

## Beaching

▼ **CAUTION :** It is not recommended to run the jet boat to the beach.

Proceed the same way as for docking except for the following :

Come slowly to the beach and shut off the engine(s) using the safety lanyard when reaching about 90 cm (3 ft) of water under the hull, then pull the boat to the beach. Ensure that all accessories are OFF.



A. 90 cm (3 ft) of water under the hull

◆ **WARNING :** In shallow water, shells, sand, pebbles or other objects could be drawn up by the jet pumps and be thrown rearward. This may damage impellers, components or clog or jam cooling systems. Also, could injure bystanders.

As necessary, the cooling system should be flushed before restarting, to remove sand or shell accumulation which may clog the water passages.

## Shutting Off the Engine(s)

To keep jet boat directional control, the engine(s) should be running until the jet boat is stopped assuming at least 90 cm (3 ft) of water is present underneath the hull.

To shut off the engine(s), completely pull back throttle lever(s) then remove safety lanyard or press the engine start / stop button(s).

Always remove safety lanyard from jet boat.

◆ **WARNING :** Should the engine be shut off, jet boat directional control is not available. Never leave the safety lanyard on an unattended jet boat.

# POST-OPERATION CARE

## General Care

Should any water be present in the bilge, unscrew the drain plugs and tilt the jet boat to the rear in order to allow water to flow out.

Wipe up any remaining liquid in the engine compartment (bilge, engine(s), etc.) with clean dry rags. This is particularly important in salt water use.

Remove the jet boat from the water every day to prevent marine organisms growth.

## Additional Care for Foul Water or Salt Water

When the jet boat is operated in foul water and particularly in salt water, additional care must be taken to protect the jet boat and its components. Rinse bilge area with fresh water.

▼ **CAUTION** : Failure to perform proper care such as : rinsing, cooling system flushing and anti-corrosion treatment, when used in salt water, will result in damage to the jet boat and its components.

## Cooling System Flushing and Engine Internal Lubrication

Flushing the cooling system with fresh water is essential to neutralize corrod- ing effects of salt or other chemical products present in water. It will help to remove sand, salt, shells or other particles in water jackets (engine, exhaust manifold, tuned pipe) and / or hoses.

Engine lubrication and flushing should be performed when the jet boat is not expected to be used further the same day or when the jet boat is stored for any extended time.

Proceed as follows :

◆ **WARNING** : Perform this operation in a well ventilated area.

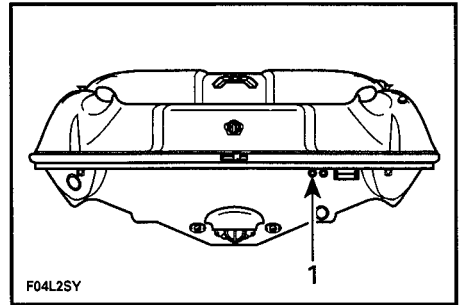
1. Clean jet pump by spraying water in its inlet and outlet and then spray a soapy solution.

○ **NOTE** : A quick connect hose adapter can be fixed to ease garden hose installation to boat's connector.

2. Open rear storage compartment and remove storage tray.

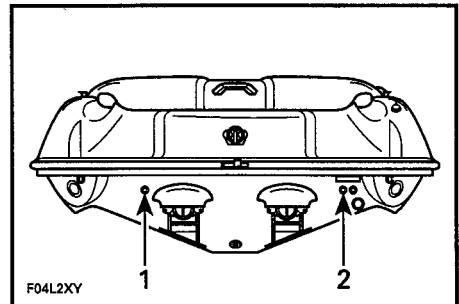
3. Connect a garden hose directly to the flushing connector. To prevent water leak, ensure the rubber washer is in the boat's connector.

○ **NOTE** : On Speedster model, perform the operation on each engine.



**SPORTSTER AND CHALLENGER MODELS**

1. Flushing connector



**SPEEDSTER MODEL**

1. Flushing connector for port engine (LH side)
2. Flushing connector for starboard engine (RH side)

4. Start the engine then immediately open the water tap.

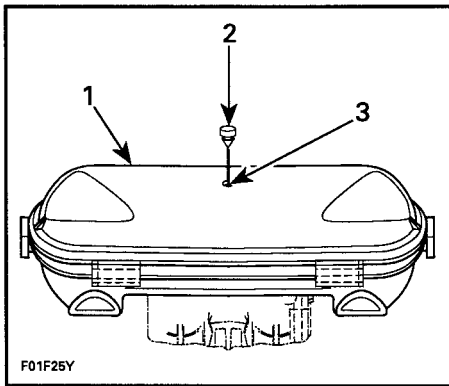
◆ **WARNING** : Do not touch any electrical parts or jet pump area when engine is running.

▼ **CAUTION** : Never flush a hot engine. Always start the engine before opening the water tap. Otherwise, water will back flow through the tuned pipe into the engine and may cause damage to internal parts. Open water tap immediately after engine is started to prevent overheating.

5. Run the engine about 3 minutes at a fast idle around 3500 RPM..

▼ **CAUTION** : Never run engine longer than 5 minutes. Drive line seal has no cooling when jet boat is out of water.

6. Remove plug from air intake silencer cover.



1. Air intake silencer cover
2. Pull plug
3. Spray BOMBARDIER LUBE here

7. Spray BOMBARDIER LUBE lubricant through air intake silencer keeping engine at fast idle.

○ **NOTE** : This should be done for at least 1 minute. After approximately half a minute, close fuel valve to run engine out of fuel while lubricating.

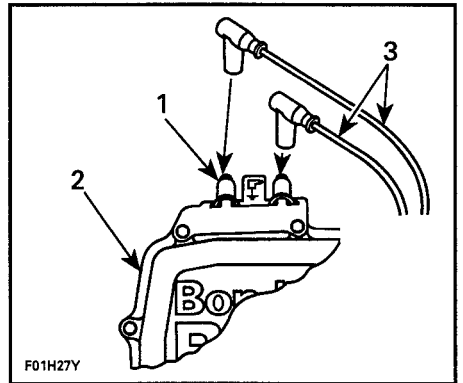
▼ **CAUTION** : When engine begins to run irregularly because a fuel starvation, immediately stop water flow before engine dies. Severe engine damage could result if not done in this order.

8. Close the water tap then stop the engine.

▼ **CAUTION** : Always close the water tap before stopping the engine.

9. Disconnect the garden hose. Ensure the rubber washer remains in boat's connector.

10. Remove spark plug cables and connect them on the grounding device.



**TYPICAL**

1. Grounding device
2. Magneto housing cover
3. Spark plug cables

11. Remove both spark plugs and spray BOMBARDIER LUBE lubricant into each cylinder.

12. Crank the engine a few turns to distribute the oil on cylinder wall.

13. Apply anti-seize lubricant on spark plug threads then reinstall them.

14. Reinstall plug on air intake silencer cover.



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15. Wipe up any residual water from the engine.

○ **NOTE** : Repeat the same procedure for the other engine. (if equipped).

### **Anticorrosion Treatment**

To prevent corrosion, spray a corrosion inhibitor (salt water resistant) such as BOMBARDIER LUBE lubricant or equivalent over metallic components in engine compartment.

○ **NOTE** : Engine fogging should be done with BOMBARDIER LUBE lubricant whenever the jet boat is to be stored for few days or a long period.

Apply a dielectric grease (salt water resistant) on battery posts and cable connectors.

▼ **CAUTION** : Never leave rags or tools in the engine compartment or in the bilge.

# SPECIAL PROCEDURES

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## Engine Overheating

If the monitoring beeper continuously sounds, stop engine(s) immediately.

Perform the Jet Pump Water Intake and Impeller Cleaning procedure in this section.

Flush cooling system, refer to POST OPERATION CARE.

If engine(s) still overheat, refer to an authorized dealer for servicing.

## Jet Pump Water Intake and Impeller Cleaning

Weeds, shells or debris can get caught on the intake grill, drive shaft(s) and / or impeller(s). A clogged water intake may cause troubles such as :

- 1- **Cavitation** : Engine speed is high but jet boat moves slowly due to reduced jet thrust ; jet pump components may be damaged.
- 2- **Overheating** : Since the jet pump operation controls the flow of water to cool the engine, a clogged intake will cause the engine to overheat and damage engine internal components.

The clogged area can be cleaned as follows :

**In-water cleaning** : Pull safety lanyard to stop engine(s). Let the boat stop by itself then wait about 10 seconds. Thereafter start engine(s). This waiting period may allow weeds or other debris to fall free from grate.

If the above method does not work, the following can be performed :

- With engine(s) running, put shifter in reverse position and vary throttle(s) quickly several times.
- Retry boat.

— If still clogged, restop engine(s) and rock the boat several times while repeatedly pressing the starting button(s) (one at a time) for short periods without starting the engine(s).

Most of the time, this will exhaust the debris fall from the intake area. Start engine(s) and make sure water flows out from bleed outlet(s) and jet boat operates properly.

If the system is still clogged, shut off the engine(s) by removing the safety lanyard.

◆ **WARNING** : Always remove safety lanyard from switch to prevent accidental engine starting before cleaning the jet pump area.

If the jet pump(s) can not be easily cleared of debris, the jet boat should be returned to the trailer or to a boat lift.

Manually clean the water intake area. If the system is still clogged, refer to an authorized dealer for servicing.

▼ **CAUTION** : Avoid jet boat operation in weeded areas. If unavoidable, vary jet boat speed. Weeds tend to entangle more at steady and slow speeds. Inspect water intake grate for damage. Refer to an authorized dealer for repair as necessary.

## Capsized Boat

The jet boat is designed so that it should not turn over easily due to its long and large dimensions. If the jet boat ever capsizes, remember that it will continue to float, and it is usually best to remain with it, you will be more easily located by a search plane, helicopter or boat.

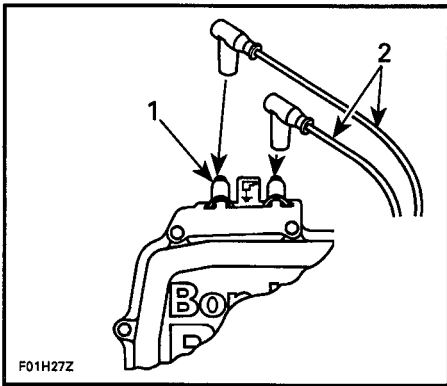
◆ **WARNING** : Operator and passengers should always wear approved personal flotation devices and be good swimmers.

## Submerged Boat

If the jet boat has been submerged and engine(s) are water-flooded, it is strongly recommended to have it serviced by an authorized dealer immediately.

In the event the engine(s) cannot be serviced within a few hours, remove spark plug cables and connect them on the grounding device.

◆ **WARNING:** Never crank engine(s) with spark plugs removed unless spark plug cables are connected to the grounding device.



### TYPICAL

1. Grounding device
2. Spark plug cables

Remove spark plugs and dry them with a clean and dry cloth.

Cover spark plug holes with a rag.

Crank engine to allow water to escape from spark plug holes.

Spray BOMBARDIER LUBE lubricant into spark plug holes.

Crank engine again.

Repeat the same procedure for the other engine (if equipped).

Reinstall spark plugs.

## Towing the Boat

In the event the jet boat becomes inoperative, tie a tow rope to the bow (front) eyelet and have the jet boat towed to the shore at moderate speed.

## Low-Charge Battery Condition

See your dealer to have it charged or replaced.

◆ **WARNING:** Do not charge or boost a battery in the boat.

# MAINTENANCE

◆ **WARNING** : Only perform procedures as detailed in this guide. It is recommended that the assistance of an authorized dealer be periodically obtained on other components / systems not covered in this guide. Unless otherwise specified, engine(s) must not be running and the safety lanyard must be removed for all maintenance procedures.

## Lubrication

### PTO Flywheel(s)

Use SEA-DOO synthetic grease and lubricate every 10 hours of use. Proceed as follows :

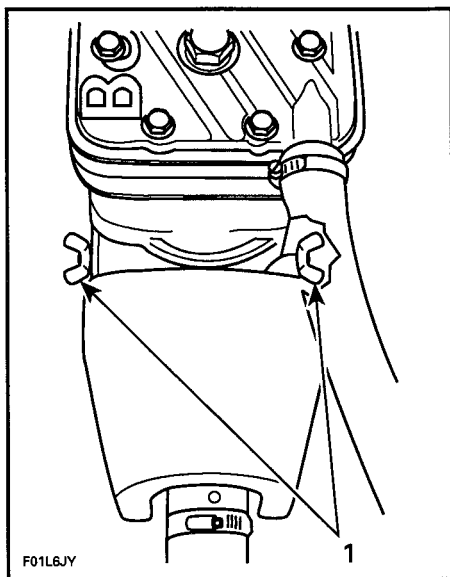
Open rear storage compartment cover.

Remove storage tray.

Remove the wing nuts, washers and pull out PTO flywheel guard(s).

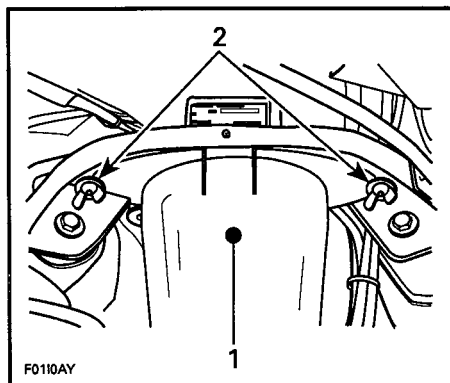
◆ **WARNING** : Always remove safety lanyard cap from its receptacle to prevent accidental engine starting before removing the PTO flywheel guard.

### Speedster and Sportster Models



1. Wing nuts

### Challenger Model

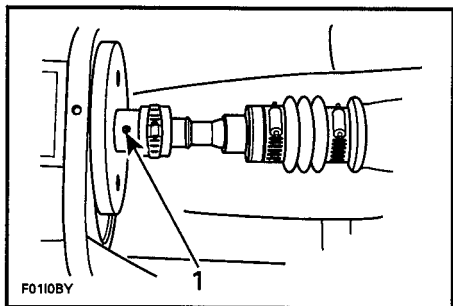


1. Flywheel guard
2. Wing nuts

## All Models

Using a grease gun, carefully lubricate PTO flywheel(s) at grease fittings until drive shaft boot is just beginning to expand.

**CAUTION** : Immediately stop lubricating as soon as boot begins to expand to prevent boot damage or slipping.



1. Grease PTO flywheel

Secure PTO flywheel guard(s).

## Anticorrosion Protection

### Throttle / Choke Cables

Lubricate the throttle and choke cables with BOMBARDIER LUBE lubricant every 25 hours of use (every 10 hours in salt water use).

## Electrical Connections

As necessary, apply an anticorrosion product such as a dielectric grease on battery posts and all exposed cable connectors including stern light connectors on mat and boat.

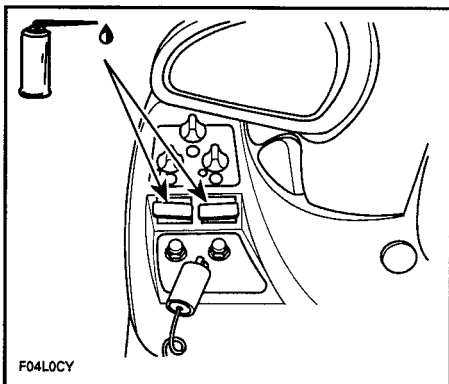
## Additional Lubrication

BOMBARDIER LUBE lubricant will help to prevent corrosion and keep proper operation of moving mechanisms.

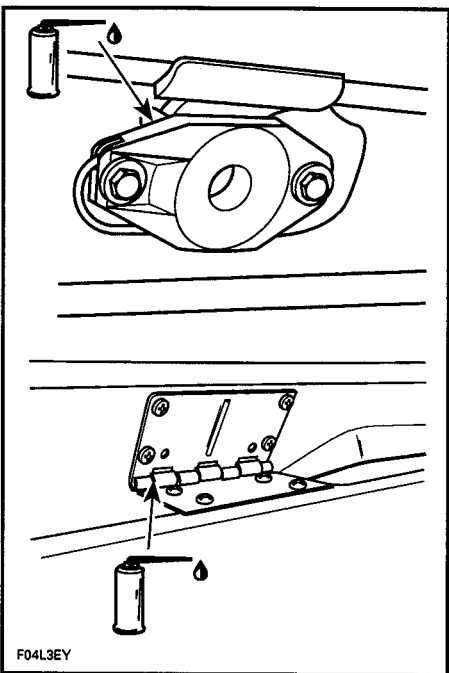
Lubrication of the following items should be performed every 50 hours in fresh water use but every 10 hours in salt water use.

## Choke Lever(s)

Fully pull choke lever(s) and lubricate the metallic portion.



## Rear Storage Compartment Cover Mechanism and Hinges



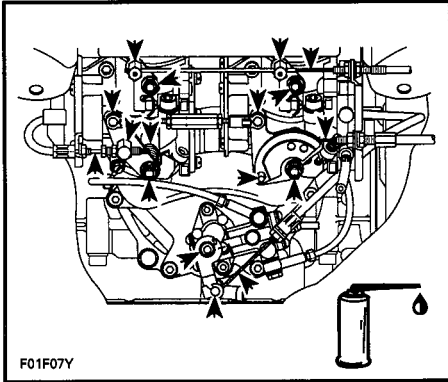
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### Ski Post (if equipped)

Lubricate ski post through all its length. Pull out then push in several times to distribute the lubricant.

### Carburetors and Oil Injection Pump(s)

Lubricate springs, shafts and exposed portion of cables. Grease carburetor linkage with synthetic grease.



F01F07Y

TYPICAL

### Reverse Gate(s)

Lubricate pivoting points and mechanism of each side.

### VTS (Variable Trim System) (if equipped)

Lubricate pivoting points.

## Periodic Inspection

Routine maintenance is necessary for all mechanized products. A periodic inspection contributes to the products life span.

The following maintenance chart gives guidelines for regular jet boat servicing schedule to be performed by you and / or by an authorized dealer. The schedule should be adjusted according to operating conditions and use.

## Periodic Inspection Chart

DESCRIPTION	FREQUENCY				To be performed by
	every 10 hours	every 25 hours	every 50 hours	every 100 hours or seasonally	
Lubrication / corrosion protection	①		✓		OPERATOR
DESS operation / DESS post and safety lanyard cap terminal condition				✓	DEALER
Engine ignition timing				✓	DEALER
Spark plug replacement			✓		DEALER
Throttle / choke cables operation / lubrication	①	✓			OPERATOR
Flame arrester inspection			✓		DEALER
Carburetor adjustment including choke / throttle cable adjustments				✓	DEALER
Oil injection pump adjustment				✓	DEALER
Fuel filter and oil filter inspection		✓			DEALER
Oil filter and fuel filter replacement				✓	DEALER
Engine head screws, retorque				✓	DEALER
Steering system			✓		DEALER
Throttle / shifter / VTS systems				✓	DEALER
Fastener tightening (flame arrester(s), carburetors, engine(s) exhaust system(s) etc.)			✓		DEALER
Muffler(s), battery and reservoir fastening devices			✓		DEALER
Fuel / oil line, check-valve(s) and hose inspection, fuel system pressurization			✓		DEALER
Inspect / clean engine drain tube(s)	①	✓			DEALER
Bilge pump / deck drain hole inspection			✓		OPERATOR
Electrical box condition			✓		DEALER
Battery condition			✓		DEALER
Starter cables		✓			DEALER
Monitoring beeper / electrical connections			✓		DEALER
Impeller shaft reservoir oil level / oil condition		✓		Replace	DEALER
Impeller condition and impeller / wear ring clearance		②	✓		DEALER
Drive shaft boot and spline condition (both ends)		②	✓		DEALER
PTO flywheel lubrication	✓				OPERATOR
Water intake grate condition		②	✓		DEALER
Hull condition and ride shoe(s)				✓	DEALER
Cooling system flushing ③		✓			OPERATOR
Light condition		✓			DEALER
Sacrificial zinc anodes			✓		OPERATOR
Bilge air blower inspection			✓		DEALER

○ NOTE : Inspection applies for both engine systems where applicable. Some items are included in the PRE-OPERATION CHECKS and are not necessarily repeated in this chart.

① Every 10 hours in salt water use.

② These items have to be initially checked after 25 hours. Thereafter, servicing to be made as specified in this chart.

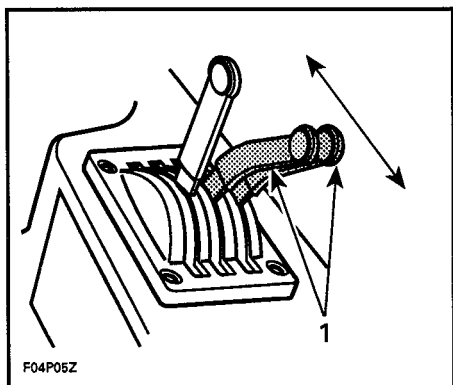
③ Daily flushing in salt water or foul water use.

## Throttle and Choke Cables

### Throttle Cable(s)

Move the throttle lever(s) forward and rearward several times. They must operate smoothly. Refer to an authorized dealer if adjustment is necessary.

◆ **WARNING** : Do not alter or tamper with throttle cables or routing.



TYPICAL THROTTLE LEVER(S)

1. Must move freely

### Choke Cable

Ensure choke cable(s) operate smoothly and without any hesitation from fully open to fully closed. When the choke lever is fully pulled, choke must be fully applied. Refer to an authorized dealer if necessary.

### Carburetor

Carburetor adjustment is very important to allow good engine operation and therefore jet boat performance. Carburetor adjustment requires technical knowledge and experience to have the correct mixture supplied to the engine. These critical adjustments must be performed by an authorized dealer once a year or more often if necessary.

▼ **CAUTION** : Serious engine damage can occur with improper carburetor adjustment.

## Fuel and Oil Filters

These filters must be replaced by an authorized dealer annually. Fuel system pressurization should be conducted at the same time.

▼ **CAUTION** : An obstructed oil filter will cause oil starvation resulting in serious engine damage.

### Steering / Jet Pump Nozzle Adjustment

When the steering is aimed in straight ahead position, the jet pump nozzle should be in the same direction to allow the jet boat to run in a straight line.

Refer to an authorized dealer if an adjustment is necessary.

◆ **WARNING** : Ensure the steering / jet pump nozzle(s) operate freely from side to side and are not stressing the steering cable(s). Steering system should be inspected every 50 hours by an authorized dealer.

### Reverse Gate(s)

When shift lever is in forward position, reverse gate should be in an upward position and locked there. With the shift lever in neutral position, reverse gate should be in intermediate position. When shift lever is in reverse position, reverse gate should be in downward position. Refer to an authorized dealer if adjustment is necessary.

◆ **WARNING** : Ensure the shifter / reverse gate(s) operates freely and are not stressing the reverse cable(s).

### VTS (Variable Trim System) (if equipped)

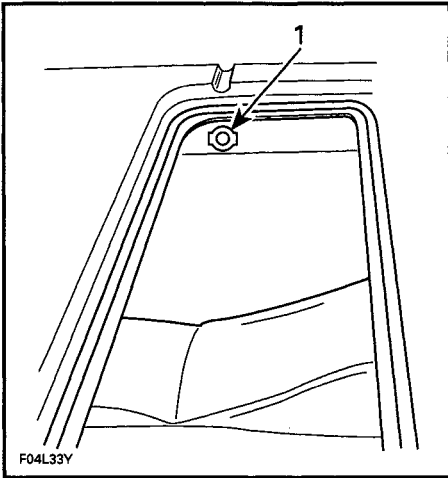
With the shifter in the forward position, fully push and pull the VTS lever. Check the nozzle in both positions. It must go up and down without touching the venturi. Otherwise, refer to an authorized dealer for inspection / adjustment.



**CAUTION :** Trim ring and / or nozzle must no interfere at any position.

## Drain Holes

Remove any obstruction at drain outlet of deck. Also check bilge drain outlet.



*TYPICAL*

1. Drain hole

## Fuses

The fuses are located at 2 places. Fuse block is located in the front storage compartment under the basket. MPEM (Multi-Purpose Electronic Module) fuses are located in the engine compartment inside the electrical box.

The fuse block is protected by a separate 20A fuse located inside the electrical box.

### MPEM Fuses

The DC-CDI module (if equipped) and the gauges are protected by a 5A fuse (2 fuses for the gauges on the Speedster model).

The MPEM module is protected by a 5A fuse (2 fuses on the Speedster model).

The charging system is protected by a 15A fuse (2 fuses on the Speedster model). If the battery is regularly discharged, check this fuse condition.

There are 3 spare fuses of 5, 15 and 20A.

### Fuse Block

The bilge pump is protected by a 3A fuse.

The bilge air blower is protected by a 7.5A fuse.

Additional accessories are protected by a 10A fuse.

NAV / ANC lights are protected by a 3A fuse.

There are 3 spare fuses of 3, 7.5 and 10A.

### All Fuses

Open fuse holder to check fuse condition.

If defective, replace the fuse by one of the same rating. Make sure to properly close the fuse holder.

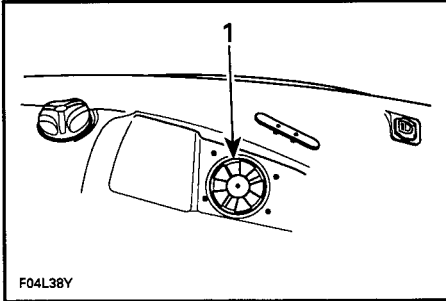
**CAUTION :** Do not use a higher rated fuse as this can cause severe damage. If a fuse is regularly burnt, refer to an authorized dealer.

**WARNING :** If any water is found in the electrical box, immediately refer to an authorized dealer before operating the boat.

When reinstalling electrical box cover make sure its seal is well positioned.

## Bilge Air Blower

Verify bilge air blower for proper operation. It is located in starboard ventilation duct.

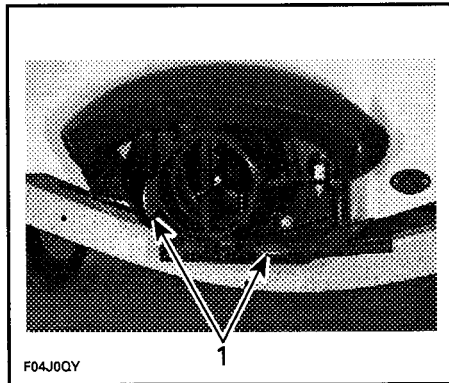


1. Blower

◆ **WARNING** : If bilge air blower does not operate properly, immediately refer to an authorized dealer before operating the jet boat.

## Sacrificial Zinc Anode(s)

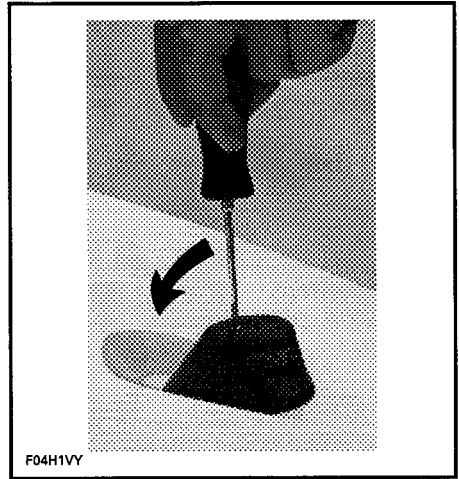
Replace as necessary.



## Light Bulb Replacement

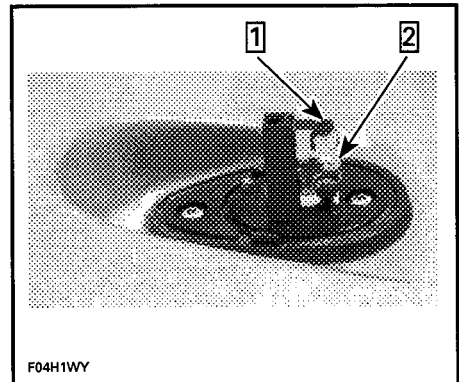
Bow Light

Remove screw.



Pull out cover.

Gently lift the upper terminal and remove bulb.



Step 1: Gently lift

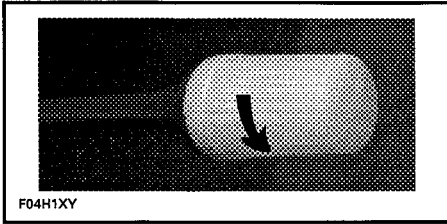
Step 2: Remove bulb

The assembly is essentially the reverse of removal procedures. However, pay particular attention to the following :

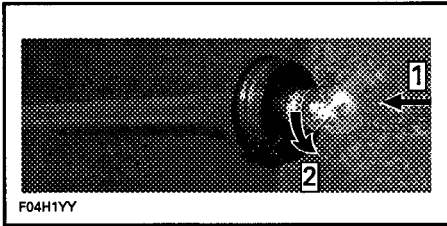
Apply dielectric grease on bulb contact surface.

**Stern Light**

Turn lens counterclockwise and remove it.



Push and hold bulb while turning it counterclockwise to remove it.



Step 1: Push and hold bulb  
Step 2: Turn and remove

Apply dielectric grease on new bulb contact surface.

The assembly is the reverse of removal procedure.

## General Inspection and Cleaning

### Inspection

Check engine compartment for any damage and fuel / oil injection system(s) for leaks. Also check battery for electrolyte leaks. Ensure all hose clamps are properly secured and no hose is cracked, kinked or presenting any other damage.

◆ **WARNING** : If any gasoline leaks / odor are found, do not start the engine(s). Have the boat serviced by an authorized dealer.

Inspect muffler(s), battery(ies) and reservoir fastening devices. Check electrical connections for corrosion and tightness.

Inspect hull and jet pump water intake grate for damage. Replace or have damaged parts repaired. It is recommended that an authorized dealer annually inspect the hull.

### Cleaning

Twice a year, the bilge should be cleaned with hot water and detergent or bilge cleaner to remove any possible fuel / oil / electrolyte deposits and mildew.

Occasionally, wash the body with hot water and soap (only use mild detergent). Remove any marine organisms from engine and / or hull. Apply non-abrasive wax.

▼ **CAUTION** : Never clean apparent fiberglass and plastic parts with strong detergent, degreasing agent, paint thinner, acetone, etc.

Respect the environment by ensuring fuel, oil or cleaning solutions do not drain into the waterways.

# TRANSPORTATION, STORAGE AND PRE-SEASON PREPARATION

## Transportation

Refer to the *Trailer Owner's Guide* for proper capacity, operation, maintenance accessories and warranty. However, pay particular attention to the following.

◆ **WARNING** : Always turn the fuel valve(s) to OFF position when transporting or docking the jet boat.

Remove stern light (if installed).

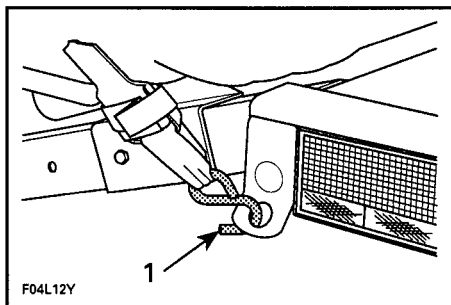
Ensure all storage compartments are properly latched.

A SEA-DOO jet boat cover should protect the jet boat, particularly before driving on dirt roads.

### Boat Tie-down Attachment on Trailer

When securing boat tie-downs to trailer, ensure that tie-down hook is passed through trailer bracket hole as shown.

The hook open end must be toward ground so that if it would slacken, it would remain hooked on trailer bracket.



TYPICAL

1. Hook open end must be positioned toward ground

◆ **WARNING** : Observe trailering safety precautions.

## Storage

It is recommended that the jet boat be taken to an authorized dealer for proper storage but the following operations can be performed by you with a minimum of tools.

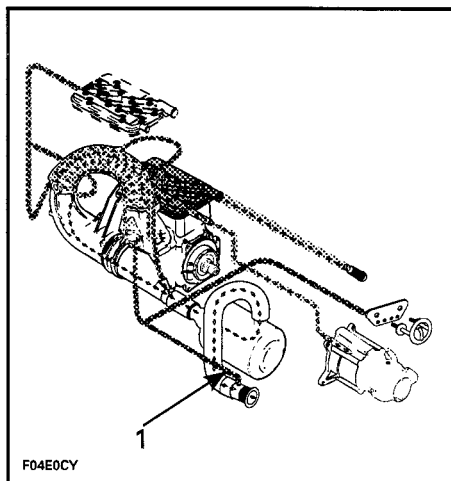
▼ **CAUTION** : Do not run the engine(s) during the storage period.

### Engine Draining

Check engine drain tube(s). Make sure there is no sand or other particles in it and that it is not obstructed so that water can leave the engine(s). Clean hose and fitting as necessary.

▼ **CAUTION** : Water in engine drain tube(s) must be free to flow out, otherwise water could be trapped in engine(s). Should water freeze in engine(s), severe damage will occur. Check engine drain tube(s) for obstructions.

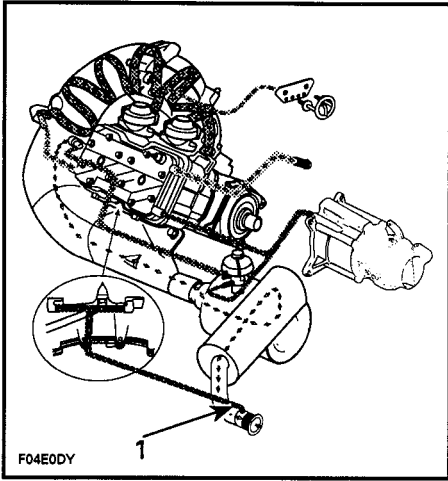
### Sportster and Speedster Models



TYPICAL

1. Drain tube

## Challenger Model



1. Drain Tube

### Boat Rinsing

Thoroughly rinse the boat hull, bilge, engine compartment, with fresh water.

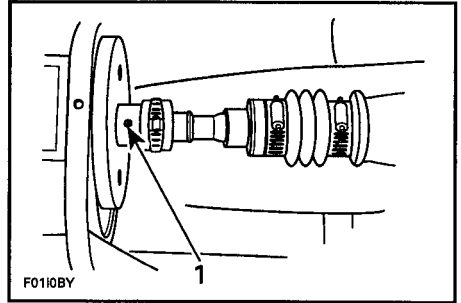
### Propulsion System

Lubricant in impeller shaft reservoir should be drained and reservoir cleaned. Refilled with 90 mL (3 oz) of BOMBARDIER synthetic polyolester oil 75W90 GL5 type C gear lube. Refer to an authorized dealer for this operation.

▼ **CAUTION** : Use only BOMBARDIER jet pump oil or equivalent synthetic gear oil, otherwise component service life could be reduced. Do not mix oil brands or types.

Lubricate PTO flywheel(s) at grease fitting(s) with synthetic grease.

▼ **CAUTION** : Do not lubricate excessively. Immediately stop when a slight movement is noticed on rubber boot(s).



1. Grease PTO flywheel

### Fuel System

SEA-DOO fuel stabilizer or equivalent, can be added to fuel tank to prevent fuel deterioration and carburetor gumming. Follow manufacturer's instructions for proper use.

▼ **CAUTION** : Fuel stabilizer should be added prior to engine lubrication to ensure carburetor protection against varnish deposit.

◆ **WARNING** : Fuel is flammable and explosive under certain conditions. Always work in a well ventilated area. Do not smoke or allow open flames or sparks in the vicinity. Always wipe off any fuel spillage from the jet boat. Always turn the fuel valve(s) to OFF position when storing the jet boat.

### Cooling System Flushing and Engine Internal Lubrication

Refer to procedure discussed in POST-OPERATION CARE.

### Battery

Contact your authorized dealer.

## Anticorrosion Treatment

Wipe off any residual water in the engine compartment.

Spray BOMBARDIER LUBE lubricant over metallic components in engine compartment.

## Additional Recommended Protection

In cold regions where freezing point temperature may be encountered, cooling system should be filled with an equal part of water and antifreeze solution.

▼ **CAUTION** : Always use ethylene glycol antifreeze containing corrosion inhibitors specifically recommended for aluminum engines.

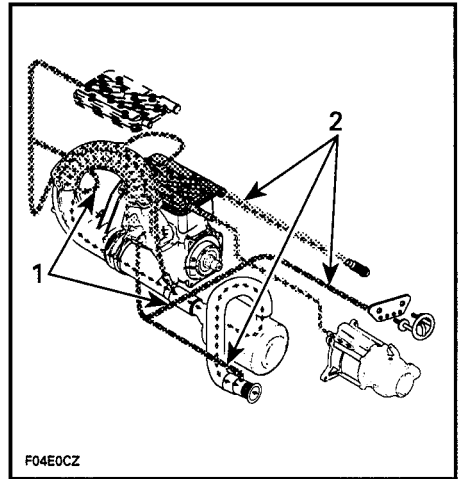
○ **NOTE** : The engine(s) will not have to run during this operation.

Three hoses have to be disconnected to allow air to escape and antifreeze solution to completely fill cooling system water jackets.

Install a hose pincher on water injection hose.

Disconnect water inlet hose, drain hose and water outlet hose.

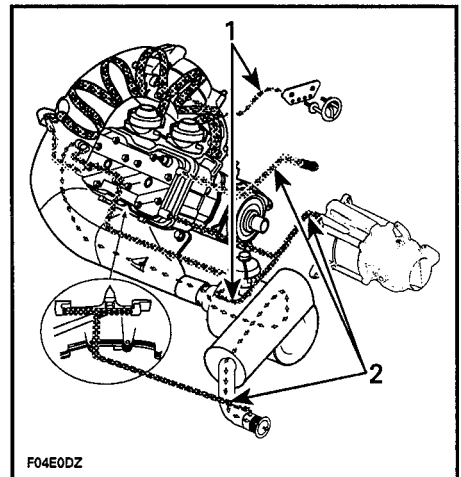
## Sportster and Speedster Models



### TYPICAL

1. Install a hose pincher on water injection hose and CSI hose
2. Disconnect here

## Challenger Model



### TYPICAL

1. Install a hose pincher on water injection hose and on CSI hose
2. Disconnect here

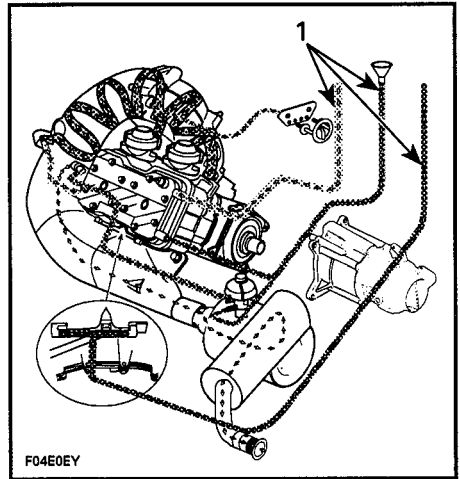
Raise all hoses above the highest point of tuned pipe and temporarily tie them together.

Insert a funnel into inlet hose going to the water inlet socket on engine head. Pour about 2 liters (1/2 gal) of antifreeze solution through the funnel.

Tie up all hoses higher than tuned pipe.

**NOTE :** If hoses are not attached higher than tuned pipe, coolant will drain out.

## Challenger Model



### TYPICAL

1. Hold hoses higher than tuned pipe
2. Water inlet hose

Repeat the same procedure for the other engine (if equipped).

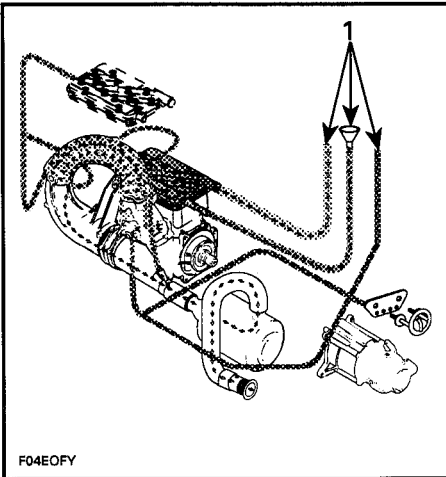
The following steps should be performed to provide the jet boat enhanced protection.

Remove muffler(s) and drain out as much water as possible. Reinstall muffler(s).

**OR :** Disconnect 1 hose from muffler(s) and pour some antifreeze liquid inside muffler(s). Reconnect hoses.

Lubricate the throttle cable(s) with BOMBARDIER LUBE lubricant.

Clean the bilge with hot water and detergent or with bilge cleaner. Rinse thoroughly. Lift front end of jet boat to completely drain bilge. If any repairs are needed to the body or to the hull contact your dealer. For paint touch up to mechanical parts use Bombardier spray paint. For small gelcoat repairs, a Bombardier repair kit is available. See **Accessories and Service Products** section. Replace damaged labels / decals.



### TYPICAL

1. Hold hoses higher than tuned pipe
2. Water inlet hose

---

**○ NOTE :** Bilge cleaning should be done prior to anticorrosion treatment.

Wash the body with soap and water solution (only use mild detergent). Rinse thoroughly with fresh water. Remove any marine organisms from the hull. Apply a non abrasive wax.

**▼ CAUTION :** Never clean apparent fiberglass and plastic parts with strong detergent, degreasing agent, paint thinner, acetone, etc.

If the jet boat is to be stored outside, cover it with an opaque tarpaulin to prevent sun rays and grime from affecting the plastic components, jet boat finish as well as preventing dust accumulation.

**▼ CAUTION :** Never leave the jet boat stored in direct sunlight. UV radiation will dull finishes. The jet boat must never be left in water for storage. Make sure to turn off bilge pump and blower.

The engine storage cover should be left opened during storage. Remove storage tray. Place it on deck. This will avoid engine compartment condensation and possible corrosion.

Unscrew the drain plugs for the storage, lift the boat so that bow is higher than the stern. Safely block in this position.

## **Pre-Season Preparation**


Use the following chart.

Since technical skills and special tools are required, some operations should be performed by an authorized dealer.

**◆ WARNING :** Observe WARNINGS and CAUTIONS mentioned throughout this guide which are pertinent to the item being checked. When component conditions seem less than satisfactory, replace with genuine BOMBARDIER parts or approved equivalents.




## Pre-Season Preparation Chart

 NOTE : It is highly recommended that the dealer perform at the same time the annual safety inspection in addition to the pre-season preparation.

OPERATIONS	To be performed by
Lubrication / corrosion protection	OPERATOR
DESS operation / DESS post and safety lanyard cap terminal condition	DEALER
Battery condition / charging and reinstallation	DEALER
Starter connections and routing ②	DEALER
Spark plug replacement ①	OPERATOR
Impeller shaft reservoir oil inspection / replacement	DEALER
Propulsion system inspection	DEALER
Sacrificial zinc anodes	DEALER
Oil filter replacement	DEALER
Oil injection reservoir filling	OPERATOR
Flame arrester cleaning / inspection ②	DEALER
Fuel filter replacement	DEALER
Fuel line condition ②	DEALER
Filler neck, fuel tank and fuel cap condition ②	DEALER
Check valves, fasteners, fuel system pressurization ②	DEALER
Choke cable inspection / adjustment	DEALER
Oil injection pump adjustment and bleeding	DEALER
Engine ignition timing	DEALER
Carburetor adjustment	DEALER
Steering system inspection ②	DEALER
Throttle / shifter VTS / system inspection ②	DEALER
Inspection of drain holes / bilge pump / drain plugs	DEALER
Inspection of cooling system inlet / outlet hoses ②, monitoring beeper	DEALER
Fire extinguisher condition / mounting ②	OPERATOR

① Before installing new spark plugs, it is suggested to burn the excess BOMBARDIER LUBE lubricant by starting the engine using the old spark plugs.

② Safety item covered in the annual safety inspection.

 **WARNING :** Only perform this operation in a well ventilated area. Garden hose must be installed or boat must be in water to cool engine. Running the engine without cooling water will damage exhaust hose interior and may damage engine.

# TROUBLESHOOTING

The following chart is provided to help in diagnosing the probable source of simple troubles. You may be able to solve many of these problems rather quickly, but others may require the skills of a mechanical technician. In such a case, consult an authorized dealer for servicing.

## Monitoring Beeper Coded Signals

NUMBER OF BEEPS	POSSIBLE CAUSE	REMEDY
2 short (while installing safety lanyard on DESS post).	<ul style="list-style-type: none"> <li>Everything is correct with the safety lanyard (good contact and right lanyard cap).</li> </ul>	<ul style="list-style-type: none"> <li>Engine can be started normally.</li> </ul>
1 long (while installing safety lanyard on DESS post or when pressing start / stop button in some cases).	<ul style="list-style-type: none"> <li>Bad connection between safety lanyard cap and DESS post.</li> <li>Wrong safety lanyard.</li> <li>Salt water in safety lanyard cap.</li> <li>Improper operation of MPEM or defective wiring harness.</li> </ul>	<ul style="list-style-type: none"> <li>Push and turn the safety lanyard on the DESS post until you hear 2 short beeps. That indicates the system is now ready to allow engine starting.</li> <li>Use the safety lanyard that has been programmed for the boat.</li> <li>If it does not work, refer to an authorized dealer.</li> <li>Shake safety lanyard cap to remove salt water.</li> <li>Refer to an authorized dealer.</li> </ul>
4 long (while installing safety lanyard on DESS post).	<ul style="list-style-type: none"> <li>Boat MPEM can not communicate with the DC-CDI module (<b>Challenger only</b>).</li> </ul>	<ul style="list-style-type: none"> <li>Check fuse on MPEM located in electrical box or refer to an authorized dealer.</li> </ul>
4 short (while pressing start / stop button with safety lanyard already installed).	<ul style="list-style-type: none"> <li>Shifter is NOT in neutral.</li> </ul>	<ul style="list-style-type: none"> <li>Place shifter in neutral. While moving the shifter, 1 short beep indicates you reached the neutral position.</li> </ul>
1 short (while moving shifter to neutral).	<ul style="list-style-type: none"> <li>Confirmation that shifter is now in <b>neutral</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Engine is now ready to be started.</li> </ul>
8 short.	<ul style="list-style-type: none"> <li>Defective MPEM (memory).</li> </ul>	<ul style="list-style-type: none"> <li>Refer to an authorized dealer.</li> </ul>
Continuous.	<ul style="list-style-type: none"> <li>Engine overheating.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to Engine Overheats below.</li> </ul>

## Engine will not Start

OTHER OBSERVATION	POSSIBLE CAUSE	REMEDY
Engine does not turn over and the monitoring beeper sounds	Refer to monitoring beeper coded signals above.	
Engine does not turn over.	<ul style="list-style-type: none"> <li>• Safety lanyard removed.</li> <li>• Burnt fuse.</li> <li>• Discharged battery.</li> <li>• Battery connections, corroded or loose.</li> <li>• Water flooded engine.</li> </ul>	Install cap over switch. Check wiring then replace fuse. Refer to an authorized dealer. Refer to an authorized dealer.  Refer to <b>Submerged Jet Boat</b> in SPECIAL PROCEDURES.
Engine slowly turns.	<ul style="list-style-type: none"> <li>• Discharged or weak battery.</li> </ul>	Refer to an authorized dealer.
Engine turns over.	<ul style="list-style-type: none"> <li>• Fuel tank empty or water-contaminated.</li> <li>• Fuel filter clogged or water-contaminated.</li> <li>• Fuel flooded engine :               <ul style="list-style-type: none"> <li>– Fouled / defective spark plugs.</li> <li>– Misuse of choke.</li> </ul> </li> </ul>	Refill or syphon and fill with fresh fuel.  Clean, check fuel tank for water.  Replace.  Use only with cold engine. Replace spark plugs.

## Engine Misfires, Runs Irregularly

OTHER OBSERVATION	POSSIBLE CAUSE	REMEDY
Weak spark.	<ul style="list-style-type: none"> <li>• Fouled worn spark plugs.</li> <li>• Faulty RPM limiter.</li> <li>• Too much oil supplied to engine.</li> </ul>	Replace. Refer to an authorized dealer. Improper oil pump adjustment, refer to an authorized dealer.
Lean fuel mixture.	<ul style="list-style-type: none"> <li>• Fuel : Level too low, stale or water-contaminated.</li> <li>• Fuel filter, clogged or water-contaminated.</li> <li>• Fuel valve partially opened.</li> </ul>	Syphon and / or refill.  Refer to an authorized dealer.  Turn fuel valve to ON position.
Rich fuel mixture (high fuel consumption).	<ul style="list-style-type: none"> <li>• Flame arrester dirty / clogged.</li> <li>• Partially closed choke.</li> </ul>	Clean or replace. Refer to an authorized dealer.

## Engine Overheats

OTHER OBSERVATION	POSSIBLE CAUSE	REMEDY
Monitoring beeper continuously sounds.	<ul style="list-style-type: none"> <li>• Clogged jet pump water intake.</li> <li>• Incorrect type of fuel or oil.</li> <li>• Clogged coolant system.</li> </ul>	Clean.  Syphon and refill. Flush cooling system with garden hose.

## Engine Continually Backfires

OTHER OBSERVATION	POSSIBLE CAUSE	REMEDY
	<ul style="list-style-type: none"> <li>• Faulty RPM limiter.</li> </ul>	Refer to an authorized dealer.
Weak spark.	<ul style="list-style-type: none"> <li>• Fouled, worn spark plugs.</li> </ul>	Replace.
Overheated engine.	<ul style="list-style-type: none"> <li>• See ENGINE OVERHEATS.</li> </ul>	

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### Engine Pinging or Knocking

OTHER OBSERVATION	POSSIBLE CAUSE	REMEDY
	<ul style="list-style-type: none"><li>• Poor quality gasoline / low octane.</li><li>• Spark plug heat range too high.</li></ul>	Use well known quality and recommended gasoline. Use recommended spark plugs.

### Engine Lacks Acceleration or Power

OTHER OBSERVATION	POSSIBLE CAUSE	REMEDY
	<ul style="list-style-type: none"><li>• Weak spark / incorrect fuel mixture.</li><li>• Water in fuel or injection oil.</li></ul>	Refer to ENGINE MISFIRES... Syphon and replace.
Overheated engine.	<ul style="list-style-type: none"><li>• See ENGINE OVERHEATS.</li></ul>	

### Jet Boat can not Reach Top Speed

OTHER OBSERVATION	POSSIBLE CAUSE	REMEDY
	<ul style="list-style-type: none"><li>• Jet pump water intake clogged.</li><li>• Damaged impeller(s).</li></ul>	Clean. Replace. Refer to an authorized dealer.

### Abnormal Noise from Propulsion System

OTHER OBSERVATION	POSSIBLE CAUSE	REMEDY
	<ul style="list-style-type: none"><li>• Weeds or debris jammed around impeller(s).</li></ul>	Clean and check for damage.
	<ul style="list-style-type: none"><li>• Damaged impeller shaft(s) or drive shaft(s).</li></ul>	Refer to an authorized dealer.

# SPECIFICATIONS

ENGINE		SPEEDSTER (5894)	SPORTSTER (5895)
Number of engines		2	1
Engine type		Bombardier-Rotax 717 X, 2-stroke	
Induction type		Rotary valve	
Exhaust system		Water cooled / water injected	
Lubrication	Type	Oil injection	
	Oil type	BOMBARDIER ROTAX INJECTION OIL	
Number of cylinders		2	
Displacement		718 cm <sup>3</sup> (43.81 in <sup>3</sup> )	
Rev limiter setting		7000 RPM (± 50)	
<b>COOLING</b>			
Type		Water cooled, total loss type. Direct flow from propulsion unit.	
Monitoring beeper, switch on @		96-99°C (205-210°F)	
<b>ELECTRICAL</b>			
Magneto generator output		160 W @ 6000 RPM	
Ignition system type		CDI (Capacitor Discharge Ignition (breakerless))	
Spark plug	Make and type	NGK, BR8ES (resistor type)	
	Gap	0.5 - 0.6 mm (.020 - .024 in)	
Starting system		Electric starter	
Battery		Not supplied ①	
Fuses	Fuse block supply	20 A (1)	20 A (1)
	MPEM supply	5 A (2)	5 A (1)
	Charging system	15 A (2)	15 A (1)
	Bilge air Blower	7.5 A	
	Bilge pump	3 A	
	Lighting system	3 A	
	Gauges	5 A	
Additional accessories		10 A	
<b>CARBURETION</b>			
Fuel type		Regular unleaded gasoline	
Carburetor		Diaphragm type, quantity : 2	

- ① Recommended : Exide RV24-130, 12 V, 25 A•h (130 minutes reserve) or RV24-160 (160 minutes) or equivalent.  
 Battery posts : On top. Round taper type.  
 Battery maximum allowed size : 285 mm (11-1/4") long x 190 mm (7-1/2") wide x 238 mm (9-3/8") high.

<b>PROPULSION</b>		<b>SPEEDSTER (5894)</b>	<b>SPORTSTER (5895)</b>
Propulsion system		Bombardier Formula Jet Pump	
Number of jet pumps		2	1
Jet pump type		Axial flow, single stage	
Transmission		Direct drive	
Impeller shaft reservoir, oil type		Sea-Doo Synthetic polyolester 75W90 gear oil	
Pivoting angle of direction (nozzle)		~26°	
Minimum required water level for jet pump(s)		90 cm (3 ft)	
<b>DIMENSIONS</b>			
Number of passengers ①		1 operator and 3 passengers	
Overall length		442 cm (174 in)	
Overall length on trailer		504 cm (200 in)	
Beam		216 cm (85 in)	
Draft angle		20°	
Dead rise		30 cm (12 in)	
Overall height		107 cm (42 in)	
Overall height on trailer		150 cm (59 in)	
Weight (dry)		567 kg (1247 lb)	430 kg (946 lb)
Load limit (passengers + luggage)		295 kg (650 lb)	
Hull material		Composite (fiberglass)	
<b>CAPACITIES</b>			
Fuel tank (reserve included)		102 L (27 U.S. gal)	
Impeller shaft reservoir	Capacity	90 mL (3 U.S. oz)	
	Oil level	Up to plug	
Oil injection reservoir		9 L (2.4 U.S. gal)	

① Refer to load limits.

BOMBARDIER INC. reserves the right to make changes in design and specifications and / or to make additions to, or improvements in its products without imposing any obligation upon itself to install them on its products previously manufactured.

<b>ENGINE</b>		<b>CHALLENGER (5896)</b>
Number of engines		1
Engine type		Bombardier-Rotax 787, 2-stroke
Induction type		Rotary valve
Exhaust system		Water cooled / water injected
Lubrication	Type	Oil injection
	Oil type	BOMBARDIER ROTAX INJECTION OIL
Number of cylinders		2
Displacement		782 cm <sup>3</sup> (47.69 in <sup>3</sup> )
Rev limiter setting		7200 RPM (± 50)
<b>COOLING</b>		
Type		Water cooled, total loss type. Direct flow from propulsion unit.
Monitoring beeper, switch on @		96-99°C (205-210°F)
<b>ELECTRICAL</b>		
Magneto generator output		180 W @ 6000 RPM
Ignition system type		DC-CDI (Direct-Current Capacitor Discharge Ignition (breakerless))
Spark plug	Make and type	NGK, BR8ES (resistor type)
	Gap	0.5 - 0.6 mm (.020 - .024 in)
Starting system		Electric starter
Battery		Not supplied ①
Fuses	Fuse block supply	20 A
	MPEM supply	5 A
	Charging system	15 A
	Bilge air Blower	7.5 A
	Bilge pump	3 A
	Lighting system	3 A
	Gauges and DC-CDI module	5 A
	Additional accessories	10 A
<b>CARBURETION</b>		
Fuel type		Regular unleaded gasoline
Carburetor		Diaphragm type, quantity : 2

- ① Recommended : Exide RV24-130, 12 V, 25 A•h (130 minutes reserve) or RV24-160 (160 minutes) or equivalent.  
 Battery posts : On top. Round taper type.  
 Battery maximum allowed size : 285 mm (11-1/4") long x 190 mm (7-1/2") wide x 238 mm (9-3/8") high.

<b>PROPULSION</b>		<b>CHALLENGER (5896)</b>
Propulsion system		Bombardier Formula Jet Pump
Number of jet pumps		1
Jet pump type		Axial flow, single stage
Transmission		Direct drive
Impeller shaft reservoir, oil type		Sea-Doo Synthetic polyolester 75W90 gear oil
Pivoting angle of direction (nozzle)		~26°
Minimum required water level for jet pump(s)		90 cm (3 ft)
<b>DIMENSIONS</b>		
Number of passengers ①		1 operator and 4 passengers
Overall length		442 cm (174 in)
Overall length on trailer		504 cm (200 in)
Beam		216 cm (85 in)
Draft angle		20°
Dead rise		30 cm (12 in)
Overall height		107 cm (42 in)
Overall height on trailer		150 cm (59 in)
Weight (dry)		480 kg (1056 lb)
Load limit (passengers + luggage)		340 kg (750 lb)
Hull material		Composite (fiberglass)
<b>CAPACITIES</b>		
Fuel tank (reserve included)		102 L (27 U.S. gal)
Impeller shaft reservoir	Capacity	90 mL (3 U.S. oz)
	Oil level	Up to plug
Oil injection reservoir		9 L (2.4 U.S. gal)

① Refer to load limits.

BOMBARDIER INC. reserves the right to make changes in design and specifications and / or to make additions to, or improvements in its products without imposing any obligation upon itself to install them on its products previously manufactured.



# SI\* METRIC INFORMATION GUIDE

BASE UNITS			
DESCRIPTION	UNIT	SYMBOL	
length	meter	m	
mass	kilogram	kg	
force	newton	N	
liquid	liter	L	
temperature	Celsius	°C	
pressure	kilopascal	kPa	
torque	newton-meter	N•m	
land velocity	kilometer per hour	km / h	
navigation velocity	knot	kn	
PREFIXES			
PREFIX	SYMBOL	MEANING	VALUE
kilo	k	one thousand	1000
centi	c	one hundredth of	0.01
milli	m	one thousandth of	0.001
micro	μ	one millionth of	0.000001
CONVERSION FACTORS			
TO CONVERT	TO <sup>ⓐ</sup>	MULTIPLY BY	
in	mm	25.4	
in	cm	2.54	
in <sup>2</sup>	cm <sup>2</sup>	6.45	
in <sup>3</sup>	cm <sup>3</sup>	16.39	
ft	m	0.3	
oz	g	28.35	
lb	kg	0.45	
lbf	N	4.4	
<b>lbf•in</b>	<b>N•m</b>	0.11	
<b>lbf•ft</b>	<b>N•m</b>	1.36	
<b>lbf•ft</b>	<b>lbf•in</b>	12	
PSI	kPa	6.89	
imp. oz	U.S. oz	0.96	
imp. oz	mL	28.41	
imp. gal	U.S. gal	1.2	
imp. gal	L	4.55	
U.S. oz	mL	29.57	
U.S. gal	L	3.79	
knot	MPH	1.15	
MPH	km / h	1.61	
Fahrenheit	Celsius	(°F - 32) + 1.8	
Celsius	Fahrenheit	(°C x 1.8) + 32	
hp	kW	.75	

\* The international system of units abbreviates SI in all languages.

① To obtain the reverse sequence, divide by the given factor. To convert "millimeters" to "inches", divide by 25.4.

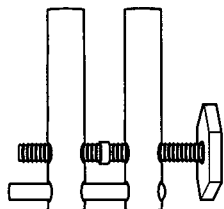
○ NOTE : Conversion factors are rounded off to 2 decimals for easier use.

# ACCESSORIES AND SERVICE PRODUCTS

These accessories and other fine Sea-Doo products are available at your dealer.

## ACCESSORIES

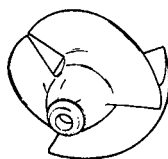
Hose Pincher  
P / N 529 030 400



F01B234

Roam  
P / N 295 500 218

Impeller  
See your authorized sea-Doo dealer  
for appropriate choice of impeller



F01B0M4

## ACCESSORIES

Extinguisher  
P / N 298 770 000 (US)  
P / N 298 777 000 (CAN)



F01B0N4

Sea-Doo Jet Boat Cover  
P / N 298 354 070

First Aid Kit  
P / N 298 296 001  
Survival Kit  
P / N 298 295 040

Lift Kit  
P / N 295 000 120

Shop Cover  
P / N 295 000 129

**PRODUCTS**

Synthetic Grease  
P / N 293 550 010



F01B154

Jet Pump Synthetic Oil  
P / N 293 600 011



F01B0P4

Spray Paint for METALLIC Parts Only  
P / N 293 500 020 Pulpe  
P / N 293 500 029 White



F01B004

Dielectric Grease  
P / N 293 550 004



F01B164

**PRODUCTS**

Anti-seize Lubricant  
P / N 293 800 023



F01B174

BOMBARDIER Lube  
P / N 293 600 016



F01B0S4

Gelcoat® (Super White)  
P / N 295 500 075

Gelcoat Spray Paint (Super White)  
P / N 293 500 076

Bombardier Cleaner  
P / N 293 110 001 400 g  
P / N 293 110 002 4 L



F01B2J4

## PRODUCTS

Injection Oil

P / N 413 802 900 1 liter

P / N 413 803 000 4 liters



F01B2I4

Pipe Sealant

P / N 293 800 018



A00B2W4

Fuel Stabilizer

P / N 413 408 600



A00B3V4

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**JET BOAT MODEL NO.** \_\_\_\_\_

**HULL**

**IDENTIFICATION NUMBER (H.I.N.)** \_\_\_\_\_

**ENGINE(S)**

**IDENTIFICATION NUMBER (E.I.N.)** \_\_\_\_\_

\_\_\_\_\_

**Purchase Date** \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_  
year month day

**Warranty Expiry Date** \_\_\_\_ | \_\_\_\_ | \_\_\_\_ | \_\_\_\_ | \_\_\_\_\_  
year month day

To be completed by the dealer at the time of the sale

**DEALER IMPRINT AREA**

**Please verify with your selling dealer to ensure your SEA-DOO jet boat has been registered with Bombardier.**



# CHANGE OF ADDRESS OR OWNERSHIP

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If your address or ownership has changed, be sure to fill out and mail the card provided on this page.

Such notification is likewise necessary for your own safety even after expiration of the original warranty, since Bombardier will be in a position to contact you if correction to your boat becomes necessary.

NOTICE TO ALL NEW OWNERS : Make sure to receive the warranty registration card from the previous owner, when the ownership is transferred, as you may be entitled to the unexpired portion of the warranty.

## CHANGE OF ADDRESS / OWNERSHIP CARD

CHANGE OF ADDRESS

CHANGE OF OWNERSHIP

BOAT  
IDENTIFICATION NUMBER

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Model Number

Hull Identification Number (H.I.N.)

OLD ADDRESS :

NAME

NO.

STREET

APT

CITY

STATE / PROVINCE

ZIP / POSTAL CODE

NEW ADDRESS  
OR NEW OWNER :

NAME

NO.

STREET

APT

CITY

STATE / PROVINCE

ZIP / POSTAL CODE

## STOLEN UNITS

In the event that your boat is stolen, you should notify your area's distributor.

Please provide your name, address, phone number, hull identification number and date it was stolen.

Bombardier will provide a list of stolen units to all Sea-Doo Jet boat dealers on a monthly basis to aid in recovery of such units to their owners.



STAMP

**BOMBARDIER INC.**  
SEA-DOO WARRANTY  
VALCOURT, QUEBEC  
CANADA J0E 2L0







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