# OPERATOR'S Guide

## SPEEDSTER Challenger X Challenger 1800 Challenger 2000

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## 🏝 WARNING

Read this guide thoroughly. It contains important safety information.

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#### SAFETY WARNING

Disregarding any of the safety precautions and instructions contained in this *Operator's Guide*, the *Safety Handbook*, the *Safety Videocassette* and the on-product *Warning Labels* could cause injury, including the possibility of death. The operator has the responsibility to inform passenger(s) of safety precautions.

This *Operator's Guide*, the *Safety Handbook* and *Safety Videocassette* should remain with the craft at the time of resale.





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SEA-DOO® BOMBARDIER-ROTAX® BOMBARDIER LUBE® Sea-Doo Synthetic Grease

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#### Doin'it on your new Sea-Doo Sport Boat

Congratulations, you are now the proud owner of a Sea-Doo sport 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 the craft, to read this *Operator's Guide*, the *Safety Handbook* and on-product warning/caution labels and familiarize yourself with the contents. These manuals contain 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 craft 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 craft and the importance of courteous, responsible riding.

Each operator has a responsibility to ensure the safety of his/her passenger(s) and of other water users. Please follow all safety instructions and operate your craft with care.

We encourage you to have an Annual Safety Inspection of your craft. Please contact your authorized Sea-Doo dealer for further details.

Finally, we urge you to visit your authorized Sea-Doo dealer regularly for regular and safety maintenance as well as any craft accessories you may require.

Have fun and... Bon Voyage.

Please keep this guide and *Safety Handbook* on board. These manuals should remain with the craft at time of resale.

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## FOREWORD

The Operator's Guide and Safety Handbook have been prepared to acquaint the owner/operator or passenger with this personal craft and its various controls, maintenance and safe riding instructions. Each is indispensable for the proper use of the product, and should be kept in a waterproof bag with the craft at all times. Make sure you read and understand the content of each document.

For any questions pertaining to the warranty and its application, consult the WARRANTY section in this guide, and/or an authorized SEA-DOO dealer.

The information contained in this guide should always be used in conjunction with the information included in *Mercury Marine*  $(M^2)$  *Jet Drive Operator's Guide*.

This guide uses the following symbols to emphasize particular information.

## 

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

## 

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. When used without the safety alert symbol  $\triangle$ , potential hazard exists for property damage only.

**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 guide are correct at the time of publication. Bombardier Motor Corporation of America (B.M.C.A.) however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured.

Because of our ongoing commitment to product quality and innovation, Bombardier 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 represent 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.

## **▲ SAFETY MEASURES**

## General

- $\Delta$  To fully appreciate the pleasures, enjoyment and excitement of boating there are some basic rules that should be observed and followed by any boater. Some rules may be new to you or covered in the PWC/Sport boat Safety Handbook or Safety Video, others may be common sense or obvious... irrespective, we ask that you please take a few minutes of your time to completely read these safety instructions before you operate your craft. 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.
- ▲ Become completely familiar with the controls and operation of the craft before embarking on your first trip or taking on a passenger(s). 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. Be fully familiar with all controls before applying the throttle above idle speed. As its operator, you control and are responsible for the craft's safe operation.

## Operation

- ▲ Always perform the pre-operation checks as specified in this guide.
- ▲ Always keep in mind that as the throttle lever is released to idle position, less directional control is available. To turn the craft, both steering and throttle are necessary.

- ▲ Like any other boats, this craft has no brake. Stopping distance will vary depending on initial speed, load, wind, and water conditions. Practice stopping and docking in a safe, traffic free area to have an idea of how long it will take to stop the craft under varying conditions. Do not release throttle when trying to steer away from objects. You need throttle to steer. Do not use the craft's reverse, if so equipped, to stop.
- ▲ Ensure that all passengers know how to swim and how to reboard the craft from the water.
- ▲ The operator and passenger(s) should be properly seated and wearing an approved PFD before starting or moving the craft and at all times when craft is in motion.
- ▲ Do not start or operate the craft if a person(s) is seated on the sun deck or swim platform, or are nearby in the water.
- ▲ The craft's jet thrust can cause injury. Always accelerate slowly.
- ▲ To prevent accidental starting or unauthorized use, always detach the safety lanyard from the craft especially when swimmers are boarding or nearby, or during removal of any weeds or debris from the intake grate.
- $\triangle$  Riding with a passenger(s) or pulling other boats, tubes, skier or wakeboarder makes the craft handle differently and requires greater skill. Do not overload the craft or take on more passengers than designated for the particular craft. Overloading can affect maneuverability, stability and performance. Avoid adding on accessories, or equipment which may alter your control of the craft. The craft may be fitted with tow eyelets which can be used to attach a ski rope. However, do not use these eyelets or the craft's cleats to tow a parasail. Severe craft damage may occur.

- ▲ In shallow water, proceed with caution and at very low speeds. Grounding or abrupt stops may result in injury. Debris may also be picked up and be thrown rearward by the jet pump onto people or property.
- ▲ Respect no wake zones, the rights of other water users and the environment. As the "skipper" and owner of a boat you are responsible for damage to other boats caused by the wake of your craft. Allow no one to throw refuse overboard.
- ▲ This craft is equipped with navigation lights which should be used between sunset and sunrise. Reduce speed and do not operate the craft in reduced visibility.
- ▲ Remember, gasoline fumes are inflammable and explosive. Always adhere to the fueling procedure contained in this guide and those given to you by the marina. Always verify fuel level before use and during the ride. Apply the principle of 1/3 fuel to destination, 1/3 back and 1/3 reserve fuel supply. Do not carry spare fuel or inflammable liquids in any of the storage or engine compartments.
- ▲ Combustion engine needs air to operate; consequently this craft can not be totally watertight. Any maneuvers such as figure eights etc., that cause the upper deck to be under water may cause severe engine problems due to water ingestion. Refer to "SPECIAL PROCEDURE" and LIMITED WARRANTY contained in this guide.
- ▲ Operation of this craft by a minor or disabled person is NOT recommended.

#### Maintenance

- ▲ Only perform servicing procedures which are detailed in this guide. Further assistance or information can be obtained from your authorized Sea-Doo dealer. In many instances proper tools and training is required for certain servicing or repair procedures.
- ▲ Maintain the craft and equipment in top condition at all times. Adhere to the prescribed maintenance schedules. An annual inspection of the craft is always a good recommendation that should be followed.
- ▲ The bilge must be kept clean of oil, water or other foreign materials.
- ▲ Do not attempt to lift the craft without special equipment and training.
- $\Delta$  The engine and the corresponding components identified in this guide should not be utilized on product(s) other than for those they were designed. Maintenance procedures and specified tightening torque must be strictly adhered to. Never attempt repairs unless the appropriate tools are available. These craft are designed with parts dimensioned in both the metric and the imperial systems. When replacing fasteners, make sure to use only those recommended by Bombardier. If required, contact your authorized Sea-Doo dealer for further servicing information.
- ▲ Operate your craft prudently and have fun. Don't forget that all persons must assist other boaters in an emergency.

## LIST OF DISTRIBUTORS

USA (Except Puerto Rico)	BOMBARDIER MOTOR CORPORATION OF AMERICA 7575, Bombardier Court WAUSAU, WI. 54401 Phone: (715) 848-4957 Fax: (715) 847-6879
	http://www.bombardier.com
	BOMBARDIER INC. RECREATIONAL PRODUCT 75, J.A. BOMBARDIER ST. SHERBROOKE, QC J1L 1W3 Phone: (819) 566-3366 Fax: (819) 566-3062 http://www.bombardier.com

If your SEA-DOO Sport Boat requires warranty service, you should take it to any authorized SEA-DOO Sport 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 Sport Boat dealership.

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

NOTE: If outside Canada and U.S.A., consult the local distributor.

#### **NORTH AMERICA**

## BOMBARDIER LIMITED WARRANTY NORTH AMERICA: SEA-DOO® SPORT BOAT

#### **1. WARRANTY COVERAGE PERIOD**

In Canada, BOMBARDIER INC. ("Bombardier"), and in the U.S.A., Bombardier on behalf of BOMBARDIER MOTOR CORPORATION OF AMERICA (BMCA), warrants FROM THE DATE OF DELIVERY TO THE FIRST CONSUMER that each SEA-DOO SPORT BOAT sold, as NEW and UNUSED and PREDELIVERED by an authorized North American SEA-DOO SPORT 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 of 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 of the deck and hull fiber-glass structure; and

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

All genuine Bombardier accessories, installed by an authorized SEA-DOO SPORT BOAT dealer at the time of delivery of the new and non-current new SEA-DOO SPORT BOAT, carry the same Warranty Coverage Period as for the SEA-DOO SPORT 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 SPORT BOAT dealer during the Warranty Coverage Period.

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

The customer must notify an authorized SEA-DOO SPORT BOAT dealer within two (2) days of the appearance of the defect in material and/or workmanship a proof of purchase of the NEW and UNUSED SEA-DOO SPORT BOAT and must sign the repair/ work order prior to the start of the repair in order to validate a warranty repair. All parts replaced under this limited warranty become the property of BOMBARDIER.

#### 4. EXCLUSIONS — ARE NOT WARRANTED

- The engine and corresponding components which are warranted by Mercury Marine. Refer to *M*<sup>2</sup> Jet Drive Operator's Guide.
- Normal wear and tear items;
- Labor, parts and lubricant costs of all maintenance services;
- Damages caused by failure to provide proper maintenance and/or storage, as described in the "SEA-DOO SPORT BOAT Operator's Guide";
- Damages resulting from improper repairs, modifications or use of non-approved parts or, repairs not performed by an authorized SEA-DOO SPORT BOAT dealer;
- Damages resulting from abuse, misuse, neglect, racing;
- Damages resulting from accident, fire, theft, vandalism or any act of God;
- Incidental or consequential damages, or damages of any kind such as but not limited to towing charges, telephone calls or taxi;
- Water damages caused by water ingestion;

- Damages related to gel coat finish including but not limited to cosmetic gel coat finish, blisters or fiberglass delamination caused by blisters, crazing, spyder or hairline cracks; and
- Damages resulting from improper service or maintenance.

#### **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 LIMI-TATION ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PAR-TICULAR PURPOSE.

Neither the distributor, any authorized SEA-DOO SPORT 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 SPORT BOAT sold while this warranty is in effect.

#### 6. TRANSFER

If the customer sells the SEA-DOO SPORT BOAT guaranteed under the present, he shall assign and transfer this warranty, which shall be valid for the rest of the relevant PERIOD as defined in section 1 hereinabove, to the new customer.

#### 7. 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, Bombardier's Customer Assistance Department should be contacted in order to resolve the matter:

In Canada: (819) 566-3366

In the U.S.A.: (715) 848-4957 Or in writing at IN CANADA AND U.S.A.: BOMBARDIER INC. RECREATIONAL PRODUCTS CUSTOMER ASSISTANCE CENTER 75, J.-A. BOMBARDIER STREET SHERBROOKE, QC J1L 1W3

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## BOMBARDIER INTERNATIONAL LIMITED WARRANTY: SEA-DOO® SPORT BOAT

#### **1. WARRANTY COVERAGE PERIOD**

BOMBARDIER INC. ("Bombardier"), as manufacturer, warrants FROM THE DATE OF DELIVERY TO THE FIRST CONSUMER that each SEA-DOO SPORT BOAT sold anywhere in the world except the United States and Canada, as NEW and UNUSED and PREDELIVERED by an authorized SEA-DOO SPORT BOAT dealer, duly appointed by an authorized SEA-DOO International Distributor, 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 of 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 of the deck and hull fiber-glass structure; and

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

All genuine Bombardier accessories, installed by an authorized SEA-DOO SPORT BOAT dealer at the time of delivery of the new and non-current new SEA-DOO SPORT BOAT, carry the same Warranty Coverage Period as for the SEA-DOO SPORT BOAT.

#### 2. WHAT BOMBARDIER WILL DO

BOMBARDIER through the local authorized SEA-DOO International Distributor will, during the Warranty Coverage Period, 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 local authorized SEA-DOO SPORT BOAT dealer.

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

The customer must notify a local authorized SEA-DOO SPORT 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 SPORT BOAT dealer the SEA-DOO Warranty Registration Card or a proof of purchase of the NEW and UNUSED SEA-DOO SPORT BOAT and must sign the repair/work order prior to the start of the repair in order to validate a warranty repair. All parts replaced under this limited warranty become the property of the international SEA-DOO distributor of the specific territory and/or BOMBARDIER.

#### 4. EXCLUSIONS — ARE NOT WARRANTED

- The engine and corresponding components which are warranted by Mercury Marine. Refer to *M*<sup>2</sup> Jet Drive Operator's Guide.
- Normal wear and tear items;
- Labor, parts and lubricant costs of all maintenance services;
- Damages caused by failure to provide proper maintenance and/or storage, as described in the "SEA-DOO SPORT BOAT Operator's Guide";
- Damages resulting from improper repairs, modifications or use of non-approved parts or, repairs non-performed by an authorized SEA-DOO SPORT BOAT dealer;
- Damages resulting from abuse, misuse, neglect, racing;

- Damages resulting from accident, fire, theft, vandalism or any act of God;
- Incidental or consequential damages, or damages of any kind such as but not limited to towing charges, telephone calls or taxi;
- Water damages caused by water ingestion;
- Damages related to gel coat finish including but not limited to cosmetic gel coat finish, blisters or fiberglass delamination caused by blisters, crazing, spyder or hairline cracks; and
- Damages resulting from improper service or maintenance.

#### **5. LIMITATIONS OF LIABILITY**

This warranty gives you specific rights, and you may also have other legal rights resulting from the application of mandatory national laws which may vary from country to country. 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 MERCHANT-ABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

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 countries 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.

Neither the distributor, any authorized SEA-DOO SPORT 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.

Every SEA-DOO SPORT BOAT is sold with the English version of this warranty. Some authorized SEA-DOO International Distributor may elect to translate this warranty into local language, it is then understood and agreed that in the event of any discrepancies or inconsistencies between the two versions, the English version shall prevail.

It is the customer's responsibility to ensure that the SEA-DOO SPORT BOAT complies with all boating regulations and standards of any country, other than the original country of sale, where the SEA-DOO SPORT BOAT is intended to be used.

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 SPORT BOAT sold while this warranty is in effect.

#### 6. TRANSFER

If the customer sells the SEA-DOO SPORT BOAT guaranteed under the present, he shall assign and transfer this warranty, which shall be valid for the rest of the relevant PERIOD as defined in section 1 hereinabove, to the new customer.

#### 7. CONSUMER ASSISTANCE

- a) In the event of a controversy or a dispute arising in connection with this BOMBARDIER INTERNATIONAL 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 authorized local SEA-DOO INTERNATIONAL DISTRIBUTOR's Service Department should be contacted in order to resolve the matter.

JULY 2002

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## **REGISTRATION NUMBER LOCATION**

All craft 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 should appear on each side of the craft.





1. Registration number location

## LOCATION OF THE IMPORTANT LABELS

The following labels are on your craft. If missing or damaged, they can be replaced free of charge. See an authorized Sea-Doo sport boat dealer.

Please read the following labels carefully before operating this craft.

#### Challenger\* 1800 Model



#### Challenger X Model



Speedster\* Model





TYPICAL — SPEEDSTER SHOWN

Label 1



TYPICAL — REFER TO ACTUAL LABEL ON CRAFT

Label 2



#### Label 3



#### Label 4

#### **AWARNING**

Do not boost battery. Servicing of electrical components should be done by authorized dealer only.

F04LALY

#### Label 5

#### AWARNING

Gasoline vapors can explode. Before starting engine, operate blower for 5 minutes and check engine compartment bilge for gasoline vapors.

F04LASY

#### Label 6

#### AWARNING

While fueling, stop engine(s). Fuel tank may be pressurized. Slowly turn cap when opening. Keep watercraft level. Do not overfill. Use regular unleaded gasoline. Check oil level. Periodically, inspect fuel system.

F04LATY

# Evaluation for the second seco

Label 7

#### Label 8

## AWARNING

Engine(s) must be off when using platform. Keep away from jet nozzle(s) or intake grate(s).

F04LAVY

#### Label 9



#### Label 10

#### 

This tow tower is designed to provide a high attachment point for a wakeboard or a water ski tow rope only and not for parasailing, kite flying, or towing other watercraft or any other object. Tie tow rope only to tow mount and never allow loose tow rope ends to dangle. Do not tow more than one person at one time from this tow tower. Do not climb on. sit on, stand on, jump off, or drive off the tower. 204 901 044

F13L0JL

## Label 11

#### **WARNING**

Never operate boat without tow tower secured and bolted in upright position. Always check that all bolts are in place and tight before and during use. Check at all times clearance height around docks, shore, overhanging objects, bridges and powerlines. All occupants must be seated when towing skier and never allow passengers to sit behind the tow rope attachment point. Do not use tower as a tie-down or tie-off.

204 901 045

F13L0KL

## **IDENTIFICATION NUMBERS**

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

## Hull

The Hull Identification Number (H.I.N.) is located on the right side of the transom.



#### TYPICAL

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

## Engine

Refer to M<sup>2</sup> Jet Drive Operator's Guide.

## CONTROLS, COMPONENTS AND INSTRUMENTS LOCATION

### Cockpit

Speedster Model



TYPICAL — COCKPIT VIEW

Challenger 2000 and Challenger 1800 Models



TYPICAL — COCKPIT VIEW

## **Overview** Speedster Model



TYPICAL — TOP/SIDE VIEW

Challenger 1800 Model



TYPICAL — CHALLENGER 1800 TOP VIEW



TYPICAL

\_\_\_\_

- 1. Safety Lanyard
- 2. Steering Wheel
- 3. Throttle Lever
- 4. Shift Lever
- 5. Ignition Switch
- 6. 12-Volts Accessory Jack
- 7. Deck Light Switch
- 8. Bilge Pump Switch
- 9. Bilge Air Blower Switch
- 10. Horn Switch
- 11. Navigation Light Switch
- 12. Fuel Gauge/Low Oil Level Pilot Lamp and Beeper
- 13. Tachometer
- 14. Speedometer
- 15. Wind Deflector
- 16. Bilge Drain Plugs
- 17. Grab Handles
- 18. Rear Grab Handle(s)
- 19. Swim Platform
- 20. Sun Deck (if so equipped)
- 21. Seats
- 22. Bow Seat (if so equipped)
- 23. Cup Holders
- 24. Right/Left Front Storage Compartment(s)
- 25. Water Ballast Bag (if so equipped)
- 26. Deck Storage Compartment

- 27. Rear Storage Compartment
- 28. Jet Pump Water Intake
- 29. Bow and Stern Eyelets
- 30. Bow Light
- 31. Removable Stern Light
- 32. Mooring Cleats
- 33. Deck
- 34. Fuel Tank Cap
- 35. Deck Drain(s)
- 36. Main Oil Reservoir Cap
- 37. Flushing Connector
- 38. Ventilation Ducts
- 39. Jet Pump Nozzle
- 40. Reverse Gate
- 41. Retractable Ladder
- 42. Scupper Valve
- 43. Hydro-Surge Grate System
- 44. Fuel Tank Vent
- 45. Ski Post
- 46. Fuses
- 47. Radio/CD Player
- 48. Glove Box (if so equipped)
- 49. Water Bypass System
- 50. Main Battery Cut-Off Switch
- 51. Wake Tower

## CONTROLS, COMPONENTS AND INSTRUMENTS FUNCTIONS

#### 1) Safety Lanyard (engine cut-out switch)

The safety lanyard cap should be securely snapped onto its switch to be fully operational.

Pulling the safety lanyard cap from the switch stops the engine operation. Attach the safety lanyard to the operator's Personal Flotation Device (PFD) and snap the cap to the switch to be able to start the engine.

## \land WARNING

Should the safety lanyard cap become loose or fails to remain on its switch, replace it immediately.



#### TYPICAL

- 1. Safety lanyard
- 2. Secure to PFD
- 3. Snap to safety lanyard switch

## <u>Ν</u> WARNING

Directional control is reduced when throttle is released and lost when engine is off. Always disconnect safety lanyard when craft is not in operation.

## 

Do not lubricate the safety lanyard switch.

## \land WARNING

While engine can be stopped using the ignition switch, good driving habits recommend that the safety lanyard also be disconnected when stopping.

## 2) Steering Wheel

The steering wheel controls the direction of the craft. Turning the steering wheel clockwise steers the craft to the right and inversely.

#### Low-Speed Steering Control System

Whenever the throttle lever is in **idle position** and the steering wheel is approaching the end of its rotation, the engine speed will be slightly accelerated to increase the jet pump thrust and thus improving the steering control for low speed operation and when approaching/leaving a dock. Refer to OP-ERATING INSTRUCTIONS for more details.

## 3) Throttle Lever

When pushed forward craft accelerates. When fully pulled back, engine return to idle speed and the craft is gradually stopped by water drag.

**NOTE:** To activate throttle lever, shift lever must be in forward or reverse position.



#### TYPICAL

- 1. Increase speed
- 2. Decrease speed

## 4) Shift Lever

A 3-position lever:

- forward
- neutral
- reverse.

In order to shift, throttle lever must be fully pulled back to idle speed.

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

**NOTE:** With throttle lever at idle and shift lever in neutral position throttle lever should be locked.



#### TYPICAL

- 1. Throttle lever back to idle position
- 2. Shift lever in neutral position

**NOTE:** To ease shifter use, line up the shifter arrow with the appropriate dot (Forward/Neutral/Reverse).



#### TYPICAL

- 1. Dots besides shifting position
- 2. Arrow on shifter

## \land WARNING

Shift lever should only be used when the engine is idling and craft is completely stopped.

## \land WARNING

Only use reverse at slow speed and for the shortest time possible. Always ensure the path behind is clear of objects and persons including children playing in shallow water.

**CAUTION:** Never rev the engine at high RPM in reverse.

## 5) Ignition Switch



TYPICAL 1. Ignition switch

#### Starting and Stopping

Refer to *M<sup>2</sup> Jet Drive Operator's Guide* for complete detailed procedure.

## 🕂 WARNING

Directional control is lost when engine is off.

## 6) 12-Volt Accessory Jack

Located in dashboard. A 12-volt jack to plug temporary accessories.



TYPICAL — SPEEDSTER SHOWN

Lift protection cap to expose jack.

Using the accessory jack for a prolonged time without engine running may discharge the battery.

Close protection cap when jack is not in use to protect against weather inclemency.

#### Challenger 1800 and Challenger 2000

12-volt jack is located in glove box.

## 7) Navigation Light Switch



A 3-position NAV/OFF/ANC push type switch.

Press switch to first position to turn on the stern light (anchorage position).

Press switch to second position to turn on the bow and stern lights.

Press to OFF position to turn off navigation lights.

**NOTE:** Switches and gauges are lit when navigation lights are turn on.

## 🕂 WARNING

Navigation lights should always be used between sunset and sunrise. Ensure the stern light is installed. See REMOVABLE STERN LIGHT in this section for location and installation.

**NOTE:** The navigation lights may be operated without the safety lanyard on its switch.

## 8) Bilge Pump Switch



A 2-position push type switch.

Press switch to ON position when a manual operation is required (after cleaning, storage, etc.).

Press to OFF position when bilge is dry.

**CAUTION**: Do not operate for prolonged time if the bilge is dry, battery drainage will occur.

**NOTE:** The bilge pump may be operated without the safety lanyard on its switch.

**CAUTION**: Ensure to always turn pump OFF when bilge is dry or before operating the engine above idle. Bilge pump will then switch to automatic mode.

#### **Automatic Bilge Pump**

An automatic bilge pump will evacuate water from the bilge. A water sensor detects the water which activates the bilge pump. After the water is pumped out, the pump shuts-off automatically. This automatic mode is working at all times: with/without safety lanyard on its switch and with/without engine running.

**CAUTION:** Bear in mind that when the main battery cut-off switch is turned OFF while craft is moored, the bilge pump will not start if water comes up in the bilge.

#### 9) Bilge Air Blower Switch



A 2-position push type switch. When ON, it ventilates the engine compartment.

Press switch to ON position to turn on the blower.

Press the switch to OFF to turn off the bilge blower.

## A WARNING

Always use blower for a minimum of 5 minutes prior to engine starting then, turn it OFF above idle speed. Use of the bilge blower should never replace "smelling" for gasoline vapors.

Using the bilge blower for a prolonged time when the engine is not running will discharge the battery.

Blower should be turned off during boat operation.

## 10) Horn Switch



A 2-position push type switch.

Press and hold the switch to activate horn.

Release the switch to stop horn.

## 11) Deck Light Switch



A 2-position push type switch.

Press switch to ON position to turn on the deck lights.

Press switch to OFF position to turn off the deck lights.

Using the deck lights for a prolonged time when the engine is not running will discharge the battery.

#### 12) Fuel Gauge/Low Oil Level Pilot Lamp and Beeper

#### Fuel Gauge

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

The gauge is illuminated whenever the navigation lights are used.

**NOTE:** The fuel level can also be verified without having engine running. With the safety lanyard removed from its switch, turn ignition switch to ON position; the gauge will be activated.

**CAUTION:** Always turn ignition switch to OFF position once fuel level has been checked.

#### Low Oil Level Pilot Lamp and Beeper

The pilot lamp and the beeper turn on when the oil level is low in engine mounted 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 if light or beeper remain on.

## **CAUTION:** Never run engine out of oil. Serious engine damage will occur.



#### TYPICAL

- 1. Low injection oil level pilot lamp
- 2. Fuel level

## 13) Tachometer

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

The gauge is illuminated whenever the navigation lights are used.



TYPICAL

1. Tachometer

## 14) Speedometer

Analog speedometer indicates the speed of the craft in miles per hour (MPH) and kilometers per hour (km/h).

The gauge is illuminated whenever the navigation lights are used.

A speed sensor mounted on the hull near  $M^2$  Jet Drive sends the signal to the speedometer.



**TYPICAL** 1. Speedometer

## **15) Wind Deflector**

For your convenience, a movable deflector may be used to divert the air flow. Pull latch then lift the deflector until locked by the retaining device. When finished, lower deflector then push down to relatch.



TYPICAL



TYPICAL

## 16) Bilge Drain Plugs

Should water be found in the bilge, it can be easily drained by unscrewing the drain plugs.

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



TYPICAL 1. Drain plugs

## 17) Grab Handles

Provide a handhold for the passengers.

**CAUTION:** Never use the grab handles to pull anything or to lift the craft.

Refer to components location illustrations at the beginning of this section for grab handles location.

## 18) Rear Grab Handle(s)



TYPICAL 1. Grab handle

Provides a handhold for boarding when needed.

**CAUTION**: Never use the grab handle to tow anything or to lift the craft.

## 19) Swim Platform

Provides an anti-skid surface for easy boarding from rear of craft.

## 

Engine must be off when using swim platform. Keep away from jet or intake grate.

#### 20) Sun Deck (if so equipped)

A convenient space to rest or take some sun while anchored.

## \land WARNING

Do not start or operate the craft if a person or more is seated on the sun deck.

## 21) Seats

Each passenger should be seated while underway.

## 

Allow no one to sit on edge of craft or to stand up while in operation. Seat/grab handles should be used in rough waters.

#### Speedster, Challenger 1800 and Challenger 2000 Models

For your convenience, front seats are provided with grab handles molded in the seat base.

Both front seats are swivels.

To unlock swivel, pull lever toward front in a rotating movement. Turn seat at the desired position. The seat can be locked in steps of 45°. To lock swivel, release lever.



TYPICAL — SPEEDSTER SHOWN

- 1. Grab handles molded in seat base
- 2. Swivel control lever

With this feature, the front passenger seat can be rotated backward to be used as a spotter seat.

## \land WARNING

Always ensure swivel is locked before riding. Seat must also face steering wheel.

#### Challenger 1800 and Challenger 2000

Both front seats are adjustable fore and aft.

For the fore and aft adjustment, lift lever to unlock seat. Move seat at the desired position. Release lever after adjustment is completed.



1. Fore and aft control lever

**NOTE:** It is necessary to move the seat completely forward to allow a rotation of 180° (half a turn).

#### 22) Bow Seat (if so equipped)

Located at front of craft, it is provided as a sun seat.

## \land WARNING

No passenger should use the most forward seat in the bow area if it faces backwards, except when the craft is stopped or under idle speed.

Use grab handles as necessary.



TYPICAL — SPEEDSTER SHOWN





CHALLENGER 2000 - BOW SEAT



CHALLENGER 2000 - BOW SIDE SEATS

#### **Storage Compartments** Speedster Model

Lift backrest of bow seat to expose storage compartment.



1. Lift backrest



1. Storage compartment behind backrest

When reinstalling backrest, firmly slide its slots over the retaining brackets. Ensure backrest is properly locked.

#### Challenger 2000 Model

Lift seat to gain access to underseat storage compartment.

## 23) Cup Holders



1. Cup holder

Convenient locations for non-alcoholic beverages.

#### 

Do not drink alcoholic beverages while aboard. Do not keep bottles, cans etc. in cup holders while riding at speed and/or on rough waters.

#### 24) Right/Left Front Storage Compartment(s)

A convenient watertight, lockable storage compartment with a removable basket to carry personal articles. The basket is the ideal location for spare spark plugs, first aid kit, etc.

## 

Never leave any heavy or loose breakable objects in the storage basket. Never operate the craft with the storage compartment cover open.

To access the compartment, open the cover using the provided key to unlock the release button.



**TYPICAL** 1. Release button

Press the release button to open cover.



#### SPEEDSTER

1. Storage cover open



CHALLENGER 2000 AND CHALLENGER 1800

The right side basket is provided with a holder to store an approved fire extinguisher.

The fire extinguisher (sold separately) should not be loose in the storage compartment.

The *Operator's Guides* should be kept in a waterproof bag and remains with the craft at all times.

## 

Do not remove the basket to have access to increased storage area.

Reinstall basket.

Push cover down to release mechanism then move down slowly. When bottomed on latch, firmly push cover to lock.

Periodically verify the lock pin tightness of storage cover. tighten if needed and make sure storage cover latches properly.

## A WARNING

Never leave any heavy or loose breakable objects in the storage basket. Never operate the craft with the storage compartment cover open.

#### 25) Water Ballast Bag (if so equipped)

Placed in ski locker. User must follow the manufacturer's instructions that are supplied for filling.

#### Pump System (water ballast bag)

User must follow the instructions that are supplied for filling.

## \land WARNING

Only use ballast bag for skiing/ wakeboarding purposes. Ballast bag must always be in the ski locker when full.

**CAUTION**: Never tow vehicle with the ballast bag filled; always empty ballast bag before towing. Never empty ballast bag into bilge area of craft.

#### 26) Deck Storage Compartment

The deck storage compartment is a convenient location for water-skis, paddles, anchor and rope, etc.



 TYPICAL

 Step 1: Pull latch and lift cover

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

When completely opened, the cover remains in that position on calm water.
To close, gently push on the side of the spring to release it and lower the cover.



1. Gently push here to release the spring

# WARNING

Never leave any heavy or breakable objects in the storage compartment. Never operate the craft with the storage compartment cover open.

#### 27) Rear Storage Compartment

Convenient rear storage location to be used to carry large personal articles. Ideal location for spare Personal Flotation Device (PFD), towels, lunch etc.

#### All Models

To open engine cover, open the right front storage compartment cover and pull lever.



TYPICAL — CHALLENGER 1800 SHOWN 1. Lever

The gas assist cylinders will complete the opening and hold engine cover open.

**NOTE:** Access to the rear storage compartment is protected only when the right front storage compartment cover is locked.

#### Storage Tray



- Basket (Challenger 1800 only)
  Storage tray

CAUTION: In order to avoid damage, MAXIMUM LOAD on storage tray must not exceed 22.5 kg (50 lb).

#### Challenger 1800 Only

Two removable baskets are mounted on storage tray. To remove basket, pull it out.

#### All Models

The storage tray is removable to give access to the engine compartment. Grab the handle and lift in a rearward movement.

# \land WARNING

When storage tray is lifted or removed, never touch any electrical part when starting engine or while in operation. Never leave any object, rag or tool in the engine compartment or in the bilge.

Reinstall storage tray then insert both baskets in place.

Firmly close engine cover to relatch.

### 

Never leave any heavy or breakable objects in the storage compartment. Never operate the craft with the engine cover open.

### 28) Jet Pump Water Intake

The water is drawn up by the impeller through this opening. It minimizes entry of foreign objects into the propulsion system.

## A WARNING

Keep away from intake grate while engine is on. Items such as long hair, loose clothing or personal flotation device straps can become entangled in moving parts resulting in severe injury or drowning.

Refer to  $M^2$  Jet Drive Operator's Guide for more detailed information.

# **29) Bow and Stern Eyelets**

#### Bow Eyelet

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



#### TYPICAL

1. Bow eyelet

#### Stern Eyelets

This eyelet allows a rope with a hook, a closes end or an open end to be attached.



#### TYPICAL

1. Stern eyelets

### 30) Bow Light

Mandatory red/green light. See LIGHT SWITCH as mentioned earlier in this section.

# 31) Removable Stern Light

Mandatory stern white light.

It is recommended to keep it in rear storage compartment at all times except when needed.

To remove from engine cover, pull it out. Snap in place to store again.



#### TYPICAL

- 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. See NAVIGA-TION LIGHT SWITCH as mentioned earlier in this section.



#### TYPICAL

- 1. Lift
- 2. Align screw in groove
- 3. Push downward
- 4. Turn to lock

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

### 32) 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 craft.

**CAUTION:** Never use mooring cleats to pull or lift the craft.

# 33) Deck

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

# 34) Fuel Tank Cap

Unscrew the cap counterclockwise. Reinstall cap and fully tighten after fueling.

## \land WARNING

Always stop the engine before refueling. Fuel is inflammable and explosive under certain conditions. Always work in a well ventilated area. Do not smoke or allow open flames or sparks in the vicinity. Fuel tank may be pressurized, slowly turn cap when opening. Keep craft level. Do not overfill or top off the fuel tank and leave craft in the sun. As temperature increases, fuel expands and might overflow. Always remove any fuel spillage from the craft. Never use an open flame to check fuel level.

# 35) Deck Drain(s)

Provides drainage of water from rain, deck washing, water splashing, etc.

Keep clean to avoid clogging.



TYPICAL

1. Rear seat

2. Deck drain

# 36) Main Oil Reservoir Cap

Open the engine cover to expose the oil cap. The cap is located under the engine cover.



To add injection oil in the reservoir, unscrew the cap counterclockwise.

# \land WARNING

Add oil to level mark. Do not overfill. Reinstall cap and fully tighten.

**CAUTION:** Oil system must be pressurized. Always ensure that reservoir caps are firmly tighten. Refer to  $M^2$  Jet Drive Operator's Guide for recommended oil and complete reservoirs filling procedure.

## **37) Flushing Connector**

Refer to  $M^2$  Jet Drive Operator's Guide for proper use.

For your convenience, flushing connector is located under engine cover. Lift cover, the flushing connector is on starboard side of the storage compartment.

## **38) Ventilation Ducts**

This is where air flows to supply engine and ventilate engine compartment. They should never be obstructed.

# 39) Jet Pump Nozzle

Turns side to side via input from the steering wheel. This provides directional control when engine is running.

# 🕂 WARNING

Never use nozzle as a supporting point to board the craft or to lift it.

# 40) Reverse Gate

When selecting the neutral or reverse position with the shift lever, the reverse gate moves up or down to obtain the desired position.

# \land WARNING

Never use gate as a supporting point to board the craft. Shift lever should only be used when the engine is idling and craft is completely stopped.

## 41) Retractable Ladder

Located under swim platform.

A convenient ladder to help reboarding the craft.

# \land WARNING

Engine should be OFF when using ladder. Keep limbs away from jet or intake grate. Stay on center of the ladder. Only one person at the time on the ladder. Never use the ladder for pulling, towing, diving or jumping, boarding a craft that is out of water or any other purpose other than a ladder.

Pull latch to unlock the ladder.



TYPICAL

1. Latch

Slide ladder toward rear, then push down.



TYPICAL

1. Ladder lowered

To store ladder, lift horizontally completely then slide toward front.

# 42) Scupper Valve

This is where water from deck drains out. Keep clean to avoid clogging.

#### 43) Hydro-Surge Grate System

Refer to M<sup>2</sup> Jet Drive Operator's Guide.

# 44) Fuel Tank Vent

It allows fuel vapors and pressure to escape from fuel tank.

# 🖄 WARNING

Never use a lit match or open flame close to vent. Follow the FUELING PROCEDURE instructions in the FUEL AND LUBRICATION section.



TYPICAL 1. Fuel tank vent

## 45) Ski Post

#### Challenger 1800 and Challenger 2000 Models

Pull up the post to allow hooking a ski rope.



TYPICAL — CHALLENGER 1800 SHOWN 1. Lift ski post to use

Push down when finished.



**TYPICAL — CHALLENGER 1800 SHOWN** 1. Push down when not used

#### Speedster Model

Pull ski post upward until it stops then turn ski post end clockwise (CW) to lock post in place. See next photo.



- 1. Turn clockwise to LOCK
- 2. Turn counterclockwise to UNLOCK

Turn ski post end counterclockwise (CCW) then push post down when finished.

#### All Models

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

**CAUTION:** Never use the ski post or wakeboard extension to tow other boats.

# \land WARNING

Riding when pulling a tube, skier or wakeboarder makes the craft handle differently and require greater skill. Unless absolutely necessary, do not make tight, sharp turns. Keep a safe distance from the docks, other swimmers, craft or objects. Be advised that serious injury can result if the tow rope become slack during a tight turn or when circling. The rope could become wrapped around the neck or limbs of a person.

### 46) Fuses

Craft electrical system fuses are located inside starboard front storage compartment.

Refer to *M<sup>2</sup> Jet Drive Operator's Guide* for ENGINE ELECTRICAL SYSTEM.

# 47) Radio/CD Player

Refer to its guide for a complete explanation of the features and controls.

**CAUTION:** Using the radio/CD player for a prolonged time without engine running may discharge the battery.



**TYPICAL** 1. Radio/CD player

Lift protection flap and push in when completely lifted.

Close protection flap when radio/CD player is not in use to protect against weather inclemency.

#### Challenger 1800 and Challenger 2000 Models

Located in glove box of LH side console.

Open the glove box to access the radio/ CD player.



#### TYPICAL

- 1. Radio/CD player
- 2. Glove box cover opened

**NOTE:** The radio/CD player is better protected from theft when the glove box and left front storage compartment cover are locked.

#### 48) Glove Box (if so equipped)



TYPICAL

1. Glove box

Located on LH side console.

A small, convenient lockable storage compartment for keys, wallet, etc.

To access the glove box, unlock the release button using the provided key and press button.

**NOTE:** Always relatch and lock glove box.

# \Lambda WARNING

Never operate the craft with the glove box cover open.

### 49) Water Bypass System

At idle speed, there will not be a water flow through this outlet.

When engine is running above idle speed, water must flow through this hole. This allows air in engine water jacket to escape.





1. Water bypass outlet

**CAUTION**: Should water not flow from the outlet a few seconds after engine starts and runs above idle, immediately stop engine and refer to POST-OPERATION CARE and look for COOLING SYSTEM FLUSHING or refer to an authorized dealer for servicing.

#### 50) Main Battery Cut-Off Switch

The switch is located in the engine compartment, close to battery. It is provided to allow a complete cut-out of the electrical system.

When in OFF position, ALL electrical equipments and electronics will not be powered and not working.

It must be in the ON position to allow the use of electrical components and to start the engine.

**CAUTION:** Stop engine before switching OFF.



1. Main battery cut-off switch

It is recommended to set in the OFF position whenever performing maintenance in the engine compartment, on the electrical system, for transportation and for short term storage on the trailer.

**CAUTION**: Bear in mind that when the switch is turned OFF while craft is moored, the bilge pump will not start if water comes up in the bilge.

### 51) Wake Tower

Convenient tower for skiing/wake boarding.

### 🕂 WARNING

Riding when pulling a tube, skier or wakeboarder makes the craft handle differently and require greater skill. Unless absolutely necessary, do not make tight, sharp turns. Keep a safe distance from the docks, other swimmers, craft or objects. Be advised that serious injury can result if the tow rope become slack during a tight turn or when circling. The rope could become wrapped around the neck or limbs of a person. **CAUTION:** Always tow the vehicle with the towing tower fastened in the upright position to avoid damage to the boat and towing vehicle while in transport.

A storage pad is supplied to prevent damage to the deck.

The tower comes with an access hole for aftermarket wiring on the starboard side rail mounting flange of the craft.



1. Black indicates wire access hole

To clean tower, use mineral spirits and a clean soft cloth.

#### 🗥 WARNING

This tow tower is designed to provide a high attachment point for a wakeboard or a water ski tow rope only and not for parasailing, kite flying, or towing other watercraft or any other object. Tie tow rope only to tow mount and never allow loose tow rope ends to dangle. Do not tow more than one person at one time from this tow tower. Do not climb on, sit on, stand on, jump off, or drive off the tower.

F13L0JL

#### 

Never operate boat without tow tower secured and bolted in upright position. Always check that all bolts are in place and tight before and during use. Check at all times clearance height around docks, shore, overhanging objects, bridges and powerlines. All occupants must be seated when towing skier and never allow passengers to sit behind the tow rope attachment point. Do not use tower as a tie-down or tie-off.

F13L0KL



1. Remove from each side

To fold tower for storage, remove knobs from each side of tower.

Carefully fold tower forward until storage pad is in contact with bow.



1. Remove from each side

Remove knobs from curved extensions. Lower arms into storage position as shown.

Place knobs in glovebox or other secure storage for later use.

Erection of tower is reverse of this procedure.

# FUEL AND LUBRICATION

**CAUTION:** Scrupulously follow the instructions of this section. Failure to do so may reduce the engine's life and/or performance.

### **Fueling Procedure**

# 🕂 WARNING

Follow these safe boating fueling instructions explicitly.

Do not allow anyone to remain on the craft.

Tie craft securely to the fueling pier.

Use bilge blower for a minimum of 5 minutes.

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

Ensure engine cover is closed to prevent fumes from entering the engine compartment.

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 tank and prevent fuel flow-back.

Fill fuel tank to bottom of filler neck. **Do not overfill.** Fully tighten fuel tank cap.

### \land WARNING

Always stop the engine before refueling. Fuel is inflammable and explosive under certain conditions. Always work in a well ventilated area. Do not smoke or allow open flames or sparks in the vicinity. Fuel tank may be pressurized. Slowly turn cap when opening. Keep craft level. Do not overfill or top off the fuel tank and leave craft in the sun. As temperature increases, fuel expands and might overflow. Always wipe off any fuel spillage from the craft.

### **Recommended Fuel**

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

**NOTE:** This craft features an oil injection system which does not require manual fuel/oil mixing. Do not mix oil with fuel except at engine break-in. Refer to *M*<sup>2</sup> *Jet Drive Operator's Guide* BREAK-IN PERIOD. Always check oil reservoir level when refueling.

Refer to  $M^2$  Jet Drive Operator's Guide for more detailed information.

**CAUTION:** The use of a fuel other than regular unleaded fuel can result in craft 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**

# \land WARNING

Add oil to level mark. Do not overfill. Reinstall cap and fully tighten.

Use Quicksilver or Mercury Precision Premium-Plus lubricants NMMA/BIA certified TC-W3 2-cycle outboard oil or equivalent.

Refer to *M<sup>2</sup> Jet Drive Operator's Guide* specifications for more detailed information.

### Main Oil Reservoir Level

A sufficient amount of oil should be maintained in the reservoir.

NOTE: Always carry a spare 1 liter of oil.

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.

**CAUTION:** Always maintain a sufficient amount of oil in the oil reservoir. Check and refill every time you refuel. Do not overfill. If the engine runs out of oil, severe engine damage will occur. If the oil reservoir is found almost empty, refer to an authorized dealer to have the oil injection system inspected.

**CAUTION:** Oil system must be pressurized. Always ensure that reservoir caps are firmly tighten. Refer to  $M^2$  Jet Drive Operator's Guide for complete reservoirs filling procedure.

#### Engine Mounted Oil Reservoir Level

Refer to M<sup>2</sup> Jet Drive Operator's Guide.

# **BREAK-IN PERIOD**

**CAUTION:** Scrupulously follow the instructions of this section. Failure to do so may reduce the engine's life and/or performance.

## Engine

Refer to M<sup>2</sup> Jet Drive Operator's Guide.

#### **10-Hour Inspection**

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

The following chart should be used in conjunction with Mercury chart. Refer to  $M^2$  Jet Drive Operator's Guide.

#### The 10-hour inspection is at the expense of the craft owner.

10-HOUR INSPECTION CHECK LIST	<b>√</b>
Fuel system lines and fasteners	
Throttle cable adjustment if required	
Oil lines	
Muffler, battery and reservoir fastening devices	
Exhaust system hose clamps torque	
Steering system and low-speed steering control system	
Steering cable adjustment if required	
Shifter cable adjustment if required	
Ensure that throttle levers keep the selected position. Adjust levers friction as necessary	
Hose condition and fasteners	
Bilge pump and bilge blower	
Safety lanyard switch	
Monitoring beeper	
Electrical connections (starter, battery, etc.)	
Lighting system inspection	
Hull condition	
Inspection of fasteners for tightness	

#### 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**

# 

The pre-operation check is very important prior to operating the vehicle. Always check the proper operation of critical controls, safety features and mechanical components before starting. If not done as specified here, severe injury or death might occur. Bring all safety equipment required by local laws.

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 craft, verify the following:

# 🕂 WARNING

Engine should be off and the safety lanyard must always be removed from its switch prior to verifying any of the following. Only start craft once all items have been checked and operate properly.

ITEM	OPERATION	✓
Safety lanyard ignition switch	Check operation.	
Hull	Inspect.	
Jet pump water intakes	Inspect/clean.	
Bilge	Drain. Ensure plug is secured.	
Battery	Inspect tightness of cables and retaining straps.	
Main battery cut-off switch	Ensure it is in the ON position.	
Navigation lights	Check operation.	
Fuel tank and oil reservoirs	Refill.	
Engine compartment	Verify fuel/oil system components.	
Steering	Check operation.	
Throttle/shifter system	Check operation.	
Bilge blower and bilge pump	Check operation.	
Mandatory safety boating equipment	Check operation.	
Storage compartment covers and engine cover	Ensure they are closed and latched.	
Wake tower	Inspect bolts and locking knobs.	

#### SUMMARY

# 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 units. Clean as necessary. If any obstruction can not be removed, refer to an authorized Sea-Doo dealer for servicing.

Inspect leading edges of the impellers, if they have nicks or bends, performance will be greatly reduced.

### Bilge

Should water be present in the bilge, use bilge pump or tilt the craft to the rear and unscrew drain plugs if craft is out of the water, as the case may be, to completely empty the bilge.

Secure bilge drain plugs.

# 

Make sure drain plugs are properly secured prior launching the craft in water.

#### Battery

## 

Verify tightness of battery cables to their posts and condition of retaining straps/fasteners. Do not boost battery while installed.

### **Fuel Tank/Oil Reservoirs**

With the craft horizontal, fill the fuel tank to specified level.

Check the oil level and refill reservoir as necessary.

**CAUTION:** Oil system must be pressurized. Always ensure that reservoir caps are firmly tighten. Refer to  $M^2$  Jet Drive Operator's Guide for complete reservoirs filling procedure.

Check fuel tank/oil reservoirs retaining straps/fasteners.

#### **Engine Compartment**

# \land WARNING

Should any leak or gasoline odor be present, do not start the engine. Consult an authorized Sea-Doo dealer before use.

### 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 should be in the straight ahead position. Ensure the jet pump nozzle pivots easily when steering is turned.

#### Υ WARNING

Check steering and corresponding steering nozzle operation before starting.

### **Throttle System**

Check throttle lever once for free and smooth operation.

**NOTE:** To activate throttle lever, shift lever must be in forward or reverse position.

### \land WARNING

Check throttle lever operation before starting the engine.

### **Shifter System**

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

# 

Verify the reverse gate lock.

### Inlet Grate

Ensure inlet grate is not blocked or obstructed by any weeds or debris. Refer to  $M^2$  Jet Drive Operator's Guide.

# Safety Lanyard and Ignition Switch

Ensure that ignition switch operates properly.

Start engine and stop it using switch. See STARTING PROCEDURE.

# \land WARNING

Only start craft once all items have been checked and operate properly.

#### Storage Compartment Covers

Ensure they are closed and latched.

# **OPERATING INSTRUCTIONS**

# \land WARNING

Always perform PRE-OPERATION CHECKS before operating the craft. Become thoroughly familiar with all controls and the function of each. Should any control or instruction be not fully understood, refer to an authorized Sea-Doo dealer.

### Launching/Loading

**CAUTION:** Before launching the craft, ensure the main battery cut-off switch is turned ON and the bilge plugs are fully screwed.

After loading the craft, ensure the main battery cut-off switch is turned OFF and the bilge plugs are remove to drain bilge.

## Trailering

Refer to the trailer or implement manufacturer instructions for proper capacity, operation, maintenance, accessories and warranty.

Check the regulations in your area concerning towing a trailer, especially the following rules:

- brake system
- tow vehicle weight
- mirrors.

**NOTE:** An optional brake system is available for your trailer, see an authorized Sea-Doo dealer.

Take the following precautions when trailering the craft:

Tie the craft to both bow and stern (front/rear) eyelets so that it is firmly retained on the trailer. Use additional tie-downs if necessary.

- Remove stern light (if installed).
- Ensure that ski post is pushed down.
- Ensure all storage compartment covers are properly latched.
- A SEA-DOO cover can protect the craft, particularly before driving on dirt roads, to prevent dirt entry through the air intake opening(s).

Observe trailering safety precautions.

### **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 craft. Then, the water flows through the impeller to a venturi. The venturi accelerates the water and produces thrust to move the craft. Pushing the throttle lever forward increases engine speed and therefore craft speed.

## 🕂 WARNING

Whenever an engine is to be started, the operator and passengers should always be sitting in the craft with the shift lever in neutral position and throttle lever in idle position.

#### Shift Lever

#### FORWARD

The shift lever should be in the forward position in order for the craft to advance.



#### TYPICAL

1. Shift lever in forward position

#### NEUTRAL

To obtain neutral, pull shift lever halfway. The reverse gate will be in the middle position, directing half of the thrust toward the front of the craft to minimize craft movement.

## 

When the craft is in neutral position, the impeller is turning.



#### TYPICAL

1. Shift lever in neutral position



#### TYPICAL

1. Reverse gate in middle position

#### REVERSE

To obtain reverse, pull shift lever completely. The reverse gate will be in downward position, directing all the thrust toward the front of the craft.



TYPICAL — SHIFT LEVER IN REVERSE POSITION



**TYPICAL** 1. Reverse gate in downward position

**NOTE:** To obtain maximum efficiency and control from the reverse, increase engine speed to slightly above idle. Too much RPM will create water turbulence and reduce reverse efficiency.

In reverse position, turn the steering wheel in the opposite direction that you want to move the rear of the craft.

For example, to steer the rear of the craft to the left side, turn the steering wheel to the right side.

# 

Shift lever should only be used when the engine is idling.

#### Steering

Turning the steering wheel pivots the jet pump nozzle which controls the craft direction. Turning the steering clockwise will turn the craft to the right and inversely.



TYPICAL

Above idle speed, the throttle must be applied to turn the craft.

# 

Throttle must be applied and steering turned to change the direction of the craft at speed. Steering efficiency will differ depending on the number of passengers, load and water conditions. A craft needs some throttle to turn. Practice in a safe area applying the throttle and turning away from an imaginary object. This is a good collision avoidance practice.

#### Low-Speed Steering Control System

Whenever the throttle lever is in **IDLE position AND** the steering wheel is approaching the end of its rotation, the engine speed will be slightly accelerated to increase the jet pump thrust. This helps steering control for lowspeed navigation or when approaching/ leaving a dock. For docking tips, refer to STOPPING/ DOCKING section below.

# 🕂 WARNING

Become fully familiar with this feature during your first ride and before carrying passengers.

### **Boarding from a Dock**

As with any craft, boarding should be done carefully and engine should not be running.

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



TYPICAL

**CAUTION:** Engine should be started with at least 90 cm (3 ft) of water below the hull.



TYPICAL

A. 90 cm (3 ft)

### **Boarding from the Water**

# 

Inexperienced riders should practice how to get aboard close to shore first before venturing into deep water.

# 

Engine should not be running while boarding. Never use propulsion components as a supporting point to board the craft.

Swim to the rear of the craft.

Come close to rear of craft then unlatch and slide ladder toward rear. Grip swim platform grab handles.



TYPICAL

Climb the ladder and pull yourself upward using the swim platform grab handles.



TYPICAL

When you can reach the engine cover grab handle, grip it and continue to pull yourself upward to place one of your foot on the swim platform.





Continue to climb on engine cover and go down on the deck.





To store ladder, lift horizontally completely then slide toward front.

**CAUTION:** Do not leave ladder hanging when operating the boat. Before operating the craft, always lock the ladder using the latch.

# Υ WARNING

Do not start engines until all passengers are properly seated.

# Starting

Always activate bilge blower 5 minutes minimum before starting the engine. The bilge blower will ventilate the bilge.

### 

Bilge blower must be turned off above idle speed.

# \land WARNING

Do not touch electrical parts or jet pump area when engine is running.

Attach the safety lanyard to your PFD and snap the cap to its switch before starting the engine.

# 🕂 WARNING

Before starting, the operator and passengers should always be properly seated.

Grip steering wheel with your right hand and place both feet on the floorboard. Turn off bilge blower.

#### Starting Procedure

Refer to *M<sup>2</sup> Jet Drive Operator's Guide* for complete detailed procedure.

#### 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 navigation lights if necessary.

### **Crossing Waves**

Reduce speed. Always be prepared to steer and balance as necessary.

When crossing wakes, always keep a safe distance from boat ahead.

# 

When crossing wakes, slow down. Operator and passenger(s) can brace themselves by posting. Do not jump waves or wakes.

# Stopping/Docking

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

The operator should become familiarized with the stopping distance under different conditions.

Reduce speed to idle. Shift to neutral, reverse or forward as required.

### NARNING

Directional control is reduced when throttle is released and lost when engine is off.

#### Low-Speed Steering Control System

Reducing RPM to **IDLE activates** the low-speed steering control feature as described previously. For more details, refer to LOW-SPEED STEERING CON-TROL SYSTEM in TURNING section above.

### WARNING

Become familiar with this feature during your first ride.

# Beaching

# **CAUTION:** It is not recommended to run the craft to the beach.

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



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

# 

In shallow water, shells, sand, pebbles or other objects could be drawn up by the jet pump and be thrown rearward or could damage the engine.

As necessary, the cooling system of the engine should be flushed before restarting, to remove sand or shell accumulation which may clog the water passages. Refer to POST-OPERATION CARE and look for COOLING SYSTEM FLUSHING.

### Shutting Off the Engine

Refer to M<sup>2</sup> Jet Drive Operator's Guide.

### \land WARNING

Should the engine be shut off, craft directional control is not available. Never leave the safety lanyard connected on its switch when craft is not in operation.

# **POST-OPERATION CARE**

# \land WARNING

Allow engine to cool before performing any maintenance.

### **General Care**

Should water be present in the bilge after use of bilge pump, unscrew the drain plug and tilt the craft to the rear in order to allow water to drain.

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

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

#### Additional Care for Foul Water or Salt Water

When the craft is operated in foul water and particularly in salt water, additional care must be taken to protect the craft and its components. Rinse trailer and craft's hull/bilge area with fresh water.

**CAUTION:** Failure to perform proper care such as: craft rinsing, cooling system flushing and anticorrosion treatment, when used in salt water, will result in damage to the craft and its components. Never leave the craft stored in direct sunlight.

#### **Cooling System Flushing**

#### General

Flushing the cooling system with fresh water is essential to neutralize corroding 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. Flushing should be performed when the craft is not expected to be used further the same day or when the craft is stored for any extended time.

### 

Perform this operation in a well ventilated area.

#### Flushing

- 1. Clean jet pump by spraying water in its inlet and outlet and then apply a coating of BOMBARDIER LUBE lubricant or equivalent.
- 2. Open engine cover.
- 3. Connect a garden hose directly to the flushing connector, as shown in the next photo. **Do not open the water tap yet.**



**TYPICAL — SPEEDSTER SHOWN** 1. Flushing connector with its cap

Refer to  $M^2$  Jet Drive Operator's Guide for complete engine flushing procedure.

# SPECIAL PROCEDURE

### **Engine Overheating**

**CAUTION:** If the monitoring beeper continuously sounds, **stop engine immediately**.

Refer to M<sup>2</sup> Jet Drive Operator's Guide.

If engine still overheats, refer to an authorized Sea-Doo dealer for servicing.

#### Jet Pump Water Intake and Impeller Cleaning

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

- 1. **Cavitation:** Engine speed is high but craft 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 described in  $M^2$  Jet Drive Operator's Guide.

# 

Always remove safety lanyard cap from switch to prevent accidental engine starting before cleaning the jet pump area.

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

# **Capsized Boat**

The boat is designed so that it should not turn over easily due to its length and width. If the 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 others.

# 🕂 WARNING

When boat is capsized, do not attempt to restart the engine. Operator and passengers should always wear approved personal flotation devices.

### Submerged Boat

# 

DO NOT attempt to restart engine. See an authorized dealer as soon as possible to service the engine.

#### **Flooded Engine**

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

# \land WARNING

Never crank engine with spark plugs removed unless spark plug cables are connected to the grounding device.

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

Cover spark plug holes with a rag.

Ensure choke lever is completely pushed in.

Crank engine for approximately 10 seconds to allow water to escape from spark plug openings.

Spray BOMBARDIER LUBE lubricant or equivalent into spark plug holes.

Crank engine again.

Reinstall spark plugs.

Start engine normally.

# Low-Charge Battery Condition

### \land WARNING

See your authorized Sea-Doo dealer to have it charged or replaced. Do not charge or boost the battery while installed on the craft. Electrolyte is poisonous and dangerous.

# MAINTENANCE

### \land WARNING

Only perform procedure 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 and/or *M2 Jet Drive Operator's Guide*. Unless otherwise specified, engine must not be running and the main battery cut-off switch must be turned OFF for all maintenance procedures.

#### Lubrication Anticorrosion Protection

#### Throttle Cable

Lubricate the throttle cable with BOMBARDIER LUBE lubricant or equivalent, every 25 hours of use (every 10 hours in salt water use).

#### **Electrical Connections**

As necessary, apply dielectric grease on battery posts and all exposed cable connectors including stern light connectors on mat and craft.

#### **Additional Lubrication**

BOMBARDIER LUBE lubricant or equivalent will help to prevent corrosion and maintain 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.

#### Engine Cover Mechanism and Hinges

Use BOMBARDIER LUBE lubricant or equivalent on metal parts.





Bow Seat Lock Pin



1. Bow seat lock pin

Lubricate lock pin. Install and remove seat a few times to distribute lubricant.

#### Ski Post

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



CHALLENGER 1800 AND CHALLENGER 2000

Step 1: Lift ski post to lubricate

Step 2: Lubricate here

Step 3: Move post up and down several times to distribute lubricant



#### SPEEDSTER 1. Ski post does not need to be lubricated

#### Locks

Lubricate locks of glove box, front storage compartment covers and deck storage compartment.

#### **Engine Cover Cylinders**

Lubricate rod of cylinders.

### **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 craft servicing schedule to be performed by you and/ or by an authorized Sea-Doo dealer. The schedule should be adjusted according to operating conditions and use.

### **Periodic Inspection Chart**

		FREQUENCY			
DESCRIPTION	FIRST 10 HOURS	EVERY 25 HOURS	EVERY 50 HOURS	EVERY 100 HOURS OR SEASONALLY	TO BE PERFORMED BY
Lubrication/corrosion protection			~		OPERATOR
Lubrication of storage compartment cover locks	1		1		OPERATOR
Safety lanyard cap				✓	DEALER
Throttle/choke cables operation/lubrication	1	~			OPERATOR
Throttle cable adjustments				~	DEALER
Fuel filter inspection		~			DEALER
Fuel filter replacement				1	DEALER
Steering system and low-speed steering control system			1		DEALER
Throttle and shifter systems				✓	DEALER
Muffler, battery and reservoir fastening devices			1		DEALER
Fuel/oil line, hose inspection	1	~	~	✓	DEALER
Bilge pump/deck drain/scupper valve inspection			1		OPERATOR
Battery condition			~		DEALER
Starter cables		~			DEALER
Monitoring beeper/electrical connections			~		DEALER
Hull condition and ride shoes				✓	DEALER
Cooling system flushing @		~			OPERATOR
Navigation lights condition		✓			DEALER
Sacrificial aluminum anode(s)			~		OPERATOR
Bilge blower inspection			~		DEALER
Wake tower bolts and locking knobs inspection			1		OPERATOR

**NOTE:** Some items are included in the PRE-OPERATION CHECKS and are not necessarily mentioned in this chart but must also be done. Refer to  $M^2$  Jet Drive Operator's Guide for engine and jet pump checks.

- ① Every 10 hours in salt water use.
- ② Daily flushing in salt water or foul water use.

# Throttle Cable

Activate the throttle lever throughout its full range of motion. It must operate smoothly. Refer to an authorized Sea-Doo dealer if adjustment is necessary.

## MARNING

Do not alter or tamper with throttle cable adjustment or routing.

### **Fuel and Oil Filters**

These filters should be replaced by an authorized dealer annually.

Refer to M<sup>2</sup> Jet Drive Operator's Guide.

#### Steering/Jet Pump Nozzle Adjustment

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

Refer to an authorized Sea-Doo dealer if an adjustment is necessary.

# \Lambda WARNING

Ensure the steering/jet pump nozzle operate freely from side to side and is not stressing the steering cable.

### **Reverse Gate**

# ΥΜΑRNING

Ensure the shifter and reverse gate operate freely and are not stressing the reverse cable.

Refer to an authorized Sea-Doo dealer if an adjustment is necessary.

# Deck Drain(s)

Remove any obstruction from deck drain and scupper valve.

#### Fuses

#### Accessories, Craft Electrical System and Gauges

If a fuse is defective, replace by one of the same rating.

# 🕂 WARNING

Do not use a higher rated fuse as this can cause severe damage. If a fuse has burnt out. Source of malfunction should be determined and connected before restarting. See an authorized Sea-Doo sport boat dealer for servicing.

#### Engine

Refer to M<sup>2</sup> Jet Drive Operator's Guide.

## **Bilge Air Blower**

Verify bilge air blower for proper operation. It is located inside engine compartment beneath ventilation duct.

Clean both clam shells opening. Ensure that both openings are not obstructed. Air is sucked in by clam shell attached to the blower and drawn out by the other side. See next illustration.



TYPICAL — AIR FLOW

# 

If bilge blower does not operate refer to an authorized Sea-Doo dealer before starting the craft.

<sup>1.</sup> Bilge air blower inside engine compartment

### Navigation Light Bulb Replacement

#### **Bow Light**



#### TYPICAL

1. Gently pry here with a screwdriver



#### TYPICAL

1. Remove this screw



......



1. Pull lens out



TYPICAL 1. Lift and 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.

When installing the bulb under the upper terminal plate, it is possible that the bulb remains loose. The cover will compress the terminal plate against the bulb at reinstallation.

#### Stern Light

Unscrew lens counterclockwise and pull it out.



1. Unscrew then pull

Pull bulb to remove it.



1. Pull bulb out

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. Ensure all hose clamps are properly secured and no hose is cracked, kinked or presenting any other damage.

# 

If any gasoline leak and/or odors are present, do not start the engine. Have the craft serviced by an authorized Sea-Doo dealer. Inspect muffler, battery, fuel tank and oil reservoir fastening devices. Visually check electrical connections for corrosion and tightness.

Inspect hull and jet pump water intake grate for damage. Replace or have damaged parts repaired.

#### Cleaning

The bilge should be cleaned by the dealer 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 nonabrasive wax.

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

Wash windscreen with Bombardier cleaner or equivalent (P/N 293 110 001 — 400 g) and water. For fine scratches and scuff marks removal, use a windshield polisher for acrylic, lucite, polycarbonate and similar materials.

Stains may be removed from seats and fiberglass with Knight's Spray-Nine\* from Korkay System Ltd or the equivalent.

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

# **STORAGE AND PRE-SEASON PREPARATION**

# A WARNING

Because fuel and oil are flammable, have an authorized Sea-Doo sport boat dealer inspect the fuel and oil systems integrity as specified in the periodic inspection chart.

#### Storage

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

**CAUTION:** Do not run the engine during the storage period.

#### Fuel System

Refer to M<sup>2</sup> Jet Drive Operator's Guide.

#### Cooling System Flushing and Engine Internal Lubrication

Refer to M<sup>2</sup> Jet Drive Operator's Guide.

#### **Propulsion System**

Refer to M<sup>2</sup> Jet Drive Operator's Guide.

#### **Craft Cleaning/Repair**

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

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

Stains may be removed from seats and fiberglass with Knight's Spray-Nine\* from Korkay System Ltd or the equivalent. If 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 minor gelcoat repairs, a Bombardier repair kit is available. Replace damaged labels/ decals.

Clean the bilge with hot water and detergent or with bilge cleaner. Rinse thoroughly. Unscrew drain plug(s) and lift front end of craft to completely drain bilge.

#### Battery

Contact your authorized Sea-Doo dealer.

#### **Anticorrosion Treatment**

Wipe off any residual water in the engine compartment.

Lubricate the throttle cable with BOMBARDIER LUBE lubricant or equivalent.

#### Finalizing Storage Preparation

Apply a non abrasive wax to body.

The engine cover should be left partially opened during storage (detach the gas shocks from the cover to prevent full opening). Remove storage tray. Place it on deck. This will avoid engine compartment condensation and possible corrosion.

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

**CAUTION:** Never leave the craft stored in direct sunlight. UV radiation will dull finishes. The craft must never be left in water for storage. Make sure to turn off main battery cut-off switch.

For the storage period, it is necessary to lift the bow up and safely block in this position so drainage can take place. Ensure the drain plug is unscrewed.

### **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

Only perform procedure 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 and/or  $M^2$  Jet Drive Operator's Guide. Unless otherwise specified, engine must not be running and the main battery cut-off switch must be turned OFF for all maintenance procedures.

#### **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
Safety lanyard cap condition	DEALER
Battery condition/charging and reinstallation	DEALER
Starter connections and routing ①	DEALER
Oil reservoir filling	OPERATOR
Fuel filter replacement	DEALER
Fuel line condition ①	DEALER
Filler neck, fuel tank and fuel cap condition ①	DEALER
Check fuel system fasteners	DEALER
Steering system and low-speed steering control system inspection ${\rm \textcircled{0}}$	DEALER
Throttle/shifter system inspection ①	DEALER
Inspection of deck drains/bilge pump/drain plugs	DEALER
Fire extinguisher condition/mounting ①	OPERATOR

① Safety item covered in the annual safety inspection.

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

# SPECIFICATIONS

ENGINE		SPEEDSTER		
Number of engines		1		
Engine type		V-6 Mercury, 2 stroke		
Induction type		Reed valve		
Exhaust system		Water cooled, water injected		
Lubrigation	Туре	Refer to M <sup>2</sup> JET DRIVE SPECIFICATIONS		
Lubrication	Oil type	Refer to M <sup>2</sup> JET DRIVE SPECIFICATIONS		
Number of cylinde	ers	6		
Displacement		2500 cm <sup>3</sup> (152.53 in <sup>3</sup> )		
COOLING		·		
Туре		Open circuit - Direct water flow		
ELECTRICAL		•		
Ignition system ty	ре	Digital-CDI (Capacitor Discharge Ignition)		
Spark plug	Make and type	Refer to M <sup>2</sup> JET DRIVE SPECIFICATIONS		
	Gap	Refer to M <sup>2</sup> JET DRIVE SPECIFICATIONS		
Starting system		Electric starter		
Battery		Not supplied ①		
Fuses	Courtesy lights	1 A (2)		
	Bilge air blower	7.5 A		
	Bilge pump	7.5 A		
	Navigation lights	3 A		
	Gauges/Low fuel	3 A		
	Radio	5 A		
	Horn system	5 A		
	Jack system	10 A		
CARBURETION				
For more	detailed information ref	er to M <sup>2</sup> JET DRIVE SPECIFICATIONS		
PROPULSION				
Propulsion system		Mercury Marine Sport Jet		
Number of jet pumps		1		
Jet pump type		Axial flow, single stage		
Pivoting angle of direction (nozzle)		~ 26°		
Minimum required water level for jet pumps		90 cm (35 in)		

DIMENSIONS	SPEEDSTER
Overall length	5.0 m (16 ft 6 in)
Beam	2.3 m (7 ft 7 in)
Draft	30 cm (12 in)
Dead rise	20°
Weight (dry)	776 kg (1710 lb)
Load limit (passengers + luggage)	5 passengers
	410 kg (905 lb) (based on calm water operation)
Maximum engine power capacity rating of the craft	179 kW (240 HP)
Hull material	Composite (fiberglass)
CAPACITIES	
Fuel tank (reserve included)	151 L (40 U.S. gal)
Main oil reservoir	11 L (3 U.S. gal)

Recommended: Exide R-24-130, 12 V, 25 A•h (130 minutes reserve) or R-24-160 (160 minutes) or equivalent.

Battery posts: On top. Round taper type.

Battery maximum allowed size: 285 mm (11-1/4 in) long x 190 mm (7-1/2 in) wide x 238 mm (9-3/8 in) high.

BOMBARDIER 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.

ENGINE		CHALLENGER 1800		
Number of engines		1		
Engine type		V-6 Mercury Marine 2 stroke		
Induction type		Reed valve		
Exhaust system		Water cooled, water injected		
Lubrication	Туре	Refer to M <sup>2</sup> JET DRIVE SPECIFICATIONS		
Lubrication	Oil type	Refer to M <sup>2</sup> JET DRIVE SPECIFICATIONS		
Number of cylind	lers	6		
Displacement		2500 cm <sup>3</sup> (152.53 in <sup>3</sup> )		
COOLING				
Туре		Open circuit - Direct water flow		
ELECTRICAL				
Ignition system type		Digital-CDI (Capacitor Discharge Ignition)		
Spark plug	Make and type	Refer to M <sup>2</sup> JET DRIVE SPECIFICATIONS		
Spark plug	Gap	Refer to M <sup>2</sup> JET DRIVE SPECIFICATIONS		
Starting system		Electric starter		
Battery		Not supplied ①		
Fuses	Courtesy lights	1 A (2)		
	Bilge air blower	7.5 A		
	Bilge pump	7.5 A		
	Navigation lights	3 A		
	Gauges/Low fuel	3 A		
	Radio	5 A		
	Horn system	5 A		
	Jack system	10 A		
CARBURETION				
For more detailed information refer to M <sup>2</sup> JET DRIVE SPECIFICATIONS				
PROPULSION				
Propulsion system		Mercury Marine Sport Jet		
Number of jet pumps		1		
Jet pump type		Axial flow, single stage		
Pivoting angle of direction (nozzle)		~ 26°		
Minimum required water level for jet pumps		90 cm (35 in)		
DIMENSIONS	CHALLENGER 1800			
---	---			
Overall length	5.46 m (17 ft 11 in)			
Beam	2.29 m (7 ft 6 in)			
Draft	30 cm (12 in)			
Dead rise	19.5°			
Weight (dry)	848 kg (1865 lb)			
Load limit (passengers + luggage)	7 passengers OR 565 kg (1245 lb) (based on calm water operation)			
Maximum engine power capacity rating of the craft	157 kW (210 HP) @ 5650 RPM and 179 kW (240 HP) @ 6500 RPM			
Hull material	Composite (fiberglass)			
CAPACITIES				
Fuel tank (reserve included)	151 L (40 U.S. gal)			
Main oil reservoir	11 L (3 U.S. gal)			

Recommended: Exide R-24-130, 12 V, 25 A•h (130 minutes reserve) or R-24-160 (160 minutes) or equivalent.

Battery posts: On top. Round taper type.

Battery maximum allowed size: 285 mm (11-1/4 in) long x 190 mm (7-1/2 in) wide x 238 mm (9-3/8 in) high.

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ENGINE		CHALLENGER 2000			
Number of engines		1			
Engine type		V-6 Mercury Marine 2 stroke			
Induction type		Reed valve			
Exhaust system		Water cooled, water injected			
Lubrication	Туре	Refer to M <sup>2</sup> JET DRIVE SPECIFICATIONS			
LUDIICATION	Oil type	Refer to M <sup>2</sup> JET DRIVE SPECIFICATIONS			
Number of cylinde	ers	6			
Displacement		2500 cm <sup>3</sup> (152.53 in <sup>3</sup> )			
COOLING					
Туре		Open circuit - Direct water flow			
ELECTRICAL					
Ignition system ty	ре	Digital-CDI (Capacitor Discharge Ignition)			
Spark plug	Make and type	Refer to M <sup>2</sup> JET DRIVE SPECIFICATIONS			
Spark plug	Gap	Refer to M <sup>2</sup> JET DRIVE SPECIFICATIONS			
Starting system		Electric starter			
Battery		Not supplied ①			
	Courtesy lights	1 A (2)			
	Bilge air blower	7.5 A			
	Bilge pump	7.5 A			
Fuses	Navigation lights	3 A			
ruses	Gauges/Low fuel	3 A			
	Radio	5 A			
	Horn system	5 A			
	Jack system	10 A			
CARBURETION					
For more	detailed information ref	er to M <sup>2</sup> JET DRIVE SPECIFICATIONS			
PROPULSION					
Propulsion system		Mercury Marine Sport Jet			
Number of jet pumps		1			
Jet pump type		Axial flow, single stage			
Pivoting angle of c	direction (nozzle)	~ 26°			
Minimum required for jet pump	d water level	90 cm (35 in)			

DIMENSIONS	CHALLENGER 2000		
Overall length	6 m (19 ft 8 in)		
Beam	2.44 n	n (8 ft)	
Draft	30 cm	(12 in)	
Dead rise	19.5°		
Weight (dry)	907 kg (2000 lb)		
	8 passengers		
Load limit (passengers + luggage)	653 kg (1440 lb) (based on calm water operation)		
Maximum engine power capacity rating of the craft	179 kW (240 HP) 186 kW (250 H		
Hull material	Composite (fiberglass)		
CAPACITIES			
Fuel tank (reserve included)	151 L (40 U.S. gal)		
Main oil reservoir	11 L (3 U.S. gal)		

① Recommended: See Mercury Marine recommendations.

Battery posts: On top. Round taper type.

Battery maximum allowed size: 267 mm (10-1/2 in) long x 172 mm (6-3/4 in) wide x 238 mm (9-3/8 in) high.

BOMBARDIER 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.

ENGINE		CHALLENGER X			
Number of engines		1			
Engine type		V-6 Mercury Marine 2 stroke			
Induction type		Reed valve			
Exhaust system		Water cooled, water injected			
Lubrication	Туре	Refer to M <sup>2</sup> JET DRIVE SPECIFICATIONS			
Lubrication	Oil type	Refer to M <sup>2</sup> JET DRIVE SPECIFICATIONS			
Number of cylinde	ers	6			
Displacement		2500 cm <sup>3</sup> (152.53 in <sup>3</sup> )			
COOLING					
Туре		Open circuit - Direct water flow			
ELECTRICAL					
Ignition system ty	/pe	Digital-CDI (Capacitor Discharge Ignition)			
Spork plug	Make and type	Refer to M <sup>2</sup> JET DRIVE SPECIFICATIONS			
Spark plug	Gap	Refer to M <sup>2</sup> JET DRIVE SPECIFICATIONS			
Starting system		Electric starter			
Battery		Not supplied ①			
	Courtesy lights	1 A (2)			
	Bilge air blower	7.5 A			
	Bilge pump	7.5 A			
E	Navigation lights	3 A			
Fuses	Gauges/Low fuel	3 A			
	Radio	5 A			
	Horn system	5 A			
	Jack system	10 A			
CARBURETION		·			
Refer to	M <sup>2</sup> JET DRIVE SPECIFIC	CATIONS for more detailed information			
PROPULSION					
Propulsion system		Mercury Marine Sport Jet			
Number of jet pumps		1			
Jet pump type		Mixed flow, single stage			
Pivoting angle of	direction (nozzle)	~ 26°			
Minimum required water level for jet pump		90 cm (35 in)			

DIMENSIONS CHALLENGER X					
Overall length	6 m (19 ft 8 in)				
Beam	2.44 m (8 ft)				
Draft	30 cm (12 in)				
Dead rise	19.5°				
Weight (dry)	939 kg (2070 lb) 1032 kg (2275 lb)				
Load limit (passengers + luggage)	8 passengers 653 kg (1440 lb) (based on calm water operation)				
Maximum engine power capacity rating of the craft	179 kW (240 HP) 186 kW (250 HP)				
Hull material	Composite (fiberglass)				
CAPACITIES					
Fuel tank (reserve included)	151 L (40 U.S. gal)				
Main oil reservoir	11 L (3 U.S. gal)				

① Recommended: See Mercury Marine recommendations.

Battery posts: On top. Round taper type.

Battery maximum allowed size: 267 mm (10-1/2 in) long x 172 mm (6-3/4 in) wide x 238 mm (9-3/8 in) high.

BOMBARDIER 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**

	BASE UNITS			
force liquid temperature		kilogram newton liter Celsius kilopascal newton-meter kilometer per hour knot	SYMBOL m kg N L °C kPa N•m km/h kn	
		PREFIXES		
PREFIX kilo centi milli micro	SYMBOL k c m µ	one hundredth of one thousandth of	VALUE 1000 0.01 0.001 0.000001	
	CONV	ERSION FACTORS		
in in <sup>2</sup> in <sup>3</sup> ft. oz lb lbf lbf•in lbf•in lbf•ft lbf•ft PSI imp. oz imp. oz imp. gal  U.S. oz U.S. gal knot MPH Fahrenheit Celsius		cm cm <sup>2</sup>	$\begin{array}{c} \mbox{MULTIPLY BY} \\ 25.4 \\ 2.54 \\ 6.45 \\ 16.39 \\ 0.3 \\ 28.35 \\ 0.45 \\ 4.4 \\ 0.11 \\ 1.36 \\ 12 \\ 6.89 \\ 0.96 \\ 28.41 \\ 1.2 \\ 4.55 \\ 29.57 \\ 3.79 \\ 1.15 \\ 1.61 \\ (^{\circ}F - 32) \div 1.8 \\ (^{\circ}C \times 1.8) + 32 \\ .75 \end{array}$	

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

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

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

BOMBARDIER RECREATIONAL PRODUCTS



# F DECLARATION OF CONFORMITY

Application of Council Directives:

Standards to which conformity is declared:

Manufacturer's name:

Manufacturer's address:

Importer's name:

Importer's address:

Notified body for Directive 94/25/CE:

Competent body for Directive 89/336/CEE:

Type of equipment:

Model names:

94/25/CE — Recreational craft

89/336/CEE — Electromagnetic compatibility

ISO 7840, ISO 8469, ISO 8665, ISO 8846, ISO 8848, ISO 8849, ISO 9094, ISO 9097, ISO 10087, ISO 10088, ISO 10133, ISO 10240, ISO 11105, ISO 11591, ISO 11592, ISO 12215, ISO 12216, ISO 13592, COLREGS, ABYC H-5, ABYC H-8

Bombardier Motor Corporation of America.

451 E. Illinois Ave Benton, Illinois 62812-0394

Société ANF — Industrie S.A.

2. rue du Nouveau Bercv 94220 Charenton Paris France

International Marine Certification Institute Trèves centre, rue de Trèves 45 1040 Brussels, Belgium

UTAC Autodrome de Linas-Montlhéry, B.P. 212 91311 Montlhéry cedex, France

Sport boats, inshore category C

Model name

Model number(s)

I, the undersigned, hereby declare that the equipment specified above conforms to the above Directives and Standards.

Name of signatory:

Fernando Garcia

Title of signatory on behalf of Bombardier Motor Corporation of America: Director - Public and Regulatory Affairs —

Sea-Doo sport boats

## **Homologation and Certification**

These boats comply with the following standards:

STANDARD	TYPE OF CERTIFICATION
United States Coast Guard	Self certification
Canadian Coast Guard	Self certification
Russian Maritime Register of Shipping	Certify by Russian Maritime Register of Shipping 8, Dvortsovaya Nab., 191186 St. Petersburg, Russia
Directive 89/336/CEE of the council relating to electromagnetic compatibility	Internal production control plus control carried out on the responsability of a competent body. Competent body: UTAC Autodrome de Linas-Montlhéry, B.P. 212 91311 Montlhéry cedex, France
Directive 94/25/EC of the European Parliament and of the council relating to recreational craft	Internal production control plus control carried out on the responsability of a notified body: International Marine Certification Institute Trèves centre, rue de Trèves 45 1040 Brussels, Belgium

### **Operator's Guide Confirmation of Receipt**

Your dealer		
Name:		
Address:		

Will assist you and help you to resolve any problems you may have.

Upon delivery of your sport boat, complete and sign the form hereunder and forward it to your dealer in order to be covered by our warranty.

Warranty conditions are as detailed in the Warranty Section of this guide.

Receipt	
Name:	
Address:	
Owner of	Sport Boat model No
HIN (to be completed by customer or selling dealer)	
This warranty begins	(date).
safety features and warranty policy, all of with. I am also satisfied with the predeliver	structed me on the operation, maintenance, which I understand and agree to be bound y set-up and inspection of my Sea-Doo sport <i>berator's Guide, Safety Handbook and Safety</i>
Signature:	

Cut here

# **PRIVACY INFORMATION**

We wish to inform you that your coordinates will be used for safety and warranty purposes. Sometimes, we also use the coordinates of our clients to inform them about our products and to present them offers. Should you prefer not to receive information on our products, services and offers, please let us know by writing to the address below.

Also note that, from time to time, carefully selected and trustworthy organizations may be permitted to use the coordinates of our clients to promote quality products and services. If you prefer not to have your name and address released, please let us know by writing to the address below:

Bombardier Inc. Recreational Products Warranty Department 75 J.A. Bombardier Street Sherbrooke, Quebec J1L 1W3 Canada

Fax Number (819) 566-3590

# **CHANGE OF ADDRESS**

If your address 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 craft becomes necessary.

NOTE: This card is strictly for change of address only.

### CHANGE OF ADDRESS

r — — — — — —			
CHANGE OF ADDRESS 🔲			
	ERS	Hull Identification Number (H.I.N.	
OLD ADDRESS:		NAME	
I 	NO.	STREET	APT
	CITY	STATE/PROVINCE	ZIP/POSTAL CODE
NEW ADDRESS:		NAME	
·   	NO.	STREET	APT
I 	CITY	STATE/PROVINCE	ZIP/POSTAL CODE

#### STOLEN UNITS

In the event that your craft is stolen, you should notify your area's distributor warranty department of such.

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 authorized Sea-Doo dealers on a monthly basis to aid in recovery of such units to their owners.

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#### AFFIX PROPER POSTAGE

### **BOMBARDIER** RECREATIONAL PRODUCTS

2

WARRANTY DEPARTMENT 75, J.A. BOMBARDIER ST. SHERBROOKE (QUEBEC) CANADA J1L 1W3

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	CITY	STATE/PROVINCE	ZIP/POSTAL CODE
NEW ADDRESS:		NAME	
·   	NO.	STREET	APT
I 	CITY	STATE/PROVINCE	ZIP/POSTAL CODE

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#### AFFIX PROPER POSTAGE

### **BOMBARDIER** RECREATIONAL PRODUCTS

2

WARRANTY DEPARTMENT 75, J.A. BOMBARDIER ST. SHERBROOKE (QUEBEC) CANADA J1L 1W3

SPORT B	SPORT BOAT MODEL No.						
<b>HULL</b> IDENTIFI	HULL IDENTIFICATION NUMBER (H.I.N.)						
	Y OR ROTA CATION NU						
Owner:			NAM				
	No.		STREE	T		APT	
	CITY STATE/PROVINCE ZIP/POSTAL CO					ZIP/POSTAL CODE	
Purchase	Purchase Date YEAR MONTH DAY						
Warranty Expiry Date							
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 craft has been registered with Bombardier.

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