

SEA-DOO®

Sport Boats



OPERATOR'S GUIDE

2000

219 000 109

**CHALLENGER
SPORTSTER**

SAFETY WARNING

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

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

BOMBARDIER
Recreational Products
After-Sales Service
Valcourt (Quebec)
Canada J0E 2L0



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Bombardier Inc.:**

SEA-DOO®
Bombardier Lube®
Sea-Doo Jet Pump Synthetic Oil
Sea-Doo Synthetic Grease

Doin'it on your new Sea-Doo sport boat

Congratulations, you are now the proud owner of a 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 *Safety Videocassette* provided with your sport boat, to read this *Operator's Guide* and *Safety Handbook* and familiarize yourself with their contents. The guide contains pertinent information which, if followed, will provide you with the necessary knowledge to help you fully enjoy the pleasures of this boat.

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

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

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

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

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

Have fun and.....Bon Voyage.

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

TABLE OF CONTENTS

FOREWORD	5
SAFETY WARNING	7
BOMBARDIER LIMITED WARRANTY NORTH AMERICA: 2000 SEA-DOO® SPORT BOAT	10
BOMBARDIER INTERNATIONAL LIMITED WARRANTY: 2000 SEA-DOO® SPORT BOAT	12
LIST OF DISTRIBUTORS	14
REGISTRATION NUMBER LOCATION	15
LOCATION OF THE IMPORTANT LABELS	16
IDENTIFICATION NUMBERS	18
Hull	18
Engines	18
CONTROLS AND COMPONENTS LOCATION	19
Cockpit	19
Overview	20
1) Safety Lanyard Post	21
2) Steering Wheel	23
3) Throttle Lever(s)	23
4) Shift Lever	23
5) Start/Stop Button(s)	24
6) Choke Lever(s)	25
7) Navigation Light Switch	25
8) Bilge Pump Switch	26
9) Bilge Air Blower Switch	26
10) Fuel Gauge/Low Injection Oil Level Pilot Lamp	26
11) Tachometers	27
12) Speedometer	27
13) Bilge Drain Plug	27
14) Grab Handles	28
15) Rear Grab Handles	28
16) Swim Platform	28
17) Seats	28
18) Bow Seat	28
19) Cup Holders	28
20) Front Storage Compartment	29
21) Deck Storage Compartment	30
22) Rear Storage Compartment	30
23) Jet Pump Water Intake(s)	31
24) Tow Hook	32
25) Bow Light	32

26) Removable Stern Light	32
27) Mooring Cleats.....	33
28) Deck.....	33
29) Fuel Tank Cap	33
30) Deck Drain Hole	33
31) Oil Injection Tank Cap	34
32) Flushing Connectors	34
33) Ventilation Ducts.....	34
34) Bow/Stern Eyelets	34
35) Jet Pump Nozzle(s)	34
36) Reverse Gate(s)	34
37) Scupper Valve	35
38) Weedless System Lever.....	35
39) Fuel Tank Vent	36
40) Ski Post.....	36
41) Fuel Tank Valve(s)	37
42) Cooling System Bleed Outlet(s).....	38
43) Main Battery Cut-Off Switch.....	38
Fuses.....	38
FUEL AND LUBRICATION	39
Fueling Procedure	39
Recommended Fuel	39
Recommended Oil	39
Oil Injection System	39
BREAK-IN PERIOD	41
Engine(s).....	41
10-Hour Inspection	41
PRE-OPERATION CHECKS	43
Hull	44
Jet Pump Water Intake(s).....	44
Bilge	44
Battery.....	44
Fuel/Oil Reservoirs	44
Engine Compartment	44
Fire Extinguisher.....	44
Steering System.....	44
Throttle System.....	44
Shifter System.....	44
Weedless System	45
Safety Lanyard and Engine Start/Stop Button(s)	45
Storage Compartment Covers.....	45
OPERATING INSTRUCTIONS	46
Principle of Operation.....	46
Boarding from a Dock or in Shallow Water	47

Starting the Engine(s)	47
Obstacles.....	49
Boarding in Deep Water	49
Rough Water or Poor Visibility Operation	50
Crossing Waves.....	50
Stopping/Docking	50
Beaching.....	50
POST-OPERATION CARE	51
General Care	51
Additional Care for Foul Water or Salt Water	51
SPECIAL PROCEDURE.....	55
Engine Overheating	55
Jet Pump Water Intake and Impeller Cleaning	55
Capsized Boat.....	55
Submerged Boat.....	56
Towing the Boat in Water.....	56
Low-Charge Battery Condition	57
MAINTENANCE	58
Lubrication	58
Periodic Inspection	60
Periodic Inspection Chart.....	61
Throttle and Choke Cables	62
Fuel and Oil Filters.....	62
Steering/Jet Pump Nozzle Adjustment.....	62
Reverse Gate(s)	62
Drain Hole.....	63
Fuses	63
Bilge Air Blower	65
Navigation Light Bulb Replacement	65
General Inspection and Cleaning	67
TRANSPORTATION.....	68
STORAGE AND PRE-SEASON PREPARATION	70
Storage	70
Pre-Season Preparation	74
TROUBLESHOOTING	76
SPECIFICATIONS.....	79
SI METRIC INFORMATION GUIDE.....	81
DECLARATION CE OF CONFORMITY.....	83
Homologation and Certification	84
Operator's Guide Confirmation of Receipt	85
CHANGE OF ADDRESS.....	87

FOREWORD

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

For any questions pertaining to the warranty and its application, please consult an authorized SEA-DOO sport boat dealer.

This guide uses the following symbols to emphasize particular information.

WARNING

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

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

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

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

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

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

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

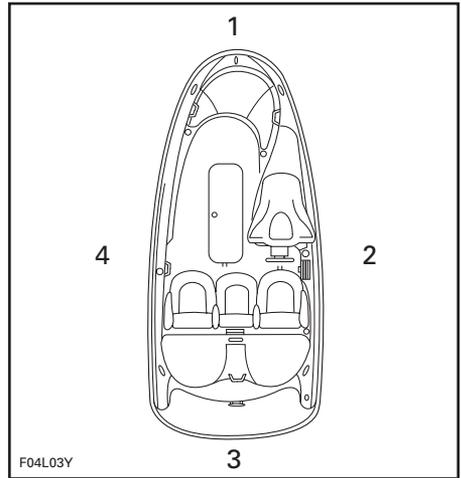
Specifications are given in the SI metric system with the SAE U.S. equivalent in parenthesis. Where precise accuracy is not required, some conversions are rounded off for easier use.

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

WARNING

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

In marine industry, PORT, STARBOARD, BOW and STERN are used to refer to LEFT, RIGHT, FRONT and REAR respectively. They always refer to the operator's position sitting in boat.



TYPICAL

1. BOW (front)
2. STARBOARD (RH)
3. STERN (rear)
4. PORT (LH)

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

SAFETY WARNING

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

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

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

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

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

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

Coast Guard approved personal flotation devices (PFD) should be worn by all aboard.

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

Do not operate the boat after consuming alcohol or drugs.

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

Always perform the pre-operation checks as specified in this guide.

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

Ensure operator all-round visibility is unrestricted.

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

Wave or wake jumping can be dangerous and in many regions illegal.

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

This boat is equipped with navigation lights which should be used between sunset and sunrise. Reduce speed and do not operate the boat in reduced visibility.

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

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

Always have an observer while towing a skier.

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

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

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

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

This boat has the capability of turning more sharply than other boats, however, unless in an emergency, do not negotiate sharp, high speed turns.

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

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

Do not overload the boat, overloading will affect boat performance.

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

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

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

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

Maintain the boat and equipment in top condition at all times. Adhere to the prescribed maintenance schedules.

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

Do not operate the boat in inclement weather.

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

Use of the bilge blower should never replace "smelling" for gasoline fumes. Blower and bilge pump must be turned off during boat operation. Bilge pump will then switch to automatic mode.

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

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

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

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

Make sure that all users of the craft read and are aware of all warnings.

Drive prudently and have fun. All persons must assist other boaters in an emergency.

BOMBARDIER LIMITED WARRANTY NORTH AMERICA: 2000 SEA-DOO® SPORT BOAT

1. WARRANTY COVERAGE PERIOD

In Canada, BOMBARDIER INC. ("Bombardier"), and in the USA, Bombardier on behalf of BOMBARDIER MOTOR CORPORATION OF AMERICA, warrants FROM THE DATE OF DELIVERY TO THE FIRST CONSUMER that each 2000 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 fiberglass 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 unused 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 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 2000 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

- Normal wear and tear items;
- Labor, parts and lubricant costs of all maintenance services;
- Damage caused by failure to provide proper maintenance and/or storage, as described in the "2000 SEA-DOO SPORT BOAT *Operator's Guide*";
- Damage resulting from improper repairs, modifications or use of non-approved parts or repairs done by a non-authorized SEA-DOO SPORT BOAT dealer;
- Damage resulting from abuse, misuse, neglect, racing;
- Damage resulting from accident, fire, theft, vandalism or any act of God;
- Incidental or consequential damages, or damages of any kind such as but not limited to towing charges, telephone calls or taxi;
- Water damages caused by water ingestion;
- Damage related to gel coat finish including but not limited to cosmetic gel coat finish, blisters or fiberglass delamination caused by blisters, crazing, spider or hairline cracks; 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 LIMITATION ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR 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 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, the DISTRIBUTOR's service department should be contacted in order to resolve the matter. In the USA, SEA-DOO products are distributed by B.M.C.A.
- c) If the issue has still not been resolved, please submit in writing your complaint to:

IN CANADA:

BOMBARDIER INC.
RECREATIONAL PRODUCTS
SPORT BOATS
CUSTOMER ASSISTANCE CENTER
VALCOURT QC J0E 2L0
Tel: (450) 532-5000

IN USA:

BOMBARDIER MOTOR
CORPORATION OF AMERICA
RECREATIONAL PRODUCTS
SPORT BOATS
CUSTOMER ASSISTANCE CENTER
P.O. BOX 8035
7575 BOMBARDIER COURT
WAUSAU WI 54402-8035
Tel: (715) 848-4957

MARCH 1999

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BOMBARDIER INTERNATIONAL LIMITED WARRANTY: 2000 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 2000 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 fiberglass 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 unused 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 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 2000 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 distributor of the specific territory and/or BOMBARDIER.

4. EXCLUSIONS — ARE NOT WARRANTED

- Normal wear and tear items;
- Labor, parts and lubricant costs of all maintenance services;
- Damage caused by failure to provide proper maintenance and/or storage, as described in the "2000 SEA-DOO SPORT BOAT *Operator's Guide*";
- Damage resulting from improper repairs, modifications or use of non-approved parts or, repairs done by a non-authorized SEA-DOO SPORT BOAT dealer;
- Damage resulting from abuse, misuse, neglect, racing;
- Damage resulting from accident, fire, theft, vandalism or any act of God;
- Incidental or consequential damages, or damages of any kind such as but not limited to towing charges, telephone calls or taxi;
- Water damages caused by water ingestion;

- Damage 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 MERCHANTABILITY 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 SEA-DOO International Distributor, the 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. A specific 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 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

- 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.
- If further assistance is required, the authorized local SEA-DOO INTERNATIONAL DISTRIBUTOR's Service Department should be contacted in order to resolve the matter.
- If the issue has still not been resolved, please submit in writing your complaint to:

BOMBARDIER RECREATIONAL PRODUCTS
SPORT BOATS
INTERNATIONAL SERVICE DEPARTMENT
VALCOURT QUEBEC J0E 2L0
CANADA

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LIST OF DISTRIBUTORS

CANADA and Continental U.S.A.

U.S.A. (Continental U.S.A. Except Puerto Rico)	BOMBARDIER MOTOR CORPORATION OF AMERICA 7575 BOMBARDIER COURT P.O. BOX 8035 WAUSAU, WI 54402-8035 Phone: (715) 842-8886
CANADA Alberta British Columbia Manitoba North West Territories Ontario Quebec Saskatchewan Yukon New-Brunswick Nova Scotia Prince Edward Island	BOMBARDIER INC. SEA-DOO SERVICE DEPARTMENT 726 ST-JOSEPH VALCOURT, QUEBEC J0E 2L0 Phone: (450) 532-2211
Newfoundland	CHARLES R. BELL P.O. BOX 1050 RIVERSIDE DRIVE CORNER BROOKE, NFLD A2H 6J3 Phone: (709) 634-3533 FAX: (709) 634-2444

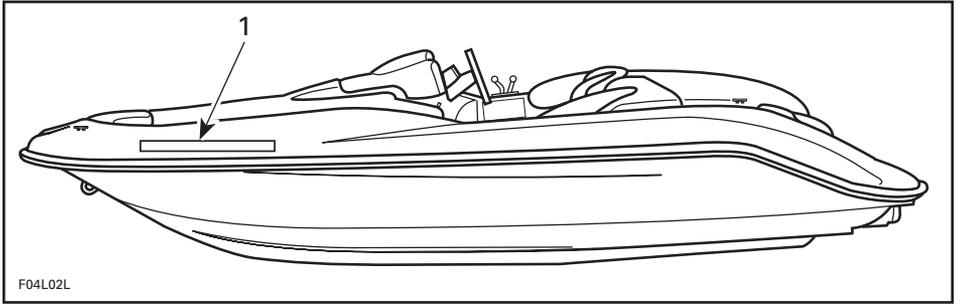
If your SEA-DOO sport boat requires warranty service, you must take it to any authorized SEA-DOO sport boat dealer. Be sure to bring your warranty registration card or other valid proof of the original date of purchase. If a question or problem arises regarding warranty, first contact the service manager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

REGISTRATION NUMBER LOCATION

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

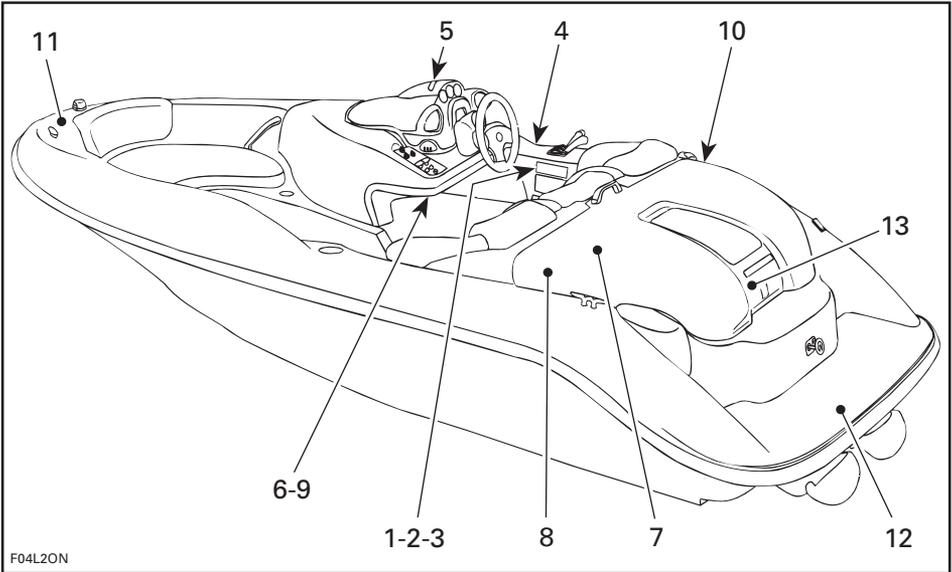


TYPICAL

1. Registration number location

LOCATION OF THE IMPORTANT LABELS

Please read the following labels carefully before operating your boat.



F04L20N

1

◆ WARNING

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

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

F04L8GZ

3

**MAXIMUM ENGINE POWER
CAPACITY RATING
OF THE CRAFT:
63 KW**

F04LA1Y

TYPICAL — REFER TO ACTUAL LABEL ON BOAT

2

MADE IN U.S.A. BOMBARDIER CORPORATION OF AMERICA
U.S. COAST GUARD
MAXIMUM CAPACITIES
4 PERSONS OR 660 LBS.
660 LBS. PERSONS, GEAR
THIS BOAT COMPLIES WITH U.S. AND CANADIAN COAST GUARD
SAFETY STANDARDS IN EFFECT ON THE DATE OF CERTIFICATION
BOAT DESIGN CATEGORY: **C**

F04L8HZ

TYPICAL — REFER TO ACTUAL LABEL ON BOAT

4

◆ WARNING

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

F04L8LZ

5

◆ WARNING

In case of fire do not open engine box (compartment). Shut down engines and blower. Continuously discharge ENTIRE contents of halon or CO₂ portable fire extinguisher through the port (or other provision) immediately.

F04L8KZ

6

▼ WEEDLESS LEVER UNDERNEATH CONSOLE.

◆ WARNING: ACTIVATE WEEDLESS SYSTEM ONLY WHEN ENGINES ARE STOPPED AND BOAT IS STILL.



F04L8JZ

TYPICAL — REFER TO ACTUAL LABEL ON BOAT

7

◆ WARNING

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

F04L8MZ

8

▼ CAUTION

OIL ONLY

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

F04L390

9

◆ WARNING

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

F04L8NZ

10

◆ WARNING

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, verify fuel system.

F04L8OZ

11

◆ WARNING

Do not sit in bow seats above idle speed or rough/choppy water.

F04L8PZ

12

◆ WARNING

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

F04L8QZ

13

Emission Control Information BOMBARDIER RECREATIONAL PRODUCTS

THIS ENGINE IS CERTIFIED TO OPERATE ON UNLEADED GASOLINE AND CONFORMS TO 1999 U.S. EPA REGULATIONS FOR MARINE SI ENGINES.

ENGINE FAMILY: XBCM 58.011 C
 FEL: XXX GM/KV-HR HC + NO,
 ENGINE DISPLACEMENT: 951.2 CC
 EXHAUST EMISSION CONTROL SYSTEM: CARB

TUNE-UP SPECIFICATIONS
 IDLE SPEED: 1500 RPM ± 200
 SPARK PLUG TYPE: NKG-BR8ES
 SPARK PLUG GAP: 0.020 IN.

F00LQJZ

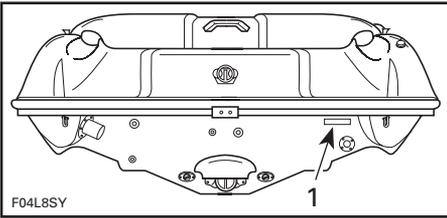
TYPICAL — REFER TO ACTUAL LABEL ON BOAT

IDENTIFICATION NUMBERS

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

Hull

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



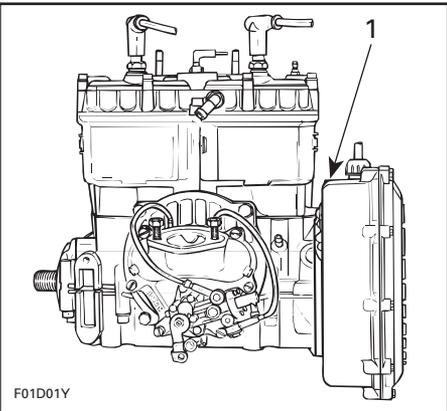
TYPICAL

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

Engines

717 Engine

The Engine Identification Number (E.I.N.) is located on the upper side of the magneto housing.



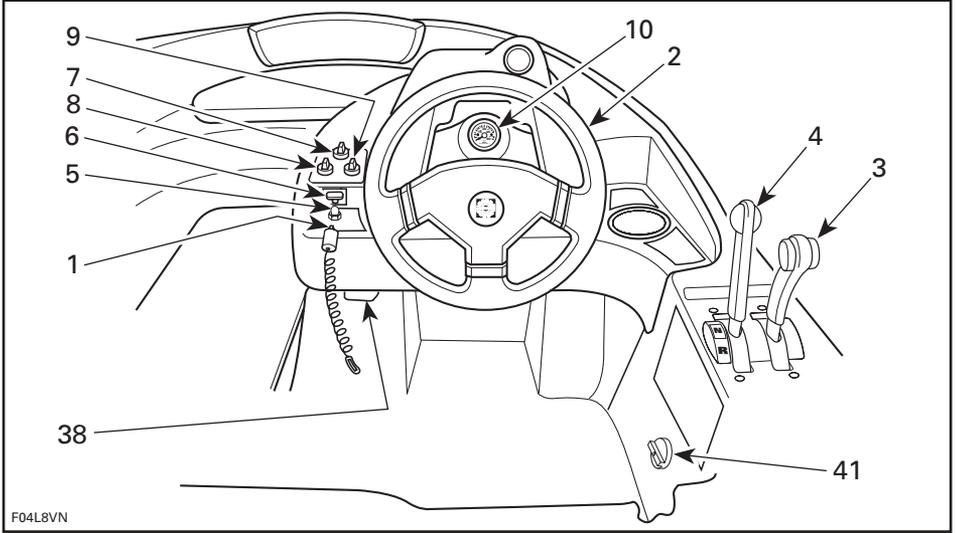
TYPICAL

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

CONTROLS AND COMPONENTS LOCATION

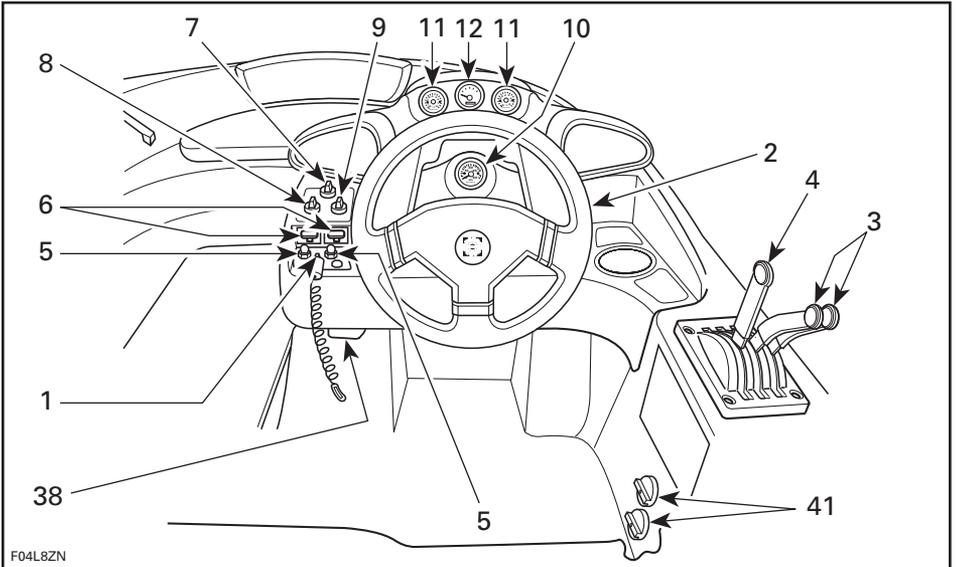
Cockpit

Sportster Model



COCKPIT VIEW

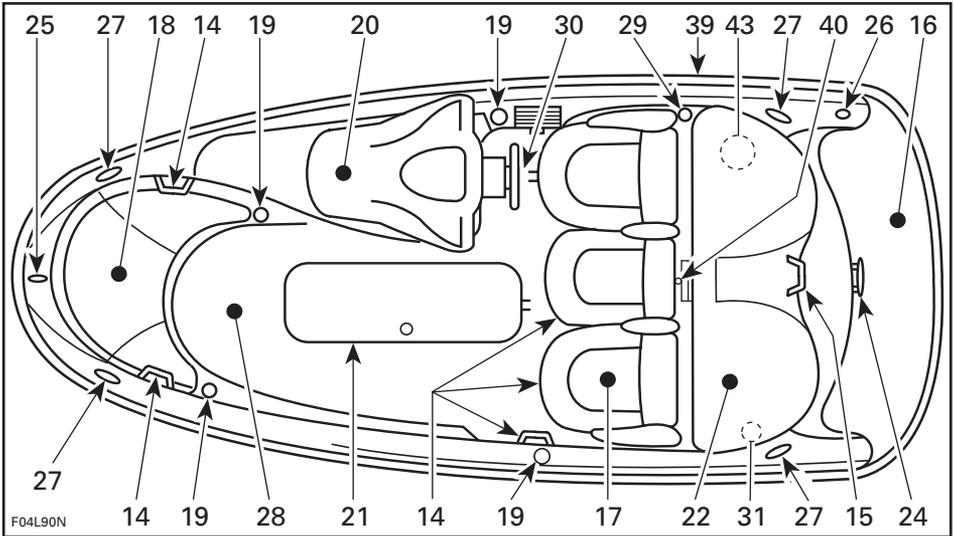
Challenger Model



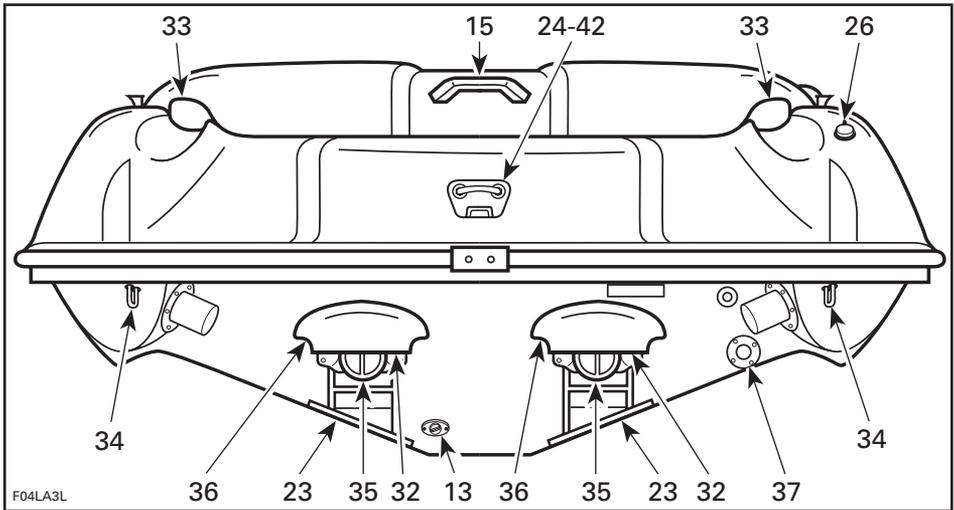
COCKPIT VIEW

Overview

Sportster and Challenger Models



TYPICAL — SPORTSTER TOP VIEW



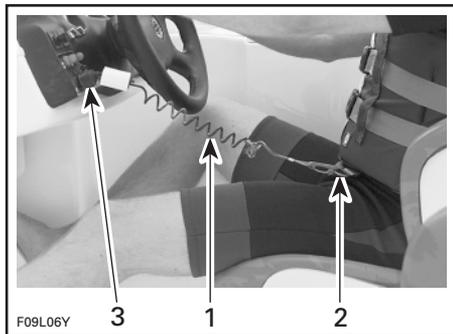
TYPICAL — CHALLENGER REAR VIEW

- | | |
|-------------------------|---|
| 1. Safety Lanyard Post | 7. Navigation Light Switch |
| 2. Steering Wheel | 8. Bilge Pump Switch |
| 3. Throttle Lever(s) | 9. Bilge Air Blower Switch |
| 4. Shift Lever | 10. Fuel Gauge/Low Injection Oil Level Pilot Lamp |
| 5. Start/Stop Button(s) | 11. Tachometers (if so equipped) |
| 6. Choke Lever(s) | |

12. Speedometer
13. Bilge Drain Plug(s)
14. Grab Handles
15. Rear Grab Handles
16. Swim Platform
17. Seats
18. Bow Seat
19. Cup Holders
20. Front Storage Compartment
21. Deck Storage Compartment
22. Rear Storage Compartment
23. Jet Pump Water Intake(s)
24. Tow Hook
25. Bow Light
26. Removable Stern Light
27. Mooring Cleats
28. Deck
29. Fuel Tank Cap
30. Deck Drain Hole
31. Oil Injection Tank Cap
32. Flushing Connectors
33. Ventilation Ducts
34. Bow/Stern Eyelets
35. Jet Pump Nozzle(s)
36. Reverse Gate(s)
37. Scupper Valve
38. Weedless System Lever
39. Fuel Tank Vent
40. Ski Post (if so equipped)
41. Fuel Tank Valve(s)
42. Cooling System Bleed Outlet(s)
43. Main Battery Cut-Off Switch

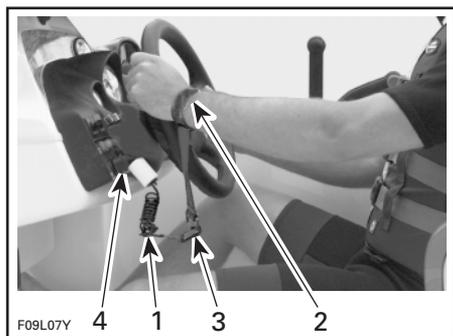
1) Safety Lanyard Post

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



TYPICAL

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



TYPICAL

1. Safety lanyard
2. Wrist band
3. Secure safety lanyard to wrist band
4. Snap to DESS post

WARNING

Should lanyard cap become loose or fail to remain on its post, replace immediately.

WARNING

Do not lubricate the safety lanyard post.

If the engine(s) are stopped with the start/stop button(s) while the safety lanyard remains on the DESS post, it can be restarted within approximately 10 minutes by pressing the start/stop button(s). After this delay, it is necessary to apply slight pressure of the safety lanyard on the DESS post. Two short beeps should sound indicating the system is ready again to allow engine(s) starting.

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

Monitoring System

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

⚠ WARNING
 While the boat engine(s) can be stopped using the start/stop button(s), good driving habits recommend that the safety lanyard also be disconnected when stopping.

NUMBER OF BEEPS	POSSIBLE CAUSE	REMEDY
2 shorts (while installing safety lanyard on DESS post).	<ul style="list-style-type: none"> • Everything is correct with the safety lanyard (good contact and the right lanyard cap). 	<ul style="list-style-type: none"> • Engine(s) can be started normally.
1 long (while installing safety lanyard on DESS post or when pressing start/stop button(s) in some cases).	<ul style="list-style-type: none"> • Bad connection between safety lanyard cap and DESS post. • Wrong safety lanyard. • Dirty safety lanyard cap. • Improper operation of MPEM or defective wiring harness. 	<ul style="list-style-type: none"> • Remove and reinstall the safety lanyard on the DESS post. Two short beeps should be heard which indicate the system is ready again to allow engine(s) starting. • Use the safety lanyard that has been programmed for the boat. If it does not work, refer to an authorized dealer. • Clean. • Refer to an authorized dealer.

Digitally Encoded Security System (DESS)

The safety lanyard cap specifically contains an electronic circuit that gives it a unique electronic serial number.

This safety lanyard can not be used on another boat and conversely, the one from another boat can not be used on your boat.

However, the DESS brings a great flexibility. You can buy additional safety lanyard and have it programmed for your boat. To have additional safety lanyard programmed, refer to an authorized dealer.

2) Steering Wheel

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

WARNING

Check steering and movement of steering nozzle(s) operation before starting.

Low-Speed Steering Control System

Whenever the throttle lever(s) is (are) 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 OPERATING INSTRUCTIONS for more details.

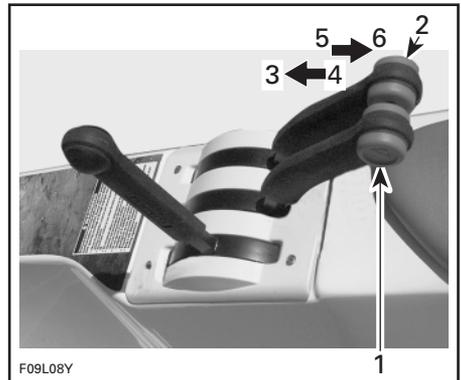
3) Throttle Lever(s)

When pushed forward, the sport boat accelerates. When fully pulled back, engine(s) return to idle speed and the sport boat is gradually stopped by water drag.

NOTE: Do not activate throttle lever(s) unnecessarily. Carburetors are equipped with fuel accelerator pumps. These pumps deliver fuel to the engines each time throttle levers are moved forward.

WARNING

Check throttle lever(s) operation before starting the engine(s).



TYPICAL — THROTTLE LEVERS ON TWIN ENGINE

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

Twin Engine Only

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

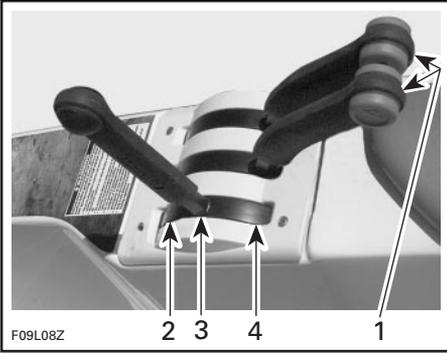
4) Shift Lever

A 3-position lever:

- forward
- neutral
- reverse

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

NOTE: 4 short beeps will signal that shifter is not in neutral (with the safety lanyard on the DESS post while pressing one of the start/stop button). Thereafter, 1 short beep will confirm the neutral position (while shifting).

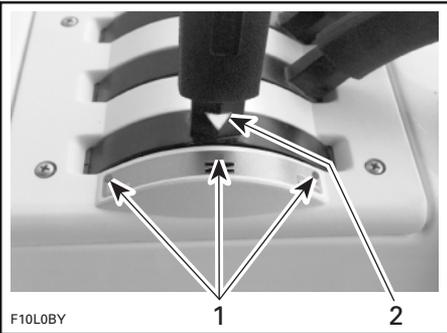


TYPICAL — SHIFT LEVER

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

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

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



TYPICAL

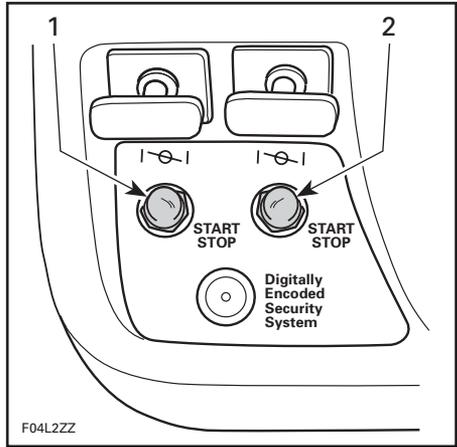
1. Dots besides shifting position
2. Arrow on shifter

⚠ WARNING

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

5) Start/Stop Button(s)

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



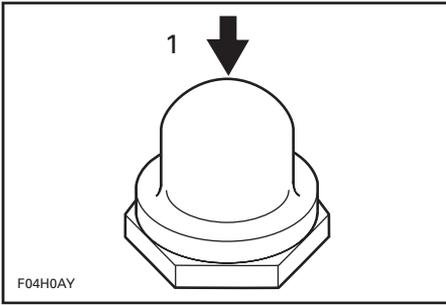
TYPICAL — START/STOP BUTTONS

1. For port engine
2. For starboard engine

Starting

Shifter must be in neutral position and the safety lanyard must be on the DESS post to allow engine(s) starting.

To start engine(s), press and hold each button. Release immediately after engine is started. Proceed the same way for the other engine (if applicable). Only one engine at a time can be started.



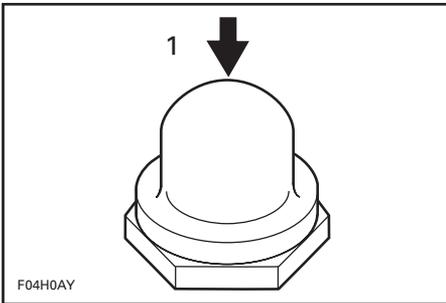
1. Start when engine is NOT running

Stopping

⚠ WARNING

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

Pressing each button when engine is running will stop the engine.



1. STOP when engine IS running

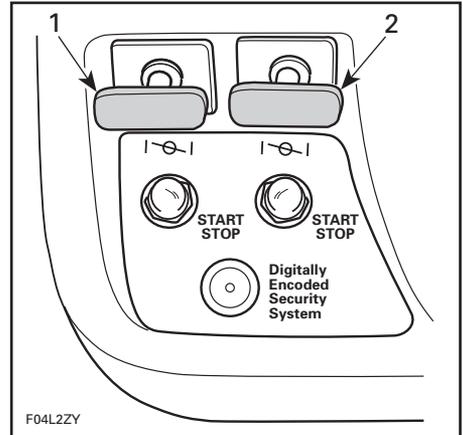
⚠ WARNING

Directional control is not available when engine(s) is (are) stopped.

6) Choke Lever(s)

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

Choke lever(s) must be pulled and held to operate. Lever(s) will automatically return to their normal position when released.



TYPICAL — CHOKE LEVERS

1. For port engine
2. For starboard engine

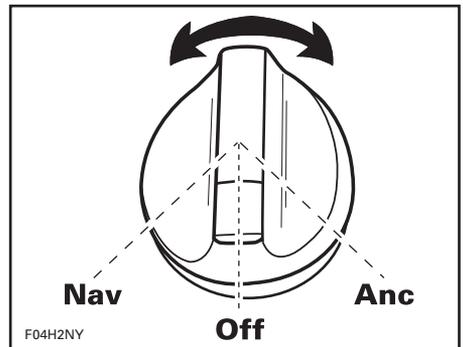
7) Navigation Light Switch

A 3-position NAV/OFF/ANC rotary switch.

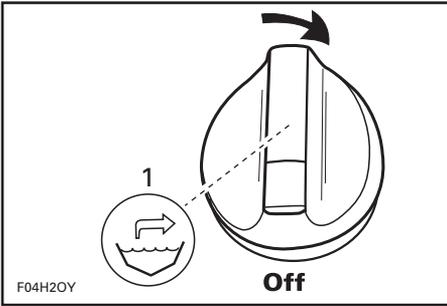
ANC: Turns on the anchorage light when the boat is anchored. Only the stern light is lit.

OFF: Turns off all lights.

NAV: Turns on both bow and stern lights and illuminates the gauge(s).



8) Bilge Pump Switch



1. Bilge

A 2-position OFF/bilge rotary switch.

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

Turn it to OFF when finished.

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

The bilge pump may be operated without the safety lanyard on DESS post.

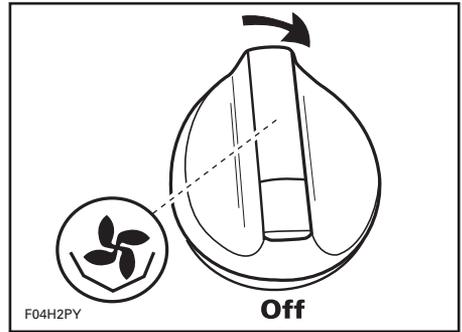
Using the bilge pump for a prolonged time when the engine(s) is (are) not running will discharge the battery.

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

Automatic Bilge Pump

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

9) Bilge Air Blower Switch



A 2-position OFF/blower rotary switch. When turned on, the blower ventilates the engine compartment.

WARNING

Always use blower for a minimum of 5 minutes prior to engine starting then, turn it OFF before operating the sport boat.

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

10) Fuel Gauge/Low Injection Oil Level Pilot Lamp

Fuel Gauge

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

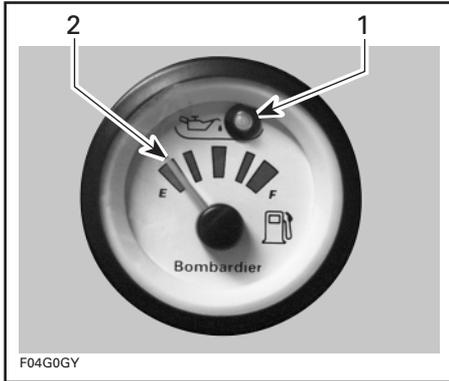
The gauge is illuminated whenever the navigation lights are used.

The fuel level can also be verified without having engine(s) running. With the safety lanyard removed from the DESS post, push a start/stop button; the gauge will be activated for approximately 30 seconds.

Low Injection Oil Level Pilot Lamp

The pilot lamp turns on when the injection oil level is low in oil reservoir. Fill reservoir as soon as possible, if lamp remains ON contact an authorized dealer.

CAUTION: Never run engine(s) out of oil. Serious engine damage will occur.



TYPICAL

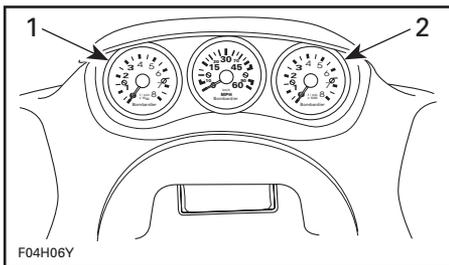
1. Low injection oil level pilot lamp
2. Fuel level

11) Tachometers

Challenger Model

Analog tachometers indicate the revolutions per minute (RPM) of the engines. Multiply reading by 1000 to obtain actual RPM.

The gauges are illuminated whenever the navigation lights are used.



TYPICAL — CHALLENGER SHOWN

1. Port engine tachometer
2. Starboard engine tachometer

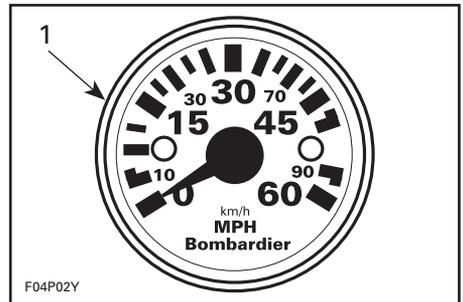
12) Speedometer

Challenger Model

The analog speedometer indicates the speed of the sport boat 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 left ride shoe sends the signal to the speedometer.



TYPICAL — CHALLENGER SHOWN

1. Speedometer

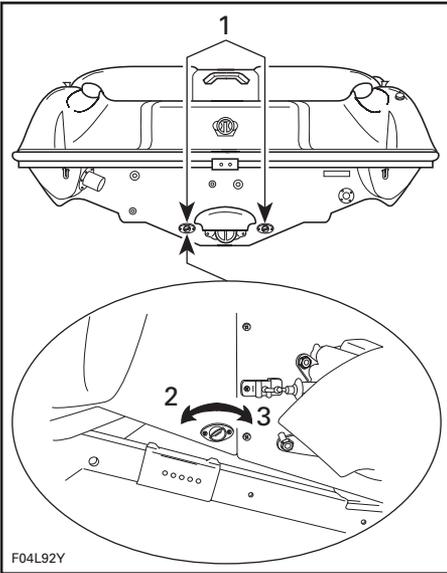
13) Bilge Drain Plug

Should water be left in the bilge, it can be easily drained by unscrewing the plug.

CAUTION: Remove sport boat from water prior unscrewing the drain plug.

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

It is suggested to drain bilge when boat is inclined with stern down.



F04L92Y

TYPICAL

1. Drain plug
2. Loosen
3. Tighten

⚠ WARNING

Always make sure bilge drain plug is properly tightened prior to launching boat.

14) Grab Handles

Provide a handhold for the passengers.

CAUTION: Never use the grab handles to pull anything or to lift the sport boat.

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

15) Rear Grab Handles

Provide a handhold for boarding when needed.

CAUTION: Never use the grab handle to tow anything or to lift the sport boat.

16) Swim Platform

Provides a large anti-skid surface for easy boarding from rear of sport boat.

⚠ WARNING

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

17) Seats

Each passenger should be seated while underway.

⚠ WARNING

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

18) Bow Seat

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

⚠ WARNING

No passenger should use this seat except at low speed in calm water or when the sport boat is stopped.

Boarding Step

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

19) Cup Holders

Convenient locations for non-alcoholic beverages.

⚠ WARNING

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

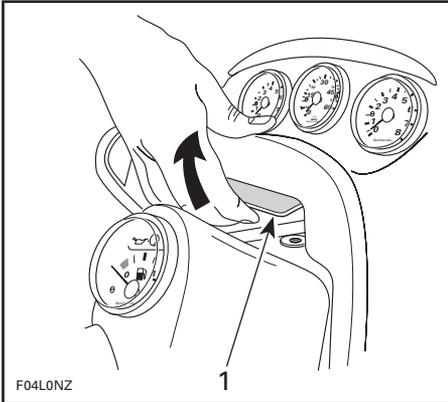
20) Front Storage Compartment

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.

WARNING

Never leave any heavy or loose breakable objects in the storage basket.

Pull the latch lever upward to unlock storage compartment cover. Lift cover until stopped by the retaining device. The cover will hold in this position on calm water.



TYPICAL

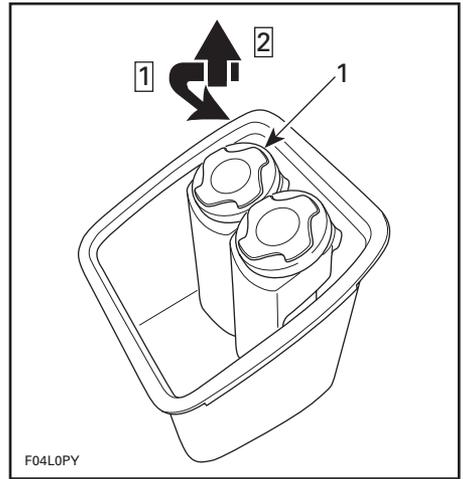
1. Pull latch lever upward

The 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.

A second holder contains the *Operator's Guide* and can be used to carry personal articles.

The *Operator's Guide* should be kept in a waterproof bag and remain with the sport boat at all times.



TYPICAL

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

WARNING

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



TYPICAL — BASKET INSTALLATION

1. Holders toward rear

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

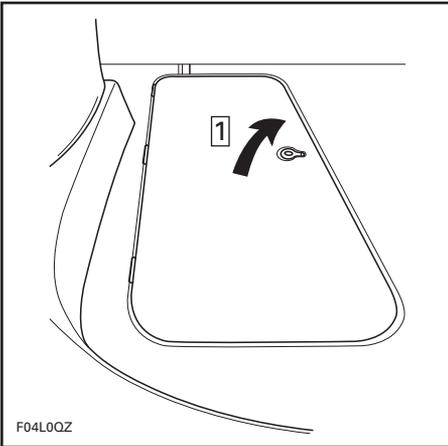
Periodically verify the lock pin tightness of storage cover. Tighten if needed and make sure storage cover latches properly.

⚠ WARNING

Never operate the boat with the storage compartment cover open.

21) Deck Storage Compartment

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



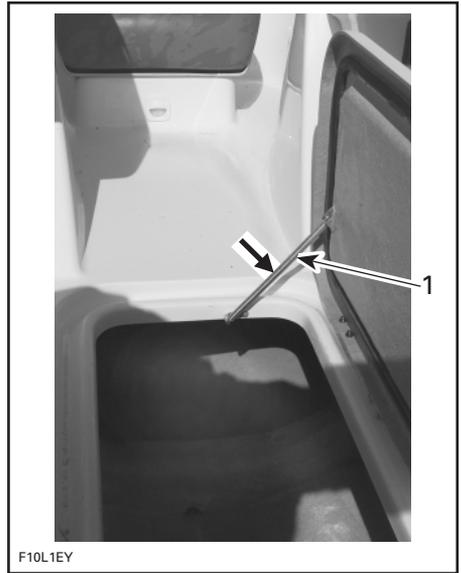
TYPICAL

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.



TYPICAL

1. Gently push here to release the spring

⚠ WARNING

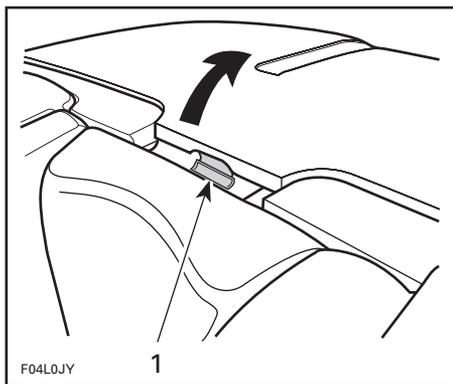
Never operate the boat with the storage compartment cover open.

22) 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.

Pull the latch lever upward and open cover gently until stopped.

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



1. Pull latch lever upward

Storage Tray

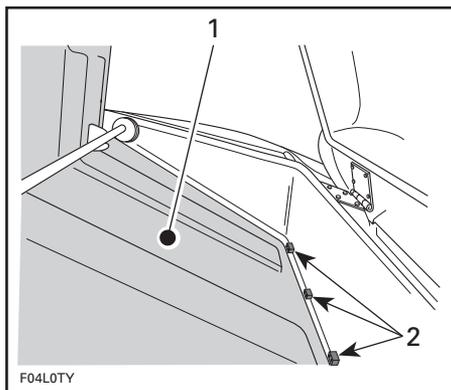
CAUTION: In order to avoid damage, **MAXIMUM LOAD** on storage tray must not exceed 22.5 kg (50 lbs).

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

WARNING

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

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



TYPICAL

1. Rear storage compartment tray
2. Tray under holders

Firmly close storage compartment cover to relatch.

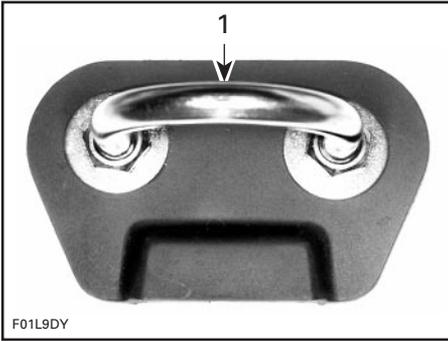
WARNING

Never operate the boat with the rear storage compartment cover open. If the rear storage compartment cover is not correctly latched, damage may occur and you might lose objects resting on tray while transporting boat.

23) Jet Pump Water Intake(s)

The water is drawn up by the impeller(s) through this (these) opening(s). The impeller(s) and the drive shaft(s) is (are) protected by a grate. Refer to OPERATING INSTRUCTIONS section for an overview of the propulsion system.

24) Tow Hook



TYPICAL

1. Tow hook

The hook is provided for your convenience.

25) Bow Light

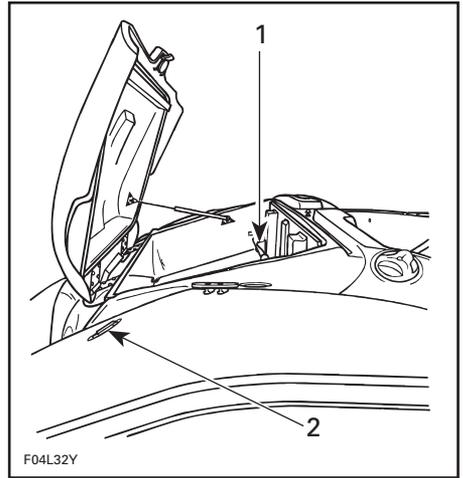
Mandatory red/green light. See **Light Switch** as mentioned earlier in this section.

26) 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 storage cover, pull it out. Snap in place to store again.

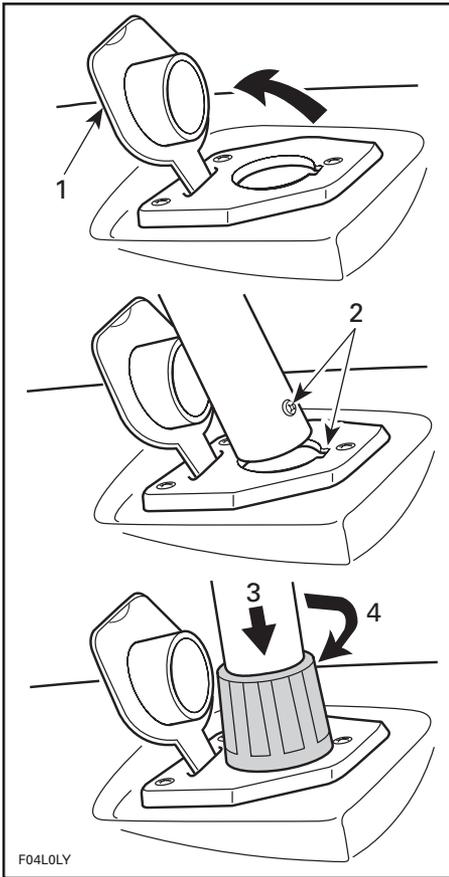


TYPICAL

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 **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.

27) Mooring Cleats

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

CAUTION: Never use mooring cleats to pull anything or to lift the sport boat.

28) Deck

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

29) Fuel Tank Cap



1. Fuel tank cap

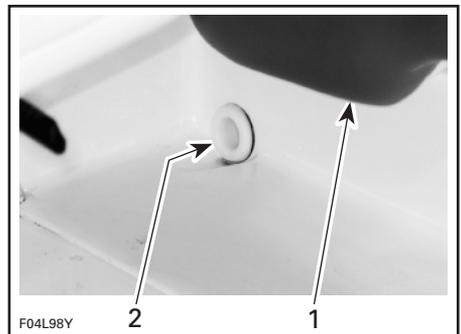
Unscrew the cap counterclockwise to allow fuel tank filling. Fully tighten when finished.

⚠ WARNING

Never use a lit match or open flame to check fuel level. Refer to FUEL AND LUBRICATION for fuel specification.

30) Deck Drain Hole

It provides drainage of water from rain, deck washing, water splashing, etc. Keep clean to avoid clogging.

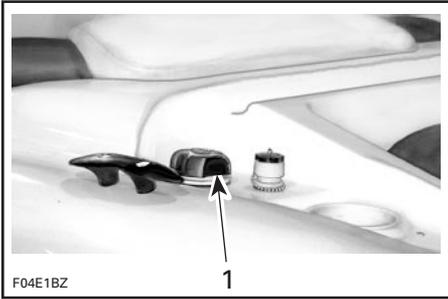


TYPICAL

1. Driver's seat
2. Deck drain hole

31) Oil Injection Tank Cap

The cap is located under the rear storage compartment cover on port side.



1. Oil injection tank cap

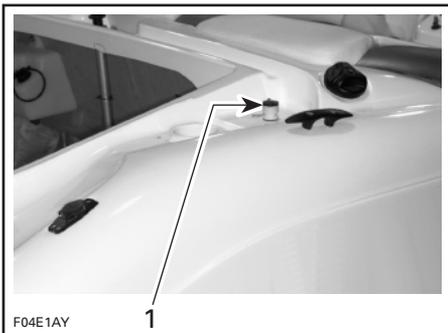
Unscrew cap by turning counterclockwise and firmly tighten by turning clockwise. Close cover. Refer to FUEL AND LUBRICATION for injection oil specification.

32) Flushing Connectors

Refer to POST-OPERATION CARE section for proper use.

NOTE: Each engine is provided with a flushing connector onto jet pump support (transom on Sportster model). Port connector is for port engine and starboard connector is for starboard engine.

For your convenience, there are additional flushing connectors under the rear storage compartment cover. Lift cover, the flushing connectors are on each side of the storage compartment.



1. Flushing connector with its cap

You may use the flushing connectors at the location that you find more practical.

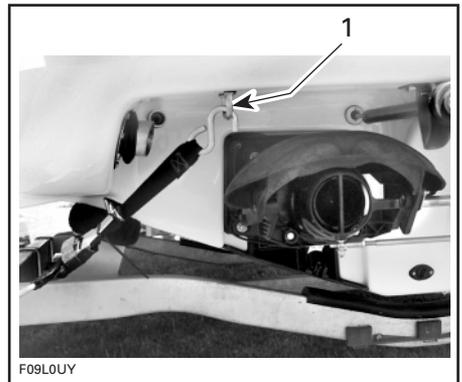
NOTE: When using upper flushing connectors, hose pincher(s) must be installed in engine compartment. This will avoid water from going out directly by the flushing connector on the jet pump. Refer to POST-OPERATION CARE section.

33) Ventilation Ducts

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

34) Bow/Stern Eyelets

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



TYPICAL

1. Stern eyelet

35) Jet Pump Nozzle(s)

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

36) Reverse Gate(s)

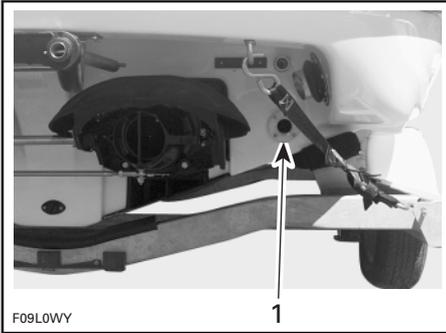
Moves from upward to downward position to get Forward, Neutral, Reverse and inversely. These positions are obtained by moving shift lever.

⚠ WARNING

Do not reverse while at speed.

37) Scupper Valve

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



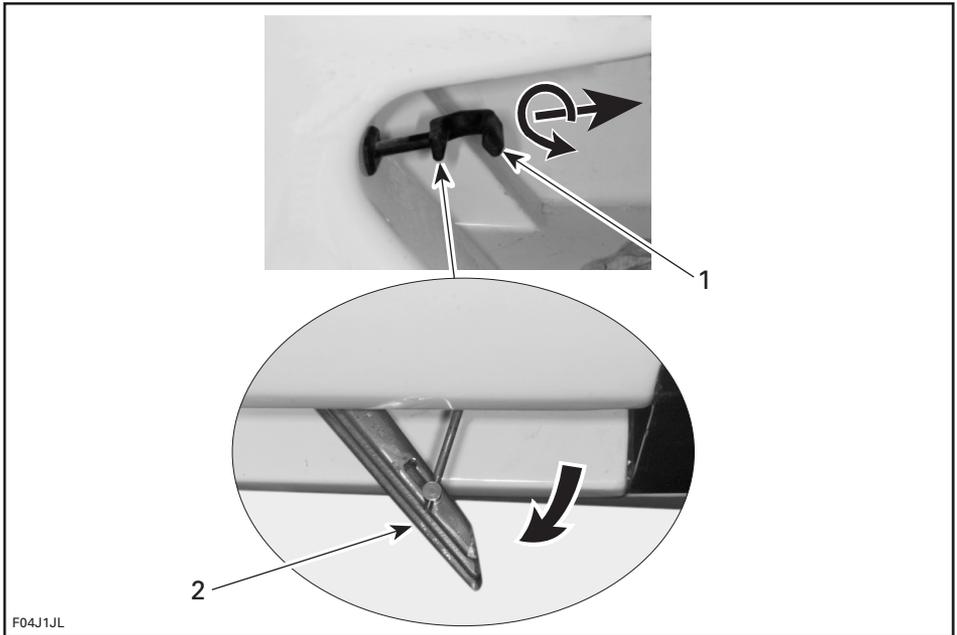
TYPICAL

1. Scupper valve

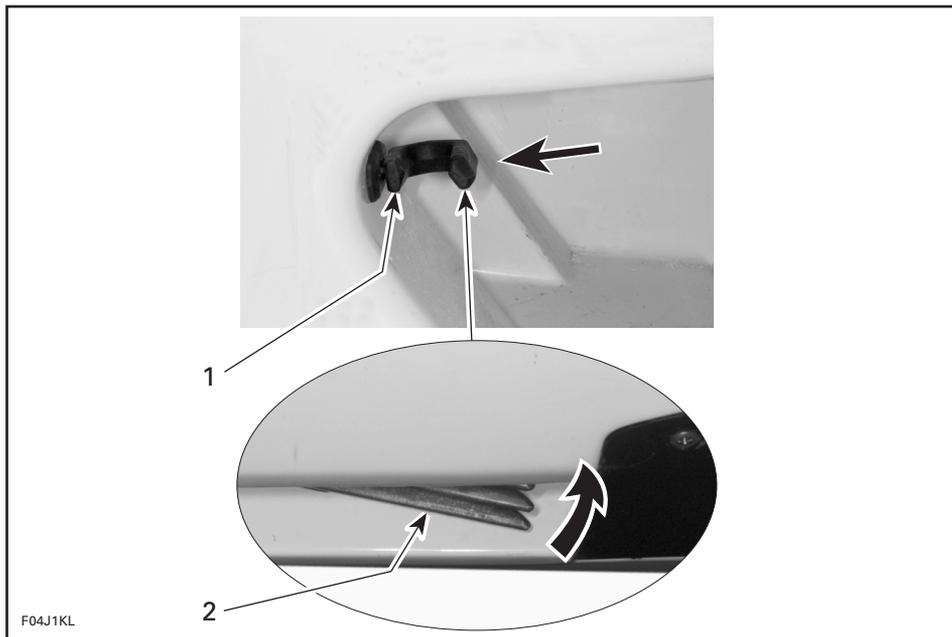
38) Weedless System Lever

Stop engine(s) prior to using the lever. Turn the lever counterclockwise and pull to lower the water intake grate(s). This should clean the water intake grate(s) of any weeds. Completely push lever in when finished. Refer to SPECIAL PROCEDURE section for details.

CAUTION: Loading/launching the boat on/from the trailer or operating the sport boat with the water intake grate in lower position will cause damage to the weedless system and possibly to the fiberglass hull.

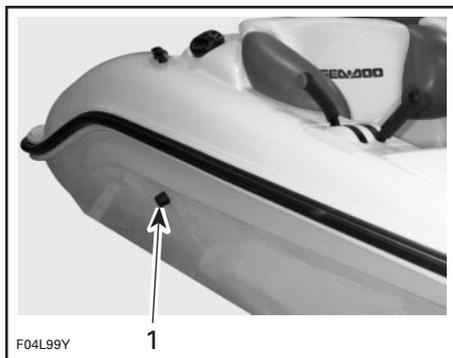


1. Turn lever counterclockwise then pull
2. Water intake grate lowered to release weeds



1. Push lever
2. Position of water intake grate while riding on water and loading/launching on/from trailer

39) Fuel Tank Vent



1. Fuel tank vent

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

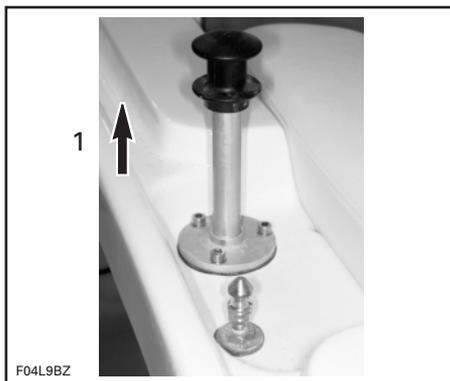
⚠ WARNING

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

40) Ski Post

Challenger Model

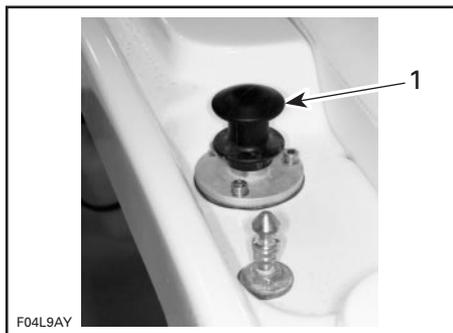
Pull up the post to allow hooking a ski rope.



TYPICAL

1. Lift ski post to use

Push down when finished.



TYPICAL

1. Ski post position when not used

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

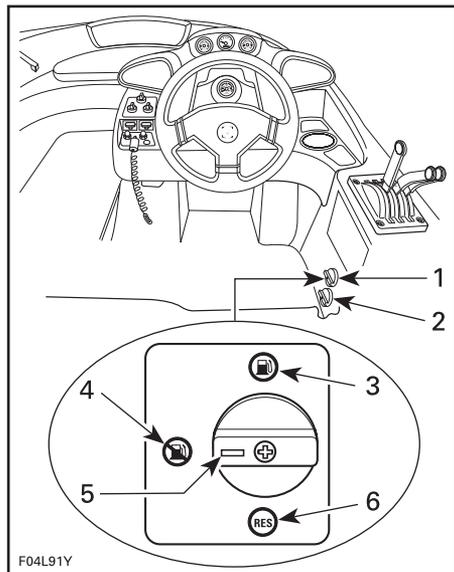
CAUTION: Never use the ski post to tow other boats.

WARNING

Use caution with skier in tow as tow rope may backlash into deck when released. Never perform a sharp turn when towing a skier or any water toy.

41) Fuel Tank Valve(s)

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



TYPICAL — CHALLENGER SHOWN

1. Valve for starboard engine
2. Valve for port engine
3. ON
4. OFF
5. Turn to align notch with desired position
6. RESERVE

OFF: Stops fuel supply to carburetors.

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

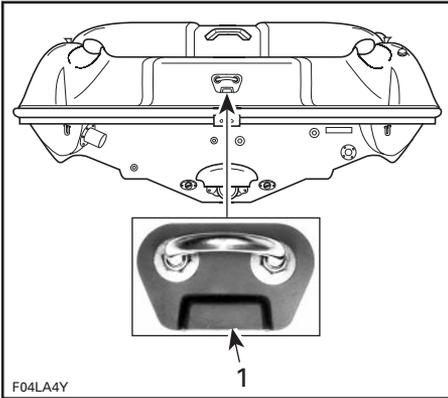
ON: Allows fuel to flow to carburetors. This is the normal position for operation of the sport boat.

RES (RESERVE): When fuel is exhausted in the fuel tank when in the ON position, an emergency supply of fuel is available by turning the knob to RES. The reserve contains approximately 10% of the fuel tank capacity.

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

42) Cooling System Bleed Outlet(s)

When engine(s) is (are) running, water must flow through this (these) hole(s). This allows air in engine water jacket to escape.



TYPICAL

1. Bleed outlet

On Challenger model, start one engine and check water flow at bleed outlet. Stop engine then start the other one and check water flow. If everything is correct, restart the first engine.

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

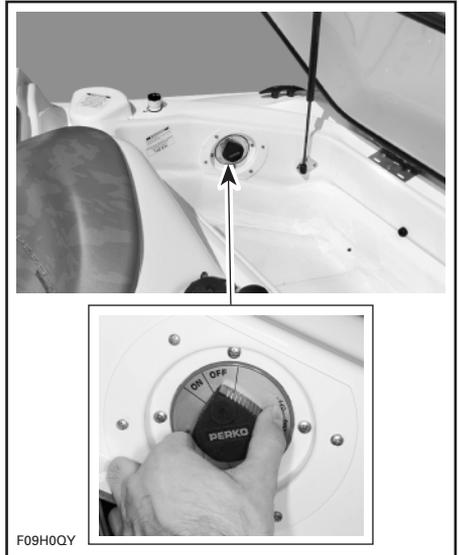
43) Main Battery Cut-Off Switch

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 equipment and electronics will be OFF.

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

CAUTION: Stop engine(s) before switching to OFF.



TYPICAL — 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, when transportation or during short term storage.

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

Fuses

The electrical system is protected with fuses. Refer to MAINTENANCE section for details.

FUEL AND LUBRICATION

Fueling Procedure

WARNING

Follow these safe boating fueling instructions explicitly.

Turn off engine(s).

Tie sport boat 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.

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

Disembark all people.

Do not smoke or allow open flames in the vicinity.

Have a fire extinguisher close at hand.

Do not insert the spout too far in filler neck.

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

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

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

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

Recommended Fuel

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

Do not mix oil with fuel except at engine break-in. Refer to BREAK-IN PERIOD section. Always check oil injection reservoir level when refueling.

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

CAUTION: The use of a fuel other than regular unleaded fuel can result in sport boat performance deterioration and damage to fuel system and engine components. Never experiment with other fuels or fuel ratios. Never use fuel containing alcohol, methanol or similar products including naphtha.

Recommended Oil

Use only BOMBARDIER-ROTAX injection oil.

The oil is available from authorized dealers. It is a blend of specially selected base oils and additives which provides outstanding lubrication, engine cleanliness and minimum spark plug fouling.

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

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

Oil Injection System

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

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

NOTE: Always carry a spare 1 liter of BOMBARDIER-ROTAX injection oil.

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

BREAK-IN PERIOD

Engine(s)

With BOMBARDIER-ROTAX® sport boat engine(s), a **break-in period is required** before operating the engine(s) at full throttle. We recommend about 10 operating hours.

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

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

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

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

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

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

10-Hour Inspection

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

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

10-HOUR INSPECTION CHECK LIST	✓
Engine ignition timing if required	
Spark plug inspection, cleaning and adjustment	
Fuel system lines and fasteners/pressurization test	
Carburetor adjustment including throttle/choke cables if required	
Oil lines and filter	
Oil injection pump adjustment if required	
Engine support and engine rubber mounts	
Muffler, battery and reservoir fastening devices	
Exhaust system hose clamps torque	
Carburetor flange screws and flame arrester support	
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 lever tension as necessary	
Hose condition and fasteners	
Bilge pump and bilge blower	
DESS system and start/stop buttons operation	
Monitoring beeper	
Electrical connections (starter, battery, etc.)	
Lighting system inspection	
Impeller shaft reservoir oil replacement	
Torque jet pump retaining nuts	
Impeller condition, impeller/wear ring clearance	
PTO flywheel lubrication	
Water intake grates/weedless system/hull condition	
Inspection of fasteners for tightness	
Inspect/clean engine drain tube	

NOTE: Inspection applies for both engine systems where applicable.

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

Date of 10-hour inspection

Authorized dealer signature

Dealer code

PRE-OPERATION CHECKS

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

WARNING

Except otherwise specified, safety lanyard must always be removed from DESS post prior to verify any of the following.

SUMMARY

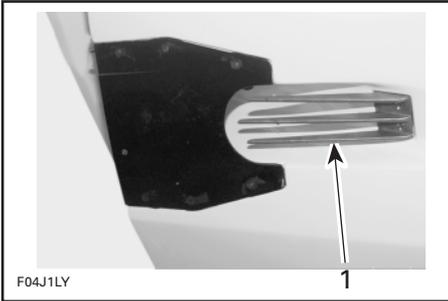
ITEM	OPERATION	✓
Hull	Inspect.	
Jet pump water intakes	Inspect/clean.	
Bilge	Drain. Ensure plug is secured.	
Battery	Inspect tightness of cables and retaining straps.	
Main battery cut-off switch	Ensure it is in the ON position.	
Navigation lights	Check operation.	
Fuel/oil reservoirs	Refill.	
Engine compartment	Verify fuel/oil system components.	
Fire extinguisher	Inspect condition/mounting.	
Steering	Check operation.	
Throttle/shifter system	Check operation.	
Weedless system	Ensure it is not activated.	
Bilge blower and bilge pump	Check operation.	
Safety lanyard/engine start/stop buttons	Check operation.	
Mandatory safety boating equipment	Check operation.	
Storage compartment covers	Ensure they are closed and latched.	

Hull

Inspect hull for cracks or damage.

Jet Pump Water Intake(s)

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 dealer for servicing.



TYPICAL

1. Inspect this area

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, turn on pump switch to completely empty the bilge.

Battery

Verify tightness of battery cables.

Fuel/Oil Reservoirs

With the sport boat horizontal, fill the fuel tank.

Check the oil level and refill reservoir as necessary.

Engine Compartment

Check condition of fuel/oil system components.

WARNING

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

Fire Extinguisher

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

Steering System

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

Throttle System

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

NOTE: Do not activate throttle lever(s) unnecessarily. Carburetors are equipped with fuel accelerator pumps. These pumps deliver fuel to the engine(s) each time throttle lever(s) is (are) moved forward.

Shifter System

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

Weedless System

Ensure lever is fully pushed in.

Safety Lanyard and Engine Start/Stop Button(s)

Ensure that switch(es) operate properly. On twin-engine models, start engines and stop them using each switch individually.

WARNING

If engine does not shut-off when pushing engine start/stop button or by disconnecting the safety lanyard, stop the engine by applying the choke. Do not operate the sport boat further, see an authorized dealer. Only start the sport boat once all items have been checked and operate properly.

Storage Compartment Covers

Ensure they are closed and latched.

OPERATING INSTRUCTIONS

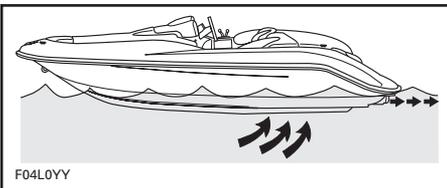
WARNING

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

Principle of Operation Propulsion

Each 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 sport boat. Then, the water flows through the impeller to a venturi. The venturi accelerates the water and produces thrust to move the sport boat. Pushing the throttle lever(s) forward increase engine speed and therefore sport boat speed.

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



TYPICAL

WARNING

Whenever an engine is to be started, the operator and passengers should always be sitting in the sport boat with the shifter lever in neutral position and throttle levers in idle position.

Turning

Turning the steering pivots the jet pump nozzle(s) which control the sport boat direction. Turning the steering clockwise will turn the sport boat to the right and inversely.



TYPICAL

Above idle speed, the throttle(s) must be applied to turn the sport boat.

WARNING

Less directional control is available when the throttle(s) is (are) pulled back. Throttle(s) must be engaged and steering turned to change the direction of the sport boat at speed. Steering efficiency will differ depending on the number of passengers, load and water conditions.

The more the throttle(s) is (are) applied while turning the steering, the more responsive the boat will be.

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

Turning when Using the Reverse

The sport boat behaves differently when using the reverse. The steering response is the opposite of forward operation. So, turning the steering clockwise will turn the sport boat to the left and inversely. Use throttle moderately. Too much RPM will create water turbulence and reduce reverse efficiency. At first outing, carefully practice this maneuver away from anything you might collide.

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 aids steering control for low-speed navigation or when approaching/leaving a dock. For docking tips, refer to **Stopping/Docking** section below.

NOTE: On twin-engine models, each engine must be running so that the low-speed control properly works.

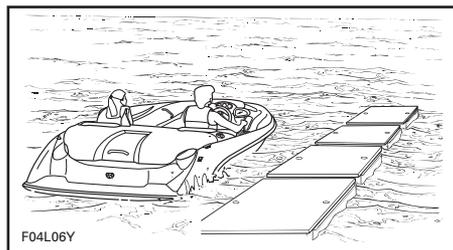
WARNING

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

Boarding from a Dock or in Shallow Water

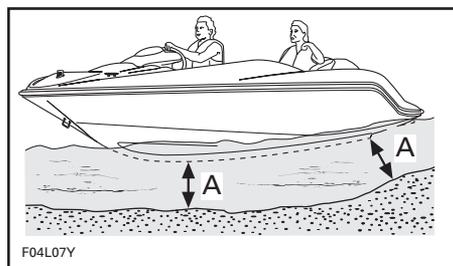
As with any boat, boarding should be done carefully and engine(s) must not be running.

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



TYPICAL

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



TYPICAL

A. 90 cm (3 ft)

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

Starting the Engine(s)

WARNING

Before starting, the operator and passengers should always be sitting in the sport boat with the shifter lever in neutral position and throttle lever(s) in idle position.

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

⚠ WARNING

Bilge blower must be turned off during sport boat operation.

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

⚠ WARNING

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

Attach the safety lanyard to your PFD or to your wrist using an appropriate wrist-band and snap the cap to the DESS post.

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

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

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

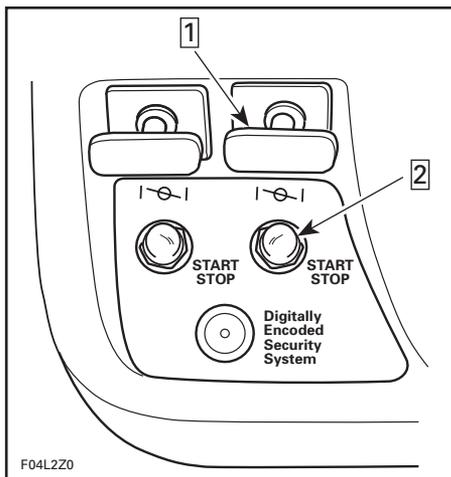
Cold Engine

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

First Engine

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

NOTE: Either engine can be started first.



TYPICAL

Step **1**: Fully pull and hold choke lever

Step **2**: Press the start/stop button

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

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

CAUTION: To avoid starter motor overheating, the cranking period should not exceed 5-10 seconds and a rest period of 30 seconds should be observed between cranking cycles to let the starter cool down and its mechanism disengage.

NOTE: In an emergency, the sport boat may be operated with one engine. Refer to SPECIAL PROCEDURE section.

Challenger Model

Second Engine

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

Both Models

Leaving the Shore

With throttle lever(s) at idle, move shifter to Forward.

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

WARNING

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

Warm Engine(s)

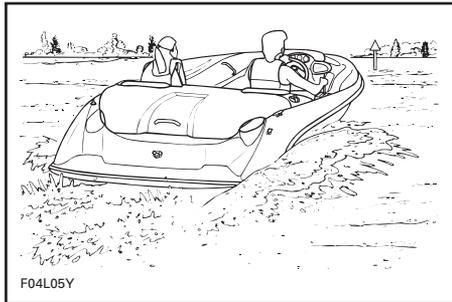
The same procedure as a cold engine applies, except the choke does not need to be applied and throttle lever has to be slightly pushed forward to approximately 1/4.

Obstacles

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

WARNING

Collision with objects, other boaters, etc., is the most common cause of accidents resulting in injury. Always keep a safe distance from other water users.

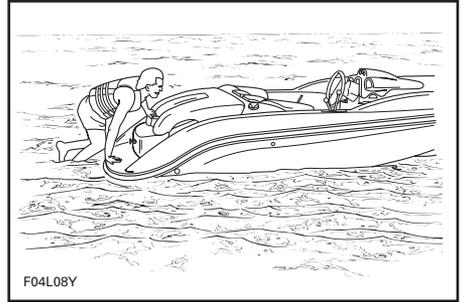


TYPICAL

Boarding in Deep Water

Swim to the rear of the sport boat.

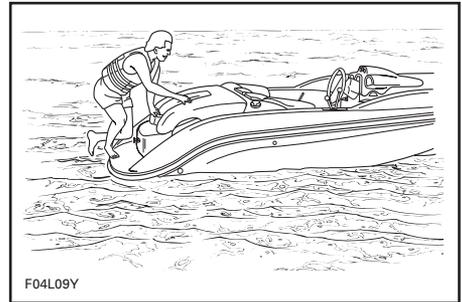
Grip the grab bar and pull yourself upward until your knee can reach the swim platform.



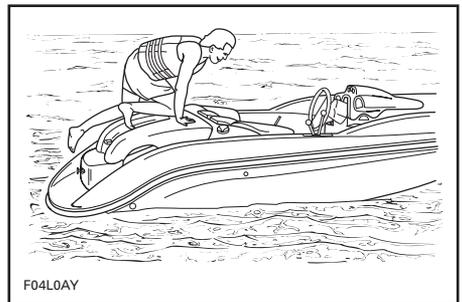
TYPICAL

WARNING

Engine(s) must not be running while boarding. Never use propulsion components as a supporting point to board the sport boat.



TYPICAL



TYPICAL

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

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

WARNING

When crossing waves, operator and passengers should brace themselves. Slow down. Wave or wake jumping can be dangerous and illegal.

Stopping/Docking

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

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

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

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 Control System** in **Turning** section above.

With practice, you can use this feature to assist docking maneuvers.

WARNING

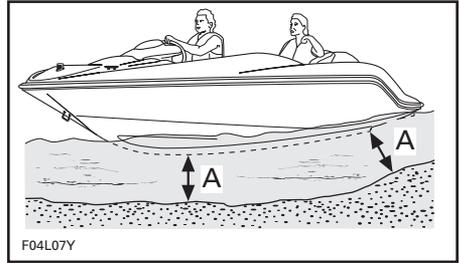
Become familiar with this feature during your first ride.

When close to the dock, shut off the engine(s).

Beaching

CAUTION: It is not recommended to run the sport boat to the beach.

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



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

WARNING

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

As necessary, the cooling system of each 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(s)

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

Always remove safety lanyard from sport boat.

WARNING

Should the engine(s) be shut off, sport boat directional control is not available. Never leave the safety lanyard on an unattended sport boat.

POST-OPERATION CARE

General Care

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

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

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

Additional Care for Foul Water or Salt Water

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

CAUTION: Failure to perform proper care such as: rinsing, cooling system flushing and anticorrosion treatment, when used in salt water, will result in damage to the sport boat and its components.

Cooling System Flushing and Engine Internal Lubrication

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.

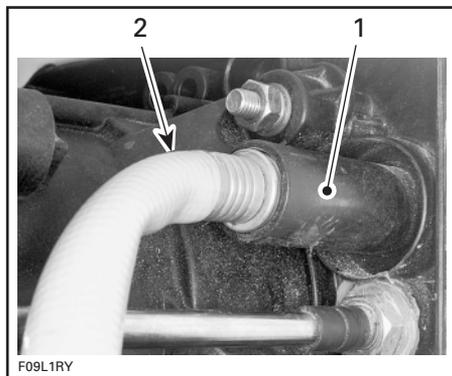
Engine lubrication and flushing should be performed when the sport boat is not expected to be used further the same day or when the sport boat is stored for any extended time.

Proceed as follows for both engines (if applicable):

WARNING

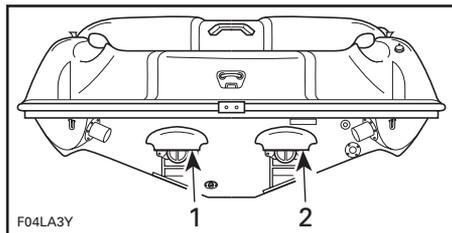
Perform this operation in a well ventilated area.

1. Clean jet pump by spraying water in its inlet and outlet and then spray a soapy solution.
2. Connect a garden hose directly to the pump support (transom on Sportster model) flushing connector(s), as shown in the next photo. **Do not open the water tap yet.**



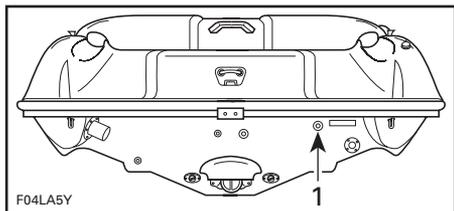
TYPICAL — CHALLENGER MODEL

1. Pump support flushing connector
2. Garden hose plugged



CHALLENGER MODEL

1. Flushing connector for port engine
2. Flushing connector for starboard engine

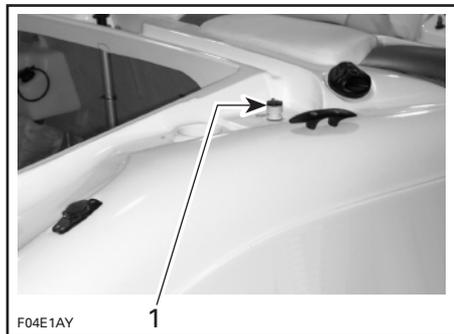


TYPICAL — SPORTSTER MODEL

1. Flushing connector on transom

NOTE: Either of the flushing connectors can be used. The one(s) on the pump support(s) on Challenger or transom on Sportster model, or the upper one(s) in the engine compartment area.

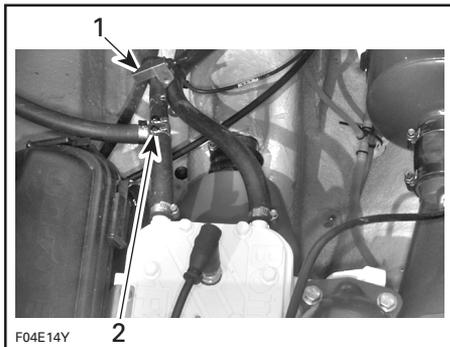
Use of the Upper Flushing Connector(s)



TYPICAL

1. Flushing connector with its cap (starboard side for Challenger)

When using the upper connector, it is necessary to prevent water going out directly by the connector on the pump support. Install a hose pincher (not supplied) (P/N 529 032 500) on the hose between the transom and the T-fitting as shown.



1. T-fitting
2. Hose pincher right after the T-fitting

Continuing the Flushing

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

⚠ WARNING

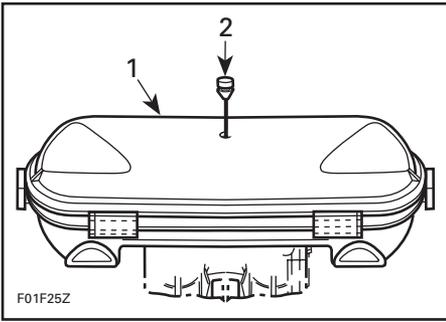
Do not touch any electrical parts or jet pump area when engine is running.

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

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

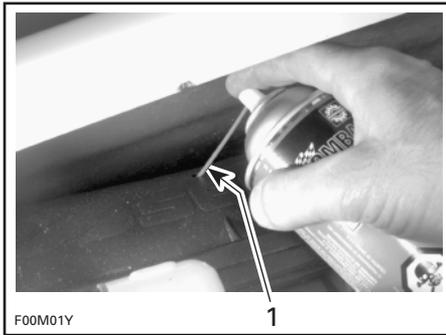
CAUTION: Never run engine longer than 5 minutes. Drive line seal has no cooling when sport boat is out of water.

5. Remove plug from air intake silencer cover.



F01F25Z

1. Air intake silencer cover
2. Pull plug



F00M01Y

TYPICAL

1. Spray BOMBARDIER LUBE here

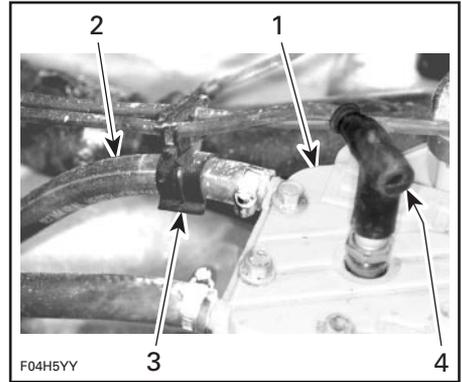
6. Spray BOMBARDIER LUBE lubricant through hole keeping engine at fast idle during one minute.
7. Close the water tap then stop the engine.

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

NOTE: For storage, engine should be run out of fuel while lubricating by turning the fuel valve to OFF position.

CAUTION: When engine begins to run irregularly because of fuel starvation, immediately stop water flow before engines dies.

8. Disconnect the garden hose. Ensure the rubber washer remains in boat's connector (upper connectors).
9. Remove spark plug cables and detach holding bracket from cooling hose.

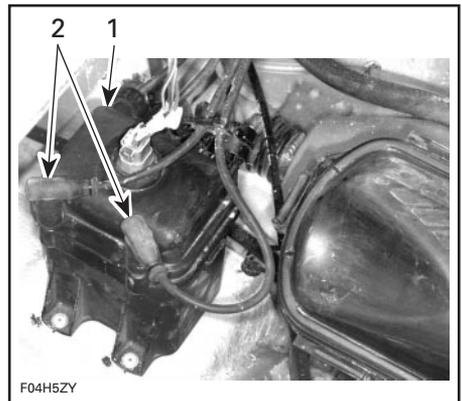


F04H5YY

TYPICAL — SPORTSTER SHOWN

1. Engine head
2. Cooling hose
3. Detach bracket holding spark plug cables
4. Remove spark plug cables

10. Connect spark plug cables to the grounding device of the electrical box.



F04H5ZY

TYPICAL — SPORTSTER SHOWN

1. Electrical box
2. Connect spark plug cables to grounding devices

11. Remove both spark plugs and spray BOMBARDIER LUBE lubricant into each cylinder.
12. Crank the engine a few turns to distribute the oil on cylinder wall.
13. Apply anti-seize lubricant on spark plug threads then reinstall them.
14. Reinstall plug on air intake silencer cover.

15. Properly reconnect spark plug cables to spark plugs.
16. Wipe up any residual water from the engine.

NOTE: Repeat the same procedure for the other engine (if applicable).

Anticorrosion Treatment

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

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

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

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

SPECIAL PROCEDURE

Engine Overheating

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

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

Flush cooling system, refer to POST-OPERATION CARE.

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

Jet Pump Water Intake and Impeller Cleaning

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

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

The clogged area can be cleaned as follows:

In-water cleaning: Pull safety lanyard to stop engine(s). Let the boat stop by itself then pull the weedless system lever (refer to POST OPERATION CARE). This will lower the water intake grate(s). Wait a while to allow weeds or other debris to escape from grate(s). Thereafter, fully push weedless system lever and start engine(s). It may be necessary to repeat the procedure.

CAUTION: Operating the sport boat with the water intake grate(s) in lower position will cause damage to the weedless system.

In severe conditions if the above method does not work, the following can be performed:

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

Most of the time, debris will escape from the propulsion system.

Out of water cleaning: If the system is still clogged, shut off the engine(s) by removing the safety lanyard.

WARNING

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

Pull the weedless system lever to lower the water intake grate(s). From underneath boat, manually clean each water intake area. If the system is still clogged, refer to an authorized dealer for servicing.

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

Capsized Boat

The sport boat is designed so that it should not turn over easily due to its long and wide dimensions. If the sport boat ever capsizes, remember that it will continue to float. It is usually best to remain with it, you will be more easily located by others.

WARNING

Operator and passengers should always wear approved personal flotation devices.

Submerged Boat

CAUTION: DO NOT attempt to restart engine(s).

If the sport boat has been submerged and engine(s) is (are) water-flooded, it must be serviced by an authorized dealer immediately.

CAUTION: See an authorized dealer as soon as possible to service the engine(s).

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.

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 into spark plug holes.

Crank engine again.

Reinstall spark plugs.

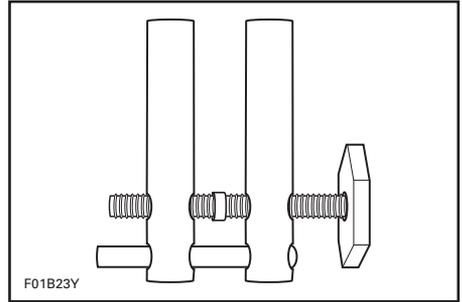
Start engine normally.

Towing the Boat in Water

In the event the sport boat becomes inoperative, tie a tow rope to the bow (front) eyelet. However, special precautions should be taken.

The maximum recommended towing speed is 24 km/h (15 MPH).

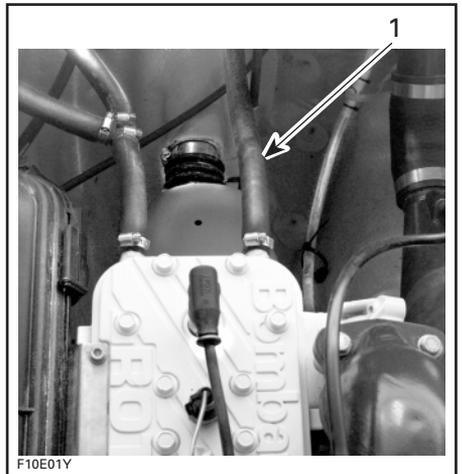
When towing your boat in water, pinch the water supply hose from the jet pump housing(s) to the engine(s) with a hose pincher (not supplied) (P/N 529 032 500) shown in the following illustration.



This will prevent the cooling system from filling which may lead to water being injected into and filling the exhaust system(s). Without the engine(s) running there isn't any exhaust pressure to carry the water out the exhaust outlet(s).

CAUTION: Failure to do this may result in damage to the engine(s). If you must tow a stranded boat in water and do not have hose pincher(s) be sure to stay well below the maximum towing speed of 24 km/h (15 MPH).

Snugly install the hose pincher on the hose as shown in the following photos.



1. Install hose pincher on this hose

CAUTION: When finished towing the boat you must remove the hose pincher(s) before operating it. Failure to do so will result in damage to the engine(s).

Low-Charge Battery Condition

See your dealer to have it charged or replaced.



WARNING

Do not charge or boost a battery in the boat.

MAINTENANCE

WARNING

Only perform procedures as detailed in this guide. It is recommended that the assistance of an authorized dealer be periodically obtained on other components/systems not covered in this guide. Unless otherwise specified, engine(s) must not be running and the main battery cut-off switch must be turned OFF for all maintenance procedures.

NOTE: Where applicable, maintenance procedure applies for both engine systems.

Lubrication

IMPORTANT: DO NOT lubricate safety lanyard post. This will prevent proper electrical contact.

PTO Flywheel

Use SEA-DOO synthetic grease and lubricate as follows:

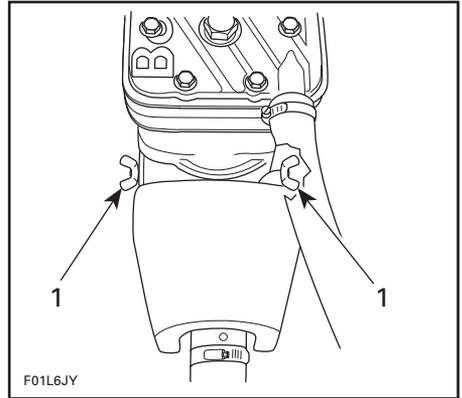
Open rear storage compartment cover.

Remove storage tray.

Loosen the wing nuts, washers and pull out PTO flywheel guard.

WARNING

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

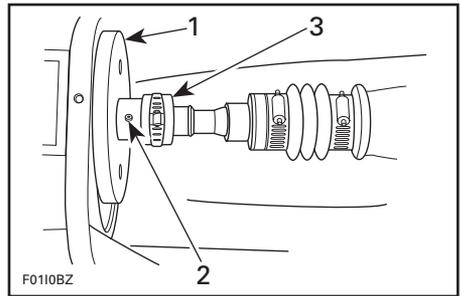


TYPICAL — CHALLENGER SHOWN

1. Loosen wing nuts

Using a grease gun, carefully lubricate PTO flywheel at grease fitting until drive shaft boot begins to expand.

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



1. PTO flywheel
2. Grease fitting
3. Drive shaft boot

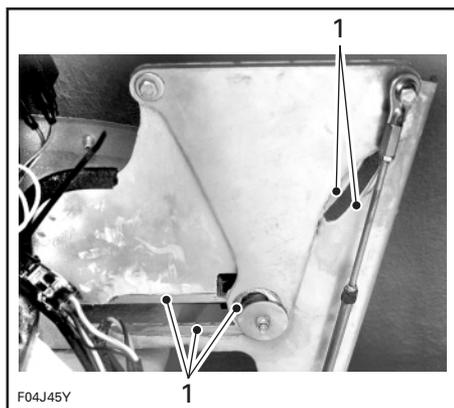
Reinstall and secure PTO flywheel guard.

Weedless System Mechanisms

Use SEA-DOO synthetic grease and lubricate as follows:

Open RH storage compartment cover and remove basket.

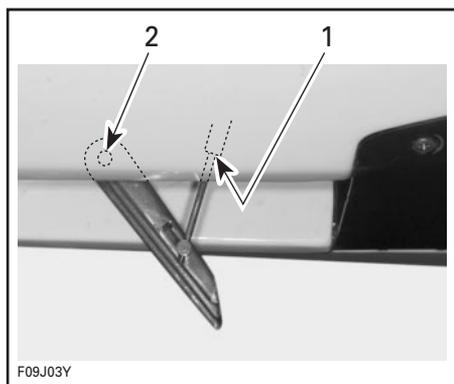
Grease sliding parts as shown.



1. Grease sliding parts and surfaces

Reinstall basket and close cover.

From underneath of hull, lubricate water intake grate(s) at pivoting points and cable rod(s) using BOMBARDIER LUBE lubricant.



TYPICAL

1. Lubricate cable rod
2. Lubricate pivoting points

Anticorrosion Protection

Throttle/Choke Cable(s)

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

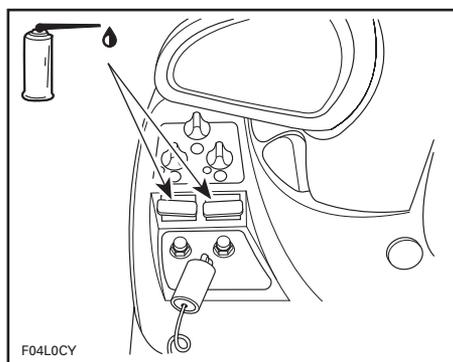
Additional Lubrication

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

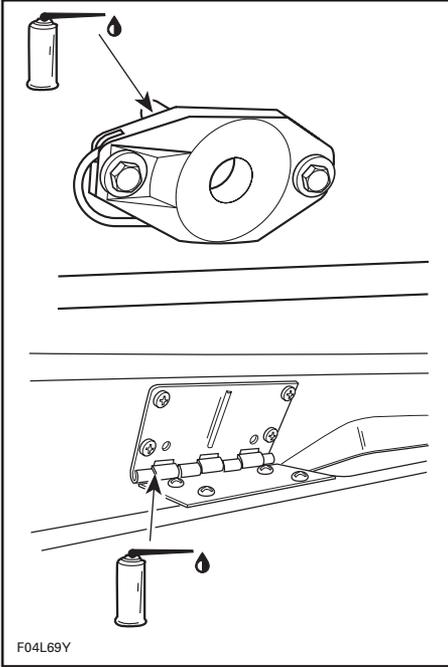
Lubrication of the following items should be performed every 50 hours in fresh water use but every 10 hours in salt water use.

Choke Lever(s)

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



Rear Storage Compartment Cover Mechanism and Hinges

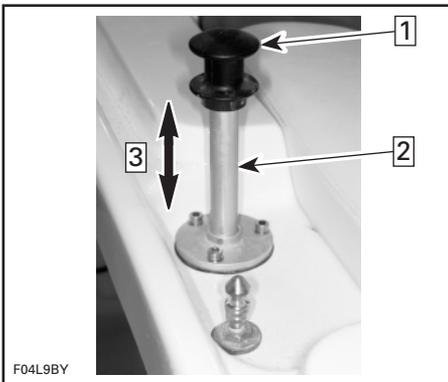


TYPICAL

Ski Post

Challenger Model

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



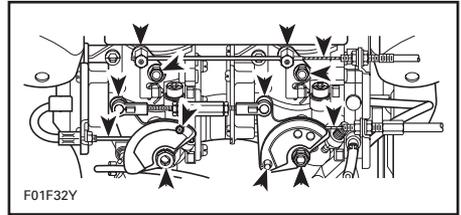
Step **1**: Lift ski post to lubricate

Step **2**: Lubricate here

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

Carburetors and Oil Injection Pump

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



TYPICAL

Reverse Gate(s)

Lubricate pivoting points and mechanism of each side.

Rear Storage Compartment 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 sport boat servicing schedule to be performed by you and/or by an authorized dealer. The schedule should be adjusted according to operating conditions and use.

Periodic Inspection Chart

DESCRIPTION	FREQUENCY				
	EVERY 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		✓		OPERATOR
DESS operation/DESS post and safety lanyard cap terminal condition				✓	DEALER
Engine ignition timing				✓	DEALER
Spark plug replacement			✓		DEALER
Throttle/choke cables operation/lubrication	①	✓			OPERATOR
Flame arrester inspection			✓		DEALER
Carburetor adjustment including choke/throttle cable adjustments				✓	DEALER
Oil injection pump adjustment				✓	DEALER
Fuel filter and oil filter inspection		✓			DEALER
Oil filter and fuel filter replacement				✓	DEALER
Engine head screws, torque				✓	DEALER
Steering system and low-speed steering control system			✓		DEALER
Throttle and shifter systems				✓	DEALER
Fastener tightening (flame arrester, carburetors, engine exhaust system, etc.)			✓		DEALER
Muffler, battery and reservoir fastening devices			✓		DEALER
Fuel/oil line, check-valve and hose inspection, fuel system pressurization	✓	✓	✓	✓	DEALER
Inspect/clean engine drain tube		✓			DEALER
Bilge pump/deck drain hole/scupper valve inspection			✓		OPERATOR
MPEM connector condition			✓		DEALER
Battery condition			✓		DEALER
Starter cables		✓			DEALER
Monitoring beeper/electrical connections			✓		DEALER
Impeller shaft reservoir oil level/oil condition		✓		Replace ^④	DEALER
Impeller condition and impeller/wear ring clearance		②	✓		DEALER
Drive shaft boot and spline condition (both ends)		②	✓		DEALER
Drive shaft floating seal C-clip position				✓	DEALER
PTO flywheel lubrication	✓				OPERATOR
Water intake grates and weedless system lubrication/condition		②	✓		DEALER
Hull condition and ride shoes				✓	DEALER
Cooling system flushing ^③		✓			OPERATOR
Navigation lights condition		✓			DEALER
Sacrificial aluminum anode(s)			✓		OPERATOR
Bilge blower inspection			✓		DEALER

NOTE: Inspection applies for both engine systems where applicable. Some items are included in the PRE-OPERATION CHECKS and are not necessarily mentioned in this chart but must also be done.

① Every 10 hours in salt water use.

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

③ Daily flushing in salt water or foul water use.

④ Have your dealer inspect anti-rattle pusher.

Throttle and Choke Cables

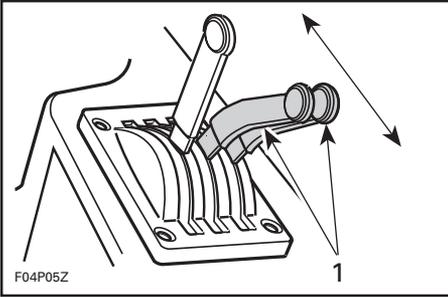
Throttle Cable(s)

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

NOTE: Do not activate throttle lever(s) unnecessarily, when engine is (are) not running. Carburetors are equipped with fuel accelerator pumps. These pumps deliver fuel to the engine(s) each time throttle lever(s) is (are) moved forward.

WARNING

Do not alter or tamper with throttle cable(s) adjustment or routing.



TYPICAL — THROTTLE LEVERS

1. Must move freely

Choke Cable(s)

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

Carburetors

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

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

Fuel and Oil Filters

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

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

Steering/Jet Pump Nozzle Adjustment

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

Refer to an authorized dealer if an adjustment is necessary.

WARNING

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

Reverse Gate(s)

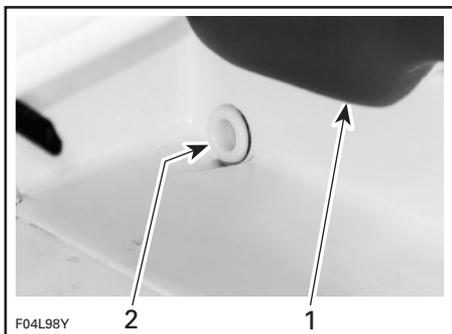
When shift lever is in forward position, reverse gate(s) should be in an upward position and locked. With the shift lever in neutral position, reverse gate(s) should be in intermediate position. When shift lever is in reverse position, reverse gate(s) should be in downward position. Refer to an authorized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

WARNING

Ensure the shifter/reverse gate(s) operate(s) freely and are not stressing the reverse cable.

Drain Hole

Remove any obstruction from deck drain outlet.



1. Driver's seat
2. Deck drain hole

Fuses

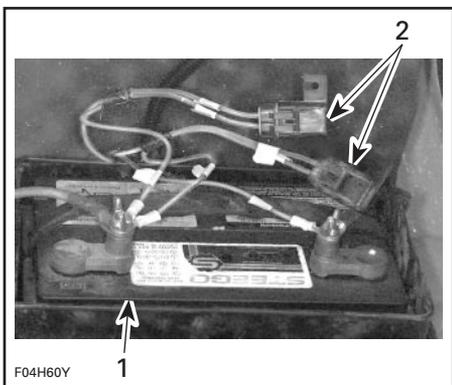
Accessories, Engine Electrical System and Gauges

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

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

If nothing at all is working, check main fuses located close to battery in engine compartment.

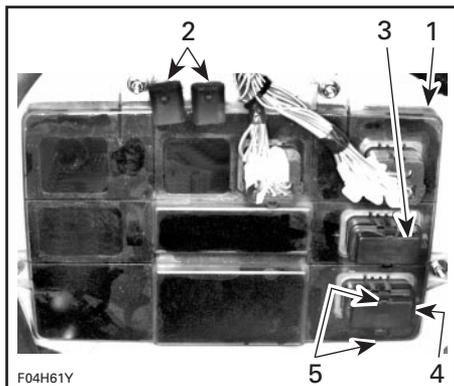
NOTE: There are spare fuses in rubber holders attached to the top of MPEM.



- TYPICAL**
1. Battery
 2. Main fuses

If an accessory, engine or gauge is not working, check its fuse condition.

Fuses for the accessories, the electrical system of the engine(s) and the gauges are mounted on the Multi-Purpose Electronic Module (MPEM), which is located in the engine compartment.



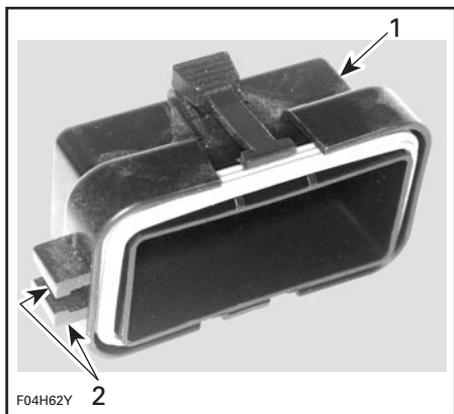
TYPICAL

1. MPEM
2. Spare fuse holders
3. Top fuse block
4. Bottom fuse block
5. Locking tabs

A decal on the MPEM shows the rating, position and identification of the fuses.

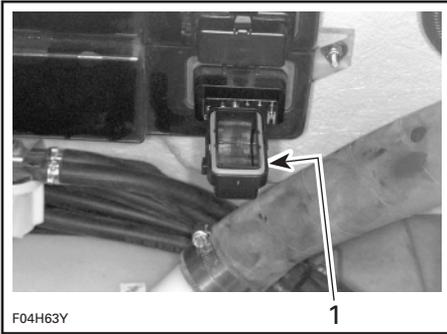
Squeeze cover locking tabs and pull cover out to access fuses.

Use the cover tabs to remove the fuse.

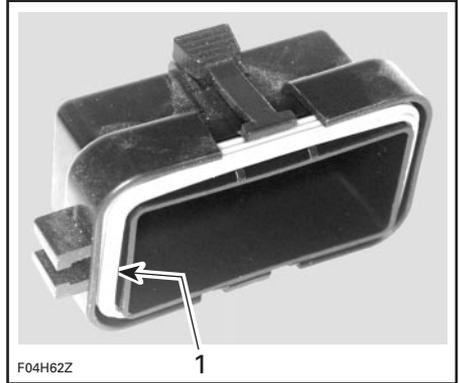


1. Fuse block cover
2. Use these tabs as a fuse puller

When finished, ensure to properly place seal in cover.



1. Slide cover tabs each side of fuse then pull fuse out



1. Properly place seal in cover

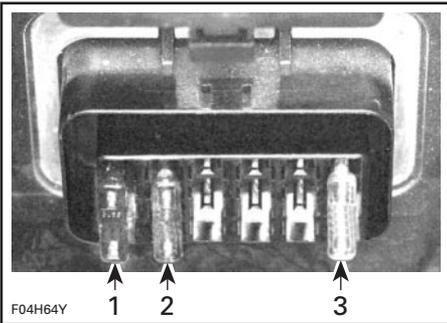
Carefully position cover on fuse block then firmly push until you hear a snapping sound for each locking tab.

Charging System

If the battery is regularly discharged, check this fuse condition.

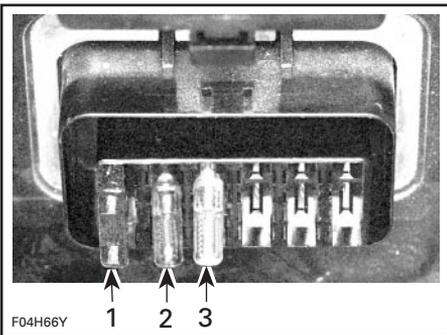
Fuses for the charging systems are located in the small electrical box(es) in the engine compartment. On Challenger model, the port side box is for the port engine and the starboard side box is for the starboard engine.

Pull tabs outside one at a time while pulling out cover.



TYPICAL — TOP FUSE BLOCK

1. MPEM supply
2. Gauges supply
3. Bilge pump

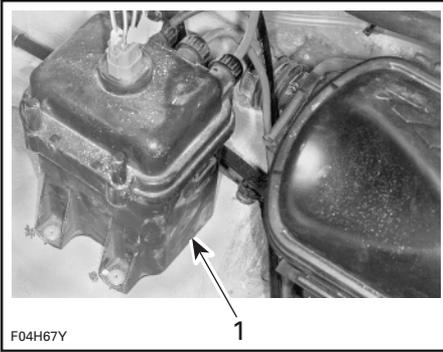


TYPICAL — BOTTOM FUSE BLOCK

1. Bilge air blower
2. Additional accessories
3. Navigation lights

WARNING

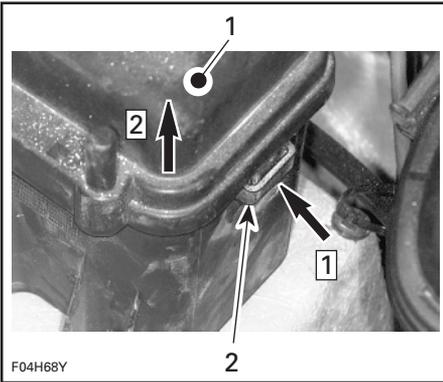
If any water is found in the electrical box, immediately refer to an authorized dealer before operating the boat.



F04H67Y

TYPICAL

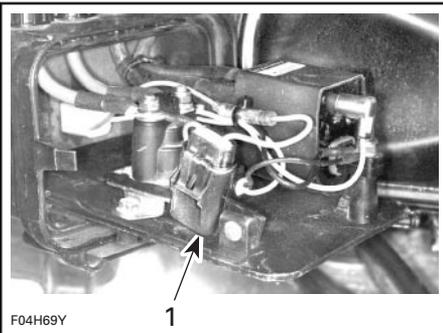
1. Electrical box



F04H68Y

- Step **1**: Push locking tab
 Step **2**: Lift cover
 1. Electrical box cover
 2. Locking tab

Lift cover and turn it upside down to reach fuse.



F04H69Y

INSIDE VIEW OF ELECTRICAL BOX COVER

1. Charging system fuse

When finished, ensure to carefully close electrical box cover so that seal is well positioned.

Bilge Air Blower

Verify bilge air blower for proper operation. It is located in starboard ventilation duct beneath rear storage compartment cover.



F10L1DY

TYPICAL

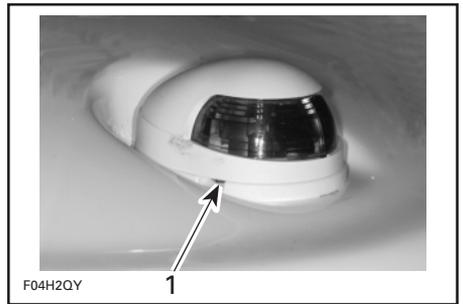
1. Blower

⚠ WARNING

If bilge blower does not operate properly, immediately refer to an authorized dealer before operating the sport boat.

Navigation Light Bulb Replacement

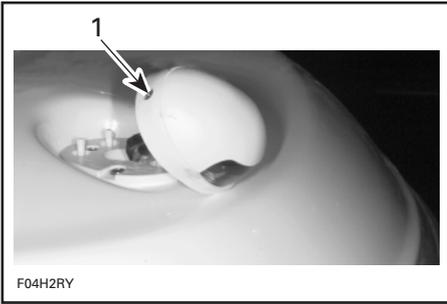
Bow Light



F04H2QY

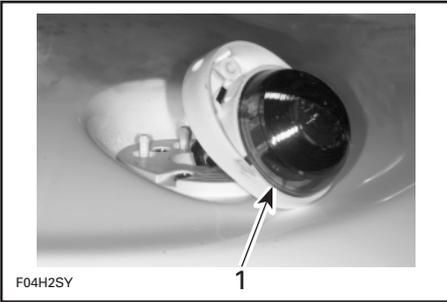
TYPICAL

1. Gently pry here with a screwdriver



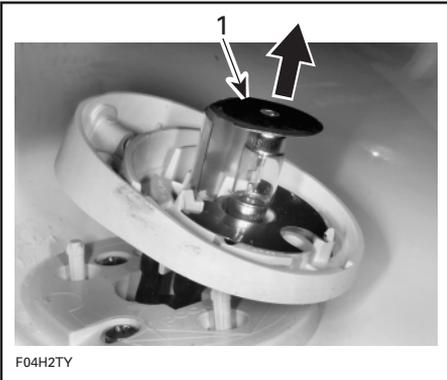
TYPICAL

1. Remove this screw



TYPICAL

1. Pull lens out



TYPICAL

1. Lift and remove bulb

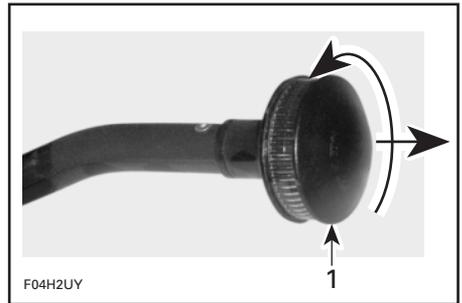
The assembly is essentially the reverse of removal procedures. However, pay particular attention to the following:

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.

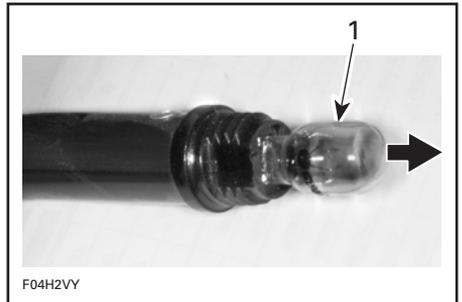
Stern Light

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 and fuel/oil injection systems for leaks. Also check battery for electrolyte leaks. Ensure all hose clamps are properly secured and no hose is cracked, kinked or presenting any other damage.

WARNING

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

Inspect mufflers, battery and reservoir fastening devices. Check electrical connections for corrosion and tightness.

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

Cleaning

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

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

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

Wash windscreen with Bombardier cleaner (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.

TRANSPORTATION

Trailer

Refer to the Trailer 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 sport boat dealer.

Sport Boat

Take the following precautions when towing the sport boat.

Remove stern light (if installed).

Ensure that ski post is pushed down.

Ensure all storage compartments are properly latched.

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

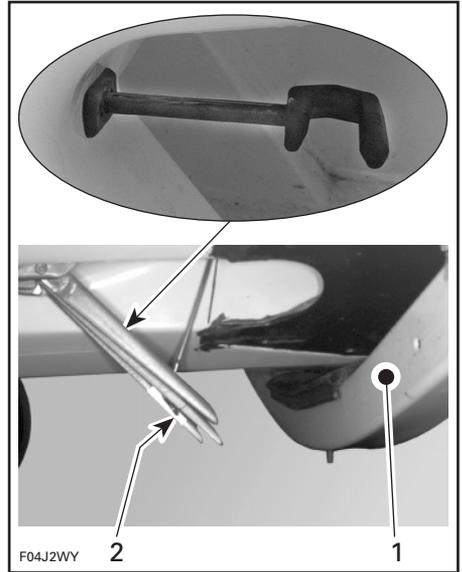
Loading/Launching

Before launching the boat, ensure the bilge plug is fully screwed and the main battery cut-off switch is turned ON.

Before loading or launching the boat on/from the trailer, ensure that the weedless system lever, is completely pushed in.

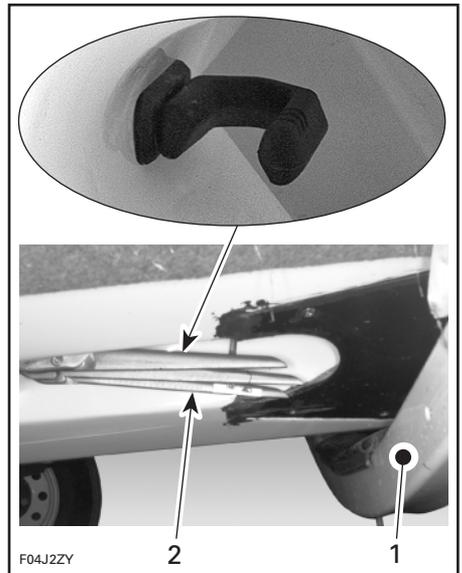
This will allow the water intake grates to be in upper position, eliminating the possibility to come in contact with the trailer.

CAUTION: Loading/launching the boat on/ from the trailer with the water intake grate in lower position will cause damage to the weedless system and possibly to the fiberglass hull.



TYPICAL — WRONG POSITION

1. Trailer frame
2. Grate in fully open position



TYPICAL — CORRECT POSITION

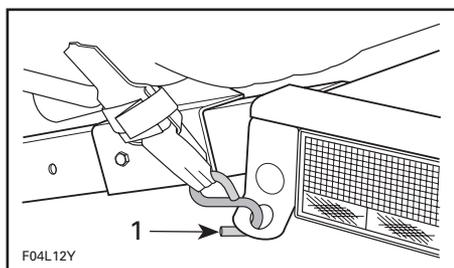
1. Trailer frame
2. Grate in fully close position

When finished with loading the boat on trailer, it is suggested to turn the main battery cut-off switch to OFF.

Boat Tie-Down Attachment on Trailer

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

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



TYPICAL

1. *Hook open end must be positioned toward ground*

⚠ WARNING

Observe trailering safety precautions located on the trailer.

STORAGE AND PRE-SEASON PREPARATION

Storage

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

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

NOTE: Storage procedure applies for both engine systems on Challenger model.

Engine Draining

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

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

Fuel System

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

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

WARNING

Fuel is flammable and explosive under certain conditions. Always work in a well ventilated area. Do not smoke or allow open flames or sparks in the vicinity. Always wipe off any fuel spillage from the sport boat.

Cooling System Flushing and Engine Internal Lubrication

Refer to procedure discussed in POST-OPERATION CARE.

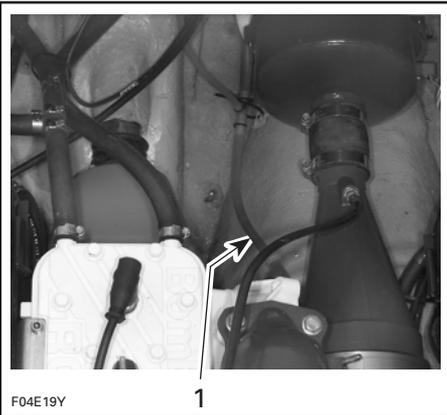
Propulsion System

Lubricant in impeller shaft reservoir should be drained and reservoir cleaned. Refilled with BOMBARDIER synthetic polyolester oil 75W90 GL5 type C gear lube, as per following table. Refer to an authorized dealer for this operation.

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

IMPELLER SHAFT RESERVOIR	
MODEL	CAPACITY (mL)
Sportster	80
Challenger	80

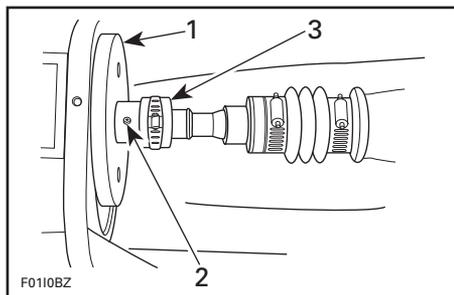
Lubricate PTO flywheel at grease fitting with synthetic grease.



TYPICAL

1. Drain tube must be clean

CAUTION: Do not lubricate excessively. Immediately stop when a slight movement is noticed on rubber boot. Never leave any clothing, tool or other objects in the engine compartment.



1. PTO flywheel
2. Grease fitting
3. Drive shaft boot

Boat 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 sport boat to completely drain bilge.

Antifreezing Protection

In cool regions where freezing point temperature may be encountered, cooling system must be filled with water and antifreeze solution. (50% water, 50% antifreeze).

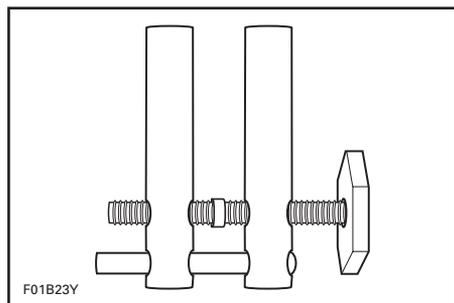
CAUTION: Antifreeze mix must be fed in cooling system. Otherwise water will freeze in engine(s)/exhaust system(s) causing severe damage.

NOTE: When available, it is recommended to use biodegradable antifreeze compatible with internal combustion aluminum engines.

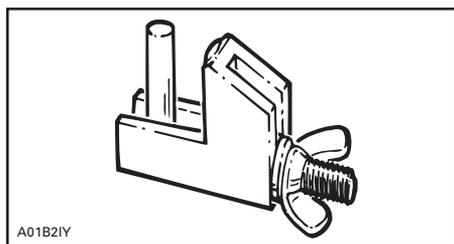
CAUTION: Always use ethylene glycol antifreeze containing corrosion inhibitors specifically recommended for aluminum engines.

NOTE: The engine(s) will not have to run during this operation but should have been run before to exhaust water from cooling system components.

Some hoses have to be plugged to prevent draining before filling cooling system jackets with the antifreeze. Use hose pinchers (not supplied) (P/N 529 032 500) or (P/N 295 000 076).



TYPICAL — HOSE PINCHER (P/N 529 032 500)



TYPICAL — HOSE PINCHER (P/N 295 000 076)

Air will escape from bleed hose on tuned pipe.

Hose Pinchers Installation

Install a hose pincher and firmly tighten on:

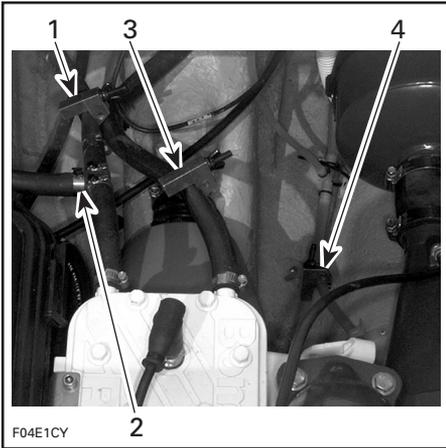
- water injection hose at tuned pipe



F04E0YL

1. *Hose pincher on injection hose going to tuned pipe*

- engine drain tube coming from exhaust manifold before T-fitting
- hose right after T-fitting
- hose on cylinder head



1. Hose pincher right after T-fitting
2. T-fitting
3. Hose pincher on this hose
4. Hose pincher on drain tube

Antifreeze Filling

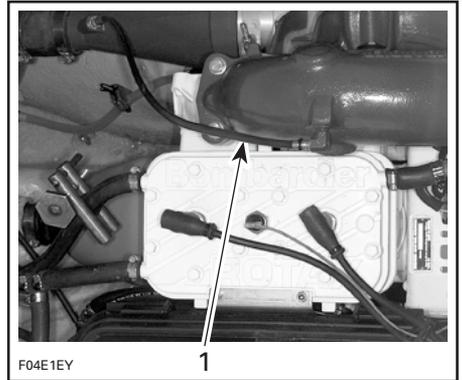
NOTE: Hose pinchers must be firmly tightened so that no antifreeze can flow through the blocked hoses. If you hear the liquid flowing in the muffler immediately after starting pouring antifreeze, it indicates that antifreeze is bypassing the engine/tuned pipe water jackets. To correct this, firmly re-tighten hose pinchers.

Unscrew cap from flushing fitting on the edge of engine compartment and insert a funnel into flushing fitting. Pour about 2 liters (1/2 gal) of antifreeze solution through the funnel. Let the antifreeze enough time to flow. Moving the hose with the T-fitting should accelerate the flow.



TYPICAL

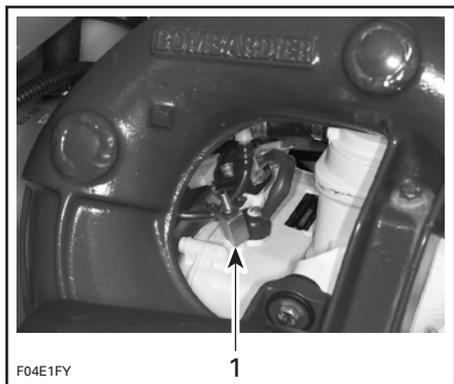
Pour antifreeze until you see it flowing out of tuned pipe bleed hose. At this time only, the entire circuit is filled with antifreeze.



TYPICAL

1. Pour antifreeze until it flows out here

Remove hose pincher from injection hose at tuned pipe and continue to pour approximately 200 mL (7 oz). This will allow antifreeze to flow inside muffler to protect it.



TYPICAL

1. Remove this hose pincher

When finished, remove all remaining hose pinchers.

Most of the antifreeze will drain out from flushing fitting and jet pump nozzle when removing hose pinchers. Use a suitable container to recover it. Dispose antifreeze as per your local laws and regulations.

Battery

Contact your authorized dealer.

Anticorrosion Treatment

Wipe off any residual water in the engine compartment.

Spray BOMBARDIER LUBE lubricant over metallic components in engine compartment.

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

Finalizing Storage Preparation

Apply a non abrasive wax to body.

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

CAUTION: Never leave the sport boat stored in direct sunlight. UV radiation will dull finishes. The sport boat 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

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

NOTE: If antifreeze was used when storing the boat, it is important to recover the antifreeze before putting the boat in the water. When first starting the engine on pre-season preparation, use a suitable container to recover it and dispose antifreeze as per your local laws and regulations.

Pre-Season Preparation Chart

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

OPERATIONS	TO BE PERFORMED BY
Lubrication/corrosion protection	OPERATOR
DESS operation/DESS post and safety lanyard cap terminal condition	DEALER
Battery condition/charging and reinstallation	DEALER
Starter connections and routing ②	DEALER
Spark plug replacement ①	OPERATOR
Impeller shaft reservoir oil inspection/replacement	DEALER
Propulsion and weedless system inspection	DEALER
Oil filter replacement	DEALER
Oil injection reservoir filling	OPERATOR
Flame arrester cleaning/inspection ②	DEALER
Fuel filter replacement	DEALER
Fuel line condition ②	DEALER
Filler neck, fuel tank and fuel cap condition ②	DEALER
Check fasteners, fuel system pressurization ②	DEALER
Choke cable inspection/adjustment	DEALER
Oil injection pump adjustment and bleeding	DEALER
Engine ignition timing	DEALER
Carburetor adjustment	DEALER
Steering system and low-speed steering control system inspection ②	DEALER
Throttle/shifter system inspection ②	DEALER
Inspection of drain hole/bilge pump/drain plug	DEALER
Inspection of cooling system inlet/outlet hoses ②, monitoring beeper	DEALER
Fire extinguisher condition/mounting ②	OPERATOR

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

② Safety item covered in the annual safety inspection.

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

TROUBLESHOOTING

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

Nothing is Working in the Electrical System

OTHER OBSERVATION	POSSIBLE CAUSE	REMEDY
No beeps are heard when installing safety lanyard on DESS post.	<ul style="list-style-type: none">• Main battery cut-off switch is turned OFF.	<ul style="list-style-type: none">• Verify and turn ON.

Monitoring Beeper Coded Signals

NUMBER OF BEEPS	POSSIBLE CAUSE	REMEDY
2 short (while installing safety lanyard on DESS post).	<ul style="list-style-type: none">• Everything is correct with the safety lanyard (good contact and right lanyard cap).	<ul style="list-style-type: none">• Engine can be started normally.
1 long (while installing safety lanyard on DESS post or when pressing start/stop buttons in some cases).	<ul style="list-style-type: none">• Bad connection between safety lanyard cap and DESS post.• Wrong safety lanyard.• Dirty safety lanyard cap.• Improper operation of MPEM or defective wiring harness.	<ul style="list-style-type: none">• Remove and reinstall the safety lanyard on the DESS post. Two short beeps should be heard which indicates the system is ready again to allow engine starting.• Use the safety lanyard that has been programmed for the boat. If it does not work, refer to an authorized dealer.• Clean.• Refer to an authorized dealer.
4 short (while pressing start/stop button with safety lanyard already installed).	<ul style="list-style-type: none">• Shifter is NOT in neutral.	<ul style="list-style-type: none">• Place shifter in neutral. While moving the shifter, 1 short beep indicates you reached the neutral position.
1 short (while moving shifter to neutral).	<ul style="list-style-type: none">• Confirmation that shifter is now in neutral.	<ul style="list-style-type: none">• Engine is now ready to be started.
8 short.	<ul style="list-style-type: none">• Defective MPEM (memory).	<ul style="list-style-type: none">• Refer to an authorized dealer.
Continuous.	<ul style="list-style-type: none">• Engine overheating.	<ul style="list-style-type: none">• Refer to Engine OVERHEATS BELOW.

Engine will not Start

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

Engine Misfires, Runs Irregularly

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

Engine Overheats

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

Engine Continually Backfires

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

Engine Pinging or Knocking

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

Engine Lacks Acceleration or Power

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

Sport Boat can not Reach Top Speed

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

Abnormal Noise from Propulsion System

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

SPECIFICATIONS

ENGINE		SPORTSTER	CHALLENGER
Number of engines		1	2
Engine type		BOMBARDIER-ROTAX 717, 2-stroke	
Induction type		Rotary valve	
Exhaust system		Water cooled/water injected	
Lubrication	Type	Oil injection	
	Oil type	BOMBARDIER-ROTAX injection oil	
Number of cylinders		2	
Displacement		718 cm ³ (43.81 in ³)	
Rev limiter setting		7000 RPM (± 50)	
COOLING			
Type		Water cooled, total loss type. Direct flow from propulsion unit	
Monitoring beeper, switch on @		96 - 99°C (205 - 210°F)	
ELECTRICAL			
Magneto generator output		160 W @ 6000 RPM	
Ignition system type		CDI (Capacitor Discharge Ignition (breakerless))	
Spark plug	Make and type	NGK, BR8ES (resistor type)	
	Gap	0.5 - 0.6 mm (.020 - .024 in)	
Starting system		Electric starter	
Battery		Not supplied ①	
Fuses	Main	20 A (2)	20 A (3)
	MPEM supply	5 A	5 A
	Charging system	15 A (1)	15 A (2)
	Bilge air blower	7.5 A	
	Bilge pump	3 A	
	Navigation lights	3 A	
	Gauges supply	5 A	
	Auxiliary system	10 A	
CARBURETION			
Fuel type		Regular unleaded gasoline	
Carburetor		One carburetor, single diaphragm type with accelerator pump	

① 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.

PROPULSION		SPORTSTER	CHALLENGER
Propulsion system		Bombardier Formula Jet Pump	
Number of jet pumps		1	2
Jet pump type		Axial flow, single stage	
Transmission		Direct drive	
Impeller shaft reservoir, oil type		Sea-Doo Synthetic polyolester 75W90 GL5 gear oil	
Pivoting angle of direction (nozzle)		~26°	
Minimum required water level for jet pump(s)		90 cm (3 ft)	
DIMENSIONS			
Overall length		442 cm (174 in)	
Overall length on trailer		498 cm (198 in)	
Beam		216 cm (85 in)	
Draft		30 cm (12 in)	
Dead rise		20°	
Overall height		107 cm (42 in)	
Overall height on trailer		150 cm (59 in)	
Weight (dry)		530 kg (1166 lb)	560 kg (1235 lb)
Load limit (passengers + luggage)		4 passengers OR 325kg (715 lb) (based on calm water operation)	
Maximum engine power capacity rating of the craft		62 kW (83 HP)	125 kW (166 HP)
Hull material		Composite (fiberglass)	
CAPACITIES			
Fuel tank (reserve included)		102 L (27 U.S. gal)	
Impeller shaft reservoir	Capacity	80 mL (2.7 U.S. oz)	80 mL (2.7 U.S. oz)
	Oil level	Up to plug	
Oil injection reservoir		9 L (2.3 U.S. gal)	

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

SI* METRIC INFORMATION GUIDE

BASE UNITS			
DESCRIPTION	UNIT	SYMBOL	
length	meter	m	
mass	kilogram	kg	
force	newton	N	
liquid	liter	L	
temperature	Celsius	°C	
pressure	kilo pascal	kPa	
torque	newton-meter	N•m	
land velocity	kilometer per hour	km/h	
navigation velocity	knot	kn	
PREFIXES			
PREFIX	SYMBOL	MEANING	VALUE
kilo	K	one thousand	1000
centi	c	one hundredth of	0.01
milli	m	one thousandth of	0.001
micro	μ	one millionth of	0.000001
CONVERSION FACTORS			
TO CONVERT	TO ①	MULTIPLY BY	
in	mm	25.4	
in	cm	2.54	
in ²	cm ²	6.45	
in ³	cm ³	16.39	
ft	m	0.3	
oz	g	28.35	
lb	kg	0.45	
lbf	N	4.4	
lbf•in	N•m	0.11	
lbf•ft	N•m	1.36	
lbf•ft	lbf•in	12	
PSI	kPa	6.89	
imp. oz	U.S. oz	0.96	
imp. oz	mL	28.41	
imp. gal	U.S. gal	1.2	
imp. gal	L	4.55	
U.S. oz	mL	29.57	
U.S. gal	L	3.79	
knot	MPH	1.15	
MPH	km/h	1.61	
Fahrenheit	Celsius	(°F - 32) ÷ 1.8	
Celsius	Fahrenheit	(°C x 1.8) + 32	
hp	kW75	

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

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

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



DECLARATION OF CONFORMITY

Application of Council Directives:	94/25/CE — Recreational craft 89/336/CEE — Electromagnetic compatibility
Standards to which conformity is declared:	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
Manufacturer's name:	Bombardier Motor Corporation of America.
Manufacturer's address:	451 E. Illinois Ave Benton, Illinois 62812-0394
Importer's name:	Société ANF — Industrie S.A.
Importer's address:	2, rue du Nouveau Bercy 94220 Charenton Paris, France
Notified body for Directive 94/25/CE:	International Marine Certification Institute Trèves centre, rue de Trèves 45 1040 Brussels, Belgium
Competent body for Directive 89/336/CEE:	UTAC Autodrome de Linas-Monthéry, B.P. 212 91311 Monthéry cedex, France
Type of equipment:	Sport boats, inshore category C
Model names and numbers:	Challenger (5672), Sportster (5673)
I, the undersigned, hereby declare that the equipment specified above conforms to the above Directives and Standards.	
Name of signatory:	Ghislain Ghot
Title of signatory on behalf of Bombardier Motor Corporation of America:	Zone Manager — 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 responsibility 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 responsibility of a notified body. 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:	_____

Is the representative of our company and will afford you the necessary help to resolve any problems you may have.

As soon as you are the owner, date and sign the receipt here and give it (or send it) to the dealer to be covered by our warranty.

Warranty condition as detailed in the Warranty Section of this Guide.

----- Cut here

Receipt	
Name:	_____
Address:	_____
Owner of _____	No. _____
HIN (to be completed by customer or selling dealer)	_____

This warranty begins _____ (date).
The dealer named on this document has instructed me on the operation, maintenance, safety features and warranty policy, all of which I understand. I am also satisfied with the predelivery set-up and inspection of my sport boat. I have also received a copy of the <i>Operator's Guide</i> for my sport boat.
Signature: _____



BOMBARDIER
RECREATIONAL PRODUCTS

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 sport boat becomes necessary.

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

CHANGE OF ADDRESS



CHANGE OF ADDRESS

SPORT BOAT
IDENTIFICATION NUMBERS

Model Number

Hull Identification Number (H.I.N.)

OLD ADDRESS: _____
NAME

NO. _____ STREET _____ APT _____

CITY _____ STATE/PROVINCE _____ ZIP/POSTAL CODE _____

NEW ADDRESS: _____
NAME

NO. _____ STREET _____ APT _____

CITY _____ STATE/PROVINCE _____ ZIP/POSTAL CODE _____

STOLEN UNITS

In the event that your sport boat 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.

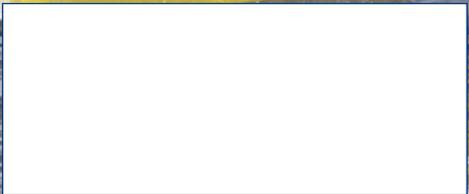
Bombardier will provide a list of stolen units to all sport boat dealers on a monthly basis to aid in recovery of such units to their owners.



AFFIX
PROPER
POSTAGE

BOMBARDIER
Recreational Products
Sea-Doo Warranty
Valcourt (Quebec)
Canada J0E 2L0

SEEN



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BOMBARDIER
RECREATIONAL PRODUCTS



VERSION FRANÇAISE ÉGALEMENT DISPONIBLE