

SEA[®]2000

Sport Boats



**SHOP
MANUAL**

UTOPIA



Shop Manual

2001 UTOPIA 185
(5444/5451/5452/5453/5454/5456/5457/5458/5496/5497/5498/5499)

2002 UTOPIA 185
(5462/5464/5466/5475/5476/5477/5478/5479/5480)

2002 UTOPIA 205
(5745/5746/5747/5748/5749/5750)

BOMBARDIER
RECREATIONAL PRODUCTS



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SAFETY NOTICE

SAFETY NOTICE

This manual was primarily published to be used by sport boat mechanic technicians trained by the manufacturer who are already familiar with all service and maintenance procedures relating to Bombardier made Sea-Doo sport boats. Mechanic technicians should attend continuing training courses given by Bombardier Training Dept.

Please note that the instructions will apply only if proper hand tools and special service tools are used.

It is understood that this manual may be translated into local language upon certain conditions and furthermore agreed that in the event of any discrepancy among the two versions, the English version shall prevail.

The content depicts parts and/or procedures applicable to the particular product at time of writing. *Service and Warranty Bulletins* may be published to update the content of this manual. Make sure to read and understand these.

The use of Bombardier parts is most strongly recommended when considering replacement of any component. Dealer and/or distributor assistance should be sought in case of doubt.

Torque wrench tightening specifications must be strictly adhered to. Locking devices (ex.: locking tab, self-locking fasteners, etc.) must be installed or replaced with new ones. If the efficiency of a locking device is impaired, it must be renewed.

This manual emphasizes particular information denoted by the following wording and symbols:

WARNING

Identifies an instruction which, if not followed, could cause serious personal injury including possibility of death.

CAUTION: Denotes an instruction which, if not followed, could severely damage boat components.

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

Although the mere reading of such information does not eliminate the hazard, your understanding of the information will promote its correct use. Always use common shop safety practice.

Bombardier Inc. disclaims liability for all damages and/or injuries resulting from the improper use of the contents. We strongly recommend that any services be carried out and/or verified by a highly skilled professional technician. It is understood that certain modifications may render use of the boat illegal under existing federal, provincial and state regulations.

INTRODUCTION

This *Shop Manual* covers the following BOMBARDIER made SEA-DOO® sport boat:

- 2001/2002 Utopia 185
- 2002 Utopia 205

MAXIMUM BOAT CAPACITY

Depending on model, the sport boat maximum capacity label can be found on RH or LH side of operator position.



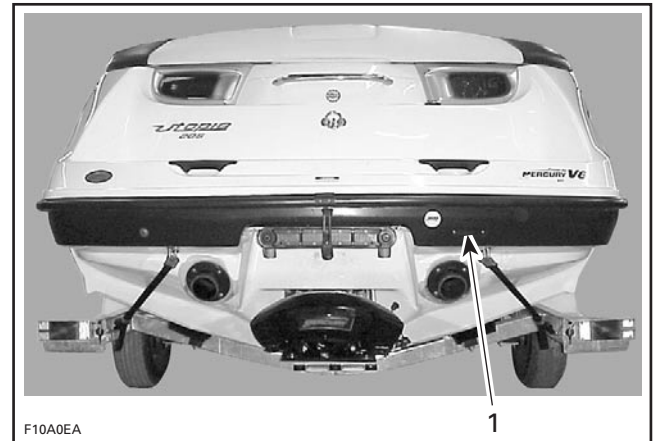
UTOPIA 185 CAPACITY LABEL LOCATION



UTOPIA 205 CAPACITY LABEL LOCATION

HULL IDENTIFICATION NUMBER (H.I.N.)

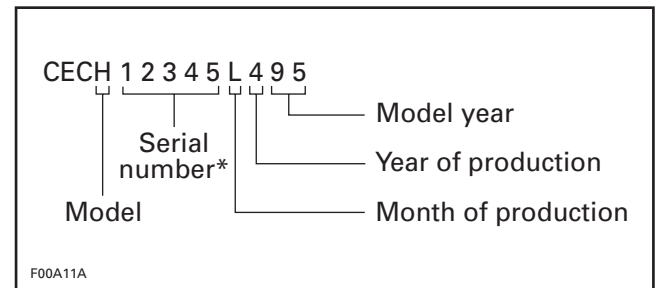
The Hull Identification Number (H.I.N.) is located at right hand rear side of hull.



TYPICAL

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

Refer to the next illustration for a description of the serial number.



*A letter may also be used as a digit.

CEC indicates that boats are manufactured in USA.

INTRODUCTION

ENGINE IDENTIFICATION NUMBER (E.I.N.)

Refer to *Mercury Marine (M2) Jet Drive Operator's Guide*.

ARRANGEMENT OF THIS MANUAL

The manual is divided into 9 major sections:

- 01 SERVICE TOOLS AND PRODUCTS
- 02 MAINTENANCE
- 03 ENGINE
- 04 FUEL SYSTEM
- 05 ELECTRICAL SYSTEM
- 06 STEERING SYSTEM
- 07 HULL/DECK
- 08 TECHNICAL DATA
- 09 WIRING DIAGRAMS

Each section may be divided in various subsections, and again, each subsection have one or more division.

TYPICAL PAGE

Page heading indicates section and subsection detailed.

Section 03 ENGINE
Subsection 04 (MAGNETO SYSTEM)

Subsection title indicates beginning of the subsection.

MAGNETO SYSTEM
717 Engine

Explosion view assists you in identifying parts and related positions.

Italic sub-title above exploded view indicate pertaining models.

Drop represents a liquid product to be applied to a surface. In this case Loctite 242 to screw threads.

Dotted box contains parts of a particular model or an exploded view.

Bold face number indicates special procedure concerning this part.

Illustration number for publishing process.

Document number for publishing process.

Tightening torque nearby fastener. In this case, nut must be torqued to 145 N·m (107 lbf·ft).

CAUTION: Pay attention to torque specifications. Some of these are in lbf·in instead of lbf·ft. Use appropriate torque wrench.

Page numbering system:
03: ENGINE section
04: MAGNETO SYSTEM subsection
1: First page of this subsection

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INTRODUCTION

TYPICAL PAGE

Sub-title indicates a particular procedure for the named part.

Section 06 FUEL SYSTEM Subsection 03 (CARBURETORS)

Title indicates main procedure to be carried-out.

CARBURETOR REMOVAL

To remove carburetors from engine, proceed as follows:
Remove air vent tube support.
Unlock retaining slides holding air intake silencer base. Remove air intake silencer base from watercraft.
Remove screws holding flame arrester base support to cylinder head cover.
Unscrew base retaining screws then remove base from carburetors and move to front of watercraft.
Turn the valve to OFF position.

Service tool to be used to perform a certain procedure.

NOTE: For fuel line removal, use pliers (P/N 295 000 054).

Disconnect pulse line from fuel pump.
Disconnect fuel supply line from fuel pump.
Disconnect fuel return line.
Disconnect oil injection pump cable, throttle cable and choke cable.

Italic bold face setting indicates a particular procedure concerning a model.

Challenger Model Only

Remove screws and lock washers retaining carburetors. Remove carburetors from intake manifold.

Italic bold face setting in this case indicates that particular procedure for Challenger is finished, so from this point, all others models are concerned.

All Others Models

Remove 4 bolts and lock washers from rotary valve cover then move carburetors and rotary valve cover on top of engine.
NOTE: When removing rotary valve cover, pay attention that the rotary valve stay in place, otherwise it must be timed.

Remove carburetors from intake manifold.
Disconnect fuel bypass line between carburetors (twin carburetors).
Remove carburetor(s) from rotary valve cover.

DISASSEMBLY AND INSPECTION

Inspect parts for corrosion damage (shaft, butterfly, spring, etc., check valve housing, etc.).

Diaphragm

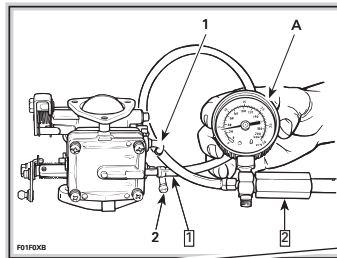
Pump Diaphragm Leak Test

Using a suitable pump gauge tester, perform the following test proceeding as follows:

- Install pump gauge tester (P/N 295 000 083) on pulse nipple.
- Pump tester until it reaches 28 kPa (4 PSI).

Sub-sub-title indicates a particular testing, adjustment or repair procedure.

Illustration always follows text it is pertained to.



"TYPICAL" caption indicates a general view which does not represent full detail.

TYPICAL
Step 1. Install pump gauge tester to pulse nipple.
Step 2. Pump tester until it reaches the desired pressure.
1. Fuel outlet nipple
2. Fuel inlet nipple
A. 28 kPa (4 PSI)

Diaphragm no. 3 must stand pressure for 10 seconds. If pressure drops, replace diaphragm.

Numbers in a frame are used to give a sequence to be performed for above illustration.

Number: following part name refers to exploded view at beginning of subsection.

Letters are used for any measures for above illustration.

Numbers are used for description of components for above illustration.

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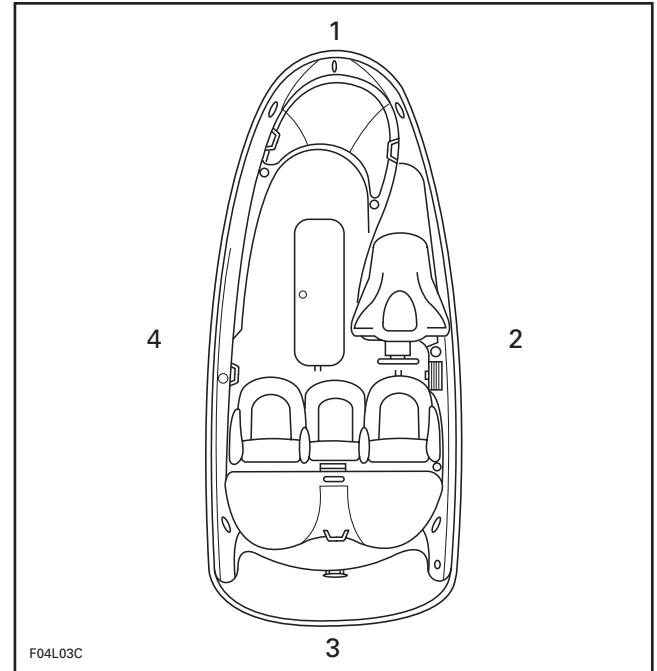
06-03-4

LIST OF ABBREVIATIONS USED IN THIS MANUAL

AC	Alternative Current
Ass'y	Assembly
CDI	Capacitor Discharge Ignition
DC	Direct Current
E.I.N	Engine Identification Number
H.I.N.	Hull Identification Number
HP	Horsepower
LH	Left Hand side (port)
MAG	Magneto
N.A.	Not Applicable
P/N	Part Number
PTO	Power Take Off
RFI	Radio-Frequency Interference
RH	Right Hand side (starboard)
RPM	Revolution Per Minute
SAE	Society of Automotive Engineering
T.I.G.	Tungsten Inert Gas
Vac	Volt, Alternative Current
Vdc	Volt, Direct Current

GENERAL INFORMATION

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)

The information and component/system descriptions contained in this manual are correct at time of publication. Bombardier Motor Corporation of America (B.M.C.A.), however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured.

Because of our ongoing commitment to product quality and innovation, Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

This *Shop Manual* uses technical terms which may be different from the ones of the *Parts Catalogs*.

When ordering parts always refer to the specific model *Parts Catalogs*.

INTRODUCTION

ILLUSTRATIONS AND PROCEDURES

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

CAUTION: These boats are designed with parts dimensioned in both the metric and the imperial systems. When replacing fasteners, make sure to use only those recommended by Bombardier. Mismatched or incorrect fasteners could cause damage to the boat or possible personal injury.

As many of the procedures in this manual are interrelated, we suggest, that before undertaking any task, you read and thoroughly understand the entire section or subsection in which the procedure is contained.

A number of procedures throughout the book require the use of special tools. Before commencing any procedure, be sure that you have on hand all the tools required, or approved equivalents.

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