



SEA-DOO®

Shop Manual
2004

GTI™ / LE / RFI / LE RFI
XP™ DI

GTX^{††} 4-TEC / Supercharged /
Limited Supercharged /
Wakeboard Edition

RXP™ 4-TEC Supercharged

2004 Shop Manual

GTI, GTI LE, GTI RFI, GTI LE RFI, XP DI
GTX 4-TEC /Supercharged /Limited Supercharged /Wakeboard Edition
RXP 4-TEC Supercharged

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SAFETY NOTICE

SAFETY NOTICE

This manual has been prepared as a guide to correctly service and repair all 2004 SEA-DOO watercraft. See model list below.

This edition was primarily published to be used by watercraft mechanical technicians who are already familiar with all service procedures relating to Bombardier made watercraft. Mechanical technicians should attend 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.

This Shop Manual uses technical terms which may be slightly different from the ones used in the Parts Catalog.

It is understood that this manual may be translated into another language. In the event of any discrepancy, 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.

In addition, the sole purpose of the illustrations throughout the manual, is to assist identification of the general configuration of the parts. They are not to be interpreted as technical drawings or exact replicas of the parts.

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.

The engines and the corresponding components identified in this document should not be utilized on product(s) other than those mentioned in this document.

WARNING

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.

WARNING

Unless otherwise specified, engine should be turned OFF and cold for all maintenance and repair procedures.

This manual emphasizes particular information denoted by the 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 vehicle 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 mechanic. It is understood that certain modifications may render use of the vehicle illegal under existing federal, provincial and state regulations.

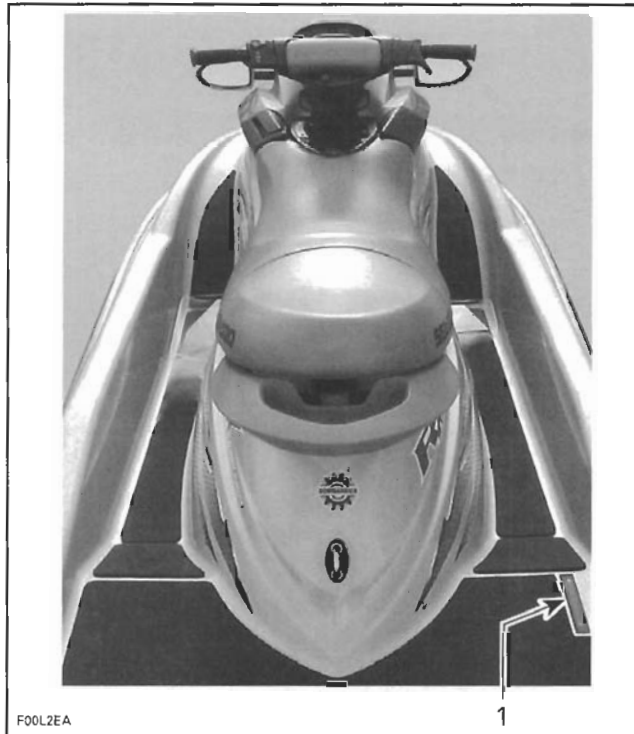
INTRODUCTION

This Shop Manual covers the following BOMBARDIER made SEA-DOO® 2004 watercraft models.

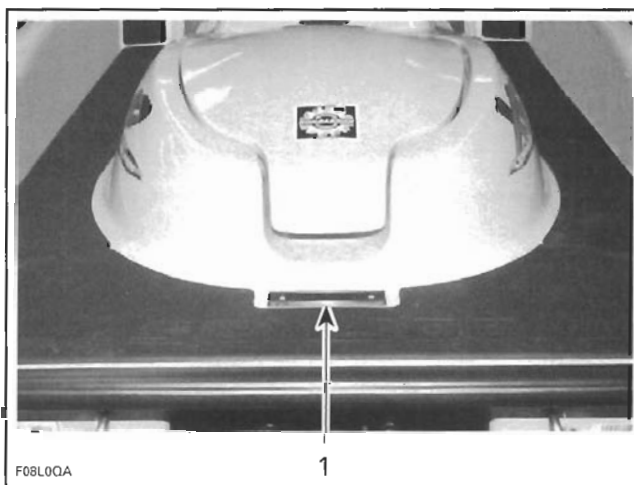
MODEL	ENGINE TYPE	MODEL NUMBER
GTI (blue jay)	717	6133
GTI International (blue jay)	717	6134
GTI LE (Sonora sand)	717	6135
GTI LE International (Sonora sand)	717	6136
GTI RFI (blue jay)	787 RFI	6137
GTI RFI International (blue jay)	787 RFI	6138
GTI RFI LE (Sonora sand)	787 RFI	6139
GTI RFI LE International (Sonora sand)	787 RFI	6140
GTX 4-TEC NA	1503	6147
GTX 4-TEC NA International	1503	6148
GTX 4-TEC Supercharged Limited International (blue pearl)	1503	6142
GTX 4-TEC Supercharged Limited (blue pearl)	1503	6141
GTX 4-TEC Supercharged (yellow)	1503	6143
GTX 4-TEC Supercharged International (yellow)	1503	6144
GTX 4-TEC Wakeboard Edition (viper red)	1503	6149
GTX 4-TEC Wakeboard Edition International (viper red)	1503	6150
RXP (apple green)	1503	6115
RXP International (apple green)	1503	5599
RXP (yellow)	1503	6162
RXP International (yellow)	1503	6163
XP DI (viper red)	947 DI	6151
XP DI International (viper red)	947 DI	6152

HULL IDENTIFICATION NUMBER (H.I.N.)

It is located on footboard at the rear of watercraft.



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

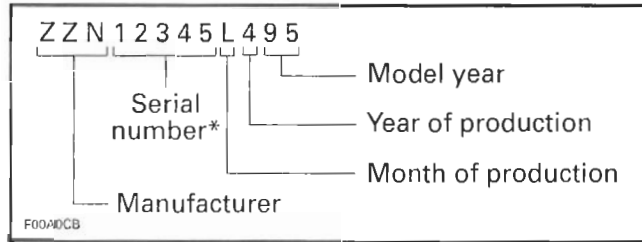


TYPICAL
1. Hull Identification Number (H.I.N.)

All Models

The Hull Identification Number is composed of 12 digits:

INTRODUCTION

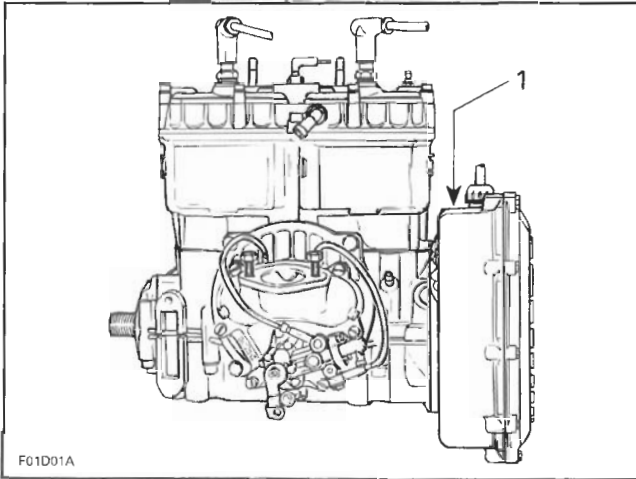


*A letter may also be used as a digit.

ENGINE IDENTIFICATION NUMBER (E.I.N.)

717 Engines

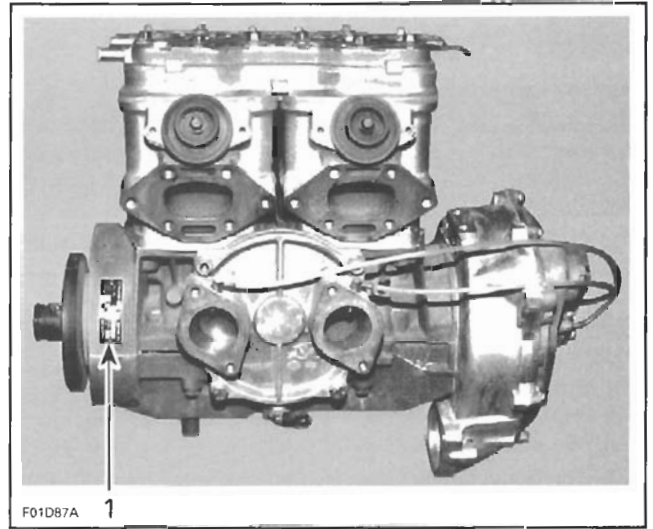
The Engine Identification Number is located on the upper side of the magneto housing.



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

787 RFI Engines

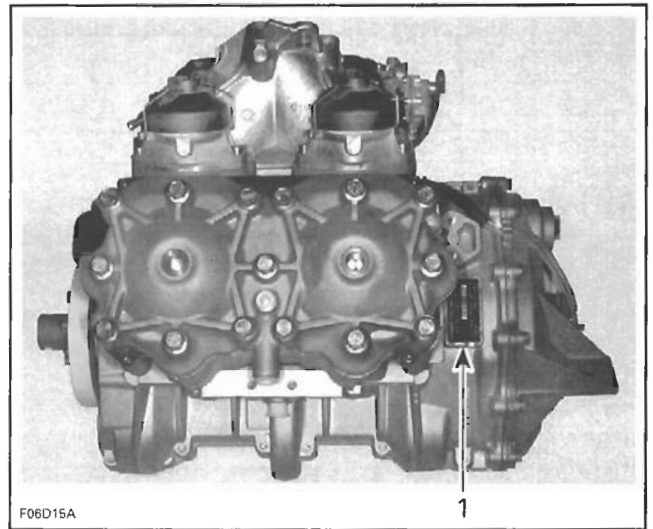
The Engine Identification Number is located on the upper crankcase on PTO side.



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

947 DI Engines

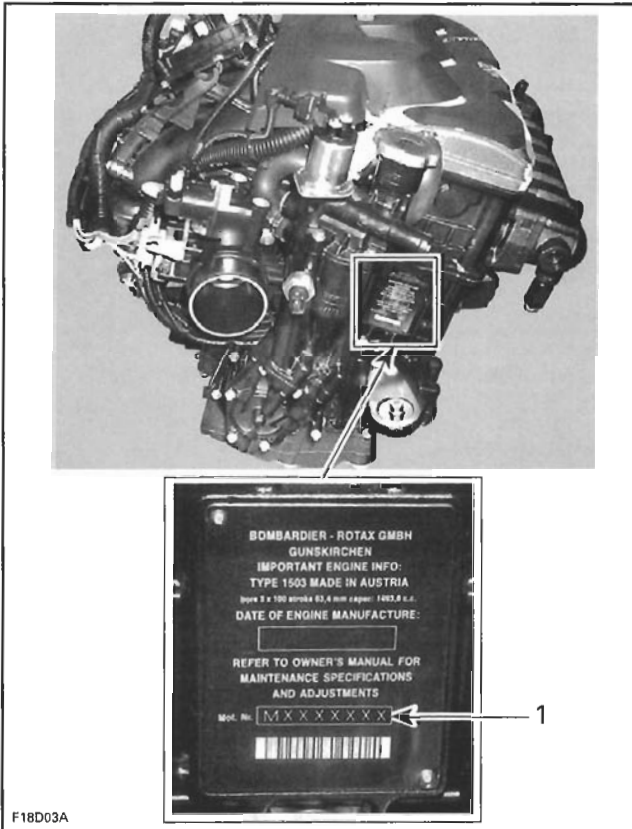
The Engine Identification Number is located on the upper crankcase on MAGNETO side.



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

1503 Engines

The Engine Identification Number is located on front end of the engine.



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

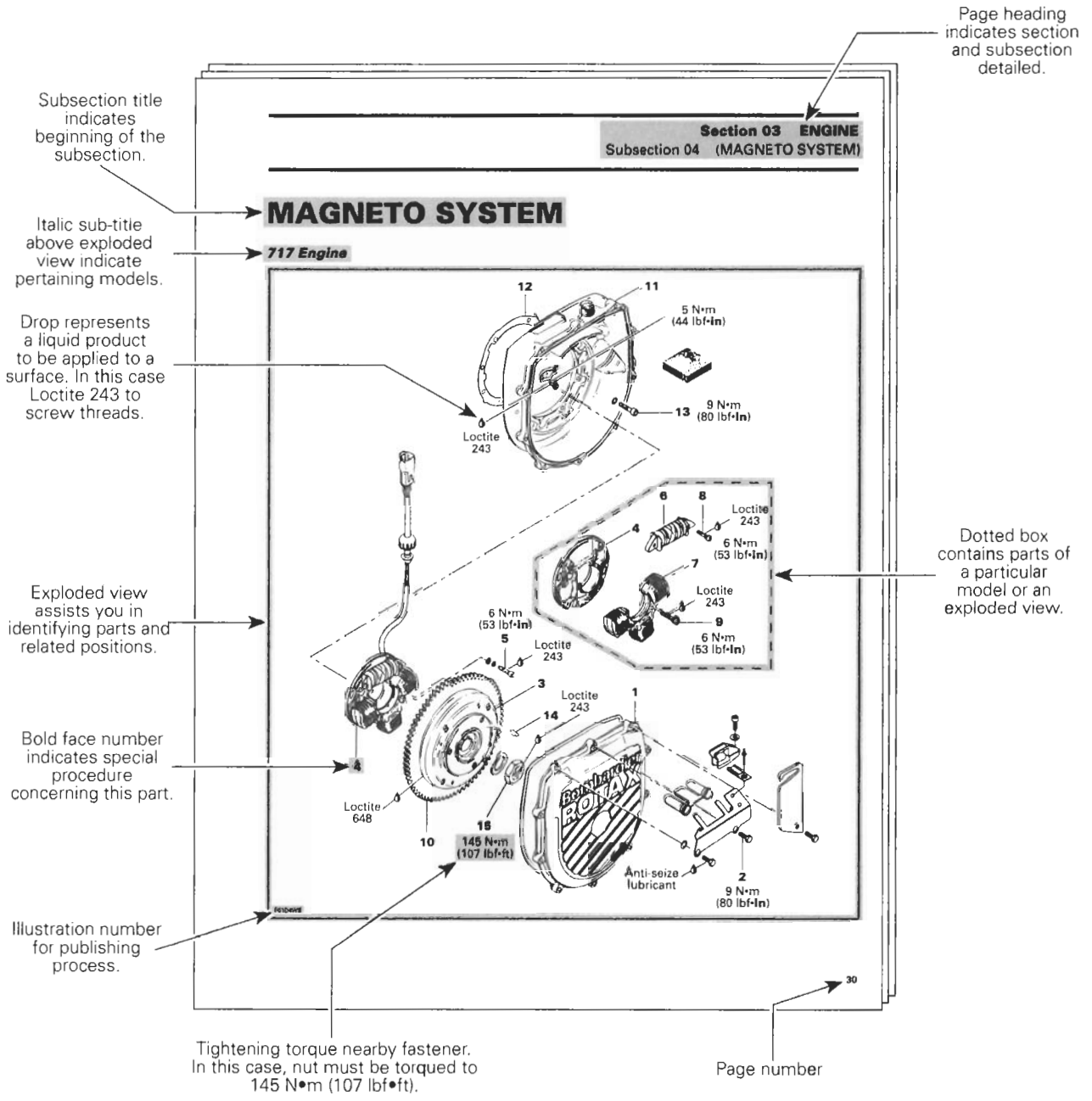
ARRANGEMENT OF THIS MANUAL

The manual is divided into many major sections as you can see in the main table of contents at the beginning of the manual.

Several sections are divided in various subsections. There is a table of contents at the beginning of many sections.

INTRODUCTION

TYPICAL PAGE



Subsection title indicates beginning of the subsection.

Page heading indicates section and subsection detailed.

Italic sub-title above exploded view indicate pertaining models.

Drop represents a liquid product to be applied to a surface. In this case Loctite 243 to screw threads.

Exploded view assists you in identifying parts and related positions.

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.

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

TYPICAL PAGE

Sub-title with part name(s) from exploded view.

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.

Title in italic indicates a particular procedure concerning a model.

XP Model Only

Remove screws no. 6 and lock washers no. 7 retaining carburetors.

Sub-sub-title in this case indicates that particular procedure for XP is finished, so from this point, all others models are concerned.

All Others Models

Remove 4 bolts no. 8 and lock washers no. 12 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 in capital indicates a particular testing, adjustment or repair procedure.

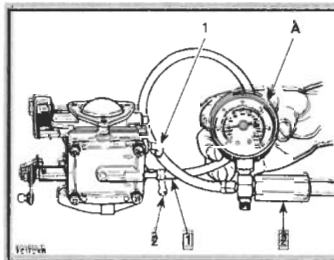


Illustration always follows text it is pertained to.

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

3: 28 kPa (4 PSI)

Diaphragm must stand pressure for 10 seconds. If pressure drops, replace diaphragm.

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

Numbered step are used to give a sequence to be performed.

Letters are used for any measures.

Bold numbers in the text refer to the parts shown in the exploded view at the beginning of the subsection.

Numbers are used for description of components.

INTRODUCTION

LIST OF ABBREVIATIONS USED IN THIS MANUAL

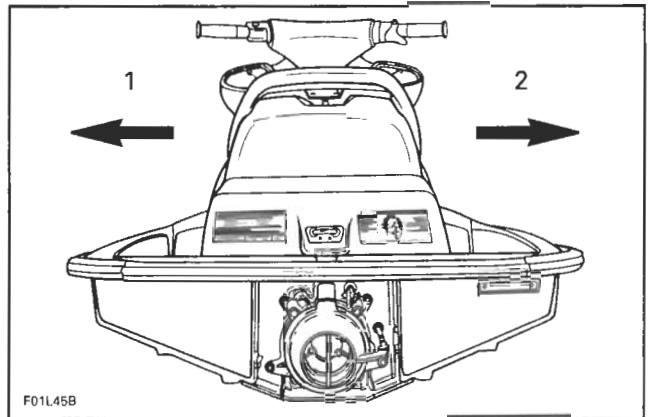
ABBREVIATION	DESCRIPTION
4-TEC NA	Naturally-Aspirated Engine
ADC	Analog to Digital Conversion
AC	Alternate Current
APS	Air Pressure Sensor
ATS	Air Temperature Sensor
B.U.D.S.	Bombardier Utility and Diagnostic Software
CDI	Capacitor Discharge Ignition
CPS	Crankshaft Position Sensor
CSI	Cooling System Indicator
DC	Direct Current
DESS	Digitally Encoded Security System
DI	Direct Injection
E.I.N.	Engine Identification Number
ECM	Engine Control Module
ECU	Electronic Control Unit
EPA	Environmental Protection Agency (USA)
HP	Horse Power
LED	Light Emitting Diode
IC	Intercooler
LED	Light Emitting Diode
MAG	Magneto
MPEM	Multi-Purpose Electronic Module
MPH	Mile Per Hour
MPI	Multi Protocol Interface
N.A.	Not Applicable
OPT	Optional
P/N	Part Number
PFD	Personal Flotation Device
PSI	Pound Per Square Inch
PTO	Power Take Off
RAVE	Rotax Adjustable Variable Exhaust
RFI	Rotax Fuel Injection
RPM	Revolution Per Minute
Sc	Supercharger
STD	Standard

ABBREVIATION	DESCRIPTION
TBD	To Be Determined
TDC	Top Dead Center
TPS	Throttle Position Sensor
VDC	Volt Direct Current
VCK	Vehicle Communication Kit
Vdc	Volt Direct Current
VTS	Variable Trim System
WTS	Water Temperature Sensor

GENERAL INFORMATION

The use of RIGHT (starboard) and LEFT (port) indications in the text, always refers to driving position (when sitting on watercraft).

Besides, in the marine industry, FRONT is called BOW and REAR is called STERN.



1. Left (port)
2. Right (starboard)

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