



SEA·DOO®

TECHNICAL UPDATE BOOK

2004



2 1 9 7 0 0 3 6 5



March 2004

To: Service Managers,

Bombardier Recreational Products Training Institute (B.R.P.T.I.) is proud to introduce the **2004 Sea-Doo® Technical Update Book**.

Brush up on new Sea-Doo technology

The 2004 Sea-Doo Technical Update Book is loaded with the latest information on the new line up improvements and features; as well as new technologies. It contains sections such as "New Technologies" that explains the new RXP model and the 3D.

Earn points for the Dealer Certification Program 2004-2005

The 2004 Sea-Doo Technical Update Book is one of the criteria for the Dealer Certification Program. To get points, at least one Technician must complete the on-line exam **before December 31st 2004**.

Start now!

- Review the 2004 Sea-Doo Technical Update Book
- Register on B.R.P.T.I. Web site at www.brpti.brp.com
- Complete and pass the on-line exam; the passing grade is 75%

If you need more information on the Dealer Certification Program or on your training status, please contact your Regional After-Sales Manager (RAM).

We wish you a great Sea-Doo season.

Network Training & Dealer Development Department

Bombardier Recreational Products Inc.

STEP BY STEP REGISTERING TO B.R.P.T.I.

Access the B.R.P.T.I. Web site at: www.brpti.brp.com

If you are **not registered** click on:
"New to B.R.P.T.I. CLICK HERE ..."

If **you are already registered to B.R.P.T.I.** you need to enroll to:
2004 Sea-Doo Technical Update.

1. Use your B.R.P.T.I. Login name and password to enter the B.R.P.T.I. Web site.
2. In the "Favorites" box, click on "Courses"
3. Check "English", click on "GO"
4. Choose "**2004 Sea-Doo Technical Update**" course by clicking on the yellow folder next to it
5. Click on "Enroll" at the bottom of the screen
6. Click on "learning environment" (in white)
7. You are now back to your learning environment; click on "**2004 Sea-Doo Technical Update**" to begin the exam.



SEA-DOO® 2004 Technical Update Book

Bombardier Recreational Products Training Institute (B.R.P.T.I.) is proud to introduce the 2004 Sea-Doo® Technical Update Book.

Again this year, you are given the opportunity to test on the B.R.P.T.I. web site:
www.brpti.brp.com

If you are **not registered** click on:
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The passing grade is 75%

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STEP BY STEP FOR TECHNICAL TRAINING

STEP 1

Watch the Introduction DVD!

STEP 2

Each technician can register to the B.R.P.T.I. Training Web site at:

www.brpti.brp.com or access the site through BOSSWeb under the "Training" tab

STEP 3

- Take the on-line Entrance (Qualifier) Exam.

STEP 4

- Complete the **Technician Level** for concerned Bombardier product, by doing the DVD on-line exams.

STEP 5

- From the Web site, select the **Certified Technician Level**
- Review criteria
- Watch applicable DVDs
- Register on-line for in-class courses

STEP 6

- From the Web site, click on **Master Technician Level**
- Review criteria
- Submit the on-line Application Form

Notes: You always have three (3) opportunities to take an exam (the passing grade is 75%). If you do not pass after three attempts, you will be restricted from taking the exam for a period of 30 days. During the 30 days, you should study the course, review the material, then re-test.



SECTION

1

SEADOO® 2004 Technical Update General Information

The objective of Section 1 is to make contacts between dealers and Bombardier Recreational Products Inc. as easy as possible.

In Section 1 you will find the most important phone numbers, key contact names and the latest updated procedures to help you being more efficient than ever.

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Bombardier Recreational Products Inc.



IT'S EASY TO REACH US

The *Dealer Network Support Group* has a consolidated structure that combines all our core services, thus allowing you easy access to eleven services with ONE TOLL FREE NUMBER.

Just dial:

One Toll Free Number

From **U.S.:**  **1-800-366-6992**
For Dealers usage only

From **Canada:**  **1-800-361-9980**
For Dealers usage only

It is Easy and Quick

The voice recognition system will connect you directly to the appropriate department. It is easy and quick. With this system, you no longer have to select keys on your touch-tone telephone.

Just Say which department you would like to reach

By just saying the service of your call, the system will automatically route your call to the appropriate department.

- Order Desk
- PAC Analysts
- Technical Service Support
- B.R.P.T.I. or Training
- Warranty Department
- BOSSWeb Help Desk
- Certification Program
- Customer Assistance
- Signage Program
- PAC Sales (I.O.)
- New Dealer Orientation (NDO)
- Vehicle Shipping

This phone number is for dealers usage only; do not give this phone number to customers as this will have a serious impact your ability to reach us.



Before You Call the Service Department :

Be prepared :

The Bombardier Recreational Products Inc. Service Department values your call, in fact you are the reason that we are here! Your input and information are vital to our department, and accuracy is critical. In an effort to provide the best service to you, we ask you observe the following guidelines :

Review the service material that you already have :

Check your service library for any publications that may assist you with your problem. Often the answer is already in your hands in the form of manuals, bulletins, spec books, etc.

Check BOSSWeb :

All bulletins and campaigns can be found on BOSSWeb. Verify the unit history on each vehicle to see if there are any pending campaigns.

Have vital information close at hand :

You will always be asked for your dealer number, the vehicle model, serial number and the vehicle mileage/hours. You will also be asked if there is already a call identification number logged on the vehicle or customer in question. Not having this information readily available is very common and slows the system down for everybody.

Verify the customer's complaint :

If you are contacting your Service Representative for assistance, you should be able to describe the problem accurately, with factual information.

Verify the warranty status :

Is the unit in warranty, out of warranty, or covered by a BEST contract? If it is covered by BEST, have the contract number available as well as maintenance history if available.

Take names :

Every Bombardier Recreational Products Inc. representative will identify themselves when answering your call. Do not complete the call without noting who you spoke with. Your call will also be logged in the computer system. **Make sure you ask for the call I.D. number and put it on the repair order.**



"Who's Who":

RAM (Regional After Sales Manager)

US, North East Region

Jean-Pierre Foucault

Bombardier Recreational Products Inc.
31 Henderson Rd – Unit #10
Gilford, N.H. 03249

☎ (603) 293-8454
☎ (603) 293-8224
✉ jean-pierre.foucault@brp.com

US, Central Region

Perry White

Bombardier Recreational Products Inc.
2604 Merganser Way
Wausau, Wi 54401

☎ (715) 848-8800
☎ (715) 848-2371
✉ Perry.white@brp.com

US, West Region

To be determined

☎ TBD
☎ TBD
✉ TBD

US, South East Region

Rodney (Rod) Thompson

Bombardier Recreational Products Inc.
6545 US 1
Grant, Florida 32949

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☎ (321) 722-4039
✉ rodney.thompson@brp.com

Canada, East

Charles Bedard

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275 Des Mouettes
Beloeil, QC J3G 5A2

☎ (450) 467-8950
☎ (450) 467-9009
✉ charles.bedard@brp.com

Canada, West

Wade McDonald

Bombardier Recreational Products Inc.
2497 Pinewood Drive
Winnipeg, Manitoba R3J 0C3

☎ (204) 837-3094
☎ (204) 837-2765
✉ wade.mcdonald@brp.com

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Nancy Larsen

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Customer Assistance Center

CAC Representatives respond to customers and dealers who call, write, or e-mail the Customer Assistance Center by giving information, investigating complaints, or referring callers/writers to the appropriate department within Bombardier Recreational Products Inc..



For Retail Customer:

In USA: (715) 848-4957
In Canada: (819) 566-3366



For Retail Customers:

(819) 566-3062

Mailing address for Retail Customers:

Customer Assistance Center
Bombardier Recreational Products Inc.
565 de la Montagne Street
Valcourt, Québec, Canada J0E 2L0

Warranty Parts Return (for dealers only)

Canadian Dealers:

Bombardier Recreational Products Inc.
C/O Warranty Parts Center
565 De La Montagne
Valcourt, Qc J0E 2L0

U.S.A. Dealers:

Bombardier Motor Corporation of America
C/O Warranty Department
7575 Bombardier Court
Wausau, WI 54401

Make sure that the correct copy of the BOSSWeb claim or paper claim is included with the exact part return properly tagged, otherwise this may cause a delay in processing your claim.

Dealers dealing with North West Co. Inc. must forward the parts, warranty claim and documents to their respective distributor's office.

For complete details concerning returning warranty parts, clothing, etc., please refer to the Warranty Guide on BOSSWeb.



Radio Warranty and Repair

In the US: Prospect Electronics



(800) 394-1914



(843) 849-9037



(843) 849-9054

In Canada: L.F.Burgess and Associates



(519) 647-3222



(519) 647-3226



E-mail info@lfbuggess.com

- Radios are covered by Prospect / Burgess warranty.
- A return authorization is required from Prospec / Burgess prior to return unit.
- Prospec / Burgess will repair or exchange at their discretion.
- For new radio immediately, need credit card. (\$5 fee).
- Bombardier Recreational Products Inc. will cover labor (please get an authorization from a Service Representative).

Warranty Period:

- CD player: 1 year limited warranty, from purchase date.
- Cassette Player: 2 year limited warranty, from purchase date.

Handling Procedure:

1. When calling Prospect / Burgess, make sure to have the following information available:
 - Radio model & serial number (found on chassis)
 - Date boat was sold (copies to be included in return)

This information is mandatory to determine the warranty coverage period.

2. Make sure to write the return authorization number outside of the box. Include also the dealer's name, complete address and key contact at dealership.
3. Send via UPS prepaid the complete radio, face plate, etc. to the following address:

In the US: Prospect Electronics
3325 Highway 17 North
Mount Pleasant, SC, 29466

In Canada: L.F. Burgess and Associates.
177 Lynden Rd.
Lynden, ON. L0R-1T0

4. Prospect / Burgess, upon receipt of the product will repair and return the product to the dealer within 72 hours typically; unless during the peak season, at which times may vary.
5. Should Prospect / Burgess find a reason to charge a dealer (out of warranty, neglect, abuse or missing parts), the dealer would be called and told of the situation, about the charges and would be asked for a valid credit card number for billing purposes.

Note: For Clarion radios please refer to the Administrative Bulletin 97-4.



Trailers Warranty and Repair

Bombardier Recreational Products Inc. does not stock any parts or administer warranty for these trailers. To help identify trailer manufacturer, the first characters of serial # for each brand we have used are listed with the manufacturer information.

Karavan: Karavan Trailers, 100 Karavan Dr., Fox Lake, WI. 53933
Serial # **5KTB** 920-928-6200 fx 920-928-6201 #128 Leo Merkes
karavan@powerweb.net

Rivalair: Out of business. For parts- Call Karavan.
Serial # **2RV** Trailer warranty was 1 year administered by
Bombardier Recreational Products Inc..

Shorelander: Midwest Industries, Hwy 59+175, Ida Grove, IA. 51445
Serial # **1MD** (712)364-3365 fx (712) 364-3361

Explorer Tube Warranty and Repair

- Tubes are covered under warranty by Bombardier Recreational Products Inc. for 1 year.
- Hypalon material is covered by the manufacturer for 5 years

For repair: Dockside Inflatable Service (Gary Carman)
519 S.E. 32nd CT.
Fort Lauderdale, FL, 33316
(954) 527-1399 fx (954) 527-5146 Cel (954) 270-8457
docksideis@aol.com

Georgian Bay Inflatables (Brad Ansell)
79 Chanplain Road
Penetang, ON. Canada, L9M-2G2, (705) 549-6643

Fiberglass Warranty and Repair

- There is a 60 month hull structural warranty on all 14' and longer Sportboats.
- To claim use system 12.
- You need to get an authorization from a Service Representative.
- Use these part numbers on your Warranty Claims:
 - Hull p/n – 999999000
 - Deck p/n – 999999001
 - Assy p/n – 999999002



Sport boat Information (For dealer only)

Bombardier Sea-Doo Sportboat, and Fishhawk

Dealer Technical Support: US – (800) 366-6992
CA – (800) 361-9980

Customer Assistance: US – (715) 848-4957
CA – (819) 566-3366

Johnson/Evinrude (For dealer only)

Technical Support: US + CA – (800) 888-4662

Customer Assistance: US + CA – (847) 689-7090

Mercury (For dealer only)

Dealer Technical Support: US – (920) 929-5884 or fax (800) 842-4550
CA – (905) 816-4751 or fax (800) 663-8334

Technical Training: US – (920) 929-5220 or fax (920) 929-5929
CA – fax (800) 663-8334 or (905) 567-8515

For faster service fill out a "Quick Fax" or "OptiMax DDT Worksheet" and fax it to Mercury.

Customer Assistance: US – (920) 929-5040
CA – (905) 567-6372



RPQ Reporting (Reports on Performance and Quality)

RPQ reporting is necessary in order to relay all information to the Engineering Department.

This process ensure that any network concern will be well documented to provide an accurate response in the shortest period of time possible. Please also refer to the Administration Bulletin 2000-02 for more details.

Below is a sample of the main RPQ screen each Service Representative must fill with your help. By compiling data, we can evaluate any trends development in the field. Please be prepared to provide all pertinent information.

Mandatory fields :

- Dealer #
- Model and serial number
- Description of concern
- Mileage/hour, temperature, any special condition, etc...

Feel free to contact your Service Representative to report any issue. A form is also available in the Annexes Section; it can be hand filled and faxed to a Service Representative.



Importance of PDI

Was the PDI Check List properly filled and filed?

Was it signed by the customer?

Legal protection

Documented proof that you have reviewed with the customer the operation and maintenance procedures for the vehicle.

Sell : value for the money

Give the customer assurance that a proper and Pre-delivery inspection has been performed on the vehicle. As well as the ability to show all the steps required to justify the expense of “set-up charges”.

Professionalism

In today’s market place customers have come to expect nothing but the best from a well trained service department. With the PDI sheet completed and signatures from each person involved you can show your commitment to excellence. When a customer leaves your dealership he should be aware of and have, all operators and safety guides, as well as his sales information, PDI sheet and proof of registration.

Where do I find this document?

It is included with every BRP recreational vehicle.

I would like to know more about it!

There is an easy way to learn more about the delivery process; you may want to view the DVD:

**Introduction to
Dealer Development Training
DVD Volume 1
P/N 219 700 256**

From the B.R.P.T.I. (Bombardier Recreational Products Training Institute) DVD series.



BOMBARDIER
RECREATIONAL PRODUCTS



MODEL NUMBER	HULL IDENTIFICATION NUMBER (H.I.N.)

PREDELIVERY CHECK LIST

THIS CHECK LIST MUST BE USED IN CONJUNCTION WITH THE PREDELIVERY BULLETIN OF THE APPLICABLE WATERCRAFT.

NOTE PERTAINING TO THE DESS (Digitally Encoded Security System)

The watercraft cannot be started and used without programming the safety lanyard.

The use of the following tool is mandatory for programming: VCK (Vehicle Communication Kit) and the B.U.D.S. (Bombardier Utility and Diagnostic Software) (P/N 529 035 844)

OR

MPEM programmer (P/N 529 035 878) with version 3.3 and up (except on 4-TEC models).

For detailed information pertaining to the use of the VCK, use the help menu inside the B.U.D.S. software or if using the MPEM programmer, refer to the guide that is shipped with it.

When programming, first start by erasing the previously programmed keys at factory THEN, program the safety lanyard that is shipped with the watercraft.

NOTE: Some parts or accessories may apply to a particular model only. To find out specific parts or accessories of a watercraft, refer to appropriate *Predelivery Bulletin*.

GENERAL INSTRUCTIONS

FINAL INSPECTION	<input checked="" type="checkbox"/>
<i>Inspect movement and operation of:</i>	
Steering and related components and assisted steering systems	
Throttle lever, operation and end-play verification	
Fuel valve	
Choke lever	
VTS	
Monitoring beeper	
Safety lanyard, Sea-Doo learning key™, DESS and engine start/stop button	
All gauges (Info Center, speedometer, etc.)	
Options and accessories (use B.U.D.S. to activate added electrical accessories) (4-TEC models)	
Read fault codes with B.U.D.S.	
Complete recall or factory-directed modification (if applicable)	
Leakage	
Wash trailer with fresh water	
Clean watercraft thoroughly and polish	

PARTS INSTALLATION	<input checked="" type="checkbox"/>
Sponson	
Deflector	
Venturi housing	
Jet pump nozzle	
Handlebar assembly	
Steering cable	
Storage compartment cover	
Storage cover lock pin	
Access panel	
Battery and vent tube	
Throttle cable	
Choke cable	
Wiring harnesses	
Front air vent tube	
Trailer wheels	
For watercraft used in Canada: Install the Canadian Coast Guard compliance label	
French labels (if applicable)	
Other	

AT SALE, EXPLAIN TO OWNER	<input checked="" type="checkbox"/>
The <i>Operator's Guide</i> and <i>Supplement</i> (if applicable), <i>Safety Videocassette</i> , safety instructions, on-product warnings labels and limited warranty policy.	

AT DELIVERY	<input checked="" type="checkbox"/>
Complete and return warranty registration signed by owner.	

LIQUIDS	<input checked="" type="checkbox"/>
Fill up battery with electrolyte	
Fill up fuel tank	
Fill up oil injection reservoir. On 2-stroke models, make sure to comply with engine requirements	
Check engine oil (4-TEC models)	
Check coolant level (4-TEC models)	

PREPARED BY:	DATE: day month year
--------------	-----------------------------

DEALER NO.:

INSPECTED BY:	DATE: day month year
---------------	-----------------------------

DEALER SIGNATURE: x

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 watercraft. I have also received a copy of the *Operator's Guide* and *Supplement* (if applicable) and *Safety Videocassette*, for my watercraft. I understand that I should take a safe boating course and will instruct users of my watercraft on proper and safe use.

OWNER SIGNATURE: x	DATE: day month year
-----------------------	-----------------------------

PRINT:

ADJUSTMENTS	<input checked="" type="checkbox"/>
Steering alignment and O.P.A.S.™(Off-Power Assisted Steering)	
Throttle cable	
Choke cable	
Idle speed	
Fuel acceleration pump	
Reverse system	
VTS system	
Information center: set the language and units	
Other	

<input type="checkbox"/> init. The Bombardier Extended Service Terms program (B.E.S.T.) has been presented to me.

For DI models only:
 init. The dealer has informed me the importance of using the **Formula XP-S II synthetic injection oil**.

init. The dealer has verified that the injection oil reservoir has been filled with **Formula XP-S II synthetic injection oil**.

OWNER SIGNATURE: x

FUEL SYSTEM PRESSURIZATION	<input checked="" type="checkbox"/>
Pressure test fuel system	

NOTE: File this document in the watercraft file. Give a copy to owner.



The BRP ELECTRONIC PARTS CATALOG is here!

- **FAST** parts look-up
- **ACCURATE** up-to-date information
- **INTEGRATED** into BOSSWeb and many Dealer Management Systems

Ordering your parts has just become that much easier!

The Bombardier ATV, Sea-Doo Watercraft, Sport Boat Electronic and Ski-Doo Parts Catalogs are now available on the Web or on the PartSmart CD.

The Web version of Electronic Parts Catalog is included in the One Charge Concept so there is **NO** extra billing.

Here are some of the Electronic Parts Catalog highlights:

	Web Version	PartSmart CD
Parts look-up & ordering	✓	✓
Hotspotting for easy part identification	✓	✓
Updates for error reduction	Weekly	Bi-annually (ability to bring corrections)
Print Part images and Part lists	✓	✓
Can be installed on a single workstation or on a network		✓

Web Example

PartSmart CD Example

*Please note that PartSmart does not interface with "Lightspeed / Bell & Howell (ProQuest)" Dealer Management Systems. If you are a user of FicheFinder integrated to Lightspeed, you will remain supported through this supplier.

Visit the web version at: www.bossweb.brp.com/ComCenter/PartsCatalogs

For assistance, do not hesitate to contact the BOSSWeb Help Desk:
☎ (800) 366-6992 (USA) ☎ (800) 361-9980 (Canada)



Accident Procedure

Since Bombardier Recreational Products Inc. wants to monitor all aspects of accidents involving any BRP product, please call our toll free hotline to report the accident and communicate to us any relevant information.

In general :

If you are aware that a BRP product is involved in an accident, which has the potential to be related to product quality, or you or BRP are being accused as being responsible, listen and report all the facts (names, addresses, serial numbers, circumstances, etc.).

In the event of fatality or serious accident :

If a fatality or serious injury occurs in your area involving any BRP product, we ask dealers to adhere to the following procedure. Immediately contact one of the following:

Nancy Larsen (English)
Legal Coordinator

☎ (800) 366-6992
ext.: 4967

☎ (715) 847-6879

Rich Klein (English)
Manager Technical Support

☎ (800) 366-6992
ext.: 6836

☎ (715) 847-6879

René Quenneville (French)
Director After Sales Services &
Dealer Development

☎ (450) 532-2211

☎ (450) 532-6313

- The accident report should be completed and signed by the owner/operator; then sent to Bombardier Recreational Products Inc.'s Wausau Office. (fax: 715-847-6879; Mail: 7575 Bombardier Court, Wausau, WI 54401). Ensure the date of narrative is filled in.
- Call a Service Representative to open a file... you will be advised what to do next.
- Report facts only. Do not investigate or commit yourself, Bombardier Recreational Products Inc., or others.
- The owner should bring the vehicle to you in order to facilitate the investigation.
- Isolate and cover the vehicle. Do not make any repairs pending further investigation.
- Take photographs of the damaged product, as verification of the damages, and to avoid any potential claim that the product was destroyed, modified or the evidence was lost.
- If case of PERSONAL INJURIES - DO NOT REPAIR THE PRODUCT. Contact one of the above contact person.
- Make no admissions, or assumptions on the cause.
- Keep Bombardier Recreational Products Inc. informed of any further developments.

The Bombardier Recreational Products Inc. Accident Report Form is available from BOSSWeb or in the Annexes Section of this book.



SECTION

2

SEADOO®

2004 Technical Update

What's New

The objective of Section 2 is to give the opportunity to dealers and Technicians to learn and understand the differences between the 2003 and 2004 models.



Bombardier Recreational Products Inc.

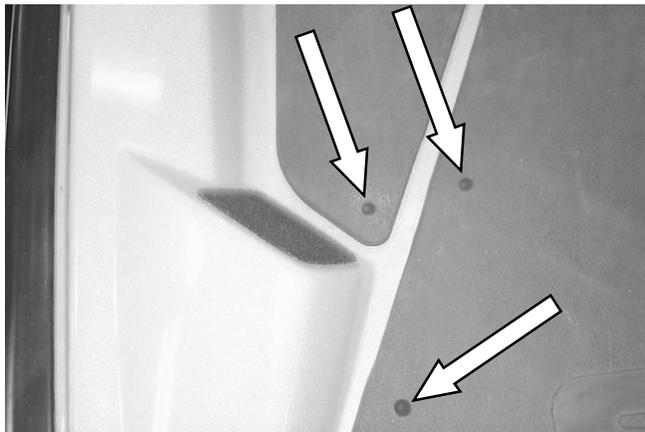
What's New :

Carpet are now riveted.

Why :

Added strength. This is a running change.

ON ALL PWC



What's New :

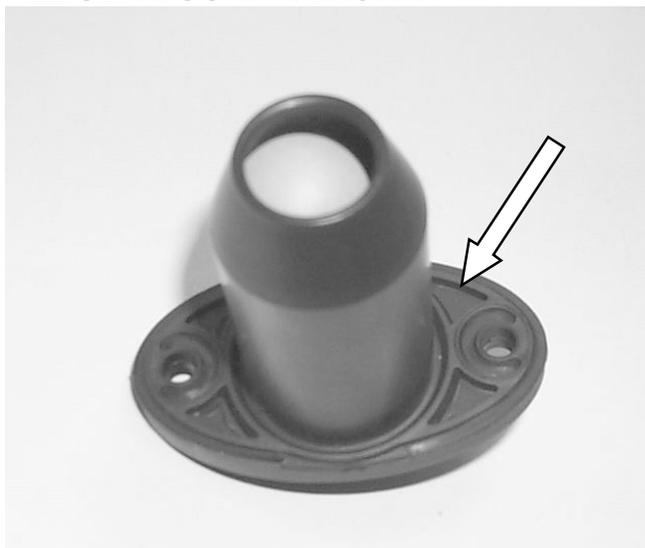
A gasket is now integrated with the drain plug assembly.

Why :

New design.

Note: in case of replacement (even if using a new part); silicone must be used for re-assembly to ensure a watertight seal.

ALL SEA-DOO WATERCRAFT



What's New :

GTI RFI: is similar to the "LE" version, except for:

- A fuel & oil gauge replaces the info center, speedometer and tachometer
- No mirrors
- No folding reboarding step
- Simpler carpets
- No metallic paint

Why :

New entry level package.

GTI RFI (STD)



What's New:

Engine painted black.

Why :

Standardization.

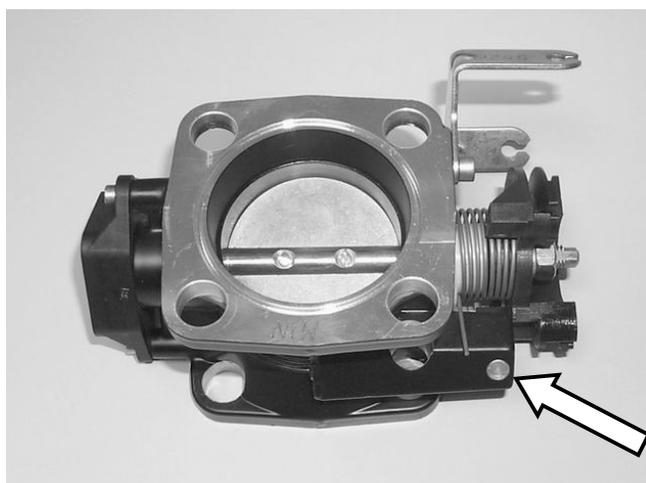
ON ALL 2-STROKE ENGINES**What's New :**

The idle screw is factory adjusted and now has a tamper protective cap. It should never be adjusted.

Why :

To meet the California CARB low emissions standards.

A high altitude kit will be available. It will consist of a calibrated spacer to increase the throttle plate opening. Simply secure the high altitude spacer over the existing version.

ON ALL RFI ENGINES**Important:**

The throttle and the idle screw no longer need to be loosened to do the TPS close position setting. The procedure is similar to the DI. Refer to the Shop Manual for all the details.

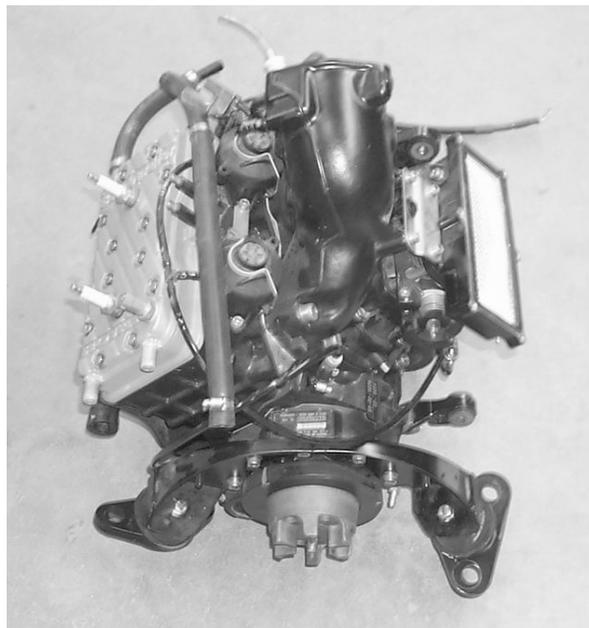
What's New :

New cylinder port design & California CARB calibration of the electronic module. Note that the engine runs on 1 cylinder at idle. Fuel is cut from the PTO cylinder so only the MAG cylinder runs.

Why :

For lower emissions and to meet the California CARB Standard. The MY 2004 is approximately 10% more fuel efficient than previous RFI models.

ON ALL RFI ENGINES



What's New :

New exhaust water regulator needle.

Why :

The new calibration is more linear and it will provide a more progressive water injection flow. This new calibration will not retrofit to previous models.

ON ALL RFI ENGINES



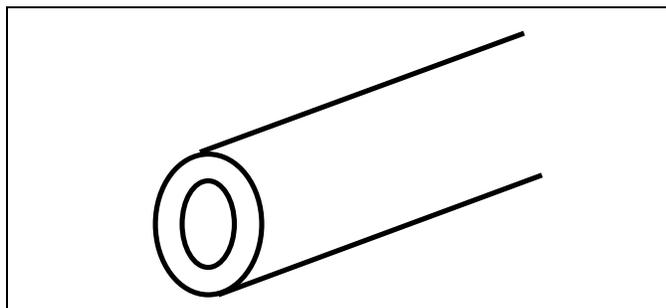
What's New :

Fuel hose size and thickness were increase.
Was 1/4 ID
Now is 5/16 ID

Why :

Standardization with the DI.

ON ALL ENGINES, EXCEPT 717



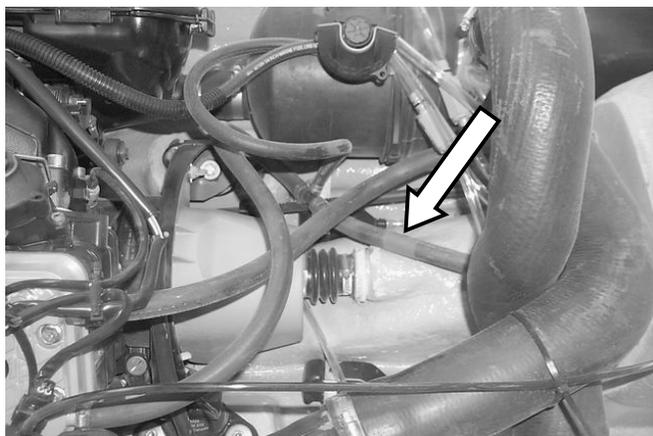
What's New :

ALL 2-STROKE ENGINES

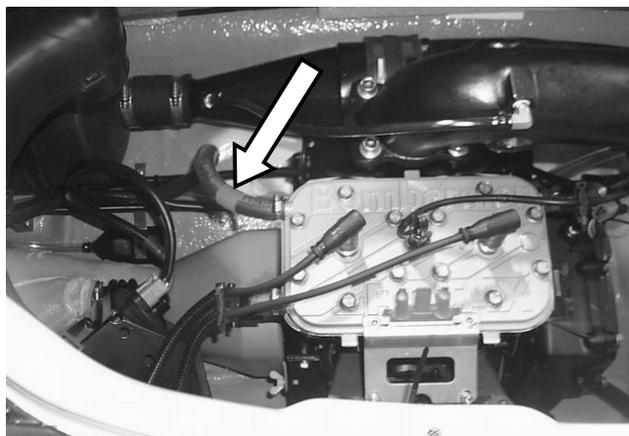
"Identifying Red Band" on the cooling hose.

Why :

To clearly show which cooling hose and where to pinch it when towing the watercraft.



GTI RFI & GTI RFI LE



GTI & GTI LE

What's New :

ALL RFI & 4-TEC

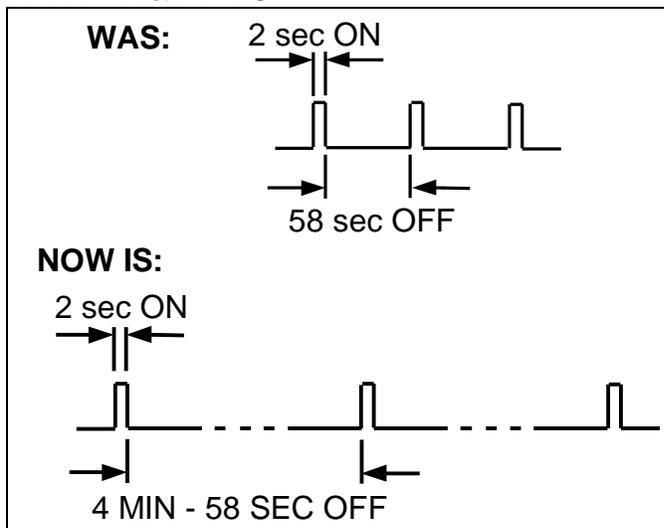
Frequency of beeper for low fuel:

Now is: 2 sec ON / 4 min 58 sec OFF

Was: 2 sec ON / 58 sec OFF

Why :

More convenient.



What's New :

Front bumper attachment design: a lip and molded clips are now integrated to the bumper.

Why :

Stronger component.

ALL EXCEPT XP

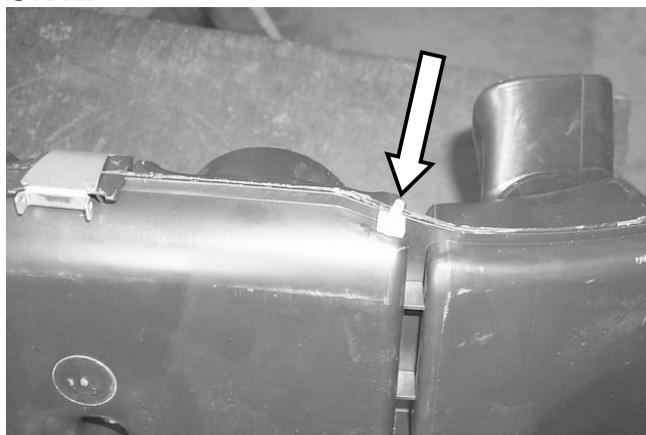
**What's New :**

The fogging nozzle can now extend further away from the air box.

Why :

Ease access.

ON XP

**What's New :**

New 2-tone carpet with "Sea-Doo" in a different color that matches the color of the watercraft.

Why :

Improved look.

ON ALL GTX LIMITED, GTX WAKEBOARD
& RXP

What's New :

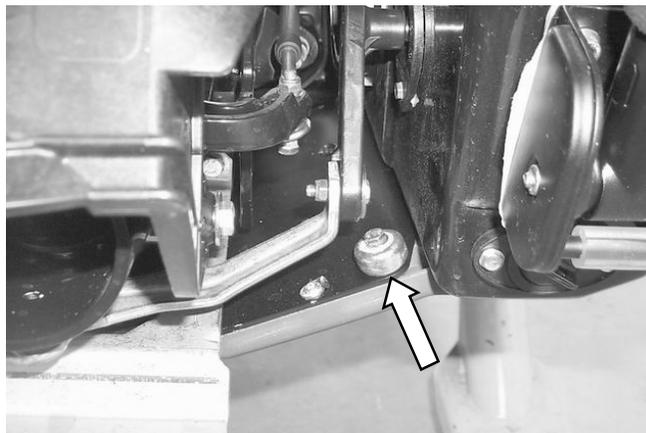
An anode was added to the ride shoe. For extreme conditions, there is also a similar location to add a second anode on the other side (left side) of the ride shoe.

Why :

For improved resistance to corrosion.

The new ride shoe fits on previous models, but the anode only will not fit alone on previous ride shoe versions.

ALL THE GTX



What's New :

Larger tubes are used to cover the OPAS (Off Power Assisted System) rods.

Why :

Ease rod movement.

NEW

ON ALL MODELS WITH O.P.A.S.



PREVIOUS

What's New :

OPAS (Off Power Assisted System) vanes are no longer moving up and down.

Why :

Fewer moving components for added reliability. Water lines were eliminated.

ON ALL GTIs & RXP



What's New :

Each of the 3 types of 4-TEC engine has its own grade of steel for the exhaust goose neck.

Parts are coded with a color dot:

4-TEC Std: Yellow

4-TEC Supercharged: Blue

4-TEC Intercooled Supercharged: Red

ALL 4-TEC ENGINES



Why :

Each one is calibrated to endure the different operating temperatures. Always use the right component for the right engine type.

What's New :

ON ALL 4-TEC ENGINES

New noise canceling system Part of D-SEA-BEL . This polymer resonator replaces tuned components and the resonator that were use in the previous versions.

Why :

Simpler exhaust system, lighter component, less exhaust restriction and reduced sound level.



What's New :

The exhaust junction with the hull is now assembled with silicone and a gasket

Why :

Standardization: Similar to the 2-stroke models.

ALL GTX 4-TEC**What's New :**

A through hull fitting has been developed for servicing.

- GTX 4-TEC naturally aspirated and Supercharged P/N 292 000 975
- RXP P/N 292 000 974

Why :

New part for service.

Retrofits the previous GTX 4-TEC models.

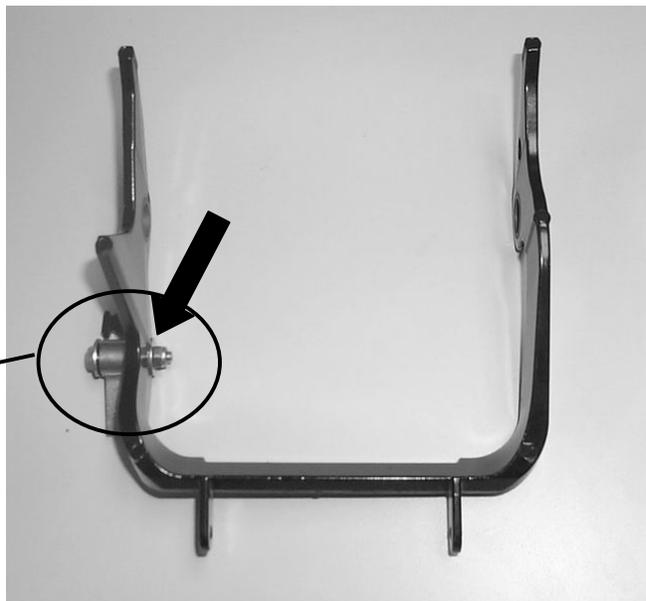
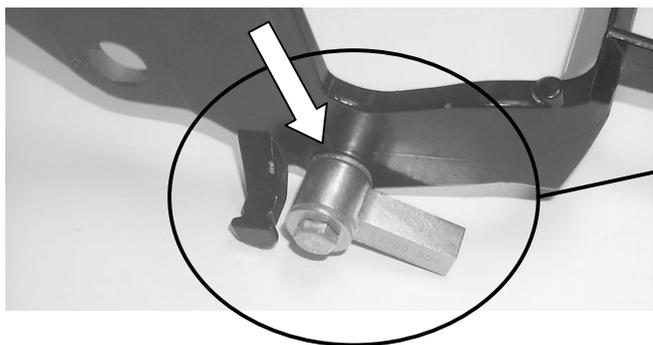
ON ALL 4-TEC MODELS

What's New :**ALL EXCEPT THE XP & 3D**

2 washers were added to the reverse gate cable assembly; one on each side of the gate bracket.

Why :

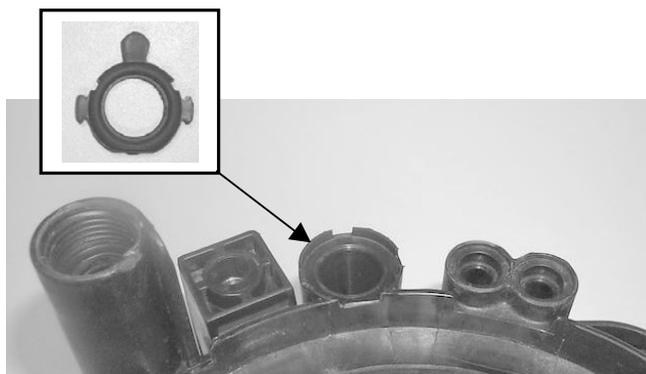
Increase part's life span.

**What's New :****ALL 4-TEC ENGINES**

The pump support was modified: retaining ribs were added to retain the water restrictor in place.

Why :

Easier to re-assemble.



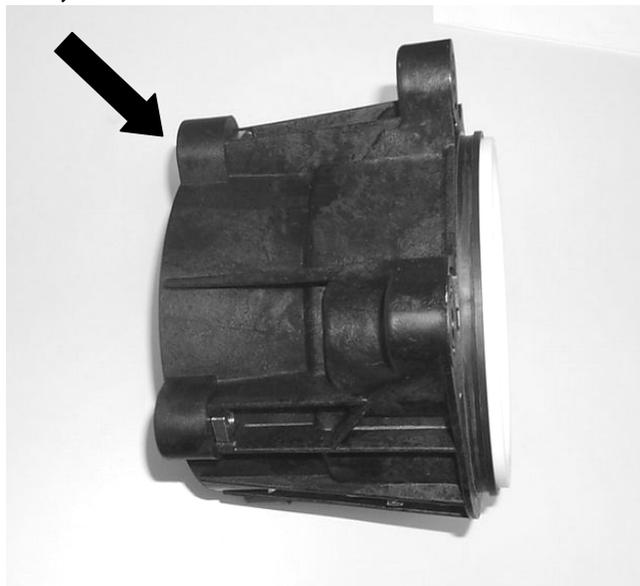
What's New :

The anchoring tabs on the impeller housing to the venturi are now machined flush with the pump housing.

Why :

For improved fit between the impeller housing and the venturi. The venturi remains the same.

Fits on previous models.

**GTX 4-TEC NATURALLY ASPIRATED,
GTI, XP & 3D****What's New :**

A larger bearing is now used in the composite impeller housing.

Why :

Stronger component.

GTX 4-TEC NATURALLY ASPIRATED

What's New :

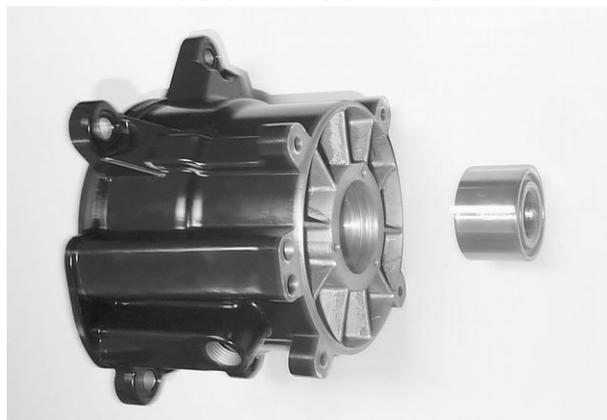
New aluminum impeller housing.

Why :

To match the performances of the 4-TEC supercharged and intercooled supercharged engines.

The aluminum pump no longer requires the jet pump side support bracket that was used on the GTX 4-TEC Supercharged in 2003.

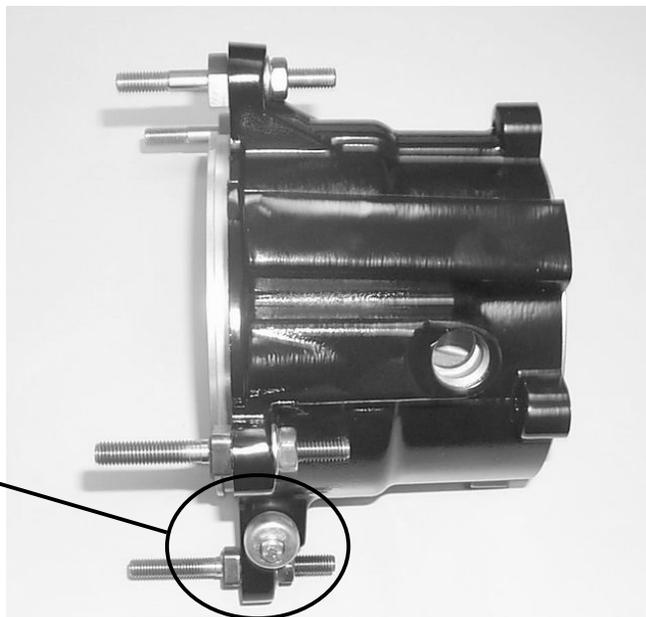
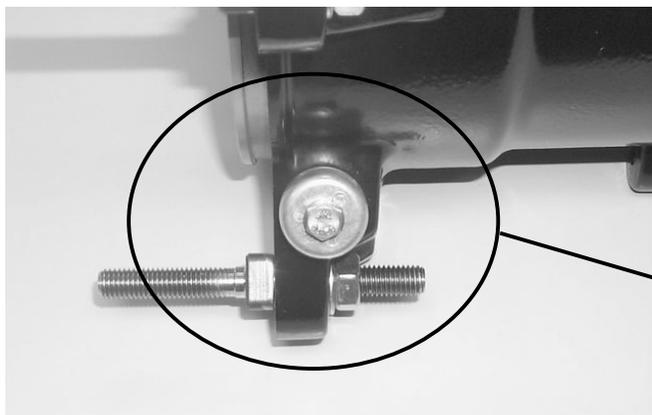
GTX 4-TEC SUPERCHARGED & RXP INTERCOOLED SUPERCHARGED



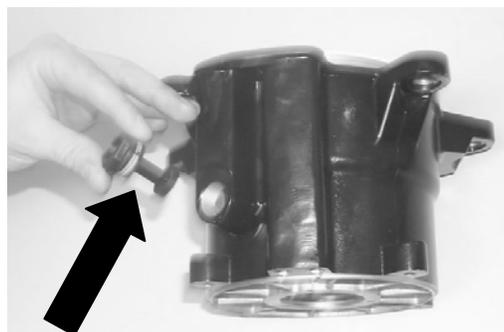
The new aluminum impeller housing uses the same larger bearing as the "composite" impeller housing used in the MY 2004 GTX 4-TEC naturally aspirated.

Refer to Service Bulletin 2004-7.

An anode is integrated to the impeller housing for added resistance to corrosion.



New water passages for the exhaust cooling are part of the new design, as well as a new strainer plug. The hole sizes were specially calibrated to minimize debris entering the exhaust system.



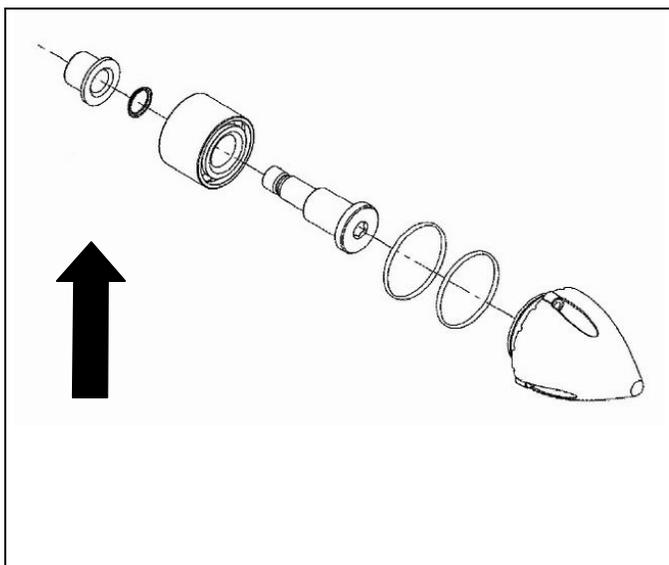
What's New :

GTX 4-TEC NATURALLY ASPIRETED, RXP SUPERCHARGED & INTERCOOLED

The impeller sleeve is now in 1 part.

Why :

Simpler component. It fits on previous models.



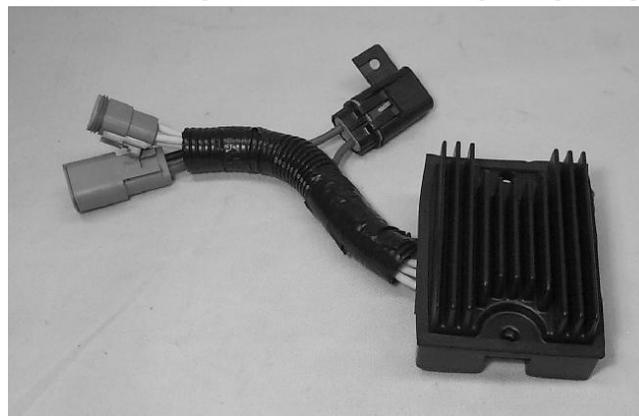
What's New :

ALL WATERCRAFT WITH 4-TEC ENGINES

The regulator rectifier now incorporates a voltage peak protection.

Why :

Improved part.
Fits on previous models.



What's New :

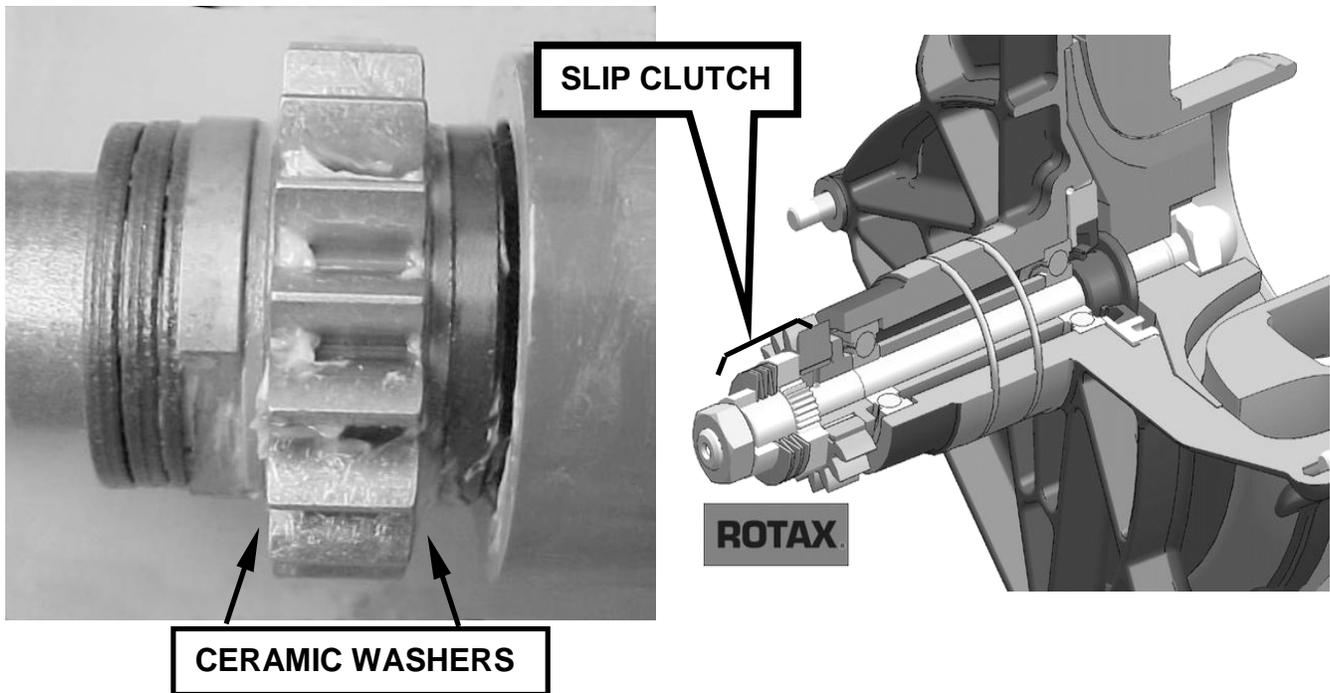
4-TEC SUPERCHARGED ENGINES

The Supercharger slip clutch now incorporates ceramic washers on both sides of the gear.

Why :

To increase life span.

Note that Bombardier 4 stroke oil 10-40 (P/N 219 700 346) or equivalent should be used with any 4-TEC Supercharged & Intercooled Supercharged engines to ensure the right lubrication level of the slip clutch.



What's New :

ALL GTX 4-TEC

- Speedometer now shows up to 130 kmh (80mph); was 110 (70 mph).
- The tachometer now shows up to 9000 rpm; was 8000 rpm.

Why :

Standardization with the RXP.





What's New :

Two-tone cut and sew seat.

Why :

New "Limited" package.

GTX 4-TEC LIMITED SUPERCHARGED



What's New :

A removable GPS is integrated to the glove box under the handlebars.

Why :

Part of the new Limited package.

GTX 4-TEC LIMITED SUPERCHARGED





What's New :

Convex mirror.

Why :

Added convenience

GTX 4-TEC WAKEBOARD EDITION



What's New :

Wakeboard rack.

Why :

New feature for added convenience.

ON GTX WAKEBOARD EDITION





SEADOO®

2004 Technical Update

Troubleshooting & Tech Tips

In this section you will find the most current tips and solutions concerning situations that occurred during last season, as well as the latest updated procedures.

4-TEC Engine:	p. 3-3
2 Stroke Engines	p. 3-17
DI & DI LE Engine	p. 3-18
General	p. 3-19

Note: All the troubleshooting procedures should be used in conjunction with the Shop Manual and other Bombardier Recreational Products Inc. service publications.

4-TEC Engine: Supercharger Slip Clutch

If a supercharged Sea-Doo comes into your shop that is low on rpm's:

- Check for faults using BUDS
- Check the condition of the spark plugs
- Verify the engine condition by a compression test
- Perform a leakdown test if the compression varies more than 5 lbs between the cylinders.

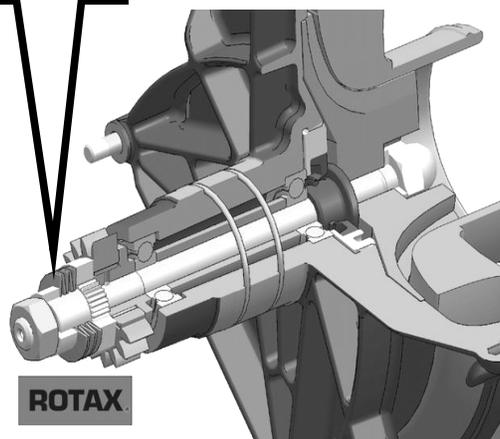
If those items are ok; then check the condition of the supercharger's slip clutch.



SLIP CLUTCH

Refer to page 05-03-4 in the 2003 Shop Manual. If the slip torque is less than specs, then there is a possibility that the slip clutch is worn and it must be repaired.

Ceramic shims were developed to be put on both sides of the gear on the new my2004 supercharger intercooled slip clutch. There is now an update kit available that has these shims, along with the gear, bearing, and the rest of the parts required for rebuilding it.



4-TEC engine supercharger slip clutch update kit part number: 420 881 940.

Refer to the instruction sheet on BOSSWeb under ComCenter, then to Instruction Sheets

All supercharged engines are now produced will employ these ceramic shims.

It is important to note the once these shims are installed, only Bombardier 4 stroke oil 10w-40 (P/N 219700346) or equivalent should be used. The same oil that lubricates the engine lubricates the supercharger slip clutch. Using any other type of oil, synthetic oil or adding additives to oil, may cause pre-mature slippage of the slip clutch.

The same oil is recommended on all my 2004 sea-doo's with superchargers.

Refer to Service Bulletin 2004-1 regarding recommended oil on 4 stroke models.



4-TEC Engine: OPS and OTPS

We heard many times last year regarding customers that would bring their Sea-Doo 4-TEC to the shop saying that it would only go so fast, that the OIL warning or Check Engine would be displayed on the cluster, the buzzer would go off, LED would flash on the cluster, etc. The problem was hard to duplicate, and at times no fault codes were recorded.

We had some issues with both the OPS and OTPS in that they did not provide a proper ground to the ECU. Many times the above problems were the end result of a faulty OPS or OTPS. It is important to understand that these switches ARE NOT related. They have entirely separate circuits! The confusion comes in because they are both related to oil and they are both pressure switches.

- **OPS: Oil Pressure Switch** **420 256 885**
- **OTPS: Oil Tank Pressure Switch** **420 256 777**

We issued a **Service Bulletin (2003-13)** regarding these switches. If after properly troubleshooting the respective switch and circuit, and nothing was found that could lead to the above described issues, replace the switch that would cause the problem.

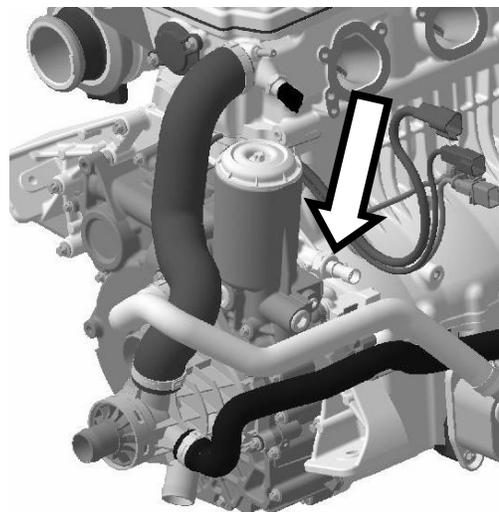
Many parts were needlessly replaced last year, and hours of troubleshooting was wasted because tech's were mistakingly troubleshooting the wrong switch and respective circuits. Below are the facts and troubleshooting tips on these 2 switches.

OPS (Oil Pressure Switch)

It's located on the right hand side of the engine, just forward of the oil filter.

A normally open switch that will switch to ground and provide that ground to the ECU, if there is sufficient oil pressure (26-32 PSI and higher) *and* the RPM's are greater then 3250.

If oil pressure is below spec, the switch will not activate, and the ECU will not receive a ground. As a result, OIL will be displayed on the Cluster, the LED will illuminate, and the buzzer will continuously sound. It will also be in the 2500 Limp Home Mode. No fault codes will be recorded!



The same thing will happen if the switch is bad, and does not provide a ground to the ECU!

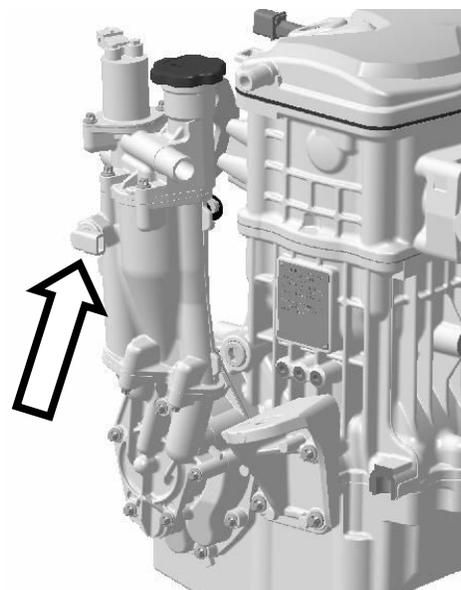
Troubleshooting the OPS

- Verify Oil Pressure
- Verify continuity between the OPS connector and the ECU connector.
- Ensure OPS connector is making good contact with the OPS.
- Ensure the ECU Kostal connector is making good contact with the ECU.
- You can fool the system by starting the engine, then grounding the OPS connector. If the problem goes away (and of course the oil pressure is within specs), then the wiring from the connector to the ECU is OK, and the switch connection or the switch itself is most likely the cause. (If the connector is grounded prior to starting the engine, the ECU sees a ground that is not supposed to be there, and Fault Code P0520 will be tripped).
- Again, at times the problem may be hard to duplicate. So, if after troubleshooting and no discrepancies are found, replace the OPS.

OTPS Oil Tank Pressure Switch (or as it is call in the Service Manual OSPS Oil Separator Pressure Switch).

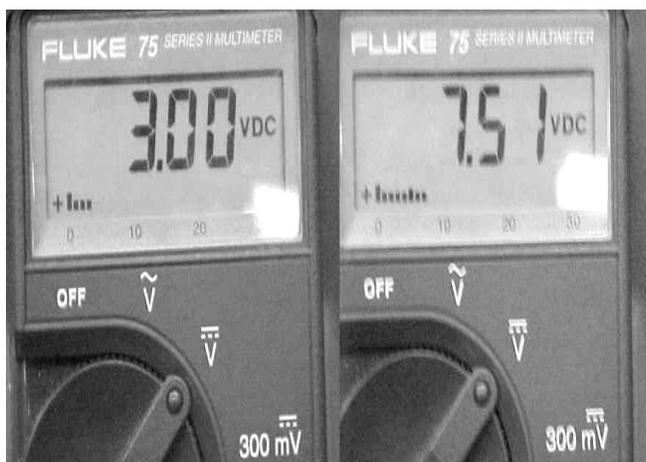
On the 4-TEC engine, the OTPS (Oil Tank Pressure Switch) is actually a crankcase pressure switch and is located at the front of the engine on the oil/air separator assembly. This switch is normally closed to ground, so in normal operation the switch provides a ground to the ECU. If the crankcase pressure exceeds approx. 4 psi, the switch opens, the ECU loses the ground and activates fault code P-1202 *after 3 to 5 minutes* of running, CHK ENG will displayed on the Cluster and the engine will go into the 5000 RPM limp home mode.

The same thing will happen if the OTPS is bad!

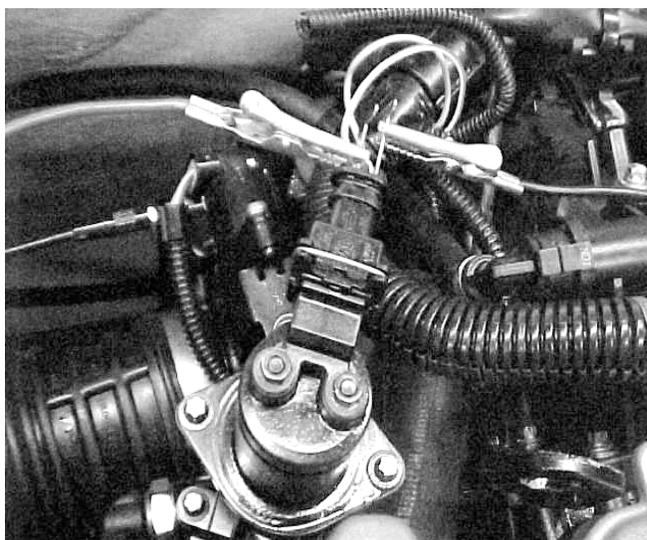


The **blow-by solenoid**, located on the oil/air separator, has 2 blow-by valves attached to it. When it is energized, the 2 blow-by valves lift to uncover ports and allow the crankcase to vent. It energizes with an audible 'click' when the lanyard is installed on the DESS post. The MPEM supplies the voltage, the ECU provides the and controls the ground. Initially, the blow-by solenoid is energized by approx. 7.5V. After a few seconds, the voltage drops to around 3V, enough to keep it energized.

If the ECU loses its ground from the OTPS, it thinks that the blow-by solenoid is not energized because there is crankcase pressure. The ECU will then try to re-energize the blow-by solenoid by controlling the ground to the blow-by solenoid to allow a cycling of 7.5V down to 3V, back up to 7.5V and so on for 3 to 5 minutes. If after that time, the OTPS does not provide a ground to the ECU, fault code 1202 will activate and the engine will go into the 5000 RPM limp home mode.



In order to measure the voltage as described above, the 2 pin connector must be connected to the blow-by solenoid, and probed from the backside of it. If the connector is probed from the front side of it when it's disconnected, battery voltage will be read. The low voltage requires less amps and allows the solenoid to run cooler.



So to recap, if the blow-by solenoid is not working, crankcase pressure builds, the OTPS will open and the ECU will lose its ground. If after 3 to 5 minutes the ECU does not get its ground back from the OTPS, Fault Code 1202 will be activated and the engine will go into the 5000 RPM limpo home mode.

The same thing will happen if there is a problem with the wiring, connectors, or the OTPS itself that would cause the ECU to lose the ground from the OTPS circuit!

If the Fault Code 1202 is Active or Occurred check the following;

- Check for Battery Voltage at the purple/grey wire going to the blow-by solenoid.
- Inspect wiring and connectors related to that circuit.
- Verify the Blow-By Solenoid is good and that the blow-by valves are lifting to uncover the ports.

You can fool the system, by disconnecting the OTPS connector and manually grounding it. If the problem (1202 code) goes away, there is an issue with the connector, or the OTPS itself (if you know for a fact no crankcase pressure is present). If the problem remains, the wiring, Kostal connector or the ECU (which is rare) is the problem.

If you can duplicate the problem, and the 1202 code becomes Active, carefully unthread the oil filler cap, and listen for pressure to escape. If pressure is present, there is a problem with the vent system. If no pressure is present then the wiring, connectors or the OTPS, is at fault. (rarely will the ECU be bad).

Again, this problem can be hard to duplicate. If everything checks out replace the OTPS.

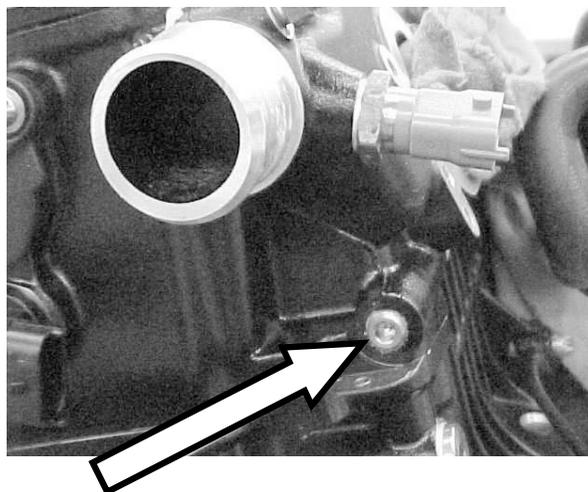
4-TEC Engine: Oil Pressure Check

The procedure for checking the oil pressure in the my 2003 Shop Manual is less than correct.

It states to remove the plug next to the oil filter, but that plug is no longer there on my 2003 and above engines.

There are two options:

The Oil Pressure Switch can be removed to allow the use of that hole; but space is limited in that area on a supercharged engine. Note also that the Oil Pressure Switch connector must be grounded after the engine is started to allow the engine to rev above 2500 RPM's.



The oil pressure can be also checked on the head of the engine. The pressure values will be the same when the engine is **cold**, however the values will be reduced as the engine heats up; because the clearance of the camshaft bearings (aluminum head) expands much more than the steel camshaft; which leads to higher oil flow.

Hot idle	20-30 PSI
Hot 4000 to 6000 RPM's	25-35 PSI

Note: At either location, a 1/8" npt pipe extensions may have to be used in order to connect the pressure gauge.

4-TEC Engine: Checking Oil & Oil Accumulating in the PTO Cover

In the past 2 years we have had some confusion regarding checking the oil and oil accumulating in the PTO cover. While we have had some failures regarding the scavenge pump, and some oil galley blockages, in most cases there is nothing wrong.

It states in the owners manual to check the oil when the engine is warm. That's important as cold oil does not return to the oil tank as fast. Experience has told us, the best way to check the oil, is when the engine has reached operating temperature (10-15 minutes riding). That may be a little inconvenient, but unless there is an obvious problem, you may consider checking the oil at operating temps before you start troubleshooting oil accumulation in the PTO cover. Also, consider draining all the oil out of the engine, and putting the correct amount in to be **sure** you have the correct amount in the engine.

With that said in the 2003 Sea-Doo Technical Update Book (219 700 266) we had a section on oil accumulating in the PTO cover. Refer to pages 3-5 through 3-7. It mentions reasons why oil may accumulate there, and over the past year we also came across a couple more areas to check.

There is an insert pressed into the counterbalancer that drives the scavenge pump shaft assy (420 837 542) that must be checked so it does not spin inside the counterbalancer; and the gear on the pump shaft assy itself must be checked so it doesn't spin on the shaft. Even though these items must be checked, it must be noted that there was only a couple failures on each last year.

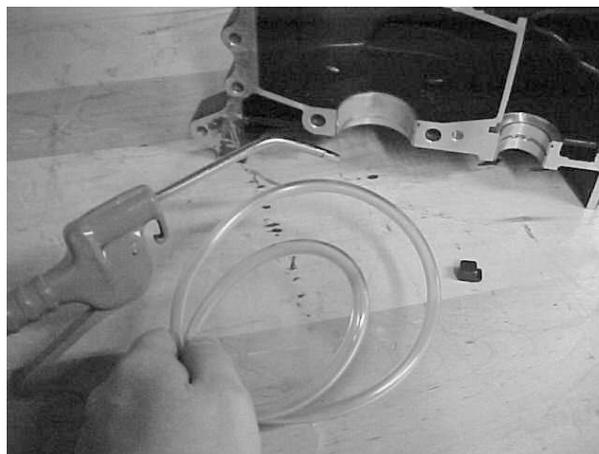
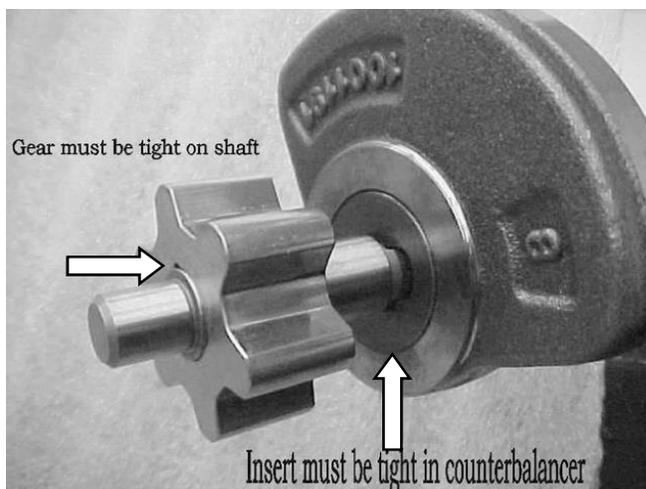
Also pictured in the 2003 Sea-Doo Technical Update Book, page 3-15 is a cam cover tab that was on all my 2002 4-TEC and my 2003 normally aspirated (n/a) 4-TEC's that may break off and get lodged in the return oil galley. Note: all my 2003 4-TEC supercharged models do not have that tab.

If you are satisfied that there is indeed a problem of oil accumulating in the PTO cover, and the scavenge pump is ok, we have successfully found a way to check the oil galley between the PTO cover and the scavenge pump and remove a blockage.

This procedure will require:

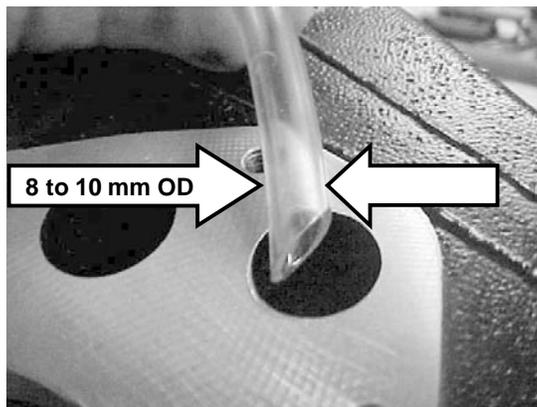
- an 8 to 10 mm od fuel line (72 cm long)
- an air gun
- a 10 to 11 mm steel ball

Cut the fuel line at an angle to allow it to slide easily into the galley.

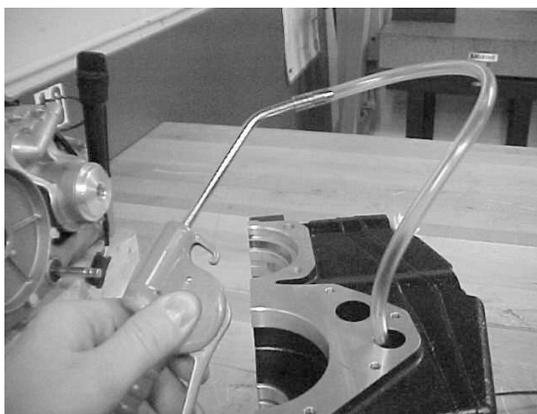


With these tools we will probe the oil passage and push any blockage out. You will have to remove the engine, PTO cover and scavenge pump.

Locate the lower oil galley hole going to the scavenge pump on the bottom half of the crankcase on the front of the engine. Introduce the fuel line into that oil galley while blowing high pressure air through the line at the same time.



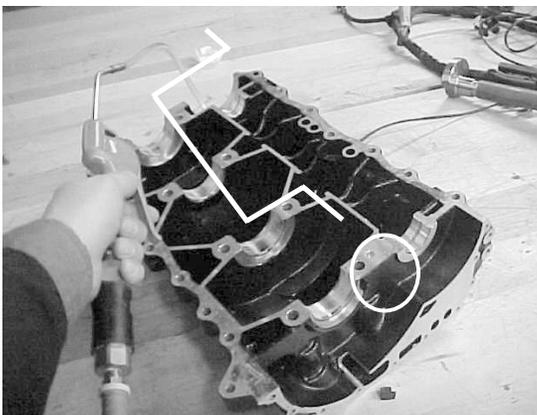
- a. The air pressure will push the piece that may be blocking the galley.
- b. The movement of the fuel line from side to side (caused by the air pressure that passes through it) assists in dislodging the rubber tab or other obstruction which may be blocking the passage.
- c. If your air gun can not be inserted into the hose, then work the hose in as far as you can, then apply pressure.
- D. It is important to understand that the oil galley is not straight through the lower part of the crankcase, it curves around as shown in the drawing below. if the cam cover tab or other obstruction is in the oil galley, it will be stuck in one of the corners, that's why we need to snake the hose through to blow it out.



The blockage may exit the passage shown here with great force. protect yourself.

To ensure the oil galley is clear, put the crankcase on end and insert a 10 to 11 mm steel ball into it. If the oil galley is clear, the steel ball will roll right through it.

The picture here is for clarity purposes. The crankcase does not have to be separated to perform this task.



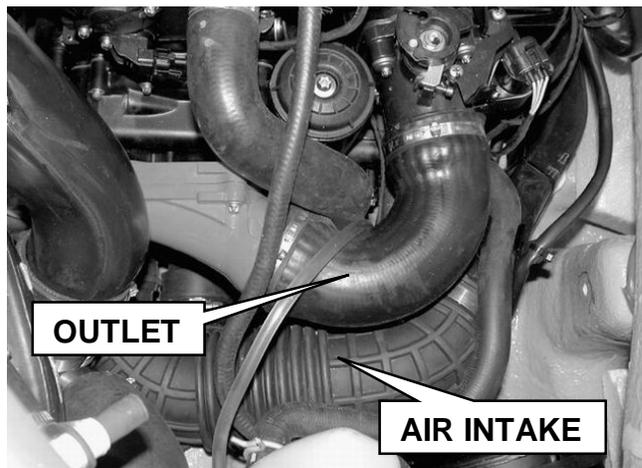
4-TEC Engine: Water-Flooded Supercharger

Here are a few more items that should be done, in addition to what the 2003 Shop Manual states in the Water-Flooded Engine Section, concerning water removal in the intake system and supercharger

Refer to page 02-04-4 in the 2003 Shop Manual.

When the intake hose is removed, lift the front of the watercraft up to help evacuate water from the airbox and intake hoses.

As stated in the manual remove the outlet hose and siphon the water out of the supercharger, but do not reconnect the outlet hose prior to starting the engine.



Most likely there will be some water left in the intake tract, and if the outlet hose is connected, this water would be blown into the intake manifold. Let the engine run a minute or two, then re-connect the outlet hose.

If the unit had water in it for some time, or if it was salt water, the bearings in the supercharger should be replaced.

4-TEC Engine: Oil Filter Cap

There was a running change on the oil filter cap. It has been updated from plastic to aluminum. There are no more plastic caps in stock, therefore if a cap is ordered an aluminum cap will be received.

There are now 2 O-rings used on the cap instead of one

Parts Numbers:

- aluminum cap 420 610 328
- O-ring 420 230 920
(same one as used on plastic cap)
- O-ring 420 850 500



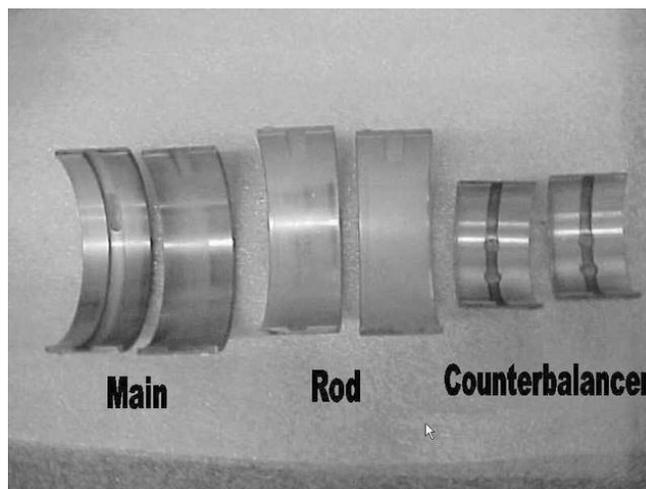
Rebuilding a 4-TEC Engine

Now that the 4-TEC engines are getting older, the opportunity to rebuild them will start to increase. Do not be afraid of this engine, it is very easy to work on.

For example:

There are no pressed fit bearings in the crankcases with the exception of the starter drive bearing.

Insert bearings are used on the rod, main, and counterbalancer. Each has a different configuration, but each of the configurations only have one size.



- No special tools are required to remove the flywheel.
- The head can be removed as an assembly - no need to remove the cam and rocker arms.

Our service dept has rebuilt several engines and we would like to give you some helpful tips when performing this procedure. The first thing that should be done is watch Technical DVD 1 (P/N 219 700 197) which covers the 4-TEC engine. It is also very important to read through the Shop Manual before starting your project. Get yourself familiar in what your about to do.

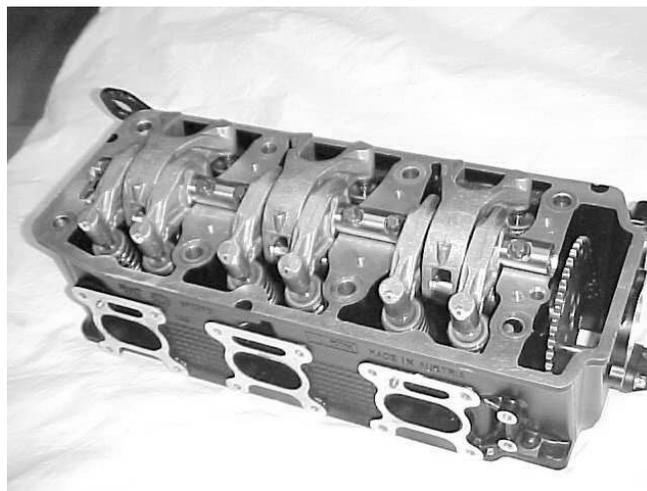
Disassembly:

Get a stand to mount the engine on. It is much easier to work on when it's stable.

Ensure you have all the special tools you need on hand. Note: the first production of crankshaft locking tools (529035821) were made to the exact size of the hole - then a zinc coating was added. Use some emery cloth and remove this coating so it will fit in the crankcase hole.



As stated before, if the head does not need to be disassembled for repairs, it can be removed as an assembly. Before removing it, stake the crankshaft and the camshaft, this makes reassembly much easier.

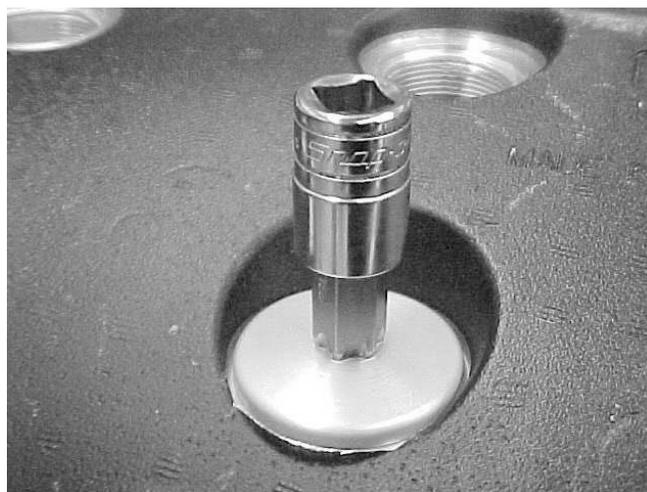


The 8 m 30 x 1.5 plug screws used to cover the main bolts are TORX T-55.

These plug screws have scotch grip on them, and are sometimes hard to remove. Ensure to use a high quality T-55.

Heat may have to be used to ease the removal.

Take special care when removing the encoder wheel. If the teeth are bent or damaged, it can be guaranteed there will be a CPS fault code and/or a running problem when put back together.



Re-assembly:

New rod stretch bolts must be used.
New rocker arm stretch bolts must be used if they were removed.

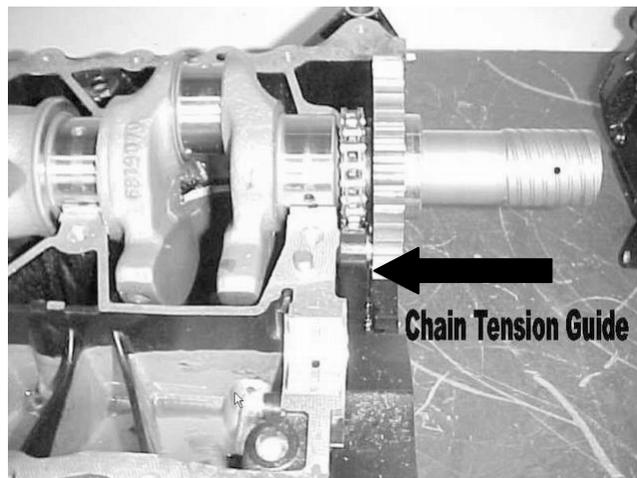
Cylinder head screws can be re-used if there with-in the service limit of 148.5 mm.

If the crankcases are to be replaced, ensure to order a new starter drive assembly bearing (P/N 420 232 480), as it is very difficult to remove without damaging it.



Be sure to install the cam chain tension guide on the crankcase and the cam chain around the crank gear before assembling the crankcases. If not, you will be taking them apart again

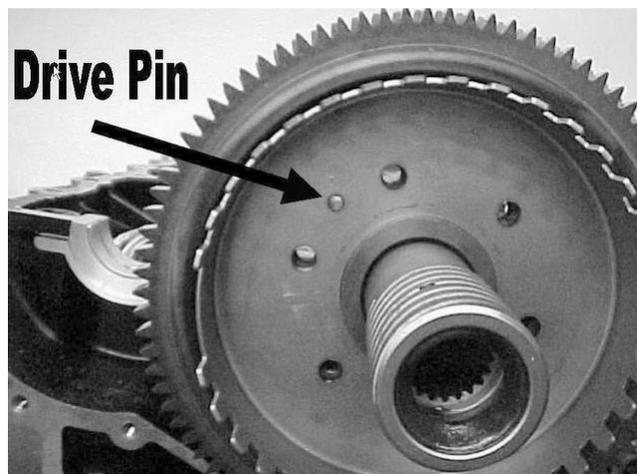
Cleanliness is vital when installing insert bearings as well as the entire re-assembly procedure.



When installing the flywheel, ensure the balance holes are not lined up with the encoder wheel gap.



Be sure to align the encoder wheel with the drive pin on the crank gear.



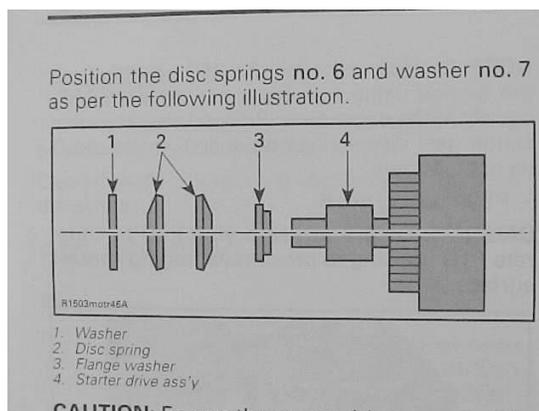
Again, ensure the encoder teeth are not bent.

If in doubt, insert a feeler gauge between the flywheel and the encoder teeth. The flywheel and encoder wheel teeth must be within 0.006" of one another.



Install the washers correctly on the starter drive.

Refer to the Shop Manual.



When installing the PTO cover, ensure that the gasket is positioned correctly, especially around the oil and coolant passageway areas.

The cam chain sprocket is slotted, giving you 2 possible ways of installing it due to manufacturing tolerances and chain stretch. Both ways can be correct.

Refer to page 3-11 in the 2003 technical update book (P/N 219 700 266) for a thorough explanation.

Be sure to follow all torque and sealant recommendations.



Other information:

If for any reason there are any light scuffs or scratches on the cylinder wall, don't automatically think it has to be replaced. The minimum piston/cylinder clearance are:

- 4-TEC Naturally Aspirated: 0.024 - 0.056 mm (0.001 - 0.0022 in)
- 4-TEC Supercharged: 0.04 mm (.001 in)

The service limit is 0.1 mm (0.0039 in) that means approx. 0.05 mm (0.002 in) can be honed off the cylinder wall and still be below the service limit. A good quality rigid hone with the recommended finish stone will do the job. If your shop does not have one, most machine shops do.

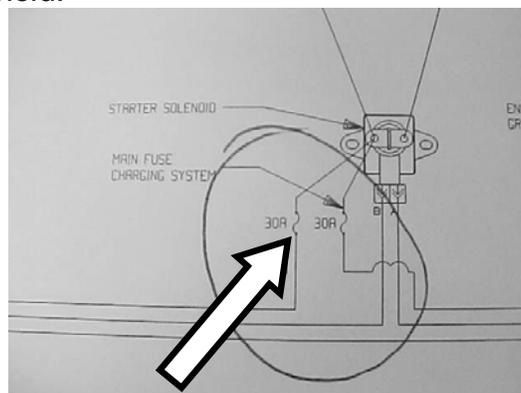
Valve guides are also available, so there is no need to replace the entire head if one or more guides are damaged or worn. There is a procedure in the 2003 Shop Manual on checking and/or replacing valve guides. Again, if your shop does not have the facilities to perform this job, most machine shops do.

4-TEC Engine: Loss of Electrical Power on Some 2003

If you get a customer stating that sometimes the buzzer beeps for no apparent reason, the gauge cluster momentarily goes blank, or possibly other strange electrical problems, check the 30 amp mpem fuse mounted next to the starter solenoid.

We have had a few reports where the fuse was not making good enough contact with the holder so the mpem momentarily loses power.

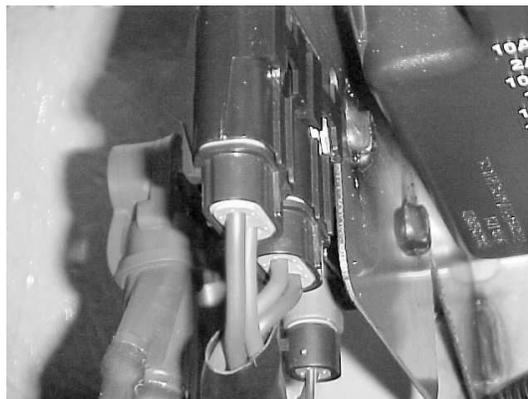
The buzzer heard is the DESS recognition beeps.



There are 2 fuses mounted at this location.

- The top one is the 30 amp charge fuse.
- The bottom one is the 30 amp mpem fuse.

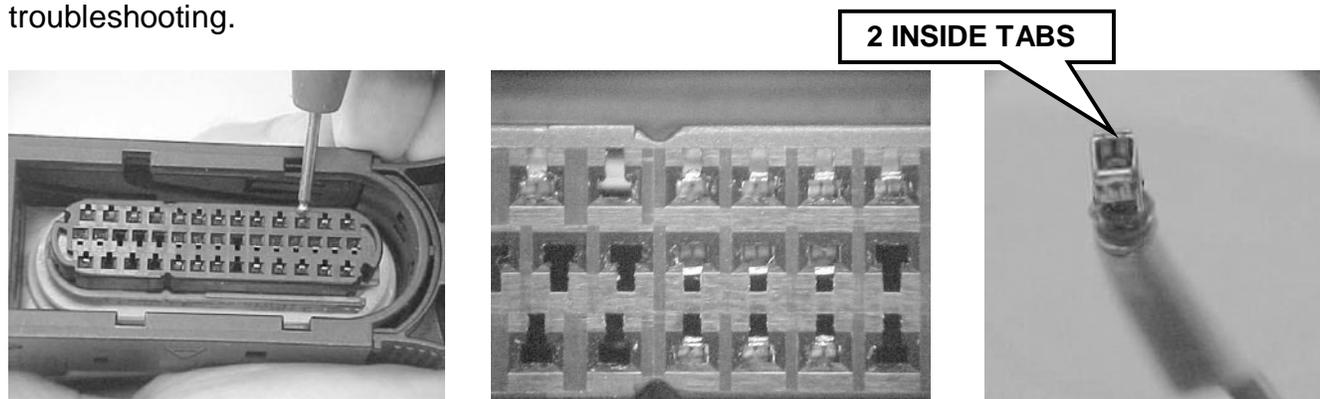
If the battery starts getting low, ensure that the fuse is OK and making good contact in the fuse holder.



4-TEC Engine: KOSTAL Connectors Inspection & Testing

The kostal connector that is used on the ECU employs square terminals that are easily damaged if round probes or pins are inserted into it.

Not only will a round probe or pin distort the square terminal, it will damage the 2 little tabs inside the terminal that make contact with the rectangular pin of the ecu. That in turn will cause a loose connection between the terminal and pin which will lead to electrical problems. A lot of other problems have been created by probing the terminal this way when troubleshooting.



We are currently working on a special tool where the kostal connector can be connected up to just like an ECU, then be probed on the back side. This would allow us to ensure the terminals are making good contact with the ecu pins, as well as making resistance checks from various components easier and more efficient.

Do not insert anything into the ECU connector terminals. Improper probing of the terminal can damage it by spreading the connection. Only touch the outer edge of the terminals as shown. To perform a visual inspection a magnifying glass will need to be utilized. Inspect deep into the female terminal and see if there is any damage or corrosion.

Make sure not to remove the KOSTAL connector off the ECU needlessly, as they are not designed to be disconnected/reconnected repeatedly.

If the terminal needs to be replaced follow the procedure in the wiring diagrams section of the 2003 Shop Manual.

Part numbers:

- Kostal female terminal: 278 001 750
- Crimping tool only 529 035 909
- Kostal terminal die 529 035 906
- Amp plug terminal die 529 035 908

Note: The crimping tool and dies are now sold separately

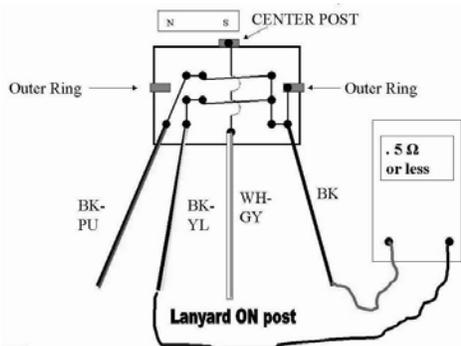
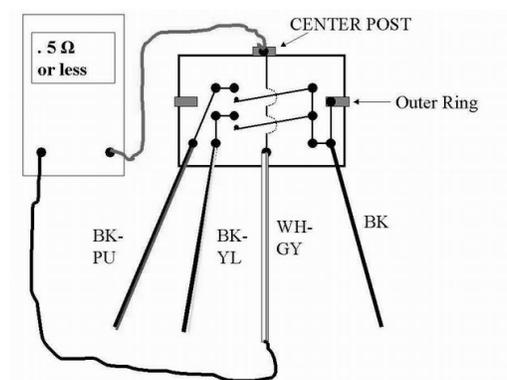
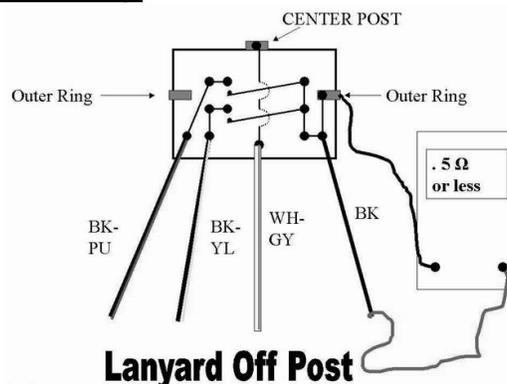
2 Stroke Engines: DESS Switch & Cutoff Relay

The following pictures are a quick break down of the four wire DESS switch and cutoff relay.

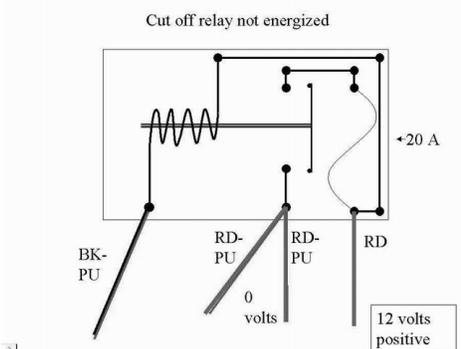
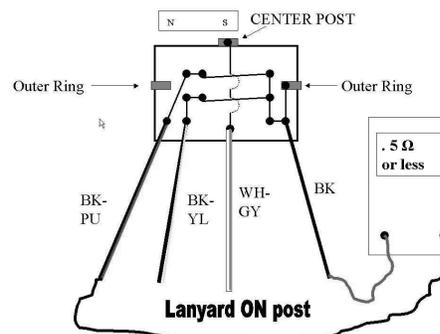
The cutoff relay has 12 volts all the time supplied through the red wire.

This also allows 12 volts available to the relay windings.

The DESS switch supplies a ground for the relay through the black /purple wire.

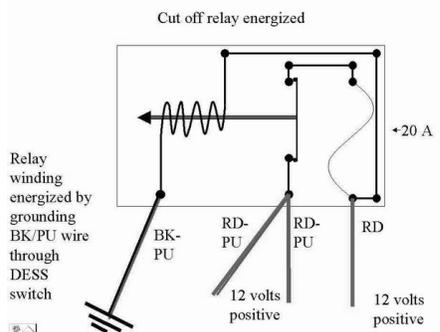


When the DESS cap is put on, the magnetic switch causes the black/purple wire to be switched to ground through the black wire of the DESS switch.



The black/ purple wire of the relay is in turn switched to ground and power can flow out of the relay through the red/purple wires.

The other three wires of the DESS switch work like they did in the past.



DI & DI LE Engines: Cylinders and Air Injectors

Now that the 947 di engine has been around awhile and updated in 2002, there's seems to be a little confusion on what parts to use.

The engines updated in 2002 were called the DI LE. However, some international my 2002's produced did not have new le engine version in them. Refer to the 2002 Technical Update Book, Section 3: "What's New" (P/N 219 700 170) for information about that and all the details concerning the differences between the two engines.

Note that the 2003 blue book rebuilt part numbers are incorrect for cylinders and shortblocks. The correct numbers are:

Di

- Rebuilt cylinders: 421 000 570
- Rebuilt shortblock: 421 000 572

Di LE

- Rebuilt cylinder: 421 000 205
- Rebuilt shortblock: 421 000 416

The main difference between these cylinders are:

- DI cylinders have **6** ports, DI LE cylinders have **5** ports
- the volumetric efficiency is increased and the fuel mapping is different on di le engines

Interchanging cylinders would have an adverse effect in the way the engine performs.

It is important to note that although the air injectors would both physically fit on either of the engines types; it is not recommended to interchange them. The opening and closing times on the DI LE injectors are different because of their ability to react. The injecting mapping is different, and if used on DI engines they will run richer. This could foul plugs and could also cause non-compliance with the EPA.



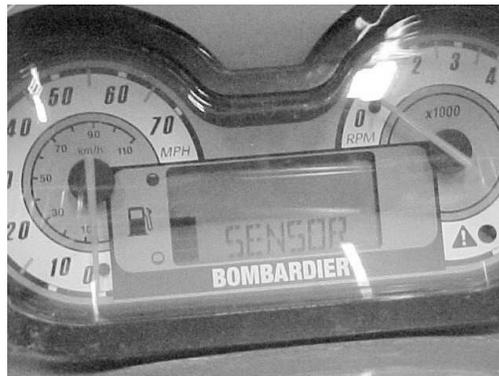
DI

DI LE



Depth Finder Message

On units equipped with a depth finder, if the hull is not in the water "sensor" will be displayed in the cluster.



Past Years Technical Update Book P/N

We currently have in stock the 2002 and 2003 Sea-Doo Technical Update Books. Since we refer you back to them several times in this update book. If you need to order them, here are the part numbers.

2002 Technical Update Book: 219 700 170

2003 Technical Update Book: 219 700 266

B.U.D.S. USB Adaptor

Some new computers no longer have com ports-yet that is what connection is required when connecting the B.U.D.S. VCK to your computer.

We have successfully found an adaptor that will plug into the USB port: F5U109 BELKINS.

It is the only one we can recommend.

As usual, if there are any questions with this, or any other computer related problem regarding our systems, please call BOSSWeb help desk.



F5U109 BELKINS

RFI, DI & 4-TEC Fuel Filters

We will now stock the fuel filter that is on the bottom of the RFI, DI and 4-TEC fuel pumps.

The filter is the same for all 3 pumps. The old filter is easily pryed off, and the new one can be pressed back on by hand. Ensure it is fully seated for complete filtering of the fuel.

- P/N 219 700 368





Please route to:

<input type="checkbox"/> Service	<input type="checkbox"/> Init.
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



Date: **October 23, 2003**

Subject: **Oil Application for 4-TEC Engines**

No. **2004-1**

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
2004	GTX† 4-TEC	All	All
2004	GTX 4-TEC Supercharged	All	All
2004	GTX 4-TEC Limited Supercharged	All	All
2004	GTX 4-TEC Wakeboard Edition	All	All
2004	RXP	All	All

† GTX is a registered trademark of Castrol Ltd, used under license.

FOREWORD

With the introduction of the 4-TEC supercharged intercooled, a new supercharger clutch assembly is used, which have specific oil requirements. This new clutch is also found on the 4-TEC supercharged (non-intercooled).

This bulletin is intended to explain the specific oil requirements of the 4-TEC engines and proper oil level verification.

The following statement for the recommended oil has been published in the *2004 Operator's Guide*.

ENGINE RECOMMENDED OIL

This watercraft features a 4-stroke engine that requires 4-stroke motor oil for internal engine lubrication. Ensure to respect the following requirements.

Normally Aspirated (NA) Engines

Watercraft featuring 4-stroke engines without superchargers require 4-stroke motor oil meeting the requirements for API service classification SL, SJ or SH. Always check the API service label on the oil container to be sure it includes those letters.

The Bombardier 4-stroke oil SAE 10W-40 (P/N 219 700 346) sold by authorized Sea-Doo dealers meets those requirements.

Supercharged and Supercharged Intercooled Engines

Use the Bombardier 4-stroke oil SAE 10W-40 (P/N 219 700 346) or an equivalent approved by Bombardier. The same oil lubricates both the engine and the supercharger clutch. The Bombardier 4-stroke oil SAE 10W-40 (P/N 219 700 346) has been thoroughly tested to be free of any additives that could impair the functionality of the supercharger clutch.

NOTE: Use of any oil that is not recommended may void Bombardier's limited warranty.

CAUTION: Do not add any additives to the recommended oil. Beware that oils not recommended by Bombardier may contain additives (friction modifiers) that may cause inappropriate slippage of the supercharger and eventually lead to premature wear. For this reason, oils other than Bombardier 4-stroke oil SAE 10W-40 (P/N 219 700 346) or an approved equivalent are not recommended.



Oil Application for 4-TEC Engines

All Engines

CAUTION: Never use any 2-stroke engine oil.

OIL VISCOSITY

The same oil is recommended for all seasons and all ambient temperatures.

OIL LEVEL

CAUTION: Check level frequently and refill if necessary. Do not overfill it would make the engine smoke and reduce its power. Operating the engine with an improper level may severely damage engine. Wipe off any spillage.

ADDITIONAL INFORMATION NOT CONTAINED IN THE OPERATOR'S GUIDE

In order to complete the above information, take note of the following:

Normally Aspirated (NA) Engines

A synthetic oil meeting the same requirements may be used.

The Bombardier synthetic oil 5W40 is very suitable for this engine. Ensure to respect the same oil change intervals with synthetics.

Supercharged and Supercharged Intercooled Engines

CAUTION: No synthetic oil can be used on these engines as it will impair the proper operation of the supercharger clutch. Depending on the manufacturer's motor oil blend, mineral base oils may also contains additives (friction modifiers) that may affect the slippage of the clutch. Any motor oils (except Bombardier 10W40) used that will cause slippage and premature wear of the supercharger clutch will not be covered by the Bombardier's Limited Warranty.

Oil Level (All Engines)

The 4-TEC engines are equipped with a dry sump oil system.

Make sure to instruct customer how to check oil level as per the Operator's Guide procedure. This procedure must be strictly adhere to, in order to read the correct oil level.

Engine Oil Information

Description	P/N	QTY
Bombardier motor oil 10W40	219 700 346	12 x 1 liter
Bombardier Synthetic Motor Oil 5W40	293 600 039	12 x 1 liter



SECTION

4

SEADOO® 2004 Technical Update New Technology

In Section 4, you will find the most current information concerning the latest technology used on Bombardier Recreational Products.

RXP

Subsection 4-A

3D

Subsection 4-B

Bombardier Recreational Products Inc.

Subsection 4-A

Introducing the
RXP
WITH INTERCOOLED SUPERCHARGED
4-TEC ENGINE



The 215HP ADRENALINE SHOT

**The RXP 4-TEC Intercooled Supercharged:**

This is 215 horses of intercooled supercharged; the industry's mightiest muscle craft that leaves everything else way behind. The new RXP is the most powerful two-seater ever, and it is born to perform. With radical new hull and deck design and instinctive responsiveness without Turbo-lag.



- 215hp: 30 more horsepower when compared to the Supercharged 4-TEC engine.
- Zero lag: the supercharger is always spinning, for instant throttle response.
- The RXP 4-TEC Intercooled Supercharged; with all these horses your time on the water is going to get a lot faster. So is your pulse.



With the styling of a classic muscle car with distinct lines and chrome accents, the RXP is available in Apple Green Metallic or Yellow.

Large 90 mm 16-function Info Center with analog speedometer and Tachometer

Informs operator in three different languages (English Spanish and French) of fuel level, low fuel warning, low oil warning, overheat warning, low 12 V, tachometer, VTS setting, current speed, average speed, trip meter, engine hour meter, chronometer, water temperature, ambient temperature and maintenance functions.

Note: the speedometer is rated to 130 km/h (80 MPH) and the tachometer to 9000 RPM.

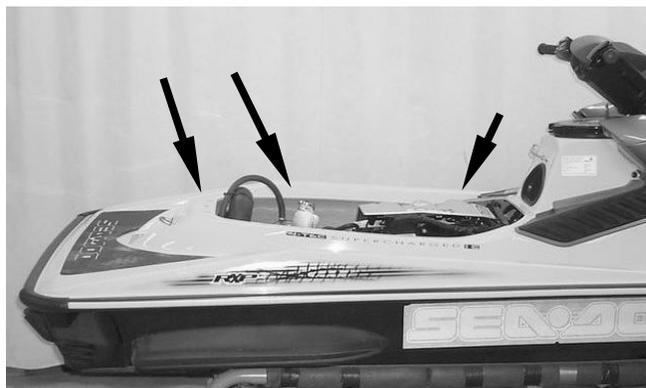
The RXP comes with the Sea-Doo Learning Key ; that: limits engine RPM & top speed for less experienced riders.

The seat cowling is easily removed and put back in place by undoing two 1/4-turn clips located under the seat, near the latch. It is just a matter of slipping the cowling toward the back.



Removable engine hatch

Easily removed (5 bolts) to allow expanded access during routine engine maintenance. Of course the complete assembly is sealed with a gasket to prevent water intrusion.



The RXP offers ample room for a full throttle day on the water: 10.7-gallons of storage space; in three separate storage compartments:

- a large storage bucket under the front hood
- a glove box under the handlebars for often used items
- a small storage bucket above the instrument panel

The extended range fuel tank 60 liters (15.9 US gal) provides maximum cruising and exploring range.

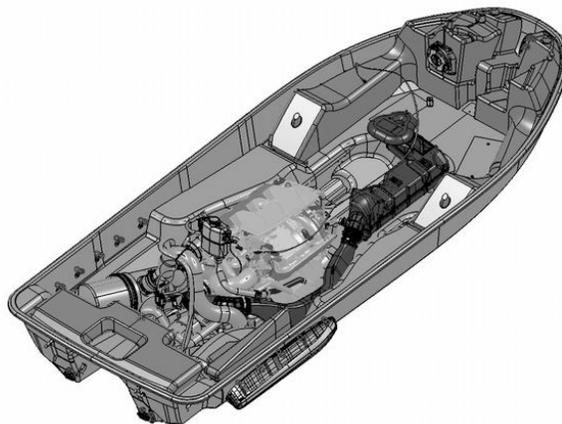
Forward/Neutral/Reverse system

The RXP comes with forward/neutral/reverse For ease of controlling in tight quarters.

Modified-V Hull Design

The RXP combines the best handling and styling attributes from the Sea-Doo RX and XP watercraft. A true two-person high performance muscle craft.

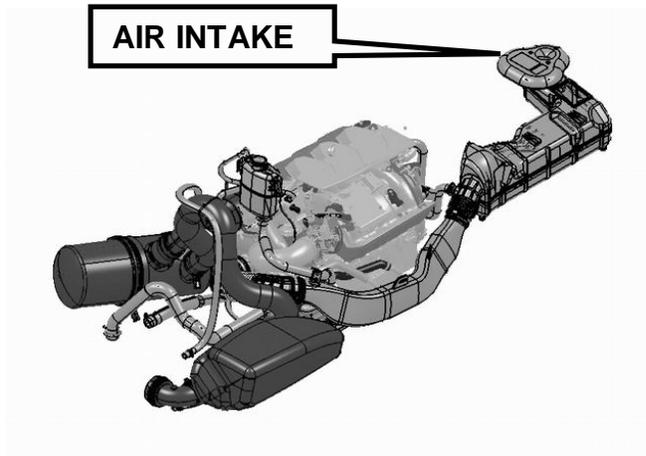
The fiberglass construction provides superior strength with extra material added where needed to ensure long lasting durability and easy maintenance.



Air intake

For greater performances, the air intake has been enlarged to allow more air to the engine,

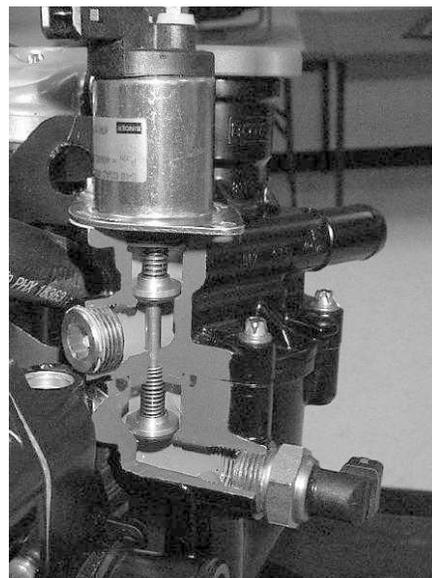
The other air intake components are similar to the previous models: GTX 4-TEC Supercharged models.



Tip Over Protection System (T.O.P.S.)

The RXP comes with the Tip Over Protection System (T.O.P.S.) that protects the engine in case of turn over.

Refer to the 2002 Sea-Doo Technical Update Book for all the details: P/N219 700 170.



Throttle Body

The same throttle body is used as on the 4-TEC normally aspirated and the Supercharged versions: a 52 mm Del Orto.

The fuel pressure was increased to 4 bars (58 PSI).

Important: never attempt to adjust the butterfly opening; it is factory adjusted and sealed. It does not require any adjustment. If it is tampered with, the throttle body will have to be replaced, as it will be impossible to get the idle correct again

4-TEC Intercooled Supercharged Engine

The 215HP Intercooled supercharged engine is the same three-cylinder, Rotax 4-TEC 1494cc engine with tip over protection and closed loop cooling. It is important to remember that turbochargers take time to spool up which can result in something called turbo lag or hesitation. The RXP Intercooled supercharged watercraft have no turbo lag resulting in more responsive power.

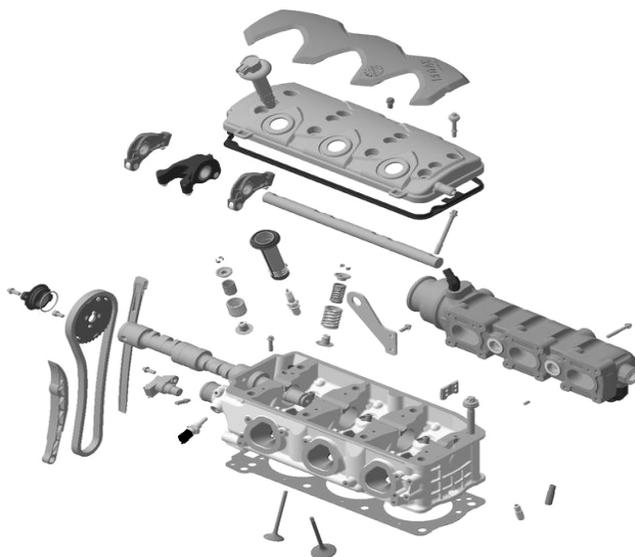
The Supercharged and the Intercooled Supercharged 4-TEC engines share many components. Please refer to these previous Technical Update Books (One Day School Book) to get all the information concerning these engines:

- 4-TEC naturally aspirated engine: 2002 Technical Update Book, P/N 219 700 170
- 4-TEC Supercharged engine: 2003 Technical Update Book, P/N 219 700 266

SOHC

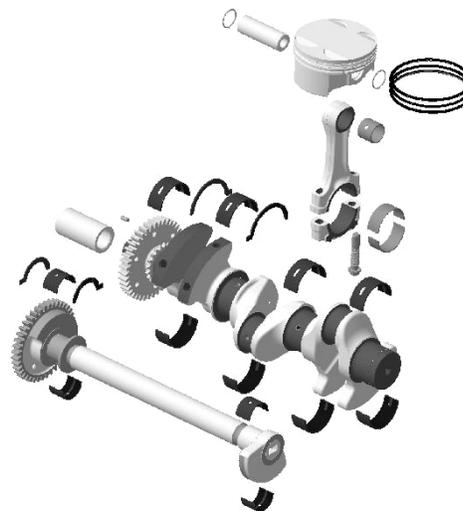
The camshaft is different from the 4-TEC normally aspirated or supercharged engines; it has a less aggressive profile.

The rest of the valve train is similar to the 4-TEC Supercharged.



The pistons are of a new aluminum reinforced type. The crankshaft, along with the majority of the other engine components remains the same as on the 4-TEC Supercharged

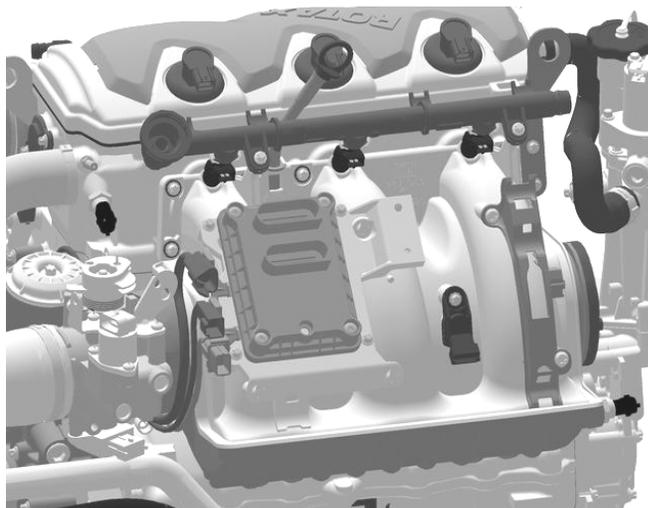
- Displacement: 1494cc
- Bore: 64.3 mm
- Stroke: 100 mm
- Compression ratio: 8,41 to 1
- Fuel type 91 octane



The 4-TEC Intercooled Supercharged uses the same sensors as on the 4-TEC Supercharged.

The Supercharged and Intercooled Supercharged use the same Seimens injectors. They share the same connectors with the Bosch injectors used on the 4-TEC normally aspirated.

Always use the specific injector model as specified in the Parts Catalog.



The Electronic module (MPEM) and the ECU EMS are not interchangeable with the 4-TEC Supercharged or the 4-TEC naturally aspirated versions. The B.U.D.S. version G2.1.1 or higher is required to program and communicate with the ECU EMS and MPEM.

Rev Limiter and Learning Key

Like all 1503 4-TEC engines, the learning key function as well as the rev limiting function is accomplished by shutting off the fuel injection to a cylinder. Each time the RPM threshold is reached, whether in the learning key or normal rev limiting function, the cylinder ready to fire next will be shut down. More cylinders will cease to fire until engine speed falls below the rpm threshold. Once engine speed is below the threshold, the next cylinder is allowed to fire... until engine speed goes above the threshold -repeat, repeat, repeat.

- Regular Key: engine rev limiter is 8300 RPM.
- The maximum operating range is from 7850 to 8100 RPM.
- Learning key: one cylinder is gradually shut down starting at 5000 RPM. At wide open throttle, the end result is one cylinder continuously shut down which limits RPM's to around 5000 RPM on a stock impeller at sea level (lower rpm at altitude).

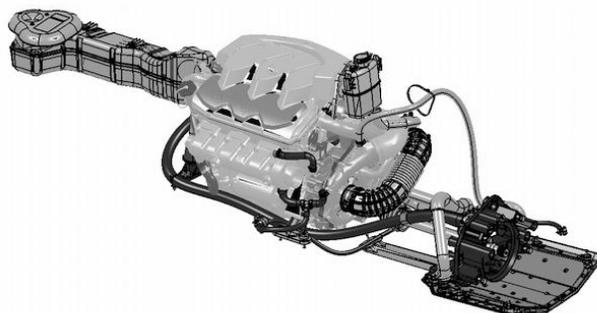
It is important to understand the learning key function. The engine will be running on only 2 cylinders, the maximum vehicle speed is limited by engine power and by the impeller pitch. Therefore, unlike the D.I. the learning key rpm will depend on operating conditions (including altitude) and the impeller being used.

Close Loop Cooling System

To cool down the engine, the 4-TEC Intercooled Supercharged uses a similar close loop cooling system as the 4-TEC naturally aspirated and the Supercharged versions. An environmental friendly close loop system for the engine and a more conventional open loop circuit for the exhaust.

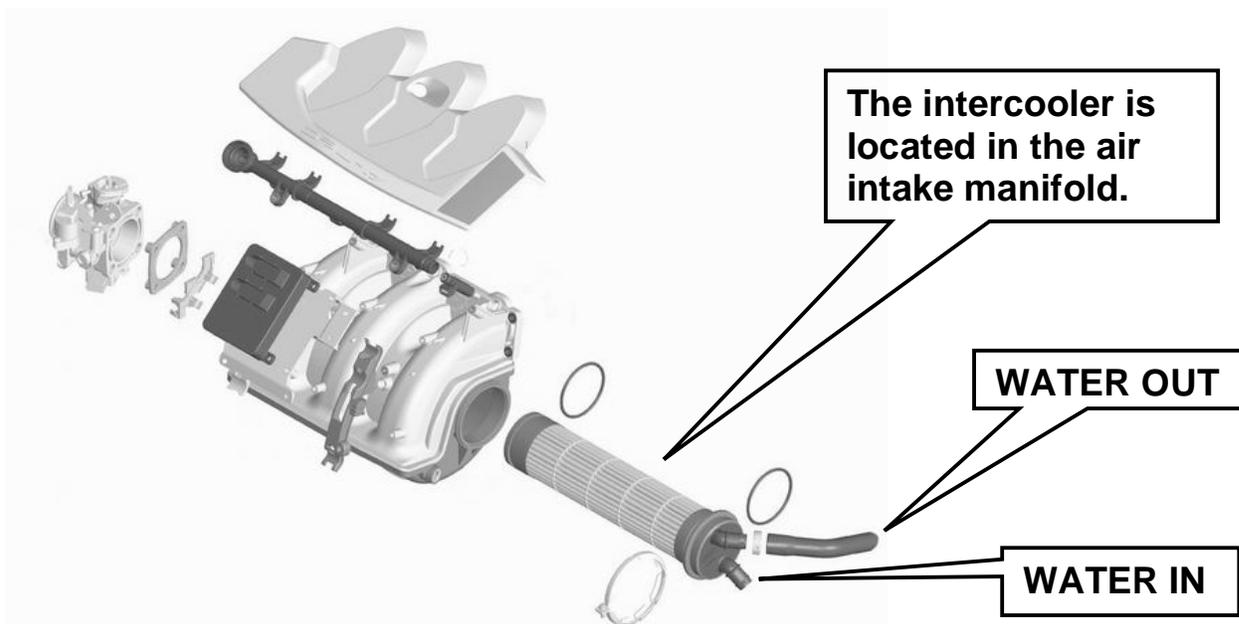
Intercooler & Open Loop Cooling System

The Intercooler is part of the open loop cooling system. It cools the air before it reaches the air intake, creating a more dense air delivery into the combustion chamber, resulting in more power.



The intercooler reduces the intake air temperature to approximately 30°C (86°F) to the engine. The air density is higher so you get more air into the engine, more air means more oxygen thus more efficient combustion resulting in more power. Due to the lower air intake temperature, the combustion process is more efficient and healthier, the fuel economy is higher as well! The power increase from the BV to the BV-IC is coming not only from the intercooler alone, we also increased the engine speed (rpm). We increased the supercharger speed as well, by changing the gear ratio from 86/17-BV to 87/16-BV-IC.

The intercooler is made of copper-nickel tubing and the housing is a mix of plastic and brass, therefore the intercooler is maintenance free except for flushing after use in salt water.



On the Open Loop System, water from the jet pump first flows to the intercooler; then to the exhaust manifold, and from there to the rest of the exhaust system — similar to other 1503 4-TEC engines. Some of the water that is injected in the exhaust will exit through the exhaust outlet, the remaining will exit through the water outlet. A new water cooling hoses routing is used to ensure the water will drain out when shutting off the engine; keeping water away from the engine.

D-SEA-BEL sound reduction system:

The RXP Intercooled Supercharged is equipped with a redesigned version of the D-SEA-Bel sound reduction system.

A single polymer resonator is now used for weight reduction. Its size and design allows sound waves to cancel each other out.

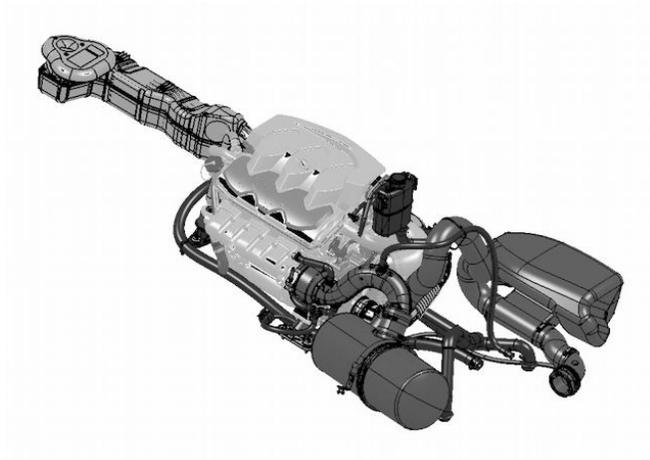
This polymer resonator replaces tuned components that were used in the previous versions.

The result is a simpler exhaust system that provides less restriction.

These components are also used on all the 4-TEC engines.

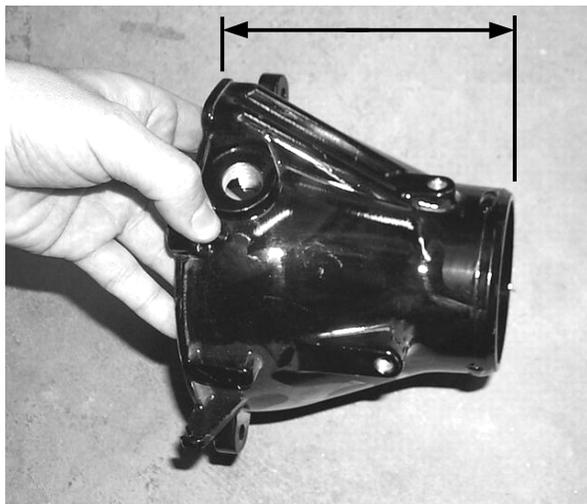
The inside material of the exhaust goose neck is specific to the 4-TEC Intercooled Supercharged. It is calibrated to endure the higher operating temperatures.

The 4-TEC intercooled Supercharged model comes with a red round sticker on it for easier identification.

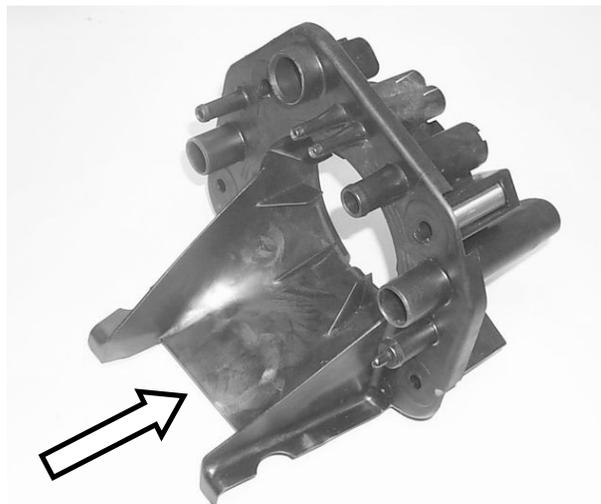


The RXP Intercooled Supercharged uses the same jet pump as the 2004 GTX Supercharged, with a few exceptions:

- Stronger and larger outer diameter driveshaft
- Larger outer diameter splines on the impeller side
- New impeller design : outer diameter is 159 VS 155.5
- Wear ring Inner Diameter is 3.5 mm larger to match the larger impeller
- Redesigned pump support
- Shorter venturi



The venturi is 15mm (1/2") shorter to reduce the steering effort for the operator, due to the extra power available.



The pump support now has a longer opening to allow more water in the pump, reducing the possibility of cavitation under hard acceleration.



Fins are part of the new design, to help maintaining stable RPM when steering left or right.

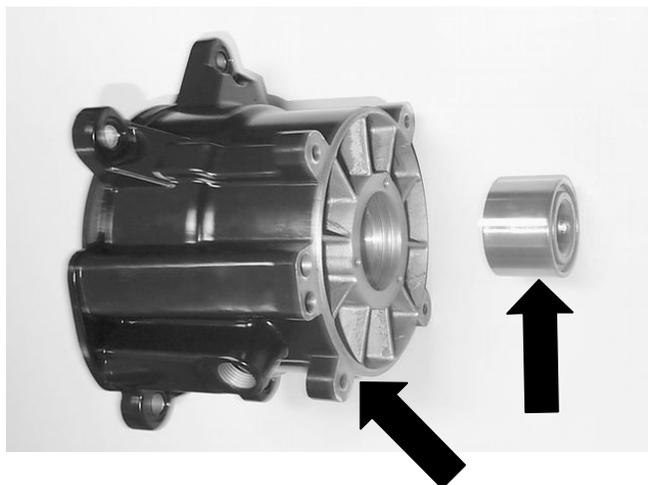


4 brass inserts are part of the pump for easy de-assembly and re-assembly.

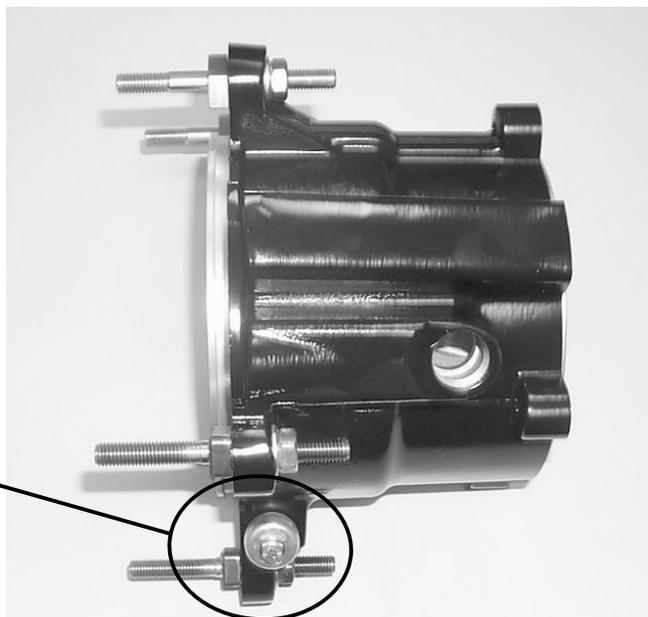
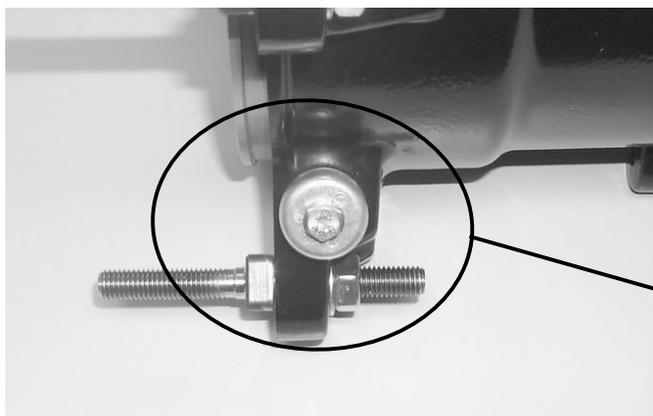
A new aluminum impeller housing is introduced for 2004, to match the performances of the 4-TEC Intercooled Supercharged engines. The same components are also used in the 2004 4-TEC Supercharged; with the exception of larger inner diameter wear ring.

The anchoring tabs are machined flush with the pump housing for an optimum fit to the venturi.

The new aluminum impeller housing uses the same larger bearing as the regular "composite" impeller housing used in the 4-TEC normally aspirated.

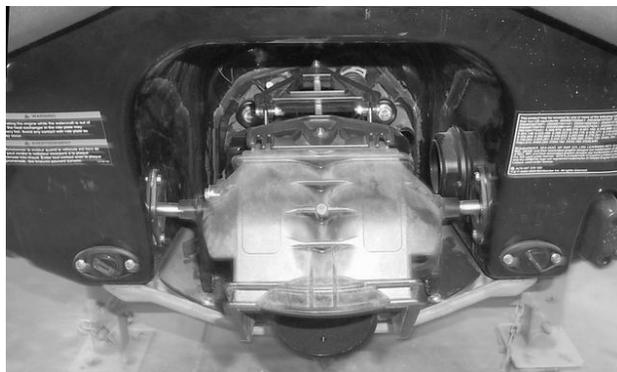


An anode is integrated to the housing for added resistance to corrosion.



The new aluminum pump does not require the side support bracket that was used on the GTX 4-TEC Supercharged in 2003.

The jet pump is equipped with the VTS electric trim for enhanced handling with fingertip control. On the RXP, the VTS has a shorter range to match the greater watercraft handling performances of the engine and for ease steering.





A new 159 mm impeller and drive shaft with larger/stronger splines were created to match the 215hp RXP.

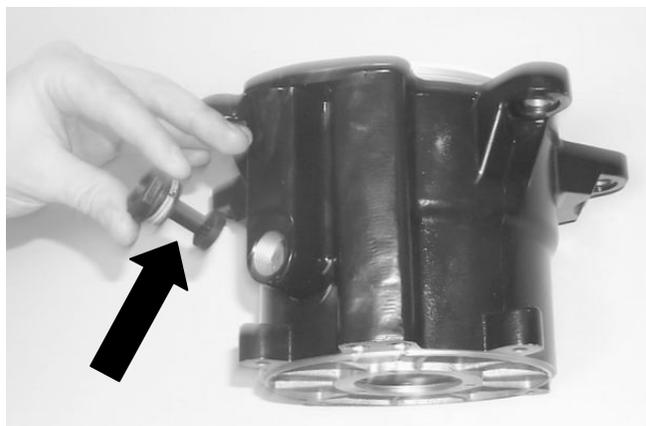
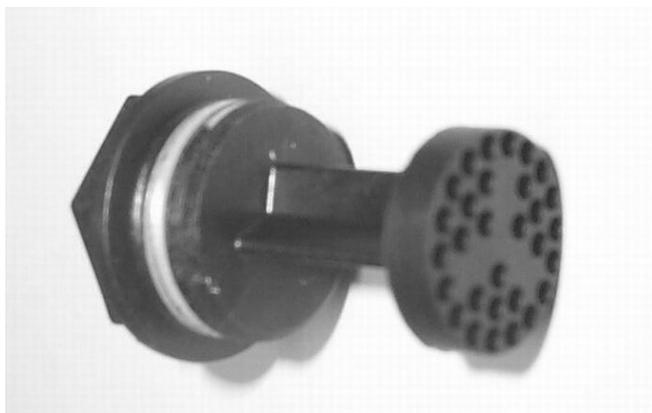


There is also a new four-blade stainless steel impeller that delivers improved acceleration, higher top speed and less cavitation.



The boot now screws in counterclockwise for improved sealing.

Different water passages for the exhaust cooling are part of a new design, as well as a new strainer plug. The hole sizes were specially calibrated to minimize debris entering the exhaust cooling system.





Brake-in period

There is no special timing or injection programmed in the MPEM for the break-in period. The GTX 4-TEC Intercooled Supercharged comes factory filled with 10W-40 petroleum based oil.

Consult the Owners Guide and the PDI sheet prior to using the vehicle for the first time.

No oil needs to be added to the first fuel tank as this is a four stroke engine.

- It is normal to consume up to one liter of oil during the first ten hour break-in period. Then up to $\frac{1}{2}$ to $\frac{3}{4}$ of a liter per 30 hours of operation.
- At high altitude, where the engine puts out less power, it is important that a high altitude impeller is used as specified, otherwise learning key and normal key maximum RPM will be low resulting in slower vehicle speed.

Maintenance & Storage Procedure:

The maintenance schedule and the storage procedure is similar to the standard models. Consult the Owners Guide and the Shop Manual for specific details.

Subsection 4-B

Introducing the 3D

The **Vert.**
Experience



The **Moto.**
Experience



The **Kart.**
Experience



Three new ways of experiencing a watercraft.



3 dimensions 3 experiences, one watercraft.

The 3D can easily be transformed into 3 different experiences.

- Vert
- Moto
- Kart

Imagine; the Semi-V hyperbolic multi-angle dead rise XP hull, our updated Low Emissions twin-cylinder, two-stroke, 782cc 110hp Rotax Fuel Injection (RFI) engine combined with the new 3D deck.

The 3D riding positions are more toward the rear of the watercraft providing a great riding experience. It leans in when turning; like a motorcycle.

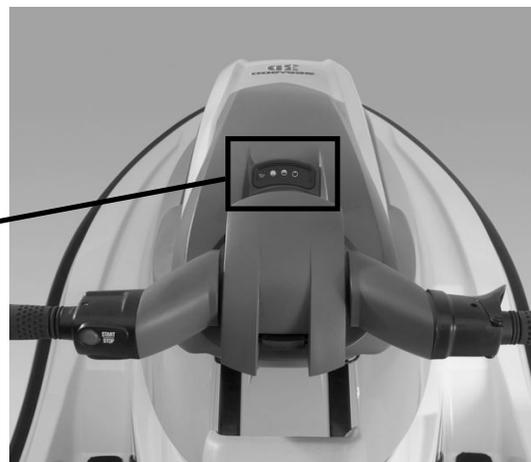
The 3D comes with the DESS (Digitally Encoded Security System) theft-deterrent system.



A multifunction LED Information Center is located on top of the handlebars.

Functions are:

- Fuel level
- Low fuel level
- Low oil level
- Maintenance info
- Check engine



Vert.

When the seat is folded in, the 3D converts into the "Vert", for an all new vertical experience.

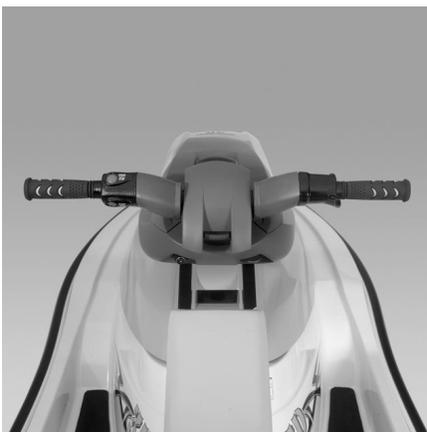
The handle pole assembly is spring loaded and can be moved freely up and down to maximize the riding experience. The spring tension is adjustable to put more or less weight on the handle pole, to suit the riders style. Note that the handle pole can be latched in its low position for the Moto and Kart experience.



SPRING LOADED HANDLE POLE

The handlebars are adjustable in 3 different positions to maximize the rider's comfort in all 3 "experiences" of the 3D. Simply press the lever located in the center, under the handlebars.

Note the 2 START/STOP switches for the different handlebars positions.

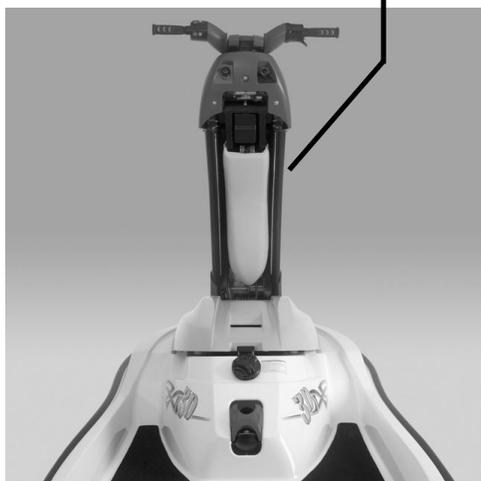


Moto.

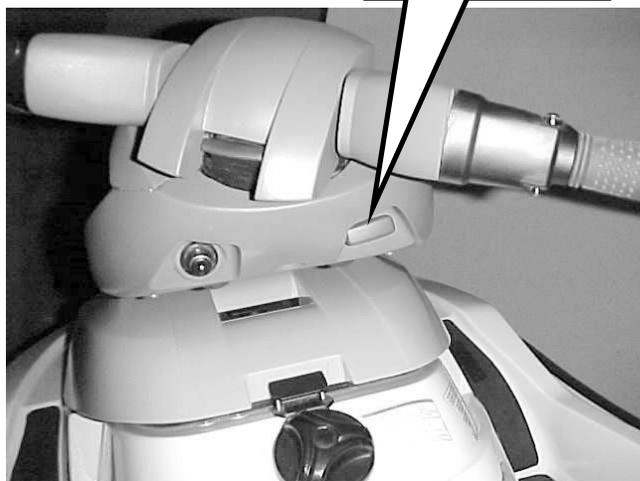
The Moto experience is for a more traditional athletic ride. This is a standard feature.



FOLDED MOTO SWITCHBACK SEAT

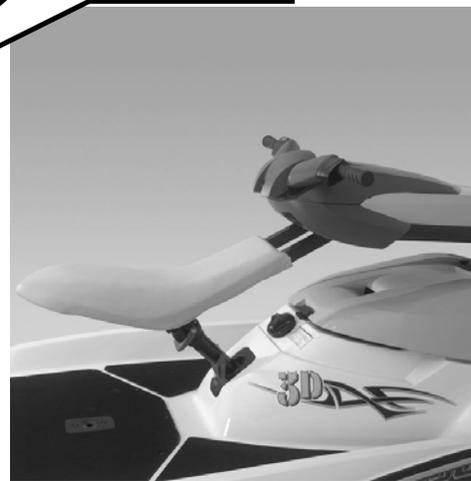
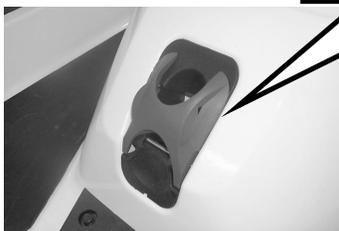
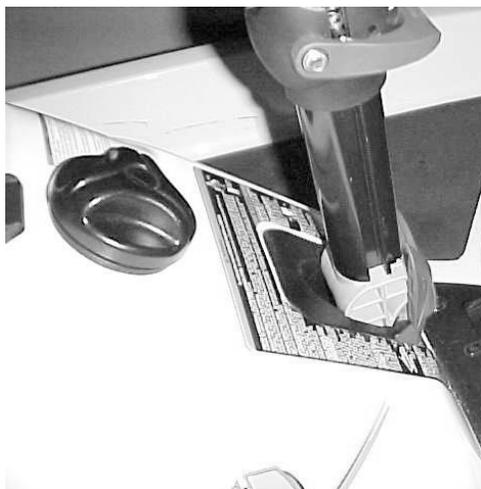


RED LEVER



The Moto switchback seat folds under the handle pole. It can be pulled out in seconds... Simply pull the red lever on the right side of the DESS post to unlock and unfold the seat. Insert the round pole in its anchoring point.

ANCHORING POINT





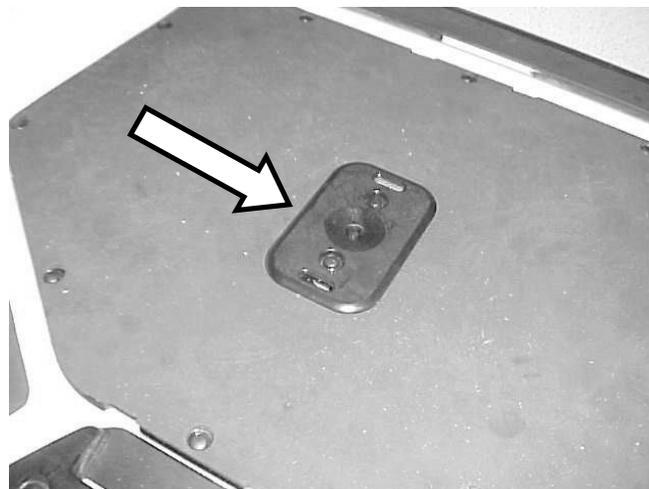
Kart.

The Kart experience is for a high-performance seated kart-style ride.

The seat can be added to the watercraft as an accessory to transform the 3D into the "Kart".



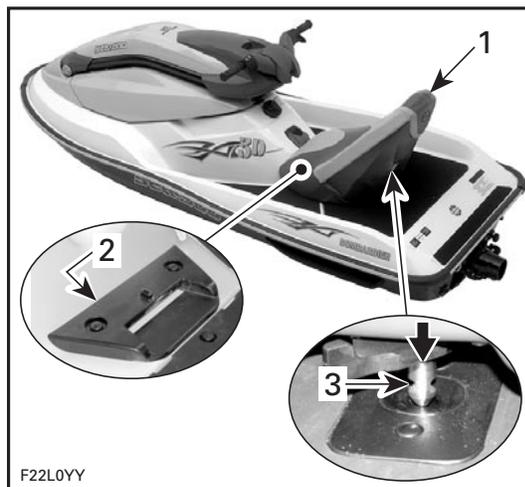
Special anchoring tabs need to be added to the deck to secure the seat in place. It will then be easily removable.



Seat Installation

With the seat slightly angled forward, insert the seat front tab into the anchor plate on the deck.

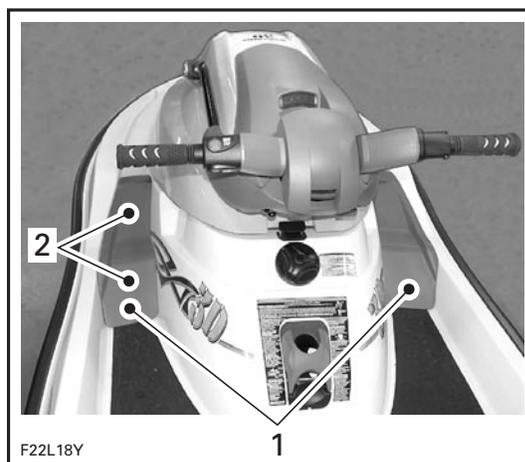
Line up the pin located underneath the seat with the hole in the deck, then push down to latch the seat.



1. Kart seat
2. Anchor plate
3. Insert pin in hole

If the rider cannot rest its feet comfortably on the footrests, install the footrest spacers. This will help achieve a more stable riding position.

These spacers come with the seat. They have 2 steps to accommodate different rider heights.

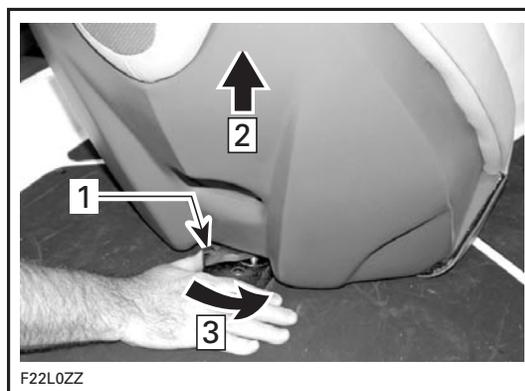


1. Footrest spacer
2. Two available steps

Seat Removal

Push and hold the lever as shown to release the latch, then lift the rear of seat up. Pull up the seat out of the anchor plate.

Make sure your customer read and understands the *Operator's Guide*, before using his PWC.



1. Lever
2. Pull up
3. Push and hold the lever

Engine

Most of the mechanical components are well known from the RFI model. The engine is the updated Low Emission Rotax RFI (Rotax Fuel Injection).

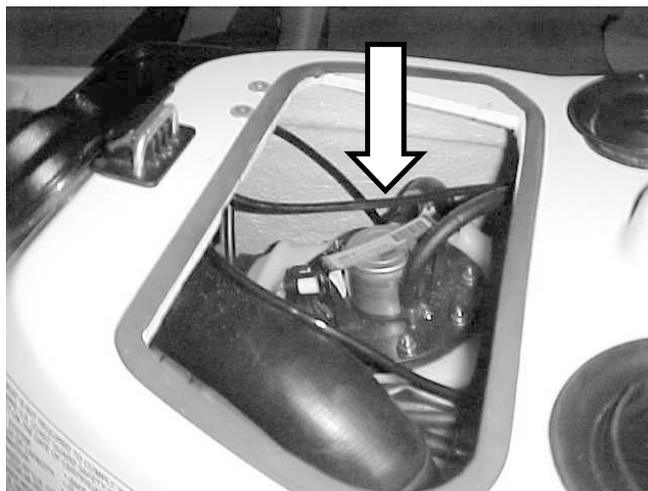
This year it is approx. 10 % more fuel efficient than previous RFI engines. It has new cylinder port design and California CARB calibration of the ECM. Note that it runs on one cylinder at idle; fuel is cut from the PTO cylinder so only the MAG cylinder runs. Both cylinders will start running at approximately 2500 RPM and up. Max RPM's are between 6750 and 6800.

As with all RFI's, a Bosch ECM and an MPEM is used in conjunction with one another. The ECM has similar calibration as the GTI RFI Low Emissions, but is not interchangeable.



B.U.D.S. can be connected through the DESS post, or through the DESS post harness adapter (P/N 278 001 978). The hand held programmer can also be used.

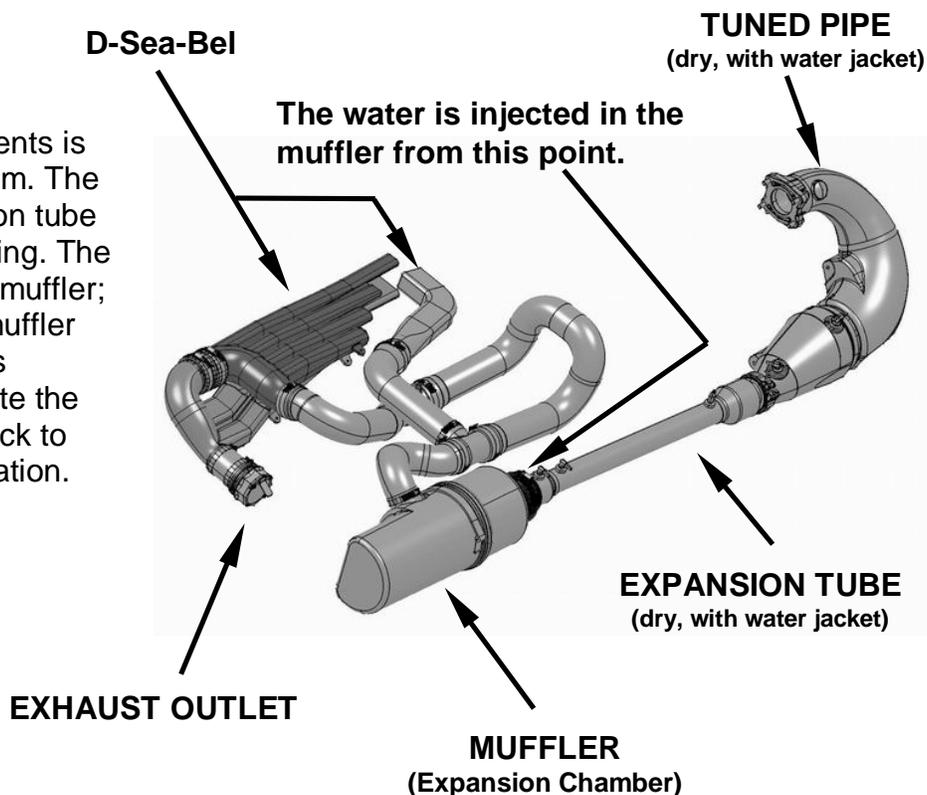
The fuel pump is easily accessible when opening the front storage cover.



Exhaust & D-Sea-Bel™ System

The 3D is equipped with the D-Sea-Bel sound reduction system that allows sound waves to cancel each other out.

One of the major improvements is the "dry pipe" exhaust system. The tuned pipe and the expansion tube have a water jacket for cooling. The water is injected only in the muffler; not in the tuned pipe. The muffler has 3 internal chambers. It's designed to virtually eliminate the possibility of water going back to the engine in a capsized situation.



The rear deck can be removed to give easy access to internal components such as the



Bilge Pump

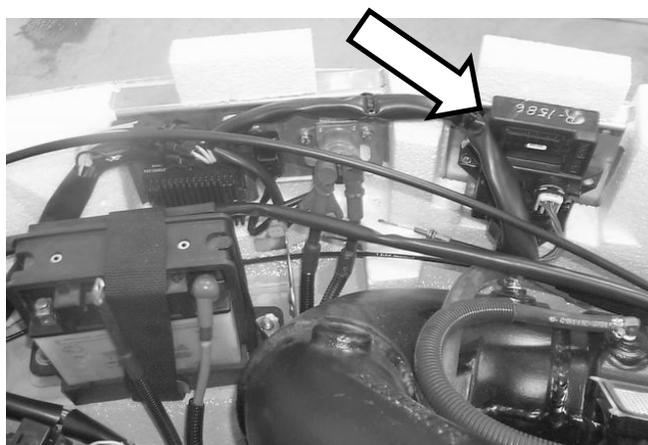
This watercraft comes from factory with 2 bailer pick ups using the jet pump to continuously remove any water that would enter the engine compartment. An automatic electric bilge pump will turn on when the lanyard is on the DESS post. This pump will cycle every 10 seconds and will shut off as soon as there is no more water in the pump.

O.T.A.S.™

The Sea-Doo O.T.A.S. (Off-Throttle Assisted Steering) provides additional maneuverability in off-throttle situations.

The O.T.A.S. system is electronically activated when the driver initiates a full turn at a pre-programmed engine RPM. A solenoid will open the throttle plate providing an approximate 3000 RPM burst to help steer the watercraft in the desired direction.

A third module is used to control the O.T.A.S.; it also controls the information center, the cut-off relay and the bilge pump.



Jet Pump & VTS™

It uses a similar jet pump as the GTI. There is no Reverse / Neutral on this pump. The impeller has a new design.

The Variable Trim System (VTS) is the turning knob type. It enables the rider to adjust the trim level of the watercraft to various experiences and water conditions with the turn of a knob. Enhances control, helping the rider to accelerate quickly and to plane and level the watercraft out on the water's surface. The adjustment is approximately +/- 9°.





Accessories are also available:

Watercraft cover.



Saddlebag
&
Seat



The 3D: the world only watercraft with the freedom of choice.



SECTION

5

SEADOO®

2004 Technical Update

Special Tools

In Section 5 you will find the most current special tools information to efficiently service Bombardier Recreational Products.

New Special Tools

Page 5-3

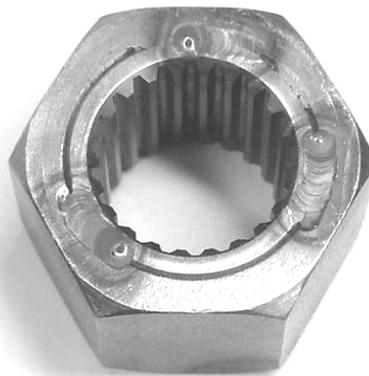
Bombardier Recreational Products Inc.

New tool for the RXP

Driveshaft adapter (MANDATORY)

P/N 529 035 985

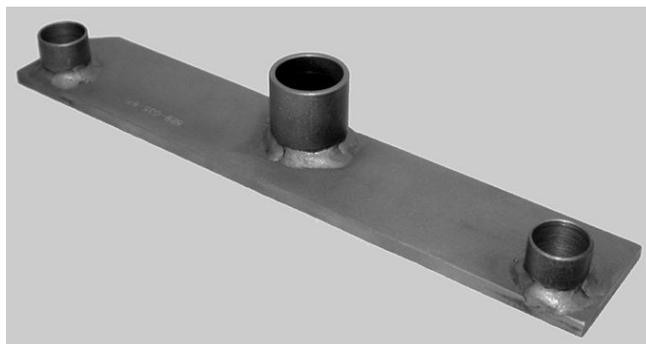
Application:
Fits on the driveshaft to turn the engine over.

**New tool for the RXP**

Drive shaft holder (MANDATORY)

P/N 529 035 986

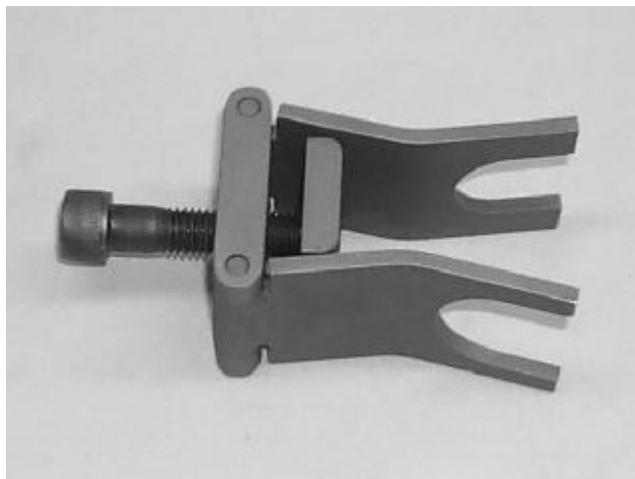
Application:
To hold the drive shaft when the jet pump is removed.

**New tool for the RXP**

Drive shaft/floating ring (MANDATORY)

P/N 529 035 987

Application:
For the removal of the drive shaft and c-clip.



New tool for the RXP

Impeller remover / installer (MANDATORY)

P/N 529 035 956

Application:
To remove / install the impeller.

**New tool for the 2004, 4-TEC models**

Bearing pusher (MANDATORY)

P/N 529 035 955

Application:
For impeller shaft removal and bearing installation.

**New tool for the 2003-4 RFI models**

RFI DESS adapter (OPTIONAL)

P/N 278 001 978

Application:
To communicate with the B.U.D.S. system without using the DESS post.





SECTION

6

SEADOO® 2004 Technical Update Specifications

In Section 6 you will find the most important specifications concerning the 2004 line-up.

Vehicle Spec Sheets	6-3
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Technical Specifications	6-27
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Bombardier Recreational Products Inc.



3D
SEA-DOO

A new way of seeing watercraft.



2004 | 3D™ Specifications



Kart.

The world's only watercraft with the freedom of choice.



Moto.



Vert.



Three dimensions. Three experiences. One watercraft.

Features



Variable trim system



110hp Rotax™ fuel-injected engine



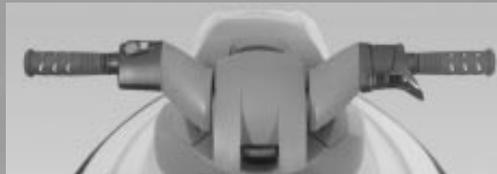
Sea-Doo® D.E.S.S.™ Key



Watertight storage compartment



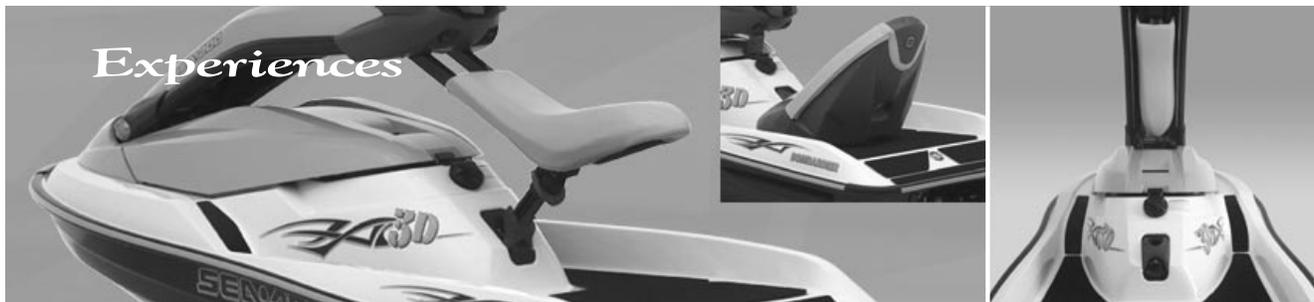
Multifunction LED info center



Adjustable triple point tilt steering



Experiences



Technical Specifications

DIMENSIONS	
Length	107.0 in. (272.0cm)
Width	44.0 in. (112.0cm)
Height	
Kart	37.75 in. (96.0cm)
Moto	44.25 in. (112.0cm)
Vert	36.25 in. (92.0cm)
Weight (dry)	
Kart	603 lbs. (274Kg)
Moto	589 lbs. (268Kg)
Vert	589 lbs. (268Kg)
Rider capacity	1
Fuel capacity (incl. reserve)	8.5 US gallons (32.0L)
Reserve	1.3 US gallons (5.0L)
Oil capacity	1.0 US gallons (4.0L)
Storage capacity	1.42 US gallons (5.4L)

ENGINE	
Type	Two-stroke, twin-cylinder Rotax fuel injection R.A.V.E.™ exhaust
Bore x stroke	82mm x 74mm
Displacement / hp	782cc / 110hp
Compression ratio	6.0:1
Intake system	Rotary valve
Carburetion	(1) Rotax 56 mm throttle body
Lubrication	Variable Rate Oil Injection (V.R.O.I.)
Cooling	Water, open system
Fuel type	Regular unleaded

DRIVE UNIT	
Propulsion system	Bombardier Formula water jet pump
Jet pump	Comp/alum, axial flow, single stage, large hub
Transmission	Direct drive
Impeller	Stainless steel

ELECTRICAL	
Ignition	Digital inductive
Starter	Electric
Battery	12 volt

HULL/DECK	
Color	Black/Bombay Yellow
Type	Semi-V, fiberglass reinforced

EQUIPMENT	
Multifunction LED info center	STD
D.E.S.S.™	STD
V.T.S.™	STD
O.T.A.S.™ system	STD

EXPERIENCES	
Kart	
Moto	
Vert	

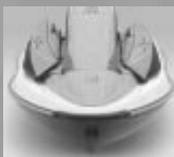
Accessories



3D boat cover



Seat cover with gel inserts



Extra storage bags





A new way of seeing watercraft.



Standard Features

ENGINE	
782cc Rotax marine with R.A.V.E. and fuel injection	Reliable performance in fresh or salt water, optimizes power at all RPM levels and throttle positions.
Rotary valve intake	Optimizes fuel and air intake for maximum power.
Fuel injection	Provides precise fuel mixture to reduce emissions and reduce fuel consumption.
Chokeless starting	Simple, user-friendly starting.
Variable Rate Oil Injection (V.R.O.I.)	Delivers optimal oil-to-fuel ratio at all RPM and throttle positions.
Power pipe with hydro-regulated injection	Regulates water injection for optimal performance and exhaust cooling.
Water cooling	Helps provide long engine life.
Watertight digital ignition	Provides optimal energy for a consistent spark, ensuring maximum performance.
RPM limiter	Protects engine from over-revving.
Overheat warning device	Warns operator of engine overheating.
Handlebar-mounted start/stop button	Starts and stops the engine in a user-friendly manner.

PROPULSION SYSTEM	
Bombardier Formula water jet pump	Delivers matched performance with the Rotax engine.
Composite stator vanes	Handles the high-performance engine without erosion.
Replaceable urethane wear ring	Provides long impeller life, less maintenance and maximum thrust.
Two automatic vacuum siphon pumps	Continuously remove water entering the engine compartment.
Drive shaft with crowned spline design	Maintains engine and pump alignment at all operating speeds.
Stainless steel impeller	Delivers improved acceleration, higher top speed and less cavitation.

HULL and COMPONENTS	
Semi-V hyperbolic multi-angle deadrise design	Provides superior high performance/handling and straight-line tracking.
Fiberglass-reinforced	Strong, light and easy to maintain.
Sponsons	For improved handling.
D-Sea-Bel™ System	Sound reduction system for a quieter ride.
Variable Trim System (V.T.S.)	Enables the rider to adjust the trim level of the watercraft to various experiences and water conditions with the turn of a knob. Enhances control, helping the rider to accelerate quickly and to plane and level the watercraft out on the water's surface.
Bumpers	Help protect watercraft from damage while tied to a dock or another craft.
Bow and stern eyes	Designed for towing or securing the craft to a trailer or dock.
Carpeted footwells and deck pads	Offer extra comfort and non-skid surface.
Non-slip hand grips	For added control and comfort.
Floating safety lanyard	Stops engine in manual and emergency situations.
Water/air separator	Provides maximum airflow to engine and reduces water intrusion.
Watertight storage compartment	Provides storage for fire extinguisher and necessities with easy access.
Reserve fuel supply	Provides supplemental source for continued operation.
Elevated fuel filler	Easy access and prevents water intrusion while refueling.
Multifunction LED Information Center	Reports key operating functions: Fuel Level, Low Fuel Level, Low Oil Level, Maintenance Info, Check Engine.
Dual drain plugs and installation	Screw type design with built-in retainer for easy removal.

con't	
Digitally Encoded Security System (D.E.S.S.™)	Industry's first digitally encoded theft-deterrent system.
Cooling System Indicator (C.S.I.)	Visual check of proper system operation.
External exhaust cooling flush attachment	Easily accessible and fits a common garden hose.
Foam flotation	Ride with security and peace of mind. Meets or exceeds USCG standards.
Operator's guide, instructional video and safety booklet	Informs you of boating regulations, care, maintenance and operating features.
Off-Throttle Assisted Steering (O.T.A.S.)	The Sea-Doo O.T.A.S. (Off-Throttle Assisted Steering) system provides additional maneuverability in off-throttle situations. The O.T.A.S. system is electronically activated when the driver initiates a full turn and under a pre-programmed engine speed.

EXPERIENCES	
KART	For a high-performance seated kart-style ride. (Requires KART package.)
MOTO	Provides a more traditional athletic ride.
VERT	For an all-new vertical riding experience.

WARRANTY

Bombardier limited warranty covers the watercraft for one year.





MUSCLE

2004 RXP



TECHNICAL SPECIFICATIONS

Dimensions

Length	120.9 in. (307.0 cm)
Width	47.2 in. (120.0 cm)
Height	42.9 in. (109.0 cm)
Weight (dry)	790 lbs. (358 Kg)
Rider capacity	1 or 2
Fuel capacity	15.9 US gallons (60 L)
Oil capacity	4.5 L (4.8 qt) dry engine 3.0 L (3.2 qt) after first oil change
Storage capacity	10.7 US gal (40.3 L)

Engine

Type	Supercharged four- stroke, three-cylinder Rotax® SOHC with Intercooler
Bore x Stroke	100mm x 63.4mm
Displacement / hp	1494 cc / 215 hp
Compression ratio	8.5:1
Carburetion / Fuel injection	Multi-port fuel injection
Lubrication	Dry sump, pressure oil system
Cooling	Closed-loop cooling system
Fuel type	Regular unleaded*

Drive Unit

Propulsion system	Bombardier Formula water jet pump
Jet pump	Aluminum, axial flow, single stage, large hub with 10-vane stator

Transmission

Direct drive with forward
/ neutral / reverse and
electric VTS™ (Variable
Trim System)

Impeller

Stainless steel, 4-blade

Electrical

Ignition	Digital inductive
Starter	Electric
Battery	12 volt

Hull

Type	Semi-V, fiberglass reinforced
Colors	Apple Green Metallic or Yellow

Equipment

Speedometer (Analog)	STD
Tachometer (Analog)	STD
Fuel gauge (Info Center)	STD
VTS™ gauge (Info Center)	STD
Information Center (16 functions)	STD
D.E.S.S.™	STD
O.P.A.S.™ system	STD
Sea-Doo® Learning Key™	STD
Mirrors	STD
Two-tone comfort hand grips	STD
Two-tone reboarding deck pad	STD
Removable rear seat cowling	STD
Removable engine hatch	STD
Reboarding step	OPT



2004 RXP

STANDARD FEATURES

Engine

Supercharged 1494 cc four-stroke, three-cylinder Rotax® SOHC with Intercooler	Reliable ultra-high performance in fresh or salt water, increased torque at low RPM, optimizes power at all RPM levels and throttle positions.
Multi-port fuel injection	Better control of exhaust emission and power at all RPM range to reduce emissions and reduce fuel consumption.
Sea-Doo® Learning Key™	Limits engine RPM & top speed for less experienced riders.
Chokeless starting	Simple, user-friendly starting.
Water cooled exhaust pipe	Regulates exhaust temperature.
Closed-loop cooling system	Insures the proper operating temperature at all speeds and improves corrosion durability.
Watertight digital ignition	Provides optimal energy for a consistent spark, ensuring maximum performance.
RPM limiter	Protects engine from over-revving.
Warning device	Warns operator of engine and exhaust overheating, engine management and system failure.
Handlebar-mounted start / stop button	Single user-friendly engine starts and stops with one control button.
Tips Over Protection System (T.O.P.S.™)	Protects engine in case of turn over.

Propulsion System

Bombardier Formula water jet pump	Delivers matched performance with the Rotax® 4-TEC engine.
Forward / neutral / reverse	Safe operation while docking, trailering or towing.
Aluminum stator vanes	Handles the high-performance engine without erosion
Replaceable urethane wear ring	Provides long impeller life, less maintenance and maximum thrust.
Dual automatic vacuum siphon pumps	Continuously remove water entering the engine compartment.
Large diameter drive shaft with crowned spline design	Maintains engine and pump alignment at all operating speeds.
Stainless steel 4-blade impeller	Delivers improved acceleration, higher top speed and less cavitation.

Hull and Components

Semi-V design	Ensures a stable ride at low speed, a smooth ride at high speed and extreme maneuverability.
Fiberglass-reinforced Sponsons	Strong, light and easy to maintain. For improved handling.
D-Sea-Bel™ system	Sound reduction system for a quieter ride.
Bumpers	Help protect watercraft from damage while tied to a dock or another craft.
Bow and stern eyes	Designed for towing or securing the craft to a trailer or dock.
Temporary docking loops	Provides access for quick tie-up.
Carpeted footwells and two-tone deck pads	Offer extra comfort, non-skid surface and great looks.
Reboarding platform	For easy and comfortable mounting of the craft in deep water.

Color-matched comfort hand grips	Provides extreme hand comfort and great looks.
Floating safety lanyard	Stops engine in manual and emergency situations.
Seat strap	Aids in reboarding from water.
Grab handle	For easy reboarding and as a passenger handhold.
Water / air separator	Provides maximum airflow to engine and reduces water intrusion.
Removable engine hatch	Easily removed to allow expanded access during routine engine maintenance.
Watertight storage compartment	Provides storage for fire extinguisher and necessities with easy access.
Glove compartment	Great place to store smaller items.
Extended range fuel tank (15 US gal)	Provides maximum cruising and exploring range.
Elevated fuel filler	Easy access and prevents water intrusion while refueling.
Multifunction LCD Information Center	Reports 16 key operating functions: Fuel Level, Low Fuel Level, Low Oil Pressure, Low Voltage, Tachometer, Overheat, Ambient Temperature, Distance, Hour Meter, Maintenance Info, Average Speed, Current Speed, Check Engine, Lake Temperature, Chronometer, Trim.
Analog speedometer and tachometer	Informs operator of watercraft speed and RPM.
Electric Variable Trim system (VTS™)	Provides boat trim adjustments, maximizes acceleration and high speed stability.
Dual drain plugs	Screw type design with built-in retainer for easy removal and installation.
Digitally Encoded Security System (DESS™)	Industry's first digitally encoded theft-deterrent system.
External exhaust cooling flush attachment	Easily accessible and fits a common garden hose.
Adjustable mirrors	Increases field of view.
Removable rear seat cowling	Covers rear seat improving the single rider's position.
Foam flotation	Ride with security and peace of mind. Meets or exceeds USCG standards.
Operator's guide, Instructional video and safety booklet	Informs you of boating regulations, care, maintenance and operating features.
Off-Power Assisted Steering (O.P.A.S.™)	Assists steering during off-power, as well as off-throttle situations.

Warranty

Bombardier limited warranty covers the watercraft for one year.



MUSCLE

2004 GTX[†] 4-TEC[™] Supercharged



TECHNICAL SPECIFICATIONS

Dimensions

Length	130.9 in. (332.5 cm)
Width	48.2 in. (122.4 cm)
Height	44.4 in. (112.8 cm)
Weight (dry)	867 lbs. (393 Kg)
Rider capacity	1, 2 or 3
Fuel capacity	15.9 US gallons (60 L)
Oil capacity	4.5 L (4.8 qt) dry engine 3.0 L (3.2 qt) after first oil change
Storage capacity	52.6 US gallons (199 L)

Engine

Type	Supercharged four-stroke, three-cylinder Rotax [®] SOHC
Bore x Stroke	100mm x 63.4mm
Displacement / hp	1494 cc / 185 hp
Compression ratio	8.5:1
Carburetion / Fuel injection	Multi-port fuel injection
Lubrication	Dry sump, pressure oil system
Cooling	Closed-loop cooling system
Fuel type	Regular unleaded*

Drive Unit

Propulsion system	Bombardier Formula water jet pump
Jet pump	Aluminum, axial flow, single stage, large hub with 10-vane stator

Transmission	Direct drive, forward / neutral / reverse
Impeller	Stainless steel, 4-blade

Electrical

Ignition	Digital inductive
Starter	Electric
Battery	12 volt

Hull

Type	Modified-V, fiberglass reinforced
Colors	Yellow

Equipment

Speedometer (Analog)	STD
Tachometer (Analog)	STD
Fuel gauge (Info Center)	STD
Information Center (16 functions)	STD
D.E.S.S.[™]	STD
O.P.A.S.[™] system	STD
Sea-Doo[®] Learning Key[™]	STD
Mirrors	STD
Reboarding step	STD
Two-tone comfort hand grips	STD
Removable front storage tray	OPT

2004 GTX[†] 4-TEC[™] Supercharged

STANDARD FEATURES

Engine			
Supercharged 1494 cc four-stroke, three-cylinder Rotax[®] SOHC	Reliable high performance in fresh or salt water, increased torque at low RPM, optimizes power at all RPM levels and throttle positions.	Two-tone comfort hand grips	Provides great looks and extreme hand comfort.
Multi-port fuel injection	Better control of exhaust emission and power at all RPM range to reduce emissions and reduce fuel consumption.	Floating safety lanyard	Stops engine in manual and emergency situations.
Sea-Doo[®] Learning Key[™]	Limits engine RPM & top speed for less experienced riders.	Seat strap	Aids in reboarding from water.
Chokeless starting	Simple, user-friendly starting.	Grab handle	For easy reboarding and as a passenger handhold.
Water cooled exhaust pipe	Regulates exhaust temperature.	Built-in reboarding step	Grooved fold-down for easy reboarding.
Closed-loop cooling system	Insures the proper operating temperature at all speeds and improves corrosion durability.	Water / air separator	Provides maximum airflow to engine and reduces water intrusion.
Watertight digital ignition	Provides optimal energy for a consistent spark, ensuring maximum performance.	3-up seat	Comfortable room for three – permits spotter for watersports.
RPM limiter	Protects engine from over-revving.	Watertight storage compartment	Provides storage for fire extinguisher and necessities with easy access.
Warning device	Warns operator of engine and exhaust overheating, engine management and system failure.	Extra-large storage compartment(s)	Abundant room for supplies on extended cruises.
Handlebar-mounted start / stop button	Single user-friendly engine starts and stops with one control button.	Glove compartment	Great place to store smaller items.
Tips Over Protection System (T.O.P.S.[™])	Protects engine in case of turn over.	Ski eye	Improved for easy and secure attachment of ski rope.
Propulsion System		Extended range fuel tank (15 US gal)	Provides maximum cruising and exploring range.
Bombardier Formula water jet pump	Delivers matched performance with the Rotax [®] 4-TEC engine.	Elevated fuel filler	Easy access and prevents water intrusion while refueling.
Forward / neutral / reverse	Safe operation while docking, trailering or towing.	Multifunction LCD Information Center	Reports 16 key operating functions: Fuel Level, Low Fuel Level, Low Oil Pressure, Low Voltage, Tachometer, Overheat, Ambient Temperature, Distance, Hour Meter, Maintenance Info, Average Speed, Current Speed, Compass, Check Engine, Lake Temperature, Chronometer.
Composite stator vanes	Handles the high-performance engine without erosion	Analog speedometer and tachometer	Informs operator of watercraft speed and RPM.
Replaceable urethane wear ring	Provides long impeller life, less maintenance and maximum thrust.	Dual drain plugs	Screw type design with built-in retainer for easy removal and installation.
Dual automatic vacuum siphon pumps	Continuously remove water entering the engine compartment.	Digitally Encoded Security System (DESS[™])	Industry's first digitally encoded theft-deterrent system.
Large diameter drive shaft with crowned spline design	Maintains engine and pump alignment at all operating speeds.	External exhaust cooling flush attachment	Easily accessible and fits a common garden hose.
Stainless steel 4-blade impeller	Delivers improved acceleration, higher top speed and less cavitation.	Adjustable mirrors	Increases field of view.
Hull and Components		Foam flotation	Ride with security and peace of mind. Meets or exceeds USCG standards.
Modified-V design	Ensures a smooth and comfortable ride in a variety of water conditions, and greater maneuverability.	Operator's guide, instructional video and safety booklet	Informs you of boating regulations, care, maintenance and operating features.
Fiberglass-reinforced Sponsons	Strong, light and easy to maintain. For improved handling.	Off-Power Assisted Steering (O.P.A.S.[™])	Assists steering during off-power, as well as off-throttle situations.
D-Sea-Bel[™] system	Sound reduction system for a quieter ride.	Warranty	
Bumpers	Help protect watercraft from damage while tied to a dock or another craft.	Bombardier limited warranty covers the watercraft for one year.	
Bow and stern eyes	Designed for towing or securing the craft to a trailer or dock.		
Temporary docking loops	Provides access for quick tie-up.		
Carpeted footwells and deck pads	Offer extra comfort and non-skid surface.		
Reboarding platform	For easy and comfortable mounting of the craft in deep water.		



SPORT

2004 XP™ DI



TECHNICAL SPECIFICATIONS

Dimensions

Length	107.1 in. (272.0 cm)
Width	44.5 in. (113.0 cm)
Height	35.8 in. (91.0 cm)
Weight (dry)	600 lbs. (272 Kg)
Rider capacity	1 or 2
Fuel capacity	14.3 US gallons (54 L)
Oil capacity	1.0 US gallons (4 L)
Storage capacity	5.5 US gallons (21 L)

Engine

Type	Two-stroke, twin-cylinder Rotax® Orbital* Direct Injection, R.A.V.E.™ exhaust
Bore x Stroke	88mm x 78.2mm
Displacement / hp	951 cc / 130 hp
Compression ratio	6.1:1
Intake system	Reed valve
Fuel delivery	(2) Orbital Automotive 46mm Throttle Bodies
Lubrication	Variable Rate Oil Injection
Cooling	Water, open system
Fuel type	Regular unleaded

Drive Unit

Propulsion system	Bombardier Formula water jet pump
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Jet pump	Comp / alum, axial flow, single stage, large hub
Transmission	Direct drive with electric VTS™ (Variable Trim System)
Impeller	Stainless steel

Electrical

Ignition	Digital inductive
Starter	Electric
Battery	12 volt

Hull

Type	Semi-V, hyperbolic, multi-angle deadrise design
Color	Viper Red

Equipment

Speedometer (Analog)	STD
Tachometer (Info Center)	STD
Fuel gauge (Info Center)	STD
VTS™ gauge (Info Center)	STD
Information Center (14 functions)	STD
D.E.S.S.™	STD
Sea-Doo® Learning Key™	STD
Mirrors	STD
Electric VTS™	STD
Direct Action Suspension	STD



2004 XP™ DI

STANDARD FEATURES

Engine	
951 cc Rotax® marine with Orbital® Direct Fuel Injection & R.A.V.E.™ exhaust	Reliable performance in fresh or salt water, optimizes power at all RPM levels and throttle positions.
Reed valve intake	Delivers maximum power to larger engine.
Orbital Direct Fuel Injection	Provides precise fuel mixture to reduce emissions and reduce fuel consumption.
Sea-Doo® Learning Key™	Limits engine RPM & top speed for less experienced riders.
Chokeless starting	Simple, user-friendly starting.
Variable Rate Oil Injection (VRO)	Delivers optimal oil-to-fuel ratio at all RPM and throttle positions.
Power pipe with hydro regulated injection	Regulates water injection for optimal performance and exhaust cooling.
Water cooling	Helps provide long engine life.
Watertight digital ignition	Provides optimal energy for a consistent spark, ensuring maximum performance.
RPM limiter	Protects engine from over-revving.
Overheat warning device	Warns operator of engine overheating.
Handlebar-mounted start / stop button	User-friendly engine starts and stops with one control button.
Propulsion System	
Bombardier Formula water jet pump	Delivers matched performance with the Rotax® engine.
Large diameter pump	Maximizes water flow for high performance.
Composite stator vanes	Handles the high-performance engine without erosion
Replaceable urethane wear ring	Provides long impeller life, less maintenance and maximum thrust.
Two automatic vacuum siphon pumps	Continuously remove water entering the engine compartment.
Automatic electric bilge pump	500 gallon per minute capacity.
Drive shaft with crowned spline design	Maintains engine and pump alignment at all operating speeds.
Stainless steel impeller	Delivers improved acceleration, higher top speed and less cavitation.
Hull and Components	
Semi-V hyperbolic multi-angle deadrise design	Provides superior high performance / handling and straight-line tracking
Fiberglass-reinforced	Strong, light and easy to maintain.
Sponsons	For improved handling.
D-Sea-Bel™ System	Sound reduction system for a quieter ride.
Bumpers	Help protect watercraft from damage while tied to a dock or another craft.
Bow and stern eyes	Designed for towing or securing the craft to a trailer or dock.
Temporary docking loops	Provides access for quick tie-up.
Carpeted footwells and deck pads	Offer extra comfort and non-skid surface.
Reboarding platform	For easy and comfortable mounting of the craft in deep water.
Non-slip hand grips	For added control and comfort.
Floating safety lanyard	Stops engine in manual and emergency situations.
Seat strap	Aids in reboarding from water.
Grab handle	For easy reboarding and as a passenger handhold.
Water / air separator	Provides maximum airflow to engine and reduces water intrusion.
Watertight storage compartment	Provides storage for fire extinguisher and necessities with easy access.
Glove compartment	Great place to store smaller items.
Large fuel tank (14.3 US gal)	Provides longer cruising and exploring range.
Multifunction LCD Information Center	Reports 14 key operating functions: Fuel Level, Low Fuel Level, Low Oil Level, Low Voltage, Tachometer, Overheat, Distance, Hour Meter, Maintenance Info, Average Speed, Current Speed, VTS, Lake Water Temperature, Chronometer.
Analog speedometer	Informs operator of watercraft speed.
Electric Variable Trim System (VTS™)	Provides boat trim adjustments, maximizes acceleration and high speed stability.
Cooling System Indicator (CSI)	Visual check of proper system operation.
Dual drain plugs	Screw-type design with built-in retainer for easy removal and installation.
Digitally Encoded Security System (DESS™)	Industry's first digitally encoded theft-deterrent system.
Direct Action Suspension	Seat suspension for added comfort and turning control.
External flush attachment	Easily accessible and fits a common garden hose.
Adjustable mirrors	Increase field of view.
Foam flotation	Ride with security and peace of mind. Meets or exceeds USCG standards.
Operator's guide, Instructional video and safety booklet	Informs you of boating regulations, care, maintenance and operating features.
Warranty	
Bombardier limited warranty covers the watercraft for one year.	



LUXURY PERFORMANCE

2004 GTX[†] 4-TEC[™] Limited Supercharged

TECHNICAL SPECIFICATIONS

Dimensions

Length	130.9 in. (332.5 cm)
Width	48.2 in. (122.4 cm)
Height	44.4 in. (112.8 cm)
Weight (dry)	867 lbs. (393 Kg)
Rider capacity	1, 2 or 3
Fuel capacity	15.9 US gallons (60 L)
Oil capacity	4.5 L (4.8 qt) dry engine 3.0 L (3.2 qt) after first oil change
Storage capacity	52.6 US gallons (199 L)

Engine

Type	Supercharged four- stroke, three-cylinder Rotax [®] SOHC
Bore x Stroke	100mm x 63.4mm
Displacement / hp	1494 cc / 185 hp
Compression ratio	8.5:1
Carburetion / Fuel injection	Multi-port fuel injection
Lubrication	Dry sump, pressure oil system
Cooling	Closed-loop cooling system
Fuel type	Regular unleaded*

Drive Unit

Propulsion system	Bombardier Formula water jet pump
Jet pump	Aluminum, axial flow, single stage, large hub with 10-vane stator
Transmission	Direct drive, forward / neutral / reverse
Impeller	Stainless steel, 4-blade

Electrical

Ignition	Digital inductive
Starter	Electric
Battery	12 volt

Hull

Type	Modified-V, fiberglass reinforced
Color	Twilight Blue

Equipment

Speedometer (Analog)	STD
Tachometer (Analog)	STD
Fuel gauge (Info Center)	STD
Information Center (17 functions)	STD
D.E.S.S. [™]	STD
O.P.A.S. [™] system	STD
Sea-Doo [®] Learning Key [™]	STD
Mirrors	STD
Reboarding step	STD
Two-tone comfort hand grips	STD
Two-tone reboarding deck pad	STD

Limited Package (STD)

Integrated GPS by Garmin	Boat Cover
Two-tone cut & sew seat	Cooler
Fairings	Log book
Cell phone case	Organizer
Removable dry bag	Mooring cleats
Wrist lanyard D.E.S.S. [™] key	Adjustable steering
Depth gauge (Info Center)	Under seat flush kit
Removable storage tray	Safety kit



2004 GTX[†] 4-TEC™ Limited Supercharged
STANDARD FEATURES

Engine	
Supercharged 1494 cc four-stroke, three-cylinder Rotax[®] SOHC with multi-port fuel injection	Reliable high performance in fresh or salt water, increased torque at low RPM, optimizes power at all RPM levels and throttle positions.
Carburetion / Fuel injection	Better control of exhaust emission and power at all RPM range to reduce emissions and reduce fuel consumption.
Sea-Doo[®] Learning Key™	Limits engine RPM & top speed for less experienced riders.
Chokeless starting	Simple, user-friendly starting.
Water cooled exhaust pipe	Regulates exhaust temperature.
Closed-loop cooling system	Insures the proper operating temperature at all speeds and improves corrosion durability.
Watertight Digital Ignition	Provides optimal energy for a consistent spark, ensuring maximum performance.
RPM limiter	Protects engine from over-revving.
Warning device	Warns operator of engine and exhaust overheating, engine management and system failure.
Handlebar-mounted start / stop button	Single user-friendly engine starts and stops with one control button.
Tips Over Protection System (T.O.P.S.™)	Protects engine in case of turn over.
Propulsion System	
Bombardier Formula water jet pump	Delivers matched performance with the Rotax [®] 4-TEC engine.
Forward / neutral / reverse	Safe operation while docking, trailering or towing.
Composite stator vanes	Handles the high-performance engine without erosion
Replaceable urethane wear ring	Provides long impeller life, less maintenance and maximum thrust.
Dual automatic vacuum siphon pumps	Continuously remove water entering the engine compartment.
Large diameter drive shaft with crowned spline design	Maintains engine and pump alignment at all operating speeds.
Stainless steel 4-blade impeller	Delivers improved acceleration, higher top speed and less cavitation.
Hull and Components	
Modified-V design	Ensures a smooth and comfortable ride in a variety of water conditions, and greater maneuverability.
Fiberglass-reinforced Sponsons	Strong, light and easy to maintain. For improved handling.
D-Sea-Bel™ System	Sound reduction system for a quieter ride.
Bumpers	Help protect watercraft from damage while tied to a dock or another craft.
Bow and stern eyes	Designed for towing or securing the craft to a trailer or dock.
Temporary docking loops	Provides access for quick tie-up.
Carpeted footwells and two-tone deck pads	Offer extra comfort, non-skid surface and great looks.
Two-tone comfort hand grips	Provides great looks and extreme hand comfort.
Reboarding platform	For easy and comfortable mounting of the craft in deep water.
Floating safety lanyard	Stops engine in manual and emergency situations.
Seat strap	Aids in reboarding from water.
Grab handle	For easy reboarding and as a passenger handhold.
Built-in reboarding step	Grooved fold-down for easy reboarding.
Water / air separator	Provides maximum airflow to engine and reduces water intrusion.
3-up seat	Comfortable room for three –
Watertight storage compartment	permits spotter for watersports. Provides storage for fire extinguisher and necessities with easy access.
Extra-large storage compartment(s)	Abundant room for supplies on extended cruises.
Glove compartment	Great place to store smaller items.
Ski eye	Improved for easy and secure attachment of ski rope.
Extended range fuel tank (15 US gal)	Provides maximum cruising and exploring range.
Elevated fuel filler	Easy access and prevents water intrusion while refueling.
Multifunction LCD Information Center	Reports 17 key operating functions: Fuel Level, Low Fuel Level, Low Oil Pressure, Low Voltage, Tachometer, Overheat, Ambient Temperature, Distance, Hour Meter, Maintenance Info, Average Speed, Current Speed, Compass, Check Engine, Lake Temperature, Chronometer, Depth.
Analog speedometer and tachometer	Informs operator of watercraft speed and RPM.
Dual drain plugs	Screw type design with built-in retainer for easy removal and installation.
Digitally Encoded Security System (DESS™)	Industry's first digitally encoded theft-deterrent system.
Adjustable mirrors	Increases field of view.
Foam flotation	Ride with security and peace of mind. Meets or exceeds USCG standards.
Operator's guide, Instructional video and safety booklet	Informs you of boating regulations, care, maintenance and operating features.
Off-Power Assisted Steering (O.P.A.S.™)	Assists steering during off-power, as well as off-throttle situations.
Limited Package	
Integrated handheld GPS by Garmin	Informs operator of precise location with maps and geographical coordinates.
Depth gauge	Informs driver of water depth.
Boat cover	Protects watercraft during trailering and storage.
Cell phone case	Keeps your electronics safe and dry.
Removable dry bag	Keeps contents dry and converts to backpack when removed.
Cut and sew seat	Ergonomically designed for comfort and great looks.
Fairings	Provide additional spray deflection and design enhancement.
Soft-sided cooler	Perfect for transporting food and drink to your destination.
Mooring cleats	Makes docking your craft a breeze.
Sandbag anchor	Provides an easy way to hold your boat in one position.
Mooring ropes	Easily ties your craft to dock.
Organizer	Holds items securely under storage cover.
Wrist lanyard D.E.S.S.™ key	Safety and security lanyard bears the Limited insignia.
Log book	Handy for navigational and service records.
Safety kit	Provides aid if the need arises.
Adjustable steering	Alters the steering angle for maximum ease and comfort.
Removable storage tray	Provides portable access to front storage items.
Under-seat exhaust cooling flush attachment	Readily accessible and fits a common garden hose.
Warranty	
Bombardier limited warranty covers the watercraft for one year.	



LUXURY PERFORMANCE

2004 GTX[†] 4-TEC[™]

TECHNICAL SPECIFICATIONS

Dimensions

Length	130.9 in. (332.5 cm)
Width	48.2 in. (122.4 cm)
Height	44.4 in. (112.8 cm)
Weight (dry)	840 lbs. (381 Kg)
Rider capacity	1, 2 or 3
Fuel capacity	15.9 US gallons (60 L)
Oil capacity	4.5 L (4.8 qt) dry engine 3.0 L (3.2 qt) after first oil change
Storage capacity	52.6 US gallons (199 L)

Engine

Type	Four-stroke, three-cylinder Rotax [®] SOHC
Bore x Stroke	100mm x 63.4mm
Displacement / hp	1494 cc / 155 hp
Compression ratio	10.5:1
Carburetion / Fuel injection	Multi-port fuel injection
Lubrication	Dry sump, pressure oil system
Cooling	Closed-loop cooling system
Fuel type	Regular unleaded

Drive Unit

Propulsion system	Bombardier Formula water jet pump
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Jet pump	Comp / alum, axial flow, single stage, large hub with 10-vane stator
Transmission	Direct drive, forward / neutral / reverse
Impeller	Stainless steel, 4-blade

Electrical

Ignition	Digital inductive
Starter	Electric
Battery	12 volt

Hull

Type	Modified-V, fiberglass reinforced
Color	Seashore Metallic

Equipment

Speedometer (Analog)	STD
Tachometer (Analog)	STD
Fuel gauge (Info Center)	STD
Information Center (16 functions)	STD
D.E.S.S.[™]	STD
O.P.A.S.[™] system	STD
Sea-Doo[®] Learning Key[™]	STD
Mirrors	STD
Reboarding step	STD
Two-tone comfort hand grips	STD
Removable front storage tray	OPT

2004 GTX[†] 4-TEC[™]

STANDARD FEATURES

Engine	
1494 cc four-stroke, three-cylinder Rotax[®] SOHC with multi-port fuel injection	Reliable performance in fresh or salt water, increased torque at low RPM, optimizes power at all RPM levels and throttle positions.
Carburetion / Fuel injection	Better control of exhaust emission and power at all RPM range to reduce emissions and reduce fuel consumption.
Sea-Doo[®] Learning Key[™]	Limits engine RPM & top speed for less experienced riders.
Chokeless starting	Simple, user-friendly starting.
Water cooled exhaust pipe	Regulates exhaust temperature.
Closed-loop cooling system	Insures the proper operating temperature at all speeds and improves corrosion durability.
Watertight digital ignition	Provides optimal energy for a consistent spark, ensuring maximum performance.
RPM limiter	Protects engine from over-revving.
Warning device	Warns operator of engine and exhaust overheating, engine management and system failure.
Handlebar-mounted start / stop button	Single user-friendly engine starts and stops with one control button.
Tips Over Protection System (T.O.P.S.[™])	Protects engine in case of turn over.
Propulsion System	
Bombardier Formula water jet pump	Delivers matched performance with the Rotax [®] 4-TEC engine.
Forward / neutral / reverse	Safe operation while docking, trailering or towing.
Composite stator vanes	Handles the high-performance engine without erosion
Replaceable urethane wear ring	Provides long impeller life, less maintenance and maximum thrust.
Dual automatic vacuum siphon pumps	Continuously remove water entering the engine compartment.
Large diameter drive shaft with crowned spline design	Maintains engine and pump alignment at all operating speeds.
Stainless steel 4-blade impeller	Delivers improved acceleration, higher top speed and less cavitation.
Hull and Components	
Modified-V design	Ensures a smooth and comfortable ride in a variety of water conditions, and greater maneuverability.
Fiberglass-reinforced	Strong, light and easy to maintain.
Sponsons	For improved handling.
D-Sea-Bel[™] system	Sound reduction system for a quieter ride.
Bumpers	Help protect watercraft from damage while tied to a dock or another craft.
Bow and stern eyes	Designed for towing or securing the craft to a trailer or dock.
Temporary docking loops	Provides access for quick tie-up.
Carpeted footwells and deck pads	Offer extra comfort and non-skid surface.
Reboarding platform	For easy and comfortable mounting of the craft in deep water.
Two-tone comfort hand grips	Provides extreme hand comfort and great looks.
Floating safety lanyard	Stops engine in manual and emergency situations.
Seat strap	Aids in reboarding from water.
Grab handle	For easy reboarding and as a passenger handhold.
Built-in reboarding step	Grooved fold-down for easy reboarding.
Water / air separator	Provides maximum airflow to engine and reduces water intrusion.
3-up seat	Comfortable room for three – permits spotter for watersports.
Watertight storage compartment	Provides storage for fire extinguisher and necessities with easy access.
Extra-large storage compartment(s)	Abundant room for supplies on extended cruises.
Glove compartment	Great place to store smaller items.
Ski eye	Improved for easy and secure attachment of ski rope.
Extended range fuel tank (15 US gal)	Provides maximum cruising and exploring range.
Elevated fuel filler	Easy access and prevents water intrusion while refueling.
Multifunction LCD Information Center	Reports 16 key operating functions: Fuel Level, Low Fuel Level, Low Oil Pressure, Low Voltage, Tachometer, Overheat, Ambient Temperature, Distance, Hour Meter, Maintenance Info, Average Speed, Current Speed, Compass, Check Engine, Lake Temperature, Chronometer.
Analog speedometer and tachometer	Informs operator of watercraft speed and RPM.
Dual drain plugs	Screw type design with built-in retainer for easy removal and installation.
Digitally Encoded Security System (DESS[™])	Industry's first digitally encoded theft-deterrent system.
External exhaust cooling flush attachment	Easily accessible and fits a common garden hose.
Adjustable mirrors	Increases field of view.
Foam flotation	Ride with security and peace of mind. Meets or exceeds USCG standards.
Operator's guide, Instructional video and safety booklet	Informs you of boating regulations, care, maintenance and operating features.
Off-Power Assisted Steering (O.P.A.S.[™])	Assists steering during off-power, as well as off-throttle situations.
Warranty	
Bombardier limited warranty covers the watercraft for one year.	



RECREATION

2004 GTI™ LE RFI



TECHNICAL SPECIFICATIONS

Dimensions

Length	120.9 in. (307.0 cm)
Width	47.2 in. (120.0 cm)
Height	40.9 in. (104.0 cm)
Weight (dry)	700 lbs. (318 Kg)
Rider capacity	1, 2 or 3
Fuel capacity (incl. reserve)	15.0 US gallons (56.5 L)
Reserve	3.0 US gallons (11.4 L)
Oil capacity	1.6 US gallons (4.5 L)
Storage capacity	33.8 US gallons (128 L)

Engine

Type	Two-stroke, twin-cylinder Rotax® Fuel Injection R.A.V.E.™ exhaust
Bore x Stroke	82mm x 74mm
Displacement / hp	782 cc / 110 hp
Compression ratio	6.0:1
Intake system	Rotary valve
Carburetion	(1) Rotax 56 mm Throttle Body
Lubrication	Variable Rate Oil Injection
Cooling	Water, open system
Fuel type	Regular unleaded

Drive Unit

Propulsion system	Bombardier Formula water jet pump
Jet pump	Comp / alum, axial flow, single stage, large hub
Transmission	Direct drive, forward / neutral / reverse
Impeller	Stainless steel

Electrical

Ignition	Digital inductive
Starter	Electric
Battery	12 volt

Hull

Type	Semi-V, fiberglass reinforced
Color	Sonoran Sand

Equipment

Tachometer (Info Center)	STD
Fuel gauge (Info Center)	STD
Information Center (16 functions)	STD
D.E.S.S.™	STD
O.P.A.S.™ system	STD

LE Package (STD)

Speedometer (Analog)	Mirrors
Reboarding step	Footwell mats



2004 GTI™ LE RFI

STANDARD FEATURES

Engine

782 cc Rotax® marine with R.A.V.E.™ and fuel injection	Reliable performance in fresh or salt water, optimizes power at all RPM levels and throttle positions.
Rotary valve intake	Optimizes fuel and air intake for maximum power.
Fuel injection	Provides precise fuel mixture to reduce emissions and reduce fuel consumption.
Chokeless starting	Simple, user-friendly starting.
Variable Rate Oil Injection (VROI)	Delivers optimal oil-to-fuel ratio at all RPM and throttle positions.
Power pipe with hydro-regulated injection	Regulates water injection for optimal performance and exhaust cooling.
Water cooling	Helps provide long engine life.
Watertight digital ignition	Provides optimal energy for a consistent spark, ensuring maximum performance.
RPM limiter	Protects engine from over-revving.
Overheat warning device	Warns operator of engine overheating.
Handlebar-mounted Start / stop button	Single user-friendly engine starts and stops with one control button.

Propulsion System

Bombardier Formula water jet pump	Delivers matched performance with the Rotax® engine.
Forward / neutral / reverse	Safe operation while docking, trailering or towing.
Composite stator vanes	Handles the high-performance engine without erosion
Replaceable urethane wear ring	Provides long impeller life, less maintenance and maximum thrust.
Two automatic vacuum siphon pumps	Continuously remove water entering the engine compartment.
Drive shaft with crowned spline design	Maintains engine and pump alignment at all operating speeds.
Stainless steel impeller	Delivers improved acceleration, higher top speed and less cavitation.

Hull and Components

Semi-V design	Ensures a stable ride at low speed, a smooth ride at high speed and extreme maneuverability.
Fiberglass-reinforced Sponsons	Strong, light and easy to maintain. For improved handling.
D-Sea-Bel™ System	Sound reduction system for a quieter ride.
Bumpers	Help protect watercraft from damage while tied to a dock or another craft.
Bow and stern eyes	Designed for towing or securing the craft to a trailer or dock.
Temporary docking loops	Provides access for quick tie-up.
Carpeted footwells and deck pads	Offer extra comfort and non-skid surface.
Reboarding platform	For easy and comfortable mounting of the craft in deep water.
Non-slip hand grips	For added control and comfort.

Built-in reboarding step

passenger handhold.
Grooved fold-down for easy reboarding.

Water / air separator

Provides maximum airflow to engine and reduces water intrusion.

3-up seat

Comfortable room for three – permits spotter for watersports.

Watertight storage compartment

Provides storage for fire extinguisher and necessities with easy access.

Glove compartment

Great place to store smaller items.

Ski eye

Improved for easy and secure attachment of ski rope.

Extended range fuel tank (15 US gal)

Provides maximum cruising and exploring range.

Reserve fuel supply

Provides supplemental source for continued operation.

Elevated fuel filler

Easy access and prevents water intrusion while refueling.

Multifunction LCD Information Center

Reports 16 key operating functions: Fuel Level, Low Fuel Level, Low Oil Pressure, Low Voltage, Tachometer, Overheat, Ambient Temperature, Distance, Hour Meter, Maintenance Info, Average Speed, Check Engine, Current Speed, Compass, Lake Temperature, Chronometer.

Analog speedometer

Informs operator of watercraft speed.

Dual drain plugs

Screw type design with built-in retainer for easy removal and installation.

Digitally Encoded Security System (DESS™)

Industry's first digitally encoded theft-deterrent system.

Cooling System Indicator (CSI)

Visual check of proper system operation.

External exhaust cooling flush attachment

Easily accessible and fits a common garden hose.

Foam flotation

Ride with security and peace of mind. Meets or exceeds USCG standards.

Operator's guide, instructional video and safety booklet

Informs you of boating regulations, care, maintenance and operating features.

Off-Power Assisted Steering (O.P.A.S™)

Assists steering during off-power, as well as off-throttle situations.

LE Package**Analog speedometer**

Informs operator of watercraft speed.

Built-in reboarding step

Grooved fold-down for easy reboarding.

Adjustable mirrors

Increases field of view.

Carpeted footwells and deck pads

Offer extra comfort and non-skid surface.

Warranty

Bombardier limited warranty covers the watercraft for one year.



RECREATION

2004 GTI™ LE



TECHNICAL SPECIFICATIONS

Dimensions

Length	120.9 in. (307.0 cm)
Width	47.2 in. (120.0 cm)
Height	40.9 in. (104.0 cm)
Weight (dry)	643 lbs. (292 Kg)
Rider Capacity	1, 2 or 3
Fuel Capacity (incl. reserve)	15.0 US gallons (56.5 L)
Reserve	3.0 US gallons (11.4 L)
Oil Capacity	1.6 US gallons (4.5 L)
Storage Capacity	33.8 US gallons (128 L)

Engine

Type	Two-stroke, twin-cylinder Rotax® engine
Bore x Stroke	82mm x 68mm
Displacement / hp	718 cc / 85 hp
Compression ratio	6.2:1
Intake system	Rotary valve
Carburetion	(1) Mikuni BN 40-38
Lubrication	Variable Rate Oil Injection
Cooling	Water, open system
Fuel type	Regular unleaded

Drive Unit

Propulsion system	Bombardier Formula water jet pump
Jet pump	Comp / alum, axial flow, single stage, large hub
Transmission	Direct drive, forward / neutral / reverse
Impeller	Stainless steel

Electrical

Ignition	Digital CDI
Starter	Electric
Battery	12 volt

Hull

Type	Semi-V, fiberglass reinforced
Color	Sonoran Sand

Equipment

Fuel / Oil gauge (Analog)	STD
D.E.S.S.™	STD
O.P.A.S.™ system	STD

LE Package (STD)

Speedometer (Analog)	Mirrors
Reboarding step	Footwell mats



2004 GTI™ LE

STANDARD FEATURES

Engine

718 cc Rotax® marine	Reliable performance in fresh or salt water.
Rotary valve intake	Optimizes fuel and air intake for maximum power.
Carburetor with accelerator pump	Better acceleration and performance, less exhaust fumes at idle speed
Variable Rate Oil Injection (VROI)	Delivers optimal oil-to-fuel ratio at all RPM and throttle positions.
High-performance tuned pipe	Provides increased horsepower.
Water cooling	Helps provide long engine life.
Watertight CDI	Provides optimal energy for a consistent spark, ensuring maximum performance.
RPM limiter	Protects engine from over-revving.
Overheat warning device	Warns operator of engine overheating.
Handlebar-mounted start/stop button	User-friendly engine starts and stops with one control button.

Propulsion System

Bombardier Formula water jet pump	Delivers matched performance with the Rotax® engine.
Forward/neutral/reverse	Safe operation while docking, trailering or towing.
Composite stator vanes	Handles the high-performance engine without erosion
Replaceable urethane wear ring	Provides long impeller life, less maintenance and maximum thrust.
Two automatic vacuum siphon pumps	Continuously remove water entering the engine compartment
Drive shaft with crowned spline design	Maintains engine and pump alignment at all operating speeds.
Stainless steel impeller	Delivers improved acceleration, higher top speed and less cavitation.

Hull and Components

Semi-V design	Ensures a stable ride at low speed, a smooth ride at high speed and extreme maneuverability.
Fiberglass-reinforced	Strong, light and easy to maintain.
Sponsons	For improved handling
Bumpers	Help protect watercraft from damage while tied to a dock or another craft.
Bow and stern eyes	Designed for towing or securing the craft to a trailer or dock.
Temporary docking loops	Provides access for quick tie-up
Reboarding platform	For easy and comfortable mounting of the craft in deep water.
Non-slip hand grips	For added control and comfort.
Floating safety lanyard	Stops engine in manual and emergency situations.
Seat strap	Aids in reboarding from water.
Grab handle	For easy reboarding and as a passenger handhold.
Water / air separator	Provides maximum airflow to engine and reduces water intrusion.
3-up seat	Comfortable room for three – permits spotter for watersports.

Watertight storage compartment	Provides storage for fire extinguisher and necessities with easy access.
Extended range fuel tank (15 US gal)	Provides maximum cruising and exploring range.
Reserve fuel supply	Provides supplemental source for continued operation.
Elevated fuel filler	Easy Access and prevents water intrusion while refueling.
Analog fuel gauge	Informs of fuel level and warns of low injection oil level.
Digitally Encoded Security System (DESS™)	Industry's first digitally encoded theft-deterrent system.
Cooling System Indicator (CSI)	Visual check of proper system operation.
Foam flotation	Ride with security and peace of mind. Meets or exceeds USCG standards.
Operator's guide, instructional video and safety booklet	Informs you of boating regulations, care, maintenance and operating features.
Off-Power Assisted Steering (O.P.A.S™)	Assists steering during off-power, as well as off-throttle situations.

LE Package

Analog speedometer	Informs operator of watercraft speed.
Built-in reboarding step	Grooved fold-down for easy reboarding.
Adjustable mirrors	Increases field of view.
Carpeted footwells and deck pads	Offer extra comfort and non-skid surface.

Warranty

Bombardier limited warranty covers the watercraft for one year.



RECREATION

2004 GTI™ RFI



TECHNICAL SPECIFICATIONS

Dimensions

Length	120.9 in. (307.0 cm)
Width	47.2 in. (120.0 cm)
Height	40.9 in. (104.0 cm)
Weight (dry)	680 lbs. (308 Kg)
Rider capacity	1, 2 or 3
Fuel capacity (incl. reserve)	15.0 US gallons (56.5 L)
Reserve	3.0 US gallons (11.4 L)
Oil capacity	1.6 US gallons (4.5 L)
Storage capacity	33.8 US gallons (128 L)

Engine

Type	Two-stroke, twin-cylinder Rotax® Fuel Injection R.A.V.E.™ exhaust
Bore x Stroke	82mm x 74mm
Displacement / hp	782 cc / 110 hp
Compression ratio	6.0:1
Intake system	Rotary valve
Carburetion	(1) Rotax 56 mm Throttle Body
Lubrication	Variable Rate Oil Injection
Cooling	Water, open system
Fuel type	Regular unleaded

Drive Unit

Propulsion system	Bombardier Formula water jet pump
Jet pump	Comp / alum, axial flow, single stage, large hub
Transmission	Direct drive, forward / neutral / reverse
Impeller	Stainless steel

Electrical

Ignition	Digital inductive
Starter	Electric
Battery	12 volt

Hull

Type	Semi-V, fiberglass reinforced
Color	Blue Jay

Equipment

Fuel / Oil gauge (Analog)	STD
D.E.S.S.™	STD
O.P.A.S.™ system	STD
Speedometer (Analog)	OPT
Mirrors	OPT
Reboarding step	OPT



2004 GTI™ RFI

STANDARD FEATURES

Engine		Floating safety lanyard	
782 cc Rotax® marine with R.A.V.E.™ and fuel injection	Reliable performance in fresh or salt water, optimizes power at all RPM levels and throttle positions.	Seat strap	Stops engine in manual and emergency situations.
Rotary valve intake	Optimizes fuel and air intake for maximum power.	Grab handle	Aids in reboarding from water.
Fuel injection	Provides precise fuel mixture to reduce emissions and reduce fuel consumption.	Water / air separator	Provides maximum airflow to engine and reduces water intrusion.
Chokeless starting	Simple, user-friendly starting.	3-up seat	Comfortable room for three – permits spotter for watersports.
Variable Rate Oil Injection (VROI)	Delivers optimal oil-to-fuel ratio at all RPM and throttle positions.	Watertight storage compartment	Provides storage for fire extinguisher and necessities with easy access.
Power pipe with hydro-regulated injection	Regulates water injection for optimal performance and exhaust cooling.	Glove compartment	Great place to store smaller items.
Water cooling	Helps provide long engine life.	Ski eye	Improved for easy and secure attachment of ski rope.
Watertight digital ignition	Provides optimal energy for a consistent spark, ensuring maximum performance.	Extended range fuel tank (15 US gal)	Provides maximum cruising and exploring range.
RPM limiter	Protects engine from over-revving.	Reserve fuel supply	Provides supplemental source for continued operation
Overheat warning device	Warns operator of engine overheating.	Elevated fuel filler	Easy access and prevents water intrusion while refueling.
Handlebar-mounted Start / stop button	Single user-friendly engine starts and stops with one control button.	Analog fuel gauge	Informs of fuel level and warns of low injection oil level.
Propulsion System		Dual drain plugs	Screw type design with built-in retainer for easy removal and installation.
Bombardier Formula water jet pump	Delivers matched performance with the Rotax® engine.	Digitally Encoded Security System (DESS™)	Industry's first digitally encoded theft-deterrent system.
Forward / neutral / reverse	Safe operation while docking, trailering or towing.	External exhaust cooling flush attachment	Easily accessible and fits a common garden hose.
Composite stator vanes	Handles the high-performance engine without erosion	Cooling system indicator	(CSI) Visual check of proper system operation.
Replaceable urethane wear ring	Provides long impeller life, less maintenance and maximum thrust.-	Foam flotation	Ride with security and peace of mind. Meets or exceeds USCG standards.
Two automatic vacuum siphon pumps	Continuously remove water entering the engine compartment.	Operator's guide, instructional video and safety booklet	Informs you of boating regulations, care, maintenance and operating features.
Drive shaft with crowned spline design	Maintains engine and pump alignment at all operating speeds.	Off-Power Assisted Steering (O.P.A.S™)	Assists steering during off-power, as well as off-throttle situations.
Stainless steel impeller	Delivers improved acceleration, higher top speed and less cavitation.	Warranty	
Hull and Components		Bombardier limited warranty covers the watercraft for one year.	
Semi-V design	Ensures a stable ride at low speed, a smooth ride at high speed and extreme maneuverability.		
Fiberglass-reinforced Sponsons	Strong, light and easy to maintain. For improved handling.		
D-Sea-Bel™ System	Sound reduction system for a quieter ride.		
Bumpers	Help protect watercraft from damage while tied to a dock or another craft.		
Bow and stern eyes	Designed for towing or securing the craft to a trailer or dock.		
Temporary docking loops	Provides access for quick tie-up.		
Non-skid surface	Enhances sure footing while riding.		
Deck Pads	Offer extra comfort and non-skid surface.		
Reboarding platform	For easy and comfortable mounting of the craft in deep water.		
Non-slip hand grips	For added control and comfort.		



RECREATION

2004 GTI™



TECHNICAL SPECIFICATIONS

Dimensions

Length	120.9 in. (307.0 cm)
Width	47.2 in. (120.0 cm)
Height	40.9 in. (104.0 cm)
Weight (dry)	623 lbs. (283 Kg)
Rider Capacity	1, 2 or 3
Fuel Capacity (incl. reserve)	15.0 US gallons (56.5 L)
Reserve	3.0 US gallons (11.4 L)
Oil Capacity	1.6 US gallons (4.5 L)
Storage Capacity	33.8 US gallons (128 L)

Engine

Type	Two-stroke, twin-cylinder Rotax® engine
Bore x Stroke	82mm x 68mm
Displacement / hp	718 cc / 85 hp
Compression ratio	6.2:1
Intake system	Rotary valve
Carburetion	(1) Mikuni BN 40-38
Lubrication	Variable Rate Oil Injection
Cooling	Water, open system
Fuel type	Regular unleaded

Drive Unit

Propulsion system	Bombardier Formula water jet pump
Jet pump	Comp / alum, axial flow, single stage, large hub
Transmission	Direct drive, forward / neutral / reverse
Impeller	Stainless steel

Electrical

Ignition	Digital CDI
Starter	Electric
Battery	12 volt

Hull

Type	Semi-V, fiberglass reinforced
Color	Blue Jay

Equipment

Fuel / Oil gauge (Analog)	STD
D.E.S.S.™	STD
O.P.A.S.™ system	STD
Speedometer (Analog)	OPT
Mirrors	OPT
Reboarding step	OPT



2004 GTI™

STANDARD FEATURES

Engine

718 cc Rotax® marine	Reliable performance in fresh or salt water.
Rotary valve intake	Optimizes fuel and air intake for maximum power.
Carburetor with accelerator pump	Better acceleration and performance, less exhaust fumes at idle speed.
Variable Rate Oil Injection (VROI)	Delivers optimal oil-to-fuel ratio at all RPM and throttle positions.
High-performance tuned pipe	Provides increased horsepower.
Water cooling	Helps provide long engine life.
Watertight CDI	Provides optimal energy for a consistent spark, ensuring maximum performance.
RPM limiter	Protects engine from over-revving.
Overheat warning device	Warns operator of engine overheating.
Handlebar-mounted start/stop button	User-friendly engine starts and stops with one control button.

Propulsion System

Bombardier Formula water jet pump	Delivers matched performance with the Rotax® engine.
Forward / neutral / reverse	Safe operation while docking, trailering or towing.
Composite stator vanes	Handles the high-performance engine without erosion
Replaceable urethane wear ring	Provides long impeller life, less maintenance and maximum thrust.
Two automatic vacuum siphon pumps	Continuously remove water entering the engine compartment.
Drive shaft with crowned spline design	Maintains engine and pump alignment at all operating speeds.
Stainless steel impeller	Delivers improved acceleration, higher top speed and less cavitation.

Hull and Components

Semi-V design	Ensures a stable ride at low speed, a smooth ride at high speed and extreme maneuverability.
Fiberglass-reinforced Sponsons	Strong, light and easy to maintain. For improved handling.
D-Sea-Bel™ System	Sound reduction system for a quieter ride.
Bumpers	Help protect watercraft from damage while tied to a dock or another craft.
Bow and stern eyes	Designed for towing or securing the craft to a trailer or dock.
Temporary docking loops	Provides access for quick tie-up.
Non-skid surface	Enhances sure footing while riding.
Deck Pads	Offer extra comfort and non-skid surface.
Reboarding platform	For easy and comfortable mounting of the craft in deep water.
Non-slip hand grips	For added control and comfort.
Floating safety lanyard	Stops engine in manual and emergency situations.
Seat strap	Aids in reboarding from water.
Grab handle	For easy reboarding and as a

Water / air separator	Provides maximum airflow to engine and reduces water intrusion.
3-up seat	Comfortable room for three – permits spotter for watersports.
Watertight storage compartment	Provides storage for fire extinguisher and necessities with easy access.
Glove compartment	Great place to store smaller items.
Ski eye	Improved for easy and secure attachment of ski rope.
Extended range fuel tank (15 US gal)	Provides maximum cruising and exploring range.
Reserve fuel supply	Provides supplemental source for continued operation
Elevated fuel filler	Easy access and prevents water intrusion while refueling.
Analog fuel gauge	Informs of fuel level and warns of low injection oil level.
Dual drain plugs	Screw type design with built-in retainer for easy removal and installation.
Digitally Encoded Security System (DESS™)	Industry's first digitally encoded theft-deterrent system.
External exhaust cooling flush attachment	Easily accessible and fits a common garden hose.
Cooling System Indicator (CSI)	Visual check of proper system operation.
Foam flotation	Ride with security and peace of mind. Meets or exceeds USCG standards.
Operator's guide, instructional video and safety booklet	Informs you of boating regulations, care, maintenance and operating features.
Off-Power Assisted Steering (O.P.A.S.™)	Assists steering during off-power, as well as off-throttle situations.

Warranty

Bombardier limited warranty covers the watercraft for one year.



RECREATION

2004 GTX[†] Wakeboard Edition



TECHNICAL SPECIFICATIONS

Dimensions

Length	130.9 in. (332.5 cm)
Width	48.2 in. (122.4 cm)
Height	44.4 in. (112.8 cm)
Weight (dry)	860 lbs. (390 Kg)
Rider capacity	1, 2 or 3
Fuel capacity	15.9 US gallons (60 L)
Oil capacity	4.5 L (4.8 qt) dry engine 3.0 L (3.2 qt) after first oil change
Storage capacity	52.6 US gallons (199 L)

Engine

Type	Four-stroke, three-cylinder Rotax [®] SOHC
Bore x Stroke	100mm x 63.4mm
Displacement / hp	1494 cc / 155 hp
Compression ratio	10.5:1
Carburetion / Fuel injection	Multi-port fuel injection
Lubrication	Dry sump, pressure oil system
Cooling	Closed-loop cooling system
Fuel type	Regular unleaded

Drive Unit

Propulsion system	Bombardier Formula water jet pump
Jet pump	Comp /alum, axial flow, single stage, large hub with 10-vane stator

Transmission	Direct drive, forward / neutral / reverse
Impeller	Stainless steel, 4-blade

Electrical

Ignition	Digital inductive
Starter	Electric
Battery	12 volt

Hull

Type	Modified-V, fiberglass reinforced
Color	Viper Red

Equipment

Speedometer (Analog)	STD
Tachometer (Analog)	STD
Fuel gauge (Info Center)	STD
Information Center (16 functions)	STD
D.E.S.S.[™]	STD
O.P.A.S.[™]	STD
Sea-Doo[®] Learning Key[™]	STD
Reboarding step	STD
Two-tone comfort hand grips	STD
Two-tone reboarding deck pad	STD

Wakeboard Package (STD)

Retractable tow pylon
Removable wakeboard racks
Removable front storage tray
New convex mirrors

2004 GTX[†] Wakeboard Edition

STANDARD FEATURES

Engine	
1494 cc four-stroke, three-cylinder Rotax[®] SOHC with multi-port fuel injection	Reliable performance in fresh or salt water, increased torque at low RPM, optimizes power at all RPM levels and throttle positions.
Carburetion / Fuel injection	Better control of exhaust emission and power at all RPM range to reduce emissions and reduce fuel consumption.
Sea-Doo[®] Learning Key[™]	Limits RPM & top speed for less experienced riders.
Chokeless starting	Simple, user-friendly starting.
Water cooled exhaust pipe	Regulates exhaust temperature.
Closed-loop cooling system	Insures the proper operating temperature at all speeds and improves corrosion durability.
Watertight digital ignition	Provides optimal energy for a consistent spark, ensuring maximum performance.
RPM limiter	Protects engine from over-revving.
Warning device	Warns operator of engine and exhaust overheating, engine management and system failure.
Handlebar-mounted start / stop button	Single user-friendly engine starts and stops with one control button.
Tips Over Protection System (T.O.P.S.[™])	Protects engine in case of turn over.
Propulsion System	
Bombardier Formula water jet pump	Delivers matched performance with the Rotax [®] 4-TEC engine.
Forward / neutral / reverse	Safe operation while docking, trailering or towing.
Composite stator vanes	Handles the high-performance engine without erosion
Replaceable urethane wear ring	Provides long impeller life, less maintenance and maximum thrust.
Dual automatic vacuum siphon pumps	Continuously remove water entering the engine compartment.
Large diameter drive shaft with crowned spline design	Maintains engine and pump alignment at all operating speeds.
Stainless steel 4-blade impeller	Delivers improved acceleration, higher top speed and less cavitation.
Hull and Components	
Modified-V design	Ensures a smooth and comfortable ride in a variety of water conditions, and greater maneuverability.
Fiberglass-reinforced	Strong, light and easy to maintain.
Sponsons	For improved handling.
D-Sea-Bel[™]	Sound reduction system that quiets your ride.
Bumpers	Help protect watercraft from damage while tied to a dock or another craft.
Bow and stern eyes	Designed for towing or securing the craft to a trailer or dock.
Temporary docking loops	Provides access for quick tie-up.
Carpeted footwells and two-tone deck pads	Offer extra comfort, non-skid surface and great looks.
Reboarding platform	For easy and comfortable mounting of the craft in deep water.
Two-tone comfort hand	Provides great looks and extreme
grips	hand comfort.
Floating safety lanyard	Stops engine in manual and emergency situations.
Seat strap	Aids in reboarding from water.
Grab handle	For easy reboarding and as a passenger handhold.
Built-in reboarding step	Grooved fold-down for easy reboarding.
Water / air separator	Provides maximum airflow to engine and reduces water intrusion.
3-up seat	Comfortable room for three – permits spotter for watersports.
Watertight storage compartment	Provides storage for fire extinguisher and necessities with easy access.
Extra-large storage compartment(s)	Abundant room for supplies on extended cruises.
Glove compartment	Great place to store smaller items.
Extended range fuel tank (15 US gal)	Provides maximum cruising and exploring range.
Elevated fuel filler	Easy access and prevents water intrusion while refueling.
Multifunction LCD information center	Reports 16 key operating functions: Fuel Level, Low Fuel Level, Low Oil Pressure, Low Voltage, Tachometer, Overheat, Ambient Temperature, Distance, Hour Meter, Maintenance Info, Average Speed, Current Speed, Compass, Check Engine, Lake Temperature, Chronometer.
Analog speedometer and tachometer	Informs operator of boat speed and RPM.
Dual drain plugs	Screw type design with built-in retainer for easy removal and installation.
Digitally Encoded Security System (DESS[™])	Industry's first digitally encoded theft-deterrent system.
External exhaust cooling flush attachment	Easily accessible and fits a common garden hose.
Foam flotation	Ride with security and peace of mind. Meets or exceeds USCG standards.
Operator's guide, instructional video and safety booklet	Informs you of boating regulations, care, maintenance and operating features.
Off-Power Assisted Steering (O.P.A.S.[™])	Assists steering during off-power, as well as off-throttle situations.
Wakeboard Package	
Retractable tow pylon	Allows for high, secure attachment of ski rope.
Removable wakeboard racks	Provides board storage for the operator and spotter.
Removable storage tray	Provides portable access to front storage items.
New convex mirrors	Increases field of view by 32% over standard mirrors.
Warranty	
Bombardier limited warranty covers the watercraft for one year.	



SECTION

6

Specifications

PWC TECHNICAL SPECIFICATIONS						
Model Year 2004						
ENGINE						
	GTI	GTILE	GTILE RFI	GTIRFI	3D	XP DI
	717	717	787 RFI	787 RFI	787 RFI	947 DI
Induction type	rotary valve	rotary valve	rotary valve	rotary valve	rotary valve	reed valves
Starting system						
Lubrication	electric VROI Mikuni	electric VROI Mikuni	electric VROI Mikuni	electric VROI Mikuni	electric VROI Mikuni	electric VROI Mikuni
Fuel/oil mixture	BBD	BBD	Bombardier Formula XP-S II			
Oil injection pump	mineral or synthetic injection oil	mineral or synthetic injection oil	synthetic injection oil	synthetic injection oil	synthetic injection oil	synthetic injection oil
Oil injection type	NA	NA	NA	NA	NA	NA
Oil pump type						
Oil type	NA	NA	NA	NA	NA	NA
Oil filter	NA	NA	NA	NA	NA	NA
Number of cylinders	2	2	2	2	2	2
Number of valves	NA	NA	NA	NA	NA	NA
Bore	82.00	82.00	82.00	82.00	82.00	88.00
1 st oversize (mm)	82.25	82.25	82.25	82.25	82.25	88.25
2 nd oversize (mm)	82.50	82.50	82.50	82.50	82.50	88.25
Stroke (mm)	68.0	68.0	74.0	74.0	74.0	78.2
Displacement (cm ³)	718.2	718.2	781.6	781.6	781.6	951.2
Compression Ratio	NA	NA	NA	NA	NA	NA
Uncorrected Nom.	6.2:1	6.2:1	6.0:1	6.0:1	6.0:1	6.0:1
Corrected	water cooled	water cooled	water cooled	water cooled	water cooled	water cooled
Exhaust system	NA	NA	NA	NA	NA	NA
Exhaust valve Type	NA	NA	NA	NA	NA	NA
Intake valve opening	NA	NA	NA	NA	NA	NA
Intake valve closing	NA	NA	NA	NA	NA	NA
Exhaust valve opening	NA	NA	NA	NA	NA	NA
Exhaust valve closing	NA	NA	NA	NA	NA	NA
Valves Stem diameter	New min.	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA
Wear limit	New min.	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA
Valve guide diameter	New min.	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA
Wear limit	New min.	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA



PWC TECHNICAL SPECIFICATIONS		GTI	GTILE	GTILE RFI	GTIRFI	3D	XPDI
Model Year 2004		717	717	787 RFI	787 RFI	787 RFI	947 DI
ENGINE (continued)							
Inner	New Nom.	NA	NA	NA	NA	NA	NA
Valve spring free length.	Wear limit	NA	NA	NA	NA	NA	NA
Outer	New Nom.	NA	NA	NA	NA	NA	NA
	Wear limit	NA	NA	NA	NA	NA	NA
Intake	New Nom.	NA	NA	NA	NA	NA	NA
Valve seat contact width	Wear limit	NA	NA	NA	NA	NA	NA
	New Nom.	NA	NA	NA	NA	NA	NA
	Wear limit	NA	NA	NA	NA	NA	NA
	New Min.	NA	NA	NA	NA	NA	NA
Rocker arm bore diameter	New Max.	NA	NA	NA	NA	NA	NA
	Wear limit	NA	NA	NA	NA	NA	NA
	New Min.	NA	NA	NA	NA	NA	NA
Rocker arm shaft diameter	New Max.	NA	NA	NA	NA	NA	NA
	Wear limit	NA	NA	NA	NA	NA	NA
Cylinder Head screw length	Service limit	NA	NA	NA	NA	NA	NA
Piston ring type and quantity		1 semi trapez 1 rectangular	1 semi trapez 1 rectangular	1 semi trapezoid 1 rectangular	1 semi trapezoid 1 rectangular	1 semi trapezoid 1 rectangular	1 semi trapez 1 semi trapez
Piston ring end gap	Min.	0.25	0.25	0.4	0.4	0.4	0.55
	Max.	0.40	0.40	0.55	0.55	0.55	0.7
	Wear limit (mm)	1.00	1.00	1.00	1.00	1.00	1.1
Ring/piston groove clearance	Min.	0.025	0.025	0.025	0.025	0.025	0.044
	Max.	0.070	0.070	0.070	0.070	0.070	0.089
	Wear limit (mm)	0.2	0.2	0.24	0.24	0.24	0.2
Piston/cyl. wall clearance	New (mm)	0.1	0.1	0.13	0.13	0.13	0.12
	Wear limit (mm)	0.2	0.2	0.22	0.22	0.22	0.22
Cylinder taper (max.)	New (mm)	0.050	0.050	0.050	0.050	0.050	0.050
	Wear limit (mm)	0.100	0.100	0.100	0.100	0.100	0.100
Cylinder out of round (max.)	New (mm)	0.008	0.008	0.008	0.008	0.008	0.008
	Wear limit (mm)	0.080	0.080	0.080	0.080	0.080	0.080
Cylinder head volume (cm3)		42.4 ± 0.4	42.4 ± 0.4	47.7 ± 0.4	47.7 ± 0.4	47.7 ± 0.4	50.76 ± 0.6
Cylinder head warpage (maximum)	Min.	0.05	0.05	0.05	0.05	0.05	0.025 over 50
Conn. rod big end axial play	New (mm)	0.311	0.311	0.230	0.230	0.230	0.390
	Max.	0.677	0.677	0.617	0.617	0.617	0.737
	Wear limit (mm)	1.200	1.200	1.200	1.200	1.200	1.200
Front	New min.	NA	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA	NA
	Wear limit	NA	NA	NA	NA	NA	NA
Camshaft bearing journal	New min.	NA	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA	NA
	Wear limit	NA	NA	NA	NA	NA	NA
	New min.	NA	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA	NA
Front	New min.	NA	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA	NA



PWC TECHNICAL SPECIFICATIONS		GTI	GTILE	GTILE RFI	GTIRFI	3D	XP DI
Model Year 2004		717	717	787 RFI	787 RFI	787 RFI	947 DI
ENGINE (continued)		717	717	787 RFI	787 RFI	787 RFI	947 DI
Camshaft bore	Wear limit	NA	NA	NA	NA	NA	NA
	New min.	NA	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA	NA
PTO and center	Wear limit	NA	NA	NA	NA	NA	NA
	New min.	NA	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA	NA
Intake	Wear limit	NA	NA	NA	NA	NA	NA
	New min.	NA	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA	NA
Cam lobe	Wear limit	NA	NA	NA	NA	NA	NA
	New min.	NA	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA	NA
Exhaust	Wear limit	NA	NA	NA	NA	NA	NA
	New min.	NA	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA	NA
Crankshaft axial clearance	Wear limit	NA	NA	NA	NA	NA	NA
	New min.	NA	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA	NA
Crankshaft journal dia.	Wear limit	NA	NA	NA	NA	NA	NA
	New min.	NA	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA	NA
Crankshaft radial clearance	Wear limit	NA	NA	NA	NA	NA	NA
	New min.	NA	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA	NA
Crankshaft deflection (mm) (Max.)	Mag side	0.050	0.050	0.050	0.050	0.050	0.050
	Center	0.080	0.080	0.080	0.080	0.080	0.080
	PTO-side	0.030	0.030	0.030	0.030	0.030	0.030
Rotary valve timing	Opening (BTDC)	147 + 5/-5	147 + 5/-5	147 + 5/-5	147 + 5/-5	147 + 5/-5	NA
	Closing (ATDC)	65.5+5/-5	65.5 + 5/-5	63.5 + 5/-5	63.5 + 5/-5	63.5 + 5/-5	NA
Rotary valve duration (deg.)		159	159	159	159	159	NA
rotary valve/cover clearance(mm)		65.5+5/-5	65.5 + 5/-5	63.5 + 5/-5	63.5 + 5/-5	63.5 + 5/-5	NA
Connecting rod big end clearance	New (mm)	.25-.35	.25-.35	.25-.35	.25-.35	.25-.35	NA
	Min.	.020	.020	.023	.023	.023	.017
	Max.	.033	.033	.034	.034	.034	.034
Connecting rod big end axial play	Wear limit (mm)	.050	.050	.050	.050	.050	.050
	Min.	0.31	0.31	0.23	0.23	0.23	0.3
	Max.	0.677	0.677	0.617	0.617	0.617	0.737
Connecting rod big end dia.	Wear limit (mm)	1.2	1.2	1.2	1.2	1.2	1.2
Connecting rod small end Dia.	Service limit	NA	NA	NA	NA	NA	NA
	New min.	NA	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA	NA
Connecting rod small end Clearance	Wear limit	NA	NA	NA	NA	NA	NA
	New min.	0.02	0.02	0.02	0.02	0.02	0.02
	New max.	0.033	0.033	0.033	0.033	0.033	0.033
Piston Pin dia.	Wear limit	0.05	0.05	0.05	0.05	0.05	0.05
	New min.	NA	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA	NA
Piston Pin bore clearance	Wear limit	NA	NA	NA	NA	NA	NA
	New min.	NA	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA	NA
Air Compressor Drive	Type	NA	NA	NA	NA	NA	Piston
	Displacement(cc)	NA	NA	NA	NA	NA	43
Intake reed valve stopper distance	Drive	NA	NA	NA	NA	NA	Balancing shaft
Crankshaft balance factor (%)	Intake	NA	NA	NA	NA	NA	reed valves
	Exhaust	NA	NA	NA	NA	NA	reed valves
	(mm)	NA	NA	NA	NA	NA	13 +0.25/-0.25
	New min.	50	50	47	47	47	49
	New max.	NA	NA	NA	NA	NA	NA



PWC TECHNICAL SPECIFICATIONS						
Model Year 2004	GTI	GTILE	GTILE RFI	GTIRFI	3D	XP DI
ENGINE (continued)						
Balance shaft journal dia.	NA	NA	NA	NA	NA	NA
Balance shaft radial clearance	Wear limit	NA	NA	NA	NA	NA
Balance shaft axial clearance	New min.	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA
Recommended Balancing shaft oil	type	NA	SAE30	SAE30	SAE30	Sea-Doo synthetic jet pump oil OR standard gear oil
	(ml)	30	30	30	30	NA
Supercharger shaft driven plate journal depth.	New min.	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA
	Wear limit	NA	NA	NA	NA	NA
Supercharger drive gear thickness	New min.	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA
	Wear limit	NA	NA	NA	NA	NA
Supercharger lock washer thickness	New min.	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA
	Wear limit	NA	NA	NA	NA	NA
INTAKE & EXHAUST						
Flame arrester	Type	multi layer wire screen	tubular wire screen			
Stinger inside diam. (mm)		38	40	40	37	50
Exhaust system water injection at tuned pipe head (mm)		3.5	4.0	4.0	0	3.5
Exhaust system water injection at tuned pipe cone (mm)		3.5	NA	NA	NA	NA
Exhaust system water injection at muffler (mm)		NA	3.5	4.5	3 X 3.5	3
Water supply calibrated restriction		NA	NA	NA	NA	17mm
ELECTRICAL						
Magneto		Denso	Denso	Denso	Denso	Denso
Magneto generator output (W @ RPM)		160 @ 6000	160 @ 6000	270 @ 6000	270 @ 6000	270 @ 6000
Magneto generator output (A @ RPM at 13.5V)		4 @ 6000	4.0 @ 6000	7 @ 6000	7 @ 6000	7 @ 6000
Ignition system type		CDI	CDI	Inductive	Inductive	Inductive
	# coil	1	1	2	2	2
Ignition coil	supplier	Denso	Denso	Bosch	Bosch	Marshall
	model	ND-129000-0501	ND-129700-3571	0 221 503 030	0 221 503 030	ME71-01
Spark plugs	Make & type	NGK BR8ES	NGK BR8ES	NGK BR8ES	NGK BR8ES	NGK ZFR4F
	Gap (mm)	0.4-0.5	0.4-0.5	0.61-0.71	0.4-0.5	1.1
Ignition timing	Timing mark (mm BTDC)	2.59 +/- 0.38	2.59 +/- 0.38	1.02	1.02	5.39 +/- 0.30 (direct)
						7.87 +/- 0.30 (indirect)
	BTDC (deg.)					Measured through spark plug hole
	@RPM (Unloaded)	20 +/- 1.5 @ 6000	20 +/- 1.5 @ 6000	12 +/- 1 up to 6000	12 +/- 1 up to 6000	27 +/- 1.5 @ 1450



PWC TECHNICAL SPECIFICATIONS		GTI	GTILE	GTILE RFI	GTIRFI	3D	XP DI
Model Year 2004		717	717	787 RFI	787 RFI	787 RFI	947 DI
ELECTRICAL (continued)		GTI	GTILE	GTILE RFI	GTIRFI	3D	XP DI
NOTE:1) Measured with open charging coil or with voltage regulator and connected battery when engine is cold		see note 1	see note 1	see note 2	see note 2	see note 2	see note 2
NOTE: 2) Timing is only a constant value if you activate the ignition timing check - curve by the MPEM; under normal operation it is not constant							
Generating coil resistance	Low speed (Ohm)	40-76	40-76	NA	NA	NA	NA
(Ignition)	High speed (Ohm)	NA	NA	NA	NA	NA	NA
AC Generator (charging)	Resistance (Ohm)	0.05-0.6	0.05-0.6	0.1-1.0	0.1-1.0	0.1-1.0	0.1-1.0
Trigger coil	Resistance (Ohm)	NA	NA	See CPS	See CPS	See CPS	See CPS
	Voltage (AC)	NA	NA	in Carburation section	in Carburation section	in Carburation section	in Carburation section
High tension coil	Primary Resistance (Ohm)	0.34-0.62	0.34-0.62	2 x 0.3-0.6	2 x 0.3-0.6	2 x 0.3-0.6	0.5 +/- 10%
	Secondary Resistance (Ohm)	9-15 k	9-15 k	N/A	N/A	N/A	8.5K +/-20%
	secondary output voltage (kvolt)	N/A	N/A	N/A	N/A	N/A	40 +/- 10%
	Partial cut						
Engine RPM limiter operation (RPM)	Full Cut	7100 +/- 50	7100 +/- 50	7200 +/- 50	7200 +/- 50	7200 +/- 50	7300 +/- 50
Coils/magneto ring gap (mm)		0.8-1.0	0.8-1.0	NA	NA	NA	NA
Rectifier	Voltage (Volt)	14.2	14.2	14.2	14.2	14.2	14.2
	Current (Amp)	16	16	22.8	22.8	22.8	22.8
Battery	Potential (v)	12	12	12	12	12	12
	Power (Ah)	19	19	19	19	19	19
Battery fuse				15	15	15	25
MPEM fuse (A)		5	5	5	5	5	NA
Main electrical fuse (A)		15	15	20	20	20	30
Charging systems fuses (A)		15	15	20	20	NA	25
INJ fuse (A)		NA	NA	7.5A	7.5A	NA	15
				10	10	10	
VTS fuse (A)		NA	NA	(installed but not in use)	(installed but not in use)	(installed but not in use)	7.5
Info center fuse (A)		NA	NA	NA	NA	NA	NA
Accessory (A)		NA	NA	NA	NA	NA	NA
Fuel pump fuse (A)		NA	NA	10	10	10	15
Bilge pump fuse (A)		NA	NA	NA	NA	NA	3
Engine management system							
OTAS	Steering switch						
	Normally open or close	NA	NA	NA	NA	Open	NA
	Resistance open (ohms)	NA	NA	NA	NA	470 ± 5%	NA
	Resistance closed (ohms)	NA	NA	NA	NA	82.5 ± 5%	NA
	Solenoid: pull type						
	Resistance (ohms)	NA	NA	NA	NA	14.9 ± 5%	NA
	Voltage (Volt)	NA	NA	NA	NA	14	NA
	Stroke (mm)	NA	NA	NA	NA	TBD	NA
	RPM	NA	NA	NA	NA	TBD	NA



PWC TECHNICAL SPECIFICATIONS				GTI	GTILE	GTILE RFI	GTIRFI	3D	XPDI	
Model Year 2004				717	717	787 RFI	787 RFI	787 RFI	947 DI	
CARBURATION (continued)										
Adjustments	Low speed screw (turn)	Temper Proof	Temper Proof			NA	NA	NA	NA	
	High speed screw (turn)	Temper Proof	Temper Proof			NA	NA	NA	NA	
	Idle speed in water (RPM)	1500+/- 100	1500+/- 100			1550+/-100	1550+/-100	1550 ± 100	1450+/-50	
	Idle speed out of water (RPM)	3000	3000			N/A	N/A	N/A	N/A	
Recommended fuel	Type	Gasoline	Gasoline			Gasoline	Gasoline	Gasoline	Gasoline	
		regular	regular			regular	regular	regular	regular	
		unleaded	unleaded			unleaded	unleaded	unleaded	unleaded	
	Octane no.	87 (R + M)/2	87 (R + M)/2			87 (R + M)/2				
	Ron.	91 RON	91 RON			91 RON	91 RON	91 RON	91 RON	
Fuel return line orifice (mm)		0.8	0.8			NA	NA	NA	NA	
Air line orifice	(mm)	NA	NA			NA	NA	NA	2.6	
COOLING										
Type		open-circuit	open-circuit			open-circuit	open-circuit	open-circuit	open-circuit	
Overheating beeper setting (Deg. Celcius)		86-94	86-94			86-94	86-94	86-94	75-80	
Thermostat setting (Deg. Celcius)		NA	NA			NA	NA	NA	NA	
Coolant type		NA	NA			NA	NA	NA	NA	
PROPULSION										
Propulsion system		Bombardier formula pump	Bombardier formula pump			Bombardier formula pump	Bombardier formula pump	Bombardier formula pump	Bombardier formula pump	
Reverse system		Standard	Standard			Standard	Standard	Standard	Standard	
Jet pump type		axial flow	axial flow			axial flow	axial flow	axial flow	axial flow	
		single stage	single stage			single stage	single stage	single stage	single stage	
		large hub	large hub			large hub	large hub	large hub	large hub	
bearing type		needle bearing	needle bearing			needle bearing	needle bearing	needle bearing	needle bearing	
sealed bearing (Y/N)		no	no			no	no	no	no	
Pump materials	Housing	Plastic	Plastic			Plastic	Plastic	Plastic	Plastic	
	Stator	Plastic	Plastic			Plastic	Plastic	Plastic	Plastic	
	Venturi	Aluminium	Aluminium			Aluminium	Aluminium	Aluminium	Aluminium	
	Nozzle	Aluminium	Aluminium			Aluminium	Aluminium	Aluminium	Aluminium	
Impeller rotation (seen from rear)		CCW	CCW			CCW	CCW	CCW	CCW	
Transmission		direct drive	direct drive			direct drive	direct drive	direct drive	direct drive	
Coupling type		crowned splines	crowned splines			crowned splines	crowned splines	crowned splines	crowned splines	
Impeller shaft reservoir	Grade	synthetic oil	synthetic oil			synthetic oil	synthetic oil	synthetic oil	synthetic oil	
	Oil (ml) qty or Grease(grams) qty	SAE 75W90 GL5	SAE 75W90 GL5			SAE 75W90 GL5	SAE 75W90 GL5	SAE 75W90 GL5	SAE 75W90 GL5	
	Oil level height (mm)	100	100			100	100	100	100	
	Oil level height (deg.) / Steering (nozzle) angle	up to plug	up to plug			up to plug	up to plug	up to plug	up to plug	
	Minimum required/water level (cm)	4.3/20	4.3/20			4.3/20	4.3/20	4.3/20	± 9/20	
	Drive shaft deflection max. (mm)	90	90			90	90	90	90	
	Impeller/wear ring clearance	0.0-0.4	0.0-0.4			0.0-0.4	0.0-0.4	0.0-0.4	0.0-0.4	
	Impeller shaft end play (new) (mm)	1.00	1.00			1.00	1.00	1.00	1.00	
	Impeller shaft side play (mm)	0	0			0	0	0	0	
		0.05	0.05			0.05	0.05	0.05	0.05	



PWC TECHNICAL SPECIFICATIONS						
Model Year 2004	GTI	GTI LE	GTI LE RFI	GTI RFI	3D	XP DI
	717	717	787 RFI	787 RFI	787 RFI	947 DI
PROPULSION (continued)						
Pitch	10-20	10-20	11-20	11-20	11-20	15-21
Material	stainless steel	stainless steel				
Outside diameter (mm)	155.3 ± .06	155.3 ± .06	155 ± 0.3	155 ± 0.3	155 ± 0.3	155.3 ± .06
Type	2 rung	2 rung				
Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
Venturi diam. (mm)	84	84	81	81	84	85.5
DIMENSIONS & MATERIALS						
Number of passengers (driver included)	3	3	3	3	1	2
Length, (bumper to bumper) (cm) / (in)	307/121	307/121	307/121	307/121	272/107	272/107
Width, (bumper to bumper) (cm) / (in)	120/47	120/47	120/47	120/47	112/44	112/44
Height, (with keel horizontal) (cm) / (in)	104/41	104/41	104/41	104/41	VERT: 92/36.25 MOTO: 112/44.25 KART: 96/37.75	104/41
As shipped 2 stroke; no oil, no acid, no fuel					MOTO: 268/589 KART: 274/603	274/625
Dry mass (kg) / (lb) 14 stroke; oil, coolant, no acid, no fuel	282/623	291/643	315/695	317/700	114/250	181/400
Load limit - passenger & luggage (kg) / (lb)	243/536	243/536	243/536	243/536		
CAPACITIES						
Fuel tank	56.5 / 15	56.5 / 15	56.5 / 15	56.5 / 15	32/8.5	51/13
Reserve (L) / (US gal)	11.4 / 3	11.4 / 3	11.4 / 3	11.4 / 3	5/1.3	9.8 / 2.6 from low level signal
Engine oil	NA	NA	NA	NA	NA	NA
Cooling System Capacities						
Injection oil tank (l) / (US gal)	6 / 1.6	6 / 1.6	6 / 1.6	6 / 1.6	4/1.0	4/1.0
Storage capacity (l) / (US gal)	128.3 / 33.8	128.3 / 33.8	128.3 / 33.8	128.3 / 33.8	5.4/1.42	21/ 5.5



PWC TECHNICAL SPECIFICATIONS			
Model Year 2004	GTX 4-TEC	Van's GTX 4-TEC	GTX 4-TEC Ltd S/C
ENGINE	1503	1503	1503 BV
	GTX 4-TEC S/C	1503 BV-I C	RXP
Induction type	SOHC, 4 valves per cyl.	SOHC, 4 valves per cyl.	SOHC, 4 valves per cyl.
Starting system	Normally-aspirated	Normally-aspirated	Supercharger with intercooler
Lubrication	electric	electric	Supercharger (Mechanically-Driven blower)
Fuel/oil mixture	NA	NA	NA
Oil injection pump	NA	NA	NA
Oil injection type	NA	NA	NA
Oil pump type	Dry sump PTO cover scavenging pump	Dry sump PTO cover scavenging pump	Dry sump PTO cover scavenging pump
Oil type	Bombardier 10W-40 mineral	Bombardier 10W-40 mineral	Bombardier 10W-40 mineral
Oil filter	Paper type, replaceable	Paper type, replaceable	Paper type, replaceable
Number of cylinders	3	3	3
Number of valves	12	12	12
Bore	100	100	100
Stroke (mm)	100.25	100.25	100.25
Displacement (cm ³)	NA	NA	NA
Compression Ratio	63.4	63.4	63.4
Exhaust system	1493.8	1493.8	1493.8
Exhaust valve Type	10.6:1	10.6:1	8.5:1
Intake valve opening	NA	NA	NA
Intake valve closing	water cooled	water cooled	water cooled
Exhaust valve opening	NA	NA	NA
Exhaust valve closing	NA	NA	NA
Valves Stem diameter	5.961	5.961	5.961
	5.975	5.975	5.975
	5.93	5.93	5.93
	5.946	5.946	5.946
	5.96	5.96	5.96
	5.93	5.93	5.93
	5.99	5.99	5.99
	6.01	6.01	6.01
	6.06	6.06	6.06



PWC TECHNICAL SPECIFICATIONS		GTX 4-TEC	Van's GTX 4-TEC	GTX 4-TEC Ltd S/C	GTX 4-TEC S/C	RXP
Model Year 2004		1503	1503	1503 BV	1503 BV	1503 BV-I C
ENGINE (continued)						
	Inner	New Nom.	41.02	41.02	41.02	41.02
	Valve spring free length.	Wear limit	38.8	38.8	38.8	38.8
	Outer	New Nom.	45.45	45.45	45.45	45.45
		Wear limit	43	43	43	43
	Intake	New Nom.	1,1 to 1,3	1,1 to 1,3	1,1 to 1,3	1,1 to 1,3
	Valve seat contact width	Wear limit	1.6	1.6	1.6	1.6
	outer	New Nom.	1,25 to 1,55	1,25 to 1,55	1,25 to 1,55	1,25 to 1,55
		Wear limit	1.8	1.8	1.8	1.8
		New Min.	20	20	20	20
	Rocker arm bore diameter	New Max.	20.02	20.02	20.02	20.02
		Wear limit	20.03	20.03	20.03	20.03
	Rocker arm shaft diameter	New Min.	19.98	19.98	19.98	19.98
		New Max.	19.99	19.99	19.99	19.99
		Wear limit	19.96	19.96	19.96	19.96
	Cylinder Head screw length	Service limit	148.5	148.5	148.5	148.5
			1 rectangular	1 rectangular	1 rectangular	1 rectangular
	Piston ring type and quantity		1 tapered face	1 tapered face	1 tapered face	1 tapered face
			1 oil scraper ring	1 oil scraper ring	1 oil scraper ring	1 oil scraper ring
			rect/tapered/oil scraper	rect/tapered/oil scraper	rect/tapered/oil scraper	rect/tapered/oil scraper
	Piston ring end gap	New (mm)	0,15 / 0,15 / 0,15	0,15 / 0,15 / 0,15	0,15 / 0,15 / 0,15	0,15 / 0,15 / 0,15
		Min.	0,3 / 0,3 / 0,35	0,3 / 0,3 / 0,35	0,3 / 0,3 / 0,35	0,3 / 0,3 / 0,35
		Max.	1,5 / 1,5 / 1,5	1,5 / 1,5 / 1,5	1,5 / 1,5 / 1,5	1,5 / 1,5 / 1,5
	Ring/piston groove clearance	New (mm)	0,02 / 0,015 / 0,2	0,02 / 0,015 / 0,2	0,02	0,02
		Min.	0,07 / 0,06 / 0,55	0,07 / 0,06 / 0,55	0,07 / 0,06 / 0,55	0,07 / 0,06 / 0,55
		Max.	0,15 / 0,15 / 0,024 - 0,056	0,15 / 0,15 / 0,04	0,15 / 0,15 / 0,04	0,15 / 0,15 / 0,04
	Piston/cyl. wall clearance	New (mm)	0,1	0,1	0,1	0,1
		Wear limit (mm)	0,1	0,1	0,1	0,1
	Cylinder taper (max.)	New (mm)	0,03	0,03	0,03	0,03
		Wear limit (mm)	0,1	0,1	0,1	0,1
	Cylinder out of round (max.)	New (mm)	0,008	0,008	0,008	0,008
		Wear limit (mm)	0,015	0,015	0,015	0,015
	Cylinder head volume (cm3)		NA	NA	NA	NA
	Cylinder head warpage (maximum)		?	?	?	?
	Conn. rod big end axial play	New (mm)	0,135	0,135	0,135	0,135
		Min.	0,287	0,287	0,287	0,287
		Max.	0,5	0,5	0,5	0,5
	Wear limit (mm)		24,93	24,93	24,93	24,93
	Front	New min.	24,96	24,96	24,96	24,96
		New max.	24,93	24,93	24,93	24,93
		Wear limit	39,89	39,89	39,89	39,89
	Camshaft bearing journal	New min.	39,9	39,9	39,9	39,9
		New max.	39,88	39,88	39,88	39,88
		Wear limit	25	25	25	25
		New min.	25,01	25,01	25,01	25,01
		New max.				



PWC TECHNICAL SPECIFICATIONS		GTX 4-TEC	Van's GTX 4-TEC	GTX 4-TEC Ltd S/C	GTX 4-TEC S/C	RXP
Model Year 2004		1503	1503	1503 BV	1503 BV	1503 BV-I C
ENGINE (continued)						
Camshaft bore	Wear limit	25.02	25.02	25.02	25.02	25.02
	New min.	40	40	40	40	40
	New max.	40.01	40.01	40.01	40.01	40.01
PTO and center	Wear limit	25.02	25.02	25.02	25.02	25.02
	New min.	31.48	31.48	31.69	31.69	31.69
	New max.	31.59	31.59	31.8	31.8	31.8
Intake	Wear limit	31.43	31.43	31.65	31.65	31.65
	New min.	31.69	31.69	31.48	31.48	31.48
	New max.	31.8	31.8	31.59	31.59	31.59
Exhaust	Wear limit	31.65	31.65	31.43	31.43	31.43
	New min.	0.08	0.08	0.08	0.08	0.08
	New max.	0.22	0.22	0.22	0.22	0.22
Crankshaft axial clearance	New min.	49.98	49.98	49.98	49.98	49.98
	New max.	50	50	50	50	50
Crankshaft journal dia.	Wear limit	49.95	49.95	49.95	49.95	49.95
	New limit	0.007	0.007	0.007	0.007	0.007
Crankshaft radial clearance	Mag side	0.05	0.05	0.05	0.05	0.05
	Center	0.05	0.05	0.05	0.05	0.05
Crankshaft deflection (mm) (Max.)	PTO-side	0.05	0.05	0.05	0.05	0.05
	Opening (BTDC)	NA	NA	NA	NA	NA
	Closing (ATDC)	NA	NA	NA	NA	NA
Rotary valve timing	Rotary valve duration (deg.)	NA	NA	NA	NA	NA
	rotary valve/cover clearance(mm)	NA	NA	NA	NA	NA
Connecting rod big end clearance	New (mm)	0.035	0.035	0.035	0.035	0.035
	Min.	0.065	0.065	0.065	0.065	0.065
	Max.	0.09	0.09	0.09	0.09	0.09
Connecting rod big end axial play	New (mm)	0.135	0.135	0.135	0.135	0.135
	Min.	0.287	0.287	0.287	0.287	0.287
	Max.	0.5	0.5	0.5	0.5	0.5
Connecting rod big end dia.	Wear limit (mm)	45.08	45.08	45.08	45.08	45.08
Connecting rod small end	Service limit	23.01	23.01	23.01	23.01	23.01
	New min.	23.02	23.02	23.02	23.02	23.02
	New max.	23.07	23.07	23.07	23.07	23.07
Dia.	Wear limit	NA	NA	NA	NA	NA
Connecting rod small end Clearance	New min.	NA	NA	NA	NA	NA
	New max.	NA	NA	NA	NA	NA
	Wear limit	22.99	22.99	22.99	22.99	22.99
Piston Pin dia.	New min.	23	23	23	23	23
	New max.	22.99	22.99	22.99	22.99	22.99
Piston Pin bore clearance	Wear limit	0.08	0.08	0.08	0.08	0.08
	Type	NA	NA	NA	NA	NA
	Displacement(cc)	NA	NA	NA	NA	NA
Air Compressor Drive	Drive	NA	NA	NA	NA	NA
	Intake	NA	NA	NA	NA	NA
	Exhaust	NA	NA	NA	NA	NA
Intake reed valve stopper distance	(mm)	NA	NA	NA	NA	NA
Crankshaft balance factor (%)	New min.	50	50	50	50	50
		31.98	31.98	31.98	31.98	31.98



PWC TECHNICAL SPECIFICATIONS		GTX 4-TEC	Van's GTX 4-TEC	GTX 4-TEC Ltd S/C	GTX 4-TEC S/C	RXP
Model Year 2004		1503	1503	1503 BV	1503 BV	1503 BV-I C
ENGINE (continued)						
Balance shaft journal dia.	New max. Wear limit	32 31.95	32 31.95	32 31.95	32 31.95	32 31.95
Balance shaft radial clearance	Wear limit	0.07	0.07	0.07	0.07	0.07
Balance shaft axial clearance	New min. New max.	0.02 0.25	0.02 0.25	0.02 0.25	0.02 0.25	0.02 0.25
Recommended Balancing shaft oil	type (ml)	Same as engine oil				
Supercharger shaft driven plate journal depth.	New min. New max. Wear limit	NA NA NA	NA NA NA	9.96 10 9.7	9.96 10 9.7	9.96 10 9.7
Supercharger drive gear thickness	New min. New max. Wear limit	NA NA NA	NA NA NA	11 11.05 10.5	11 11.05 10.5	11 11.05 10.5
Supercharger lock washer thickness	New min. New max. Wear limit	NA NA NA	NA NA NA	6.9 7.1 6.6	6.9 7.1 6.6	6.9 7.1 6.6
INTAKE & EXHAUST						
Flame arrester	Type	tubular wire screen	tubular wire screen	tubular wire screen	tubular wire screen	tubular, integrated with intercooler
Stinger inside diam. (mm)		NA	NA	NA	NA	NA
Exhaust system water injection at tuned pipe head (mm)		NA	NA	NA	NA	NA
Exhaust system water injection at tuned pipe cone (mm)		NA	NA	NA	NA	NA
Exhaust system water injection at muffler (mm)		3x3.5	3x3.5	3x3.5	3x3.5	3x3.5
Water supply calibrated restriction		8 mm	8 mm	7mm	7mm	8mm
ELECTRICAL						
Magneto		Denso	Denso	Denso	Denso	Denso
Magneto generator output (W @ RPM)		360 @ 6000	360 @ 6000	360 @ 6000	360 @ 6000	360 @ 6000
Magneto generator output (A @ RPM at 13.5V)		32 @ 7300	32 @ 7300	33 @ 7300	33 @ 7300	33 @ 7300
Ignition system type		inductive	inductive	inductive	inductive	inductive
Ignition coil	# coil supplier	3 Denso	3 Denso	3 Denso	3 Denso	3 Denso
Spark plugs	Make & type	stick coil DCPR8E				
Ignition timing	Gap (mm) Timing mark (mm BTDC)	0.7-0.8 not adjustable				
	BTDC (deg.) @RPM (Unloaded)					



PWC TECHNICAL SPECIFICATIONS		GTX 4-TEC	Van's GTX 4-TEC	GTX 4-TEC Ltd S/C	GTX 4-TEC S/C	RXP
Model Year 2004		1503	1503	1503 BV	1503 BV	1503 BV-I C
ELECTRICAL (continued)						
NOTE: 1) Measured with open charging coil or with voltage regulator and connected battery when engine is cold						
NOTE: 2) Timing is only a constant value if you activate the ignition timing check - curve by the MPEM; under normal operation it is not constant						
Generating coil resistance	Low speed (Ohm)	NA	NA	NA	NA	NA
(ignition)	High speed (Ohm)	NA	NA	NA	NA	NA
AC Generator (charging)	Resistance (Ohm)	0.1-1.0	0.1-1.0	0.1-1.0	0.1-1.0	0.1-1.0
Trigger coil	Resistance (Ohm)	See CPS	See CPS	See CPS	See CPS	See CPS
	Voltage (AC)	in Carburation section	in Carburation section	in Carburation section	in Carburation section	in Carburation section
High tension coil	Primary Resistance (Ohm)	0.85-1,15	0.85-1,15	0.85-1,15	0.85-1,15	0.85-1,15
	Secondary Resistance (Ohm)	9.5-13.5k	9.5-13.5k	9.5-13.5k	9.5-13.5k	9.5-13.5k
	secondary output voltage (kvoit)					
	Partial cut					
Engine RPM limiter operation (RPM)	Full Cut	7650 rpm	7650 rpm	7650 rpm	7650 rpm	8000
Coils/magneto ring gap (mm)		NA	NA	NA	NA	NA
Rectifier	Voltage (Volt)	14.5	14.5	14.5	14.5	14.5
	Current (Amp)					
Battery	Potential (v)	12	12	12	12	12
	Power (Ah)	30	30	30	30	30
Battery fuse		30	30	30	30	30
MPEM fuse (A)		5	5	5	5	NA
Main electrical fuse (A)		30	30	30	30	30
Charging systems fuses (A)		30	30	30	30	30
INJ fuse (A)		10	10	10	10	10
VTS fuse (A)		(installed but not in use)	7.5A			
Info center fuse (A)		1	1	1	1	1
Accessory (A)		2A -5A	2A -5A	2A -5A	2A -5A	2A -5A
Fuel pump fuse (A)		10	10	10	10	10
Bilge pump fuse (A)		3	3	3	3	3
Engine management system		5	5	5	5	5
OTAS	Steering switch					
	Normally open or close	NA	NA	NA	NA	NA
	Resistance open (ohms)	NA	NA	NA	NA	NA
	Resistance closed (ohms)	NA	NA	NA	NA	NA
	Solenoid: pull type					
	Resistance (ohms)	NA	NA	NA	NA	NA
	Voltage (Volt)	NA	NA	NA	NA	NA
	Stroke (mm)	NA	NA	NA	NA	NA
	RPM	NA	NA	NA	NA	NA



PWC TECHNICAL SPECIFICATIONS		GTX 4-TEC	Van's GTX 4-TEC	GTX 4-TEC Ltd S/C	GTX 4-TEC S/C	RXP
Model Year 2004		1503	1503	1503 BV	1503 BV	1503 BV-I C
CARBURATION						
Carburetor(s)	Make	DELLORTO	DELLORTO	DELLORTO	DELLORTO	DELLORTO
	Type	throttle body				
	Model (MAG side)	52mm	52mm	52mm	52mm	52mm
	Model (PTO side)	NA	NA	NA	NA	NA
	Acceleration pump	NA	NA	NA	NA	NA
Main jet		NA	NA	NA	NA	NA
Pilot jet		NA	NA	NA	NA	NA
Arm level		NA	NA	NA	NA	NA
Spring (g)		NA	NA	NA	NA	NA
Pop-off pressure	(Psi)	NA	NA	NA	NA	NA
Injection type		Multiport sequential				
Fuel pressure	(Psi)	42-45	42-45	42-45	42-45	56-60
Air Pressure	(Psi)	NA	NA	NA	NA	NA
Fuel injector	Quantity	3	3	3	3	3
	Voltage (V)					
Direct injector	Resistance (Ohm)	11,4 - 12,6	11,4 - 12,6	11,4 - 12,6	11,4 - 12,6	11,4 - 12,6
	Quantity	NA	NA	NA	NA	NA
	Voltage (V)	NA	NA	NA	NA	NA
	Resistance (Ohm)	NA	NA	NA	NA	NA
Throttle Position Sensor (TPS)	Quantity	1	1	1	1	1
	Voltage (V)	5	5	5	5	5
	Resistance (kOhm)	1,6-2,4	1,6-2,4	1,6-2,4	1,6-2,4	1,6-2,4
	Idle resistance (kOhm)	710-1380	710-1380	710-1380	710-1380	710-1380
Crankshaft Position Sensor (CPS)	Type					
	Voltage (V)	0.2 to 0.5				
	Resistance (Ohm)	190-290	190-290	190-290	190-290	190-290
Manifold Air Temperature Sensor	Voltage (V)	5	5	5	5	5 ?
	Resistance (kOhm)	2.28-2.74	2.28-2.74	2.28-2.74	2.28-2.74	2.28-2.74 ?
Water Temp. Sensor	Voltage (V)					
	Resistance (kOhm)	2.28-2.74	2.28-2.74	2.28-2.74	2.28-2.74	2.28-2.74
Manifold						
Air Pressure	Resistance at term 2-1 (kOhm)	6040	6040	6040	6040	6040
Sensor	Resistance at term 3-2 (kOhm)	5554	5554	5554	5554	5554
	Resistance at term 3-1 (kOhm)	5822	5822	5822	5822	5822
Rave Solenoid	Voltage (V)	NA	NA	NA	NA	NA
	Resistance (Ohm)					
Exhaust Gaz Temp Sensor	Voltage (V)	5	5	5	5	5
	Resistance (Ohm)	2.28-2.74	2.28-2.74	2.28-2.74	2.28-2.74	2.28-2.74
Throttle plate (#)						
Bypass holes	B.P.1 diam/distance (mm)	NA	NA	NA	NA	NA
	B.P.2 diam/distance (mm)	NA	NA	NA	NA	NA
	B.P.3 diam/distance (mm)	NA	NA	NA	NA	NA
	B.P.4 diam/distance (mm)	NA	NA	NA	NA	NA



PWC TECHNICAL SPECIFICATIONS		GTX 4-TEC	Van's GTX 4-TEC	GTX 4-TEC Ltd S/C	GTX 4-TEC S/C	RXP
Model Year 2004		1503	1503	1503 BV	1503 BV	1503 BV-I C
CARBURATION (continued)						
Adjustments	Low speed screw (turn)	NA	NA	NA	NA	NA
	High speed screw (turn)	NA	NA	NA	NA	NA
	Idle speed in water (RPM)	1800+/-50	1800+/-50	1800+/-50	1800+/-50	1800+/-50
	Idle speed out of water (RPM)	NA	NA	NA	NA	N/A
Recommended fuel	Type	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline
		Premium unleaded				
	Octane no.	91 (R+ M)/2				
	Ron.	95 RON				
Fuel return line orifice (mm)		NA	NA	NA	NA	NA
Air line orifice	(mm)	NA	NA	NA	NA	NA
COOLING						
Type		Close loop				
Overheating beeper setting (Deg. Celcius)		100	100	100	100	100
Thermostat setting (Deg.Celcius)		87	87	87	87	87
Coolant type		Ethylene glycol-water				
		50 - 50 ratio				
PROPULSION						
Propulsion system		Bombardier formula pump				
Reverse system		Standard axial flow				
Jet pump type		single stage large hub				
	bearing type	Double rows Ball bearings				
	sealed bearing (Y/N)	no	no	no	no	no
Pump materials	Housing	Plastic	Plastic	Aluminium	Aluminium	Aluminium
	Stator	Plastic	Plastic	Aluminium	Aluminium	Aluminium
	Venturi	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
	Nozzle	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
Impeller rotation (seen from rear)		CCW	CCW	CCW	CCW	CCW
Transmission		direct drive				
Coupling type		crowned splines				
Impeller shaft reservoir	Grade	Bomb. Jet pump Grease				
	Oil (ml) qty or Grease(grams) qty					
	Oil level height (mm)	4.3/20	4.3/20	4.3/20	4.3/20	4.3/20
Nozzle trimming angle (deg.) / Steering (nozzle) angle		90	90	90	90	90
Minimum required/water level (cm)		0.5	0.5	0.5	0.5	0.5
Drive shaft deflection max. (mm)		0.0-0.4	0.0-0.4	0.07-0.23	0.07-0.23	0.07-0.23
Impeller/wear ring clearance	New (mm)	1.00	1.00	0.5	0.5	0.5
	Wear limit (mm)	0	0	0	0	0
Impeller shaft end play (new) (mm)		0	0	0	0	0
Impeller shaft side play (mm)		0	0	0	0	0



PWC TECHNICAL SPECIFICATIONS					
Model Year 2004	GTX 4-TEC	Van's GTX 4-TEC	GTX 4-TEC Ltd S/C	GTX 4-TEC S/C	RXP
PROPULSION (continued)	1503	1503	1503 BV	1503 BV	1503 BV-I C
Pitch	13-23	13-23	13-23	13-23	10-21
Material	stainless steel				
Outside diameter (mm)	155.3 ± .06	155.3 ± .06	155.5 ± .06	155.5 ± .06	159.0 ± .06
Type	2 rung				
Material	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
Venturi diam. (mm)	84	84	83	83	83
DIMENSIONS & MATERIALS					
Number of passengers (driver included)	3	3	3	3	2
Length, (bumper to bumper) (cm) / (in)	331/130	331/130	331/130	331/130	307/121
Width, (bumper to bumper) (cm) / (in)	122/48	122/48	122/48	122/48	122/48
Height, (with keel horizontal) (cm) / (in)	113/44	113/44	113/44	113/44	109/43
As shipped 2 stroke; no oil, no acid, no fuel					
Dry mass (kg) / (lb)	385/850	385/850	396/875	393/867	359/792
Load limit - passenger & luggage (kg) / (lb)	272/600	272/600	272/600	272/600	181/400
CAPACITIES					
Fuel tank	60/15.9	60/15.9	60/15.9	60/15.9	60/15.9
Reserve (L) / (US gal)	15 from low level signal				
Engine oil	4.5 l (dry engine)				
Cooling System Capacities	3 l (after the first oil change)				
Injection oil tank (l) / (US gal)	5.5L / 5 u.s.qt				
Storage capacity (l) / (US gal)	NA	NA	NA	NA	NA
Total	199/53	199/53	199/53	199/53	40.3 / 10.7



ANNEXES

SEADOO®

2004 Technical Update

Annexes

Bombardier Recreational Products Inc.



2004 INDEX

PREDELIVERY	SUBJECT	MODEL
2004-1 Rev. 1	Preelivery	GTX 4-TEC Supercharged
2004-2	Preelivery	GTI / GTI LE
2004-3	Preelivery	XP/DI
2004-4	Preelivery	RXP
2004-5	Preelivery	2-TEC RFI

SERVICE	SUBJECT	MODEL
2004-1	Oil application for 4-TEC Engines	GTX 4-TEC / GTX 4-TEC Supercharged/ GTX 4-TEC Ltd Supercharged/ GTX 4-TEC Wakeboard Edition / RXP
2004-2	Impeller Chart	All
2004-3	High Altitude	All
2004-4	Paint Codes	All
2004-5	B.U.D.S. Version	All
2004-6	French Decal Kit	All
2004-7	Quick Reference for 4-TEC Jet Pumps	2004 GTX 4-TEC / GTX 4-TEC Wakeboard / GTX 4-TEC Supercharged/ GTX 4-TEC LTD Supercharged/ RXP /
		2003 GTX 4-TEC / GTX 4-TEC Wakeboard / GTX 4-TEC Supercharged/ GTX 4-TEC LTD Supercharged/
		2002 GTX 4-TEC
		2004 GTI LE / GTI LE RFI / GTX 4-TEC / GTX 4-TECH Wakeboard Edition / GTX 4-TEC Supercharged / GTX
2004-8	Mirror to be installed at PDI	4-TEC Limited Supercharged

WARRANTY	SUBJECT	MODEL
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ADMINISTRATIVE	SUBJECT	MODEL
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PARTS & ACCESSORIES	SUBJECT	MODEL
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PREDELIVERY SUBJECT

MODEL

2003-1	Preelivery	GTX DI / RX DI
2003-2	Preelivery	GTX 4-TEC / GTX 4-Tec vans triple crown edition
2003-3	Preelivery	GTI / GTI California / GTI LE
2003-4	Preelivery	4-TEC SC Models
2003-5	Preelivery	2-TEC RFI Models
2003-6	Preelivery	2-TEC DI Models

SERVICE SUBJECT

MODEL

2003-1	Battery Care Reminder	All
2003-2 Rev. 1	High Altitude	All
2003-3 Rev. 1	Impeller Chart	All 1999 to 2003
2003-4	Paint Codes	All
2003-5	Canadian Coast Guard Compliance Label	GTI/GTI LE/ GTI LE RFI/ GTX DI/ GTX 4-TEC / 4-TEC LTD/ 4-TEC WAKE/ 4-TEC Supercharged/ XP DI/RX DI/ LRV DI
2003-6	Fuel Pump Removal	XP DI
2003-7	Spark Plug Type on Emission Control Information Label	GTX -4TEC Supercharged
2003-8	Oil Tank Straps	2002 XP / 2003 XP DI
2003-9	Rotary Valve Oil Fittings	2003 GTI/GTI LE/GTI LE RFI/ 2002 GTI/GTI LE/GTX RFI/ 2001 GS/GSX/GTS/GTI/GTX RFI/ 2000 GS/GSX RFI/ GTS/GTI/GTX RFI/ 1999 SPX/GS/GSX RFI/GTS/GTI/GTX RFI/ 1998 SPX/GS/GTS/GTI/GTX RFI/ 1997 SP/SPX GS/GSI/GSX/GTS/GTI/GTX/HX/XP/ 1996 SPX/GSX/GTS/GTI/GTX/HX/XP/ 1995 HX/XP/XP 800
2003-10	GTX 4-TEC ECU Replacement	2003 and 2002 GTX 4-TEC
2003-11	Storage Procedure (4-TEC engine units)	2003 GTX / GTX Supercharged / GTX LTD Supercharged
2003-12	Storage Procedure (2-stroke engine units)	2003 GTI/ GTI LE / GTI LE RFI / GTX DI / LRV DI / RX DI/ XP DI
2003-13	A) Fault Code "P1202" B) Oil Message on Cluster	2003 GTX 4-TEC/ WAKE/ Supercharged/ LTD Supercharged/
2003-14	Pre-Season/Annual Safety Inspection (Owner's expense)	All 4-stroke engine units

WARRANTY SUBJECT

MODEL

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ADMINISTRATIVE SUBJECT

MODEL

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PARTS & ACCESSORIES SUBJECT

MODEL

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PREDELIVERY	SUBJECT	MODEL
2002-1	Predelivery	GTX RFI
2002-2	Predelivery	GTX
2002-3	Predelivery	GTI LE / GTI
2002-4	Predelivery	RX
2002-5	Predelivery	XP
2002-6	Predelivery	LRV DI
2002-7	Predelivery	GTX 4 TEC
2002-8	Predelivery	GTX DI (LE)
SERVICE	SUBJECT	MODEL
2002-1	High Altitude	All
2002-2	Impeller Chart	All (1998 to-2002)
2002-3	Pre-Season Inspection (owner's expense)	All
2002-4	Annual Safety Inspection (owner's expense)	All
2002-5	Batteries	All
2002-6	PaintCodes	All
2002-7	Cancelled	All
2002-8	Replacement Battery Cables and Special Tool Introduction	All
2002-9	New Mandatory/Recommended Service Tools/Products	All
	Canadian Coast Guard Compliance Label	GTI/GTILE/ GTX/ GTX DI/ GTX RFI/ GTX 4-TEC/XP / RX/ RX DI LE/ LRV DI
WARRANTY	SUBJECT	MODEL
2002-1	Lower Engine Oil Plugs <i>Campaign no. 2002-0010</i>	GTX 4-TEC
2002-2	Rev. 1 Water Inlet Double T-Fitting <i>Campaign no. 2002-0009</i>	GTX DI / RX DI / LRV DI
2002-3	(US Dealers Only) – Neoprene PFD D-ring Detachment	Neoprene PFD (grey / blue)
ADMINISTRATIVE	SUBJECT	MODEL
2002-1	Warranty Procedures Pertaining to Sea-Doo Covers	All
2002-2	Part Claim Procedure Modification	All
2002-3	Rebuilt Parts on Warranty	All
PARTS & ACCESSORIES	SUBJECT	MODEL
2002A-101	Accessories Price List	
2002-102	Rev. 1 4-TEC Jet Pump Bearing Grease (P/N 293 550 032)	
2002-103	Rotax Engine P/N Changes	

Bombardier Oils & Lubricants

(This is only a partial listing to use as a quick reference sheet.)

Part #	Product Description	Size	Application			Notes
			Ski-Doo	Sea-Doo	ATV	
293600011	Bombardier Synthetic Jet Pump Oil	177 ml (6 oz)	-	X	-	
293600043	Bombardier Synthetic Gear Oil 75w 90	946 ml (32 oz)	-	-	X	Same as 293 600 011 but 946 ml
413801900	Bombardier Chaincase Oil	250 ml (8.4 oz)	X	-	X	
413803300	Bombardier Synthetic Chaincase Oil	355 ml (12 oz)	X	-	X	
413711600	Bombardier Storage oil	Spray 473 ml (16 oz)	X	X	X	
413408600	Bombardier Fuel Stabilizer	236 ml (8 oz)	X	X	X	
293600016	Bombardier Lube	Spray 473 ml (16 oz)	X	X	X	

413802900	Bombardier 2-stroke Injection Oil	1 liter (33.8 oz)	X	X	X	Exc. Models that require FORMULA XP-S or FORMULA XP-S DI ATV : Mini DS 2-stroke only
413803000	Bombardier 2-stroke Injection Oil	4 liter (135 oz)	X	X	X	
413803200	Bombardier 2-stroke Injection Oil	Drum 205 L (54 gallons)	X	X	X	

293600045	NEW FORMULA XP-S II Synthetic 2-stroke Oil	1 liter (33.8 oz)	X	X	X	Replaces both FORMULA XP-S and FORMULA XP-S DI ATV : Mini DS 2-stroke only
293600046	NEW FORMULA XP-S II Synthetic 2-stroke Oil	4 liter (135 oz)	X	X	X	
293600047	NEW FORMULA XP-S II Synthetic 2-stroke Oil	Drum 205 L (54 gallons)	X	X	X	

413803100	Bombardier Premix oil	500 ml (17 oz)	X	X	X	2 stroke
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293600039	Bombardier Synthetic 4-stroke Oil 5W40	1 liter (33.8 oz)	-	-	X	
293600054	Bombardier Synthetic 4-stroke Oil 0W-40	1 liter (33.8 oz)	X	-	-	

REBUILT PARTS LIST SEA-DOO – SKI-DOO – ATV

PRODUCT	REBUILT PART	PART	ENGINE TYPE	COOLING SYSTEM F/C - L/C	AMOUNT CYL.	YEAR	DESCRIPTION	Original Part #	
SKI-DOO	421000051	REP		L/C		N/A	Resleeve cylinder, repair only	N/A	
	421000060	REP				N/A	Crankcase brass plate insert, repair only	N/A	
	421000062	REP				N/A	Rotary valve cover refacing, repair only	N/A	
	421000063	REP				N/A	Oversized cylinder, repair only	N/A	
	421000050	REP		F/C		N/A	Resleeve cylinder, repair only	N/A	
	421000031			F/C	1	1993 to 2004		420995301	
	421000009			F/C	2	1992 to 1996		420887245 / 420996332	
	421000154			F/C	2	1997 to 2004		420889630	
	421000150			L/C	2	1995 to 1998		420887962 / 420887966	
	421000574			L/C	2	2000 TO 2002	27 mm	420888286	
	421000573			L/C	2	2000 TO 2002		420888402	
	421000019			L/C	2	1985 to 1995		420995205	
	421000151			L/C	2	1996 to 2000		420886933	
	421000567			F/C	2	2000		420888462	
	421000011			F/C	2	1990 to 1996	Keyway at 3 o'clock	420996445	
	421000155			F/C	2	1997 to 2003		420888390 / 420888391	
	421 000 601			F/C	2	2003 to 2004		420 889 062	
	421000021			532-536-537-582	L/C	2	1985 to 1996		420996628
	421000044			583	L/C	2	1990 to 1993		
	421000563			583	L/C	2	1994 to 1999		420 887 355
	421000553			593	L/C	2	2000 to 2002		420888252 / 420888751
	421000023			593	L/C	2	1999		420888250
	421000025			643	L/C	2	1991 & 1992		420996625
	421000046			670	L/C	2	1993 & 1994	Order needle bearing # 420 832 425	420886425
	421000312			670	L/C	2	1995 & 1996	Order needle bearing # 420 832 425	420887987
421000047			670	L/C	2	1997 to 1999			
421000152			670	L/C	2	1998 & 1999	Summit X & MXZ H.O.	420887986	
421000310			599 - 699 CK3	L/C	3	1995		420886903	
421000153			699	L/C	3	1996 & 1997		420887970	
421000026			779	L/C	3	1998 to 2000	New modified part for 1999-2000	420888030 / 420888034	
421000048			779	L/C	3	1997		420887605	
421000156			809	L/C	3	1993 & 1994		420886485	
				L/C	3	1995 & 1996		420887590	
				L/C	3	1997 to 2003	New modified part for 1999-2002	420887667 / 420887668 420887662	

CRANKSHAFT

SKI-DOO

PRODUCT	REBUILT PART	PART	ENGINE TYPE	COOLING SYSTEM F/C - L/C	AMOUNT CYL.	YEAR	DESCRIPTION	Original Part #
SKI-DOO	421000606	CRANKSHAFT	793SDI	L/C	2	2003-2004	SDI ONLY	420889106
	421000607		793HO	L/C	2	2003-2004	H.O. ONLY 2004 ONLY	420889671
	421000608		793	L/C	2	2003	2003 ONLY	420889101
	421000609		693	L/C	2	2003-2004	693 AND 593 HO ONLY	420889091
	421000611		593HO	L/C	2	2003-2004		420888757
	421000599		493	L/C	2	2003		420888465
	421000101		277	F/C	1	1993 to 1996		420913217
	421000200		277	F/C	1	1997 to 2004		420913218 / 420913219
	421000102		377	F/C	2	1984 to 1994	Pto	420823796
	421000103		377	F/C	2	1995 & 1996	Pto	420823799
	421000201		377	F/C	2	1997 to 1998	Pto	420-923 402
	421000104		377	F/C	2	1984 to 1994	Mag	420823805
421000105	377	F/C	2	1995 & 1996	Mag	420823809		
421000202	377	F/C	2	1997 /1998	Mag	420923405		
421000106	443	F/C	2	1996	Pto	420923346		
421000107	443	F/C	2	1996	Mag	420923356		
421000203	443	F/C	2	1997 to 2004	Pto	420923348 / 420923790		
421000204	443	F/C	2	1997 to 2004	Mag	420923358 / 420923795		
421000559	377	F/C	2	1999 to 2004	Pto	420923403		
421000560	377	F/C	2	1999 to 2004	Mag	420923408		
421000114	467	L/C	2	1985 to 1995	Comes with 2 bolts	420823697 / 420923149		
421000113	467	L/C	2	1985 to 1995		420823699		
421000115	494	L/C	2	1996 & 1997	# 420 887 553 at 69,39 mm	420923148		
421000551	494	L/C	2	1998 to 2000	All models except Skandic	420923617		
421000552	494	L/C	2	1998 to 2000	Skandic only	420923619		
421000109	503	F/C	2	1983 to 1998		420 823 645		
421000110	503	F/C	2	1983 to 1997		420923410		
421000500	503	F/C	2	1998 to 2003		420923417		
421000600	552	F/C	2	2003 to 2004		420923975		
421000116	582	L/C	2	1993		420913449		
421000117	582	L/C	2	1994 to 1996		420913446		
421000118	583	L/C	2	1989 to 1993		420913078		
421000119	583	L/C	2	1994		420923670		
421000120	583	L/C	2	1995 to 1999		420923067		
421000554	593	L/C	2	1999 & 2002		420923435 / 420923437		
421000121	643	L/C	2	1991 & 1992		420913077		
421000123	670	L/C	2	1993 to 1999	1 exhaust pipe	420923193		
421000124	670	L/C	2	1995 & 1996	Mach 1 only	420923199		
421000568	493	L/C	2	2001 TO 2003		420923855 / 420613605		
421000578	593	L/C	2	2001 TO 2004	WITH OUT DEKO SLOTS	420923439 / 420613625		
421000550	670	L/C	2	1998 & 1999	Summit X & MXZ H.O.	420923700		
421000125	779	L/C	3	1994 to 1996		420913339		

SKI-DOO

CYLINDER

PRODUCT	REBUILT PART	PART	ENGINE TYPE	COOLING SYSTEM F/C - L/C	AMOUNT CYL.	YEAR	DESCRIPTION	Original Part #
SKI-DOO	421000558	NICASYL CYL.	693	L/C	2	2001 to 2002		420923694 / 420923692
	421000065		454	L/C	2	1995 & 1996		420923170
	4210000610		454	L/C	2	1997 & 1998		420923172
	421000066		599	L/C	3	1995		420923110
	421000067		599	L/C	3	1996 to 1999		420923112
	421000555		693	L/C	2	2000	SAND CAST	420923691
	421000064		699	L/C	3	1997 to 2000		420923420
	421000068		809	L/C	3	1997 to 2003		420923480
	421000566		693	L/C	2	2001 to 2004	WITH OUT DEKO SLOTS	420923695
	421000579		793	L/C	2	2000 to 2004	WITH OUT DEKO SLOTS	420923811 / 420923817
	421000597		793	L/C	2	2002		420923810 / 420923815
	421000605		593HO	L/C	2	2003 to 2004	H.O. ONLY	420613711
	421000604		793HO	L/C	2	2003 to 2004	H.O. ONLY	420613852
	421000175		377	F/C	2	1995 to 2002		N/A
421000173	494	L/C	2	1996		N/A		
421000181	494	L/C	2	1997		N/A		
421000412	494	L/C	2	1998 to 2000		N/A		
421000410	503	F/C	2	1994 to 1999	All models except Skandic	N/A		
421000602	552	F/C	2	2003 to 2004		420055201		
421000182	583	L/C	2	1995 to 1997		N/A		
421000413	583	L/C	2	1998 & 1999		N/A		
421000180	670	L/C	2	1997		N/A		
421000414	670	L/C	2	1998 & 1999	1 exhaust pipe	N/A		
421000415	670	L/C	2	1998 & 1999	Summit X & MXZ H.O.	N/A		
421000575	493	L/C	2	2000 TO 2002		420049302		
421000581	593	L/C	2	2001 - 2002		420049302		
421000581	593	L/C	2	2001 TO 2002		420059303		
421000580	593	L/C	2	2001 TO 2002		420059302		
421000598	793	L/C	2	2001 TO 2002	421000598 is replaced by 421000613	420079304		
421000612	793HO	L/C	2	2003-2004	H.O. ONLY			
421000613	793	L/C	2	2001-2003	This shortblock is assy. With a 2004 HO crank and Crankcase			
421000614	693	L/C	2	2001-2004	ENGINES UPDATE 2004			
421000615	593HO	L/C	2	2003-2004	H.O. ONLY			
421000616	593	L/C	2	2001-2004	ENGINES UPDATE 2004			
421000617	493	L/C	2	2001-2003				

ALL 2004 UPDATED SHORTBLOCKS WILL BE IDENTIFIED ON CRANKCASE 2004 MODEL

PRODUCT	REBUILT PART	PART	ENGINE TYPE	COOLING SYSTEM F/C - L/C	AMOUNT CYL.	YEAR	DESCRIPTION	Original Part #
SEA-DOO	421000071	CRANKSHAFT	587	L/C	2	1988 to 1993	Labyrinthine Seal	290886797
	421000072		587	L/C	2	1994 to 1996		290886797
	421000024		657	L/C	2	1993		290886558
	421000073		657	L/C	2	1994 & 1995		290886558
	421000074		717	L/C	2	1995 to 2003		290887867
	421000075		787	L/C	2	1995	XP 800	290888103
	421000076		787	L/C	2	1996 to 1999	Non RFI	290888103
	421000712		787	L/C	2	1998 to 2003	RFI	290887890
	421000571		947	L/C	2	2003	D.I.	290887767
	421000711		947	L/C	2	1998 to 2002	Except D.I.	290887762
	421000052	CYLINDER	587	L/C	2	1989 to 1991	Yellow	290913286
	421000053		587	L/C	2	1992 to 1996	White	290913376
	421000054		657	L/C	2	1993 & 1994	Except White XP 1994	290913386
	421000055		657	L/C	2	1994	White XP	290913388
	421000056		717	L/C	2	1995 to 2003	All White X	290923805
	421000057		787	L/C	2	1995	Grey	290923500
	421000059		787	L/C	2	1996 to 1999	USE 421 000 059 No RFI- Grey see note 2	290923503
	421000813		787	L/C	2	1998 to 2003	RFI, Grey	290923846
	421000561		947	L/C	2	1998 to 2002	Except D.I., replace 812	290613561
	421000570		947	L/C	2	2001	D.I.	290923718
421000205	947	L/C	2	2002-2003	D.I.	420613576		
421000093	SHORT BLOCK	587	L/C	2	1989 to 1991	Yellow	290881440	
421000094		587	L/C	2	1992 to 1996	White	290881444	
421000095		657	L/C	2	1993	XP White	290881448	
421000096		657X	L/C	2	1994	SPX - XPI - GTX White	290881449	
421000097		717	L/C	2	1994	XP White	290881449	
421000098		787	L/C	2	1995	White SPX -GTX	290881449	
421000100		787	L/C	2	1995 to 2003	Grey	290071703	
421000913		787	L/C	2	1995	USE 421 000 100 + 290 958 057	290881527 / 290881528	
421000562		947	L/C	2	1996 to 1999	Non RFI-Grey , SEE NOTE 1	290078704	
421000572		947	L/C	2	1998 to 2003	RFI, Grey	290078703	
421000416	BAL. SHAFT	947	L/C	2	1998 to 2002	Except D.I., replace 912	290094703	
421000582		947	L/C	2	2001	D.I.	290094705	
			947	L/C	2	2002-2003	D.I.	420094706
SEA-DOO			947	L/C	2	1998 to 2002	BALANCING SHAFT	290837387

SEA-DOO

PRODUCT	REBUILT PART	PART	ENGINE TYPE	COOLING SYSTEM F/C - L/C	AMOUNT CYL.	YEAR	DESCRIPTION	Original Part #	
ATV	421000577	CRANKSHAFT	654	L/C	1	2001	DS650	711295192	
	421000157		511	L/C	1	1999-2002	Traxler	420295693	

NOTE 1 : Running change from white to grey

Note: Old core will be completely refunded only if :

- Core is returned within 30 days with the filled-out rebuilt confirmation form
- Core is same model as the one shipped
- Core casting is not broken
- Core is complete and fully assembled
- Core is shipped prepaid to Bombardier
- Core is returned in original packaging to avoid freight damages

Not respecting those requirements could result in a refused or reduced core credit.

LEGEND	
CR	CRANKSHAFT
CY	CYLINDER
CY N	CYLINDER (NICASIL)
REP	REPAIR ONLY
SB	SHORT BLOCK

Bombardier Recreational Products Inc.

REPORT ON PERFORMANCE/QUALITY (FROM DEALER)

SEA-DOO
 SPORT BOAT

Please Check Here Properly Box

N.B. If fields with grey headings are not completed, the report can not be processed!

DATE (YEAR-MONTH-DAY)	REPORTED BY First Name: Last Name:	DEALER'S NUMBER (999999)	CONTACT First Name: Last Name:	
CIRCLE THE APPLICABLE CONDITION				
ENVIRONMENT 1.1 During PDI 1.2 Freight Damage 1.3 High Sea 1.4 Lake	1.5 River/Channel 1.6 During Storage N.A.*	TYPE OF USAGE 3.1 Personal 3.2 Rental 3.3 Commercial 3.4 Racing N.A.*	WATER CONDITION 4.1 High Waves 4.2 Shallow Water 4.3 Calm Water N.A.*	THROTTLE OPENING 1/4 1/2 3/4 4/4 N.A.*
OUTSIDE TEMPERATURE Unité de mesure <input type="checkbox"/> F <input type="checkbox"/> C	WATER TEMPERATURE Select Measure <input type="checkbox"/> F <input type="checkbox"/> C	SPEED Select Measure <input type="checkbox"/> km/h <input type="checkbox"/> MPH	RPM	
MODEL NUMBER (9999)	SERIAL NUMBER	TOTAL HOURS USED	PART NUMBER (999 999 999)	
PROBLEM DESCRIPTION				
CORRECTIVE ACTION TAKEN 				
COMMENTS/OTHER OBSERVATIONS 				

RETURN AUTHORIZATION

PROSPEC ELECTRONICS
 OF SOUTH CAROLINA
 3325 HIGHWAY 17 NORTH
 MOUNT PLEASANT, SC 29466
 PH (843) 849-9037
 FAX (843) 849-9054

All information below **must** be completed to be accepted.

Customer Name		
Address		
Contact		Fax
		Phone
Radio Manufacturer	Radio Model	
Hull Identification Number		
Boat Model	Manufacturer	Purchase Date
		Year
Customer Complaint		RA#
		RC# Prospect use
Store Number		



OptiMax

DDT Data Worksheet



Dealer Name:	Engine S/N:
Dealer Number:	Engine Type:
Technician Name:	ECM Part Number
Date:	DDT Software Version:

Total Run Time		
0000-0999		
1000-1499		
1500-2999		
3000-3999		
4000-4999		
5000-5999		
6000+		
RPM LIM CNT		
BREAL LN Min.		
OVER TMP Sec		
Ignition Err		
Cyl 1		
Cyl 2		
Cyl 3		
Cyl 4		
Cyl 5		
Cyl 6		
Injector Err		
Cyl 1		
Cyl 2		
Cyl 3		
Cyl 4		
Cyl 5		
Cyl 6		
Pump Err		
OIL PMP		

Sensor Err		
CTS		
CTP		
ACT		
MAP		
TPI1		
TPI2		
AIR		
TRIG		
BPSI		
Switches Err		
LOW OIL		
H ₂ O		
Misc. Err		
BAT		
PWR1		
PWR2		
PRLY		
LAMP		
HORN		

WOT RPM	
Propeller Type	
Propeller Size	
Boat Type	
Boat Length	
Weather Condition	

Description of Problem:



OptiMax



DDT Data Worksheet

Dealer Name:	Technician Name:
Dealer Number:	Engine S/N:

#1 Data Monitor	NOW:	Min:	Max:	Notes
ENGINE RPM				
TPI 1 VOLTS				
TPI 2 VOLTS				
BATTERY VOLTS				
PWR 1 VOLTS				
PWR 2 VOLTS				
COOL TMP STB				
COOL TMP PRT				
MAP PSI				
AIR TMP				
TRIGGER ERR				
TIME TO OIL				
OIL INJ CNT				
AIR COMP TMP				
BLOCK PSI				

#2 Data Monitor	NOW:	Min:	Max:	Notes
ENGINE RPM				
TPI 1 VOLTS				
TPI 2 VOLTS				
BATTERY VOLTS				
PWR 1 VOLTS				
PWR 2 VOLTS				
COOL TMP STB				
COOL TMP PRT				
MAP PSI				
AIR TMP				
TRIGGER ERR				
TIME TO OIL				
OIL INJ CNT				
AIR COMP TMP				
BLOCK PSI				

QuickFax Service Fax Form

Mercury/Mariner/Force
Service – USA
QuickFax: 800-842-4550

MerCruiser
Service – USA
QuickFax: 800-245-8794

Service – Canada
Miss. FAX #905-270-8334
QuickFax: 800-663-8334

Please use this convenient form to request service assistance. Information below is required to help us respond to your request.

Number of Pages Being Faxed _____

Dealer / OEM Name _____ Dealer / OEM # _____

Phone No. _____ Fax No. _____ Contact Person _____

Serial No. _____ Model No. _____ Horsepower/Liters _____

Owner's Name _____ Date of Purchase _____ Hours Used _____

Boat Manufacturer _____ Boat Length _____ Prop Size _____ W.O.T. RPM _____

Description of Problem (WHen does problem occur? What RPM? How often?): _____

Tests Performed/Readings (Ignition, DVA, Pressures, Engine RPM, etc.): _____

Suspected Cause of Problem (Disassemble if this is an Internal Engine or Lower Unit problem): _____

List Any Repairs Already Performed and Parts Replaced: _____

Action Requested (Warranty/QGuard/Preauthorization, Advice, Information Only, Other): _____

BOMBARDIER ACCIDENT REPORT

DATE OF ACCIDENT

Y	M	D

REPORTING AGENCY			
Name of Dealer/Distributor:		Town/City:	
Date of Report:	am	pm	State/Prov.:

Vehicle No. 1					
DEMOGRAPHIC DATA	Owner's Name:		Product Experience: <input type="checkbox"/> 0-50 hours <input type="checkbox"/> 50-100 hours <input type="checkbox"/> 100-150 hours <input type="checkbox"/> 150-200 hours <input type="checkbox"/> 200 +		
	Owner's Address:		Completed State/Prov. Product Safety Course: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N.A.		
	Town/City:	State/Prov.:	Year Taken:	Certificat No.:	
	Zip/Postal Code:		Tel. No.:	Member of Product Club/Association: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Operator's Name: (unless same as owner)		Occupation:	Employer:	
	Operator's Address:		Passenger's Name:		
	Town/City:	State/Prov.:	Passenger's Address:		
	Zip/Postal Code:		Town/City:	State/Prov.:	
	Driver's Licence No.:		Coded Restrictions:	Zip/Postal Code:	Tel. No.:
	Years Licenced as Driver: <input type="checkbox"/> 1-3 <input type="checkbox"/> 3-6 <input type="checkbox"/> 6-10 <input type="checkbox"/> 10 +		Date of Birth: Y M D		
	Date of Birth: Y M D		Age: <input type="checkbox"/> 0-10 <input type="checkbox"/> 10-16 <input type="checkbox"/> 16-25 <input type="checkbox"/> 25-40 <input type="checkbox"/> 40 +		
	Age: <input type="checkbox"/> 0-10 <input type="checkbox"/> 10-16 <input type="checkbox"/> 16-25 <input type="checkbox"/> 25-40 <input type="checkbox"/> 40 +		Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female		
	Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female		Product Experience: <input type="checkbox"/> 0-50 Hours <input type="checkbox"/> 50-100 Hours <input type="checkbox"/> 100-150 Hours <input type="checkbox"/> 150-200 Hours <input type="checkbox"/> 200 +		
	Vehicle No. 2				
Owner's Name:		Years Licenced as Driver: <input type="checkbox"/> 1-3 <input type="checkbox"/> 3-6 <input type="checkbox"/> 6-10 <input type="checkbox"/> 10 +			
Owner's Address:		Date of Birth: Y M D			
Town/City:	State/Prov.:	Age:	Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female		
Zip/Postal Code:		Tel. No.:	Passenger's Name:		
Operator's Name: (unless same as owner)		Passenger's Address:			
Operator's Address:		Town/City:	State/Prov.:		
Town/City:	State/Prov.:	Zip/Postal Code:	Tel. No.:		
Zip/Postal Code:		Tel. No.:	Date of Birth: Y M D		
Driver's Licence No.:		Coded Restrictions:	Age:	Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female	

Vehicle No. 1			
PRODUCT DATA	Make:	Model:	Name of Ins. Company:
	Year:	Serial No.:	Product Certified: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Condition: <input type="checkbox"/> New <input type="checkbox"/> Used <input type="checkbox"/> Borrowed <input type="checkbox"/> Rent		Safety Devices Present: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Date of Pre-Delivery:	Date of 1 st Recommended Inspection:	Safety Device in Use: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Date of Recent Service:	Mileage/Hours:	Warning or Caution Statement Present: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Dealer's Name:		Proper Operating Instructions Present: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Dealer's Address:		Had Product Undergone Modification/Recall Approved by Manufacturer? <input type="checkbox"/> Yes <input type="checkbox"/> No
	Town/City:	State/Prov.:	Had Product Undergone Modification by Former Owner? <input type="checkbox"/> Yes <input type="checkbox"/> No
	Zip/Postal Code:	Tel. No.:	Were All Components on Product Original? <input type="checkbox"/> Yes <input type="checkbox"/> No
	Product Registration No.:	Year of Registration:	Were Replacement Components Sold by Product Manufacturer or Representative? <input type="checkbox"/> Yes <input type="checkbox"/> No
	Insured: <input type="checkbox"/> Yes <input type="checkbox"/> No		Were All Components on Any Security Item Fastened to the Product? <input type="checkbox"/> Yes <input type="checkbox"/> No
	Policy No.:	Expiry Date:	Was Routine Lubrication and Maintenance Given to the Products as Specified by the Manufacturer? <input type="checkbox"/> Yes <input type="checkbox"/> No

PROPERTY DAMAGE DATA	Vehicle/Components: _____	Estimated Cost of Repair: Vehicle: \$ _____ Property: \$ _____ Total: \$ _____

	Environment/Private: _____	

ENVIRONMENT DATA	Type of Terrain												
	Road, Right of way		Public Trail		Railroad		Wooded		Hilly Mountains				
	Ditch		Private Trail		Lake		Open Field		Other:				
	River		Stream		Sea								
	Type of Topography												
	Unknown		Crest of Hill		Slope Up		Slide Slope		Straight				
	Level		Bottom of Hill		Slope Down		Curve		Other:				
	Surface Cover (Type)				Precipitation			Visibility Limitation			Ambiant Temperature		
	Bare Ground		Complete Cover		None		None		At or Above 32°F (0°C)				
	Soft Snow		Partial Cover		Rain		Precipitation		Below 32°F (0°C):				
Hard Packed Snow		Asphalt		Snow		Fog-Smoke-Dust							
Ice		Other:		Sleet		Darkness							
Calm Water				Hail		Other:							
Rough Water				Other:									

ACCIDENT DATA	Day of week:	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday	
	Collision with Car, Truck, Snowmobile		Struck Barb Wire		Broke Thru Ice		Racing								
	Collision with Boat		Struck Cable/Guy Wire		Contact with Machine Mechanism		Being Towed								
	Collision with Train		Roll Over		Caught Clothing in Machine		Equipment Malfunction								
	Collision with Fixed Object		Fell/Thrown		Struck Pedestrian		Fire								
	Other:														
	Location of Accident:											Estimated Speed:			
	Time of Accident:	<input type="checkbox"/> Morning			<input type="checkbox"/> Afternoon			<input type="checkbox"/> Night							
	ACTIVITY:	<input type="checkbox"/> Unknown			<input type="checkbox"/> Transportation			<input type="checkbox"/> Racing							
		<input type="checkbox"/> Recreation			<input type="checkbox"/> Work			<input type="checkbox"/> Other							
	CLOTHING:	<input type="checkbox"/> Suit			<input type="checkbox"/> Boots/Deck Shoes			<input type="checkbox"/> Visor/Goggles							
		<input type="checkbox"/> Helmet			<input type="checkbox"/> Gloves/Mitts			<input type="checkbox"/> Life Jacket							
	Doctor's Name:														
Doctor's Address:															
Length of Stay Hospital:															
Accident Reported to:															
Witnesses' Name:															
Witnesses' Address:															

INJURY DATA	Person Injured:	Type of Injury:	<input type="checkbox"/> Death	<input type="checkbox"/> Exposure	<input type="checkbox"/> Bruise	<input type="checkbox"/> Burns
	Address:	Part of Body Injured:	<input type="checkbox"/> Fracture	<input type="checkbox"/> Sprain	<input type="checkbox"/> Lacerations	<input type="checkbox"/> Internal
	Person Injured:	Type of Injury:	<input type="checkbox"/> Head	<input type="checkbox"/> Back	<input type="checkbox"/> Abdomen	<input type="checkbox"/> Lower Limb
	Address:	Part of Body Injured:	<input type="checkbox"/> Face/Neck	<input type="checkbox"/> Chest	<input type="checkbox"/> Upper Limb	<input type="checkbox"/> Other

RELATIVE QUESTIONS	Was the victim aware that what he was doing might result in injury?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	Was there anything to distract the victim's attention from what he was doing?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	What?
	Had anything happened to upset the victim that day or at the time of accident?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	What?
	Was the victim unusually tired or fatigued that day, or at the time of accident?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	Was operator or passenger ejected from product?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Unknown
	Was operator or passenger entrapped by product?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Unknown
	Was the victim in a hurry at the time of the accident?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	Has the victim or any member of his family had injury, accident or close call from this previous activity?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	What?
	Had the victim taken any precautions to prevent an accident?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	What?
	Was the victim familiar with the proper operation of the product?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	How often had the victim performed this specific activity before?	_____		
	Describe activities of victim leading up to and at time of injury:	_____		

	Describe physical condition of victim at time injury (consider: mentally ill, chronically ill, handicapped or disabled, if influence by alcohol or drugs):	_____		

	Had the operating literature been read and understood by the victim?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Why?
	Had victim ever been involved in another accident other than with this product? (Motorvehicle, Marine, Occupational, Recreation, Other):	_____		

Year of accident:	_____			
Is the brake operational?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Was it at the time of accident? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Is the throttle operational?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Was it at the time of accident? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Is the emergency cut-out switch operational?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Was it at the time of accident? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Is the lighting operational?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Was it at the time of accident? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Is the headlamp, tail/brake light operational?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Was it at the time of accident? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Did the victim perform a pre-start check of the product before the accident?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
Was the victim familiar with the area being traveled?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
Was passenger informed of proper driving position/techniques before riding the product?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
Was passenger wearing adequate clothing/helmet/lifejacket	<input type="checkbox"/> Yes	<input type="checkbox"/> No		

NARRATION REPORT BY VICTIM

PLEASE PROVIDE PHOTOGRAPHS OF DAMAGED VEHICLE!

SIGNATURE:

DATE:



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