Bombardier Recreational Products Inc.

ski-doo®

2005

Technical Update

2 1 9 6 0 0 0 1 2
Order extra copy if needed!

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INDEX

2005 Technical Update Book

Bombardier Recreational Products Inc. (BRP) is proud to introduce the 2005 Ski-Doo Technical Update Book.

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

www.brpti.brp.com

Bombardier Recreational Products Inc.

STEP BY STEP TO DO THE EXAM:

Go to the the B.R.P.T.I. web site: **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:
2005 Ski-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 **"2005 Ski-Doo Technical Update"** 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 **"2005 Ski-Doo Technical Update"** to begin the exam.

The passing grade is 75%

Notes: You always have three (3) opportunities to take an exam. 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.

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SECTION 1

2005 Technical Update
General Information

The objective of Section 1 is to make contacts between dealers and BRP 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 be more efficient.

Bombardier Recreational Products Inc.

IT'S EASY TO REACH US

The *Dealer Network Support Group* has a consolidated structure that combines all of 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 Dealer use only

From Canada: ☎1-800-361-9980

For Dealer use only

It's Quick and Easy

This is the new phoning procedure for contacting us:

Dial the same numbers:

Enter your BRP dealer number to access your support services.

Listen to the first menu and choose the service by pressing the number key on your telephone.

Listen to the second menu tone and choose the appropriate subject category.

These phone numbers are for dealer use only: Do not give these phone numbers to customers as this will have a serious impact on your ability to reach us.

BRP Network Support		
Service	**Shortcut path using phone keys**	
PAC	1 - 1	PAC Analysts
	1 - 2	PAC & BEST Sales Information
Technical Service	2 - 1	Ski-Doo
	2 - 2	Sea-Doo
	2 - 3	ATV
	2 - 4	Sport Boat
Warranty	3 - 1	Vehicles and Parts
	3 - 2	Clothing
BOSSWeb and Technology Support	4	BOSSWeb and technology Support (Including BUDS, PACPro & EPC)
Sales Coordinator & Vehicle Shipping	5 - 1	If you know your Regional Coordinator extension…
	5 - 2	US Dealer Coordinators
	5 – 3	Canadian Dealer Coordinators
	5 - 4	Vehicle Shipping
All Other Services	6 – 1	Consumer Assistance
	6 – 2	BPR Pro
	6 – 3	Signage and Co-op
	6 – 4	Dealer Certification
	6 - 5	Training B.R.P.T.I.

Before You Call the Service Department :

Be prepared :

The BRP 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 to 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 and Call ID:

Every BRP 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": Dealer Technical Support

Call the Service Reps to get technical assistance and to get a Warranty authorization number.

Rich Klein Manager ☎ **(715) 842-8886** 🖷 **(715) 847-6879**

Service Representatives:

☎	**U.S.:**	**(800) 366-6992**	🖷	**U.S.:**	**(715) 847-6879**
	Canada:	**(800) 361-9980**		**Canada:**	**(819) 566-3062**

In the U.S.:

Mike Carter (English)
Jeff Downs (English)
Patrick Eppolite Sr (English)
Duane Hall (English)
Paul Literski (English)
John Lofy (English)

In Canada :

Claude Beaudoin (English / French)
Simon Belzile (English / French)
Richard Cossette (English / French)
Alain Doucet (English / French)
Rosaire Goudreau (English / French)
Ian McAuliffe (English)
Dennis Sawyer (English / French)

"Who's Who": Performance and Quality of Product

Gordy Radtke
Field Product Quality Specialist

☎ **U.S.** **(800) 366-6992**
☎ **Canada** **(800) 361-9980**
🖷 **(715) 847-6879**
✉ **gordy.radtke@brp.com**

"Who's Who": B.R.P.T.I.

(Bombardier Recreational Products Training Institute)

Call for questions concerning B.R.P.T.I. web training, DVD's, exams or for the Dealer Certification.

Georgie Johns (English) ***Christian Larose (English & French)***

☎	**U.S.:**	**(800) 366-6992**	🖷	**U.S.:**	**(715) 847-6879**
	Canada:	**(800) 361-9980**		**Canada:**	**(819) 566-3062**

✉ **brpti@brp.com**

"Who's Who": RAM (Regional After Sales Manager)

RAMs are responsible for: « Network financial and business operation development and profitability ».

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, Western Region
Bruce Knight
Bombardier Recreational Products Inc.
1295 Long Drive
Freeland, WA 98249
☎ (360) 331-6731
🖷 (360) 331-6731
✉ Bruce.knight@brp.com

US, South East Region
Rodney (Rod) Thompson
Bombardier Recreational Products Inc.
896 Kersfield Circle
Heathrow, FL. 32746
Address TBD
☎ (407) 833-8862TBD
🖷 (407) 833-8862TBD
✉ rodney.thompson@brp.com

Canada, East
Charles Bedard
Bombardier Recreational Products Inc.
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

"Who's Who": Coordinator - Legal Support

Nancy Larsen ☎ **(715) 842-8886** 🖷 **(715) 847-6879**

"Who's Who": International Distributor - After Sales Support

Ronald Hurner Senior Coordinator International After Sales & Service	☎ +1 819 566-3086 ronald.hurner@brp.com	🖷 +1 819 566-3457
BRP Australia		
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Paul Dawson	☎ +61 2-9794-6615 paul.dawson@brp.com	🖷 +61 2-9794-6651
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Bruce O'Dowd	☎ +61 2-9794-6600 bruce.o'dowd@brp.com	🖷 +61 2-9794-6651
BRP Europe - Europe, Middle East & Africa + Russia		
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Karel Bogaerts	☎ +32-9-272-63-63 karel.bogaerts@brp.com	🖷 +32-9-272-63-49
Latin America (except Brazil)		
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Alfredo Padron (all except Brazil)	☎ +1 954-846-1407 alfredo.padron@brp.com	🖷 +1 954-846-1476
BRP Brazil		
Ednilson Beneli	☎ +55-19-3716-8605 ednilson.beneli@brp.com	🖷 +55-19-3246-3800
Carlos Parra	☎ +55-19-3716-8616 carlos.parra@brp.com	🖷 +55-19-3246-3800
BRP Japan		
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BRP Nordtrac - Scandinavia		
Pekka Tiuraniemi	☎ +35 8 16 3208 128 pekka.tiuraniemi@brp.com	🖷 +35 8 16 3420 316
Jorma Kukkola	☎ +35 8 16 3208 132 jorma.kukkola@brp.com	🖷 +35 8 16 3420 316

"Who's Who": 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 BRP.

☎ **For Retail Customers:**	**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 returned and 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 Service Guide on BOSSWeb.

RPQ Reporting

(Reports on Performance and Quality)

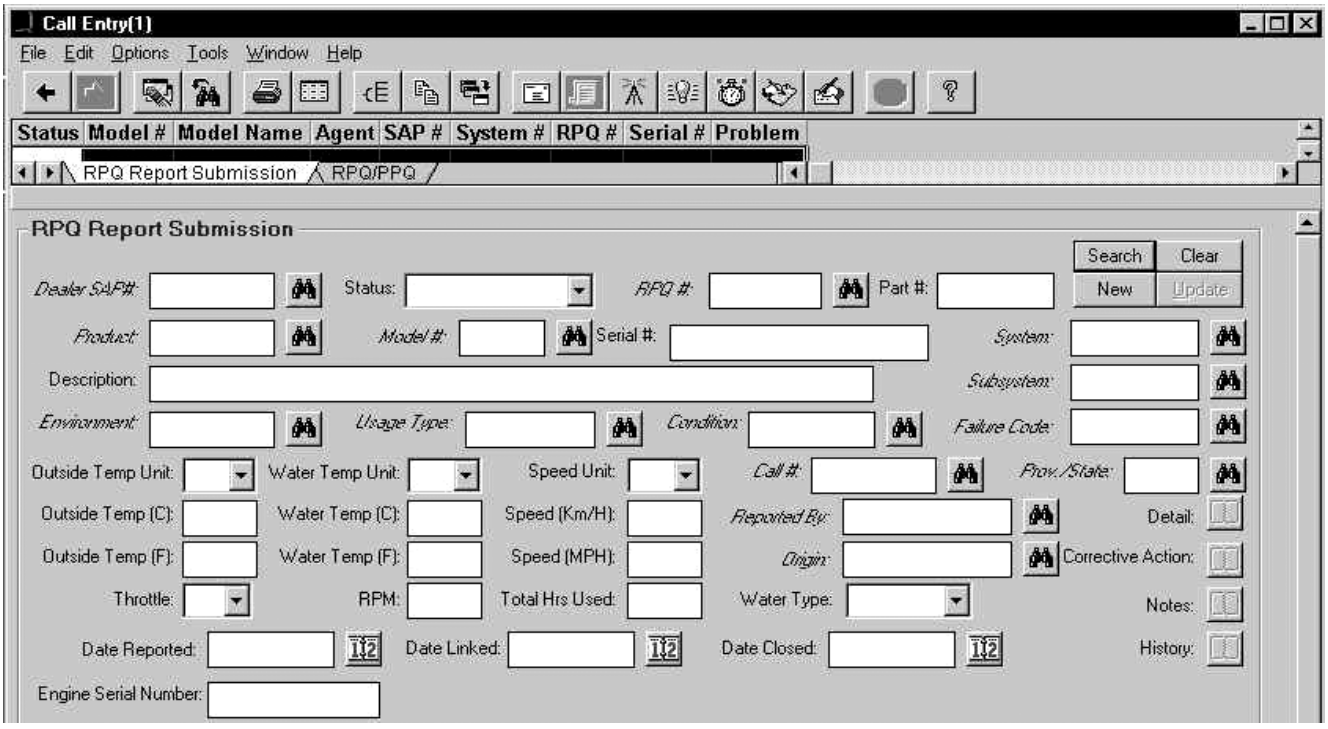
RPQ reporting is necessary in order to relay all information to the Engineering Department.

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

Below is a sample of the main RPQ screen each Service Representative must fill out 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 filled out and faxed to a Service Representative.

Importance of PDI

Was the PDI Check List properly filled out and filed?

Was it signed by the customer?

Legal protection
• The PDI provides documented proof that you have reviewed the operation and maintenance procedures for the boat with the customer.

Sell : Value for the money
• The PDI gives the customer assurance that a proper pre-delivery inspection has been performed on the boat, as well as the ability to show all the steps required to justify the expense of “set-up charges”.

Professionalism
• In today’s marketplace, 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, the operator’s guide, and safety videocassette as well as his sales information, PDI sheet and proof of registration.

Where do I find this document?
• It is included with every 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

ski-doo Snowmobiles

BOMBARDIER
RECREATIONAL PRODUCTS

MODEL NAME	SERIAL NUMBER

PREDELIVERY CHECK LIST

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

NOTE PERTAINING TO THE DESS (Digitally Encoded Security System)

The use of the following tool is mandatory for programming:

MPEM programmer (P/N 529 035 878) with version 3.5 and up (**all liquid cooled models with DESS, except 4-TEC and SDI models**).

OR

VCK (Vehicle Communication Kit) and the B.U.D.S. (Bombardier Utility and Diagnostic Software) (P/N 529 035 844) (4-TEC and SDI models as well as **all liquid cooled models with DESS**).

NOTE: 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 factory programmed keys.

NOTE: Some items only apply to certain vehicles. For specific items refer to appropriate *Predelivery Bulletin*.

PARTS TO BE INSTALLED	✓
Battery (full charged)	
Steering pad/cover/holding strap	
Skis	
Bumper, front/rear (w/molding)	
Front/rear suspension components	
Backrest	
Drive belt	
Windshield	
Snow guard	
Any other equipment as required by law ①	
Other	

① In some areas, some equipments are required by law like a left side rear-view mirror and a speedometer. Check local regulations.

OPTIONS/ACCESSORIES	✓
High/low altitude kit	
Other	

LIQUIDS	✓
Brake fluid	
Engine oil (4-TEC)	
Fuel	
Injection oil (fill and bleed)	
Coolant	
Chaincase/gearbox oil	
Grease/lubricant	

ADJUSTMENTS	✓
Handlebar	
Track tension/alignment	
Front and rear suspensions	
Speedometer reading (miles or kilometers)	
Other	

FINAL INSPECTION	✓
Inspect movement and operation of:	
Throttle/brake lever/parking brake	
Ignition/emergency stop/tether cut-out switches	
Headlamp/taillight/brake light	
Dimmer switch/pilot lamps	
Accessories	
Test run snowmobile.	
Clean and polish snowmobile.	

AT SALE, EXPLAIN TO OWNER	✓
The *Operator’s Guide*, *Safety Videocassette*, all on-product warning labels, Bombardier Extended Service Terms program (B.E.S.T.) and limited warranty policy and give same to customer. Advise the owner that some equipments are required by law to use this vehicle.	

AT DELIVERY	✓
Complete and return warranty registration signed by owner.	

PREPARED BY:	DATE: month / day / year
DEALER NO.:	
INSPECTED BY:	DATE: month / day / year
DEALER SIGNATURE: ✗	

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 snowmobile.

OWNER SIGNATURE: ✗	DATE: month / day / year
PRINT:	

For SDI Models Only

init.	The Bombardier Extended Service Terms program (B.E.S.T.) has been presented to me.
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: ✗	

For 4-TEC Models Only

init.	The Bombardier Extended Service Terms program (B.E.S.T.) has been presented to me.
init.	The dealer has informed me the importance of using the **Synthetic Bombardier 4-Stroke engine oil 0W40**.
init.	The dealer has verified that the engine has been filled with **Synthetic Bombardier 4-Stroke engine oil 0W40**.
OWNER SIGNATURE: ✗	

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

520 000 359 Page 1 of 1

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!

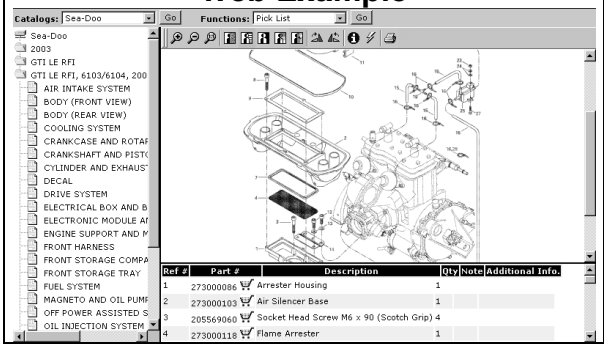
The BRP ATV, Sea-Doo Watercraft, Sport Boat Electronic and Ski-Doo Parts Catalogs are now available on the Web or on the PartSmart CD.

The Web version of Electronic Parts Catalog is included in the monthly fee so there is **NO extra billing**.

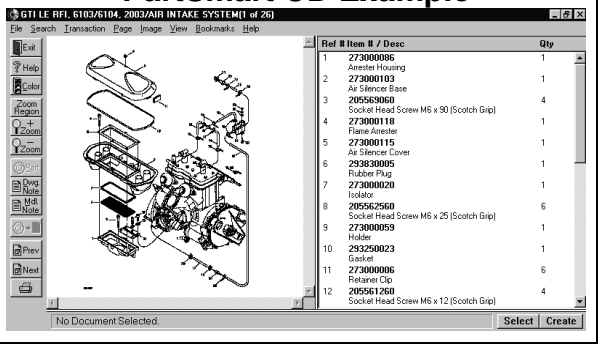
Here are some of the Electronic Parts Catalog highlights:

	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/Parts Catalogs

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

BOSSWeb Tips and Tricks: E.T.A.

You can now see on various BOSSWeb screens, Estimated Time of Arrival (E.T.A.'s) for some our your critical back ordered items:

PARTS – PARTS AVAILABILITY SCREEN

Tip : You must choose a product line while consulting this screen to avoid error messages such as: Error! 14: Material not saleable".

Parts - Parts Availability

Search Results

Ex.	Part Number	Description	Year	B/O	Avail. Qty	Retail	Cost	Markup	Sales Unit	Price Unit
	707800072	FILTER-AIR	2003	1	0	17.47$	10.24$	41%	PC	PC
	420256188	FILTER-OIL	2001	1	0	10.47$	6.24$	40%	PC	PC
		E.T.A. : WEEK OF JUNE 4, 2004								

PARTS – ORDER STATUS

Tip : Click on the right hand « Order status » to see posted ETA information

Search Results

Bombardier Order Number	Order Date	Your Order Number	Terms	Order Type	Order Status
1003336481	2004/5/26	4304	Net 30 Days	Regular	Partially Delivered

PARTS – BACK ORDER LIST

Parts - Order Status

Order Details

Bombardier Order Number 1003336481

Ex.	Item	Part Number / Description	Req. Qty	B/O / Memo / Expected Availability Date	Alloc.	XAlloc.	Shipped / Ship Date	UOM / Ship Item No.	Del. UOM / Last Ship No.
USE	10	420280280	2	0	2	0	0	PC	PC
		V BELT		STOCK					
*	20	715900024	2	0	2	0	2	PC	PC
		COURROIE ENTRAIN*V BELT		STOCK			2004/5/31	10	8000321705
	30	420256188	3	3	0	0	0	PC	PC
		FILTER-OIL		STOCK					
				E.T.A. : WEEK OF JUNE 4, 2004					

Parts - Back Order List

Search Results

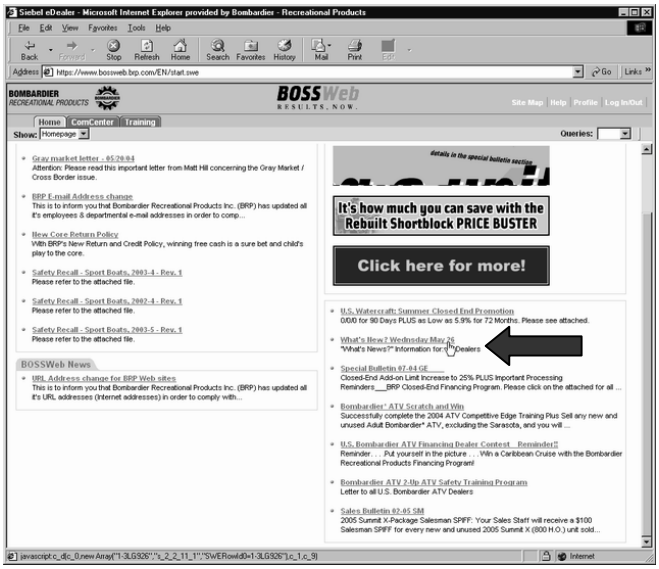
Part Number - Description	Order Qty	B/O Qty / Expected Availability Date	Bombardier Order Number	Item	Your Order Number	Order Type	Order Date	Memo	Cancel item
420256188 - FILTER-OIL	3	3	1003336481	30	4304	Regular	2004/05/26	STOCK	
		E.T.A. : WEEK OF JUNE 4, 2004							
707800072 - FILTER-AIR	2	2	1003332312	20	4292	Regular	2004/05/24	STOCK	

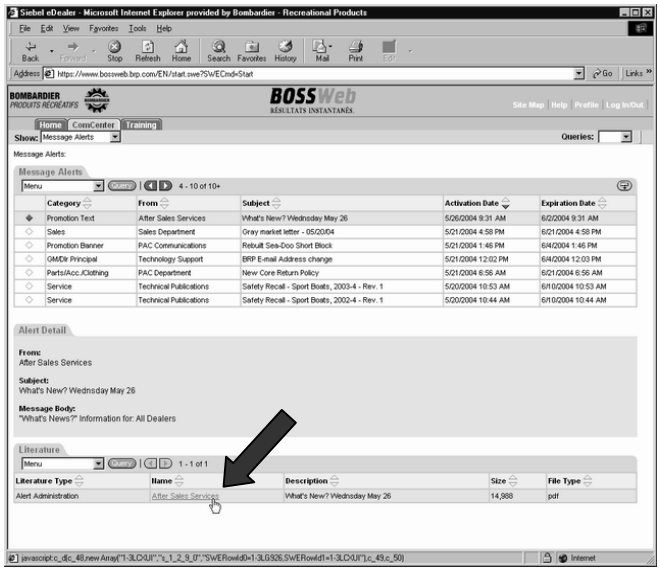
"What's News" Letter

Hot Tips and Tricks From Your After Sales Group, Posted Weekly

Once a week, the What's News letter is published on BOSSWeb.
It provides the latest news from the After Sales Department.

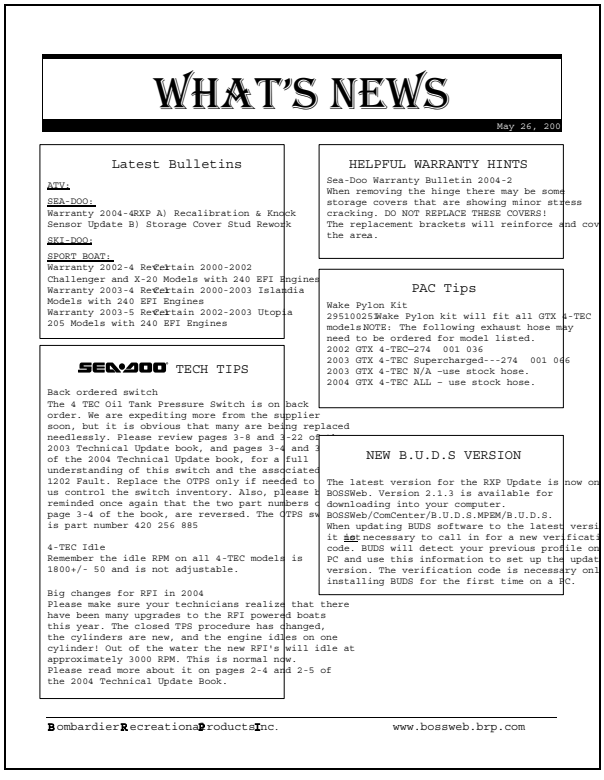
Go to BOSSWeb (www.bossweb.brp.com). From the home page, select the "What's News" links.





This is an example of the What's New letter.

BOSSWeb is the only place you will find this letter.



WHAT'S NEWS

May 26, 200

Latest Bulletins

ATV:

SEA-DOO:
Warranty 2004-4RXP A) Recalibration & Knock Sensor Update B) Storage Cover Stud Rework

SKI-DOO:

SPORT BOAT:
Warranty 2002-4 Re©ertain 2000-2002 Challenger and X-20 Models with 240 EFI Engines
Warranty 2003-4 Re©ertain 2000-2003 Islandia Models with 240 EFI Engines
Warranty 2003-5 Re©ertain 2002-2003 Utopia 205 Models with 240 EFI Engines

HELPFUL WARRANTY HINTS

Sea-Doo Warranty Bulletin 2004-2
When removing the hinge there may be some storage covers that are showing minor stress cracking. DO NOT REPLACE THESE COVERS!
The replacement brackets will reinforce and cov the area.

PAC Tips

Wake Pylon Kit
29510025Wake Pylon kit will fit all GTX 4-TEC models NOTE: The following exhaust hose may need to be ordered for model listed.
2002 GTX 4-TEC-274 001 036
2003 GTX 4-TEC Supercharged---274 001 066
2003 GTX 4-TEC N/A -use stock hose.
2004 GTX 4-TEC ALL - use stock hose.

SEA-DOO TECH TIPS

Back ordered switch
The 4 TEC Oil Tank Pressure Switch is on back order. We are expediting more from the supplier soon, but it is obvious that many are being replaced needlessly. Please review pages 3-8 and 3-22 of the 2003 Technical Update book, and pages 3-4 and 3 of the 2004 Technical Update book, for a full understanding of this switch and the associated 1202 Fault. Replace the OTPS only if needed to us control the switch inventory. Also, please b reminded once again that the two part numbers c page 3-4 of the book, are reversed. The OTPS sw is part number 420 256 885

4-TEC Idle
Remember the idle RPM on all 4-TEC models is 1800+/- 50 and is not adjustable.

Big changes for RFI in 2004
Please make sure your technicians realize that there have been many upgrades to the RPI powered boats this year. The closed TPS procedure has changed, the cylinders are new, and the engine idles on one cylinder! Out of the water the new RFI's will idle at approximately 3000 RPM. This is normal now.
Please read more about it on pages 2-4 and 2-5 of the 2004 Technical Update Book.

NEW B.U.D.S VERSION

The latest version for the RXP Update is now on BOSSWeb. Version 2.1.3 is available for downloading into your computer.
BOSSWeb/ComCenter/B.U.D.S.MPEM/B.U.D.S.
When updating BUDS software to the latest versi it set necessary to call in for a new verificati code. BUDS will detect your previous profile on PC and use this information to set up the updat version. The verification code is necessary onl installing BUDS for the first time on a PC.

BombardierRecreationalProductsInc. www.bossweb.brp.com

Book and DVD Quick P/N Reference

Technical Update Books	English	French
2005 Ski-Doo Technical Update Book	219 600 012	219 600 011
2004 Ski-Doo Technical Update Book	219 600 010	219 600 009
2003 Ski-Doo Technical Update Book	219 600 007	219 600 006

Technical Book	English	French
BRP Guide to Service Fundamentals and Principles	484 800 168	484 800 167

Ski-Doo DVDs	English & French
2005 SKi-Doo Competitive Edge DVD	484 800 152
2004 SKi-Doo Competitive Edge DVD	219 700 259

Technical DVDs	English & French
DVD Series Training Kit (includes a DVD player, Tech DVDs Vol 1 to 5 & Intro to B.R.P.T.I. DVD)	295 500 954
Intro to B.R.P.T.I. DVD	219 700 196
DVD1 Engines	219 700 197
DVD2 Electrical Systems	219 700 198
DVD3 Fuel Systems	219 700 199
DVD4 Suspensions / Chassis / Steering	219 700 200
DVD5 Transmissions / Drive Lines	219 700 201
DVD6 Supercharger (Sea-Doo)	219 700 273

Dealer Development Training DVDs	English & French
Introduction to Dealer Development Training - DVD1	219 700 256
Dealer Development Training - CSI - DVD2	219 700 325
Dealer Development Training - Service Department Operation - DVD3	219 700 329
Dealer Development Training - Parts & Accessories Management - DVD4	219 700 403

Accident Procedure

Since BRP 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**
Ghislain Cossette (English & French) After Sales Services Manager	☎ **(450) 532-2211**	🖷 **(450) 532-6313**

- The accident report should be completed and signed by the owner/operator; then sent to the BRP Wausau office. (fax: 715-847-6879; Mail: 7575 Bombardier Court, Wausau, WI 54401). Ensure the date of the 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, BRP, 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.
- In case of PERSONAL INJURIES - DO NOT REPAIR THE PRODUCT. Contact one of the above contact persons.
- Make no admissions, or assumptions on the cause.
- Keep BRP informed of any further developments.

The BRP Accident Report Form is available from BOSSWeb or in the Annexes Section of this book.

ski-doo®

SECTION 2

2005 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 2004 and 2005 models.

Bombardier Recreational Products Inc.

ski-doo®

SUB-SECTION 2-A
REV PLATFORM

Bombardier Recreational Products Inc.

What's new :

377& 552 MXZ, GSX, GTX,& SUMMIT

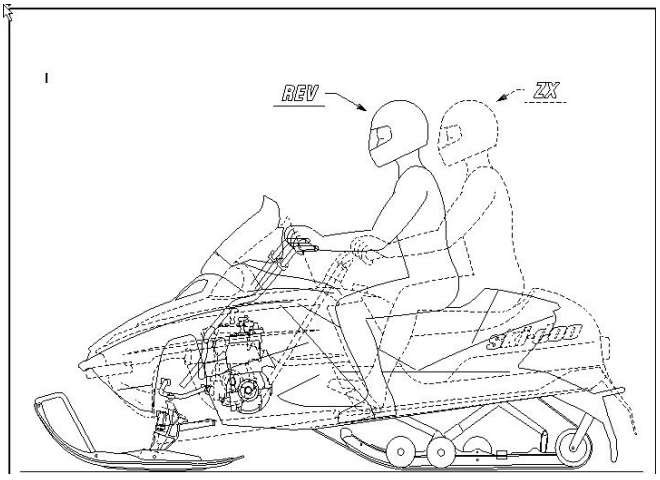
Fan cooled Revs

Why :

For all the same reasons the L/C Revs are setting new standards for bump absorption, handling and lightweight. Nothing else compares to the way a Rev rides and handles. Year after year on the Snowcross race circuit we have won more races than all others combined!

Now the great riding Rev chassis has a lightweight fan cooled powerplant!.
The lightest Rev's ever.

The biggest difference with a Rev chassis is the fact that the rider is a full 12" further forward than a conventional sled. This essentially places him in the center of the vehicle almost over the drive axle. This position eliminates most of the pitching or bucking normally associated with bumpy trails.



The Rev fan cooled sleds are now a full 30 lbs. lighter than their ZX brothers. This along with the 10 tooth drivers to reduce rolling resistance and the efficiency of our fan-cooled engines is sure to be a hit with your customers. The fun factor will be pegged at 100%.

ALL FAN COOLED REV'S

What's new :

Fan ducting.

Why :

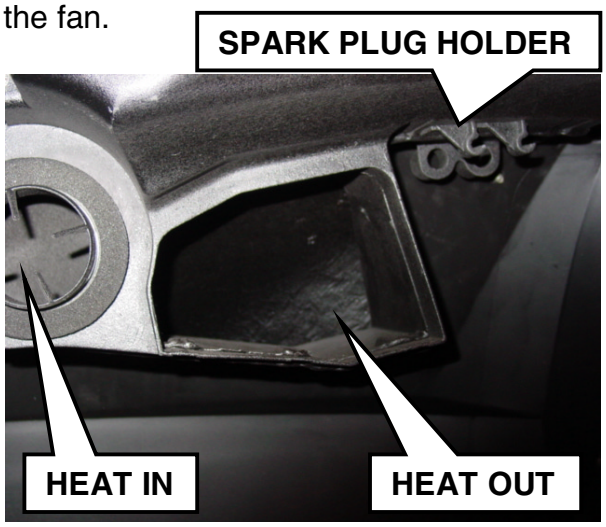
To ensure a quiet ride and adequate engine cooling, our engineers have worked hard to bring plenty of cold air in and duct the heat out from under the hood.

All the while striving to reduce sound levels to a minimum.

Hot air is exhausted through a sealed duct to the closeable side panel and directed down to reduce the sound level to the operator.

The engine airbox air is also ducted through a 2 piece air box to the left side of the hood to ensure cold outside air in and keep sound levels to a minimum.

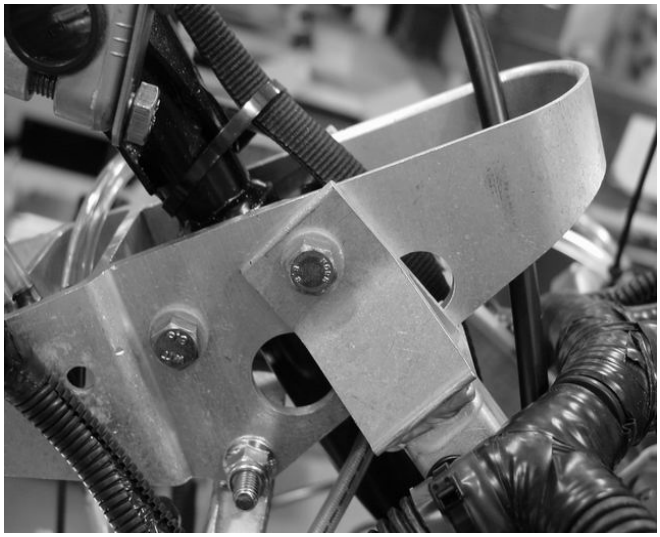
Note the one-piece secondary airbox with built in air duct to remove heat from the cab and direct it downward while at the same time silencing the fan.



Also, note the built in spare spark plug holders.

For riding in extremely deep soft snow, a pre-filter kit is available to cover the air intake and hood louvers. This helps reduce the possibility of snow plugging the air intake, thereby enrichening the air/fuel mixture.

ALL FAN COOLED REV PLATFORM



What's new :

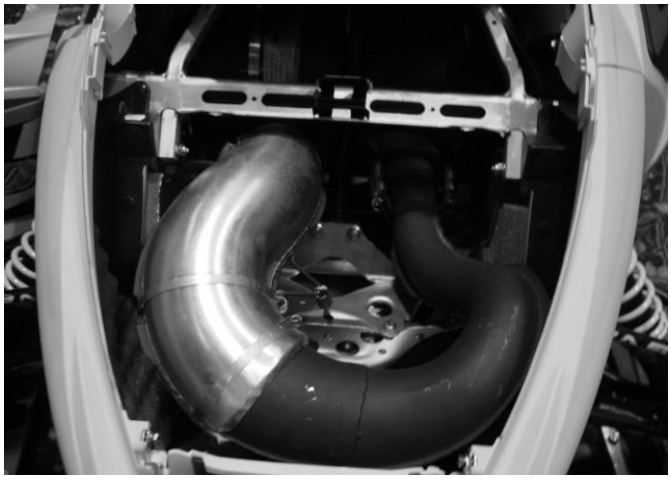
Non adjustable steering post

Why :

Single fixed position available due to steering column clearance with engine.

Do not attempt to drill new hole and move column, limited steering movement will result.

REV 377& 552 FAN



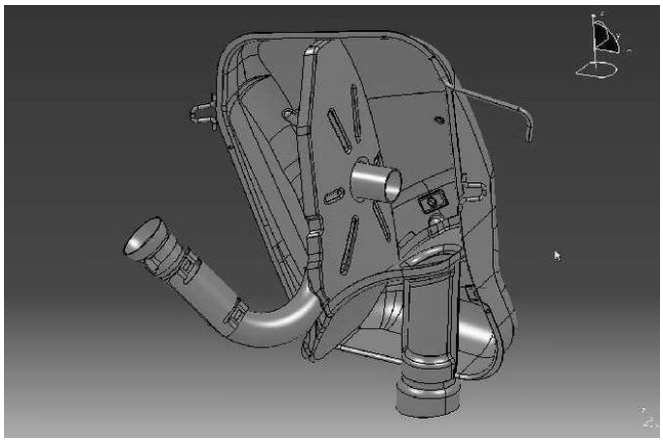
What's new :

Tuned pipe.

Why :

Designed for Rev chassis. Partially covered for sound reduction reasons.

REV 377& 552 FAN



What's new :

After-muffler

Why :

Designed to fit Rev chassis. Large, open, lightweight 3 chamber design to reduce sound level and keep heat to a minimum. It is partially covered with aluminum for improved sound deadening.

ALL MXZ, & GSX, 121" REV FAN

What's new :

SC-3 rear suspension

Why :

- Major upgrade to our fully coupled rising rate design.
- Improved bump absorption and rebound control.
- Unparalleled adjustability.

GTX, SUMMIT & EXPEDITION 136" FAN

What's new :

Reinforced rear arm.

Why :

To increase strength and reliability for two-up riding and utility work.

GTX & EXPEDITION FAN

What's new :

Rear shock

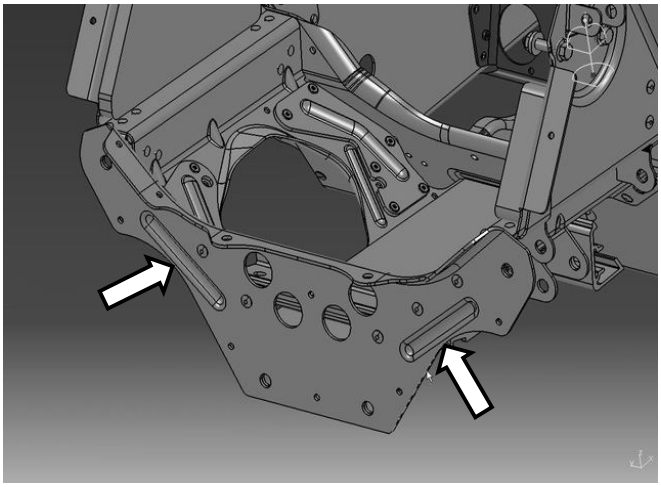
Why :

- Non rebuildable HPG shock standard.
- Improved fade resistance.
- Increased load capacity.
- Reduced chance of freezing.
- Improved valving.

ON ALL REV

What's new :

Reinforced “flying nun” frame structure: embosses were added to front section.



Why :

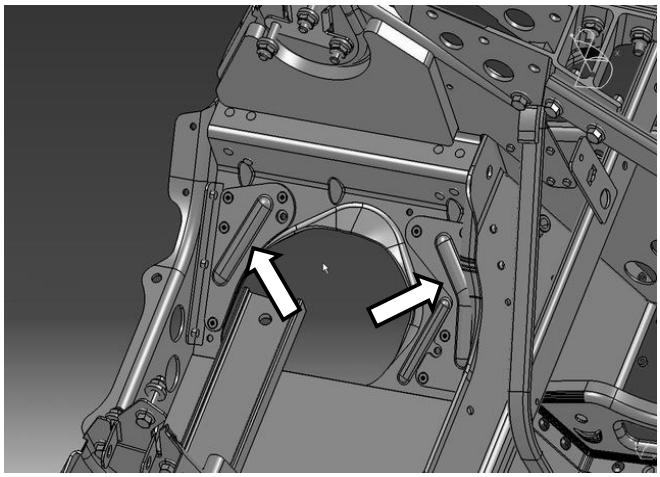
To improve rigidity, stiffness and strength of front member when impacting unforeseen objects such as rocks and stumps.

This is a running change.

ON ALL REV

What's New :

Four extra reinforcing plates added in corners



Why :

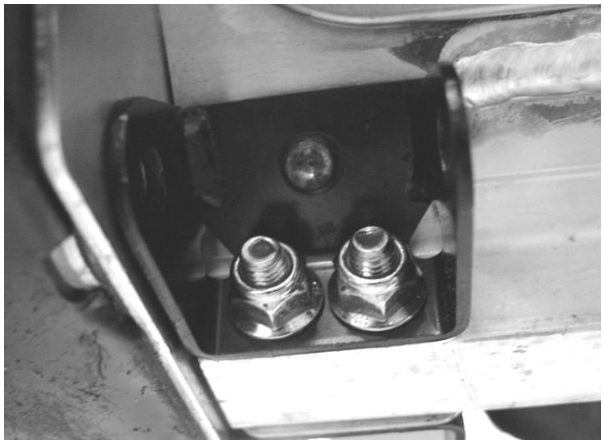
To improve resistance to deformation in case of a major impact.

This is a running change.

ALL REV

What's new :

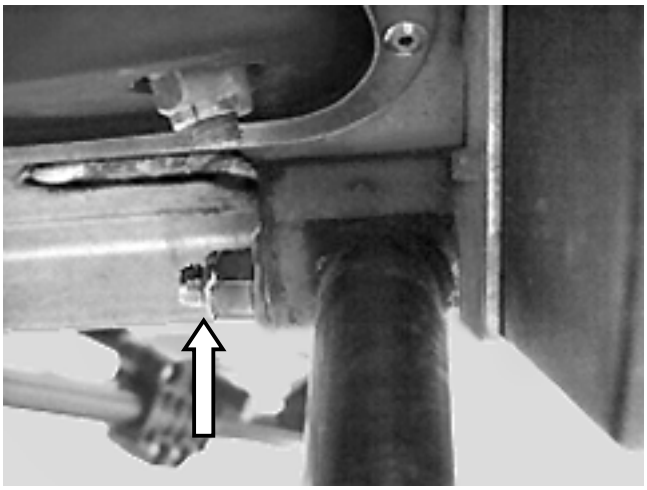
Double A-arm bracket attachment bolts are now used Vs single.



Why :

To reduce possibility of bracket twisting in case of major impact.

ALL L/C REV



What's new :

1- A-arm attachment bolts grade is now 10.9; it was 8.8.
2- Bolt has also been reversed so that threads are now facing forward.

Why :

1- For increased strength in case of impact.
2- To improve shear strength.

ALL REV

What's new :

Major changes inside the ball Joint and to the A-arm.

Why :

To reduce internal friction. The previous design was metal to metal with grease inside. The new design has inner nylon sleeve to reduce internal friction.

The A-arm area, which the ball joint fits in, has been increased in thickness to properly fit the new ball joint height.

Never needs lubrication.

The new ball joint will retrofit fit 2003 and 2004 models; however, a spacer washer (included with part) is needed to properly position snap ring.

OLD NEW

ALL L/C REV

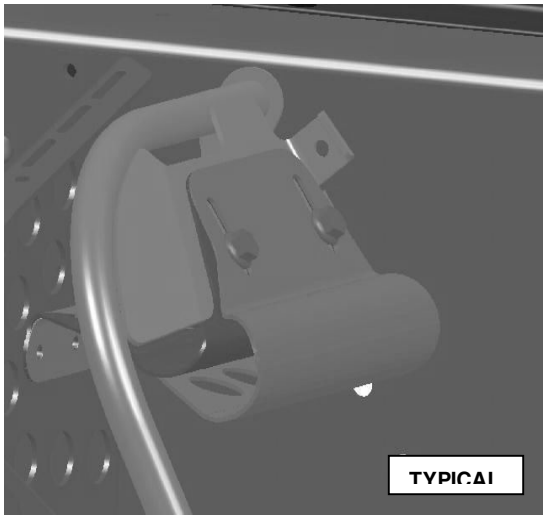
What's new :

Adjustable foot rest.

Why :

New “squared” top profile allows more room for larger boots.

Also less contact with ankles.



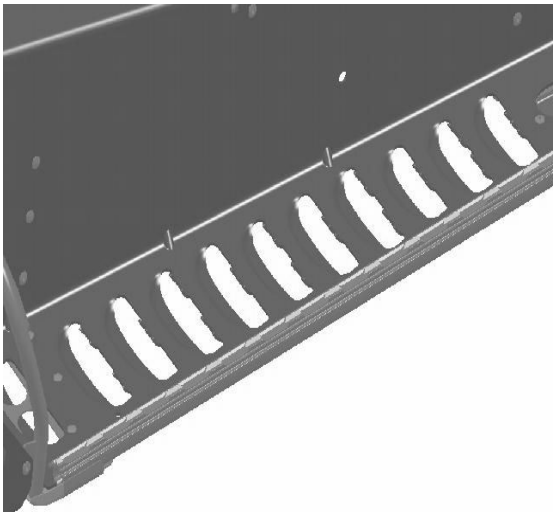
SUMMIT L/C MODELS

What's new :

Running board large openings pattern.

Why :

To allow snow to pass through.
This greatly reduces the amount of ice and snow buildup on running boards. Raised traction surfaces pressed-in to aid in gripping boots.



GTX MODELS

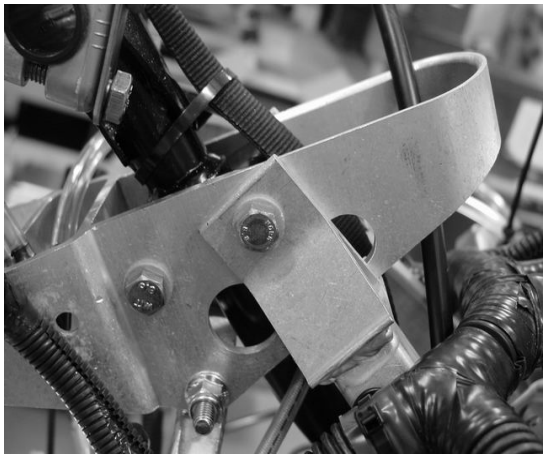
What's new :

Steering position: handlebars were moved back 4”.

Why :

For a more relaxed riding style.

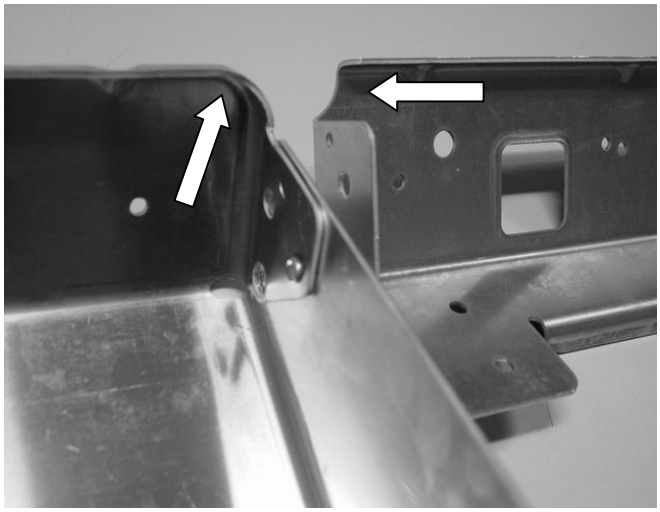
The steering column is not adjustable to ensure no interference between handlebars and windshield.



ALL REV CHASSIS

What's new :

Reinforced frame end cap: end cap now has rolled full-length corners.



Why :

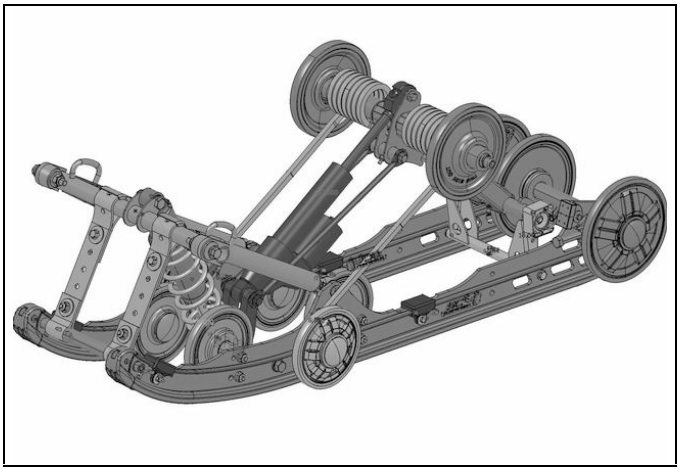
To improve strength and rigidity of rear cap.

This will reduce the risk of cracks developing in rear cap due to extreme riding.

MXZ X PACKAGE

What's new :

SC-IV rear suspension.



Why :

New design: see the complete information in Section 4-E; New Technology.

MXZ X PACKAGE

What's new :

Suspension mounting brackets on the frame.

Why :

For proper positioning of SC-IV rear suspension.

MXZ X PACKAGE

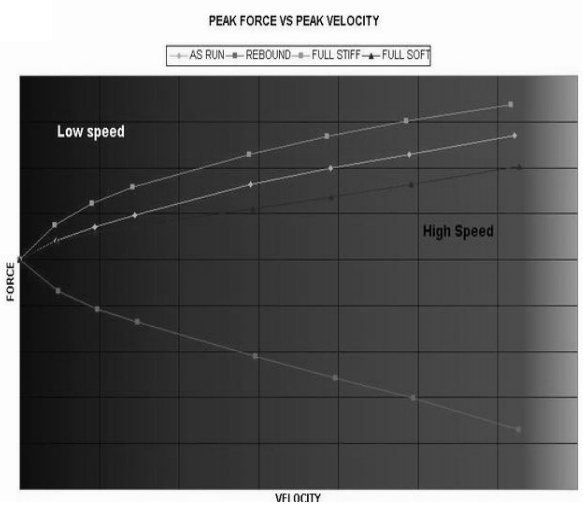
What's new :

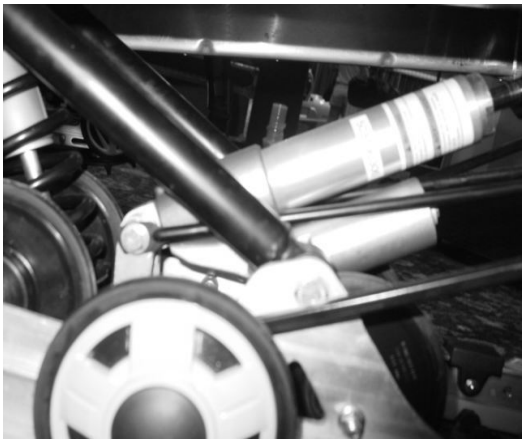
C-36 adjustable racing shock

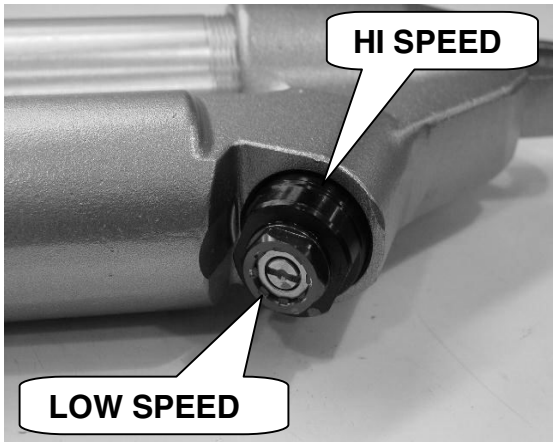
Why :

To greatly reduce the chance of fading under severe riding conditions and allow easily adjustable compression dampening for the rider.

A special anti cavitation valve is incorporated into this shock absorber at the base of the piggyback reservoir. This system resists fading even better than our C-46 shock absorber.

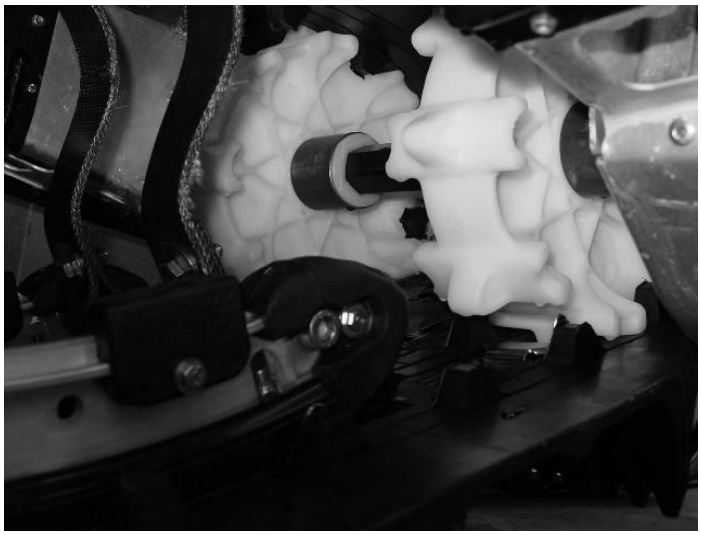






Turning the red nut clockwise increases the high-speed compression dampening. Turning the small brass screw clockwise increases the low speed compression dampening. The valves are set approximately to the center from factory. This gives the customer the ability to stiffen or soften both adjustments. These adjustments have no effect on rebound dampening.

MXZ X and SUMMIT L/C



What's new :

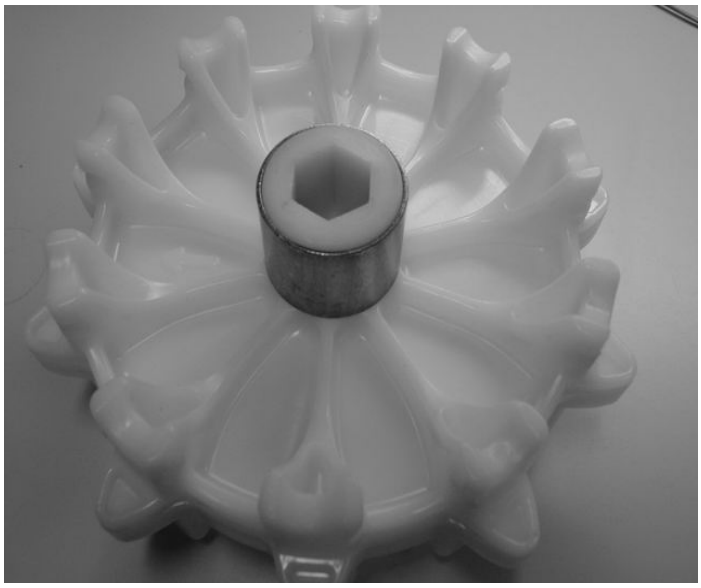
Internal/external drive sprockets.

Why :

Allow the track to be run looser to reduce rolling resistance.

Even with a looser track, “ratcheting” is virtually eliminated.

MXZ X and SUMMIT L/C



What's new

Improved internal/external drive sprockets.

Why :

To increase strength and reduce:

- the possibility of movement on the drive axle

and

- stripping on the drive axle

The sprockets are now made of LMWPE for increased strength. This is noticeable by the white color.

The center hub has been lengthened by 15mm (5/8 in) for increased press fit contact.

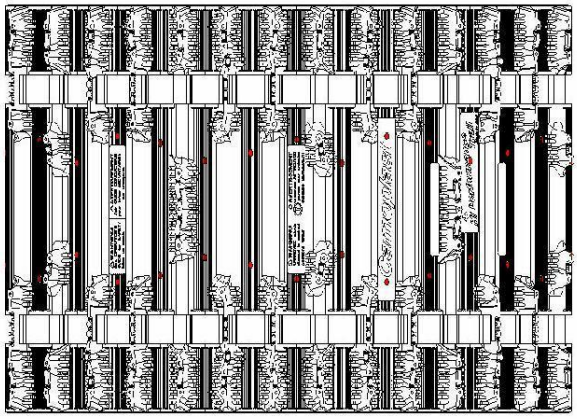
Extensive webbing has been added to reinforce the outer diameter of the sprocket and reduce the possibility of deformation under high loads.

The 10 tooth drivers now have dual internal teeth for a more uniform loading.

ALL EXCEPT THE 377 FAN

What's new :

Tracks: most tracks are pre-marked and approved for 96 studs!



Why :

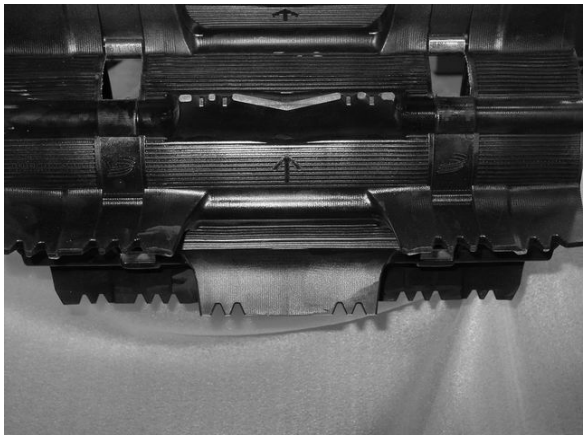
This is an industry first.
Stud kits are available for most models.
Follow directions on stud kit carefully.

Most vehicles will need some form of extra protection added.
Ensure to read Opewrator's Guide about stud maintenance.
The use of more than 96 studs voids tracks warranty.

ALL RENEGADE

What's new :

Renegade track



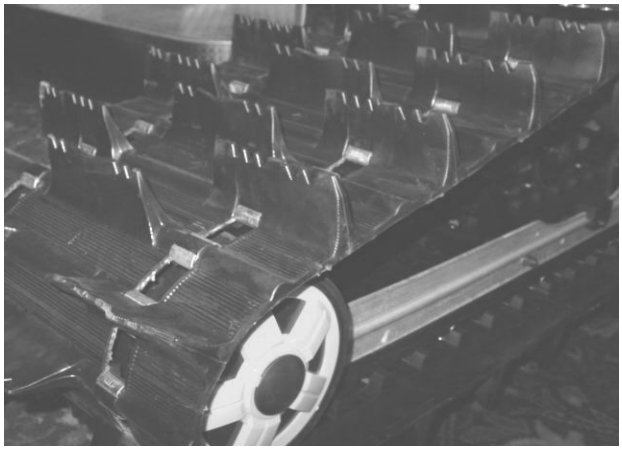
Why :

Now 16" wide Vs 15" for improved flotation.
By increasing the width 1" as on Renegade, the overall flotation is equivalent to a 144"x15" with the maneuverability of a 136".
Standard profile: 1.25"
Optional in spring: 1.75" with a new profile.

SUMMIT X

What's new :

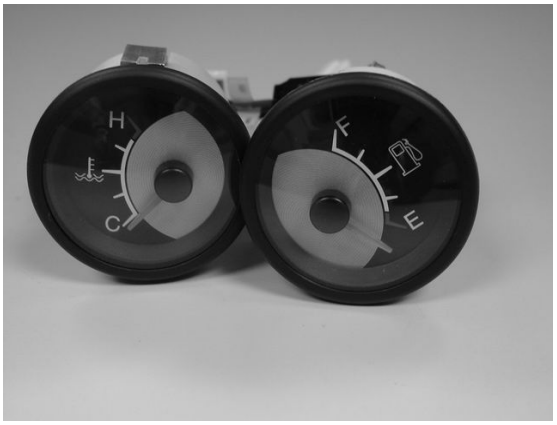
2.25" Summit track



Why

For unparalleled traction in deep powder.
This 16"x159x2.25" track has unbelievable bite in most conditions.

ALL L/C



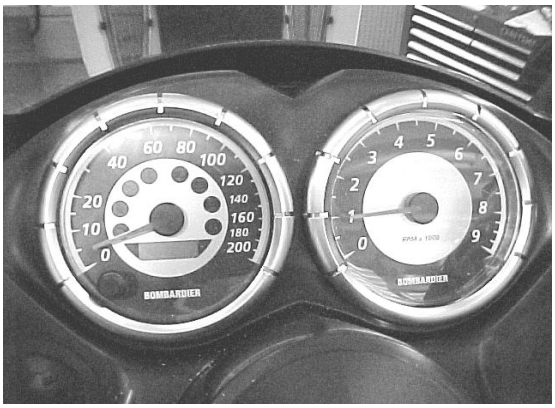
What's new :

Fuel and water temp gauges: new supplier.

Why :

Glass lenses, and vented to atmosphere to prevent permanent fogging.
Not retrofitable due to smaller O.D. and use of AMP connectors now.
New calibration on water temp gauge. The red zone starts at 85 C˚ (185 F˚) Vs old at 95-100 C˚ (203-212 F˚) which is the same
temp that beeper goes off. Customers can continue to ride in red zone, however an immediate change in snow conditions should be sought.

ALL REV



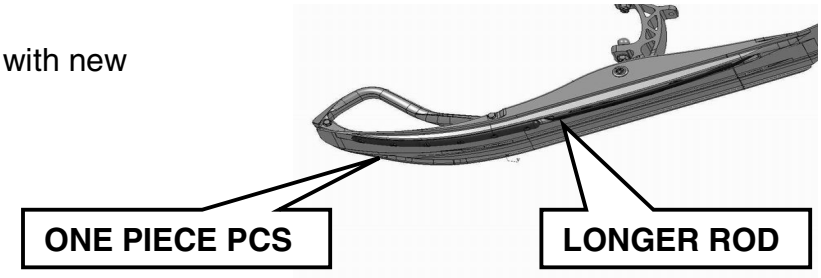
WHAT'S NEW :

Tachometer and speedometer:
- Two bags of desicant now used internally
- New applique procedure

Why :

To resist fogging and chemical fogging.

ALL SUMMIT



WHAT'S NEW :

Summit longer 2003 type wear rod with new one-piece PCS.

Why :

The longer wear rod up-front reduces steering effort and reduces wear on PCS while crossing roads etc. The one-piece PCS eases steering and reduces darting. It is longer up-front and secured by more fasteners.

**MXZ, & RENEGADE X,
SUMMIT HIGHMARK & X**

What's new :

Brake lever

Why :

Reshaped brake lever is 10 mm (3/8”) further from bars for more clearance with gloves on.

Parking brake lever is larger and has multiple positions. Extremely noticeable when applied.

MXZ & RENEGADE X PACKAGES

What's new :

Material for the handlebar protector brackets.

Why :

Improved to allow more flex before breaking.

GSX & GTX LTD,

WHAT'S NEW :

Crystal Tec taillight lens.

Why :

New hi-tech design; very stylish.

SUMMIT X AND HIGHMARK X

What's new :

Fuel tank

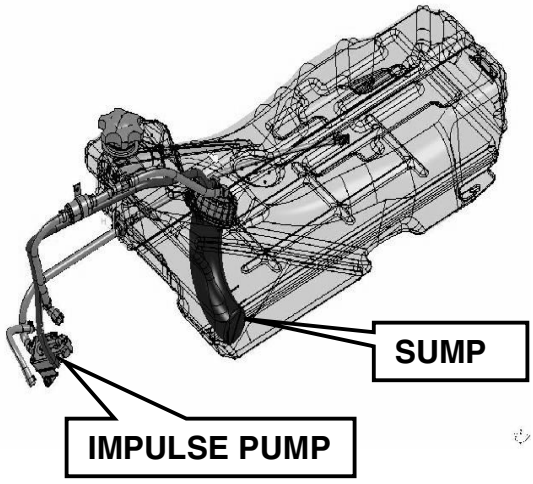
Why :

Translucent fuel tank with black cover allows quick visual verification of fuel remaining in fuel tank.

ALL REV PLATFORM SDI

What's new :

Fuel pick up and delivery system.



Why :

To ensure a more consistent fuel delivery even under extreme riding angles, and to allow more fuel to be extracted from fuel tank.

This new system utilizes a conventional fuel pickup, and impulse-operated fuel pump. The output is continuously fed to the plastic “sump” tank, with the excess overflowing back into the fuel tank. From the “sump” the high-pressure electric pump sends the fuel to the injector rail. This system will draw all but approx. 1-3 litters from the fuel tank.

WHAT'S NEW :

ALL REV PLATOFORM SDI

Sump tank for high-pressure pump & filter element.

Why :

As stated above to ensure consistent fuel delivery. A 70 micron filter has been added to the bottom of the fuel pump, this serves the same function as the original multi pickups used in the past. The electronic fuel gauge has also been recalibrated to more accurately reflect fuel level in tank. Empty is now indicated when approx. 6 liters Vs 13+ are left in tank.

All SDI

What's new :

A center steel tube has been added to the secondary in-line cartridge fuel filter.

Why :

To keep the filter element more accurately placed and sealed in filter body. This ensures no fuel can bypass the filter element; reducing the risk of injector plugging.

ALL 593 SDI

WHAT'S NEW :

Improved ECM mapping.

Why :

Major calibration changes aimed at:

1. Reducing spark plug fouling at start up
2. Less chance of backfire on deceleration
3. More consistent tuned pipe heat to reduce surging
4. Increased idle speed and TPS setting
5. Increased idle RPM during warm up
6. More sensitive knock sensor calibration
7. More consistent rev limiter function
8. Less sensitive to clutch adjustments

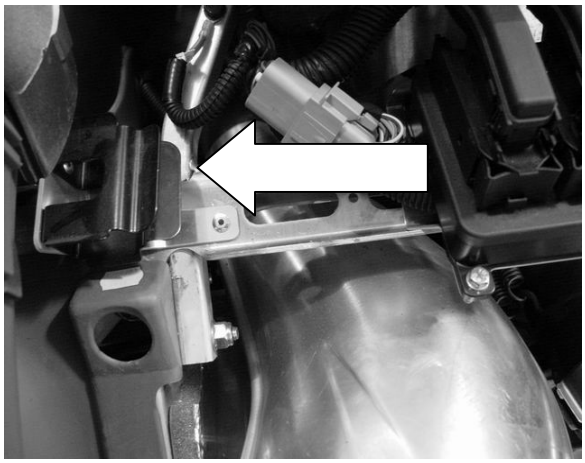
WHAT'S NEW :

A spare drive belt holder clip was added.

Why :

To properly hold a spare drive belt.

ALL SDI



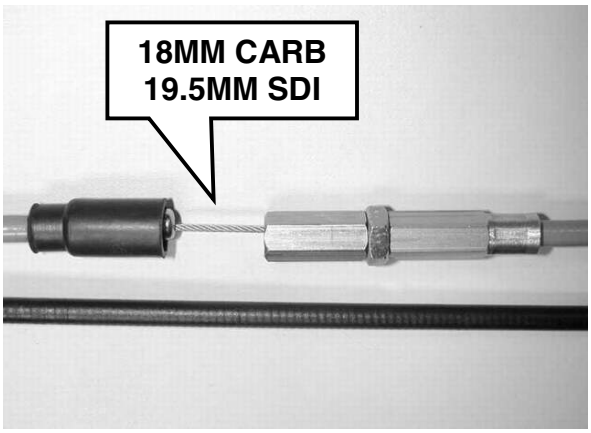
What's new :

More accurate oil pump adjustment from factory.

Why :

To reduce the amount of oil consumed.
Note: All 593 HO SDI oil pump cable should be adjusted to 19-19.5mm. Most other vehicles are set at 18mm including 995 engine types equiped vehicles. Refer to the shop manuals or PDI bulletins for appropriate setting. This should be checked and readjusted at the 10 hr inspection.

All 593 HO SDI



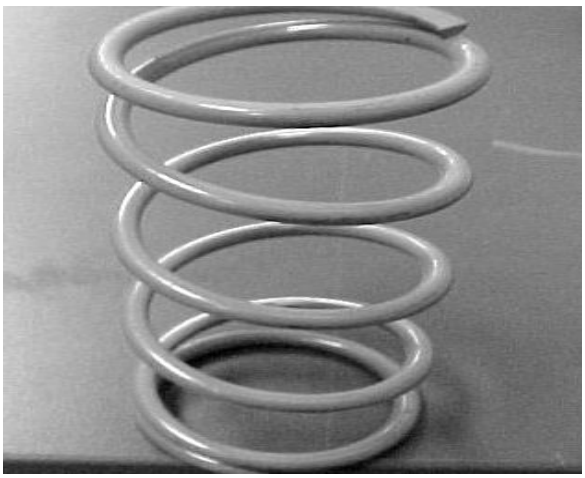
What's new :

TRA clutch calibration

Why :

To allow more user adjustability of the TRA clickers. This new calibration consists of a slightly softer drive spring and a higher clicker setting from the factory. Now set in position #4 so a customer can fine tune to his RPM more accurately. Spring rate: 130 – 230 lbf.

ALL 593 HO SDI



ski-doo®

SUB-SECTION 2-B
UTILITY VEHICLES

Bombardier Recreational Products Inc.

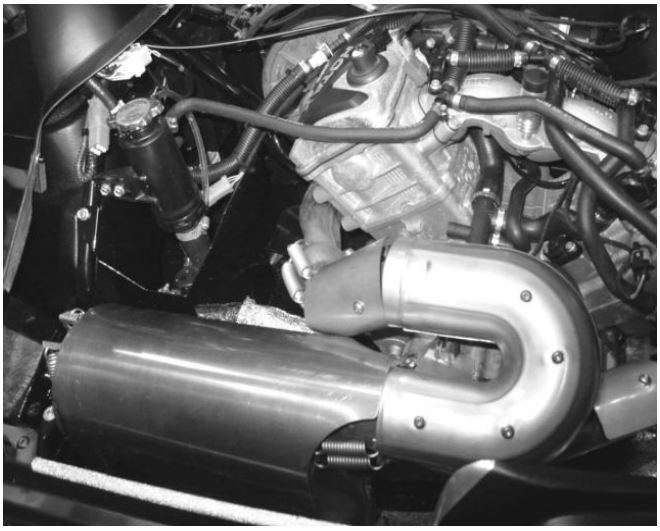
What's new :

V-1000 engine added for full production run vehicle.

Why :

For 4 stroke power and fuel economy, and very strong low-end torque for superb pulling power.

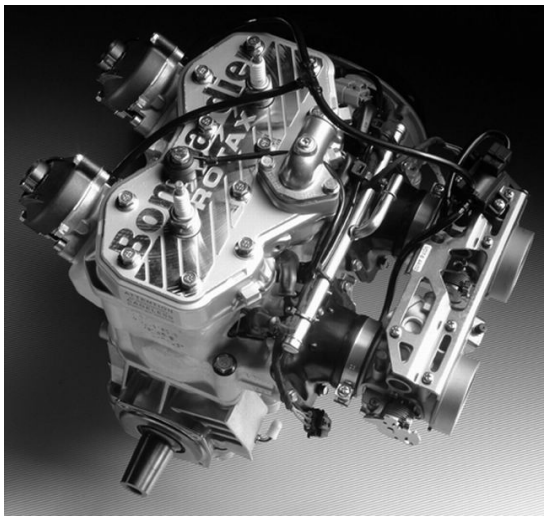
Skandic Expedition V-1000



It comes with the following :

- V-1000 engine with fuel injection and TRA IV drive clutch.
- Heavy-duty transmission shafts and bearings.
- More heat resistant foil added around the exhaust system
- Metal plate added to the belly pan near the exhaust outlet.
- Foil added to the hood to resist deforming from muffler heat.

EXPEDITION 600 SDI



What's new :

600 SDI engine in Expedition chassis.

Why :

- For the excellent gas mileage and very low emissions, our SDI engines are noted for.
- Instant cold weather starting with electronic warm up.
- Knock sensor greatly reduces possibility of detonation. More flexibility with different octane fuels.
- E Rave gives more torque, excellent fuel economy, and lower emissions.
- Crisper throttle response and acceleration.

SKANDIC SUV & EXPEDITION

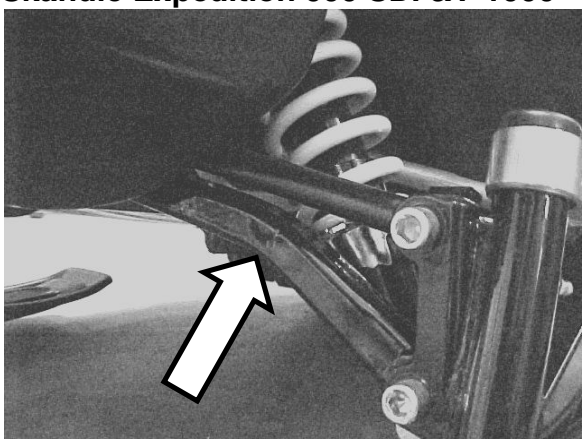
What's new :

Front trailing arm.

Why :

To increase strength and reduce possibility of bending due to mishaps with stumps, rocks, etc. Thicker wall high strength steel is used.

Skandic Expedition 600 SDI &V-1000



What's new :

Front suspension lower radius rod.

Why :

Thicker walled tubing used for increased strength and durability to match the extra power of the V-1000 engine. It provides also an extra load capacity.

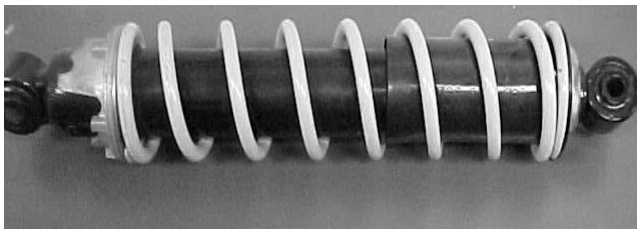
What's new :

Front suspension springs

Why :

Higher rate 32 n/mm [183 lb/in] springs used for increased weight of V-1000 engine.

Skandic Expedition V-1000



What's new :

Transmission and bearings.

Why :

Heavy duty tapered roller bearings now used on transmission shafts for improved durability under high horsepower and loads.
Taper roller bearing's load capacity is over twice that of previously used ball bearings. Testing has shown the new bearings life is over 20 times longer.

Expedition 600 SDI & V-1000

What's new :

Fuel shut off valve added

Why :

To eliminate the possibility of engine flooding while trailering or storing vehicle.

SKANDIC LT

ski-doo®

SUB-SECTION 2-C
ELITE

Bombardier Recreational Products Inc.

ELITE

What's new :

Gluing process

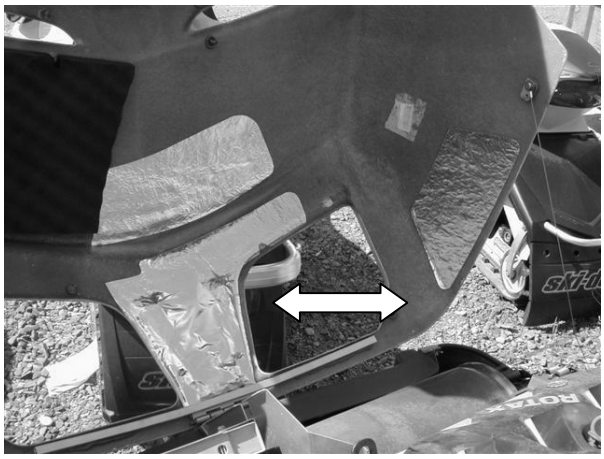
Why :

The supplier has increased the amount of glue applied to ensure a more consistent application in the correct areas. This will ensure a more consistent attachment of doors; hood and engine cover hinge.

Elite

What's new :

Heat reflective foils have been added to the rear engine cover.



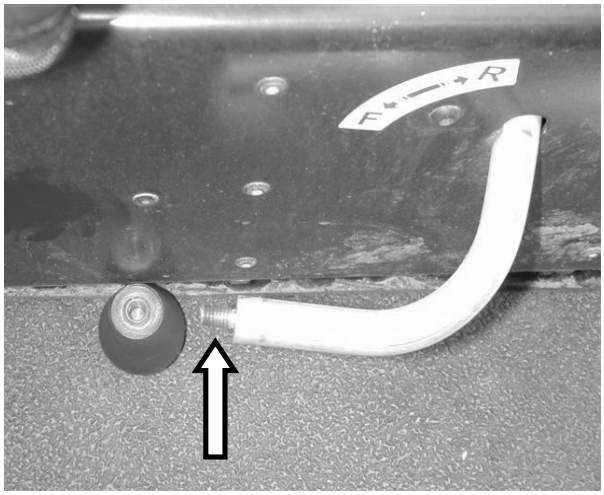
Why :

To dissipate heat, thus reducing the possibility of discoloration of these fiberglass areas.

Elite

What's new :

Steel shifter knob stud.



Why :

To reduce the possibility of breakage under severe use. The threaded steel stud has been used to secure the shifter knob to the shaft along with Loctite®.

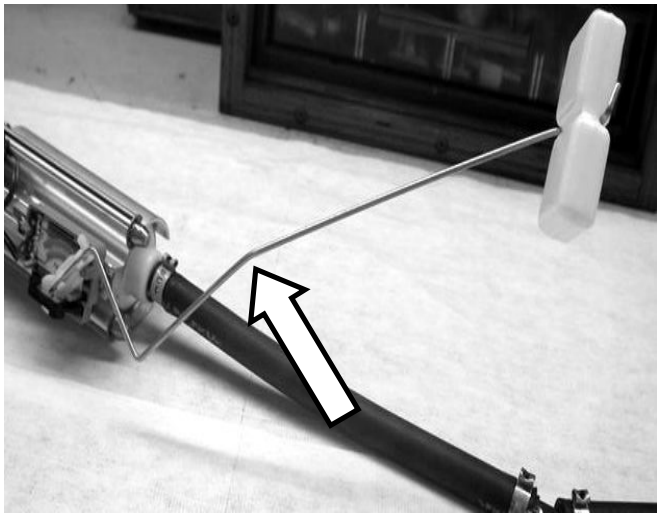
What's new :

Fuel gauge sending unit.

Why :

To improve the accuracy of the fuel gauge. The sending unit rod has been modified to assure a more accurate reading of remaining fuel in the tank. This change is particularly noticeable at levels below ½ tank.

ELITE



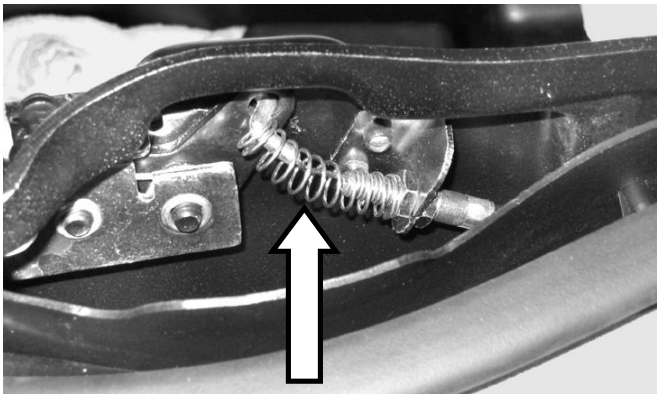
What's new :

Spring added on hood release cable latch.

Why :

To ensure the hood release cable return completely.

Elite



What's new :

- Tunnel protectors are now factory installed.
- Studable track.

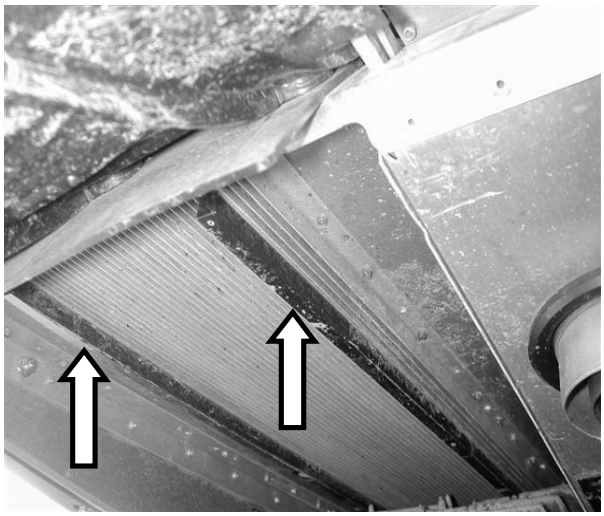
Why :

To allow easier studding.

The rear tunnel protectors have also been repositioned to be in line with track windows.

To ensure adequate protection when studding; simply remove these protectors and slide in taller ones.

Elite



What's new :

- Lower engagement speed rpm.
- A urethane coupling is now inserted into the cushion drive governor cup assembly.

Why :

Smoother acceleration.
To improve the life of the cushion drive governor cup.

Note that this design limits the amount of “rock” possible at certain RPM’s, more commonly at low RPM,s.

ELITE

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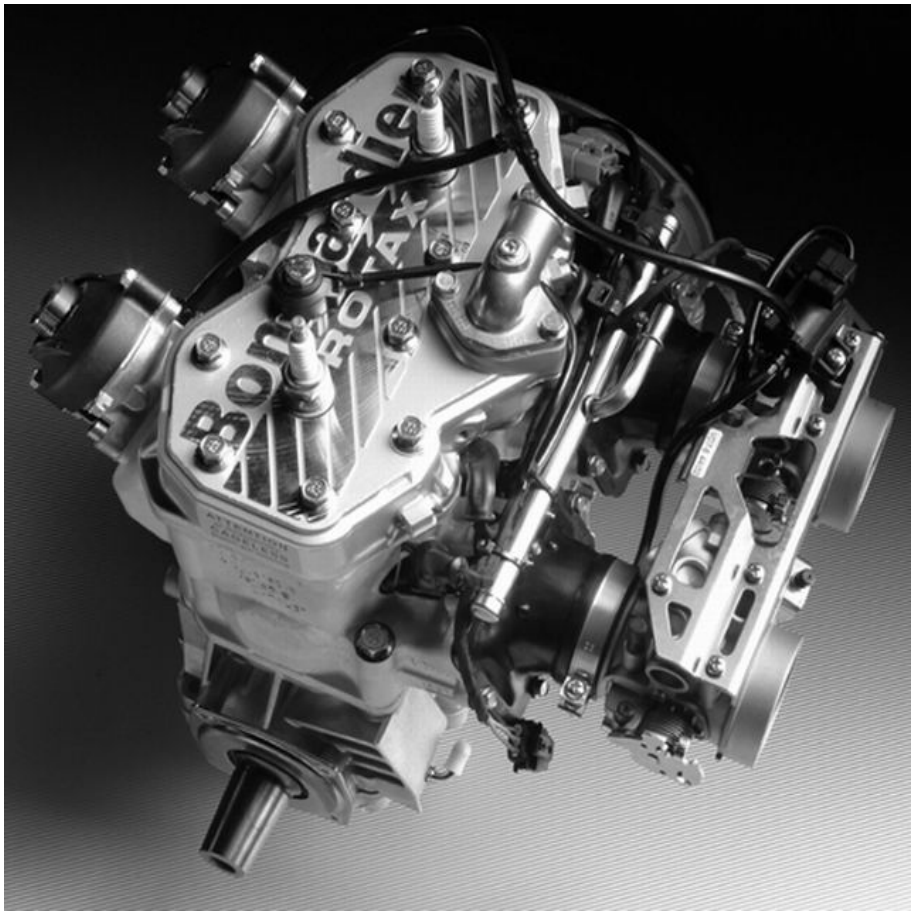
SUB-SECTION 2-D
ROTAX ENGINES



BOMBARDIER RECREATIONAL PRODUCTS INC.

TYPE 277 / 377 / 503 FAN COOLED

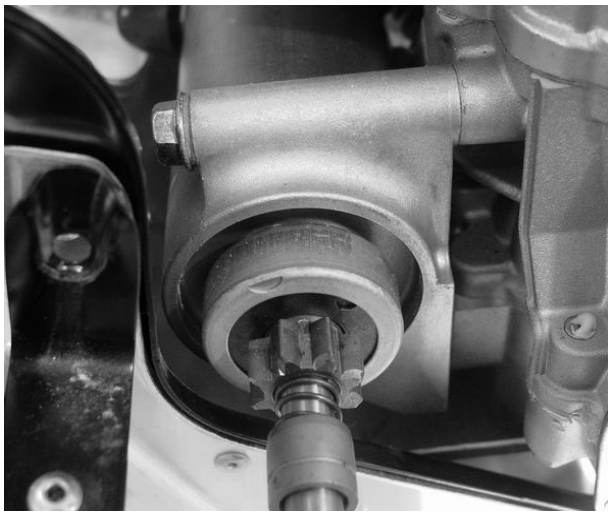
What's new :

Imprinted Molykote on the pistons

Why :

As with our other engine types it aides in break-in, and reduces the possibility of piston scuffing due to fuel enrichment during cold start, and minor snow ingestion.

TYPE 377 & 552 FAN COOLED



What's new :

One-piece electric starter motor and bracket

Why :

For simplicity and improved strength.
Similar to the L/C engines.

TYPE 377 FAN COOLED

What's new :

Ring gear

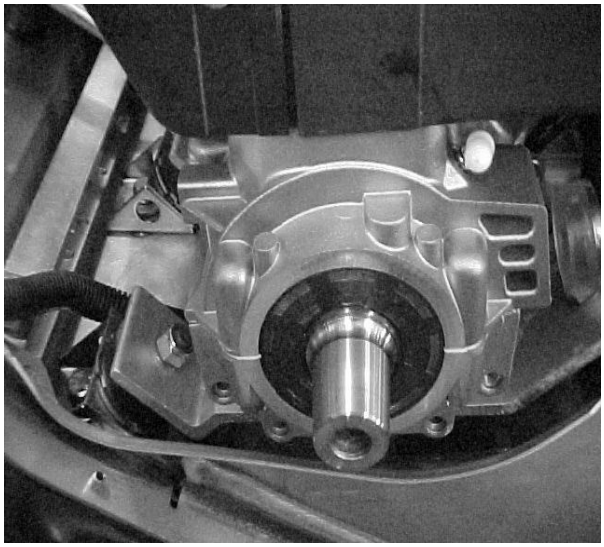
Why :

To standardize ring gear with 552 type.

TYPE 552 FAN COOLED

What's new :

PTO seal now made of FPM



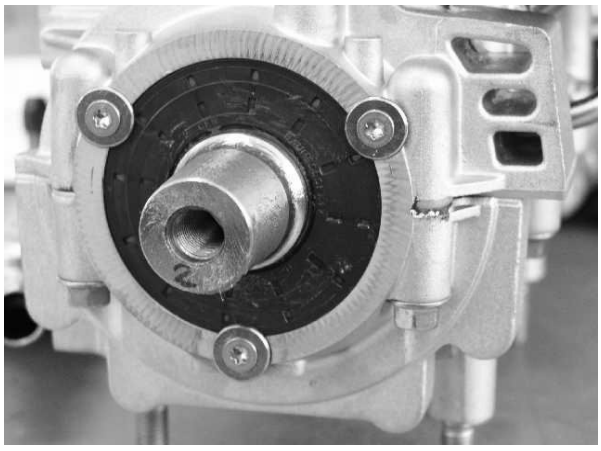
Why :

Improved lip material, for a better seal to crankshaft.

TYPE 552 FAN COOLED

What's new :

PTO seal holder



Why :

To ensure PTO seal stays in position.

It has a similar function as the steel plate on the series III engines.

TYPE 552 FAN COOLED

What's new :

Vented protection cap

Why :

To eliminate any pressure in PTO bearing cavity. Some grease may exit this fitting from time to time.

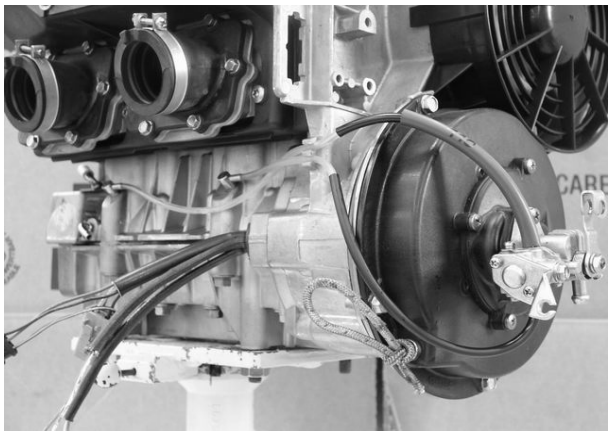
What's new :

High temperature resistant sleeve added to oil lines near rewind.

Why :

This gives added resistance to effects of muffler heat.

TYPE 552 WT / SWT / SUV



What's new :

Improved the soldering joint process between the Ducati stator and the yellow wires.

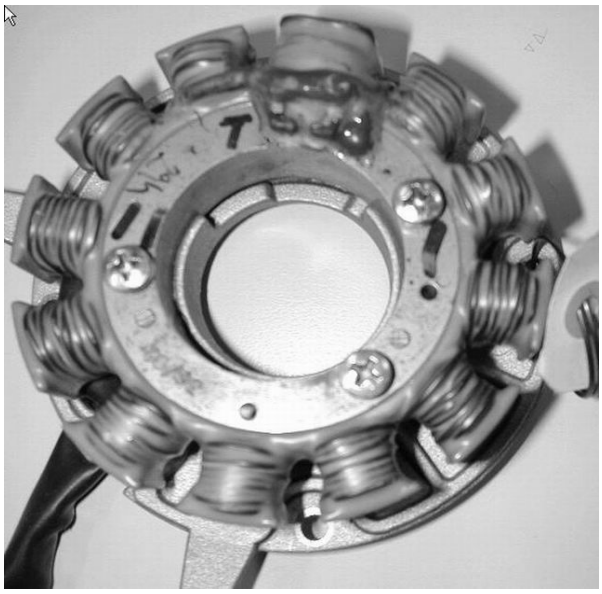
Why :

Improved reliability.

Magneto components are now sold separately:
- Stator P/N: 420889366
- Flywheel P/N: 420889376

This is a running change

TYPE 377 AND 552 FAN COOLED



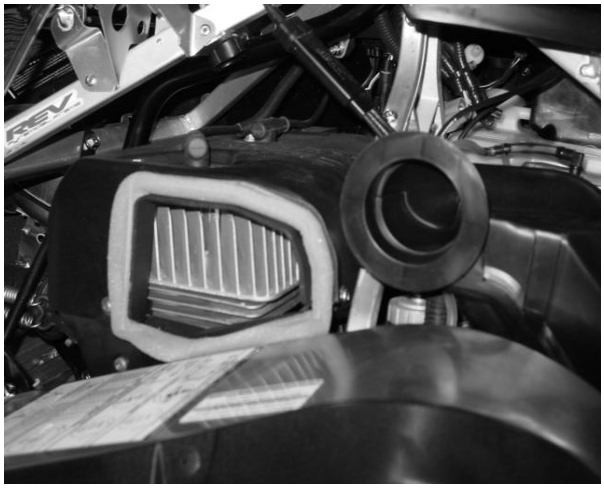
What's new :

Engine fan shrouds

Why :

To duct cold air in and warm air out of the new Fan Cooled Rev chassis.
These shrouds are also designed to keep sound levels to a minimum.

TYPE 377& 552 FAN COOLED



What's new :

After muffler/ silencer: light weight and high volume design, with partial heat shields.

Why :

To keep noise levels down while maintaining proper under hood temperatures. Large fan air inlet for engine ducted through right side panel. Snow screen is standard on opening.

377 & 552 FAN COOLED REV MODELS

What's new :

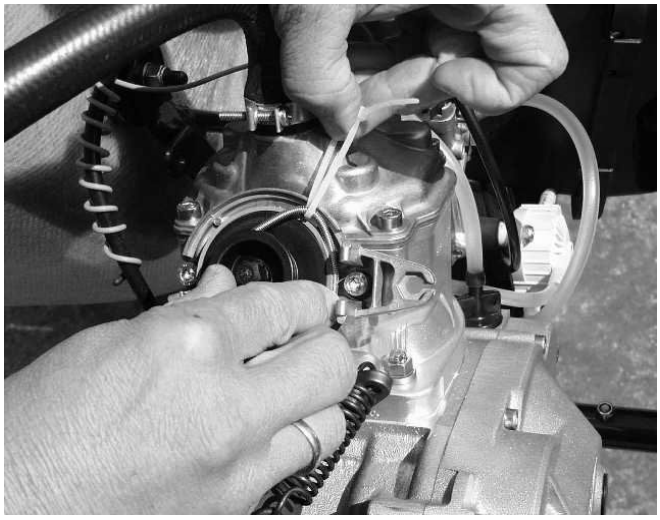
RAVE valve “gator” type springs

Why :

It is considerably tighter to reduce the possibility of oil leaks.

Due to this fact, it may be more difficult to install. A simple solution is to use a tie rap to help pull the spring into position. Remember the bellow is also sealed with either Dreibond or Loctite 5910. This is a running change.

ON ALL 3 SERIES ENGINES



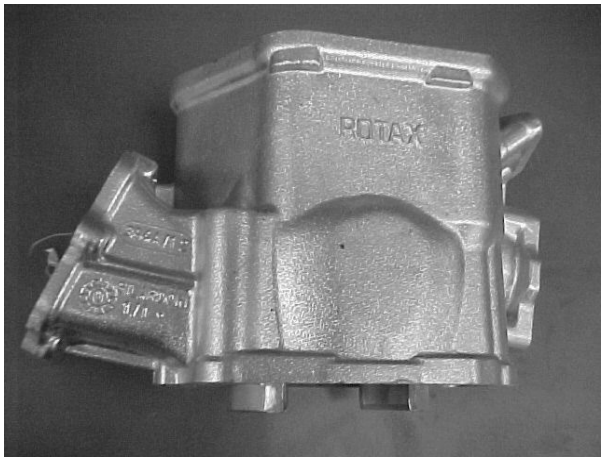
What's new :

Cylinder slightly altered exhaust port shape.

Why :

New supplier. These are interchangeable and retrofitable with previous cylinders.

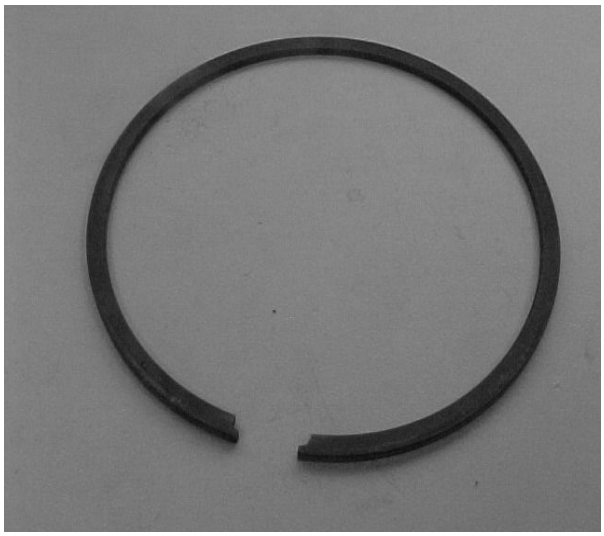
593 HO & 593 HO SDI



593 HO & 593 HO SDI

What's new :

"Chrome-nitrited" piston ring



Why :

To improve reliability and reduce the possibility of "flaking".

593 HO SDI

What's new :

Crankshaft MAG end is no longer "wasted".

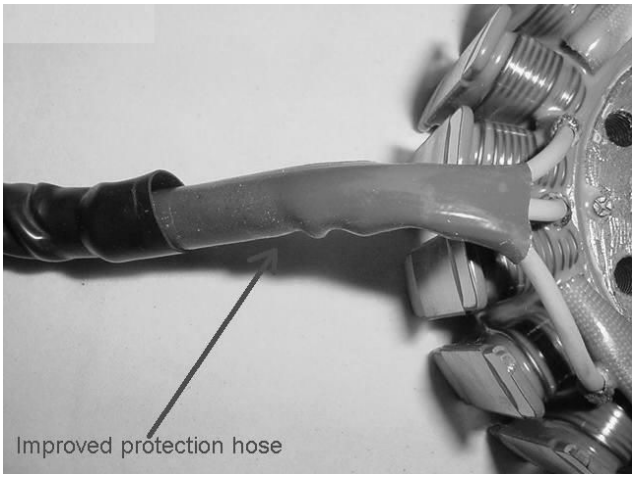
Why :

To standardize production and reduce vibration.

593 HO SDI & 793 HO Power TEK

What's new :

Stator assembly: Ducati has made numerous internal improvements to the insulation and connection of the wires to the stator.



Why :

These are all aimed at increasing the reliability of the stator.

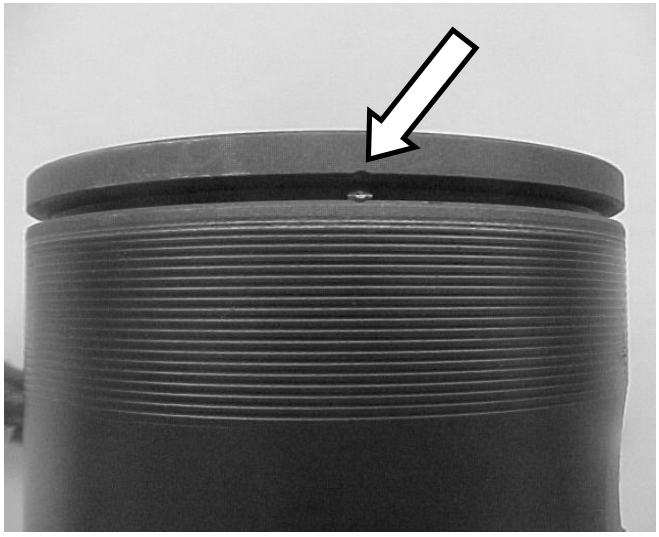
TYPE 793 HO

What's new :

Piston: improved press fit on ring locating pin.

Why :

To ensure locating pin does not loosen.



ALL SERIES 3 ENGINES

What's new :

Thicker ring gear

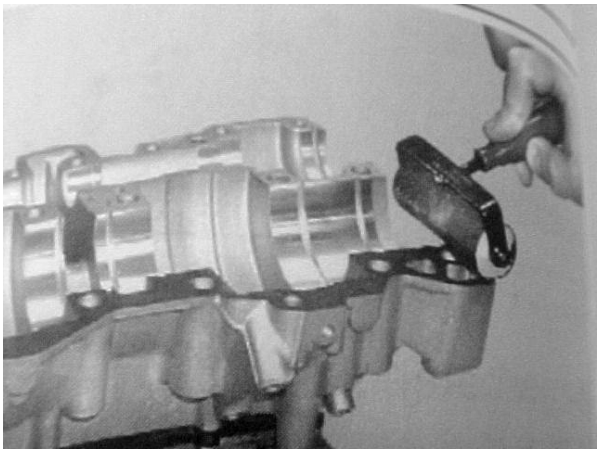
Why :

To improve durability and reduce vibration.

ALL 2005 ENGINES

What's new :

Loctite 5910 is now being used to seal all crankcases.



Why :

This sealant can be used to replace either Dreibond or Loctite 518.

Note: If an older engine that has been sealed with 5910 is later resealed with 518 some problems may occur.

Refer to the 2005 Service Bulletin.

TYPE 1503 ELITE

What's new :

ECU mapping

Why :

- Fuel mapping and ignition timing have been changed to reduce muffler heat.
- Ignition timing has been changed to soften power curve at clutch engagement.

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SECTION
3

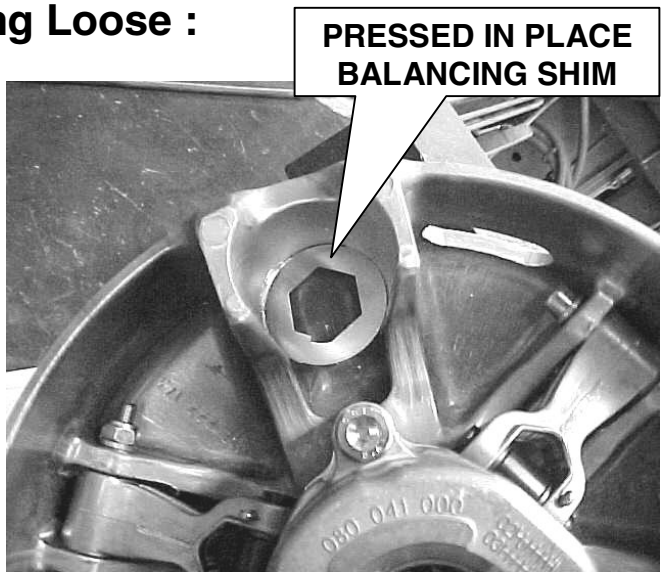
2005 TECHNICAL UPDATE
TROUBLESHOOTING & TECH TIPS

In Section 3, you will find the most current tips and solutions concerning situations that occurred during last season, as well as the latest update procedures.

Note: All the troubleshooting procedure should be used in conjunction with the Shop Manuals and other BRP service publications.

BOMBARDIER RECREATIONAL PRODUCTS INC.

TRA III Balancing Weights Coming Loose :

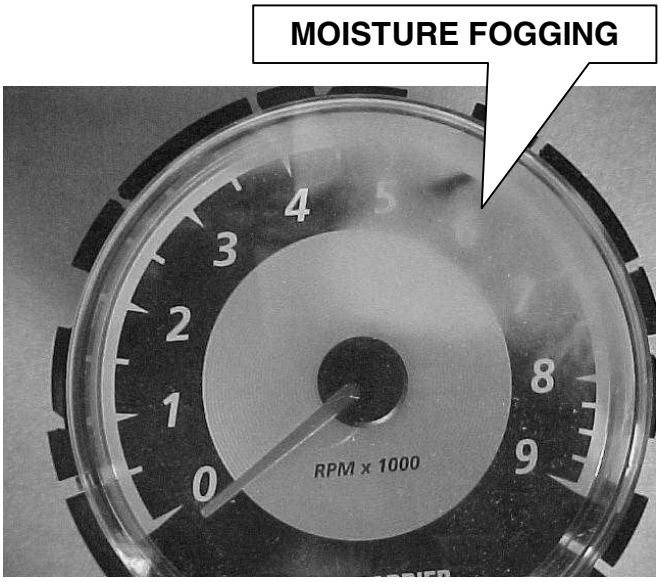


Last season we experienced some balance shims or “weights” dislodging from their pushed in position in the TRA III drive pulley sliding half. Not all clutches have these weights as they are installed as needed to balance each sliding sheave individually.

If a balancing weight does come out of position the entire sliding half and any other damaged parts should be replaced. Do not try to reinstall these shims.

Our supplier has improved the process for installing these balancing weights.
Normal warranty applies.

Fogging gauges



The desiccant patch that was used on production gauges last season was not always enough to stop the gauges from moisture fogging under certain conditions.

The previous desiccant per Warranty Bulletin 2003-6 was in the form of a bag. The capacity of absorption of the bag was 2-3 times more.

If a 2004 gauge fogs due to moisture the gauge can be disassembled and the desiccant bag kit installed per the Warranty Bulletin 2003-6. Normal warranty applies.

The new kit now includes 2 desiccant bags, as all 2005 gauges. If the lens cannot be cleaned correctly during kit installation, new lenses are now available.

- Tachometer lens: 415128937
- Speedometer lens: 415128938
- Desiccant bag kit:: 861785700

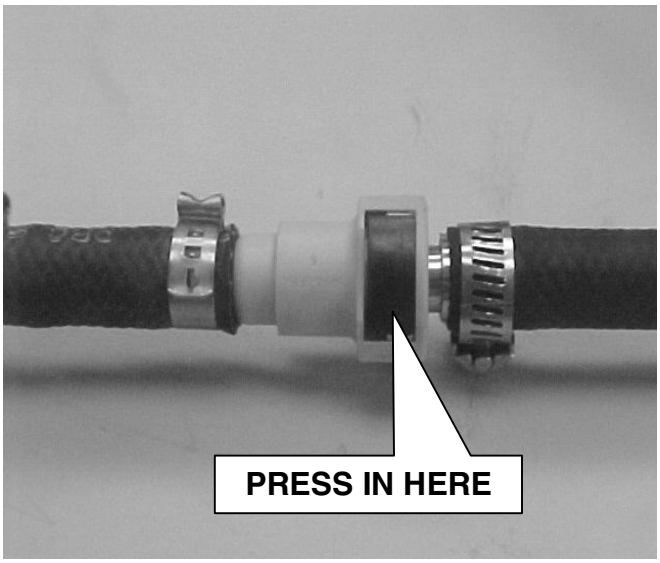
SDI Fuel Line Clip

The black plastic clip used to secure the quick disconnect at the fuel filter is now available separately.

- P/N 513 033 135

To open the connector, press straight in lightly on the smooth black surface. The coupler can now be separated. Do not pry or twist this black piece.

If a clip is broken, the new one is easily reinserted by snapping it into position.



Exhaust Manifold Bolt Loose on 593 HO, 593 SDI and 793 HO

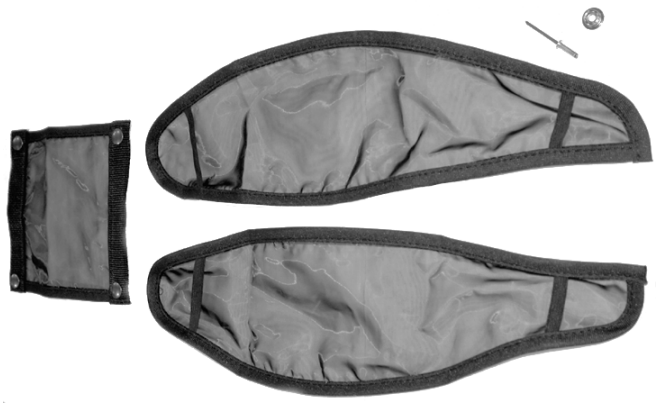
A new bolt, along with scotch-grip coating is now available. It is used on MY05 production models.

- P/N: 514 054 047

Air filter plugging on rev chassis

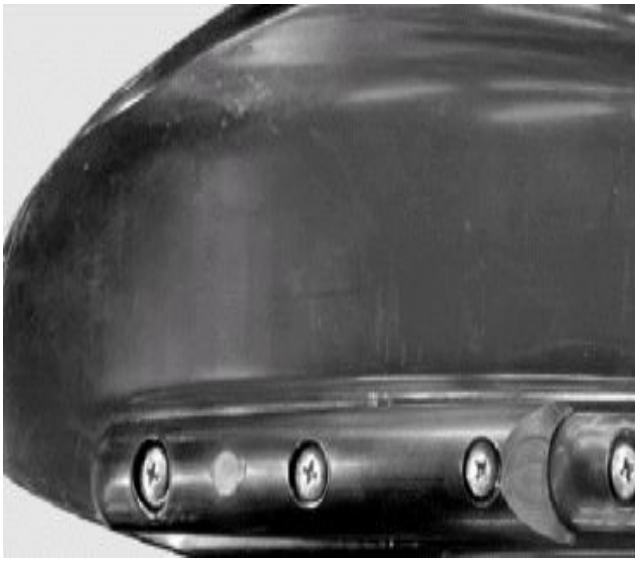
In some types of deep snow conditions, the air filter on REV chassis vehicles may become plugged.

The front belly pan screens may also allow large amounts of snow to pass through in these conditions.
A pre-filter kit has been developed specifically for these snow conditions. Once installed they are easily removed when not required.



- REV air intake pre filter kit P/N 508 000 454
- REV & RT louver pre-filter kit P/N 861 789 100

Hard Steering on Summit's



Last season the production wear rod and PCS on Summit models required more effort to turn and could possibly catch on some trailers during loading.

To alleviate this situation Warranty Bulletin 2004-6 was issued. This bulletin explained that an extension to the original PCS needed to be added. The additional extension has now been superseded to a 1-piece PCS. These are available now.

If a customer has not updated his vehicle, it must be done before the start of the season. Another possibility is to use the 2003 or 2005 Summit wear rods, which are longer toward the front and the 2005 PCS. This combination will be more durable crossing roads and steering effort will be reduced.

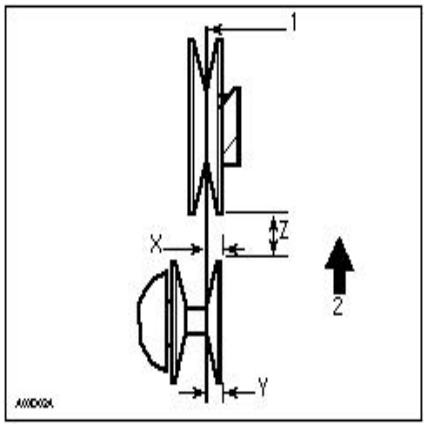
Incorrect Renegade H/A specs

In H/A Service Bulletin 2004-2, the 2005 Renegade 600 SDI high altitude specifications are incorrect.

- The drive pulley spring needs to be changed from 6000 ft. and up
- The new spring is P/N 415-015-300 - Violet/Yellow, 160/230lb rate
- Max RPM is 8100
- Rave red cap should be flush
- TPS is 4.1 degrees
- The top gear should NOT be changed to a 22 tooth
- Oil pump cable should be adjusted to 19mm

Altering the clutches from our recommendations may affect the SDI calibration and performance may deteriorate.

Incorrect REV "Z" Dimension

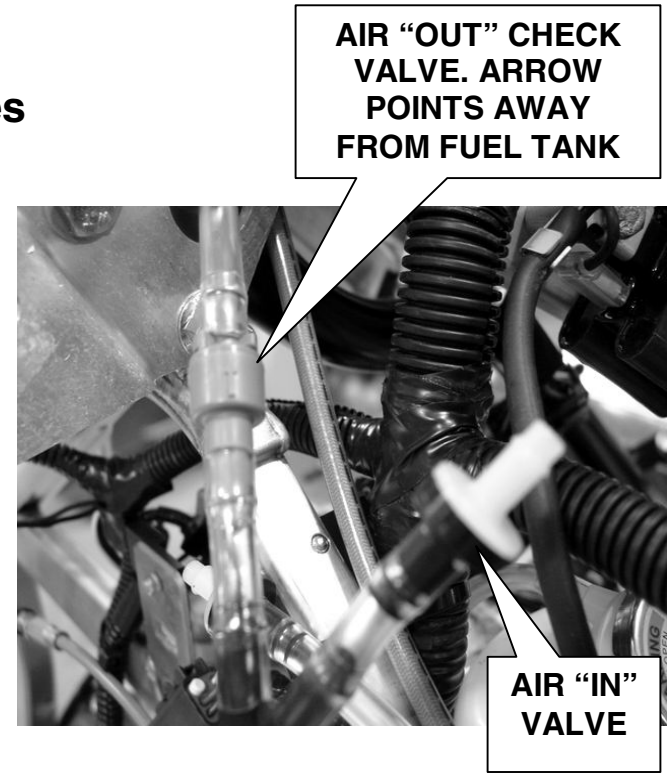


To clear up any confusion, the Z dimension is fixed on all REV chassis vehicles.

Here is a summary of "Z" dimensions:

- All Formula VSA RER are 19mm (500SS)
- All formula VSA non-RER (Adrenaline 2003 & 2004 – 600 HO) are 19mm.
- All HPV, 600 HO, 800 HO are 20mm.

REV Fuel Tank Vent Check Valves



There are two check valves used on the fuel tank vent line on all REV models.

The "air in" valve is a black and white colored one way check valve. Air is allowed in and nothing is allowed out. Installed correctly the black side should be connected to the vent line. The other end is left open.

The blue colored valve was added as an outlet valve. It has an arrow on it to clearly show the airflow direction. When installed correctly the customer may hear a hissing or squealing sound when sitting on the seat.

This is a normal situation. The valve has approximately a 1.5 psi pop off pressure. This causes a slight pressure in the tank, most noticeable when removing the fuel cap.

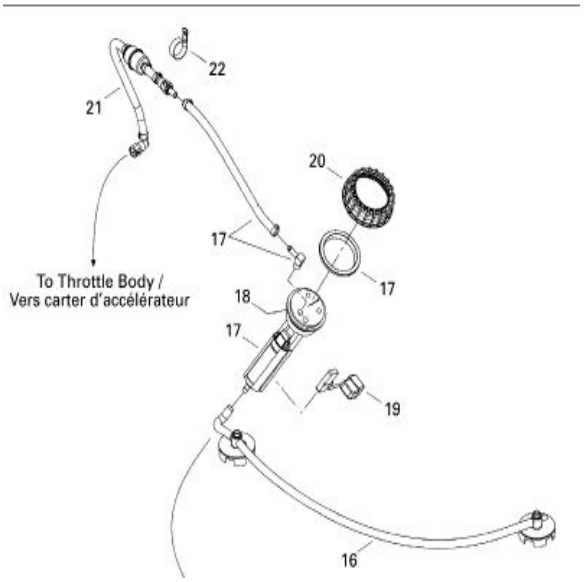
If installed backwards the fuel tank may collapse and the engine starve for fuel. This would be caused by a vacuum effect in the tank.

SDI Fuel Pickup

There have been some cases of fuel pickup problems in 2004 SDI's.

A few of these were attributed to the rear fuel pickup installed backwards, or too high in the tank. If a vehicle seems to run out of fuel under hard acceleration, with 1/4 to 1/3 of a tank left; an inspection of the pickups should be performed.

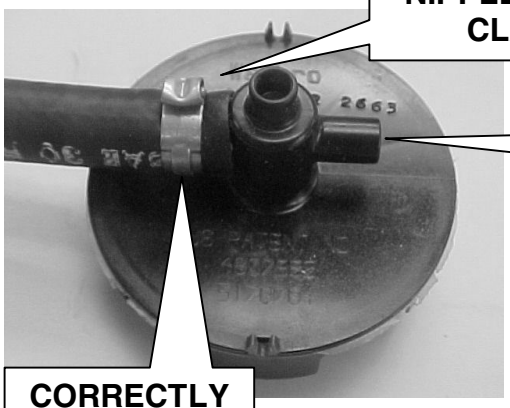
These photos clearly depict a correct and incorrectly installed pickup.

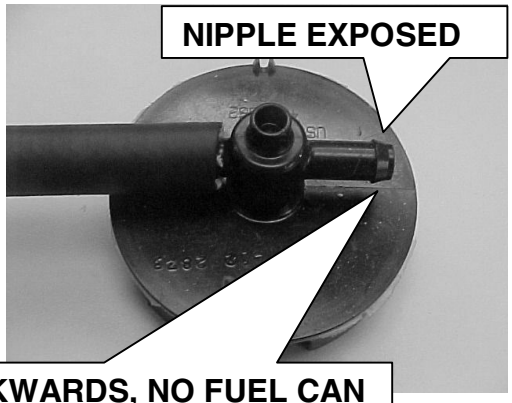


The angle of these pickups when installed on the line is critical. The pickups must lie flat on the bottom of the tank in order to allow the maximum amount of fuel to be drawn out. It is also important to ensure the rear fuel pickup line is not too long, as it may ride up the rear of the tank

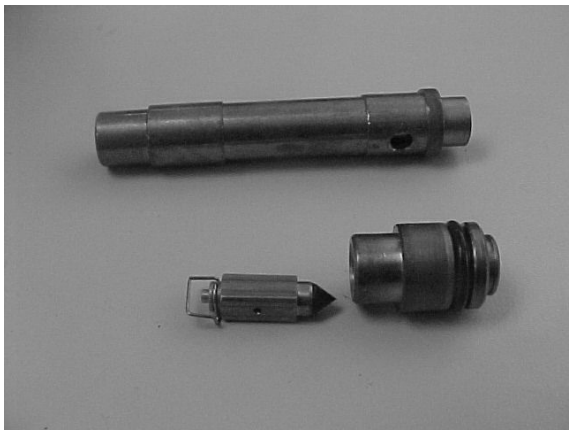
Fuel pickup line # 16 above is only available as an assembly at this time. This is due to the critical nature of the indexing of these pickups. If in doubt, replace the complete assembly.

Ensure to read the shop manual for proper positioning of the fuel pump assembly to the fuel pump as proper indexing is required. Make sure to accurately align the arrows of the fuel pump with the arrow on the fuel tank. This is extremely important to ensure the correct placement of the pickups in the tank.





Tundra Bog



In warm weather operation, the Tundra may occasionally bog while accelerating.

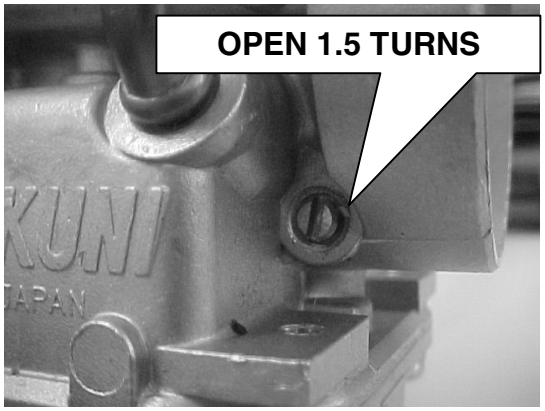
If this condition exists, a new calibration has been developed to improve warm weather performance.

Install these new components:
- Needle jet 480-O8, P/N 404 148 600
- Needle valve VM 28 #1.2, P/N 404 175 500

Then, readjust float level to 24.9 mm.

It is not recommend using this calibration on extremely cold weather.
For MY 1998 to 2000, the Warranty Bulletin 2000-5 need to be perform prior this modification.

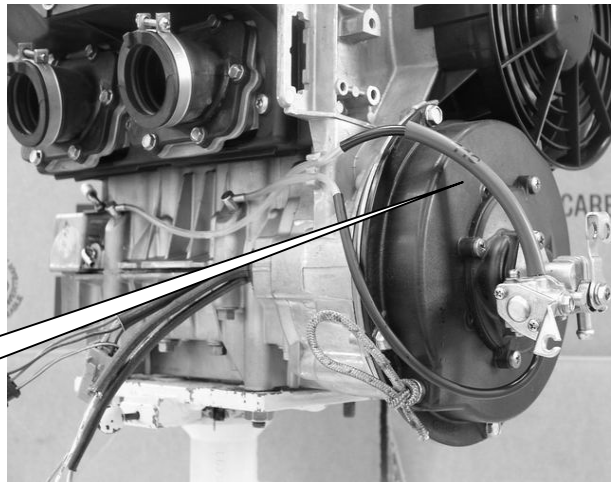
Skandic WT 552 fuel consumption



There have been some reports of higher than expected fuel consumption at very slow riding speeds on Skandic WT's. A simple adjustment of the airscrew has been tested and results in a noticeable improvement.

The original airscrew setting was .5 turn open, the new adjustment should be 1.5 turns open.

SKANDIC 552 WT OIL LINE MELTING



Last season under certain severe riding conditions the oil injection line from the oil pump to crankcase fittings could deform from muffler heat.

If this condition is experienced, two 110mm long protection tubes can be added.

- P/N 420 460 170

377 Molykote Pistons

We now have all three sizes of Molykoted pistons available for 380 engines. These pistons will retrofit all type 377 engine designs to date.

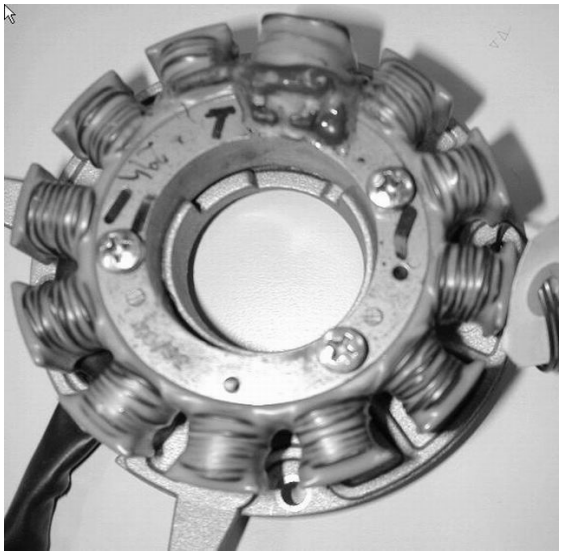
- Std size: 61.93 mm: 420 890 060
- 1st over size: 62.18 mm: 420 890 061
- 2nd over size: 62.43 mm: 420 890 062

Magneto For Type 377 And 552 Fan Cooled

Magneto components are now sold separatly for the ZX with type 377 and 552 FAN cooled engines.

The soldering joint process between the Ducati stator and the yellow wires has also been improved.

- Stator P/N: 420889365
- Flywheel P/N: 420889375

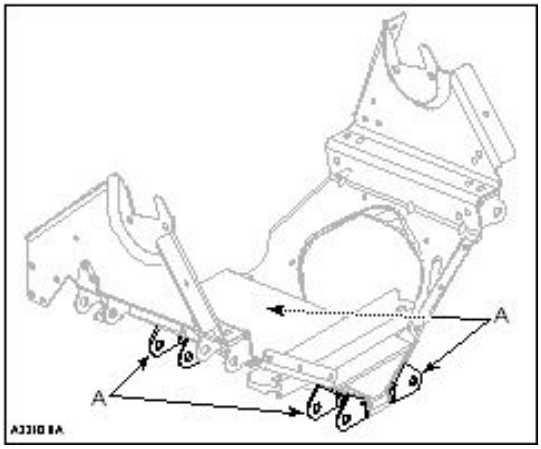


REV Chassis Repairs

Most REV chassis can be repaired rather than replaced in case of an accident.

Service Bulletin 2004-10 depicts all of the proper procedures and parts available to repair or replace front end damage to the front cross member. Many of these parts were NOT listed in the 2004 parts books, including replacement “A” arm attachment brackets.

This bulletin makes it possible for your customers to be riding again as inexpensively as possible.

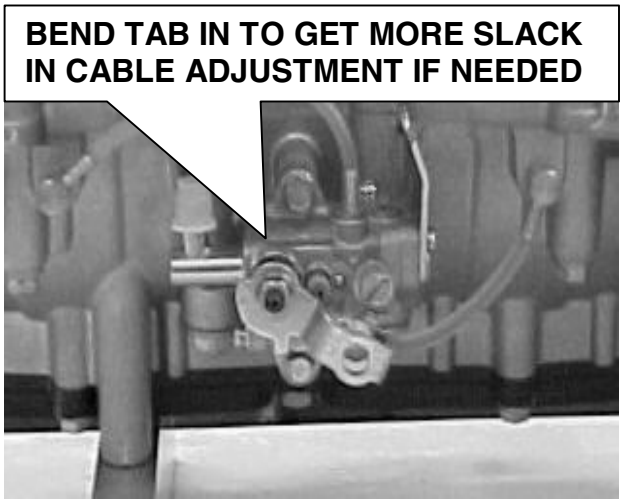


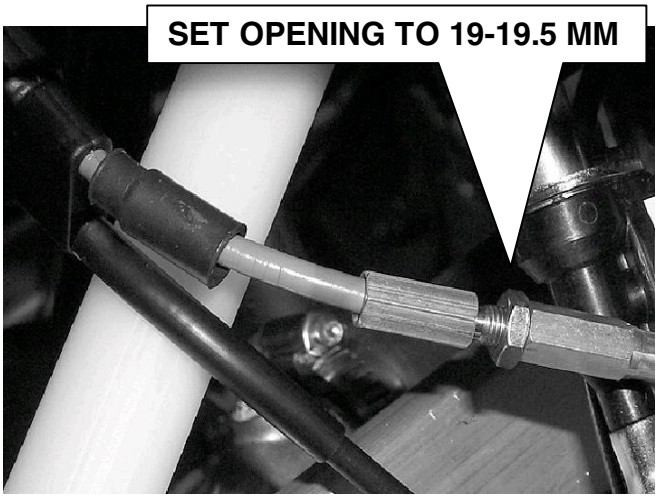
SDI High Oil Consumption

Last season there were reports of high oil consumption on the 593ho SDI models.

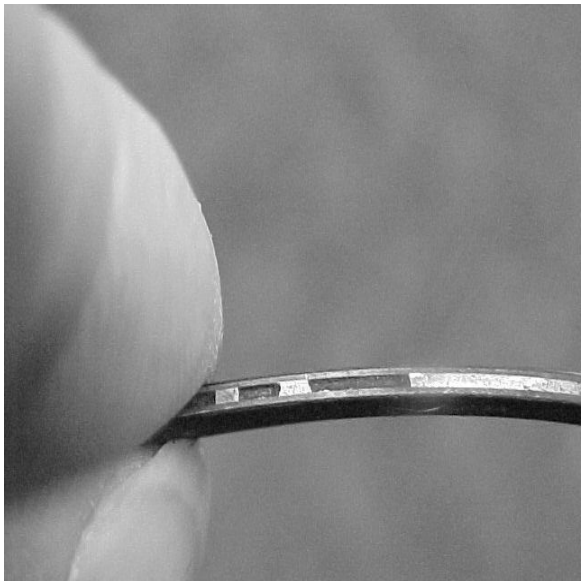
The ratio of oil pump opening angle to throttle bodies is not quite the same as on vehicles equipped with TM40 carburetors. Because of this, the oil pump cable adjustment must be different.

The correct adjustment is 19 to 19.5mm. If this setting can not be achieved the oil pump cable attachment bracket on the pump may have to be repositioned. With this setting, the overall ratio will be near 40:1. This equates to approximately 1 liter of oil to one tank of fuel. This adjustment should be made if a customer complains of high oil consumption.





593 HO Piston Rings



As mentioned in Section 2-E: What's New Rotax of this book, we have a new Chrome-Nitrated ring on all 593 HO engines this season.

This ring has been tested and has proven to be very durable as a direct replacement for all MY 2003 and 2004 engines.

If an engine has a significant drop in compression, or the vehicle's performance or RPM are down, or if the RER does not function reliably, further inspection may be required. If the rings are found to have severe flaking, replace with the 2005 rings. All 593 HO rings superseded automatically to these.

Normal warranty applies. P/N 420 815 295

Warranty Parts That Are Not Defective

Every year we receive many warranty parts from our dealers that are not defective.

It is of the utmost importance for your technician and/or service manager to correctly determine if a part needs to be replaced or not.

Even if your Service Rep gives you an authorization, it is still the Warranty Department's decision if the part was defective and truly needed to be replaced.

**NORMAL WEAR OF MOLYKOTING.
NO NEED TO REPLACE**

Please keep in mind that Service Reps are not looking at the parts, they are taking your word that it really needs to be replaced.

In the past, we have been fairly lenient in dealing with this issue, however we are continuing to see perfectly good parts being replaced every day. This obviously costs everyone in the end.

These pictures show parts that have been replaced and claimed recently. Please ensure that parts are only replaced when necessary.

In the future, this will ensure that we can keep our prices in line with the competition,. and continue to offer leading edge technologies to you and your customers.

ski-doo®

SECTION 4

2005 Technical Update
New Technology

In Section 4 you will find the most current information concerning the latest technologies used by Bombardier Recreational Products Inc.

Bombardier Recreational Products Inc.

SUB-SECTION 4-A
RT PLTFORM

BACK IN BLACK

Strap your gloves and your helmets a little tighter; the

Mach Z is back!

BOMBARDIER RECREATIONAL PRODUCTS INC.

THE RT PLATFORM

When the decision was made to develop the ROTAX 995, it was obvious a new chassis would be needed due to the increase in physical size of the engine.

The philosophy was straightforward: take the key points of the Rev chassis.

- Pyramidal frame
- Advanced ergonomics
- Centralized mass

Moreover, ensure the new chassis was strong enough for the increased weight, power and speed, of the 995 and at the same time increase straight-line high-speed stability.

The RT chassis is the final result.

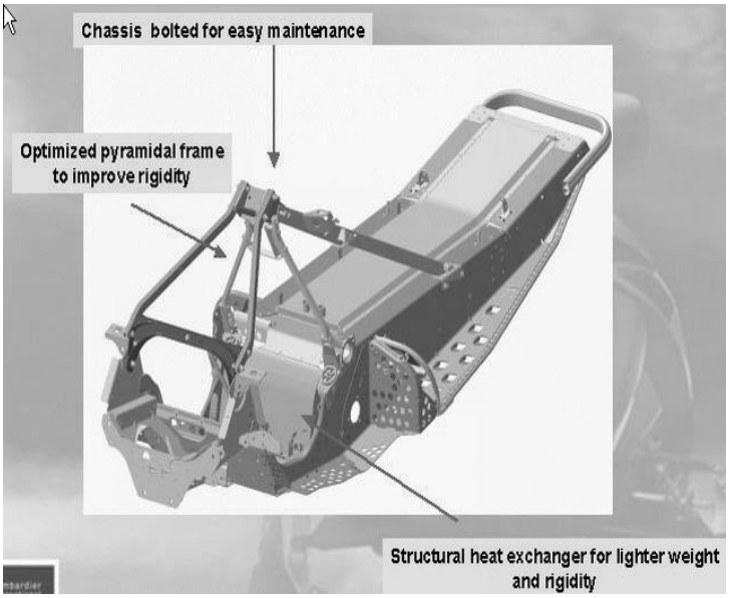
Chassis:

The chassis was stretched 2” to accommodate the larger engine.

This in effect lengthened the wheel base 2” which gives the desired effect of increasing straight-line stability.

The engine bay was also heavily reinforced.

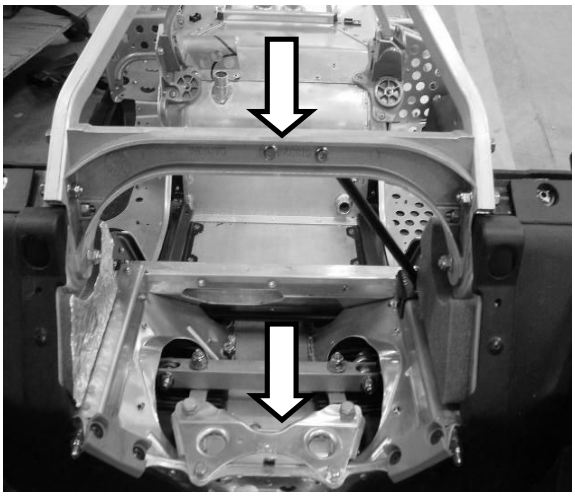
Although the chassis is physically larger and structurally more rigid, the use of multi purpose castings kept the weight gain to only 2 KG (4.5 lbs.).

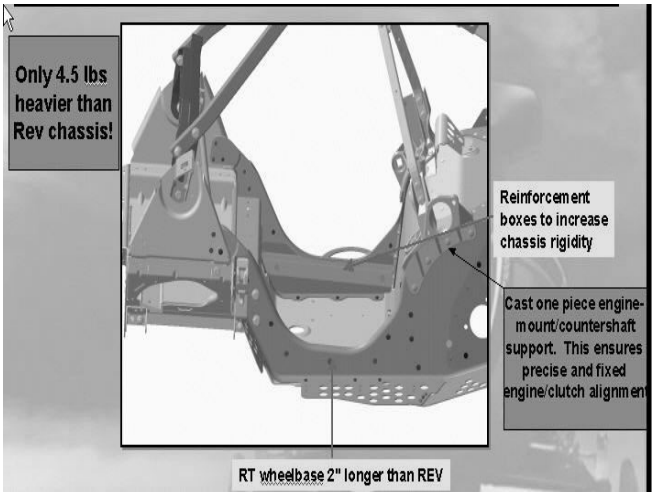


All these changes add up to a chassis that is approximately 20% more rigid than an already very rigid Rev chassis.

The chassis is also easier to work on as many structural members are now bolted rather than riveted in position.

Front Suspension:



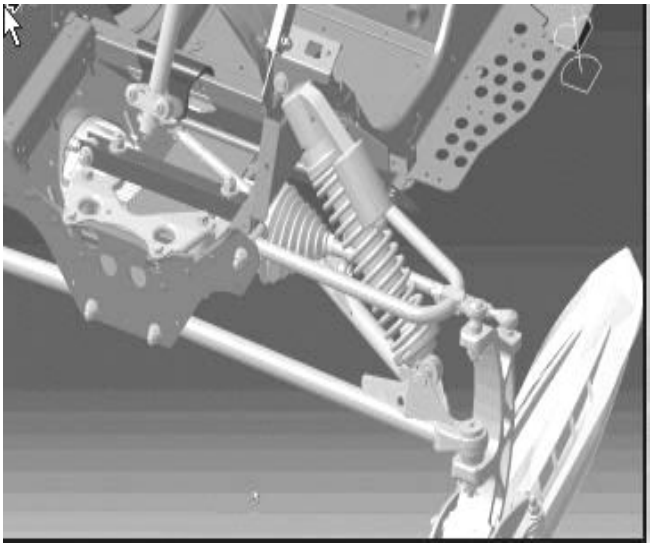


Only about 20% of the Rev chassis components were used in the RT, and the RAS front suspension comprised most of this.

The steering links are now made of aluminum on the RT to save weight.

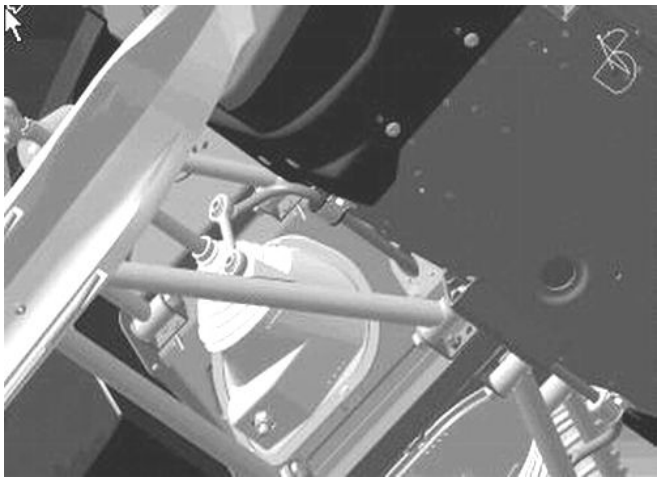
The Mach Z's front suspension travel has been reduced by 3" by using shorter shocks to lower the vehicle for improved handling and reduced frontal drag.

Longer shocks could be used if the customer desired.



One unique change however is the use of a "linked" type sway bar.

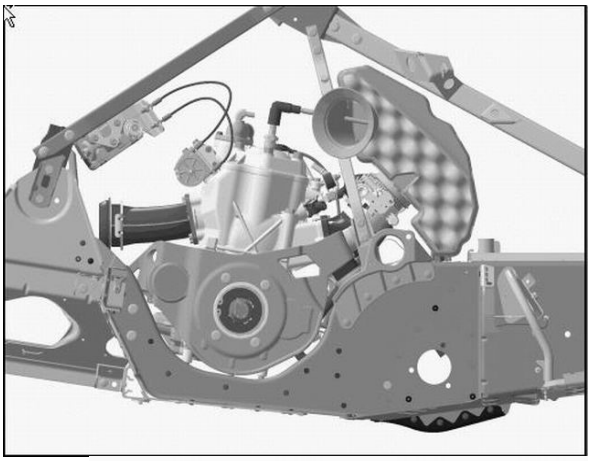
This design was chosen to create a falling rate design. The falling rate design allows a fairly rigid or firm bar in its first few inches of travel to give unsurpassed high-speed handling. The rate decreases with further compression to allow a supple, more "independent" movement in the bigger bumps on the trail. Note: the Rev chassis's sway bar is a rising rate design.



Engine Position:

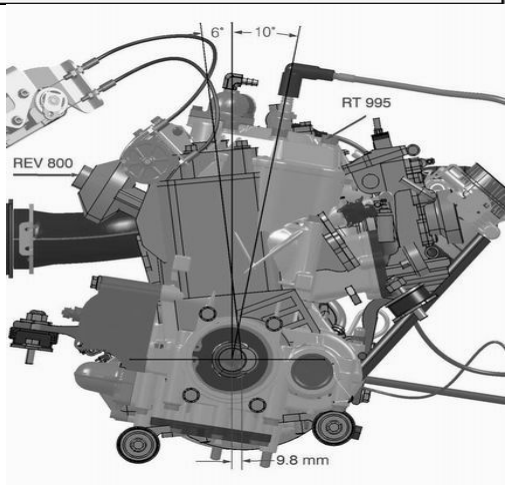
Lowest possible engine mounting ensures a low center of gravity.

The engine is tilted 16 degrees further back than a Rev to maximize centralized mass**.**

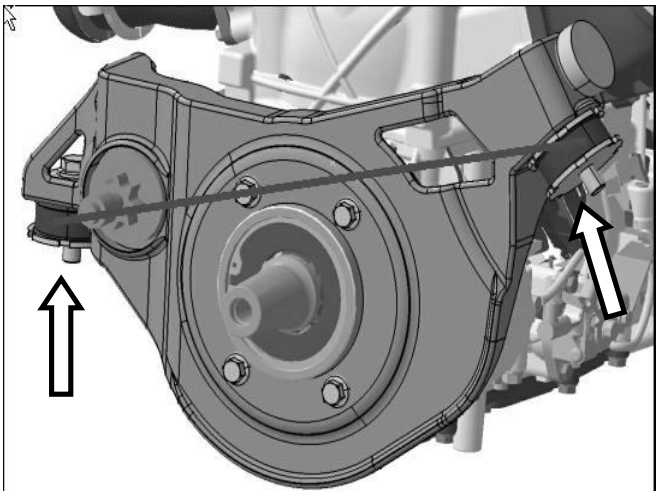


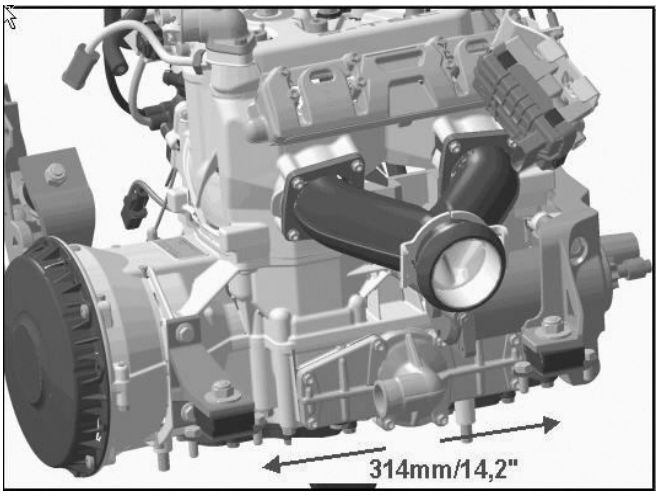
The engine mounts are designed to go through the engine's center of gravity; this greatly improves the engines stability in bumps.

The engine's mounting studs are also spaced further apart for maximum engine stabilization.



Note that the engine support plate is a very rigid aluminum casting for unsurpassed strength and precise engine alignment.





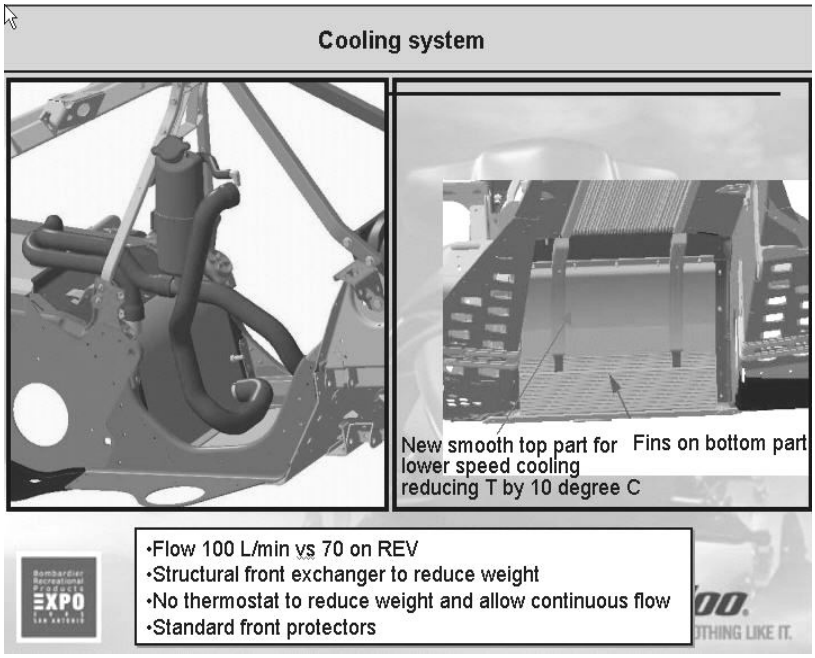
Dual torque stoppers are used to keep engine and clutches in precise alignment.

Cooling:

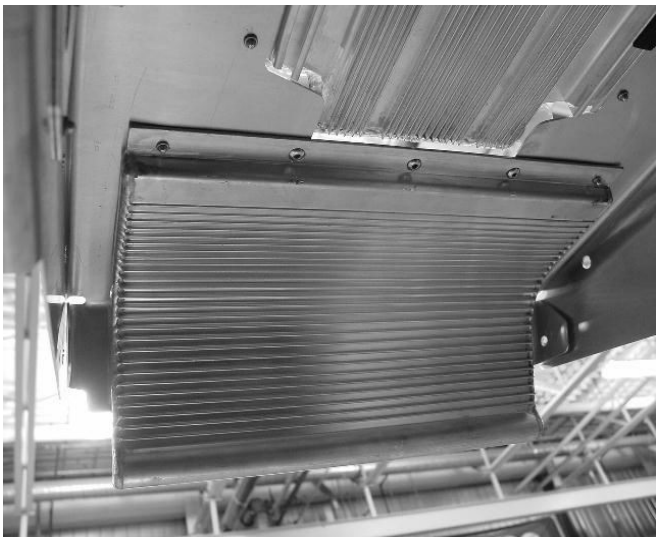
Even the RT's cooling system is new.

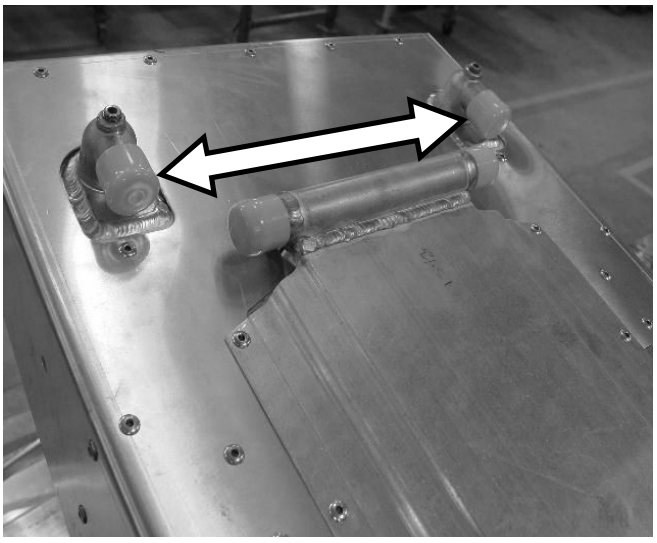
It has been optimized for 30% more flow. The heat exchangers are actually a structural part of the frame. The front heat exchanger is considerably larger and has a portion of the finning removed to aid in low speed cooling. The thermostat has been eliminated to improve coolant flow.

The engine warm up is now electronically controlled via the ECM. The Mach Z comes with bulkhead protectors standard for studding purposes.



The Summit RT has a third rear heat exchanger for unsurpassed cooling even in springtime conditions.



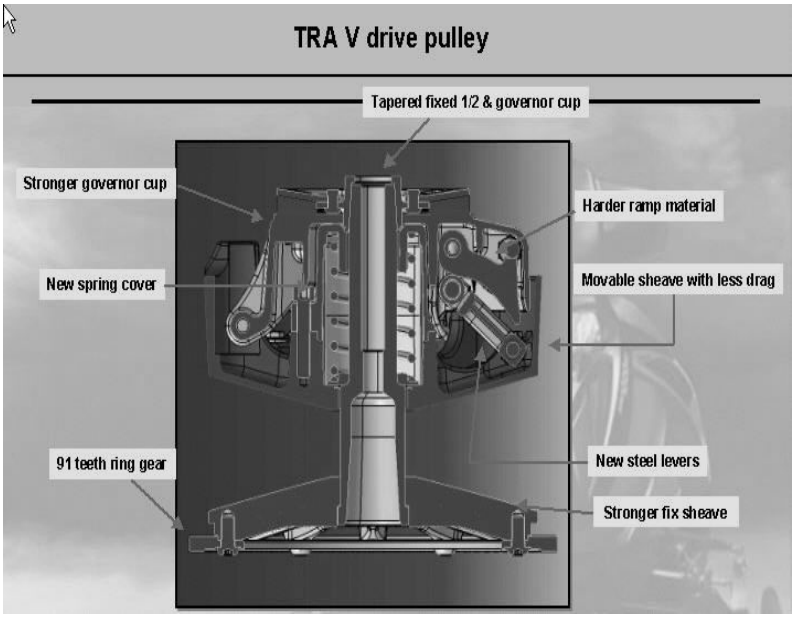


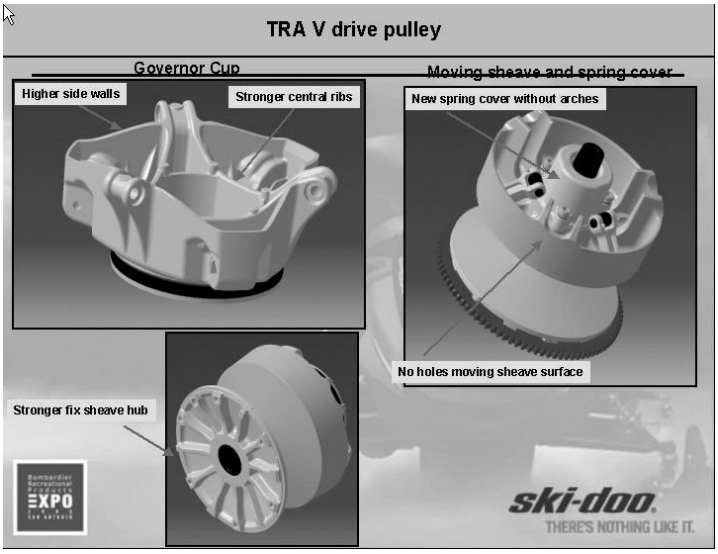
Center heat exchanger is narrower to reduce ice build up on track and running boards. Note the bleed screws on rear exchanger if system is ever totally drained.

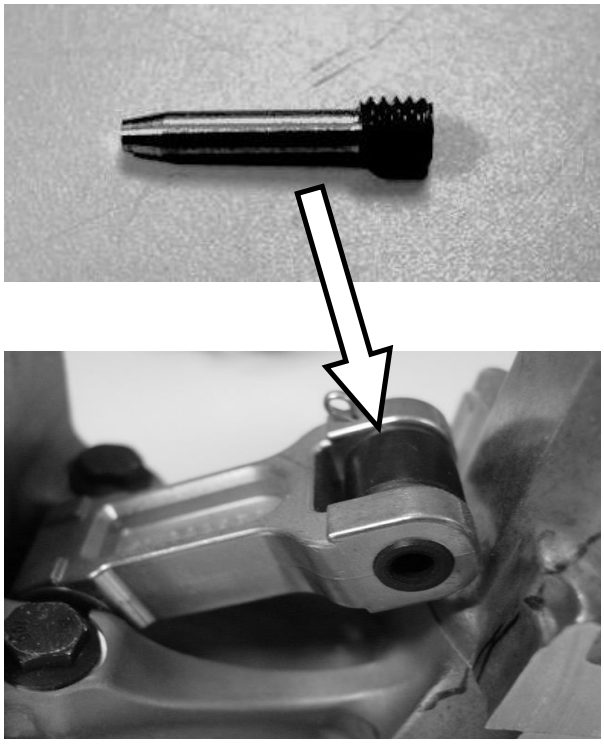
New TRA V Drive Clutch:

With the introduction of the 995, a stronger drive clutch was needed. The TRA V is basically a beefed up version of a TRA III or IV. It is still a VSA pulley with overdrive, and has all the same features as other TRA's

- Stronger forged fixed and sliding sheaves
- Tapered fixed half/governor cup
- Solid steel arms
- Hardened ramps
- Stonger spring cup
- Loctited and screwed roller pins
- Larger diameter ring gear
- Hardened TRA adjusters







No special tools needed to remove governor cup. Just heat cup lightly and strike inserted puller with a hammer

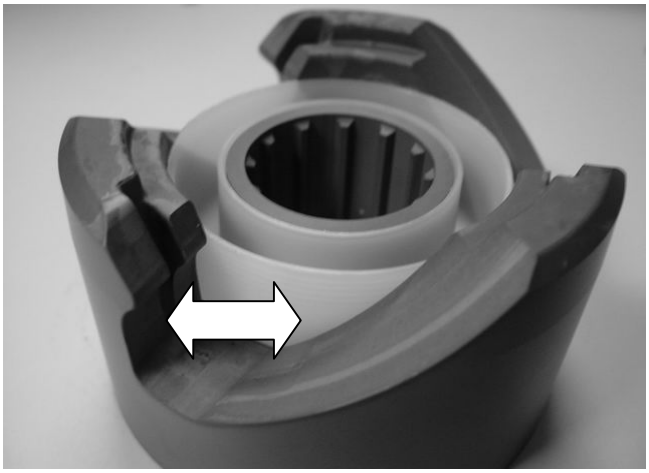
New Roller Driven Pulley:

The Mach Z will come standard with a new HPV27 roller driven pulley design. This new pulley shifts dramatically better under high load and heat conditions.

This sliding half and cam could be installed on other HPV27 fixed halves.

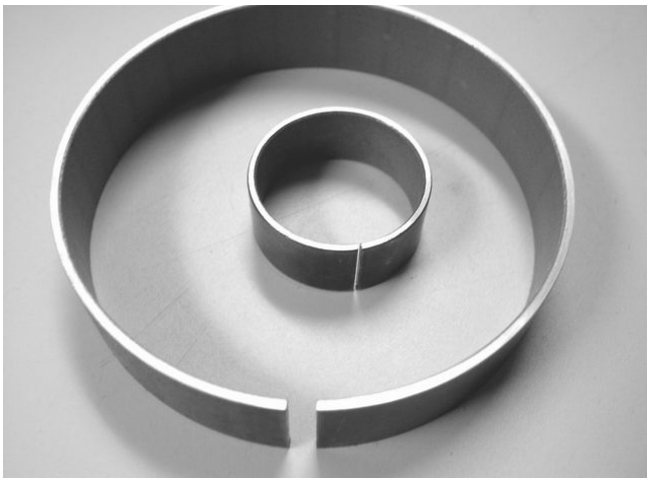
New Roller Cam:

This cam functions with or without RER. A unique encapsulated roller groove is machined into the cam for more precise backshifting.



New Bushings:

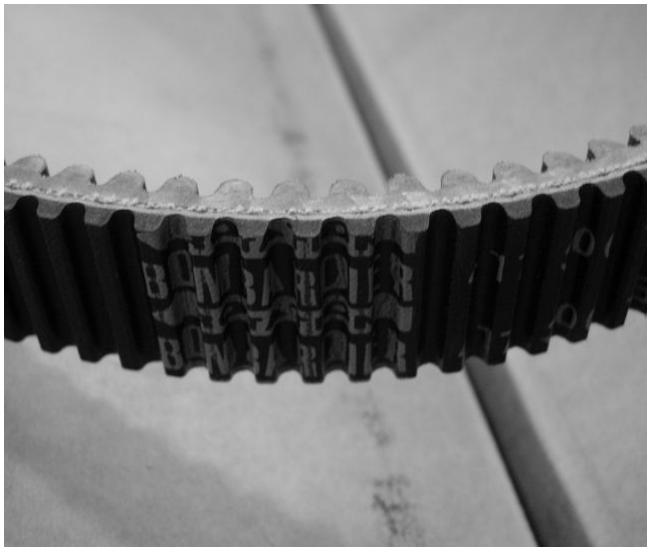
The small and large bushings are made of a new material that far surpasses any we have used in the past. The large bushing is also wider and is held in position with a removable clip. The Summit RT non-roller HPV 27 driven will also use this material for greatly improved longevity and consistency in shifting.



New Drive Belt:

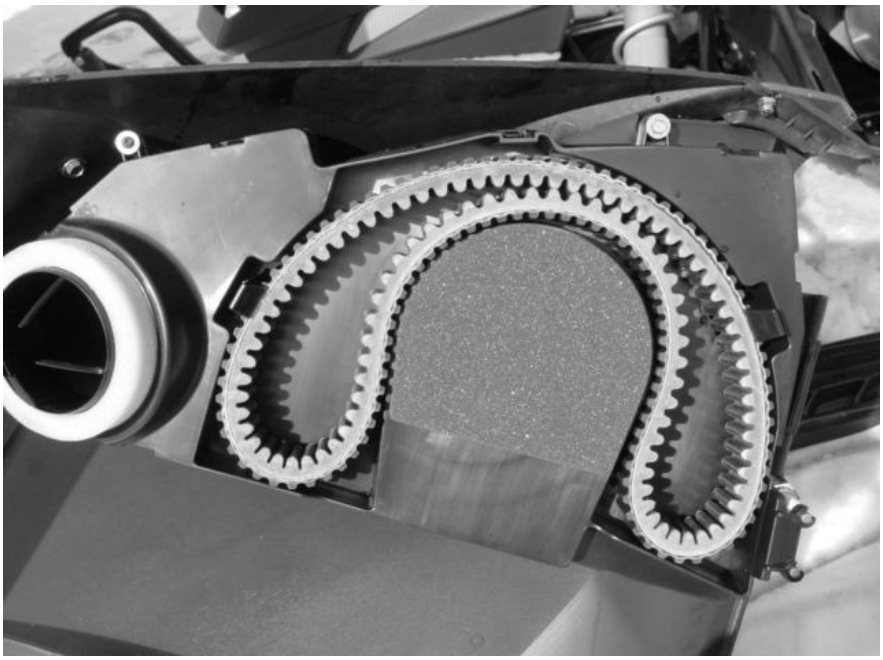
A new special compound drive belt on all RT vehicles.

- Stronger less abrasive cord
- Yellow cords are tell tale sign of wear
- Stiffer rubber compound
- Slightly longer
- Top cog design
- Most durable belt to date
- 13 degree belt angle
- Belt is 1mm wider to reduce side clearance at engagement. This is possible due to very stable engine mounting of RT chassis
- This also reduces the metal to metal contact of sheaves at full shift out



Even the Little Things…

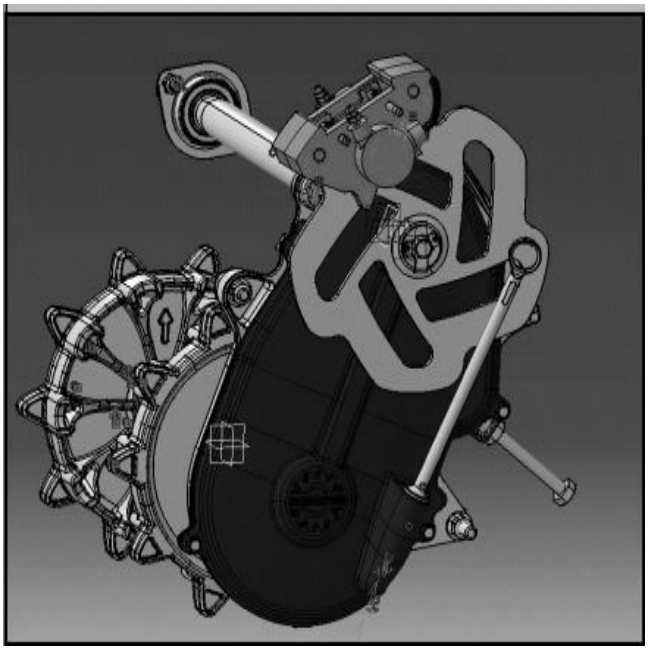
Easy to reach spare belt and plug holder.



All new RT drive train:

The most obvious change is the movement of the brake disc to the outside of the chaincase.

This allowed the case to be mounted directly against the tunnel, which shortens the driveshaft, by approximately 2". This reduces rotating weight.

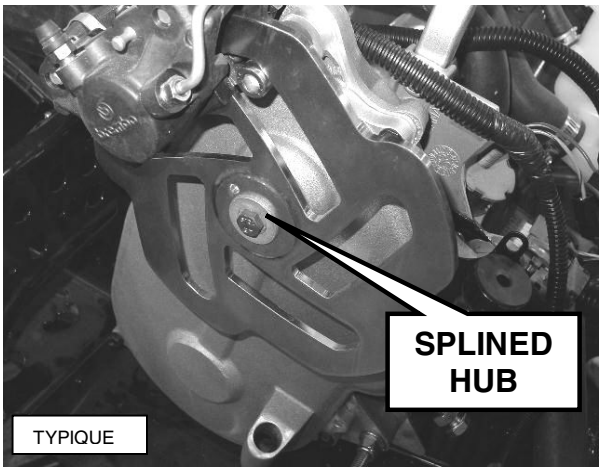


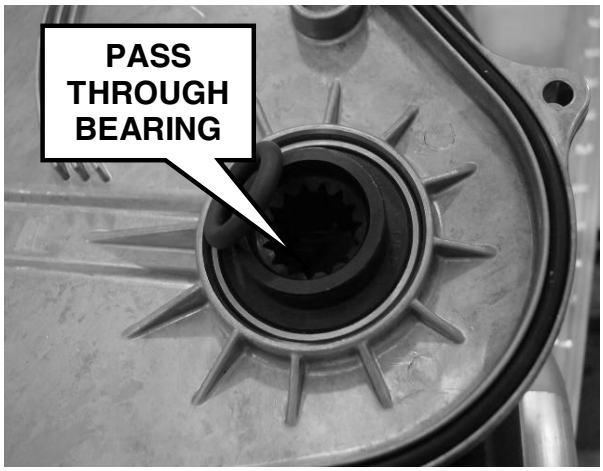
Another benefit to moving the chaincase directly against the tunnel is the case is considerably more rigid now with less flexing possible. The hub area of the case and bearings are now immersed in snow, hence the chain and case run much cooler.

The new cases are longer to allow plenty of clearance even with 10 tooth drivers.

There are two different length chaincases used on the RT platform vehicles. The Mach Z: 202.5 mm C/C; and Summit: 233.5 mm C/C that has been lengthened for additional clearance due to the 2-5/16" track, and a shallower approach angle.

By moving the brake disc to the outside, the countershaft now passes through the chaincase cover via a pass through bearing. This extra bearing adds a great amount of support to the countershaft and keeps the chain and sprockets in perfect alignment. The disc itself is over 2 lbs. lighter due to its wave shape and a much smaller splined hub. Due to the spline the disc is very solidly attached and gives a more positive feel with no keyway noise or rock. The disc also runs cooler due to it's mounting outside the case and has cold air directed at it via hood louvers.





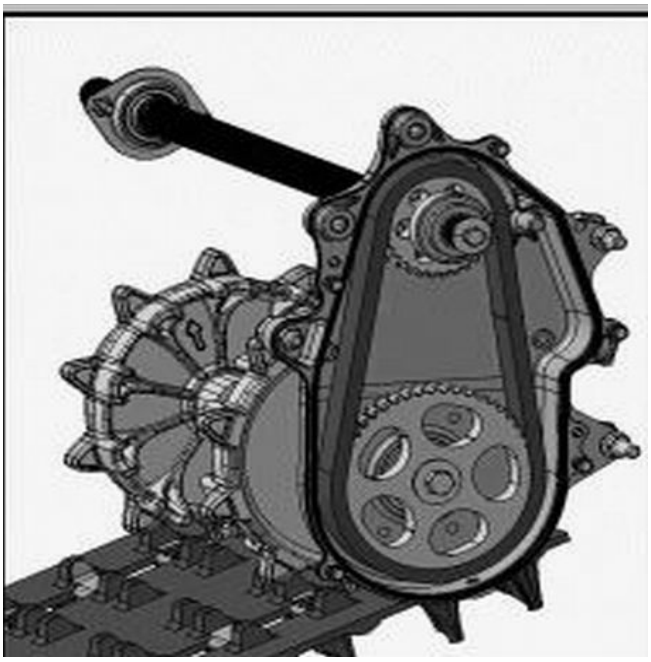
Mach Z Chain and Chaincase:

The new case was designed to allow larger top and bottom sprockets to be used.

This is needed to obtain proper gear ratios with the advent of larger drive sprockets. The Mach Z comes with a 29/49 gear ratio. This is the largest top and bottom gear we have ever used. With this combination a new special “rocker type chain is used. This type of chain does not stretch and is 1.5% more efficient.

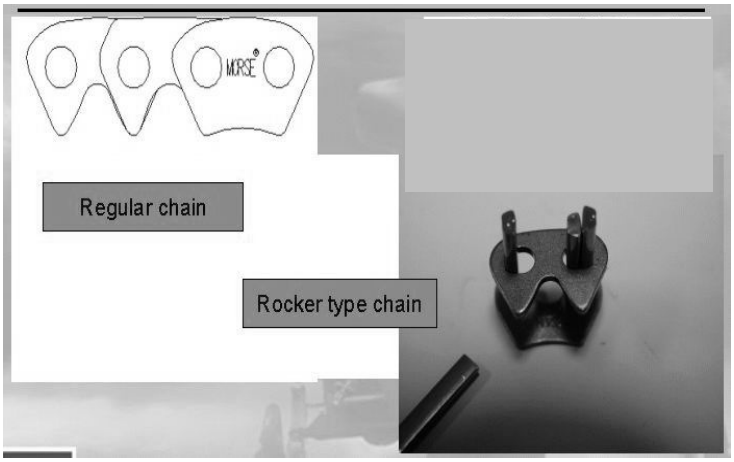
Because there is no stretch, there is no need to adjust the chain. As the photo depicts there is not even an adjuster on the vehicle!

This also adds to the efficiency of the system.



Note: it is important to change the oil at the 10hr check and as recommended thereafter.

This type of chain uses two “D” shaped pivot pins rather than a single round pin, the resulting decrease in pivoting friction is the reason for the increased efficiency.

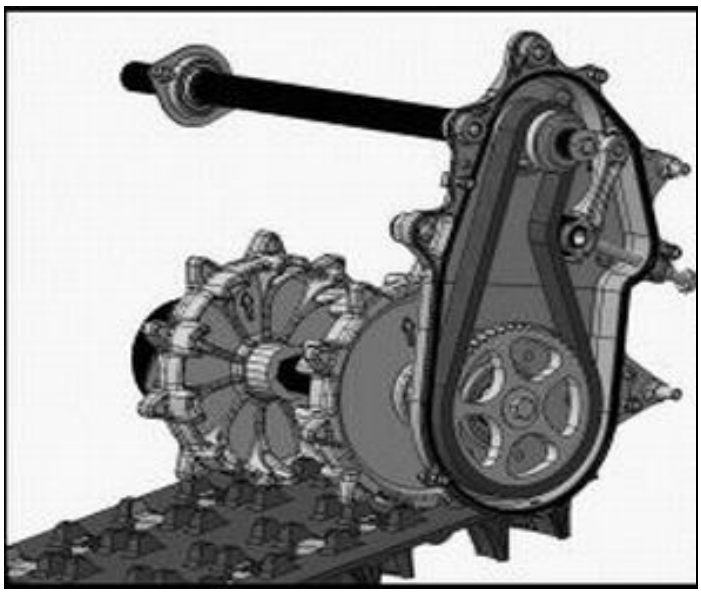


Note: The rocker style chain can not be used with a top sprocket smallet than 29 teeth.

Also, due to the difference in pitch between the "rocker" and the standard type chain, it is neccessary to use a standard chain and bottom sprocket if a smaller top sprocket is to be used.

The case is threaded to accept an adjuster should a gear ratio change be needed.

Summit Chaincase:



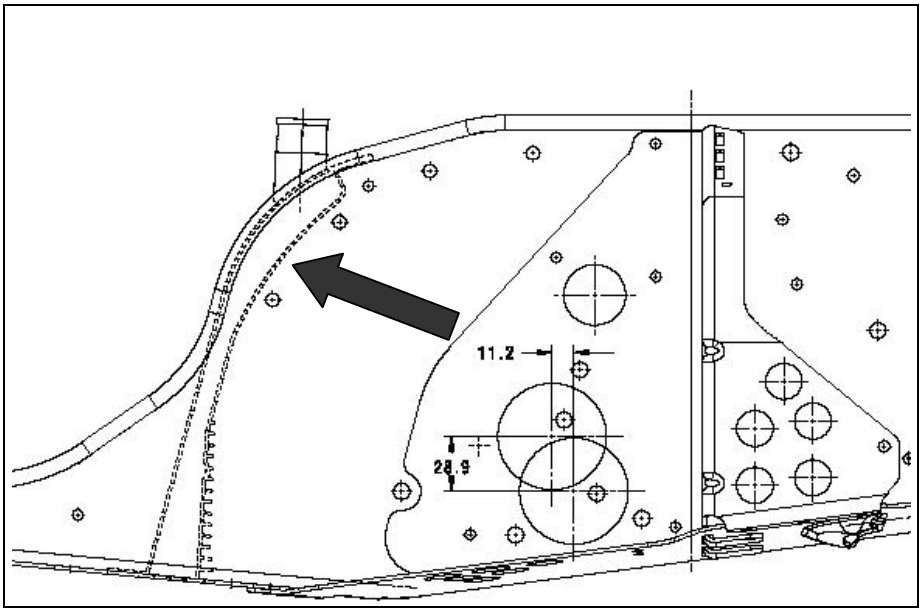
Since the summit uses 10 tooth drivers and a 2-5/16" tall profile track, it was necessary to lengthen the chaincase to ensure adequate tunnel clearance. This was accomplished by adding a segment to the midsection of the case, and is notable by the mold line marks.
Since the summit is geared lower for altitude, [21/49] the "rocker" type chain could not be used. The efficiency is still improved from a rev chassis however due to the use of a 21 tooth top sprocket rather than a 19. A newly designed manual chain tensioner is used.

This new chaincase/axle design gives a full 3" of clearance between the sprockets and front heat exchanger.

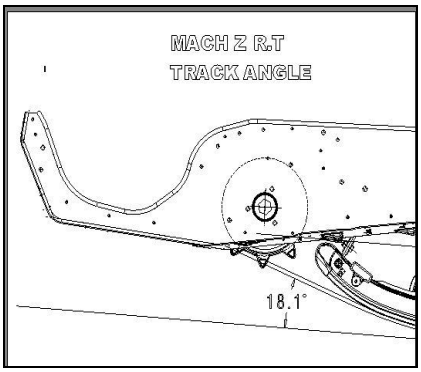
Drive Axles:

There are two different axle-mounting locations.

Note the smooth surface on top of front exchanger to add clearance for studding or deep lug tracks.

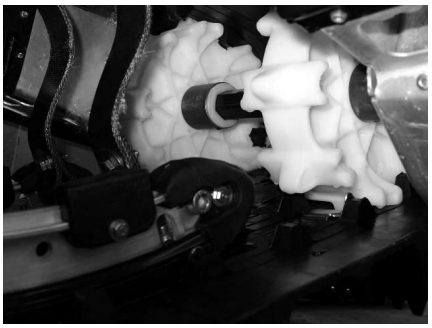


The Mach Z is optimized for top speed and flat handling.



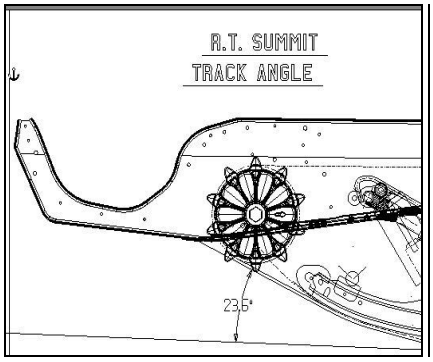
The Summit uses 10-tooth internal/external dual row anti ratchet drivers.

The Mach Z has 10 tooth internal only.



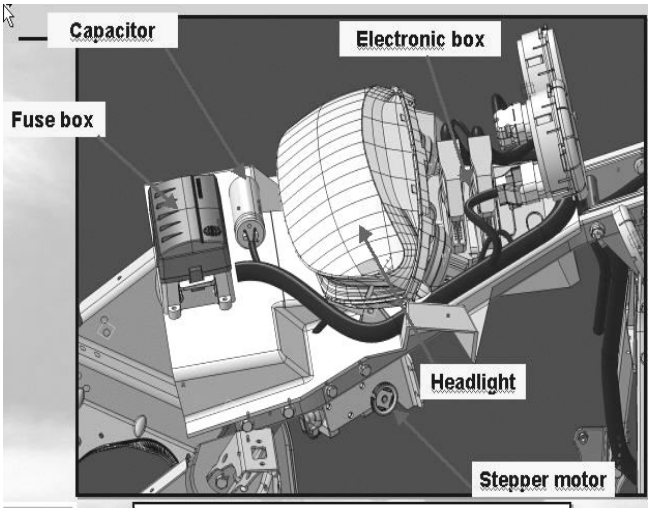
The Summit's is optimized for flotation, weight transfer, and clearance.

There is actually a full 3" of clearance.



Electrics, All In One Place:

There is even a capacitor in the system to allow starting with a virtually dead battery.

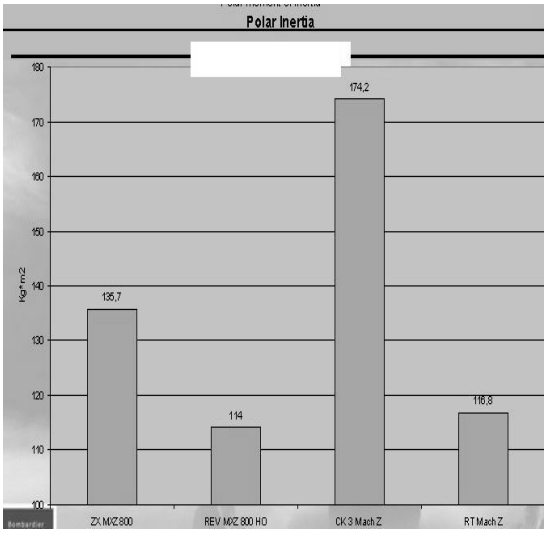


Slide Out Primary Airbox:

Extremely easy to slide out air box and access throttle bodies and oil cable adjuster. Nylon prefilter factory installed on Summit RT.

The graph on the right compares the ability of a vehicle to be turned quickly about an axis. As you can see, the RT is a **very** nimble platform. It can be turned quite easily on the tight twisty trails.

It may be a muscle sled however it is an extremely nimble one!



ACTIVITY:	Unknown ☐	Transportation ☐	Racing ☐
	Recreation ☐	Work ☐	Other ☐
Witnesses' Name: (if more than one please add a page)			
Witnesses' Address:			
Did the operator perform a pre-start check of the product before the accident?	☐ Yes ☐ No		
Was the operator familiar with the area being traveled?	☐ Yes ☐ No		
Did the operator complete any appropriate safety training courses relative to product (i.e. SVIA) ? ☐ Yes ☐ No If so what type ?			
Did the operator review the product safety video or DVD supplied with the vehicle ? ☐ Yes ☐ No			

PROPERTY DAMAGE	
Vehicle/Components:	**ESTIMATED COST OF REPAIR :**
	Vehicle : $
Environment/Private:	Property : $
	Total : $

ACCIDENT / INCIDENT DATA

Type of Terrrain

Road, Right of way ☐	River ☐	Private Trail ☐	Railroad ☐	Sea ☐	Open Field ☐	Hilly Mountains ☐
Ditch ☐	Public Trail ☐	Stream ☐	Lake ☐	Wooded ☐	Other ☐	

Type of Topography

Unknown ☐	Crest Cover ☐	Slope Up ☐	Slide Slop ☐	Straight ☐
Level ☐	Bottom of Hill ☐	Slope Down ☐	Curve ☐	Other ☐

Surface Cover (Type)			Precipitation		Visibility		Ambiant Temperature
Bare Ground ☐	Ice ☐	Complete Cover ☐	None ☐	Snow ☐	None ☐	Precipitation ☐	Actual Temperature :
Soft Snow ☐	Calm Water ☐	Partial Cover ☐	Rain ☐	Sleet ☐	Darkness ☐	Fog-Smoke-Dust ☐	_____ ☐ °C ☐ °F
Hard Pack Snow ☐	Rought Water ☐	Asphalt ☐		Hail ☐	Other ☐		
Other ☐			Other ☐				

Location of Accident:			Estimated Speed: Vehicle 1 : Vehicle 2 :
TIME OF ACCIDENT / INICIDENT:	Morning ☐	Afternoon ☐	Night ☐

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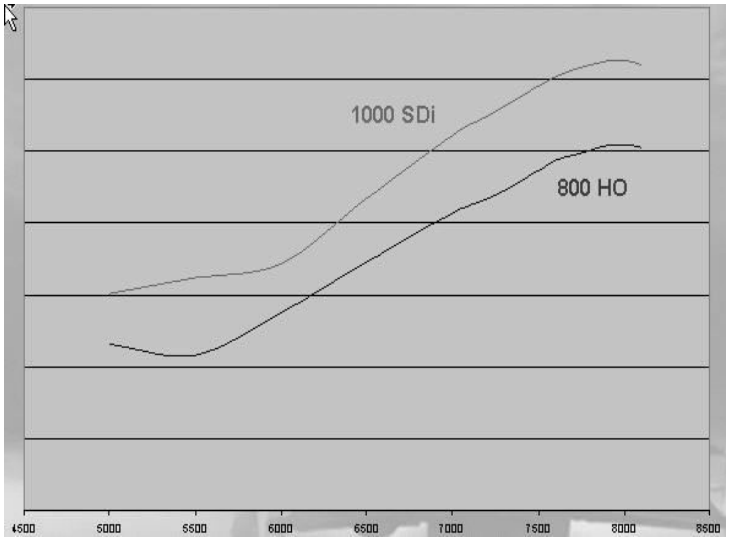
SUB-SECTION 4-B
ROTAX 1000 SDI ENGINE

POWER !!!

BOMBARDIER RECREATIONAL PRODUCTS INC.

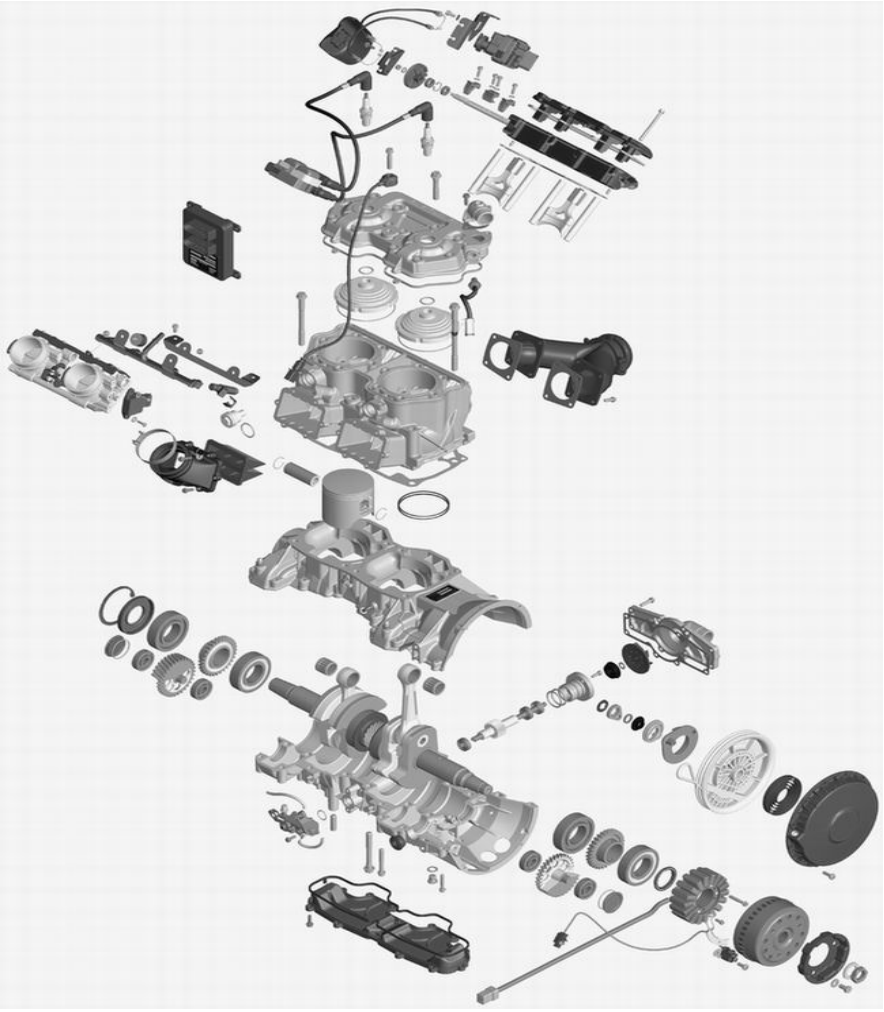
ROTAX 1000 SDI Engine



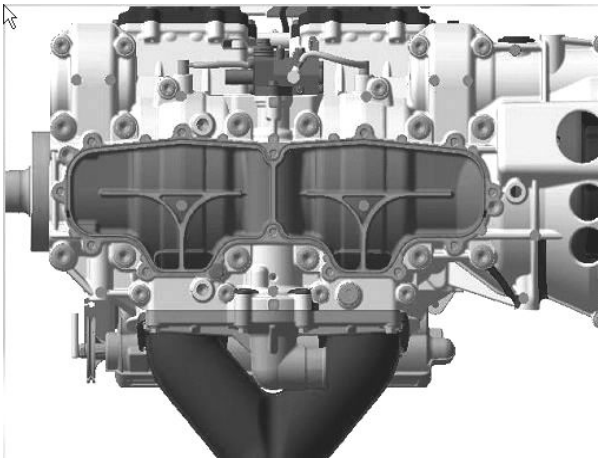
The 1000 SDI ROTAX engine, also called the “995”, is a totally new design that started with a clean sheet of paper. It is the first snowmobile engine designed from the ground up to be a semi direct injected engine. Durability and cooling system performance were paramount in this design.

Key specifications are:

- 2 cylinder parallel twin with semi direct injection
- Bore: 88 mm
- Stroke: 82 mm
- Displacement: 997.5
- Compression ratio: 12.0:1
- 165 hp at 8000 rpm
- 480 watt magneto

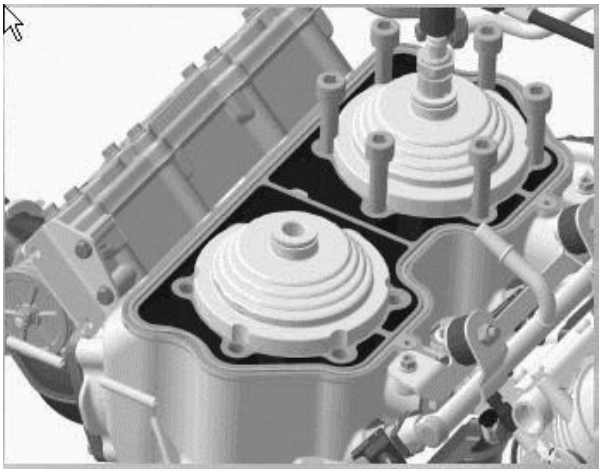


Engine Overview:



Here is a brief overview of this new series of engines.

On a carbureted, or throttle body injected engine as fuel travels through the crankcase and into the transfer ports it has a significant cooling effect on the engine. This cooling effect increases the volumetric efficiency of the engine, unfortunately a portion of this unburned fuel is expelled via the exhaust ports. This lowers fuel mileage and can increase emissions of HC.

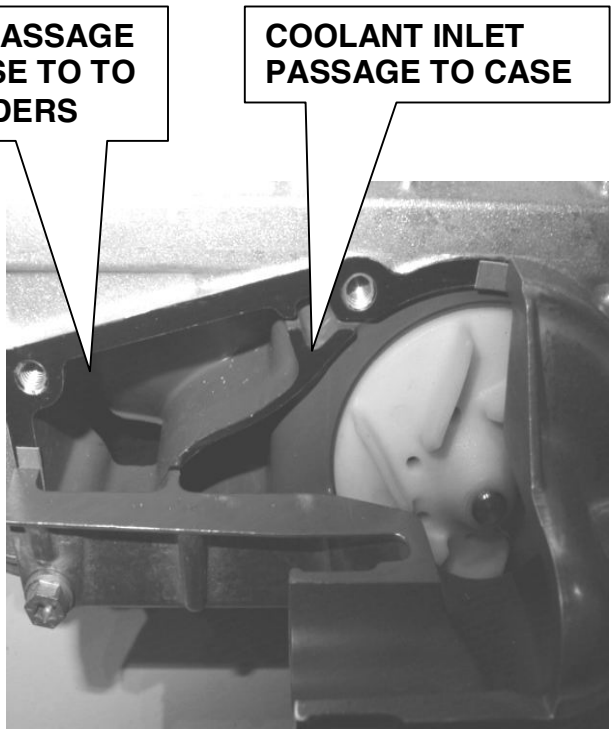


The new ROTAX 995 is a semi-direct injection engine. This means that the fuel is injected directly into the rear transfer ports via two sequential injectors per cylinder. Since no fuel goes through the crankcase most of the “scavenging” is done with pure air, so there is considerably less fuel loss via the exhaust ports. Fuel consumption and emissions are reduced.

To ensure the crankcase runs cool and the efficiency of the engine remains, “high” passages have been cast into the lower case to allow coolant to circulate through them. This area is sealed with a removable “o” ringed plastic cover. Next, the coolant is directed through the case into the mono block cylinder and around the exhaust ports. The cylinder is designed with a very large volume “bathtub” type of cooling system. This is similar to our previous rotary valve designs and ensures excellent cooling.

The cylinder head is a two piece design with fully machined removable combustion chamber inserts. These inserts are also finned to dissipate heat efficiently. They are sealed with «o» rings to the head cover. A square rubber ring is used to seal the external head area.

COOLING:



The water pump is larger and is designed to move approximately 30% more coolant through the engine than a series III design.

The outlet is split to send coolant to the lower case first and return to the cylinders.

The is no thermostat in this engine design, this improve cooling flow substantially.

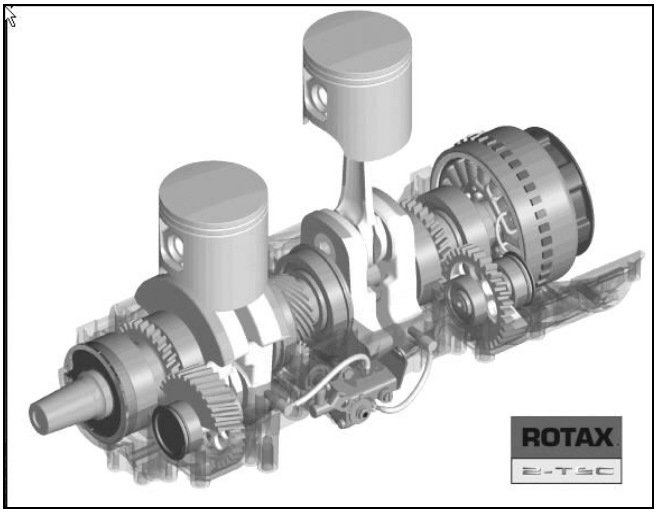
The engine warm up is electronically controlled by the ECM and the SDI to essentially reduce power output until warm to prevent cold seizures.

This high volume coolant flow is designed to give excellent cooling to the crankcase to ensure maximum performance even without a fuel/air mix traveling through the base.

Crankshaft Balancing:

Large displacement engines require balancing shafts, or in this case dual counterweighted gears to cancel primary and secondary vibrations adequately.

By choosing to use two asymmetrical gears rather than a shaft, the overall weight and size of the engine has been reduced. The size of the crankshaft counterweights could also be reduced due to the addition of these balancing gears. The gears are cast as one piece with their shafts. They are lubricated via high quality synthetic grease in a vented cavity.



Crankshaft Bearings and Seals:

The large diameter external main bearings use integrated seals to hold synthetic grease in their respective cavities as do Series III engines.

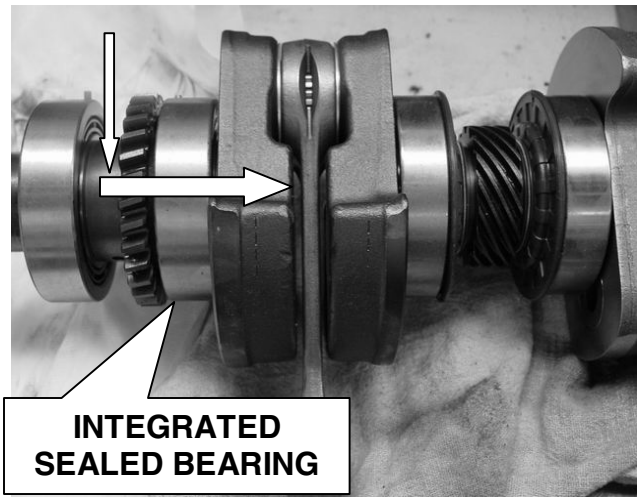
The difference is the crankshaft is cross-drilled to relieve any pressure build up from these cavities. This means there is a passage drilled vertically to the center of the crank and then horizontally to the primary pressure area. Both the MAG and the PTO sides are vented.

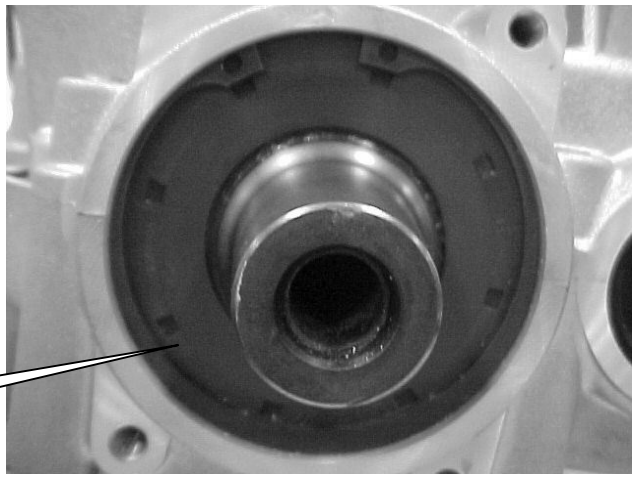
All six main bearings are externally the same diameter for maximum strength and rigidity.

The connecting rods are the heaviest I beam shaped forged rods used to date.

The center gear cavity is lubricated by an oil bath for the water and oil pumps.

The PTO seal is now held in place with a snap ring and is totally replaceable without splitting the cases!

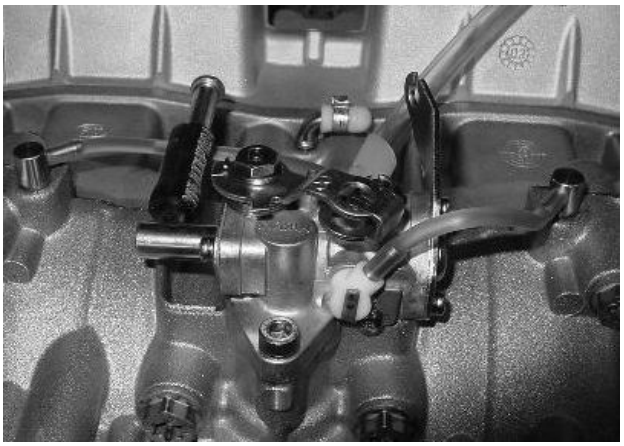




Low Oil Consumption:

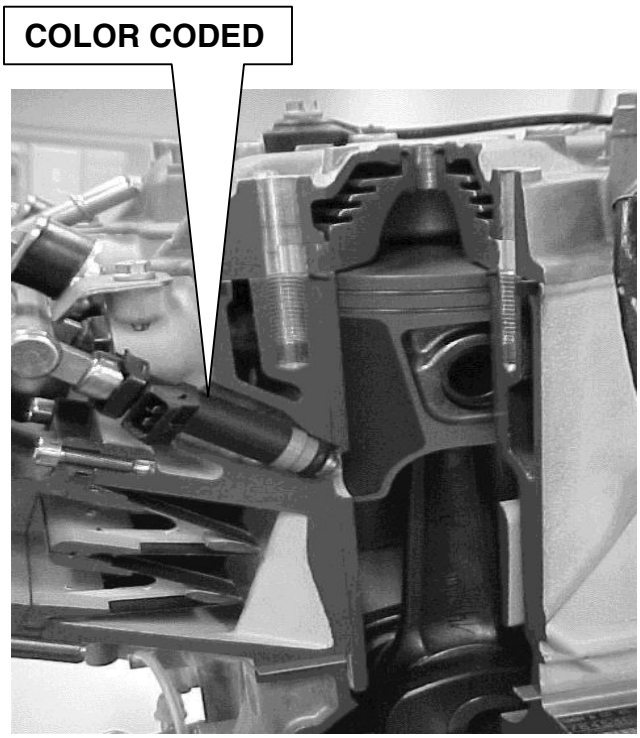
A new oil pump with considerably revised calibration has been introduced on this engine.

The output of this new pump has been reduced in the low to medium throttle opening angles. This is to reduce visible smoke while idling and riding at slow to medium trail speeds. The wide open throttle output has been increased slightly.



Summit: • **At H/A the oil pump should be adjusted to 20 mm** **Bombardier semi synthetic oil is recommended**	**Mach Z:** • **The oil pump should be adjusted to 18mm** **Bombardier semi synthetic oil or full synthetic are recommended**

Pistons:



The piston is a Molykoted, dual trapeze ring design for maximum longevity and sealing efficiency. The rings are chrome nitrated and have lubrication holes on the skirt.

Note the double “V” REED cage design, similar to our 793 HO.

Injectors:

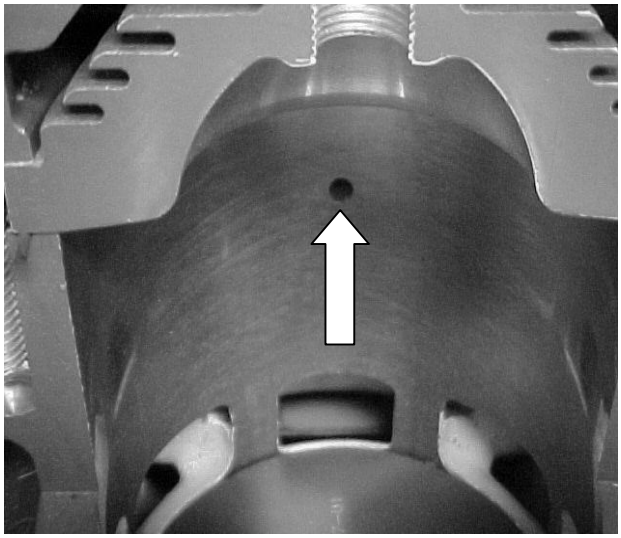
The 995’s dual injectors are of two different sizes and flow rates.

The smaller outside injector is identical to our 593 HO and 793 HO injectors. The inside injectors are of a larger flow rate, necessary for the larger displacement engine. This combination has proven to be optimum for a smooth idle and adequate wide-open throttle fuel flow.

The injectors are color coded to avoid mix-up.

- Brown = inside
- Blue = outside.

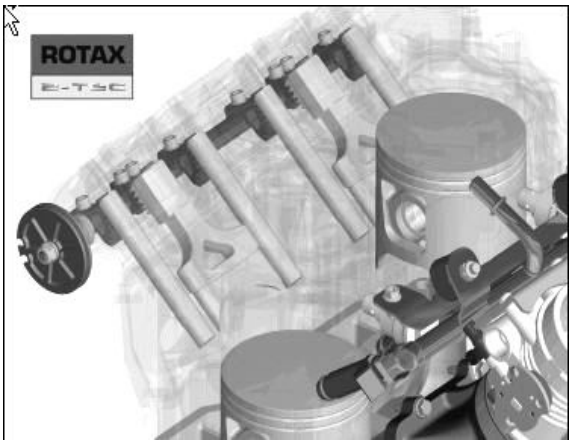
Cylinders:



A small hole is drilled into the rear of the cylinder directly into the boost port area. This hole serves as a decompressor to reduce starting effort at sea level. The Summit RT’s hole is plugged, since at high altitudes the cranking compression is already lower.

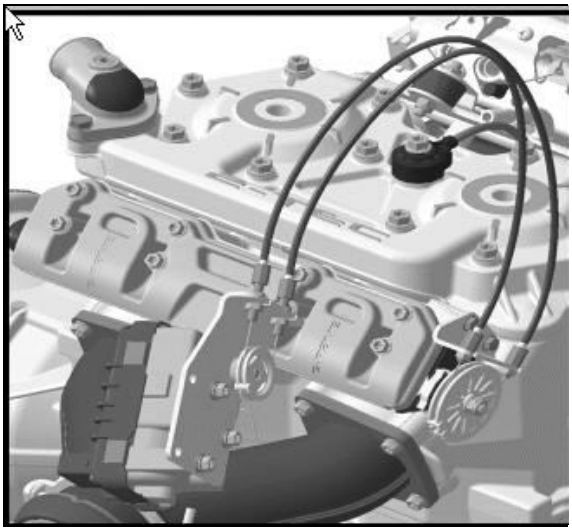
The Siamese or mono block cylinder was chosen for it’s high strength and the ability to have larger transfer ports than two separate cylinders. The bores are Nikasil coated so no overboring is possible.

RAVE:



The 995 is the first ROTAX snowmobile engine to effectively control all 3 exhaust ports. Doing so enhances torque and fuel economy. At the same time emissions of HC can be reduced considerably.

This is accomplished with three individual guillotines that are “racked” together. The outer guillotines have different movement rate compaired to the center one; due to their position vs the cylinder diameter.



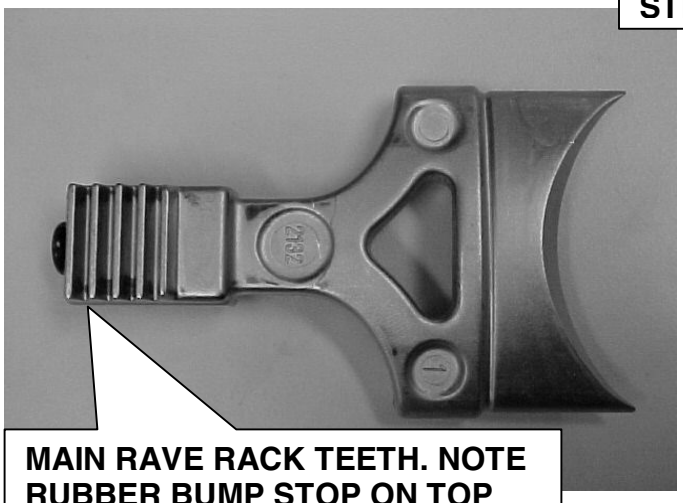
Their movement is controlled via an electronic servo motor and dual cable mechanism.

The ECM controls the opening and closing time based on throttle position and rpm.

Like the Power TEK engines the RAVE opening rpm is much higher under many types of riding conditions.

It is not uncommon to have the RAVE’s still closed as late as 6900 rpm and 40 % throttle openings. This optimizes torque and fuel economy.

This servo motor automatically resets it’s travel limits each time the engine is started. For the most part this system is self-adjusting for slight cable stretch variations. This is not designed to be a self-cleaning mode. Maintenance is very straightforward; there is a detailed service procedure in the Shop Manual.



MAIN RAVE RACK TEETH. NOTE RUBBER BUMP STOP ON TOP

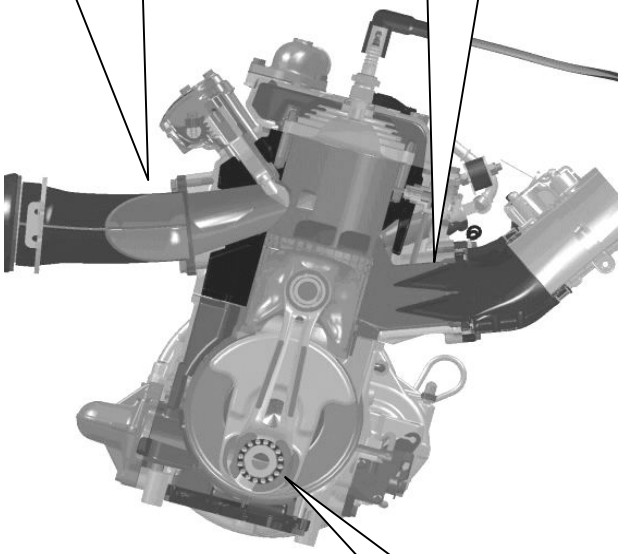
STEPPER MOTOR AND CABLE ADJUSTERS

RAVE DUAL CABLE DRUM

V-REED Valves:

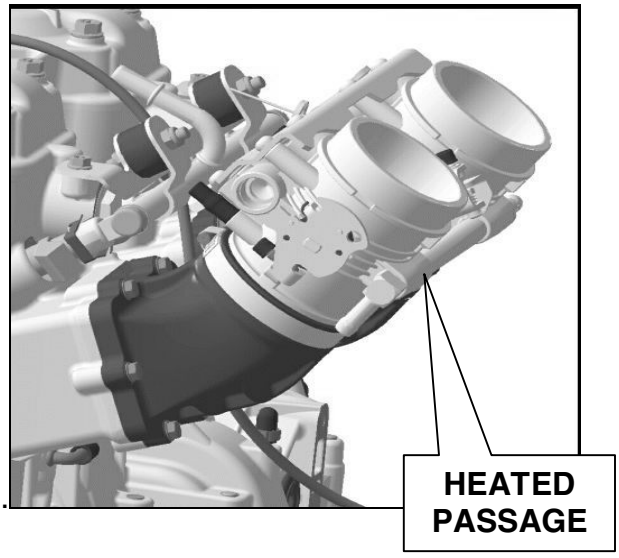
This side view of a cutaway 995 clearly shows the double V-REED cages and downdraft throttle body arrangement.

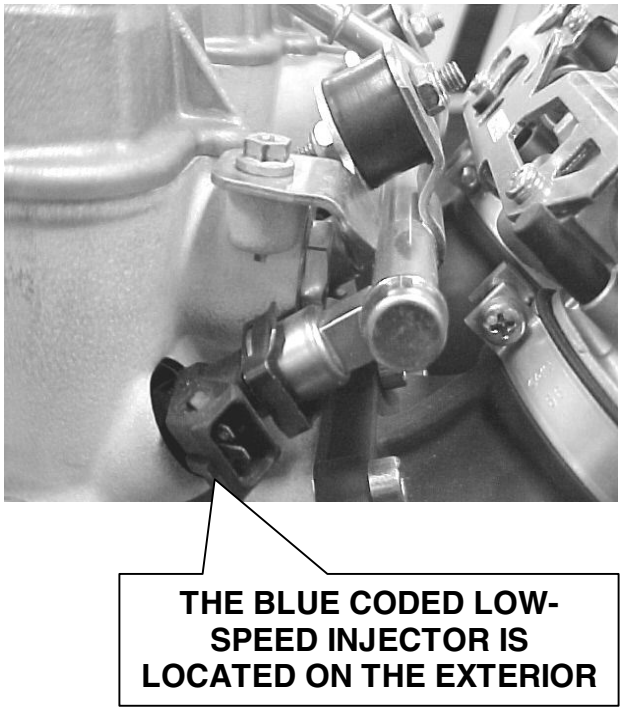
The reason the downdraft design was chosen was to permit the engine to be tilted back in the chassis, lowering the overall center of gravity of the engine.



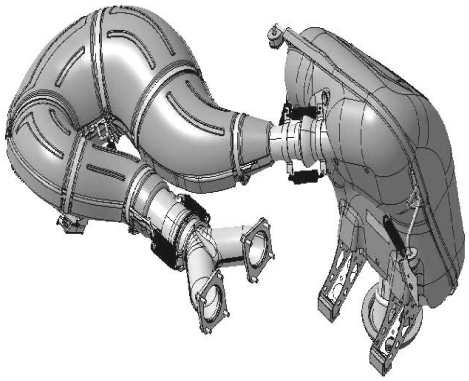
Throttle Bodies:

The next pictures show the 52mm throttle bodies, the dual fuel injectors, and their associated mounting rail. The throttle bodies are heated to prevent icing.



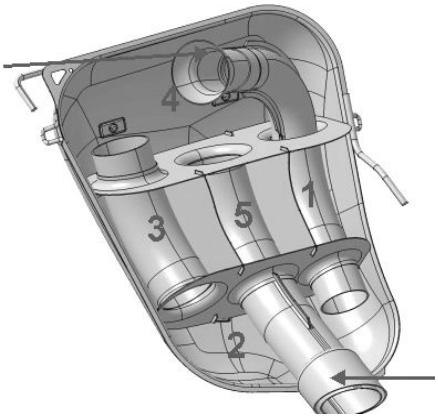


Exhaust System:



A totally new muffler system has been developed for the 995 engine. It uses a unique steel shell with sound deadening material beneath it to keep sound levels to a minimum. Steel was chosen rather than aluminum due to the high exhaust temperatures of a lean burning SDI type engine.

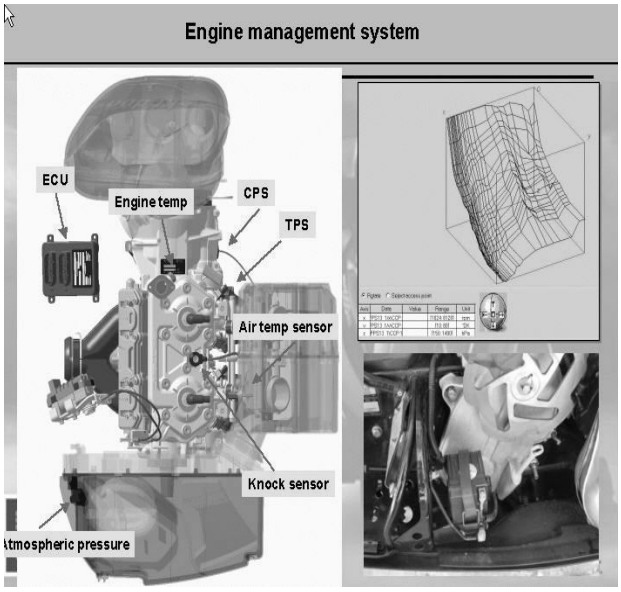
The exhaust manifold bolts are a special Scotchgrip type locking bolt. There is a specific torquing sequence outlined in the shop manual for these.



A new after muffler completes this exhaust system. It is a large volume 5-tube design. Internally it is a hollow box with 5 tubes and 2 walls creating 3 separate chambers.

The exhaust gases are allowed to expand with very little restriction so backpressures are fairly low and it has a distinct powerful sound to it.

Engine Management:



Several sensors feed the ECM input to control the 995's fuel injection, and ignition timing functions.

The knock sensor also acts as an automatic fuel octane switch as it does on the Power TEK engines. Stronger acceleration will be felt if the customer runs 91 octane fuel.

A small 3-amp hour battery is standard on the non-electric start models. It facilitates the injection and ignition process, for an easy engine start.

The ECM has many diagnostic codes stored in its memory. Be sure to read the shop manual for information on how to access this with BUDS. A new BUDS version is needed to program the 995. You can update to the latest version on BOSSWeb (www.bossweb.com).

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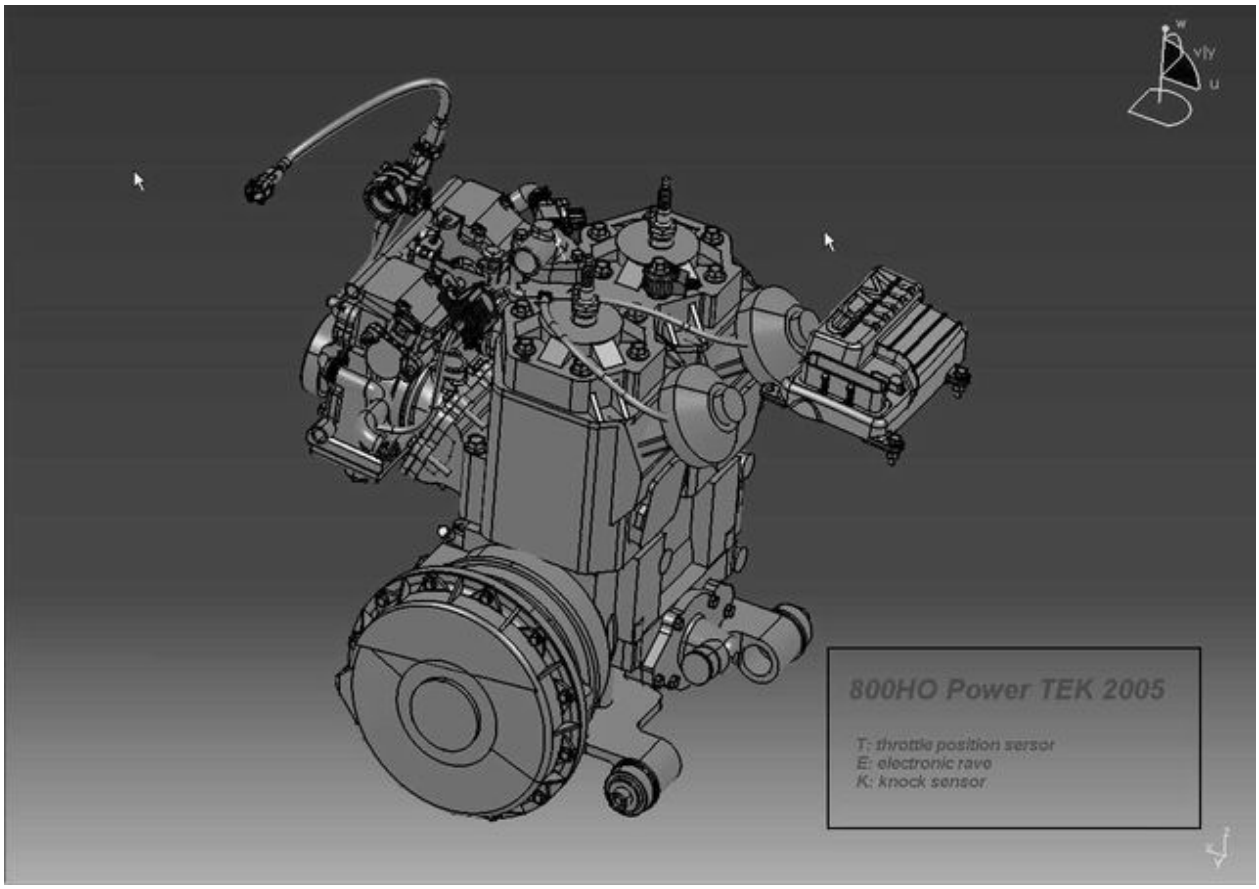
SUB-SECTION 4-C
POWER TEK ENGINES



Throttle Position Sensor

Electronic RAVE

Knock Sensor

BOMBARDIER RECREATIONAL PRODUCTS INC.

ROTAX 793 HO Power TEK Engine:

The TEK in Power TEK stands for:

- **T**hrottle position sensor.
- **E**lectronic RAVE
- **K**nock sensor.

The addition of these three items, and a very sophisticated ECM to our 793 HO engine with DPM brings a new level of fuel economy, emissions, and performance never before possible with a carbureted engine.

In fact, this engine is so efficient it is already 2006 EPA compliant! That is pretty incredible when many competitive EFI engines cannot even make this claim. Even oil consumption has been reduced considerably, especially at low to medium speeds.

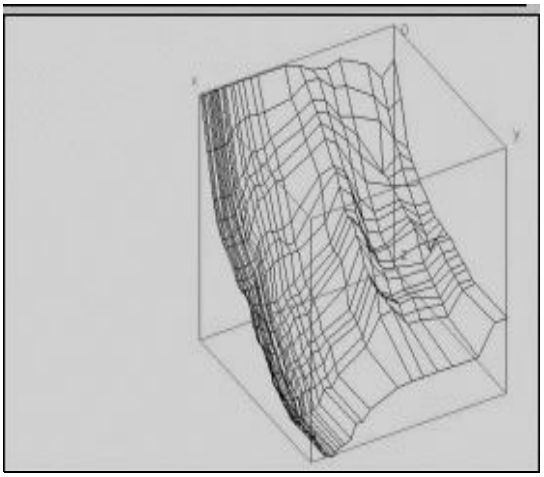
By optimizing the RAVE opening time, ignition timing, and fuel compensation, fuel mileage, throttle response and emissions will be improved greatly.

Lets take a look at the Power TEK features and benefits.

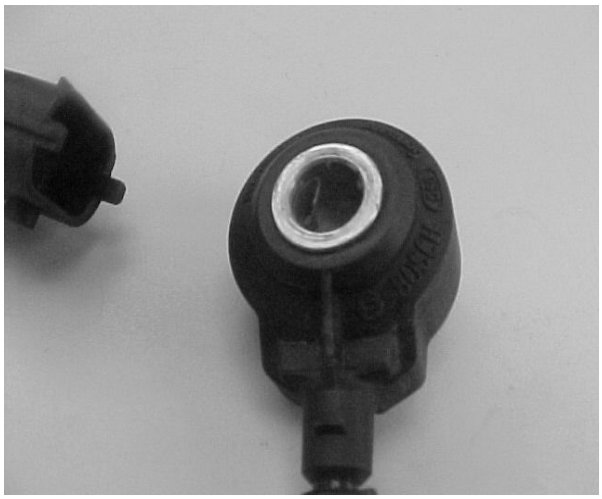
3D Ignition Mapping with Knock Sensor:

With the addition of a TPS, the throttle position or load can be more accurately predicted, along with the engine's rpm the ignition timing can be optimized for all conditions.

This includes ignition timing compensation for altitude and temperature just like our DPM equipped Summit's.



Automatic octane switch:



Since this system also incorporates a knock sensor, the timing can always be maximized for performance without the worry of detonation.

Another unique benefit is the ability of the knock sensor to act as an automatic octane level switch.

There are multiple ignition timing maps stored in the ECM.

The high octane fuel (premium) map is always used at start up, if the customer has put high octane fuel in the tank the vehicle will have maximum performance automatically.

If the tank is filled with a lower octane fuel, the engine will begin to detonate or “knock”. If this “knocking” is sensed for a pre-determined length of time the ECM will presume that a lower grade of fuel has been used and automatically switch to a lower octane ignition timing map.

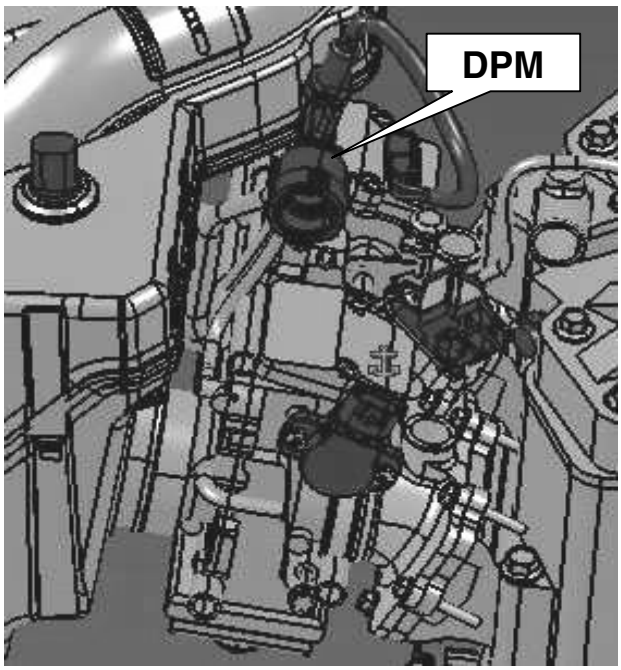
The engine will run safely, however peak performance will be down slightly.

600 HO SDI show as an example

Every time the engine is restarted, the ECM will automatically start in the “premium” map mode again.

In conclusion if the customer is willing to put high octane fuel in the vehicle he will be rewarded with improved performance, conversely the vehicle will run safely all day long on low octane fuel, however performance will be down slightly.

3D DPM:



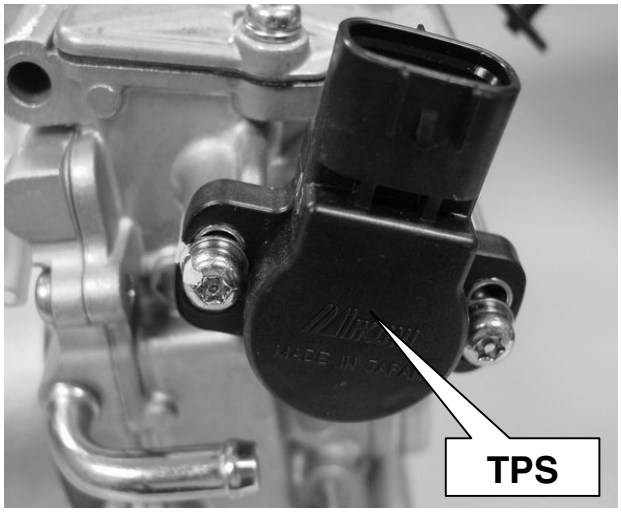
3D DPM means the DPM is more accurately calibrated for all conditions due to the addition of the TPS. The additional information about throttle position can greatly influence the calibration of the DPM system.

One of the first things you will notice is the idle speed is more accurately stabilized.

Flat slide carburetors traditionally have a tendency to have the idle rpm fluctuate up and down; this is a common characteristic of this type of carburetor. Some customers find this annoying. With the addition of 3D ignition timing and 3D DPM we are now able to stabilize the to within approx. 200 rpm.

The idle speed is stabilized by altering ignition timing and fuel compensation for changes in temperature and altitude, even engine temperature during warm up.

3D RER:

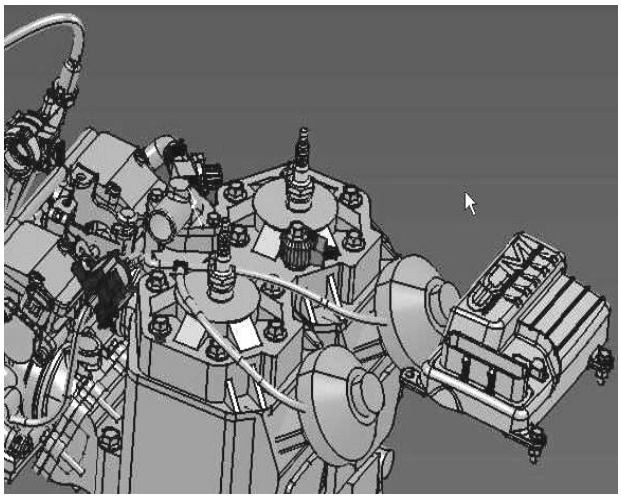


This is a simple but important improvement your customers will appreciate.

The RER function is now 3D. When the RER function is activated the engine water temperature, outside air temperature and even altitude are taken into consideration. These informations are important because they influence the rpm and degree of ignition advance the RER function initiates at. Ex.: a cold engine may require a slightly higher rpm and more ignition timing to ensure the engine continues to run after depressing the RER button.

Bottom line: more instant activation, and fewer failed executions due to a more accurately defined rpm and timing window.

3D RAVE Control:



The RAVE valves are now electro-pneumatically controlled.

They are still pressure activated; however, the pressure is now greater as it is now from the crankcase rather than exhaust system. This ensures a more positive opening due to the considerably higher pressure being used.

The “electro” or “E” part consists of an in-line electric solenoid controlled by the sophisticated ECM and it’s array of sensors.

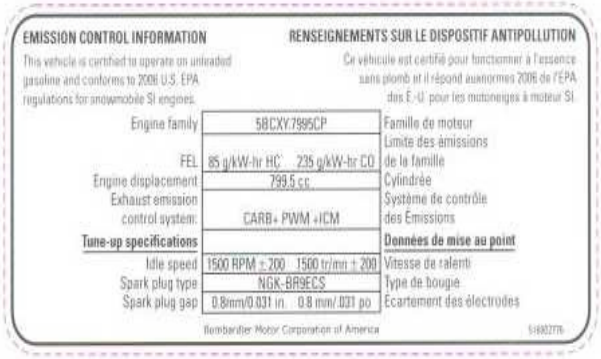
The benefits of this design are many.

First of all the RAVE valves are now held in the closed position until as much as 7300 rpm and 50% throttle opening. This greatly increases torque, fuel economy and at the same time it reduces HC emissions.

During average trail riding the valves will normally be closed, consequently throttle response out of corners will be enhanced.

In comparison, a conventional RAVE opening rpm is around 6,000, and throttle position and altitude are not taken into consideration.

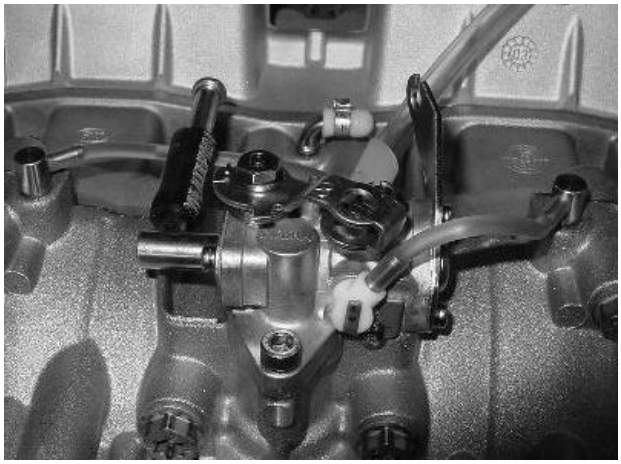
The benefits in fuel mileage and emissions are very noticeable. Fuel mileage increases in the range of 2-3 mpg are quite possible, and the HC and CO emissions are reduced enough to actually be 2006 EPA compliant. No other carbureted engine or competing EFI’s can claim this.



EMISSION CONTROL INFORMATION This vehicle is certified to operate on unleaded gasoline and conforms to 2006 U.S. EPA regulations for snowmobile SI engines.		RENSEIGNEMENTS SUR LE DISPOSITIF ANTIPOLLUTION Ce véhicule est certifié pour fonctionner à l'essence sans plomb et il répond aux normes 2006 de l'EPA des É.-U. pour les motoneiges à moteur SI.
Engine family	5BCXY.7995CP	Famille de moteur
FEL	85 g/kW-hr HC 235 g/kW-hr CO	Limite des émissions de la famille
Engine displacement	799.5 cc	Cylindrée
Exhaust emission control system:	CARB+ PWM +ICM	Système de contrôle des Émissions
Tune-up specifications		**Données de mise au point**
Idle speed	1500 RPM ± 200 1500 tr/mn ± 200	Vitesse de ralenti
Spark plug type	NGK-BR9ECS	Type de bougie
Spark plug gap	0.8mm/0.031 in. 0.8 mm/.031 po	Écartement des électrodes

Bombardier Motor Corporation of America

Reduced Oil Consumption:



A new oil pump with revised calibration has been introduced on these engines.

The output of this new pump has been reduced by 20-50% in the low to medium throttle opening angles. This is to reduce visible smoke while idling and riding at low to medium trail speeds. The wide open throttle output has been increased slightly.

Warm-Up Period:

The ignition timing and fuel compensation are varied to limit power output on a cold engine to reduce the chance of engine damage. This type of limitation is rpm related and the warm-up period should be seamless.

BUDS New Version:

Final note: a new version of buds is needed to program the power TEK models. Please check boss web for the latest version.

In Conclusion:

In conclusion, the new Power TEK engines combine most of the benefits of SDI:

- decreased fuel consumption
- faster throttle response
- more torque
- lower emissions
- electronic engine warm-up

All with the simplicity and flexibility of conventional carburetors.

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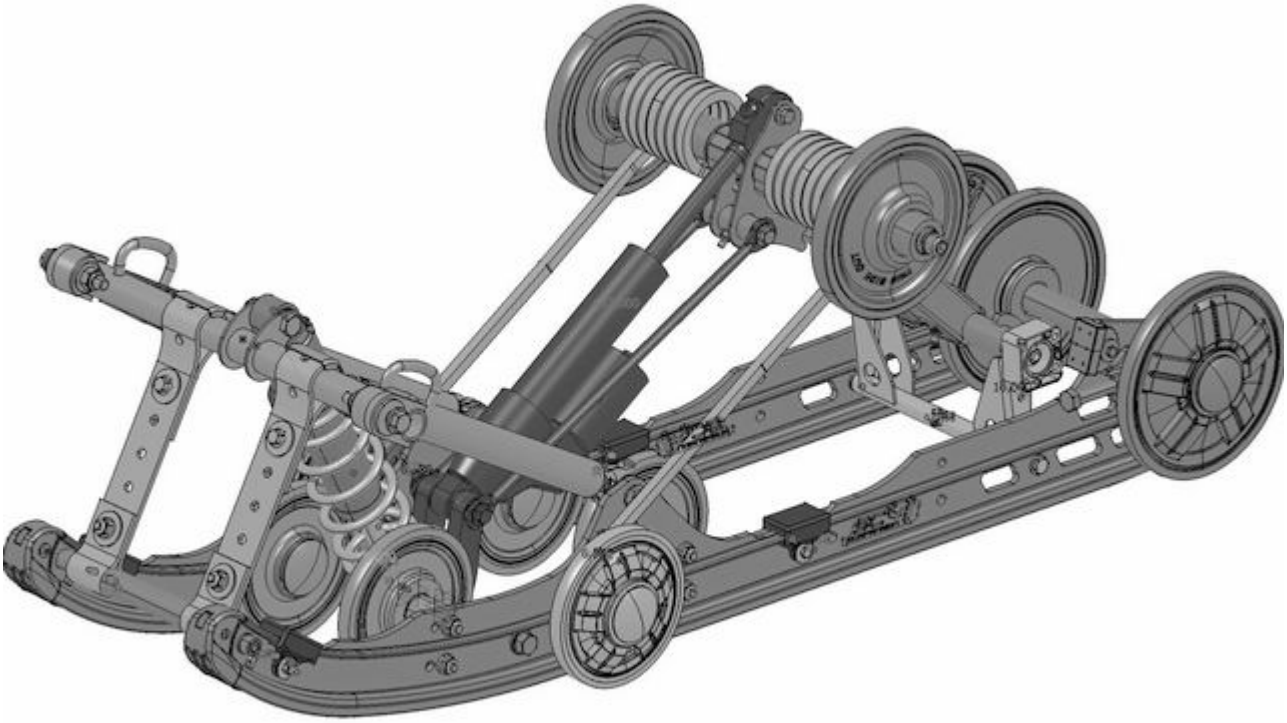
SUB-SECTION 4-D
SC IV REAR SUSPENSION

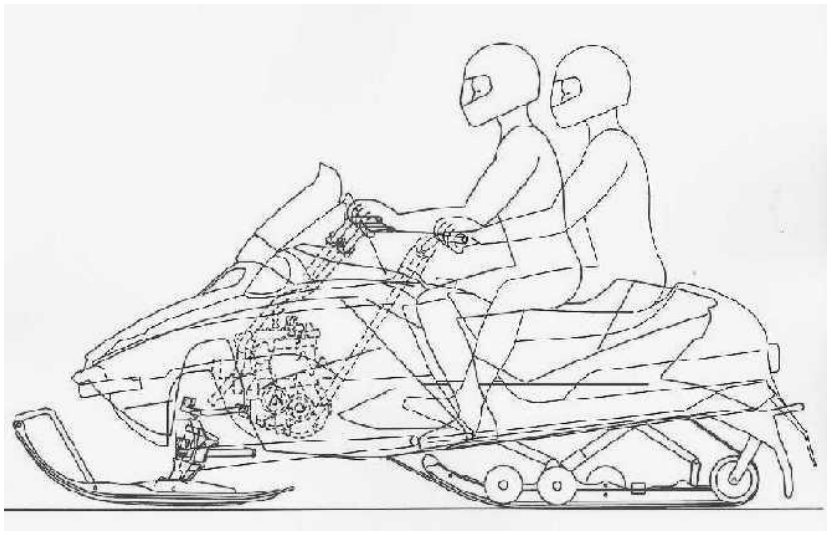


THE FIRST SUSPENSION OPTIMIZED FOR THE REV AND RT PLATFORMS.

BOMBARDIER RECREATIONAL PRODUCTS INC.

THE SC IV REAR SUSPENSION

All suspensions in the past have been designed with the fact that the rider was sitting over the rear arm.



With this in mind, engineers have designed most of the bump absorption into the rear arm. The front arm was for the most part looked at only as a means of adjusting weight transfer and has always been of a falling rate design. The SC-10, II & III are both excellent suspensions and have been finely tuned to work very well over the past few years. However with the advent of the REV and it's forward riding position engineers decided to rethink and improve the rear suspension.

Since the rider is now seated close to the front arm the roles of the front and rear arm were changed.

Conventionally designed suspensions work very well in most riding conditions, however, weight transfer and bump absorption in the deepest moguls could be made even better.
This is where the SC IV comes in, it is the first rear suspension designed from the ground up with the rider sitting close to the front arm in mind.

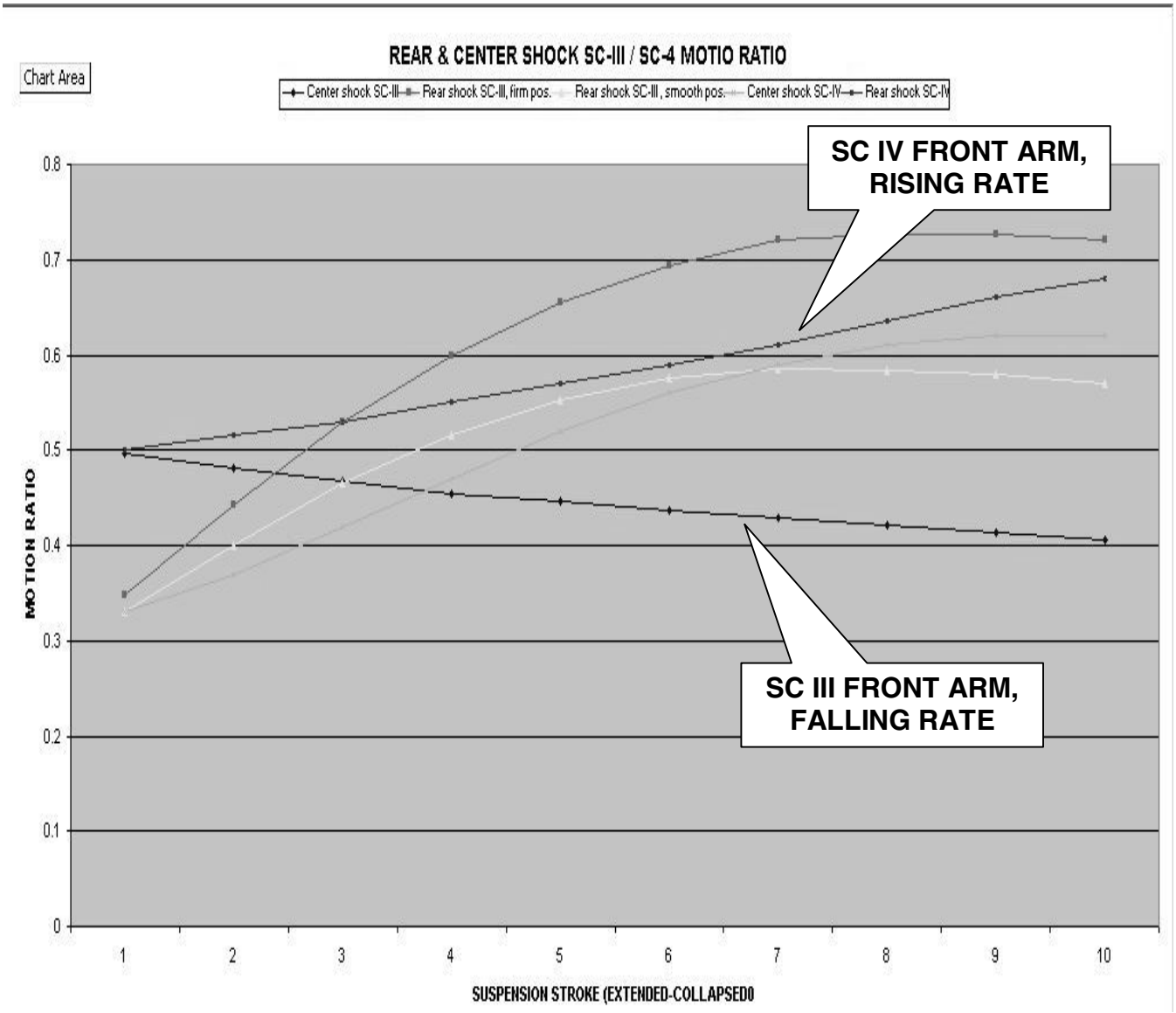
The goals were relatively simple however they have taken a total redesign to achieve.

1. Increase weight transfer from 0-30 mph.
2. Decrease weight transfer at higher trail speeds to improve feel when exiting out of corners.
3. Optimize center shock motion ratio for the REV and RT chassis.
4. Increase rear suspension travel.
5. Increase overall strength.
6. Reduce overall weight.

The engineers have accomplished all of this and more with the SC IV rear suspension which was race tested for the past two seasons on our open mod race sleds. As part of our continued efforts to improve our products, this suspension is now making its way to production on selected 2005 models.

On Rider Forward Vehicle:

In the bumps, on a rider forward vehicle, the front arm and center shock do more of the work, since the rider and most of the vehicle's mass is concentrated over the center arm. Conversely, on acceleration weight transfer is more difficult since the rider and vehicle's mass are moved farther forward compaired to conventional vehicle.

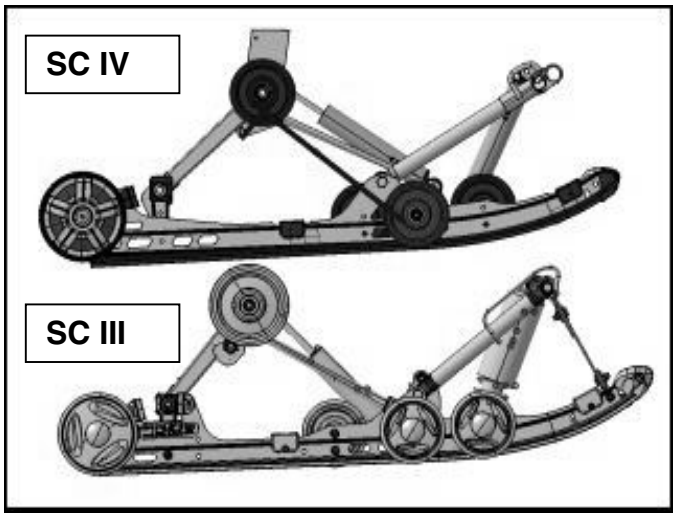


The motion ratio curve above depicts the major differences between the SC III & SC IV rear suspensions. If we take a close look at the center shock's motion ratio, you will see the SC III's front arm is a 15% falling rate design, the SC IV's is a 78% rising design.

Construction:

This major change allows the front arm to be supple in the little bumps and still resist bottoming if the rider encounters big ones.

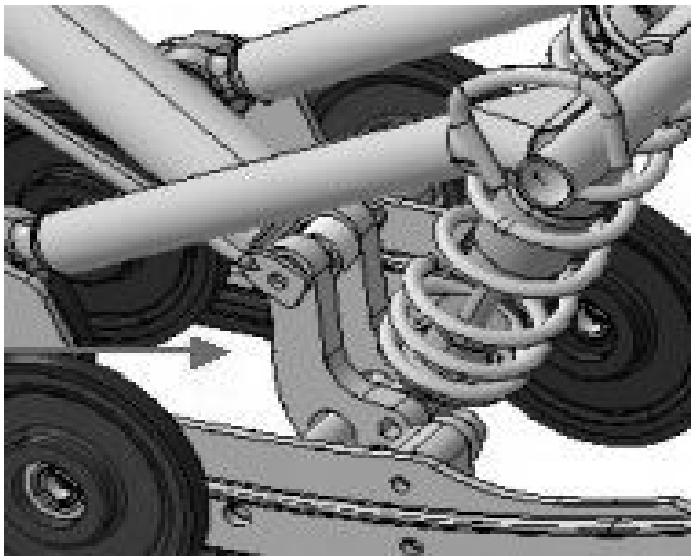
By designing the rear arm into a “slight” rising rate design, the weight transfer under acceleration is enhanced from 0-30 mph and is decreased at higher trail speeds. These changes were accomplished by linking the front shock through a pivoting mechanism to the rear arm. The front arm has also been lengthened and lowered.



Another unique change is the pass through front arm design.

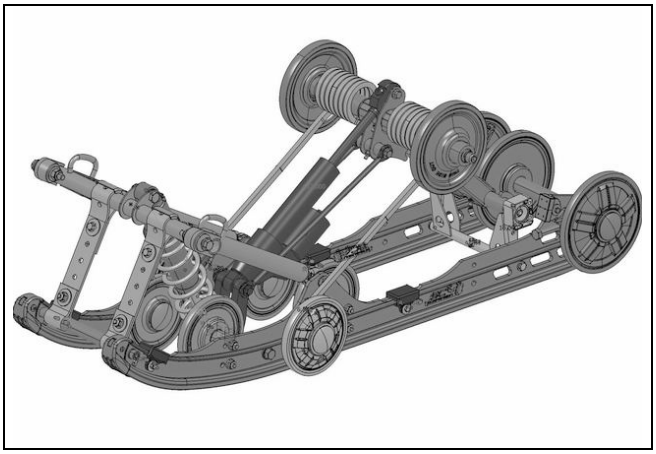
This along with the longer rear arm allows the suspension 1” more travel. The pivoting bell cranks are made of aluminum for lightweight.

Note that the motion ratio rods are non-adjustable.

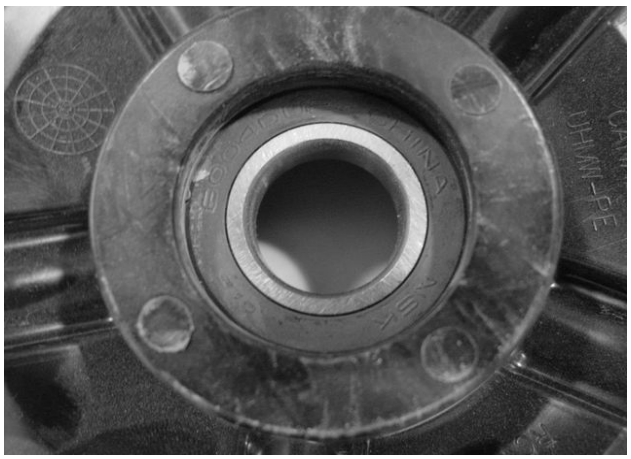


Here are some of the other highlights of this suspension:

1. Total weight of SC IV is 1.36 KG (3 lbs) less than the SC-3.
2. Rails are 3mm (1/8”) taller and slightly thicker for a 26% decrease in vertical flex and a 30% improvement in lateral flex.

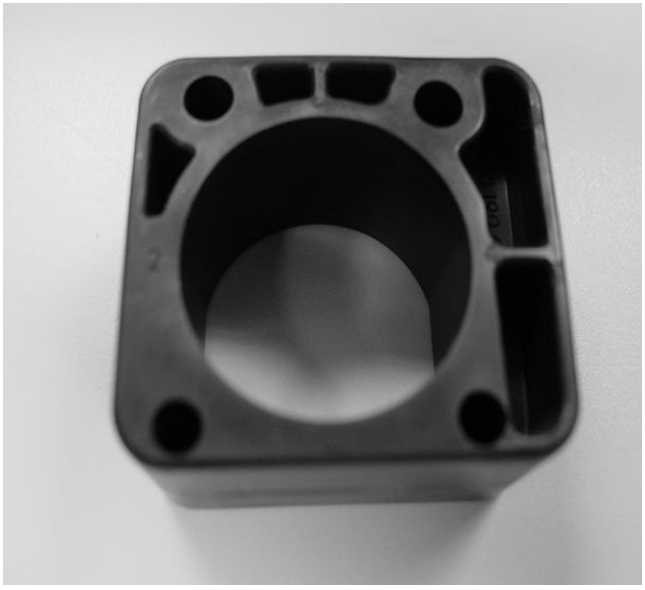


3. Offset idler wheels on rail to reduce noise.
4. Idler wheels are larger, 141mm versus 135mm due to increased rail height.
5. Labyrinth seals on idler bearings to reduce risk of water infiltration.
6. Smaller diameter idler wheel bearings used throughout.
7. Rear axle and bearings are smaller diameter.



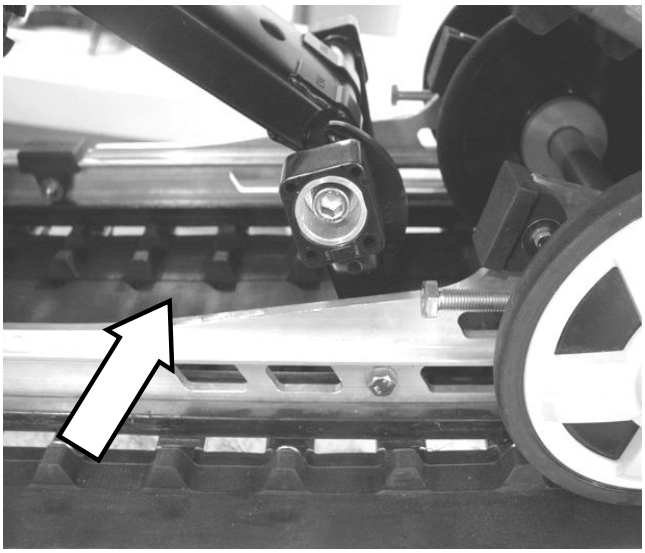
8. Teflon pivot bushings used throughout suspension.

9. Coupling blocks can now be used on their 4 sides thus 4 different adjustments.



10. No coupling front to rear. This reduces kick in downhill bumps and deceleration.

11. Rear coupling area is larger allowing more weight transfer.



Mission accomplished!

The SC IV suspension was designed to optimize the rider forward vehicle type. On the REV and the RT chassis, the front arm and center shock do more of the work.

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SECTION
5

2005 Technical Update
Special Tools

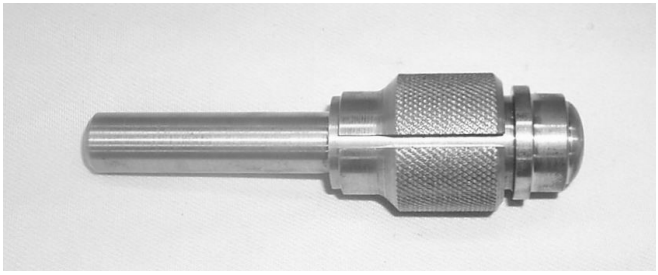
In Section 5 you will find the most current special tools information to efficiently service BRP vehicles.

Bombardier Recreational Products Inc.

New tool for the 2-TEC 1000 SDI

Piston circlip installer (MANDATORY)

P/N 529 035 998



New tool for the 2-TEC 1000 SDI

Exhaust plug plate (MANDATORY)

P/N 529 035 999

Application:
Two of these are required when doing a leak down test.

New tool for the 2-TEC 1000 SDI

Intake plug (MANDATORY)

P/N 529 036 000

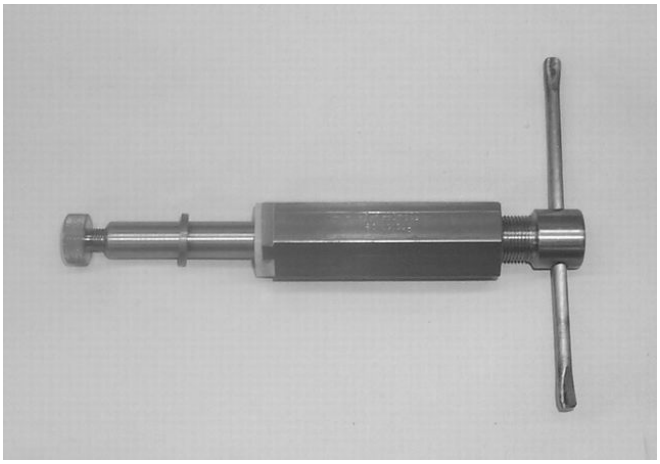
Application:
Two of these are required when doing a leak down test.

New tool for the 2-TEC 1000 SDI

Piston pin puller / installer (MANDATORY)

P/N 529 036 002

Application:
To remove and install the piston pin.

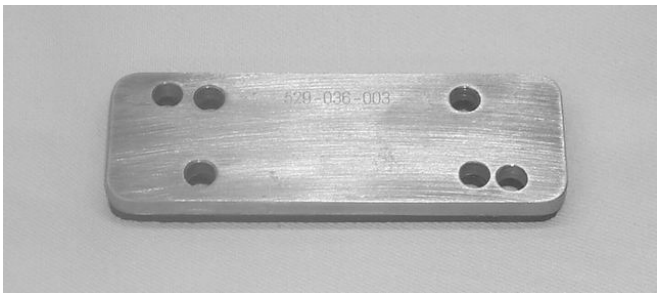


New tool for the 2-TEC 1000 SDI

RAVE plug plate (MANDATORY)

P/N 529 036 003

Application:
Two of these are required when doing a leak down test.

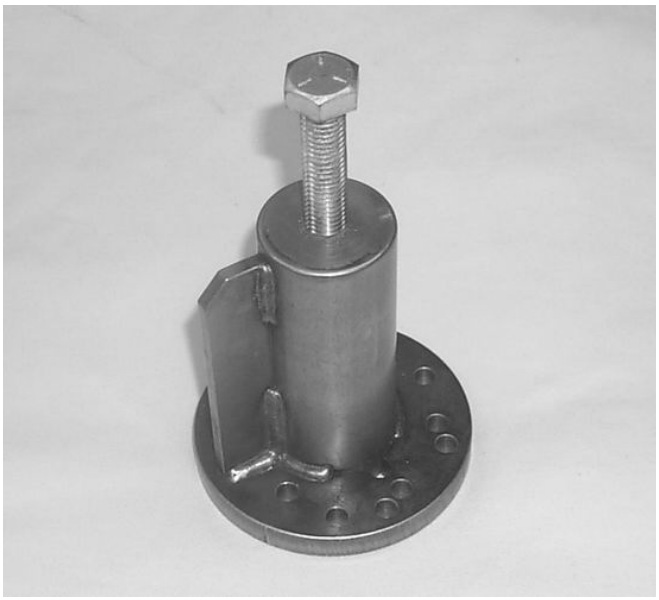


New tool that replaces the previous bearing puller P/N 420 877 636

Crankshaft bearing puller (OPTIONAL)

P/N 529 036 004

Application:
To remove the bearings from the crankshaft.
Stronger construction than previous model.



New tool for the 2-TEC 1000 SDI

Magneto holder (MANDATORY)

P/N 529 036 001

Application:
To be used to hold the crankshaft.

New tool to use with BUDS

Supplied Harness (MANDATORY)

P/N 529 035 997

Application:
To supply 12V power from a battery to a non-running unit. To use along with BUDS. Works with the supplied harness P/N 529 035 869.

Please note that all mandatory tools will be shipped automatically.

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SECTION
6

2005 Technical Update
Specifications

In Section 6 you will find the most important specifications concerning the 2005 line-up.

Bombardier Recreational Products Inc.

SKI-DOO 2005

MODIFICATIONS FOR 2005 MODELS	MACH Z	MX Z						SUMMIT					GSX			GTX			LEGEND		EXPEDITION		SKANDIC					
	ADRENALINE	FAN	TRAIL	ADRENALINE	RENEGADE	RENEGADE "X"	"X"	FAN	ADRENALINE	HIGHMARK	"X"	HIGHMARK X	FAN	SPORT	LIMITED	FAN	SPORT	LIMITED	SPORT	SE	SPORT	TUV	TUNDRA	LT	WT	SWT	SUV	ELITE
SPRING FEVER						X	X				X	X																
PLATFORM																												
RT	X									X		X																
ZX																			X	X								
REV		X	X	X	X	X	X	X	X		X		X	X	X	X	X	X			X							
YETI																						X						
LYNX																								X	X	X	X	
TUNDRA																							X					
ELITE																												X
ENGINE & CARB TYPE																												
1503 4-TEC EFI & MEC TRANS																												X
V-1004 4-TEC EFI & MEC TRANS																			X	X		X						
995 SDI	X									X		X																
793 HO TM-40 (2) & RER Power TEK					X	X	X								X			X										
793 HO TM-40 (2) & RER				X																								
793 HO TM-40 (2) & DPM & RER									X		X																	
593 HO SDI & RER				X	X	X	X							X	X		X	X										
593 HO TM 40 (2) & RER			X	X	X		X							X			X											
593 HO TM 40 (2) & DPM & RER									X																			
593 HO SDI (2) SYNCHRO																						X						
593 VM 38 (2)																									X		X	
593 TM 40 (2) 500 SS & RER			X	X										X			X											
550 VM 34 (2) & RER		X						X					X			X					X							
550 VM 34 (2) & SYNCHRO																									X	X	X	
443 VM 32 (1) & RER																								X				
380 VM 30 (2) & RER		X											X			X												
280 VM 34 (1)																							X					
CLUTCH																												
TRA III Cushion Drive			X	X	X	X	X		X		X			X	X		X	X				600			600		600	
TRA IV																			X	X		V-2						
TRA IV H.D. Cushion Drive																												X
TRA V Cushion Drive	X									X		X																
BOMBARDIER LITE		X						X					X			X					X		X		550	X	550	
COMET																								X				

C = Choice/Choix

SKI-DOO 2005

MODIFICATIONS FOR 2005 MODELS	MACH Z	MX Z						SUMMIT					GSX			GTX			LEGEND		EXPEDITION		SKANDIC					
	ADRENALINE	FAN	TRAIL	ADRENALINE	RENEGADE	RENEGADE "X"	"X"	FAN	ADRENALINE	HIGHMARK	"X"	HIGHMARK X	FAN	SPORT	LIMITED	FAN	SPORT	LIMITED	SPORT	SE	SPORT	TUV	TUNDRA	LT	WT	SWT	SUV	ELITE
SPRING FEVER						X	X				X	X																
REAR SUSPENSION																												
SC-4	X						X																					
SC-136"								X								X												
SC-144"									X		X																	
SC-151"									X		X																	
SC- 159"										X	X	X																
SC-3 121" (AMR)		X	X	X									X	X	X				X	X								
SC-3 136" (AMR)					X	X											X	X	X	X								X
SLIDE ARTICULATED																								X	X	X		
SUV ARTICULATED																						X					X	
TORQUE REACTION																							X					
SHOCK (Front)																												
GAS (HPG TA) piggy back						X	X																					
GAS (HPG)	X			X	X				X	X					X			X										
GAS (HPG TA) aluminium											X	X																
MOTION CONTROL GAS		X	X					X					X	X		X	X		X	X	X							X
HYDRAULIC																						X	X	X	550	X	X	
SHOCK (Center)																												
GAS (HPG)	X			X	X				X	X				X			X											
GAS (HPG VR)															X			X										
GAS (HPG TA) aluminium						X	X				X	X																
MOTION CONTROL GAS (VR)																			X	X								
MOTION CONTROL GAS		X	X					X					X			X					X							X
HYDRAULIC																						X					X	
SHOCK (Rear)																												
GAS (HPG)	X			X	X				X	X															600			
GAS (HPG VR)														X	X		X			1 UP								
GAS (HPG VR TA)																												
GAS (HPG TA) aluminium											X	X																
GAS (HPG TA) C46						X																						
MOTION CONTROL GAS (VR)																			X									
MOTION CONTROL GAS		X	X					X					X			X					X							X
AUTO-AIR																		X		GT								
HYDRAULIC																						X	X	X	550	550	X	
GAS (HPG TA) Aluminium Cliker							X																					

C = Choice/Choix

SKI-DOO 2005

MODIFICATIONS FOR 2005 MODELS	MACH Z	MX Z						SUMMIT					GSX			GTX			LEGEND		EXPEDITION		SKANDIC					
	ADRENALINE	FAN	TRAIL	ADRENALINE	RENEGADE	RENEGADE "X"	"X"	FAN	ADRENALINE	HIGHMARK	"X"	HIGHMARK X	FAN	SPORT	LIMITED	FAN	SPORT	LIMITED	SPORT	SE	SPORT	TUV	TUNDRA	LT	WT	SWT	SUV	ELITE
SPRING FEVER						X	X				X	X																
FRONT SUSPENSION TRAVEL(in)																												
11,0																			X	X								
10.0																												X
9.5	X	X	X	X	X	X	X						X	X	X	X	X	X			X							
9.0								X	X	X	X	X																
7.3																						X					X	
6.0																									X	X		
4.7																							X	X				
REAR SUSPENSION TRAVEL (in)																												
15.0	X						X			159	159	159																
14.0									151		151																	
13.0		X	X	X	X	X		X	144		144		X	X	X	X	X	X			X							
12.0																			121	121								
11.5																			GT	GT		X					X	X
10.5																												
10.0																												
8.5																								X	X	X		
8.0																							X					
TRACK																												
15 X 121 X .725		380											380			380												
15 X 121 X 0.880		550											550			550			X	X								
15 X 121 X 1.000	X		X	X			X							X	X													
15 X 121 X 1.250				C			C																					
15 X 136 X 0.725																												
15 X 136 X 0.880																	X	X	X	X								X
15 X 136 X 1.500								X																				
16 X 136 X 1.250					X	X															X							
16 X 136 X 1.750						C																						
16 X 144 X 2.000									X		X																	
16 X 151 X 2.000									800		X																	
16 X 159 X 2.000										X																		
16 X 159 X 2.250											X	X																
15 X 139 X .0.725																							X					
15 X 156 X 1.000																								X				

C = Choice/Choix

SKI-DOO 2005

MODIFICATIONS FOR 2005 MODELS	MACH Z	MX Z						SUMMIT					GSX			GTX			LEGEND		EXPEDITION		SKANDIC					
	ADRENALINE	FAN	TRAIL	ADRENALINE	RENEGADE	RENEGADE "X"	"X"	FAN	ADRENALINE	HIGHMARK	"X"	HIGHMARK X	FAN	SPORT	LIMITED	FAN	SPORT	LIMITED	SPORT	SE	SPORT	TUV	TUNDRA	LT	WT	SWT	SUV	ELITE
SPRING FEVER						X	X				X	X																
20 X 156 X 1.250																						X			X		X	
24 X 156 X 1.000																										X		
STUDS APPROVED	X	550	X	X	X	X	X						550	X	X	550	X	X	X	X	X								X
DRIVE SPROCKET																												
10 Teeth internal		X	X	X	X	X							X	X	X		X	X										
10 Teeth internal/external	X						X		X	X	X	X																
9 Teeth internal								X								X			X	X	X							
9 Teeth internal/external											159																	X
8 Teeth internal																						X		X	X	X	X	
SKI																												
PLASTIC (Blow Mold)		X											X			X					X							
PRECISION	X		X	X	X	X	X							X	X		X	X	X	X								X
MOUNTAIN								X	X	X	X	X																
STEEL																							X					
STEEL WIDE																								X				
LYNX (ADJ)																						X			550		550	
LYNX (ADJ) & Liner																									600	550	600	
SKI-STANCE (Carbide to Carbide)																												
32																							X	X				
35.5																									X	X	X	
38.8																						X						
40-42.5								X	X	X	X	X																
42.5		X											X			X					X							
47	X		X	X	X	X	X							X	X		X	X	X	X								X
BRAKE																												
HYDRAULIC Racing type S						X	X				X																	
HYDRAULIC (Short Lever)		X	X	X	X			X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HYDRAULIC Racing RT	X									X		X																
AJD TOE HOLD	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X							
ANTI-SLIP RUNNING BOARDS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X					X	
HEATED GRIPS																												
Racing with integrated element	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

C = Choice/Choix

SKI-DOO 2005

MODIFICATIONS FOR 2005 MODELS	MACH Z	MX Z						SUMMIT					GSX			GTX			LEGEND		EXPEDITION		SKANDIC					
	ADRENALINE	FAN	TRAIL	ADRENALINE	RENEGADE	RENEGADE "X"	"X"	FAN	ADRENALINE	HIGHMARK	"X"	HIGHMARK X	FAN	SPORT	LIMITED	FAN	SPORT	LIMITED	SPORT	SE	SPORT	TUV	TUNDRA	LT	WT	SWT	SUV	ELITE
SPRING FEVER						X	X				X	X																
HANDLE BAR																												
Strap					X	X		X	X	X	X	X										X					X	
REV-Adjustable		X	X	X	X								X	X	X													
Straight / Riser-115	X																											
Straight / Riser-115/J-hooks						X	X																					
Mountain/Straight/Riser-180/J-hooks											X	X																
Mustang								X																				
Mustang / J-hooks									X	X																		
GTX																X	X	X			X							
Touring																			X	X		X	X	X		X		
Straight																									X		X	
Air Plane Type																												X
WINDSHIELD																												
LOW fix	X																											
MEDIUM Moving		X	X	X	X																							
MEDIUM Profile																							X					X
MEDIUM fix (with Hand Guard)						X	X																					
MEDIUM fix Mountain								X	X	X	X	X																
HIGH fix																X	X	X			X							
HIGH Profile																			1 up	1 up		X		X	X		X	
HIGH Moving													X	X	X													
EXTRA-HIGH Profile																			GT	GT						X		
COLOR																												
BLACK / YELLOW					X	X	X	X																				
BLACK / RED					X		X	X						X														
YELLOW / BLUE									X	X	X	X																
ORANGE / BLACK																												
SILVER / BLUE															X		X											
SAESHORE / EARTH GREY																		X										
SAESHORE																						X						
BLACK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X				X	
YELLOW		X	X																				X	X	X	X	X	
SYLVER																												X

C = Choice/Choix

SKI-DOO 2005

MODIFICATIONS FOR 2005 MODELS	MACH Z	MX Z						SUMMIT					GSX			GTX			LEGEND		EXPEDITION		SKANDIC					
	ADRENALINE	FAN	TRAIL	ADRENALINE	RENEGADE	RENEGADE "X"	"X"	FAN	ADRENALINE	HIGHMARK	"X"	HIGHMARK X	FAN	SPORT	LIMITED	FAN	SPORT	LIMITED	SPORT	SE	SPORT	TUV	TUNDRA	LT	WT	SWT	SUV	ELITE
SPRING FEVER						X	X				X	X																
SEAT																												
LOW TACH SEAT		X	X	X	X	X	X						X	X	X				X	X								
HIGH TACH SEAT	X							X	X	X	X	X				X	X	X	GT	GT	X		X	X	X	X	X	
POWER OUTLET															X			X							X	X	X	X
VISOR OUTLET (Driver)													X	X	X	X	X	X										X
VISOR OUTLET (Passenger)																		X										
SPEEDOMETER																												
Electronic Analog	X	X	X	X	X	X	X						X	X	X	X	X	X	X	X	X	X						X
Mechanical																								X	X	X	X	
TACHOMETER																												
Electronic Analog	X		X	X	X	X	X							X	X		X	X	X	X		X						X
Speedo/Tacho integrated								X	X	X	X	X																
FUEL & TEMP GAUGE																												
Electronic Analog	X														X			X		X								X
MAGNETO																												
240 WATTS																							X	X				
290 WATTS																									600		600	
340 WATTS		X						X					X			X					X				550	550	550	
360 WATTS			X	X	X	X	X		X		X			X	X		X	X										
480 WATTS	X			SDI	SDI	SDI	SDI			SDI		SDI		SDI	SDI		SDI	SDI				SDI						
ALTERNATOR																												
40 AMPS																			V-2	V-2		V-2						
55 AMPS																												X

C = Choice/Choix

2005 MODELS, MIKUNI CARBURETOR CALIBRATION

ENG	MODEL NAME	DPM JET		MIKUNI #	NEEDLE	N.JET	C.A.	V.S.	S.J.	IDLE	M.J.	P.J.	A.S.	P.S.	FLOAT	RPM
		VENT	LEAN					ϕ	ϕ	±0.1			Ref.		LEVEL ± 1	±200
277	Tundra 280 R			VM34-585	6DH4-3	O-8 (159)	2.5	1,5(3)	N/A	1.5	200(5)	40	1.0	N/A	23.9	1650
377	GSX 380 R Fan GTX 380 R Fan MXZ 380 R Fan			VM30-213	6DEY13-3	Q-2 (159)	2.0	1.2(3)	0.9	1.7	195(5)	35	2.0	N/A	23.9	1650
443	Skandic 440 R LT			VM32-306	6DGY12-3	O-0 (159)	3.0	1.5(3)	1.5	1.4	180	50	[1,0]	N/A	23.9	1800
453	MXZ x 440 Racing			TMX34-29	6EN29-61-3	Q-6	4.0	1,5(3)	N/A	1.8	400(8)	25	[1,0]	N/A	N/A	1600
453	MXZ x 440 Racing Europe			TMX34-33	6EHY2-59-3	Q-6	4.0	1,5(3)	N/A	1.5	350(8)	25	[1,0]	N/A	N/A	1600
550	MXZ 550 R Fan GSX 550 R Fan GTX 550 R Fan Expedition 550 R Sport Fan SUMMIT 550 Fan Europe			VM34-617	6BCY40-4	P-7 (159)	2.5	1.2(3)	1.0	1.6	260(5)	45	[2,0]	N/A	23.9	1650
550	SUMMIT 550 R Fan			VM34-616	6BCY40-3	P-7 (159)	2.5	1.2(3)	1.0	1.9	220(5)	45	[2,0]	N/A	23.9	1650
550	Skandic 550 WT Fan Skandic 550 SWT Fan Skandic 550 SUV Fan			VM34-596	6DH4-2	P-0 (159)	2.5	1,2(3)	1.0	1.6	190	40	[1,5]	N/A	23.9	1650
593	GSX 500 SS R Sport GTX 500 SS R Sport MXZ 500 SS R Adrenaline MXZ 500 SS R Trail			TM40-B313	9DGM15-58-1(6)	P-0M(4)	2.0	1,5(3)	1.1	1.5	360(5)(8)	17.5	N/A	1.5	N/A	1600
593	Skandic 600 WT Skandic 600 SUV			VM38-449	6DGL24-3	P-9 (480)	2.5	1,5(3)	1.5	1.5	330	40	2.0	N/A	18.1	1900
593HO	SUMMIT 600 R Adrenaline	1.2	2.0	TM40-B325	9DGK11-58-3	P-0M(4)	2.0	1,5(3)	1.1	2.0	380(5)(8)	17.5	N/A	1.5	N/A	1600
593HO	GSX 600 R Sport GTX 600 R Sport MXZ 600 R Adrenaline MXZ 600 R Trail MXZ 600 R Renegade MXZ 600 R X			TM40-B316	9DHI14-58-1(6)	P-0M(4)	2.0	1,5(3)	1.1	1.6	380(5)(8)	17.5	N/A	1.5	N/A	1600
793HO	SUMMIT 800 R Adrenaline SUMMIT 800 R X	1.2 1.2	2.0 2.0	TM40-B328	9EGY2-58-3	P-0M(4)	2.0	1,5(3)	1.1	2.0	400(5)(8)	17.5	N/A	1.5	N/A	1500
793HO	MXZ 800 R Adrenaline			TM40-B319	9DGI16-58-1 (6)	P-0M(4)	2.0	1,5(3)	1.1	1.7	400(5)(8)	17.5	N/A	1.5	N/A	1500
793HO	GSX 800 R Limited GTX 800 R Limited MXZ 800 R Renegade MXZ 800 R Renegade X MXZ 800 R X	1.2 1.2 1.2 1.2 1.2	2.0 2.0 2.0 2.0 2.0	TM40-B322	**9EGI04-58**	P-0M(4)	2.0	1,5(3)	1.1	1.7	440(5)(8)	17.5	N/A	1.5	N/A	1500

(1) Without primary choke

(2) With straigth float arm

(3) Viton type

(4) Press fit type nickel plated

(5) DPM vent hose or HAC vent hose or carbs vent hoses should be connected on the air box.

(6) Needle with 3 grooves (nominal plus 2 on richer side)

(8) Intake adaptor without RIB

[x.xx] Fine thread (20°, 0.5mm pitch)

Color Identification : MAG= Red, CENTER= Yellow, PTO= Blue.

Note: No color if carburetors are identical

Shock Valving Calibration
Calibration des valves d'amortisseurs

Legend VR T/A 2005

FRONT/AVANT	CENTRE	REAR/ARRIÈRE
		Shock/Amortisseur
		503190007
		IFP 185
		Compression
		8x30x0.152 1x12x0.114
		3x30x0.203
		2x15x0.203
		Rebound
		5x26x0.254
		1x12x0.203
		2slit piston2x 0.3

MXZ X package 2005

FRONT/AVANT	CENTRE	REAR/ARRIÈRE
Shock/Amortisseur	**Shock/Amortisseur**	**Shock/Amortisseur**
505071300-301	503190443	503190306
IFP: 54 ± 1	IFP:119.5	IFP: 54.5
Compression	Compression	Compression
	1 x 30 x 0.203	1x30x.203
1 x 30 x 0.152	1 x 15 x 0.152	1x15x.152
1 x 14 x 0.152	5 x 30 x 0.152	4x30x.203
5 x 30 x 0.152		
1 x 15 x 0.152	1 x 18 x 0.114	1x22x..114
Rebound	Rebound	Rebound
1 x 26 x 0.203	1 x 26 x 0.254	1x26x.254
1 x 15 x 0.114	1 x 15 x 0.114	1x15x.114
2 x 26 x 0.152	4 x 26 x 0.254	4x26x.254
1 x 15 x 0.254	1 x 16 x 0.203	2x17x.203
1 slit piston	1 slit piston	1 slit piston
		Base valve =5x18x.305
		C36 Adj AL

Shock Valving Calibration
Calibration des valves d'amortisseurs

MXZ Renegade X package 2005

FRONT/AVANT	CENTRE	REAR/ARRIÈRE
Shock/Amortisseur	**Shock/Amortisseur**	**Shock/Amortisseur**
505071300-301	503190445	503190382
IFP: 54 ± 1	IFP: 119.5	IFP: 178.5
Compression	Compression	Compression
	1 x 30 x 0.203	2 x 40 x 0.152
1 x 30 x 0.152	1 x 15 x 0.152	1 x 22 x 0.114
1 x 14 x 0.152	5 x 30 x 0.152	5 x 40 x 0.203
5 x 30 x 0.152		
1 x 15 x 0.152	1 x 18 x 0.114	1 x 18 x 0.152
Rebound	Rebound	Rebound
1 x 26 x 0.203	1 x 26 x 0.254	1 x 36 x 0.203
1 x 15 x 0.114	1 x 15 x 0.152	1 x 16 x 0.114
2 x 26 x 0.152	4 x 26 x 0.254	6 x 36 x 0.203
1 x 15 x 0.254	1 x 16 x 0.203	1 x 28 x 0.254
1 slit piston	1 slit piston	Piston hole 2.0
	C36	C46

Summit X package 144/159 2005

FRONT/AVANT	CENTRE	REAR/ARRIÈRE
Shock/Amortisseur	**Shock/Amortisseur**	**Shock/Amortisseur HPG AL**
505071644	503190975	503190978
IFP: 167	IFP: 121.5	IFP: 171.5
Compression	Compression	Compression
1 x 30 x 0.152	1 x 30 x .203	1 x 30 x .203
1 x 13 x 0.152	1 x 14 x .152	1 x 15 x .152
5 x 30 x 0.152	4 x 30 x .203	2 x 30 x .152
1 x 15 x 0.203	1 x 22 x .114	5 x 30 x .203
		1x22x.152
Rebound	Rebound	Rebound
1 x 26 x 0.203	1 x 26 x .254	1 x 26 x .254
1 x 14 x 0.114	1 x 15 x .114	1 x 15 x .114
3 x 26 x 0.152	4x26x.254	4x26x0.254
1 x 14 x 0.254	1x17x0.203	1x16x0.203
1 slit piston 2x0.3	1 slit piston 2x0.3	1 slit piston 2x0.3

Shock Valving Calibration
Calibration des valves d'amortisseurs

Summit HM 162 RT

	CENTRE	
	Shock/Amortisseur	
	503190834	
	IFP: 134	
	Compression	
	1 x 30 x 0.203	
	1 x 15 x 0.152	
	5 x 30 x 0.203	
	1 x 22 x 0.152	
	Rebound	
	1 x 26 x 0.254	
	1 x 15 x 0.114	
	4x26x0.254	
	1x16x0.203	
	1 slit piston 2x0.3	

Summit HM X 162 RT 2005

FRONT/AVANT	**CENTRE**	**REAR/ARRIÈRE**
Shock/Amortisseur	**Shock/Amortisseur**	**Shock/Amortisseur HPG AL**
505071457	503190662	503190990
IFP: 176	IFP: 121.5	IFP: 171.5
Compression	Compression	Compression
1 x 30 x 0.152	1 x 30 x .203	1 x 30 x 0.203
1 x 15 x 0.152	1 x 15 x .152	1 x 15 x 0.152
5 x 30 x 0.152	10 x 30 x .152	5 x 30 x 0.203
1 x 15 x 0.203	1 x 22 x .114	1 x 22 x 0.152
Rebound	Rebound	Rebound
1 x 26 x 0.203	1 x 26 x. 254	1 x 26 x 0.254
1 x 15 x 0.114	1 x 15 x. 114	1 x 15 x 0.114
2 x 26 x 0.152	4x26x .254	4x26x0.254
2 x 15 x 0.203	1x16x .203	1x16x0.203
1 slits piston 2x0.3	1 slit piston 2x0.3	1 slit piston 2x0.3

Shock Valving Calibration
Calibration des valves d'amortisseurs

MX Z 380/600 Europe 2005
Rear 380 only

FRONT/AVANT	CENTRE	REAR/ARRIÈRE
Shock/Amortisseur	**Shock/Amortisseur**	**Shock/Amortisseur**
505071557	503190973	503190808
IFP:186 ±1	IFP: 119.5	IFP:171.5
Compression	Compression	Compression
	2 x 30 x 0.152	1 x 30 x 0.203
1 x 30 x 0.152	1 x 20 x 0.114	1 x 20 x 0.152
1 x 13 x 0.152	8 x 30 x 0.152	3 x 30 x 0.203
5 x 30 x 0.152		
1 x 17 x 0.152	1 x 22 x 0.114	1 x 18 x 0.254
Rebound	Rebound	Rebound
1 x 26 x 0.203	1 x 26 x 0.254	1 x26 x 0.254
1 x 16 x 0.114	1 x 18 x 0.114	1 x 20 x 0.114
6 x 26 x 0.152	6 x 26 x 0.254	5 x 26 x 0.254
1 x 16 x 0.254	1 x 16 x 0.203	1 x 16 x 0.203
2 slit piston	1 slit piston	1 slit piston
	C36	C36

MXZ X Europe 2005

FRONT/AVANT	CENTRE	REAR/ARRIÈRE
Shock/Amortisseur	**Shock/Amortisseur**	**Shock/Amortisseur**
505071645-646	503190747	503190987
IFP: 54 ± 1	IFP:119.5	IFP: 54.5
Compression	Compression	Compression
	2 x 30 x 0.203	1x30x.203
1 x 30 x 0.152	1 x 20 x 0.114	1x15x.152
1 x 13 x 0.152	8 x 30 x 0.152	6x30x.152
6 x 30 x 0.152		1x22x.203
1 x 17 x 0.152	1 x 22 x 0.114	
Rebound	Rebound	Rebound
1 x 26 x 0.203	1 x 26 x 0.254	1x26x.254
1 x 16 x 0.114	1 x 18 x 0.114	1x16x.114
6 x 26 x 0.152	6 x 26 x 0.254	5x26x.254
1 x 16 x 0.254	2 x 17 x 0.203	2x18x.203
1 slit piston	1 slit piston	1 slit piston
		Base valve=5x18x.305
		C36 ADJ AL T/A

Shock Valving Calibration
Calibration des valves d'amortisseurs

MX Z 600 Renegade Europe 2005

FRONT/AVANT	CENTRE	REAR/ARRIÈRE
Shock/Amortisseur	**Shock/Amortisseur**	**Shock/Amortisseur**
505071557	503190973	503190382
IFP:186 ±1	IFP: 119.5	IFP: 178.5
Compression	Compression	Compression
	2 x 30 x 0.152	2 x 40 x 0.152
1 x 30 x 0.152	1 x 20 x 0.114	1 x 22 x 0.114
1 x 13 x 0.152	8 x 30 x 0.152	5 x 40 x 0.203
5 x 30 x 0.152		
1 x 17 x 0.152	1 x 22 x 0.114	1 x 18 x 0.152
Rebound	Rebound	Rebound
1 x 26 x 0.203	1 x 26 x 0.254	1 x 36 x 0.203
1 x 16 x 0.114	1 x 18 x 0.114	1 x 16 x 0.114
6 x 26 x 0.152	6 x 26 x 0.254	6 x 36 x 0.203
1 x 16 x 0.254	1 x 16 x 0.203	1 x 28 x 0.254
2 slit piston	2 slit piston	Piston hole 2.0
		C46

Summit X Europe 144 2005

FRONT/AVANT	CENTRE	REAR/ARRIÈRE
Shock/Amortisseur HPG AL	**Shock/Amortisseur HPG AL**	**Shock/Amortisseur HPG AL**
505071398	503190501	503190502
IFP: 167	IFP: 121.5	IFP: 171.5
Compression	Compression	Compression
2 x 30 x 0.203	1 x 30 x 0.203	2 x 30 x 0.152
1 x 13 x 0.152	1 x 16 x 0.152	1 x 12 x 0.152
5 x 30 x 0.152	6 x 30 x 0.152	4 x 30 x 0.152
1 x 16 x 0.152	1 x 22 x 0.114	1 x 16 x 0.114
Rebound	Rebound	Rebound
1 x 26 x 0.203	1 x 26 x 0.254	6 x 26 x 0.254
1 x 12 x 0.114	1 x 16 x 0.114	1 x 16 x 0.203
4 x 26 x 0.152	6 x 26 x 0.254	
1 x 16 x 0.203	1 x 16 x 0.203	
2 slits piston 2x0.3	2 slits piston 2x0.3	4 slits piston 2x0.3

Shock Valving Calibration
Calibration des valves d'amortisseurs

Summit 800 Rear Europe 2005

		REAR/ARRIÈRE
		Shock/Amortisseur HPG AL
		503190980
		IFP: 168
		Compression
		1 x 30 x 0.203
		1 x 15 x 0.152
		2 x 30 x 0.152
		5 x 30 x 0.203
		1x22x .152
		Rebound
		1 x 26 x 0.254
		1 x 15 x 0.114
		4x26x.254
		1x16x.203
		1 slit piston 2x0.3

Summit Europe 162 RT 2005

FRONT/AVANT	**CENTRE**	**REAR/ARRIÈRE**
Shock/Amortisseur HPG AL	**Shock/Amortisseur HPG AL**	**Shock/Amortisseur HPG AL**
505071457	503190662	503190990
IFP: 176	IFP: 121.5	IFP: 171.5
Compression	Compression	Compression
1 x 30 x 0.152	1 x 30 x 0.203	1 x 30 x 0.203
1 x 15 x 0.152	1 x 15 x 0.152	1 x 15 x 0.152
5 x 30 x 0.152	10 x 30 x 0.152	5 x 30 x 0.203
1 x 15 x 0.203	1 x 22 x 0.114	1 x 22 x 0.152
Rebound	Rebound	Rebound
1 x 26 x 0.203	1 x 26 x 0.254	1 x 26 x 0.254
1 x 15 x 0.114	1 x 15 x 0.114	1 x 15 x 0.114
2 x 26 x 0.152	4 x 26 x 0.254	4x26x.254
2 x 15 x 0.203	1 x 16 x 0.203	1x16x.203
1 slit piston 2x0.3	1 slit piston 2x0.3	1 slit piston 2x0.3

Shock Valving Calibration
Calibration des valves d'amortisseurs

MachZ Europe 2005

FRONT/AVANT	**CENTRE**	**REAR/ARRIÈRE**
Shock/Amortisseur	**Shock/Amortisseur**	**Shock/Amortisseur**
505071450	503190655	503190994
IFP: 140.	IFP: 119.5.	IFP: 171.5.
Compression	Compression	Compression
1 x 30 x 0.152	1 x 30 x 0.203	1 x 30 x 0.203
1 x 14 x 0.152	1 x 15 x 0.152	1 x 15 x 0.203
4 x 30 x 0.152	5 x 30 x 0.152	4 x 30 x 0.203
1 x 15 x 0.152		
	1 x 16 x 0.114	1 x 17 x 0.114
Rebound	Rebound	Rebound
1 x 26 x 0.203	1 x 26 x 0.254	1 x 26 x 0.254
1 x 15 x 0.114	1 x 15 x 0.114	1 x 17 x 0.114
2 x 26 x 0.152	4 x 26 x 0.254	5 x 26 x 0.254
2 x 15 x 0.203	1 x 16 x 0.203	2 x 17 x 0.203
1 slit piston	1 slit piston	1 slit piston

Transmission 2005 Ski-DOO Drive pulley

Model Modèle	Engine Moteur	Taper Cone	Spring Ressort	Pin or weight / Pine ou pesée	Ramp or bloc / Rampe ou bloc	Pos. calib. or / ou capsule	Engage- ment ±100 RPM	Max. speed / Régime max. ±100 RPM
TUNDRA R	277	01:10	Red/yellow	5 x 417114400	417 1143 00	1x417 1145 00	3000	6850
MXZ 380 F	377	01:10	blue-pink	1 x 417120400 + 1 x 417114400	417 1181 00	1x417114500	3300	7000
GSX 380 F	377	01:10	blue-pink	1 x 417120400 + 1 x 417114400	417 1181 00	1x417114500	3300	7000
GTX 380 F 136"	377	01:10	blue-pink	1 x 417120400 + 1 x 417114400	417 1181 00	1x417114500	3300	7000
Skandic LT	443	01:10	(silver/black)	417003900	218311C	N/A	3200	6800
MXZ X 440 RACING	453	1:7.5	White/White	1 x 417222595 1 x 206261299 + 1 x 206261699	435	5	5400	8400
MXZ 550 F	552	1:10	(purple/yellow)	1 x 417 1204 00 + 2 x 417114400	417 ---- --	1x417114500	3500	7000
GSX 550 F	552	1:10	(purple/yellow)	1 x 417 1204 00 + 2 x 417114400	417 ---- --	1x417114500	3500	7000
GTX 550 F 136"	552	1:10	(blue/orange)	1 x 417 1204 00 + 2 x 417114400	417 ---- --	1x417114500	3000	7000
GTX 550 F 136"Europe	552	1:10	(blue/orange)	1 x 417 1204 00 + 2 x 417114400	417 ---- --	1x417114500	3000	7000
SUMMIT 550 F 136"	552	1:10	(purple/yellow)	5 x 417114400	417 ---- --	1x417114500	3300	7000
SUMMIT 550 F Europe	552	1:10	(blue/orange)	1 x 417 1204 00 + 2 x 417114400	417 ---- --	1x417114500	3000	7000
Expedition Sport 550F 16 X 136 X 1.25	552	1:10	(purple/yellow)	1 x 417 1204 00 + 2 x 417114400	417 ---- --	1x417114500	3300	7000
Expedition Sport 550F Europe	552	1:10	(purple/yellow)	1 x 417 1204 00 + 2 x 417114400	417 ---- --	1x417114500	3300	7000
Skandic WT, SWT,SUV	552	1:10	(yellow/green)	1 x 417 1204 00 + 4 x 417114400	417 ---- --	1x417114500	3000	6950
MXZ 500 SS R Trail , Adrenaline	593	1:7.5	Green/White	Solid	412	3	3800	8000
MXZ 500 SS R Trail Europe	593	1:7.5	Green/White	Solid	412	3	3800	8000
GSX 500 SS R Sport	593	1:7.5	Violet/Pink	Solid	412	4	3400	8000
GTX 500 SS R Sport 136	593	1:7.5	Violet/Pink	Solid	412	4	3400	8000
GTX 500 SS R Sport Europe 136	593	1:7.5	Violet/Pink	Solid	412	4	3400	8000
Skandic SUV,WT	593	1:7.5	Yellow/Red	417222594 Long	600	3	2800	7100
MXZ 600 HO R Trail, Adrenaline, X	593 HO	1:7.5	Violet/Blue	Solid	410	3	3800	8000
MXZ 600 HO R Ren. 1.25 track	593 HO	1:7.5	Violet/Blue	Solid	410	3	3800	8000
GSX 600 HO R Sport	593 HO	1:7.5	Violet/Blue	Solid	410	3	3800	8000
GTX 600 HO R Sport, 136"	593 HO	1:7.5	Violet/Blue	Solid	410	3	3800	8000
Summit 600 HO R Adrenaline 144"	593 HO	1:7.5	Violet/White	1 x 417222477 + 1 x 206262099	417	1	3600	8000
Summit 600 HO R Adren. Europe 144"	593 HO	1:7.5	Violet/Blue	Solid	410	3	3800	8000
Expedition TUV 600SDi	593 Sdi	1:7.5	Yellow/Orange	Solid	410	3	3000	8000
MXZ 600 SDi R Adrenaline, X	593 Sdi	1:7.5	Blue/Yellow	Solid	410	4	3800	8100
MXZ 600 SDi Ren., Ren. X 1.25 track	593 Sdi	1:7.5	Blue/Yellow	Solid	410	4	3800	8100
MXZ 600 SDi Ren. X 1.75 track	593 Sdi	1:7.5	Blue/Yellow	Solid	410	4	3800	8100
GSX 600 SDi R Sport, Limited	593 Sdi	1:7.5	Blue/Yellow	Solid	410	4	3800	8100
GTX 600Sdi R Sport, Limited 136"	593 Sdi	1:7.5	Blue/Yellow	Solid	410	4	3800	8100
GTX 600Sdi R Sport, Europe 136"	593 Sdi	1:7.5	Blue/Yellow	Solid	410	4	3800	8100
MXZ 800HO R Adrenaline	793 HO	1:7.5	Violet/Green	417222594 Long	414	3	3800	7950
MXZ 800HO R X	793 HO	1:7.5	Violet/Green	417222594 Long	414	3	3800	7950
MXZ 800HO R Renegade 1.25 t	793 HO	1:7.5	Violet/Green	417222594 Long	415	3	3800	7950
MXZ 800HO R Renegade X, 1.25 t	793 HO	1:7.5	Violet/Green	417222594 Long	415	3	3800	7950
MXZ 800HO R Renegade X, 1.75 t	793 HO	1:7.5	Violet/Green	Solid	415	3	3800	7950
MXZ 800HO R Renegade X, Europe	793 HO	1:7.5	Violet/Green	Solid	415	3	3800	7950
GSX 800HO R Limited	793 HO	1:7.5	Blue/Green	417222594 Long	414	3	3600	7950
GTX 800HO R Limited 136"	793 HO	1:7.5	Blue/Green	417222594 Long	414	3	3800	7950
GTX 800HO R Limited 136" Europe	793 HO	1:7.5	Blue/Green	417222594 Long	414	3	3800	7950
SUMMIT 800HO R Adrenaline, X 144	793 HO	1:7.5	Violet/Yellow	1 x 417222595 + 1 x 206261299	415	1	3800	7950
SUMMIT 800HO R Adrenaline, X 151	793 HO	1:7.5	Violet/Yellow	1 x 417222595 + 1 x 206261299	415	1	3800	7950
SUMMIT 800HO R Adren. Europe 151	793 HO	1:7.5	Violet/Green	Solid	415	3	3800	7950
SUMMIT 800HO R X 159 X 2.25	793 HO	1:7.5	Violet/Yellow	1 x 417222595 + 1 x 206261299	415	1	3800	7950
Summit Highmark , Highmark X 162	995SDi	1:7.5	Pink/White	Steel lever + 1 x 417004309	433	4	3500	7900
Summit Highmark, Europe	995SDi	1:7.5	Green/White	Steel lever + 1 x 417004309	600	3	3400	7900
Mach Z Adrenaline	995SDi	1:7.5	Green/Violet	Steel lever + 1 x 417004309	434	6	3400	7900
LEGEND V1000 Sport, SE 121"	1004	1:7.5	Red/Yellow	417222594 Long	607	3	2500	7250
LEGEND GT V1000 Sport, SE 136"	1004	1:7.5	Red/Yellow	417222594 Long	607	3	2500	7250
Expedition TUV V-1000	1004	1:7.5	Red/Orange	417222594 Long	607	4	2500	7250
Elite	1503	1:7.5	Yellow/Yellow	Steel lever + Solid	609	3	2200	7300

2005 SKI-DOO DRIVEN PULLEY

Model / Modèle	Engine / Moteur	Driven pulley / Poulie menée							Carter				
		Belt / Courroie	Model / Modèle	Ressort / Spring: Color	Ressort / Spring: Force	Preload new/after break-in period: Tension neuf/après rodage (±0.7 kg)	Cam: (°)	Cam: type	Big bushing width / Largeur du grand coussinet	Sprocket top / Pignon haut	Sprocket bottom / Pignon bas	Chaine / Chain: Maille/Link	Chaine / Chain: width	Sprocket / Barbottin
TUNDRA R	277	414 8276 00	SAFARI-R	YELLOW		0.0 Position 3	37.8		N/A	14	25	62	single	
MXZ 380 F	377	415 0606 00	Formula RER	White		0.0	44	long	19 mm	19	45	74	13	10 teeth
GSX 380 F	377	415 0606 00	Formula RER	White		0.0	44	long	19 mm	19	45	74	13	10 teeth
GTX 380 F 136"	377	415 0606 00	Formula RER	White		0.0	44	long	19 mm	19	45	74	13	9 teeth
Skandic LT	443	414 633 800	LPV 27	YELLOW		0.0	40		19 mm	17	44	70	13	8 teeth
MXZ X 440 RACING	453	**417 3002 88**	Team	Black / Light blue		0.0	42			21	45 Team	74	15	9 teeth
MXZ 550 F	552	415 0606 00	Formula RER	White		0.0	44	long	19 mm	19	43	72	13	10 teeth
GSX 550 F	552	415 0606 00	Formula RER	White		0.0	44	long	19 mm	19	43	72	13	10 teeth
GTX 550 F 136"	552	415 0606 00	Formula RER	White		0.0	44	long	19 mm	21	45	74	13	9 teeth
GTX 550 F 136"Europe	552	415 0606 00	Formula RER	White		0.0	44	long	19 mm	19	43	72	13	9 teeth
SUMMIT 550 F 136"	552	415 0606 00	Formula RER	White		0.0	44	long	19 mm	19	43	72	13	9 teeth
SUMMIT 550 F Europe	552	415 0606 00	Formula RER	White		0.0	44	long	19 mm	19	43	72	13	9 teeth
Expedition Sport 550F 16 X 136 X 1.25	552	415 0606 00	Formula RER	White		0.0	44	long	19 mm	19	43	72	13	9 teeth
Expedition Sport 550F Europe	552	415 0606 00	Formula RER	White		0.0	44	long	19 mm	19	43	72	13	9 teeth
Skandic WT, SWT,SUV	552	414 633 800	Cvtech	Bleu		7.0	40-35		N/A	1.7	N/A	N/A	N/A	8 teeth
MXZ 500 SS R Trail , Adrenaline	593	417 300 197	Formula VSR	vert/vert	670-1060	0.0	44	Long Anod	19 mm	22	43	74	13	10 teeth
MXZ 500 SS R Trail Europe	593	417 300 197	Formula VSR	vert/vert	670-1060	0.0	44	Long Anod	19 mm	21	43	74	13	10 teeth
GSX 500 SS R Sport	593	417 300 197	Formula VSR	vert/vert	670-1060	0.0	44	Long Anod	19 mm	22	43	74	13	10 teeth
GTX 500 SS R Sport 136	593	417 300 197	Formula VSR	vert/vert	670-1060	0.0	44	Long Anod	19 mm	21	43	74	13	10 teeth
GTX 500 SS R Sport Europe 136	593	417 300 197	Formula VSR	vert/vert	670-1060	0.0	44	Long Anod	19 mm	21	43	74	13	10 teeth
Skandic SUV,WT	593	417 300 155	Cvtech VSA	Bleu		7.0	35-30		N/A	N/A	N/A	N/A	N/A	8 teeth
MXZ 600 HO R Trail, Adrenaline, X	593 HO	417 3001 97	HPV VSA	Black	700N	0.0	47-44	Anodized	25 mm	22	43	74	13	10 teeth
MXZ 600 HO R Ren. 1.25 track	593 HO	417 3001 97	HPV VSA	Black	700N	0.0	44	Anodized	25 mm	21	43	74	13	10 teeth
GSX 600 HO R Sport	593 HO	417 3001 97	HPV VSA	Black	700N	0.0	47-44	Anodized	25 mm	22	43	74	13	10 teeth
GTX 600 HO R Sport, 136"	593 HO	417 3001 97	HPV VSA	Black	700N	0.0	47-44	Anodized	25 mm	21	43	74	13	10 teeth
Summit 600 HO R Adrenaline 144"	593 HO	417 3001 97	HPV VSA	Red	600N	0.0	47-44	Anodized	25 mm	19/steel	45	74	13	10 teeth
Summit 600 HO R Adren. Europe 144"	593 HO	417 3001 97	HPV VSA	Black	700N	0.0	44	Anodized	25 mm	19/steel	45	74	13	10 teeth
Expedition TUV 600SDi	593 Sdi	417 300 155	Cvtech VSA	Bleu		7.7	35-30		N/A	1.7	N/A	N/A	N/A	8 teeth
MXZ 600 SDi R Adrenaline, X	593 Sdi	417 3001 97	HPV VSA 10	Black	700N	0.0	47-44	Anodized	25 mm	22	43	74	13	10 teeth
MXZ 600 SDi Ren., Ren. X 1.25 track	593 Sdi	417 3001 97	HPV VSA 10	Black	700N	0.0	44	Anodized	25 mm	21	43	74	13	10 teeth
MXZ 600 SDi Ren. X 1.75 track	593 Sdi	417 3001 97	HPV VSA 10	Black	700N	0.0	44	Anodized	25 mm	19/steel	43	72	13	10 teeth
GSX 600 SDi R Sport, Limited	593 Sdi	417 3001 97	HPV VSA 10	Black	700N	0.0	47-44	Anodized	25 mm	22	43	74	13	10 teeth
GTX 600Sdi R Sport, Limited 136"	593 Sdi	417 3001 97	HPV VSA 10	Black	700N	0.0	47-44	Anodized	25 mm	21	43	74	13	10 teeth
GTX 600Sdi R Sport, Europe 136"	593 Sdi	417 3001 97	HPV VSA 10	Black	700N	0.0	47-44	Anodized	25 mm	21	43	74	13	10 teeth
MXZ 800HO R Adrenaline	793 HO	417 300 166	HPV VSA 10	Green	800N	0.0	50-40	Anodized	25 mm	25	45	76	13	10 teeth
MXZ 800HO R X	793 HO	417 300 166	HPV VSA 10	Green	800N	0.0	50-40	Anodized	25 mm	25	45	76	13	10 teeth
MXZ 800HO R Renegade 1.25 t	793 HO	417 300 166	HPV VSA 10	Green	800N	0.0	47-40	Anodized	25 mm	23	43	74	13	10 teeth
MXZ 800HO R Renegade X, 1.25 t	793 HO	417 300 166	HPV VSA 10	Green	800N	0.0	47-40	Anodized	25 mm	23	43	74	13	10 teeth
MXZ 800HO R Renegade X, 1.75 t	793 HO	417 300 166	HPV VSA 10	Green	800N	0.0	47-40	Anodized	25 mm	21	43	74	13	10 teeth
MXZ 800HO R Renegade X, Europe	793 HO	417 300 166	HPV VSA 10	Green	800N	0.0	47-40	Anodized	25 mm	23	43	74	13	10 teeth
GSX 800HO R Limited	793 HO	417 3001 66	HPV VSA 10	Green	800N	0.0	50-40	Anodized	25 mm	23	43	74	13	10 teeth
GTX 800HO R Limited 136"	793 HO	417 3001 66	HPV VSA 10	Green	800N	0.0	47-40	Anodized	25 mm	23	45	76	13	10 teeth
GTX 800HO R Limited 136" Europe	793 HO	417 3001 66	HPV VSA 10	Green	800N	0.0	47-40	Anodized	25 mm	23	45	76	13	10 teeth
SUMMIT 800HO R Adrenaline, X 144	793 HO	417 3001 66	HPV VSA 10	VIOLET	1000N	0.0	44	Anodized	25 mm	19/steel	45	74	13	10 teeth
SUMMIT 800HO R Adrenaline, X 151	793 HO	417 3001 66	HPV VSA 10	VIOLET	1000N	0.0	44	Anodized	25 mm	19/steel	45	74	13	10 teeth
SUMMIT 800HO R Adren. Europe 151	793 HO	417 300 166	HPV VSA 10	Black	700N	0.0	44	Anodized	25 mm	21	45	74	13	10 teeth
SUMMIT 800HO R X 159 X 2.25	793 HO	417 3001 66	HPV VSA 10	VIOLET	1000N	0.0	44-40	Anodized	25 mm	19/steel	45	74	13	9 teeth
Summit Highmark , Highmark X 162	995SDi	417 3001 89	HPV VSA 10	VIOLET	1000N	0.0	44-30	Anodized	N/A	21	49	86	13	10 teeth
Summit Highmark, Europe	995SDi	417 3001 89	HPV VSA 10	VIOLET	1000N	0.0	44-30	Anodized		23	49	86	13	10 teeth
Mach Z Adrenaline	995SDi	417 3001 89	HPV Roller	VIOLET	1000N	0.0	44-33	Anodized	N/A	29	49	82	13	10 teeth
LEGEND V1000 Sport, SE 121"	1004	417 3001 97	HPV VSA	PINK		6.6 / 5.7	50-40	Anodized	25 mm	21	44	74	13	9 teeth
LEGEND GT V1000 Sport, SE 136"	1004	417 3001 97	HPV VSA	PINK		6.6 / 5.7	50-40	Anodized	25 mm	21	44	74	13	9 teeth
Expedition TUV V-1000	1004	605 3484 25	Cvtech VSA	Bleu		7.9 / 7.0	40-30		N/A	N/A	N/A	N/A	N/A	8 teeth
Elite	1503	417 300 207	HPV VSA	RED		7.9 / 7.0	47-30	Anodized	N/A	N/A	N/A	N/A	N/A	N/A

2005 Technical Update
Annexes

Bombardier Recreational Products Inc.

Bombardier
Recreational Products Inc.

REPORT ON PERFORMANCE/QUALITY (FROM DEALER)

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

ski-doo

DATE (YEAR-MONTH-DAY)	REPORTED BY	DEALER'S NUMBER (999999)	CONTACT
	First Name: Last Name:		First Name: Last Name:

CIRCLE THE APPLICABLE CONDITION

ENVIRONEMENT

- 1.1 During PDI
- 1.2 Freight Damage
- 1.3 Open Fields
- 1.4 Groomed Trails
- 1.5 Trail not Maintained
- 1.6 Lake
- 1.7 Mountains
- 1.8 Race Track
- N.A.*

TYPE OF USAGE

- 3.1 Touring
- 3.2 Sport Riding
- 3.3 Logging/Towing
- 3.4 Trail Grooming
- 3.5 Racing
- 3.6 Hill Climbing
- 3.7 Unused-New
- N.A.*

SNOW CONDITION

- 2.1 Powder
- 2.2 Hard Pack
- 2.3 Icy
- 2.4 Marginal
- N.A.*

THROTTLE OPENING

- 1/4
- 1/2
- 3/4
- 4/4
- N.A.*

OUTSIDE TEMPERATURE Select Measure ☐ F ☐ C

SPEED Select Measure ☐ km/h ☐ MPH

CIRCLE THE APPLICABLE SYSTEM

N.A. if not applicable

- 01 Engine/Manual Starter
- 02 Fuel System/Oil System
- 03 Exhaust System
- 04 Electrical System (starter, ignition)
- 05 Transmission
- 06 Brake System
- 07 Steering System
- 08 Suspension
- 09 Body
- 10 Crate/Accessories/ Special Tools
- 11 N.A.
- 118 Multiple System

MODEL NUMBER (9999)	SERIAL NUMBER (99999)	MILEAGE Select Measure ☐ km ☐ m.	RPM	PART NUMBER (999 999 999)
				- -

PROBLEM DESCRIPTION

CORRECTIVE ACTION TAKEN

COMMENTS/OTHER OBSERVATIONS

Bombardier Oil and Lubricant Quick Ref. Chart

This is a listing of our currant oil part numbers.

Part #	Product Description	Size	Application			2 stroke
			Ski-Doo	Sea-Doo	ATV	
293 600 011	Synthetic Jet Pump oil	177 ml (6 oz).	-	X	-	
293 600 043	Synthetic Gear oil 75w 90	946 ml (32 oz)	-	-	X	Same as 293 600 011 but 946 ml (32 oz)
413 801 900	Bombardier Chaincase Oli	250 ml (8.4 oz)	X		X	
413 803 300	Bombardier Synthetic Chaincase Oil	355 ml (12 oz)	X		X	
413 711 600	Bombardier Storage oil	spray 473 ml (16 oz)	X	X	X	
413 408 600	Bombardier Fuel Stabilizer	236 ml (8 oz)	X	X	X	
293 600 016	Bombardier Lube	Spray 473 ml (16 oz)	X	X	X	
413 803 100	Bombardier Premix Oil	500 ml (17 oz)	X	X	X	2-stroke
413 802 900	Bombardier 2-stroke Injection Oil	1 liter (33.8 oz)	X	X	X	EXCEPT : - Models that require FORMULA XP-S or FORMULA XP-S Di - ATV: Mini DS 2 stroke only
413 803 000	Bombardier 2-stroke Injection Oil	4 liters (135 oz)	X	X	X	
413 803 200	Bombardier 2-stroke Injection Oil	Drum 205 liters (54 gallons)	X	X	X	
293 600 071	Bombardier Semi-synthetic 2-stroke Oil	1 liter (33.8 oz)	X	X	X	Recommended for all SDI engines replaces both XP-S and XP-S Di ATV : Mini DS 2 stroke only
293 600 072	Bombardier Semi-synthetic 2-stroke Oil	4 liters (135 oz)	X	X	X	
293 600 073	Bombardier Semi-synthetic 2-stroke Oil	Drum 205 L (54 gallons)	X	X	X	
293 600 045	NEW FORMULA XP-S II Synthetic 2-stroke	1 liter (33.8 oz)	X	X	X	Replaces both XP-S and XP-S Di ATV : Mini DS 2 stroke only
293 600 046	NEW FORMULA XP-S II Synthetic 2-stroke	4 liters (135 oz)	X	X	X	
293 600 047	NEW FORMULA XP-S II Synthetic 2-stroke	Drum 205 L (54 gallons)	X	X	X	
293 600 039	4 Stroke Synthetic oil 5W40	1 liter (33.8 oz)	-	-	X	
293 600 054	4 Stroke Synthetic oil 0W40	1 liter (33.8 oz)	X	-	-	Recommended for V-1000

Now available!
Ski-Doo tested / Woody's approved
Maintenant disponible
Testé par Ski-Doo / Approuvé par Woody's

P/N For Studs and Backers
Crampons et plaque de fixation

P/N	Description (English)	Description (française)	Pack of / Paquet de
415 128 884	Drill Bit	Outil de perçage	1
415 128 885	Aluminum Backer 5/16	Plaque de fixation aluminium 5/16	24
415 128 886	Aluminum Backer 5/16	Plaque de fixation aluminium 5/16	96
415 128 887	Aluminum Backer 5/16	Plaque de fixation aluminium 5/16	144
415 128 917	Aluminum Backer 5/16	Plaque de fixation aluminium 5/16	1000
415 128 888	Woodies Gold Diggers 5/16 -1.0"	Crampon Gold Diggers 5/16 -1.0"	24
415 128 889	Woodies Gold Diggers 5/16 -1.0"	Crampon Gold Diggers 5/16 -1.0"	96
415 128 890	Woodies Gold Diggers 5/16 -1.0" P	Crampon Gold Diggers 5/16 -1.0"	144
415 128 891	Woody's Gold Diggers 5/16 -1.0"	Crampon Gold Diggers 5/16 -1.0"	1000
415 128 892	Woodies Gold Diggers 5/16 -1.075"	Crampon Gold Diggers 5/16 -1.075"	24
415 128 893	Woodies Gold Diggers 5/16 -1.075"	Crampon Gold Diggers 5/16 -1.075"	96
415 128 894	Woodies Gold Diggers 5/16 -1.075"	Crampon Gold Diggers 5/16 -1.075"	144
415 128 895	Woodies Gold Diggers 5/16 -1.075"	Crampon Gold Diggers 5/16 -1.075"	1000
415 128 896	Woodies Gold Diggers 5/16 -1.325"	Crampon Gold Diggers 5/16 -1.325"	24
415 128 897	Woodies Gold Diggers 5/16 -1.325"	Crampon Gold Diggers 5/16	96
415 128 898	Woodies Gold Diggers 5/16 -1.325"	Crampon Gold Diggers 5/16 -1.325"	144

BRP recommends that studs be installed by an authorized BRP dealers and on pre-pattented tracks only.
BRP recommande l'installation de crampons par un concessionnaire Ski-Doo autorisé sur des chenilles approuvées avec un patron d'installation de crampons à même la chenille.

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 / Sea-Doo	421000051	REP		L/C		N/A	Resleeve cylinder, repair only	N/A
Ski / Sea-Doo	421000060	REP				N/A	Crankcase brass plate insert, repair only	N/A
Ski / Sea-Doo	421000062	REP				N/A	Rotary valve cover refacing, repair only	N/A
Ski / Sea-Doo	421000063	REP				N/A	Oversized cylinder, repair only	N/A
Ski / Sea-Doo	421000050	REP		F/C		N/A	Resleeve cylinder, repair only	N/A
SKI-DOO	421000031	CRANKSHAFT	277	F/C	1	1993 to 2004		420995301
	421000009		377 - 443	F/C	2	1992 to 1996		420887245 / 420996332
	421000154		377 - 443	F/C	2	1997 to 2004		420889630
	421000150		454	L/C	2	1995 to 1998		420887962 / 420887966
	421000574		693	L/C	2	2000 TO 2002		420888286
	421000573		793	L/C	2	2000 TO 2002		420888402
	421000019		467	L/C	2	1985 to 1995		420995205
	421000151		494	L/C	2	1996 to 2000		420886933
	421000567		493	F/C	2	2000		420888462
	421000011		503	F/C	2	1990 to 1996	Keyway at 3 o'clock	420996445
	421000155		503	F/C	2	1997 to 2003		420888390 / 420888391
	421 000 601		552	F/C	2	2003 to 2004		420 889 062
	421000021		532-536-537-582	L/C	2	1985 to 1996		420996628
			583			1990 to 1993		
	421000044		583	L/C	2	1994 to 1999		420 887 355
	421000563		593	L/C	2	2000 to 2002		420888252 / 420888751
	421000553		593	L/C	2	1999		420888250
	421000023		643	L/C	2	1991 & 1992		420996625
	421000025		670	L/C	2	1993 & 1994	Order needle bearing # 420 832 425	420886425
	421000046		670	L/C	2	1995 & 1996	Order needle bearing # 420 832 425	420887987
						1997 to 1999		
	421000312		670	L/C	2	1998 & 1999	Summit X & MXZ H.O.	420887986
	421000047		599	L/C	3	1995		420886903
	421000152		599	L/C	3	1996 & 1997		420887970
	421000310		599 - 699 CK3	L/C	3	1998 to 2000	New modified part for 1999-2000	420888030 / 420888034
	421000153		699	L/C	3	1997		420887605
	421000026		779	L/C	3	1993 & 1994		420886485
	421000048		779	L/C	3	1995 & 1996		420887590
	421000156		809	L/C	3	1997 to 2003	New modified part for 1999-2002	420887667 / 420887668 420887662

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	HO ONLY	420889671
	421000608		793	L/C	2	2003	2003 ONLY	420889101
	421000609		693 593HO	L/C	2	2003-2004	693 AND 593 HO ONLY	420889091
	421000611		593	L/C	2	2003-2004		420888757
	421000599		493	L/C	2	2003		420888465
SKI-DOO	421000101	CYLINDER	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

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
	421000610		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	SANDCAST Cylinder bolts M8	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	SHORT BLOCK	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	All models except Skandic	N/A
	421000410		503	F/C	2	1994 to 1999		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
	421000612		793HO	L/C	2	2003-2004	H.O. ONLY	
	421000613		793	L/C	2	2001-2003		
	421000614		693	L/C	2	2001-2004		
	421000615		593HO	L/C	2	2003-2004	H.O. ONLY	
	421000616		593	L/C	2	2001-2004		
	421000617		493	L/C	2	2003		

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	Labyrinthe 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	Carb.	290888103
	421000712		787RFI	L/C	2	1998 to 2003	RFI	290887890
	421000571		947DI	L/C	2	all	D.I.	290887767
	421000711		947	L/C	2	1998 to 2003	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
						1995	All White X	
	421000056		717	L/C	2	1995 to 2003		290923805
	421000057		787	L/C	2	1995	USE 421 000 059	290923500
	421000059		787	L/C	2	1996 to 1999	Carb.	290923503
	421000813		787RFI	L/C	2	1998 to 2003	RFI	290923846
	421000561		947	L/C	2	1998 to 2002	Except D.I.	290613561
	421000570		947DI	L/C	2	2001	D.I.	290923718
	421000205		947DI	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
						1994	SPX - XPI - GTX White	
	421000096		657X	L/C	2	1994	XP White	290881449
						1995	White SPX -GTX	
	421000097		717	L/C	2	1995 to 2003		290071703
	421000098		787	L/C	2	1995	USE 421 000 100 + 290 958 057	290881527 / 290881528
	421000100		787	L/C	2	1996 to 1999	Carb.	290078704
	421000913		787RFI	L/C	2	1998 to 2003	RFI	290078703
	421000562		947	L/C	2	1998 to 2002	Except D.I.	290094703
	421000572		947DI	L/C	2	2001	D.I.	290094705
	421000416		947DI	L/C	2	2002-2003	D.I.	420094706
SEA-DOO	421 000 582	BAL. SHAFT	947	L/C	2	1998 to 2002	BALANCING SHAFT	290837387

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	all	DS650	711295192
	421000157		511	L/C	1	all	Traxter	420295893

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.

BRP ACCIDENT / INCIDENT REPORT	DATE OF ACCIDENT / INCIDENT	Year	Month	Day

DEALER NUMBER :_____ NAME OF DEALER / DISTRIBUTOR :_____			
Contact person at dealership :			Town/City:
Date of Report:	am	pm	State/Prov.:

PLEASE REPRESENT SITUATION BY DRAWING AND IDENTIFYING VEHICLE 1 AND VEHICLE 2

VEHICLE NO. 1

Owner's Name:		Product Experience:	Hours ☐ 0-50 ☐ 50-100 ☐ 100-150 ☐ 150-200 ☐ 200+
Owner's Address:		Completed State/ Prov. Product Safety Course: ☐ Yes ☐ No ☐ N.A.	
Town/City:	State/ Prov.:	Year Taken:	Certificat No.:
Zip/ Postal Code:	Tel. No.:	Member of Product Club/ Association: ☐ Yes ☐ No	If Yes name ?
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:	Tel. No.:	Town/ City:	State/ Prov.:
Driver's Licence No.:	Coded Restrictions:	Zip/ Postal Code:	Tel. No.:
Years Licenced as Driver: ☐ 1-3 ☐ 3-6 ☐ 6-10 ☐ 10+		Date of Birth: Year	Month Day
Date of Birth: Year Month Day		Age:	Sex: ☐ Male ☐ Female
Age:	Sex: ☐ Male ☐ Female	Product Experience Hours ☐ 0-50 ☐ 50-100 ☐ 100-150 ☐ 150-200 ☐ 200+	

Make:	Model:	Safety Devices Present: ☐ Yes ☐ No
Year:	Serial No.:	Safety Device in Use: ☐ Yes ☐ No
☐ Owned ☐ Borrowed ☐ Rent		Warning or Caution Statement Present: ☐ Yes ☐ No
Date of Pre-Delivery:	Date of 1st Recommended Inspection	Proper Operating Instructions Present: ☐ Yes ☐ No
Date of Recent Service:	**Mileage/Hours** :	Had Product Undergone Modification/ Recall Approved by Manufacturer? : ☐ Yes ☐ No
Dealer's Name:		Had Product Undergone Modification by Former Owner? : ☐ Yes ☐ No
Dealer's Address:		Were All Components on Product Original? : ☐ Yes ☐ No
Town/City:	State/Prov.:	If no, what was changed ?
Zip/Postal Code:	Tel. No.:	Were Replacement Components Sold by Product Manufacturer or Representative? : ☐ Yes ☐ No
Product Registration No.:	Year of Registration:	Were All Components on Any Security Item Fastened to the Product? : ☐ Yes ☐ No

Insured: ☐ Yes ☐ No		Were all scheduled maintenance procedures performed by an Authorized BRP dealer ? ☐ Yes ☐ No	
Policy No.:	Expiracy Date:	Was Routine Lubrification and Maintenance Given to the Products as Specified by the Manufacturer? ☐ Yes ☐ No	
Name of Ins. Company:			
ACTIVITY:	Unknown ☐	Transportation ☐	Racing ☐
	Recreation ☐	Work ☐	Other ☐
Witnesses' Name: (if more than one please join another page / witness)			
Witnesses' Address:			
Did the operator perform a pre-start check of the product before the accident? ☐ Yes ☐ No			
Was the operator familiar with the area being traveled? ☐ Yes ☐ No			
Did the operator complete any appropriate safety training courses relative to product (i.e. SVIA) ? ☐ Yes ☐ No If so what type ?			
Did the operator review the product safety video or DVD supplied with the vehicle ? ☐ Yes ☐ No			

VEHICLE NO. 2

Owner's Name:				Product Experience:	Hours ☐ 0-50 ☐ 50-100 ☐ 100-150 ☐ 150-200 ☐ 200+		
Owner's Address:				Completed State/ Prov. Product Safety Course: ☐ Yes ☐ No ☐ N.A.			
Town/City:	State/ Prov.:			Year Taken:		Certificat No.:	
Zip/ Postal Code:	Tel. No.:			Member of Product Club/ Association: ☐ Yes ☐ No		If yes name ?	
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:	Tel. No.:			Town/ City:		State/ Prov.:	
Driver's Licence No.:	Coded Restrictions:			Zip/ Postal Code:		Tel. No.:	
Years Licenced as Driver: ☐ 1-3 ☐ 3-6 ☐ 6-10 ☐ 10+				Date of Birth:	Year	Month	Day
Date of Birth:	Year	Month	Day	Age:		Sex: ☐ Male ☐ Female	
Age:	Sex: ☐ Male ☐ Female			Product Experience : Hours ☐ 0-50 ☐ 50-100 ☐ 100-150 ☐ 150-200 ☐ 200+			

Make:	Model:	Safety Devices Present: ☐ Yes ☐ No If Yes specify
Year:	Serial No.:	Safety Device in Use: ☐ Yes ☐ No If Yes specify
☐ Owned ☐ Borrowed ☐ Rent		Warning or Caution Statement Present: ☐ Yes ☐ No If Yes specify
Date of Pre-Delivery:	Date of 1st Recommended Inspection	Proper Operating Instructions Present: ☐ Yes ☐ No If Yes specify
Date of Recent Service:	**Mileage/Hours** :	Had Product Undergone Modification/ Recall Approved by Manufacturer? : ☐ Yes ☐ No
Dealer's Name:		Had Product Undergone Modification by Former Owner? : ☐ Yes ☐ No
Dealer's Address:		Were All Components on Product Original? : ☐ Yes ☐ No
Town/City:	State/Prov.:	If no, what was changed ?
Zip/Postal Code:	Tel. No.:	Were Replacement Components Sold by Product Manufacturer or Representative? : ☐ Yes ☐ No
Product Registration No.:	Year of Registration:	Were All Components on Any Security Item Fastened to the Product? : ☐ Yes ☐ No
Insured: ☐ Yes ☐ No		Were all scheduled maintenance procedures performed by an Authorized BRP dealer ? ☐ Yes ☐ No
Policy No.:	Expiracy Date:	Was Routine Lubrification and Maintenance Given to the Products as Specified by the Manufacturer? ☐ Yes ☐ No
Name of Ins. Company:		

INJURY DATA

Person Injured:	TYPE OF INJURY	Death	Exposure	Bruise	Burns
Address:		Fracture	Sprain	Lacerations	Internal
	PART OF BODY INJURED	Head	Back	Abdomen	Lower Limb
		Face/Neck	Chest	Upper Limp	Other

If more than one person was injured, please join another page per person

Was the person injured in ? ☐ Vehicle 1	☐ Operators	☐ Passenger	☐ Other Please specify :
☐ Vehicle 2	☐ Operators	☐ Passenger	☐ Other : Please specify :

CLOTHING:	Suit ☐	Boots/Deck Shoes ☐	Visor/Goggles ☐
Wetsuit ☐	Helmet ☐	Gloves/Mitts ☐	Life Jacket ☐

Doctor's Name:	
Doctor's Address:	
Length of Stay Hospital:	
Accident Reported to:	
Was the person injured aware that what he was doing might result in injury?	☐ Yes ☐ No
Was there anything to distract the injured person's attention from what he was doing?	☐ Yes ☐ No What?
Had anything happened to upset the person injured that day or at the time of accident ?	☐ Yes ☐ No What?
Was the person injured unusually tired or fatigued that day, or at the time of accident?	☐ Yes ☐ No
Was the person injured ejected from product?	☐ Yes ☐ No If so How ?
Was the person injured entraped by product?	☐ Yes ☐ No If so by What ?
Was the person injured in a hurry at the time of the accident?	☐ Yes ☐ No
Has the person injured or any member of his family had injury, accident or close call from this previous activity?	☐ Yes ☐ No If so What ?
Had the person injured taken any precautions to prevent an accident?	☐ Yes ☐ N If so What ?
Was the person injured familiar with the proper operation of the product?	☐ Yes ☐ No
Was the person injured informed of proper driving position/techniques before riding the product?	☐ Yes ☐ No
Was passenger wearing adequate clothing/helmet/lifejacket	☐ Yes ☐ No
How often had the person injured performed this specific activity before?	

Describe activities of person injured leading up to and at time of injury: _____

Describe physical condition of person injured at time injury (consider:, wearing glasses, handicapped or disabled, influenced by alcohol or drugs, mentally ill, chronically ill) :

Had the operating literature been read and understood by the person injured?	☐ Yes ☐ No
If no Why?	
Had victim ever been involved in another accident other than with this product? (Motorvehicle, Marine, Occupational, Recreation, Other):	☐ Yes ☐ No
If so When ?	
Was the person injured informed of proper driving position/techniques before riding the product?	☐ Yes ☐ No
Was passenger wearing adequate clothing/helmet/lifejacket	☐ Yes ☐ No

NARRATION REPORT BY PERSON INJURED	
If narration is done by someone else than the person injured, please identify yourself and sign the Narration report :	
☐ Attach Police or Fire Department reports	Include photographs of : ☐ Vehicle ☐ Scene ☐ Injuries

Signature :_____
Narration date :

219 600 012 CA

TECHNICAL UPDATE / ENGLISH
MISE À JOUR TECHNIQUE / ANGLAIS

FAIT AU / MADE IN CANADA U/M:P.C.