2012 Technical Update Book

TECHNICAL UPDATE BOOK and the DEALER CERTIFICATION PROGRAM (for North American dealer only):

The Technician Level Training is mandatory for your dealership to achieve the Platinum Certified status.

ATTENTION: "Technician Level Training" is described as one technician (with a BRPTI profile and access) who has completed the Technical DVD exams 1-5 PLUS the 2010, 2011 and the 2012 Ski-Doo Technical Update exams in BRPTI. To complete this criteria in the Dealer Certification Program, these Technical Update Book exams must be completed with a passing score of 75% or better in BRPTI.

Technician Level Training: Each technician that has completed their Ski-Doo Technician Level must complete the annual Technical Update Book exam in BRPTI to maintain their individual status as a BRP Technician and to be eligible for their Certified Technician Level.

LEGAL DEPOSIT:
NATIONAL LIBRARY OF QUEBEC
NATIONAL LIBRARY OF CANADA 2011

TECHNICAL PUBLICATIONS
BOMBARDIER RECREATIONAL PRODUCTS INC. (BRP)
VALCOURT (QUEBEC) CANADA

STEP BY STEP INSTRUCTIONS ON HOW TO DO THE EXAMS ON BRPTI:

(for North American dealer only)

If you are new to BOSSWeb and BRPTI OR you have a BRPTI login but not set up as a user in BOSSWeb:

– Ask your dealership's BOSSWeb administrator to create your profile in BOSSWeb by making sure that all the personal information fields are completed and the Training, BRPTI role BRP Dealer Employee BRPTI responsibility is checked off in your profile.
– **If you have a BRPTI login**, your BOSSWeb administrator must make sure your first name, last name, date of birth and gender are the same in BOSSWeb as they are in BRPTI.

If you already have a personal login to BOSSWeb and have BRPTI access:

1. Access BRPTI via BOSSWeb/Training/BRPTI.
2. In the "Resources" box, click on "Courses".
3. Check "English", click on "Start search — GO".
4. Find **2012 Ski-Doo Technical Update** in the list of courses.
5. Click on the Info/Enroll icon at the right of the course name.
6. Click on "Enroll" at the bottom right of the screen.
7. Click on "OK" in the pop-up box to enroll to this course.
8. Click on "updated learning plan" in the confirmation paragraph or click on "Home" in the "Resources" box. This will take you back to your home page where you will see the course (exam) is now in your "Training Activities TO COMPLETE" section.
9. In the "Training Activities TO COMPLETE" section, click on the **2012 Ski-Doo Technical Update** course title to start your exam.

– To pass the Technical Update Exam, a technician must pass with a **75% or greater** score.
– To achieve or maintain Technician Level status, a technician must have completed all applicable Technician Level Exams after viewing the DVD series, and pass all Update exams for the appropriate products carried by the dealership.
– To qualify for the Certified Technician Level course, a technician must first achieve and maintain Technician Level Status.
– To maintain Certified Technician Status, a technician must stay current by passing all subsequent Technical Update Exams for the product lines completed at the Certified Technician hands-on school.
– To qualify for Master Level Status, a technician must meet the criteria below.

Master Technician Level criteria:

– Minimum of 5 years as a Powersports Industry mechanic.
– Minimum of 2 years at your current BRP dealership.
– Maintain Certified Technician Level for at least one year.
– 90% or higher, on 1st completed score, on Technical Update exam(s).

If you need assistance, contact:

For accesses and logins contact the BOSSWeb help desk:		If you need assistance with the exams or use of the BRPTI application, contact:	
USA	800 366-6992 (4)	USA	800 366-6992 (5-3)
Canada	800 361-9980 (4)	Canada	800 361-9980 (5-3)

General Information

The objective of Section 1 is to make contacts between dealers and BRP as easy as possible.

In this section you will find the most important phone numbers, key contact names and the latest update procedures to help you being more efficient.

IT'S EASY TO REACH US

NORTH AMERICAN SERVICE TOLL-FREE NUMBER

NOTE: These references are only for North American dealers. If you are calling from a country outside of Canada or the United States please refer to the *DEALER TECHNICAL SUPPORT* section in this book.

BRP Network Support Only	From Canada 800 361-9980	From USA 800 366-6992	
Dial the number.	SERVICE	SHORTCUT PATH USING PHONE KEYS	
Enter you BRP dealer number to access your support services.	Parts, Accessories and Clothing (PAC)	PAC Analysts ETA or BO details	1-1
		PAC Analysts Parts and kit Request or Spec.	1-2
		PAC Analysts Shipping Information	1-3
		PAC Analysts Order and Order status	1-4
		PAC Analysts Return and Return status	1-5
		PAC Analysts Other Questions	1-6
		To reach your PAC Sales Representative	1-8
By entering your dealer number, it will secure your dealership access to your Network Support Services by not allowing non-authorised users in.	Technical Service	Ski-Doo High Altitude	2-1-1
		Ski-Doo Utility Vehicles	2-1-2
		Ski-Doo E-TEC	2-1-3
		Ski-Doo – All other questions	2-1-4
		Sea-Doo PWC	2-2-1
		Sea-doo Sport Boats	2-2-2
		Can-Am ATV	2-3-1
		Can-Am Roadster	2-3-3
		Can-Am Side-by-Side	2-3-2
Listen to the first menu, and choose the **Service** by pressing the number key on your telephone.	Warranty	Warranty on clothing	3-1
		Claim questions and information	3-2
		Warranty coverage	3-3
		Unit information and registration	3-4
		Warranty policies and procedures	3-5
		Other Warranty questions	3-6
	BOSSWeb and Technology Support		4
Listen to the second menu to choose the appropriate **Subject** category.	Training, Sales Administration and Unit Shipping	BRP Awards	5-1
		BEST Sales Inquiries	5-2
		Certification and BRPTI	5-3
		Technical Training	5-4
		Signage	5-5
		All other vehicles Sales related inquiries or to speak to your Regional Sales Coordinator	5-6
NOTE: Calls from a rotary phone will be directed to an operator who will then transfer your call.	Consumer Assistance	Concerning an open case	6-1
		All other questions	6-2
	Coop and PAC Racking System Programs	PAC Racking System (Merchandising)	7-1
		Coop Advertising	7-2

Important Note: The Network Support Center is for **dealer use only**.
Retail Canadian Customers can reach Customer Assistance by dialling 819 566-3366.
Retail American Customers can reach Customer Assistance by dialling 715 848-4957.

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 that you observe the following guidelines:

Review the service material that you already have

Check your service library for any publications that may assist you with your problem. Often the answer is already in your hands in the form of manuals, bulletins, spec books, technical update books, What's New letters, 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

Many times you will 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. Make sure the vehicle does what the customer says it does; when he says it does it. If you cannot verify a problem, do not work on the vehicle. Do not attempt needless repairs.

Verify the warranty status

Is the unit in warranty, out of warranty, or covered by a BEST contract (if applicable)? If it is covered by BEST, have the contract number available as well as the 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 may be logged in the computer system. Ask for the call I.D. number and put it on the repair order.

DEALER TECHNICAL SUPPORT

CANADA AND USA

Call the Service Representatives to get technical assistance and to get a Warranty authorization number. Remember these are for DEALER USE ONLY.			
	Phone	Fax	E-mail
Jasmin Boudreau Coordinator	1 819 566-3578	1 819 566–3590	jasmin.boudreau@brp.com
Service Representatives			
USA	800 366-6992	715 847-6879	—
Canada	800 361-9980	819 566-3062	
Benoit Gagner (English and French)			service@brp.com
Bill Phare (English)			
Dany Davey (English and French)			
Dennis Sawyer (English and French)			
Éric Fauteux (French)			
Gordy Radtke (English)			
John Lofy (English)			
John Wegmueller (English)			
Ken Gauthier (English and French)			
Kurt Otteson (English)			
Mike Carter (English)			
Paul Literski (English)			
Perry Redeker (English)			
Robert Wegmueller (English)			
Simon Boucher (English and French)			
Tom Lawrence (English)			

OUTSIDE NORTH AMERICA AFTER SALES SUPPORT

	PHONE	FAX	E-MAIL
Robert Gariup Service Manager International	+1 819 566-3536	+1 819 566-3457	robert.gariup@brp.com
Ronald Hurner International Service Coordinator	+1 450 532-5100 ext 4678	+1 450 532-6186	ronald.hurner@brp.com
Brian Hanover International Service Coordinator	+1 847 689-7099	+1 847 689-7277	brian.hanover@brp.com
Vincent Deschamps-Sonsino International Service Coordinator	+1 450 532 5100 Ext.4678	+1 819 566 3457	vincent.deschamps-sonsino@brp.com

AUSTRALIA AND ASIA EXCLUDING JAPAN

	PHONE	E-MAIL
Brett Roberts Service Manager	+61 2 9794 6619	brett.roberts@brp.com

BRP JAPAN

	PHONE	FAX	E-MAIL
Daisuke Simizu Service Manager	+81 44 200 1431	+81 44 200 1432	daisuke.simizu@brp.com

EUROPE MIDDLE EAST AND AFRICA

	PHONE	E-MAIL
Andreas Klopfleisch Service Manager	+49 2174 7836 15	andreas.klopfleisch@brp.com
Helder Amaral Service Manager	+34 93 145 8456	helder.amaral@brp.com

CARIBBEAN AND LATIN AMERICA

	PHONE	E-MAIL
Ednilson Beneli Service Manager	+1 954 846 1450	ednilson.beneli@brp.com

BRP SCANDINAVIA

	PHONE	E-MAIL
Geir Kristensen Service Manager (Norway, Sweden)	+47 78 44 35 00	gier.kristensen@brp.com
Jorma Kukkola Service Manager (Finland, Central and Eastern Europe, Russia and CIS)	+35 8 16 3208 132	jorma.kukkola@brp.com

CUSTOMER ASSISTANCE CENTERS

CALL THE CUSTOMER ASSISTANCE CENTER

Although customers have the option to call us at the numbers and address provided below, calling in for your customer on any customer issues or questions is always the best alternative for your customer. For dealers in Canada, simply call 1 800 361-9980/in the USA 1 800 366-6992, and press option 6 to speak to a customer representative.

CUSTOMER ASSISTANCE CENTER FOR NORTH AMERICA

		PHONE	FAX
For Retail Customers	In USA	715 848-4957	819 566-3062
	In Canada	819 566-3366	

Mailing address for Retail Customers:
BRP Consumer Service Group
75, J.-A. Bombardier Street
Sherbrooke,
Québec, Canada
J1L 1W3

CUSTOMER ASSISTANCE FOR COUNTRIES WITHIN EUROPE, MIDDLE EAST, AFRICA, RUSSIA AND CIS

Please contact our European office: BRP EUROPE N.V.

FOR RETAIL CUSTOMERS	PHONE	+ 32-9-218-26-00

Mailing address for Retail Customers:
Consumer Service Center
Skaldenstraat 125
9042 Gent
Belgium

CUSTOMER ASSISTANCE FOR SCANDINAVIAN COUNTRIES

Please contact our Finland office: BRP FINLAND OY

FOR RETAIL CUSTOMERS	PHONE	+ 358 16 3208 111

Mailing address for Retail Customers:
Service Department
Isoaavantie 7
Fin-96320 Rovaniemi
Finland

CUSTOMER ASSISTANCE FOR ALL OTHER COUNTRY

Please contact your local distributor or our North America office: Bombardier Recreational Products Inc.

LEGAL COORDINATOR

NOTE: Only for North American dealer. Other countries please contact your Service Representative.

	PHONE	FAX	E-MAIL
Nancy Larsen	715 847-6828	262 884-5789	nancy.larsen@brp.com

WARRANTY

TIPS

NOTE: **Please, do not forget:**

– You have 21 days from the repair date to submit a claim.
– You have 45 days from the credit date to ask for a claim resubmission.
– North American dealers have 21 days to return your parts (please keep tracking number) and documents to BRP from the date your claim is accepted.

NOTE: For North America, If you feel you will not be able to complete the repair before the end of Warranty, but the vehicle before the end of warranty, please complete the Repairs Completed While Vehicle's Warranty Expired form available in the ComCenter section of BOSSWeb under Warranty Guide and Forms. Fax this form before the end of the Warranty to the number at the bottom of the Form.

NOTE: For other countries dealers, please contact your local distributor or BRP Regional Office.

– You must keep the parts that are not requested to be returned to BRP 90 days after the credit date.
– You must register all vehicles within 10 calendar days from the date of delivery to the customer.

NOTE: **You must keep on file all the following information about a vehicle.**

– Signed PDI checklist (keep for 10 years).
– Signed rider form (ATV only).
– Warranty registration form.
– Work/repair order (keep for 3 years from the credit date).
– Warranty claims (keep for 3 years from the credit date).
– Sublet work/repair receipts (keep for 3 years from the credit date).
– Notes on customer call.

NOTE: **Your work orders must be able to provide key elements which describe and justify the warranty claim:**

The 3 C's

– Condition or Complaint: Description of customer complaint(s).
– Cause: The determination of which component(s) failed.
– Cure: The corrective action taken to fix the problem (repair and/or replace).

And

– Vehicle serial number.
– Reported date of failure/date of repairs completed.
– Mileage or hours on the vehicle.
– If applicable, authorization number issued by a service representative.
– Punched timecards of mechanics.
– Customer's signed authorization to perform the work (signature).

PARTS RETURN

CANADIAN DEALERS	USA DEALERS	INTERNATIONAL DEALERS
Use label (P/N 484 500 001)	Use label (P/N 480 901 601)	All requested Warranty Parts must be returned to your distributor or BRP Regional office. Contact them for complete address and shipping information.
BRP C/O Warranty Parts Center 565 De La Montagne Valcourt Qc J0E 2L0	BRP C/O Warranty Department 7575 Bombardier Court Wausau WI 54401	

Ensure the part returned is properly tagged and the correct copy of the BOSSWeb claim is included in the packaging, 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.

NOTE: For complete details concerning returning warranty parts, please refer to the Warranty Service Guide on BOSSWeb.

B.E.S.T. (BRP EXTENDED SERVICE TERMS)

NOTE: for details concerning this program refer to the *BEST GUIDE* in the *COMCENTER SECTION OF BOSSWEB*.

NOTE: OFFERED TO CANADIAN AND UNITED STATES DEALERS ONLY.

B.E.S.T. is an extended service plan designed to create a new income opportunity for BRP's authorized dealers. A true peace of mind for your customers, B.E.S.T. can be included in every new vehicle sale or sold at retail to existing customers. It offers a valuable additional extended service plan and also has a customer retention focus with its annual maintenance plan which, brings customers back to your dealership for services.

There are two plans to choose from:

– **B.E.S.T. Plus**: extended service coverage + 10-hour check (off road vehicles)/600 mile inspection (Spyder Roadster) and annual maintenance.
– Regular **B.E.S.T.**: extended service coverage only.

The plan features:

– Coverage of eligible Ski-Doo snowmobiles, Sea-Doo PWCs, Can-Am ATVs and Roadsters, and Rotax Powered Sea-Doo Boats.
– Coverage available for a full 3-year extended period beyond the manufacturer's warranty. Customers can purchase in 12, 24, 36 month's blocks.
– Unlimited mileage/hours protection.
– Coverage is fully transferable but non-cancelable, at no charge.
– Repairs are subject to a deductible of only $50 for each repair order (except for Emergency Roadside Assistance offered on Spyder roadsters where there is no deductible).
– Personalized welcome letter and card sent to customers.

For detailed information on BRP's B.E.S.T. coverage, please refer to the B.E.S.T. contract form. For any other inquiry or to order marketing documents, you may go to *BOSSWeb (COMCENTER/DOCUMENT/B.E.S.T.GUIDE)* or call our Sales Administration team at 1-800-361-6992 (USA) or at 1-800-361-9980 (Canada).

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	USA	CANADA
Contract forms	(P/N 484 800 210)	(P/N 484 800 212)
Counter mats	(P/N 219 701 170)	(P/N 219 700 535)
Customer brochures	(P/N 219 700 533)	(P/N 219 700 709)

BOSSWEB ACCESS FOR SERVICE DEPARTMENT PERSONNEL

It has been brought to our attention that in many instances BRP service department personnel do not have complete BOSSWeb accesses to view information in specific roles (functions) they need to properly service vehicles and maintain dealership records. Many times this is due to the fact that the dealership's BOSSWeb system administrator does not know what accesses to grant these personnel.

These accesses can only be granted by the dealership's BOSSWeb system administrator.

The following is a list for the minimum recommended specific roles for service department personnel.

Service Technician

E-Tec Injector Coefficient (Ski-Doo Only)	Instruction sheets
Online Parts Catalogs	Messages
Document	Rebuild Program
BRPTI (BRP Training Institute)	Shop Manual
BOSSWeb e-Z learning	Technical Publications
Diagnostic software	Warranty Flat Rate
	What's News

Service Manager

Parts Availability and Prices	B.E.S.T. Guide
Claim Status	Diagnostic Software
Clothing Claim	Instruction Sheets
Parts Claim	Messages
Unit History	PAC Price List
Unit Claim	Rebuild Program
Campaign Monitoring	Shop Manual
Campaign Claim	Technical Publications
Scheduled Unit Maintenance	Warranty Flat Rate
B.E.S.T plus Maintenance Claim	Warranty Guide and Forms
PartSmart CD Password	What's News
Dealer Certification	
E-Tec Injector Coefficient (Ski-Doo)	
Online Parts Catalogs	
B.U.D.S. Access Codes	
Customer Satisfaction Index	
Document	
BRPTI (BRP Training Institute)	
BOSSWeb e-Z learning	

Parts Manager

Dealer to Dealer Parts/Clothing Search Request	B.E.S.T. Guide
Return Status	Instruction Sheets
Parts History	Messages
Regular Order Entry	PAC Price List
Parts Availability and Prices	Promotions
Back Order List	Rebuild Program
Return Entry	Shop Manual
Shopatron Orders	Technical Publications
Shopatron Enrollment	Warranty Guide and Forms
View All Dealer Parts/Clothing Request	What's News
PAC order status	
Claim Status	
Clothing Claim	
Parts Claim	
Invoice Display	
PartSmart CD Password	
Online Parts Catalog	
Licensed Products	
Document	
BRPTI (BRP Training Institute)	
BOSSWeb e-Z learning	

BOSSWEB SYSTEM ADMINISTRATOR TIPS

The following is a step—by—step procedure for the dealership BOSSWeb system administrator on how to add or remove BOSSWeb Roles and Authorized Document Types for the Service Manager, Technician, Sales, and Parts profiles. The suggested roles will help make your department staff more informed and knowledgeable with BRP products and procedures.

To give access to the sub users, please go to the administration tab, select "users".

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Choose the user you want to give the accesses.

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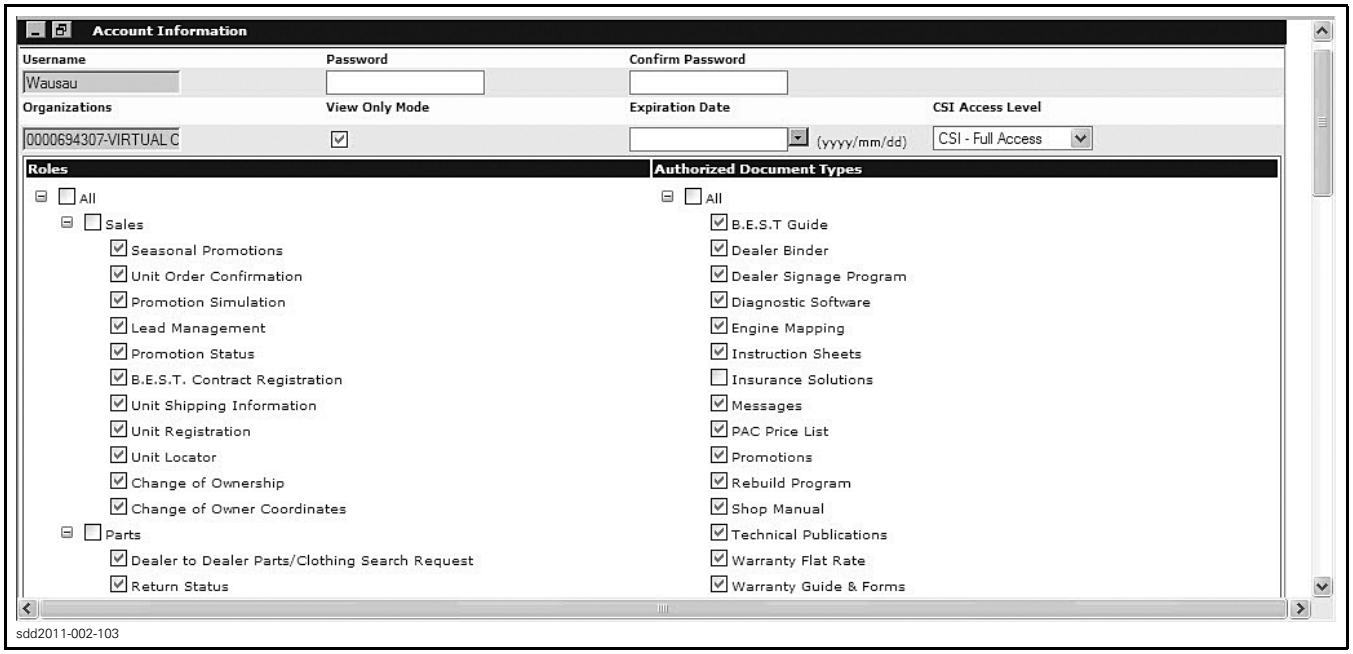
Select the accesses you wish to give that user.



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Click on the blue arrow forward to save changes.

B.U.D.S. ACCESS CODES ARE NOW AVAILABLE ON BOSSWEB

A new Feature in BOSSWeb has been added to allow you to automatically get your access codes for MPI-2 without having to contact BRP Service Representatives. This section for the BOSSWeb administrator and Sub-Users who were given the "get B.U.D.S. access codes" role.

NOTE: This access is only for B.U.D.S. version 3.xx or newer.

NOTE: Please remember that these access code needs to be entered in B.U.D.S. on the same day you get them from BOSSWeb. The access code will be invalid after 24 hours.

Under the ComCenter Tab, choose the "Get B.U.D.S. Access Codes" menu.

The following screen shows the registered MPI serial numbers recorded previously from manual entries done at the Call Center, that were purchased by your dealership.

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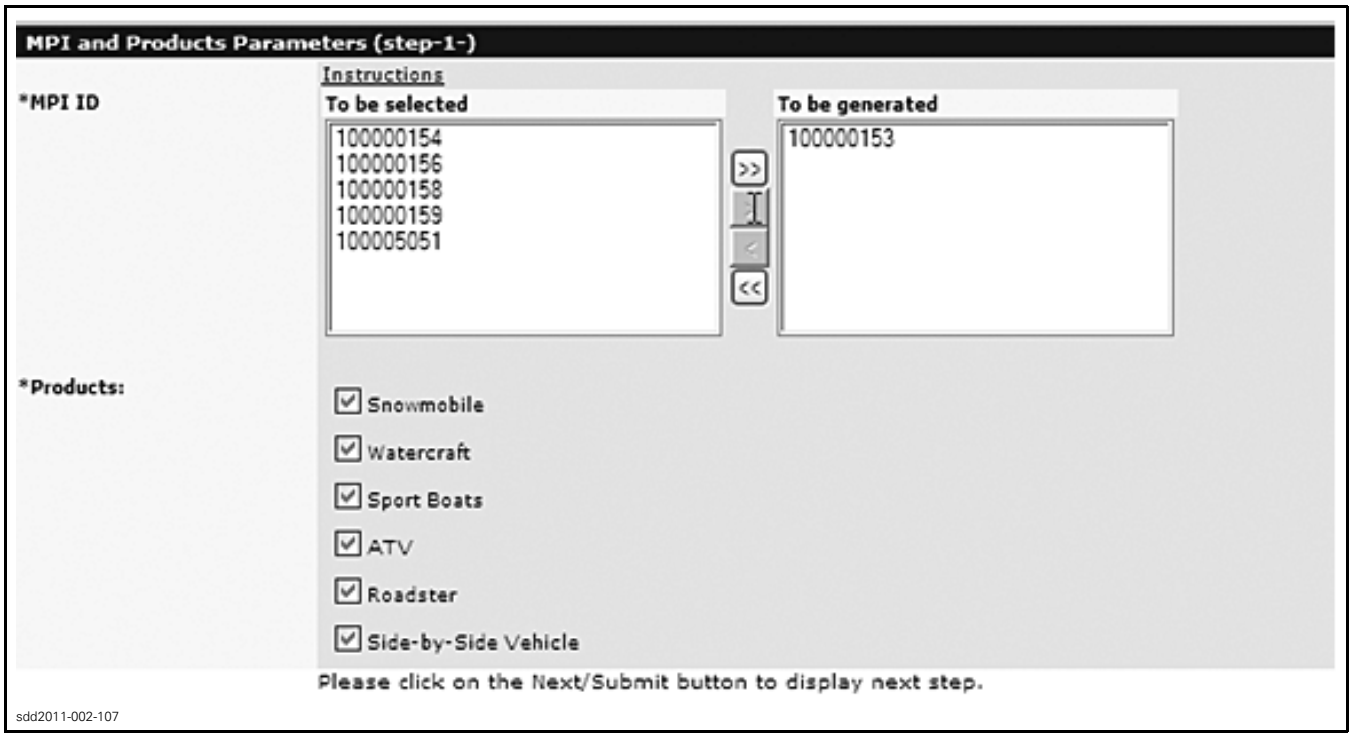
Select the specific MPI serial number you want the access code for by highlighting the serial number. Then push the single arrow to the right for that serial number to be moved to the "to be generated" section.



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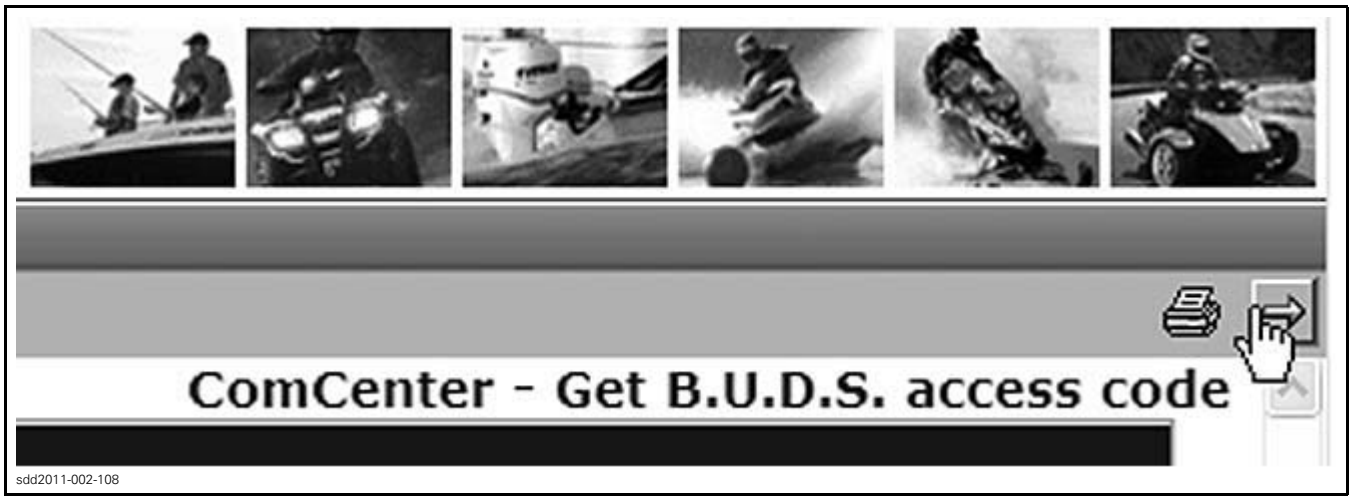
Then push the blue submit arrow on menu bar to get your code.



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Copy the code and type it or paste it in B.U.D.S. Access screen.

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sdd2011-002-109

NOTE: : If the MPI 2 serial number is not listed in BOSSWeb, you will need to contact your service representative, as you did in the past to have him add the serial number to our master database for future access in BOSSWeb. The service representative will be able to generate a temporary code for you, so you can start using B.U.D.S. immediately.

NOTE: If you no longer have the MPI-2 as listed, contact a Service rep so that it may be removed from your list. This will cause the missing MPI-2 to eventually be deactivated permanently preventing unauthorized use.

"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.

3 ways to access the "What's News" letters.

Go to *BOSSWeb* (**www.bossweb.brp.com**).

On the home page, select the **"What's News" banner [1]** which provides rapid access to the newly published letters for 3 days.

After 3 days, the recently published letters can be accessed through the BOSSWeb home page for an additional 4 days. To access them, choose **What's News** in the *DOCUMENT TYPE* drop down menu **[2]** on the right side of the page.

All What's News publications are archived from the first day of publication and available though the *COMCENTER* **[3]** section of BOSSWeb.

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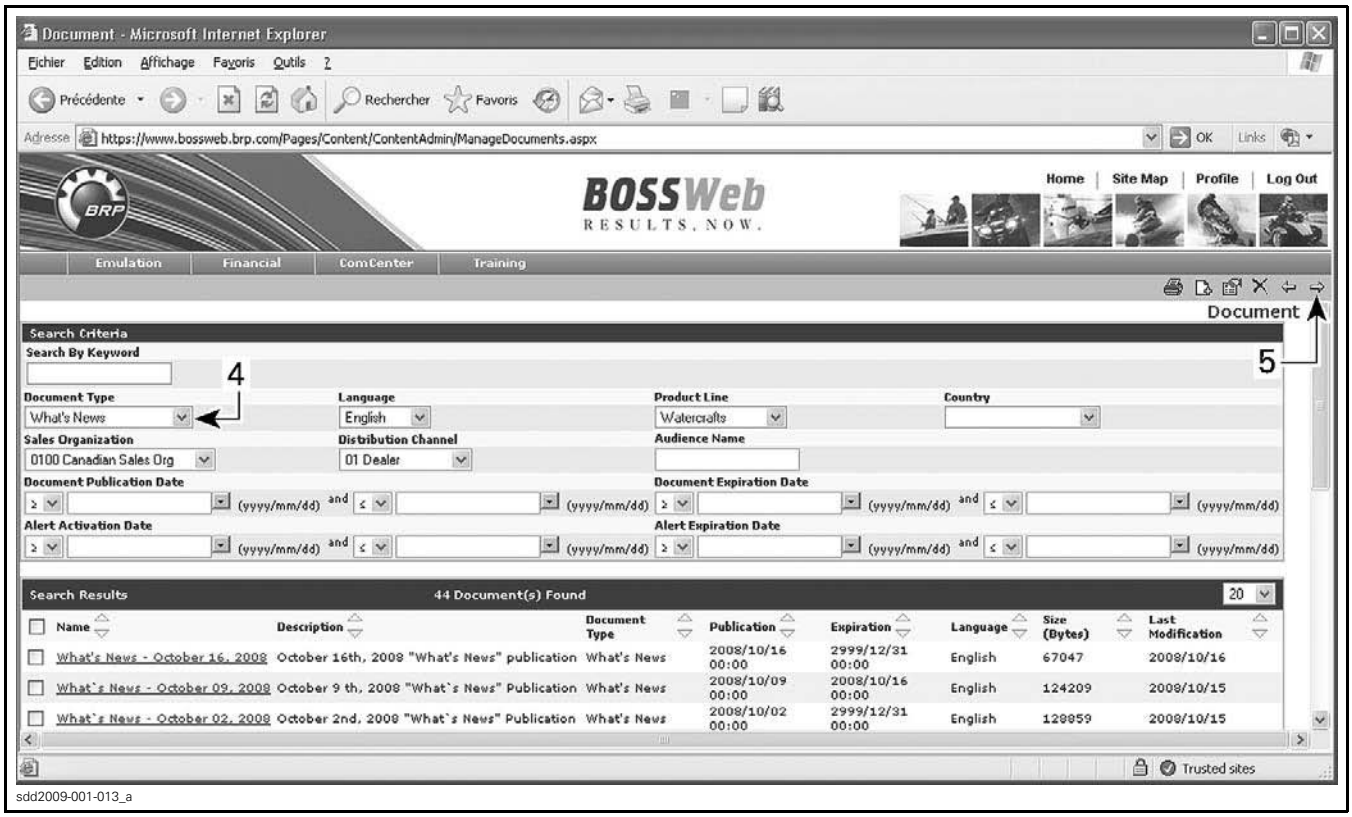
They can be accessed by first selecting **Document** in the *COMCENTER* drop down menu **[3]**.

In the *SEARCH CRITERIA FIELD*, choose "What's News" in the **Document Type** drop down box **[4]**, select the appropriate information in the other applicable drop down boxes, and click on the **Submit** arrow **[5]**.

The archived publications shall be listed in the **Search Results** field at the bottom of the page. Double click on the publication name to view it.



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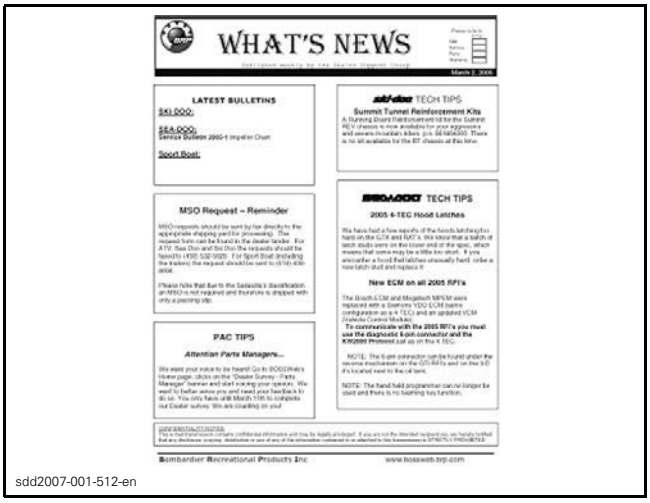
NOTE: BOSSWeb is the only place you will find this letter.

This is an example of a What's News letter.



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REPORTS ON PERFORMANCE AND QUALITY

RPQ

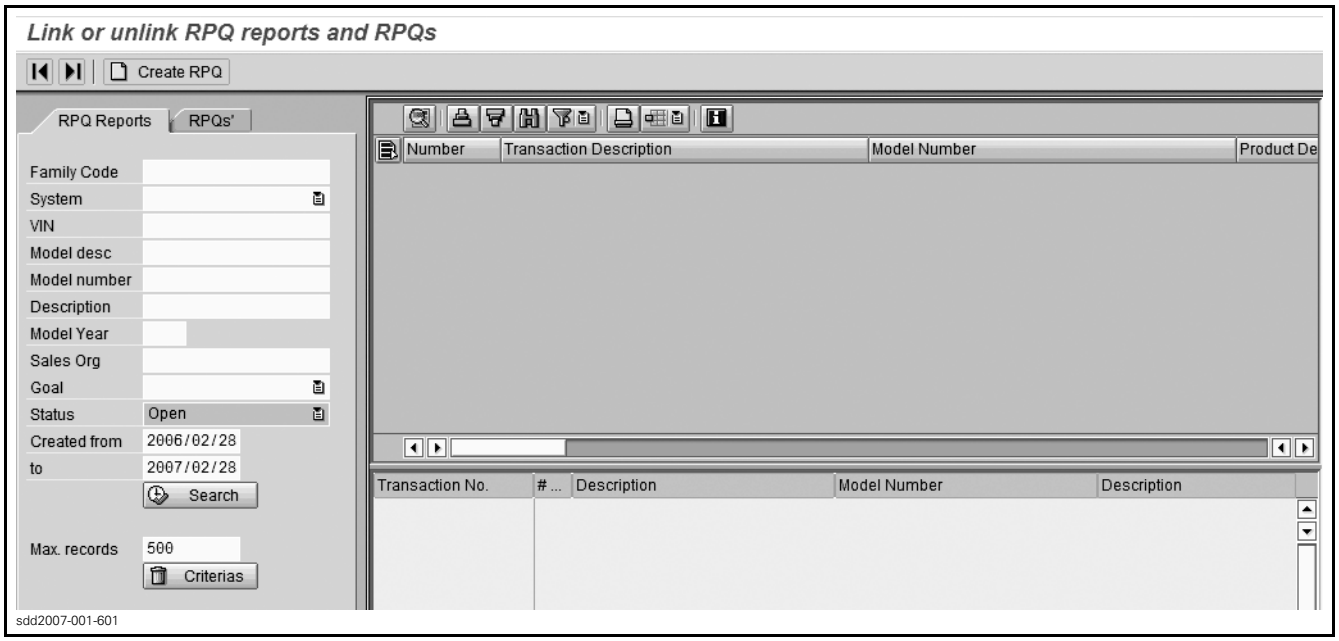
RPQ is the method BRP uses to find out what is happening in the network.

By calling or faxing the **R**eports on **P**erformance and **Q**uality you are helping speed up the investigation process.

Quantity Counts

The quantity of RPQs we receive on issues helps determining priorities; an issue that is occurring on many units will most likely be put in priority. Do not hesitate to report the same issue on different vehicles, especially on the current model year.

This is an example of the information the Service Representative will enter in the data base:



You will be asked:

– Dealer number
– Vehicle model/year
– Serial number
– Mileage/hours
– Possible digital pictures
– B.U.D.S. report
– Riding conditions when the failure occurred.

You will also be asked if there is already a call identification number logged in the system and a detailed description of the issue.

A form is also available in the Annexes Section; it can be filled out and faxed to a Service Representative.

It is important that you tell us about your concerns: Report on Performance and Quality.

IMPORTANCE OF PDI

WAS THE PDI CHECK LIST PROPERLY FILLED AND FILED?

Sell Value for the Money

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

Professionalism

In today's market place, customers have come to expect nothing but the best from a well trained service department. With the PDI sheet completed and signatures from each person involved you can show your commitment to excellence. When a customer leaves your dealership he should be aware of and have:

– All operators and safety guides.
– His sales information.
– The PDI sheet.
– Proof of registration.

NOTE: The checklist has been modified to include an "OWNER'S SECTION" on the second page that is to be read and signed by the customer.

Was the PDI checklist reviewed with the customer? Was the "OWNER'S SECTION" of the PDI Check list read and signed by the customer?

Legal Protection

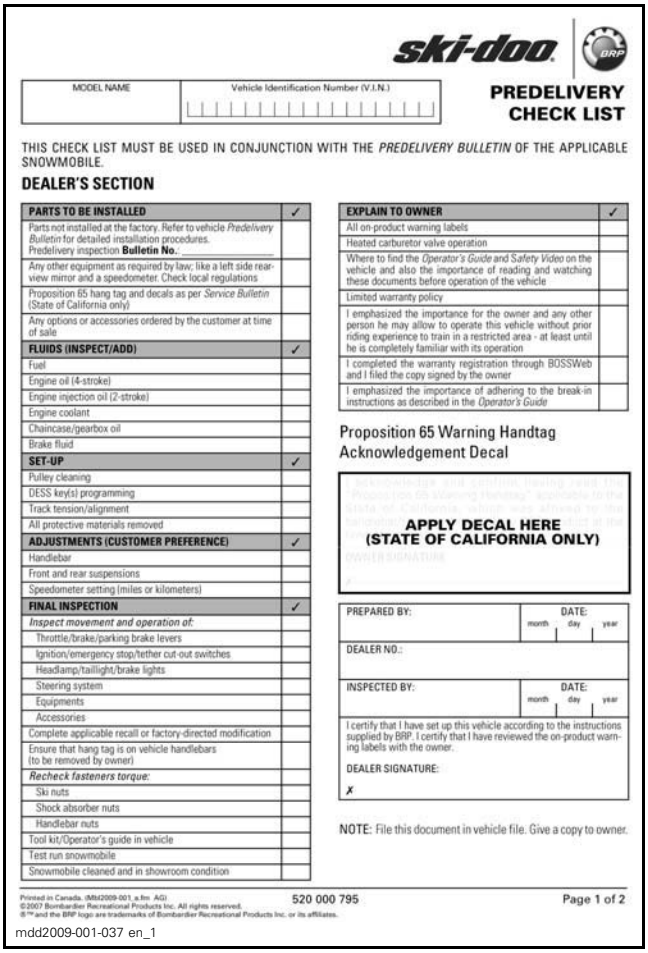
Documented proof that you have reviewed with the customer the operation and maintenance procedures for the vehicle.

Where Do I Find these Documents?

They are shipped with every BRP recreational vehicle or can be found in **BOSSWeb** (**www.bossweb.brp.com**), **ComCenter** tab, **Document Type** (Technical Publications), **Category** (Checklist).

How Do I Learn More About It!

An easy way to learn more about the delivery process is to view the DVD: Introduction to Dealer Development Training DVD Volume 1; (P/N 219 700 256) from the BRPTI (Bombardier Recreational Products Training Institute) DVD series.



ski-doo

MODEL NAME | Vehicle Identification Number (V.I.N.)

PREDELIVERY CHECK LIST

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

DEALER'S SECTION

PARTS TO BE INSTALLED	✓
Parts not installed at the factory. Refer to vehicle *Predelivery Bulletin* for detailed installation procedures. Predelivery inspection **Bulletin No.**:	
Any other equipment as required by law; like a left side rear-view mirror and a speedometer. Check local regulations	
Proposition 65 hang tag and decals as per *Service Bulletin* (State of California only)	
Any options or accessories ordered by the customer at time of sale	
FLUIDS (INSPECT/ADD)	✓
Fuel	
Engine oil (4-stroke)	
Engine injection oil (2-stroke)	
Engine coolant	
Chaincase/gearbox oil	
Brake fluid	
SET-UP	✓
Pulley cleaning	
DESS key(s) programming	
Track tension/alignment	
All protective materials removed	
ADJUSTMENTS (CUSTOMER PREFERENCE)	✓
Handlebar	
Front and rear suspensions	
Speedometer setting (miles or kilometers)	
FINAL INSPECTION	✓
Inspect movement and operation of:	
Throttle/brake/parking brake levers	
Ignition/emergency stop/tether cut-out switches	
Headlamp/taillight/brake lights	
Steering system	
Equipments	
Accessories	
Complete applicable recall or factory-directed modification	
Ensure that hang tag is on vehicle handlebars (to be removed by owner)	
Recheck fasteners torque:	
Ski nuts	
Shock absorber nuts	
Handlebar nuts	
Tool kit/Operator's guide in vehicle	
Test run snowmobile	
Snowmobile cleaned and in showroom condition	

EXPLAIN TO OWNER	✓
All on-product warning labels	
Heated carburetor valve operation	
Where to find the *Operator's Guide* and *Safety Video* on the vehicle and also the importance of reading and watching these documents before operation of the vehicle	
Limited warranty policy	
I emphasized the importance for the owner and any other person he may allow to operate this vehicle without prior riding experience to train in a restricted area - at least until he is completely familiar with its operation	
I completed the warranty registration through BOSSWeb and I filed the copy signed by the owner	
I emphasized the importance of adhering to the break-in instructions as described in the *Operator's Guide*	

Proposition 65 Warning Handtag Acknowledgement Decal

APPLY DECAL HERE (STATE OF CALIFORNIA ONLY)

PREPARED BY: DATE: month day year

DEALER NO.:

INSPECTED BY: DATE: month day year

I certify that I have set up this vehicle according to the instructions supplied by BRP. I certify that I have reviewed the on-product warning labels with the owner.

DEALER SIGNATURE:

✗

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

520 000 795

Page 1 of 2

mdd2009-001-037 en_1

BRP ELECTRONIC PARTS CATALOG

PARTSMART VERSION 8.9.28

By the end of December you will receive the new electronic *PARTS CATALOG PART SMART* version 8.9.28!

If you need detailed instructions (including pictures of example screens) or for network install instructions, access a file called instructions pdf on the *PART SMART CD*.

License Keys

A license key is required for new installations of PartSmart 8.9.28, or if a new license key has been issued for some other reason.

Installation

Server-only Installations. When 8.9.28 is installed from the Server, the software on the client work stations will be updated to the newest version without any additional action required. All Client work stations must exit PartSmart before running the update from the server.

NOTE: If you are using the PartSmart Updater feature, when installation of PartSmart 8.9.28 is complete, you will need to reset the schedule you have in place. To update, click on Start ALL Programs ARI PartSmartUpdate, choose the tab to review and or set up your preferred schedule.

Overall Install

You will be prompted to enter your license key after you launch PartSmart, and to select a catalog which, requires an updated key.

Catalog Install

The catalog data installation has been designed to ensure that catalog updates do not "hang" during the installation and successfully complete regardless of size.

The license key can be found on BOSSWeb.

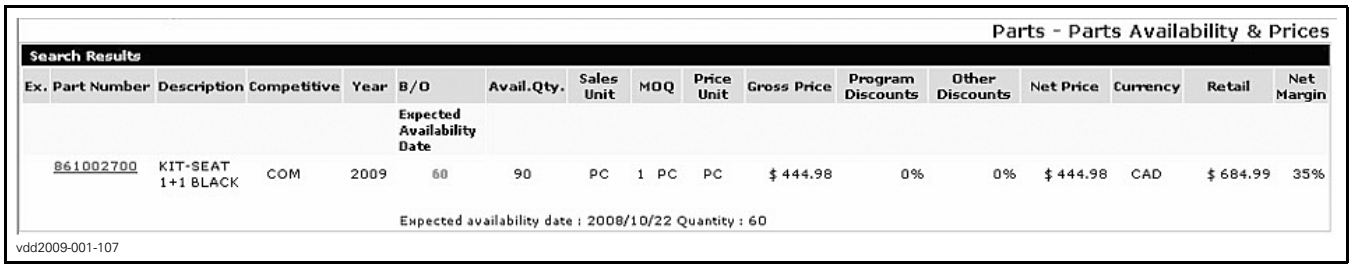
For assistance in obtaining a license key, please communicate with our technology support group.

BRP Electronic Parts Catalogs (PartSmart and Empart) are included in the monthly fee, so there is **NO extra billing**.

BOSSWEB TIPS AND TRICKS: E.T.A.

PARTS AVAILABILITY SCREEN

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

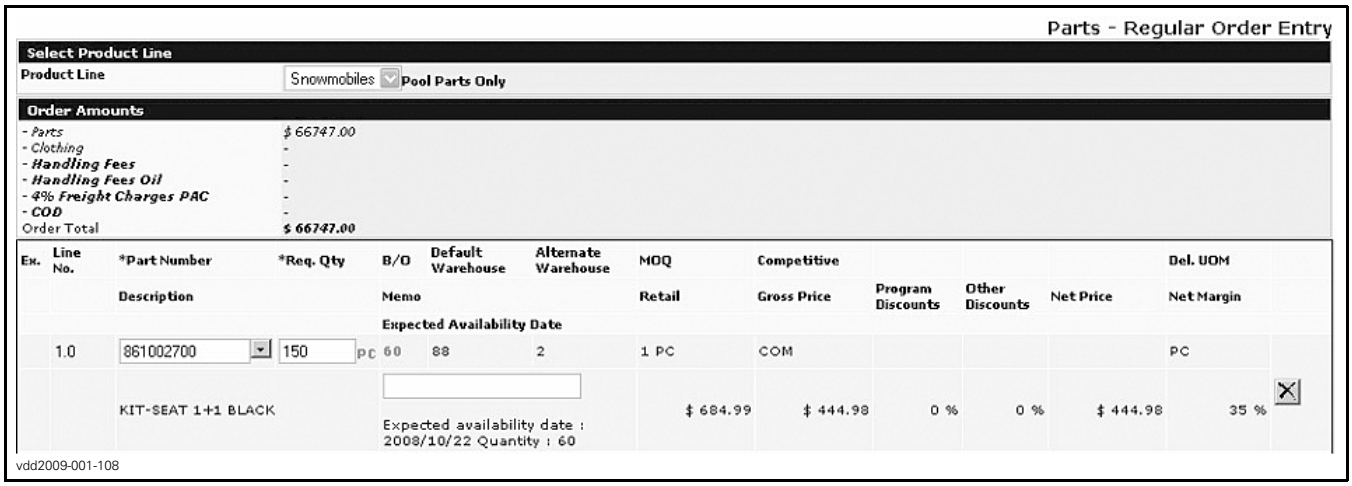


Parts - Parts Availability & Prices

Search Results

Ex.	Part Number	Description	Competitive	Year	B/O	Avail.Qty.	Sales Unit	MOQ	Price Unit	Gross Price	Program Discounts	Other Discounts	Net Price	Currency	Retail	Net Margin
					Expected Availability Date											
	861002700	KIT-SEAT 1+1 BLACK	COM	2009	60	90	PC	1 PC	PC	$ 444.98	0%	0%	$ 444.98	CAD	$ 684.99	35%
					Expected availability date : 2008/10/22 Quantity : 60											

vdd2009-001-107



Parts - Regular Order Entry

Select Product Line

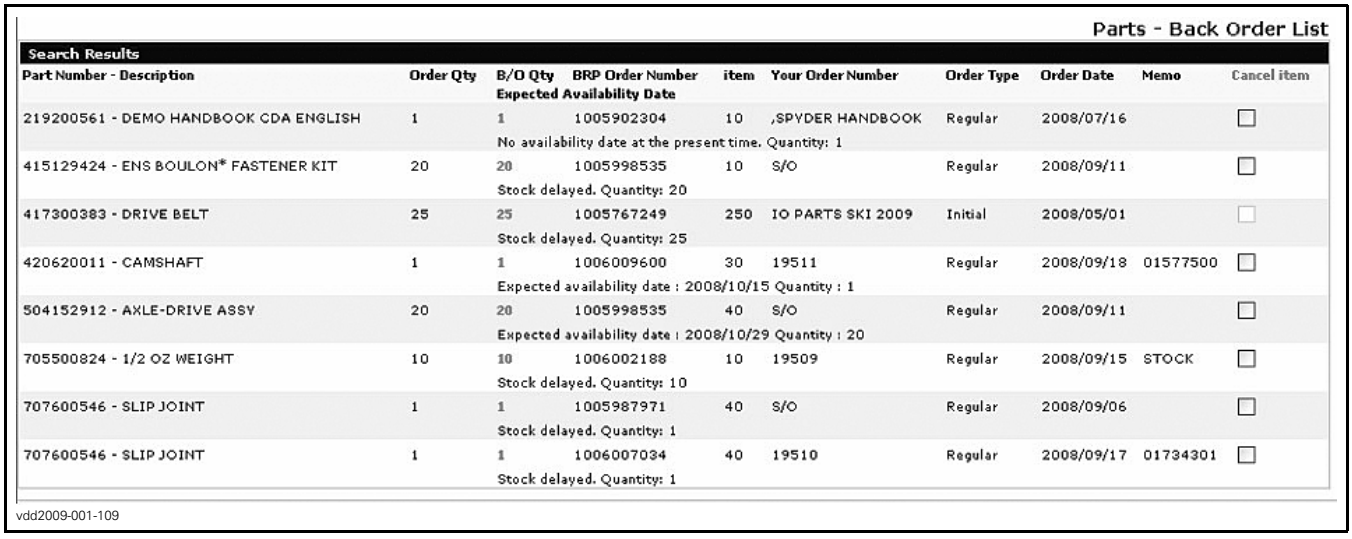
Product Line: Snowmobiles — Pool Parts Only

Order Amounts

- Parts	$ 66747.00
- Clothing	-
- Handling Fees	-
- Handling Fees Oil	-
- 4% Freight Charges PAC	-
- COD	-
Order Total	$ 66747.00

Ex.	Line No.	*Part Number	*Req. Qty	B/O	Default Warehouse	Alternate Warehouse	MOQ	Competitive				Del. UOM	
		Description		Memo			Retail	Gross Price	Program Discounts	Other Discounts	Net Price	Net Margin	
				Expected Availability Date									
	1.0	861002700	150 PC	60	88	2	1 PC	COM				PC	
		KIT-SEAT 1+1 BLACK		Expected availability date : 2008/10/22 Quantity : 60			$ 684.99	$ 444.98	0 %	0 %	$ 444.98	35 %	

vdd2009-001-108



Parts - Back Order List

Search Results

Part Number - Description	Order Qty	B/O Qty	BRP Order Number	item	Your Order Number	Order Type	Order Date	Memo	Cancel item
		Expected Availability Date							
219200561 - DEMO HANDBOOK CDA ENGLISH	1	1	1005902304	10	,SPYDER HANDBOOK	Regular	2008/07/16		☐
		No availability date at the present time. Quantity: 1							
415129424 - ENS BOULON* FASTENER KIT	20	20	1005998535	10	S/O	Regular	2008/09/11		☐
		Stock delayed. Quantity: 20							
417300383 - DRIVE BELT	25	25	1005767249	250	IO PARTS SKI 2009	Initial	2008/05/01		☐
		Stock delayed. Quantity: 25							
420620011 - CAMSHAFT	1	1	1006009600	30	19511	Regular	2008/09/18	01577500	☐
		Expected availability date : 2008/10/15 Quantity : 1							
504152912 - AXLE-DRIVE ASSY	20	20	1005998535	40	S/O	Regular	2008/09/11		☐
		Expected availability date : 2008/10/29 Quantity : 20							
705500824 - 1/2 OZ WEIGHT	10	10	1006002188	10	19509	Regular	2008/09/15	STOCK	☐
		Stock delayed. Quantity: 10							
707600546 - SLIP JOINT	1	1	1005987971	40	S/O	Regular	2008/09/06		☐
		Stock delayed. Quantity: 1							
707600546 - SLIP JOINT	1	1	1006007034	40	19510	Regular	2008/09/17	01734301	☐
		Stock delayed. Quantity: 1							

vdd2009-001-109

BOMBARDIER RECREATIONAL PRODUCTS TRAINING INSTITUTE

THE FOUR STEPS TO TECHNICIAN TRAINING

1. Getting Started

How to become a better BRP service technician

GO to BRPTI via BOSSWeb, review your dealership copy of the *BOMBARDIER RECREATIONAL PRODUCTS GUIDE TO SERVICE FUNDAMENTALS BOOKS* (English (P/N 484 800 168) or French (P/N 484 800 167) which was automatically shipped to every dealership. Then complete the Entrance (Qualifier) Exam on the web site. A passing score of 75% allows you to proceed to the Technician level.

2. Technician Level Training

Watch the series (all product lines are DVDs Vol. 1-2-3-4-5, DVD Vol. 6 Sea-Doo Supercharger, DVD Vol. 7 Roadster Technical Overview, and USB Vol. 8 Sea-Doo iControl Advanced Training). Complete all the exams in the Technician Level of your choice on BRPTI. Passing scores of 75% qualifies you for the BRP Technician Level.

vdd2009-001-105

3. Certified Technician Level

After the Technician Level and current Technical Update exams are completed with a passing score, you can register to attend the Certified Level, hands-on training at one of three locations:

– Sherbrooke, QC
– Wausau, WI
– Atlanta, GA


vdd2008-001-053

These courses are 100% hands-on and very challenging. Students receive credits toward their Certified Technician Level for each task completed. Enroll on BRPTI to Course no. 0060 to see the latest information.


vdd2008-001-054

4. Master Technician Level

After being at the Certified Technician Level for one year, if you have 5 years Powersports Industry experience
as a technician, have worked at your current dealership for 2 years, and pass all subsequent applicable Technical Update exams with 90% or higher on the first completion, you may qualify as a Master Technician. Enroll on BRPTI to Course no. 0070 to see the latest information.

BOOK AND DVD QUICK REFERENCE P/N

TECHNICAL UPDATE BOOKS

Technical Update Books	English	French
2011 Ski-Doo Technical Update Book	219 600 049	219 600 050
2010 Ski-Doo Technical Update Book	219 600 042	219 600 043
2009 Ski-Doo Technical Update Book	219 600 029	219 600 030
2008 Ski-Doo Technical Update Book	219 600 019	219 600 020
2007 Ski-Doo Technical Update Book	219 600 015	219 600 016
2006 Ski-Doo Technical Update Book	219 600 013	219 600 014
2005 Ski-Doo Technical Update Book	219 600 012	219 600 011

RACING HANDBOOK

	English only
2011 Ski-Doo Racing Handbook	484 800 849
2010 Ski-Doo Racing Handbook	484 800 719
2009 Ski-Doo Racing Handbook	484 200 085
2008 Ski-Doo Racing Handbook	484 200 084
2007 Ski-Doo Racing Handbook	484 200 076
2006 Ski-Doo Racing Handbook	484 200 073

TECHNICAL BOOK

BRP Guide to Service Fundamentals and Principles	484 800 168	484 800 167

COMPETITIVE EDGE DVDS

2011 Ski-Doo Competitive Edge DVD	484 800 775
2010 Ski-Doo Competitive Edge DVD	484 800 682
2009 Ski-Doo Competitive Edge DVD	484 800 559
2008 Ski-Doo Competitive Edge DVD	484 800 458
2007 Ski-Doo Competitive Edge DVD	484 800 345
2006 Ski-Doo Competitive Edge DVD	484 800 237

TECHNICAL DVDS

DVD Series Training Kit (includes, Tech DVDs Vol. 1 to 5, Fundamentals Book, Dealer Development DVD Vol.1, 3 to 6 and Intro to BRPTI DVD)	219 700 379
Intro to BRPTI DVD	219 700 196
DVD Vol. 1 Engines	219 700 197
DVD Vol.2 Electrical Systems	219 700 198
DVD Vol.3 Fuel Systems	219 700 199
DVD Vol.4 Suspensions Chassis Steering	219 700 200
DVD Vol.5 Transmissions Drive Lines	219 700 201
DVD Vol.6 Supercharger (Sea-Doo)	219 700 273
DVD Vol. 7 Roadster Technical Overview	219 701 329
DVD Vol. 7 Roadster Technical Overview Workbook	219 600 032
USB Vol. 8 Sea-doo iControl Advanced Training	219 701 672

DEALER DEVELOPMENT TRAINING DVDS

Introduction to Dealer Development Training - DVD Vol. 1	219 700 256
Dealer Development Training - Service Department Operation - DVD Vol. 3	219 700 329
Dealer Development Training - Parts Accessories Management - DVD Vol. 4	219 700 403
Dealer Development Training – Selling Skills – DVD Vol. 5	219 700 518
Dealer Development Training - Merchandizing – DVD Vol. 6	219 700 519

ACCIDENTS INVOLVING BRP PRODUCTS

WHAT TO DO

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.

NOTE: 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 if you or BRP are being accused of being responsible in any way, listen and report all facts (names, addresses, serial numbers, circumstances, etc.).

THE BRP ACCIDENT REPORT FORM IS AVAILABLE FROM BOSSWeb (COMCENTER WARRANTY GUIDE FORMS) OR IN THE ANNEXES SECTION OF THIS BOOK.

- An 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 on what to do next.
- In the case of a MAJOR ACCIDENT, PERSONAL INJURIES, OR A FATALITY- DO NOT REPAIR THE PRODUCT. Contact one of the persons listed below.
- Report facts only.
- Have owner bring the vehicle to you in order to facilitate the investigation.
- Isolate and cover the vehicle.
- Take photographs of the damaged product as proof of damages, and to avoid any potential claim that the product was destroyed, modified or that the evidence was lost.
- Keep BRP informed of any further developments.

WHAT NOT TO DO

- Make no admissions or assumptions of the cause of the accident.
- Do not investigate or commit yourself, BRP, or others.
- Do not make any repairs pending investigation.

IMPORTANT CONTACTS IN THE EVENT OF A MAJOR ACCIDENT, SERIOUS INJURY, OR A FATALITY

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

	PHONE	FAX
Nancy Larsen (English) Coordinator Legal Support	+ 715 848-6828	715 847-6879
Rich Klein (English) Technical Support Coordinator	+ 715 847-6836	715 847-6879
Ghislain Cossette (French) After Sales Service Manager	+ 450 532-2211 Ext. 5276	450 532-6313

What's New

The objective of this section is to give the opportunity to dealers and technicians to learn and understand the differences between this year and last year models on a technical standpoint. **If there are no technical differences, nothing will be shown.**

WHAT'S NEW FOR 2012 SKI-DOO SNOWMOBILES (OVERVIEW)

rMotion rear suspension: All new rear suspension delivers new levels in comfort, capability and adjustability. Reduced transfer enhances sled handling even further. It's motion ratio is the most rising rate in the industry, additional travel and separate spring and shock motion ratios mean the rMotion is supple in small and medium bumps while maintaining extreme capacity in large ones. Plus the new adjustments have a greater range of effect. (rMotion is available on MX Z XRS and MX Z X models.)

rMotion Quick Adjust system: Rear spring preload and rear shock compression damping controls are moved to the running boards to quickly and easily fine tune for riding style, load and trail conditions. The spring preload adjustment has infinite settings and increases the range of adjustment by 40% over the standard rMotion.

Easy Adjust (EA) on KYB PRO 36 and PRO 40 shocks: New single knob controls compression damping on all four shocks where Pro 36 EA or Pro 40 EA, are used. No tools are needed to make adjustments, even when wearing gloves, no tools are needed.

Freeride offering expanded, promoted to model: Enthusiasm for the 2011 Summit Freeride sled and the diversity of the target market's riding styles and areas drives expansion of the concept into a full 2012 model with three packages 154, 146 and 137. All feature the strong REV-XP RS chassis, KYB Pro 40 shocks and loads of trick features for extreme freeriders. With riders' input, BRP has improved the SC-5M-2 rear suspension, as it has an even more progressive motion ratio and trenches less.

Expanded availability of the Rotax E-TEC 800R engine: With the limited first year build in the books, BRP is expanding the availability of the acclaimed E-TEC 800R engine to several more sleds.

Added engine options for GSX SE model: Snowmobilers have really taken to this fully loaded, refined performance sled with the 4-TEC 1200 engine. For 2012, BRP is adding two new engine choices, the lightweight E-TEC 600 H.O. and the 155+ horsepower E-TEC 800R.

REV-XP X seats now come with a rear storage area: Adds 1.3 gallons (5 L) of storage to the performance oriented seat which is on all X package and select Summit models. Two different seat styles are available, the lower flatter style seat that comes on all X package sleds and the higher narrower style seat that comes on units such as the XRS and the Summit.

New Spring Build Your Own Sled choices: Spring buyers of popular models can now further tailor their sleds for their riding and personal styles. New choices include track type, graphic wrap design and the rMotion Quick Adjust system.

Skandic SWT model on REV-XU platform: The ultimate Ski-Doo work sled moves to the REV-X platform and gets all its benefits, including a 52 pound (23.6 kg) weight reduction, more flexible riding position, advanced features and sophisticated styling. For 2012, the Ski-Doo line-up is built 100% on the REV-X platform.

2.5 inch (6.4 cm) lug PowderMax track: Monster lugs, the tallest available from an OEM, increases powder traction and climbing ability.

2012 SKI-DOO ACCESSORIES AND RIDING GEAR PREVIEW

QRS Kit for XP and XR Chassis Sleds (P/N 860 200 565): For removing the QRS driven pulley without having to remove the countershaft. The kit includes a gun-drilled lightweight countershaft and all the necessary parts and hardware for conversion to a floating QRS secondary.

36" Front Suspension Conversion Kit (P/N 860 200 557): Converts 2008-2010 Summit sleds to the 2011-2012 Summit front end 36" configuration, with the benefits of the S-36 handling package. The kit includes a softer sway bar to help you initiate maneuvers, narrower ski stance (35.7"/90 cm), HPG Plus shock absorbers and the ski stance is easily adjustable from 35.7" (90 cm) to 37.4" (95 cm). To complete the S-36 handling package a rear suspension upgrade kit (P/N 860 200 404) is also available for 154" units. Also available for Summit rear suspensions is the Quick Adjuster Kit (P/N 860 200 402) for the front limiter strap length.

42" Suspension Conversion Kit (P/N 860 200 573): Converts 2011-2012 Summits sleds to a wider configuration. This is a complete conversion kit to transform Summits to more of a trail-oriented suspension for those who prefer it. A wide (MX-Z) ski stance (42"/106 cm) and HPG Plus R shock absorbers with rebound clicker adjustment.

Tundra Full Wrap Bumper (P/N 860 200 572): Full (1.25" diameter) heavy-duty steel wrap-around bumper. This bumper delivers added protection to front of vehicle and side panels and attaches to the existing bumper and footrests.

Tundra Full Body Skid Plate (P/N 860 200 601): High molecular weight polyethylene that provides complete underbelly protection in off-trail conditions to help glide on the snow and prevent snow from sticking to the frame.

Graphic Kits: 6 kits to provide additional consumer personalization. Fits Freeride 137", 146" and 154" or REV-XP models of all lengths depending on the wrap design. See the 2012 parts, accessories and riding gear catalog for application and part number reference.

Handlebar Air Deflector Extension Kit (P/N 860 200 435): Additional hand protection from the elements from the new semi-rigid manufacturing deflector extensions. The kit features a soft-shell construction for unimpeded riding yet strong enough to avoid collapsing at high speeds. Works in conjunction with 2011-2012 handlebar air deflectors and can be installed or removed in seconds.

Colored Foot Rests – More Colored Ski Handles – Large 10 Gallon RS Fuel tank

Helium Goggles - Advanced TEC Goggles - Adrenaline Goggles

ABS Vario Avalanche Airbags: Includes the ABS Avalanche Airbag System Base Unit which houses the complete ABS system and the ABS Airbag Activation Unit. Comes with either the 15 or the 30 liter ABS Vario Backpack or the Ski-Doo Vario Backpack by ABS. These bags can be easily zipped on. See the 2012 PAC catalog for more information.

New Line of Base Layers: Three weights of base layers, Ultralight, Active and Thermal. The "Ultralight" layer has Coconut fibers which promote evaporative cooling and odor absorption. The "Active" layer thermodynamically regulates body temp has long-lasting antibacterial performance and silver woven into fibers to promote odor absorption. The "Thermal" layer has warmth and softness.

What's New:

For 2012 the Freeride offering has been expanded and is now available in 137" and 146" track lengths along with the 154" track length that the Freeride was launched with last year. **Freeride has also been promoted to its own model segment.** The Freeride features the strong REV-XP RS chassis, KYB Pro 40 shocks and loads of trick features for extreme Freeriders. The 137" Freeride is a radical sled developed for extreme mountain riders for those that prefer it. The SC-5 suspension that comes on the 137" Freeride is derived from the MX-Zx 600RS race sled for outstanding bump absorption, handling and control. With riders' input, BRP developed the racing inspired SC-5M-2 rear suspension for 146" and 154" as it has an even more progressive motion ratio for less trenching and better floatation.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Why:

Western freeriders were enamoured with the 2011 Summit Freeride package, with the deep snow capability of a Summit sled, and robust snocross proven chassis and shocks. But as freeriding is very personal, each rider wants something a little different. So for 2012, BRP is offering the Freeride as an independent model segment with three different track lengths and lug height variations.

PACKAGE HIGHLIGHTS

- REV-XP RS chassis with forward steering post
- White with White painted tunnel
- Rotax E-TEC 800R
- SC-5 rear suspension with reinforced rails and 4th idler wheel (137")
- SC-5MR-2 rear suspension with reinforced rails and 4th idler wheel (146" and 154")
- 16 x 1.75 x 137 inch Powdermax
- 16 x 2.25 x 137, 146 or 154 Powdermax
- 16 x 2.50 x 146 or 154 Powdermax II
- Lightweight chrome moly front suspension lower a-arm
- KYB Pro 40 R aluminum piggyback front and KYB Pro 40 aluminum center and rear shocks with new single knob compression adjuster
- Pilot DS skis
- Wide adjustable ski stance 38.4/40.1 inch 137", 146" and 154" (or 41.6/43.3 inch on the racing version 154")
- Brembo brake with racing pad and braided stainless-steel brake line
- Multi-function digital gauge w/display and 3 minute high sampling rate record mode
- Aluminum tapered handlebar with mountain strap, 130 mm riser block
- RER electronic reverse
- NEW REV-XP X Narrow seat with 1.3 gal. of storage
- Dual air intake
- 6 in. (152 mm) windshield
- Wrap kit choices with the spring promotion (Mean Clown, Out of Bounds or Tag)

What's New:

In the utility segment, where BRP has the most complete offering in the industry, the **Skandic SWT model moves to the REV-XU chassis**, making the 2012 Ski-Doo snowmobiles 100% built on the REV-X platform. The new SWT sled boasts a monster industry leading 156 x 24 inch track, six percent more fuel capacity and 52 fewer pounds (24 kg) not to mention all the benefits of the modern platform such as sleek styling and flexible riding position.


mdd2012-001-026

Why:

Now on the REV-XU platform, this sled is an absolute workhorse. The 2012 SWT delivers traction and floatation second to none for more hauling power, traction and flotation to get the most demanding jobs done.

PACKAGE HIGHLIGHTS

- NEW REV-XU Platform
- Rotax ACE 600 or Rotax E-TEC 600 H.O.
- NEW Skandic body
- Yellow/Black
- NEW SC-5U articulating rear suspension
- NEW 24 x 156 x 1.25 inch track
- Lynx telescopic front suspension
- 35 inch ski stance
- NEW Pilot DS skis with liner
- Synchromesh transmission with reverse (2-1-N-R)
- Electric start
- Analog gauge with display
- NEW flexible one-piece extra-high windshield with mirrors
- Mountain strap
- Air radiator
- 12 V power outlet
- Two-up seat with passenger handholds
- Cargo rack
- Hitch

Extra Highlights

- ACE 600 (Advanced Combustion Efficiency) engine
- 650 W magneto
- Engine oil cooler
- Air radiator with fan

ALL SUMMIT/FREERIDE 800R E-TEC MODELS


mdd2012-001-012

What's New:

Improved drive belt cooling

- Improved Air Flow for CVT
- Reduce snow/moisture in clutch compartment
- Minimize engine vibration transmitted to chassis
- Mountain specific engine stopper gap and revised belt alignment X and Y dimensions
- Lower gearing
- New cam angle
- Softer driven spring
- New drive belt

Why:

Each of these changes is explained in more detail in this section. All are aimed at decreasing drive belt running temperatures, and improving drive belt life under extreme mountain riding conditions.

Suspension

mdd2012-001-074

146" AND 154" FREERIDE

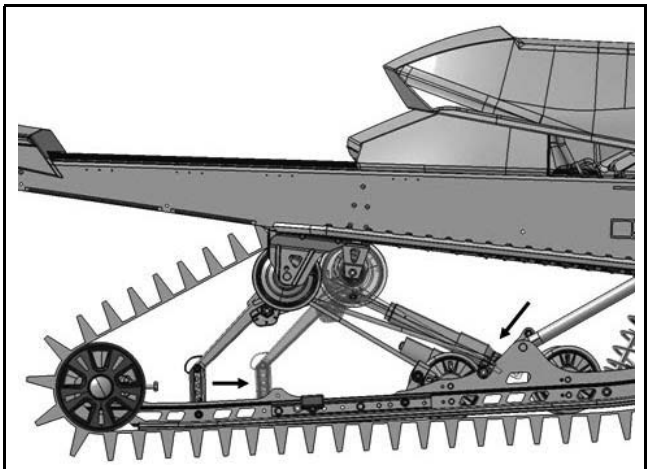
What's New:

The rear suspension is the SC-5M-2

Why:

The racing inspired SC-5MR that was introduced on the 2011 Freeride 154" has been improved for even better deep snow performance, better control and outstanding weight transfer.

For more information on the SC-5M-2 suspension refer to the *NEW TECHNOLOGY* section of this book.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MX-Z X AND MX Z XRS

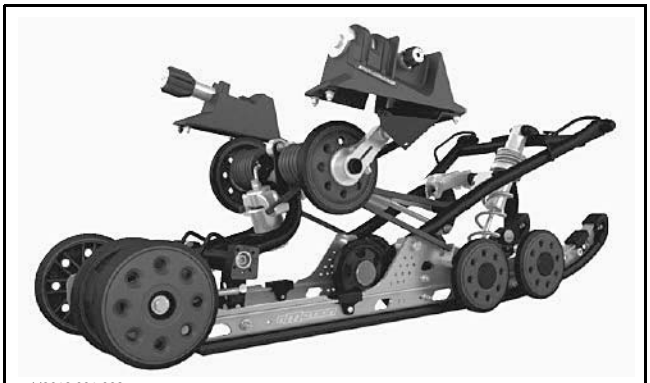
What's New:

Available on the MX-Z X and MX Z XRS, is the rMotion rear suspension

Why:

It sets new industry standards for travel, rising rate motion ratio and adjustability.

For more information on the rMotion suspension refer to the *NEW TECHNOLOGY* section of this book.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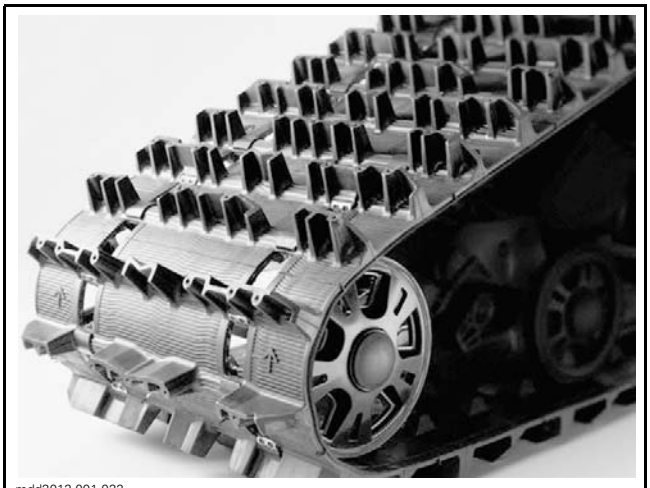
OPTION ON RENEGADE X/800R E-TEC = 16 X 137 X 1.5" STD ON TUNDRA LT = 16 X 154 X 1.5"

What's New:

Charger profile

Why:

Great profile for softer snow conditions, less track squirm, higher top speed.


mdd2012-001-022

800 SUMMIT FREERIDE 137" = 16 X 137 X 2.25"

What's New:

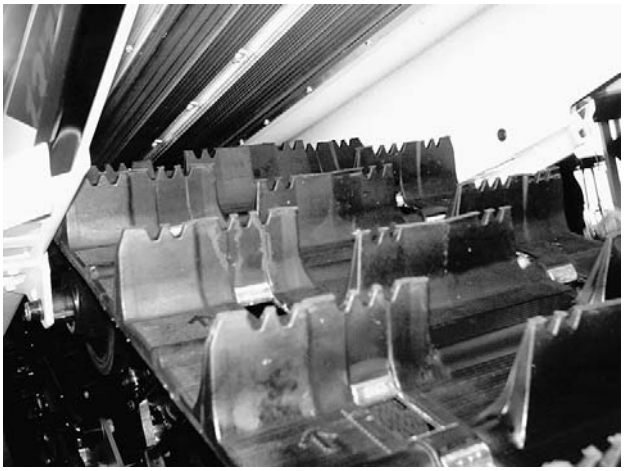
Freeride 137, 2.25" profile Powder Max track

Why:

New deep lug track developed for deep snow, short track version Freeride.

16 x 137 x 1.75" Powder Max is also available for the short track Freeride.

Both tracks are of the non-ported design, to give the best floatation and track speed possible.



mdd2012-001-029

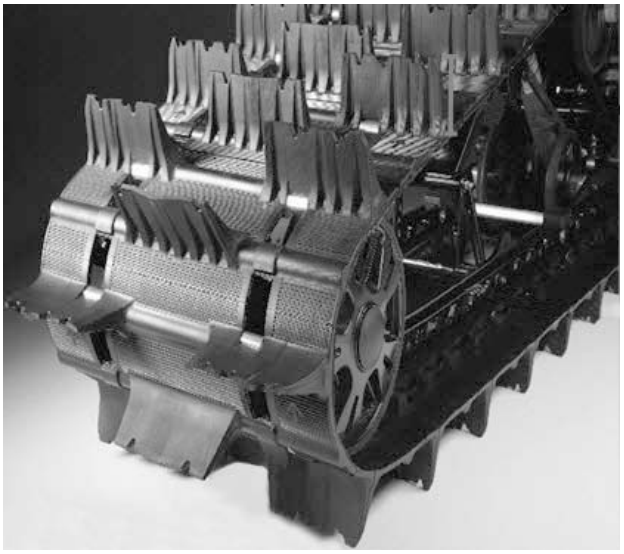
800 SUMMIT SP, X, AND FREERIDE 146/154" = 16 X 146/154 X 2.5"

What's New:

Powder Max II profile with 2.5" height!

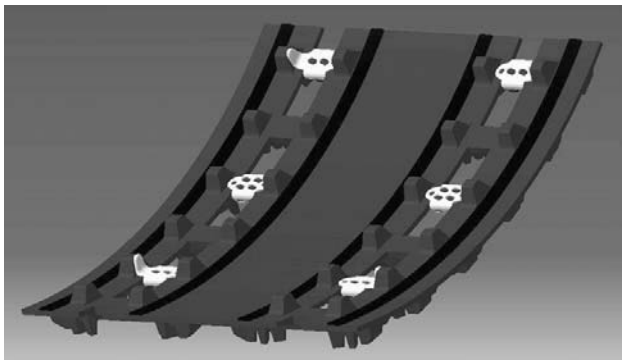
Why:

Traction and High marking king. Paddles have reduced amount of support molded in at base to reduce weight and improve tip flexibility. Non-ported design, to give the best floatation and track speed possible.



mdd2012-001-023_a

GRAND TOURING MODELS 15 X 137 X 1"/ACE AND 16 X 137 X 1"


mdd2009-001-031

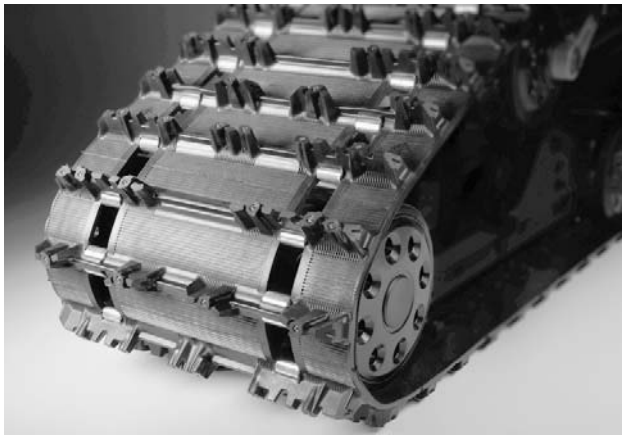
What's New:

Silent track technology expanded

Why:

To enhance noise reduction on these very quiet 4 stroke models. 4 softer durometer strips or bands are vulcanized to the inside of the track surface. There is less noise produced from each of the idler wheels as they go over the reinforcing rods embedded in the track. This is due to the softer strip absorbing and lessening the impact as the wheel contacts each rod. Noise may be reduced by as much as 3 - 4 dba.

OPTION ON MXZ-X 15 X 120 X 1.25"


mdd2012-001-024

What's New:

Ice Ripper XT

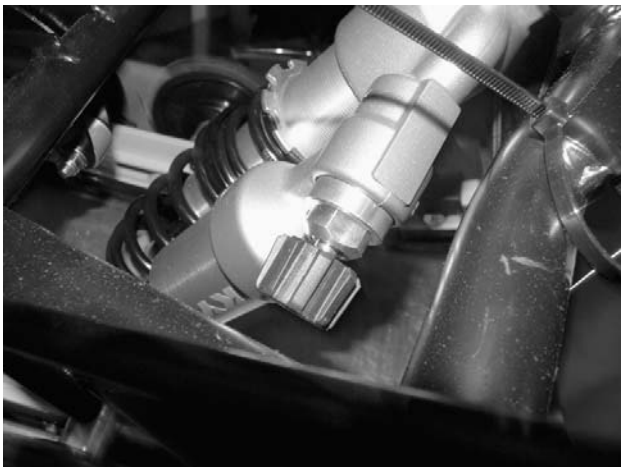
Why:

The right amount of traction to give control in icy corners without the added weight, work or maintenance of push through studs. Preinstalled carbide tipped auto type studs.

PRO 36 AND PRO 40 – EA SHOCKS

What's New:

Easy Adjust (EA), simplified compression dampening adjustment on some models equipped with PRO 36 EA or PRO 40 EA shocks


mdd2012-001-006

Why:

A single adjustment knob now combines high and low speed compression bypass valving. This easy to turn by hand adjuster, requires no tools, and allows a broader range of adjustability. Easier to tune as less knowledge of high and low speed bump types is required.

For more information refer to the *NEW TECHNOLOGY* section of this book.

RUNNING CHANGE ON MODELS WITH MOTION CONTROL

What's New:

Motion control shock eye rubber

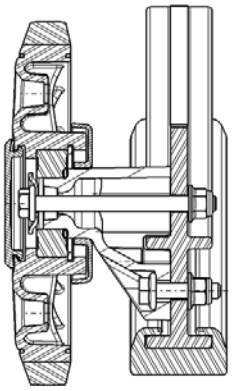

mdd2012-001-004

Why:

Rubber is now barrel shaped to ensure better alignment and no binding while the shock travels through its full stroke. This reduces bending loads on the welded eyelet.


mdd2012-001-005

MODELS EQUIPPED WITH SC-5



What's New:

SC-5 suspension rail idler wheel molded support hex flange screws are both now 10.9 grade screws and the torque on the retaining nuts has been increased to 18 N•m (159 lbf•**in**).

M6 x 25 – (P/N 250 000 522) (new 2012)

M6 x 70 – (P/N 250 000 475) (since 2011)

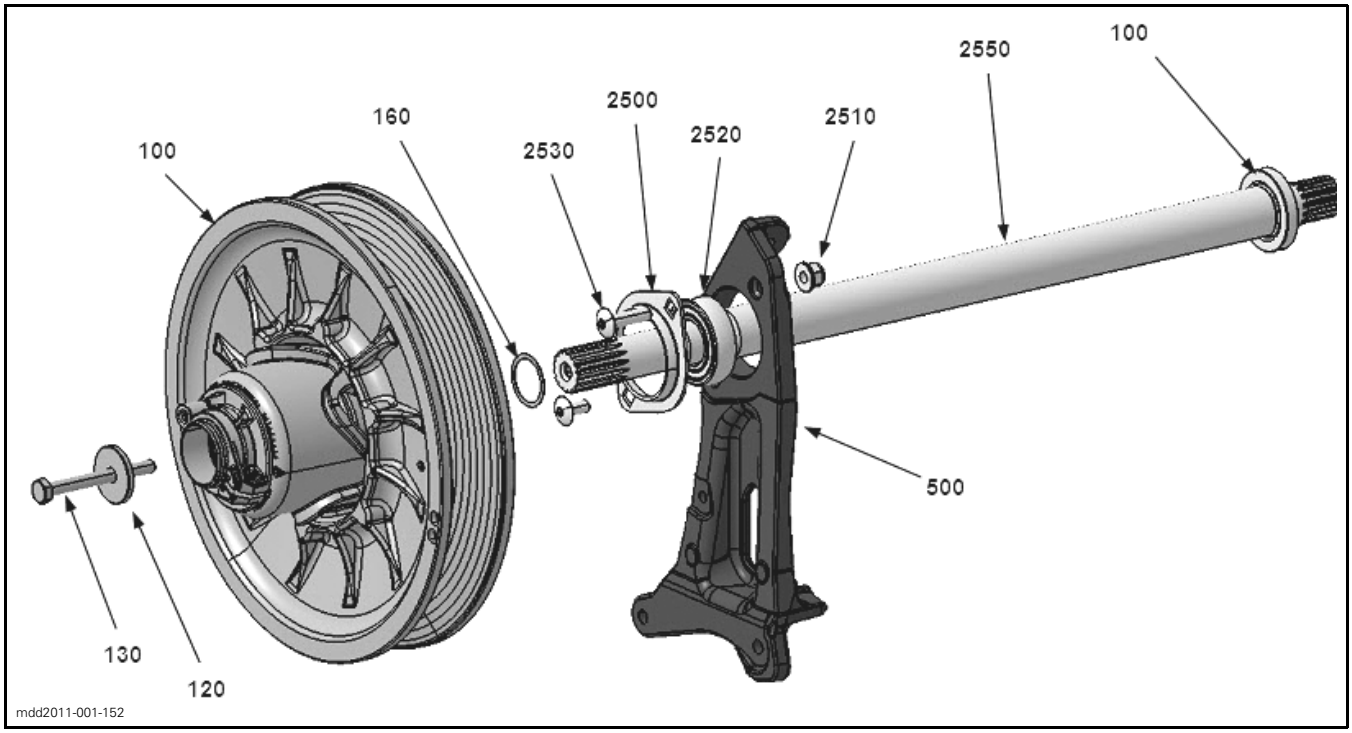
Why:

Improved molded support retention. Both of these new higher grade hex flange screws will retrofit back to 2008 and could be used as replacements for the rivet style molded support retainer.

NOTE: If retrofitting, be sure to use new grade 10 elastic flanged nuts, (P/N 250 100 130) and torque to the new 2012 torque specification.

Normal warranty applies.

Power Train


100
160
2530
2500
2520
2510
2550
100
500
130
120
mdd2011-001-152

ALL 600 ACE EQUIPPED VEHICLES

What's New:

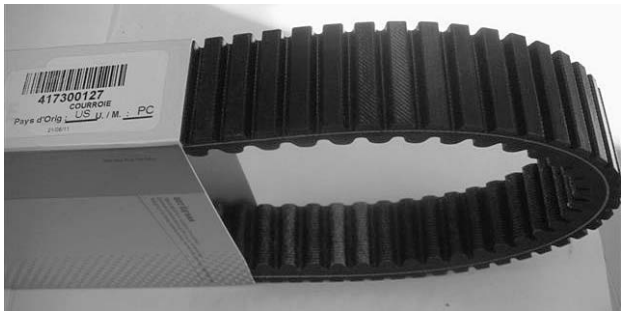
Two different drive belts used

Why:

A heavy duty drive belt has been approved for use on most utility type vehicles equipped with E-drive and QRS SS. The standard drive belt is (P/N 414 860 700) this belt is standard on the MXZ/Renegade/GTX Sport and TNT models. This belt is a good compromise for fuel efficiency, performance and economy.

The utility ACE equipped models this year will come standard with (P/N 417 300 127). This belt is more durable under heavy load's, pulling, and deep snow conditions.

Either of these belts may be used on any 600 ACE model, 2011 or 2012. One thing to note however, is a different belt deflection or belt height is used for each belt. Ensure to read the *2012 SHOP MANUAL* and/or 2012 PDI sheet for the proper measurement. If the belt is sold over the counter, make sure the customer is aware of the proper deflection/belt height specification. The "127" belt will allow the belt to be run higher up in the driven giving a lower starting or take off ratio. This will improve belt life and take off power considerably.



mdd2012-001-032

SUMMIT/FREERIDE 800R E-TEC MODELS

What's New:

Driven pulley cam

Why:

Was (for example on 2011 Summit 154, 43 - 47) now straight 40 degree. This improves back-shifting in heavy snow, along with a softer driven spring. Shifting RPM is more consistent, and the vehicle "coasts more freely".


mdd2012-001-019

ALL SUMMIT AND FREERIDE 800R E-TEC

What's New:

Driven pulley spring

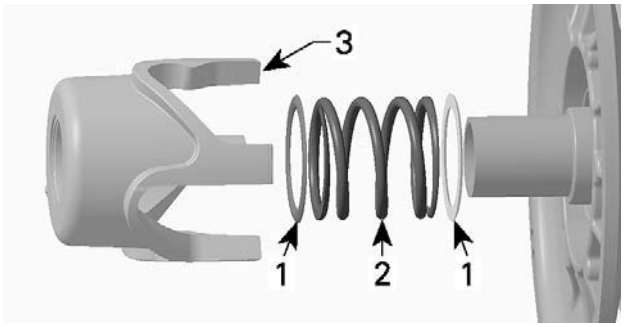
Why:

Previously Violet 1000 N•m.

Now Blue 700 N•m.

This reduces belt temps/improves free wheeling and reduces over rev.

NOTE: Throttle should be applied more cautiously in reverse and or deeper fluffy snow, to keep the belt from opening the driven too quickly.



mmr2008-044-013_a

1. Spring stopper
2. Spring
3. Cam

SUMMIT/FREERIDE 800R E–TEC 146", 154" AND 163"

What's New:

Gear ratio

Why:

146" was 21/45, now is 21/49.

154" was 21/49, now is 19/49.

163" was 21/49, now is 19/51.

Change in gear ratio reduces belt temps and slippage at low speeds. Also new overall calibration to match the new Powder Max II track 2.5" profile. For more information on transmission calibrations see "Section 6" of this book for the 2012 transmission reference chart.


mdd2012-001-020

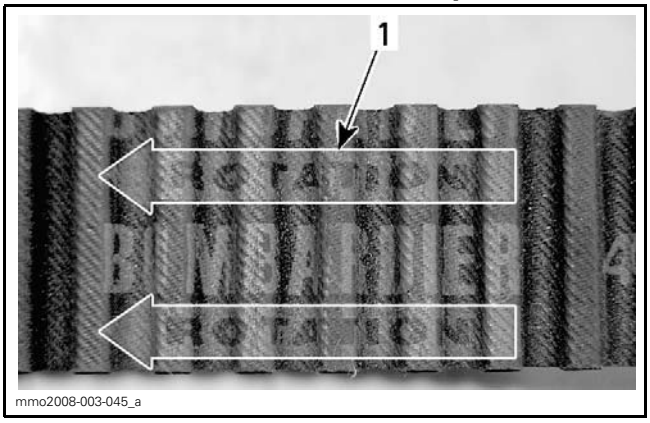
ALL 800R E-TEC SUMMIT/FREERIDE

What's New:

Drive belt

Why:

Was 377 now 391. After one more full year of testing, BRP has approved the 391 as the premier mountain belt, (P/N 417 300 391) is now standard on and recommended for all 2012 800R E-TEC Summit and Freeride models. It has excellent wear characteristics and extended life in the correct applications. This belt uses the identical PBO compressive compound and tensile strength cords as the (P/N 417 300 377) with a special high temperature coating on the cords to reduce cord pop out.



mmo2008-003-045_a

1. Arrow pointing the front of vehicle

ALL MODELS WITH TRA

What's New:

Cotter pins

Why:

The cotter pins are now made of stainless steel to reduce corrosion and improve long term reliability.


A32D1ZA

ALL TRA IV EQUIPPED 1200'S

What's New:

Governor cup

Why:

Since the governor cup is more precisely spot faced for depth a "standard" torque slider is used (Model year 2012 units use slider shoe (P/N 417 223 271)). Older 1200's model year 2009 -2011 could benefit from the new thicker slider shoe, (P/N 417 223 652).


mdd2011-001-129

SUMMIT/FREERIDE 800R E-TEC

What's New:

QRS roller axel

Why:

Higher temp resistant thread locker (Scotch grip) is used on the roller axle threads along with a "metal clip" to reduce the possibility of the axle backing out.

mdd2011-001-153

SUMMIT/FREERIDE 800R E-TEC'S

What's New:

Belt/pulley guard

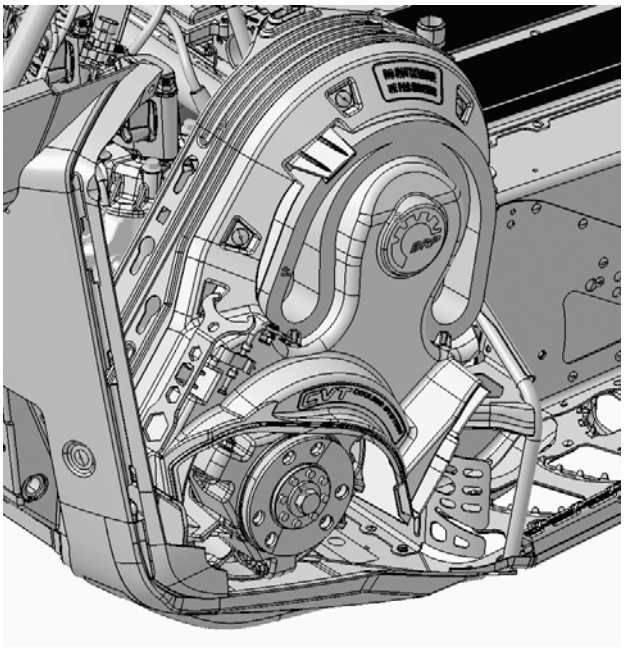
Why:

New plastic cover, designed for improved air flow to reduce drive belt temperatures by as much as 30°F or 10°-15°C. Greatly reduces the possibility of snow contaminating the pulleys. Spare belt holder, multi-use wrench, and driven pulley Allen key have pre-molded holders designed in.

NOTE: For longest belt life and cooler belt temps, it is especially important to leave this cover and pulley guard on and not remove it. Leaving the complete belt cover installed also holds the left side cover from flexing inward and prevents snow from entering the CVT area.

A CVT cover kit (P/N 860 200 714) is available for retrofiting Rev-XP's back to model year 2008 with the new 2012 CVT cover.

Normal warranty does not apply to retrofit.



mdd2012-001-013

Miscellaneous

mdd2011-001-154

600 ACE

What's New:

New 2012 High Altitude/Sea-Level Specifications, see Service Bulletin 2012-4

Why:

Retros to 2011.

Normal warranty does not apply.

ski-doo SNOWMOBILES SERVICE Bulletin

July 19, 2011 Subject: **High Altitude / Sea Level Specifications** No. **2012-4**

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
2012	All	All	All

TABLE OF CONTENTS

mdd2012-001-035

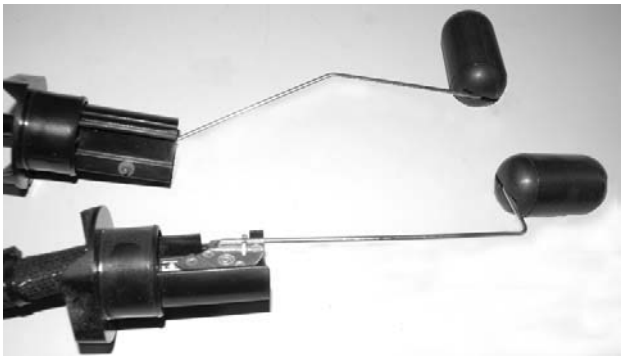
RUNNING CHANGE ON XP MODELS

What's New:

Fuel tank sending unit

Why:

Float arm is now straight to reduce chance of hanging up inside fuel tank. This will improve accuracy of fuel gauge, and reduce alignment sensitivity.



mdd2012-001-007

E-TEC MODELS

What's New:

Oil tank float and switch

Why:

New float design to improve reliability and accuracy. This system will now turn the low oil light on at approximately .6 liter oil remaining in the tank. Previous versions turned the low oil light on at approximately 1.2 liter oil remaining.

mdd2012-001-008

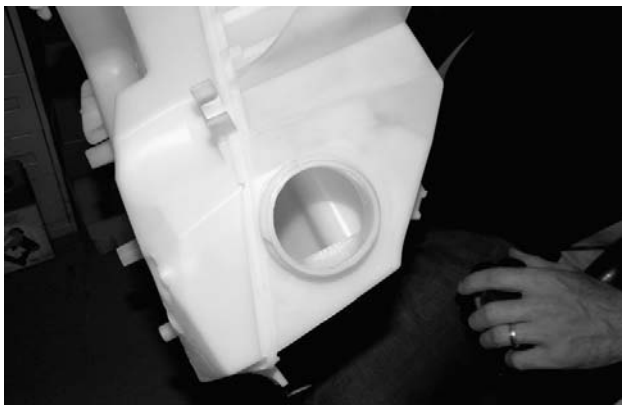
E-TEC MODELS

What's New:

Oil tank

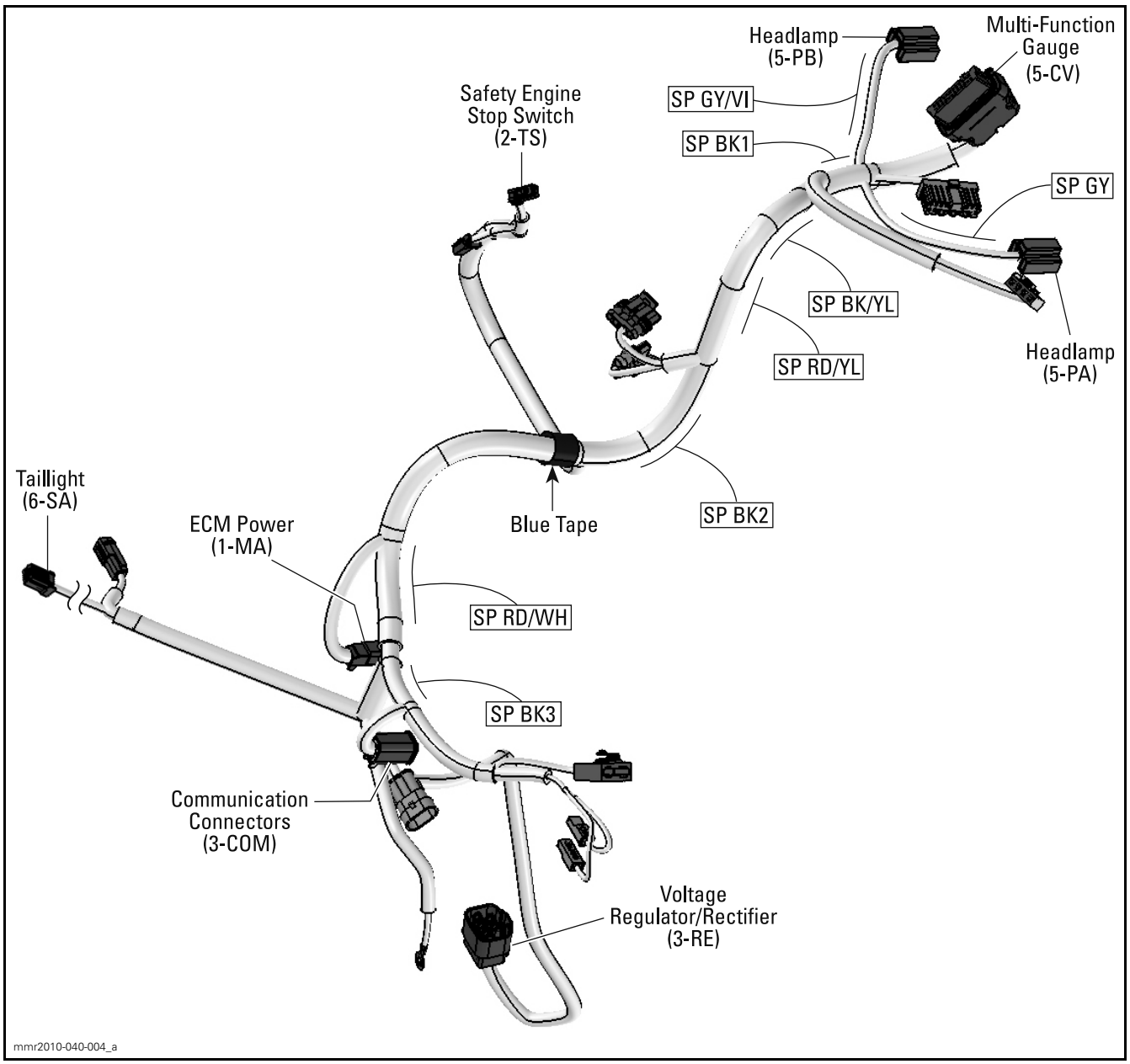
Why:

A small lip or step has been molded in the filler neck as a reference to when the tank is full. Inform customers not to fill the tank beyond this protrusion.



mdd2012-001-009

Electrical


Headlamp
(5-PB)
Multi-Function
Gauge
(5-CV)
Safety Engine
Stop Switch
(2-TS)
SP GY/VI
SP BK1
SP GY
SP BK/YL
SP RD/YL
Headlamp
(5-PA)
Taillight
(6-SA)
ECM Power
(1-MA)
Blue Tape
SP BK2
SP RD/WH
SP BK3
Communication
Connectors
(3-COM)
Voltage
Regulator/Rectifier
(3-RE)
mmr2010-040-004_a

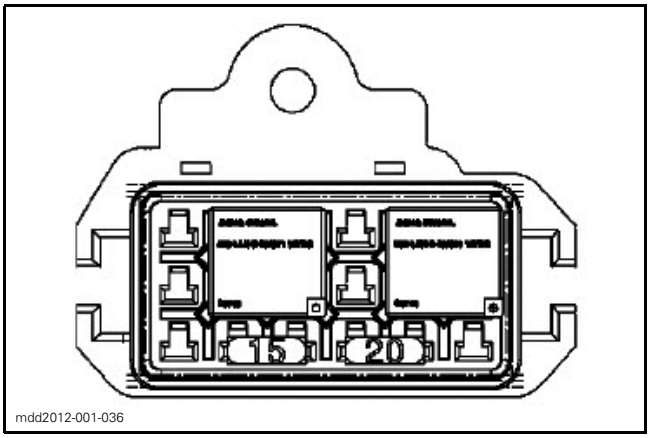
600 ACE AND 1203

What's New:

The fuse block terminals are silver plated to match contact pin silver plating that is used on the relays

Why:

Improved heat dissipation and better electrical conductivity.



mdd2012-001-036

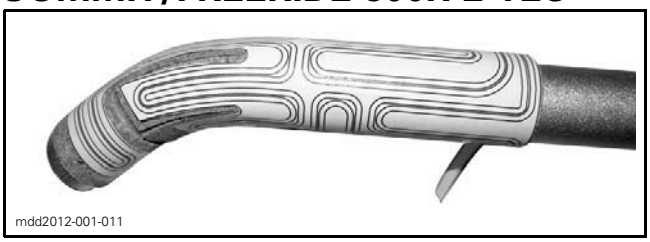
SUMMIT/FREERIDE 800R E-TEC

What's New:

Heated grip element

Why:

The printed circuit has been improved to better conform to the bend in the handlebars for "J" hook area. This change will reduce the failure potential under twisting loads and high output voltages.


mdd2012-001-011

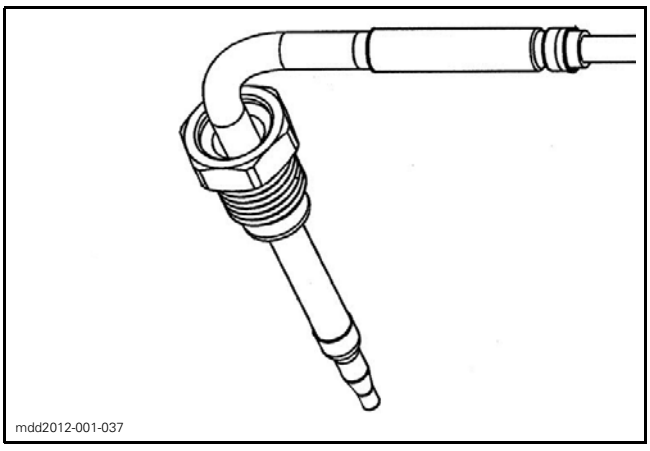
ALL 600 E-TEC

What's New:

An improved exhaust gas temperature sensor on 600 E-TEC, (P/N 514 054 856). This sensor can be used only on 600 E-TEC Motors, it is not for use on 800R E-TEC

Why:

Improved durability and vibration resistance.


mdd2012-001-037

600 ACE

What's New:

Spark plugs

Why:

Iridium spark plugs used to reduce fouling at extremely cold temps.


mdd2012-001-038

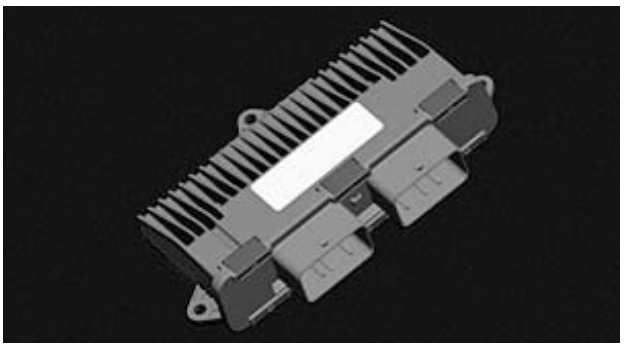
600 ACE

What's New:

ECM

Why:

New hardware and software to improve cold start and run-ability and the brake on limp home mode has been removed.


mdd2012-001-039

600 ACE

What's New:

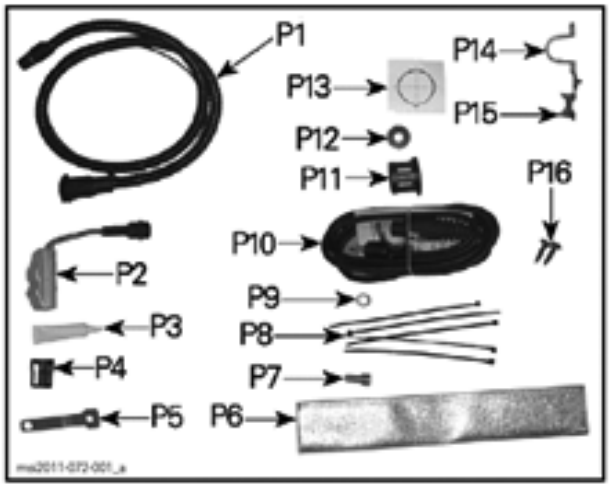
Engine block heater kit

Why:

To improve starting in extremely cold temperatures -30°C to 40°C (-25°F to - 40°F) this kit is now available to be installed.

NOTE: This kit requires a 120 volt power source and takes approximately 1 hour to install. In addition no coolant lines need to be cut as it attaches to the outside of the engine block.

Normal warranty does not apply.



ITEM	DESCRIPTION	QTY	
		Rev-XP Models	Rev-XU Models
P1	Electric Harness	1	1
P2	120-Volt Engine Heater	1	1
P3	Heat Transferring paste	1	1
P4	Fastener for Engine	1	1

mdd2012-001-040

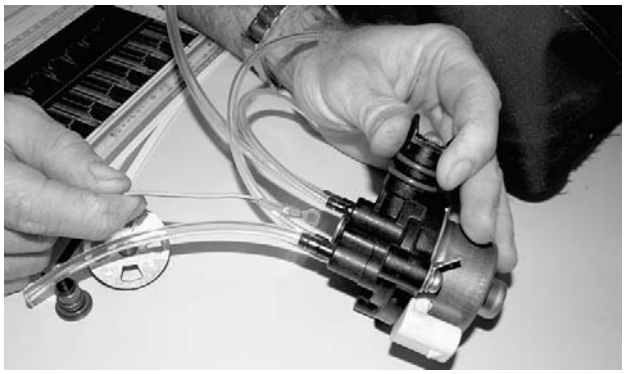
ALL 800R E-TEC MODELS

What's New:

Oil pump assembly

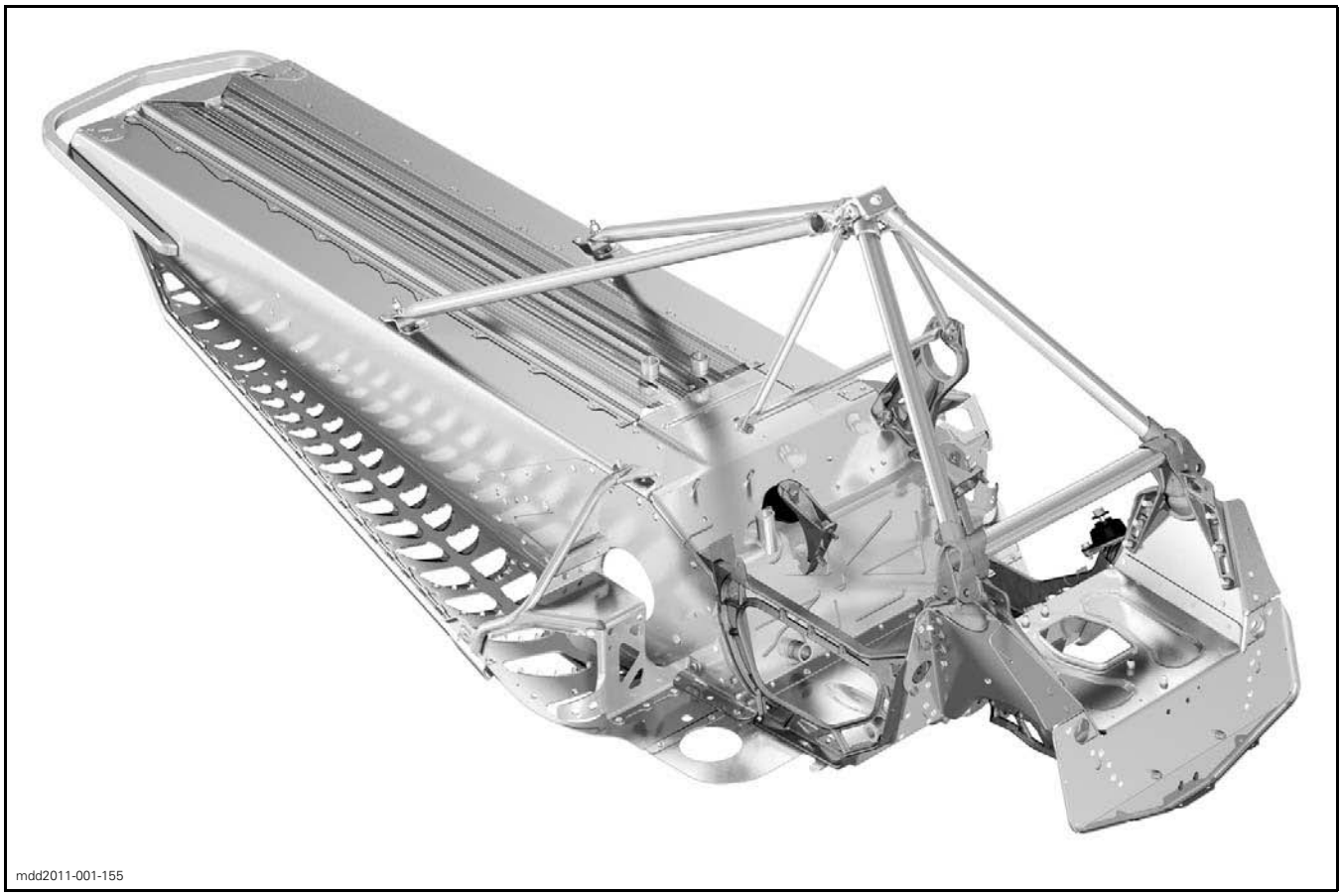
Why:

Durability improvements have been made to both the ground lug on the side of the pump body and the brown feedback wire ring terminal. This will reduce the chance of breakage of the wire or loss of continuity.



mdd2012-001-010

Chassis



mdd2011-001-155

ALL X PACKAGES AND TUNDRA EXTREME

What's New:

X style seat with storage

Why:

Latching rear storage door keeps items in and most snow out.


mdd2012-001-001

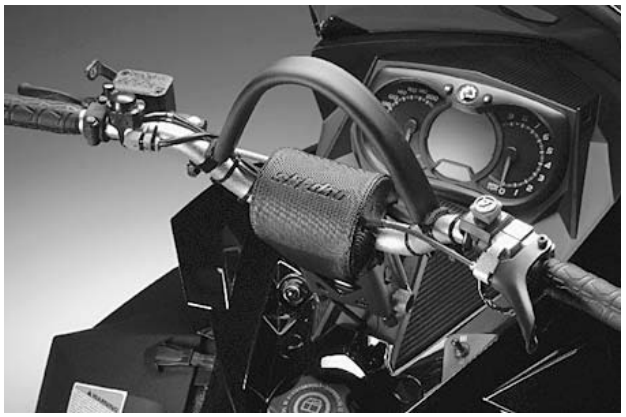
SUMMIT X

What's New:

Attractive tapered handle bar

Why:

Same bar as the Freeride. Sleek look and a stiffer handle bar.


mdd2012-001-044

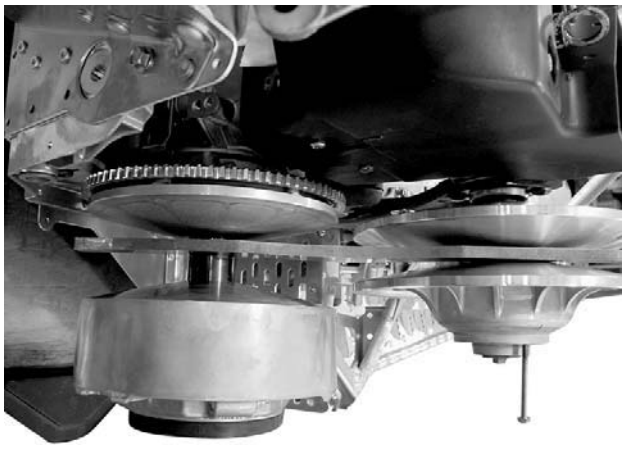
ALL SUMMIT/FREERIDE 800R E-TEC

What's New:

X offset for pulley alignment

Why:

X has been 36.4 mm nominal in the past, but now X = 39.4 mm, Y – X = 3 mm and Z = 20.9. These new specifications are for mountain powder use, it allows a straighter belt alignment at track speeds common in the mountains. This reduces side loads, which helps cool the belt. This change is possible due to a 3 mm longer countershaft.


mdd2012-001-018

ALL SUMMIT/FREERIDE 800R E-TEC

What's New:

The engine stopper gap is now at 0 gap (lightly seated)

Why:

Less engine movement and less belt heat.

mmo2010-009-007

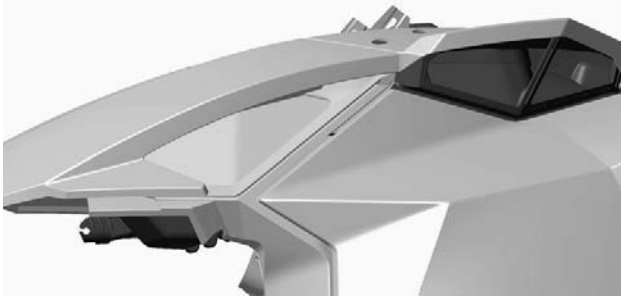
SUMMIT/FREERIDE 800R E-TEC

What's New:

Body panel cover

Why:

A body cover molding has been designed to reduce the possibility of snow entering the pulley area through the cab/body panel seam.



mdd2012-001-041

SUMMIT/FREERIDE 800R E-TEC

What's New:

Pulley guard front hook

Why:

To ease installation and removal of pulley guard, the shape of the front retaining slot has been modified.

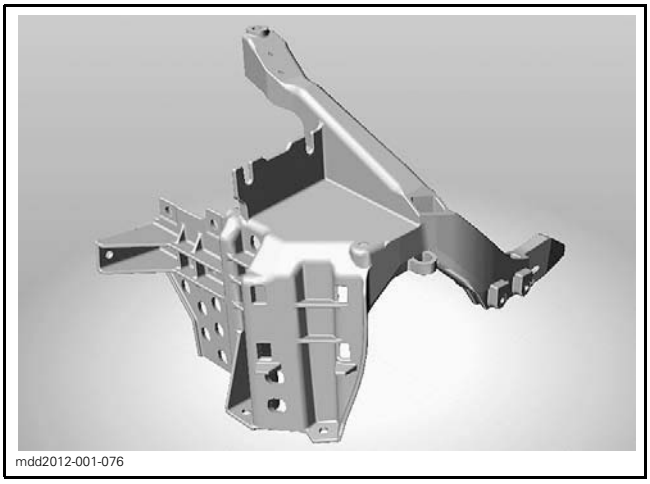
mdd2012-001-014

What's New:

A newly designed left side stirrup which is constructed of Nylene (a nylon polymer)

Why:

Improvement over the aluminum assembly because there are no welds or fabrication and it offers 30% more fatigue resistance. It provides improved parts standardization among Ski-Doo models and furthers cost optimization. It is removable with screws for serviceability with the elimination of the self-piercing rivets that were used on the previous aluminum design. The new left side stirrup is compatible with all 2012 REV-X chassis snowmobiles. For 2012 it is used on all North American non-race REV-XP, all REV XR and some REV-XU chassis units. It is not used on the race units because of the different race toe-hold design.


mdd2012-001-076

RUNNING CHANGE ON ALL MODELS

What's New:

Left front and both rear engine mounts and bolts

Why:

To reduce vibration transmitted to chassis. Bolts use Loctite rather than Scotch grip to reduce torsional "wrap" of mount while torquing. The threads are de-burred in mount for the same reason. The engine mounts are designed for the best compromise between belt alignment and vibration absorption.


mdd2012-001-017

ALL 800R E-TEC MODELS

What's New:

QRS support and brake hose

Why:

For greater strength and improved belt alignment, the forged QRS support is now thicker at the chassis mounting area. The reason its thickness could be increased, is due to a new brake line that is steel from the caliper to the top of the tower support. In the past, it was rubber or braided stainless, so the support was thinner to allow clearance.

mdd2012-001-002

MOST ALL MODELS

What's New:

Stainless steel brake line

Why:

From the lower caliper section there is full stainless tubing to the top of the QRS support (first picture). Rather than the short tube with the crimped on hose. (second picture). This gives a more solid feel to the brake lever and one finger operation. It also allows more clearance between the QRS tower and hose.

mdd2012-001-002


mdd2012-001-003

REV-XU Chassis

mdd2011-001-157

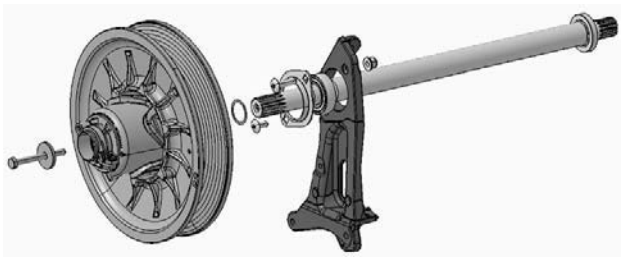
ALL SKANDIC AND REV-X FAN

What's New:

QRS short shaft on both 600 ACE and Fan

Why:

All the benefits of the QRS responsiveness and durability.


mdd2012-001-042

TUNDRA SPORT, LT AND EXPEDITION SPORT

What's New:

Air cooled radiator with fan

Why:

Standard for cooling engine while doing work at low speeds.


mdd2012-001-043

REV-XU

What's New:

Improved design transmission clips

Why:

Two clips are now used to reduce the possibility of the C-clip coming out of position and allowing 1st gear to move over on shaft.


mmr2009-176-016

REV-XU - WT 600 ACE AND E-TEC

What's New:

New one piece windshield

Why:

Standardization.

mdd2012-001-045

REV-XU - EXPEDITION SE 1200 AND E-TEC AND WT 600 ACE AND E-TEC

What's New:

New handle bar

Why:

Standardization.

mdd2012-001-046

REV-XU - EXPEDITION SE 1200 AND E-TEC

What's New:

New rear and front bumper

Why:

New color, black.

mdd2012-001-047

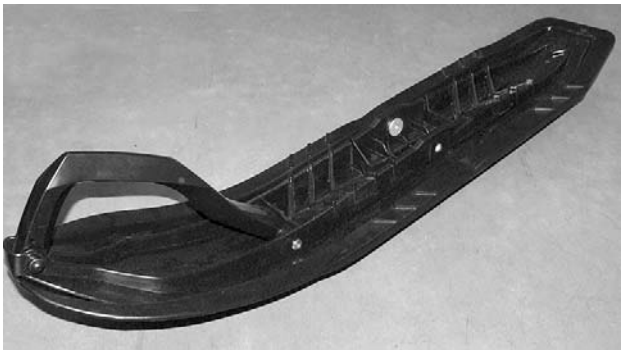
REV-XU - WT 600 ACE AND E-TEC

What's New:

New DS pilot ski w liner

Why:

Better floatation and carving in powder.



mdd2012-001-048

REV-XU REV-XU REV-XU

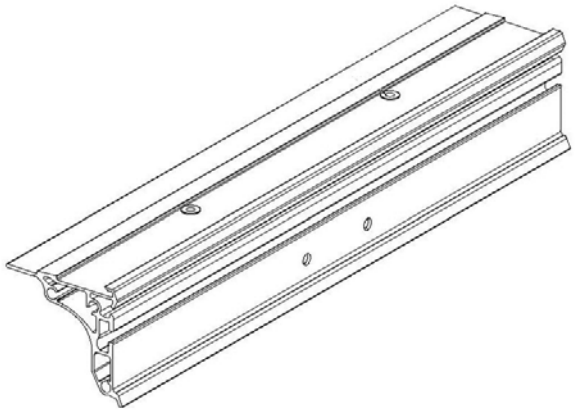
What's New:

New rear extrusion with thread and new bolt instead of self tapping bolt

Why:

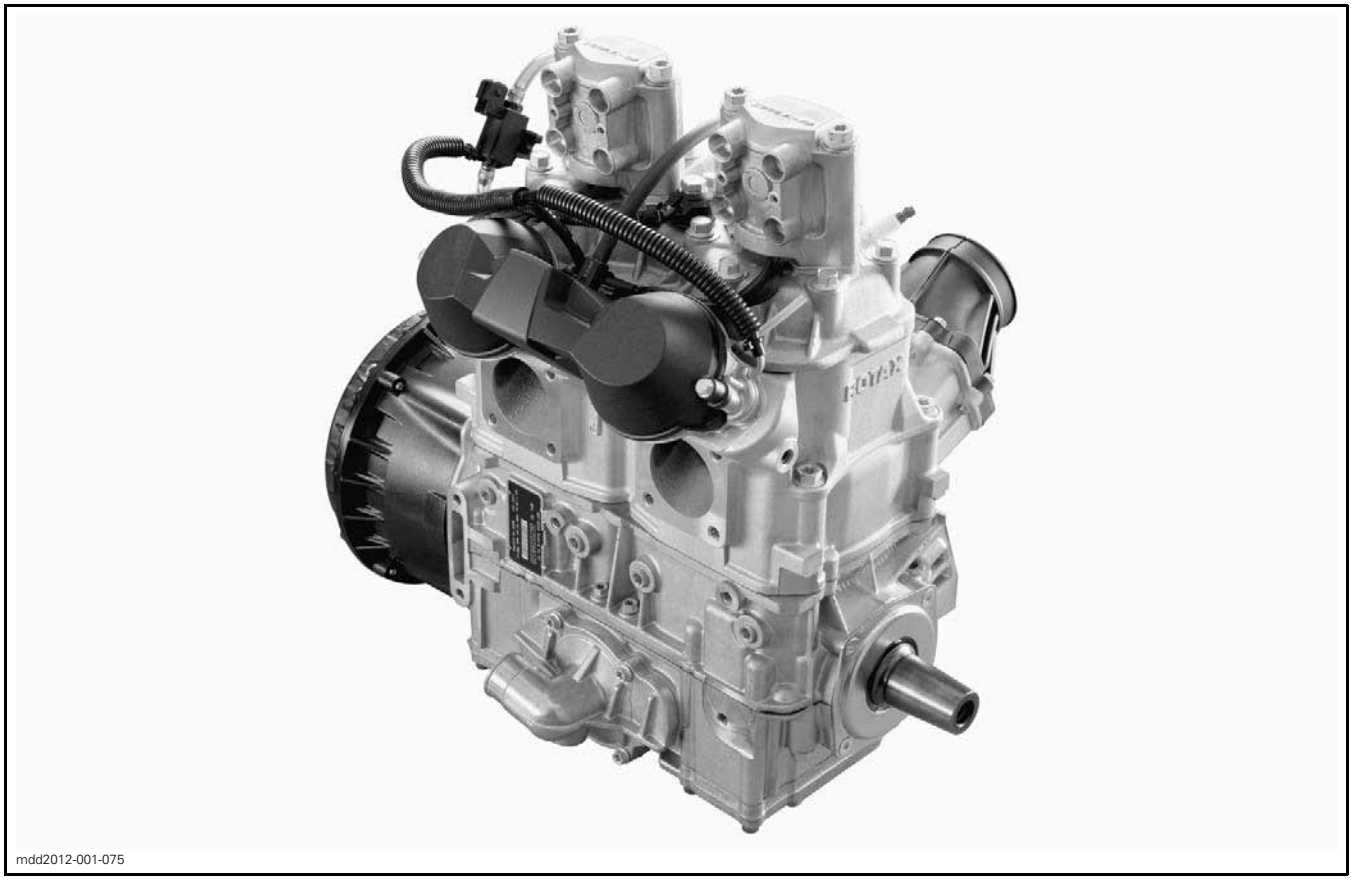
Better bolt retention.

NOTE: Service parts are the new rear cap (extrusion) (P/N 518 327 194) and the new screws (M8 x 1.25 x 25 – 10.9 grade) (P/N 207 582 586).



mdd2012-001-049

Rotax 2-Strokes



mdd2012-001-075

593 CARBURETED


mdd2012-001-050

What's New:

Cylinder head

Why:

Cast one piece design improves cooling efficiency, reduces combustion chamber temperatures, increases strength, and reduces coolant leak possibilities. Very similar to 600 E-Tec design.

TYPE 593 E-TEC


mdd2012-001-051

What's New:

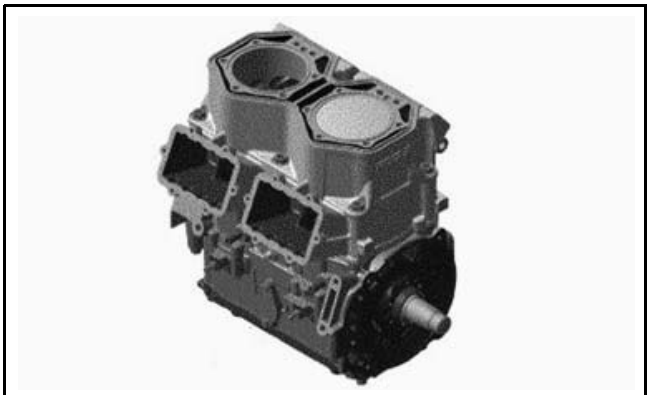
Piston assembly

Why:

Change to the stainless steel locating pin for improved retention.

Will retrofit on all model year Type 593 E-TEC.

TYPE 797 P-TEK/CARBURETED


mdd2012-001-053

What's New:

Short block

Why:

The major change is the crankshaft with shortened threads on the PTO end and a shorter matching clutch bolt. Similar to last years Summit 800R E-TEC.

NOTE: For parts replacement always verify the correct part number through EPC (Electronic Parts Catalog) for the correct model and model year. Also for rebuilt parts, always verify the correct part number from the latest rebuild list.

ALL 2012 TYPE 797 P-TEK

What's New:

Crankshaft

Why:

Modified PTO end (shorter thread like on 800R E-TEC Summit 2011).

NOTE: This crankshaft requires a matching shorter bolt for the drive pulley.

For clutch removal the new shorter universal clutch puller (P/N 529 000 064) is required.

mdd2012-001-054

NEW VERSION - 2012 SUMMIT 797 P-TEK, 2011 SUMMIT E-TEC AND ALL 2012 800R E-TEC

mdd2012-001-055

PREVIOUS VERSION - 2008-2011 MXZ AND SUMMIT 797 P-TEK AND 2011 MXZ E-TEC

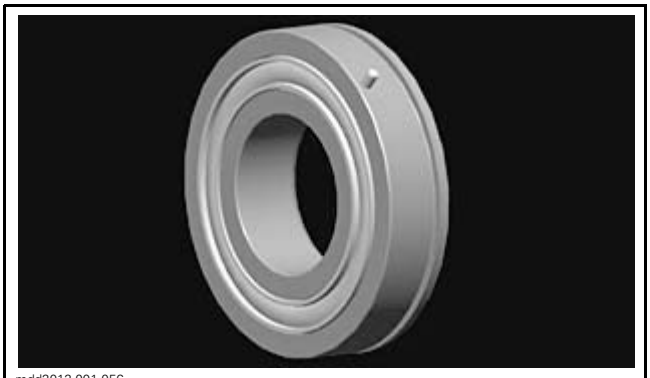
ALL 2012 TYPE 797

What's New:

Center main bearing's

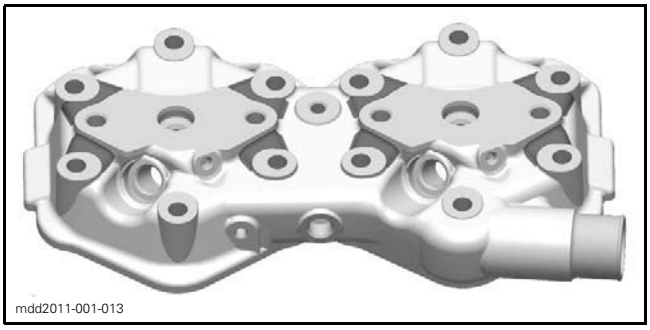
Why:

The integrated seal on the bearing is now laser welded to the bearing. To improve retention under vibration, heat and pressure.



mdd2012-001-056

TYPE 797 E-TEC


mdd2011-001-013

What's New:

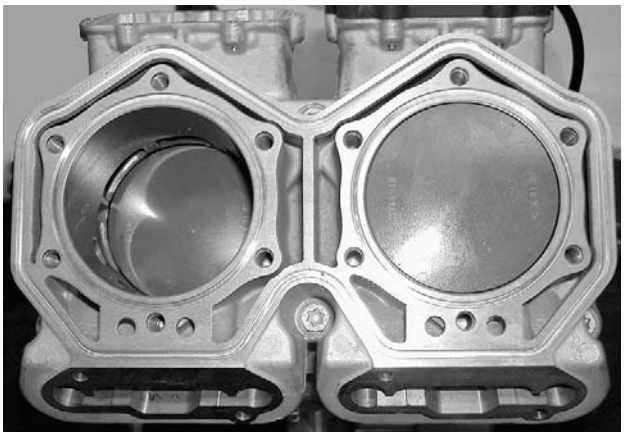
Short block

Why:

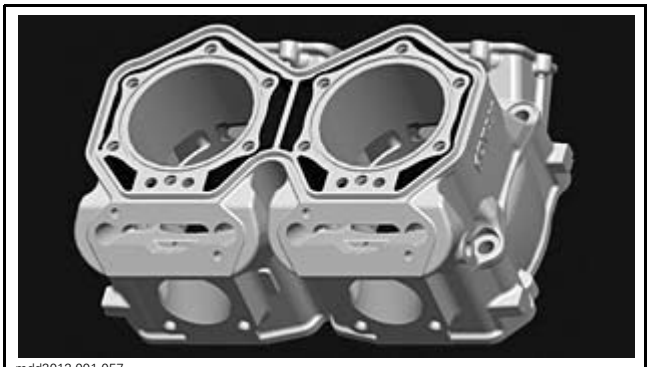
Built with newest technologies and improvements.

- New cylinder assembly
- New base gasket
- New piston
- Center main bearings
- Short thread PTO end of crankshaft

NOTE: There are different part numbers for the short blocks depending on the application. Always verify the correct part number to order through EPC (Electronic Parts Catalog) for the correct model and model year. Also for rebuilt parts, always verify the correct part number from the latest rebuild list.


mmr2007-019-008

TYPE 797 E-TEC


mdd2012-001-057

What's New:

Cylinder assembly

Why:

New boost port shape for improved cooling and support of the piston locating pin.

TYPE 797 E-TEC

What's New:

Piston

Why:

The piston has been modified to accept a longer locating pin and moved to align with the boost port, this promotes better cooling under extreme riding conditions. Not retrofitable unless both the pistons and the cylinder are changed as a matched set.

mdd2012-001-058

TYPE 797 E-TEC

What's New:

Stator plate

Why:

A higher temperature resin is used on the windings to reduce the possibility of thermal shock failure. Retrofitable.

mdd2012-001-059

ALL TYPE 797 E-TEC

What's New:

New injectors with 2 new ECM calibrations, 1 for MxZ and 1 for Summit/Freeride

Why:

A new injector was developed for better fuel delivery control at high RPM.

Can not re-flash a model year 2011 with it.

mdd2012-001-061

ALL TYPE 797 E-TEC

What's New:

Rave check valve assembly

Why:

Simplified and more compact system. Fewer and better protected impulse hoses. Single solenoid. Complete system is now mounted between cylinders and throttle body.

Retrofitable if all 2012 parts are used together.

mdd2012-001-062

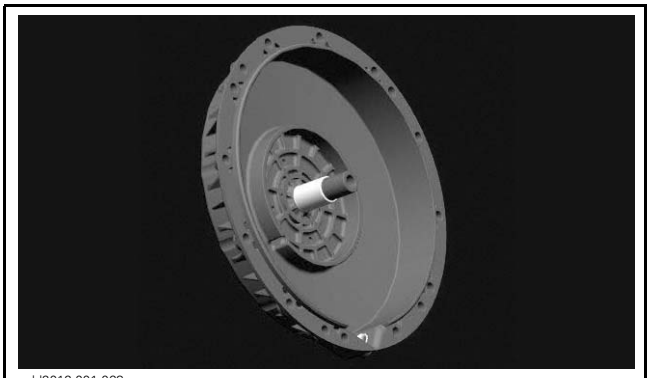
ALL TYPE 797 E-TEC

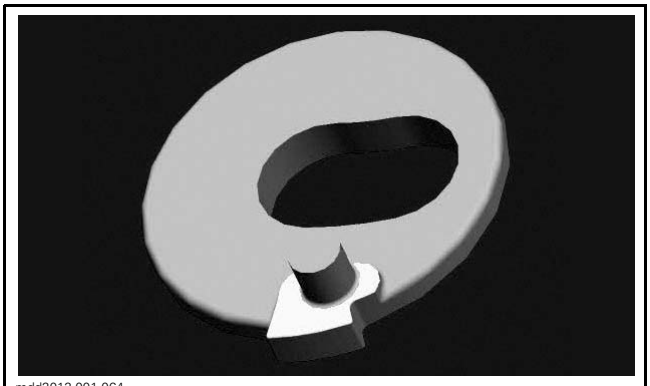
What's New:

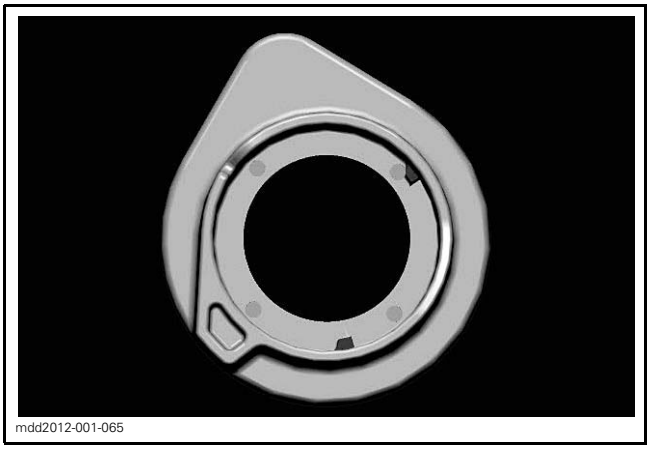
Rewind starter

Why:

- To reduce the possibility of the rope sheave friction welding to the center post, the post is now made of aluminum for greater strength and less flexing.
- Pawl lock has an additional 1.5 mm of material for added strength.
- Pawl shape has been modified to add strength.


mdd2012-001-063


mdd2012-001-064


mdd2012-001-065

Rotax 4-Stroke Changes

mdd2011-001-133

TYPE 602 ACE

What's New:

All 600 ACE have engine oil coolers standard

Why:

Thicker backing plate to reduce vibration, retrofitable.


mdd2012-001-073

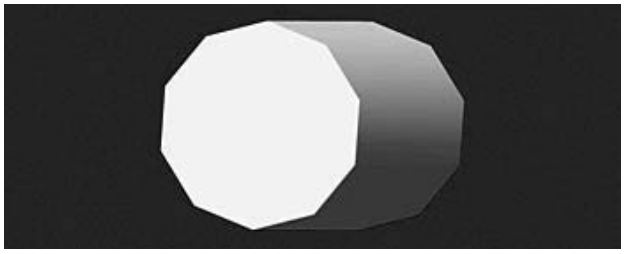
TYPE 602 ACE

What's New:

Oil pressure regulating piston

Why:

Optimized 10 sided tapered shape to reduce stiction, and improve regulating consistency in all temperature ranges.


mdd2012-001-066

TYPE 602 ACE

What's New:

Water pump cover

Why:

Brass rather than steel crush bushings used to reduce long term corrosion between bushing/bolts and cases.

NOTE: The larger lower bushing is the water pump drain.


mdd2012-001-067

TYPE 1203

What's New:

Engine assembly and long block

Why:

Minor machining differences in the depth of the holes for the oil cooler, new oil regulating plunger, and oil cooler.

mdd2012-001-068

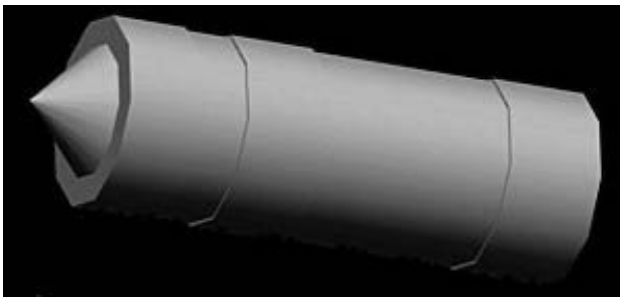
TYPE 1203

What's New:

Oil pressure regulating piston

Why:

Tapered and faceted design to reduce sticktion in cold temps, and improve oil pressure stabilization.


mdd2012-001-069

TYPE 1203

What's New:

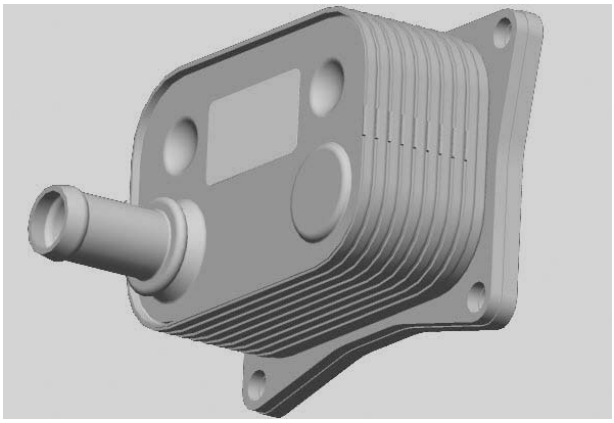
Oil cooler (P/N 420 891 913)

Why:

Running change on some central European units to eliminate the intermediate plate and utilizes a thicker base plate.

Retrofitable with the new gasket (P/N 420 431 282) and with M6 x 25 mm screws.

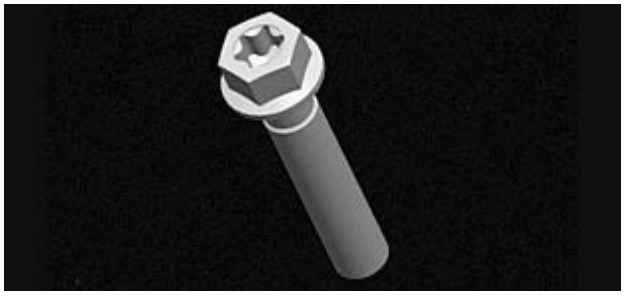
Normal warranty applies.


mdd2010-001-199

TYPE 1203

What's New:

Oil cooler screws (M6 x 25 – (P/N 420 440 234)) on some central European units with the (P/N 420 891 913) oil cooler. For all other 2012 units with the (P/N 420 891 912) oil cooler that still requires the intermediate plate, the oil cooler screws are (M6 x 30 – (P/N 420 440 647))



mdd2012-001-070

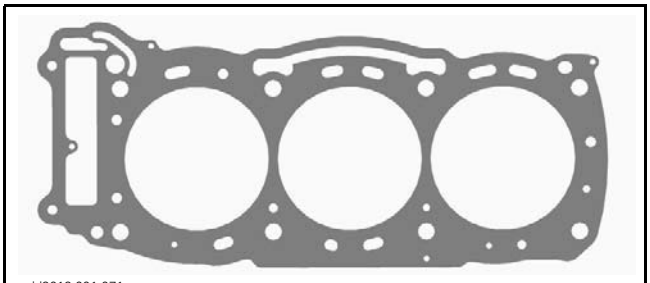
Why:

To standardize the length, so all four oil cooler screws are the same length for the configuration of oil cooler used.

TYPE 1203

What's New:

Head gasket and gasket kit



mdd2012-001-071

Why:

Re-designed head gasket cooling system passages to improve coolant flow.

Will Retrofit.

TYPE 1203

What's New:

Oil separator valve

mdd2012-001-072

Why:

Standardized with 1503 Sea-Doo engine.

Troubleshooting and Tech Tips

In this section you will find the most current tips and solutions concerning situations that occurred during last season, as well as the latest updated procedures information concerning the latest technologies used by BRP. All the troubleshooting procedure should be used in conjunction with the *SHOP MANUAL* and other BRP service publications.

TROUBLESHOOTING AND TECH TIPS INDEX 2003 TO 2011

The following tables describe subjects that were discussed in previous Technical Update books.

2011 technical update book subjects (discussing model year 2010)
– 550 fan oil pump adjustment inspection
– REV-X 550 fan intermittent spark or no spark condition
– REV-X – tail light harness possible routing and electrical issues
– REV-X analog and premium gauge cluster temperature bar graph values
– REV-XR transmission jumps out of gear on 1200 4-Tec models
– REV- XU 600 SDI over-reving – ski-doo warranty bulletin 2010-19
– 800r reed cage inserts mating surface gap
– 1200 4-Tec engine oil level verification
– 1200 4-Tec do not apply dielectric grease on fuse and relay terminals
– 1200 4-Tec oil radiator repair kit
– QRS countershaft removal tool for 2010 and 2011 REV-XR 1200 4-Tec
– Blown head and tail lights, erratic cluster readings
– Importance of doing 550F starter drive pinion nuts tightening procedure – Ski-Doo warranty bulletin 2010-13
– Scale for shock testing as per Ski-Doo service bulletin 2010-12
– Slow reacting rave solenoids – poor fuel economy and poor performance
– Tundra spare belt position incorrect in owners manual
– Proper choke use during cold start on REV-X 552 fan's
– REV-X in-tank fuel hose coming off the fuel pick-ups
– Safety measures to avoid unintentional engine starting or fuel ignition while working on Ski-Doo snowmobiles
– 1200 4-Tec built-in parameter for shut down if an intake air leak is detected by the ECM
– 1200 4-Tec intermittent shut down with no faults or P0339 faults
– Air intake filter change for 2010 Skandic Tundra, Sport and LT
– E-TEC oil pump issues
– Summit 600 E-TEC 146 in - loss of engine RPM @ WOT
– Verification for main bearing integrated seal failure (2-stroke engines)

2010 technical update book subjects (discussing Model Year 2009)
– After muffler damaged from impact
– Altimeter display change after update
– Bud's transfer speed MPI1 vs MPI2
– Binding TRA levers
– Bud's Fault descriptions
– V-twin valve guide parts
– Repairing stripped drain plugs
– Rev X D.E.S.S. post communication issues
– 55 V fault codes
– Bud's monitoring 714C exhaust temperature
– E-Tec "warm up" displayed on cluster
– E-Tec drive clutch noise
– E-Tec compression test.
– E-Tec pinched oil line.
– E-Tec Rave position fault code.
– E-tec Rave sensor replacement.
– E-Tec intermittent high RPM engine miss
– E-Tec summarization
– E-Tec battery charging and secondary ACC info
– E-Tec ECM and injector troubleshooting
– E-Tec fuel consumption issues
– E-Tec knock fault codes.
– Transmission issues 1200 4-Tec models
– Rev XR 1200 possible overheating
– Heated seat switch reversed
– High pressure fuel pump filter restricted
– Don't forget the basics
– Piston failure analysis
– Pulley alignment explained on Rev XP models
– QRS driven clip tool
– Rev XU updates
– Rev XP hood fit
– Thermostat's reversed on 2 stroke models
– TRA IV sliding half bushing clearance
– XP chaincase cover bolt breakage
– Summit rear suspension sag
– XP coolant leak recap
– Critical detonation knock fault.
– V-810 high temperature readings
– Poor quality fuel used.
– V-810 slider shoe and rollers failing

2009 Technical Update Book subjects (discussing Model Year 2008)
– REV-XP chain adjuster bolt leaking
– REV-XP chaincase cover bolt breakage
– Renegade and Summit track edges fraying
– REV-XP Premium gauge issues
– REV-XP coolant hose rubbing
– Renegade or Summit pre filter clogging
– REV-XP oil tank and cap leak
– REV-XP coolant bottle leak
– REV-XP Rewind rope fraying
– TNT track noise and vibration
– 800 R crankshaft and shortblock update
– REV-XP tunnel protectors
– Skandic SWT rear suspension spring contacting track
– REV-XP TNT and X package ride compliance in ripple bumps
– 800 R exhaust manifold bolts loosening
– REV-XP wiring harness issues
– REV-XP Brake sponginess
– QRS adjuster not machined
– New alignment specifications for REV-XP chassis
– TNT and MX Z X package rear idler wheel failures
– 600 SDI 7.5 amp Fuse failures
– REV-XP heated grip failures
– Skandic safety recall
– REV-XP MX Z and Summit fuel tank safety recall
– MX Z and Summit throttle cable interference safety recall bulletin
2008 Technical Update Book subjects (discussing Model Year 2007)
– RF V-810 super cooler kit.
– V-810 Update information.
– Freezing relays.
– 800 R information.
– Exhaust Screws/Water Intrusion into ECM connector/Oil Pump Adjustment/Software Modification.
– 3D-RAVE troubleshooting tips.
– SUMMIT 800 R TRA VII.
– 793/800 R/995 electric starter failures.
– Studding an REV-XP.
– After mufflers or "cans".
– OTD system countershaft removal.
– QRS cam change procedure.

2007 Technical Update Book subjects (discussing Model Year 2006)
– 995 R.A.V.E. cables adjustment.
– Repetitive bog and drop in rpm on MACH Z and Renegade 1000.
– 2006 and 2007 Mach Z and Renegade 1000 performance option.
– Mach Z and Summit 1000 down On and severe top speed loss.
– 2006 RT Series shop manual correction for 995 engine.
– 800 POWER TEK: TPS fault codes and unnecessary TPS replacement.
– 800 HO POWER TEK intermittent running issues and fault codes caused by water intrusion in ECM connector.
– 600 H.O. SDI wiring harness.
– 600 SDI check engine light flashing and rpm loss.
– Summit heavy duty chain and sprocket chart.
– HPV 27 driven pulley cam and bushing wear.
– Summit rear suspension throttle rod bolt's coming loose.
– SC rear suspension center shock failures.
– REV front suspension ball joint inspection.
– RF chassis Tundra excessive front suspension sag.
– RF chassis Tundra heavy duty drive belt.
– 2006 RF chassis RER malfunctioning.
– Zeroing needle on electronic speedometer or tachometer.
– Mini Z headlight failure.
2006 Technical Update Book subjects (discussing Model Year 2005)
– Fan cooled RER malfunctioning.
– Random premature belt wear cord pop out on REV chassis vehicles.
– GTX rear passenger heated grips failing.
– Broken TM 40 DPM vent fittings.
– Running boards bending on Summit REV models.
– Summit 550 Fan's over revving and possible engine damage shortly after delivery.
– Fan cooled REV voltage regulator being damaged when installing OEM "skid plate."
– Mach Z and Summit 1000 SDI fuel starvation and E-RAVE cable issues.
– Fan cooled starter motor Bendix binding jamming.
– Fan cooled REV spare belt damaged by improper placement.
– Expedition 552 over revving.

2005 Technical Update Book subjects (discussing Model Year 2004)
– TRA III balance weights coming loose.
– Fogging gauges.
– SDI fuel line clip.
– Exhaust manifold bolt loose on 593 HO, 593 SDI, and 793 H.O.
– Air filter plugging on rev chassis.
– Hard steering on Summit's.
– Incorrect Renegade HA specs.
– Incorrect Rev "Z" dimension.
– Rev fuel tank vent check valves.
– SDI fuel pickup.
– Tundra bog.
– Skandic WT 552 fuel consumption.
– Skandic 552 WT oil line melting.
– 377 Molykote pistons.
– Magneto for type 377 and 552 fan cooled.
– Rev chassis repairs.
– SDI high oil consumption.
– 593 HO piston rings.
– Warranty parts that are not defective.
2004 Technical Update Book subjects (discussing Model Year 2003)
– Coolant tank leaking or loosing coolant while riding.
– RER button replacement.
– Coolant warning lamp on LC models.
– Fan cooled SC-10 suspension rear arm failures.
– Fogging gauges on LC models.
– SUV slider shoe wear.
– SUV fuel consumption.
– SUV snow infiltration.
– SUV hood deforming.
– Rewind post failures, melting, sticking.
– Spark plug boot difficult to remove.
– 793 engine's PTO seal popping out.
– 593 HO piston ring flaking.
– ECM connector terminal inspection and testing.
2003 Technical Update Book subjects (discussing Model Year 2002)
– Tundra bog, or non responsive back-shifting.
– Rewind starter melting skipping.
– Low charging current on 360 watt ignition systems.
– Skandic WT speedometer failures.
– Spark plug cap or wire rubbing on hoods.
– High fuel consumption and high rpm while trail riding.
– Tundra rich running condition.
– SC10-III rear shock bolt loosening.

600 ACE BATTERY GROUND CABLES

If a 600 ACE with a side mounted battery starts and runs while attached to the T-harness, but not when disconnected, don't forget **there are two ground cables that need to be attached to the negative terminal of the battery.** Many times during PDI or routine maintenance this second cable is left unconnected from the battery. In addition, make sure to zip tie the wire in place at the base of the battery support.

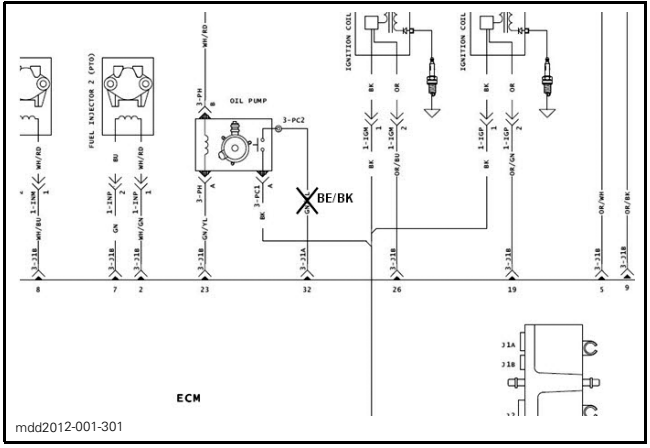
If the second ground wire is not connected to the battery ground post, communication and programming issues will also be noticed when using B.U.D.S.

NOTE: REV-XU chassis units with the battery mounted at the rear of the unit such as WT and SWT only have one battery ground cable.


mdd2012-001-300

800R E-TEC 2011 WIRING DIAGRAM ERROR

The oil pump feedback sensor signal wire between ECM terminal 3-J1A-32 and the oil pump feedback sensor terminal 3-PC2 is labeled incorrectly on the 2011 800R E-TEC wire diagram. The wire should be labeled Beige/Black, not Green/Yellow. Please make the necessary corrections to the *2011 WIRING DIAGRAM*.



mdd2012-001-301

ACOUSTIC FOAM REPLACEMENT CAMPAIGN FOR 2011'S

Warranty Bulletin 2011-2 asks all dealers to replace the acoustic foam on several early production units, yet the completion ratio is very low at the time of this printing. While this may seem trivial, it is very important. On fan cooled models loose foam can block the cooling air to the engine and cause severe engine damage. Falling foam on other models can cause a string of other problems. If any of these problems occurs and the campaigns have not been completed or filed on the vehicles, claim payments could be jeopardized. Please use campaign monitoring and unit history in BOSSWeb to check for units included in Warranty Bulletin 2011-2.

ski-doo

SNOWMOBILES
WARRANTY
Bulletin

Campaign no.: 2011–0002

October 15, 2010 Subject: **Acoustic Foam Replacement** No. **2011-2**

YEAR	MODEL		MODEL NUMBER	SERIAL NUMBER
2011	Grand Touring	Sport 550F	ELBA	See Attached List
		Sport 600	EDBA	
	MX Z	Sport 550F	UBBB	
		Sport 600	BHBC, BHBD	
		TNT 600	MFBA, MFBB	
		TNT 800R Power TEK	UDBA, UDBB	
	Renegade	Sport 550F	MWBB	
		Adrenaline 800R Power TEK	BUBB	
		Back Country 800R Power TEK	UHBB	
	Summit	Sport 600	CYBA	
		Everest 800R Power TEK 146"	CUBA, CUBB	
		Everest 800R Power TEK 163"	CWBA, CWBB	
	Expedition	Sport 550F	KABA	
	Tundra	Standard 550F	GABA	
		LT 550F	GDBA	
		Sport 550F	GKBA	

mdd2012-001-302_en

CAUTION, WHILE DRILLING RIVETS

Be careful not to drill too deeply while drilling rivets out of the rear snow flap. Some units have this extra capacity "dropped tail" heat exchanger. The dropped tail extension section of the rear heat exchanger is hidden behind the snow flap and drilling too far will perforate the heat exchanger. Always look before drilling. Perforated heat exchangers will not be covered by warranty.

mdd2012-001-303

SEARCHING OLDER SKI-DOO SERIAL NUMBERS IN BOSSWEB - 1999 AND PRIOR

To find vehicle info in BOSSWeb for older snowmobiles, it is required to add some zeros to the serial number.

For example: If the model and serial number is 1163 02178, add 3 zeros to the beginning and 2 zeros in-between. Enter 00011630002178 as the serial number (total of 14 digits) and BOSSWeb will bring up the info on the unit.

AUTO SHUTDOWN MODE FOR EXTENDED IDLE

Please don't forget that many of the new engine packages such as P-TEK, E-TEC and 4-TEC come with an auto-shutdown feature. Depending on engine package, after four to twelve minutes of no throttle activity while idling, the unit will beep four times then shut down. This is to prevent engine overheating as well as contributing to overall emissions reductions.

600 ACE LIMP MODE INCASE RIDING THE BRAKE

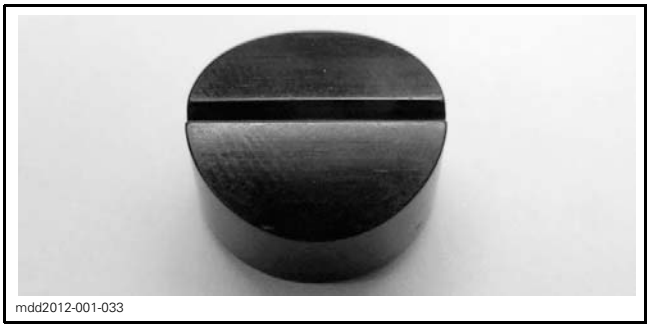
All 2011 600 ACE-equipped vehicles provide a built-in feature designed to prevent continued regular or high speed operation with the brake on to help prevent further damage to the vehicle and components. If the brake switch on ACE-equipped models is not fully released, the ECM will activate the built-in "parking brake on" limp home mode, limiting operation to 3000 RPM. Specifically, the limp home mode can occur when the Throttle Position Sensor (TPS) opening is higher than 1 degree and the vehicle speed is greater than 5 km (3 MPH) for more than 15 seconds. No check engine light will be displayed on the gauge or Fault Codes in B.U.D.S., so if the brake is on, 3000 RPM's maximum engine speed is what the customer will experience. If there is a customer complaint that there is an occasional RPM drop to 3000 RPM, verify that the parking brake is not activated or that they are not "riding the brake". A short test ride can validate the customer concern if the issue is present.

NOTE: This function has been removed for 2012.

TRA LV SLIDER SHOE (NEW SERVICE PART)

Model year 2009 - 2011 1200's with TRA IV

The TRA IV slider shoe (New service part is now thicker .03 mm (.001 in) than the previous (P/N 417 223 271) slider shoe to reduce clearance between the button and the tower to reduce play. The improved slider shoe (P/N 417 223 652) can also be identified by a paint mark inside of the shoe. The new thicker slider shoe improves ramp and roller life considerably. To be used only on all model year 2009 to 2011 1203 TRA IV equipped models.

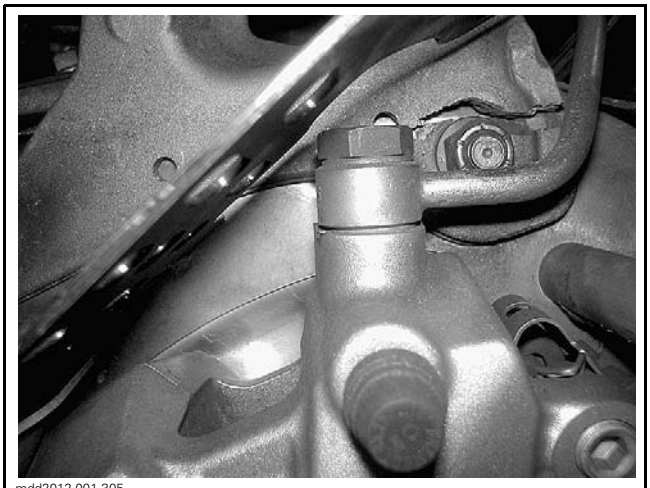

mdd2012-001-033


mdd2012-001-034

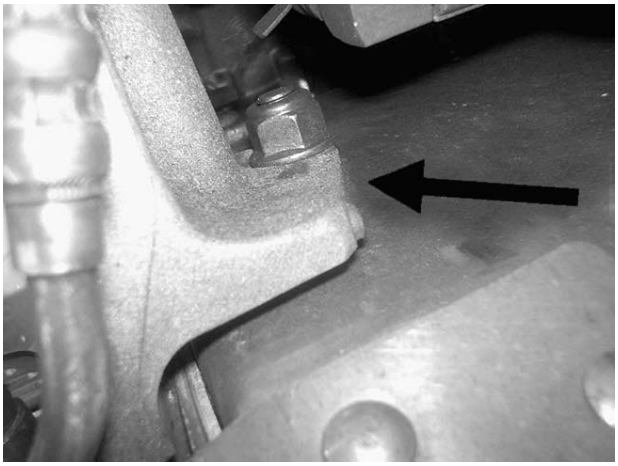
BULKHEAD REPAIR KIT FOR REV-X

As mentioned in the *WHAT'S NEW SECTION* of this book, there is an improved QRS pulley support on 2012 Summit and Freeride 800R E-TEC's. The improved thicker and 50% stronger forged support replaces the old thinner cast style support.

If an older unit is found to have a broken QRS pulley support, always check further for frame damage where the inner pulley support anchor stud mounts. If damaged the bulkhead can normally be repaired and a frame replacement is not required.


mdd2012-001-305

PAC offers a repair reinforcement plaque for the bulkhead if needed. The bulkhead repair reinforcement plaque (P/N 518 326 116) consists of an aluminum plate and a stud ready to be either bolted into the chassis from the underside or welded in, depending on the severity of the damage. For fit, finish and strength, the "welded in" method is the preferred method of repair. The severity of the bulkhead damage will determine the amount of vehicle disassembly required, but most often at the very least, the fuel tank and drive axle should be removed.


mdd2012-001-306_a

NOTE: If welding is required, always follow safety precautions by removing any fuel and fuel system components from the unit. Remember to disconnect and remove the battery, and disconnect the ECM and gauge cluster to protect them from electrical surges.


mdd2012-001-307

If the QRS pulley support was broken, also be sure to inspect the upper chaincase bearing and all chaincase components. As far as the QRS pulley support, it is best to upgrade the unit being repaired with the 2012 support (P/N 518 327 134). Be sure to torque the retaining hardware for the support to 34 N•m (25 lbf•ft).

Normal warranty applies.


mdd2012-001-308

BREAK-IN OIL CONSUMPTION ON 800R E-TEC AND RECOMMENDED OIL

Please understand that during initial engine break-in, the 800R E-TEC will consume a fair amount of oil. BRP wants to be absolutely certain that the engine is well protected during those first few hours of operation. That's why the first tank of oil is on BRP! It would not be uncommon to see up to 3 liters of use during the first tank of fuel. Also be reminded, that even though the official printed recommendation for oil on the 800R E-TEC is the synthetic blend, the FULL Synthetic oil is the "best choice" for the 800R E-TEC. We at BRP always use this in the corporate fleet sleds.

mdd2012-001-309

XPS semi synthetic oil was developed after years of testing specifically for the 600 E-TEC. With the introduction of the 800R E-TEC with almost 200 HP/Litre of power it makes sense to use the absolute best quality and cleanest oil BRP produces. BRP has recently finalized and released the updated XPS full synthetic that surpasses the XPS semi synthetic for lubricity, and cleanliness. **The 800R E-TEC's will soon be on the way and each and every one is filled with XPS Full synthetic on the assembly line.** So when customers ask which oil to use in the 800R E-TEC, tell them the ultimate oil is the **XPS Full Synthetic Oil**, it's a super premium oil, that is recommended for a super premium engine!

800R E-TEC HIGH COOLANT TEMPERATURE PROTECTION MODE

The 800R E-TEC is a high output engine that produces approximately 200 hp per liter. It is calibrated for the best horsepower, the best fuel economy, the best overall performance and the calibration has to fit a wide range of riders and riding styles. To achieve these high standards the calibration must be precisely mapped for current conditions and maximum engine protection.

In marginal snow conditions, slower speeds, or extended WOT (Wide Open Throttle) operation the engine may reach it's maximum safe operating temperature. When this occurs, the engine is designed to protect itself through ignition timing optimization which could result a very slight reduction in peak RPM at WOT. This is by design and should be considered as normal operation. In these "high temperature" situations customers may notice a momentary 200 to 300 RPM loss only at WOT which returns as soon as the engine cools down to a safe limit.

It has come to BRP's attention that some 2011 800R E-TEC's electrical systems have been modified through aftermarket sources to "fool" the ECM regarding the engine coolant temperature input. If the ECM does not know the actual running temperature of the engine at all times, the lifespan of the engine may be compromised. There are also other low extreme high temperature self protection modes that would be altered if the engine temperature inout to the ECM were modified.

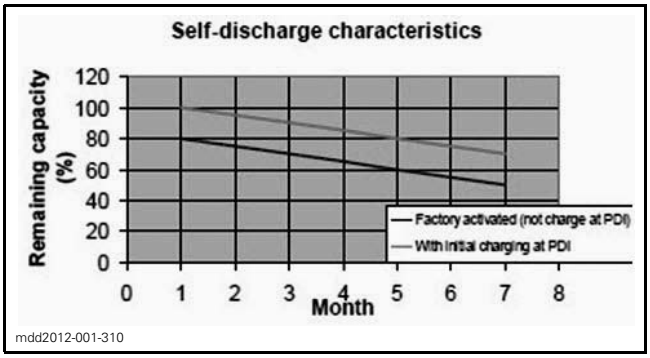
The ECM must know the precise actual temperature of the engine and any steps to give the ECM a false engine temperature input must be considered an unauthorized modification to the unit and the warranty status must be changed to "race status". Normal warranty and B.E.S.T warranty will no longer apply.

TOP TEN POSSIBLE CAUSES FOR E-TEC ENGINE MISFIRE

Engine misfire could be caused by any one of the items listed here. It is important to consider the following possibilities in this order.

1. MECHANICAL CONDITION OF ENGINE
   a. Check cylinder compression.
   b. Listen and feel for any obvious engine damage.
2. CVT TRANSMISSION OPERATION
   a. Check drive belt.
   b. Check drive and driven pulleys for smooth operation.
   c. Check calibration components versus specifications.
   d. Adjust TRA screws for proper shift RPM.
3. COOLING SYSTEM OPERATION
   a. Overheating causes needed ECM protection action.
   b. Check entire cooling system, and do NOT modify.
4. SPARK PLUG CONDITION
   a. Check gap.
   b. Check for cracked insulator.
   c. Check and clean plug cap ensuring good fit and no spark "leaks" or cap fouling.
   d. Replace plugs, wires, and caps if suspect.
5. FUEL QUALITY AND DELIVERY
   a. Check for fresh fuel of proper octane (fuel deteriorates quickly).
   b. Ensure no higher than E-10 fuel is used (10% alcohol).
   c. Check fuel pressure from pump.
6. IGNITION TIMING
   a. Two stroke basics. Timing is critical to performance.
   b. See *SHOP MANUAL*.
7. RAVE VALVE OPERATION
   a. Engine off = Valves at mid position.
   b. Engine idle to approximately 6600 RPM = Closed position.
   c. Approximately 6600 to 7700 RPM = Mid position.
   d. Above approximately 7700 RPM = Full open position.
   e. Check RAVE Position Sensor (RPS) setting and reset if suspect.
   f. Check all air lines and RAVE Solenoid for leaks.
8. EXHAUST OVERHEATING
   a. Check for exhaust leaks.
   b. Check for exhaust obstructions.
9. CAPACITOR AND CHARGING SYSTEM CONDITION
   a. Check for low or unstable 55 volts using B.U.D.S.
   I. Check stator specifications.
   II. Check coils for signs of overheating or shorts..
   III. Check capacitor and all connections.
10. INJECTOR OPERATION
   a. Check operation with B.U.D.S.
   b. Ensure calibration coefficients match injectors.
   c. Use known good injector as test if needed.

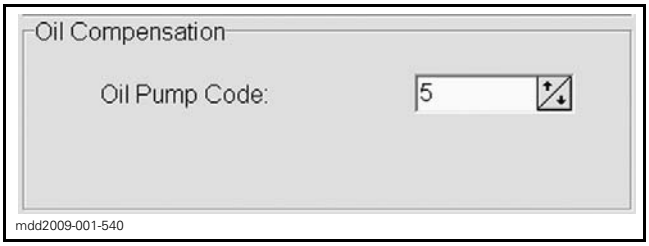
PROPER WET-TYPE BATTERY ACTIVATION AT PDI



mdd2012-001-310

Predelivery bulletins are available on BOSSWeb. Make sure the vehicle set-up people have a copy of the correct PDI bulletin for the unit being set-up. Last year, 2011, there was a change to the use of a "Wet Type" battery in Ski-Doo's. This same wet type battery will again be used on 2012 units. The battery is now filled at the factory and given an initial charge. This saves some prep time and reduces the possibility of leaks due to improper sealing cap installation, or absorption time. **It is extremely important at PDI, the battery voltage is measured and a full charge applied.** Always refer to the latest Ski-Doo battery activation Service Bulletin to ensure the best life and maximum power available. Always charge the battery at the correct amperage, time period, and rest periods recommended before installation. It is also a good idea to place the battery on a the bench in the position it will be installed for a few moments to be absolutely sure there are no leaks. **Do not simply install the battery and send it down the trail!** See the chart that helps to show the decreased capacity of a battery a customer will experience, if not initially charged correctly at PDI.

800R E-TEC COMPLAINTS OF HIGH OIL CONSUMPTION – INFORMATION FOR BETTER UNDERSTANDING OF THE 800R E-TEC OIL LOGIC



mdd2009-001-540

During the "Break-In" period, the fuel to oil ratio can be as much as 25:1 under heavy loads or hard riding. The break-in period will last until 120 liters (or approximately 32 gallons) of fuel has been used. This may seem excessive, but the oil logic that has been programmed into the ECM is designed to protect the engine and its components. Using a 3D map, several factors determine how much oil is being consumed. The oil consumption is sensitive to rate of acceleration, rate of deceleration, the air temperature, and other input/output values to determine the needed duty cycle of the oil pump.

mmr2009-023-093

Example: A rider that opens and closes the throttle frequently will use more oil than a rider who rides at a steady throttle opening, even if they are riding together on the same trail.

NOTE: The E-TEC oil pump has a code number on the pump that needs to be entered into B.U.D.S. It is important to understand that changing the oil pump code to a different number in B.U.D.S. may cause engine damage.

800R E-TEC P1427 FAULT CODE THERMOCOUPLE MODULE NOT DETECTED (800R E-TEC SUMMIT AND FREERIDE ONLY)

P1427 fault code is generated primarily by 4 things:

1. Engine below 900 RPM for 3 seconds (including a long electric start occurrence).
2. Temperature module not detected.
3. Low battery voltage.
4. RFI from spark plugs and/or wires.

 # 1 - This condition occurs primarily at startup if the engine does not start right away within the first or second pull (manual start), starter motor is defective (electric start), or a mechanical issue prevents the engine from achieving 900 RPM within 3 seconds.

 # 2 - Exhaust temperature module (pipe sensor) is disconnected or defective.

 # 3 - Low battery voltage. Test the charging system. Make sure the battery is fully charged before starting. Replace the battery.

 # 4 - RFI created by loose spark plug caps or wires too close to the exhaust temperature module wires. Re-route wires as far away for the module wires as possible.

The P-code P-1427 may be recorded as OCCURED in the ECU. If the customer has not complained of a check engine light, the code is to be considered as normal and can be simply cleared with B.U.D.S. If the customer has complained of the check engine light and code at higher engine RPM check the components that could cause excessive EMI (spark plugs, ignition coils, wires and plug caps). Pay particular attention to the spark plug caps and ensure they are completely inserted onto the spark plugs.

To Check the Thermocouple and Sensor Proceed as Follows:

View the THCM page on the B.U.D.S. monitoring screen.

Ensure the engine is at least 25°C (77°F).

Start the engine and allow it to idle while observing the sensor temperature.

After 60 seconds – the sensor should read between 35°C and 80°C (95°F and 176°F).

After 120 seconds - the sensor should read between 40°C and 85°C (104°F and 185°F).

After 180 seconds - the sensor should read between 50°C and 100°C (122°F and 212°F).

If the temperature sensor readings are between these temperature variations the thermo module should be functional and no further service actions are necessary.

POOR IDLE, ACCELERATION OR ENGINE BOG OR MISS – UNIT'S EQUIPPED WITH E-TEC ENGINES – ALSO B.U.D.S ECM REPLACEMENT TIPS

There have been a few reports that just replacing the ECM or Injectors alone did not cure the running complaint. Later it was found on those few cases that when both of the injectors and ECM were replaced as a set at the same time, it fixed the running complaint. It is possible, for the shorted ECM injector drivers to damage the injectors, and when the new ECM alone was installed on these few units, that the already damaged injectors from the original internally shorted ECM caused damage to the newly replaced ECM.

NOTE: This scenario **does not** in any way apply to all E-TEC running complaints, and **is not** in any way a recommendation to replace both injectors and the ECM as a rule of thumb, but is only intended to make sure dealers and technicians are aware of this possible scenario.

It should also be known that there have been unit's with ECM's with internally corrupted parameters where the bad ECM parameters were transferred into the brand new ECM by using the "Replace ECM" feature in B.U.D.S. If the internal ECM I parameters are is in question, it **is not** recommended to use the "Replace ECM" feature in B.U.D.S. **It is recommended instead, to use the longer fresh ECM replacement installation procedure of writing in all of the data to the ECM manually through B.U.D.S.**

On the other hand, there have been unit's that have had corrupted logic ECM's restored to a good working ECM. This was done by overwriting the bad ECM logic parameters with a known good same calibrated ECM by copying the good data from the good ECM and then using the "Replace ECM" feature in B.U.D.S. and overwriting the bad ECM parameters with the good ECM parameters. By trying this, it may save the customer the cost of a having to buy a new ECM.

P1562 FAULT CODE ON UNIT'S EQUIPPED WITH E-TEC ENGINES

Low voltage on system voltage fault code occurs whenever the system voltage is less than, 55 volts (600 models) or 60 volts (800 models).

Two Primary Issues can Cause this:

 # 1 - The stator can have open or shorted windings.

 # 2 - A component(s) in the system voltage circuit can be shorted and draw down the ECM output voltage. Components to be tested are the; injectors, ignition coils, fuel pump, capacitor, and oil pump.

Monitoring system voltage in B.U.D.S. can aid in helping to determine the root cause of the issue. Resistance measurements of each set of windings of the stator should measure .63 ohms + .03 ohms.

Be Aware of the Resistance in the Meter Test Probes and Subtract that Reading from the Measurement. It is not Uncommon for Test Probes to Have Resistance of .1 to 1 Ohm of Resistance.

To Measure the Test Probe Resistance, Switch Meter to Ohms, and Touch the Probe ends Together. Note the Value that the Meter Displays, this is the Probe Resistance.

For more test information consult the *SHOP MANUAL*.

P1563 FAULT CODE ON UNIT'S EQUIPPED WITH E-TEC ENGINES

The primary cause of this fault is an open stator winding.

Resistance measurements of each set of windings should measure .63 ohms + .03 ohms.

Logic would dictate a faulty voltage regulator for an over-voltage situation. However, on E-TEC the voltage regulator switches from series to parallel at lower RPM. If a stator winding is open, the regulator gets "confused" and continually switches from series to parallel and the voltage is higher than normal causing this code.

Be Aware of the Resistance in the Meter Test Probes and Subtract that Reading from the Measurement. It is not Uncommon for Test Probes to Have Resistance of .1 to 1 ohm of Resistance.

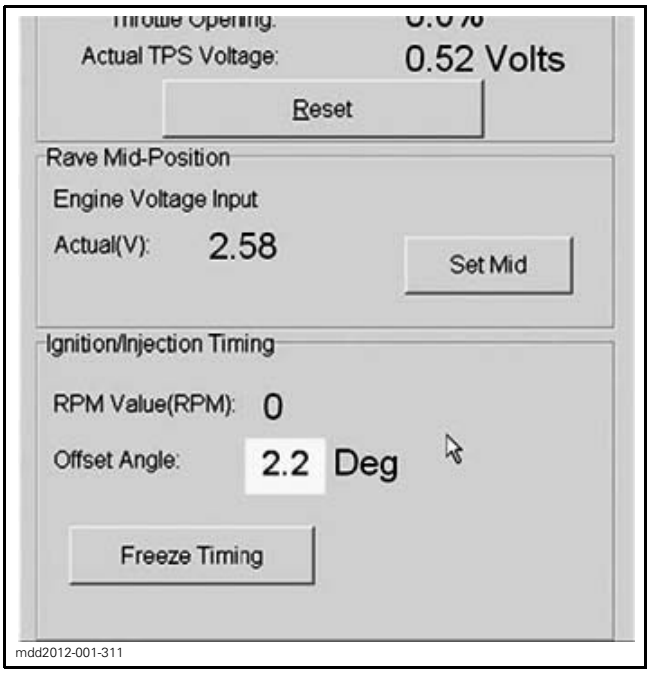
To Measure the Test Probe Resistance, Switch Meter to Ohms, and Touch the Probe Ends Together. Note the Value that the Meter Displays, this is the Probe Resistance.

For more test information consult the *SHOP MANUAL*.

E-TEC KNOCK FAULT CODE

The most common reasons for knock fault codes are, poor grade fuel or low octane fuel, and/or advanced ignition timing. It is important to discuss with the customer, to be aware of the quality of fuel that is being used, and to always use the recommended fuel type as stated in the operators guide. On some 2008.5 and a few 2009 600 E-TEC units it has been determined, a small quantity of units were produced with the incorrect ignition timing offset value in B.U.D.S. If there are any performance issues or the engine has been apart for a repair, it is always best to verify the timing by marking the correct BTDC value and running the engine at the correct verification rpm and adjusting the timing to the correct value in B.U.D.S. as needed.

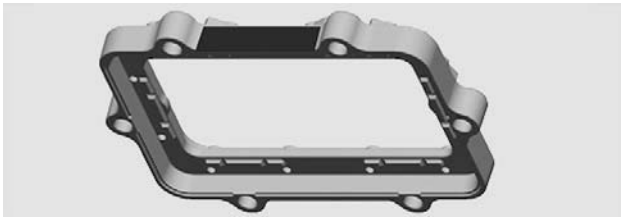
Refer to proper *SERVICE MANUAL* for the correct timing specification for the 600 or 800R E-TEC that is being checked and for procedures on how to adjust the timing.



mdd2012-001-311

800R ENGINES INTAKE SOCKET CRACKING

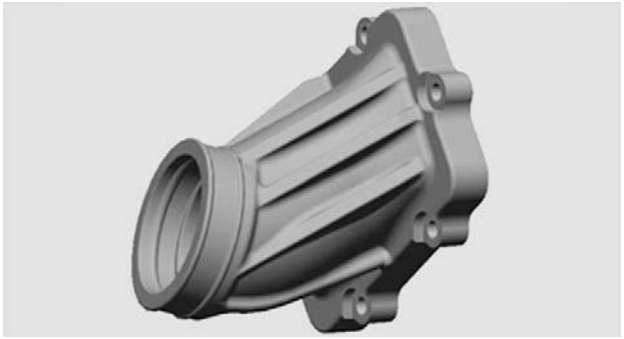
On the 2010 and newer 800R Power-TEK and 800R E-TEC, a new improved intake socket is used. This improved intake socket (P/N 420 667 472) for Power-TEK and (P/N 420 867 333) for E-TEC) has the rubber outer layer vulcanized to a polyamide base (plastic) insert instead of the rubber being vulcanized to an aluminum base insert. This change in process is to eliminate any corrosion of the aluminum and prevent delaminating and deterioration of the rubber from the inner aluminum insert.


mdd2012-001-312

This new improved intake socket will retro to any 800R equipped REV-X chassis sled. The Power-TEK intake socket part number is different from the E-TEC because of the inlet size of the 40 mm carburetors that are used on Power-TEK vs the 52 mm throttle bodies that are used on 800R E-TEC.

If the problem occurs, replace the failed intake socket.

Normal warranty applies.


mdd2012-001-333

EEPROM 02 MESSAGE 2008 – 2011 REV-XP MODELS EQUIPPED WITH MULTIFUNCTION DIGITAL DISPLAY

The cluster writes into memory data updates every 6 minutes (run time, mileage, etc). If the engine shuts down while updating the cluster, upon restart, the cluster will display the EEPROM 02 message for a short period of time.

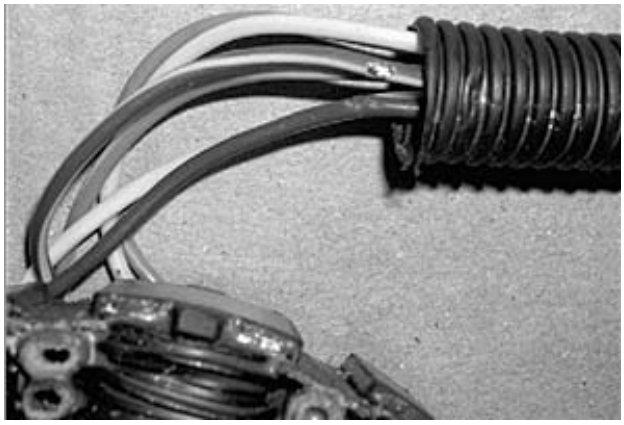
The message indicates the cluster is completing the update.

This is a normal operation. Most customers will never see this message.

B.U.D.S. 55 OR 60 VOLTS FAULT CODES (600 E-TEC - 55 VOLTS) OR (800R E-TEC - 60 VOLTS)

ISSUE: Pinched stator wires by the tie wrap exposing wires or shorting wires together.

CORRECTIVE ACTION: Remove the tie wrap, repair and reinsulate the wires.


mdd2012-001-313

ISSUE: Loose capacitor terminal wires (charred terminals).

CORRECTIVE ACTION: Replace capacitor, clean wire terminals and replace screws and washers with model year 2010 or newer screws and washers.

Improved model year 2010
10-32 x 5/16 Scotch Grip Screws – (P/N 250 000 462).

Improved model year 2010
no. 10 Helical Lock Washer – (P/N 250 200 026).


mdd2012-001-314

ISSUE: Externally shorted stator wire connector (charred marks inside connector).

CORRECTIVE ACTION: Replace the connector, but do not use dielectric grease in or on the connector terminals.


mdd2012-001-315

ISSUE: Internally shorted or overloaded stator (dark brown in color and smells hot).

CORRECTIVE ACTION: Replace the stator and always check to make sure the flywheel has not lost any of it's magnetism on any of the flywheel magnets from intense heat that may have been generated from the failed stator. Also check the flywheel for any heat damage that may have been incurred to the epoxy that helps to retain the inner flywheel drum. If any damage is found to the flywheel replace the flywheel also.

NOTE: E-TEC high or low voltage fault codes may be generated by a single fault. This can make accurate diagnosis difficult for the technician.

The number one cause of 55 or 60 volts fault codes has been loose capacitor connections. When the low 55 or 60 volts code (depending on engine application) is found it is common to see numerous low 12 volts codes also.

Since model year 2009 fault code strategy has been updated in model year 2010 and following years to prioritize the root cause fault code only. Fewer check engine lamps and false fault codes will result.


mdd2012-001-316

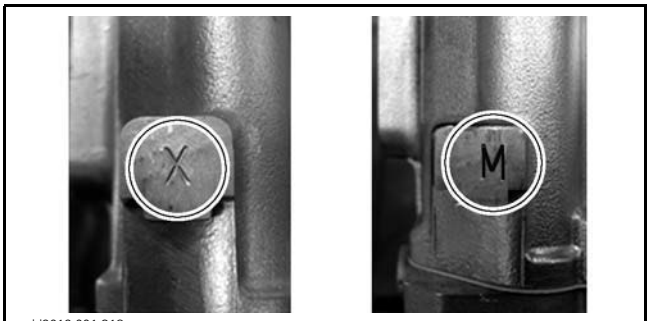
2011 800R E-TEC ENGINE DIFFERENCE BETWEEN MX-Z AND SUMMIT

Cylinder

The 2011 North American MX-Z and European Summit models will have a **S** stamped into the lower left of the cylinder block.

mdd2012-001-317

The 2011 North American Summit models will have an **M** or **X** stamped into the lower left of the cylinder block.

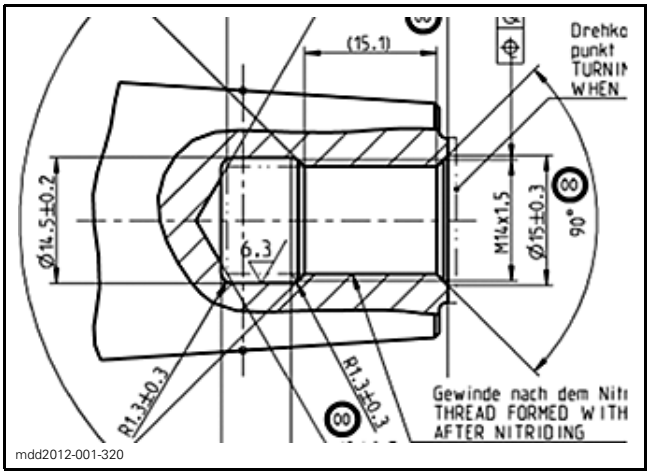


mdd2012-001-318_a

Crankshaft

2011 North American and European Summits models will have a new PTO end with "short" clutch bolt threads. It can be easily identified by the raised collar machined on the end. This type of crankshaft requires a different clutch bolt and the new universal puller (P/N 529 000 064).

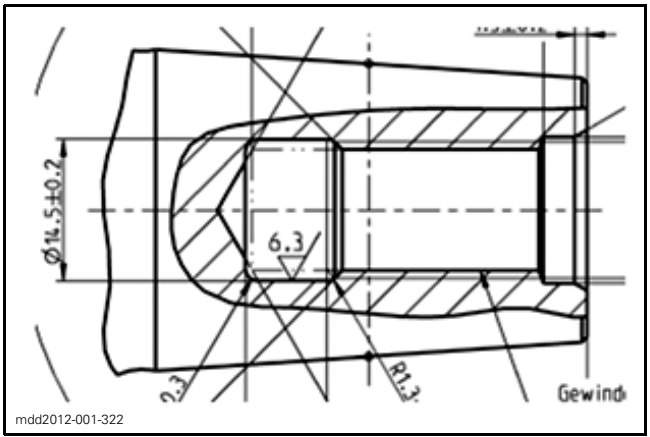

mdd2012-001-319



mdd2012-001-320

2011 MXZ models will remain the same as in the past years. This can be easily identified by the PTO end machined flat. This type uses the older standard clutch bolt and puller (P/N 529 022 400) or the new universal puller (P/N 529 000 064).


mdd2012-001-321



mdd2012-001-322

Cylinder Head

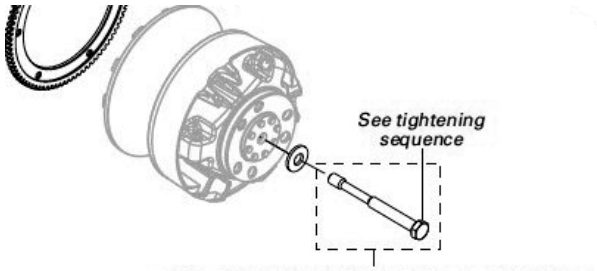
2011 North American Summit models come equipped with a head machined .3 mm tighter than a normal head. To compensate for the machining, a .3 mm thicker base gasket is used. The compression ratio is the same as MX-Z models. The Summit head is identified by a machining mark or color dot on the cylinder head

The 2011 MX-Z and European Summit models will still use the standard head, and do not have any indicating marks.

mdd2012-001-323

2012 Clutch Bolt Lengths

Note that there are bolt length differences because of the different crankshafts. Ensure to use the correct bolts.



600, 600 HO E-TEC	152.5 mm (6.004 in)
800R Power TEK	157.5 mm (6.201 in)
800R E-TEC (MX Z, Renegade)	162.5 mm (6.398 in)
800R E-TEC (Summit)	153.5 mm (6.043 in)

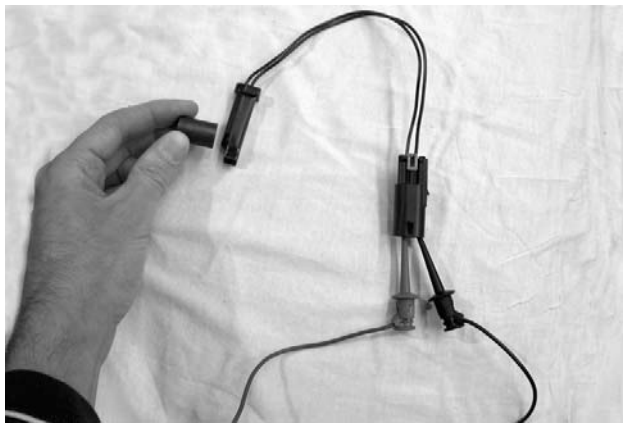
mdd2012-001-324

Updated Oil Level Sensor Test

The oil level sensor test for the *SHOP MANUAL* has been updated. Here is the new test.

1. Remove the sensor from the oil tank.
2. Connect Multimeter to the OLS connector.
3. Measure resistance = must be open circuit (OL).
4. Place a magnet to the OLS.
5. Measure resistance = must be close to .5 ohm.
   - If the Sensor Tests Good:
6. Check the float condition in the oil tank (damaged, jammed, fell to the bottom).
7. Check if the float magnet is still in place on the float.

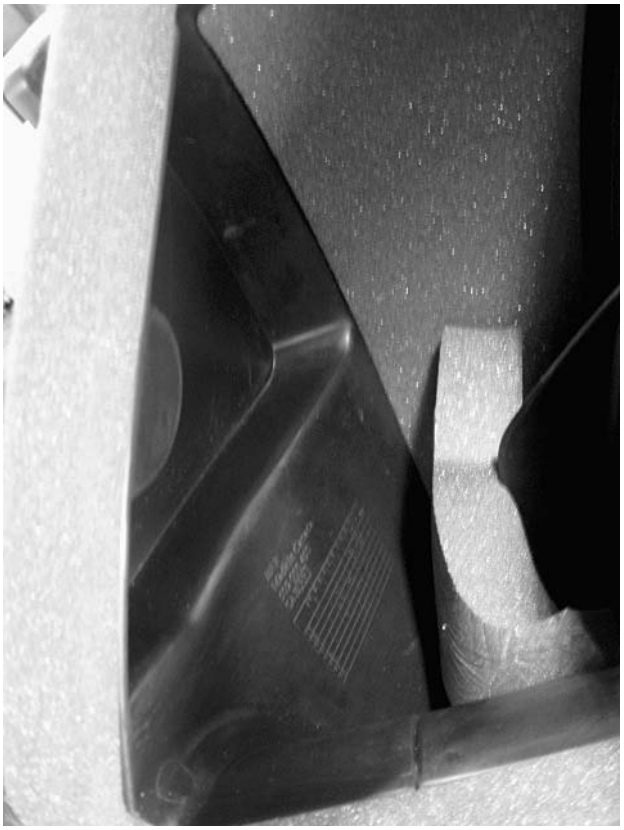
The *2012 SHOP MANUAL* will be updated as per the above information.



mdd2012-001-325

FAN INLET DUCT INTERNAL FOAM COMING LOOSE

For 2011 REV-X 550 Fan cooled units, be sure to inspect if the fan air inlet duct internal foam is attached securely to the internal sidewall of the duct. If the foam comes loose and falls down and obstructs airflow, the engine may begin to run warmer than it should and engine damage could be a result. As a safeguard, check to see if the foam is coming loose and use an all purpose contact cement or glue to reattach the foam if it is loose.

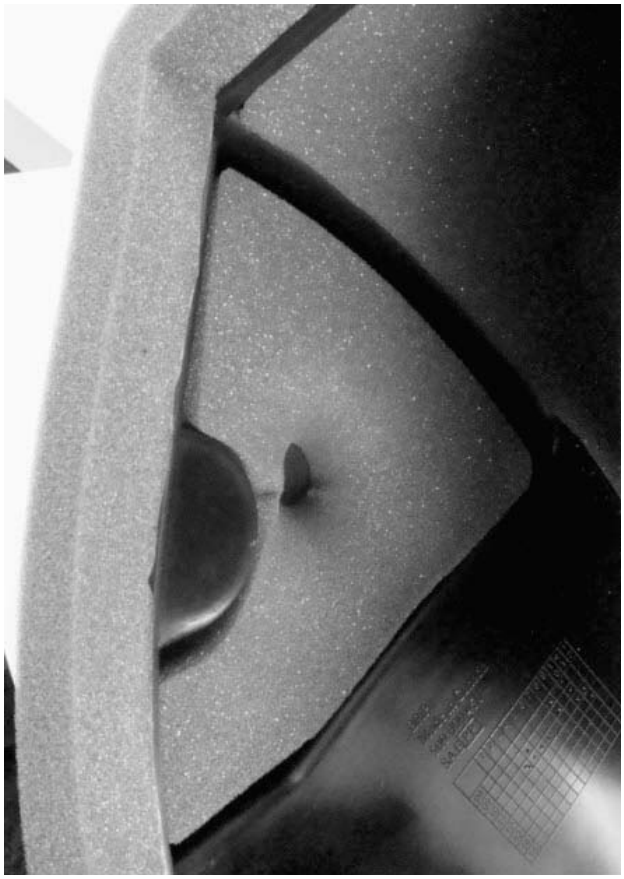


mdd2012-001-326

For extra foam retention, install a plastic dart (P/N 293 730 004) to help retain the foam in its proper position in the fan air inlet duct. To install the dart, measure down about 2 in from the top opening of the fan air inlet duct panel, and drill a 7/32 inch hole from the exterior to the interior in the duct for the dart to be inserted. When the dart is inserted in place, the extra material from the tip of the dart should be trimmed away so it does not interfere with anything. Additional darts can be installed for even better foam retention.

Normal warranty applies.

NOTE: Also verify if Warranty Bulletin 2011-2 (Acoustic Foam Replacement) has been performed, so that the side panel or the hood foam does not drop down and obstruct the airflow.

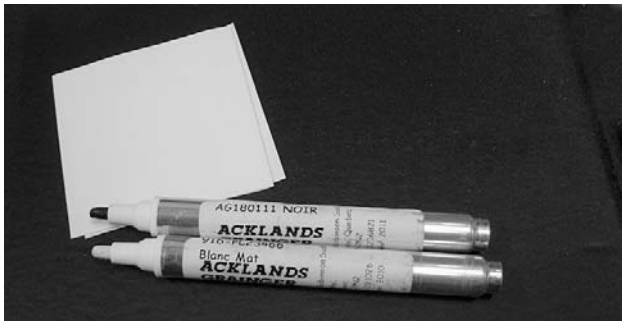

mdd2012-001-327

Tunnel Paint Repair

There are two paint sticks available to perform small paint repairs to the black and white painted tunnels.

Black paint pencil (549 011 404)

White paint pencil (549 011 400)



mdd2012-001-328

CVT DRIVE BELT GUIDELINE – ADMINISTRATIVE BULLETIN 2011-4

Always refer to Ski-Doo Administration Bulletin 2011-4 when considering a belt for warranty. Although BRP drive belts are covered by the vehicle warranty against material defects, in most cases belt failure is not a result of defect. Belts have always been considered a normal wear item. Before attempting belt coverage on a claim, always refer to Administrative Bulletin 2011-4. If the belt damage appears as one of the many pictures labeled "Typically not a manufacturing defect", the claim will be rejected by a claim analyst and the belt held for 90 days. If, however, the belt was subsequently damaged by another covered part or material defect, it will be considered.

ski-doo

SNOWMOBILES
ADMINISTRATIVE
Bulletin

January 25, 2011 Subject: **CVT Drive Belt Guidelines** No. **2011-4**

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
2011	All	All	All

ALL BRP OEM CVT BELTS ARE COVERED BY THE BRP LIMITED WARRANTY AGAINST ANY MANUFACTURING DEFECT.

BRP OEM CVT belts are premium belts that are especially designed and calibrated for BRP recreational vehicles.

BRP CVT belts are the only belts covered by the BRP Limited Warranty against any manufacturing defects. This warranty also covers contributory damages caused by a belt manufacturing defect; aftermarket belts do not.

Beyond manufacturing defects, damages can still occur if the system is abused, adjusted incorrectly or neglected. Therefore, BRP has created a new "CVT DRIVE BELT GUIDELINES" document you can consult to determine the cause of a damaged CVT belt.

279 X 406 MM (11 X 16 IN) BILINGUAL GUIDELINE DOCUMENT

(P/N 484 800 456)

Order as required, through regular channel.

This is a two-page color document that can be inserted in your dealer binder (English on one side, French on the other).

Some conditions shown on these pages are not related to a manufacturing defect, and therefore are not covered under BRP limited Warranty.

In case of doubt, do not hesitate to send CVT belts to the Warranty Department to confirm diagnostic.

CVT belts are considered normal wear items; normal wear is not warrantable.

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The full color, 11" x 17", bilingual "CVT DRIVE BELT GUIDELINES" poster can be ordered using (P/N 484 800 456) through regular channels and hung on the wall for quick reference by everyone in the service department.

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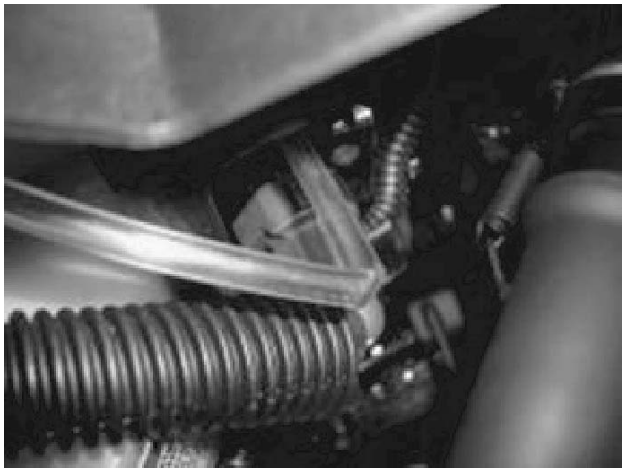
600 OR 800R E-TEC POOR PERFORMANCE DUE TO APS HOSE OBSTRUCTION

The air pressure sensor on an E-TEC is built into the ECM. A hose runs from the ECM to the air box. The APS is calibrated to detect the pressure of the air box. If the hose is disconnected, kinked or obstructed the proper air pressure will not be detected and the vehicle can exhibit poor performance and or poor economy. Ensure that the air pressure hose to the ECM is clear and properly routed.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800R E-TEC VOLTAGE RELATED P-CODES

The stator has three legs or sets of windings and if one of them **fails open or is shorted to ground a high or low voltage fault may be tripped.** The regulator/rectifier inside the ECM switches circuitry [parallel or series] dependent on RPM and load. If a stator leg opens, the regulator/rectifier can't switch fast enough to stop tripping the code. Watch the 60 volts scale in B.U.D.S. carefully while running the unit for fluctuation. Check that the stator harness connection wires and stator terminal connections are not damaged and repair as needed. But if the wires and connections are OK then replace the stator if erratic readings are noticed.

Normal warranty applies.

800R E-TEC "WARM UP" DISPLAYED

"Warm Up" displayed on the cluster is a result of 1 of 2 things.

1. Engine temperature is too low. Engine temperature did not reach 30°C (86°F) yet.
2. Oil pump feedback switch takes too long to send feedback to the ECM. Each time the ECM activates the oil pump, the pump returns a signal back indicating a "full stroke". If the oil pump feedback switch takes too long to send feedback to the ECM, the ECM believes the oil is too thick and engine RPM must be limited. In that mode, instead of releasing the coil activation right away, it keeps the coil activation longer to heat the oil in the pump. It will stay in this mode until the feedback signal comes back fast enough from the pump to the ECM to indicate that the oil is now fluid enough. It is possible for the connector and/or wire connecting the feedback switch to fail causing the unit to stay in this mode. Check wire and connector.

800R E-TEC OVERHEATING AT PDI

On some 2011 800R E-TEC models it is possible that some front heat exchangers were not machined internally to allow coolant to circulate properly. If it is discovered at pdi that the unit is overheating and coolant is not flowing through the bulkhead heat exchanger then replace the front heat exchanger.

Normal warranty applies.

600 E-TEC STARTING SEQUENCE

Refer to a 600 E-TEC *WIRING DIAGRAM*.

600 E-TEC Manual Start Models: Normal Operation

When the D.E.S.S. key is installed, the switch inside the D.E.S.S. post closes. No electrical power in the ECM is activated. ECM (J1A-9) controlled by RUN/STOP switch must be open and not be shorted to ground. When the recoil is pulled, voltage is supplied to the ECM from the stator via the 3 separate windings. The ECM (J2-13) supplies 55 volts to injectors, ignition coils, capacitor, fuel and oil pumps. The ECM (J2-15 and 16) supplies 12 volts to the primary circuit components - head and tail lights, the gauge cluster, and ECM (J1A-15). The ECM controls the 3D RAVE valve, oil pump, fuel pump and injectors by switching on and the ground connections to these components. The 6 ECM ground terminals (J2-5,7,8 and J1B-14,20,21) are not assigned to any particular component, but if one or more of these ground connections fail, it will overload the others. The ECM does not control the ground for the ignition coils, but supplies an electrical pulse to "fire" the coils at the exact time. The capacitor filters the pulsating 55 volts produced by the ECM. If the capacitor is open or shorted, the engine will miss and be hard to start.

600 E-TEC No Start - without T-Harness Connected:

– Check D.E.S.S. switch and key.
– Check the RUN/STOP switch.
– Check 55 volts supply to injectors and ignition coils.
– Should measure above 30 volts when engine is turned over.
– Check fuel pump operation.
– Fuel pressure should increase when turned over and voltage should be above 6 volts.
– Check primary 12 volts supply to ECM (J1A-15).
– Test for ignition coil operation.
– Test for injector operation.
– Test for stator output.
– Replace the ECM.

600 E-TEC No Start - with T-Harness Connected:

With the T-harness and external battery connected, the 12 volts primary circuit is activated. 12 volts is applied to ECM (J1B-10) which will "turn on" the ECM. Gauge cluster, head and tail lights will turn on. If not, check manual start jumper wire, 12 volts power and ground at the diagnostic and gauge connectors.

– Check D.E.S.S. switch and key.
– Check the RUN/STOP switch.
– Check 55 volts supply to injectors and ignition coils.
– Should measure above 30 volts when recoil is pulled.
– Check fuel pump operation.
– Fuel pressure should increase when recoil is pulled and voltage should be above 6 volts.
– Check primary 12 volts supply to ECM (J1A-15).
– Test for ignition coil operation.
– Test for injector operation.
– Test for stator output.
– Replace the ECM.

600 E-TEC Only Start with T-Harness Connected:

If the engine only starts with T-harness and external battery connected, the ECM is not supplying 12 volts to the primary circuit and to ECM (J1A-15).

– Check ECM connectors.
– Replace the ECM.

600 E-TEC Electric Start Models: Normal Operation

When the D.E.S.S. key is installed, the switch inside the D.E.S.S. post closes. No electrical power in the ECM is activated. ECM (J1A-9) controlled by RUN/STOP switch must be open and not be shorted to ground. Battery voltage is supplied thru the 30 amp main fuse, thru the 5 amp fuse and applied to the START/RER switch. When the START/RER switch is closed, battery voltage is applied to terminal A of the starter solenoid, ECM (J1A-28), and thru diode D1 to ECM (J1B-10). The voltage applied to ECM (J1B-10) turns on the ECM. The voltage applied to ECM (J1A-28) causes the ECM (J1B-9) to ground terminal B of the starter solenoid. With the starter solenoid circuit complete, the solenoid will close, supplying battery voltage to the starter motor. Once the starter motor engages, the engine will turn over. If engine turns over, but does not start, refer to **"Engine No Start"** procedures.

600 E-TEC Starter Motor will not Activate:

Test for Battery voltage – Higher than 12.5 volts. Measure 12 volts on battery side of starter solenoid. If not, check wiring and connections. Measure 12 volts on starter motor side of starter solenoid when START/RER switch is depressed. If not, replace starter solenoid or see **"Starter Solenoid will not activate"** procedure. Measure 12 volts on positive terminal of starter motor when START/RER switch is depressed. If not, check wiring and connections. If yes, check proper starter motor ground or replace the starter motor.

600 E-TEC Starter Solenoid will not Activate:

Test for Battery voltage – Higher than 12.5 volts. Check 30 and 5 amp fuses – 0 voltage drop, less than 1 Ω resistance. Test RUN/STOP switch – pin 1 to 4 of steering harness, infinite Ω resistance. Test START/RER switch – pin 3 to 6 of steering harness, 0 voltage drop, less than 1 Ω resistance. Measure 12 volts at starter solenoid (RD/GN) when START/RER button is depressed. If not, check wiring and connections. Measure 12 volts at ECM (J1A-28) when START/RER button is depressed. If not, check wiring and connections. Measure 12 volts at ECM (J1B-10) when START/RER button is depressed. If not, Diode D1 is open, or check wiring and connections. Test Starter Solenoid, terminal A approximately 7.5 Ω resistance. Measure 0 volts ECM (J1B-9) with START/RER button depressed. If not, check ECM ground wires and connections, or replace ECM.

600 E-TEC Starter Motor and Solenoid Activate when T-Harness is Connected:

Diode D1 is shorted, replace.

600 E-TEC Diode D1 Location

D1 is hardwired into the main wiring harness. If it is determined D1 is defective, it can be replaced without having to replace the entire wiring harness. D1 is located inside the harness sheathing about 8 in away from the gauge cluster connector. This is a common part and available at most electronic components outlets. Max diode rating is 5 amps.

800R E-TEC STARTING SEQUENCE

Refer to a 800R E-TEC *WIRING DIAGRAM*.

800R E-TEC Manual Start Models: Normal Operation

When the D.E.S.S. key is installed, the switch inside the D.E.S.S. post closes. No electrical power in the ECM is activated. ECM (J1A-9) controlled by RUN/STOP switch must be open and not be shorted to ground. When the recoil is pulled, voltage is supplied to the ECM from the stator via the 3 separate windings. The ECM (J2 13,) supplies 60 volts to J1B-3 and 4, ignition coils, capacitor, fuel and oil pumps. The ECM (J2-15 and 16) supplies 12 volts to the primary circuit components - head and tail lights, the gauge cluster, and ECM (J1A-15). The ECM controls the fuel Injectors separately. The ECM controls the 3D RAVE valve, oil pump, and fuel pump by controlling the ground connections to these components. The 6 ECM ground terminals (J2-5,7,8 and J1B-14,20,21) are not assigned to any particular component, but if one or more of these ground connections fail, it will overload the others. The ECM does not control the ground for the ignition coils, but supplies an electrical pulse to "fire" the coils at the exact time. The capacitor filters the pulsating 60 volts produced by the ECM. If the capacitor is open or shorted, the engine will miss and be hard to start.

800R E-TEC Engine No Start - without T-Harness Connected:

– Check D.E.S.S. switch and key.
– Check the RUN/STOP switch.
– Check 60 volts supply to injectors and ignition coils.
– Should measure above 30 volts when engine is turned over.
– Check fuel pump operation.
– Fuel pressure should increase when engine is turned over and voltage should be above 8 volts.
– Check primary 12 volts supply to ECM (J1A-15).
– Test for ignition coil operation.
– Test for injector operation.
– Test for stator output.
– Replace the ECM.

800R E-TEC Engine No Start - with T-Harness Connected:

With the T-harness and external battery connected, the 12 volts primary circuit is activated. 12 volts is applied to ECM (J1B-10) which will "turn on" the ECM. Gauge cluster, head and tail lights will turn on. If not, check manual start jumper wire, 12 volts power and ground at the diagnostic and gauge connectors.

– Check D.E.S.S. switch and key.
– Check the RUN/STOP switch.
– Check 60 volts supply to injectors and ignition coils.
– Should measure above 30 volts when recoil is pulled.
– Check fuel pump operation.
– Fuel pressure should increase when engine is turned over and voltage should be above 8 volts.
– Check primary 12 volts supply to ECM (J1A-15).
– Test for ignition coil operation.
– Test for injector operation.
– Test for stator output.
– Replace the ECM.

800R E-TEC Engine Only Start with T-Harness Connected:

If the engine only starts with T-harness and external battery connected, the ECM is not supplying 12 volts to the primary circuit and to ECM (J1A-15).

– Check ECM connectors.
– Replace the ECM.

800R E-TEC Electric Start Models: Normal Operation

When the D.E.S.S. key is installed, the switch inside the D.E.S.S. post closes. No electrical power in the ECM is activated. ECM (J1A-9) controlled by RUN/STOP switch must be open and not be shorted to ground. Battery voltage is supplied thru the 30 amp main fuse, thru the 5 amp fuse and applied to the START/RER switch. When the START/RER switch is closed, battery voltage is applied to terminal A of the starter solenoid, ECM (J1A-28). The voltage applied to ECM (J1A-28) causes the ECM (J1B-9) to ground terminal B of the starter solenoid. With the starter solenoid circuit complete, the solenoid will close, supplying battery voltage to the starter motor. Once the starter motor engages, the engine will turn over. If engine turns over, but does not start, refer to **"Engine No Start"** procedures.

800R E-TEC Starter Motor will not Activate:

Test for battery voltage – higher than 12.5 volts. Measure 12 volts on battery side of starter solenoid. If not, check wiring and connections. Measure 12 volts on starter motor side of starter solenoid when START/RER switch is depressed. If not, replace starter solenoid or see **"Starter Solenoid will not activate"** procedure. Measure 12 volts on positive terminal of starter motor when START/RER switch is depressed. If not, check wiring and connections. If yes, check proper starter motor ground or replace the starter motor.

800R E-TEC Starter Solenoid will not Activate:

– Test for battery voltage – higher than 12.5 volts.
– Check 30 and 5 amp fuses – 0 voltage drop, less than 1 Ω resistance.
– Test RUN/STOP switch – pin 1 to 4 of steering harness, Infinite Ω resistance.
– Test START/RER Switch – pin 3 to 6 of steering harness, 0 voltage drop, less than 1 Ω resistance.
– Measure 12 volts at starter solenoid (RD/GN) when START/RER button is depressed.
– If not, check wiring and connections.
– Measure 12 volts at ECM (J1A-28) when START/RER button is depressed.
– If not, check wiring and connections.
– Measure 12 volts at ECM (J1B-10) when START/RER button is depressed.
– Test Starter Solenoid, terminal A approximately 7.5 Ω resistance.
– Measure 0 volts ECM (J1B-9) with START/RER button depressed.
– If not, check ECM ground wires and connections, or replace ECM.

800R E-TEC Starter Motor and Solenoid Activate when T-Harness is Connected:

The cause of this issue is a short between ECM (J1A-28 and J1B-10). The ECM must be replaced.

ENGINE VIBRATION POINTS OF INSPECTION ON 2011 800R E-TEC UNITS

Excessive engine vibration can be caused by several things. The 800R engine, because of its displacement, normally vibrates more than a smaller displacement engine. If excessive vibration is noted to be more than that of other known good running same configuration 800R E-TEC units, several inspection points need to be verified.

1. Verify the unit has not been modified, altered or involved in an impact.
2. Check the drive clutch internal components for abnormal wear and/or broken parts.
3. Re-index the governor cup 120 degrees from where it was originally positioned in the sliding sheave or rotate the whole clutch on the crank).
4. Verify the engine stopper adjustment is set at the correct clearance specification, the 2011 specification is .020 in ths (.5 mm). Ensure to not confuse the 2011 engine stopper clearance specification with the 2012 specification, since the 2012 engine stopper is set snug only for Summit and Freeride because of changes to the 2012 vehicle configuration.
5. Check for broken and/or worn out motor mounts.
6. Remove the center mounting bolt and clean the internal and external threads completely so that the bolt screws in by hand. Apply loctite and torque the bolt. This procedure prevents "wind up" of rubber during the tightening sequence.
7. Inspect the crankshaft deflection as outlined in the proper *SHOP MANUAL* in the engine measurement section. Refer to the engine section of the *SHOP MANUAL* for the crankshaft minimum and maximum tolerances. Make sure to inspect the crankshaft to verify that it is in correct phase (the pistons must be opposed exactly 180 degrees from each other).

E-TEC RAVE OIL LINES EMPTY - ALL E-TEC MODELS

It is not uncommon to see no oil in the RAVE oil lines from the RAVE check valves to the RAVE housing nipples. Gravity and engine vibration cause the oil to "drain" into the RAVE valve housings. This is normal and nothing needs to be done. If there is no oil in the lines between the oil pump and the check valves, perform the oil system bleed or Summerization procedure to monitor the flow of oil in the lines. Either of these procedures will cycle the oil pump approximately once every second for approximately 45 seconds.

NOTE: A very small amount of oil is pumped through the lines. If no oil is flowing, inspect the check valves, make sure the oil lines are not clogged or gelled-up from the oil being mixed with a different than BRP brand oil and test the oil pump with the B.U.D.S. oil pump activation feature. If the cause of the issue is no oil pump activation from the ECM and not a wire or connection issue, then replace the ECM as needed.

NOTE: The E-TEC rave oil check valve specification is 2.13 to 3.55 PSI (14.68 to 24.47 kPa).

SUMMITS MUST BE CALIBRATED FOR SEA-LEVEL IF USED AT SEA-LEVEL

All 2011 and 2012 North America Summit or Freeride models, except for the Summit Sport 600 and Freeride 137's, come from the factory calibrated for use at higher altitudes. While correct calibrations are always necessary for optimum performance, it is especially critical for the 800R E-TEC. Always refer to the correct Ski-Doo High Altitude/Sea Level Specifications Service Bulletin for the unit, to verify correct calibrations for which the unit is to be used at. The darker grey areas of the Ski-Doo Service Bulletin High Altitude/Sea Level Specifications charts, indicates the calibration that the unit had in it when it was sent to the dealer, from the factory.

NOTE: There is an error in the Ski-Doo High Altitude/Sea-Level Specifications Service Bulletin 2011-6 revision 1 (dated October 28 2010) regarding the 2011 Summit 800R E-TEC TRA drive pulley spring to be used at sea-level. The correct sea-level TRA drive spring for pages 42 and 43 is the **YL/GN 100-260 lb spring (P/N 414 742 100) for use below 4000 ft** to prevent engine misfires due to over-revving. Note these corrections.

800R E-TEC SHORT BLOCK AND CRANKSHAFT REPAIR KITS

For 800 E-ETEC engine repairs, there is the option to order repair kits for short block or crankshaft replacements. The short block repair kit is (P/N 415 129 610) (for 2011 flatlander 800R E-TEC's) which includes the short block, the head, the drive clutch bolt and all the gaskets needed to complete the repair. This kit will include all the latest updated parts in the kit. There is no need to order the gaskets separately when ordering the short block kit. For other application 800R E-TEC's see EPC (*ELECTRONIC PARTS CATALOG*) or the latest rebuild list for the correct short block to use.

The crankshaft repair kit is (P/N 415 129 609). This kit includes the crankshaft and the drive clutch bolt, but no gaskets. The crankshaft in this kit will also include all the latest updated parts. The engine gasket set (P/N 420 892 474) would need to be ordered separately if not stocked at the dealership. This kit will also work on 2009 to 2012 797 Power-TEK's. In both cases, it is very important to use the included clutch bolt in the kit because of revised machining on the PTO crankshaft end.

E-TEC ECM AND INJECTOR TROUBLESHOOTING E-TEC ENGINES

Before proceeding use B.U.D.S. to determine if the correct coefficient files for both the MAG and PTO injectors are programmed.

Injector Resistance Test

Unplug the injector from main wiring harness and using an ohmmeter, measure the resistance between the two wires of each injector. The measured resistance should be between 2.6 and 3 ohms. Also, measure the resistance from each wire to the injector body. This resistance should be infinite, if not; the voice coil of the injector is shorted.

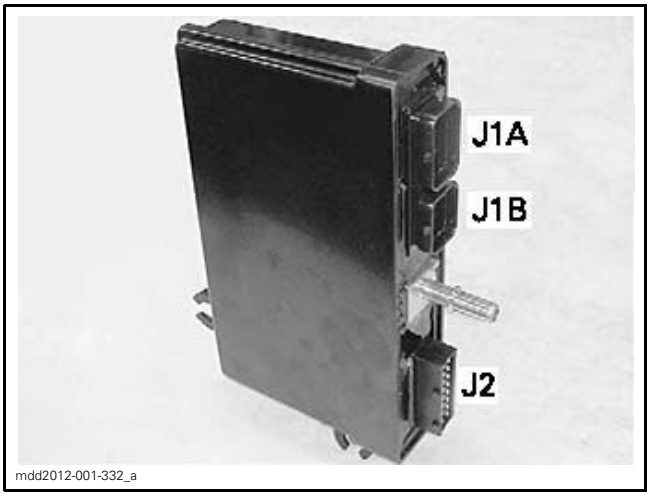
Care must be taken when using an ohmmeter to obtain correct readings. Remove power from the circuit when measuring resistance. The ohmmeter leads have a small amount of resistance and must be subtracted from the measured amount. Also, do not touch both leads while measuring resistance because the ohmmeter will measure resistance in your body.

Electrical Test

Power up the unit's electrical system using the T-harness and battery.

Plug and unplug each injector while touching them to see if they activate. If you feel them activating, either the ECU or wiring between it and the injector are bad.

To determine which is bad next unplug connector J1B from ECU then plug/unplug each injector, if activated the harness is defective. If not the harness it is the ECU injector driver circuit inside the ECU, replace the ECU. The injectors should only activate when the engine is running or with B.U.D.S.



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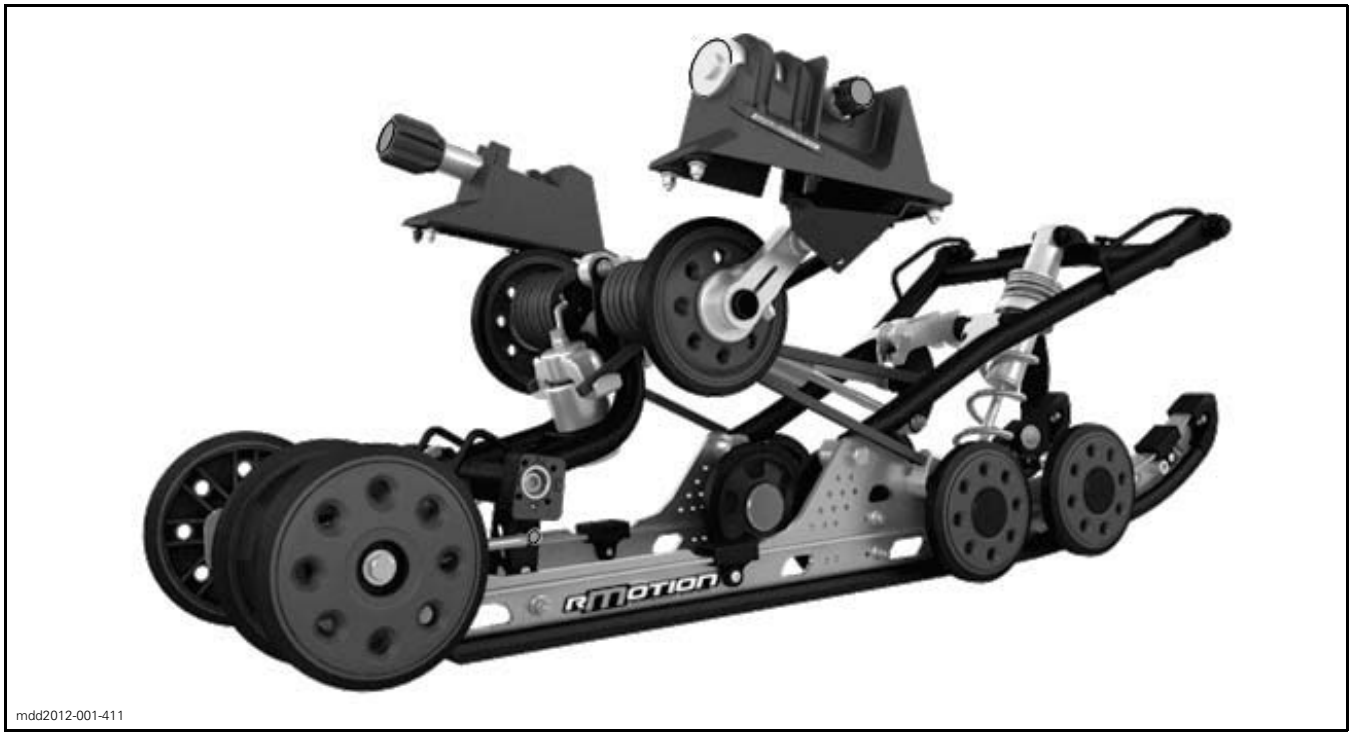
New Technology

In this section you will find the most current information concerning the latest technologies used by BRP.

Suspension



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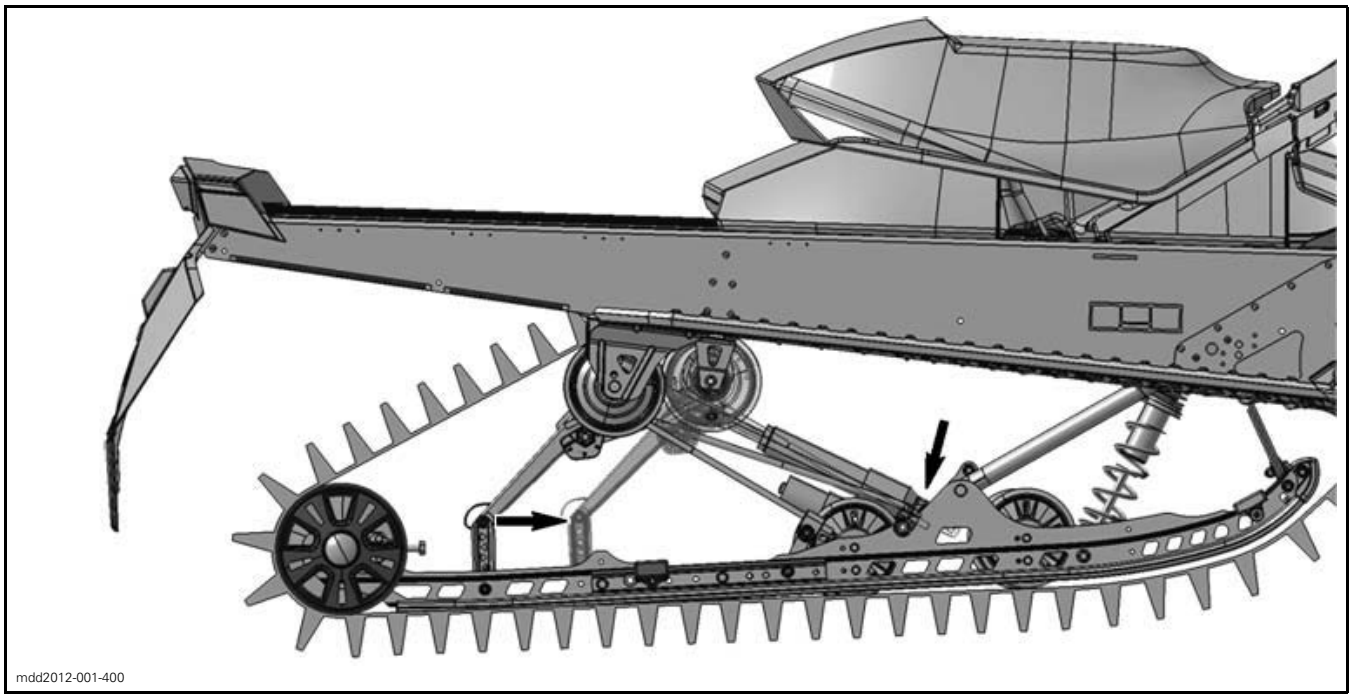
SUSPENSION SC-5M-2

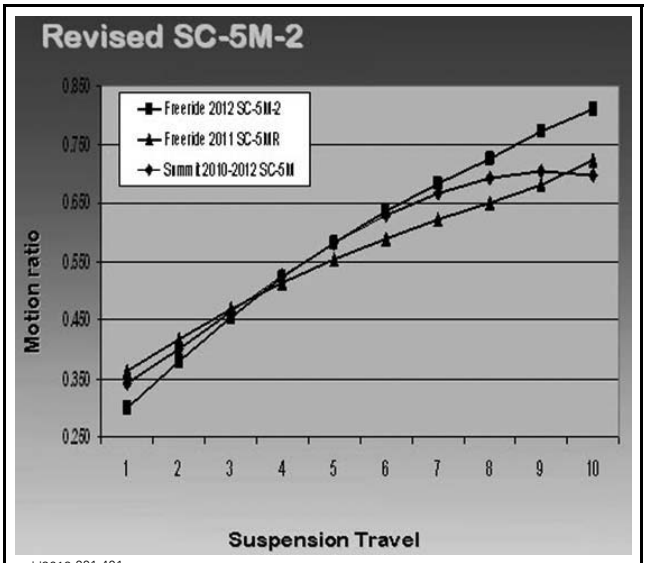


For 2012, on 146" and 154" Freeride, the rear suspension is the SC-5M-2. The racing inspired SC-5MR that was introduced on the 2011 Freeride 154" has been improved for even better deep snow performance, better control and outstanding weight transfer. SC-5M-2 shock motion ratio has a more aggressive rising rate through the whole suspension travel. This is specific to 146" and 154" Freeride's to reduce transfer, decrease trenching, improve floatation and reduce bottoming while taking the biggest hits with ease. The SC-5M-2 rear suspension is equipped with the new single knob, easy adjust KYB PRO 40 shocks for compression low and high speed adjustments so no tools are needed to make adjustments, even when wearing gloves the new large adjuster knob makes compression adjustments easy.

Two large changes include, changing the rear shock's front rocker or pivot shape, and moving the rear arm drop link 4.5 in forward. Together these changes have refined this lightweight mountain suspension for the best compromise of great flotation and minimal trenching. Perfect for aggressive riders.

Also see the chart which shows comparison shock motion ratios on 2010 to 2012 Summit vs 2011 Freeride SC-5MR vs 2012 Freeride SC-5M-2.

NOTE: The race version 154" Freeride remains with the SC-5MR rear suspension for 2012 because it gives the rear shock more leverage for hard acceleration, climbing and for the type of cornering seen in hill climbing race conditions. Rear shock clicker adjustments are then used for the traction conditions and hill angle in order to keep the front end low and increase climbing speed and cornering capability.



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NEW rMotion REAR SUSPENSION

mdd2012-001-402

For 2012, the new rMotion suspension is available in both the MX-Z X and MX Z XRS packages and it is available in two variations of adjustability.

BRP set out to push suspension capability, comfort and adjustability to new levels. With the introduction of the Ski-Doo rMotion rear suspension those raised levels have been achieved while keeping in the design envelope within the REV-X platform.

By keeping the rMotion a more conventional design, BRP maintains key attributes of its REV-X design, such as great protection from snow dust, effective heat exchanger performance, industry leading cargo space, variety of easy to use cargo bags and the ability to add the versatility of the Ski-Doo exclusive 1+1 seat. The rMotion may appear similar to the SC suspension architecture used in Ski-Doo snowmobiles since 1996, but every piece of the rMotion is new and absolutely state-of-the-art. In fact, it sets new industry standards for travel, rising rate motion ratio and adjustability. It also has an even broader sweet spot than the industry leading SC-5. This broad sweet spot, means the rMotion delivers an exceptional ride in nearly all conditions without adjustments after the initial set-up. The rMotion offers many easy tuning choices for those with the desire and know how to fine tune their ride for conditions or their riding style.

Four features separate the rMotion from its competition:

- Broader range of any Rising Rate motion ratio suspension
- Additional suspension travel/stroke
- Separate spring and shock motion ratios
- Ease of tuning

Rising Rate: Its motion ratio – the largest variation of rising rate progression in the industry – means the rMotion rear shock is supple in small bumps while maintaining extreme capacity in large ones.

Additional Travel: Because we always push the envelope, the new rMotion has 18% (2 in) more rear travel than the SC-5 and up to 23% more than some competitors. The extra capacity to absorb even bigger bumps provides more comfort in the worst conditions.

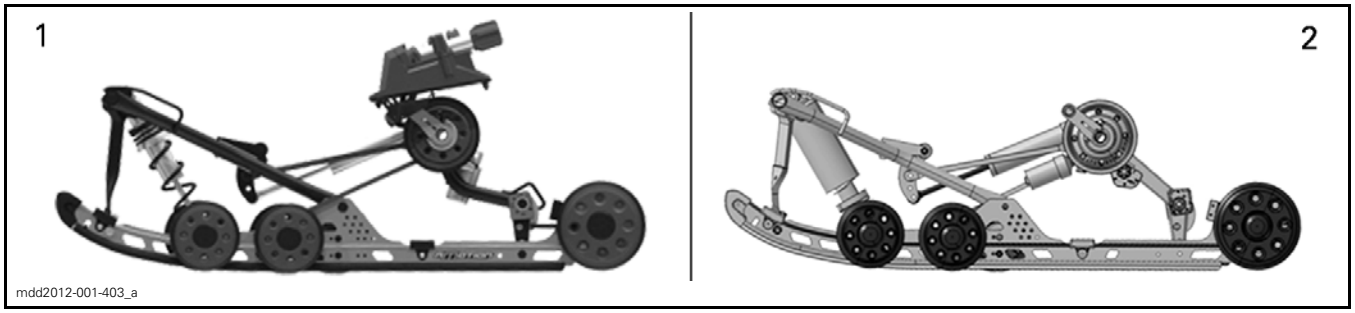
Separate Spring and Shock motion ratios: Separating the spring and shock motion ratios allows independent tuning of each component. In the early part of the suspension travel the rMotion uses the spring mainly to absorb the small trail chatter; as the suspension moves faster and further as the bumps get bigger, the shock plays a bigger role, to absorb the bigger hits.

Ease of Tuning: The rMotion offers many tuning choices to customize the ride. All three springs have preload adjustments. The rear shock has two mounting points to change motion ratios (one biased towards comfort, the other towards high performance).

New adjustments for shock compression speed and coupling block position (to control transfer) can be made without tools while wearing gloves.

These four features expand the already broad sweet spot of Ski-Doo suspensions – the widest range of performance covering the widest range of trail conditions before requiring adjustment to maintain comfort.

There are two options for spring preload and rear shock compression adjustment. With the quick adjust system or without.



1. **With** *quick adjust system – 57.4 pounds*
   Remote shock reservoir
2. **Without** *quick adjust system – 52.4 pounds*
   Piggyback shock reservoir

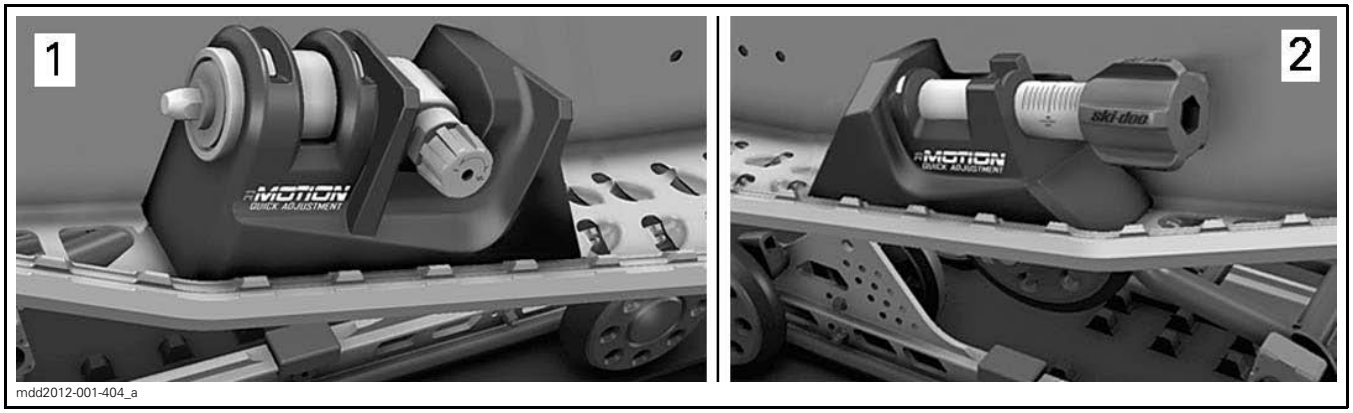
rMotion QUICK ADJUST SYSTEM

Available as a Spring option on MX Z X and X-RS sleds, the Quick Adjust system places controls on the running boards for easily fine-tuning the rear spring preload and rear shock compression speed for riding style, load and trail conditions.

The spring preload adjustment increases the range of adjustment by 30%, with infinite settings between full soft and full hard.

The spring preload adjuster works hydraulically and is located on the left side of the foot well, on the right side there's the remote reservoir for the rear shock clicker.

By turning the spring preload adjustment knob hydraulic pressure either increases or decreases in a hydraulic cylinder attached to the rear spring. The greater the pressure in the cylinder the more spring preload increases. Since hydraulic pressure is used there is a greater range of movement possible than by hand.



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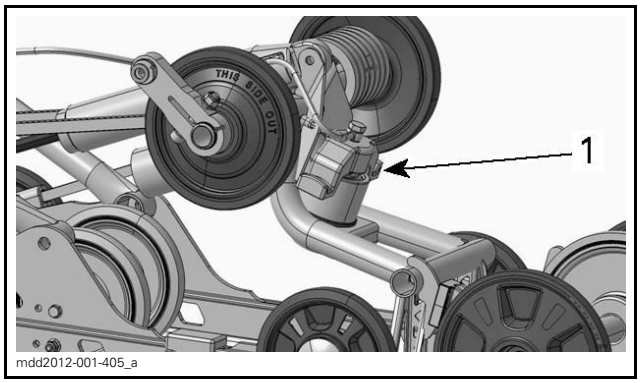
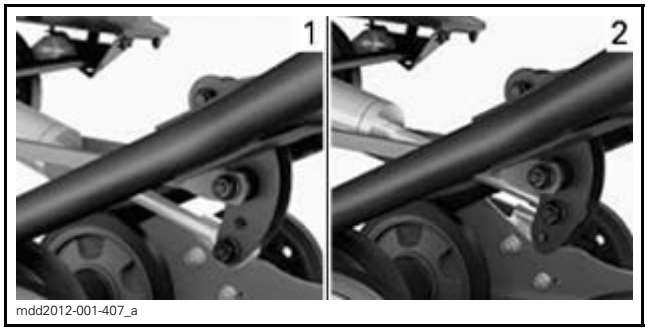
1. **Shock valving** *adjustment with quick adjust system*
2. **Spring preload** *adjustment with quick adjust system*



1. Hydraulic cylinder

The piggyback shock reservoir has a single knob base valve so it is easier to manipulate and provides faster adjustability.

The two rear shock mounting positions provide a 20% difference in the ride. The top position provides for a softer ride and the bottom position provides for a stiffer ride.



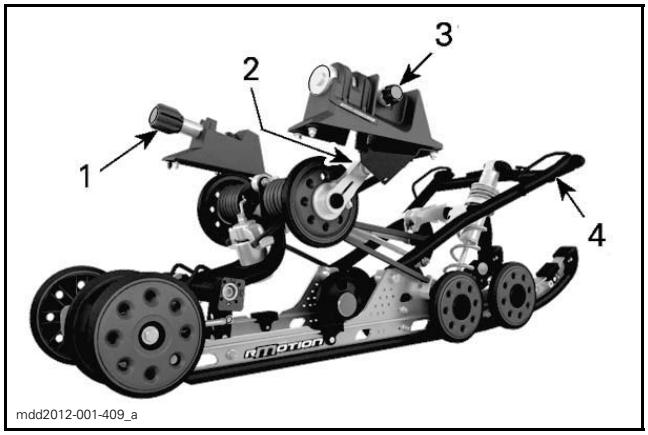
1. Stiffer
2. Softer

The rMotion suspension spring preload adjustment, without the quick adjust system, should be adjusted to the drivers weight.

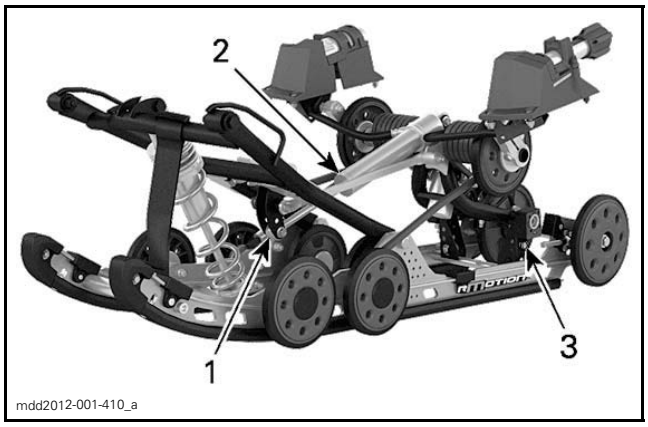
Suspension spring preload adjustment, without the quick adjust system

DRIVER WEIGHT	REAR SPRING ADJUSTER POSITION
Up to 180	1
180 to 210	2
210 to 240	3
240 to 270	4
270 to 300	5

Features:



1. *Spring preload adjuster*
2. *Link to increase rear stroke and reduce transfer*
3. *Compression clicker adjuster*
4. *Longer front arm to reduce transfer and increase front stroke*



1. *2nd Shock mounting point to increase adjustment range*
2. *Inverted rear shock to increase comfort (less unsprung weight) and increase adjustment access*
3. *Tool less coupling block adjustment and more range*

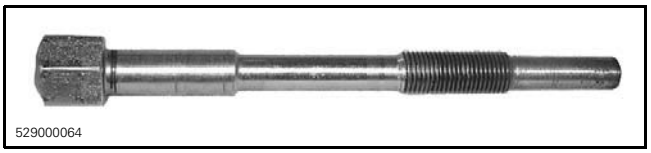
Troubleshooting Chart

ISSUE	SOLUTION
Suspension bottoming	1. Screw the rear shock clicker 2. Screw the center shock clicker (XRS only) 3. Increase rear spring preload
Suspension is harsh	1. Unscrew the rear shock clicker 2. Reduce the ACM cam setting 3. Relocate the rear shock in bell crank upper hole
Too much transfer	1. Increase the ACM cam setting 2. Increase the rear spring preload

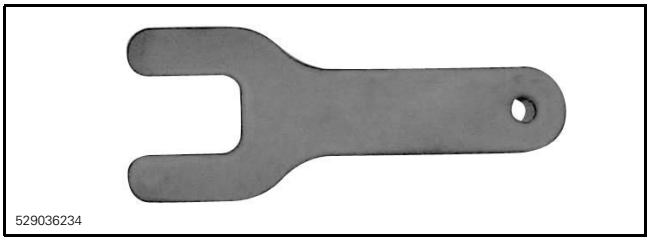
Special Tools

In this section you will find the most current special tools to service efficiently service BRP vehicles. All mandatory tools will be shipped automatically.

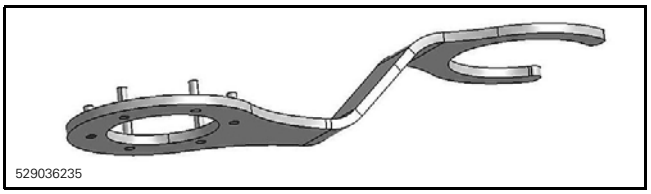
Drive Pulley Puller
(P/N 529 000 064)



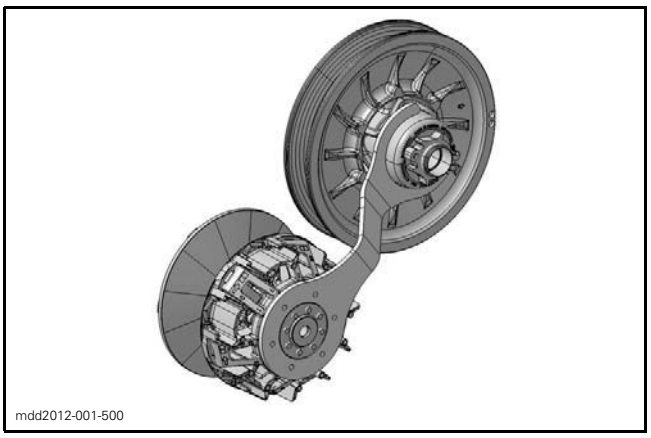
rMotion Suspension Wrench
(P/N 529 036 234)
NOTE: For suspension removal.



Drive pulley holder (E-drive)
(P/N 529 036 235)



2009 and newer Ski-Doo Shop Manuals include a special tools reference section in the *SERVICE TOOLS INDEX* section. For older special tools that may not be shown in the newer Shop Manuals see the following.



ski-doo | BRP

SNOWMOBILES
SERVICE
Bulletin

Date : June 13 2008 Subject : Service Tools No

Year	Model
All	All

BRP is proud to introduce its latest Service Tools Bulletin. These special tools were designed to help you efficiently service BRP vehicles.
Please always make sure to use special tools along with the appropriate Shop Manual(s) and respect all safety measures.

Mandatory Tools: These tools are absolutely needed to perform certain service procedures. They will be automatically shipped to dealerships. They do not need to be ordered separately.

Recommended Tools: These tools will facilitate the Technicians work. They will not be automatically shipped to dealerships. They need to be ordered separately.

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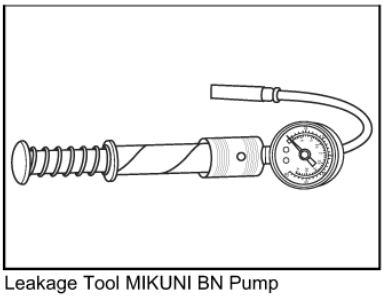
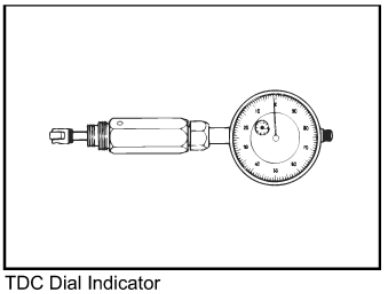
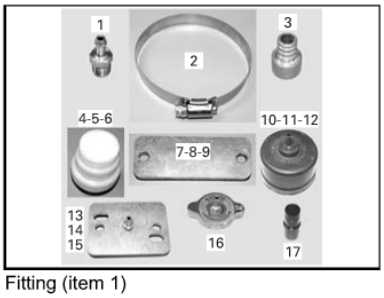
Engine



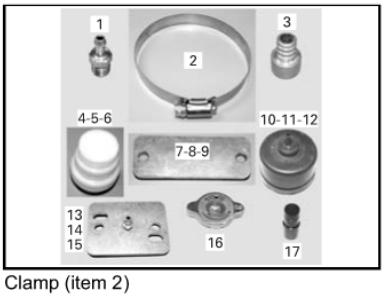
Leakage Tool MIKUNI BN Pump
P/N 295 000 114 Recommended
All carbureted engines
To leak test carburetor pop-off pressure.



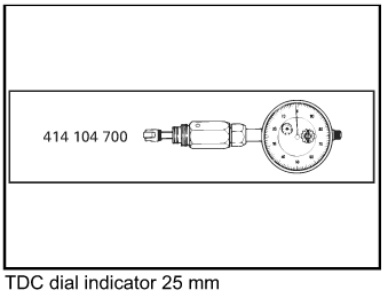
TDC Dial Indicator
P/N 295 000 143 Recommended
2-stroke engines except DI



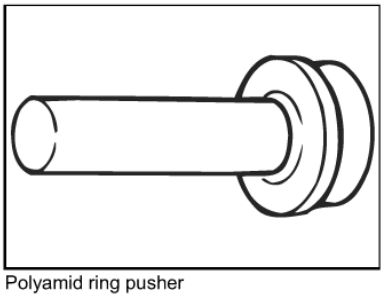
Fitting (item 1)
P/N 408 201 100 Recommended
All 2 stroke engines
Replacement part for item included in kit 861749100



Clamp (item 2)
P/N 408 803 500 Recommended
All 2 stroke engines
Replacement part for item included in kit 861749100

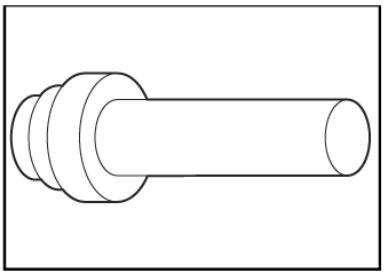


TDC dial indicator 25 mm
P/N 414 104 700 Recommended
For ignition timing static measurement

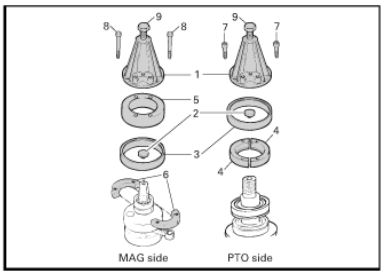


Polyamid ring pusher
P/N 420 267 930 Recommended
247 engine

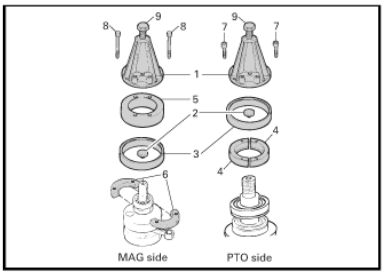
HALF RING PULLER MAG
P/N 420 276 025 Recommended
717 engine
To remove crankshaft bearings.



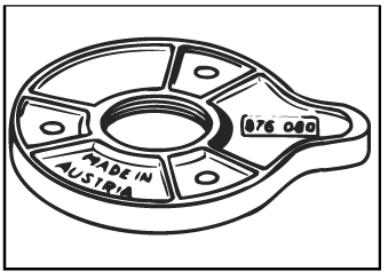
MAG seal pusher
P/N 420 277 875 Recommended
277f



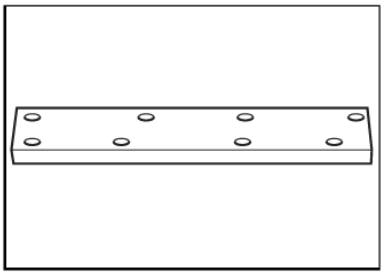
Screw M8x40 (item #7)
P/N 420 840 681 Recommended
All 2-stroke engines



Screw M8x70 (item #8)
P/N 420 841 201 Recommended
All 2-stroke engines
To be used with P/N 420 877 635.



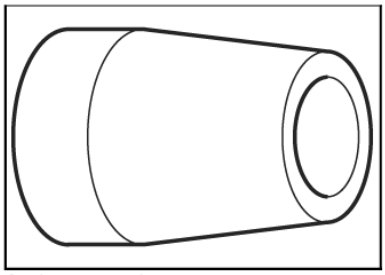
Magneto Puller
P/N 420 876 081 Mandatory
All 2 strokes



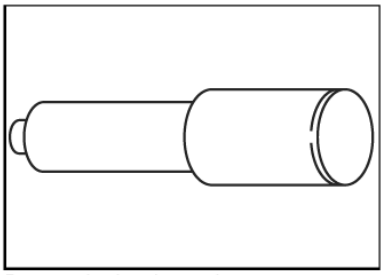
Cylinder alignement tool
P/N 420 876 171 Recommended
377f, 440f
To use on exhaust side

Engine

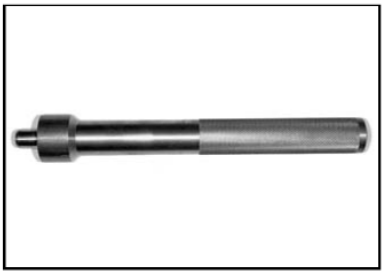
Half ring puller
P/N 420 876 330 Recommended
947 & 947 DI engines
To remove 52 mm O.D. bearings from the crankshaft.



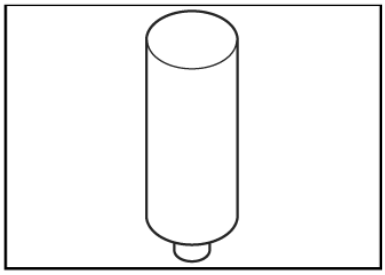
Seal protector sleeve
P/N 420 876 490 Recommended
Rotary valve engine with 12 mm shaft



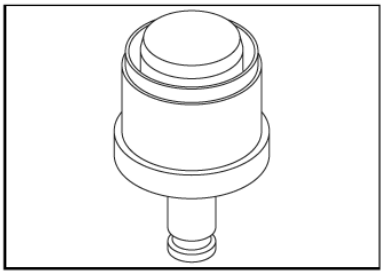
Rotary valve bearing pusher
P/N 420 876 500 Recommended
Rotary valve engines



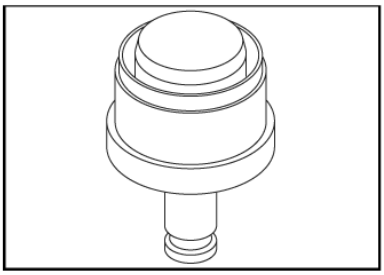
Rotary Valve Bearing Pusher
P/N 420 876 501 Recommended
717, 787 & 787 RFI engines



Rotary valve seal pusher
P/N 420 876 510 Recommended
440F
All rotary valve shaft seal with 12 mm I. D.

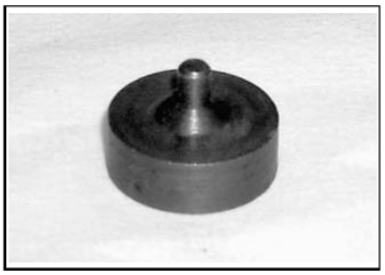


Insertion jig (magneto seal)
P/N 420 876 514 Recommended
454,494, 599, 670, 699 & 809



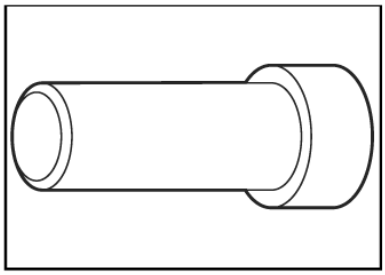
Gasket pusher (magneto side seal)
P/N 420 876 516 Recommended
599, 699, 779, 809

Crankshaft Protector
P/N 420 876 552 Recommended
All 2 stroke, except 247 (PTO)
Use with 420877635

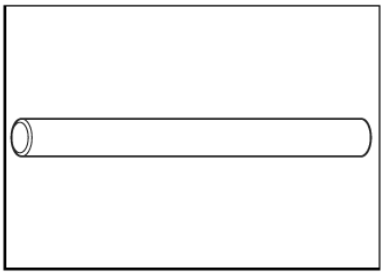


Crankshaft Protector
P/N 420 876 557 Recommended
717 / 787 RFI / 800R / 800 HO

Crankshaft Distance Ring (MAG)
P/N 420 876 569 Recommended
All 2-stroke engines

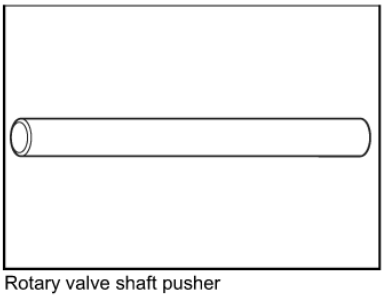


Rotary Valve Shaft Installer
P/N 420 876 605 Recommended
717 engines & older than 1990

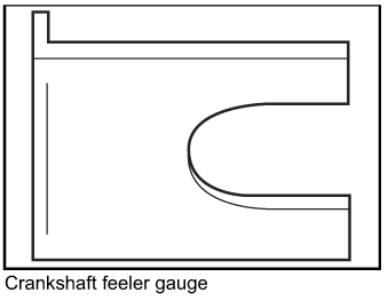


Rotary valve shaft pusher
P/N 420 876 610 Recommended
500lc
All rotary valve engine with 12 mm shaft.

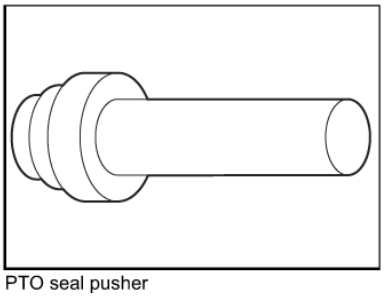
Engine



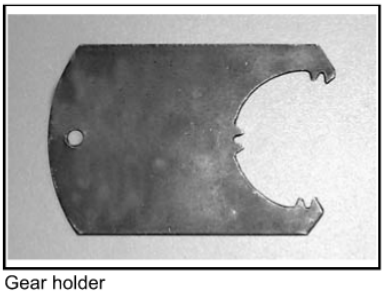
Rotary valve shaft pusher
P/N 420 876 612 Recommended
engine with rotary shaft 10 mm



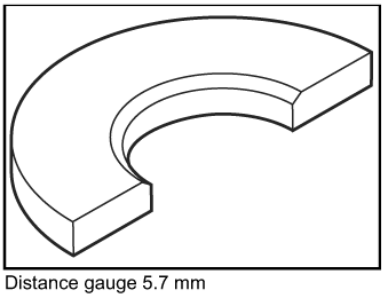
Crankshaft feeler gauge
P/N 420 876 620 Recommended
377, 443, 447 & 503



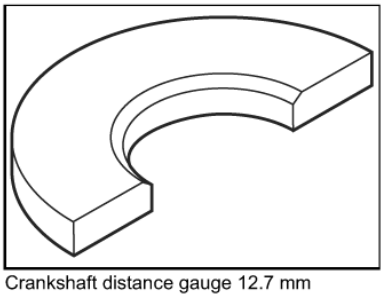
PTO seal pusher
P/N 420 876 660 Recommended
277



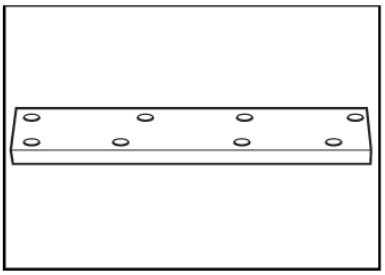
Gear holder
P/N 420 876 695 Recommended
277F, 377F, 447 & 503
To hold the oil pump gear



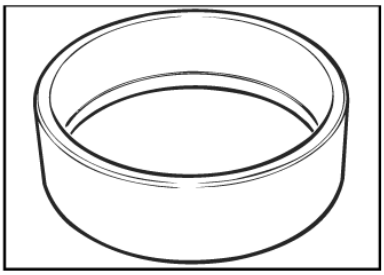
Distance gauge 5.7 mm
P/N 420 876 822 Recommended
377, 443 & 447



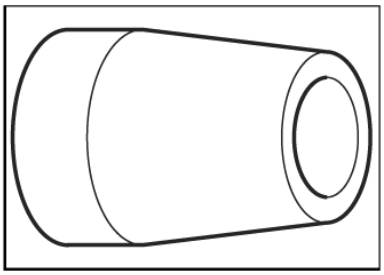
Crankshaft distance gauge 12.7 mm
P/N 420 876 824 Recommended
503F



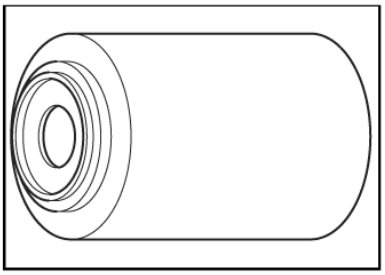
Cylinder Alignment Tool
P/N 420 876 904 Recommended
717 engines



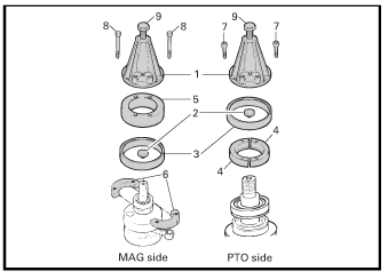
Magneto centering tool
P/N 420 876 922 Recommended
717 engines
All engines with Nippondenso 160 W CDI.



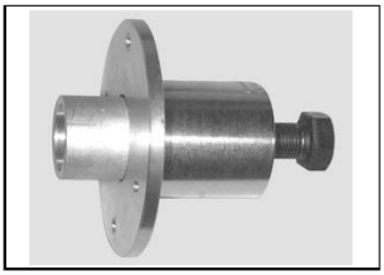
Seal protector sleeve
P/N 420 876 980 Recommended
Rotary valve engines with 10 mm shaft



Rotary valve seal pusher
P/N 420 877 050 Recommended
500, 583, 670

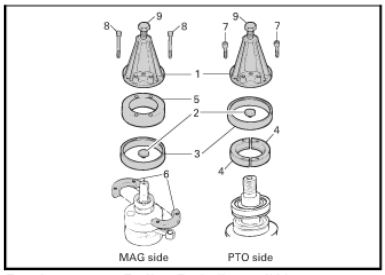


Puller et bolt (item 1 & 9)
P/N 420 877 635 Recommended
All 2-stroke engines



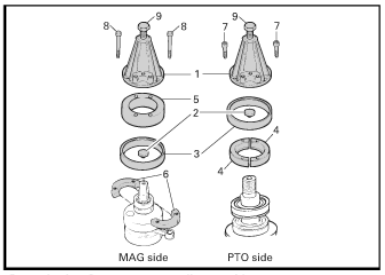
Ceramic seal pusher
P/N 420 877 820 Recommended
494 & 670

Engine



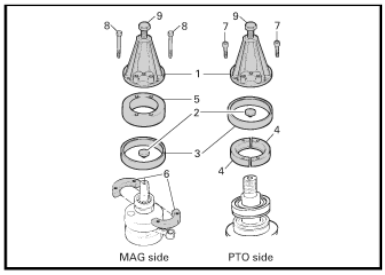
Replacement Puller Bolt (item #9)
P/N 420 940 755 Recommended
All 2-stroke engines
To use with puller P/N 420 877 635.

Flywheel puller
P/N 420 976 235 Recommended
247, 787, 787 RFI, 947 & 947 DI engines
Replacement bolt P/N 529 035 549.

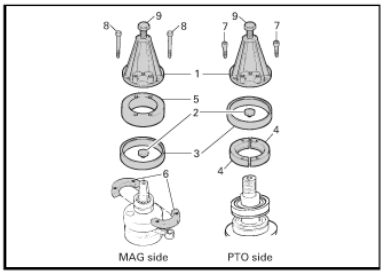


Crankshaft protector (item 2)
P/N 420 976 890 Recommended
247 engine

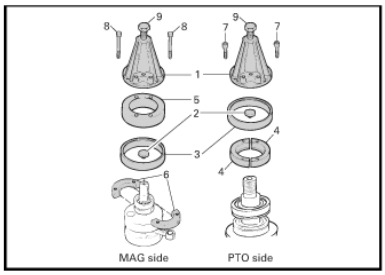
HALF RING PULLER
P/N 420 977 475 Recommended
717 / 787 RFI engines



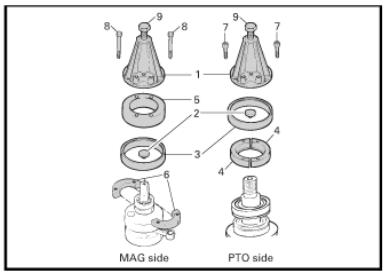
Half-ring puller (item 4)
P/N 420 977 479 Recommended
599, 699, 779, 809
3 cylinders crankshaft bearing remover; to use with 420877635



HOLDER RING (item #3)
P/N 420 977 480 Recommended
947DI engines



RING PULLER (item #3)
P/N 420 977 490 Recommended
717/787RFI engines



Ring Puller (item 3)
P/N 420 977 494 Recommended
599, 699, 779, 809
Crankshaft bearing installer

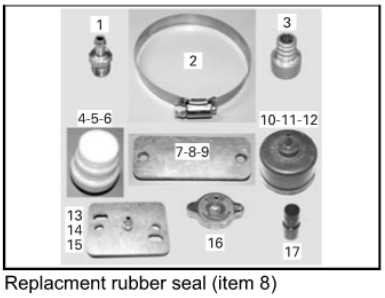
Adapter (item 3)
P/N 517 234 900 Recommended
All 2 stroke engines
Replacement part for item included in kit 861749100

Replacment rubber seal (item 13)
P/N 529 010 902 Recommended
For kit 529010900

Intake Plug (item 4)
P/N 529 011 000 Recommended
All 2 stroke engines
Replacement part for item included in kit 861749100

RAVE plate (item 7)
P/N 529 011 200 Recommended
All 2 stroke engines
Replacement part for item included in kit 861749100

Engine



Replacment rubber seal (item 8)

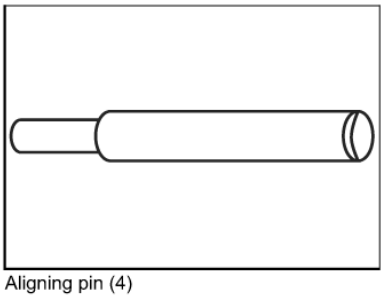
P/N 529 011 203 Recommended

All 2 stroke engines
Replacment part for intem included in kit 861749100

Circlip installer

P/N 529 016 900 Recommended

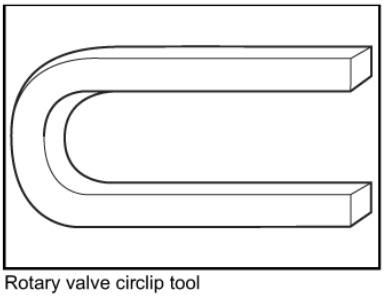
Replaced by 529035562



Aligning pin (4)

P/N 529 018 900 Recommended

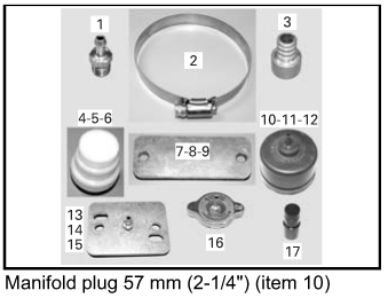
CK3 1999: 467, 494 & 582



Rotary valve circlip tool

P/N 529 020 800 Recommended

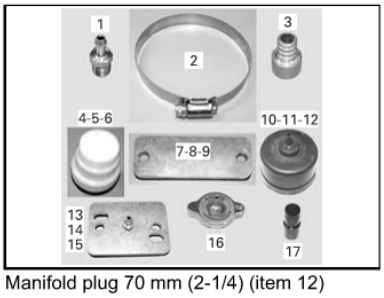
1993 and earlier rotary valve engines



Manifold plug 57 mm (2-1/4") (item 10)

P/N 529 021 100 Recommended

All 2 stroke engines
Replacement part for item included in kit 861749100



Manifold plug 70 mm (2-1/4) (item 12)

P/N 529 021 200 Recommended

All 2 stroke engines
Replacement part for item included in kit 861749100

Exhaust plate (item 13)

P/N 529 021 300 Recommended

All 2 stroke engines
Replacement part for item included in kit 861749100

Replacement rubber seal (item 13)

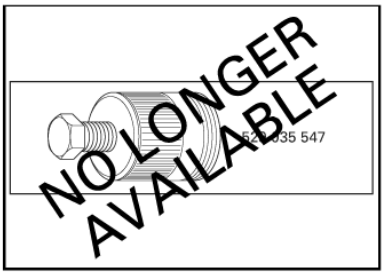
P/N 529 021 302 Recommended

Replacement part for kit 861749100

Vacuum pressure pump

P/N 529 021 800 Recommended

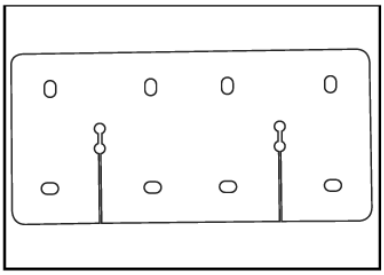
All models



Magneto puller

P/N 529 022 500 Recommended

Replaced by 529035547



Rubber pad protector

P/N 529 023 400 Recommended

1999 CK3 & S200 cageless bearing engines

Exhaust plate (item 14)

P/N 529 024 600 Recommended

All 2 stroke engines
Replacement part for item included in kit 861749100

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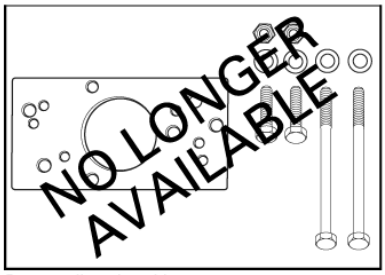
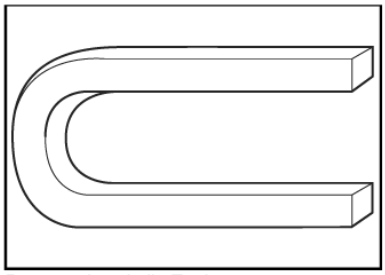
Engine



Base puller plate kit
P/N 529 024 900 Recommended
277



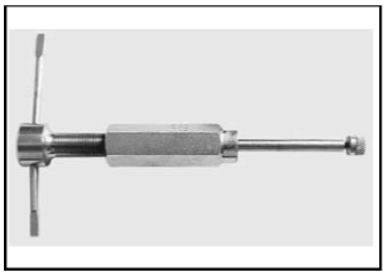
Rotary valve circlip Tool
P/N 529 029 100 Recommended
1994 and more recent rotary valve engine

Intake plug (item 5)
P/N 529 030 500 Recommended
All 2 stroke engines
Replacement part for item included in kit 861749100

Piston ring compressor 78 mm
P/N 529 030 800 Recommended
670 engine

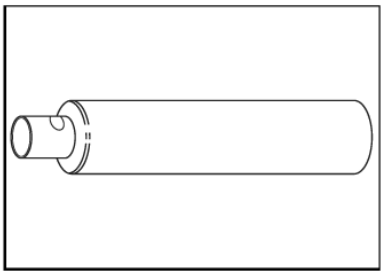
Leak test kit (fuel/oil)
P/N 529 033 100 Mandatory
All models

Exhaust spring installer/remover
P/N 529 035 400 Recommended
Replaced by 529035983

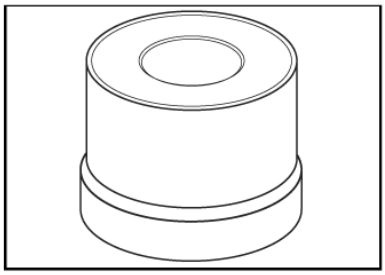


Piston pin puller
P/N 529 035 503 Mandatory
All 2-stroke engines

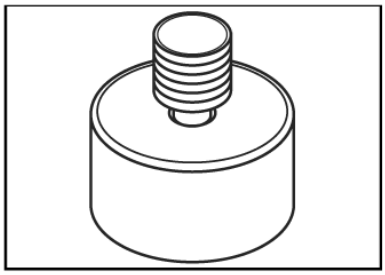
Replacement Protector Sleeve
P/N 529 035 513 Recommended
To be used with P/N 529 035 503.



Driver tool
P/N 529 035 521 Recommended
Mini Z



Attachment
P/N 529 035 522 Recommended
Mini Z



Bearing Pusher 2 2mm
P/N 529 035 523 Recommended
Mini Z

Sleeve kit 18 mm
P/N 529 035 541 Mandatory
Ski-Doo 277, Sea-Doo 587
To install cageless bearings. Used with 529035503

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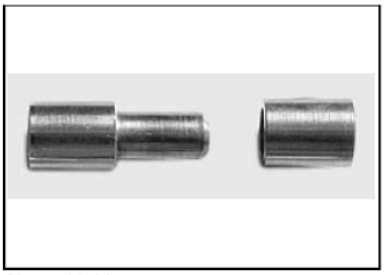
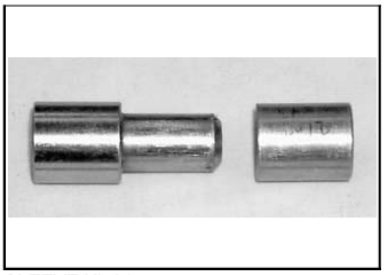
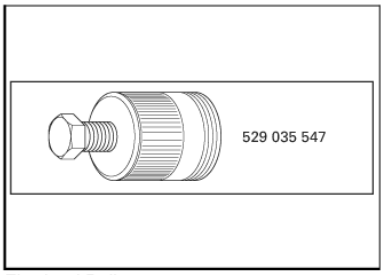
Engine



Sleeve kit 20 mm
P/N 529 035 542 Mandatory
717, 787 RFI, 600, 800HO
Used with 529035503



SLEEVE Kit 21mm
P/N 529 035 543 Mandatory
947, 947 DI, 800 R Engines
To install cageless bearings. Used with 529035503

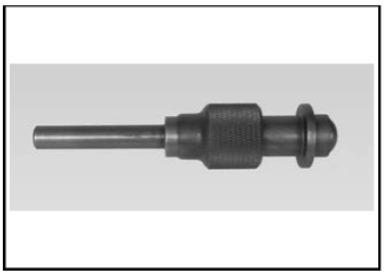


Flywheel Puller
P/N 529 035 547 Mandatory
Replacement bolt 529035549. Use 20876081/295000125/420841591/290847220

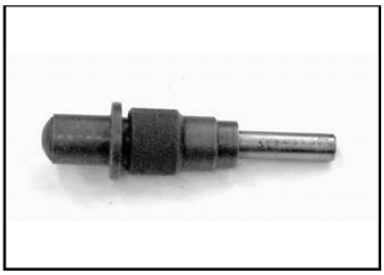
Bolt M16 x 1,5 x 65mm
P/N 529 035 549 Recommended
DS 450
Goes with 529 035 547 & 420 976 235.

Spring installer remover
P/N 529 035 559 Recommended
Replaced by 529035983 or 529035989

Circlip Insertion Tool 18 mm
P/N 529 035 561 Recommended
Sea-Doo 587, Ski-Doo 277 engines



Circlip insertion Tool 20 mm
P/N 529 035 562 Recommended
593, 670, 693, 717, 787 & 787 RFI engine
Sleeve without groove P/N 529 035 567 also available.

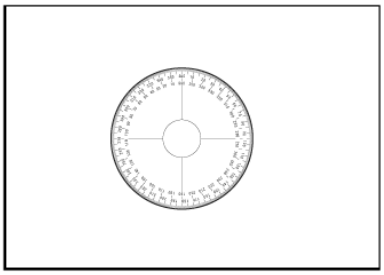


Circlip Insertion Tool 21 mm
P/N 529 035 563 Recommended
947 & 947 DI engines
Sleeve without groove, P/N 529 035 569 also available.

Sleeve 18mm
P/N 529 035 565 Recommended
Replacement part for 529035561

20 mm Sleeve
P/N 529 035 567 Recommended
Use with 529 035 562.

21 mm Sleeve
P/N 529 035 569 Recommended
Use with P/N 529 035 563.



Degree Wheel
P/N 529 035 607 Mandatory
All rotairy valve engines

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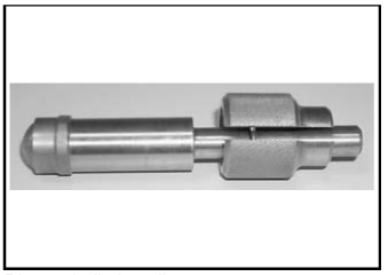
Engine

Engine leak down test kit
P/N 529 035 661 Recommended
All 4-stroke engines
To perform a leak down test on engine.

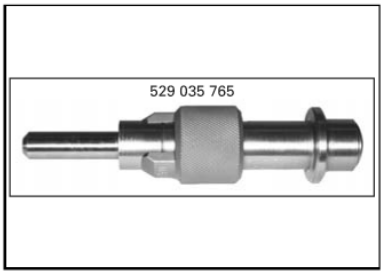


Piston circlip installer
P/N 529 035 686 Mandatory
All engine with tab type circlip

Valve stem seal installer
P/N 529 035 687 Recommended
610 engine

Valve spring compressor
P/N 529 035 724 Recommended
4-TEC engines
To be used with valve spring compressor cup 529 035 764 and 529 036 073

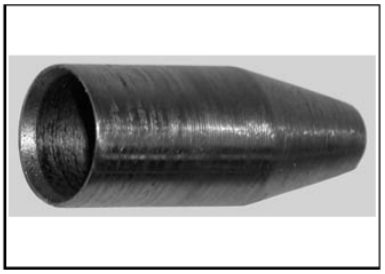
Valve spring compressor cup
P/N 529 035 764 Recommended
V-1000/ V-1300/330/400/490/660/810
To be used with valve spring compressor 519 035 724.



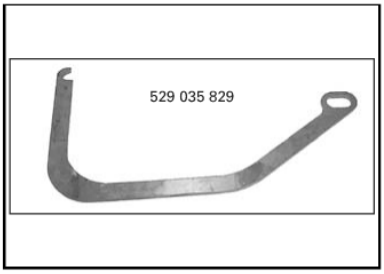
Piston circlip installer
P/N 529 035 765 Recommended
610/500/1503/V-1000 engines

Ceramic seal installer
P/N 529 035 766 Recommended
All V-twin, 330/400, 610/500, 500 eng.
Use with 529 036 130

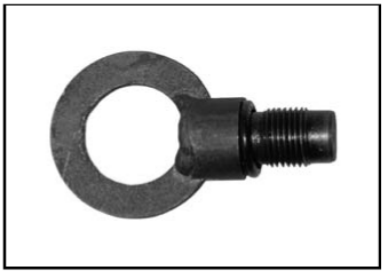
CRANKSHAFT LOCKING TOOL
P/N 529 035 821 Recommended
4-TEC 1503 engines



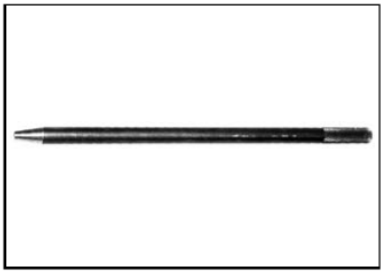
OIL SEAL GUIDE
P/N 529 035 822 Recommended
4-TEC 1503 engines



Engine removal hook
P/N 529 035 829 Mandatory
REV, RT



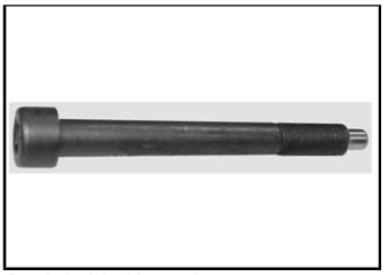
Engine lifting ring
P/N 529 035 830 Mandatory
2-stroke engines with 14 mm spark plugs



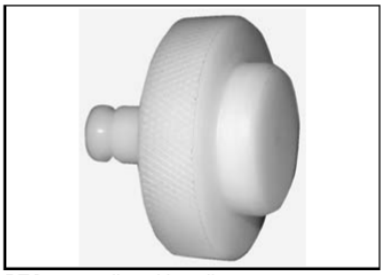
CAMSHAFT LOCKING TOOL
P/N 529 035 839 Recommended
V1000, V1300 &1503 engines

Engine

Suction pump
P/N 529 035 880 Recommended



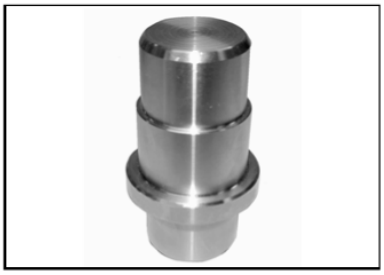
Crankshaft locking tool
P/N 529 035 900 Recommended
V-1000, V-1300



PTO cover oil seal installer
P/N 529 035 910 Recommended
V1000, V-1300

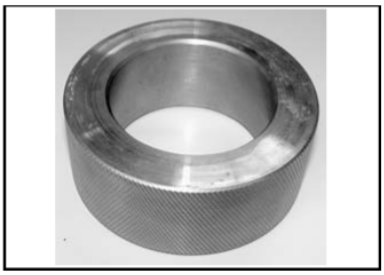
Oil pump seal installer
P/N 529 035 911 Recommended
4-TEC V1000

Pusher 55/59 mm
P/N 529 035 913 Recommended
V1000, V1300



Pusher 32/42 mm
P/N 529 035 914 Recommended
V1000, V1300

2-stroke engine lifting hook
P/N 529 035 940 Recommended
All 2-stroke engines



Support sleeve
P/N 529 035 944 Recommended
V1000, V1300

Engine support bearing installer
P/N 529 035 952 Recommended
Elite

Engine support bearing
P/N 529 035 953 Recommended
Elite

Torque flange remover
P/N 529 035 958 Recommended
Elite

4-tooth socket
P/N 529 035 960 Recommended
Elite

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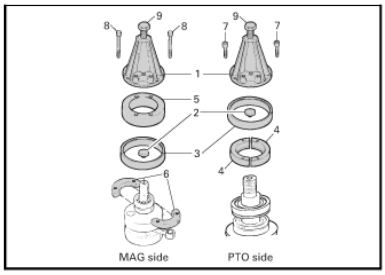
Engine

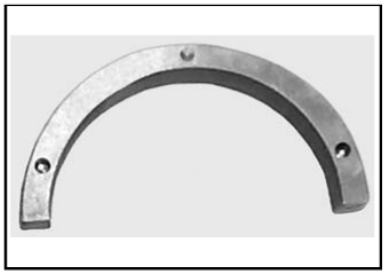
Manifold plug 63 mm (2-1/2") (item 11)
P/N 529 035 961 Recommended
All 2 stroke engines
Replacement part for item included in kit 861749100

Exhaust plate (item 15)
P/N 529 035 962 Recommended
All 2 stroke engines
Replacement part for item included in kit 861749100

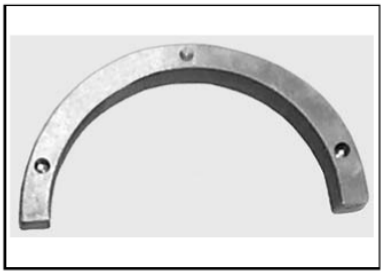
Intake Plug (item 6)
P/N 529 035 963 Recommended
All 2 stroke engines
Replacement part for item included in kit 861749100



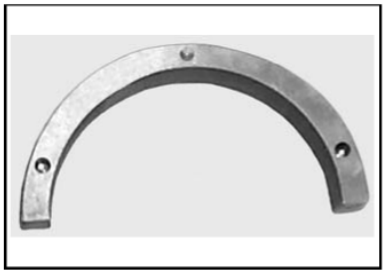
Distance ring (item 14)
P/N 529 035 964 Recommended
693, 793
To be used with 420877635, for MAG side bearing



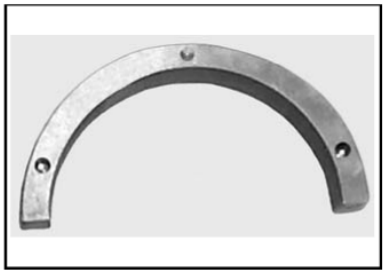
Crankshaft distance gauge
P/N 529 035 965 Recommended
552
To be used with 529035876



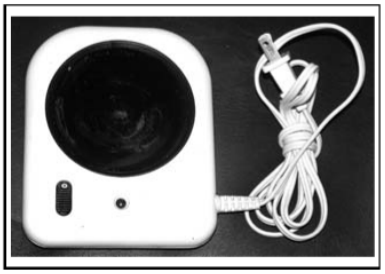
Crankshaft distance gauge
P/N 529 035 966 Recommended
493 & 593
To be used with item 529035976



Crankshaft distance gauge
P/N 529 035 967 Recommended
593HO, 593 SDI, 693 & 793
To be used with 529035976



Crankshaft distance gauge
P/N 529 035 968 Recommended
793 HO & 793 HO SDI
To be used with 529035976



Bearing heater
P/N 529 035 969 Mandatory
All

Temperature indicator
P/N 529 035 970 Mandatory
All

RAVE plate (item 8)
P/N 529 035 971 Recommended
All 2 stroke engines
Replacement part for item included in kit 861749100

RAVE plate (item 9)
P/N 529 035 972 Recommended
All 2 stroke engines
Replacement part for item included in kit 861749100

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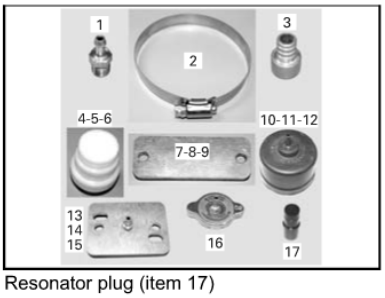
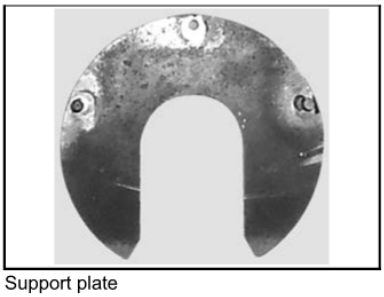
Engine



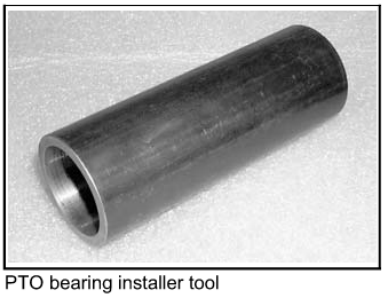
Resonator plug (item 17)
P/N 529 035 973 Recommended
All 2 stroke engines
Replacement part for item included in kit 861749100



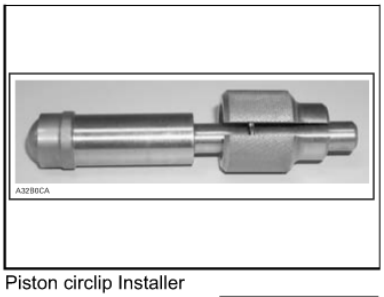
Support plate
P/N 529 035 976 Recommended
3 series & 552 engines
Used with 529035964, 965, 966, 967 & 968

Crankshaft MAG bearing installer
P/N 529 035 979 Recommended
493, 593 engines

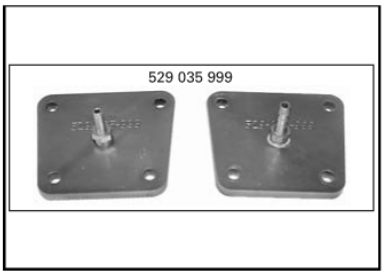
Crankshaft MAG bearing installer
P/N 529 035 980 Recommended
552, 593HO, 693, 793 engines



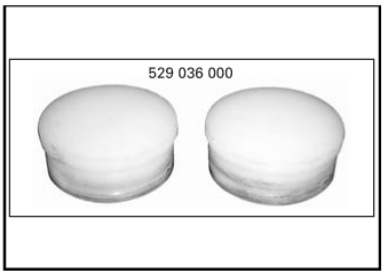
PTO bearing installer tool
P/N 529 035 990 Recommended
552, 593HO, 693, 793 engines



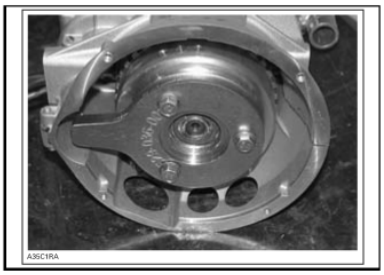
Piston circlip Installer
P/N 529 035 998 Mandatory
995 SDI



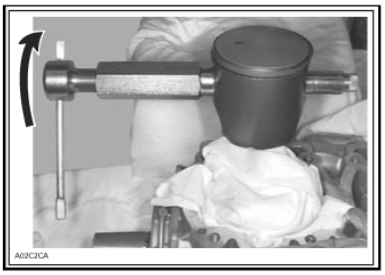
Exhaust plate
P/N 529 035 999 Recommended
995 SDI
For leak test.



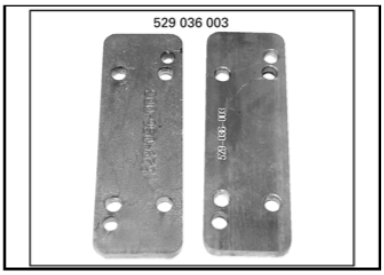
Plug Intake
P/N 529 036 000 Recommended
995 SDI
For leak test.



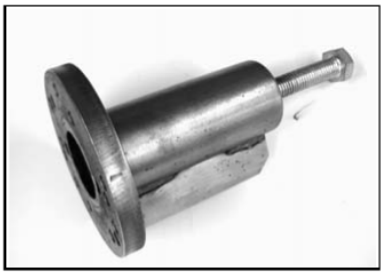
Magneto holder
P/N 529 036 001 Mandatory
995 SDI



Piston pin puller
P/N 529 036 002 Mandatory
995 SDI



RAVE Plate
P/N 529 036 003 Recommended
995 SDI
For leak test.



Crank shaft bearing puller
P/N 529 036 004 Recommended
2 strokes Engine

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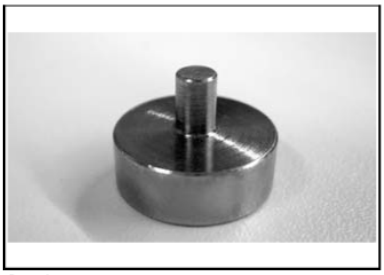
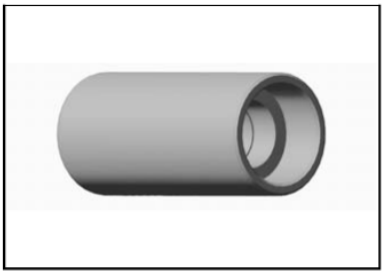
Engine



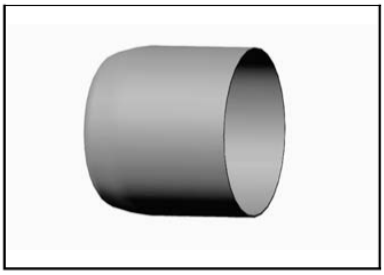
Crank protector
P/N 529 036 011 Mandatory
995 SDI

Ceramic seal installer
P/N 529 036 014 Recommended
All LC's engines without rotary valve

Engine lifting tool
P/N 529 036 022 Recommended
V-490, V-660 & V-810 engines



Drive shaft oil seal installer
P/N 529 036 028 Recommended
V-490, V-660 & V-810 engines



Drive shaft oil seal protector
P/N 529 036 029 Recommended
V-490, V-660 & V-810 engines

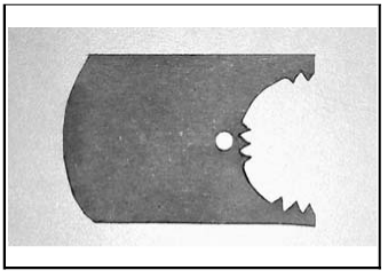
Crankcase support MAG/PTO
P/N 529 036 031 Recommended
V-490, V-660 & V-810 engines

PTO cover plain bearing remover
P/N 529 036 032 Recommended
V-490, V-660 & V-810 engines

PTO cover oil seal installer
P/N 529 036 033 Recommended
V-490, V-660 & V-810 engines

Crankshaft protector
P/N 529 036 034 Recommended
V-490, V-660 & V-810 engines

Distance gage for bearing on crankshaft
P/N 529 036 060 Recommended
797



Gear holder
P/N 529 036 061 Recommended
552 Fan
To hold oil pump gear.

No picture available

Intake Plug
P/N 529 036 128 Recommended
500SS, 600SDI, 800R

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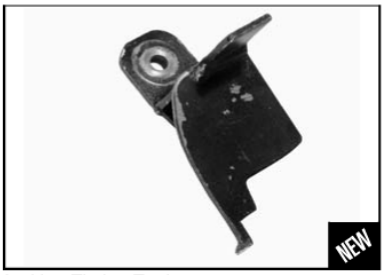
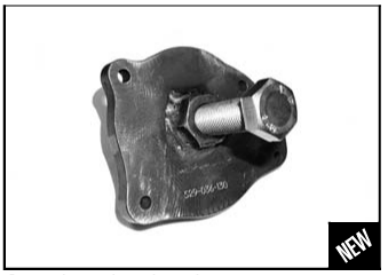
Engine

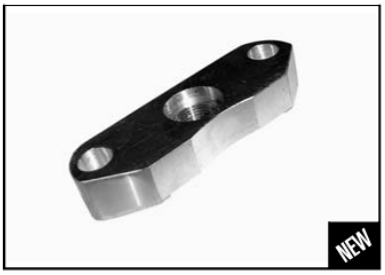


Ignition Timing Tool
P/N 529 036 129 Recommended
REV-XP

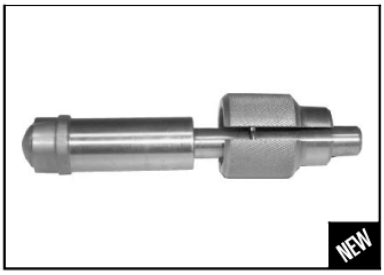


Ceramic seal pusher plate
P/N 529 036 130 Recommended
V-490, V-660 & V-810 engines
Use with ceramic seal installer 529035766

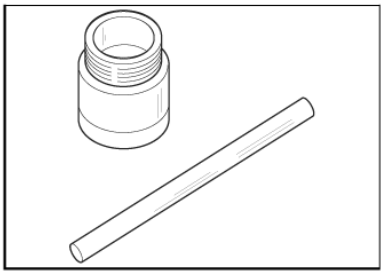
Engine Lifting Tool (E-TEC)
P/N 529 036 131 Mandatory
E-TEC



Dial Indicator Adaptor (E-TEC)
P/N 529 036 132 Mandatory
E-TEC



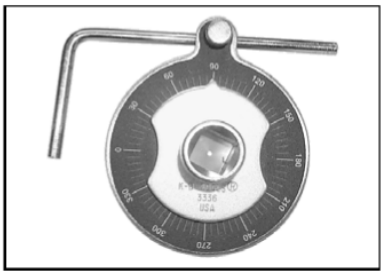
Piston circlip installer 21mm
P/N 529 036 138 Recommended
797



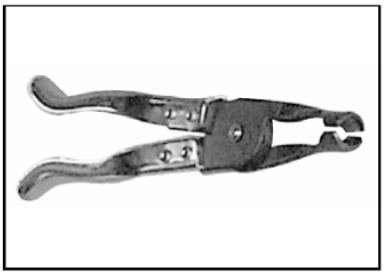
RAVE movement detector
P/N 861 725 800 Recommended
All RAVE equipped, except 797

Engine leak test kit
P/N 861 749 100 Mandatory
All
To use with hand pump 529021800

Piston ring compressor
P/N Snap-on RC 980 Recommended
4-TEC
Not sold by BRP



Torque angle gauge
P/N Snap-on TA362 Recommended
Used on most 4-stroke engines.
Not sold by BRP



Valve stem seal removal pliers
P/N Snap-on YA 8230 Recommended
1503, 991 engines, DS650
Not sold by BRP

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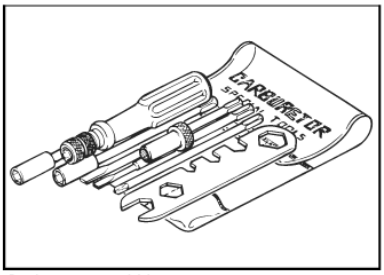
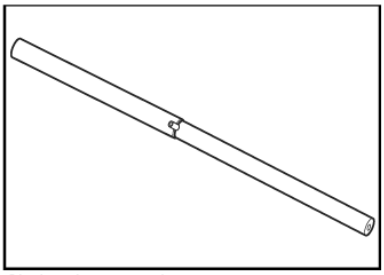
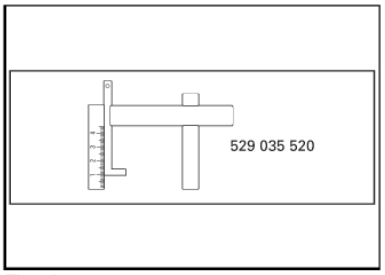
Fuel



Carburetor tool kit
P/N 404 112 000 Recommended

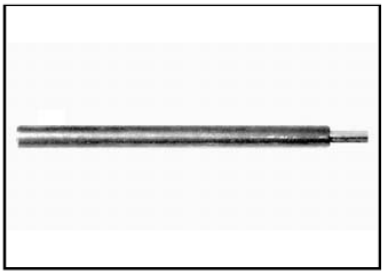


Choke plunger tool
P/N 529 032 100 Recommended
All equipped with choke, except ZX



Float lever measurement
P/N 529 035 520 Recommended
Carburetor-equipped vehicles

Fuel pressure gauge
P/N 529 035 591 Recommended
787 RFI, 793 SDI & 4-TEC engines
Replaced by 529 035 709. Spare plastic clip P/N 275500429



Choke plunger tool
P/N 529 035 602 Recommended
VM carburetor on all 552

Gas Tank Nut Wrench
P/N 529 035 603 Recommended
CK3, ZX

Pressure gauge
P/N 529 035 709 Mandatory
Injection type engines
Use with 529035652, 529035714 & 529036023

Fuel line remover
P/N 529 035 714 Mandatory
Injection models
Used also with gauge P/N 529 035 709, 529 035 652 & 529 036 023

Needle jet height tool: guide
P/N 529 035 835 Recommended
TM-40 carburator, 2002-3
Part of kit 590122400

Needle jet height tool: pusher
P/N 529 035 836 Recommended
TM-40 carburator, 2002-3
Part of kit 590122400

Needle jet height tool: long pusher
P/N 529 035 837 Recommended
TM-40 carburator, 2002-3
Part of kit 590122400

Needle jet height tool: short pusher
P/N 529 035 838 Recommended
TM-40 Carburator, 2002-3
Part of kit 590122400

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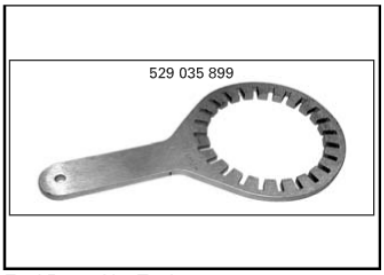
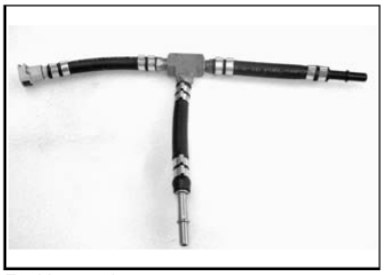
Fuel

Fuel tank wrench
P/N 529 035 891 Recommended
REV, REV-XP, RT & RF

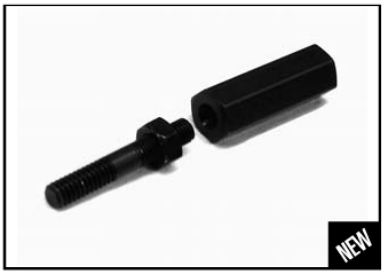


Fuel Pump Nut Tool
P/N 529 035 899 Recommended
2-TEC SDI & 4-TEC engines



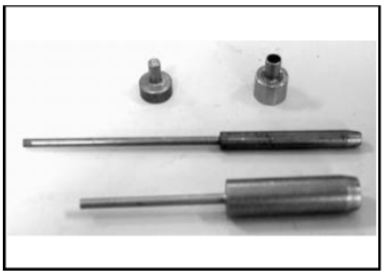
Fuel hose adapter
P/N 529 036 023 Mandatory
Injection type vehicles
To be used with 529 035 709.
Replacement clip 513 033 135

Fuel Pump Nut Tool
P/N 529 036 118 Mandatory
REV-XP
For SDI and Summit models



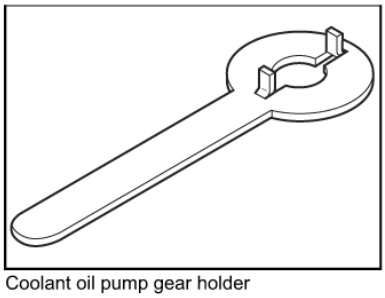
Extractor adaptor
P/N 529 036 136 Recommended
E-TEC, V-twin

Injector retainer plate
P/N 529 036 137 Recommended
E-TEC

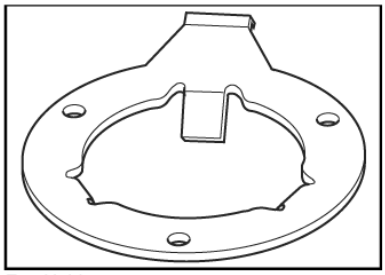


Needle jet height tool kit
P/N 590 122 400 Recommended
TM-40 carburator, 2002 & 2003

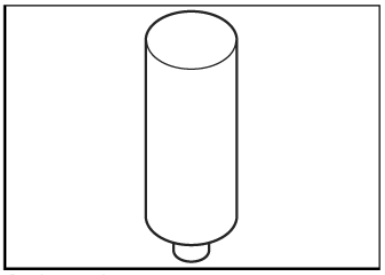
Cooling



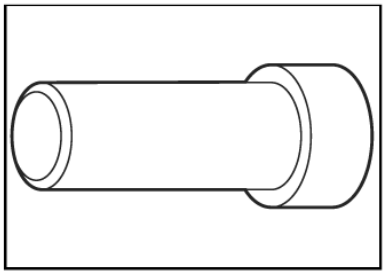
Coolant oil pump gear holder
P/N 420 277 905 Recommended
717, 583, 670, 599, 699, 779, 809 engine



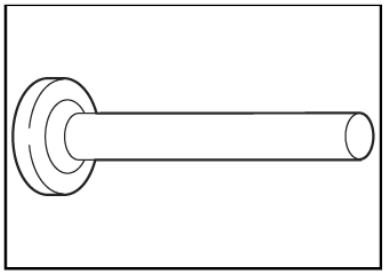
Fan Holder
P/N 420 876 357 Mandatory
All axial fan engines
exept 552F



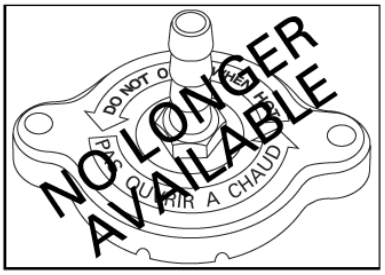
Gasket pusher
P/N 420 876 512 Recommended
500 LC, 670, 583
Rotary valve, 10 mm impeller shaft



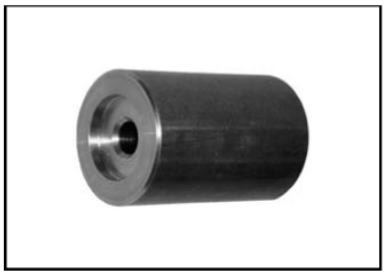
Rotary valve seal pusher
P/N 420 876 607 Recommended
500lc, 583, 670



Washer pusher (behind impeller)
P/N 529 020 700 Recommended
Rotary valve engines

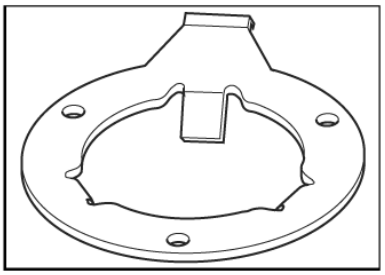


Radiator Cap Pressure Test
P/N 529 021 400 Recommended
4-TEC models
Replacement part for item also included in kit 861749100



Coolant Pump Seal Pusher
P/N 529 035 823 Recommended
4-TEC 1503

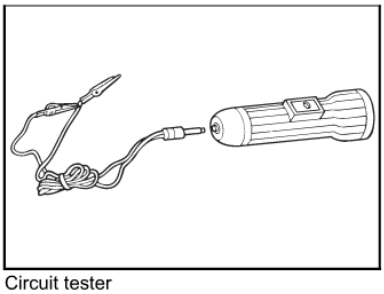
Test cap
P/N 529 035 991 Recommended
All models
To be used with Vacuum/Pressure Pump 529 021 800.



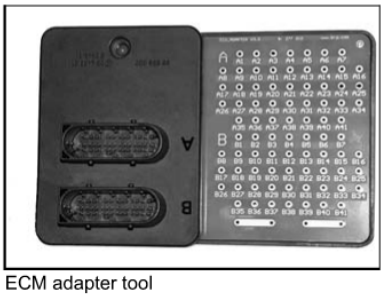
Fan Holder Tool
P/N 529 036 006 Mandatory
552F

Electrical

MPI communication cables only
P/N 278 001 052 Recommended
MPI not included

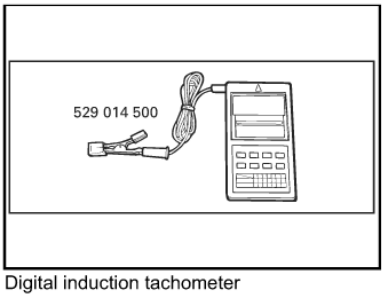


Circuit tester
P/N 414 012 200 Recommended
All



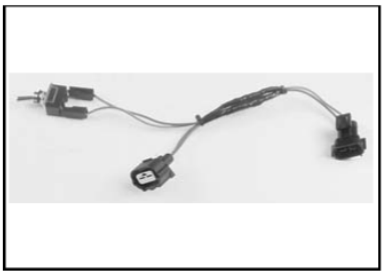
ECM adapter tool
P/N 420 277 010 Recommended
All models
All injected 2-TEC & 4-TEC with VDO ECM

MPEM programmer guide
P/N 484 300 139 Recommended
Guide: how to use hand held programmer
Has been replaced by B.U.D.S., the MPI and recently by the MPI-2.

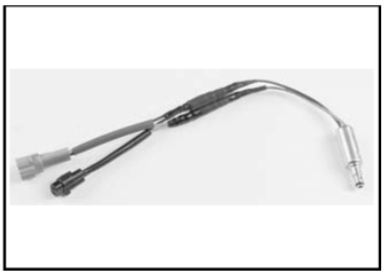


Digital induction tachometer
P/N 529 014 500 Recommended
All models

Stroboscopic Timing Light
P/N 529 031 900 Recommended
All 2-stroke



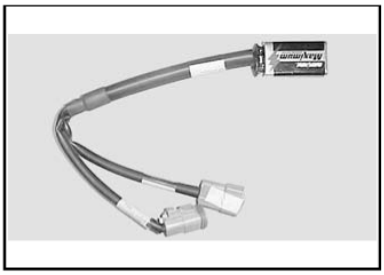
Bypass Wire
P/N 529 033 300 Recommended
CK3 with magneto 360W



Adaptor
P/N 529 033 800 Recommended
GT SE 1997-8 & Summit X 670 1998

Choke Nut Removal Tool
P/N 529 034 600 Recommended
Replaced by 529035943

Adaptor
P/N 529 035 550 Recommended
1998, Summit 670 DPM



9 V battery supply cable
P/N 529 035 675 Mandatory
All DESS equipped
Used with 529035869

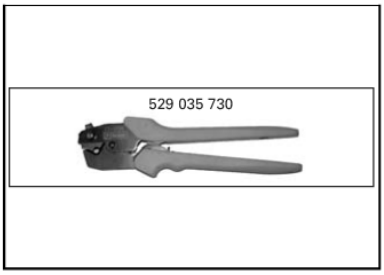
MPI commiunication Kit
P/N 529 035 676 Recommended
Replaced by MPI-2

Electrical

Diagnostic adaptor for VCK
P/N 529 035 679 Recommended
To be used with the MPI, connects to 529 035 807.

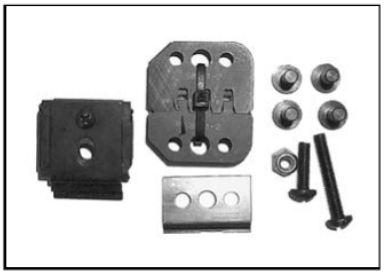
9 Pins to 25 Pins Adaptor
P/N 529 035 681 Recommended
To connect communication cable P/N 529 035 697 of MPI to older PC.

MPI-2 Communication Cable Extension
P/N 529 035 697 Recommended
Male/female DB9 extension can be purchassed at any PC store; max. 25 ft lg.



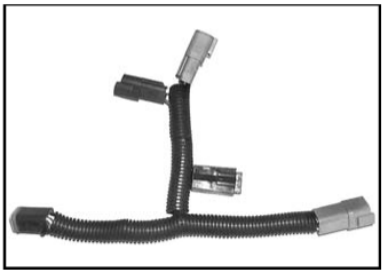
Crimping plier for heavy gage wire
P/N 529 035 730 Recommended
All models
Ex.: To crimp battery cable terminals.

Flywheel puller
P/N 529 035 748 Recommended
All V-twin



Multilock 070 Die
P/N 529 035 828 Recommended
For small connectore of AMP Multilock co
To use with crimping tool P/N 529035909

Fluke 115 digital multimeter
P/N 529 035 868 Recommended
All models

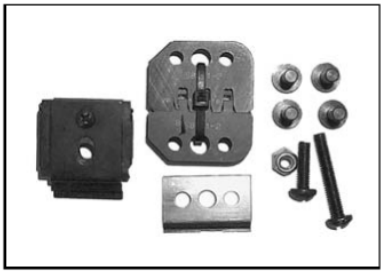


T-harness
P/N 529 035 869 Mandatory
All DESS equipped

MPEM programmer kit
P/N 529 035 878 Recommended
All 2-stroke models
No longer sold, replaced by MPI-2, P/N 529 036 018.

B.U.D.S. DESS Key
P/N 529 035 896 Recommended
MY 2004 with DESS
To wake up MPEM

D.E.S.S. Adaptor
P/N 529 035 904 Mandatory
Connects to the diagnostic cable of the MPI or MPI-2.



KOSTAL Die
P/N 529 035 906 Recommended
All models with KOSTAL ECM connectors
To use with crimping tool 529 035 909 to crimp ECU connectors

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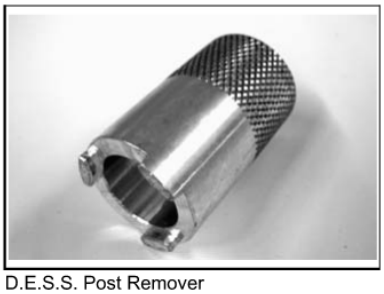
Electrical

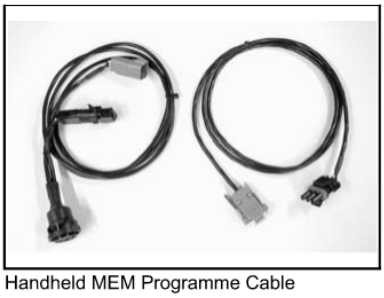
AMP die
P/N 529 035 908 Recommended
All models with AMP connectors
To use with crimping tool 529 035 909 to crimp Deutsch connectors.

Crimping tool
P/N 529 035 909 Recommended
To use with compatible die to crimp different connectors

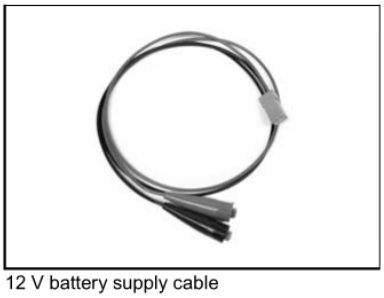


D.E.S.S. Post Remover
P/N 529 035 943 Recommended
All DESS equipped models

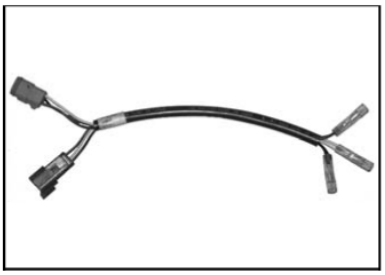
MPI communication kit
P/N 529 035 981 Recommended
Spare cables are still available. See MPI-2



Handheld MEM Programme Cable
P/N 529 035 993 Recommended
6 pin connector

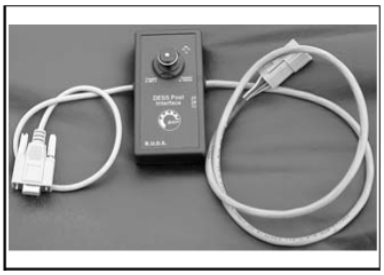


12 V battery supply cable
P/N 529 035 997 Recommended
Used with 529035869

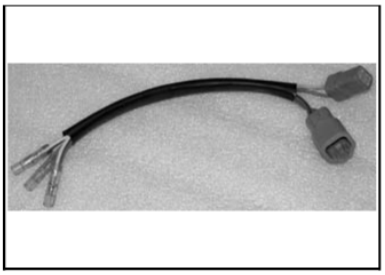


Magneto harness adapter
P/N 529 036 016 Recommended
1503, 449
To test the magneto.

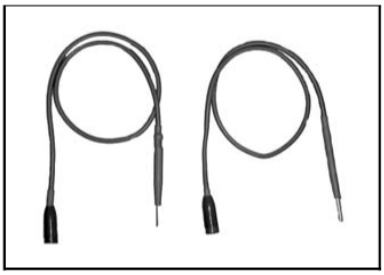
MPI-2 interface card
P/N 529 036 018 Mandatory
Replaces the MPI.



D.E.S.S. Post Interface
P/N 529 036 019 Mandatory
To programm D.E.S.S. keys with the MPI-2.



4-pin magneto diagnostic harness
P/N 529 036 062 Recommended
V810



Test probes
P/N 529 036 063 Recommended
All models
To back probe various connectors.

MPI-2 diagnostic cable
P/N 710 000 851 Mandatory
All DESS-equipped vehicles

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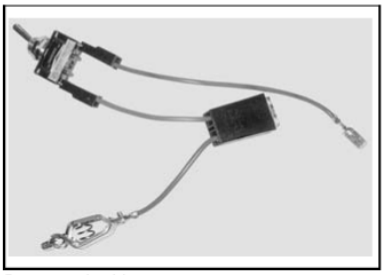
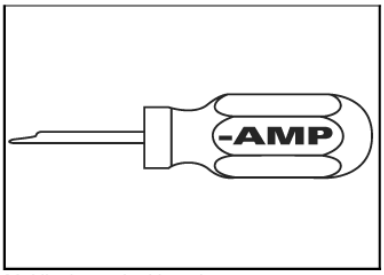
mdd2009-001-225_en_20

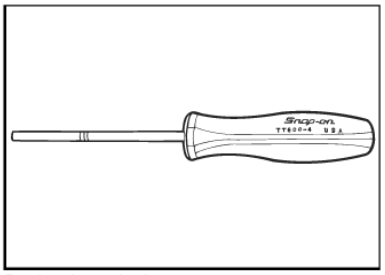
Electrical



Bypass wire kit
P/N 861 780 600 Recommended
2002 ZX 360W magneto

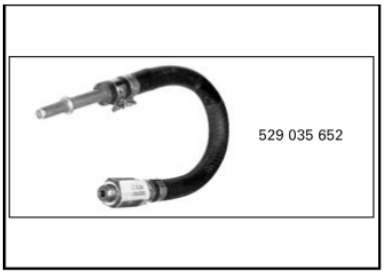


Multilock terminal housing connector ext
P/N AMP 755430-2 Recommended
Not sold by BRP



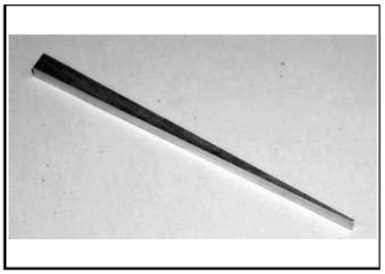
Packard terminal extractor
P/N Snap-on TT600-4 Recommended
Not solb by BRP

Lubrication



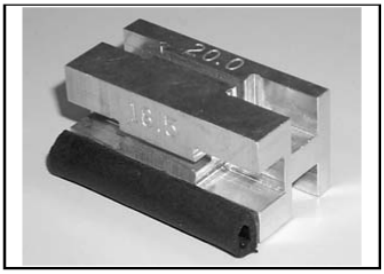
Adapter Hose
P/N 529 035 652 Recommended
4-TEC engines
Used with 529 035 709.

OIL FILTER COVER EXTRACTOR
P/N 529 036 038 Recommended
4-TEC 1503



Free play throttle gauge
P/N 529 036 042 Recommended
Replacement part for 861205900

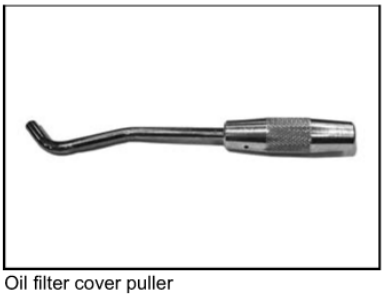
Oil pump adj. procedure card
P/N 529 036 043 Recommended
Replacement part for 861205900



Oil Pump Ajuster
P/N 529 036 045 Recommended
Replacement part for 861205900

Oil Filter Cover Puller
P/N 529 036 057 Recommended
4-TEC 1503
Replaced by 529 036 108

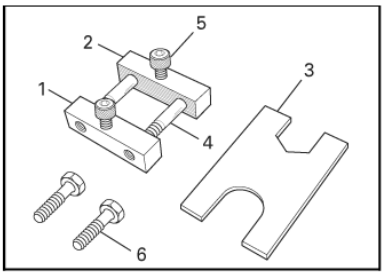
Lubrication



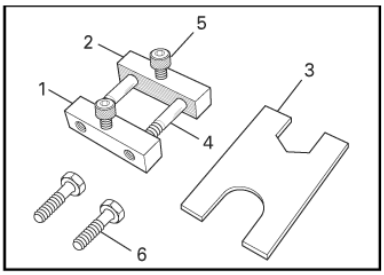
Oil filter cover puller
P/N 529 036 108 Recommended
1503
Used with 529 036 038.

Oil pump adjustment kit
P/N 861 205 900 Mandatory
2005 and up LC engines

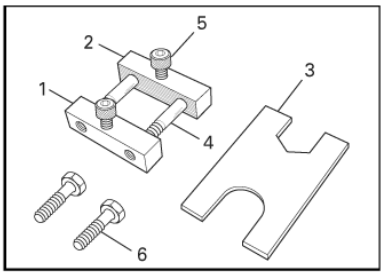
Propulsion / Transmission



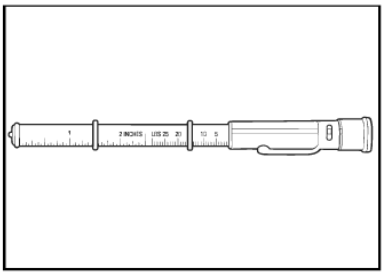
Bolt M10 (item 4)
P/N 222 007 565 Recommended
All except Élan
Part of kit 861725700



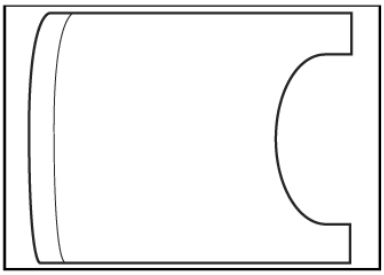
Screw M8 (item 6)
P/N 222 082 565 Recommended
All except Élan
Part of kit 861725700



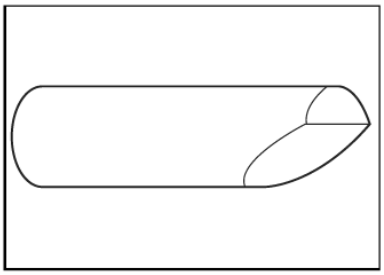
Allen screw (item 5)
P/N 222 983 065 Recommended
All except Élan
Part of kit 861725700



TESTER TENSION
P/N 414 348 200 Mandatory
All

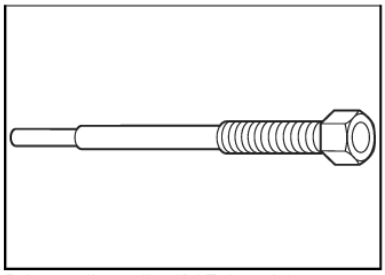


Alignment tool
P/N 420 476 010 Recommended
Skandic WT & Alpine II gearbox

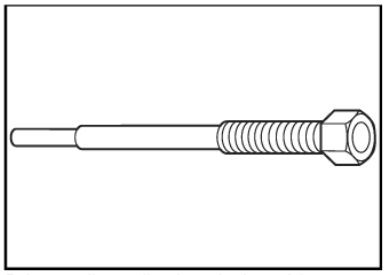


Transmission ball mounting pin
P/N 420 476 020 Recommended
Alpine II gearbox

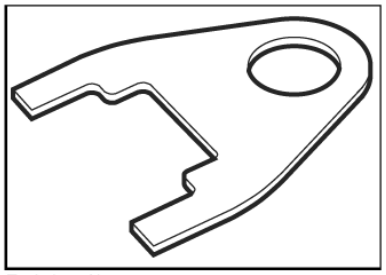
Propulsion / Transmission



Driven pulley puller (SAE threads)
P/N 529 002 100 Recommended
Square shaft equipped vehicles

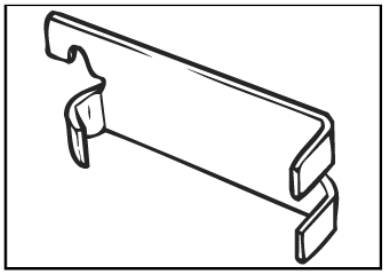


Driven pulley puller (metric threads)
P/N 529 002 800 Recommended
277-377

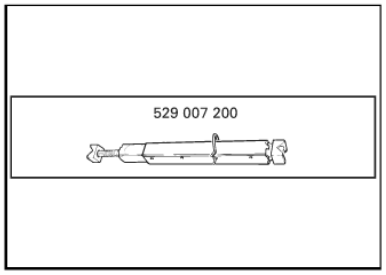


Fork (qty 3)
P/N 529 005 500 Mandatory
All vehicles with TRA drive pulley

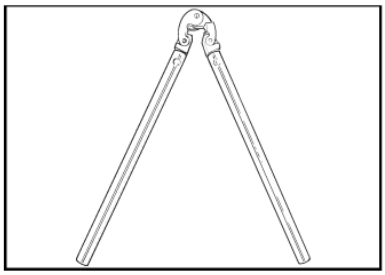
Drive pulley holder (CVT)
P/N 529 006 400 Recommended



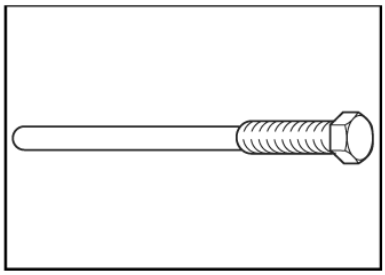
Spring scale hook
P/N 529 006 500 Recommended
Tundra II LT



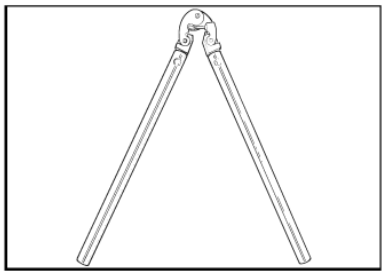
Drive axle holder
P/N 529 007 200 Recommended
All



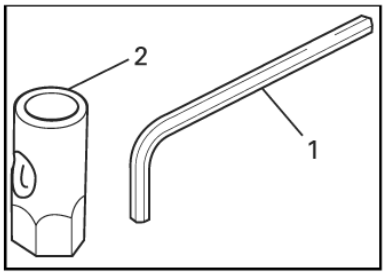
Track wide cleat installer
P/N 529 007 700 Recommended
1992 and older with wide cleat



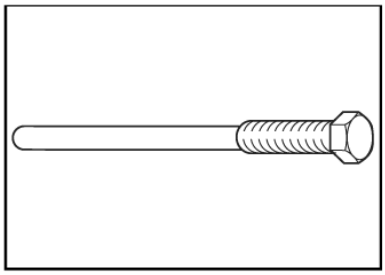
Drive pulley puller
P/N 529 007 900 Mandatory
443, 467, 503.536 & 537 TRA



Track narrow cleat plier
P/N 529 008 500 Recommended
1993 and older models



Drive belt deflection adjuster
P/N 529 008 700 Recommended
Formula and LPV 27 driven pulley
1: 420878730 , 2: 529015000; available as a kit only.



TRA drive pulley puller (27 mm)
P/N 529 010 100 Recommended
TRA (27 mm) except 454, 670 & 779

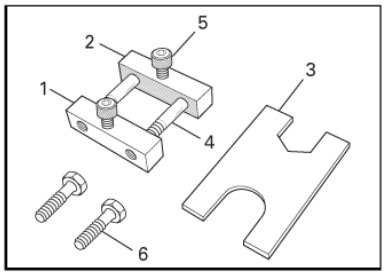


Plate (item 3)
P/N 529 010 600 Recommended
All except Élan
Part of kit 861725700

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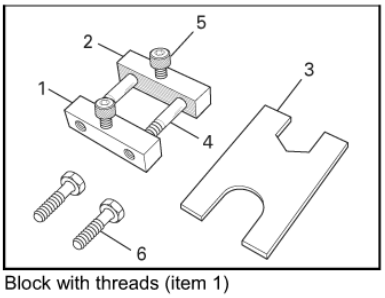
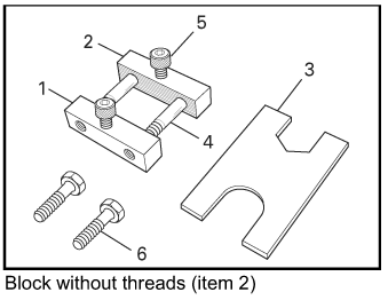
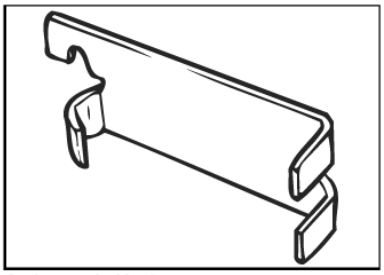
Propulsion / Transmission



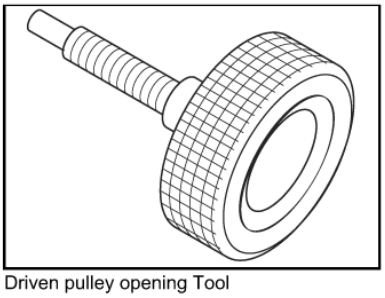
Block with threads (item 1)
P/N 529 010 700 Recommended
All except Élan
Part of kit 861725700



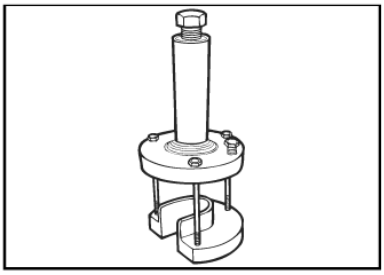
Block without threads (item 2)
P/N 529 010 800 Recommended
All except Élan
Part of kit 861725700



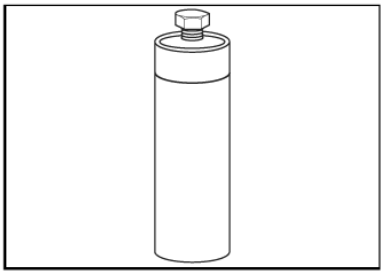
Spring scale Hook
P/N 529 015 200 Recommended
1994 models and older, except Alpine II



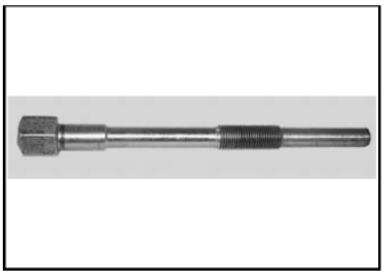
Driven pulley opening Tool
P/N 529 017 200 Recommended
Almost all models



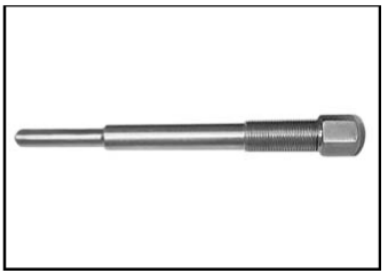
Countershaft bearing remover
P/N 529 018 700 Recommended
PRS chassis



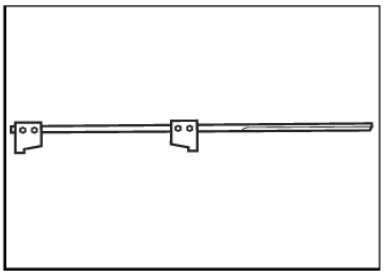
Countershaft bearing installer
P/N 529 018 800 Recommended
PRS chassis



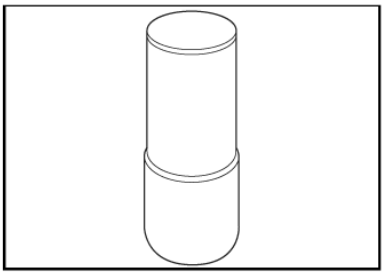
Drive pulley puller
P/N 529 022 400 Mandatory
2003 and up bombardier Lite & TRA



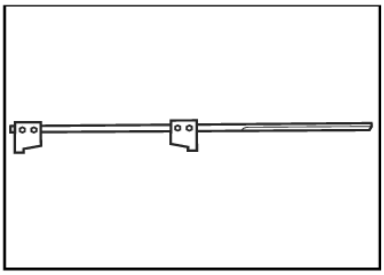
Drive Puller
P/N 529 025 000 Recommended
Skandic 440 LT



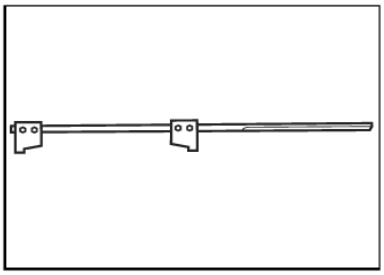
Pulley alignment bar
P/N 529 025 600 Recommended
PRS chassis



Burnishing bar
P/N 529 026 402 Recommended
Tundra II LT, Safari / Skandic

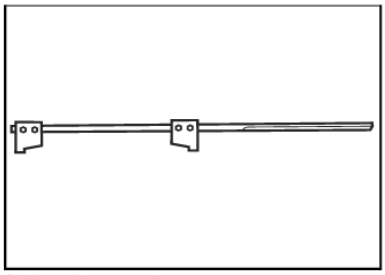


Pulley alignment bar
P/N 529 026 700 Recommended
S-2000, F-2000

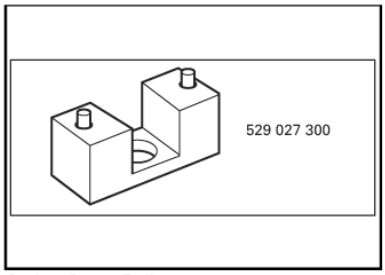


Pulley alignment bar
P/N 529 026 800 Recommended
Safari L

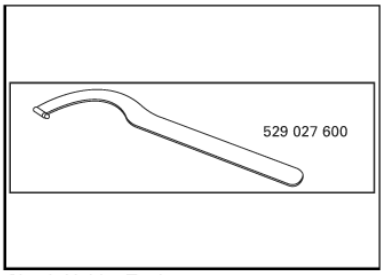
Propulsion / Transmission



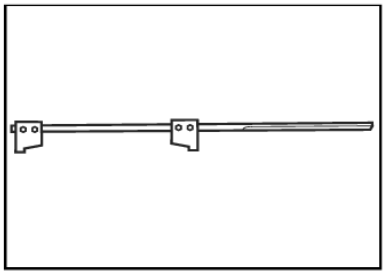
Pulley alignment bar
P/N 529 026 900 Recommended
Tundra II LT/R



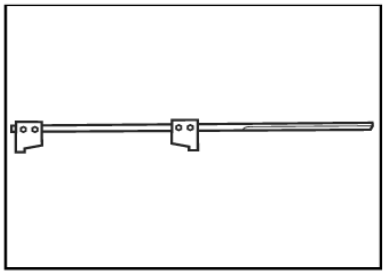
Spring Cover Puller
P/N 529 027 300 Recommended
Bombardier Lite



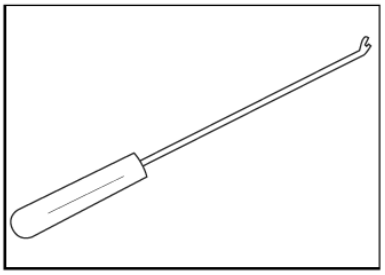
Clutch Holder Tool
P/N 529 027 600 Mandatory
Bombardier Lite



Pulley alignment bar
P/N 529 028 200 Recommended
Alpine II

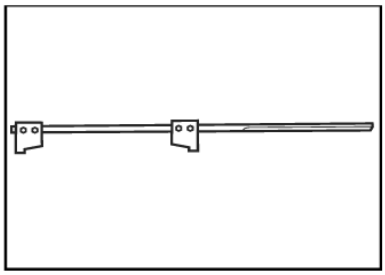


Pulley alignment bar
P/N 529 028 300 Recommended
Élan

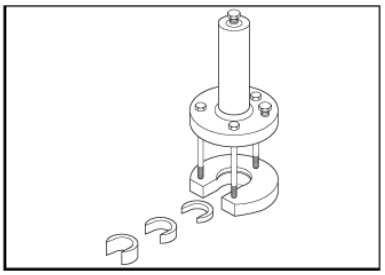


Transmission adjuster
P/N 529 028 500 Recommended
F series with "twist shifter" reverse tr

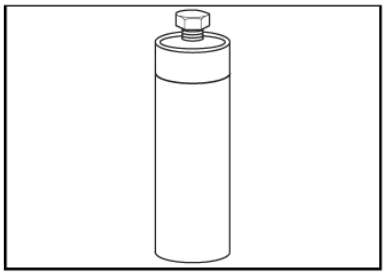
Track cleat installer
P/N 529 028 800 Recommended
1994 and newer models
Replaced by 529036044.



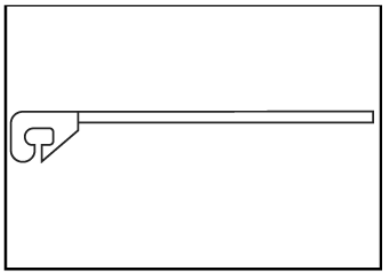
Pulley alignment bar
P/N 529 030 000 Recommended
S series with Bombardier LITE



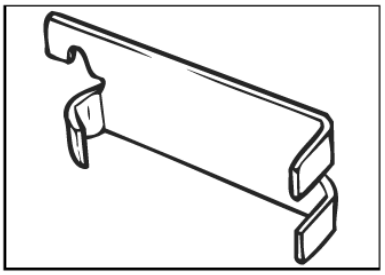
Countershaft bearing remover
P/N 529 030 100 Recommended
F & S series



Countershaft bearing installer
P/N 529 030 200 Recommended
S & F series



Transmission adjuster
P/N 529 030 300 Recommended
"Push-pull shifterl" reverse transmissio



Spring balance hook
P/N 529 030 900 Recommended
S-2000, F-2000 1995 and newer

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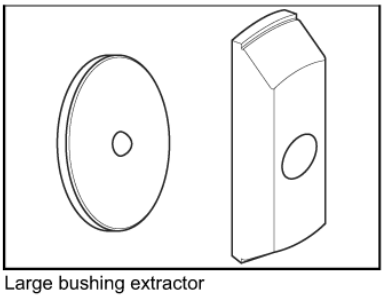
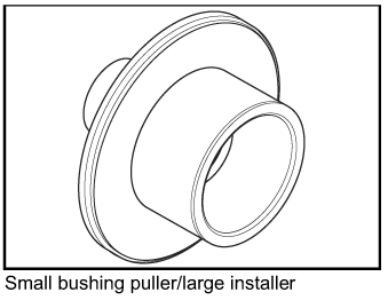
Propulsion / Transmission

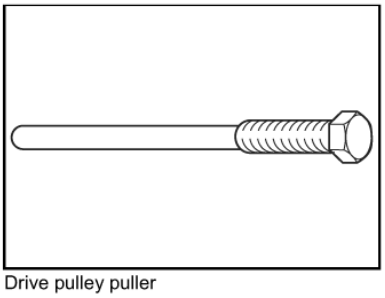


Large bushing extractor
P/N 529 031 100 Recommended
Formula type driven pulley
To use with puller: 529018600

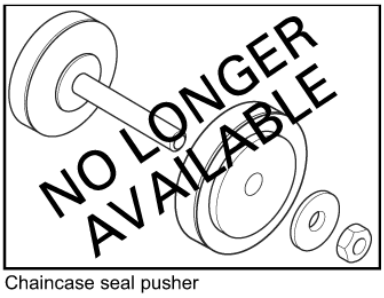


Small bushing puller/large installer
P/N 529 031 200 Recommended
All
Except Tundra R, Skandic WT/SWT/WT LC, S series

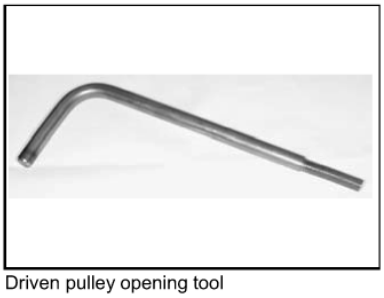
Bushing extractor/installer
P/N 529 031 300 Recommended
TRA cover with replacable bushing



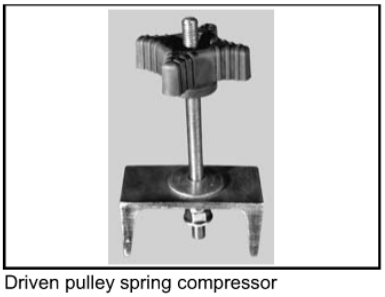
Drive pulley puller
P/N 529 031 400 Recommended
277F, 377F
2002 and older Bombardier Lite equipped vehicles



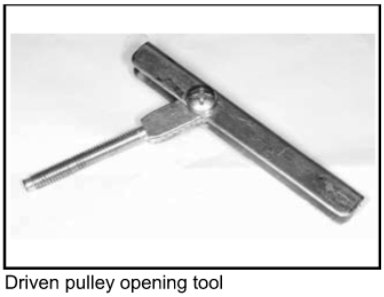
Chaincase seal pusher
P/N 529 032 300 Recommended
Replaced by 529035584



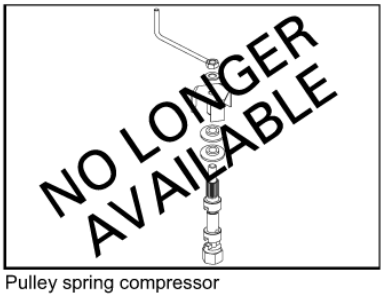
Driven pulley opening tool
P/N 529 034 200 Recommended
Tundra R up to 2005



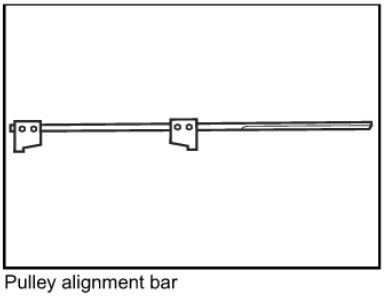
Driven pulley spring compressor
P/N 529 035 300 Recommended
Tundra R



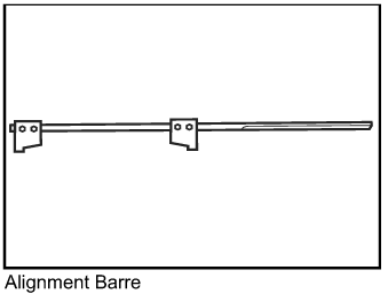
Driven pulley opening tool
P/N 529 035 501 Recommended
HPV, LPV & some Formula pulley



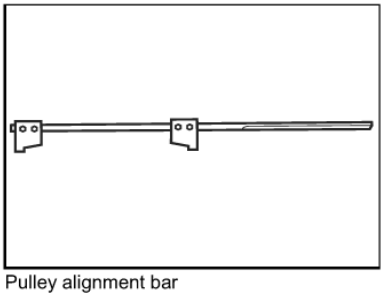
Pulley spring compressor
P/N 529 035 524 Recommended
All
This tool has been replaced by 529036012



Pulley alignment bar
P/N 529 035 527 Recommended
CK3 exept Mach Z 1998

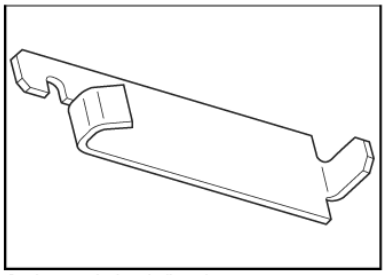


Alignment Barre
P/N 529 035 530 Recommended
S-2000 with TRA and RER

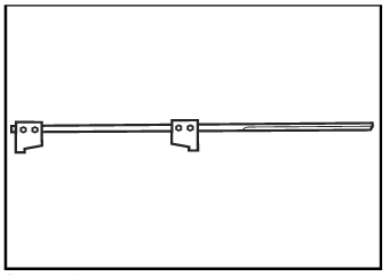


Pulley alignment bar
P/N 529 035 545 Recommended
1998 Skandic WT

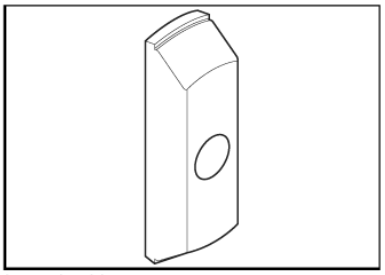
Propulsion / Transmission



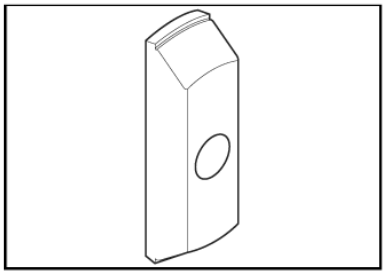
Spring scale hook (long)
P/N 529 035 557 Recommended
CK3 without RER



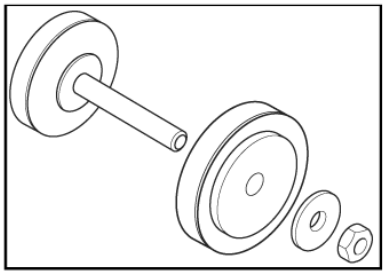
Pulley alignment bar
P/N 529 035 572 Recommended
1998 Mach Z



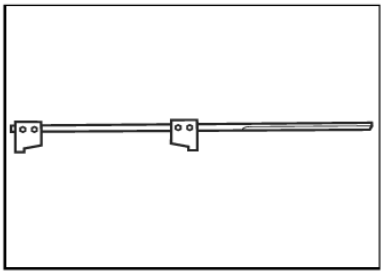
Large bushing extractor
P/N 529 035 575 Recommended
LPV27 driven pulley
To be used with 529035524



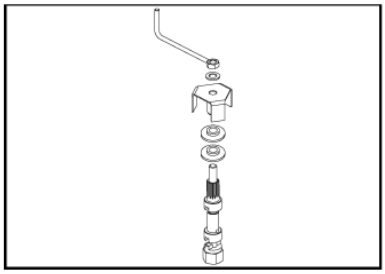
Large bushing extractor
P/N 529 035 576 Recommended
Formula type driven pulley
To be used with 529035524



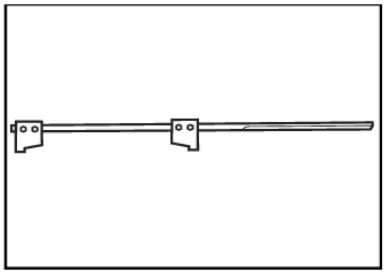
Chain case seal pusher
P/N 529 035 584 Recommended
All Frames
Replaces 529032300



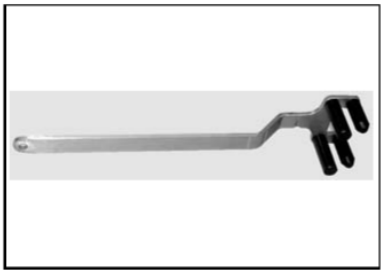
Pulley alignment bar
P/N 529 035 586 Recommended
S & ZX series



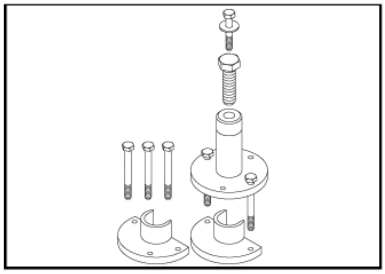
Replacement part for puller
P/N 529 035 588 Recommended
For 529036012



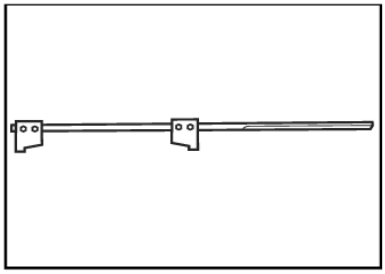
Pulley alignment bar
P/N 529 035 594 Recommended
CK3 series



Drive pulley retainer
P/N 529 035 674 Mandatory
All TRA



Countershaft bearing remover/installer
P/N 529 035 699 Recommended
REV, RT, ZX & CK3
Replaces 529035554.



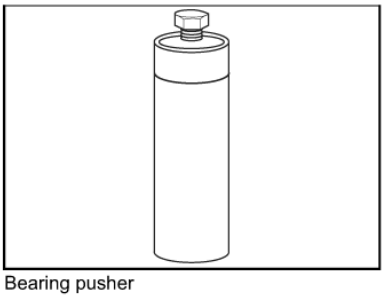
Pulley alignment bar
P/N 529 035 808 Recommended
Skandic II

Countershaft bearing remover
P/N 529 035 812 Recommended
Skandic LT

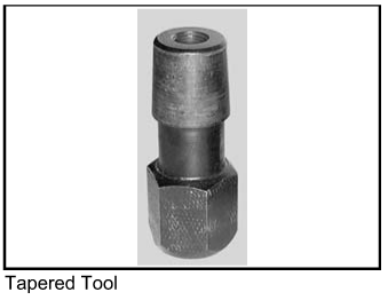
27/38

mdd2009-001-225_en_27

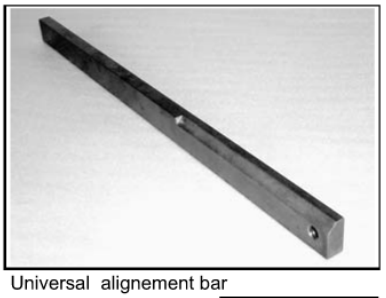
Propulsion / Transmission



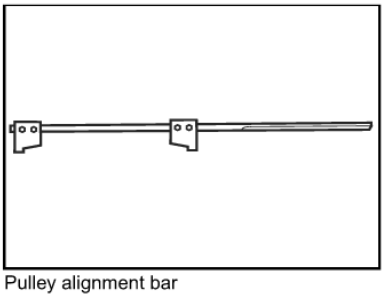
Bearing pusher
P/N 529 035 815 Recommended
Skandic 440 LT



Tapered Tool
P/N 529 035 826 Recommended
Skandic 440 LT
Replacement tool from kit 529025400



Universal alignement bar
P/N 529 035 831 Mandatory
All escept CK3 & ELITE



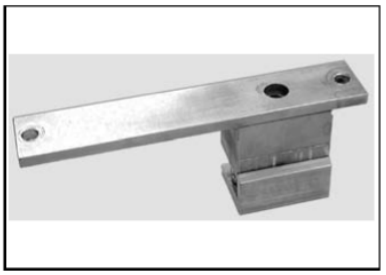
Pulley alignment bar
P/N 529 035 832 Recommended
ZX series

Gouvernor Cup Remover
P/N 529 035 894 Recommended
TRA IV

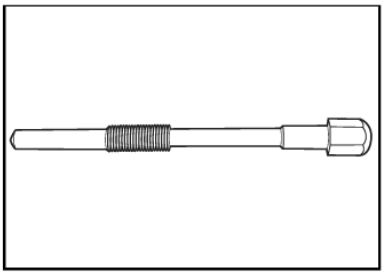
Sliding half bushing remover/installer
P/N 529 035 931 Recommended
TRA III & TRA IV

Hydraulic gauge kit
P/N 529 035 939 Recommended
TRA IV

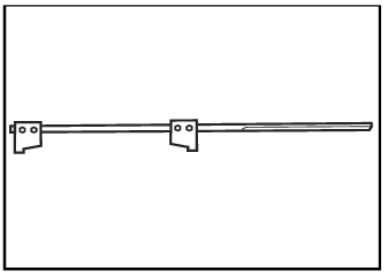
Clutch Support
P/N 529 035 942 Recommended
TRA IV



Belt tensioner tool
P/N 529 035 957 Recommended
Elite



Clutch Puller
P/N 529 035 959 Recommended
Elite

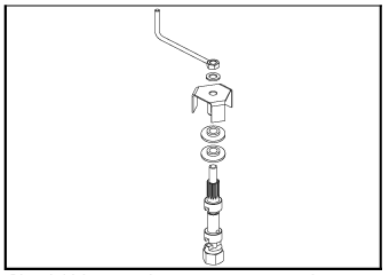


Pulley alignment bar
P/N 529 035 974 Recommended
2004 Skandic WT/SWT/SUV 550

Countershaft alignment bearing
P/N 529 036 009 Recommended
RT

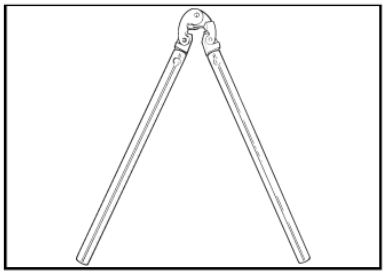
Propulsion / Transmission

BOLT PULLER COUNTERSHAFT
P/N 529 036 010 Recommended
RT, DS 450

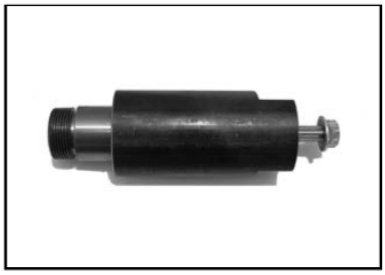


Clutch/driven spring compressor tool
P/N 529 036 012 Mandatory
Most drive & driven pulleys

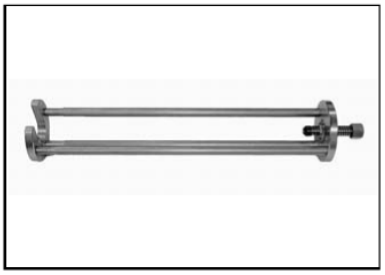
Driven spring compressor
P/N 529 036 035 Recommended
RF 277F 2006 Only
To take apart the driven



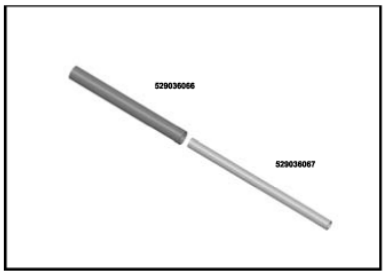
track Cleat Installer
P/N 529 036 044 Recommended
1994 and newer models.
Stronger version of tool 529028800. For newer track design.



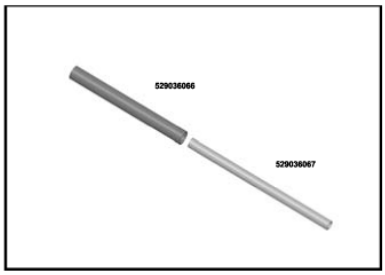
Driven spring compressor
P/N 529 036 064 Mandatory
REV-XP



Countershaft bearing remover
P/N 529 036 065 Mandatory
REV-XP

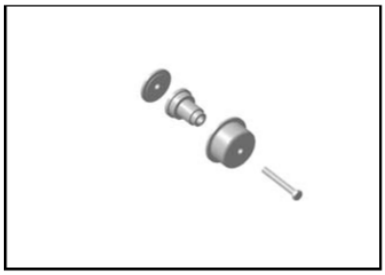


Countershaft bearing installer
P/N 529 036 066 Mandatory
REV-XP

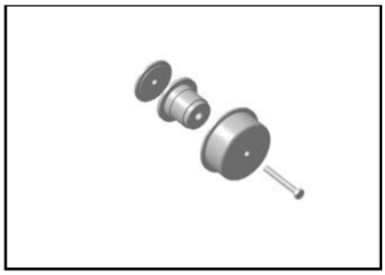


Countershaft support
P/N 529 036 067 Mandatory
REV-XP

Retaining upper gear tool
P/N 529 036 110 Mandatory
REV-XP



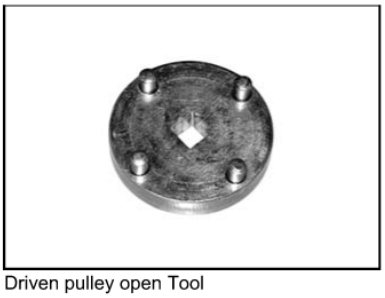
Installer/remover upper bearing
P/N 529 036 111 Mandatory
REV-XP



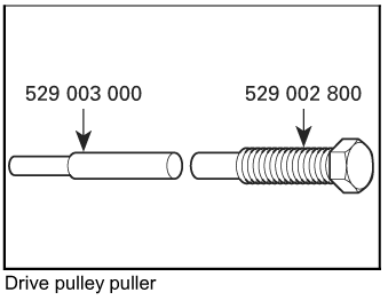
Installer/remover lower bearing
P/N 529 036 112 Mandatory
REV-XP

Screw Cap Socket
P/N 529 036 122 Recommended
600 RS

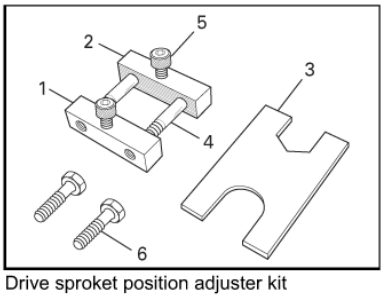
Propulsion / Transmission



Driven pulley open Tool
P/N 529 036 127 Recommended
REV-XP



Drive pulley puller
P/N 860 414 200 Recommended
Square shaft equipped vehicles (metric)
Made of 529003000 & 529002800



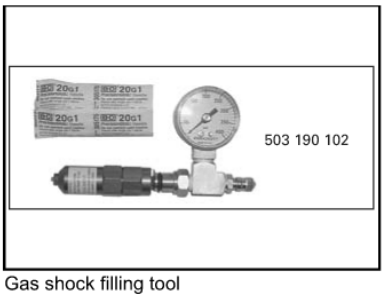
Drive sproket position adjuster kit
P/N 861 725 700 Recommended
All except Élan
Includes: 529010700, 529010800, 529010600, 222007565, 222983065 &

Steering

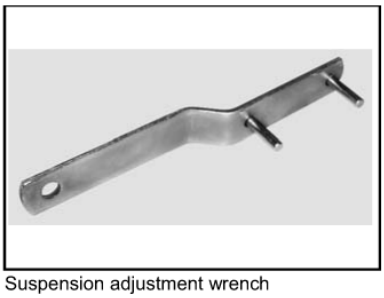
Heated grip installer
P/N 529 035 897 Recommended
Straight grips

Heated grip installer
P/N 529 035 936 Recommended
Models witrh J-hook

Suspension



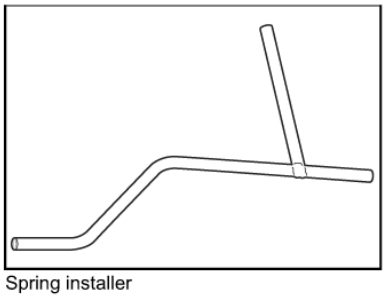
Gas shock filling tool
P/N 503 190 102 Recommended
T/A shocks
To be used with P/N 529035570. Spare needle P/N 529035930.



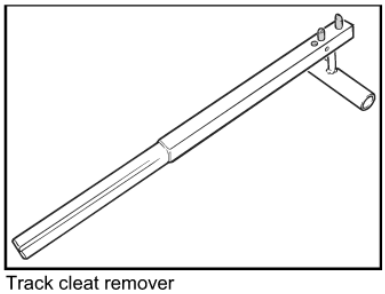
Suspension adjustment wrench
P/N 520 000 126 Recommended
SC-10 II & III

Ball joint installer
P/N 529 000 012 Mandatory
REV, RT, DS 650, DS 450

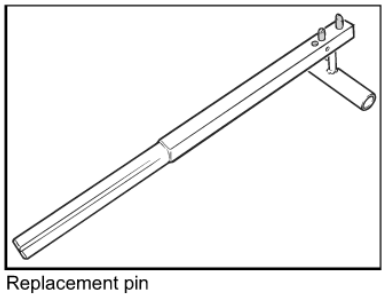
Suspension



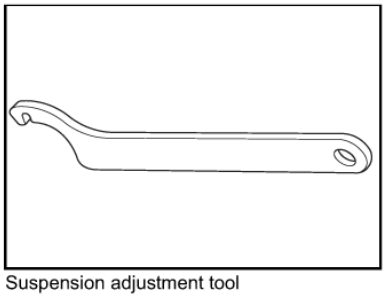
Spring installer
P/N 529 005 000 Recommended
Rear suspension torsion spring removal



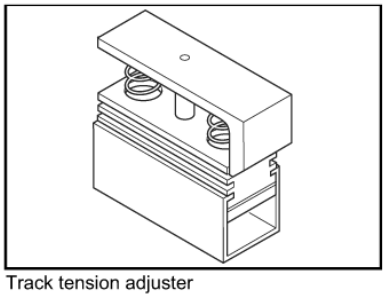
Track cleat remover
P/N 529 008 200 Recommended
1993 and older
Replacement pin 529008204



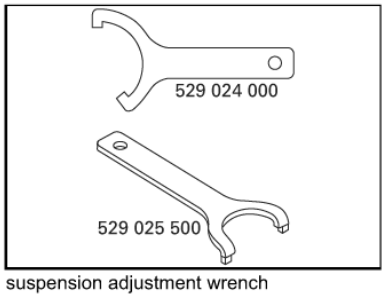
Replacement pin
P/N 529 008 204 Recommended
1993 and older
Remplacment part for tool 529008200.



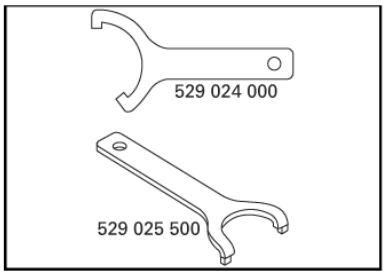
Suspension adjustment tool
P/N 529 017 100 Recommended
1992 and older C-7



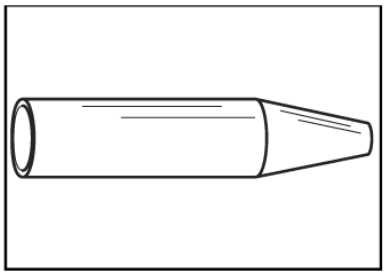
Track tension adjuster
P/N 529 021 500 Recommended
All except Élan



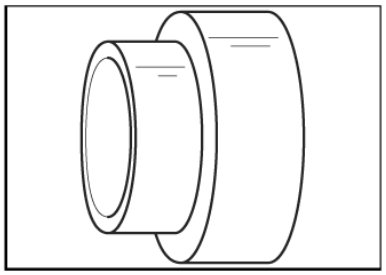
suspension adjustment wrench
P/N 529 024 000 Recommended
1998 and older models, with T/A shock
Included in kit 861743900



Suspension adjustmentwrench
P/N 529 025 500 Recommended
1998 and older models with T/A shock
Included in kit 861743900

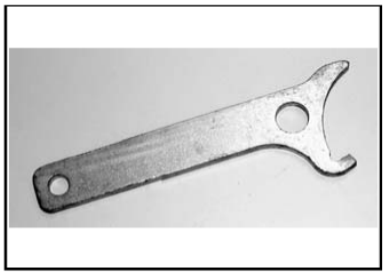


Dome Guide
P/N 529 026 500 Recommended
C-36 HPG T/A Shock

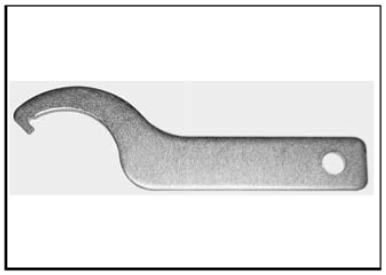


Piston guide
P/N 529 026 600 Recommended
C-36 HPG T/A shock

Track cleat remover
P/N 529 028 700 Recommended
1994 and newer, except Élan & Tundra II

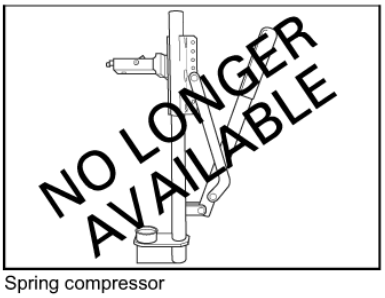


Shock preload adjustment wrench
P/N 529 032 900 Recommended

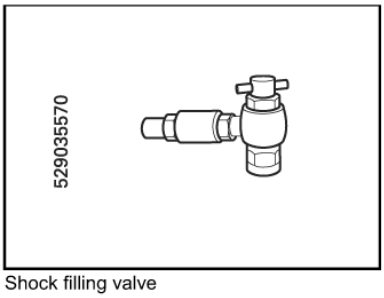


Suspension adjustment tool
P/N 529 034 100 Recommended
CK3 series

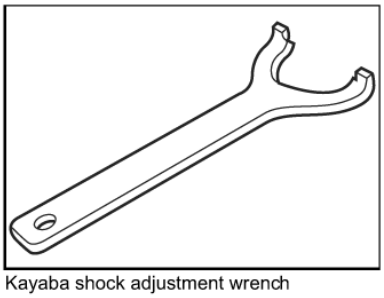
Suspension



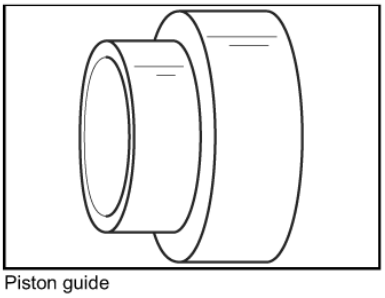
Spring compressor
P/N 529 035 504 Recommended
No longer sold, replaced by P/N 529 036 007.



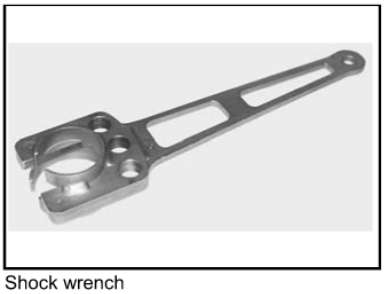
Shock filling valve
P/N 529 035 570 Recommended
T/A shocks



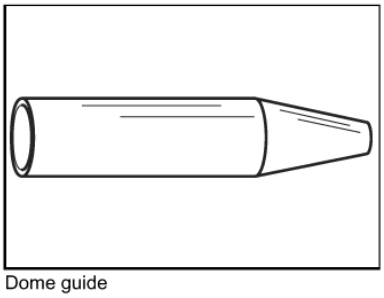
Kayaba shock adjustment wrench
P/N 529 035 582 Recommended
C-7 suspension



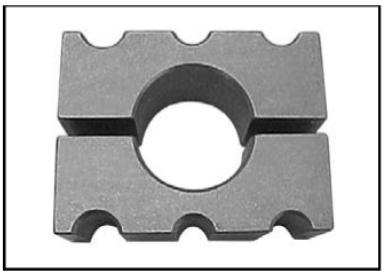
Piston guide
P/N 529 035 608 Recommended
C-46 HPG T/A shock



Shock wrench
P/N 529 035 727 Recommended
All T/A shocks



Dome guide
P/N 529 035 728 Recommended
C-46 HPG T/A shock



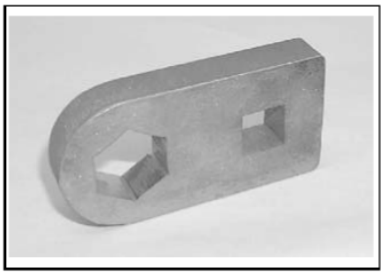
Shock retainer tool
P/N 529 035 769 Recommended
All HPG shock

Ball joint extractor
P/N 529 035 827 Mandatory
REV, RT

Ball joint remover support
P/N 529 035 873 Mandatory
REV, RT
Replaced by 529036121

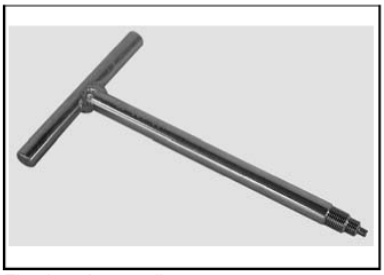
Ball joint installer
P/N 529 035 874 Recommended
2003 REV series

Ball joint installer support
P/N 529 035 875 Mandatory
REV, RT, Outlander

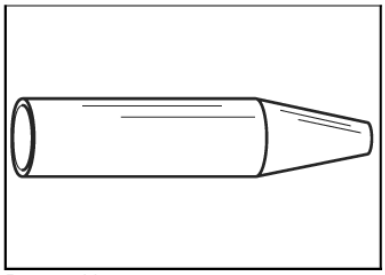


Extension to torque ball joint
P/N 529 035 876 Mandatory
REV, RT

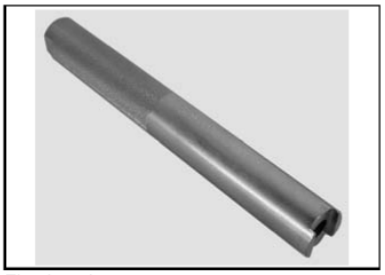
Suspension



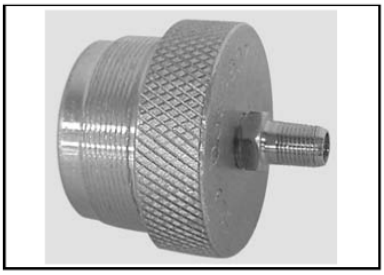
Floating piston puller
P/N 529 035 901 Recommended
HPG T/A shock with externa reservoir



Dome guide
P/N 529 035 902 Recommended
ZX X 440



Floating piston support
P/N 529 035 903 Recommended
ZX X 440

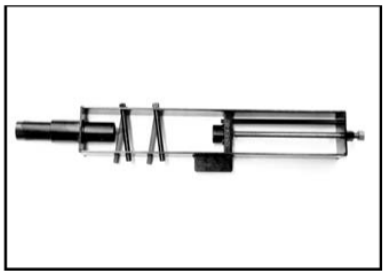


Floating piston puller
P/N 529 035 907 Recommended
MX Z X 440

Needle (10) spare
P/N 529 035 930 Recommended
Used with 503190102

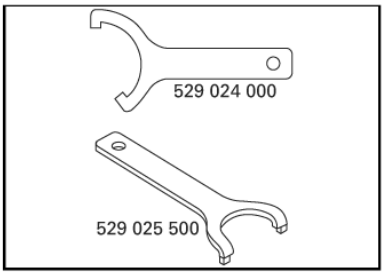
Ball joint lock
P/N 529 035 945 Recommended
REV, RT

Ball joint installer
P/N 529 035 975 Recommended
REV, RT, except 2003 REV



Spring Remover
P/N 529 036 007 Recommended
All models
To remove coil spring from shock.

Ball joint remover support
P/N 529 036 121 Recommended
REV, RT, Outlander, roadsters



Suspension adjustment wrench
P/N 861 743 900 Recommended
1998 and older models with T/A shocks
Includes 529024000 & 529025500

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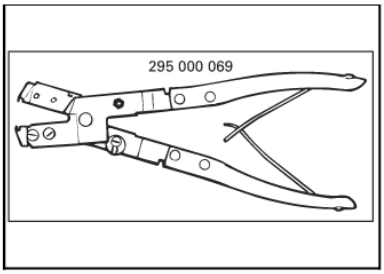
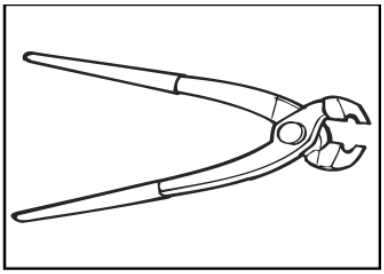
Hull / Body / Chassis

Template for hood drilling
P/N 529 034 400 Recommended
S series
To install gauges.

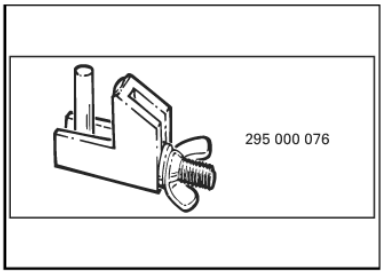
Various



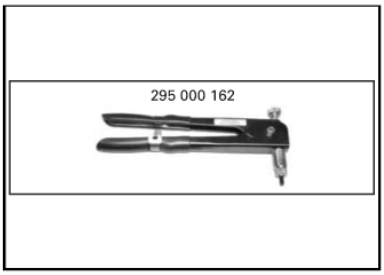
Oetiker Pliers
P/N 295 000 069 Recommended
All models



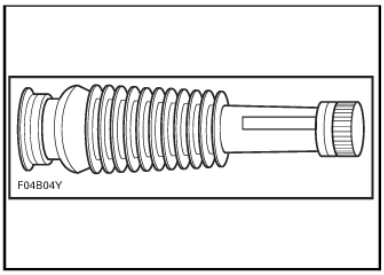
Oetiker pliers
P/N 295 000 070 Recommended
All models



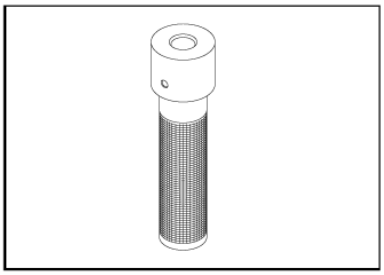
Small hose pincher
P/N 295 000 076 Mandatory
All models



6 mm insert pliers
P/N 295 000 162 Recommended
To install 6mm inserts on frame.

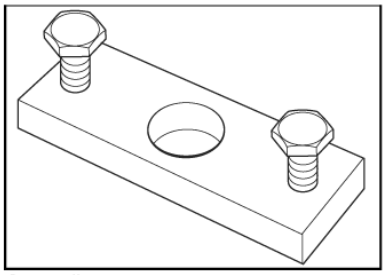


Flexible spout for oil
P/N 414 837 300 Recommended
All models

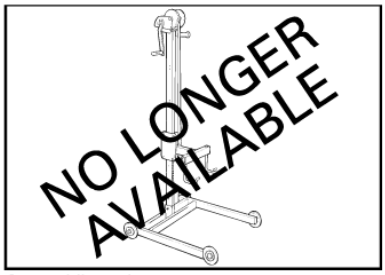


Handle
P/N 420 877 650 Recommended
All models
To be used with many pushers.

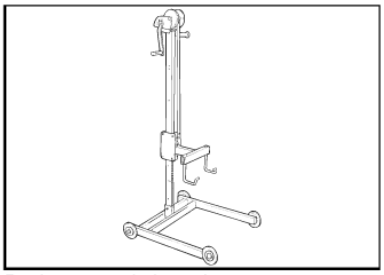
Various



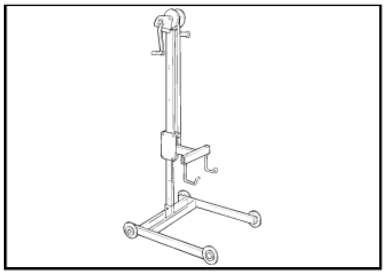
Cam puller
P/N 529 012 900 Recommended
Tundra II LT



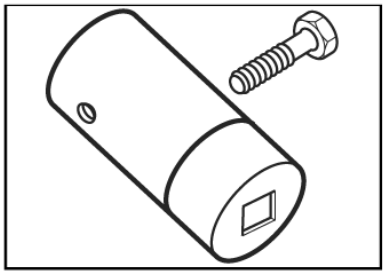
Snomobile rack
P/N 529 020 000 Recommended
All
No longer sold, replacement parts still available.



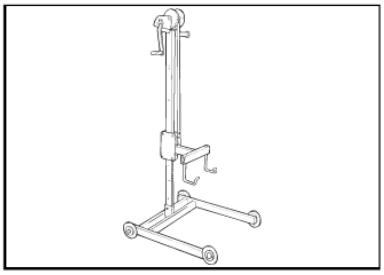
Replacement chain ass'y
P/N 529 020 400 Recommended
For jack 529020000.



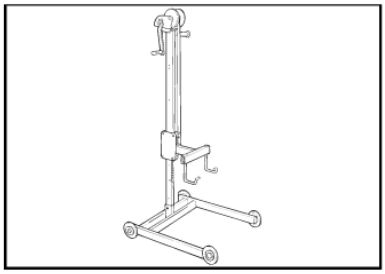
Replacement bushing
P/N 529 020 600 Recommended
For jack 529020000.



Drive pulley puller
P/N 529 023 100 Recommended
Elan



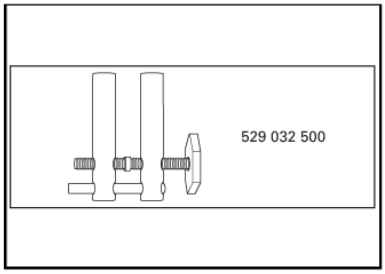
Replacement strap
P/N 529 026 200 Recommended
For jack 529020000



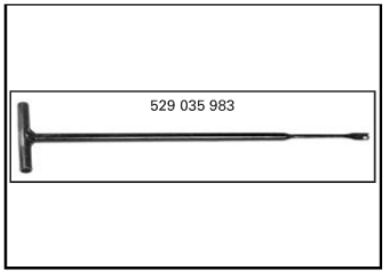
Replacement U bushing
P/N 529 027 703 Recommended
For jack 529020000

Protective mat
P/N 529 030 600 Recommended
All

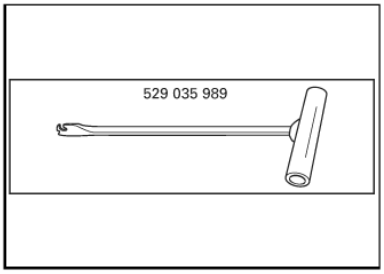
Supertitanium drill bit 3/16"
P/N 529 031 800 Recommended
To drill/remove many kinds of rivet.



Large hose pincher
P/N 529 032 500 Recommended
All models



Spring removal tool
P/N 529 035 983 Mandatory
All models



Spring removal tool (small)
P/N 529 035 989 Mandatory

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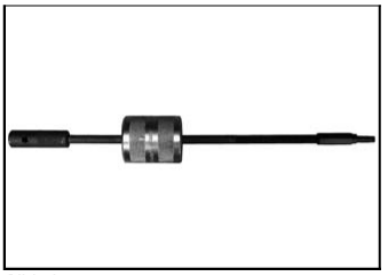
Various

Blind hole bearing puller set
P/N 529 036 117 Recommended
All models
Replaced by 529036056



Slide hammer
P/N Snap-on CJ125-6 Recommended
All
No sold by BRP

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Tool Part Numbers ... Page

These tools are mandatory

Index

Tool Part Numbers ... Page

These tools are mandatory

Specifications

Objective in this section you will find the most important specifications concerning this year line up.

DRIVE BELT SPECIFICATIONS

The chart below lists belts BRP has used the past years with important measurements and specifications.

– Part numbers
– Top Width – measured in/mm
– Thick – measured in/mm
– Angle – both sides combined in degrees
– Circumference – overall outside measurement in/mm
– Type – outside belt design
– Performance – low to high HP
– Durometer – belt rubber compound
– Replace by – designated replacement
– Available – can be ordered through PAC

DRIVE BELT SPECS									
Part number	Top width	Thickness	Angle	Circumference	Type	Performance	Durometer	Replace by	Available
414 633 800	34.5	13.5	26	1118	Flat Top	Low	Soft	None	No
414 827 600	33.3	12.7	30	1117.6	Flat Top	Low	Soft	None	Yes
414 860 700	35.3	15.8	25	1105.6	Flat Top	Medium	Medium	None	Yes
415 060 600	35.2	15.3	25	1104.9	Flat Top	Low	Soft	None	Yes
417 300 067	35.6	16.4	24	1113.5	Top Cog	Medium	Medium	None	Yes
417 300 127	36.3	16.4	25	1118	Top Cog	Low	Medium	None	Yes
417 300 128	35.6	16.4	23.5	1101	Top Cog	Medium	Hard	417 300 127	No
417 300 152	35.0	15.5	24	1105	Flat Top	High	Hard	None	No
417 300 155	37.3	14.5	26	1126	Flat Top	Low	Medium	None	Yes
417 300 166	37.7	16.4	26	1118	Top Cog	Medium	Hard	417 300 383	No
417 300 189	38.3	16.7	26	1129	Top Cog	High	Hard	None	Yes
417 300 197	37.6	14.5	26	1106	Top Cog	Low	Medium	None	Yes
417 300 207	37.3	14.5	26	1297	Flat Top	Low	Medium	None	Yes
417 300 230	36.9	15.5	26	1108	Flat Top	NA	NA	None	No
417 300 253	37.7	16.4	24	1118	Top Cog	Medium	Hard	417 300 288	No
417 300 267	37.7	16.7	26	1117	Top Cog	NA	NA	None	No
417 300 287	37.3	14.5	26	1296	Flat Top	High	Hard	None	Yes
417 300 288	37.7	16.7	26	1117	Top Cog	High	Medium	None	Yes
417 300 297	38.2	16.7	25	1112	Top Cog	High	Soft	417 300 288	Yes
417 300 298	33.0	14.4	25	1055	Top Cog	Medium	Medium	417 300 334	No
417 300 299	33.1	14.4	25	1069	Top Cog	Low	Soft	None	No
417 300 326	34.7	15.5	25	1096	Flat Top	Low	Soft	None	Yes
417 300 334	33.0	14.4	25	1069	Top Cog	Medium	Medium	None	Yes
417 300 367	36.7	14.6	25	1095	Flat Top	Low	Soft	None	Yes
417 300 377	38.3	16.7	26	1117	Top Cog	High	Hard	417 300 391	Yes
417 300 383	38.5	16.4	26	1118	Top Cog	Medium	Hard	None	Yes
417 300 391*	38.3	16.7	26	1117	Top Cog	High	Hard	417 300 377	Yes
417 300 425	38.0	16.7	26	1117	Top Cog	High	Medium	None	Yes
605 348 425	37.3	14.5	26	1181	Flat Top	Low	Medium	None	Yes
Same as 417 300 377, except glued cord construction									

REV CHASSIS GEAR AND CHAIN INFORMATION

TOP SPEED CALCULATION			
Clutch Ratio	**Number of Drive Sprocket Teeth**	**Track Pitch**	**Constant**
1 : 1	8	2.86	46.1
1 : 1	9	2.52	46.6
1 : 1	10	2.52	41.8
.83 : 1	8	2.86	38.4
.83 : 1	9	2.52	38.6
.83 : 1	10	2.52	34.7

Bottom Gear/Top Gear = Gear Ratio
Engine RPM/Gear Ratio/Constant = MPH
.83 : 1 ratio is Maximum overdrive

EXAMPLE: 2008 MX Zx 600RS
Engine RPM - 8400
Top Gear - 23
Bottom Gear - 49
Gear Ratio - 49/23 = 2.13
Clutch Ratio - 1:1
Track Pitch - 2.86 in
Constant no. - 46.1
Formula = 8400/2.13/46.1 = 85.5 MPH

REV-X CHAIN APPLICATIONS			
Top Gear	**Bottom Gear**	**Ratio**	**Chain**
20	45	2.25	102
21	45	2.14	102
22	45	2.05	104
23	45	1.96	104
24	45	1.88	104
25	45	1.80	104
26	45	1.73	106
27	45	1.67	106
20	49	2.45	104
21	49	2.33	104
22	49	2.23	106
23	49	2.13	106
24	49	2.04	106
25	49	1.96	106
26	49	1.88	108
27	49	1.81	108

CHAIN – 11 WIDE – TYPE EA	
LENGTH	**PART NUMBER**
70	504 151 882
72	504 151 883
74	504 151 859
92	504 152 090
96	504 152 091
CHAIN – 13 WIDE – TYPE L/A	
LENGTH	**PART NUMBER**
46	504 152 145
70	504 152 032
72	504 151 830
74	504 151 857
76	504 151 856
80	504 152 522
82	504 152 421
86	504 152 414
102	504 152 579
104	504 152 629
106	504 152 630
108	504 152 631
CHAIN – 15 WIDE – TYPE XL/SA	
LENGTH	**PART NUMBER**
74	504 151 932
76	504 152 431
86	504 152 744
102	504 152 775
106	504 152 777

11 WIDE TOP GEARS		
17	504 071 800	
18		504 070 100
19		414 680 500
20		504 058 800
21		504 091 200
22		504 056 000
23	504 078 400	
11 WIDE BOTTOM GEARS		
43		504 148 600
44		504 070 900

13 WIDE TOP GEARS		
# of teeth	**STEEL**	**POWDER**
15		504 152 603
17	504 125 807	
19	504 152 030	504 152 031
21	504 151 500	504 096 200
21		504 096 200
22		504 091 100
23	504 085 400	504 091 000
24	504 139 700	
25		504 084 300
26		504 085 300
27		504 148 400
13 WIDE TOP GEARS – REV-XR with Mechanical Reverse Transmission		
24	504 152 852	
13 WIDE BOTTOM GEARS		
43		504 148 500
45	504 152 379	504 152 238
45	504 152 614 - (C)	
13 WIDE BOTTOM GEARS – REV-XP and REV-XR		
43		504 152 726
45		504 152 593
49	504 152 581	
49	504 152 655 – (C)	
49	504 152 880 – (C)	
51		504 152 971

(C) – Clutch Pak Gear used on 440 MX-ZX or 600RS race sleds.

15 WIDE TOP GEARS	
Number of teeth	**STEEL**
21	**504 152 044**
15 WIDE BOTTOM GEARS	
45	504 152 379

RT CHASSIS 13 WIDE TOP GEARS			
Number of teeth	**STEEL**	**POWDER**	**WHERE USED**
29 (Hy-vo)		504 152 442	05-07 Mach Z with 504 152 415 82 Link Rocker Chain
RT CHASSIS 13 WIDE BOTTOM GEARS			
Number of teeth	**STEEL**	**POWDER**	**WHERE USED**
49 (Hy-vo)		504 152 412	05-07 Mach Z with 504 152 415 82 Link Rocker Chain
RT CHASSIS 13 WIDE BOTTOM GEARS			
Number of teeth	**STEEL**	**POWDER**	**WHERE USED**
49		504 152 441	05-07 Renegade and Summit 1000
RT CHASSIS 15 WIDE TOP GEARS			
Number of teeth	**STEEL**	**POWDER**	**WHERE USED**
19	504 152 752		05-07 Summit 1000
21		504 152 505	05-07 Summit 1000
21		504 152 505	05-07 Summit 1000
23	504 152 506		05-07 Summit 1000

(Hy-vo) – Borg Warner special cut gears to match the 504152415 82 Link Rocker Chain. For more explanation on 2005 - 2007 Mach Z Chain and Chaincase, see page 4A-11 of the 2005 Ski-Doo Technical Update Book (P/N 219 600 012).

TRACK REFERENCE CHART

2.86" PITCH TRACK	PROFILE	SPECIAL NOTE	PRE-MARKED FOR STUDS	CLIP	PART NUMBER
15" X 120" X 1.0"	Rip Saw	All windows open	Yes	Full clip	504 152 760
15" x 120" x 1.25"	Rip Saw	All windows open	Yes	Full clip	504 152 606
15" x 120" x 1.25"	Cobra	All windows open	No	Full clip	C9092H
15" x 120" x 1.25"	ICE Ripper XT	All windows open	Studs not allowed	Full clip	C9164H
15" x 120" x 1.25"	ICE Ripper XT	All windows open	Studs not allowed	Full clip	504 153 100
15" x 120" x 1.375"	ICE Attak	All windows open	Studs not allowed	Full clip	C9136H
15" x 120" x 1.5"	Rip Saw	All windows open	Studs not allowed	Full clip	C9159C
15" x 120" x 1.75"	10-11 Racing	All windows open	No	Full clip	504 152 981
15" x 120" x 1.75"	09 Racing	All windows open	No	Full clip	504 152 883
15" x 137" x 1.0"	Rip Saw	All windows open	Yes	Full clip	504 152 863
15" x 137" x 1.0"	Rip Saw	All windows open	Yes (also is Silent Track)	Full clip	504 152 755
15" x 137" x 1.25"	Cobra	All windows open	Studs not allowed	1 every 2	504 152 838
15" x 137" x 1.25"	Rip Saw Lite	All windows open	Yes	Full clip	C9080H
15" x 137" x 1.25"	Rip Saw	All windows open	Yes	Full clip	504 152 905
15" x 137" x 1.25"	ICE Ripper XT	All windows open	Studs not allowed	Full clip	9191H
15" x 137" x 1.25"	ICE Ripper XT	All windows open	Studs not allowed	Full clip	504 153 101
15" x 137" x 1.375"	ICE Attak	All windows open	Studs not allowed	Full clip	C9137H
15" x 137" x 1.5"	RipSaw	All windows open	Studs not allowed	Full clip	C9076C
15" x 137" x 1.75"	RipSaw	All windows open	Studs not allowed	Full clip	C9096C
16" x 120" x 1.75"	Powder Max	All windows open	Studs not allowed	Full clip	C9069C
16" x 137" x 1.25"	Cobra	All windows open	Studs not allowed	1 every 2	504 152 907
16" x 137" x 1.25"	RipSaw	All windows open	Yes	1 every 2	504 152 734
16" x 137" x 1.5"	Charger	All windows open	Studs not allowed	Full clip	504 153 102
16" x 137" x 1.75"	Powder Max	All windows open	Studs not allowed	Full clip	504 152 803
16" x 137" x 2.31"	Powder Max	All windows open/Non Ported	Studs not allowed	Full clip	504 153 103
16" x 146" x 2.25"	Challenger	All windows open/Non Ported	Studs not allowed	Full clip	C9064M
16" x 146" x 2.31"	Powder Max	All windows open/Non Ported	Studs not allowed	1 every 2	504 153 014
16" x 146" x 2.31"	Powder Max	All windows open/Ported	Studs not allowed	1 every 2	504 152 799
16" x 146" x 2.50"	Powder Max II	Non Ported	Studs not allowed	1 every 2	504 153 008

2.86" PITCH TRACK	PROFILE	SPECIAL NOTE	PRE-MARKED FOR STUDS	CLIP	PART NUMBER
16" x 154" x 1.5"	Charger	All windows open	Studs not allowed	1 every 2	504 152 761
16" x 154" x 2.25"	Challenger	Non Ported	Studs not allowed	Full clip	C9065M
16" x 154" x 2.31"	Powder Max	Ported	Studs not allowed	1 every 2	504 152 800
16" x 154" x 2.31"	Powder Max	Non Ported	Studs not allowed	1 every 2	504 153 015
16" x 154" x 2.50"	Powder Max II	Non Ported	Studs not allowed	1 every 2	504 153 009
16" x 163" x 2.25"	Challenger	Non Ported	Studs not allowed	Full clip	C9066M
16" x 163" x 2.31"	Powder Max	All windows open/Ported	Studs not allowed	1 every 2	504 152 801
16" x 163" x 2.31"	Powder Max	Non Ported	Studs not allowed	1 every 2	504 153 016
16" x 163" x 2.50"	Powder Max II	Non Ported	Studs not allowed	1 every 2	504 153 010
2.52" PITCH TRACK	PROFILE	SPECIAL NOTE	PRE-MARKED FOR STUDS	CLIP	PART NUMBER
15" x 121" x .880"		3rd window closed	Yes	1 every 3	504 152 485
15" x 121" x 1.0"	ICE Attak	All windows open	Studs not allowed	Full clip	C9028H
15" x 121" x 1.25"	RipSaw	All windows open	No	Full clip	C9968H
15" x 121" x 1.25"	RipSaw	All windows open	Yes	Full clip	504 152 558
15" x 121" x 1.25"	Ice Ripper	All windows open	Studs not allowed	Full clip	504 152 654
15" x 121" x 1.75"	05 Racing	All windows open	No	Full clip	504 152 517
15" x 136" x 1.0"	ICE Attak	All windows open	Studs not allowed	Full clip	C9029H
15" x 136" x 1.25"	RipSaw	All windows open	No	Full clip	C9969H
16" x 136" x 1.25"		3rd window closed	Yes	1 every 3	504 152 456
16" x 136" x 1.75"	Powder Max	All windows open	Studs not allowed	1 every 3	504 152 644
16" x 144" x 2.0"	Powder Max	All windows open/Ported	Studs not allowed	1 every 2	504 152 528
16" x 144" x 2.25"	Challenger Lite	All windows open/Ported	Studs not allowed	1 every 2	504 152730
16" x 159" x 2.25"	Powder Max	All windows open/Ported	Studs not allowed	1 every 2	504152536
16" x 159" x 2.25"	Challenger Lite	All windows open/Ported	Studs not allowed	1 every 2	504152640
16" x 162" x 2.25"	Powder Max	All windows open/Ported	Studs not allowed	1 every 2	504152531
20" x 156" x 1.25"	ICE Wide	All windows open	Studs not allowed	Full clip	C9008U
2.55" PITCH TRACK	PROFILE	SPECIAL NOTE	PRE-MARKED FOR STUDS	CLIP	PART NUMBER
10" x 69" x .625"		Mini-REV	Studs not allowed	Full clip	504 152 172

TRA ROLLER PINS AND ALLEN SET SCREWS PARTS LIST

Roller Pins				
Pin Weight	**Pin Type**	**Part Number**	**Length**	**Packaging**
18.7 gram	Solid Pin	417222594	35.7 mm	pack of 3
16.6 gram	Solid Pin	417004308	32 mm	pack of 3
12.2 gram	Threaded Steel (Metric)	417222595	35.7mm	pack of 3
10.9 gram	Threaded Steel (Metric)	417222477	32 mm	pack of 3
9.8 gram	Hollow Steel	417004309	32 mm	pack of 3

Allen Set Screws				
Weight	**Thread Type**	**Part Number**	**Dimensions**	**Packaging**
3.81 gram	(Metric)	206262599	M6 x 1.0 x 25	pack of 5
3.02 gram	(Metric)	206262099	M6 x 1.0 x 20	pack of 5
2.35 gram	(Metric)	206261699	M6 x 1.0 x 16	pack of 5
1.68 gram	(Metric)	206261299	M6 x 1.0 x 12	pack of 10
.73 gram	(Metric)	206260699	M6 x 1.0 x 6	pack of 3

Slugs – only available through the Ski-Doo Race Department			
Weight	**Part Number**	**Length**	**Packaging**
8.287 gram	486400005	23 mm	pack of 3
5.044 gram	486400004	14 mm	pack of 3

mdd2011-001-600

mdd2012-001-600

Fuel, oil, spark plug and timing for MY2012 Ski-Doo models

Engine	Model	Fuel Octane	Idle opening	Idle RPM +-100	Oil	Oil Pump Adj.	Spark Plug Type	Spark Plug Gap	Timing @ 3500 RPM
550F	XP-XU	87	1.6mm	1650	Mineral	Visual	NGK - BR9ECS	0.45mm	2.77mm / 22 degrees
600 ACE	XP-XU	87	0 degrees	1450	0w40 full synth.	----	NGK - CR7EiX	0.8mm	----
600 carb (MX - Summit)	XP	87	1.5mm	1600	semi-synth.	16.5mm	NGK - BR9ECS	0.8mm	2.49mm / 20 degrees
600HO ETEC	XP-XR-XU	91	0 degrees	1200	semi-synth.	Electronic	NGK - PZFR6F	0.8mm	5.39mm / 28 degrees ***
600HO ETEC (Summit)	XP	91	0 degees	1200	semi-synth.	Electronic	NGK - PZFR6F	0.8mm	5.39mm / 28 degrees ***
600RS (Racing)	XP	91	2.5mm	1600	pre-mix semi-synth. 33@1	N/A	NGK - BR9ECS	0.45mm	3.37mm / 22 degrees
800R	XP	91	4%	1900	semi-synth.	16.5mm	NGK - BR9ECS	0.8mm	2.37mm / 18 degrees **
800R (Summit)	XP	91	5%	1900	semi-synth.	16.5mm	NGK - BR9ECS	0.8mm	2.37mm / 18 degrees **
800R ETEC	XP	91	0 degrees	1200	semi-synth.	Electronic	NGK - PFR7AB	0.8mm	5.63mm / 28 degrees ***
1203	XR	87	0 degrees	1100	0w40 full synth.	----	NGK - CR8EKB	0.8mm	15 degrees *

Note 1: Fuel = R+M/2.
Note 2: Fuel, for units with 91 octane should be "recommended" but is not "mandatory".
* Between 1500 and 2000 RPM.
** Disconnect the TPS wire connector to verify timing.
***Verify the timing at 3500 RPM on the PTO side while using B.U.D.S. to change the offset angle as required.

CARBURETOR CALIBRATION
BRP SKI-DOO MODELS 2012

ENG	PF	MODEL NAME	TYPE	DPM JET		MIKUNI #	BRP #	NEEDLE	N.JET	B.H.	C.A.	V.S.	S.J.	IDLE	M.J.	PW.J.	P.J.	A.S.	P.S.	FLOAT	RPM
				VENT	LEAN					ϕ	ϕ	ϕ	ϕ	±0.1				Ref.		LEVEL ± 1	±200
552	XP	Tundra 550 STD				MAG VM30-218	403 138 813	6BFY46-3	P-8 (159)	N/A	2.5	1.2[3]	1.3	1.6	190	N/A	35	1.25	N/A	23.9	1650
	XU	Tundra 550 Sport				PTO VM30-219	403 138 814	6BFY46-4	P-8 (159)	N/A	2.5	1.2[3]	1.3	1.6	200	N/A	35	1.00	N/A	23.9	1650
		Tundra 550 LT																			
		Expedition 550 Sport				MAG: Green dot															
		MXZ 550 Sport				PTO: Blue dot															
		MXZ 550 TNT																			
		Renegade 550 Sport																			
		GTX 550 Sport																			
552	XU	Skandic 550 WT Fan				MAG VM30-218	403 138 813	6BFY46-3	P-8 (159)	N/A	2.5	1.2[3]	1.3	1.6	190	N/A	35	1.25	N/A	23.9	1650
						PTO VM30-219	403 138 814	6BFY46-4	P-8 (159)	N/A	2.5	1.2[3]	1.3	1.6	200	N/A	35	1.00	N/A	23.9	1650
						MAG: Green dot															
						PTO: Blue dot															
593	XP	MXZ 600 Sport	HTD			TM40-418	403 138 815	9CEY2-58-2	P-0M[4]	1.6	2.0	1.5[3]	1.1	1.5	390[5]	N/A	17.5	N/A	1.5	N/A	1600
		MXZ 600 TNT																			
		GTX 600 Sport																			
		SUMMIT 600 Sport																			
593RS	XP	MXZ x 600 Racing				TMX38-73	403 138 816	6FDY1-57-3	P-6	N/A	4.0	1.5[3]	N/A	2.5	290	160	55	[3,0]	N/A	N/A	1600
797	XP	SUMMIT 800R Sport	TPS,DPM,HTD	1.2	2.0	TM40-400	403 138 806	9EGI04-58	P-0M[4]	1.6	2.0	1.5[3]	1.1	2	480[5]	N/A	17.5	N/A	1.5	N/A	1900

(1) Without primary choke
(2) With straight 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

Color Identification : MAG= Red, PTO= Blue.
Note: No color if carburetors are identical

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BOMBARDIER SKI-DOO - 2012 MODELS / MODELES 2012
TRANSMISSION SYSTEM DEFINITION / DEFINITION DU SYSTEME DE TRANSMISSION

Model Modèle	Engine Moteur	Platform	Status	Drive pulley / Poulie motrice									
				Model Modèle	Taper Cone	Governor cup / Cuvette de régulateur	Slider Glissière	Spring Ressort	Pin or weight / Pine ou pesée	Ramp or bloc / Rampe ou bloc	Pos. calib. or / ou capsule	Engagement ±100 RPM	Max. speed / Régime max. ±100 RPM
TUNDRA 550 Std 137x15x1.25	552	XU	Final	e-drive	1 : 7.5	n/a	Vespel	80-170	n/a	6 X 700	n/a	2600	6800
TUNDRA 550 Sport 137x16x1.25	552	XU	Final	e-drive	1 : 7.5	n/a	Vespel	80-170	n/a	6 X 700	n/a	2600	6800
TUNDRA 550 LT 154x16x1.5	552	XU	Final	e-drive	1 : 7.5	n/a	Vespel	80-170	n/a	6 X 700	n/a	2600	6800
Expedition 550 Sport 154x16x1.5	552	XP	Final	e-drive	1 : 7.5	n/a	Vespel	80-170	n/a	6 X 700	n/a	2600	6800
MXZ 550, Sport, TNT 120 x 15 x 1.25	552	XP	Final	e-drive	1 : 7.5	n/a	Vespel	80-170	n/a	6 X 730	n/a	3200	6800
MXZ 550, TNT 120 x 15 x 1.25 Eur	552	XP	Final	e-drive	1 : 7.5	n/a	Vespel	80-170	n/a	6 X 730	n/a	3200	6800
Renegade 550 Sport 137-15-1.25	552	XP	Final	e-drive	1 : 7.5	n/a	Vespel	80-170	n/a	6 X 730	n/a	3200	6800
Renegade 550 Sport 137-16-1.25 Eur.	552	XP	Final	e-drive	1 : 7.5	n/a	Vespel	80-170	n/a	6 X 730	n/a	3200	6800
GTX FAN Sport 137 x 16 x 1,25	552	XP	Final	e-drive	1 : 7.5	n/a	Vespel	80-170	n/a	6 X 730	n/a	3200	6800
GTX FAN Sport 137 x 16 x 1,25 Eur	552	XP	Final	e-drive	1 : 7.5	n/a	Vespel	80-170	n/a	6 X 730	n/a	3200	6800
Skandic WT	552	XU	Final	e-drive	1 : 7.5	n/a	Vespel	80-170	n/a	6 X 700	n/a	2600	6800
MXZ 600 Sport, TNT 120 x 15 x 1.25	593	XP	Final	TRA 3	1:7.5	Cushion drive	Torlon	Violet / Violet	Solid - Short	412	3	3800	8100
Summit 600 Sport, 146 x 16 x 2,25	593	XP	Final	TRA 3	1:7.5	Cushion drive	Torlon	Blue / Pink	Solid - Short	417	3	3400	8100
GTX 600 Sport 137 x 16 x 1,25	593	XP	Final	TRA 3	1:7.5	Cushion drive	Torlon	Blue / Violet	Solid - Short	412	3	3400	8100
MXZ 600HO E-Tec TNT, X, X-RS, 120x15x1.25	600HO E-Tec	XP	Final	TRA 3	1:7.5	Cushion drive	Torlon	Blue / Green	Solid - Short	412	3	3400	8100
Renegade 600HO E-Tec Adrenaline, X, 137-16 or 15-1.25	600HO E-Tec	XP	Final	TRA 3	1:7.5	Cushion drive	Torlon	Blue / Green	Solid - Short	412	3	3400	8100
Renegade 600HO E-Tec Adrenaline, 137-16-1.25 Eur.	600HO E-Tec	XP	Final	TRA 3	1:7.5	Cushion drive	Torlon	Blue / Green	Solid - Short	412	3	3400	8100
Renegade 600HO E-Tec Backcountry, X 137-16-1.75	600HO E-Tec	XP	Final	TRA 3	1:7.5	Cushion drive	Torlon	Blue / Green	Solid - Short	412	3	3400	8100
Renegade 600HO E-Tec Backcountry X 137-16-1.75 Eur.	600HO E-Tec	XP	Final	TRA 3	1:7.5	Cushion drive	Torlon	Blue / Green	Solid - Short	412	3	3400	8100
GSX 600HO E-Tec LE 120 x15 x 1.25	600HO E-Tec	XP	Final	TRA 3	1:7.5	Cushion drive	Torlon	Yellow / Green	Solid - Short	412	3	3400	8100
GSX 600HO E-Tec SE 137 x 15 x1.25	600HO E-Tec	XR	Final	TRA 3	1:7.5	Cushion drive	Torlon	Red / Green	Solid - Short	414	3	3400	8100
Grand-Touring 600HO E-Tec LE, 137-15-1.0	600HO E-Tec	XR	Final	TRA 3	1:7.5	Cushion drive	Torlon	Red / Green	Solid - Short	414	3	3400	8100
Grand-Touring 600HO E-Tec LE, 137 x 16 x 1,25 Eur	600HO E-Tec	XR	Final	TRA 3	1:7.5	Cushion drive	Torlon	Red / Green	Solid - Short	414	3	3400	8100
Summit 600HO E-Tec SP, 146 x 16 x 2.25	600HO E-Tec	XP	Final	TRA 3	1:7.5	Cushion drive	Vespel	Violet / Green	Threaded short + 16mm	440	3	4000	8100
Summit 600HO E-Tec SP, 146 x 16 x 2.25Eur	600HO E-Tec	XP	Final	TRA 3	1:7.5	Cushion drive	Torlon	Blue / Green	Solid - Short	412	3	4000	8100
Summit 600HO E-Tec SP, 154 x 16 x 2.25	600HO E-Tec	XP	Final	TRA 3	1:7.5	Cushion drive	Vespel	Violet / Green	Threaded short + 16mm	440	3	4000	8100
Tundra Xtreme 600HO E-Tec 154 x 16 x 2.25	600HO E-Tec	XU	Final	TRA 3	1:7.5	Cushion drive	Vespel	Red / Orange	Threaded short + 16mm	412	3	2800	8100
Tundra Xtreme 600HO E-Tec 154 x 16 x 2.25 Eur.	600HO E-Tec	XU	Final	TRA 3	1:7.5	Cushion drive	Vespel	Red / Orange	Threaded short + 16mm	412	3	2800	8100
Expedition LE, SE 600HO E-Tec 20 x 154 x 1.25	600HO E-Tec	XU	Final	TRA 3	1:7.5	Cushion drive	Vespel	Yellow / Red	Solid - Long	600	2	3000	8100
Skandic WT 600HO E-Tec 20 x 154 x 1.5"	600HO E-Tec	XU	Final	TRA 3	1:7.5	Cushion drive	Vespel	Yellow / Red	Solid - Long	600	2	3000	8100
Skandic SWT 600HO E-Tec 24 x 154 x 1.25"	600HO E-Tec	XU	Final	TRA 3	1:7.5	Cushion drive	Vespel	Yellow / Red	Solid - Long	600	2	3000	8100
MXZ X 600RS	600 RS	XP	Final	TRA 3-light	1:7.5	Light-cushion dr.	Vespel	Red / Red*	Threaded long + 25mm +6 mm	443	4	5300	8400
MxZ 600 ACE Sport, 120 x 15 x 1,0	602	XP	Final	e-drive	1 : 7.5	n/a	Vespel	80-170	n/a	6 X 712	n/a	2200	7250
MxZ 600 ACE TNT 120 -15-1,25	602	XP	Final	e-drive	1 : 7.5	n/a	Vespel	80-130	n/a	6 X 715	n/a	2200	7250

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BOMBARDIER SKI-DOO - 2012 MODELS / MODELES 2012
TRANSMISSION SYSTEM DEFINITION / DEFINITION DU SYSTEME DE TRANSMISSION

Model / Modèle	Engine / Moteur	Platform	Status	Belt / Courroie	Driven pulley / Poulie menée						Carter				Sprocket / Barbottin
					Model / Modèle	Initial openning Ouverture Initiale (mm)	Ressort / Spring Color	Force (N)	Preload new / after break-in period Tension neuf / après rodage (±0.7 kg)	Cam Came (°) / Type	Sprocket top / Pignon haut	Sprocket bottom / Pignon bas	Chaine / Chain Maille/Link	width	
TUNDRA 550 Std 137x15x1.25	552	XU	Final	414 8607 00	QRS-SS	50.8	Brown	800N	0.0	44 -XP	19	45	102	13	8 teeth 2.86
TUNDRA 550 Sport 137x16x1.25	552	XU	Final	414 8607 00	QRS-SS	50.8	Brown	800N	0.0	44 -XP	19	45	102	13	8 teeth 2.86
TUNDRA 550 LT 154x16x1.5	552	XU	Final	414 8607 00	QRS-SS	50.8	Brown	800N	0.0	44 -XP	19	45	102	13	8 teeth 2.86
Expedition 550 Sport 154x16x1.5	552	XP	Final	414 8607 00	QRS-SS	50.8	Brown	800N	0.0	44 -XP	19	45	102	13	8 teeth 2.86
MXZ 550, Sport, TNT 120 x 15 x 1.25	552	XP	Final	414 8607 00	QRS-SS	50.8	Brown	800N	0.0	47-44 -XP	21	45	102	13	8 teeth 2.86
MXZ 550, TNT 120 x 15 x 1.25 Eur	552	XP	Final	414 8607 00	QRS-SS	50.8	Brown	800N	0.0	47-44 -XP	21	45	102	13	8 teeth 2.86
Renegade 550 Sport 137-15-1.25	552	XP	Final	414 8607 00	QRS-SS	50.8	Brown	800N	0.0	47-44 -XP	21	45	102	13	8 teeth 2.86
Renegade 550 Sport 137-16-1.25 Eur.	552	XP	Final	414 8607 00	QRS-SS	50.8	Brown	800N	0.0	47-44 -XP	19	45	102	13	8 teeth 2.86
GTX FAN Sport 137 x 16 x 1.25	552	XP	Final	414 8607 00	QRS-SS	50.8	Brown	800N	0.0	47-44 -XP	19	45	102	13	8 teeth 2.86
GTX FAN Sport 137 x 16 x 1.25 Eur	552	XP	Final	414 8607 00	QRS-SS	50.8	Brown	800N	0.0	47-44 -XP	19	45	102	13	8 teeth 2.86
Skandic WT	552	XU	Final	414 8607 00	QRS-NTC	50.8	Wh2-Wh2		7.0-6.4	47-44- XP	1-3,86	2- 2,3	N/A	N/A	7 teeth 2.86
MXZ 600 Sport, TNT 120 x 15 x 1.25	593	XP	Final	417 300 197	QRS	51.7	Black	700N	0.0	42	25	45	104	13	8 teeth 2.86
Summit 600 Sport, 146 x 16 x 2.25	593	XP	Final	417 300 197	QRS	51.7	Black	700N	0.0	43-47 - XP	19	49	104	13	8 teeth 2.86
GTX 600 Sport 137 x 16 x 1.25	593	XP	Final	417 300 197	QRS	51.7	Black	700N	0.0	42	23	45	104	13	8 teeth 2.86
MXZ 600HO E-Tec TNT, X, X-RS, 120x15x1.25	600HO E-Tec	XP	Final	417 300 383	QRS	51.7	Green	800N	0.0	48 - XP	25	45	104	13	8 teeth 2.86
Renegade 600HO E-Tec Adrenaline, X, 137-16 or 15-1.25	600HO E-Tec	XP	Final	417 300 383	QRS	51.7	Green	800N	0.0	48 - XP	23	45	104	13	8 teeth 2.86
Renegade 600HO E-Tec Adrenaline, 137-16-1.25 Eur.	600HO E-Tec	XP	Final	417 300 383	QRS	51.7	Green	800N	0.0	48 - XP	21	45	102	13	8 teeth 2.86
Renegade 600HO E-Tec Backcountry, X 137-16-1.75	600HO E-Tec	XP	Final	417 300 383	QRS	51.7	Green	800N	0.0	48 - XP	21	49	106	13	8 teeth 2.86
Renegade 600HO E-Tec Backcountry X 137-16-1.75 Eur.	600HO E-Tec	XP	Final	417 300 383	QRS	51.7	Green	800N	0.0	48 - XP	21	49	106	13	8 teeth 2.86
GSX 600HO E-Tec LE 120 x15 x 1.25	600HO E-Tec	XP	Final	417 300 383	QRS	51.7	Green	800N	0.0	48 - XP	25	45	104	13	8 teeth 2.86
GSX 600HO E-Tec SE 137 x 15 x1.25	600HO E-Tec	XR	Final	417 300 383	QRS	51.7	Green	800N	0.0	48 - XP	23	45	104	13	8 teeth 2.86
Grand-Touring 600HO E-Tec LE, 137-15-1.0	600HO E-Tec	XR	Final	417 300 383	QRS	51.7	Green	800N	0.0	48 - XP	23	45	104	13	8 teeth 2.86
Grand-Touring 600HO E-Tec LE, 137 x 16 x 1,25 Eur	600HO E-Tec	XR	Final	417 300 383	QRS	51.7	Green	800N	0.0	48 - XP	21	45	102	13	8 teeth 2.86
Summit 600HO E-Tec SP, 146 x 16 x 2.25	600HO E-Tec	XP	Final	417 300 383	QRS	51.7	Black	700N	0.0	41-45 -XP	19 Steel	49	104	13	8 teeth 2.86
Summit 600HO E-Tec SP, 146 x 16 x 2.25Eur	600HO E-Tec	XP	Final	417 300 383	QRS	51.7	Black	700N	0.0	41-45 -XP	19 Steel	49	104	13	8 teeth 2.86
Summit 600HO E-Tec SP, 154 x 16 x 2.25	600HO E-Tec	XP	Final	417 300 383	QRS	51.7	Black	700N	0.0	41-45 -XP	19 Steel	49	104	13	8 teeth 2.86
Tundra Xtreme 600HO E-Tec 154 x 16 x 2.25	600HO E-Tec	XU	Final	417 300 383	QRS	51.7	Black	700N	0.0	42 -XP	21	49	106	13	8 teeth 2.86
Tundra Xtreme 600HO E-Tec 154 x 16 x 2.25 Eur.	600HO E-Tec	XU	Final	417 300 383	QRS	51.7	Black	700N	0.0	42 -XP	21	49	106	13	8 teeth 2.86
Expedition LE, SE 600HO E-Tec 20 x 154 x 1.25	600HO E-Tec	XU	Final	417 300 383	QRS-NTC	53.7	Wh2-Wh2		7.5-6.8	40 - XP	1-3,23	2- 1,98	N/A	N/A	8 teeth 2,86
Skandic WT 600HO E-Tec 20 x 154 x 1.5"	600HO E-Tec	XU	Final	417 300 383	QRS-NTC	53.7	Wh2-Wh2		7.5-6.8	40 - XP	1-3,86	2- 2,3	N/A	N/A	8 teeth 2,86
Skandic SWT 600HO E-Tec 24 x 154 x 1.25"	600HO E-Tec	XU	Final	417 300 383	QRS-NTC	53.7	Wh2-Wh2		7.5-6.8	40 - XP	1-3,86	2- 2,3	N/A	N/A	9 teeth 2,52
MXZ X 600RS	600 RS	XP	Final	417 300 425	Team 417 127 291		black/orange	180-280	0.0	46x0,46) 2=(70-4	19 Steel	49 BRP	104	13	8 teeth 2,86"
MxZ 600 ACE Sport, 120 x 15 x 1,0	602	XP	Final	**417 3001 27**	QRS-SS	50	Pk2-Pk2		7.0-6.4	41-45	24	51	108	13	8 teeth 2.86
MxZ 600 ACE TNT 120 -15-1,25	602	XP	Final	**417 3001 27**	QRS-SS	50	Pk2-Pk2		7.0-6.4	41-45	24	51	108	13	8 teeth 2.86

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BOMBARDIER SKI-DOO - 2012 MODELS / MODELES 2012
TRANSMISSION SYSTEM DEFINITION / DEFINITION DU SYSTEME DE TRANSMISSION

Model Modèle	Engine Moteur	Platform	Status	Drive pulley / Poulie motrice									
				Model Modèle	Taper Cone	Governor cup / Cuvette de régulateur	Slider Glissière	Spring Ressort	Pin or weight / Pine ou pesée	Ramp or bloc / Rampe ou bloc	Pos. calib. or / ou capsule	Engagement ±100 RPM	Max. speed / Régime max. ±100 RPM
Renegade 600 ACE Sport 137 x 15 x 1.25	602	XP	Final	e-drive	1 : 7.5	n/a	Vespel	80-130	n/a	6 X 716	n/a	2200	7250
Renegade 600 ACE Sport 137 x 16 x 1.25 Eur.	602	XP	Final	e-drive	1 : 7.5	n/a	Vespel	80-130	n/a	6 X 716	n/a	2200	7250
GTX 600 ACE Sport 137 x 15 x 1,0	602	XP	Final	e-drive	1 : 7.5	n/a	Vespel	80-170	n/a	6 X 712	n/a	2200	7250
GTX 600 ACE Sport 137 x 16 x 1.25 Eur	602	XP	Final	e-drive	1 : 7.5	n/a	Vespel	80-130	n/a	6 X 715	n/a	2200	7250
Expedition 600 ACE Sport 154x16x1.5	602	XP	Final	e-drive	1 : 7.5	n/a	Vespel	80-130	n/a	6 X 716	n/a	2200	7250
TUNDRA 600 ACE Sport 137x16x1.25	602	XU	Final	e-drive	1 : 7.5	n/a	Vespel	80-130	n/a	6 X 716	n/a	2200	7250
TUNDRA 600 ACE LT 154x16x1.5	602	XU	Final	e-drive	1 : 7.5	n/a	Vespel	80-130	n/a	6 X 716	n/a	2200	7250
Skandic 600 ACE WT 154 x 20 x 1.5	602	XU	Final	e-drive	1 : 7.5	n/a	Vespel	80 - 130	n/a	6 X 716	n/a	2200	7250
Skandic 600 ACE SWT 154 x 24 x 1.25	602	XU	Final	e-drive	1 : 7.5	n/a	Vespel	80 - 130	n/a	6 X 716	n/a	2200	7250
SUMMIT 800R Sport 154 x 16 x 2.25	800R	XP	Final	TRA 7	1:7.5	Cushion drive	Vespel	Green / Violet	Threaded long + 12mm	441	1	3800	8150
MXZ 800R E-Tec X, X-RS, TNT 120 x 15 x 1.25	800R E-Tec	XP	Final	TRA 7	1:7.5	Cushion drive	Vespel	Blue / Green	Solid - Long	414	3	3800	7900
MXZ 800R E-Tec X-RS 120 x 15 x 1.25 Eur.	800R E-Tec	XP	Final	TRA 7	1:7.5	Cushion drive	Vespel	Blue / Green	Solid - Long	414	3	3800	7900
GSX 800R E-Tec SE 137 x 15 x 1.25	800R E-Tec	XR	Final	TRA 7	1:7.5	Cushion drive	Vespel	Yellow / Green	Solid - Long	414	3	3800	7900
Renegade 800R E-Tec X, Adrenaline 137-16or15-1.25	800R E-Tec	XP	Final	TRA 7	1:7.5	Cushion drive	Vespel	Blue / Green	Solid - Long	414	3	3800	7900
Renegade 800R E-Tec B Country, B Country X 137-16 -1.75 or 1.5	800R E-Tec	XP	Final	TRA 7	1:7.5	Cushion drive	Vespel	Violet / Blue	Solid - Long	413	3	3800	7900
Renegade 800R E-Tec B Country X 137-16 -1.75 Eur.	800R E-Tec	XP	Final	TRA 7	1:7.5	Cushion drive	Vespel	Violet / Blue	Solid - Long	413	3	3800	7900
SUMMIT 800R E-Tec SP, X 146 x 16 x 2.5	800R E-Tec	XP	Final	TRA 7	1:7.5	Cushion drive	Vespel	Violet / Pink	Threaded long + 12mm	441	1	3800	7900
SUMMIT 800R E-Tec X 146-16-2.5 Eur.	800R E-Tec	XP	Final	TRA 7	1:7.5	Cushion drive	Vespel	Yellow / Green	Solid - Long	413	2	3800	7900
SUMMIT 800R E-Tec SP,X 154 x 16 x 2.5	800R E-Tec	XP	Final	TRA 7	1:7.5	Cushion drive	Vespel	Violet / Pink	Threaded long + 12mm	441	1	3800	7900
SUMMIT 800R E-Tec X 154-16-2.5 Eur.	800R E-Tec	XP	Final	TRA 7	1:7.5	Cushion drive	Vespel	Yellow / Green	Solid - Long	413	2	3800	7900
SUMMIT 800R E-Tec SP, X 163 x 16 x 2.5	800R E-Tec	XP	Final	TRA 7	1:7.5	Cushion drive	Vespel	Violet / Pink	Threaded long + 12mm	441	1	3800	7900
SUMMIT 800R E-Tec X 163-16-2.5 Eur.	800R E-Tec	XP	Final	TRA 7	1:7.5	Cushion drive	Vespel	Yellow / Green	Solid - Long	413	2	3800	7900
Freeride 800R E-Tec 137 x 16 x 1.75	800R E-Tec	XP	Final	TRA 7	1:7.5	Cushion drive	Vespel	Violet / Blue	Solid - Long	413	3	3800	7900
Freeride 800R E-Tec 137 x 16 x 2.25	800R E-Tec	XP	Final	TRA 7	1:7.5	Cushion drive	Vespel	Violet / Blue	Solid - Long	413	3	3800	7900
Freeride 800R E-Tec 137-16-1.75 Eur	800R E-Tec	XP	Final	TRA 7	1:7.5	Cushion drive	Vespel	Violet / Blue	Solid - Long	413	3	3800	7900
Freeride 800R E-Tec 146 x 16 x 2.25	800R E-Tec	XP	Final	TRA 7	1:7.5	Cushion drive	Vespel	Violet / Pink	Threaded long + 12mm	441	1	3800	7900
Freeride 800R E-Tec 146 x 16 x 2.5	800R E-Tec	XP	Final	TRA 7	1:7.5	Cushion drive	Vespel	Violet / Pink	Threaded long + 12mm	441	1	3800	7900
Freeride 800R E-Tec, Racing 154 x 16 x 2.25	800R E-Tec	XP	Final	TRA 7	1:7.5	Cushion drive	Vespel	Violet / Pink	Threaded long + 12mm	441	1	3800	7900
Freeride 800R E-Tec, 154 x 16 x 2.5	800R E-Tec	XP	Final	TRA 7	1:7.5	Cushion drive	Vespel	Violet / Pink	Threaded long + 12mm	441	1	3800	7900
Freeride 800R E-Tec 154 x 16 x 2.25 Eur.	800R E-Tec	XP	Final	TRA 7	1:7.5	Cushion drive	Vespel	Yellow / Green	Solid - Long	413	2	3800	7900
MXZ 1200 TNT, X 120 x 15 x 1,25	1203	XR	Final	TRA 4 LD	1:7.5	Standard	Vespel	Yellow / Orange	Solid - Long	617	3	2500	7800
Renegade 1200 Adren, X 137-16or15-1.25	1203	XR	Final	TRA 4 LD	1:7.5	Standard	Vespel	Yellow / Orange	Solid - Long	617	3	2500	7800
Renegade 1200 X 137 x 16 x 1.75 Eur	1203	XR	Final	TRA 4 LD	1:7.5	Standard	Vespel	Yellow / Orange	Solid - Long	617	3	2500	7800
GSX 1200 LE 120 x 15 x 1.25	1203	XR	Final	TRA 4 LD	1:7.5	Standard	Vespel	Yellow / Orange	Solid - Long	617	3	2500	7800
GSX 1200 SE 137 x 15 x 1.25	1203	XR	Final	TRA 4 LD	1:7.5	Standard	Vespel	Yellow / Orange	Solid - Long	617	3	2500	7800
G Touring 1200 LE, SE 137 x 15 x 1	1203	XR	Final	TRA 4 LD	1:7.5	Standard	Vespel	Yellow / Orange	Solid - Long	617	3	2500	7800
G Touring 1200 SE 137 x 16 x 1.25 Eur.	1203	XR	Final	TRA 4 LD	1:7.5	Standard	Vespel	Yellow / Orange	Solid - Long	617	3	2500	7800
Expedition LE, SE 1200 20 x 154 x 1,25	1203	XU	Final	TRA 4 LD	1:7.5	Standard	Vespel	Red / Orange	Solid - Long	617	2	2500	7800

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BOMBARDIER SKI-DOO - 2012 MODELS / MODELES 2012
TRANSMISSION SYSTEM DEFINITION / DEFINITION DU SYSTEME DE TRANSMISSION

Model / Modèle	Engine / Moteur	Platform	Status	Belt / Courroie	Driven pulley / Poulie menée						Carter				Sprocket / Barbottin
					Model / Modèle	Initial openning Ouverture Initiale (mm)	Ressort / Spring Color	Force (N)	Preload new / after break-in period Tension neuf / après rodage (±0.7 kg)	Cam Came (°) / Type	Sprocket top / Pignon haut	Sprocket bottom / Pignon bas	Chaine / Chain Maille/Link	width	
Renegade 600 ACE Sport 137 x 15 x 1.25	602	XP	Final	**417 3001 27**	QRS-SS	**50**	Pk2-Pk2		7.0-6.4	41-45	21	49	106	13	8 teeth 2.86
Renegade 600 ACE Sport 137 x 16 x 1.25 Eur.	602	XP	Final	**417 3001 27**	QRS-SS	**50**	Pk2-Pk2		7.0-6.4	41-45	21	51	106	13	8 teeth 2.86
GTX 600 ACE Sport 137 x 15 x 1,0	602	XP	Final	**417 3001 27**	QRS-SS	**50**	Pk2-Pk2		7.0-6.4	41-45	21	49	106	13	8 teeth 2.86
GTX 600 ACE Sport 137 x 16 x 1.25 Eur	602	XP	Final	**417 3001 27**	QRS-SS	**50**	Pk2-Pk2		7.0-6.4	41-45	21	51	106	13	8 teeth 2.86
Expedition 600 ACE Sport 154x16x1.5	602	XP	Final	417 3001 27	QRS-SS	50	Pk2-Pk2		7.0-6.4	41-45	21	51	106	13	8 teeth 2.86
TUNDRA 600 ACE Sport 137x16x1.25	602	XU	Final	417 3001 27	QRS-SS	50	Pk2-Pk2		7.0-6.4	41-45	21	51	106	13	8 teeth 2.86
TUNDRA 600 ACE LT 154x16x1.5	602	XU	Final	417 3001 27	QRS-SS	50	Pk2-Pk2		7.0-6.4	41-45	21	51	106	13	8 teeth 2.86
Skandic 600 ACE WT 154 x 20 x 1.5	602	XU	Final	417 3001 27	QRS-NTC	50	Pk2-Pk2		7.0-6.4	37-45	1-3,86	2- 2,3	N/A	N/A	7 teeth 2.86
Skandic 600 ACE SWT 154 x 24 x 1.25	602	XU	Final	417 3001 27	QRS-NTC	50	Pk2-Pk2		7.0-6.4	37-45	1-3,86	2- 2,3	N/A	N/A	8 teeth 2.52
SUMMIT 800R Sport 154 x 16 x 2.25	800R	XP	Final	417 300 377	QRS	51.7	Violet	1000N	0.0	43-47 - XP	21	49	106	13	8 teeth 2.86
MXZ 800R E-Tec X, X-RS, TNT 120 x 15 x 1.25	800R E-Tec	XP	Final	417 300 391	QRS	51.7	Green	800N	0.0	47-44 - XP	27	45	106	13	8 teeth 2.86
MXZ 800R E-Tec X-RS 120 x 15 x 1.25 Eur.	800R E-Tec	XP	Final	417 300 391	QRS	51.7	Green	800N	0.0	47-44 - XP	25	45	104	13	8 teeth 2.86
GSX 800R E-Tec SE 137 x 15 x 1.25	800R E-Tec	XR	Final	417 300 391	QRS	51.7	Green	800N	0.0	50-44 - XP	27	45	106	13	8 teeth 2.86
Renegade 800R E-Tec X, Adrenaline 137-16or15-1.25	800R E-Tec	XP	Final	417 300 391	QRS	51.7	Green	800N	0.0	44-42 - XP	25	45	104	13	8 teeth 2.86
Renegade 800R E-Tec B Country, B Country X 137-16 -1.75 or 1.5	800R E-Tec	XP	Final	417 300 391	QRS	51.7	Green	800N	0.0	44-42 - XP	23	45	104	13	8 teeth 2.86
Renegade 800R E-Tec B Country X 137-16 -1.75 Eur.	800R E-Tec	XP	Final	417 300 391	QRS	51.7	Green	800N	0.0	44-42 - XP	21	45	102	13	8 teeth 2.86
SUMMIT 800R E-Tec SP, X 146 x 16 x 2.5	800R E-Tec	XP	Final	417 300 391	QRS	51.7	Blue	700N	0.0	40 - XP	21	49	106	13	8 teeth 2.86
SUMMIT 800R E-Tec X 146-16-2.5 Eur.	800R E-Tec	XP	Final	417 300 391	QRS	51.7	Blue	700N	0.0	40 - XP	21	49	106	13	8 teeth 2.86
SUMMIT 800R E-Tec SP,X 154 x 16 x 2.5	800R E-Tec	XP	Final	417 300 391	QRS	51.7	Blue	700N	0.0	40 - XP	19 Steel	49	104	13	8 teeth 2.86
SUMMIT 800R E-Tec X 154-16-2.5 Eur.	800R E-Tec	XP	Final	417 300 391	QRS	51.7	Blue	700N	0.0	40 - XP	21	49	106	13	8 teeth 2.86
SUMMIT 800R E-Tec SP, X 163 x 16 x 2.5	800R E-Tec	XP	Final	417 300 391	QRS	51.7	Blue	700N	0.0	40 - XP	19 Steel	51	106	13	8 teeth 2.86
SUMMIT 800R E-Tec X 163-16-2.5 Eur.	800R E-Tec	XP	Final	417 300 391	QRS	51.7	Blue	700N	0.0	40 - XP	19 Steel	51	106	13	8 teeth 2.86
Freeride 800R E-Tec 137 x 16 x 1.75	800R E-Tec	XP	Final	417 300 391	QRS	51.7	Blue	700N	0.0	40 - XP	23	45	104	13	8 teeth 2.86
Freeride 800R E-Tec 137 x 16 x 2.25	800R E-Tec	XP	Final	417 300 391	QRS	51.7	Blue	700N	0.0	40 - XP	21	45	102	13	8 teeth 2.86
Freeride 800R E-Tec 137-16-1.75 Eur	800R E-Tec	XP	Final	417 300 391	QRS	51.7	Blue	700N	0.0	40 - XP	21	45	102	13	8 teeth 2.86
Freeride 800R E-Tec 146 x 16 x 2.25	800R E-Tec	XP	Final	417 300 391	QRS	51.7	Blue	700N	0.0	40 - XP	21	45	102	13	8 teeth 2.86
Freeride 800R E-Tec 146 x 16 x 2.5	800R E-Tec	XP	Final	417 300 391	QRS	51.7	Blue	700N	0.0	40 - XP	21	49	106	13	8 teeth 2.86
Freeride 800R E-Tec, Racing 154 x 16 x 2.25	800R E-Tec	XP	Final	417 300 391	QRS	51.7	Blue	700N	0.0	40 - XP	21	49	106	13	8 teeth 2.86
Freeride 800R E-Tec, 154 x 16 x 2.5	800R E-Tec	XP	Final	417 300 391	QRS	51.7	Blue	700N	0.0	40 - XP	19 Steel	49	104	13	8 teeth 2.86
Freeride 800R E-Tec 154 x 16 x 2.25 Eur.	800R E-Tec	XP	Final	417 300 391	QRS	51.7	Blue	700N	0.0	40 - XP	21	49	106	13	8 teeth 2.86
MXZ 1200 TNT, X 120 x 15 x 1,25	1203	XR	Final	417 300 383	QRS	51.7	Pk2-Pk2		8.3-7.5	47-40	24	43	104	13	8 teeth 2.86
Renegade 1200 Adren, X 137-16or15-1.25	1203	XR	Final	417 300 383	QRS	51.7	Pk2-Pk2		8.3-7.5	47-40	24	45	104	13	8 teeth 2.86
Renegade 1200 X 137 x 16 x 1.75 Eur	1203	XR	Final	417 300 383	QRS	51.7	Pk2-Pk2		8.3-7.5	47-40	24	45	104	13	8 teeth 2.86
GSX 1200 LE 120 x 15 x 1.25	1203	XR	Final	417 300 383	QRS	53.7	Pk2-Pk2		8.3-7.5	47-40	24	43	104	13	8 teeth 2.86
GSX 1200 SE 137 x 15 x 1.25	1203	XR	Final	417 300 383	QRS	53.7	Pk2-Pk2		8.3-7.5	47-40	24	45	104	13	8 teeth 2.86
G Touring 1200 LE, SE 137 x 15 x 1	1203	XR	Final	417 300 383	QRS	53.7	Pk2-Pk2		8.3-7.5	47-40	24	45	104	13	8 teeth 2.86
G Touring 1200 SE 137 x 16 x 1.25 Eur.	1203	XR	Final	417 300 383	QRS	53.7	Pk2-Pk2		8.3-7.5	47-40	24	49	106	13	8 teeth 2.86
Expedition LE, SE 1200 20 x 154 x 1,25	1203	XU	Final	417 300 377	QRS-NTC	53.7	Bg2-Bg2		8.3-7.5	44-40	1-3,23	2- 1,98	N/A	N/A	8 teeth 2.86

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Front - Take Apart	
XP/XR MXZ TNT & Ren Adren	
505072754	
Valve spec	
REB.	COMP.
1 x 26 x .203	2 x 30 x .203
1 x 15 x .114	1 x 15 x .152
3 x 26 x .152	3 x 30 x .152
1 x 16 x .254	1 x 26 x .114
	1 x 16 x .152
1 slit piston (2 x 0.3)	
IFP height = 167mm	
Extended length = 431mm	
Compressed length = 285mm	
XP Spring rate = 90 lbs/in	
XR Spring rate = 120 lbs/in	

Front - Take Apart	
XP/XR Renegade X & MXZ X	
505073117	
Valve spec	
REB.	COMP.
1 x 26 x .254	3 x 30 x .203
1 x 15 x .114	1 x 15 x .114
3 x 26 x .203	3 x 30 x .152
1 x 15 x .254	1 x 26 x .114
	1 x 16 x .152
No slit piston	
IFP height = 164mm	
Extended length = 440mm	
Compressed length = 302.7mm	
XP Spring rate = 90 lbs/in	
XR Spring rate = 120 lbs/in	

Front - Take Apart	
XP MXZ XRS	
505073093/094	
Valve spec	
REB.	COMP.
1 x 30 x .203	3 x 34 x .152
1 x 16 x .114	1 x 26 x .114
1 x 26 x .114	1 x 18 x .254
4 x 30 x .203	
1 x 17 x .114	
No slit piston	
IFP height = 52mm	
Extended length = 456mm	
Compressed length = 305 mm	
XP Spring rate = 90 lbs/in	

Front - Take Apart	
Summit X	
505073118	
Valve spec	
REB.	COMP.
1 x 26 x .152	4 x 30 x .152
1 x 15 x .114	1 x 15 x .152
2 x 26 x .152	2 x 30 x .152
1 x 15 x .203	1 x 16 x .152
1 slit piston (2 x 0.3)	
IFP height = 161mm	
Extended length = 420mm	
Compressed length = 280mm	
XP Spring rate = 75 lbs/in	

Front - Take Apart	
Freeride 146/154 38.4/40.1	
505073123/124	
Valve spec	
REB.	COMP.
1 x 30 x .203	3 x 34 x .152
1 x 16 x .114	1 x 18 x .152
1 x 24 x .114	1 x 28 x .114
3 x 30 x .203	3 x 34 x .152
1 x 18 x .152	1 x 26 x .114
	1 x 24 x .114
	1 x 16 x .203
No slit piston	
IFP height = 52mm	
Extended length = 431mm	
Compressed length = 293 mm	
XP Spring rate = 90 lbs/in	

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Center - Take Apart	
XP/XR MXZ TNT	
503191791	
Valve spec	
REB.	COMP.
1 x 26 x .203	2 x 30 x .203
1 x 15 x .114	1 x 14 x .152
3 x 26 x .254	6 x 30 x .152
1 x 16 x .203	1 x 26 x .114
	1 x 18 x .114
1 slit piston (2 x 0.3)	
IFP height = 119.5mm	
Extended length = 331mm	
Compressed length = 238mm	
XP/XR Spring rate = 110 lbs/in	

Center - Take Apart	
MXZ X - rMotion	
503192769	
Valve spec	
REB.	COMP.
1 x 26 x .203	1 x 30 x .203
1 x 15 x .114	1 x 14 x .152
3 x 26 x .254	1 x 30 x .203
1 x 16 x .203	1 x 26 x .114
	1 x 16 x .254
1 slit piston (2 x 0.3)	
IFP height = 133mm	
Extended length = 366mm	
Compressed length = 260mm	
XP Spring rate = 190/175 lbs/in	

Center - Take Apart	
MXZ XRS - rMotion - Freeride 38.4/40.1	
503192783	
Valve spec	
REB.	COMP.
1 x 30 x .254	2 x 34 x .203
1 x 16 x .114	1 x 22 x .114
1 x 26 x .114	1 x 34 x .203
3 x 30 x .203	1 x 28 x .114
1 x 17 x .114	1 x 26 x .114
	1 x 18 x .254
0.9mm hole piston	
IFP height = 52mm	
Extended length = 366mm	
Compressed length = 260mm	
XP Spring rate = 190/197 lbs/in	

Center - Take Apart	
XP Renegade X	
503192035	
Valve spec	
REB.	COMP.
1 x 26 x .203	6 x 30 x .203
1 x 15 x .114	1 x 17 x .152
3 x 26 x .203	5 x 30 x .203
1 x 16 x .203	1 x 26 x .114
	1 x 22 x .114
1 slit piston (2 x 0.3)	
IFP height = 119.5	
Extended length = 331mm	
Compressed length = 238mm	
XP Spring rate = 135 lbs/in	

Center - Take Apart	
XR Renegade X	
503191797	
Valve spec	
REB.	COMP.
1 x 26 x .203	2 x 30 x .203
1 x 15 x .114	1 x 17 x .152
3 x 26 x .254	10 x 30 x .152
1 x 16 x .203	1 x 26 x .114
	1 x 22 x .114
1 slit piston (2 x 0.3)	
IFP height = 119.5mm	
Extended length = 331mm	
Compressed length = 238mm	
Spring rate = 180 lbs/in	

Center - Take Apart	
Summit X	
503192210	
Valve spec	
REB.	COMP.
1 x 26 x .254	1 x 30 x .203
1 x 15 x .114	1 x 14 x .152
4 x 26 x .254	4 x 30 x .203
1 x 16 x .203	1 x 26 x .114
	1 x 20 x .114
1 slit piston (2 x 0.3)	
IFP height = 133mm	
Extended length = 366mm	
Compressed length = 260mm	
XP Spring rate = 215/275 lbs/in	
XR Spring rate = 319/325 lbs/in	

Center - Take Apart	
Freeride 137	
503192962	
Valve spec	
REB.	COMP.
1 x 30 x .254	2 x 34 x .203
1 x 16 x .114	1 x 22 x .114
1 x 26 x .114	1 x 34 x .203
3 x 30 x .203	1 x 28 x .114
1 x 17 x .114	1 x 26 x .114
	1 x 18 x .254
0.9mm hole piston	
IFP height = 52mm	
Extended length = 331mm	
Compressed length = 238mm	
Spring rate = 135 lbs/in	

Center - Take Apart	
Freeride 41.6/43.3 (Racing)	
503192458	
Valve spec	
REB.	COMP.
1 x 30 x .254	3 x 34 x .203
1 x 16 x .114	1 x 15 x .152
1 x 26 x .114	1 x 28 x .114
5 x 30 x .203	4 x 34 x .152
1 x 18 x .152	1 x 26 x .114
	1 x 24 x .114
	1 x 18 x .203
0.9mm hole piston	
IFP height = 52mm	
Extended length = 366mm	
Compressed length = 260mm	
Spring rate = 215/275 lbs/in	

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Rear - Take Apart	
XP MXZ TNT	
503192120	
Valve spec	
REB.	COMP.
1 x 26 x .203	4 x 30 x .203
1 x 16 x .114	1 x 15 x .152
4 x 26 x .254	2 x 30 x .203
1 x 16 x .203	1 x 26 x .114
	1 x 16 x .152
1 slit piston (2 x 0.3)	
IFP height = 171.5mm	
Extended length = 437.5mm	
Compressed length = 288.5mm	
XP Spring rate = 1.28-95deg	

Rear - Take Apart	
XP/XR MXZ X rMotion	
503192456	
Valve spec	
REB.	COMP.
1 x 26 x .203	3 x 30 x .152
1 x 15 x .114	1 x 15 x .152
3 x 26 x .254	1 x 30 x .203
1 x 16 x .203	1 x 26 x .114
	1 x 16 x .152
1 slit piston (2 x 0.3)	
BASE VALVE single speed	
IFP height = 54.5mm	
Extended length = 437.5mm	
Compressed length = 288.5mm	
XP/XR Spring rate = 1.35-80deg	

Rear - Take Apart	
XP/XR MXZ X rMotion SAK	
503193172	
Valve spec	
REB.	COMP.
1 x 26 x .203	3 x 30 x .152
1 x 15 x .114	1 x 15 x .152
3 x 26 x .254	1 x 30 x .203
1 x 16 x .203	1 x 26 x .114
	1 x 16 x .152
1 slit piston (2 x 0.3)	
BASE VALVE single speed	
IFP height = 54.5mm	
Extended length = 437.5mm	
Compressed length = 288.5mm	
XP/XR Spring rate = 1.35-80deg	
SAK = Suspension Adjustability Kit	

Rear - Take Apart	
MXZ XRS rMotion	
503192908	
Valve spec	
REB.	COMP.
1 x 30 x .203	3 x 34 x .203
1 x 16 x .114	1 x 22 x .114
4 x 30 x .254	2 x 34 x .203
1 x 17 x .305	1 x 28 x .114
	1 x 26 x .114
	1 x 18 x .254
0.9mm hole piston	
IFP height = 52mm	
Extended length = 437.5mm	
Compressed length =288.5 mm	
Spring rate = 1.35-80deg	

Rear - Take Apart	
MXZ XRS rMotion SAK	
503193173	
Valve spec	
REB.	COMP.
1 x 30 x .203	3 x 34 x .203
1 x 16 x .114	1 x 22 x .114
4 x 30 x .254	2 x 34 x .203
1 x 17 x .305	1 x 28 x .114
	1 x 26 x .114
	1 x 18 x .254
0.9mm hole piston	
IFP height = 52mm	
Extended length = 437.5mm	
Compressed length = 288.5 mm	
Spring rate = 1.35-80deg	
SAK = Suspension Adjustability Kit	

Rear - Take Apart	
XP/XR Renegade X	
503192205	
Valve spec	
REB.	COMP.
1 x 26 x .203	5 x 30 x .254
1 x 16 x .114	1 x 15 x .152
4 x 26 x .254	4 x 30 x .254
1 x 16 x .203	1 x 26 x .114
	1 x 16 x .152
1 slit piston (2 x 0.3)	
BASE VALVE SPEC	
2 x 18 x .305 ; 3 x 15 x .305	
BV Spring 11501-14387	
IFP height = 54.5mm	
Extended length = 551mm	
Compressed length = 413mm	
XP Spring rate = 1.28-95deg	
XR Spring rate = 1.33-100deg	

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Rear - Take Apart	
Freeride 137 SC-5	
503192963	
Valve spec	
REB.	COMP.
1 x 30 x .254	6 x 34 x .254
1 x 16 x .114	1 x 22 x .114
4 x 30 x .203	2 x 34 x .203
1 x 17 x .305	1 x 28 x .114
	1 x 26 x .114
	1 x 18 x .254
0.9mm hole piston	
IFP height = 52mm	
Extended length = 551mm	
Compressed length = 413mm	
Spring rate = 1.33-100deg	

Rear - Take Apart	
Freeride 146/154 38.4/40.1	
503192964	
Valve spec	
REB.	COMP.
1 x 30 x .254	2 x 34 x .203
1 x 16 x .114	1 x 20 x .114
5 x 30 x .203	1 x 34 x .203
1 x 17 x .305	1 x 28 x .114
	1 x 26 x .114
	1 x 18 x .254
0.9mm hole piston	
IFP height = 52mm	
Extended length = 437.5mm	
Compressed length =288.5 mm	
Spring rate = 1.35-80deg	

Rear - Take Apart	
Summit X	
503192208	
Valve spec	
REB.	COMP.
1 x 26 x .203	6 x 30 x .203
1 x 15 x .114	1 x 15 x .152
4 x 26 x .254	4 x 30 x .203
1 x 16 x .203	1 x 26 x .114
	1 x 16 x .152
1 slit piston (2 x 0.3)	
IFP height = 171.5mm	
Extended length = 437.5mm	
Compressed length = 288.5mm	
XP Spring rate = 1.27-80deg	
XR Spring rate = 1.35-80deg	

Rear - Take Apart	
XP/XR MXZ TNT (Europe)	
503192023	
Valve spec	
REB.	COMP.
1 x 26 x .203	7 x 30 x .203
1 x 16 x .114	1 x 17 x .152
4 x 26 x .254	4 x 30 x .203
1 x 16 x .203	1 x 26 x .114
	1 x 16 x .152
1 slit piston (2 x 0.3)	
IFP height = 171.5mm	
Extended length = 437.5mm	
Compressed length = 288.5mm	
XP Spring rate = 1.28-95deg	
XR Spring rate = 1.33-100deg	

Rear - Take Apart	
XP/XR Renegade (Europe)	
503192298	
Valve spec	
REB.	COMP.
1 x 26 x .203	7 x 30 x .254
1 x 16 x .114	1 x 18 x .152
4 x 26 x .254	6 x 30 x .254
1 x 16 x .203	1 x 26 x .114
	1 x 16 x .152
1 slit piston (2 x 0.3)	
BASE VALVE SPEC	
2 x 18 x .305 ; 3 x 15 x.305	
BV Spring 11501-14387	
IFP height = 54.5mm	
Extended length = 551mm	
Compressed length = 413mm	
XP Spring rate = 1.28-95deg	
XR Spring rate = 1.33-100deg	

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Front - Take Apart	
Freeride 41.6/43.3 (Race)	
505072937/938	
Valve spec	
REB.	COMP.
1 x 30 x .254	2 x 34 x .203
1 x 16 x .114	1 x 15 x .152
1 x 24 x .114	1 x 28 x .114
3 x 30 x .203	3 x 34 x .152
1 x 18 x .152	1 x 26 x .114
	1 x 24 x .114
	1 x 16 x .203
No slit piston	
IFP height = 52mm	
Extended length = 441mm	
Compressed length = 298 mm	
XP Spring rate = 90 lbs/in	

Center - Take Apart	
Freeride 41.6/43.3 (Race)	
503192458	
Valve spec	
REB.	COMP.
1 x 30 x .254	3 x 34 x .203
1 x 16 x .114	1 x 15 x .152
1 x 26 x .114	1 x 28 x .114
5 x 30 x .203	4 x 34 x .152
1 x 18 x .152	1 x 26 x .114
	1 x 24 x .114
	1 x 18 x .203
0.9mm hole piston	
IFP height = 52mm	
Extended length = 366mm	
Compressed length = 260mm	
Spring rate = 215/275 lbs/in	

Rear - Take Apart	
Freeride 41.6/43.3 (Race)	
503192459	
Valve spec	
REB.	COMP.
1 x 30 x .254	4 x 34 x .203
1 x 16 x .114	1 x 18 x .152
1 x 28 x .114	1 x 30 x .114
4 x 30 x .203	3 x 34 x .152
1 x 18 x .152	1 x 26 x .114
	1 x 24 x .114
	2 x 16 x .114
0.9mm hole piston	
IFP height = 52mm	
Extended length = 551mm	
Compressed length = 406 mm	
Spring rate = 1.27-80deg	

Front - Take Apart	
600 RS (Production Calibration - PCX)	
505073145/146	
2012 Prod Cal - Valve spec	
REB.	COMP.
1 x 30 x .254	4 x 34 x .254
1 x 16 x .114	1 x 22 x .152
5 x 30 x .203	1 x 32 x .114
2 x 17 x .114	6 x 34 x .203
	1 x 32 x .203
	1 x 30 x .254
	1 x 28 x .254
	1 x 26 x .254
	1 x 24 x .254
	1 x 20 x .305
No piston bleed	
BASE VALVE SPEC	
RL=2 BL=4 BH=3/4 turn	
IFP height = 66mm	
Spring rate = 165lbs/in * 3/4"	
Spring rate = 28.9N/mm * 19mm	

Center - Take Apart	
600 RS (Production Calibration - PCX)	
503193111	
2012 Prod Cal - Valve spec	
REB.	COMP.
2 x 30 x .254	6 x 34 x .254
1 x 16 x .114	1 x 34 x .203
5 x 30 x .203	1 x 22 x .152
2 x 17 x .114	1 x 30 x .114
	5 x 34 x .254
	1 x 30 x .203
	1 x 28 x .203
	1 x 26 x .203
	1 x 24 x .203
	1 x 22 x .203
	1 x 20 x .305
1 slit piston (2 x 0.1)	
BASE VALVE SPEC	
BL=4 BH=3/4 turn	
IFP height = 66mm	
Spring rate = 735/240lbs/in x 1/8"	
Spring rate = 128/42N/mm * 3mm	

Rear - Take Apart	
600 RS (Production Calibration - PCX)	
503193109	
2012 Prod Cal - Valve spec	
REB.	COMP.
2 x 30 x .254	6 x 34 x .254
1 x 16 x .114	1 x 23 x .152
5 x 30 x .203	1 x 32 x .114
2 x 19 x .114	2 x 34 x .203
	1 x 32 x .254
	1 x 30 x .305
	1 x 28 x .305
	1 x 26 x .305
	1 x 24 x .305
	1 x 22 x .305
	1 x 20 x .305
1 slit piston (2 x 0.1)	
BASE VALVE SPEC	
BL=4 BH=3/4 turn	
IFP height = 66mm	
Spring rate = 1.56-100 #1 - #1	
Coupling #4 (Maximum is #5)	

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Front - Take Apart	
600 RS (Trail Calibration - PCX)	
505073145/146	
Optional 2012 - Valve spec	
REB.	COMP.
1 x 30 x .254	2 x 34 x .203
1 x 16 x .114	1 x 15 x .152
1 x 24 x .114	1 x 28 x .114
3 x 30 x .203	3 x 34 x .152
1 x 18 x .152	1 x 26 x .254
	1 x 24 x .254
	1 x 16 x .203
0mm piston bleed	
BASE VALVE SPEC	
RL=10 BL=4 BH=1.5 turn	
IFP height = 54mm	
Spring rate = 90lbs/in * 1/2"	
15mm shorter shock recommended - install a 15mm spacer	

Center - Take Apart	
600 RS (Trail Calibration - PCX)	
503193111	
Optional 2012 - Valve spec	
REB.	COMP.
1 x 30 x .254	2 x 34 x .203
1 x 16 x .114	1 x 15 x .152
1 x 24 x .114	1 x 28 x .114
4 x 30 x .203	2 x 34 x .152
2 x 17 x .114	1 x 28 x .203
	1 x 26 x .203
	1 x 16 x .203
1 slit piston (2 x 0.1)	
BASE VALVE SPEC	
BL=4 BH=1.5 turn	
IFP height = 54mm	
Spring rate = 220/240 lbs/in x 1/4"	

Rear - Take Apart	
600 RS (Trail Calibration - PCX)	
503193109	
Optional 2012 - Valve spec	
REB.	COMP.
1 x 30 x .254	4 x 34 x .203
1 x 16 x .114	1 x 18 x .152
1 x 28 x .114	1 x 28 x .114
4 x 30 x .203	4 x 34 x .152
1 x 18 x .152	1 x 28 x .305
	1 x 26 x .305
	1 x 16 x .203
1 slit piston (2 x 0.1)	
BASE VALVE SPEC	
BL=4 BH=1.5 turn	
IFP height = 54mm	
Spring rate = 1.33-100 #3	
Coupling #3 (Maximum is #5)	

Front - Take Apart	
600 RS (Sno-X Softer Calibration - PCX)	
505073145/146	
Optional 2012 - Valve spec	
REB.	COMP.
1 x 30 x .254	4 x 34 x .254
1 x 16 x .114	1 x 22 x .152
5 x 30 x .203	1 x 32 x .114
2 x 17 x .114	6 x 34 x .203
	1 x 32 x .203
	1 x 30 x .254
	1 x 28 x .254
	1 x 26 x .254
	1 x 24 x .254
	1 x 19 x .305
No piston bleed	
BASE VALVE SPEC	
RL=6 BL=8 BH=3/4 turn	
IFP height = 66mm	
Spring rate = 165lbs/in * 1/2"	
Spring rate = 28.9N/mm * 13mm	

Center - Take Apart	
600 RS (Sno-X Softer Calibration - PCX)	
503193111	
Optional 2012 - Valve spec	
REB.	COMP.
2 x 30 x .254	6 x 34 x .254
1 x 16 x .114	1 x 34 x .203
5 x 30 x .203	1 x 22 x .152
2 x 17 x .114	1 x 30 x .114
	5 x 34 x .254
	1 x 30 x .203
	1 x 28 x .203
	1 x 26 x .203
	1 x 24 x .203
	1 x 22 x .203
	1 x 19 x .305
1 slit piston (2 x 0.1)	
BASE VALVE SPEC	
BL=8 BH=3/4 turn	
IFP height = 66mm	
Spring rate = 735/240lbs/in x 1/8"	
Spring rate = 128/42N/mm * 3mm	

Rear - Take Apart	
600 RS (Sno-X Softer Calibration - PCX)	
503193109	
Optional 2012 - Valve spec	
REB.	COMP.
2 x 30 x .254	6 x 34 x .254
1 x 16 x .114	1 x 23 x .152
5 x 30 x .203	1 x 32 x .114
2 x 19 x .114	2 x 34 x .203
	1 x 32 x .254
	1 x 30 x .305
	1 x 28 x .305
	1 x 26 x .305
	1 x 24 x .305
	1 x 22 x .305
	1 x 19 x .305
1 slit piston (2 x 0.1)	
BASE VALVE SPEC	
BL=8 BH=3/4 turn	
IFP height = 66mm	
Spring rate = 1.56-100 #1 - #1	
Coupling #2 (Maximum is #5)	

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Front - Take Apart	
600 RS (Sno-X Stiffer Calibration - PCX)	
505073145/146	
Optional 2012 - Valve spec	
REB.	COMP.
1 x 30 x .254	4 x 34 x .254
1 x 16 x .114	1 x 22 x .152
5 x 30 x .203	1 x 32 x .114
2 x 17 x .114	7 x 34 x .203
	1 x 32 x .203
	1 x 30 x .254
	1 x 28 x .254
	1 x 26 x .254
	1 x 24 x .254
	1 x 20 x .305
No piston bleed	
BASE VALVE SPEC	
RL=2 BL=3 BH=3/4 turn	
IFP height = 66mm	
Spring rate = 175lbs/in * 3/4"	
Spring rate = 28,9N/mm * 19mm	

Center - Take Apart	
600 RS (Sno-X Stiffer Calibration - PCX)	
503193111	
Optional 2012 - Valve spec	
REB.	COMP.
2 x 30 x .254	7 x 34 x .254
1 x 16 x .114	1 x 34 x .203
5 x 30 x .203	1 x 22 x .152
2 x 17 x .114	1 x 30 x .114
	5 x 34 x .254
	1 x 30 x .203
	1 x 28 x .203
	1 x 26 x .203
	1 x 24 x .203
	1 x 22 x .203
	1 x 20 x .305
1 slit piston (2 x 0.1)	
BASE VALVE SPEC	
BL=3 BH=3/4 turn	
IFP height = 66mm	
Spring rate = 735/275lbs/in x 1/8"	
Spring rate = 128/48,2N/mm * 3mm	

Rear - Take Apart	
600 RS (Sno-X Stiffer Calibration - PCX)	
503193109	
Optional 2012 - Valve spec	
REB.	COMP.
2 x 30 x .254	7 x 34 x .254
1 x 16 x .114	1 x 23 x .152
5 x 30 x .203	1 x 32 x .114
2 x 19 x .114	2 x 34 x .203
	1 x 32 x .254
	1 x 30 x .305
	1 x 28 x .305
	1 x 26 x .305
	1 x 24 x .305
	1 x 22 x .305
	1 x 20 x .305
1 slit piston (2 x 0.1)	
BASE VALVE SPEC	
BL=3 BH=3/4 turn	
IFP height = 66mm	
Spring rate = 1.73-100 #1 - #1	
Coupling #5 (Maximum is #5)	

Front - Take Apart	
600 RS (X-Country Calibration - PCX)	
503073145/146	
Optional 2012 - Valve spec	
REB.	COMP.
1 x 30 x .254	3 x 34 x .203
1 x 16 x .114	1 x 22 x .152
1 x 26 x .114	1 x 32 x .114
5 x 30 x .203	3 x 34 x .203
2 x 17 x .114	1 x 28 x .254
	1 x 26 x .254
	1 x 24 x .254
	1 x 18 x .305
BASE VALVE SPEC	
RL=6 BL=4 BH=1 turn	
IFP height = 54mm	
Spring rate = 110-135lbs/in * 1/2"	
15mm shorter shock recommended - install a 15mm spacer	

Center - Take Apart	
600 RS (X-Country Calibration - PCX)	
503193111	
Optional 2012 - Valve spec	
REB.	COMP.
1 x 30 x .254	3 x 34 x .254
1 x 16 x .114	1 x 34 x .203
1 x 26 x .114	1 x 18 x .152
5 x 30 x .203	1 x 30 x .114
1 x 18 x .152	3 x 34 x .254
	1 x 28 x .203
	1 x 26 x .203
	1 x 24 x .203
	1 x 22 x .203
	1 x 19 x .305
1 slit piston (2 x 0.1)	
BASE VALVE SPEC	
BL=4 BH=1 turn	
IFP height = 54mm	
Spring rate = 350/240 lbs/in x 1/4"	

Rear - Take Apart	
600 RS (X-Country Calibration - PCX)	
503193109	
Optional 2012 - Valve spec	
REB.	COMP.
1 x 30 x .254	4 x 34 x .254
1 x 16 x .114	1 x 20 x .152
1 x 28 x .114	1 x 32 x .114
4 x 30 x .203	2 x 34 x .254
1 x 18 x .152	1 x 28 x .305
	1 x 26 x .305
	1 x 24 x .305
	1 x 22 x .305
	1 x 19 x .305
1 slit piston (2 x 0.1)	
BASE VALVE SPEC	
BL=4 BH=1 turn	
IFP height = 54mm	
Spring rate = 1.33-100 #3	
Coupling #4 (Maximum is #5)	

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Front - Take Apart	
600 RS (Sno-X Scandinavian - PCX)	
505073145/146	
Optional 2012 - Valve spec	
REB.	COMP.
1 x 30 x .254	4 x 34 x .254
1 x 16 x .114	1 x 22 x .152
5 x 30 x .203	1 x 32 x .114
2 x 17 x .114	6 x 34 x .203
	1 x 32 x .203
	1 x 30 x .254
	1 x 28 x .254
	1 x 26 x .254
	1 x 24 x .254
	1 x 19 x .305
No piston bleed	
BASE VALVE SPEC	
RL=6 BL=8 BH=3/4 turn	
IFP height = 66mm	
Spring rate = 165lbs/in * 5/8"	
Spring rate = 28,9N/mm * 16mm	

Center - Take Apart	
600 RS (Sno-X Scandinavian - PCX)	
503193111	
Optional 2012 - Valve spec	
REB.	COMP.
2 x 30 x .254	6 x 34 x .254
1 x 16 x .114	1 x 34 x .203
4 x 30 x .203	1 x 22 x .152
2 x 17 x .114	1 x 30 x .114
	5 x 34 x .254
	1 x 30 x .203
	1 x 28 x .203
	1 x 26 x .203
	1 x 24 x .203
	1 x 22 x .203
	1 x 19 x .305
1 slit piston (2 x 0.1)	
BASE VALVE SPEC	
BL=8 BH=3/4 turn	
IFP height = 66mm	
Spring rate = 735/240lbs/in x 1/8"	
Spring rate = 128/42N/mm * 3mm	

Rear - Take Apart	
600 RS (Sno-X Scandinavian - PCX)	
503193109	
Optional 2012 - Valve spec	
REB.	COMP.
2 x 30 x .254	6 x 34 x .254
1 x 16 x .114	1 x 23 x .152
5 x 30 x .203	1 x 32 x .114
2 x 19 x .114	2 x 34 x .203
	1 x 32 x .254
	1 x 30 x .305
	1 x 28 x .305
	1 x 26 x .305
	1 x 24 x .305
	1 x 22 x .305
	1 x 19 x .305
1 slit piston (2 x 0.1)	
BASE VALVE SPEC	
BL=8 BH=3/4 turn	
IFP height = 66mm	
Spring rate = 1.56-100 #1 - #1	
Coupling #4 (Maximum is #5)	

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Optional Soft Valving	
XP/XR MXZ TNT	
503192023	
Valve spec	
REB.	COMP.
1 x 26 x .203	3 x 30 x .203
1 x 16 x .114	1 x 15 x .152
4 x 26 x .254	2 x 30 x .203
1 x 16 x .203	1 x 26 x .114
	1 x 16 x .152
1 slit piston (2 x 0.3)	
IFP height = 171.5mm	
Extended length = 437.5mm	
Compressed length = 288.5mm	
XP Spring rate = 1.28-95deg	
XR Spring rate = 1.33-100deg	

Rear T/A - Standard Valving	
XP & XR MXZ TNT	
503192023	
Valve spec	
REB.	COMP.
1 x 26 x .203	7 x 30 x .203
1 x 16 x .114	1 x 17 x .152
4 x 26 x .254	4 x 30 x .203
1 x 16 x .203	1 x 26 x .114
	1 x 16 x .152
1 slit piston (2 x 0.3)	
IFP height = 171.5mm	
Extended length = 437.5mm	
Compressed length = 288.5mm	
XP Spring rate = 1.28-95deg	
XR Spring rate = 1.33-100deg	

Optional Hard Valving	
XP & XR MXZ TNT	
503192023	
Valve spec	
REB.	COMP.
1 x 26 x .203	5 x 30 x .254
1 x 16 x .114	1 x 19 x .152
4 x 26 x .254	7 x 30 x .203
1 x 16 x .203	1 x 26 x .114
	1 x 16 x .152
1 slit piston (2 x 0.3)	
IFP height = 171.5mm	
Extended length = 437.5mm	
Compressed length = 288.5mm	
XP Spring rate = 1.28-95deg	
XR Spring rate = 1.33-100deg	

Optional Soft Valving	
XP/XR MXZ X rMotion	
503192456 or 503193172	
Valve spec	
REB.	COMP.
1 x 26 x .203	2 x 30 x .152
1 x 15 x .114	1 x 15 x .152
3 x 26 x .254	1 x 30 x .152
1 x 16 x .203	1 x 26 x .114
	1 x 16 x .152
1 slit piston (2 x 0.3)	
BASE VALVE single speed	
IFP height = 54.5mm	
Extended length = 437.5mm	
Compressed length = 288.5mm	
XP/XR Spring rate = 1.35-80deg	

Rear T/A - Standard Valving	
XP/XR MXZ X rMotion	
503192456 or 503193172	
Valve spec	
REB.	COMP.
1 x 26 x .203	3 x 30 x .152
1 x 15 x .114	1 x 15 x .152
3 x 26 x .254	1 x 30 x .203
1 x 16 x .203	1 x 26 x .114
	1 x 16 x .152
1 slit piston (2 x 0.3)	
BASE VALVE single speed	
IFP height = 54.5mm	
Extended length = 437.5mm	
Compressed length = 288.5mm	
XP/XR Spring rate = 1.35-80deg	

Optional Hard Valving	
XP/XR MXZ X rMotion	
503192456 or 503193172	
Valve spec	
REB.	COMP.
1 x 26 x .203	4 x 30 x .203
1 x 15 x .114	1 x 15 x .152
4 x 26 x .254	2 x 30 x .203
1 x 16 x .203	1 x 26 x .114
	1 x 16 x .152
1 slit piston (2 x 0.3)	
BASE VALVE single speed	
IFP height = 54.5mm	
Extended length = 437.5mm	
Compressed length = 288.5mm	
XP/XR Spring rate = 1.35-80deg	

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Optional Soft Valving	
XP/XR Renegade X	
503192205	
Valve spec	
REB.	COMP.
1 x 26 x .203	4 x 30 x .203
1 x 16 x .114	1 x 15 x .152
4 x 26 x .254	3 x 30 x .203
1 x 16 x .203	1 x 26 x .114
	1 x 16 x .152
1 slit piston (2 x 0.3)	
BASE VALVE SPEC	
2 x 18 x .305 ; 3 x 15 x .305	
BV Spring 11501-14387	
IFP height = 54.5mm	
Extended length = 551mm	
Compressed length = 413mm	
XP Spring rate = 1.28-95deg	
XR Spring rate = 1.33-100deg	

Rear T/A - Standard Valving	
XP/XR Renegade X	
503192205	
Valve spec	
REB.	COMP.
1 x 26 x .203	5 x 30 x .254
1 x 16 x .114	1 x 15 x .152
4 x 26 x .254	4 x 30 x .254
1 x 16 x .203	1 x 26 x .114
	1 x 16 x .152
1 slit piston (2 x 0.3)	
BASE VALVE SPEC	
2 x 18 x .305 ; 3 x 15 x .305	
BV Spring 11501-14387	
IFP height = 54.5mm	
Extended length = 551mm	
Compressed length = 413mm	
XP Spring rate = 1.28-95deg	
XR Spring rate = 1.33-100deg	

Optional Hard Valving	
XP & XR Renegade X	
503192205	
Valve spec	
REB.	COMP.
1 x 26 x .203	7 x 30 x .254
1 x 16 x .114	1 x 18 x .152
4 x 26 x .254	6 x 30 x .254
1 x 16 x .203	1 x 26 x .114
	1 x 16 x .152
1 slit piston (2 x 0.3)	
BASE VALVE SPEC	
2 x 18 x .305 ; 3 x 15 x .305	
BV Spring 11501-14387	
IFP height = 54.5mm	
Extended length = 551mm	
Compressed length = 413mm	
XP Spring rate = 1.28-95deg	
XR Spring rate = 1.33-100deg	

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Center - Non Take Apart	
XP Renegade Adren	
503192504	
Valve spec	
REB.	COMP.
1 x 26 x .203	6 x 30 x .203
1 x 15 x .114	1 x 17 x .152
3 x 26 x .203	5 x 30 x .203
1 x 16 x .203	1 x 26 x .114
	1 x 22 x .114
1 slit piston (2 x 0.3)	
IFP height = not t/a	
Extended length = 331mm	
Compressed length = 238mm	
Spring rate = 135 lbs/in	

Center - Non Take Apart	
XR Renegade Adren	
503192984	
Valve spec	
REB.	COMP.
1 x 26 x .203	2 x 30 x .203
1 x 15 x .114	1 x 17 x .152
3 x 26 x .254	10 x 30 x .152
1 x 16 x .203	1 x 26 x .114
	1 x 22 x .114
1 slit piston (2 x 0.3)	
IFP height = not t/a	
Extended length = 331mm	
Compressed length = 238mm	
Spring rate = 180 lbs/in	

Center - Non Take Apart	
GTX / GSX SE	
503192988	
Valve spec	
REB.	COMP.
1 x 26 x .203	1 x 30 x .203
1 x 15 x .114	1 x 14 x .152
3 x 26 x .203	5 x 30 x .152
1 x 16 x .203	1 x 17 x .152
1 slit piston (2 x 0.3)	
IFP height = not t/a	
Extended length = 331mm	
Compressed length = 238mm	
Spring rate = 135 lbs/in	

Center - Non Take Apart	
Tundra Extreme	
503192991	
Valve spec	
REB.	COMP.
1 x 26 x .254	1 x 30 x .203
1 x 15 x .114	1 x 14 x .152
4 x 26 x .254	5 x 30 x .203
1 x 16 x .203	1 x 28 x .114
	1 x 24 x .114
1 slit piston (2 x 0.3)	
IFP height = not t/a	
Extended length = 331mm	
Compressed length = 238mm	
Spring rate = 215/275 lbs/in	

Center - Non Take Apart	
Summit Everest	
503192986	
Valve spec	
REB.	COMP.
1 x 26 x .254	1 x 30 x .203
1 x 15 x .114	1 x 14 x .152
4 x 26 x .254	4 x 30 x .203
1 x 16 x .203	1 x 26 x .114
	1 x 20 x .114
1 slit piston (2 x 0.3)	
IFP height = not t/a	
Extended length = 366mm	
Compressed length = 260mm	
Spring rate = 215/275 lbs/in	

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Front - Non Take Apart	
Summit Everest	
505072935	
Valve spec	
REB.	COMP.
1 x 26 x .152	4 x 30 x .152
1 x 15 x .114	1 x 15 x .152
2 x 26 x .152	2 x 30 x .152
1 x 15 x .203	1 x 16 x .152
1 slit piston (2 x 0.3)	
IFP height = not t/a	
Extended length = 420mm	
Compressed length = 280mm	
XP Spring rate = 75 lbs/in	

Front - Non Take Apart	
XP GT & GSX LE	
505072261	
Valve spec	
REB.	COMP.
1 x 26 x .203	1 x 30 x .203
1 x 15 x .114	1 x 14 x .152
2 x 26 x .152	4 x 30 x .152
1 x 15 x .254	1 x 16 x .152
1 slit piston (2 x 0.3)	
IFP height = not t/a	
Extended length = 431mm	
Compressed length = 285mm	
Spring rate = 90 lbs/in	

Front - Non Take Apart	
XR GT & GSX SE	
505072489	
Valve spec	
REB.	COMP.
1 x 26 x .203	3 x 30 x .203
1 x 15 x .114	1 x 15 x .152
4 x 26 x .152	3 x 30 x .203
1 x 16 x .203	1 x 26 x .114
	1 x 16 x .152
1 slit piston (2 x 0.3)	
IFP height = not t/a	
Extended length = 431mm	
Compressed length = 285mm	
Spring rate = 120 lbs/in	

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Rear - Non Take Apart	
GTX 550	
503192295	
Valve spec	
REB.	COMP.
1 x 26 x .203	4 x 30 x .152
1 x 16 x .114	1 x 15 x .152
4 x 26 x .254	1 x 30 x .203
1 x 16 x .203	1 x 16 x .152
1 slit piston (2 x 0.3)	
IFP height = not t/a	
Extended length =477mm	
Compressed length = 335mm	
Spring rate = 1.66-80deg	

Rear - Non Take Apart	
XR GTX LE VR	
503191853	
Valve spec - Variable Rate	
REB.	COMP.
1 x 26 x .254	1 x 30 x .254
1 x 15 x .114	1 x 30 x .203
5 x 26 x .254	1 x 19 x .152
1 x 16 x .254	3 x 30 x .203
	1 x 17 x .254
1 slit piston (2 x 0.3)	
IFP height = not t/a	
Extended length = 551mm	
Compressed length = 413mm	
Spring rate = 1.78-100deg	

Rear - Non Take Apart	
XP Renegade Adren	
503192037	
Valve spec	
REB.	COMP.
1 x 26 x .203	5 x 30 x .203
1 x 15 x .114	1 x 15 x .152
3 x 26 x .254	3 x 30 x .203
1 x 16 x .203	1 x 26 x .114
	1 x 16 x .152
1 slit piston (2 x 0.3)	
IFP height = not t/a	
Extended length = 551mm	
Compressed length = 413mm	
Spring rate = 1.28-95deg	

Rear - Non Take Apart	
XR Renegade Adren	
503192026	
Valve spec	
REB.	COMP.
1 x 26 x .203	6 x 30 x .203
1 x 16 x .114	1 x 15 x .152
4 x 26 x .254	6 x 30 x .203
1 x 16 x .203	1 x 26 x .114
	1 x 16 x .152
1 slit piston (2 x 0.3)	
IFP height = not t/a	
Extended length = 551mm	
Compressed length = 413mm	
Spring rate = 1.33-100deg	

Rear - Non Take Apart	
Tundra 137	
503192159	
Valve spec	
REB.	COMP.
1 x 26 x .203	2 x 30 x .152
1 x 16 x .114	1 x 16 x .152
3 x 26 x .254	1 x 30 x .203
1 x 16 x .203	1 x 16 x .152
1 slit piston (2 x 0.3)	
IFP height = not t/a	
Extended length =477mm	
Compressed length = 335mm	
Spring rate = 1.27-80deg	

Rear - Non Take Apart	
Tundra LT	
503192294	
Valve spec	
REB.	COMP.
1 x 26 x .203	3 x 30 x .152
1 x 16 x .114	1 x 16 x .152
3 x 26 x .254	1 x 30 x .203
1 x 16 x .203	1 x 16 x .152
1 slit piston (2 x 0.3)	
IFP height = not t/a	
Extended length = 551mm	
Compressed length = 413mm	
Spring rate = 1.35-80deg	

Rear - Non Take Apart	
Tundra Extreme	
503192639	
Valve spec	
REB.	COMP.
1 x 26 x .203	4 x 30 x .203
1 x 16 x .114	1 x 16 x .152
4 x 26 x .254	2 x 30 x .203
1 x 16 x .203	1 x 16 x .152
1 slit piston (2 x 0.3)	
IFP height = not t/a	
Extended length = 551mm	
Compressed length = 413mm	
Spring rate = 1.35-80deg	

Rear - Non Take Apart	
Expedition Sport	
503192638	
Valve spec	
REB.	COMP.
1 x 26 x .203	4 x 30 x .152
1 x 16 x .114	1 x 16 x .152
4 x 26 x .254	1 x 30 x .203
1 x 16 x .203	1 x 16 x .152
1 slit piston (2 x 0.3)	
IFP height = not t/a	
Extended length = 551mm	
Compressed length = 413mm	
Spring rate = 1.66-80deg	

Rear - Non Take Apart	
Summit Everest	
503192207	
Valve spec	
REB.	COMP.
1 x 26 x .203	6 x 30 x .203
1 x 15 x .114	1 x 15 x .152
4 x 26 x .254	4 x 30 x .203
1 x 16 x .203	1 x 26 x .114
	1 x 16 x .152
1 slit piston (2 x 0.3)	
IFP height = not t/a	
Extended lenght = 437.5mm	
Compressed lenght = 288.5mm	
XP Spring rate = 1.27-80deg	
XR Spring rate = 1.35-80deg	

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B.U.D.S. Chart – August 2011

PLATFORM	MODEL YEAR	Protocol	DESS Post 529036019	BOSSWeb/ComCenter/Get Buds Access Codes					
				A3.3.1	C3.3.1	S3.3.1	3.0.5.4	3.0.3.5	L3.3.0
				ATV	SSV	SkiDoo	Roadster	PWC&SB	2006 & older
				Released to Network					
Ski-Doo									
With D.E.S.S. connection only	All	D.E.S.S.	to program Keys						MPI-2
L/C Carb w-MPEM thru the 6 pin	All	D.E.S.S.	to program Keys						MPI-2
SDI and V1000	2003 to 2006	KW2000	to program Keys						MPI-2
SDI	2007 to 2011	Automatic	to program Keys			MPI-2			
V800	2007 to 2011	Automatic	to program Keys			MPI-2			
Carburator vehicle with ECM	2005 to 2006	KW2000							MPI-2
Carburator vehicle with ECM	2007 to 2011	Automatic				MPI-2			
E-TEC 600HO	All	Automatic				MPI-2			
1203	All	Automatic				MPI-2			
600ACE	All	Automatic				MPI-2			
Can-Am ATV									
DS450	all	Automatic		MPI-2					
Outlander 400 EFI	all	Automatic		MPI-2					
Outlander 800	all	Automatic		MPI-2					
Outlander/Renegade 500 and 650	all	Automatic		MPI-2					
Outlander 400	all	Automatic		MPI-2					
Outlander 800 with DPS	all	Automatic		MPI-2					
Outlander 800 MAX with DPS+ACS	all	Automatic		MPI-2					
Sea-Doo Watercraft									
All Carb models through D.E.S.S. Post	Up to 2005	D.E.S.S.	to program Keys						MPI-2
RFI models through the 4-pin or DESS post	Up to 2004	D.E.S.S.	to program Keys						MPI-2
RFI models throught the 6 pin	2005	KW2000	to program Keys						MPI-2
DI models through the 6-pin	All	947-DI	to program Keys						MPI-2
1503	2002 to 2006	KW2000	to program Keys						MPI-2
1503	2007 to 2011	Automatic	to program Keys					MPI-2	
I-control - GTX limited (iS) and RXT (iS)	all	Automatic						MPI-2	
Sea-Doo Sport Boats									
All Carb models through D.E.S.S. Post	Up to 2003	D.E.S.S.	to program Keys						MPI-2
DI models through the 6-pin	All	947-DI	to program Keys						MPI-2
ALL 1503	2002 to 2006	KW2000	to program Keys						MPI-2
ALL 1503	2007 to 2011	Automatic	to program Keys					MPI-2	
Can-Am Roadster									
All Models	all	Automatic					MPI-2		
SSV /VCC									
All Models	all	Automatic			MPI-2				

Ski-Doo

Quick reference chart for selecting the correct MPI – 2 communication tools required for Ski-Doo B.U.D.S. communication and programming.

The VCK (Vehicle Communication Kit) is no longer available. Only the MPI – 2 is available. This chart is intended to show what electrical adapters are required to connect the MPI – 2 to the electrical system of Ski-Doo vehicles. The proper connections will ensure that key programming, diagnostics and module updates are correctly performed with B.U.D.S.

To use this quick reference chart, first identify the vehicle to be programmed. Then reference the marked number in the column and identify the correct tool as listed in the picture section of this document. Note: For connection procedures refer to the appropriate shop manual and/or Service bulletin 2005 – 7 Note: For chassis identification refer to the chassis section of the appropriate specification booklet or the chassis identification section in the Yellow book.

Tools required for communication	# 1 529036018	# 2 710000851	# 3 529036019	# 4 529 035 904	# 5 529 035 896	# 6 529 035 869	# 7 529 035 675	# 8 529 035 997	# 9 529 033 300	# 10 861 780 600	# 11 DB9 Ext.	Protocol
S chassis DESS equipped vehicles.			–									DESS
CK3 chassis AC CDI DESS equipped vehicles			–									DESS
CK3 chassis 1997 to 2001 with 360 watt DC electrical systems.			–									DESS
ZX chassis AC CDI equipped liquid cooled vehicles			–									DESS
ZX chassis 2002 DC CDI equipped liquid cooled vehicles			–									DESS
Option 1 for Carburetor equipped vehicles with 6 pin B.U.D.S. connector and with "MPEM" printed on the electronics box(not for fuel injection, not for vehicle with ECM printed on their electronics box			–				NR					DESS
Option 2 for Carburetor equipped vehicles with 6 pin B.U.D.S. connector and with "MPEM" printed on the electronics box (Not for fuel injection, not for vehicles with ECM printed on their electronics box			–				NR					DESS
V-1000, V-810 and SDI vehicles (including 995)		U	– K*		Or the vehicle DESS key		NR					KW2000
Carburetor equipped vehicles with "ECM" printed on their electronics box (including power T.E.K.)					Install the DESS key to be programmed or already programmed on the vehicle's DESS post		NR					KW2000
E-TEC equipped vehicles					Install the DESS key to be programmed or already programmed on the vehicle's DESS post		NR					KW2000
1203 and 600ACE					Install the DESS key to be programmed or already programmed on the vehicle's DESS post		NR					KW2000

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U = For ECM or cluster Update K* = – For DESS key programming only **Notice** On the listed vehicles only use the DESS post interface for key programming. If an update of the ECM or cluster is necessary, use the diagnostic cable in its place. **Failure to use the diagnostic cable could result in module or cluster damage. NR = Not Recommended** √* = Connected if not running – Disconnect battery to start vehicle

Notice When performing any module update ensure that the vehicle or power supply battery is fully charged.

Roadster

Tools required for communication	# 1 529036018	# 2 710000851	# 3 529036019	# 4 529 035 904	# 5 529 035 896	# 6 529 035 869	# 7 529 035 675	# 8 529 035 997	# 9 529 033 300	# 10 861 780 600	# 11 DB9 Ext.	Protocol
ALL Spyder Roadster models												Auto

ATV

Tools required for communication	# 1 529036018	# 2 710000851	# 3 529036019	# 4 529 035 904	# 5 529 035 896	# 6 529 035 869	# 7 529 035 675	# 8 529 035 997	# 9 529 033 300	# 10 861 780 600	# 11 DB9 Ext.	Protocol
ALL ATV models												Auto

SSV

Tools required for communication	# 1 529036018	# 2 710000851	# 3 529036019	# 4 529 035 904	# 5 529 035 896	# 6 529 035 869	# 7 529 035 675	# 8 529 035 997	# 9 529 033 300	# 10 861 780 600	# 11 DB9 Ext.	Protocol
ALL SSV models												Auto

Sea-Doo / Sports Boat

Tools required for communication	# 1 529036018	# 2 710000851	# 3 529036019	# 4 529 035 904	# 5 529 035 896	# 6 529 035 869	# 7 529 035 675	# 8 529 035 997	# 9 529 033 300	# 10 861 780 600	# 11 DB9 Ext.	Protocol
Carb unit + RFI												DESS
DI												947 DI
4-Tec without I-Control												KW2000
4-Tec with I-Control												Auto

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New XPS 2 Stroke and 4 Stroke Oil Features

XPS

LUBRICANT CHART

Ski-Doo®
Lynx®
Sea-Doo®
Rotax®
Can-Am®

NEXT GENERATION LUBRICANTS
AND MAINTENANCE PRODUCTS

2-STROKE PRODUCTS

293600132

MINERAL GROUP		
293600117	Quart/946 ml	Approved for all carbureted Sea-Doo and Ski-Doo 2-stroke engines.
293600118	Gallon/3.785 L	
293600119	55 G Drum/205 L	
293600120	Pre-Mix/500 ml	
SEMI-SYNTHETIC GROUP		
293600100	Quart/946 ml	Approved for all Sea-Doo and Ski-Doo 2-stroke engines.
293600101	Gallon/3.785 L	
293600102	55 G Drum/205 L	
SYNTHETIC GROUP		
293600132	Quart/946 ml	Approved for all Sea-Doo and Ski-Doo 2-stroke engines.
293600133	Gallon/3.785 L	
293600134	55 G Drum/205 L	

4-STROKE PRODUCTS

293600122

703500736

SEMI-SYNTHETIC (SUMMER 4-T) (5W40)		
293600121	Quart/946 ml	Approved for all Sea-Doo and Can-Am 4-stroke engines.
293600122	Gallon/3.785 L	
293600123	55 G Drum/205 L	
SYNTHETIC (ALL CLIMATE 4-T) (0W40)		
293600112	Quart/946 ml	Approved for all Ski-Doo 4-stroke engines. Recommended for all 4-stroke engines used in extreme climate conditions except for the Supercharged Sea-Doo.
293600115	Gallon/3.785 L	
293600116	55 G Drum/205 L	
OIL CHANGE KITS		
295501075	Sea-Doo	Oil change and maintenance kit for 4-TEC engines.
703500735	Can-Am ATV All-Climate	Synthetic Oil Change kit for Renegade and Outlander 500, 650 & 800.
703500736	Can-Am ATV Summer Grade	Semi-synthetic oil change kit for Renegade and Outlander 500, 650 & 800.
415129404	Ski-Doo	Oil change and maintenance kit for 4-TEC engines.

Protect your investment.
Do not risk untested lubricants!

XPS Dealer BiFold_Cover new_1

XPS Dealer BiFold_Inside new

The new second generation XPS oils are now available. Make no mistake, the new XPS oils are in fact new oils and have been through an intensive development program to deliver the best oils ever offered from BRP. There are cheaper oils offered from other company's, but keep in mind, all Rotax engines are developed along with BRP's XPS oils. There have been confirmed cases of engine failures related to the poor quality from other brand oils and BRP highly recommends the exclusive use of XPS oil. The newly developed second generation XPS oils will prove to be the best oils ever offered from BRP. It can not be overstated how much research and development went into making the new XPS oil the best oil to work in conjunction with Rotax engines. All Rotax engines ranging from lower output fan cooled engine, to high output liquid cooled 2 and 4 stroke engines have been tested in normal to extreme conditions with the new XPS oils. Without question the new 2 stroke and 4 stroke XPS oils are the best oils available for all Rotax engines.

Regardless of what oil brand a customer chooses, it is always best to drain down oil reservoirs before switching oils. This helps avoid potential compatibility issues such as "gelling" or "gumming".

See the following for more information (excluding chemical make-up) on the 2 stroke and 4 stroke XPS oils.

The new XPS 2 stroke oils are targeting improved cleanliness, improved wear characteristics, and less smoke and smell.

– The clear advantage of the new XPS formulation is immediately obvious observing the RAVE valves which show very little to no carbon build-up even through extensive long term physical testing with no maintenance.
– With low quality oils, cylinder and piston life is limited because of the amount of cylinder and piston wear. The high detergency content of low quality oils causes an accelerated wear to the honed crosshatch finish of the cylinders and an accelerated wear to the pistons and piston rings. When an engine is run for the same test period cycles with the new XPS oils, the honed crosshatch finish on the cylinders barely show wear and the pistons and piston rings barely show any wear at all. With the new XPS 2 stroke oil executions the shearing and gliding wear mechanism between components such as the cylinder and the piston ring are delayed greatly. There is an improved wear resistance well beyond previous engine physical test target life spans.
– Bearings in a very high output 2 stroke engine can suffer in durability due to overload or grey strain pitting. The new XPS oils have been designed with the right mix of base stocks and additives to target improved crankshaft big end rod bearing life.
– Low quality oils can cause excessive hard carbon depositing in the ring groove areas. Excessive hard carbon deposits forming in the ring grooves will lead to piston failure due to ring sticking or the failure of combustion gasses to exert enough outward force on the ring. This outward force is necessary for proper ring to cylinder wall sealing. Poor ring sealing leads to "blow-by" which over-heats the piston skirt. The new XPS oils reduce hard carbon deposits by instead allowing soft carbon depositing, so the deposits are able to move away and clear out past the ring. This is a clear advantage versus other lower quality oils. Excessive hard carbon deposits accumulating in the ring groove area can also lead to "ring jacking" which exerts too much ring pressure against the cylinder wall. Ring jacking, will eventually lead to outright ring and cylinder damage, and eventually lead to a piston seizure. After extensive physical testing with the new XPS oils, we found only slight semi solid or soft carbon depositing visible in the ring groove allowing proper ring operation.
– Changes in base stocks and additives have dramatically reduced the smoke and smell of the new oils.

The new XPS 4 stroke oils are a tremendous leap forward in technology.

– Low quality 4 stroke oils, are often developed with old technology, designed exclusively for the automotive applications. These oils struggle to provide the long term protection against wear and deposits in the new smaller displacement, high revving and higher output recreational engines. Typical automotive packages also do not have adequate storage additives. The new XPS 4 stroke oils have additional corrosion inhibitors to protect recreational engines during extended storage periods due to seasonal use. These additives are state of the art, and fully protect internal engine components from corrosion. This is especially important for salty environments, humid environments, and moisture in the oil sump as a result of intermittent machine use.

– One of the most important features of the new XPS 4 stroke synthetic formula is the improved Viscosity Index (VI). An engine using the new XPS 4 stoke oil starts easier in cold temperatures and stays at the proper operating viscosity in hot temperatures. Because of this technology, there is a much wider operating range with optimum engine protection in extreme temperatures.
– The latest on liquid oil engineering technologies and development are integrated into the new XPS oil formulations, combined with a tremendous amount of testing in order to ensure that the next generation of BRP oils are fit for the next generations of BRP engines.

Annexes

In BRP's continuing efforts to improve the return process, BRP is pleased to announce that it is now possible for dealers to request an authorization number via BOSSWeb to return new and unused Ski-doo tracks that have been removed from a new unit as per the BRP **"Track Exchange Program"**. To proceed, follow the below quick and easy steps and for more details on this program, refer to the Ski-Doo dealer binder that is available in BOSSWeb. To search BOSSWeb go to Com Center/Document/Dealer Binder and then for Product Line – "Snowmobile" and for Document Year – "2012".

Program Duration:

April 1, 2011 to February 24, 2012.

Eligible Models:

All 2012 Ski-Doo snowmobile models sold after March 31, 2011.

NOTE: Tracks to be returned must be **original BRP tracks new, unused**, and in **perfect resalable condition. All tracks returned during the program duration will be credited at dealer cost, less $200**.

New for BOSSWeb users only. You may now do all YOUR return requests directly online via BOSSWeb. Here's how to proceed:

1. In the PARTS menu, select: **Return Entry**
2. The return type is: **Return Program**
3. The return reason is: **Track Exchange**
4. For your return number: **Write the unit serial #**
5. The product line is: **Snowmobile**, click the blue forward arrow to go to next step.
6. In the part number field: **Write the part number of the track being returned (attention: only one track per return request).**
7. In the quantity field: **Write quantity 1 (attention: only one track per return request)**
8. In the text field:
   Write the part # ordered:_____ and the invoice #:_____.
   Write the serial # ordered:_____ and the date installed:_____.
   Write the part # returned:_____ and the serial # returned:_____.
9. Finally, once you are sure that all information is correct, click the blue forward arrow and click on the "Submit" icon to send your return request and please allow 5 business days to receive your return authorization # (this number will appear in the return status screen).

If you are not a BOSSWeb user, a Track Exchange Form must be completed and faxed to a PAC Analyst for authorization. The Track Exchange Form is available in the "Forms" section of this dealer binder. Upon receipt and verification, the Analyst will fax you a return authorization.

Track Returns:

Original BRP tracks to be returned may be accumulated and sent back at any time freight prepaid, but no later than **February 24, 2012** to:

USA	CANADA
BRP C/O Affiliated 60 Maple Street Derby Line, VT 05830	Bombardier Recreational Products Inc. 75 J.A. Bombardier Street Sherbrooke (Quebec) J1L 1W3

A copy of the Return Authorization must be enclosed.

SKI-DOO® TRACK EXCHANGE FORM

Date:_____

Dealer Number: _____ Dealer Name: _____

Contact Person _____

Telephone: _____ Fax: _____

Unit Information

Model Number:_____ Serial Number: _____

To be completed by dealer

- ❑ US
- ❑ CAN

Part # Ordered: _____ Invoice #: _____

Serial # Ordered: _____ Date Installed:_____

Part # Returned:_____ Serial # Returned:_____

To be completed by BRP

Check list:

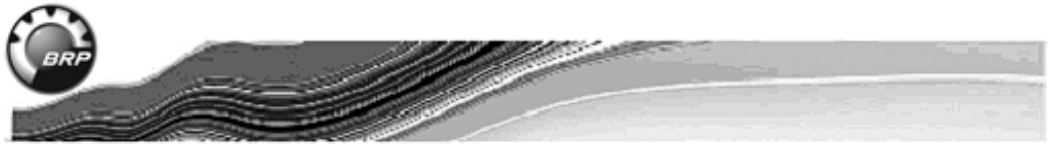
- ❑ ZGV3 / Track Serial Number
- ❑ "PO" Date Box
- ❑ VA01 / "Condition Type" / "HB00"
- ❑ VA01 / Condition / "Rate" / -200

Return Authorization number: _____

Authorized by: _____ Date Approved:_____

If you are a BOSSWeb user, please submit your exchange request via the "PARTS" menu on BOSSWeb. This form is reserved for non BOSSWeb users.

Fax completed form to PAC Analyst to receive your authorization number
US: 1-800-366-3880 / CAN: 1-800-361-7143



CDN / US
Ski-Doo
Revised March 2007

mdd2012-001-701

BRP REBUILD CENTER

May 2009

DEALER PROCEDURE
SKI-DOO® REBUILT GEARBOX FOR SKANDIC® AND EXPEDITION® TUV TRANSMISSIONS

This 4-step procedure applies specifically to Skandic and Expedition TUV gearbox repairs.

1. Dealer completes the Repair Request form from BOSSWeb™, agrees to its terms and conditions, and faxes form to the Rebuild Center. (Also confirms if replaced parts are to be returned.)
2. Rebuild Center sends a confirmation and an authorization number by fax to the dealer, after which the dealer can send the gearbox in for repair.
3. Rebuild Center receives gearbox and performs repairs.
4. Service and freight are charged to dealer parts account and rebuilt gearbox is returned to dealer.

As with every part we rebuild, we guarantee that each Skandic and Expedition TUV gearbox we repair will leave our state-of-the-art facility performing as per or above the most demanding standards. To learn more or to find out what else is new at the BRP Rebuild Center, please call your PAC analyst at **1 800 366-6992 (US) / 1 800 361-9980 (CA)**.

mdd2010-001-501

Rebuilt price list

PRODUCT	REBUILT PART	PART	ENGINE	COOLING SYSTEM	AMOUNT	YEAR	DESCRIPTION	Original Part
			TYPE	F/C - L/C	CYL.			#
SKI-DOO	421000635	REP	GEARBOX REPAIR REQUEST			N/A	Dealer completes form from BOSSWeb	N/A
	421000031	CRANKSHAFT	277	F/C	1	1993 to 2005		420995301
	421000639		277	F/C	1	2006 to 2009		420995307
	421000154		377 - 443	F/C	2	1997 to 2006		420889630
	421000151		494	L/C	2	1996 to 2000		420886933
	421000567		493	L/C	2	2000 to 2002		420888462
	421000599		493	L/C	2	2003		420888465
	421000011		503	F/C	2	1990 to 1996	Keyway at 3 o'clock	420996445
	421000155		503	F/C	2	1997 to 2003		420888390 / 420888391
	421000601		552	F/C	2	2003 to 2009		420 889 062
	421000673		552	F/C	2	2010		420 889 067
	421000553		593	L/C	2	1999		420888250
	421000563		593	L/C	2	2000 to 2002		420888252 / 420888751
	421000611		593	L/C	2	2003 to 2012		420888757
	421000664		593SDI	L/C	2	2004 to 2012		420889098 / 420890950 / 890951
			593 ETEC	L/C	2			420890956 / 420890955 / 890954
	421000574		693	L/C	2	2000 to 2002	DIECAST ENGINE ONLY	420888286
	421000609		693 593HO	L/C	2	2003 to 2007	693 AND 593 HO ONLY	420889091
	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
	421000573		793	L/C	2	2000 to 2002		420888402
	421000608		793	L/C	2	2003	2003 ONLY	420889101
	421000607		793HO	L/C	2	2003 to 2007	HO ONLY	420889671
	421000606		793SDI	L/C	2	2003 & 2004	SDI ONLY	420889106
	421000665		797	L/C	2	2006 to 2008	2006 & 2007 REV / 2008 REV-XP	420892562
	421000668		797	L/C	2	2009 to 2012	Usage of clutch bolt 417300409 is mandatory (provided)	420892567 / 420893090 / 420893093 420893098
	421000156		809	L/C	3	1997 to 2003	New modified part for 1999-2002	420887667 / 420887668 420887662
	421000634		995SDI	L/C	2	2005 & 2006		420889217
	421000200	CYLINDER	277	F/C	1	1993 to 2009		420913218 / 420913219 / 623180
	421000559		377	F/C	2	1999 to 2004	Pto	420923403
	421000560		377	F/C	2	1999 to 2004	Mag	420923408
	421000568		493	L/C	2	2001 to 2003		420923855 / 420613605
	421000500		503	F/C	2	1983 to 2003		420923417
	421000600		552	F/C	2	2003 to 2006		420923975 / 420923978
						2007 to 2009	Model MXZ, Summit et GTX/GSX	
	421000651		552	F/C	2	2007	FREESTYLE et Expedition	420623141 / 420623142
						2008 & 2009	Except MXZ, Summit and GTX/GSX	Low Port, page 2H-6 2007 Tech Update Book
						2010 & 2011	All models	
	421000578		593	L/C	2	1999 to 2011	All models	420613620 / 420613625 / 613627
	421000605	NIC. CYL.	593HO	L/C	2	2003 to 2006	H.O. ONLY	420613711
	421000624		593SDI	L/C	2	2004 to 2008	593 SDI ONLY	420613940 / 420613944
	421000667		593 ETEC	L/C	2	2008 to 2011		420623260 / 420623262
	421000064		699	L/C	3	1997 to 2000		420923420
	421000579		793	L/C	2	2000 to 2004	WITH OUT DEKO SLOTS	420923811 / 420923817
	421000604		793HO	L/C	2	2003 to 2006	H.O. ONLY	420613852
	421000666		797	L/C	2	2007 to 2009		420623240 / 420623241
	421000675		797	L/C	2	2010 & 2011	ALL PTEK & ETEC Summit Can/Us models. This cylinder must be used with piston 420893430	420623242 / 420623246 / 420413044
	421000703		797ETEC	L/C	2	2011	all flatlanders. This cylinder must be used with piston 420893430	420413042
	421000701		797ETEC	L/C	2	2012	all flatlanders and Summit Europe. This cylinder can be used on the 2011 models but only with pistons 420893314	420413046
	421000702		797ETEC	L/C	2	2012	Summit and Freeride Can/US models. This cylinder can be used on the 2011 models but only with pistons 420893314	420413041

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PRODUCT	REBUILT PART	PART	ENGINE	COOLING SYSTEM	AMOUNT	YEAR	DESCRIPTION	Original Part
			TYPE	F/C - L/C	CYL.			#
SKI-DOO	421000625	SHORTBLOCK	377	F/C	2	2004 to 2006	New 377 with oil check valves	
	421000617		493	L/C	2	2003		
	421000410		503	F/C	2	1994 to 1999		N/A
	421000638		552	F/C	2	2003 to 2007	Except REV, RF, Exped.	420055201 / 420055204
			552	F/C	2	2005 & 2006	Model REV & Expedition	420055206
						2007 to 2009	Model MXZ, Summit et GTX/GSX	
	421000663		552	F/C	2	2007	FREESTYLE / EXPEDITION	420055207
						2008 & 2009	Except MXZ, Summit and GTX/GSX	
	421000674		552	F/C	2	2010 & 2011		420055208
	421000616		593	L/C	2	2000 to 2007		420059302 / 420059304
	421000660		593XP	L/C	2	2008 & 2011	XP500SS	420059310/420059312
	421000615		593HO	L/C	2	2003 to 2007	H.O. ONLY	
	421000623		593SDI	L/C	2	2004 to 2007	593 SDI ONLY	
	421000659		593SDI-XP	L/C	2	2008 to 2010	593SDI-XP models	420059373
	421000662		593 ETEC	L/C	2	2008 to 2011	593 SDI E-TEC	420059350 / 59351 / 59352
	421000613		793	L/C	2	2001 to 2003		
	421000612		793HO	L/C	2	2003 to 2007	H.O. ONLY	
	421000645		797	L/C	2	2006 & 2007	NOT FOR XP MODEL	420079703 / 420079704
	421000650		797	L/C	2	2008	REV-XP	42079705/42079707
	421000661		797	L/C	2	2009	REV-XP	420079706
	421000676		797 PTEK	L/C	2	2010 & 2011	Usage of clutch bolt 417300409 is mandatory and provided	420079708
	421000699		797ETEC	L/C	2	2011 & 2012	all flatlanders and Summit Europe. Usage of clutch bolt 417300409 is mandatory and provided. Shortblock comes with cylinder head installed	415129610 / 420079752
	421000700		797ETEC	L/C	2	2011 & 2012	Summit / Freeride models. Shortblock comes with cylinder head installed	415129610 / 420079753
	421000637		995SDI	L/C	2	2005 & 2006		420099502
	421000678	LONGBLOCK	1203	L/C	3	2009 & 2011		420120302
SPYDER	421000696	SHORTBLOCK	991	L/C	2	2008 to 2010	SM5	707000986
	421000697		991	L/C	2	2008 to 2010	SE5	707000985
CAN-AM	421000628		175	L/C	1	2003 to 2005	RALLY-175	420296420
	421000157	CRANKSHAFT	511	L/C	1	all	Traxter	420295893
	421000577		654	L/C	1	all	DS650	711295192
	421000698	GEARBOX	800 & 1000	L/C	2	all	SIDE-BY-SIDE ONLY	420684789 / 420684786
	421000672	longblock	800	L/C	2	2006 TO 2008	OUTLANDER 800 / RENEGADE 800	420081030
SEA-DOO	421000074	Crankshaft	717	L/C	2	1995 to 2003		290887867
	421000076		787	L/C	2	1996 to 1999	Carb.	290888103
	421000712		787RFI	L/C	2	1998 to 2005	RFI	290887890 / 420887891
	421000571		947DI	L/C	2	all	D.I.	290887767
	421000711		947	L/C	2	1998 to 2003	Except D.I.	290887762
	421000670		1503	L/C	3	2002 to 2005		420819077
	421000671		1503	L/C	3	2006 to 2009		420819346
	421000056	CYLINDER	717	L/C	2	1995 to 2003		290923805
	421000059		787	L/C	2	1996 to 1999	Carb.	290923503
	421000813		787RFI	L/C	2	1998 to 2003	RFI	290923846
	421000626		787RFI	L/C	2	2004 to 2005	RFI	420623086
	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
	421000097	Shortblock	717	L/C	2	1995 to 2005		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
	421000627		787RFI	L/C	2	2004 & 2005	RFI	420078707
	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 to 2005	D.I.	420094706
	421000647	longblock 1503	N/A	L/C	3	2002 to 2005	1st Oversize Long Block	270000645
	421000648		B/V	L/C	3	2003 to 2005	1st Oversize Long Block	270000644
	421000649		I/C	L/C	3	2004 & 2005	1st Oversize Long Block	270000643
	421000640		DT	L/C	3	2006 to 2010	1st Oversize Long Block	420150345
	421000641		N/A	L/C	3	2006 to 2010	1st Oversize Long Block	420150315
	421000642		I/C	L/C	3	2006 to 2010	1st Oversize Long Block	420150335
	421000658		HO	L/C	3	2008 to 2010	1st Oversize Long Block (Except ETC)	420150355
	421000652	Basic longblock 1503	N/A	L/C	3	2005 & prior	1st Oversize Basic Long Block	270000645
	421000653		B/V	L/C	3	2005 & prior	1st Oversize Basic Long Block	270000644
	421000654		I/C	L/C	3	2004 & 2005	1st Oversize Basic Long Block	270000643
	421000655		DT	L/C	3	2006 to 2010	1st Oversize Basic Long Block	420150345 / 420150347
	421000656		N/A & N/A ETC	L/C	3	2006 to 2010	1st Oversize Basic Long Block	420150315 / 420150317 / 420150318
	421000657		I/C, HO, I/C ETC & HO ETC	L/C	3	2006 to 2010	1st Oversize Basic Long Block	420150337 / 420150355 / 420150338 420150365
	421000644	Head	1503	L/C	3	2002 to 2010	Head with valves installed	420613976 / 420613978

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 BRP
- 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

mdd2012-001-700_2

BRP Oils and Lubricants / Huiles et lubrifiants BRP

Part #	Product Description	Size	Ski-Doo	Sea-Doo	ATV	
293 600 011	Synthetic jet pump oil 75W90 Huile synthétique 75W90 pour turbine	177 ml (6 oz).	-	X	-	
293 600 043	Synthetic gear oil 75W90 Huile synthétique 75W90 pour engrenage	946 ml (32 oz)	-	-	X	Same as 293 600 011 but 946 ml (32 oz)
413 801 900	XP-S chaincase oil Huile XP-S pour carter de chaîne	250 ml (8.4 oz)	X	-	X	
413 803 300	XP-S synthetic chaincase oil Huile synthétique XP-S pour carter de chaîne	355 ml (12 oz)	X	-	X	
413 711 600	XP-S storage oil / Huile de remisage XP-S	spray 473 ml (16 oz)	X	X	X	
293 600 016	XP-S lubricant / Lubrifiant XP-S	Spray 473 ml (16 oz)	X	X	X	General use Usage générale
293 550 010	XP-S synthetic grease Graisse synthétique XP-S	400 g tube (14 oz)	-	X	-	High rev marine application Utilisation marine, revolution élevée
293 550 033	XP-S synthetic grease Graisse synthétique XP-S	400 g tube (14 oz)	X	-	X	For suspension Pour suspension
413 408 600	Fuel stabilizer / Stabilisateur de carburant	236 ml (8 oz)	X	X	X	
413 803 100	XP-S premix oil / Huile prémélangée XP-S	500 ml (17 oz)	X	X	X	For carbureted 2-stroke Pour moteur deux-temps à carburateur.
413 802 900	XP-S 2-stroke mineral injection oil Huile minéral XP-S pour moteur deux-temps	1 U.S. Quart / 946 ml	X	X	X	For carbureted 2-stroke and ATV: Mini DS 2-stroke only Pour moteur deux-temps DI, SDI et à carburateur. VTT: Mini DS à moteur deux-temps seulement VTT: Mini DS à moteur deux-temps seulement
413 803 000	XP-S 2-stroke mineral injection oil Huile minéral XP-S pour moteur deux-temps	1 U.S. Gallon / 3.785 L	X	X	X	
413 803 200	XP-S 2-stroke mineral injection oil Huile minéral XP-S pour moteur deux-temps	Drum 205 L / 54 US gallons	X	X	X	
293 600 071	XP-S Semi-Synthetic 2-stroke oil Huile Semi-Synthétique XP-S pour moteur deux-temps	1 U.S. Quart / 946 ml	X	X	X	For DI, SDI and Carbureted 2-stroke. ATV: Mini DS 2-stroke only Pour moteur deux-temps DI, SDI et à carburateur. VTT: Mini DS à moteur deux-temps seulement
293 600 072	XP-S Semi-Synthetic 2-stroke oil Huile Semi-Synthétique XP-S pour moteur deux-temps	1 U.S. Gallon / 3.785 L	X	X	X	
293 600 073	XP-S Semi-Synthetic 2-stroke oil Huile Semi-Synthétique XP-S pour moteur deux-temps	Drum 205 L / 54 US gallons	X	X	X	
293 600 045	XP-S Synthetic 2-stroke oil Huile Synthétique XP-S pour moteur deux-temps	1 U.S. Quart / 946 ml	X	X	X	For DI, SDI and Carbureted 2-stroke. ATV: Mini DS 2-stroke only Pour moteur deux-temps DI, SDI et à carburateur. VTT: Mini DS à moteur deux-temps seulement
293 600 046	XP-S Synthetic 2-stroke oil Huile Synthétique XP-S pour moteur deux-temps	1 U.S. Gallon / 3.785 L	X	X	X	
293 600 047	XP-S Synthetic 2-stroke oil Huile Synthétique XP-S pour moteur deux-temps	Drum 205 L / 54 US gallons	X	X	X	
293 600 054	XP-S 4-stroke Synthetic oil 0W40 Huile XP-S Synthétique 0W40 pour moteur quatre-temps	1 U.S. Quart / 946 ml	X	-	-	Recommended for V-1000 Recommandé pour V-1000
293 600 039	XP-S 4-stroke Synthetic oil 5W40 Huile XP-S Synthétique 5W40 pour moteur quatre-temps	1 U.S. Quart / 946 ml	-	X	X	Not recommended for the supercharged engines. Non recommandé pour moteur à surcompresseur.
219 700 359	XP-S 4-stroke Synthetic oil 5W40 Huile XP-S Synthétique 5W40 pour moteur quatre-temps	Drum 205 L / 54 US gallons	-	X	X	
219 700 706	XP-S 4-stroke Mineral oil 5W30 Huile minéral XP-S 5W30 pour moteur quatre-temps	1 U.S. Quart / 946 ml			X	New
219 700 702	XP-S 4-stroke Mineral oil 5W30 Huile minéral XP-S 5W30 pour moteur quatre-temps	Drum 205 L / 54 US gallons			X	New
219 700 346	XP-S 4-stroke Mineral oil 10W40 Huile minéral XP-S 10W40 pour moteur quatre-temps	1 U.S. Quart / 946 ml	-	X	-	See Oil Application Chart in Operator's Guide for ATV's / Recommended for the supercharged engines, Sea-Doo Pour VTT, se référrer à la charte d'utilisation des huiles du Guide de l'opérateur. / Recommandé pour moteur à surcompresseur, Sea-Doo
219 700 433	XP-S 4-stroke oil 10W40 Huile minéral XP-S 10W40 pour moteur quatre-temps	Drum 205 L / 54 US gallons	-	X	-	

mdd2008-002-505

mdd2008-002-002_en

Bombardier Recreational Products Inc.

REPORT ON PERFORMANCE/QUALITY (FROM DEALER)

ski-doo

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

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.*

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

OUTSIDE TEMPERATURE	Select Measure	SPEED	Select Measure
	☐F ☐C		☐km/h ☐MPH

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

PROBLEM DESCRIPTION

CORRECTIVE ACTION TAKEN

COMMENTS/OTHER OBSERVATIONS

FO419-SAV-03 (05-99) N.A.* Info Unavailable 484 300 084

BRP US Inc.
7575 Bombardier Court
Wausau, Wisconsin, USA 54401
T 715.842.8886 F 715.847.6879

www.brp.com

Application for BRP "Master Technician Level"

Important: Do not fax this to 715-847-6866 unless you meet ALL qualifications

1) Minimum of 5 years as a Powersports Industry mechanic
2) Minimum of 2 years at your current BRP dealership
3) Maintain Certified Technician Level for 1 year by doing your updates
4) 90% or higher **(from now on)** on 1st attempt of applicable Technical Update exams **(update exams are also used to maintain your Master Level every year for every product line)**

As Page 2 of this fax, please include your "Technician progress detailed report" **(found at the bottom of your BRPTI Home page)**

Full Name :_____

Nick Name:_____

BRPTI Number (found on your home page of BRPTI): _____

Date & Location achieved certified status (found on your Certified Technician certificate):

Ski-Doo_____ Sea-Doo_____ Can-Am ATV_____
_____ _____ _____

Current Dealer Name: _____

Current Dealer Number:_____ Start Date: _____

Previous Dealer/Powersports Info (if applicable):_____

Previous Dealer Phone Number _____

Previous Dealer Start Date:_____ End Date: _____

I, the undersigned, certify that I meet the requirements for Master Technician

X _____

Master Application June 30, 2006

Ski-Doo
Lynx
Sea-Doo
Evinrude
Johnson
Rotax
Can-Am

sdd2007-001-710_MasterTechApp_en

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/OR VEHICLE 2 - MAKE SURE TO COMPLETE NARRATIVE ON PAGE 5

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:	Certificate 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 License No.:	Coded Restrictions:	Zip/ Postal Code:	Tel. No.:
Years Licensed 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:	Year:	Safety Devices Present: ☐ Yes ☐ No
License No.:	Serial No.:		Safety Device in Use: ☐ Yes ☐ No
☐ Owned ☐ Borrowed ☐ Rent			Warning or Caution Statement Present: ☐ Yes ☐ No
Date of Predelivery:	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 Lubrication and Maintenance Given to the Products as Specified by the Manufacturer? ☐ Yes ☐ No
Name of Ins. Company:			

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ACTIVITY:	Unknown ☐	Transportation ☐	Racing ☐
	Recreation ☐	Work ☐	Other ☐
Witnesses' Name: (if more than one please join another page / witness)			
Witnesses' Address:			
			Phone:
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:		Certificate 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 License No.:	Coded Restrictions:			Zip/ Postal Code:		Tel. No.:	
Years Licensed 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:	Year:		Safety Devices Present: ☐ Yes ☐ No If Yes specify			
License No.:	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 Predelivery:	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.:			Were All Components on Any Security Item Fastened to the Product? : ☐ Yes ☐ No			
Zip/Postal Code:	Tel. No.:			Were Replacement Components Sold by Product Manufacturer or Representative? : ☐ Yes ☐ No			
Product Registration No.:	Year of Registration:			If no, what was changed?			
Insured: ☐ Yes ☐ No				Were all scheduled maintenance procedures performed by an Authorized BRP dealer? ☐ Yes ☐ No			
Policy No.:	Expiracy Date:			Was Routine Lubrication 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 add a page)			
Witnesses' Address:			
			Phone:
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 1	
Vehicle/Components:	ESTIMATED COST OF REPAIR :
	Vehicle: $
Environment/Private:	Property: $
	Total: $

PROPERTY DAMAGE VEHICLE 2	
Vehicle/Components:	ESTIMATED COST OF REPAIR :
	Vehicle: $
Environment/Private:	Property: $
IF OTHER VEHICLE INVOLED, ADD ANOTHER SHEET	Total: $

ACCIDENT / INCIDENT DATA

Type of Terrain

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 ☐	Side Slope ☐	Straight ☐
Level ☐	Bottom of Hill ☐	Slope Down ☐	Curve ☐	Other ☐

Surface Cover (Type)			Precipitation		Visibility		Ambient 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
Hard Pack Snow ☐	Rough Water ☐	Asphalt ☐		Hail ☐	Other ☐		☐ °F
Other ☐			Other ☐				

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

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INJURY DATA

Person Involved	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 entrapped 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 ☐ No 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? (Motor vehicle, 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

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

Signature: _____

Narration date: _____