

# 2004 **ski-doo**®

## **Operator's Guide**

*Includes Safety,  
Vehicle and Maintenance  
Information*

# **SUPPLEMENT**

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This Supplement must be used in conjunction with  
2004 ZX™ Series REV™ Series Operator's Guide  
(P/N 520 000 361).

## **ZX™ 600 SDI / V-1000 REV™ 600 SDI**

### **⚠ WARNING**

Read this supplement thoroughly. It contains important safety information.

Minimum recommended operator's age: 16 years old.

Minimum recommended passenger's age  
(if applicable): 16 years old.

Do not remove this Operator's Guide supplement from the vehicle.



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## **SAFETY WARNING**

Disregarding any of the safety precautions and instructions contained in this *Operator's Guide Supplement*, *Safety Videocassette* or on-product warnings may result in injury, including the possibility of death.

This *Operator's Guide Supplement* and *Safety Videocassette* should remain with the unit at time of resale.

**BOMBARDIER**  
RECREATIONAL PRODUCTS



**Dear 2004 ZX 600 SDI/V-1000 and REV 600 SDI owner, in addition to the informations in the 2004 ZX™ Series REV™ Series Operator's Guide (P/N 520 000 361), the following also applies to your model.**

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# **BOMBARDIER LIMITED WARRANTY NORTH AMERICA: 2004 SKI-DOO® SNOWMOBILES**

## **1. SCOPE OF THE LIMITED WARRANTY**

In Canada, BOMBARDIER INC. (hereinafter “**BOMBARDIER**”), and in the USA, Bombardier on behalf of BOMBARDIER MOTOR CORPORATION OF AMERICA (BMCA) warrants its 2004 SKI-DOO snowmobiles from defects in material or workmanship for the period described below.

All genuine BOMBARDIER parts and accessories, installed by an authorized BOMBARDIER dealer (as hereinafter defined) at the time of delivery of the 2004 SKI-DOO snowmobile, carry the same warranty as that of the snowmobile.

Use of the product for racing or any other competitive activity, at any point, even by a prior owner will render this warranty null and void.

## **2. WARRANTY COVERAGE PERIOD**

This warranty will be in effect FROM THE DATE OF DELIVERY TO THE FIRST RETAIL CONSUMER or the date the product is first put into use, whichever occurs first and for a period of:

TWELVE (12) CONSECUTIVE MONTHS, for private or commercial use owners. The warranty coverage period on a snowmobile delivered between June 1<sup>st</sup> and December 1<sup>st</sup> of a given year will expire December 1<sup>st</sup> of the following year.

The emission-related components on EPA certified snowmobiles (see list below) registered in the USA are covered for thirty (30) consecutive months or 2500 miles (4000 km) of engine use whichever occurs first. If the 2500 miles (4000 km) are reached during the regular warranty coverage period, the emission-related components are still on warranty until the end of regular warranty coverage period.

- Legend V-1000
- MX-Z 600 HO SDI
- GSX 600 HO SDI
- Legend 600 HO SDI

## Emission-Related Components

COMPONENT	ENGINE FAMILY (TYPE)	
	600 HO SDI	4-TEC V-1000
Throttle Position Sensor (TPS)	X	X
Air Temperature Sensor (ATS)	X	X
Air Pressure Sensor (APS)	X	X
Fuel Pressure Regulator	X	X
Fuel Injectors	X	X
Engine Management System (EMS)	X	X
Cylinder Head Rubber Rings/O-rings or Gasket	X	X
Cylinder/Base Gaskets	X	
Throttle Body Shaft Seals	X	
RAVE Hose System	X	
Exhaust System Sealing Components	X	
Knock Sensor	X	
Muffler Temperature Sensor	X	
Crankcase Ventilation System		X

The repair or replacement of parts or the performance of service under this warranty does not extend the life of this warranty beyond its original expiration date.

### **3. CONDITIONS TO HAVE WARRANTY COVERAGE**

This warranty coverage is available only on 2004 SKI-DOO snowmobile purchased as new and unused by its first owner from a BOMBARDIER dealer authorized to distribute SKI-DOO products in the country in which the sale occurred (**hereinafter "BOMBARDIER dealer"**), and then only after the BOMBARDIER specified pre-delivery inspection process is completed and documented. Moreover, this warranty coverage is only available if the SKI-DOO snowmobile is purchased in the country in which the purchaser resides. Bombardier will not honor this limited warranty to any personal use owner or commercial use owner where the preceding conditions have not been met. Warranty coverage only becomes available upon proper registration of the product by a BOMBARDIER dealer. Such limitations are necessary in order to allow BOMBARDIER to preserve both the safety of its products, and also that of its consumers and the public. Routine maintenance outlined in the *Operator's Guide* must be timely performed in order to maintain warranty coverage. BOMBARDIER reserves the right to make warranty coverage contingent upon proof of proper maintenance.

### **4. WHAT TO DO TO OBTAIN WARRANTY COVERAGE**

The customer must notify a servicing BOMBARDIER dealer within two (2) days of the appearance of a defect, and provide it with reasonable access to the product and reasonable opportunity to repair it. The customer must also present to the BOMBARDIER dealer, proof of purchase of the product and must sign the repair/work order prior to the start of the repair in order to validate the warranty repair. All parts replaced under this limited warranty become the property of BOMBARDIER.

### **5. WHAT BOMBARDIER WILL DO**

BOMBARDIER's obligations under this warranty are limited to, at its sole discretion, repairing parts found defective under normal use, maintenance and service, or replacing such parts with new genuine BOMBARDIER parts without charge for parts and labor, at any authorized BOMBARDIER dealer.

BOMBARDIER reserves the right to improve or modify products from time to time without assuming any obligation to modify products previously manufactured.

### **6. EXCLUSIONS - ARE NOT WARRANTED**

- Normal wear and tear;
- Routine maintenance items, tune ups, adjustments;
- Damage caused by failure to provide proper maintenance and/or storage, as described in the *Operator's Guide*;

- Damage resulting from removal of parts, improper repairs, service, maintenance, modifications or use of parts not manufactured or approved by BOMBARDIER or resulting from repairs done by a person that is not an authorized servicing BOMBARDIER dealer;
- Damage caused by abuse, abnormal use, neglect, use of the product on surfaces other than snow, or operation of the product in a manner inconsistent with the recommended operation described in the *Operator's Guide*;
- Damage resulting from accident, submersion, fire, theft, vandalism or any act of God;
- Operation with fuels, oils or lubricants which are not suitable for use with the product (see the *Operator's Guide*);
- Snow or water ingestion;
- Incidental or consequential damages, or damages of any kind including without limitation towing, storage, telephone, rental, taxi, inconvenience, insurance coverage, loan payments, loss of time, loss of income; and
- Damage resulting from tracks which have been studded.

## **7. LIMITATIONS OF LIABILITY**

THIS WARRANTY IS EXPRESSLY GIVEN AND ACCEPTED IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT THAT THEY CANNOT BE DISCLAIMED, THE IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE LIFE OF THE EXPRESS WARRANTY. INCIDENTAL AND CONSEQUENTIAL DAMAGES ARE EXCLUDED FROM COVERAGE UNDER THIS WARRANTY. SOME STATES/PROVINCES DO NOT ALLOW FOR THE DISCLAIMERS, LIMITATIONS AND EXCLUSIONS IDENTIFIED ABOVE, AS A RESULT, THEY MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC RIGHTS, AND YOU MAY ALSO HAVE OTHER LEGAL RIGHTS WHICH MAY VARY FROM STATE TO STATE, OR PROVINCE TO PROVINCE.

Neither the distributor, any BOMBARDIER dealer nor any other person has been authorized to make any affirmation, representation or warranty regarding the product, other than those contained in this limited warranty, and if made, shall not be enforceable against BOMBARDIER.

BOMBARDIER reserves the right to modify this warranty at any time, being understood that such modification will not alter the warranty conditions applicable to the products sold while this warranty is in effect.

## 8. TRANSFER

If the ownership of a product is transferred during the warranty coverage period, this warranty shall also be transferred and be valid for the remaining coverage period provided that BOMBARDIER is notified of such transfer of ownership in the following way:

- a. The former owner contacts BOMBARDIER (at the phone number provided below) or an authorized BOMBARDIER dealer and gives the coordinates of the new owner; or
- b. BOMBARDIER or an authorized BOMBARDIER dealer receives a proof that the former owner agreed to the transfer of ownership, in addition to the coordinates of the new owner.

## 9. CONSUMER ASSISTANCE

- a. In the event of a controversy or a dispute in connection with this BOMBARDIER LIMITED WARRANTY, BOMBARDIER suggests that you try to resolve the issue at the dealership level. We recommend discussing the issue with the authorized dealer's service manager or owner.
- b. If the issue has not yet been resolved, please submit your complaint in writing or call the appropriate number below:

In Canada:

**BOMBARDIER INC.**  
**RECREATIONAL PRODUCTS**  
SKI-DOO®  
CUSTOMER ASSISTANCE CENTER  
VALCOURT QC J0E 2L0  
Tel: (819) 566-3366

In USA:

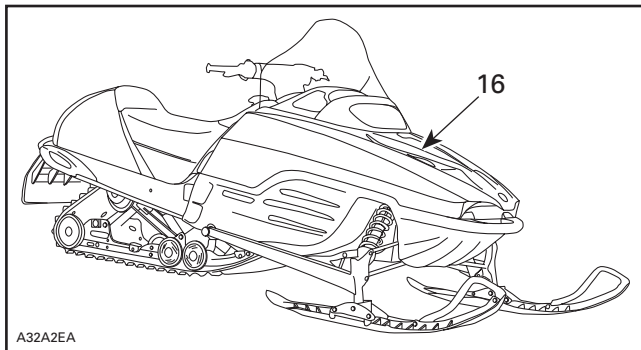
**BOMBARDIER MOTOR**  
**CORPORATION OF AMERICA**  
**RECREATIONAL PRODUCTS**  
SKI-DOO®  
CUSTOMER ASSISTANCE CENTER  
7575 BOMBARDIER COURT  
WAUSAU WI 54401  
Tel: (715) 848-4957



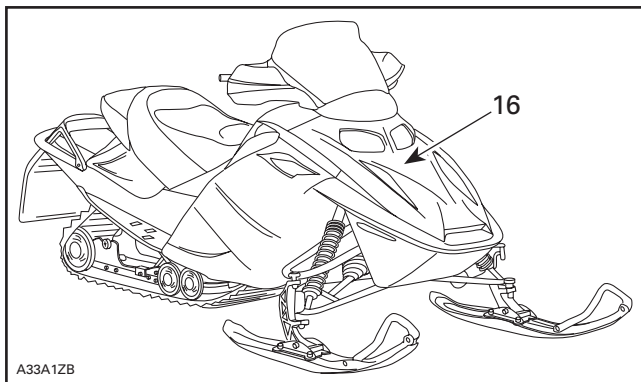
## ON-VEHICLE IMPORTANT INSTRUCTIONS

The following instruction is also on your snowmobile. If missing or damaged, this decal can be replaced free of charge. See an authorized SKI-DOO dealer.

Please read the following instruction carefully before operating this snowmobile.



TYPICAL — LOCATION OF THE EPA DECAL ON ZX 600 SDI/V-1000 MODELS



TYPICAL — LOCATION OF THE EPA DECAL ON REV 600 SDI MODELS

## Instruction 16

### EMISSION CONTROL INFORMATION

THIS ENGINE IS CERTIFIED TO OPERATE ON  
UNLEADED GASOLINE AND CONFORMS TO 2006  
U.S. EPA REGULATIONS FOR SNOWMOBILE SI ENGINES.



**BOMBARDIER**  
RECREATIONAL PRODUCTS

ENGINE FAMILY: ..... 4BCXS.5941CS  
FEL:..... 85g/kW-hr HC 155g/kw-hr CO  
ENGINE DISPLACEMENT:..... 594.1 cc  
EXHAUST EMISSION CONTROL SYSTEM:..... EFI

#### TUNE-UP SPECIFICATIONS

IDLE SPEED:..... 1500 RPM  $\pm$  200  
SPARK PLUG TYPE:..... NGK-BR9ECS  
SPARK PLUG GAP:..... 0.031 in. / 0.8mm.

516 002 603

A33A21A

*ZX 600 SDI/REV 600 SDI MODELS*

### EMISSION CONTROL INFORMATION

THIS ENGINE IS CERTIFIED TO OPERATE ON  
UNLEADED GASOLINE AND CONFORMS TO 2012  
U.S. EPA REGULATIONS FOR SNOWMOBILE SI ENGINES.



**BOMBARDIER**  
RECREATIONAL PRODUCTS

ENGINE FAMILY: ..... 4BCXS.9960GF  
FEL:..... 15 g/kW-hr HC+NO<sub>x</sub> 230g/kw-hr CO  
ENGINE DISPLACEMENT:..... 996.0 cc  
EXHAUST EMISSION CONTROL SYSTEM:..... MFI

#### TUNE-UP SPECIFICATIONS

IDLE SPEED:..... 1400 RPM  $\pm$  100  
SPARK PLUG TYPE:..... NGK-DC PR8E  
SPARK PLUG GAP:..... 0.029 in. / 0.75 mm.

516 002 602

A32A2FA

*ZX V-1000 MODELS*





# PERIODIC MAINTENANCE CHART







## WARNING

Observe WARNINGS and CAUTIONS mentioned throughout this guide which are pertinent to the item being checked. When component conditions seem less than satisfactory, replace with genuine BOMBARDIER parts or approved equivalents.

Some items may not apply to your particular model. Refer to MAINTENANCE in *Shop Manual* for more details.

- ① 10-HOUR OR 500 km (300 miles) INSPECTION (to be performed by an authorized SKI-DOO dealer)
- ② WEEKLY OR EVERY 240 km (150 miles)
- ③ MONTHLY OR EVERY 800 km (500 miles)
- ④ ONCE A YEAR OR EVERY 3200 km (2000 miles)
- ⑤ ONCE A YEAR OR EVERY 6000 km (3700 miles)
- ⑥ STORAGE (to be performed by an authorized SKI-DOO dealer)
- ⑦ PRESEASON PREPARATION (to be performed by an authorized SKI-DOO dealer).

PERIODIC MAINTENANCE CHART		①	②	③	④	⑤	⑥	⑦
	Rewind Starter and Rope						I,L,C	I
	Engine Nuts and Screws	I			I		I	
	Exhaust System	I		I			I	
	Engine Lubrication						L	
	Cooling System	I			I			I
	Coolant	I					R	
	Condition of Seals (3)						I	I
	RAVE Valves (3)				C			
	Oil and Filter Replacement (4-TEC)					R		
	Injection Oil Filter			I			R	
	Injection Oil Pump	A			A			A
	Fuel Stabilizer						R	
	Fuel Filter							R
	Fuel Lines and Connections	I					I	I
	Carburetor	A			A			A,C
	Throttle Cable	I			I		I	I
	Air Filter			C				C
	Fuel Injection System (visual inspection)				I			
	Throttle Body Bores and Throttle Plates (3)							C

PERIODIC MAINTENANCE CHART		①	②	③	④	⑤	⑥	⑦
	Drive Belt	I	I					I
	Drive and Driven Pulleys	I		I	C		I	C
	Tightening Torque of Drive Pulley Screw	I			I			I
	Driven Pulley Preload	I			I		I	
	Brake Fluid	I	I				R	I
	Brake	I	I				I	I
	Drive Chain Tension	A		A			A	
	Countershaft Lubrication (2)	L		L			L	
	Chaincase or Gearbox Oil	I		I			R	I
	Drive Axle End Bearing (2)	L		L			L	
	Steering and Front Suspension Mechanism (2)	A,I,L		A,I	L		A,I,L	
	Wear and Condition of Skis and Runners	I	I				I	
	Suspension Adjustments	AS REQUIRED						
	Suspension (2)	I		I,L			I,L	
	Suspension Stopper Strap				I		I	
	Track	I		I			I	
	Track Tension and Alignment	A	AS REQUIRED					
	EMS Fault Codes (3)	I				I		
	Spark Plugs (1) (3)	I		I				R
	Battery (if so equipped)	I		I			I	I
	Headlamp Beam Aiming				A			A
	Wiring Harnesses, Cables and Lines (3)	I		I			I	
	Operation of Lighting System (HI/LO beam, brake light, etc.), Test Operation of Engine Cut-Out Switch and Tether Cut-Out Switch	I	I				I	
	Rags in Air Intake and Exhaust System						R	C
	Engine Compartment	C		C			C	
	Vehicle Cleaning and Protection	C		C			C	

A = ADJUST

I = INSPECT (clean, inspect, repair, adjust and lubricate)

L = LUBRICATE

R = REPLACE

C = CLEAN

- (1) Before installing new spark plugs at preseason preparation, it is suggested to burn excess storage oil by starting the engine with the old spark plugs. Only perform this operation in a well ventilated area.
- (2) Lubricate whenever the vehicle is used in wet conditions (wet snow, rain, puddles).
- (3) Emission-related

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# **MAINTENANCE FOR EPA CERTIFIED ENGINES**

Maintenance, replacement, or repair of the emission control devices and systems may be performed by any snowmobile SI (spark ignition) engine repair establishments or individual.

## **Engine Emissions Information**

### **Manufacturer's Responsibility**

Beginning with 2004 model year engines, snowmobile manufacturers of snowmobile engines may determine the exhaust emission levels for each engine horsepower family and certify these engines with the United States of America Environmental Protection Agency (EPA). An emissions control information label, showing emission levels and engine specifications, must be placed on each vehicle at the time of manufacture.

Bombardier Recreational Products certified the following engines to applicable EPA snowmobile standards:

4-TEC V-1000  
600 HO SDI

### **Dealer's Responsibility**

When performing service on all 2004 and more recent certified SKI-DOO snowmobiles that carry an emissions control information label, adjustments must be kept within published factory specifications.

Replacement or repair of any emission related component must be executed in a manner that maintains emission levels within the prescribed certification standards.

Dealers are not to modify the engine in any manner that would alter the horsepower or allow emission levels to exceed their predetermined factory specifications.

Exceptions include manufacturer's prescribed changes, such as altitude adjustments for example.

### **Owner Responsibility**

The owner/operator is required to have engine maintenance performed to maintain emission levels within prescribed certification standards.

The owner/operator is not to, and should not allow anyone to modify the engine in any manner that would alter the horsepower or allow emissions levels to exceed their predetermined factory specifications.

## **EPA Emission Regulations**

All new 2004 and more recent certified SKI-DOO snowmobiles manufactured by Bombardier are certified to the EPA as conforming to the requirements of the regulations for the control of air pollution from new snowmobile engines. This certification is contingent on certain adjustments being set to factory standards. For this reason, the factory procedure for servicing the product must be strictly followed and, whenever practicable, returned to the original intent of the design.

The responsibilities listed above are general and in no way a complete listing of the rules and regulations pertaining to the EPA requirements on exhaust emissions for snowmobile products. For more detailed information on this subject, you may contact the following locations:

### **VIA U.S. POSTAL SERVICE:**

Office of Mobile Sources  
Engine Programs and Compliance Division  
Engine Compliance Programs  
Group (6403J)

401 M St. NW  
Washington, DC 20460

### **VIA EXPRESS or COURIER MAIL:**

Office of Mobile Sources  
Engine Programs and Compliance Division  
Engine Compliance Programs  
Group (6403J)

501 3<sup>rd</sup> St. NW  
Washington, DC 20001

EPA INTERNET WEB

SITE: [www.epa.gov](http://www.epa.gov)