

A CONTRACTOR

SPEEDSTER SPORTSTER CHALLENGER

S F O A P





1996 Shop Manual

### TABLE OF CONTENTS

SECTION S		SUB-SECTION	PAGE	
SAFETY NOTICE				
INTRODUCTION				
01	SERVICE TOOLS AND PRODUCTS	01 – Mandatory Tools	01-01-1 01-02-1 01-03-1	
02	MAINTENANCE	00 – Table of contents 01 – Periodic Inspection Chart 02 – Flushing and Care 03 – Water-Flooded Engine 04 – Storage	02-03-1	
03	TROUBLESHOOTING	00 – Troubleshooting	03-00-1	
04	ENGINE	00 - Table of contents 01 - Removal and Installation 02 -Top End 03 - PTO Flywheel and Magneto. 04 - Bottom End. 05 - Rotary Valve.	04-00-1 04-01-1 04-02-1 04-03-1 04-04-1 04-05-1	
05	COOLING SYSTEM	00 – Table of contents	05-00-1 05-01-1 05-02-1	
06	FUEL SYSTEM	00 – Table of contents 01 – Fuel Circuit 02 – Air Intake 03 –Carburetors.	06-00-1 06-01-1 06-02-1 06-03-1	
07	LUBRIFICATION SYSTEM	00 – Table of contents 01 – Oil Injection Reservoir 02 – Oil Injection Pump	07-01-1	
08	ELECTRICAL	00 - Table of contents. 01 - Overview. 02 - Magneto System. 03 - Ignition System. 04 - Spark Plugs. 05 - The DESS (Digitally Encoded Security System) 06 - MPEM (Multi-Purpose Electronic Module) 07 - Charging System. 08 - Starting System. 09 - Instruments and Accessories. 10 - Wiring Diagram.	08-00-1 08-01-1 08-02-1 08-03-1 08-04-1 08-05-1 08-06-1 08-07-1 08-08-1 08-09-1	

1

### TABLE OF CONTENTS

SECTION		SUB-SECTION	PAGE
09	PROPULSION AND DRIVE SYSTEMS	00 – Table of contents 01 – Propulsion and Drive Systems 02 – Reverse System 03 – Variable Trim System (VTS)	09-00-1 09-01-1 09-02-1 09-03-1
10	STEERING SYSTEM	00 - Table of contents 01 - Steering System 02 - Alignment 03 - Throttle / Shifter / VTS Controller	10-00-1 10-01-1 10-02-1 10-03-1
11	HULL / DECK	00 – Table of contents 01 – Components 02 – Repair 03 – Painting	11-00-1 11-01-1 11-02-1 11-03-1
12	TECHNICAL DATA	01 – All Models	12-01-1

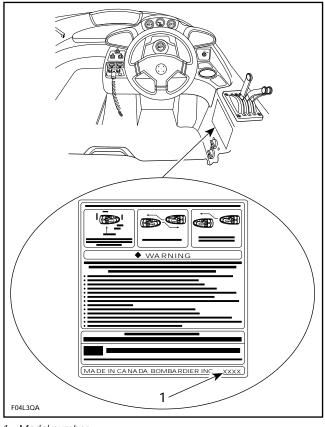
### INTRODUCTION

This Shop Manual covers the following BOMBAR-DIER made SEA-DOOr jet boats.

MODEL	MODEL NUMBER
SPORTSTER	5895
SPEEDSTER	5894
CHALLENGER	5896

### **BOAT MODEL NUMBER**

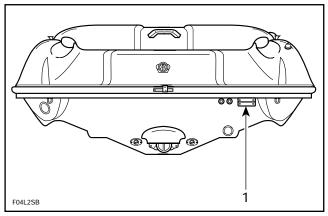
The jet boat model number can be found on RH side of operator position.



1. Model number

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

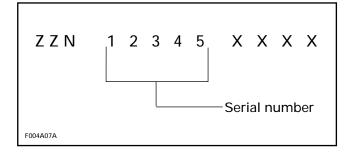
The Hull Identification Number (H.I.N.) is located at right hand rear side of hull.



#### **TYPICAL**

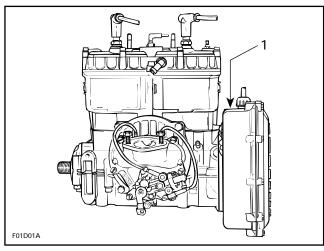
1. Hull Identification (H.I.N.)

The 5 digits after ZZN are the boat serial number.



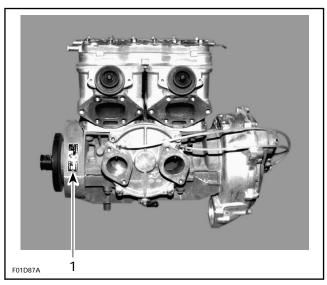
## ENGINE IDENTIFICATION NUMBER (E.I.N.)

It is located on the upper side of the magneto housing.



**TYPICAL-717 ENGINE** 

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



#### 787 ENGINE

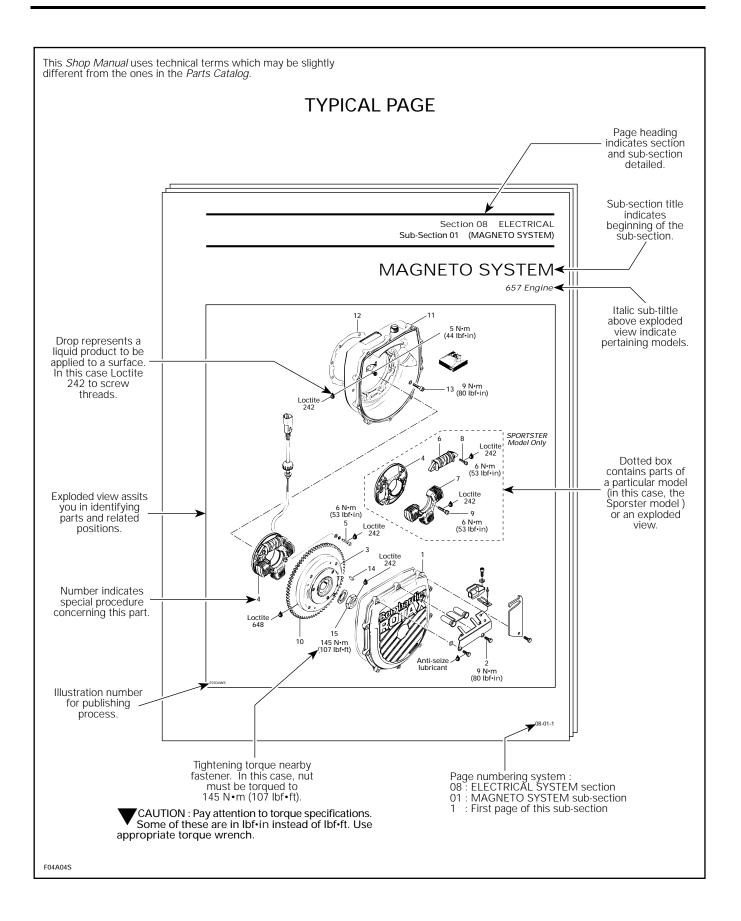
1. Engine Identification Number (E.I.N.)

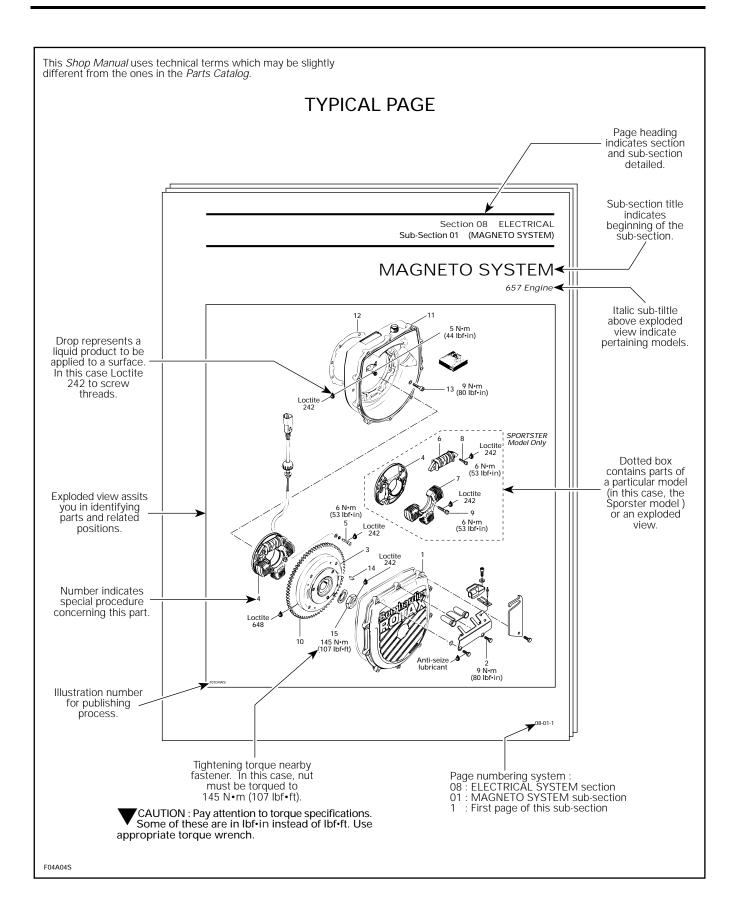
## ARRANGEMENT OF THIS MANUAL

The manual is divided into 12 major sections:

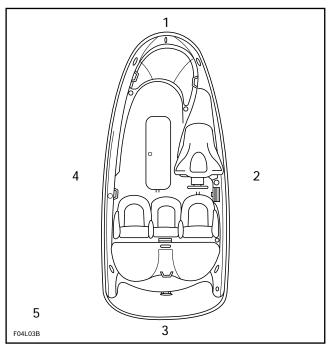
- 01 SERVICE TOOLS AND PRODUCTS
- 02 MAINTENANCE
- 03 TROUBLESHOOTING
- 04 ENGINE
- 05 COOLING SYSTEM
- **06 FUEL SYSTEM**
- 07 LUBRICATION SYSTEM
- 08 ELECTRICAL
- 09 PROPULSION AND DRIVE SYSTEMS
- **10 STEERING SYSTEM**
- 11 HULL / DECK
- 12 TECHNICAL DATA

Each section is divided in various sub-sections, and again, each sub-section has one or more division. A table of contents is included at the beginning of most sections.





#### GENERAL INFORMATION



- 1. BOW (front)
- 2. STARBOARD (RH)
- 3. STERN (rear)
- 4. PORT (LH)
- In marine insdustry, PORT, STARBOARD, BOW and STERN are used to refer to LEFT, RIGHT, FRONT and REAR respectively. They always refer to the operator's position sitting in boat.

The information and component / system descriptions contained in this manual are correct at time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured.

Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

This Shop Manual uses technical terms which may be different from the ones of the Parts Catalogs.

When ordering parts always refer to the specific model Parts Catalogs.

### ILLUSTRATIONS AND PROCEDURES

The illustrations show the typical construction of the different assemblies and, in all cases, may not reproduce the full detail or exact shape of the parts shown, however, they represent parts which have the same or a similar function.

CAUTION: These boats are designed with parts dimensioned in both the metric and the imperial systems. When replacing fasteners, make sure to use only those recommended by Bombardier. Mismatched or incorrect fasteners could cause damage to the boat or possible personal injury.

As many of the procedures in this manual are interrelated, we suggest, that before undertaking any task, you read and thoroughly understand the entire section or sub-section in which the procedure is contained.

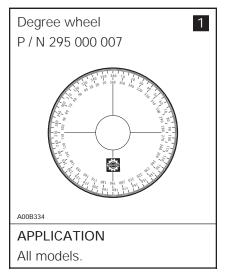
A number of procedures throughout the book require the use of special tools. Before commencing any procedure, be sure that you have on hand all the tools required, or approved equivalents.

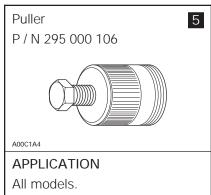
Technical Publications Bombardier Inc. Valcourt (Quebec), Canada

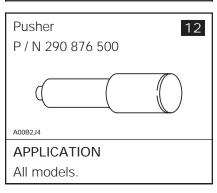
### MANDATORY TOOLS

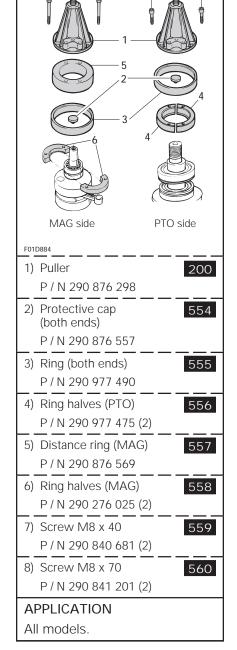
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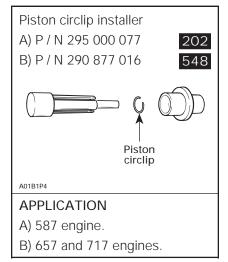
#### **ENGINE**

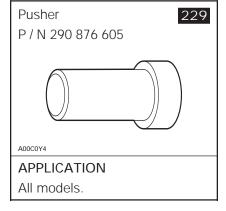


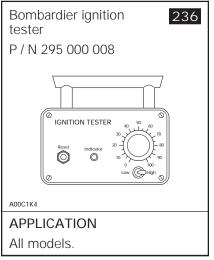




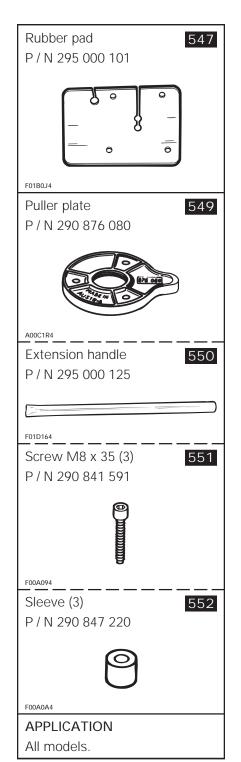


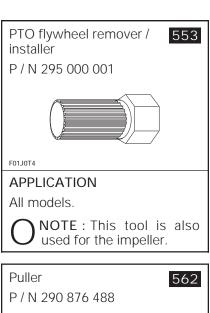


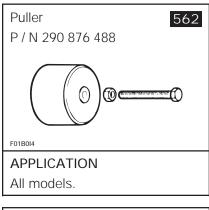


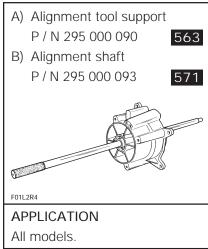


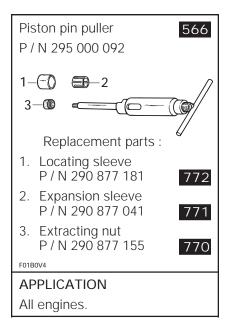
## Section 01 SERVICE TOOLS AND PRODUCTS Sub-Section 01 (MANDATORY TOOLS)











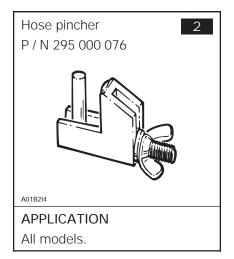


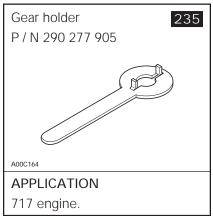


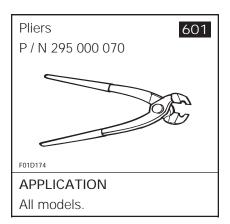


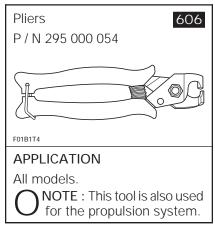
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### COOLING / FUEL / OIL SYSTEMS

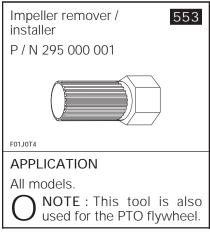


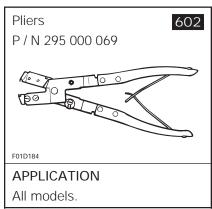


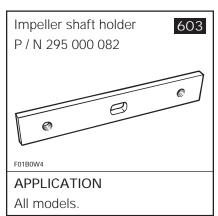


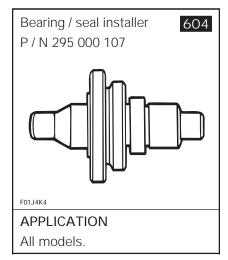


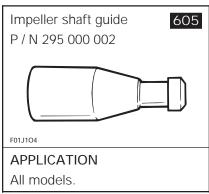
### **PROPULSION SYSTEM**

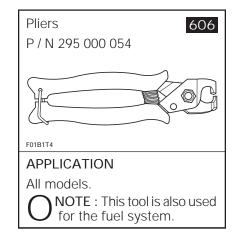








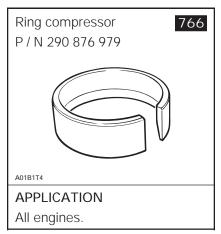


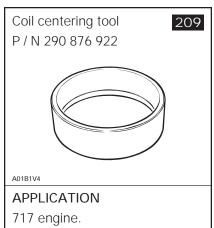


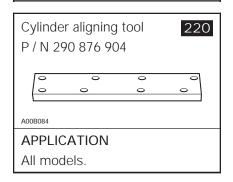
### RECOMMENDED TOOLS

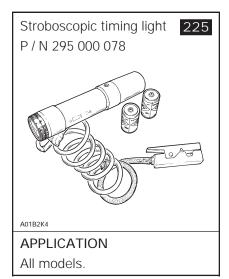
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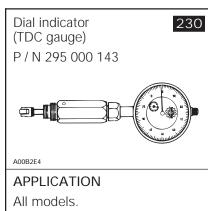
#### **ENGINE**

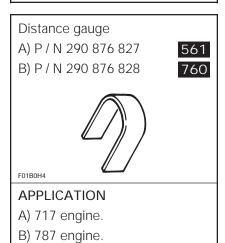


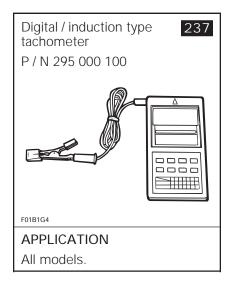


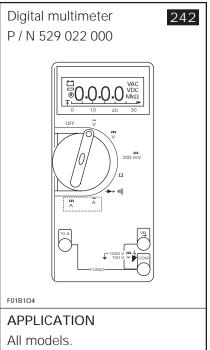




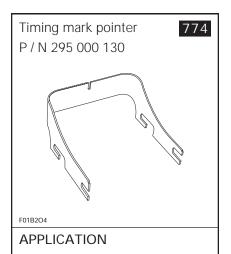


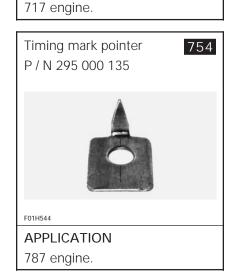


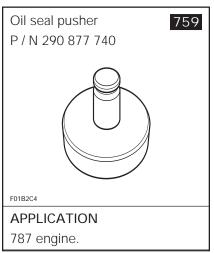


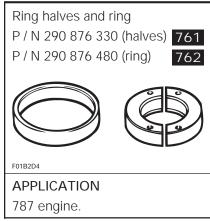


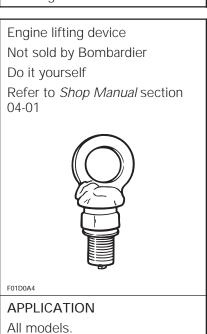
## Section 01 SERVICE TOOLS AND PRODUCTS Sub-Section 02 (RECOMMENDED TOOLS)

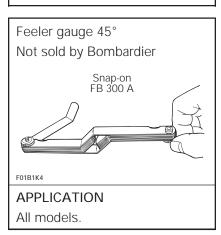


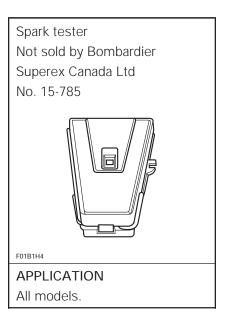


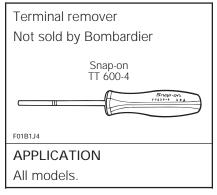


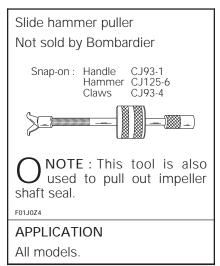




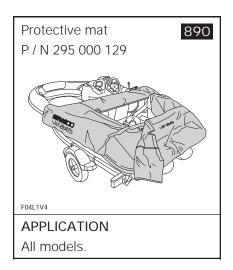






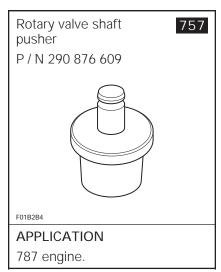


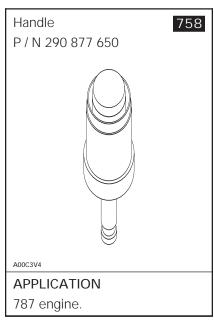
## Section 01 SERVICE TOOLS AND PRODUCTS Sub-Section 02 (RECOMMENDED TOOLS)

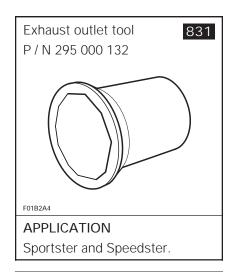


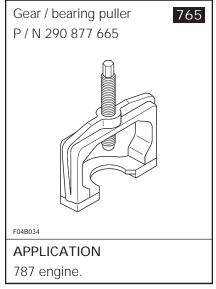






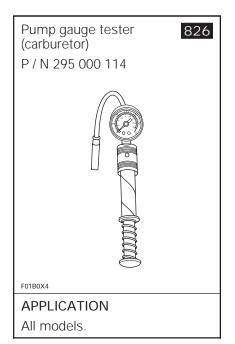


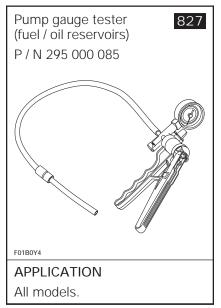


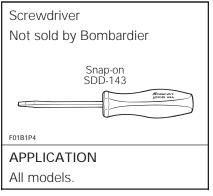


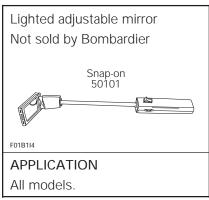
## Section 01 SERVICE TOOLS AND PRODUCTS Sub-Section 02 (RECOMMENDED TOOLS)

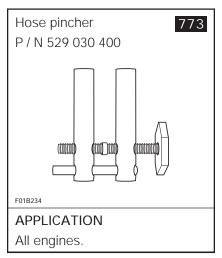
### COOLING / FUEL / OIL SYSTEMS



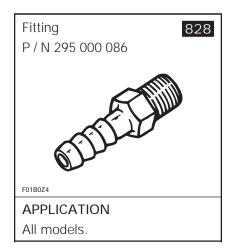


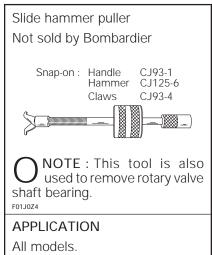


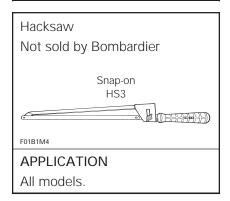


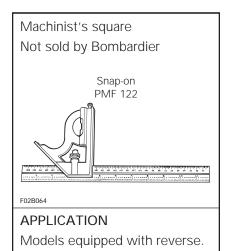


### PROPULSION SYSTEM

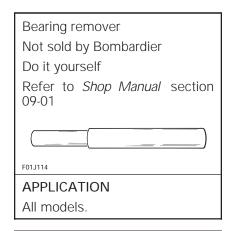


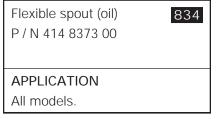






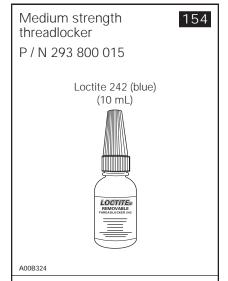






### SERVICE PRODUCTS

NOTE: The numbers outlined in black (example: 1) are reference numbers to tools from other divisions (Sea-Doo and / or Sea-Doo Jet Boats). Matching numbers are the same tool even if the part numbers are different.



#### **APPLICATION**

Cylinder head screws (All engines).

Tuned pipe nut and screws.

Engine rubber mount screws.

Armature plate screws.

Magneto flywheel / crankshaft.

Carburetor mount nuts / screws.

Magneto coil screws.

Impeller housing cover screws (except for plastic pumps).

Venturi / impeller housing screws.

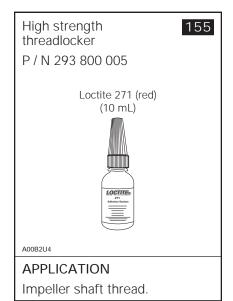
Intake grate screws.

Engine support screws.

Impeller housing / hull nuts.

Steering nozzle screws.

Reverse gate screws.

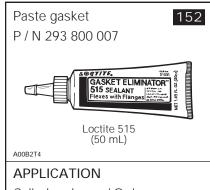




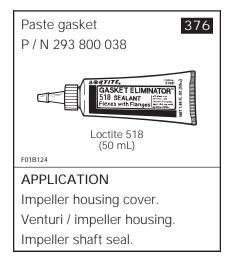
### APPLICATION

Crankcase / plug at end of rotary valve shaft.

Magneto / ring gear.



Cylinder sleeve / O-ring groove.
Crankcase halves mating surface.
Crankcase screws.



### Section 01 SERVICE TOOLS AND PRODUCTS Sub-Section 03 (SERVICE PRODUCTS)



#### **APPLICATION**

Impeller shaft threads. Drive shaft splines. Impeller threads and splines.



Crankcase halves mating surface.

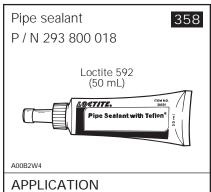
Impeller shaft thread.

Venturi / impeller housing mating surface.

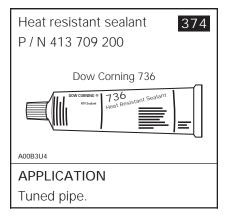


Mating surfaces of cylinders and crankcase.

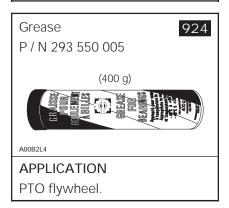
Crankcase halves.



Plug on impeller housing cover. Plastic fitting tool (P / N 295 000 086) on impeller housing cover. Cooling system fittings.







### Section 01 SERVICE TOOLS AND PRODUCTS Sub-Section 03 (SERVICE PRODUCTS)



#### APPLICATION

Cylinder and cylinder head screws.

Carburetor linkage.

Impeller shaft seal lips.

Drive shaft / impeller splines.

PTO flywheel





#### **APPLICATION**

Crankshaft thread / PTO flywheel. Crankshaft bearing seat. Spark plug threads. Ignition housing cover screws.



#### **APPLICATION**

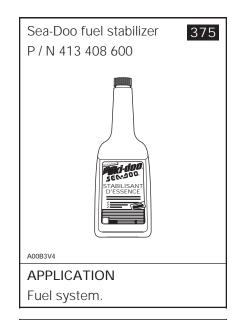
Throttle cable.

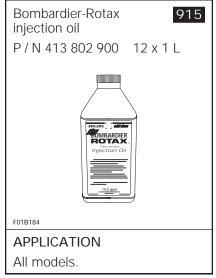
Wear ring (when new).

Corroded parts.

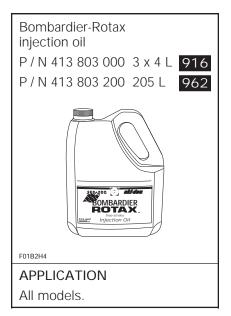
Water flooded engine.

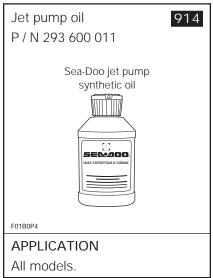
Storage.

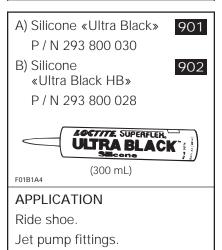




## Section 01 SERVICE TOOLS AND PRODUCTS Sub-Section 03 (SERVICE PRODUCTS)



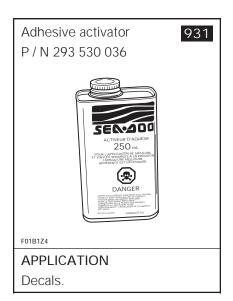


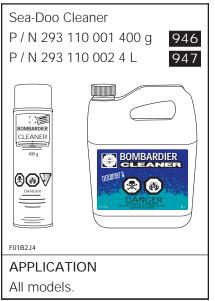








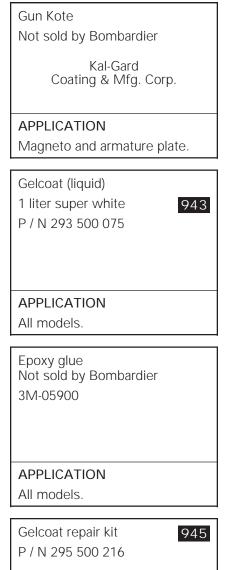




## Section 01 SERVICE TOOLS AND PRODUCTS Sub-Section 03 (SERVICE PRODUCTS)

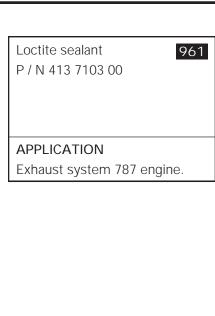






**APPLICATION** 

All models.



### **Section 02 MAINTENANCE**

Sub-Section 00 (TABLE OF CONTENTS)

### **TABLE OF CONTENTS**

PERIODIC INSPECTION CHART	
FLUSHING AND CARE	
FLUSHINGPROCEDURE	
CARE	
WATER-FLOODED ENGINE	02-03-1
STORAGE	02-04-1



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