

**Factory Pipe**  
**Bill of Materials**  
**Sea Doo® 951 RX Twin Pipe**

	<b>QTY</b>	<b>PART NUMBER</b>	<b>PART DESCRIPTION</b>
<b>1</b>	<b>1</b>	<b>COMASM0900</b>	<b>951 RX MAG CHAMBER ASSEMBLY</b>
	<b>QTY</b>	<b>PART NUMBER</b>	<b>SUB ASSEMBLY</b>
A	1	COMCH95106	MAG CHAMBER
B	2	COMFTG0045	1/4" NPT X 1/2" X 90 deg FITTING
C	1	COMFTG0030	1/8" NPT X 3/8" X 90 deg FITTING
D	1	COMHOS0017	3/8" X 25" WATERLINE
E	2	COMCLP0010	#6 HOSE CLAMP

<b>ITEM</b>	<b>QTY</b>	<b>PART NUMBER</b>	<b>PART DESCRIPTION</b>
<b>2</b>	<b>1</b>	<b>COMASM0905</b>	<b>951 RX PTO CHAMBER ASSEMBLY</b>
	<b>QTY</b>	<b>PART NUMBER</b>	<b>SUB ASSEMBLY</b>
A	1	COMCH95107	PTO CHAMBER
B	2	COMFTG0045	1/4" NPT X 1/2" X 90 deg FITTING
C	1	COMFTG0300	1/8" NPT X 3/8" X 90 deg FITTING
D	1	COMHOS0018	3/8" X 7" WATERLINE
E	2	COMCLP0010	#6 HOSE CLAMP

<b>ITEM</b>	<b>QTY</b>	<b>PART NUMBER</b>	<b>PART DESCRIPTION</b>
<b>3</b>	<b>1</b>	<b>COMASM0910</b>	<b>951 RX MAG HEADPIPE ASSEMBLY</b>
	<b>QTY</b>	<b>PART NUMBER</b>	<b>SUB ASSEMBLY</b>
A	1	COMCH95105	MAG HEAD PIPE
B	1	COMFTG0045	1/4" NPT X 1/2" X 90 deg FITTING

<b>ITEM</b>	<b>QTY</b>	<b>PART NUMBER</b>	<b>PART DESCRIPTION</b>
<b>4</b>	<b>1</b>	<b>COMASM0918</b>	<b>951 RX PTO HEADPIPE ASSEMBLY</b>
	<b>QTY</b>	<b>PART NUMBER</b>	<b>SUB ASSEMBLY</b>
A	1	COMCH95108	PTO HEAD PIPE
B	1	COMFTG0045	1/4" NPT X 1/2" X 90 deg FITTING

<b>ITEM</b>	<b>QTY</b>	<b>PART NUMBER</b>	<b>PART DESCRIPTION</b>
<b>5</b>	<b>1</b>	<b>N/A</b>	<b>951 RX COLLECTOR ASSEMBLY</b>
	<b>QTY</b>	<b>PART NUMBER</b>	<b>SUB ASSEMBLY</b>
A	2	COMCLP0021	#250 SS HOSE CLAMP, HIGH TORQUE #32
B	2	COMHOS0080	2" X 2-1/2" SILICONE COUPLER
C	1	COMCO95102	RX COLLECTOR

ITEM	QTY	PART NUMBER	PART DESCRIPTION
6	1	COMASM0930	951 RX HARDWARE KIT
	<b>QTY</b>	<b>PART NUMBER</b>	<b>SUB ASSEMBLY</b>
A	1	COMMNT0170	ALUMINUM SPOOL MOUNT
B	4	COMMNT0052	LORD MOUNT #J 11729-190
C	2	COMBRK0020	ALUMINUM BRACKET
D	5	COMFAS0086	3/8" FLAT WASHER
E	5	COMFAS0070	3/8" EXT. TOOTH WASHER
F	4	COMFAS0100	3/8"-16 X 3/4" HEX HEAD BOLT
G	2	COMFAS0090	3/8"-16 S.S. NUT
H	1	COMFAS0290	3/8"-16 X 8MM MOUNT NUT
I	1	COMFAS0310	8MM X 1.25 X 100MM STUD
J	2	COMFAS0026	8MM X 1.25 X 40 MM
K	9	COMFAS0036	8MM FLAT WASHER
L	2	COMGAS0330	#341 BUNA N O-RING, (LARGE OUTER)
M	2	COMGAS0340	#334 BUNA N O-RING, (SMALL OUTER)
N	2	COMGAS0235	#337 BUNA N O-RING, (INNER O-RING)
O	1	COMADH0001	MA-300 EPOXY ADHESIVE
P	1	LOC001	THREAD LOCKER
Q	1	COMTOL0004	8MM ALLEN (MODIFIED)
R	2	COMGAS0360	951 MANIFOLD GASKET
S	2	COMFTG0115	ALUMINUM SIDE SQUITER, 1/2"
T	1	COMFAS0215	36" X 1" VELCRO STRAP
U	3	COMFAS0024	8MM X 1.25 X 25MM
V	4	COMFAS0035	8MM X 1.25 NYLON NUT
W	2	COMCLP0021	#250 HOSE CLAMP, HIGH TORQUE #32
X	1	COMFTG0094	3/4" PLASTIC PLUG
Y	1	COMFTG0090	1/8" NPT PIPE PLUG
Z	1	COMHOS0700	1/2" X 2-3/4" WATERLINE
AA	1	COMHOS0702	1/2" X 4-1/2" WATERLINE
BB	10	COMCLP0012	1/2" SS HOSE CLAMP
CC	8	COMFAS0260	10MM X 1.5 X 30 MM SOCKET HEAD BOLT
DD	8	COMFAS0085	3/8 S.S. FLAT WASHER (.627" OD)
EE	1	COMFTG0130	1/2" X 1/2" HOSE MENDER
FF	1	COMHOS0703	1/2" X 56" WATERLINE
GG	1	COMHOS0704	1/2" X 50" WATERLINE
HH	2	COMHOS0701	3-3/4" X 2" SILICONE SLEEVE
II	2	PROSTI0001	10" FACTORY PIPE STICKER
JJ	1	COMFAS0020	8MM X 1.25 X 20MM BOLT

**Required parts not included in Kit:**

1. Aftermarket rev limiter / ignition system or Sea Doo RXX ignition (part# 289100003)
2. Aftermarket flame arrestors

**Factory Pipe Sea Doo RX 951 Twin Pipe**



**Item 1 - Mag Chamber**



**Item 2 - PTO Chamber**



**Item 3 - Mag Headpipe**



**Item 4 - PTO Headpipe**



**Item 5 - Collector**



**PTO Mount Assembly**



**Crankcase Mount Assembly**



**Mag Mount Assembly**



**Chamber O-Rings**



**Hardware Kit**

**Factory Pipe**  
**Instructions**  
**SeaDoo 951RX Twin**

**Attention:** Do not install twin pipes on a new Sea Doo 951 RX. The engine must be run a minimum of 15 hours or you can hone the cylinders to provide .0045"-.005" piston/cylinder clearance. Data acquired shows that the clearance is insufficient on a new engine with the increased power of the twin pipe system and piston seizure could occur.

- > Check contents against Bill of Materials. Report any shortages where you purchased your Factory Pipe system.
- > Read all instructions carefully **BEFORE** starting installation.

Disconnect the battery cables. And turn fuel valve to the off position. Remove the air plenum and the electrical box bracket at the rear of the engine compartment. Remove electrical box from the mounting bracket and leave in the hull. Remove the air horns and stock air box. At this time go ahead and remove the carbs from the intake manifolds and set in the hull. Remove stock pipe and brackets from the front of the cases and the right side of the cylinder. Now you can remove the carbs. Remove the fuel supply, return and pulse lines and cables from the carbs and remove them from the boat. Leave carbs on the bench at this time. Also leave stinger hose and loose clamps attached to the waterbox for future use. You should now be ready to start installation of the pipes.

Install any aftermarket ignition parts or reprogrammed RX MPEM. You can also purchase from SEA DOO an RXX MPEM (not supplied) as per the manufacturers instructions.

Your new RX twin pipes are designed to retain the OEM oil injection system. If you choose to remove your oil injection system now would be the time to remove it. See a qualified technician for proper removal.

Remove the stock 8mm bolt from the left rear motor mount. Install the PTO Mount (item#6-B,C,D,E,F,G) with the 8mm x 20mm flange head bolt (item# 6-JJ,E) but leave loose at this time (fig. 1). Install the Case Mount (item# 6-B,H,I,E,F,G) into the forward left hole where the stock pipe bracket was located (fig. 2)using the supplied threadlocker (item# 6-B).

Slide the Collector (item# 5-C) into the existing waterbox hose. Leave the clamps loose for now. Install 2" ID x 2.5" couplers (item# 5-A,B) and clamps onto collector. You might want to slide couplers flush with stingers until chambers are in place.(fig. 3)

Locate the PTO chamber body (item# 2) and install the three O-rings (item# 6-L,M,N) into the flange (fig. 4). Slide one of the 3 3/4" x 2" silicone sleeves (item# 6, HH) over the flange and leave loose at this time. Lightly coat the O-rings with grease prior to installation. Slide the PTO headpipe (item# 4) into the chamber body flange and push until the O-rings lock in place. There will be a small gap (approx. 1/8") between the

headpipe and chamber flange when installed correctly. Now slide the 3 3/4" x 2" Silicone sleeve over the connection covering the gap.

Slide the 1/2" x 4-1/2" waterline (item# 6-AA) onto the barbed fitting of the PTO chamber near the flange and secure with a 1/2" hose clamp (item# 6-BB). Slide another 1/2" hose clamp over this waterline and rotate the PTO headpipe until the barbed fitting lines up with the waterline. Secure the remaining end of the waterline to this fitting and secure with the 1/2" hose clamp (fig. 5).

Clean the exhaust port gasket surfaces on your cylinder. Secure the PTO chamber assembly onto the rear cylinder using the manifold gasket, four 10mm x 30mm socket head bolts (item#6-CC) and four 3/8" SS flat washers (item# 6-DD). Use the supplied 8mm wrench (item# 6-Q) to secure the bolts and use thread locker (item# 6-P) on all bolts. Rotate the PTO mount that was previously installed until it lines up with the PTO chamber bracket. Secure the chamber bracket to the mount with the assembly hardware. Secure the bolt that holds the PTO mount to the stock motor mount.

Locate the Spool mount (item#6-A,B). Slide the Spool mount assembly under the PTO chamber bracket on the port (left) side of the boat near the gas tank. Temporarily secure the Spool mount assembly to the PTO chamber bracket using one of the 3/8"-16 x 3/4" bolts and washers (item# 6-D,E,F). With the Spool mount secured to the PTO chamber assembly note the contact location on the hull (fig. 6). Be sure to take your time mounting the Spool mount. Now remove the mount assembly from the chamber and rough up the contact area on the hull with some coarse sandpaper. Clean sanded surface with acetone or other solvent to make sure it is free of any oil or dirt. Reinstall Spool mount assembly on chamber and mark contact area on hull with felt pen or marker. Remove the bolt and mount assembly from the chamber. Now secure the mount to hull using the supplied epoxy adhesive (item# 6-O). Squirt a small amount of epoxy onto a piece of scrap cardboard and mix thoroughly. Apply the epoxy to the bottom of the mount and secure in hull to the marked area. Allow at least one hour for the epoxy to fully cure before installing any hardware into mount.

Rejet the carburetors to the supplied specifications in these instructions. The supplied specs are for a stock carb, stock compression engine only. If you have other modifications you may need different jetting. This installation does reconnect the stock choke cable and we highly recommend leaving the choke plates in place. Removal of the choke plates can cause possible detonation. Reinstall the carbs and reconnect all fuel lines, choke and throttle cables.

The stock side squirter (bypass) will not be used in this installation. In order to keep water from coming in the squirter do the following. Locate the two 5/16" waterlines that were connected to stock pipe. Follow waterlines up to the front engine compartment. The side squirter is located behind the MPEM. There is also a one way valve located in the same area. We recommend coiling up the waterlines and securing them and use marine silicone to seal stock side squirter (fig. 7). If you choose to remove waterlines from boat that is your option. However you do this procedure make sure to seal area so water cannot enter engine compartment.

For the next step locate your electrical box which should still be in hull. Place electrical box along side of the battery with the coil wires facing motor. Now locate supplied velcro strap (item#6-T) and secure electrical box to the side of the battery. (fig. 8) Locate MAG chamber mount (item#6-B,H,D,E,F,J,K) and bolts, nuts and washers (item#6-J,U,V,K). These items will be used to secure rear grab bar where the stock air plenum used to be located. There are six bolts that secure grab bar there should still be two bolts in place remove starboard (right) bolt and replace with MAG chamber mount. Now install the rest of the bolts to secure rear grab bar.(fig. 9)

Locate the water regulator (RAVE valve) on the stock waterbox. Disconnect the black waterline from the regulator and remove the waterline from the boat (the other end was connected to the stock pipe). Follow the clear waterline from the regulator to the "T" fitting on the main incoming cooling line and disconnect it. Now disconnect the clear waterline from the water regulator and remove the waterline from the boat. Remove the complete water regulator assembly from the waterbox. Install the 1/8" NPT pipe plug (item# 6-Y) into the hole where the regulator was removed and secure.(fig. 9)

Remove the stock "T" fitting in the main incoming waterline where the clear waterline from the water regulator was connected and retain the stock clamps. Install the 1/2" x 1/2" hose mender (item# 6-EE) in place of the stock "T" fitting and secure using the retained stock clamps.

To install MAG chamber (item# 1) you will need to install o-rings (fig. 4) in the chamber just like the PTO chamber except do not assemble the MAG headpipe to the chamber just yet. After o-rings slide 1/2" x 2 3/4" waterline (item# 6-Z) onto the barbed fitting of the MAG chamber near the flange and secure with a 1/2" hose clamp (item# 6-BB). Also slide the 3 3/4 x 2" silicone sleeve (item# 6-HH) on the chamber. Install MAG chamber in the boat with out headpipe (fig. 10). Once MAG chamber is in place and lined up to the MAG mount install bolt (item#6-D,E,F). Now install Mag headpipe, waterline and clamp, then the silicone sleeve.(fig. 11) Secure the MAG headpipe/chamber onto the front cylinder using a manifold gasket, four 10mm x 30mm socket head bolts and four 3/8" SS flat washers (item# 6-CC,DD). Use the supplied 8mm wrench (item# 6-Q) to secure the bolts and use thread locker (item# 6-P) on all bolts.

Fully secure the hardware left loose in the MAG/PTO mount assembly's. All the pipe brackets and mounts should be installed and secure at this time.

Slide the couplers on the collector assembly onto the ends of the MAG and PTO chambers and secure with the hose clamps previously placed loose on the couplers. Secure the clamp that connects the collector assembly to the waterbox. All the pipe couplers and clamps should be secure at this time.

Locate the 1/2" x 4ft 8in waterline (item# 6-FF) and install it on the barbed fitting at the end of the MAG chamber. Locate the 1/2" x 4ft 2in waterline (item# 6-GG) and install it on the barbed fitting at the end of the PTO chamber.(fig. 12) Secure both waterlines with a 1/2" hose clamp (item# 6-BB). Take the loose ends of each of these waterlines

and run them over oil tank along hull towards the front of boat. Locate where the foam has been cut out for the one way valve that leads from the gas tank. Just above this will be the location of your side squirters (fig. 13). After marking the location double check that the hoses will reach your desired location and that they are not kinked then drill a 5/8" hole for each side squirter (fig. 13B) Install the two 1/2" side squirters (item# 6-S) into the holes and secure using a small amount of marine silicone around the hole to seal them. Slide a 1/2" hose clamp over each of the waterlines and connect them to the side squirters. Secure the waterlines to the squirters.

Looking in the pump cavity from the rear of the boat locate the 1 1/4" OD tube in the upper right corner. Install the 3/4"-16 plug (item# 6-X) in the threaded end of the tube and secure. This tube was the stock exhaust water exit which is no longer used. You can also remove that waterline or leave in the hull. This line is commonly used to flush your engine. Now that this line has been abandoned you will need to set up a flush kit to flush the engine from the main water feed line on the cylinder head. Flush kit parts are not supplied by manufacture.

Double check that all hardware, hoses, clamps and waterlines are secure. Reconnect the battery cables. Install your aftermarket flame arrestors at this time.

### **IMPORTANT NOTES**

1. You must run fuel with a minimum octane rating of 92 (premium pump fuel).  
Running a lower octane fuel can cause detonation and serious engine damage.
2. Always warm up the engine prior to full throttle/high speed operation.
3. If you choose to remove your oil injection system you must pre-mix fuel.
4. Use only Sea Doo Synthetic racing oil. For Pre-mix and oil injection.

### **CARBURETOR ADJUSTMENTS**

These carburetor recommendations are for 730 feet above sea level. Factory Pipe testing was performed on a stock engine with aftermarket flame arrestors. No claims are made by Factory Pipe for the performance, reliability or function of this exhaust system on a modified engine. Carburetor adjustments will vary depending on engine modifications, fuel, altitude and other variables. Please consult a qualified technician if you are not familiar with tuning your carburetor(s). These carburetor adjustments **MUST** be done prior to running the engine with this exhaust system. High performance engines require precise jetting and damage can occur if the carburetors are not tuned properly.

#### **2000-2001 RX**

Main jet : 182.5

Pilot Jet : 80

High speed screw : 1/2 turn out from closed

Low speed screw : 1 1/2 turns out from closed

Needle: 2.0 (Stock)

Spring: 95 gram (Stock)

**Notes:** Stock compression with R&D flame arrestor. Choke plates were **NOT** removed.

## **OPTIONAL PERFORMANCE UPGRADE PARTS FOR 951RX**

1. RX-X Cooling System (consists of following Sea Doo Part Numbers)
  - 275 000 007, Hose 8mm, Qty. 2
  - 293 710 066, Male connector, Qty. 1
  - 293 800 013, Loctite 56765 250ml, Qty. 1
  - 293 700 023, Elbow fitting 90deg., Qty. 1
  - 293 650 037, Tridon clamp, Qty. 8
  - 276 000 001, Hose 12.5 mm, Qty. 2
  - 293 650 038, Tridon clamp, Qty. 4
  - 290 811 430, Channel Cover (Case Cooler), Qty. 1
  - 290 931 880, Rubber ring (gasket for above part), Qty. 1
  - 290 841 558, Taptite screw, Qty. 10
2. RX-X MPEM Ignition box, 289 100 003
3. RX-DI Waterbox, 289 100 025
4. RX-X Reed cages, xxx xxx xxx (no part number available at this time)
5. R&D Racing Products Flame Arrestor





FIG. 1



FIG. 2



FIG. 3



FIG. 4



FIG. 5



FIG. 6



FIG. 7



FIG. 8



**FIG. 9**



**FIG. 10**



**FIG. 11**



**FIG. 12**



**FIG. 13**



**FIG. 13b**