

***** FOR COMPETITION USE ONLY Per US EPA Regulations *****

Factory Pipe
Bill of Materials
SeaDoo 951XP Twin Mod

<u>Item</u>	<u>Qty</u>	<u>Part Number</u>	<u>Part Description</u>
1	1	COMASM0953	951XP Mod MAG chamber assembly
2	1	COMASM0952	951XP Mod PTO chamber assembly
3	1	COMASM0954	951XP Mod MAG hp assembly
4	1	COMASM0955	951XP Mod PTO hp assembly
5	1	COMASM0854	951XP Collector assembly
6	1	COMTUB0008	951XP Stinger tube
7	1	COMASM0849	951XP Mod hardware kit (contains items 8 - 39)
8	1	COMADH0001	MA-300 Epoxy adhesive
9	1	COMASM0845	951XP/RX PTO Mount assembly
10	1	COMASM0846	951XP/RX Case mount assembly
11	1	COMASM0847	951XP MAG/PTO Mount assembly
12	1	COMASM0848	951XP/RX Spool mount assembly
13	8	COMCLP0012	SS hose clamp (1/2")
14	2	COMCLP0021	#250 High torque SS hose clamp (2")
15	1	COMFAS0020	8mm x 1.25 x 20mm Flange head bolt
16	2	COMFAS0070	3/8" Ext. Tooth washer S.S.
17	8	COMFAS0085	3/8" Flat washer S.S. (.627" OD)
18	2	COMFAS0086	3/8" Flat washer w/1" OD S.S.
19	1	COMFAS0090	3/8" - 16 S.S. Nut
20	2	COMFAS0100	3/8"-16 x 3/4" Hex head bolt S.S.
21	8	COMFAS0260	10mm x 1.5 x 30mm SS Socket head bolt
22	1	COMFTG0090	1/8" NPT Pipe plug
23	2	COMFTG0115	Side squirter (" Hose)
24	1	COMFTG0130	1/2" x 1/2" Hose mender
25	2	COMGAS0330	341 Buna N o-ring
26	2	COMGAS0341	335 Buna N o-ring
27	2	COMGAS0346	338 Buna N o-ring
28	2	COMGAS0360	951 Cylinder/Manifold gasket
29	2	COMHOS00695	1/2" x 10-1/2" Waterline
30	1	COMHOS0697	" x 14-1/2" Waterline
31	1	COMHOS0698	" x 11-1/2" Waterline
32	2	COMHOS0701	3 3/4" X 2" Silicone sleeve
33	4	COMFTG0120	1/8" Vinyl cap
34	2	COMFAS0003	5mm X .8 X 12mm Socket head bolt SS
35	4	COMFAS0210	4" Plastic zip tie
36	1	COMPLA0001	951XP Oil block off plate
37	1	LOC001	Thread locker
38	1	COMFTG0094	3/4" GHT Plastic plug
39	1	COMTOL0004	Modified 8mm allen wrench For 951XP

Required parts not included in kit: 1. Rev limiter 2. Aftermarket flame arrestor(s)

< **Check contents against bill of materials. Report any shortages where you purchased your Factory Pipe.**

< **Read all instructions carefully before starting installation.**

< **This pipe system installation requires the removal of the oil injection system. Any fuel left in the tank must have oil added (32:1) prior to running the engine.**



PTO Chamber



Mag Chamber



PTO Headpipe



Mag Headpipe



Collector



Stinger



Mag Mount



Mag / PTO Mount

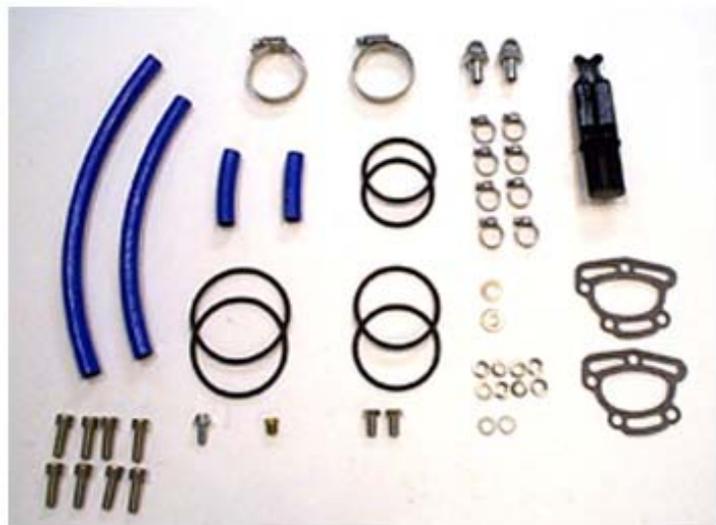


Case Mount



PTO Mount

Note: Parts shown are for identification only. Color of components may vary.



Hardware Kit

Factory Pipe
Instructions
SeaDoo 951XP Twin Mod

Disconnect the battery cables. Remove the stock exhaust system. You may need to remove the carburetors to access the headpipe bolts or you can remove the manifold and first section of pipe as a complete assembly. Remove the stock pipe brackets from the front of the cases and the right side of the cylinder. Remove the stock airbox from the carbs. Remove the stock stinger tube that connects the chamber and waterbox and retain the two stock 2.5" ID x 3.5" couplers and four clamps. Remove the oil tank and foam tray. Bend the two oil tank brackets in the hull down until they are almost flat (fig. 1). Disconnect the oil pump cable from the oil pump and secure the cable to the throttle cable with a 4" zip tie (item # 35) to keep it out of the way. Remove the oil pump (leave pump and tank in hull at this time) and install the oil pump block off plate (item # 36).

Install the aftermarket rev limiter (not supplied) per the manufacturer's instructions.

If you have not already done so, unbolt the carburetors from the intake manifolds. Disconnect the oil feed lines from the intake manifolds. You can now remove the oil pump and oil tank. Slide the two 1/8" vinyl caps (item # 33) over the intake manifold fittings where the oil lines were removed and secure each with a 4" zip tie (item # 35). Remove the fuel supply, return lines, pulse lines, and cables from the carbs and remove them from the boat. Leave carbs on bench at this time. You should now be ready to start installation of the pipes (fig. 2).

Remove the stock 8mm bolt from the left rear motor mount. Install the PTO mount assembly (item # 9) with the 8mm x 20mm flange head bolt (item # 15) but leave loose at this time (fig. 3). Install the case mount assembly (item # 10) into the forward left hole where the stock pipe bracket was located (fig. 4), using the supplied thread locker (item # 37).

Install the retained stock 2.5" ID x 3.5" couplers onto each end of the Stinger tube (item # 6). Slide the couplers on about half way and secure with two of the retained stock clamps. Slide the stinger tube back into the stock location. Place the remaining two retained stock clamps loosely over each end of the stinger tube couplers. Now slide the stinger tube onto the waterbox connection but leave clamp loose at this time. Slide the collector assembly (item # 5) into the front stinger tube coupler but leave clamp loose at this time (fig. 5).

Locate the PTO chamber body (item # 2) and install the three o-rings (item # 25,26,27) into the flange (fig. 6). 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.

Slide the 1/2" x 10-1/2" waterline (item # 29) onto the barbed fitting of the PTO chamber near the flange and secure with a 1/2" hose clamp (item # 13). Slide another 1/2" hose clamp over this waterline and rotate the PTO headpipe until the barbed fitting lines up with the waterline. Cut the 1/2" waterline to the proper length. Secure the remaining end of the waterline to this fitting and secure with the 1/2" clamp (fig. 7).

Slide a #250 hose clamp (item # 14) over each coupler on the collector assembly and leave loose at this time. 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, and four 3/8" SS flat washers (item # 28,21,17). Use the supplied 8mm wrench (item # 39) to secure the bolts and use thread locker (item # 37) 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. Secure the end PTO chamber bracket to the case mount assemblies, previously installed, with a 3/8-16 x 3/4" bolt, lock washer, and flat washer (item # 20,16,18).

Locate the MAG/PTO mount assembly (item # 11). Remove the 3/8"- 16 x 2-1/2" bolt, two-piece rubber mount, flat washers, and lock washer. Leave the remaining rubber mount attached (fig. 8). Slide the MAG/PTO mount assembly under the PTO chamber bracket near where the oil tank was located. Temporarily secure the MAG/PTO mount assembly to the chamber bracket using one of the 3/8"-16 x 3/4" bolts (item # 20) from the hardware kit. With the mount secured to the chamber assembly, note the contact location on the hull (fig. 9). Now remove the mount assembly from the chamber and rough up the contact area on the hull with some coarse sandpaper. Clean the sanded surface with acetone or other solvent to make sure it is free of any oil or dirt. Reinstall 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 # 8). 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 according to your individual engine setup. If you are not familiar with engine jetting please seek a qualified technician. Reinstall the carbs and reconnect all fuel lines and throttle cable.

The stock side squirter 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 from the stock side squirter on the left side of the hull. Remove one of the waterlines from the side squirter (either one) and cut the remaining line to approximately 6". Then attach the end of the remaining line back to the open end of the side squirter and secure with a 4" zip tie (item # 35).

Assemble the MAG headpipe (item # 3) and MAG chamber (item # 1) using the same procedure as the PTO pipe. Slide the 1/2" x 10-1/2" waterline (item # 29) onto the barbed fitting of the MAG chamber near the flange and secure with a 1/2" hose clamp (item # 13). Slide a 1/2" hose clamp over this waterline and rotate the MAG headpipe until the barbed fitting lines up with the waterline. Cut the 1/2" waterline to the proper length. Attach the remaining end of the waterline to this fitting and secure with the 1/2" clamp.

To install the MAG headpipe/chamber assembly start with it positioned as shown in figure 10. Now rotate the headpipe over the PTO chamber and toward the cylinders (fig. 11). Before rotating the

chamber all the way to the cylinders, install the bottom piece of the two-part rubber mount that was removed from the MAG/PTO mount assembly earlier into the bottom of the chamber bracket (fig. 12). Now continue to rotate the chamber assembly until the flange lines up at the cylinder and the chamber bracket with the bottom piece of the rubber mount is on top of the mount assembly installed in the hull. Secure the MAG headpipe/chamber onto the rear cylinder using a manifold gasket, four 10mm x 30mm socket head bolts, and four 3/8" SS flat washers (item # 28, 21, 17). Use the supplied 8mm wrench (item # 39) to secure the bolts and use thread locker (item # 37) on all bolts.

Locate one of the large flat washers that was removed from the MAG/PTO mount assembly and place it between the rubber Lord mount left in the MAG/PTO mount assembly and the bottom of the rubber mount in the chamber bracket. Install the remaining top part of the rubber mount on top of the chamber bracket. Loosely secure the complete mount assembly back together using the hardware removed earlier.

Locate the spool mount assembly (item # 12) and slide it under the remaining bracket on the end of the MAG chamber. Temporarily bolt the mount assembly to the chamber bracket using a 3/8"-16 x 3/4" bolt (item # 20) from the hardware kit. With the MAG mount secured to the chamber assembly note the contact location of the mount assembly to the hull. Remove the mount assembly from the chamber and install it with the supplied epoxy adhesive following the same procedure as used on the MAG/PTO mount assembly. Allow at least one hour for the epoxy to fully cure before installing any hardware into mount.

Fully secure the hardware left loose in the MAG/PTO mount assembly. Secure the end PTO chamber bracket to the PTO mount assembly using a 3/8"-16 x 3/4" hex head bolt, 3/8" flat washer, and 3/8" lock washer (item # 20, 18, 16). 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 stinger tube. Secure the clamp that connects the rear of the stinger tube to the waterbox. All the pipe couplers and clamps should be secure at this time.

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 # 22) into the hole where the regulator was removed and secure.

Remove the stock T in the main incoming waterline where the clear waterline from the water regulator was connected and retain the stock clamps. Install the " x " hose mender (item # 24) in place of the T and secure using the retained stock clamps.

Locate the " x 14-1/2" waterline (item # 30) and install it on the barbed fitting at the end of the PTO chamber. Locate the " x 11-1/2" waterline (item # 31) and install in on the barbed fitting at the end of the MAG chamber. Secure both waterlines with a 1/2" hose clamp (item # 13). Take the loose end of each of these waterlines and put them on right side of the hull. Note where they contact the foam/hull. This will be the location of your side squitters (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. Install the two " side squirters (item # 23) into the holes and secure using a small amount of 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" plug (item # 38) in the threaded end of the tube and secure.

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. This installation removed the oil injection system so you must add oil to any fuel in you tank before running the engine.**
- 2. These pipes are designed for a non-stock boat. We do not have jetting instructions available.**



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