***** FOR COMPETITION USE ONLY per US EPA regulations *****

Factory Pipe
Bill Of Materials
Yamaha GP1200R

Item	Qty	Part Number	Part Description
1	3	COMASM0690	GP1200R Flange assembly
2	1	COMASM0840	GP1200R Collector assembly
3	1	COMASM0821	GP1200R Mag chamber assembly
4	1	COMASM0822	GP1200R Ctr chamber assembly
5	1	COMASM0823	GP1200R PTO chamber assembly
6	1	COMST12002	GP1200R Mag stinger
7	1	COMST12003	GP1200R Ctr stinger
8	1	COMST12001	GP1200R PTO stinger
9	1	COMASM0825	GP1200R Mag bracket assembly
10	1	COMASM0826	GP1200R PTO upper bracket assy
11	1	COMASM0827	GP1200R PTO lower bracket assy
12	1	COMASM0828	GP1200R Filter block hose assy
13	1	COMASM0829	GP1200R Exit water manifold
14	1	COMASM0844	GP1200R Cyl head water exit
15	**1**	**COMASM0843**	**GP1200R Hardware kit (includes items 16-35)**
16	6	COMASM0790	Spring w/ clear hose cover
17	12	COMFAS0050	10mm x 1.25 x 40mm Flanged head cap
18	6	COMFAS0002	2 Hole spring hook S.S. (10mm)
19	9	COMCLP0020	#32 SS Hose clamp (2")
20	3	COMHOS00703	1-3/4" Silicone coupler (2-1/2")
22	13	COMCLP0010	#06 SS Hose clamp (3/8")
23	6	COMFAS0086	3/8" Flat washer w/1" OD S.S.
24	6	COMFAS0046	10mm x 1.25 x 30mm Flange head cap
25	1	COMFAS0280	3/8"-16 x 1" S.S. Hex head cap screw
26	5	COMFAS0100	3/8"-16 x 3/4" Hex head bolt S.S.
27	6	COMFAS0040	10mm Lock washer (.691" OD) S.S.
28	1	COMBRK0214	GP1200R Mag case bracket
29	3	COMGAS0150	7-1/4" Graphite/kevlar sealing ring
32	2	COMCLP0085	S.S. AP@ Clamp
33	1	COMFAS0012	#10 x 2" SS Pan head screw
34	2	COMFAS0210	4" Plastic zip tie
35	1	COMTUB0006	1/4" Flex guard 24" long

Required Parts Not Included in Kit: Aftermarket Rev Limiter/Ignition Module, Aftermarket Flame arrestors and Aftermarket Top Loader Intake Pump Grate and Ride Plate.

- **CHECK CONTENTS AGAINST BILL OF MATERIALS. REPORT ANY SHORTAGES WHERE YOU PURCHASED YOUR FACTORY PIPE.**
- **READ ALL INSTRUCTIONS CAREFULLY BEFORE STARTING INSTALLATION.**
- **DO NOT USE THE STOCK IGNITION MODULE, ENGINE DAMAGE WILL OCCUR IF THE STOCK IGNITION TIMING CURVE IS USED.**
- **AN AFTERMARKET INTAKE GRATE AND/OR RIDE PLATE MUST BE USED WITH THIS EXHAUST SYSTEM. INCREASED SPEEDS WILL RESULT IN DANGEROUS HANDLING WITHOUT THESE CHANGES.**

PTO Chamber

Mag Chamber

Center Chamber

Collector

Mag Stinger

Center Stinger

PTO Stinger

Mag Case Bracket

PTO Upper Bracket

PTO Lower Bracket

Mag Bracket

Flange

Filter Block Assy.

Water Exit Manifold

Cyl. Head Water Exit

Hardware Kit

Factory Pipe
Instructions
Yamaha GP1200R

Disconnect the battery and remove the power valve servo and cables with the bracket. Completely remove the stock exhaust/catalytic converter system from the cylinder to the water box and leave the stock 3/8" waterlines attached to the side squirters. Remove the two studs on the center cylinder. Retain the stock waterbox rubber coupler and clamp, stock front engine case bracket, and stock exhaust manifold gasket. Remove the stock front air silencer and carburetor flame arrestors. Retain one of the rubber mounts and bolt. Remove the rear motor mount on the exhaust side of the boat. Slide trim cable, stator wires, starter cable, and ground cable under motor. Remove lower cable guide from hull to allow clearance for exhaust.

Install an aftermarket top loader intake grate and ignition system (or rev limiter/CDI module) per the manufacturer=s instructions.

Install the three graphite/kevlar sealing rings (item #29) into the flanges (item #1) (Figure 1). **Note: Kevlar seals should be 7-1/4" in length. Check length before installing.** Install the three flanges on the cylinder using the retained stock manifold gasket, 10mm x 40mm bolts (item #17), and spring hooks (item #18). The barbed hose fittings should point toward the front of the boat and the spring hooks should be turned outward at a 45 degree angle (Figure 2). Torque all flange bolts to 30 ft.-lb.

Lay the filter block assembly (item #12) in the left side of the hull in the upper groove centered on the engine. Connect the front three non-filtered waterlines on the filter block assembly to the fittings on the exhaust flanges. Secure with #6 hose clamps (item #22). **Note: Waterline lengths are left long to accommodate different setups. Cut to suit your application**. Secure the filter assembly to the hull using one of the AP@ clamps (item #32), and the #10 x 2" screw (item #33). Use a 1/8" drill bit to pre-drill the hole for the screw (Figure 3). Remove the stock black 5/8" x 4" piece of waterline from the stock AY@. Connect the 5/8" waterline from the filter assembly to the AY@ and secure with the supplied clamp.

Remove the air box silencer rubber mount from the left side of the mag cover. Install the mag case bracket (item #28) using the retained rubber mount and 8mm bolt and washer, making sure that the steel collar is on the mag side of the bracket. (Figure 4).

Put the center chamber (item #4) in the boat and secure the rubber Lord mount on chamber to the mag case bracket using a 3/8"-16 x 3/4" bolt and washer (item #26,23). Do not insert chamber into flange at this time (Figure 5).

Install the mag chamber (item #3) starting with the pipe vertical and rotating it down and through the center chamber. Now, insert both the mag and center chambers into the flanges and secure with the exhaust springs (item #16)(Figure 6). **Note: 1. After installation of mag chamber, remove the throttle cable from carb bracket and route through center of chamber to avoid stretching cable. 2. A small amount of grease on the o-rings will allow them to slide in easily.**

Install the mag bracket (item #9) on the stock front bracket using two 10mm x 30mm bolts (item #24), and two 10mm lock washers (item #27). Torque bolts to 30 ft.-lb.

Attach mag chamber to bracket using the 3/8" x 1" bolt (item #25), and 3/8" flat washer (item #23) on the exhaust side mount, and a 3/8" x 3/4" bolt (item #26), and flat washer (item #23) on the carburetor side mount. **Note: Install the 3/8" x 1" bolt first.** Install a 3/8" x 3/4" bolt (item #26), and flat washer (item #23), on the upper mount of the center chamber into the Lord mount and tighten.

Attach the front two filtered waterlines (the larger diameter of the filter block is the filtered end) to the fittings on the mag and center chambers below the flanges using a #6 hose clamp (item #13).

Install the collector assembly (item #2) into the waterbox coupler and rotate it so the bottom tube is 2" above hull. Do not tighten clamp at this time.

Note: 1. Do not use grease or oil on silicone couplers. Use only glass cleaner or water with dish soap if required. 2. You may want to leave all the hose clamps slightly loose on the stinger/collector/chamber connections until all three are installed and aligned.

Slip a #32 hose clamp (item #19) over each coupler tube on the collector and leave loose. Install the mag stinger tailpipe (item #6) into the lower coupler on the collector. Then install a 1-3/4" x 2 2"silicone coupler (item #20) between the mag chamber and mag stinger and lightly secure with #32 hose clamps (item #19). Install the center stinger tailpipe (item #7) into the upper coupler on the collector. Install a 1-3/4"x 2-1/2"silicone coupler (item #20) between the center chamber and tailpipe. Lightly secure with #32 hose clamps (item #19) and lightly secure clamps on the rear collector (Figure 7).

Install the PTO lower bracket (item #11) using two 10mm x 30mm bolts (item #24), and two 10mm lock washers (item #27) onto the left rear engine case and torque to 30 ft.-lbs..

Remove the four nuts holding the battery tray and move it just slightly to make it easier to install the PTO chamber. Install the PTO chamber (item #5) into the flange and secure with exhaust springs (item #16). Install a 3/8" x 3/4" bolt and washer (item #26,23) through the PTO chamber into the lower mount bracket. Install the PTO upper bracket (item #10) on the cylinder head using the remaining 10 x 30mm bolts (item #24), and 10mm lock washers (item #27) and torque to 30 ft.-lb. Install a 3/8" x 3/4" bolt and washer (item #26,23) through the PTO chamber, into

the upper mount bracket. Install the PTO stinger tailpipe (item #8) into the remaining coupler on the collector. Attach the 1-3/4"x 2-1/2" silicone coupler (item #20) between the chamber and tailpipe and secure with #32 hose clamps (item #19).

Attach the remaining waterline from the filter block assembly to the fitting on the PTO chamber, secure with a #6 hose clamp (item #22). Connect the stock 2@ outlet hose to the 2" fitting on the water exit manifold (item #13). Secure with the retained stock clamp. Attach the three 3/8@ waterlines to the outlet fitting on the end of each of the chambers and secure with #6 hose clamps (item #22). **Note: You can also use three individual side squirters to bypass the exit water from the chambers.**

Install remaining AP@ clamp (item #32) over 3/8" waterlines going to the center and mag chambers. Attach to the left upper 6mm bolt hole on the PTO power valve assembly.

Attach the cylinder head exit waterlines (item #14) to the water outlet fittings on the cylinder head. Attach the 3/8" barbed ends to the two retained stock waterlines from the side squirters at the front of the boat. Secure all hoses with #6 hose clamps (item #22).

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.

CARBURETOR ADJUSTMENTS

Because of the number of variables involved with the triple pipes on this application, Factory Pipe makes no carburetor recommendations. 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).

Fig. 1

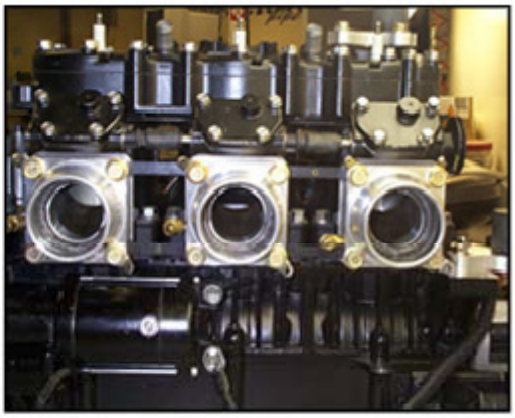

Fig. 2

Fig. 3

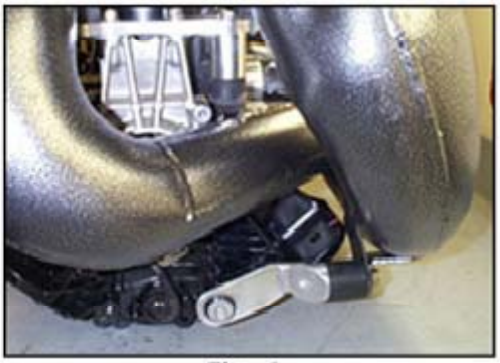

Fig. 4
XL1200 shown for reference

Fig. 5

Fig. 6

Fig. 7
XL1200 shown for reference

GP1200R August 22, 2000 instruction addendum

As of this writing the only ignition systems available for the Yamaha GP1200R are:

1. MSD total loss ignition with a RAD flywheel. Currently MSD is out of flywheels which they generally buy from RAD. The downside is that this system retails for about $1,100 retail and requires recharging the battery after every race/ride. The upside is that, well, they are available and they are easily programmed with your desired ignition curve (we recommend a specific curve which is attached) and if installed correctly they are reliable. We strongly recommend you double check the timing with a strobe light.

2. ProTec. ProTec will modify your OEM ignition to raise the rev limiter to about 8,100 RPM for $150.00. This does not change the stock ignition curve which is less than perfect and does not address issues with the exhaust valve. To address the issues with the OEM exhaust valve controller ProTec offers an inline unit which allows you to adjust the valve opening and closing for $199.00. Also not addressed is the temp sensor. The temp sensor may be installed into the outlet water manifold by taping it to 8mm.

3. Riva Yamaha. Riva is currently working on an ignition system which, when it is ready, is to properly control the exhaust valves and have several ignitions curves available.

Exhaust valves. You can run an 800 (66e) power valve controller instead of the stock GP1200R unit because the GP1200R controller will close the valve if the RPM goes past the normal rev limiter. Dan Lamey @ Racer=s Edge makes these great pressure operated exhaust valves, ala Sea-Doo7/Rotax7 RAVE7 valves. These valves are available through Riva Yamaha. The down side is that they are about $450 and some people say that you should pull the cylinders off to match the valves to your cylinder and pull the shaft out. The upside is that, well, they are available, and they are reported to operate faster than the OEM Yamaha electronic valves and are easily adjusted by changing springs.

Vendor	**Vendor Phone number**	**Item**	**$Retail**
MSD	(915) 857-5200	Total loss ignition	.$900.00
RAD	(562) 596-4109	MSD/RAD flywheel #150116	$275.00
Riva Yamaha	(954) 785-2684	Ignitions (eventually)	
		Exhaust valves	
		Handling components	
		Ride Plate, Intake Grates, Sponsons	
R and D	(562) 906-1190	Handling components,	
		Ride Plate, Intake Grates, Sponsons	
Racer=s Edge	(951) 681-1131	Exhaust Valves	.$450.00
PRO-TEC	(951) 698-8988	Rev Limiter Modification	
		Power Valve Controller	$199.00