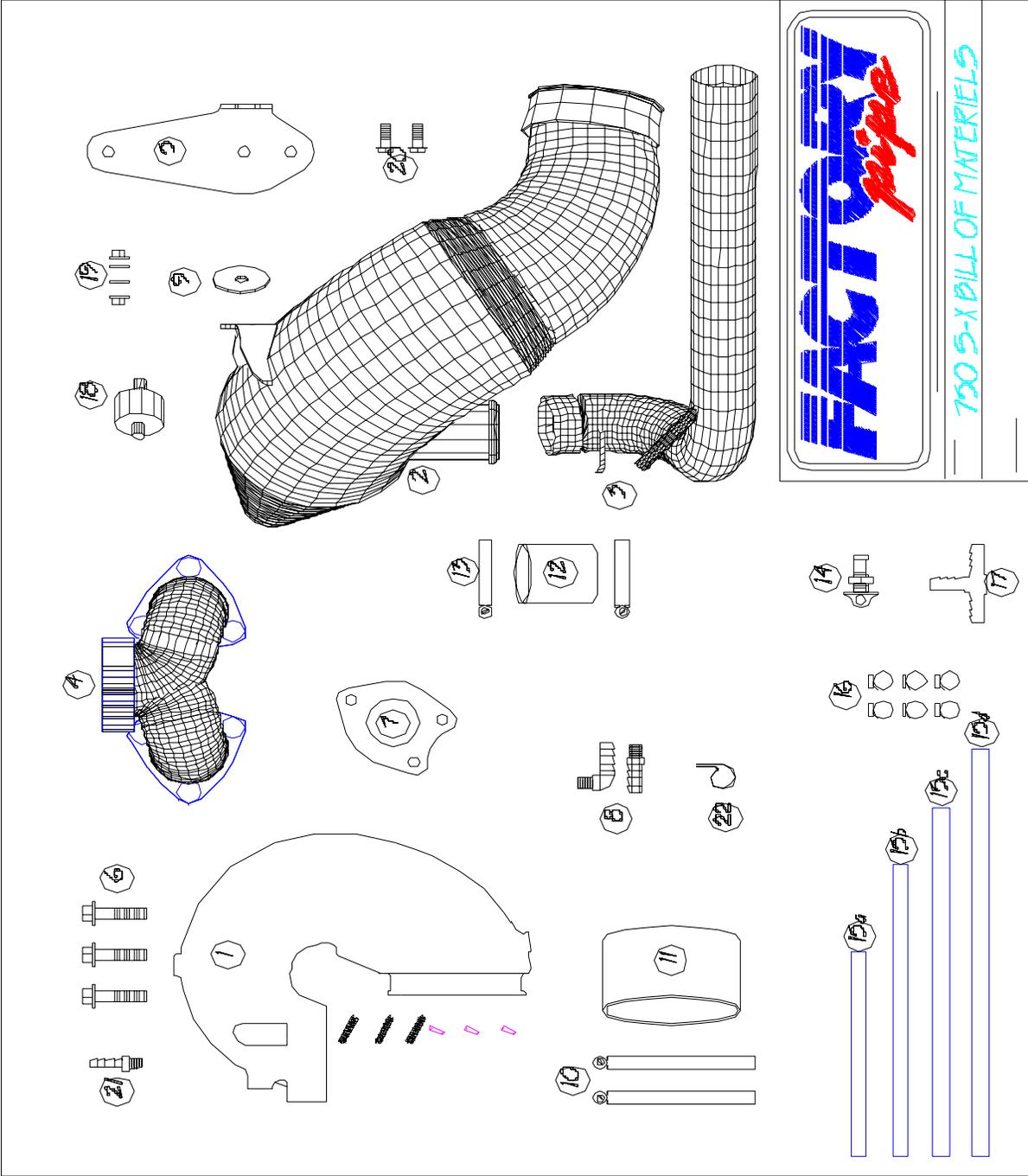


Factory Pipe
Bill of Materials
750 SX/SXi Limited

<u>Item#</u>	<u>Qty.</u>	<u>Part Number</u>	<u>Part Description</u>
1	1	COMCST0010	Reg headpipe-750 SX/650 SX-X2/650 SJ
2	1	COMCH75001	750 SX Ltd chamber only
3	1	COMST75001	750 SX Ltd stinger
4	1	COMCST0200	750 SX Ltd manifold
-	1	COMASM0110	750 SX Ltd hardware kit (items 5-9 &13-25)
5	1	COMBRK0052	(Rev 3) New 750 SX/SXi bracket
6	3	COMFAS0060	10mm x 1.25 x 50 Flanged head cap screw
7	1	COMGAS0010	3 Bolt headpipe gasket
8	3	COMFAS0040	10mm Lock washer (.691 OD) SS
9	1	COMFAS0200	Fiber insulating washer
10	2	COMCLP0050	100-120mm SS hose clamp (4")
11	1	COMHOS0100	4" Silicone coupler (2-1/6")
12	1	COMHOS0080	2" Silicone coupler (2-1/2")
13	2	COMCLP0020	#32 SS Hose clamp (2") (One installed on pipe)
14	1	COMFTG0110	Side squirter (3/8" hose)
15A	2	COMHOS0004	3/8" x 4" Waterline
15B	1	COMHOS0010	3/8" x 7" Waterline
15C	1	COMHOS0040	3/8" x 12" Waterline
16	4	COMCLP0010	#06 SS hose clamp (3/8")
17	1	COMFTG0060	3/8" Plastic "T"
18	1	COMMNT0040	#J11729-123 Lord mount
19	2	COMFAS0090	3/8"-16 Nut
20	2	COMFAS0020	8mm x 1.25 x 20mm Flanged head bolt
21	1	COMFTG0010	1/8" NPT x 1/4" Hose fitting
22	1	COMMNT0100	6mm Cushioned stainless cable clamp
23	1	COMBRK0217	Drain bracket, bent SST
24	2	COMCLP0012	SS hose clamp (2")
25	2	COMFAS0070	3/8" Ext. Toot washer SS

- < **CHECK CONTENTS AGAINST BILL OF MATERIALS. REPORT ANY SHORTAGES WHERE YOU PURCHASED YOUR FACTORY PIPE.**
- < **READ ALL INSTRUCTIONS CAREFULLY BEFORE STARTING INSTALLATION.**
- < **WATER INJECTION SET SCREWS ON TUNABLE HEADPIPES ARE PRE-ADJUSTED AND LUBRICATED. HOWEVER, YOU SHOULD DOUBLE CHECK ADJUSTMENT PRIOR TO INSTALLATION AND RE-LUBRICATE THEM ON A REGULAR BASIS TO PREVENT BINDING IN HEADPIPE.**



FACTORY
people

750 5-X BILL OF MATERIALS

Factory Pipe
Instructions
750SX/SXi Limited

Note: 1. For installation on the SXi you will need to remove the left rear ventilation tube and air box from the inside of your hood. This is a legal modification for limited class racing. 2. Aftermarket flame arrestors (K&N, Vortex) are recommended, or rotate the base of the stock flame arrestor 180 degrees to clear the chamber. 3. For legal limited race set-up you will not run the stock heat sensor.

If you wish to retain your stock heat sensor for recreational riding follow this step. Remove the rubber boot and the 1/8" NPT pipe plug from the stock flush fitting mounted to the cylinder head. (Not the AT@ fitting off of the head, only the middle leg where you would attach a flush kit.) Install the 1/8" NPT x 1/4" hose fitting (item #21) into the stock flush fitting. Disconnect the stock 1/4" hose that is connected to the top of the stock exhaust system and connect it to the new 1/8" NPT x 1/4" fitting.

Remove the stock exhaust system. If you are going to install an aftermarket waterbox (Factory Pipe offers a waterbox to compliment this system) do so now. Remove the exhaust brackets. Remove the stock air box (intake silencer) and brackets. You can keep the stock flame arrestor (not including the Air box@) or install an aftermarket flame arrestor (K&N, Vortex, etc.) Install the Factory Pipe stainless steel mount (item #5) to the front of the cylinder with the supplied 8mm x 1.25 x 20mm long bolts (item # 20). Using blue Loctite, torque to 14.5 ft.-lb.

SXi Only: After installing the bracket to cylinder remount the throttle and choke cables in the bracket tab. Remove the top left stock mag cover bolt. Slide the supplied 5/16" tubing clamp (item# 22) around both cables and secure the tubing clamp to the mag cover by reinstalling the stock bolt. Torque to 7 ft.-lb. using Loctite 242.

Note: The current IJSBA rules require the use of the stock side squirter in limited class racing. Follow the appropriate step for your application.

Recreational - Drill a 2" hole just above the bond line and about 6" behind the front of the hood and install the aluminum side squirter (item #14). Install one of the 3/8" x 4" waterlines (item # 15A) to the side squirter as per drawing "TIPS AND TRICKS", secure with a #6 hose clamp (item # 16).

Race - Cut the stock hose coming from the stock side squirter about 6" behind the front of the hood. This end will attach to the middle leg of the plastic AT@ later in the installation.

Note: Never use oil on hoses or couplers during assembly. Use only water or dish soap if lubrication is required.

Attach the stock cooling line from the pump to the barbed fitting on the Factory Pipe exhaust manifold and secure with the stock clamp. Inspect and replace, if necessary, the cylinder/exhaust manifold gasket. Install the Factory Pipe 750 exhaust manifold (item #4) using the stock 8mm nuts and Loctite 242. Torque to 14.5 ft.-lb.

Install the remaining 3/8" x 4" waterline (item #15A) to the inlet on the stinger tube (item #3) and secure with a #6 hose clamp. Install the middle leg of the 3/8" plastic "T" (item #17) to the other end of this waterline but do not tighten the #6 clamp at this time. Install the aluminum stinger into the waterbox using the stock 2" hose and clamps. Tighten the clamp on the waterbox end of the hose only. Rotate the clamps so you can get to them with a 5/16" socket and a long extension after the headpipe is installed. Install the 3/8" x 12" waterline (item #15C) to the bottom fitting on the headpipe and secure with a #6 hose clamp (item #16).

Install the Lord mount (item #18) to the stainless bracket (item #5) on the cylinder and attach with the supplied 3/8"-16 stainless nut (item #19) (see drawing #1). Install the fiber insulating washer between the chamber and the Lord mount.

We pre-assemble the Factory Pipe tunable headpipe (item #1), stainless chamber (item #2), 4" silicone coupler (item #11), two 100-120mm stainless hose clamps (item #10), 2" silicone hose (item #12) and one #32 clamp. These are assembled the way they go into the ski. **Do not disassemble these parts to install.**

Install the Factory Pipe headpipe and chamber assembly onto the exhaust manifold using the headpipe gasket, three 10 x 1.25 x 50mm bolts and 10mm lock washers (items #6,7,8) Use Loctite 242 and torque to 32 ft.-lb. Secure the chamber body bracket to the Lord mount with the 3/8"-16 stainless nut (item #19). Be careful not to put a twist in the Lord mount. You will have to bend the side of the fiber washer to get it to clear the chamber body (see drawing #1)

Push the aluminum stinger tube up into the 2" silicone coupler on the chamber as far as possible. Make sure that the stinger tube does not touch the motor mount, oil pump, etc. Tighten the remaining #32 clamp.

Install the 3/8" x 7" waterline (item# 15B) from the stock fitting on the cylinder head to the top 3/8" barbed fitting on the headpipe and secure with the stock hose clamps. Connect the remaining end of the 3/8" x 12" waterline from the bottom of the headpipe to the plastic "T" as per drawing "TIPS AND TRICKS" secure with a #6 clamp. If you cut the stock side squirter waterline for limited racing, connect the end of the stock line to the remaining end of the AT@ as per A750SX Ltd. Water mods@. If you installed the supplied side squirter for recreational riding, connect the remaining end of the 3/8" x 4" waterline from the side squirter to the remaining end of the AT@. Secure all lines with #6 hose clamps.

Recommended Carb Adjustments:

These adjustments are for sea level on a stock engine with aftermarket flame arrestors. Your specific adjustments may vary depending on modifications, fuel, altitude and other variables. Please consult a qualified technician if you are not familiar with tuning your carburetor.

750SX

Main jet : 155

Pilot Jet : 88

High speed screw : 7/8 turn out from closed

Low speed screw : 5/8 turn out from closed

Needle & Seat : Stock

Spring : Stock

1995 750SX_i

Main jet : 125

Pilot Jet : 75 (Stock)

High speed screw : 3/4 turn out from closed

Low speed screw : 1 2 turns out from closed

Needle & Seat : Stock

Spring : Stock

Comment: Stock spring shortened to produce 20 psi

96-UP 750SX_i

Main Jet : 147.5 (Stock)

Pilot Jet : 75 (Stock)

High speed screw : 7/8 turn out

Low speed screw : 1 turn out

Needle & Seat : Stock

Spring : Stock

Comment : Some applications may find #80 pilot better.

Factory Pipe Performance Exhaust 101

The purpose of an expansion chamber is to return to the exhaust port a negative sound wave then a positive sound wave at precisely the right time. If the pressure wave returns too late, you lose some of the fresh fuel charge in the combustion chamber and performance. If the wave returns too soon, it pushes hot exhaust gas back into the combustion chamber contaminating the fresh charge and creating hot spots on the piston. The challenge to the pipe designer is to arrive at the proper exhaust tuning that will return the sonic waves at the correct time. This challenge is made all the harder by many impeller/nozzle combinations, engine configurations, riding conditions and rider preferences.

Traditionally, if you wanted low RPM torque and high RPM horsepower, it required several pipes. A few of our competitors cast rings into their pipes to achieve pipe tuning by cut and try. In 1992 Factory Pipe introduced the first truly tunable pipe using our variable water injection system. This system allows you to modify where and how much water injects into the exhaust by the turn of a set screw. Where our competition had you change the length of the pipe, the Factory Pipe allows you to vary the exhaust gas temperature which in turn changes the sonic wave speed within the pipe. **Changing the sonic wave speed within the pipe has the same tuning affect as changing the length of the pipe.**

Factory Pipe Tuning Your Exhaust System

Most Factory Pipe systems have our exclusive Adjustable headpipe which allows you to custom tune the pipe to your riding style. The following page gives a general overview of how this system works and how each adjustment will affect the performance of your watercraft. Double check all hoses, bolts and clamps from your installation. For the first on-water test of your new Factory Pipe we recommend closing the top and middle adjustment screws and opening the bottom screw 3/4 turn out from closed. This setting will be more water than is required but will provide a good starting point to test the pipe.

Ride the watercraft for several minutes while varying the throttle position. Open the engine cover as quick as possible after the ride and check the pipe temperature by splashing water on the chamber body directly after the headpipe coupler. **The water should lightly sizzle for the first few inches on the chamber body.**

If the water **does not** sizzle, close the bottom adjustment screw 1/8 turn and retest. If the water **sizzles rapidly**, open the bottom screw 1/4 turn and retest.

This set up will provide the best top end performance of your watercraft. With the pipe adjusted as stated above, open the top screw 1/4 turn. This will cool the exhaust in the headpipe and provide better bottom end performance at the expense of some top-end. This would be an ideal setting for running slalom or a tight buoy course.

If you want a change that is somewhere in the middle of the two settings, close the top screw and open the middle screw 1/4 turn or add another 1/8 turn to the bottom screw.

Some engines may react differently from the above. For example, while testing the 650 Super Jet we found that we gained top end performance by running the top screw open and the others closed. You may use any combination of the three screws to achieve the desired performance.

However, AT LEAST ONE SCREW MUST REMAIN OPEN AT ALL TIMES TO PREVENT

Water injection tuning tip:

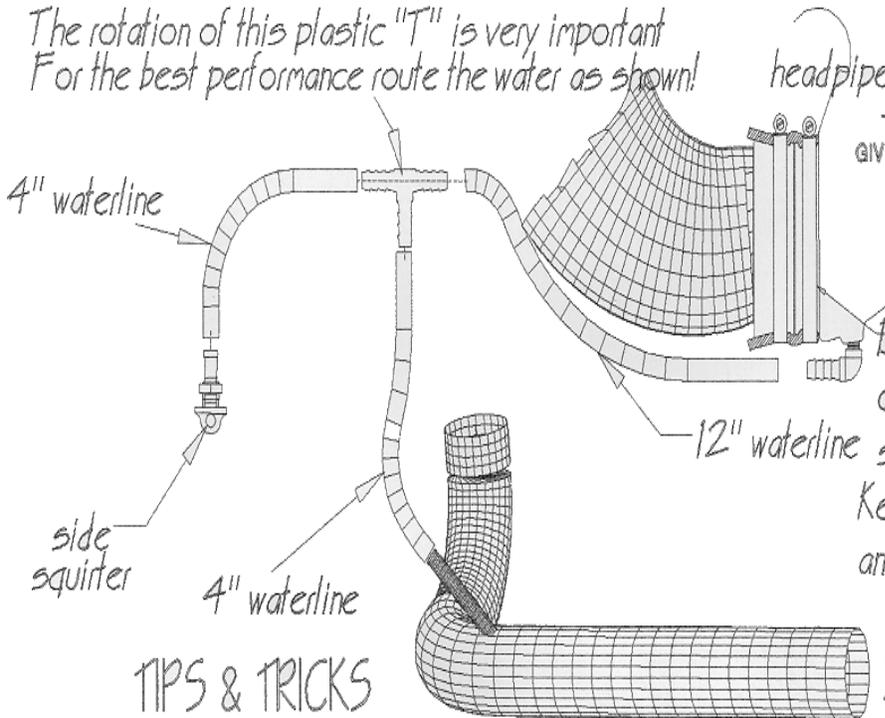
A good starting point is open the bottom screw 1/2 turn and the top screw out 1/8 turn. (NON LIMITED)

If you have the stock carb we recomend this jetting:

Stock pop off pressure
#88 Low speed jet
Low speed screw out 5/8
#155 main jet
High speed screw out 7/8

THIS JETTING IS APPLICABLE
GIVEN THE FOLLOWING CONDITIONS:

Barometer: 29.55"
ambient air temp. 67 F
50% Relative Humidity
96.3% air density



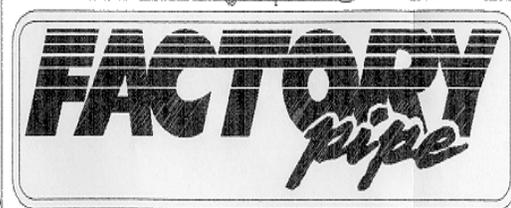
Do not put these clamps on the very end of the silicone coupler. Keep the silicone hoses and the clamps free from grease and oil.

95 SX-1 Jetting

75 Low Speed Jets NOT SUPPLIED
Low speed screw @ 1 1/2 turns
125 Main Jets NOT SUPPLIED
High Speed @ 3/4 turns

A good way to clean the silicone hoses and clamps is to throw them into the family clothes washing machine. This will insure they dont slide off while riding. Do not put the clamps at the very end of the hose. This could allow them to fall off the end. Keep an eye on the pipe temperature, you should just barely be able to hold your hand on the pipe after a hard ride.

If you strip any of the castings KAWASAKI sells these great thread repair inserts called "time serts".



HIGH PERFORMANCE EXHAUST PRODUCTS (707) 463-1322

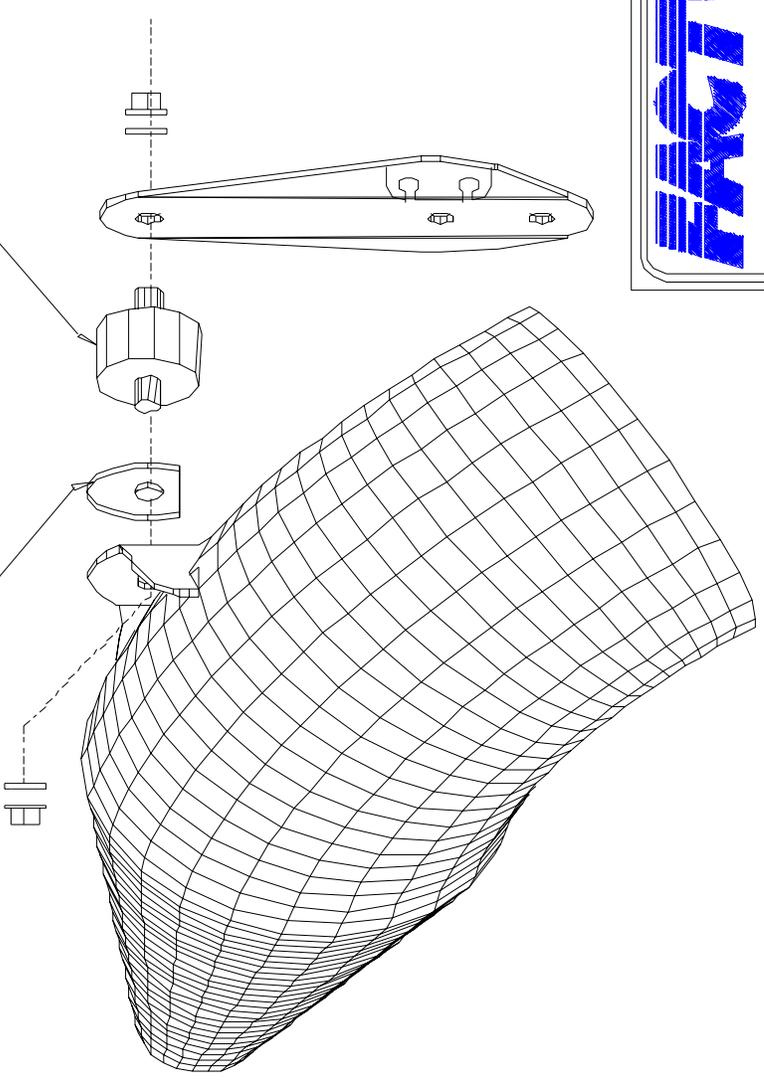
TITLE TIPS AND TRICKS

DWG. No.

DAMAGE TO THE PIPE.

THIS FIBER WASHER IS TO
DAMPEN VIBRATION AND
INSULATE THE RUBBER MOUNT
FROM HEAT.
PLEASE USE IT!!!

MAKE SURE THIS MOUNT IS
NOT TWISTED OR STRESSED
UPON INSTALLATION!



Water injection tuning tip:
A good starting point is open the bottom screw 1/2 turn
and the top screw out 1/8 turn. (NON LIMITED)

