



# Ron's Performance Shop

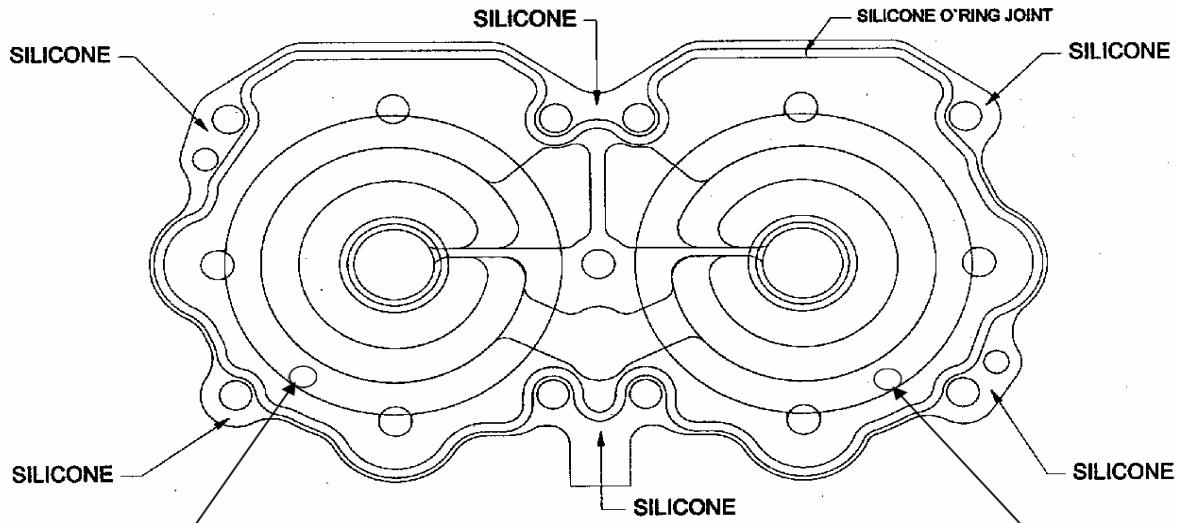
## SEA-DOO 951 / 1050 CYLINDER HEAD INSTALLATION

Please read ALL Instruction sheets before starting

Thank you for your purchase . The head assembly has evolved from many years of Mel Millers dyno pulls and actual competition testing and requires the proper selection of insert size, squish clearance, fuel and timing for reliability and best performance. This kit includes the o-ring and pipe plugs. See installation sheet on details. Inserts need to be matched to your engine by bore size and cc size to realize the best performance. Here is our suggestion chart:

Octane	Premium Fuel, no ethanol, 91 min Octane	Premium / race fuel , 100 Octane
Bore	88 - 89	49 cc
Bore	90 - 91	52 cc
Squish	.060 / .070	.060 / .070
Compression	150	160

Stock head is .090 Squish, 52cc dome, and 135 compression



See note on the 2 ea. 1/8" pipe fittings

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Install the outer o-ring in the channel, start somewhere on the top side of the head, do not stretch the outer o-ring as it will contract and leak. For the final assembly, add a dab of red silicone at the splice area. Also apply silicone around the 8 stud holes. When installing the outer dome o-ring, you may need to stretch it to fit in the groove. Add the upper o-rings now and install the domes with spark plugs into the head and add rubber bands between the plugs as it makes a good handle to help with the install.

**APPLY A LIGHT FILM OF GREASE AROUND THE INSERT O`RING TO KEEP IT IN PLACE WHILE INSTALLING THE HEAD ON THE CYLINDER, BEING CAREFUL NOT TO PINCH THE O`RING.**

Use the stock head gasket and, if overbored, enlarge the gasket bore to match the cylinder within 1 mm. Install a piece of .090 solder across the piston in line with the piston pin to eliminate piston tilt, and temporarily install the head for a squish check. Miller rec heads and rec domes are designed to have .060 / .070 squish when using the stock gaskets. You can adjust the squish by adding or subtracting head gaskets.

I would recommend gluing all the head gaskets together and to the top of the cylinder with 1211, but don't glue the top of the top gasket. The only sealant needed for the top and dome is a thin layer of high temperature RTV on the flat surface of the dome and o-ring if used. This allows you to easily remove the head if needed with minimum effort and clean up. Head gaskets must be used with domes that do not have an o-ring.

Big bore head gaskets ( 92.45 and larger ) come in 4 bore sizes to match your cylinder bore. They are 3 piece and .027 thick, and we have these in stock. They can be separated for gluing by drilling out the rivet or cutting the rivet off. Again, check squish, .060 is recommended safe and can be adjusted by adding or removing gasket pieces.

Most all rec domes have an approx. .008 squish recess but Q or other domes may not have this recess and will have a tighter squish, so check and adjust before final assembly. All but the highest performance engines run fine at .060 squish. Anything below that requires good tuning knowledge and perhaps more octane depending on your engine / pipe mods.

**CAUTION: Do not over torque the 10 mm head bolts. I recommend 15 lbs of torque starting with the 8 mm bolts working from the center out, then 25 lbs on all. Torque on the stock 10 mm bolts is 25 ft lbs, 30 ft lbs on the 10 mm nuts. (50 ft lbs on oversize 12 mm stud nuts.)**

Two additional 1/8" NPT water outlets in the head are for high output engines and racing long distances. Install a 1/8" NPT x 3/8" hose barb. The feed line should be an extra 1/2" hose from the pump and split into 2 ea, 3/8" hoses. Remember to add an additional drain line of the same size. **Do not use the 1/8" fittings for outlets or engine damage can occur.**

**DISCLAIMER:** Due to the nature of performance applications, our aftermarket performance parts are sold without any express warranty or any implied warranty of fitness for a particular purpose. We shall not, under any circumstances, be liable for any special, incidental, or consequential damages which may arise from installation or use of our performance parts.