



Racing Outboards Progress Update 5

Well, folks, you'll recall that our mission was to improve the Hot Rod engine to be a more reliable, durable, easier to start, easier to work on motor. **Racing Outboards LLC is proud to announce that we have achieved all of those goals!**

After running a hard, hard 30+ hours of tank and boat testing, the new Sidewinder has been disassembled for inspection. The reed-induction version starts easily in the water. During our last test session, the engine consistently started on the first pull with the exhaust buried in the water (without the 4 exhaust relief holes in the housing)!



The engine is easy to service with total powerhead teardown taking less than 45 minutes to complete. The reeds are accessible in minutes, and the ignition system can be removed by disconnecting one connector and three nuts.

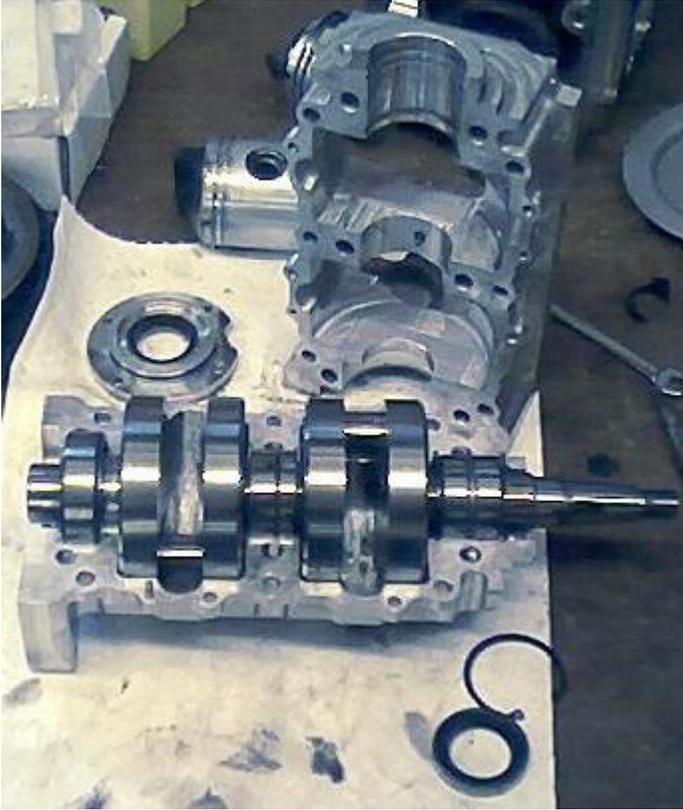


After more than 30 hours of running, the pistons and rings show no abnormal wear or signs of scuffing. Cylinder walls retain the original crosshatch with no scuffing or polished areas due to distortion or excessive wear.



The bearings are in like new condition with plenty of lubrication. Bearing surfaces on the crankshaft have no discoloration or wear. Seal contact areas have no signs of grooving or wear.





Main bearing bores in the crankcase appear as they did when first machined. One of the reasons for the excellent lubrication of the crank train is due to the carburetor location on the side of the block. On the Sidewinder the incoming air-fuel charge does not flush the oil off the rod bearings, but deposits more oil with each cycle. The oil recirculation system also takes excess oil that collects in the bottom bearing and sends it to the top main bearing through an external oil line and check valve. We have been running a 16:1 mix ratio, but due to the oil in the motor upon disassembly, it can probably be leaned out still more; the final recommended ratio has yet to be determined.

There were no signs of stress anywhere in the powerhead. The crank pins and crankshaft pieces show no signs of cracking or fissures around the pin area.

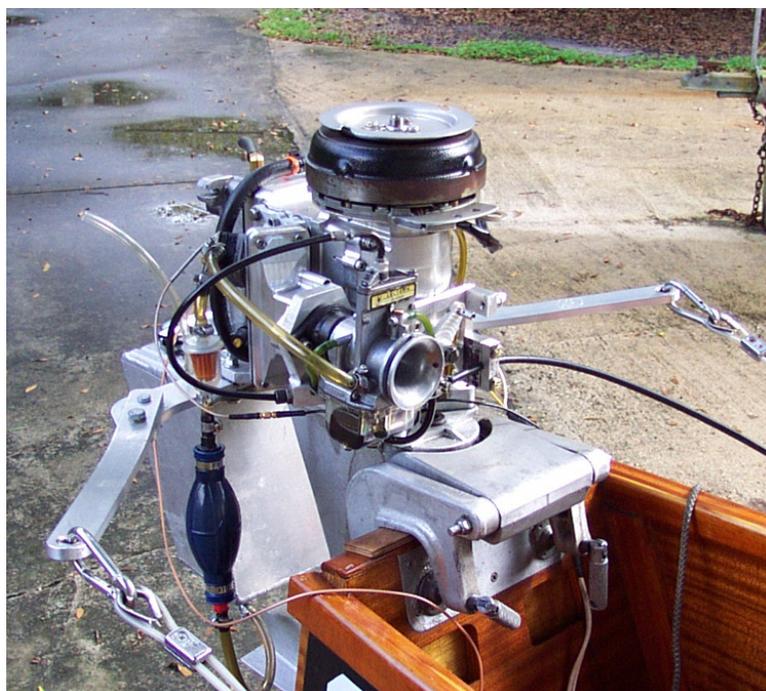
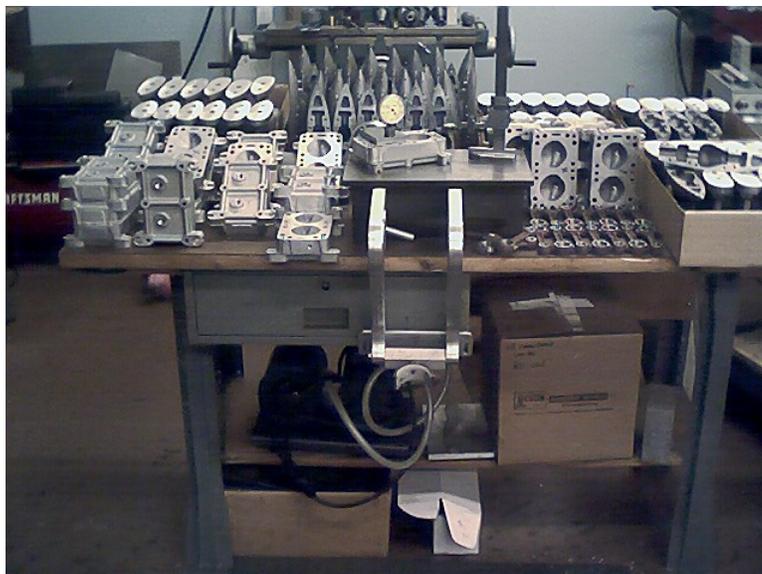
Vibration is at a minimum even though no attempt to balance the assembly has yet been performed, but will be reduced even more when in production.

At this time patterns are being developed for the block and crankcase castings. New connecting rod forgings will be in house within the next 2 weeks. Prints for the crankshaft components are ready to go out to vendors. Piston castings are on order.



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Cylinder heads are finished, and sleeve prints are being verified prior to placing an order.



Long-skeg gearcase housings are in process. Swivel housing and the new clamp bracket castings are at the foundry, and exhaust housings are in stock.

The engine seems very responsive to carburetion, and several makes have been tested, including Tillotson, Mikuni, and Lectron. Price vs. performance is also a consideration. Racing Outboard's dyno test cell is under construction and will be used to help make the final carburetor choice(s).

Parts for the classic rotary-inducted Hot Rods are also in process; rods should be available shortly as well as new pistons, blocks, sleeves and

crankcases. Cylinder heads are finished and inventoried.

We are on plan to have 15 and 20 ci engines available by late spring for this year's racing season. The initial production run will be 50 completed units and 25 – 50 additional units as spare parts. There is a lot of work ahead of us yet, including moving the shop from New Jersey to Pennsylvania and getting the eCommerce portion of the website ready. I have found that it doesn't work well having me take parts orders over the phone as I get interrupted and distracted by my other job before I can even hang up the phone. The website will take the orders and facilitate next day shipping. We have also been lining up suppliers for other race needs like pit supplies, chemicals, trailers, and so on to make the site a one-stop

shopping mall for all your racing needs. Content is being added weekly to help attract and inform new racers and their families. Ed Runne will be announcing our new Mentor program at the APBA National meeting next week and the other associations will be approached with the idea at the same time. The site will feature special marketing messages designed to appeal to the interests of families, parents, ladies young and not-so-young, and young people; if you have a story to tell about what racing has meant to you, please consider submitting it for inclusion in the site (rselewach@hrmc.com). Pictures are also welcome; especially those showing racing life off the water – the pits, at home in the garage, during the winter (family project to build boats/motors, etc). The site will offer resources and assistance to local clubs for PR and local promotions.

That's it for now. We're getting very, very close.

Best regards,

Ron Selewach and Ed Runne

Racing Outboards LLC