EXTRUDE HONE PORTING

Not-so-silly putty

By the Staff of DIRT BIKE

Porting has become big business once again. In the early and mid-'70s, porting was all the rage. However, as bikes became better and better, most attention was paid to suspension development. Now, with a typical modern bike being delivered in a highly advanced state, it's hard to find ways to spend money.

Thus we have the return to extracting more horsepower from the engines. In a way, the newer engines are more able to take the increased loads, especially the water-cooled wonders. They can still get rid of the heat, even if the rpm level is pushed to the limit of metal failure.

The flow bench has become a valuable tool for porting; it lets the operator measure the changes as he grinds on the barrel. There are still some "old-school" porting specialists who insist they don't need a flow bench and can do a good job by eye.

Now there's another approach to porting . . . one we haven't seen before. Like so many technological gains, this one comes from the aerospace industry.

The company is called Extrude Hone, and the actual porting process consists of pressing putty through the ports under high pressures—up to 1000-plus psi. An abrasive compound that smoothes and polishes at the same time is mixed with the putty. It's a silicone-carbide compound that's available in different abrasive qualities.

A normal two-stroke barrel takes 20 to 25 minutes of forcing the putty through to completely smooth out the ports. Pressures will vary, depending on port size, but a typical 250 two-stroke barrel will have the putty forced through the ports at about 600 psi. About 300 cubic inches of the compound is used and it's run back and forth through the ports until the desired finish is realized.

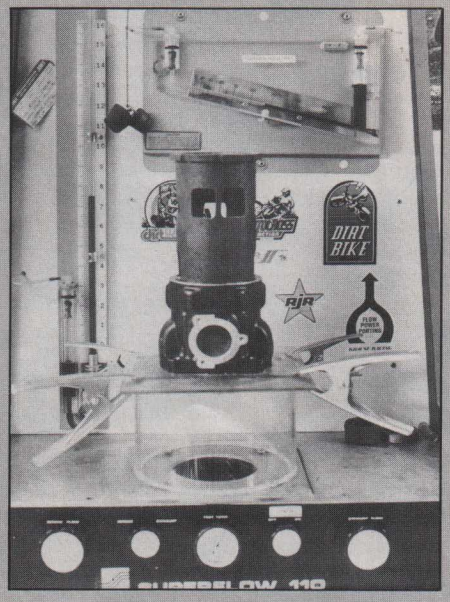
One advantage the Extrude Hone process offers that ordinary porting does not is the way it cleans and polishes heretofore inaccessible areas, like the inside of transfer ports. You cannot even get a porting tool deep in the recesses of many smaller barrels.

THE FLOW BENCH TELLS ALL

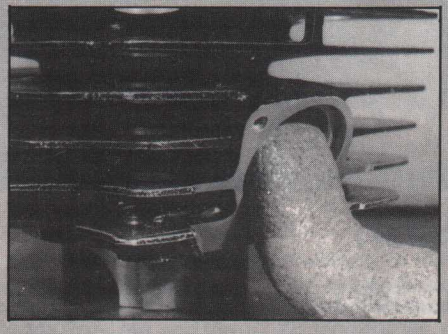
When we were approached by Extrude Hone to try its porting service, we wanted to see just exactly what the results would be. So, we measured the flow on a stock 1982 RM250Z barrel on our flow bench.

Here's what we noted on the stock barrel:

Right Transfer	*Left Transfer*
58.05 cubic feet per minute flow	55.97 cubic feet per minute flow



The flow bench tells all. Our total gain was over 18 cubic feet per minute flow—impressive.



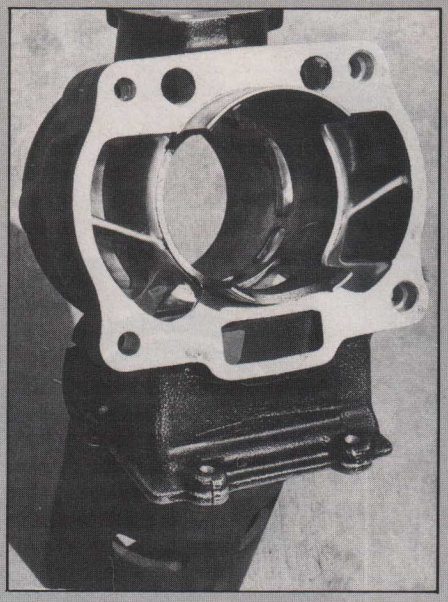
Here's how the silicone-carbide putty compound flows through a typical barrel. The abrasive solution can be varied, depending on the hole size and the desired finish.

This proved to be a more or less typical Suzuki barrel, with fairly close transfers. The difference in flow between the two transfers was 2.08 cubic feet per minute. Any basic flow-porting job would make this particular barrel run better.

When we received the barrel back from Extrude Hone, it looked like a work of art. The insides of the ports shone like they were chrome-plated. Even the guts of the transfers had the same smooth and polished look.

Still, we held judgment until the barrel had a chance to ride the flow bench. Here's what we ended up with:

Right Transfer	*Left Transfer*
65.62 cubic feet per minute flow	66.67 cubic feet per minute flow



Here's our completed RM250Z barrel. The finish inside the ports was mirrorlike.

Quite impressive. The right transfer gained 7.57 cubic feet per minute; the left picked up 10.7. Curiously, the left transfer was flowing less on the stock barrel. Extrude Hone noted that an imbalance in port size usually took care of itself, as the smaller hole would give more resistance and the abrasize material would take a bigger bite from the same pressure.

We haven't yet had a chance to ride the RM with the barrel to relate the increase in flow with real-world performance, but common sense and regular flow-bench testing show us that the performance should be improved noticeably.

Extrude Hone porting should improve most any engine. It is not a drastic, high-rpm procedure. If you choose to extract maximum horsepower from any barrel, you may have to go the traditional route of raising/widening the exhaust and making all of the ports big enough to nearly snag rings. However, a radical porting job, combined with an Extrude Hone finish, would seem to be just about the ultimate.

Next month look for our impressions in "Bits and Pieces" on how the RM250 worked with the Extrude Hone barrel.

WHERE TO GET IT AND WHAT IT COSTS

Contact Extrude Hone, 6845 East Compton Boulevard, Paramount, California 90723; 213-531-2976. Ask for Joe Doyle or Ed Melendez. In the East: 75 Pennsylvania Avenue, Irwin, Pennsylvania 15642; 412-863-5900. Ask for Bill Fehl or John Metechen. Cost is $120. □