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47919 OCTOBER 1991

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I probably shouldn't run the old Hartford

We've all seen rare or extremely valuable old machines regarded by some as far too precious to actually use, or hardly touch for that matter. It might be a motorcycle or a boat languishing in some museum. Or a classic, 100-point auto rolled from its sealed trailer to lie in splendor on the grass at some concours judging event, then returned to its womb, never to roam the open road. I guess I can see the reason for such thinking, particularly from those paying the bills. And I can understand not wanting to harm, or possibly destroy, some rare machine already teetering on the edge of extinction. I can understand...but in a way, it's still too bad.

Fortunately, antique outboard motors do not involve anything close to the lofty investments related to these other artifacts. However, on occasion I have heard the remark, "You know, maybe you shouldn't run that. After all, there are only a few known to exist."

The Gray and Prior Machine Company of Hartford, Connecticut, had long produced a line of inboard marine engines when, in late 1927, it entered the outboard field with its Hartford Sturdy Twin. This model, a 20-cubic-inch opposed twin, had limited production for about a year and a half. Total units are said to have been about 330. At this time, the Indian Motorcycle Company of Springfield, Massachusetts, purchased the rights and tooling of the Sturdy Twin to form the basis of its Silver Arrow outboard ("Antique Corner" December, 1983) which debuted the following year.

The Hartford, as well as its stepchild Indian, were well-designed, speedy outboards. A good one can still hold its own with a modern B-size counterpart. The 1928 edition Hartford, shown here to the left of the companion Silver Arrow, is such an engine. However, during recent years it's had its share of problems.

Some time ago, this Sturdy Twin was fitted with a new set of pistons. Subsequently, a small, hardened pin that holds the wrist pin from sliding back and forth in the port-side piston came loose and began a destructive tour of the engine's interior. This, of course, while at full throttle. Through the crankcase, the pin

was caught in a starboard intake port, snapping out a half-moon-shaped piece of piston skirt about the size of a dime. Back in the port combustion chamber, the piston began pounding the pin repeatedly into the head. This early model Hartford was equipped with cast-iron cylinders that are water-jacketed around their circumference only. These "hothead" cylinders, therefore, have a single-wall head. By the time the engine came to a stop, several large cracks were open to the outside air.

The Hartford sat a while on its stand, then finally was disassembled. The starboard cylinder was cleaned, but the piston was not repaired. The thinking was that the missing piece of skirt would not greatly hinder operation. Crankshaft and rods were not damaged. The port



1928 Hartford and Silver Arrow

cylinder was another matter. It was given to an "expert" welder who carefully repaired the cracks. The domed exterior was then reshaped.

Back in the water, the Sturdy Twin ran like the wind and idled respectfully. The missing piece of piston skirt seemed to make no perceptible difference. Suddenly, a couple large cracks opened in the port cylinder. On the stand it went for about a year.

Then, I sent the cylinder to a friend who had worked minor miracles on other specialty jobs. At the same time, I had him do some aluminum buildup on the Hartford's broken skeg tip, a cracked thrust-bearing case and a partially collapsed, port exhaust manifold. While the cylinder was being repaired, I carefully reshaped the other parts.

Together once more, the Sturdy Twin

seemed in its best shape in years. On the boat, it started obediently at very low rpm. It idled from the dock while I kept a careful eye on the port cylinder. What? Through the new, black cylinder paint I could detect a couple of tiny openings spitting compression out into the breeze. Damn! A porous weld. I shut down the engine, took it home and put it on the stand. I hadn't even burned the paint off the cylinder ends. At least it still looked good.

All last winter I kept looking at the engine. In the spring, I took it apart again. Maybe I'd been too careful...too high-tech minded with this repair. I thought about trying it myself, but I didn't think I could get it hot enough, even with two torches.

I took the cylinder to an old guy in town who has been welding things together for 50 years. His shop is a disaster area of parts, castings and metal stock of all kinds strewn amidst his equipment. It's nearly impossible to go from one side of the room to the other without getting nicked or scratched or absolutely filthy. A sign on the door warns that Occupational Safety and Health Administration (OSHA) people will be shot within seconds of showing their identification. A larger sign on the building proclaims, "We Weld Anything But a Broken Heart."


The old man poked at the weld in the cylinder with a small, sharp instrument. "This stuff is soft. It's porous. No good," he said.

"Yeah," I said, "Why don't you cap the whole end of the cylinder. I'll take it down to a reasonable thickness afterward."

"Okay, come back next week."

I left in a cold sweat. There was virtually no possibility of my finding another cylinder.

Well, we're back together again, but the Sturdy Twin hasn't made it to the lake yet. There are maybe 15 Hartfords known to exist. I know of one other in running condition, but there may be more. Like I said, I've heard the remark, "You probably shouldn't run this engine. After all, it's a very rare piece."

No way. By the time you read this, the old Hartford will either be back on plane or down for more repairs. 

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