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Hercules Engine News

Unraveling Differences in Hercules 3 HP Engines

By Glenn Karch

Finding more information out about the Hercules-built engines is always a continuing challenge. There is bound to be more information out there because there are a number of questions yet to be answered – and new things keep popping up.

Just recently I acquired a 7 HP half base Hercules-built engine from Larry Paschke that reportedly had been used on a hay baler. Surprise; although I didn't notice it at the time, the half base has turned out to be different than the normal early half base that was adapted to the old, straight-framed cart. A continuing story on that engine will be forth coming.

A message came a few days ago about a 7 HP EK Hercules engine that came factory supplied so it could be run as a hit-and-miss or as a throttling governed engine. Hopefully, Tom Weatherford will supply more information on that one.

Tom Bellar asks questions about his 3 HP Hercules engine. Although the tag indicates it is a 1919 engine, the head has a 1926 casting date on it. The 3 HP size (variously rated at 2-1/2 to 3-1/2) has several variations when it comes to the head, water hopper and oiler location.

Although the physical appearance is similar, it is a little tricky to match up some parts, especially if the engine is supposed to be correct when it is finished. The 2-1/2 HP E Economy had a 4-inch bore. The early 2-3/4 HP Hercules had a 4-inch bore, but the 3 HP Hercules and later 3 HP Economys had a 4-1/4-inch bore. Some of the 3 HP EK Hercules had a 4-inch bore. That all sounds complicated. The 4-inch bore heads will fit the 4-1/4-inch bore engine, but not vise versa, although the bolt patterns are identical.

Bellar observes that there are only two water ports in the head that match up with the five water ports in the block. Most of the time, there are three matching water ports. Since none of the water ports are at the bottom of the head, it is necessary to take the plug out of the bottom to completely drain it. I once had a 5 HP Thermoil that had only one matching water port. Now you know why there are so many cracked heads. The petcock under the cylinder doesn't fully drain the head.

There were at least three different bolt patterns where the water hopper bolts to the cylinder. There were two, different, four-bolt patterns depending on where the oil pipe was located. There was a five-bolt pattern used on the S models, and there was a variation in the oiler pipe location. Originally it went down through the large water hopper opening. It was later moved back to a hole in the hopper just behind the water hopper opening.

Along at this same time some engines had a boss on the rear of the cylinder to accommodate a 45 degree street L and the pipe. At the top rear of the water hopper there was another boss with an eyebolt screwed into it to serve as the oiler pipe brace. However, some engines did not have the hopper boss, but rather, had a triangular plate bolted there with a hole for the oiler pipe. To complicate matters further, there were a few engines that had provisions for the oiler at both the cylinder and hopper locations. Normally, the boss on the cylinder was not drilled and tapped. However, I have seen a couple engines operating with an oiler at both locations. That ought to make a nice oily engine.

I hope this column hasn't made the 3 HP size engine seem complicated. If you are building up one of these engines and require parts, you should be aware that this size engine offers some challenges. But don't worry, most people will not know the difference – only the nosey Hercules people will know.

Glenn Karch is a noted authority on Hercules Engines. Contact him at 20601 Old State Road, Haubstadt, IN 47639, or email: glenn.karch@gte.net.