

The Hercules Engine News

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Today the story of Hercules engine number 148306 begins. It is a 1½ HP model E. It was acquired in a recent trade. This story and another or two to follow will trace the refurbishing of this engine to running condition. A quick inspection revealed several missing parts. The M Webster magneto was missing, but I knew that in advance and would be able to provide one from my collection of parts. There was no crank guard, but one bolt to hold it on was there. The muffler was cracked but repairable; however, it did not appear to be the original. There was no oiler or oiler pipe, but those things are in my inventory. The igniter bracket had been broken and rewelded. Luckily, whoever welded it got it together correctly and made a nice cast iron weld.

From there I begin to look for points of wear. The valves fit in the guides reasonably well and it appeared that the guides had been reamed and oversized stemmed valves had been used as replacements. The valve springs looked good and proper. The rocker arm pin fit well, but the tip where it touched the exhaust valve had a pit worn into it. The side rod was somewhat loose in the guide in the governor bracket. The governor shaft was acceptable, but the brass wear washer between the governor gear

and the bracket was gone. All gears appear to be useable, but the timing gear shaft needs to be replaced.

The cylinder bore feels smooth and there is little play in the wrist pin or the rings in their lands. The hope now is that the cylinder is still round enough for new rings to seat well. The rod and main bearings appear to be okay. By feeling underneath, the bottom of the fuel tank seems to be smooth and without rust or holes. It has a pulley, but it is a large one and it is off type for a Hercules.

The igniter bracket (303M1) seemed to be in good shape with good points and a good retard-advance mechanism. The igniter trip finger and bracket also appear to be useable as is.

There is a good bit of original paint, but not enough to make a decent looking original, but the decision about what to do about that will come later.

Now, here is a list of parts that are needed:

- Magneto – in stock
- Oiler – in stock
- Oiler pipe and coupling – need to make
- Governor shaft washer – will make
- Timing gear shaft – will make from ⅝ inch drill rod
- Piston rings – will order
- Igniter moveable electrode spring – will make from stock springs
- Crank guard – will order
- Grease cups – from stock
- Pulley – from stock
- Governor spindle pin – will make from ¼ inch carriage bolt
- Side rod spring – spring

There will likely be a few other unknown miscellaneous parts and pieces needed as the project continues. You may wonder about all those in-stock parts. Having been a collector for 28 years now, a lot of parts and pieces have been accumulated during those years. Some were free, some were bought at low prices, some were traded for and some were bought at the current market. To get all these parts at current prices, it would come to nearly \$300. The cost of Redi-strip or sand blasting plus necessary painting supplies could easily add another \$60. If a cart is desired, add that on too. I make my carts using cast 8, 10 or 12 inch wheels bought here and there for \$10 each or less. The rest of the cart parts come from the scrap iron pile and the native lumber pile. Add to this the priceless value of your time and effort and almost any engine becomes expensive. Often times it is cheaper to find and buy a refurbished engine than to fix one up yourself, but be sure that the "refurbished" engine doesn't need a lot of repairs. A good paint job can fool you and lead you to believe that all has been properly repaired.

An interesting thing happened when I removed the valves and springs from the engine head. I laid the disassembled parts on the work bench and went on to other things. The next day one of the valves disappeared and without a trace so far. I have had many tools lie in hiding under my nose, but never a valve. Them gremlins are at work again. Story to be continued. ○