

## 44 Rear Crankshaft Seal

~ **Paul Moroni**

The 44 was almost ready for painting but I noticed that the oil pan was wet with oil. I checked all the retaining bolts for it, and they were tight, and the pan was siliconed on instead of a paper gasket so it should not have been leaking. One way to test for a leak is with a Smoke Tester. I had purchased one from Harbor Freight and all it does is heat a small amount of mineral oil in what looks like a spray gun pot.

The heater is powered by a 12-volt power source, and a shop airline hose pushes the smoke out of the can through a 1/8 hose. I plugged the smoke hose onto the fitting that goes to the hydraulic tank breather and plugged the valve cover breather tube so that the smoke would fill the engine crankcase cavity. I waited till I saw smoke come out of somewhere. The pot was regulated to 5 PSI so there was no chance of damaging any seals or gaskets.

The smoke was coming out of the bell housing area, not from around the oil pan. I had to remove the engine for painting anyways, so it was a good time to try to fix it. With the engine on the floor, I made a wooden box to go around the oil pan to hold it up and removed the Bell housing and clutch. With that removed I tested it again to try and see the problem. The oil was coming out where the 2-piece seal mates together. I had replaced the seal about 20 years ago and remember it gave me a hard time to install.

The seal is made with upper and lower halves that are pushed into a curve and held in place with two dowel pins and a few screws. This time I removed the screws and the dowel pins to make it easier to install. The first half went in fairly easy, but the second half was harder. I had to make sure the halves lined up and pushed it into the groove. It does make it a lot easier with the dowel pins removed. I must have distorted the first one I put in because of the pins. You have to make sure not to bend the seal when installing them. Once I got them in place I put the screw and dowel back in. On the next smoke test there were no leaks.

On some models of tractors, you should put sealer on the bolts that hold the adapter plate to the back of the engine block as sometimes they can leak oil.