

It's easier than it looks

TROUBLESHOOTING & FIXING AN INDIAN



I AM A LUCKY GUY WHO OWNS AND RIDES A FEW TERRIFIC classic bikes. Like any older machine, they tend to need a bit more attention than an Evo or Twin Cam, and they occasionally break. But many of us riders of older machines tend to be fair wrenches — often by necessity.

Three or four years ago, I was riding my 1953 Indian Chief back from a swap meet that was about two hours from where I live. The bike was running strong, although the guys I rode up with told me the Chief was spitting a little oil out of the exhaust. Before the ride back I checked the oil, and it was fine, so I got on the road to home.

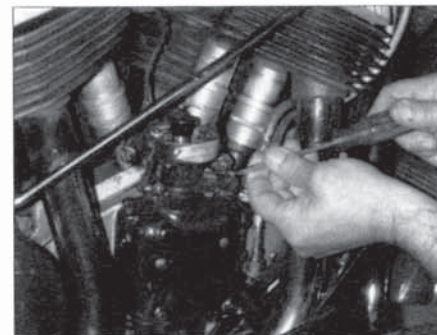
I was motoring down the Merrit Parkway, about 35 miles from home, when the bike died. I quickly punched down on the clutch with my foot, twisted the throttle a few times to prime the carb, downshifted, and dumped the clutch. The bike screeched to a halt. I punched down the clutch again and rolled over to the side of the road.

I won't go into the details, but rest assured, all the oil had drained out of the tank, and I had succeeded in locking up the engine so badly that the connecting rods were welded to each other. Many thousands of dollars later, the bike was roadworthy once again. I have since sold that bike.

A few months ago, I was riding my 1946 Chief, which is the bike that replaced the '53, on the Merrit Parkway again. I had just won the Best In Show trophy at a local bike event and was returning home. In spite of the intense heat that day, the bike was running great, and I was feeling pretty good about life. Then the engine simply stopped running. Fearing the worst, I punched down on the clutch again and tried a rolling jumpstart with no luck.

I pulled over to the side of the road and away from oncoming traffic with a strong sense of déjà vu. As it cooled, I checked the oil in the tank. It was fine. I looked down and saw a lot of oil on the ground, the engine, and the rear sections of the bike. I figured I'd blown a hole in the engine somewhere. I let it cool for just a few moments, put the handshifter into neutral and gently kicked it over. The kicker went full arc, so I knew it was not a welded crank (thank goodness — the last one cost a fortune to fix). Then I tried to figure out what had happened. It was too sudden to be lack of fuel (although I did check the gas tank). The headlight worked, so I knew the battery was okay. The kickstarter easily ran through its full arc with appropriate resistance from the engine.

I pushed the bike down the parkway to the nearest exit ramp



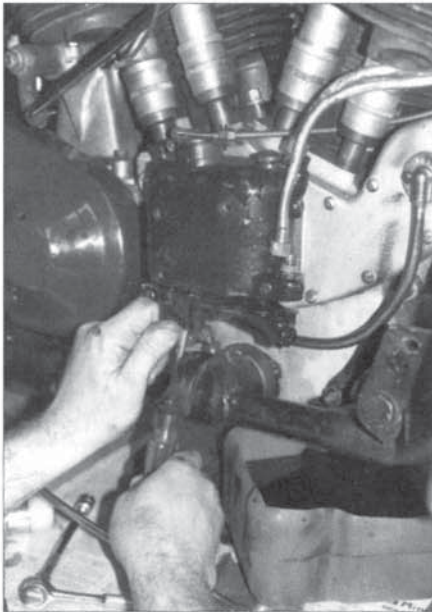
1 Having popped the distributor cap off, we removed the cable that advances and retards the distributor. Then we loosened the clamp that holds the unit in place in the oil pump.



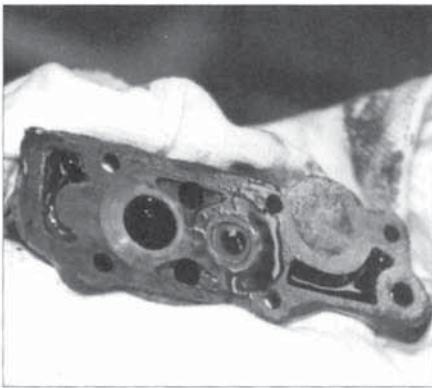
2 This is what an Indian distributor looks like when out of the bike. Pretty basic, isn't it? The clamps hanging down hold the cap in place.



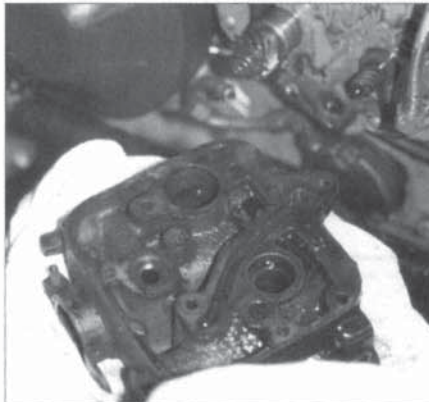
3 Once the distributor was out, Mark placed an oil-catch can underneath the engine to keep things clean and then removed the mounting screws that hold the bottom of the oil pump in place.



4 After removing the floorboard for easier access, Mark dropped the bottom of the oil pump to get to the pump's other mounting hardware.



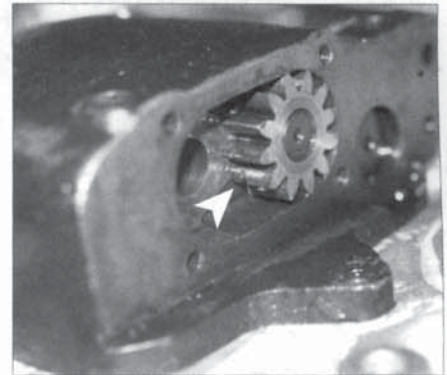
5 This is what the bottom of the oil pump looks like. We let it soak in a mild cleaning solution for awhile, then carefully brushed off the years of crud.



6 We next pulled the rest of the oil pump off the engine, which showed many miles and years of use. You can see the two pump drivers sticking out of the bottom end of the engine.



7 After a quick rinse off, Mark removed the first of two gears, which showed a little acid etching.



8 The second gear shows signs of more serious damage from the sheared metal pin.



9 We removed the nicked gear and ordered a set of replacement gears, as well as new gaskets, from Kiwi Indian Parts. Once the parts arrived, I was back on the road by the end of the day.

and parked it in the shade to cool off. Once the engine was a bit cooler, I pulled the spark plugs to check for spark. (After all, we need spark, gas, and compression for an engine to run.) There was no spark on either plug. I was stumped. I then pulled the distributor cap off and opened the gap in the points. I got a good fat spark at the points but not at the plugs. I cleaned the contacts on the rotor and inside the cap, checked the connections on the wires, and cleaned the plugs. Still no spark at the plugs.

Giving up for the day, I hauled the Chief home in my pickup. Now, I am a fair mechanic, but this one stumped me. I knew my problem lay somewhere in the ignition. The points were getting spark,

but the plugs weren't. When it comes to mechanical things, and I have exhausted my knowledge, I call my good friend Mark Zimmerman. Mark said if I brought the bike to his place that weekend he'd see what he could do.

Once there, Mark verified everything I had reported. He suspected that the problem was somewhere in the distributor shaft. Not having worked on Indians before, he said he'd have to pull out the distributor and have a look at how it is driven. He suspected it might have a sheared key. We pulled out the repair manuals and went at it.

As Mark suspected, we found that a sheared pin in the distributor had created the problem, but we also discovered a damaged oil pump had compounded the

issue. Unlike my last mechanical disaster on an Indian, this one was fairly easy and inexpensive to fix. We pulled the distributor and oil pump, replaced the two gears in the oil pump, cleaned everything up, and installed a new pin in the distributor. Using some fresh gaskets, we bolted it all back together.

In the two months since then, I have put a few hundred miles on the Chief and am pleased to report the operation was an unqualified success. The reason we are sharing this with our readers is to encourage you to become more familiar with the mechanics of motorcycles. Most trouble-shooting and many repairs are easy enough for most of us to do, even if you don't have a 1946 Chief. **AIM**