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Leave Cali day 29

I sell a set of Neway valve cutters and take a pictures of a broken sprocket cover for my 1962.



I think it was [Duncan Keller at his motorcycle shop Yankee Engineuity](#) who told me about [Neway carbide valve seat cutters](#). Rather than grind the valve seat, they would cut the seat with a carbide insert. The racers used them, and supposedly, they can make a better seat than grinding stones that are conventionally used. What I liked is you don't need a valve grinding machine to use them.

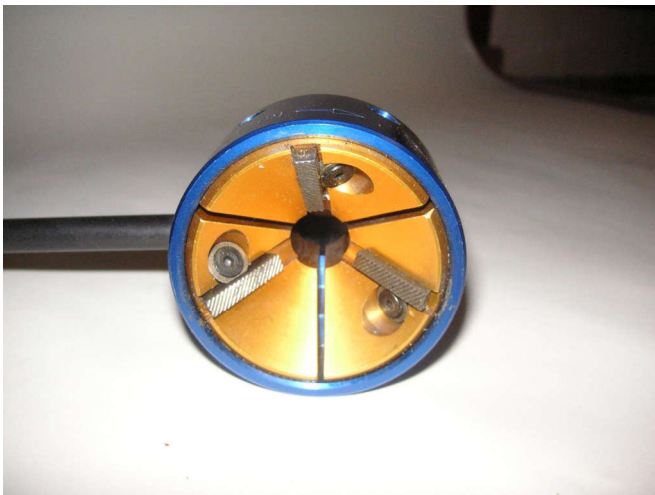
These Neway cutters are for cutting the valves, not the valve seats. I paid a lot for them on eBay, and I made a lot when I sold them. They were something I never used. Furthermore, Duncan had taught me it is good policy to just buy new nitrided steel valves, rather than try to save older valves with a grinder or a cutter like this. Same for the guides, pound in new cast iron guides, they work fine in Iron Sportsters.



I had two different angle cutters. They fit into the unit at left, which clamps the valve stem.



This is where the cutters fit. It has a precision bearing for the cutters to spin on.



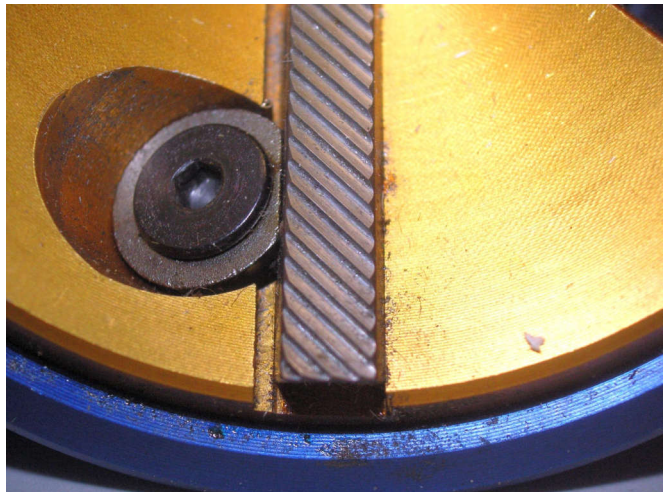
The view of the smaller Neway valve cutter.



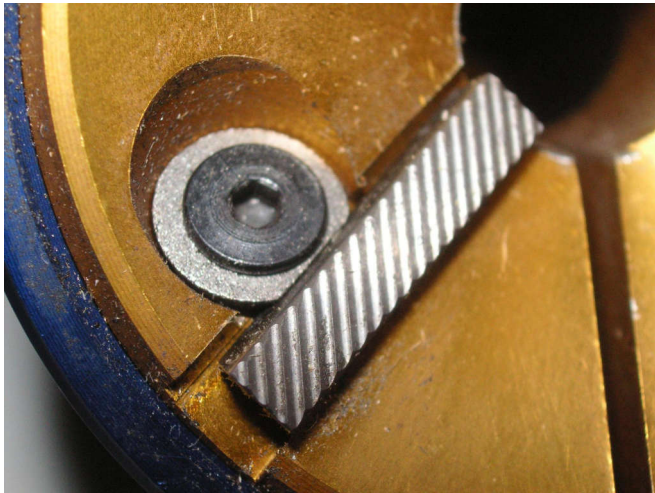
The two cutters side-by-side.



Here is the clamp mechanism for the valve stem. This sold fast on eBay, I can't remember what I got for it..



A close-up of the clamping method for the carbide blade. This is well-made stuff, and made in the USA as well.



Here is the larger cutter. You can slide the carbide blades to give fresh cutting action.



This was a real tragedy, it broke the cases of my 1962 Sportster right through the speedometer drive area in the transmission. Rather than taking the engine completely apart, I used JB Weld to put the case back together. It has held up, and does not leak, but I have not put many miles on the bike since then.



The back view of the cutters. They looked brand new when I bought them on eBay.

I thought the way I let this happen was letting chain get too loose. On my other 5 Sportsters, I use O-ring chains that I put on with a brand new transmission sprocket. They usually last a lifetime, since I divide my miles across all the bikes. For the 1962, the sprocket cover was too narrow, and an O-ring chain would grind chunks of aluminum out of it.



I wanted to toss out this broken sprocket cover from my 1962 Sportster, so I took a picture.

So for the 1962 Sportster, I used a conventional chain, but I had no chain oiler. Yes the chain did get saggy when it broke, but it was not a loose chain itself that broke the cases. What happened was the chain adjuster on the swing-arm right side broke where the stud attaches to the ring that the axle runs through.

So I was on the throttle leaving for work, and the adjuster broke, and the torque pulled the axle all the way forward. That put so much slop in the chain, it could double-up and jam in the sprocket cover, wrecking it and blowing a chunk out the engine case. One 3-dollar part.