CRANKSHAFT FRONT BEARING REMOVAL TOOL

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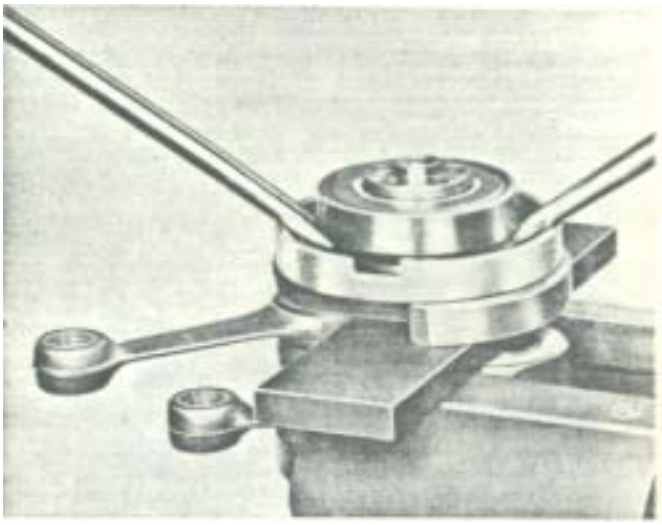

If you have ever tried to remove the front crankshaft bearing (flywheel end) by using the instructions in the book you will understand what true frustration is. The book states "…use the tool 5116 (support ring) and two suitable levers to press the ball bearing off the crankshaft end." I have tried to do this with a support ring similar to the one described in the manual to no avail. I only achieved - higher blood pressure, a damaged slinger ring and a bearing still in its original position.

I have attempted to remove these bearings by applying substantial quantities of heat only to have a very hot bearing and crankshaft. I don't believe with the outer race and balls still intact that it is possible to apply enough heat to the inter race – quickly enough – to expand the bearing and release the shaft. Although I have never attempted this method, another possible way to remove this bearing with heat would be as follows. First grind away the rivets holding the ball cage together. Then remove the top half of the bearing cage. This should allow the balls to roll to one side allowing you to remove them and the outer race. At this point, it may be possible with an acetylene torch to apply sufficient heat to the inter race to release it from the shaft.

I have found 2 ways that definitely will work. The first is by welding threaded rods to the bearing and using these rods to "jack" the bearing off. This can be done, but it does take a very good welder who is knowledgeable in proper heat and rod usage (in other words it is beyond my ability)!! If you attempt this method, be very careful not to allow any arc-welder current

to travel through the connecting rod bearings (be sure to insulate the piston ends of the rods from any grounded surfaces), otherwise you could damage the rod bearings.

The second method involves using a special tool that is made just for this job. SKF makes just such a tool as do other suppliers. It is an inside bearing puller. SKF's part number is TMMD61. It has 4 "fingers" that reach into the bearing race and pulls the bearing by grasping the inside of the outer race. A photo of it being used to remove the front bearing from a 600 crankshaft is shown at the right.

A few close up photos showing how the tool hooks into the bearing.