

Primary Gear and Swinging Arm

Alex Cooke sent me this picture of his 638 engine out on the bench as he was struggling to remove the large nut holding the gear to the crankshaft. He did eventually remove it using a large “rattle” gun to use his words. Heat would have damaged the nylon worm that drives the speedometer.



I replied as follows: To remove the nut (as you have nothing to prevent it moving now) -you may have to refit the clutch and primary chain and lock it up with a clutch lock. If the engine was in the bike you just put it in gear and lock the transmission by applying the back brake. If the engine is on the bench there is another way if the cylinders and pistons have been removed – you can insert a rod through both small end holes in the rods and using some wooden blocks to act as stops for the rod you can rotate the crank till it is locked and then remove the nut. Sometimes it really is worth thinking about how you will tackle a job as the nut removal or at least freeing it - would have been better done with the engine in the frame and the brake applied. Do not be tempted to use the 10mm bolt through the dynamo/alternator on the other end of the crank as you may break the head off leaving a sheared stud in the journal. We learn by experience and that’s why our Technical reps are ready to help you.

Jim Lugsden wrote: My swinging arm pivot pin is extraordinary in that it is loose in the frame and the arm turns freely on it but it still won't come out. I'm up to lump hammer and drift. The other frame I'm playing with is more honest in that the pin is seized in the arm in the usual annoying way. I'll make a properly dimensioned plug with a long stud going through and a nut with an old thrust bearing under it and see if that will pull it through. I sent Jim a diagram of the components with this comment:

If you look at the diagram the pin can seize on the 3 steel bushes which can still rotate in the s/arm. It is common for the swinging arm pins to seize if not assembled with plenty of grease. It is worth pulling them and greasing up every couple of years. I have once (in 40 years) been able to push out the pin on a JAWA with a stiff finger!

Pete Edwards 21 June 2016.