

CHAPTER 3: ENGINE CHEST, CRANK, REAR MAIN, SLUDGETRAP

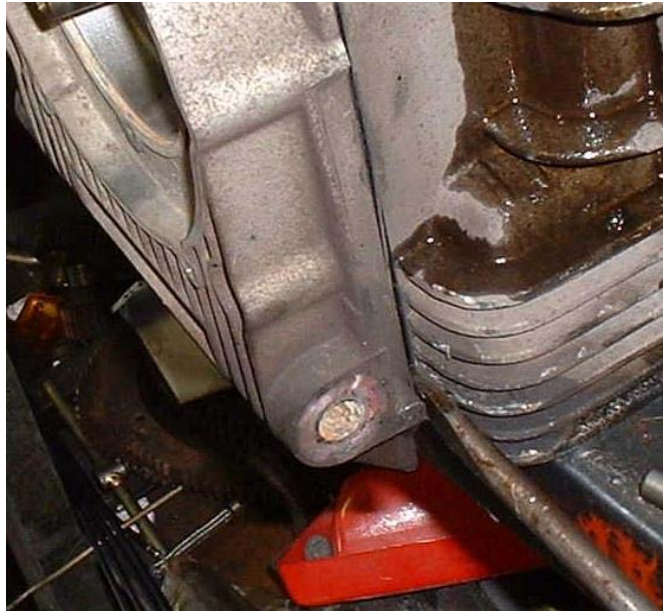
Posted on the Wildguzzi forum by Pete Roper: December 10, 2005:

Contents: Engine chest, crank out, rear main bearing off, open sludgetrap

Pic 3-01:

Once the alternator is off the 14 bolts that hold on the timing chest can be removed. Note that the lower 6 are longer than the upper eight.

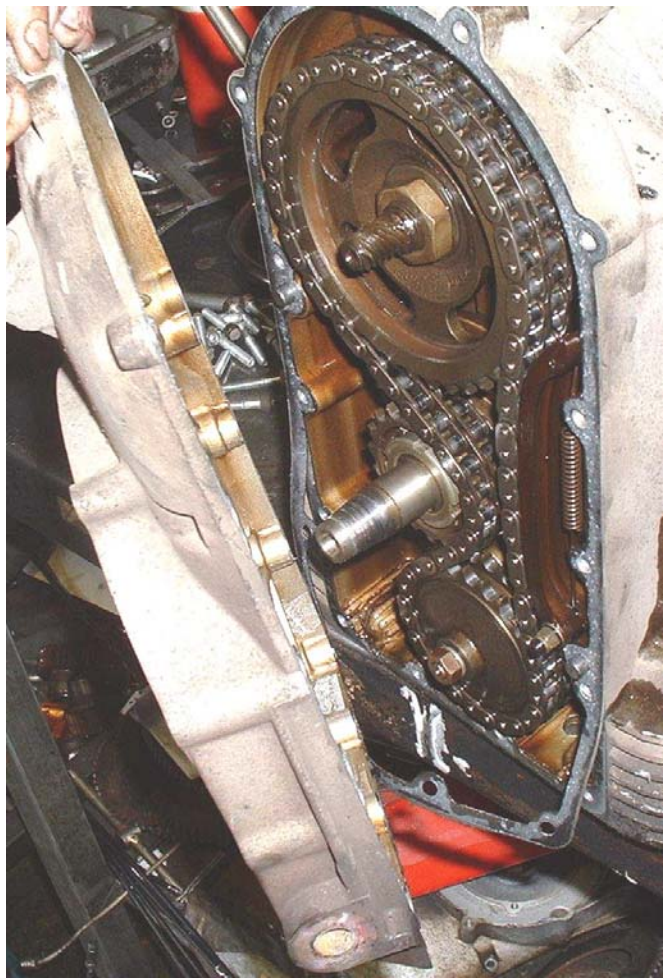




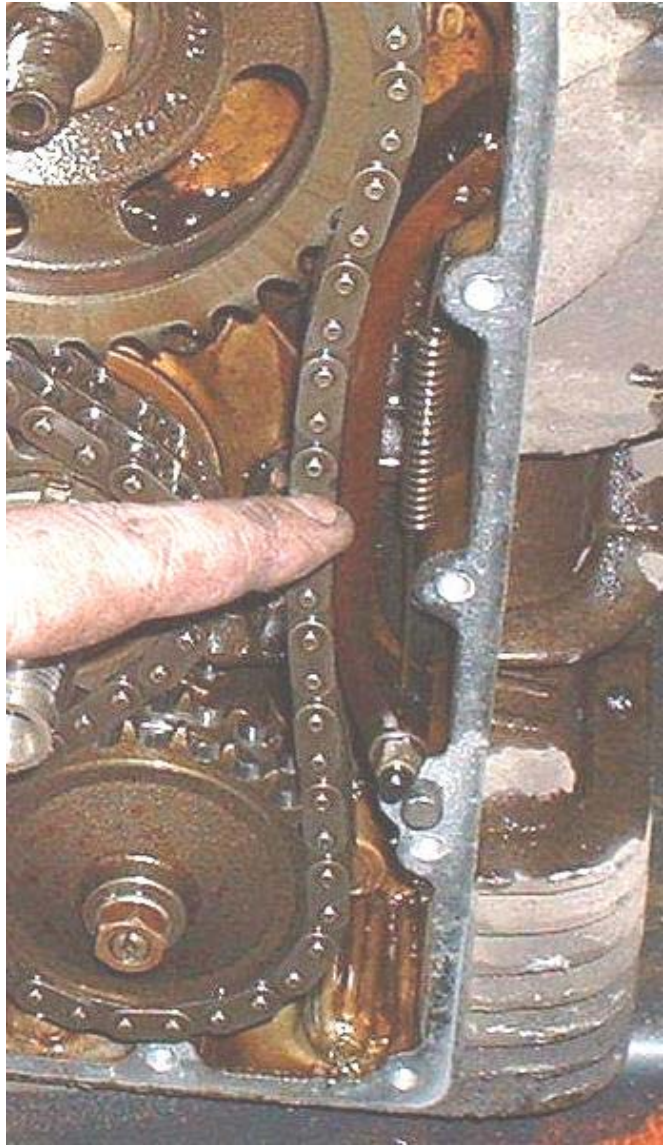
Pic 3-02A

Pic 3-02B:

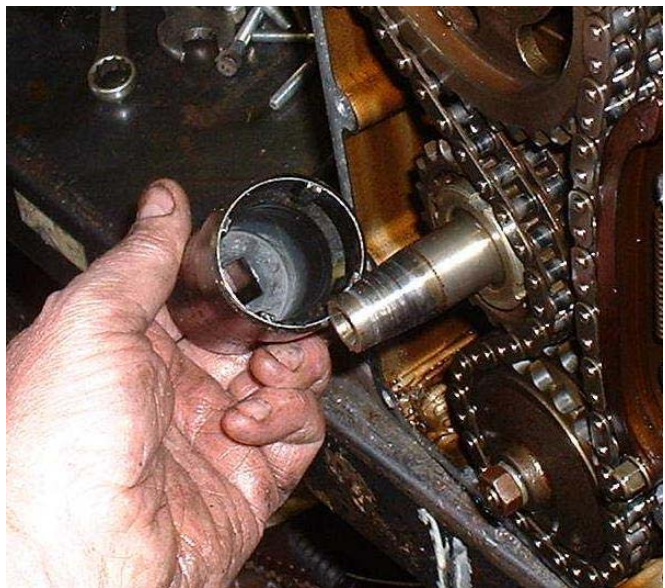
The timing chest cover can now be gently pried away from the block and removed, exposing the timing chain and



Pic 3-03:
In this case the Valtek type cam chain tensioner.



Pic 3-04:
The crank sprocket is retained by a queer peg nut. I have a set of Rolf Halvorsen's brilliant peg nut sockets that make removing them a breeze!!!! Note that the nut is locked by a tab washer and the tab must be flattened before the tool can be installed on the nut.

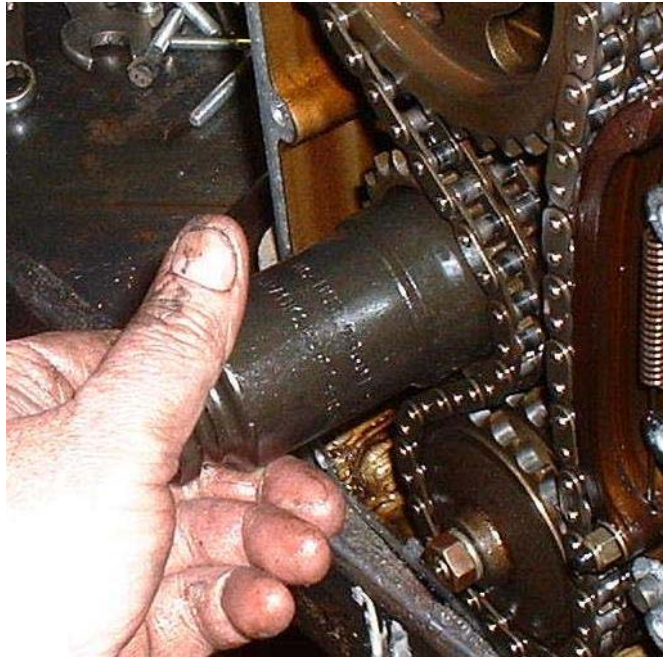


Pic 3-05:

Socket installs on nut thusly and the nut can then be wound off!!!!

Tool available from Rolf Halvorsen:

rolf.i.halvorsen@nammo.com



Pic 3-06:

Leaving the lock washer exposed.



Pic 3-07:

The cam nut, (27mm.) has a large spring washer under it. I usually whizz it off with a rattle gun.



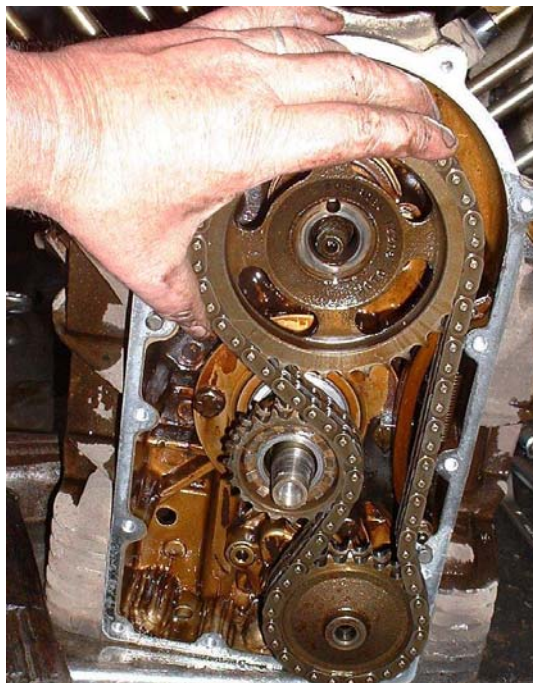
Pic 3-08:

Oil pump sprocket is retained by a 13mm nut. Note that this nut and the oil pump shaft have an unusual 8mm x 1mm thread rather than the usual 8 x 1.25 ISO thread. Remember this if you loose the nut. An *ordinary* 8mm nut won't work!!!! Under the nut there should be a small spring washer.



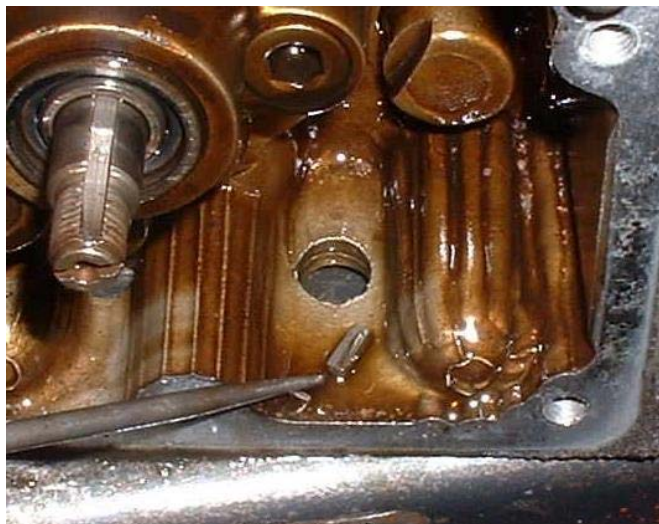
Pic 3-09:

All three sprockets and the chain can now be slid forward off their respective shafts. Sometimes a bit of gentle prying is required or the use of a small 2 jaw puller to get things moving, especially if the sprocket nuts have previously been loctited.



Pic 3-10:

VERY IMPORTANT!!!! The oil pump sprocket is Keyed to the shaft. This tiny key, (I'm pointing to it with a seal pick.) almost always falls out into the bottom of the timing chest as the sprockets come off the shafts. Make sure you find it and store it somewhere safe. Then order another one as you'll forget where *safe* is You can clearly see the keyway in the shaft of the oil pump in this picture.



Pic 3-11:

Turn the motor through 180 degrees and remove the eight 13mm bolts that retain the rear main bearing.



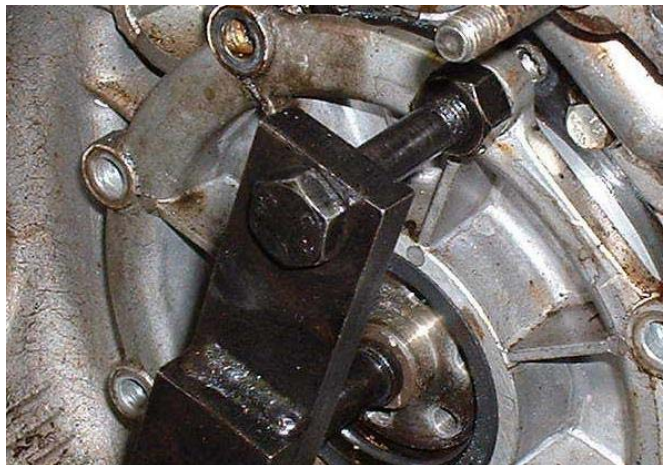
Pic 3-12:

This is the special too, Guzzi suggest for removing the rear main bearing and it's flange. The two bolts at the outer ends of the bridge screw into threads in the bolt holes in the bearing at 1 O'Clock and 7 O'Clock. The threaded handle in the middle then seats in the end of the crank and the bearing can be wound out of the block as seen below as the bearing starts to separate from the block face.



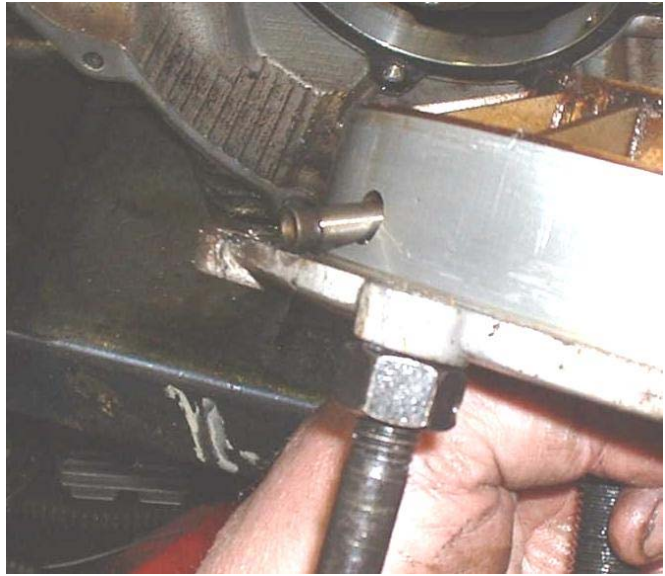
Pic 3-13:

This method is actually a bit Hit and Miss. Even with the tool the bearing flange is sometimes such a tight fit that the bosses the tool bolts screw into will break before the bearing flange comes free of the block. My preferred alternative, (Which I'll have to post pics of up later. Is to stand the block on the bed of a hydraulic press on it's bell housing studs and then use the press ram on the nose of the crank to push the rear main out of the block. This eliminates the risk of breaking the bearing flange bosses and will cause no harm to either crank or bearing. What WILL cause considerable harm is if when the bearing comes free of the case you aren't supporting it and aren't ready to take it's weight! The crank, although small, is drop forged, nitrided steel and it's heavy and slippery!!! Make sure you, or better still a mate, is taking the strain underneath the bell housing and you can support the front web of the crank through the sump while operating the ram with your other hand. Once the flange is free CAREFULLY lower the crank and rear main bearing combined making sure the nose of the crank doesn't bash or scrape the inside of the front main bearing as it comes out. Once free of the block the crank can be removed from the bearing and taken to the bench!



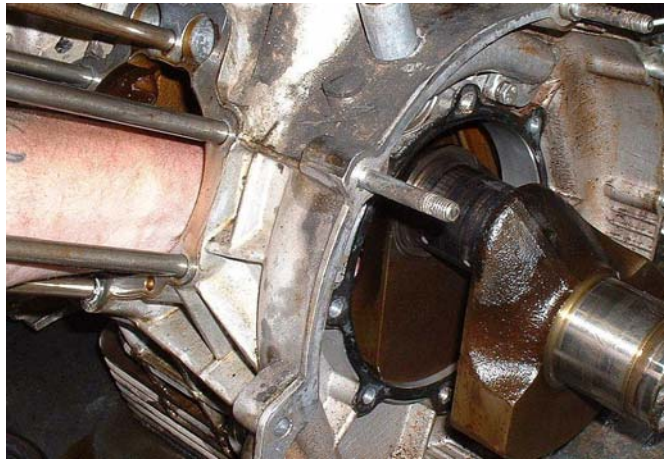
Pic 3-14:

Once the bearing is off the crank be aware that there is an oil feed dowel that locates the bearing proper within the flange. This little pipe is absolutely VITAL, as without it the bearing will spin in the flange in service cutting off the oil supply to the bearing. There is also a smaller one in the front main bearing. Both are prone to slipping out un-noticed. I suggest you remove it and put it in the same safe place as that bloody oil pump key! Both the front and rear oil fed dowels point upwards to the cam. This is useful to remember when re-installing the bearings.



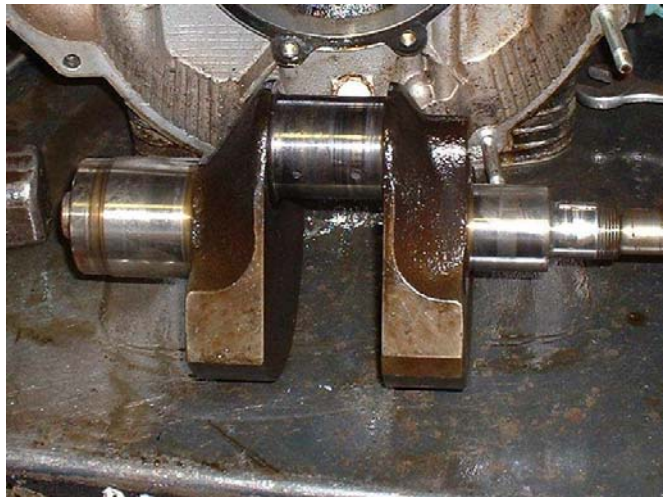
Pic 3-15:

Here is a pic of a sweaty meathead carefully lifting the crank out of the case after removal of the rear main with the factory tool and trying to take a pic with his other hand! I suggest when you do it you use two hands to help guide the nose of the crank out of the front main as previously mentioned.



Pic 3-16:

Crank out on the bench. As you can see the crankpin has got mighty hot!!!!



Pic 3-17:

The plug in the end of the crankpin can be removed thusly.



Pic 3-18:

Exposing the sludge trap. This is a low mileage engine, (Sub 20,000 miles.) and sludge build up is negligible but visible in the *bottom* of the trap.

