

## DESMO SINGLES (Continued)

vious signs of wear and, if necessary, face the marks out of the steel end cover with medium grade wet and dry on a sheet of glass. Make sure the flat end engages into the drive slot when replacing the casing.

You can use blocks of hardwood between the gudgeon pin and the crankcase to hold the crank to undo the LEFT-HAND THREAD on the cam drive pinion. Leave the blocks in position while you tackle the drive pinion nut on the other side.

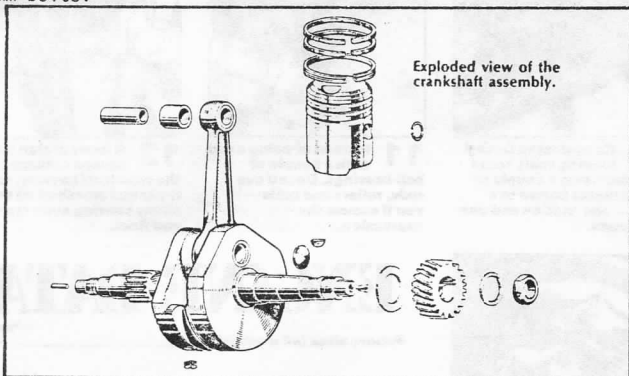
In our case, the drive pinion nut didn't need much strength the thing was virtually hand tight! This in turn, had caused a few problems like mashed up shims on the crank journals caused by float and damaged Woodruff key and keyway caused by fretting of the alternator flywheel on the shaft.

To remove the clutch, you will have to lock it up. The usual approach to this problem is to use a friction plate drilled and bolted to a metal clutch plate with a lever either welded or bolted to the plates-- there are other ways of holding the clutch to remove the centre nut, but this method ensures that you don't end up having to buy a new clutch body.

Once the clutch is off there's a motley selection of bits that make up the clutch push-rod. From the clutch end, the order is thus: ball, small roller, long pushrod, ball and short rod. No, we don't know why they have all these parts either! You'll also find a shim behind the clutch which keeps the primary gears in line.

The brass generator flywheel is a bit of a problem to remove. There is no room to get a universal puller behind it, and it would appear that the pukka Ducati puller which threads onto the boss is the only one that will do the job. So for this item, it's all down to begging, borrowing, or the other thing.

The primary drive side half of the main casing is the bit you want off after the alternator assembly has been removed--using a soft face mallet on the kickstart stop bolt at the rear of the casing, or the base of the cam drive should shift it. Don't clout the clutch cable stop casting, it could be embarrassing if it broke off. Before you start banging about are you sure you have removed six allen bolts and three long 13mm bolts?



Now, when you get the casing off leaving the crank and the gears in the timing side remember that all the rotating parts usually have shims on the end including the selector drum -- luckily all the shafts are different diameters so it's not a disaster if a couple of shims fall off. If you appear to have a shim and a spacer left over, you'll probably find that it has fallen off the kickstart shaft on the casing that's just been removed.

Pull the crank out and check the big-end for play and the main bearings for any signs of roughness after they have been cleared and lightly oiled. Also check the timing pinion, on our engine it was in pretty bad shape, maybe due to the sideways movement created by busted shims and loose pinion nut.

All the gearbox and selector shafts slide out for inspection--laying all the parts carefully in order on the bench after cleaning prevents getting them in a muddle. If you can see any signs of wear ridge on the selector forks we advise you to replace them, also check the pins and the channels

that they run in on the selector drum.

The gear train is fairly strong on the Ducati, but check the teeth for pitting and wear and make sure the engagement dogs still have a slightly dove-tailed surface and the corners are not excessively rounded. The way to check for proper engagement of the dogs is to assemble the two casings without the crank and shim up the selector drum, main and layshaft as may be necessary to get zero end float. Once this is okay, you can shift through the gears and check that the dogs nestle into the place nicely by feeling through the crankcase mouth.

Once this has been checked out, the crank can be fitted and checked for end-float. Again, this should be shimmed up on the primary side for zero clearance. Just in case you are wondering what we mean by zero clearance, it's the point at which all the movement is taken up -- we make this point because there's a temptation to set the whole thing nice and tight which gives no clearance, but also makes bearings and things wear out rather quickly.

When finally putting the two casing halves together, you can use a tiny smear of gasket compound all around, but the main requirement for a good seal is spotless and unmarked mating surfaces. Tighten down evenly working diagonally around the casing and don't use a pipe over the allen key wrench unless you are making up the normal length using the key longwise -- they are small bolts and are easily overtightened.

The primary drive is pretty much reverse order stuff--make sure the flywheel taper is clean and grease-free before fitting and the pinion nut should be nice and tight on clean threads with a bit of Loctite for good measure. As for the clutch plates, these hardly ever wear much unless it's been slipping, as long as there are still vestiges of radial grooves in the friction material, they will be okay.

On the timing side, you should find lining the various marks up a doddle. Fit the large plastic idler gear which drives the oil pump and the points gear so that all the dots line up from the crank pinion onwards.

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