

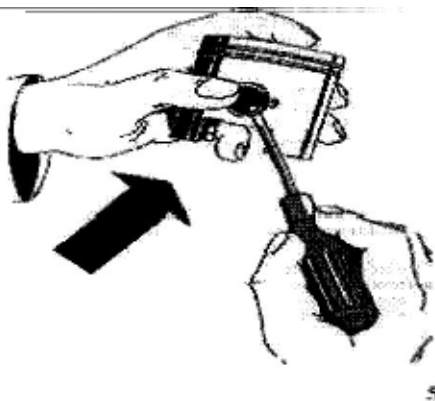
BOTTOM END DISASSEMBLY

Tools needed:

- 5mm Allen wrench (intake and fan tower)
- 6mm Allen wrench (fan pulley, gearbox, exhaust and crankcase bolts)
- 13mm open end wrench (cylinder base nuts)
- 24mm socket (crankshaft nut)
- 8mm Allen wrench cut short (gearbox)
- 10mm wrench (air guide)
- flywheel puller
- 4mm Allen wrench (stator plate)
- star puller
- soft faced hammer
- 1/4" socket
- wrist pin puller
- circlip remover

Procedure:

1. Remove engine from machine (remove all attached parts that can be left on machine; exhaust, carbs, FI system, etc.
2. Remove gearbox completely (refer to page 12).
3. Remove fan tower or flywheel cover.
4. Remove flywheel and stator plate (refer to page 6).
5. Remove air guide.
6. Remove intake system (5mm Allen wrench).
7. Remove exhaust manifold (6mm Allen wrench cut short)
8. Remove cylinder heads.
9. Remove cylinders (keep piston and cylinders matched together, and also make note of which cylinder went where, pto/mag) (13mm open end wrench).
10. Remove pistons (wrist pin puller very helpful in doing so) (leave wrist pin bearing in rod eye and secure with tie wrap), (remove circlip to do so).
11. Remove 7 - 8mm Allen head bolts that hold crankcase together (the crankcase is not free to be split apart).
12. Split crankcase: holding up on the top of the crankcase, tap down on both the mag end and the pto end of the crank, the crankcase will begin to split (DO NOT PRY CRANKCASE APART).
13. Thread 2 of the 7 Allen head bolts back into case 3 or 4 threads and tap on the Allen bead, while holding up on top half of crankcase.
14. Once the crankcase is split you can now remove the crank (put crank in a safe place free of dust and debris).
15. Remove small "alignment pins" from block.



How to remove piston from connecting rod;

1. Remove circlip or retaining ring from pto end side (as shown in picture)
2. Withdraw wrist pin from piston using a wrist pin puller or pushing out with a soft material. **MAKE SURE TO SUPPORT THE BACK SIDE OF THE PISTON WHEN PUSHING OUT PIN, TO REDUCE THE RISK OF BENDING CONNECTING ROD.**
3. Secure needle bearing on rod with tie rap until reassembly. This is to insure needle bearing goes back in same direction and on the same con rod. Pistons should also be returned to same con rod and cylinders.