

## Top End Disassembly

Tools needed:

- 5mm Allen wrench
- 3/8" drive 5mm Allen wrench
- 10mm socket (fan cooled engines only)
- 3/8" drive ratchet
- 13mm open end wrench
- 6mm Allen wrench
- 5mm Allen ball wrench
- Circlip remover
- Wrist pin puller
- Spark plug socket 5/8" or 13/16"
- Marker or something to keep parts together
- Plastic or rubber faced hammer

Procedure:

1. Make sure ignition is turned off and battery is disconnected to reduce risk of injury.
2. Remove exhaust system including EGT probes.
3. Remove spark plugs.
4. Remove air guide from fan cooled engine or free air scoop from free air engine.
5. Remove carbs or fuel injection (you can simply let the carbs or FI hang on the cables and hoses).
6. Remove intake manifold.
7. Remove all head bolts (you may want to mark your heads for reassembly later, example pto, mag).
8. You may want to remove the fan tower or flywheel cover for easier access to the base nuts on the cylinders.
9. With a 13mm open end wrench, remove all 4 base nuts from each cylinder needed to work on (mark the cylinder for reinstallation later as mag or pto).
10. To remove the pistons, you will need to first remove at least one circlip from each piston (I usually remove the pto end circlip from each piston), (throw the circlips away, they are not to be used over) with either a wrist pin puller or a soft round piece of material, push or pull the wrist pin out. **BE CAREFUL TO SUPPORT THE PISTON WITH YOUR HAND IF PUSHING THE PIN OUT SO YOU DO NOT BEND THE CONNECTING ROD.** (You will also need to mark the pistons for later reassembly). The needle bearing on the wrist pin is caged so there is not need for concern about needle bearings falling out, keep the needle bearing in the rod eye for safe keeping by using a tie wrap or piece of wire.