

Engine Rebuild with John

Aim: to strip down the engine as much as possible.

PPE: Steel toe capped boots and overalls

Engine: Honda VFR750

Engine number:

11th October

14.30 - 16.30

Lesson 1

- Chose VFR750 engine to strip and rebuild, used a trolley to move engine from shelf to workshop bench so as not to damage our backs.

Equipment used: • 3/8 drive socket set - 8mm - 27mm

- Impact gun and driver
- flat head screw driver
- long reach magnet
- pick
- pliers (long nosed)
- clear plastic bags (for bolts etc)

Set up procedure

- Used trolley to move engine onto bench.
- Planned where to start stripping the engine.
 - Removed camshaft covers - (one bolt missing from front ~~cover~~ ^{cover})
 - Unscrewed camshaft bearing bolts and swapped one bholder from the front ~~for~~ camshaft with rear, as was in the wrong place (Q236 in wrong place - among 3 covers with Q151)
 - Removed camshafts, and cylinder head bolts in order to ~~remove~~ ^{remove} cylinder head
 - Milo removed cooling system, whilst I removed alternator, then we each unscrewed the bolts holding the timing gears in place and took these out.
 - ~~I Took~~ ^{Took} off clutch cover and inspected area for timing marks. Removed senso
 - Used an impact gun to remove main bolt from starter clutch, removed this along with starter idle gear, watching out for bearings and spacers
 - Unbolted clutch ~~bolts~~ ^{basket} bolts, one already snapped, being careful not to let the coils spring out. Removed basket and clutch plates.
 - Usually an impact gun and clutch holder should be used to remove the housing bolt but this was not sufficiently tightened, therefore used a ratchet. Removed clutch housing.

- This exposed two sprockets connected with a chain which was driving the oil pump. Removed the bolts holding this on, as well as the filter.
- Once we were satisfied that we couldn't remove anything else
- Removed the sump bolts to expose the oil pump which I took out with the pickup.
- We then started to remove the crankcase bolts, and then separated the lower engine casing and gearbox to expose the crankshaft.
- Unbolted the big end bearings, allowing us to take out the pistons.
- We labelled the pistons and cylinders ~~to~~
- Took out the crankshaft which left a totally stripped down cylinder block.

Work achieved: Totally stripped engine into major components, allowing us to focus on top end strip down, gearbox as well as any measurements in the upcoming lessons.