PROJECT DETAILS

Name and Roll No. of student:

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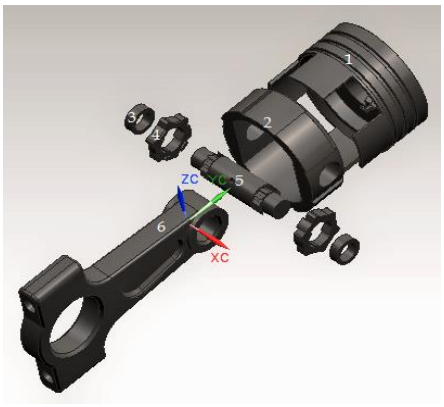
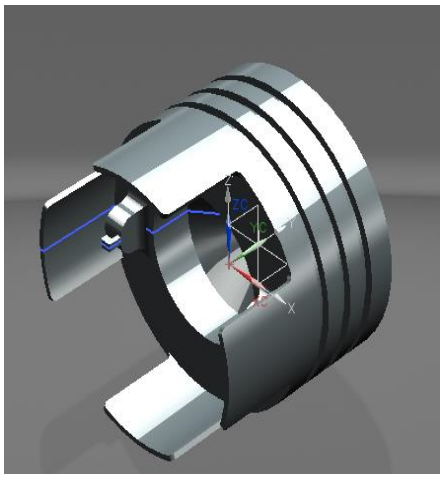
Name of project: Redesigning of piston and piston pin.

Working principle in brief: In suction stroke atmospheric air take place in cylinder at this time piston comes from TDC to BDC position. And at compression stroke time piston take place BDC to TDC position. At a time this two part piston react as normal one piece piston. But cam gear is rotate 30 degree because oscillating motion of connecting rod. In power stroke fuel are injected and power is generated at a time piston comes from TDC to BDC position. Between this two positions again cam rotate about 15 degree at this time cam gear hill portion is attached with upper portion follower. Then piston length is increase and upper portion of piston power transfer on lower portion of piston via. Follower and cam. And also decrease the volume of combustion chamber. After power stroke, exhaust stroke will start in this stroke piston take place from BDC to TDC and cam rotate other 15 degree. So at TDC position upper piston fully fitted on lower piston because of cam and follower portion lock.

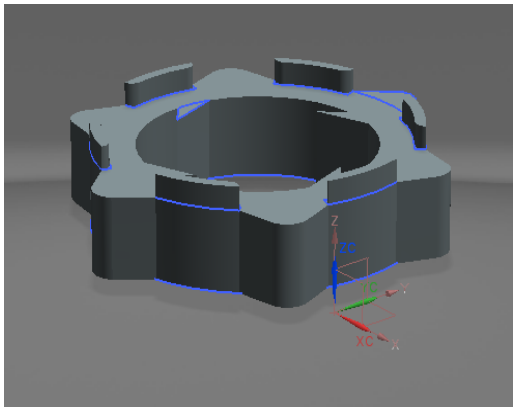
Figure and photograph:



Assembly of Piston



Cam Gear



Upper Part of Piston

Application:

- Commercial vehicle engines.
- In pitter engine.
- Also used in sea way vehicles.
- In train engine.
- In low speed engine.

Approximate cost: It is around 22,000 rupees.

Project guide:

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