SNS COLLEGE OF TECHNOLOGY

Coimbatore-35
An Autonomous Institution

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A+' Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

DEPARTMENT OF AGRICULTURAL ENGINEERING

19AGB301-FARM TRACTORS

III YEAR V SEM

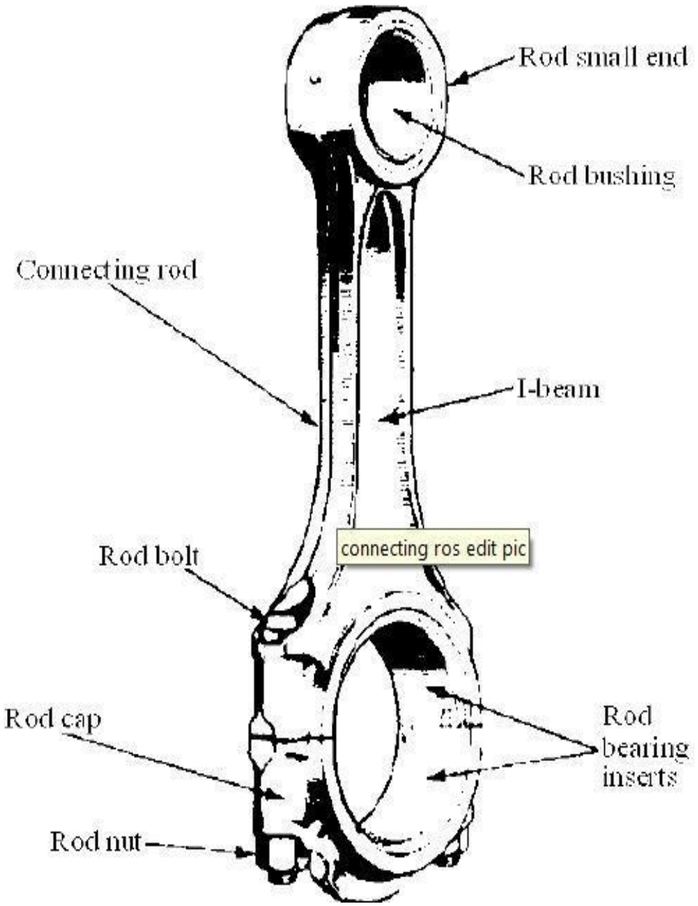
Topic : Connecting rod & Crankshaft

CONNECTING ROD :

A connecting rod is the part of a piston engine which connects the piston to the crankshaft.

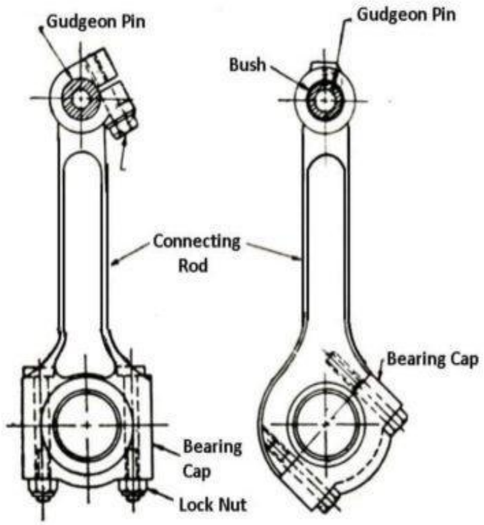
Together with the Crank, the connecting rod converts reciprocating motion of the piston into the rotation of the Crank Shaft.

The connecting rod is required to transmit the compressive and tensile forces from the piston.

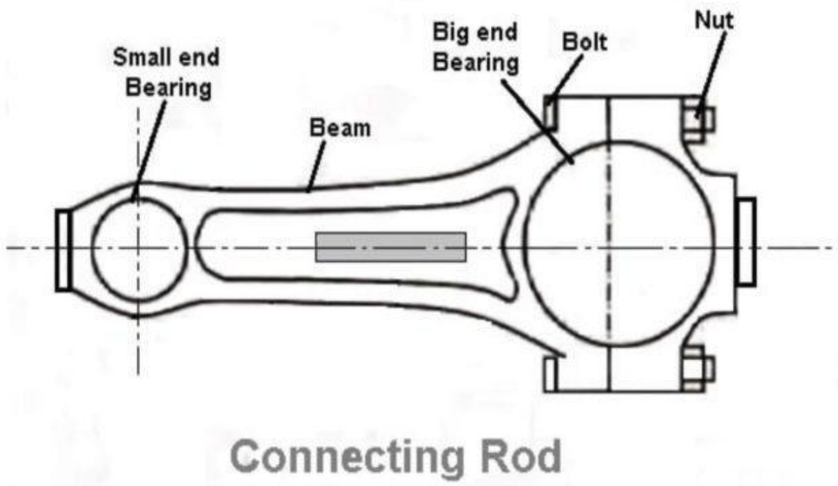


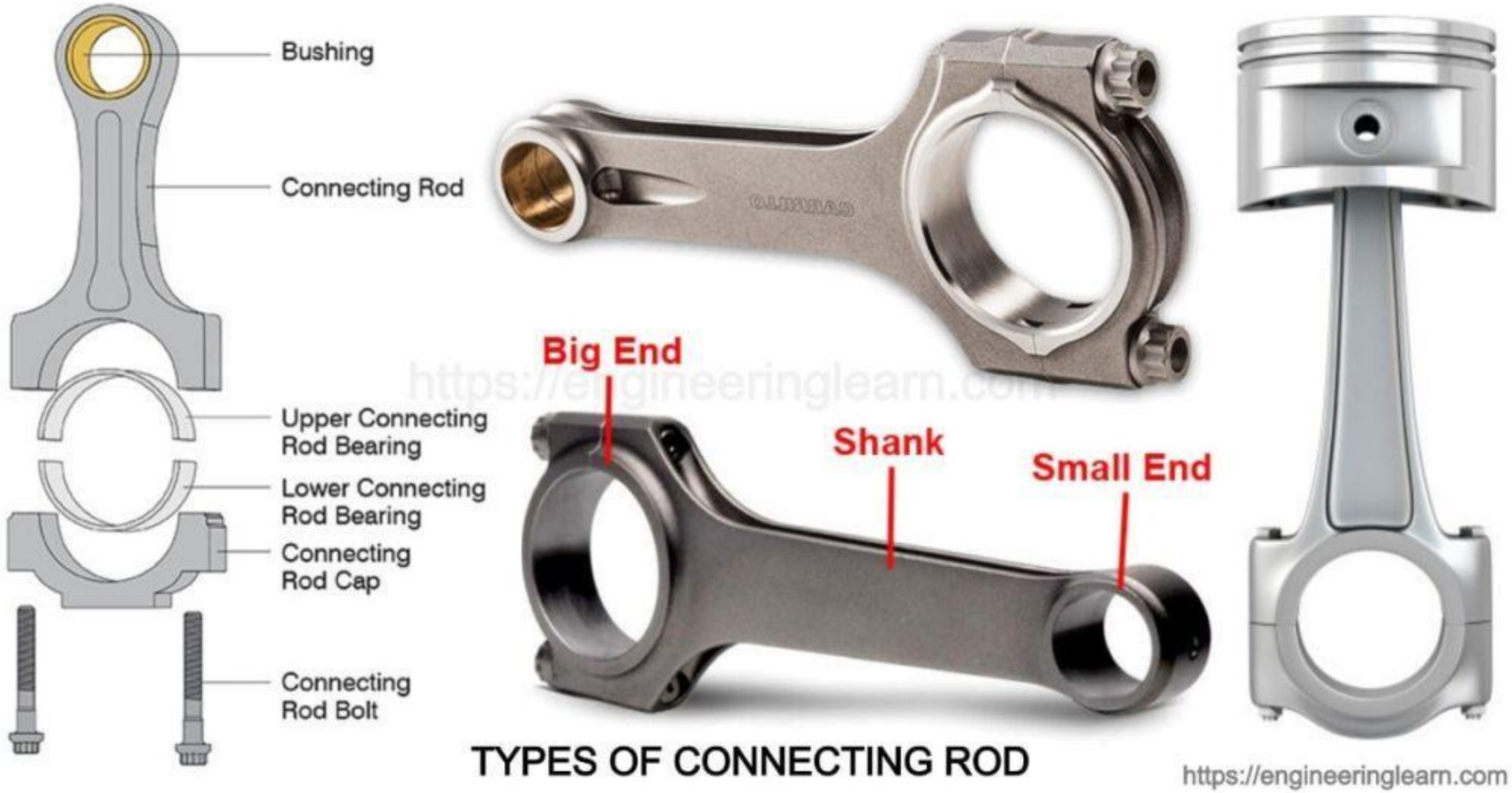
COMPONENTS OF CONNECTING ROD

- Small End.
- Big End.
- Bushing.
- Bearing inserts.
- Bolt and Nut.
- Shank.
- Wrist pin.
- Piston.



Parts of Connecting Rod




Bushing
Connecting Rod
Upper Connecting Rod Bearing
Lower Connecting Rod Bearing
Connecting Rod Cap
Connecting Rod Bolt
Big End
Shank
Small End
https://engineeringlearn.com
TYPES OF CONNECTING ROD
https://engineeringlearn.com

CONNECTING ROD :

The connecting rod is subjected to heavy load during power stroke ,it is forged out of good steel in the 'I' - section. To provide the maximum rigidity to the minimum rigidity.

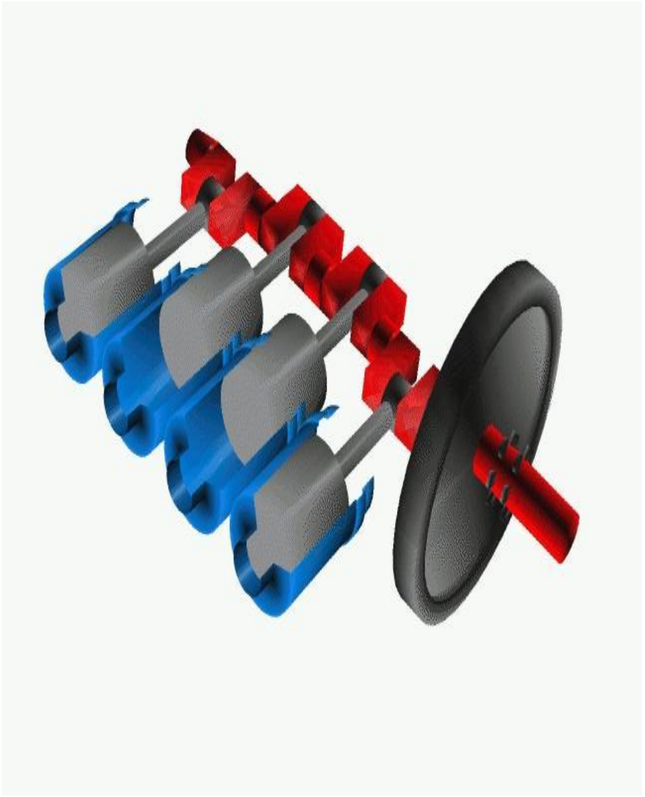
As it is known that the connecting rod is divided into several areas, namely **the top is the pinend, the middle area is called the shank, and the bottom is the crank-end/big-end** [4] . The pin-end and crank-end bores are each equipped with bearing mounts with very high accuracy.

CRANK SHAFT :

The crankshaft is essentially the backbone of the internal combustion engine.

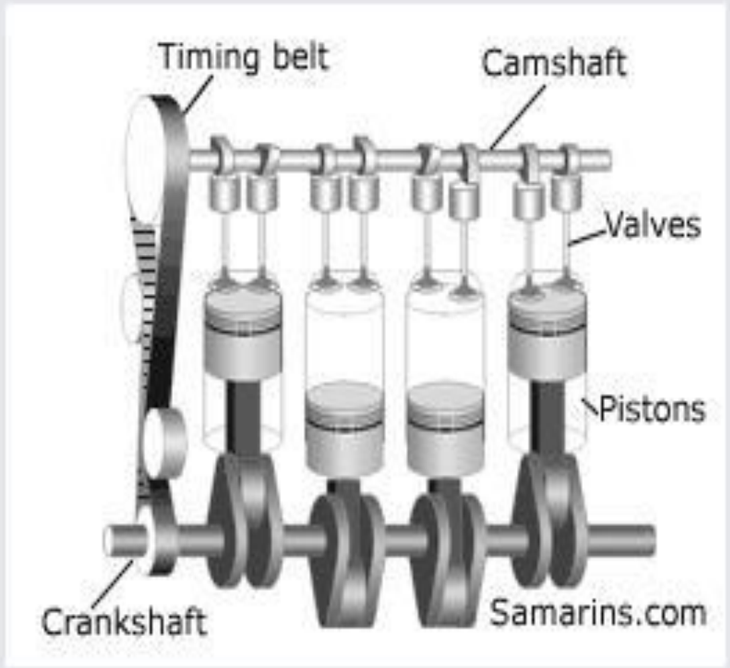
The crank shaft is responsible for the proper operation of the engine and converting a linear motion into rotational motion.

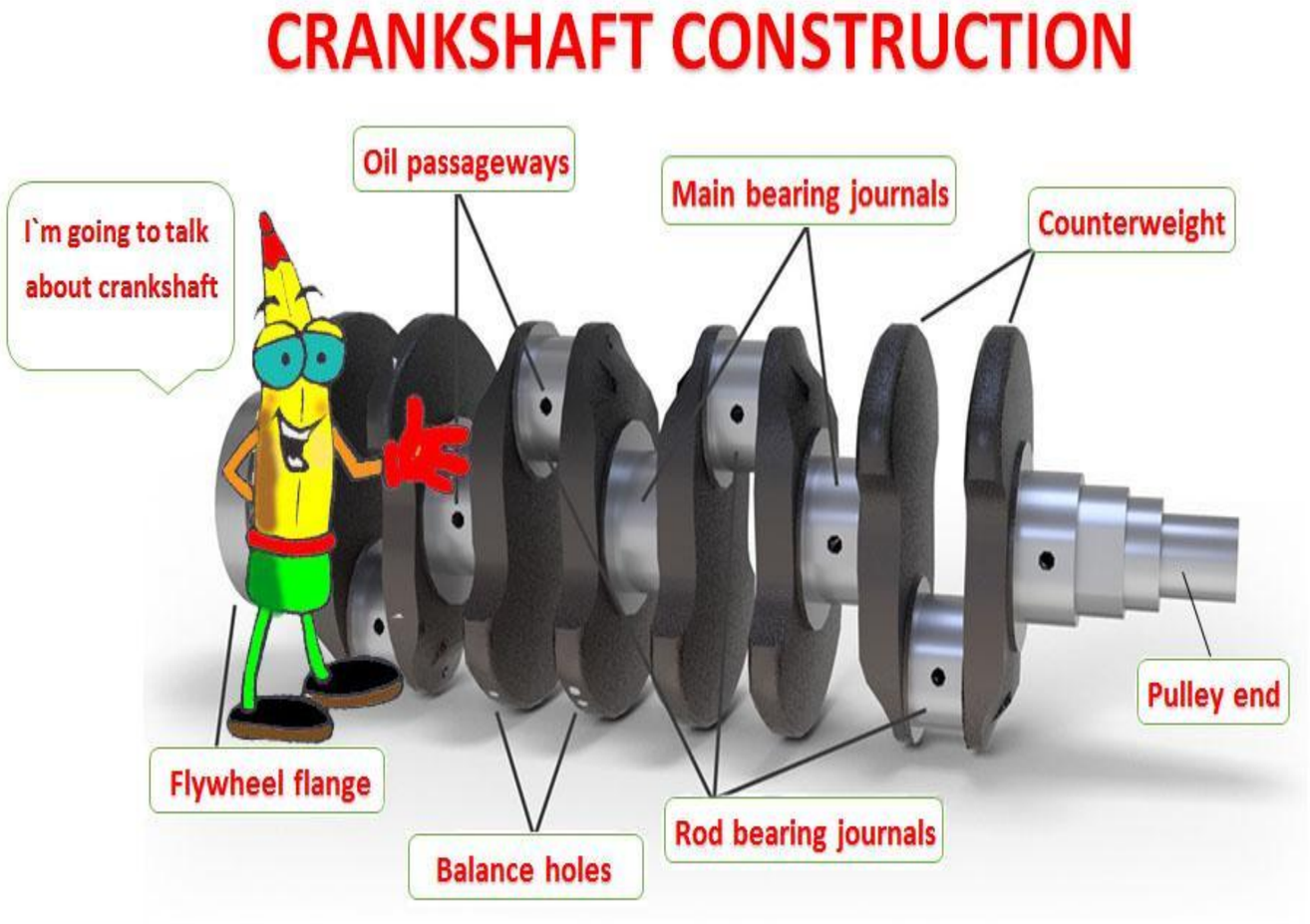
Crankshaft should have very high fatigue strength and wear resistance to ensure the long service life.



PARTS :

A crankshaft consists of **crankpins, crank webs (crank arms or cheeks), balancing weights, and main journals**. The large end of the connecting rod is attached to the crankpin of the crankshaft. During one stroke, the center-to-center distance between the crankpin and the crankshaft is half of the piston displacement.


Timing belt
Camshaft
Valves
Pistons
Crankshaft
Samarins.com


CRANKSHAFT CONSTRUCTION
I`m going to talk about crankshaft
Oil passageways
Main bearing journals
Counterweight
Pulley end
Flywheel flange
Balance holes
Rod bearing journals

YOUTUBE LINKS :

https://youtu.be/r45xO3SGLoY

https://youtu.be/MowN5t1maLI

https://youtu.be/HLvYTJVOWi4

https://youtu.be/KNR_VN5sYwA


Thank You