

Engine Terminology :

- **Top Dead Center (TDC):** Position of the piston when it stops at the furthest point away from the crankshaft.
 - Top because this position is at the top of the engines (not always), and dead because the piston stops at this point. Because in some engines **TDC** is not at the top of the engines (e.g: horizontally opposed engines, radial engines, etc,.) Some sources call this position **Head End Dead Center (HEDC)**.
 - Some source call this point **TOP Center (TC)**.
 - When the piston is at TDC, the volume in the cylinder is a minimum called the clearance volume.

- **Bottom Dead Center (BDC)** : P o s i t i o n o f t h e piston when it stops at the point closest to the crankshaft.
 - Some sources call this **Crank End Dead Center (CEDC)** because it is not always at the bottom of the engine. Some source call this point **Bottom Center (BC)**.
- **Stroke** : Distance traveled by the piston from one extreme position to the other : TDC to BDC or BDC to TDC.
- **Bore** :It is defined as cylinder diameter or piston face diameter; piston face diameter is same as cylinder diameter(minus small clearance).
- **Swept volume/Displacement volume** : Volume displaced by the piston as it travels through one stroke.
 - Swept volume is defined as stroke times bore.
 - Displacement can be given for one cylinder or entire engine (one cylinder times number of cylinders).

- **Clearance volume** : It is the minimum volume of the cylinder available for the charge (air or air fuel mixture) when the piston reaches at its outermost point (top dead center or outer dead center) during compression stroke of the cycle.
 - Minimum volume of combustion chamber with piston at TDC.
 - **Compression ratio** : The ratio of total volume to clearance volume of the cylinder is the compression ratio of the engine.
 - Typically compression ratio for SI engines varies from 8 to 12 and for CI engines it varies from 12 to 24