

FIGURE 5.2 (a) Engine cross section showing cam and follower. (Source: General Motors Corp.) (b) Camshaft.

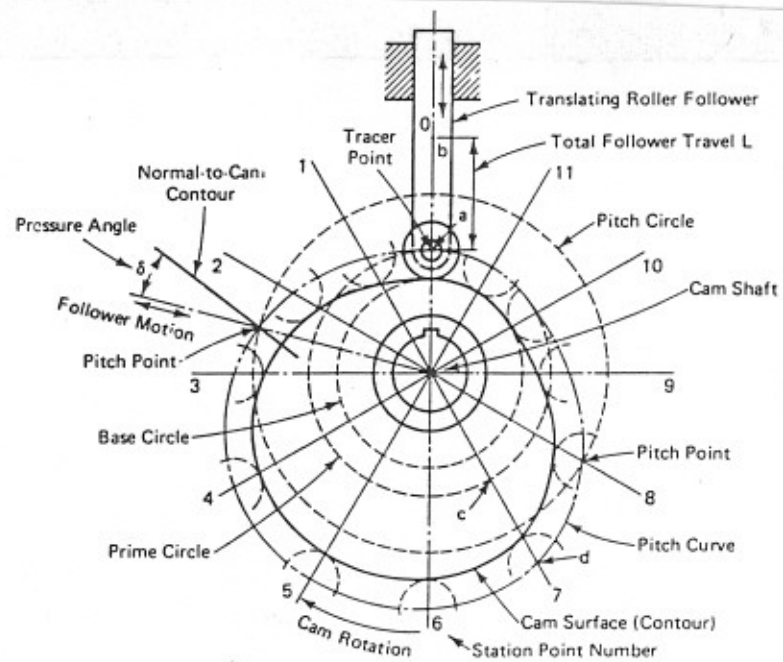


Figure 6.4 Disk cam and radial roller follower with appropriate nomenclature. Distance $c-d$ is the rise of the follower in position 7.

Base Circle - Is the smallest circle tangent to the cam surface about the center of cam rotation.

Cam Profile - Is the cam surface or contour.

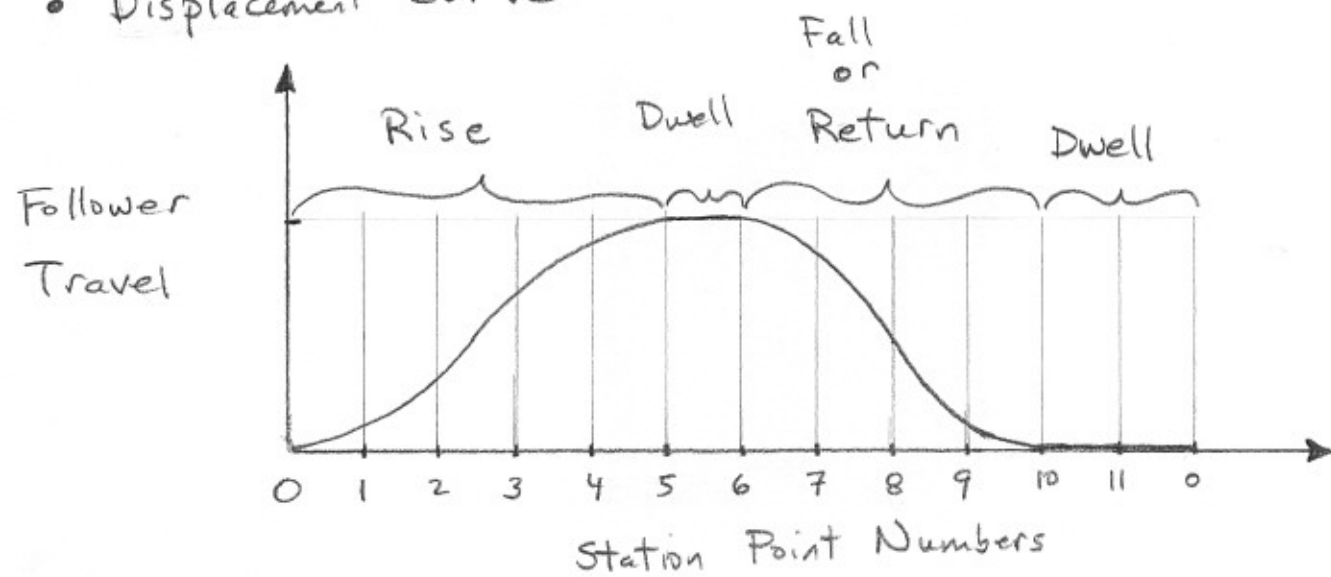
Throw or Stroke - Is the distance between the extreme or Travel positions of the follower.

Pressure Angle - Similar to deviation angle. The angle between the direction of motion and the normal to the contacting surface (line of action). Should be less than 30° .

Tracer Point - The point at the center of the follower that generates the pitch curve.

Pitch Point - The location of maximum pressure angle along the pitch curve.

• Displacement Curve



Rise - The interval which the follower is moving away from the center of the cam.

Dwell - An interval in which the follower is stationary. 2-3

Return - The interval during which the follower moves toward the center of the cam.

Disk Cam with Radial Follower (graphical design)

- To determine the cam contour graphically, it is necessary to invert the mechanism and hold the cam stationary while the follower moves around it.
- ① Rotate the follower about the center of the cam in a direction opposite to that of the proposed cam rotation
- ② Move the follower radially outward the correct amount for each division of rotation
- ③ Draw the cam outline tangent to the polygon that is formed by the various positions of the follower face.

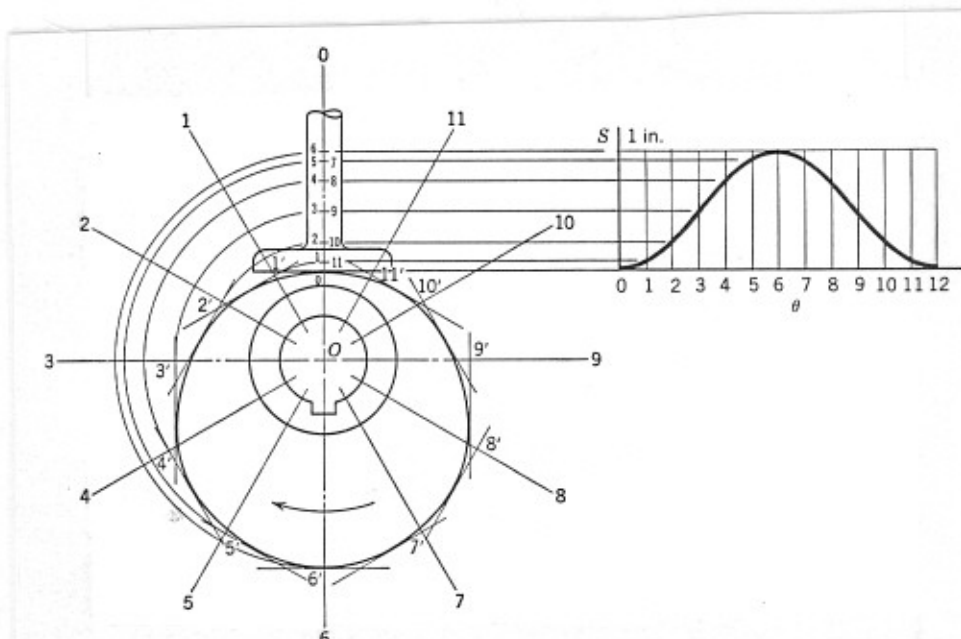


FIGURE 3.3 Disk cam with radial flat-faced follower.

