VARYING LOBE CENTERS

Tighten	Widen
Moves Torque to Lower RPM	Raise Torque to Higher RPM
Increases Maximum Torque	Reduces Maximum Torque
Narrow Powerband	Broadens Power Band
Builds Higher Cylinder Pressure	Reduce Maximum Cylinder Pressure
Increase Chance of Engine Knock	Decrease Chance of Engine Knock
Increase Cranking Compression	Decrease Cranking Compression
Increase Effective Compression	Decrease Effective Compression
Idle Vacuum is Reduced	Idle Vacuum is Increased
Idle Quality Suffers	Idle Quality Improves
Open Valve-Overlap Increases	Open Valve-Overlap Decreases
Closed Valve-Overlap Increases	Closed Valve-Overlap Decreases
Natural EGR Effect Increases	Natural EGR Effect is Reduced
Decreases Piston-to-Valve Clearance	Increases Piston-to-Valve Clearance

LOBE CENTERS

Above 114 Deg. = Extremely Wide

114-112 Deg. = Wide

112-110 Deg. = Moderately Wide

110-108 Deg. = Moderate

108-106 Deg. = Moderately Tight

106-104 Deg. = Tight

Below 104 Deg. = Extremely Tight

ADVANCING / RETARDING CAM TIMING

ADVANCING	RETARDING
Begins Intake Event Sooner	Delays Intake Event Closes Intake
Open Intake Valve Sooner	Keeps Intake Valve Open Later
Builds More Low-End Torque	Builds More High-End Power
Decrease Piston-Intake Valve Clearance	Increase Piston-Intake Valve Clearance
Increase Piston-Exhaust Valve Clearance	Decrease Piston-Exhaust Valve Clearance