Lashless Valvetrain

Traditional automatic lash adjusting valvetrains cannot be fitted to valvetrains with engine retarders (such as Jake Brake)

- Separation of exhaust bridge from rocker result in lash adjuster pump up
- Pump up result in piston to valve interference

Jacobs lashless system for valvetrains incorporating engine retarders

- Adjust lash during assembly and operation (positive power and retarding)
- Reduced assembly time / cost for engine OEM
- Improved valve timing accuracy
- Reduced maintenance for owner.
Lashless Road Map

Intake - Self Lashing Intake
Exhaust - Self Lashing Exhaust
- Only
- Integrated - Bridge Brake
- Lost Motion
- Tappet
- Rocker Brake
- Dedicated Cam Brake
- Bolt on Master/Slave Piston
- Dedicated Rocker
- Tandem Rocker
- Self Lashing Bleeder Brake

Challenges:
- Variants in mechanism architecture depending on valvetrain architecture
- Minimize cost impact of additional functionality
- Robust confirmation of all system benefits beyond the need for lash setting on engine assembly and in service
- Repeatability of valve opening / closing and valve lift resulting in P&E benefit
- Reduced valve train related NVH and improved valve train durability