

Combustion



Hybrid

Explore our Technologies

Electric Variable Cam Timing

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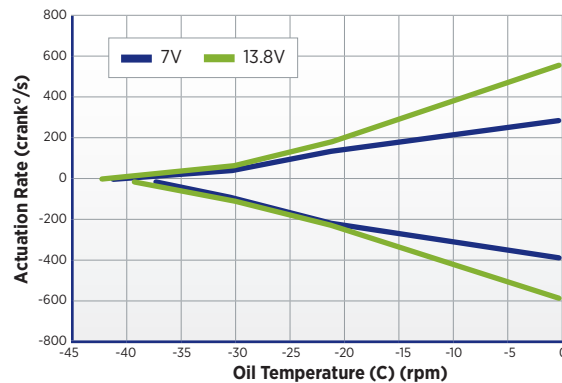
FEATURES & BENEFITS

- Improves fuel economy by allowing extreme LIVC strategies (large ROA)
- Eliminates no fly zone common with hydraulic phasers
 - Faster actuation rates
 - Reduces time to pressure oil pump requirements
 - Operates at low oil pressure and temperature
- Hybrid Electric Vehicles
 - Reduces restart energy for extended range or reduced battery size
 - Fuel economy and emissions benefits when combined with hybridization
- Stop/Start
 - Decreases time to torque/vehicle acceleration
 - Improves NVH by decompressing engine during (re)starts
 - Allows robustness to “change of mind” or abnormal shutdown events

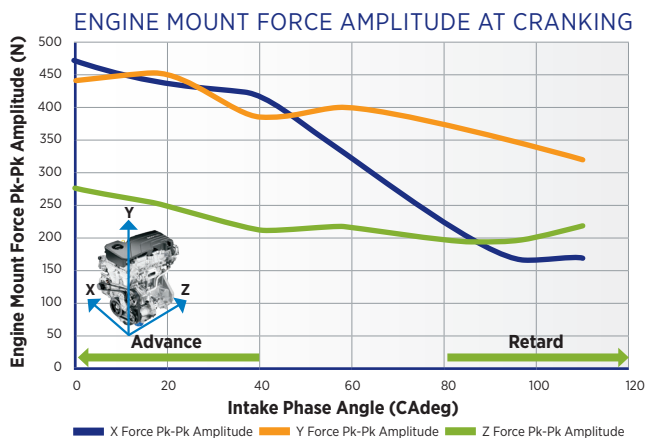
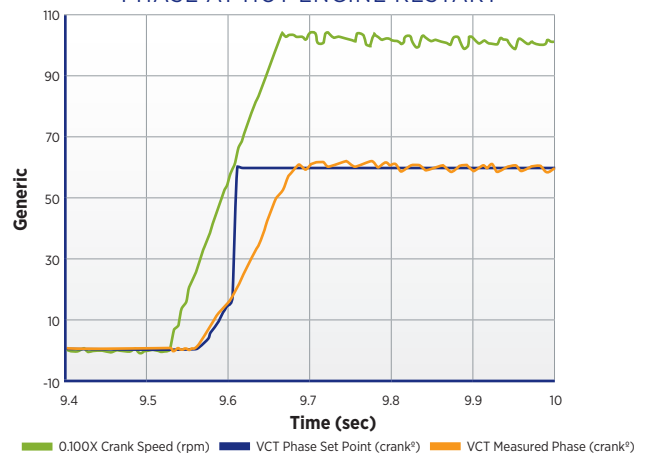
Product Specifications

- Low drag gear system
- Compact efficient brushless motor
- Controls can be integrated on electric motor or in ECU
- Axial length: 71mm (with controls)
- Speeds up to 750 degs/s (crank)
- 120 millisecond time to target at startup
- CAM position stability within +1CA
- Normal operating temperature: -40 to 130C

COLD PERFORMANCE 1000RPM



PHASE AT HOT ENGINE RESTART



For Additional
BorgWarner Information:
borgwarner.com

