

Combustion



Hybrid

Explore our Technologies

Intelligent Cam Torque Actuation (iCTA)

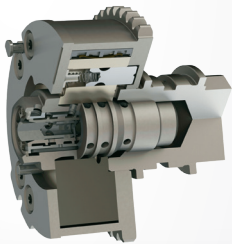
for all vehicles

Intelligent Cam Torque Actuation (iCTA)

THE FUTURE OF HYDRAULIC CAM PHASING: A PHASER THAT USES THE HIGHEST ENERGY SOURCE (OIL OR CAM TORQUE) BASED ON PRESSURE INPUT TO THE CHECKVALVE DURING PHASING.

This blended CTA/TA phaser can be applied to any engine architecture, and is an ideal solution for I4's with low cam torque, or varying cam torque energy.

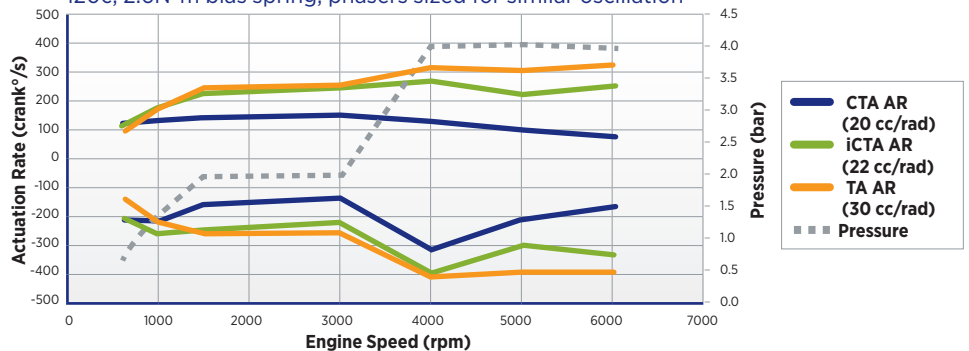
This innovative solution is a refinement and expansion of existing Morse technology.



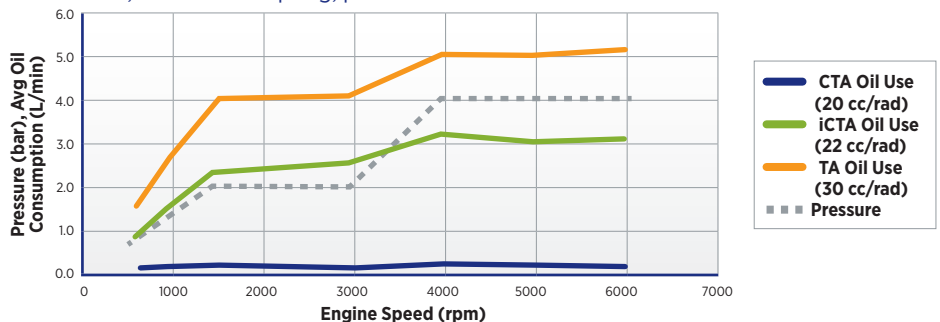
Features & Benefits

- Primarily uses camshaft torque energy to actuate and supplements with oil when necessary
- Partners with front mounted variable force solenoid controls and center mounted spool
- Integrates all features within existing centerbolt architecture, to allow interchangeability with an existing CTA or TA
- Enables late intake valve closing strategies
- Can be tuned for applications with variable cam torque signatures such as cylinder deactivation or variable valve lift
- Available with large range of authority and mid-position lock
- By recirculating oil, reduces oil demand and allows for reduced engine parasitic losses over competing I4 solutions. The result is:
 - Increased fuel economy
 - Lower emissions
 - Improved vehicle performance

ACTUATION RATE I4 WITH DVVL
120c, 2.6N-m bias spring, phasers sized for similar oscillation



OIL CONSUMPTION DURING OL SHIFT - I4 WITH DVVL
120c, 2.6N-m bias spring, phasers sized for similar oscillation



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