Explore our Technologies
Intelligent Cam Torque Actuation (iCTA)
for all vehicles
Intelligent Cam Torque Actuation (iCTA)

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

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.

For Additional BorgWarner Information: borgwarner.com

© BorgWarner 4-19/iCTA