# **GM 2.4L OHC Ecotec** Value Added Quality Improvements

## **from JASPER**

| Issue / Concern:                 | JASPER Solution:  |
|----------------------------------|---|
| Oil consumption                  | <ul> <li>Anodized top land and crown provides a thermal barrier and reduces carbon build up.</li> <li>JASPER- designed piston increases oil return by 300%.</li> <li>JASPER installs a robust, two-piece 2.0mm oil ring for improved oil control</li> <li>JASPER uses a steel top ring which includes a PVD coating for longevity and less friction.</li> <li>Additional accumulator groove is machined into the piston to decrease the pressure between the first and second ring land, preventing the upper (compression) ring from unseating at higher RPMs.</li> <li>100% installation of synthetic, rubber-based PTFE (polytetrafluoroethylene) valve stem seals.</li> </ul> |
| Dry start-up and piston scuffing | • JASPER-designed piston with graphite coating helps prevent dry start-up and piston scuffing.  |
| Valve guide wear                 | <ul> <li>100% installation of upgraded Stellite faced exhaust valves for increased heat resistance and protection against micro welding.</li> <li>Valve guides are air gauge tested to verify proper clearance between valve and guide.</li> </ul>  |
| Cylinder bore wear/Piston slap   | <ul> <li>100% torque plate honing of engine block, utilizing a torque plate and<br/>specially-designed, ARP2000® bolts, provides cylinder wall geometry that<br/>matches the cylinder head as a complete running assembly, for improved ring<br/>sealing.</li> </ul>  |
| Head gasket failure and leaks    | <ul> <li>Multi-layer steel (MLS) head gasket installed to reduce head gasket failure.</li> <li>100% installation of NEW head bolts to ensure even clamp load.</li> <li>Block and head resurfaced to 50-150 RZ.</li> <li>JASPER design piston is De-stroked pistons to prevent detonation.</li> </ul>  |
| Timing components                | <ul> <li>100% installation of NEW timing chains and tensioners for longevity.</li> </ul>  |

### 3 Year/100,000 Mile Nationwide Parts & Labor Warranty



#### Remanufactured in the U.S.A.

815 Wernsing Road • P.O. Box 650 • Jasper, IN 47547-0650 (800) 827-7455 • Fax (812) 634-1820 • www.jasperengines.com

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| Low oil pressure / knocking | <ul> <li>Micro-polished cranks are machined to exact tolerances for improved bearing<br/>clearance</li> </ul> |
|-----------------------------|---|
| VVT Failure                 | • VVT's are hydraulically tested using a state-of-the-art oil-controlled, test stand.                         |
| Reliability                 | • 100% live-run tested to verify proper compression, vacuum and oil pressure.                                 |

100% live-run tested to verify proper compression, vacuum and oil pressure.
 100% tested intake and exhaust cam actuators to verify proper performance.
 100% black light leak tested to ensure the unit is leak free.

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Full warranty disclosure available at www.jasperengines.com or upon request. Specifications subject to change without notice.