

P/M Aluminum Cam Caps

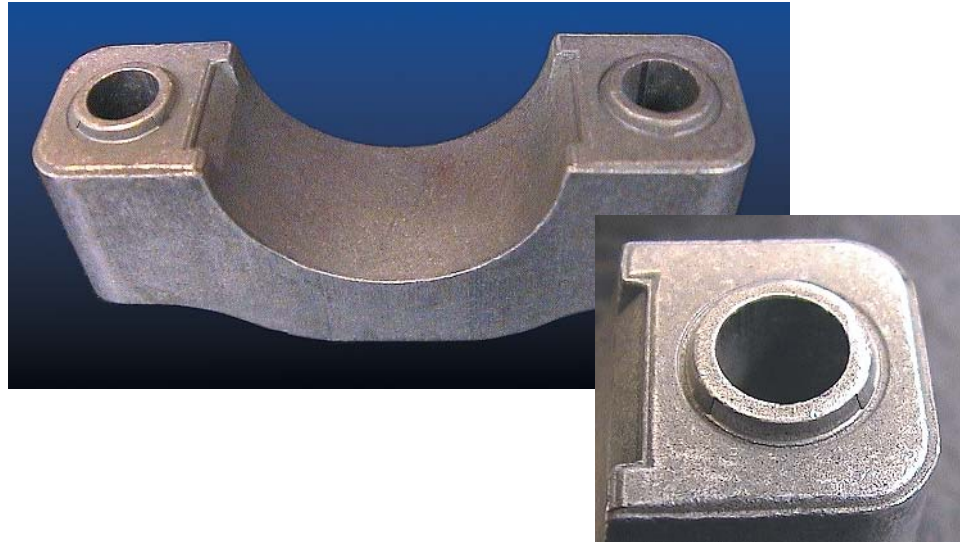
Featuring Z-Loc Technology

The Challenge:

Provide a superior performing aluminum cam cap that eliminates costly machining processes and improves relocation fit after line boring, cap removal and re-assembly.

The Solution:

Z-Loc cam caps are a unique design concept for camshaft retention providing unmatched precision.



Cost Savings:

Compared to diecasting, our aluminum cam caps save money by (1) eliminating the need for capital equipment purchases, (2) reducing the number of components, and (3) simplifying the assembly process.

- Multiple machining operations are unnecessary because our process yields net shape features with superior dimensional quality.
- Location dowels and/or special shoulder bolts can be eliminated through use of our "Z-Loc" feature.

Higher Performance:

Re-alignment of the cam cap after line boring and removal of the cap to install the cam are critical. GKN Sinter Metals' aluminum cam caps featuring Z-Loc technology provide the answer.

- Bolt-up studies comparing doweled cam caps to Z-Loc cam caps show a significant improvement in re-alignment capability with Z-Loc.
- Microporosity allows for retention of oil that aids in lubrication of the camshaft during cold starts.

Dimensional Quality:

Z-Loc features are integral to compaction and sizing tools, and enable us to maintain excellent dimensional stability.

- Z-Loc cam cap features are formed by a common punch during the powder compaction process, thus ensuring precise and consistent form and location.
- Z-Loc cam cap features eliminate tolerance stack-up of fitted-dowels, thus ensuring superior alignment.

Summary:

- One piece part with integral dowels
- Superior precision
- Transparent to current head design
- Near perfect relocation
- Microporosity holds oil
- Net shape - no machining
- Flexible oil groove design

