

INSIDE SEALING

LASERWELD™ HEAD GASKET EDITION

- Who:** For shop owners and technicians
- What:** Tips for engine sealing repairs and upgrades
- Where:** Visit www.felpro-only.com for more information
- Why:** Leverage the expertise of Federal-Mogul's Fel-Pro® engineering team to grow your engine sealing business

Highlights:

- Anatomy of world-class head gaskets
- LaserWeld™ stopper layer technology



A New Standard in Cylinder Head Sealing

Engine sealing is a dynamic science that evolves with each new block and head design. Inevitably, each generation of engine technology brings an array of new challenges for sealing manufacturers – reduced casting weight and clamp loads, increased combustion pressures and temperatures, greater risk of crushing and/or scrubbing of the head gasket.

To stay well ahead of this technology curve, Federal-Mogul gasket engineers invest tens of thousands of hours each year in the development of sophisticated new sealing

designs that set the standard among OEMs, engine repair professionals and performance engine builders. This commitment led to the dominance of the company's Fel-Pro® PermaTorque® head gaskets in the 1980s and '90s, and it has driven the unparalleled success of PermaTorque MLS (multilayer steel) gaskets over the past decade.

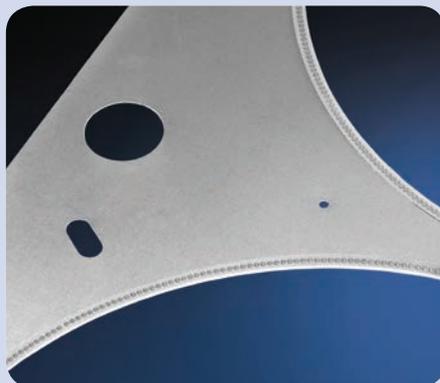
Now there's a new standard, once again available exclusively through the Fel-Pro brand: PermaTorque MLS gaskets featuring LaserWeld™ stopper layer technology.

The new LaserWeld design offers a critical combustion sealing feature that precisely controls the compression of the multiple layers within many PermaTorque MLS gaskets. This helps reduce head lift commonly encountered in many late-model engines, prevents gasket damage and ensures a superior combustion seal over a full range of operating conditions.

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LaserWeld™ Technology

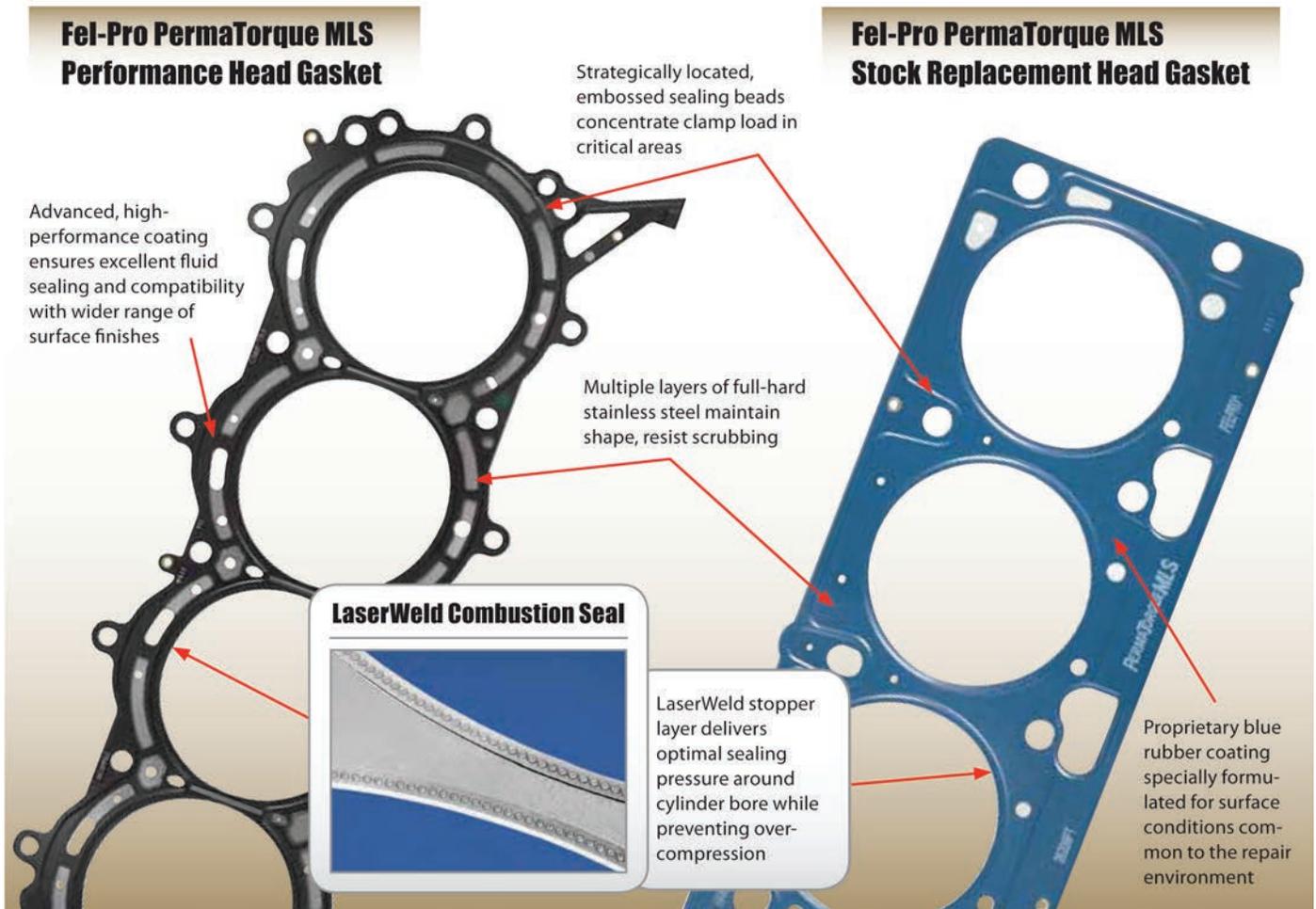
- Advanced feature precisely controls gasket compression
- Originally developed for global engine OEMs
- Proven in oval track racing competition
- Now standard on many Fel-Pro® PermaTorque® MLS gaskets



Key Benefits

- 1) Superior combustion seal for today's more powerful, lighter-weight engines
- 2) Helps reduce head lift and prevent gasket damage
- 3) Unsurpassed sealing strength and reliability

Anatomy of World-Class Head Gaskets



A New Standard in Cylinder Head Sealing

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Federal-Mogul originally developed LaserWeld technology for OEMs to seal the extreme cylinder pressures and temperatures encountered in a growing number of engine platforms. This technology has been proven in the heat of asphalt and dirt oval track competition – including the engines that contributed to several oval track championships – and is now a standard feature of a growing range of PermaTorque MLS gaskets for automotive and performance applications.

“As we move into the era of lighter-weight, higher-output engines, increased head lift and other dynamic challenges can undermine even the best conventional

multi-layer steel gaskets,” said Fel-Pro Product Manager Jim Daigle. “Our engineering team in Skokie identified this approaching engine performance threshold several years ago and we were ready with the right gasket technology at the right time.”

The LaserWeld stopper layer ensures a stronger and more reliable seal for engine rebuilders and performance engine professionals alike. Because of the unique requirements of the aftermarket repair environment, selecting an OE-style replacement MLS gasket will simply not provide the same level of sealing performance, Daigle explained.

“Engine professionals rely on the Fel-Pro brand for gaskets that outperform original designs – that’s our heritage and we take it very seriously. In the case of LaserWeld technology, we combined a proven OE concept with several advanced features engineered specifically for the repair environment. Then we validated this technology in racing. And now it’s the standard not only in professional racing but also in the automotive engine rebuilding market.”