

GASKET MATERIAL DELAMINATION



Performance & Price Improvement

View the material mentioned in this case study as well as others at www.mtiqasket.com.

Call MTI today at (641) 648-5165.

Email: sales@mtiqasket.com.

Customer Information

Metal Tech Industries was contacted about a competitor's gasket materials that were not surviving engine dyno testing. This testing was being performed by a company that manufactures heavy duty diesel engine applications in the agricultural market.

Challenges & Recommendation

The gasket being used in the testing was a multi-layer laminate that featured alternating layers of graphite and stainless steel that were adhesively bonded. The material was delaminating and failing to maintain a seal over the test cycle.

The picture below shows the failed material after being tested for exhaust temperatures during long-term dyno cell test cycles.

MTI had successfully solved a previous problem for this company on a different application, so they were aware that we offered various materials that are able to withstand challenging environments.

Our Engineering team looked at the application, the composition of the failing material and the method by which it was manufactured. The goal was to provide a robust solution that would improve the overall strength of the gasket.

HT 959 was suggested as a replacement material. It is a perforated core laminate (which provides durability) that features anti-oxidant graphite (providing a longer service life).

How Product Performed

The customer ran HT 959 through the testing cycle and it passed. The gaskets maintained their integrity and sealed throughout the cycle without delamination.

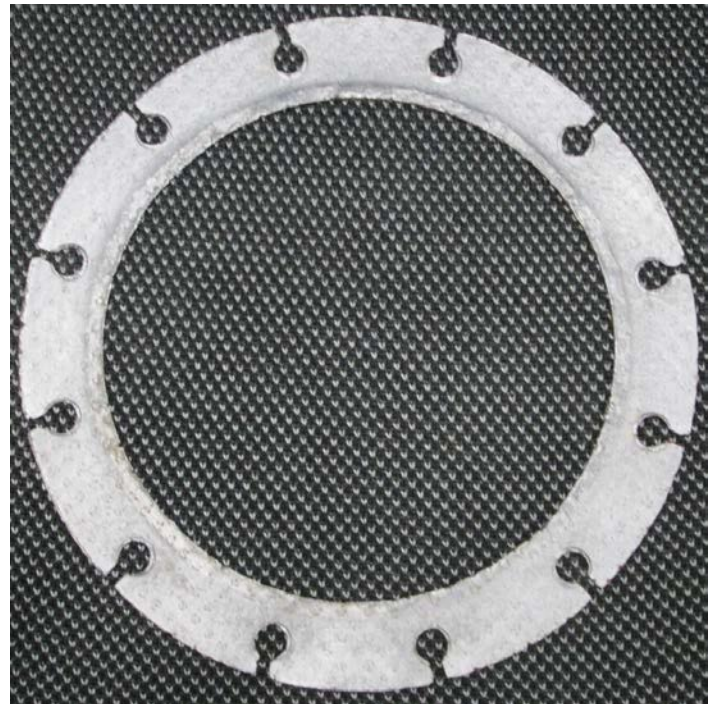
Results, Return on Investment and Future Plans

The HT 959 gaskets are working flawlessly! The lab is seeing an **80% cost reduction** on the gasket-to-gasket cost, **AND** they are able to reuse the gaskets made from HT 959 which further increases the cost savings!

It doesn't get much better than a >80% cost savings on a project with a material that works better than the original. If you have an application that you'd like our engineers to take a look at, contact us today!



Multi-layer laminate featuring alternating layers of graphite & stainless steel – adhesively bonded.



MTI's HT 959 after going through the same test cycle.