

High-performance lubricant solutions for noise, vibration, and harshness (NVH) issues.

Applying high-performance lubricants to quickly and effectively address NVH issues on the production line

Could less than one gram of grease help save over \$150M in truck recalls?

It's an all-too familiar issue on today's production lines: After repeated failures on a 4-post shaker test, one of the leading North American Car and Light Truck manufacturers needed a quick but permanent fix to maintain production while protecting against any future recalls. Only one lubricant solution passed the test.

The Challenge

While undergoing the 4-post vibrational test in the NVH garage, an NVH engineer heard a rattle in the door between the latch and the titanium post on the Class 2 pick-up truck. The team at the plant soon realized these noise issues were also occurring in their full-sized Class 3 pick-up, only at a higher rate.

That's when they discovered the issue. Their commonly used PTFE thickened silicone lubricant was migrating out of the target application area, which reduced lubrication of the latch and ultimately led to rattling.

The Short-term Answer

An alternative lubricant was initially proposed by the Tier 1 supplier; however, they did not have data to demonstrate its NVH and BSR performance. The OEM wouldn't even consider it. Fortunately, the NVH engineer had a Krytox™ NVH lubrication kit from Chemours. Once they lubricated the post with 0.5-1cc of Krytox™ GPL 205 grease, they



retested the vehicles, and both the Class 2 and Class 3 pick-ups passed. The high-performing lubricant fixed the containment issue on the spot.

The Long-term Solution

Chemours worked with the Tier 1 supplier to optimize the grease fill-level, set up a dispensing system for Krytox™ GPL 205 grease, and implemented Krytox™ lubricants as the long-term solution for 750,000 pick-ups (approximately 0.75 cc per latch in 3 or 4 latches per vehicle, depending on model).

Producing Real Results

The North American Car and Light Truck manufacturer experienced several production and cost-saving benefits with the help of the new wave of Krytox™ high-performance lubricants:

- With the application of Krytox™ GPL 205 grease, the NVH issue on the pick-up truck latch is no longer a problem
- Prevented over \$150M in potential recalls and kept production moving*
- Secured OEM brand reputation as a top North American brand

Put Our High-Performing Lubricants to Work for You

As top auto OEMs and Tier 1 suppliers consider their options, they look at the key characteristics that make Krytox™ oils and greases the ideal lubricants in automotive applications, including:

- ✓ **Wide temperature range performance.** Extreme heat or cold has no effect on lubricity, effective from -73 to >360 °C (-99 to >680 °F), depending upon operating conditions and product grade.
- ✓ **Life-time lubrication.** Low oil volatility prevents drying out, while low migration ensures lubricants stay in place. Chemically inert PFPE oils maintain lubrication performance through cleaning, contamination, and repeated mechanical cycles.
- ✓ **Safety and low evaporation (low VOCs).** When used within the recommended temperature ranges, Krytox™ oils and greases experience minimal evaporation or chemical changes over a vehicle's service life.
- ✓ **Compatibility.** Krytox™ performance lubricants won't harm painted surfaces, plastics, leathers, or elastomers, and are compatible with almost every material they may contact.
- ✓ **Noise and wear protection.** Surfaces treated with Krytox™ performance lubricants have a lower coefficient of friction, preventing noise and protecting against wear.

Together, let's reconsider possible.

We've helped our partners proactively address and quickly fix a wide range of production issues. And no matter your engineering challenge—from longer component life and extreme temperatures, to reducing failures and eliminating NVH issues—we're confident that Krytox™ high-performance lubricants will work for you, too.

*Calculated based on records of previous door latch recalls.

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