



CHEMICAL RESISTANT GREASE FOR EGR VALVES

INDUSTRY:
Automotive

APPLICATION:
EGR Valve

COMPONENT:
Bearing & Gear

LOCATION:
USA



BACKGROUND

Vehicle emission control systems such as exhaust gas recirculation (EGR) systems play an important role in ensuring vehicles comply with safety and emission regulations. To ensure optimum performance, EGR valves and other components must operate reliably under harsh underhood conditions. To do this, these applications require lubricants that can withstand extreme temperatures and exposure to fuels and emissions. A leader in EGR design approached Nye to find a lubricant for their EGR valve bearings and plastic actuator gears that would pass durability testing.

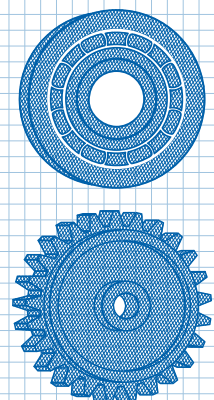
CHALLENGES

- Can the lubricant meet low temperature safety requirements and withstand high underhood temperatures?
- Can the lubricant resist hydrocarbon emissions, exhaust fuels, and other chemicals?
- Can Nye provide a grease that is compatible with the plastics and elastomers of the application?

SOLUTION UNIFLOR™ 8921 & UNIFLOR™ 8472

Chemically inert, PFPE lubricants thickened with PTFE.

- Consistent performance at low & high temperatures
- Resists chemicals, fuels, and exhaust
- Compatible against plastics & elastomers
- Prevents wear, extends component life



RESULTS

Uniflor™ 8921 and Uniflor™ 8472 both have a high viscosity index which means that the grease maintains its viscosity as temperature changes. Lubricants with a high VI are more stable, last longer, and require less lubricant per part. Ultimately, Nye recommended that the OEM use Uniflor™ 8921 for their valve bearings and Uniflor™ 8472 for their actuator gears after our products passed their durability testing. The customer was pleased with our technical support and range of products and now considers Uniflor™ 8472 their “go-to” grease for plastic gearing.

Base Oil Properties	Conditions	Uniflor™ 8921	Uniflor™ 8472	Test Method
Chemistry	–	PTFE	PFPE/PTFE	–
Temperature Range	–	-65 to 250 °C	-50 to 225 °C	–
Kinematic Viscosity	-40 °C	4823 cSt	–	ASTM D445
	40 °C	135 cSt	215 cSt	
	100 °C	40 cSt	37 cSt	
Viscosity Index	–	334	221	ASTM D2270
Grease Properties				
Penetration (1/10 mm)	Unworked	269	262	ASTM D217
	Worked (60X)	295	287	
NLGI Grade	–	2	2	ASTM D217

Since 1844: Our performance is reflected in the value we bring to our customers.

Nye Lubricants is a leader in the innovation, formulation and provision of synthetic lubricants, enabling and improving breakthrough products and critical new technologies. We bring proven experience, deep technical knowledge and customer focus to solve our customers' toughest challenges, adding tangible value to products in a wide range of industries and applications.

Nye Lubricants, Inc.

12 Howland Road
 Fairhaven, MA 02719 USA
 Ph: +1.508.996.6721
 Email: contact@nyelubricants.com



NyeLubricants.com



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