

CONTROLAIR, INC.

INDUSTRY:
Medical

APPLICATION:
Ventilator

COMPONENT:
Lip Seal/Regulator

LOCATION:
USA



BACKGROUND

The United States federal government tasked NASA/Jet Propulsion Laboratory (JPL) to design a mass-producible ventilator device that could be built with "off the shelf" parts in response to the COVID-19 pandemic. The design was completed by JPL Engineers in April 2020 and was released to twenty manufacturers all over the world. ControlAir, a worldwide leading manufacturer of precision pneumatic and electro pneumatic control products, was one of the first manufacturers rewarded with a contract. The dynamic lip seal within the device's two regulators needed to be lubricated and ControlAir, Inc needed the grease quickly to stay ahead of their production schedule.

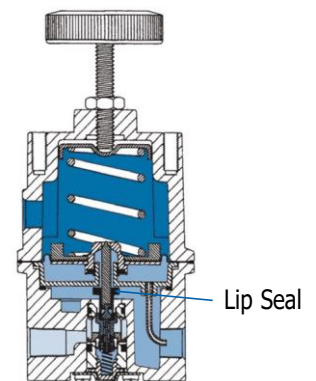
CHALLENGE

- Can Nye provide a ventilator grease in time to accommodate the manufacturer's critical production schedule?

SOLUTION UNIFLOR™ 8612

A stiff, PTFE thickened, medium viscosity, completely fluorinated grease.

- Very wide temperature capability
- Excellent plastic, elastomer, and oxygen compatibility
- Resists aggressive chemicals.



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RESULTS

Nye's grease, Uniflor™ 8612, was specified by ControlAir to lubricate the dynamic lip seal within the regulators of the ventilator device. ControlAir was extremely pleased with Nye's rapid response, with the project lead saying, "After a brief exchange with Nye's production team, they let us know they were shipping product the very next day, weeks ahead of schedule. I have used Nye Lubricants at my current and previous employers, and they always seem to have the answers. Many thanks to the Nye team."

Base Oil Properties	Conditions	Uniflor™ 8612	Test Method
Chemistry	–	PFPE/PTFE	–
Temperature Range	–	-20 to 250 °C	–
Kinematic Viscosity	40 °C	345 cSt	ASTM D445
	100 °C	33 cSt	
Viscosity Index	–	136	ASTM D2270
Grease Properties			
Penetration (1/10 mm)	Unworked	230	ASTM D217
	Worked (60X)	239	
NLGI Grade	–	3	ASTM D217
Oil Separation	22 hr, 150 °C	3%	ASTM D6184
Evaporation	22 hr, 150 °C	0.3 %	CTM*

*CTM: Nye Company Test Method

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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

Dulub Co., Ltd. www.dulub.com.tw tel : 886-7-536 5500



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