

# EXTERIOR COMPONENTS

Lubricants designed to improve the functionality, reliability and longevity of automotive exterior components.





# **EXTERIOR COMPONENTS**

SYNTHETIC LUBRICANTS FOR THE LONG HAUL

# DOORS & WINDOWS

Door lock actuators are essentially plastic gearboxes with

small motors. They are often expected to survive 50,000

cycles, operate at temperatures as low as -40°C and resist

A synthetic hydrocarbon, lithium-soap grease is a cost-

Some OEMs require door actuators to operate in virtual

silence; others want audible feedback when the door

is locked or unlocked. Synthetic damping greases offer

rain, car wash detergents and other environmental stressors.

**Door Lock Actuators** 

effective solution for this application.

#### Sunroof •

Sunroof systems are controlled by a motor and cable. Unlike window regulators, these components are often not exposed to the elements. A transparent synthetic grease with low oil separation that resists water, withstands temperatures of -40°C, and offers vibration and noise reduction is recommended.

NyoGel® 774L - Sunroof mechanisms

UniFlor™ 8170 - Sunroof seal

UniFlor™ 8470 - EPDM BSR itching



When a car hits a bump, the high frictional characteristics of rubber window seals - particularly when they come in contact with painted sheet-metal surfaces - can cause a light, squeaky, distracting noise called "itching." Fluorinated oils, chemically compatible with elastomers, will stop the itching.

Rheolube® 462 - Wiper motor gears

UniFlor™ 8170 - Windshield seal

### **Electrical**

Contact lubricants are used to prevent wear, environmental corrosion and "fretting corrosion," micro-motion caused by vibration and thermal changes within the connector housing. By reducing the formation of metal oxide at the mated interface, synthetic lubricants extend contact life and keep resistance low.

NyoGel® 760G - Head & taillight connectors

NyoGel® 760G - Trailer tow connector

## Gas Door

UniFlor™ 8472 - Hinge area

Trunk

UniFlor™ 8132 - Trunck latch

# Key Cylinders

economical sound control.

Key cylinders are installed after cars are painted. If any defects are found in the paint job, a Xenon light is used to cure paint touch-ups rapidly. The light also radiates sufficient heat to cause some cylinder greases to leach, discoloring the paint. Perfluoropolyether lubricants can "take the heat," to prevent these grease-based paint blemishes.

## Window Regulator Assembly

The one or two-track assembly that raises and lowers the window glass must withstand extreme temperatures, as well as dust, dirt, water and car wash fluids that infiltrate the door cavity. A high-viscosity, silicone-based, PTFE-thickened grease has proven successful in these assemblies. It resists water-washout, operates at temperatures to -40°C, and easily passes the "Arizona Dust Test."



#### Mirrors —

Increasingly, side mirrors are electrically controlled. Their small motors and gears must operate flawlessly at temperatures to -40°C, even when exposed to rain, saltwater, and car washes. Compounding the lubrication challenge, the plastic exterior housing acts like an acoustic amplifier that can create an annoying buzzing noise. A light viscosity, synthetic hydrocarbon damping grease withstands the cold, offers vibration and noise reduction, and resists the elements.

NyoGel® 774VLF - Power folding mirrors

Rheolube® 362HB - Power mirror gears

NyoGel® 760G - Connectors

Instrument Grease 732C - Switches

 $\textbf{Rheolube} \textcircled{R} \ \textbf{362HB} \ \textbf{-} \ \textbf{Latch} \ \textbf{mechanisms}$ 

UniFlor™ 8172 - Door handles

UniFlor™ 8470 - EPDM BSR itching

UniFlor™ 8512 - Key cylinder

### Windows

Fluorocarbon Gel 880 - Window regulator assembly

NyoGel® 774 Series - Switches

UniFlor™ 8170 - Window rails

UniFlor™ 8170 - Window seal







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