



# Case Study

## NYE LUBRICANTS SUCCESS STORIES

**CONFIDENTIAL**



**Industry:** Automotive

**Application:** Window Lift System

**Component:** Cable

**Location:** China

**Time Period:** May 2007 - July 2009

### BACKGROUND

A growing Chinese company that specializes in auto manufacturing took part in a Nye lube seminar. The company was interested in learning more about how synthetic lubricants can improve quality and extend the operating life of their applications. They introduced Nye to their window lift application that is run on a cable system. The lift was using a petroleum-based product that the company wanted to replace.

**For more information, contact our technical expert.**

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### CHALLENGES



- Can a synthetic grease from Nye outperform the petroleum-based grease?
- Can a single grease meet the requirements of all the moving parts of the window lift system?

### SOLUTION



1. Nye recommended using PAO-based greases because they demonstrate a longer operating life and function over a broader operating temperature range than petroleum.
2. Samples were given to the company for testing.
3. Life testing verified that the petroleum-based product did not last as long as the PAO-based Nye lubricants.
4. Low temperature torque tests and material compatibility tests were performed on the samples to verify the Nye greases could lubricate all moving parts of the window system.



Window Switch to Power Lift System

### RESULTS



Rheolube® 368F proved to be superior in temperature and longevity over all PAO-based products tested and was chosen to replace the petroleum product. 368F was also able to lubricate all moving parts of the window lift system. Rheolube® 368F has now become the lubricant of choice for this company, as it is used in automotive cables, door locks, and HVAC systems.

Lubricant Properties		Rheolube® 368F	Test Method
Base Oil		PAO	
Thickener		Lithium Soap	
Temperature Range		-40 to 125°C	
Kinematic Viscosity	40°C	203.45 cSt	ASTM D-445
	100°C	24.68 cSt	
NLGI Grade		1.5	ASTM D-217
Penetration	Unworked	294	ASTM D-217
	Worked (60X)	306	
	Worked (10,000X)	295	
SRV, Step Load (75°C, 50Hz)		733 N	ASTM D-1478