



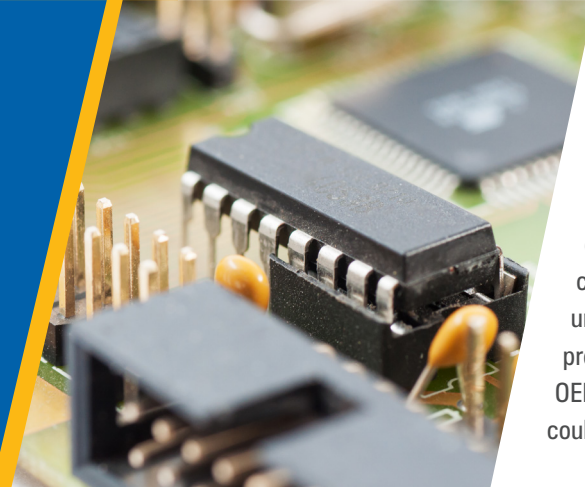
## DISPENSING OPTIONS FOR PRINTED CIRCUIT BOARDS

**INDUSTRY:**  
Automotive

**APPLICATION:**  
Ignition Module

**COMPONENT:**  
Print Circuit Boards

**LOCATION:**  
Brazil



### BACKGROUND

One of Nye's long-standing OEM customers manufactures vehicles using components from other suppliers. In one of their vehicles, they experienced short circuiting within their printed circuit boards, which lead to a recall of affected vehicles. When connectors within circuit boards are exposed to water, they become corroded, which causes short circuiting to occur. Dealerships were unable to access the circuit board in recalled vehicles because a protective casing was built around the component. The Automotive OEM approached Nye to find a lubricant and dispensing option that could reach the hard to access area and solve the corrosion issue.

### CHALLENGES

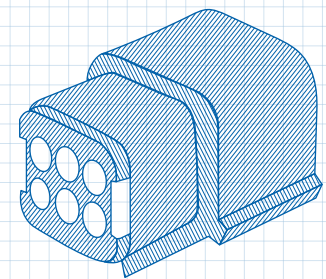
- Can the lubricant protect the electrical contacts from water?
- Can Nye provide a dispensing solution that reaches these circuit boards?

### SOLUTION

#### **NYOGEL® 760G, 55CC SYRINGE**

A silica thickened, medium viscosity, synthetic hydrocarbon grease.

- Excellent water resistance that protects contacts from short circuiting
- Syringe with metal tip allows dealerships to easily insert the lubricant into the circuit board
- Universal standard for dielectric grease specified by leading OEM's
- Specifications: Ford: WSB-M1C239-A, GM: 9986087, & DaimlerChrysler: MS-9496



### RESULTS

Dealerships were able to successfully dispense NyoGel®760G into the printed circuit board of recalled vehicles because of the metal tip included in the design of the 55cc syringe. The supplier of these circuit boards was also able to use NyoGel®760G to lubricate components during manufacturing so that this problem would not arise in the future.

Base Oil Properties	Conditions	NyeGel® 760G	Test Method
Chemistry		Silica / PAO	
Temperature Range		-40 to 135°C	
Kinematic Viscosity	40°C	400 cSt	ASTM D-445
Viscosity Index		147.5	ASTM D-2270
<b>Grease Properties</b>			
NLGI Grade		2	ASTM D-217
Oil Separation	24 hrs, 100°C	1.5%	ASTM D-6184
Evaporation	24 hrs, 100°C	0.3%	ASTM D-972
Water Washout	1 hr, 80°C	2%	ASTM D-1264
Copper Corrosion	24 hrs, 150C	1a, Slight Tarnish	ASTM D-4048
Salt Spray Resistance	48 hrs	No Corrosion	MIL-G-81827A
Dielectric Breakdown Voltage		11.2 kV	NYE CTM

**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.

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