# **Seals Improve Reliability of Paint Pumps**

Automotive Industry
SES 145 Piston Seal, SES 521 Plunger Seal Stack
Polymer Seals Case Study

## **Challenge**

#### **Background**

A reciprocating Positive Displacement (PD) pump is ideal for metering out paint in spraying applications. However, if this equipment is not sealed properly paint leakage, low flow, and/or rod and cylinder scoring can occur.



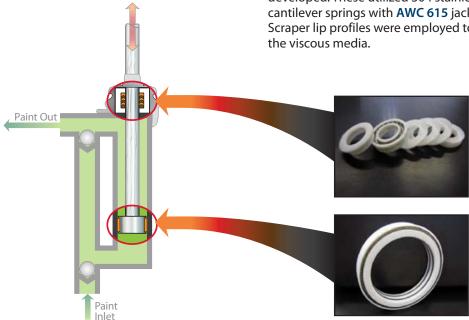
**Solution** 

Chesterton specialists worked closely with an automobile paint shop to design solutions to common problems. Chesterton® Spring Energized Seal 145 Piston Seal and Spring Energized Seal 521 Plunger Seal Stack were developed. These utilized 304 stainless steel cantilever springs with AWC 615 jackets. Scraper lip profiles were employed to handle the viscous media.

### **Results**

#### Increased Seal Life

Validation took place in the customer's paint pumps. Seal life was increased from less than four months to nearly two years. Not only did seals need replaced less often, but performance improved and damage to expensive, critical pump components was reduced.



Chesterton SES 521 Plunger Stack and 145 Piston Seal.



Field validation.

Paint pump cutaway.