



## Powertrain

# Vacuum Generation System for Brake Assist

### *OEM/Vehicle*

Ford Motor Company  
2017 Ford F-150

### *System Supplier*

Dayco Products

### *Material Processor*

MacLean-Fogg, Engineered Plastics Company

### *Material Supplier*

DuPont Automotive

### *Resins*

Delrin 73M30 POM+PTFE  
Minlon 520MP PA6

### *Tooling/Equipment Supplier*

Kald Tool & Die



The open/close valve actuation is accomplished via two complimentary resin systems acting in concert to provide for critical no “stick-slip” and no measurable wear after 2,500,000 hot/cold test cycles. Injection molding allows for very close tolerances of critical details necessary for total system performance. A 40% weight savings and a 25% cost savings over current pump systems was achieved.