

# DuPont Automotive

Innovation Spotlight: DuPont™ Delrin®



PART OF THE 2016 SPE  
AUTOMOTIVE INNOVATION  
AWARDS PROGRAM  
BODY INTERIOR CATEGORY

## Power Head Restraint Drive Nut

### Application

Important safety component that provides rear-impact neck protection for the 2017 Ford Motor Company Lincoln Continental seat system. This seat system was a Grand Award Winner in the 2016 SPE® Automotive, Innovation Awards Competition.

### Unmet Need

Automotive seating engineers are tasked with designing economically viable seat systems that meet increasingly stringent safety requirements and consumer demand for greater comfort, while also reducing overall weight.

### Challenges

- Component must be durable and strong enough to withstand fore/aft motion while maintaining required rearward head impact load stiffness.
- Component must maintain good mechanical properties at the temperature extremes that can occur in automotive interior environments.

### Solution

The award-winning, patented Ford design:

- Meets or exceeds all Federal safety requirements for head impact resistance.
- Establishes a new level of passenger comfort and safety.
- Reduces weight, helping to increase fuel efficiency.
- Enables quick and easy assembly.

### DuPont Material Chosen and Why

DuPont™ Delrin® 100 homopolymer was chosen for this application because it offers:

- Excellent low-temperature impact performance
- Best balance of toughness and stiffness of any polyoxymethylene (POM)
- Consistent and predictable performance in the automotive interior environment
- High mechanical strength and rigidity without the need for fillers/reinforcements or other modifications



**For more information on the Latching Refueling Valve and other SPE award winners and finalists, visit the [SPE Automotive Innovation Awards website](#).**

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