



CASCADE
engineering

shaping ideas in plastics™



SEAT BACK & MAP POCKET



AUTOMOTIVE SOLUTIONS

SEAT BACK & MAP POCKET

Automotive Seating Design

CHALLENGE

Work with an automotive OEM to develop a seat back that reduced weight and cost while maintaining structural integrity. The design called for 30% glass filled polypropylene and required a difficult edge wrap and rib fill.

SOLUTION

Cascade Engineering monitored part development from material analysis through prototyping, tooling, and initial production. The original design materials were replaced with customized polypropylene-based nanocomposites that proved equal in strength, yet lighter weight and less expensive to use. Parts were produced via a unique, high-pressure in-mold process that minimized scrap, prevented foam burnout, and allowed for assembly without adhesives. Cascade Engineering also partnered with a local equipment supplier to launch an automated secondary wrap process that eliminated wrinkles and improved aesthetics.

RESULTS

The development program and production launch was completed in 9 months, resulting in a product that exceeded initial expectations:

- Cost savings of nearly 20% per piece over traditional seat back products
- Use of nanocomposites
- Technological advancements
- Reduced component weight
- Improved dimensional stability
- Improved thermal properties
- Improved impact resistance
- Improved aesthetics
- Assembly simplified

For additional information about this project or other Cascade Engineering case histories, visit our web site at cascadeng.com or call 800.968.2278.

