

Process, Assembly & Enabling Technologies



Hybrid-Composite Bolster with Glass-Mat Reinforcement

OEM/Vehicle

2010MY Ford Motor Co.: Ford® Taurus® Sedan

System Supplier

Magna Exteriors & Interiors

Material Processor

Magna Composites - Lenoir

Material Suppliers

Dow Automotive, Owens Corning & Composite One

Resin

DLFT-PP with Uni-Glass Mat

Tooling/Equipment Supplier

Century Tool & Gage Company



By converting from a pelletized 40%-long-glass thermoplastic (LFT)-PP with metal reinforcement to a 40%-glass direct-LFT PP grade reinforced with 3 layers of 70% unidirectional glass mat (in 0°/90° orientations), this compression-molded front-end module (bolster) offers better airflow, improved serviceability, a 25-30% piece-price reduction, and approximately \$500,000 USD in tooling savings due to component reduction. The final part can withstand severe hood-latch loads of 5,340 N without the need for metal reinforcement.