Integrated Sliding Armrest and Hinge Assembly

Process/Assembly/Enabling Technologies

OEM/Vehicle
Ford Motor Company
2017 Ford EcoSport

System Supplier
Faurecia Interior Systems

Material Processor
M & N Plastics

Material Supplier
BASF Corporation

Resin
Ultramid B3EG6  30% GF PA 6

Tooling/Equipment Supplier
M & N Plastics

Additional console stowage volume with a lid held open to any position (like a laptop screen) is achieved with this single Injection molded upper bin and lid inner using a torque insert to create hinge for the armrest. It includes integrated attachments for a sliding armrest that is interchangeable with a fixed armrest. Using a robotic arm, the torque insert hinge is placed into the cavity of the mold and over-molded with 30% glass-filled nylon 6. Upon mold close, the seal off around the hinge allows for the upper leaf and lower bin to be independently injected at the same time (using sequential valve gating), producing 2 complete assemblies in one press cycle. This eliminates the need for metal hinge systems saving $4.50 and 2 lbs weight per unit.