German Automaker

Achieve Faster Castings with Lower Costs

Premier auto manufacturer saved over 50% in costs and gained flexibility for casting design changes.

Customer Challenge
Automotive manufacturer needed a way to quickly and economically produce complex prototypes.

The Solution
Printed sand parts to form a complete package for creating castings.

ExOne Competitive Advantage
Additive manufacturing offers shorter lead times, accommodates changes in design rapidly and enables product design improvements at a reduced cost.

Conclusion
ExOne’s digital printing process offered significant time and cost advantages over both conventional and other additive technologies for castings.

About ExOne
ExOne digital part materialization uses three-dimensional printing to create complex molds and cores directly from CAD data for a variety of industries, with accuracies of ± 0.011 in. or ± 0.3mm. The ExOne process achieves geometric complexity and scale unmatched using conventional casting techniques. The process produces accurate, uniform cores and molds rapidly, significantly reducing lead times.

ExOne operates facilities across the Americas, Europe and Asia.

Specifications
Part: Formula 1 Transmission Housing
Batch Size: 5 pieces
Material Cast: Aluminum alloy 356
Material Printed: Silica sand with furan binder system
Printed Volume: 200 L for complete mold package

Traditional Method
Patterns and tools for sand core forming, lost foam model parts.
Cost per Lot: 15,000-20,000 €

ExOne® Sand Printing Method
Production Time: 4 hours
Cost per Part: 1,500 €

To learn more, contact: www.exone.com