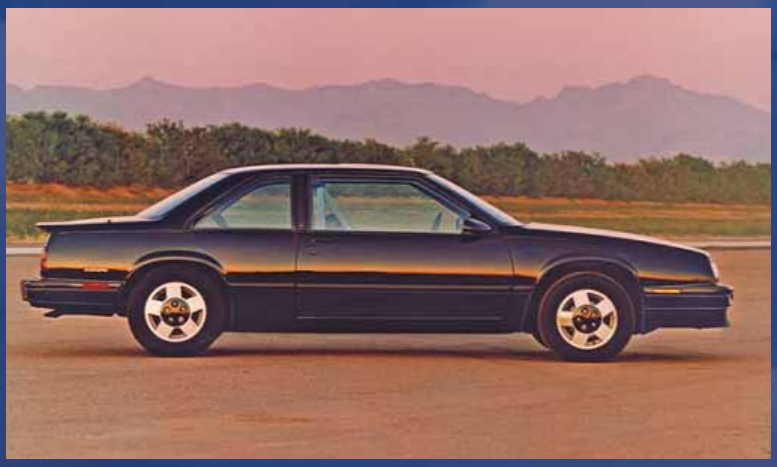
HALL OF FAME

SPE® Honors First Thermoplastic Vertical Body Panel on 1987MY Buick® LeSabre® Sports Coupe as *Hall of Fame* Winner



To be considered for the ***Hall of Fame Award***, a part must have been in continuous service in some form for at least 15 years and preferably have been widely adapted within the automotive or ground-transportation industries. This year's winner meets these qualifications: it is the first use of an engineering thermoplastic on a vertical body panel – the front fenders on the 1987MY Buick® LeSabre® T-Type sports coupe produced by then General Motors Corp (GM) using Noryl GTX® 910 resin, an MPPE/PA copolymer supplied by then GE Plastics (now SABIC Innovative Plastics).

The automaker's success with this application was quickly translated into thermoplastic fenders on the 1987MY Buick Reatta® sports coupe, then other 1988–1995 C&H-platform vehicles, and in GM's 1989–2005 Saturn® passenger vehicles, all of whose exterior vertical body panels were thermoplastic. In fact, over 45 platforms and 20-million vehicles globally have used or currently use this material. Thermoplastic body panels have since been translated beyond automotive to tractors and lawnmowers for home and agricultural use.

The first fenders for the Buick LeSabre T-Type sports coupe were molded at GM's Buick Factory 8 in Flint, Mich. Delta Tooling produced the original injection-molding tooling for this program.

A team at GE worked for more than five years to develop a polymer that would fulfill GM's requirements for a material that was high quality, lightweight, damage and corrosion resistant, and compatible with then current body-build practices and paint systems. GM's own engineering group reviewed, tested, and rejected 160 different materials from 17 resin suppliers before settling on the MPPE/PA grade.

Noryl GTX resin had the thermal stability to endure online priming and painting, allowing the fenders to be assembled to the body-in-white (BIW). Furthermore, the polymer alloy offered low-temperature impact strength, very-good thermal stability, broad chemical resistance, low mold shrinkage, low moisture absorption (vs. nylon alone), and good dimensional stability. The injection-molded parts produced a Class A surface out of the tool, eliminating multiple secondary operations required with steel, SMC, or RIM prior to painting. Making the switch from steel to thermoplastic enabled GM to reduce part weight 40% (4.0 lb/1.8 kg vs. 7.3 lb/3.3 kg in steel) and eliminate denting and corrosion.

Dave Malik, director-Front & Rear Closures, and Henry Brockman, lead engineer, both from General Motors Co., will accept the award.