

Development of the Class-A Carbon Fiber Hood for the 2004 Chevrolet Corvette Z06

Mark Voss* and John Remy
General Motors Corporation

Nancy Pottish
MacLean Vehicle Systems

ABSTRACT

The 2004 Chevrolet Corvette Z06 is the first North American volume production automobile to incorporate carbon fiber as original equipment for a painted exterior panel. The carbon fiber hood, representing a 34 percent weight savings, is produced using modified aerospace-type prepregs and a streamlined autoclave process, and is primed, painted, and assembled along with traditional fiberglass hoods. This paper discusses the progression of development of this large, highly visible part, including structural analysis and validation testing, materials qualification, and manufacturing challenges.