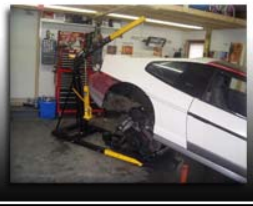

Tech Articles

Another First for Fiero...

by Gary Amundsen

Although the 1984 Fiero won many awards for its design and innovative use of materials (such as the magnesium engine vent panel, which was eliminated on 1985 Fiero models), the Fiero continued to debut engineering advancements as late as the1988 model. What little-known "first" did the Fiero feature for 1988?

The newly designed suspension, while a definite improvement, borrowed elements from many existing suspension configurations and could not be considered an engineering "first". The innovative speed-sensitive power-assist steering certainly could have qualified, but was never made available to the public on the 1988 Fiero. (Every Fiero assembled with the speed-sensitive steering was stripped of the power-assist unit before being released for sale. While some reports say the cancellation of the Fiero left no reason to spend the money to produce the steering unit, other reports blame the excessive noise made by the unit for its omission from the 1988 Fiero.) *[Ed. that steering system did live on. Lotus perfected it and it now resides in their flagship Turbo Esprit S4s. Another benefit of G.M.'s past ownership of Lotus. Yes, that is a Camaro airbag steering wheel in the Esprit!]*

But the 1988 Fiero did feature the first automotive use of nickel coated graphite fiber (NCG) as a shield against electromagnetic and radio frequency interference (EMI and RFI). The chopped NCG fibers were supplied as a non-woven mat resembling fiberglass. The three main horizontal plastic panels (hood, front roof section, and rear deck lid) of all Fieros are made of fiberglass/polyester sheet molding compound (SMC). The 1988 Fiero added a layer of the NCG matting to the uncured SMC for the rear deck lid only. During the molding process, the heat and pressure bonded the NCG and SMC together. No additional assembly was required.

Make no mistake about it-, Pontiac Motors made this change in order to eliminate the metal plate shield previously used, as well as the fasteners and factory labor used to install the shield. But the effect on the Fiero was entirely positive. The shielding properties of parts made with nickel-coated graphite fibers do not diminish over time. The fibers do not affect the structural integrity of the sheet molding compound, and may increase mechanical properties (things engineers call IZOD strength and notch resistance).

Reference: MACHINE DESIGN magazine, May 12,1988 issue.