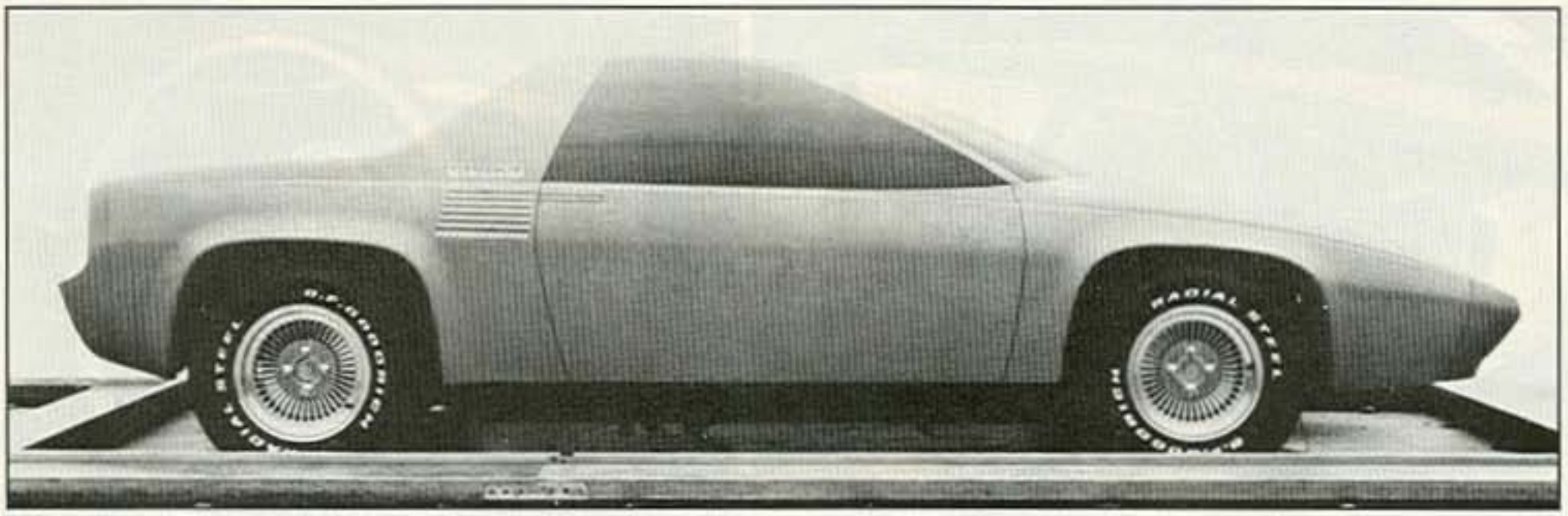
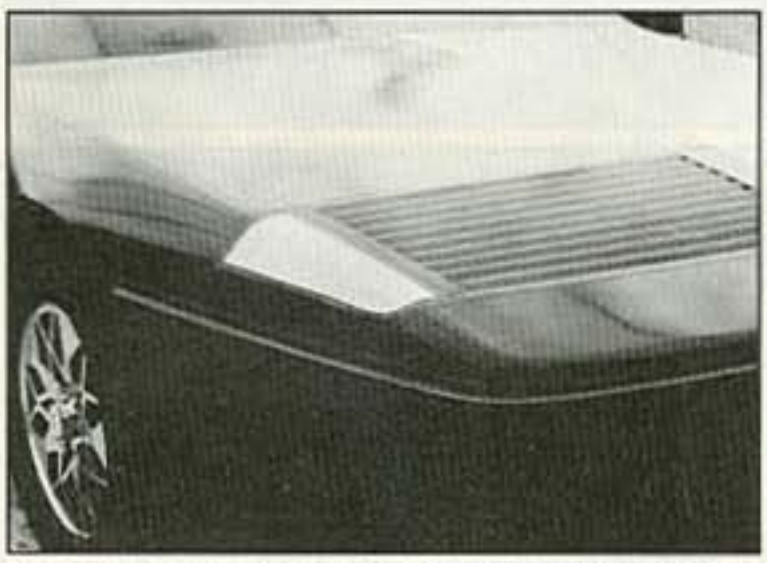
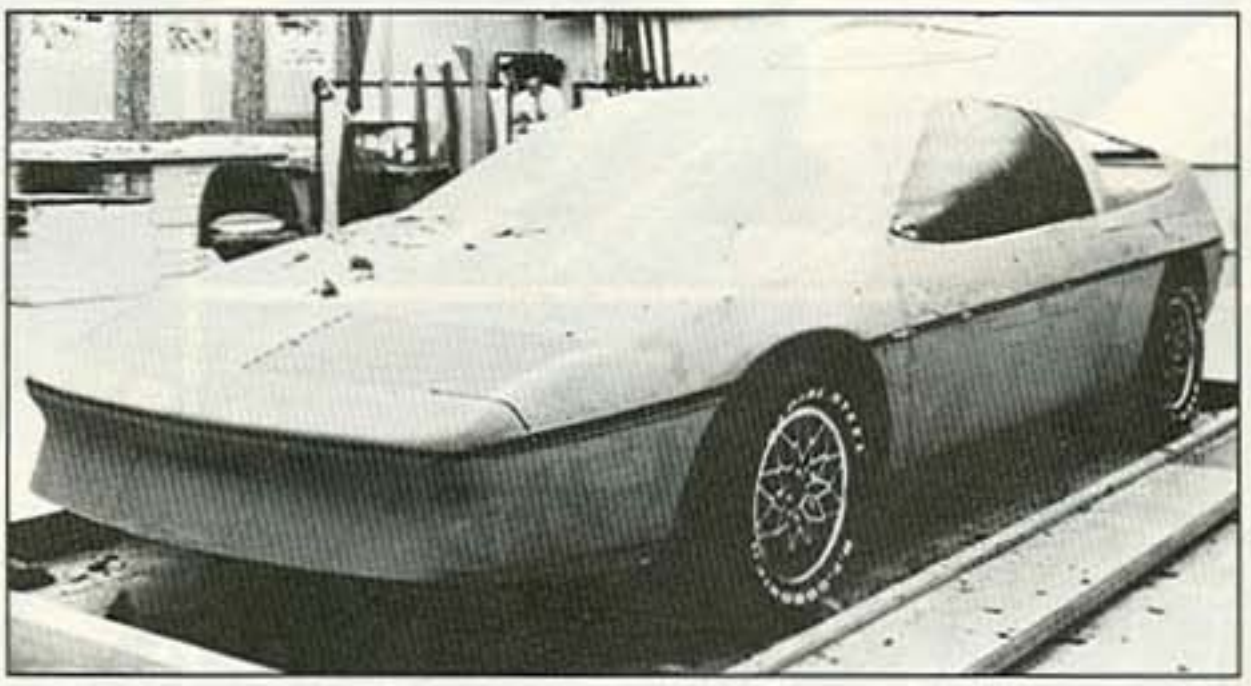
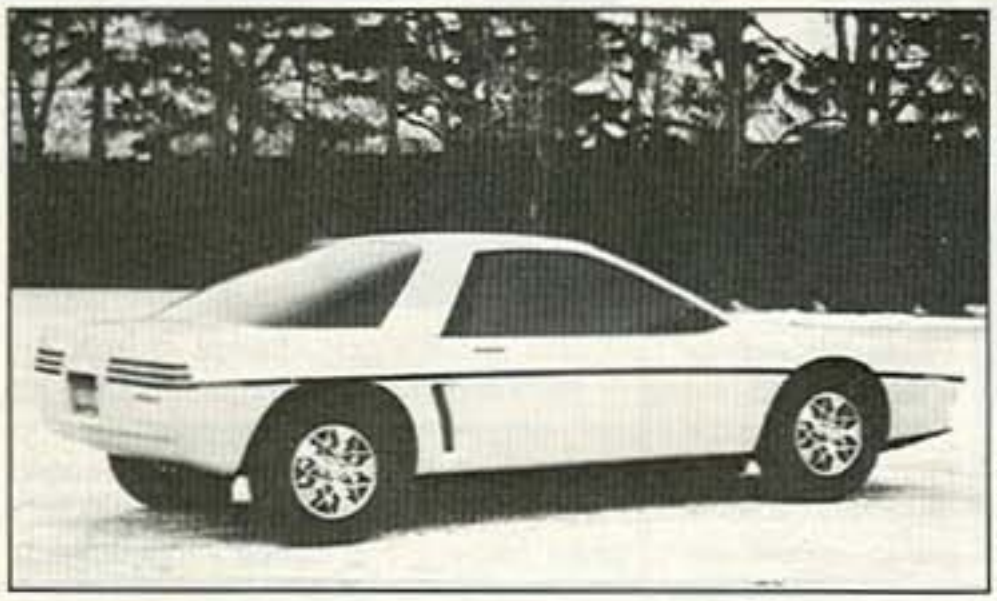


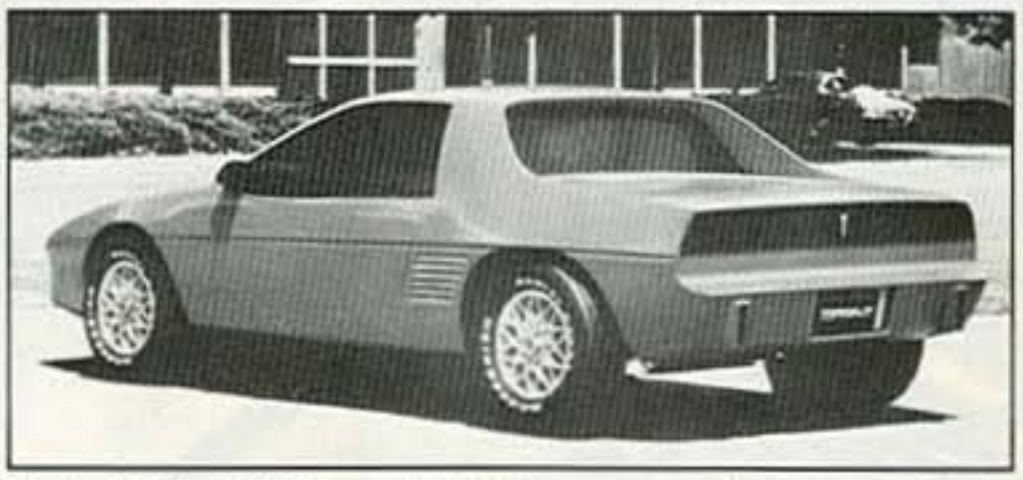
Feat of clay: Advanced Design Three's full-size clay model of the mid-engine P-car project in one of its earliest developmental stages.





At one point, Advanced Three considered wraparound parking and turn-signal lamps (above), hood-located air intakes, and a flying-buttress rear end (right).





The bubble back (left) was desirable from an aerodynamic standpoint but too expensive. Another Advanced Design study (above) sported windowless B-pillars and a heavy cut line around the car's middle.

Fiero project from Pontiac's Advanced Vehicle Concepts group, the drivetrain and suspension configurations, and consequently the width, had already been established. Seating was also worked out, since the engineering group had decided to house the fuel tank and the service lines in a central tunnel.

Three critical design issues remained to be addressed. First, should the Fiero have a fastback or a notchback? Although some sleek fastback designs were considered, Hill's group was forced by cost and weight constraints to go with a notchback, the most practical design for exhausting engine heat away from the passenger compartment.

Second, Pontiac's new "spaceframe" underbody construction technique necessitated cut-lines between the car's main body panels. Instead of trying to make the Fiero appear seamless, Advanced Three carefully incorporated the cuts of the deck lids and doors into the overall design.

A third problem sprang from engineering's plan to use two different materials in place of sheetmetal: reaction-injection-molded urethane (RIM) on the car's upper half, and thermoplastic olefin (TPO) on the bottom. (The production car actually makes use of *four* different plastics: RIM, TPO, sheet molding compound, and reinforced reaction-injection-molded urethane.) Advanced Three avoided a potentially sloppy meeting of the plastics by carving a deep crease around the car's middle to divide the RIM panels from the TPO panels neatly and decisively. Later in the program, the mix of materials changed, and the crease was toned down with a black rub strip.

According to Hill, a consensus on the Fiero shape was reached quickly. Instead of the usual proliferation of scale models, just one was made and sent to