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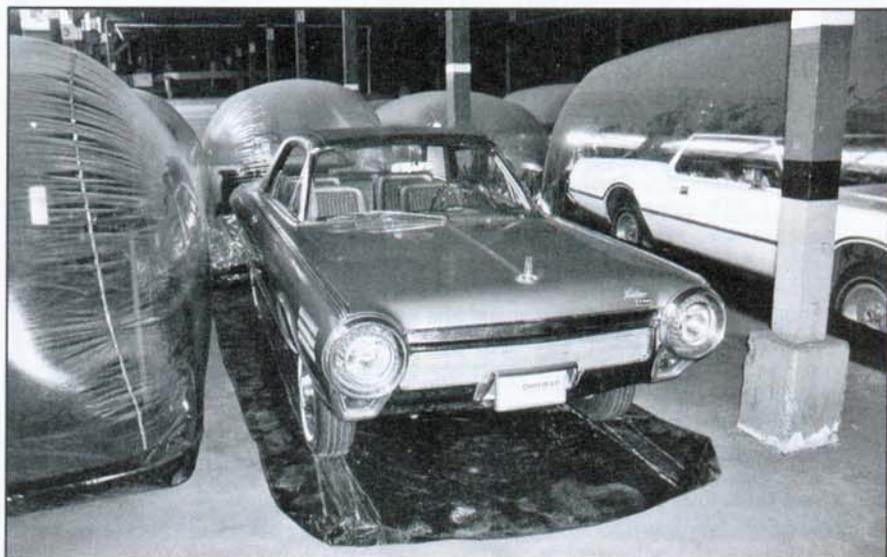
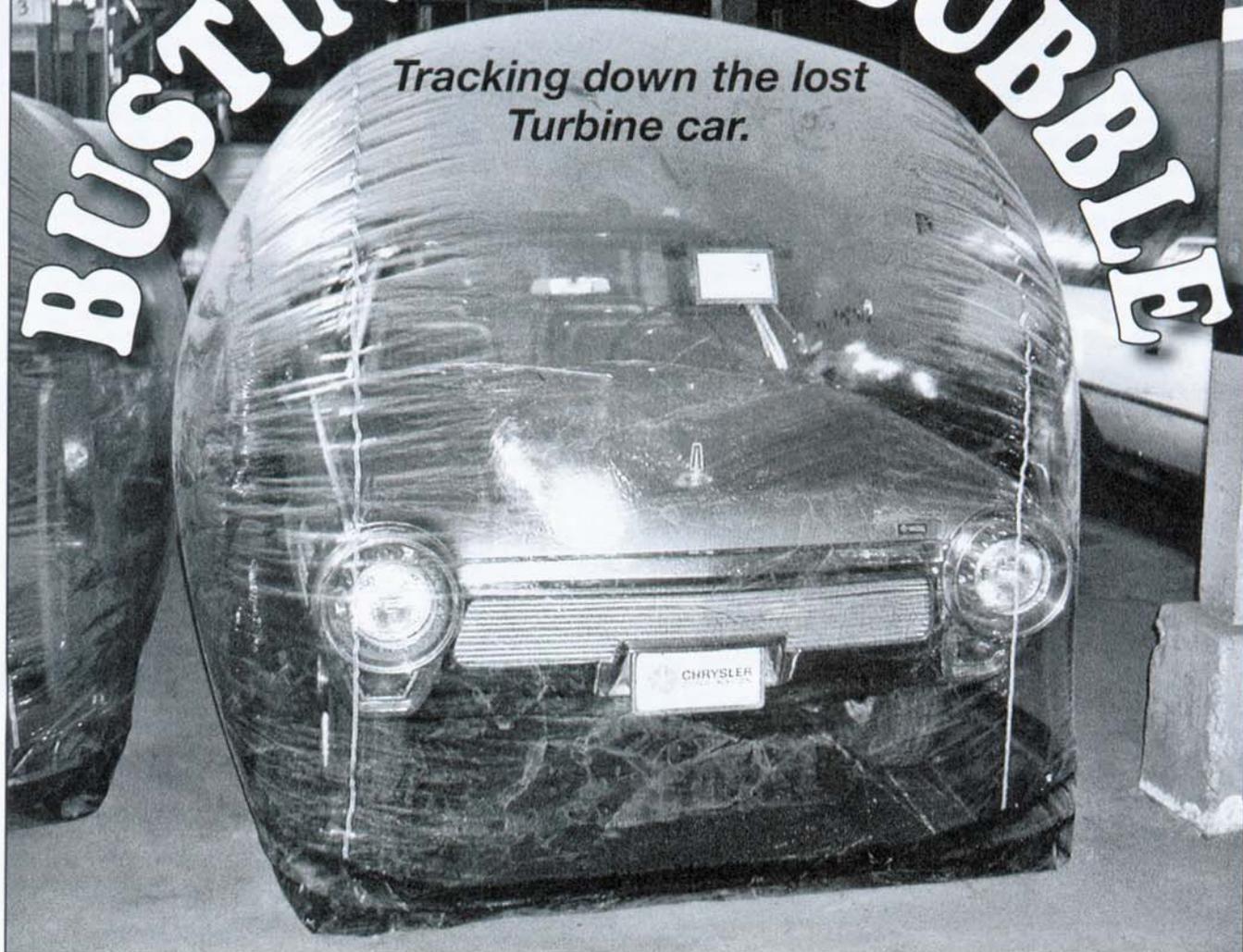
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LOST & FOUND DEPT

BUSTING THE BUBBIE

Tracking down the lost
Turbine car.



Sealed in a bubble, eh? Lessee, I'll just take my trusty little penknife...

By Steve Lehto

Photos by Steve and Rick Lehto

In the early 1960s, Chrysler developed an experimental car that almost turned the automotive world upside down.

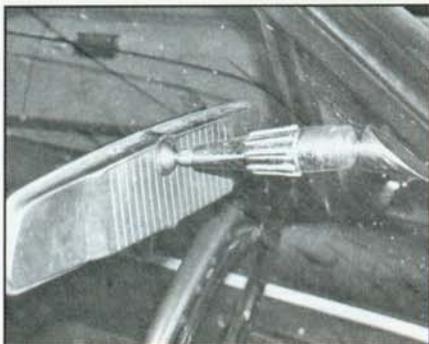
They built a turbine car—think “jet engine”—that was so practical they even built a fleet of them and let regular consumers use them. That fleet of users placed more than 1.1 million miles on the cars and showed that—although the cars needed a bit of refinement—Chrysler’s turbine cars were within a stone’s throw of viability. The program also managed to get the turbine cars into the public eye: 46 cars were loaned to 203 different families—in the lower 48 states—over a two-year period. Another traveled the world and visited 21 countries on five continents. Meanwhile, more than 18 million people saw two of the cars at the



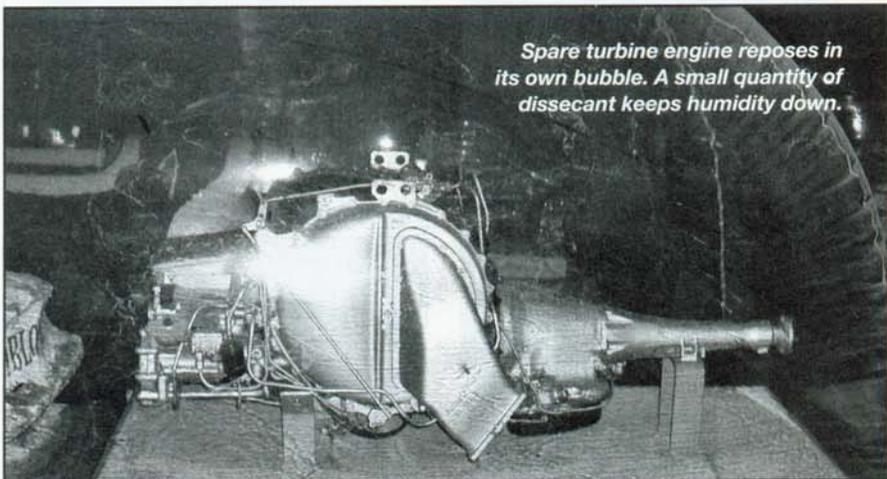
Finned theme, used throughout the car is evident on the front of the console. Even the dust particles have a finned shape.



Finned rear console houses only an ash-tray that appears to hold at least a couple of cartons worth of butts.



Even the rear-view mirror bracket is finned.



Spare turbine engine reposes in its own bubble. A small quantity of dissecant keeps humidity down.



After wracking their brains for weeks, Chrysler's creative geniuses came up with a real catchy name for the car. What did you expect—300T?

1964-'65 World's Fair in New York. It is not hard to find someone who saw one of these cars. For a brief span, they seemed to be everywhere. They were unique in appearance, both for their shape and color—all of the cars were Chrysler "Turbine Bronze."

For how ubiquitous the cars were, they are

quite rare today. Why? Chrysler destroyed 46 of the 55 Chrysler turbine cars after the user program ended. Various reasons have been given, including a sticky tax bill the feds wanted paid for importing the hand-made Ghia bodies from Italy. Nowadays, people who worked on the program are more likely to say the cars were destroyed like any other prototype cars. The Big Three don't like their experiments falling into public hands when the show is over. So, before the cars were sent to the scrap yard, they offered them to museums and kept three for themselves. Six museums accepted the offer.

It's not difficult to track some of the cars down, or even see one. Chrysler has one in the lobby of its museum in Auburn Hills, Michigan. But a little more research shows that one of the cars is "lost." Actually, researchers know where it is, but it hasn't been shown publicly in over ten years. That car is serial number 991225. Car 25, as it

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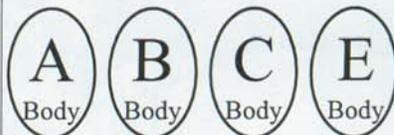
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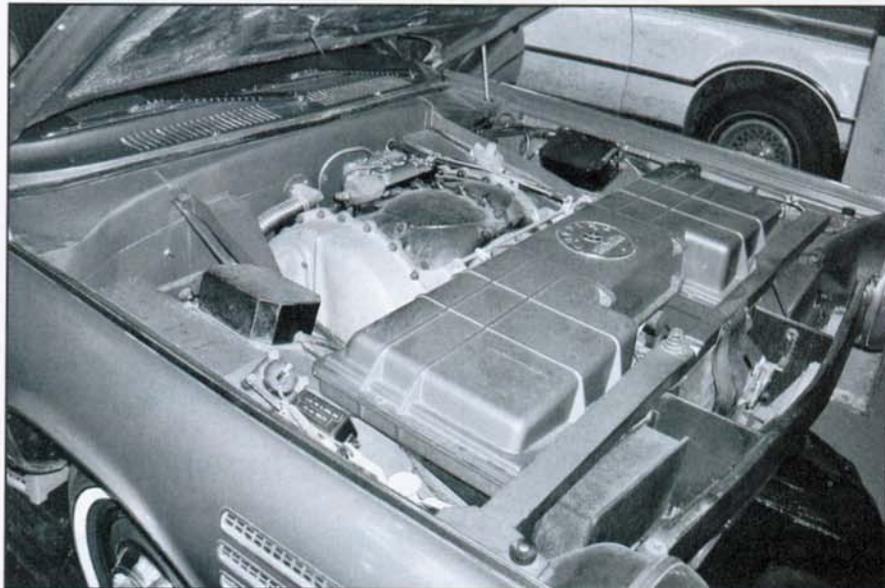
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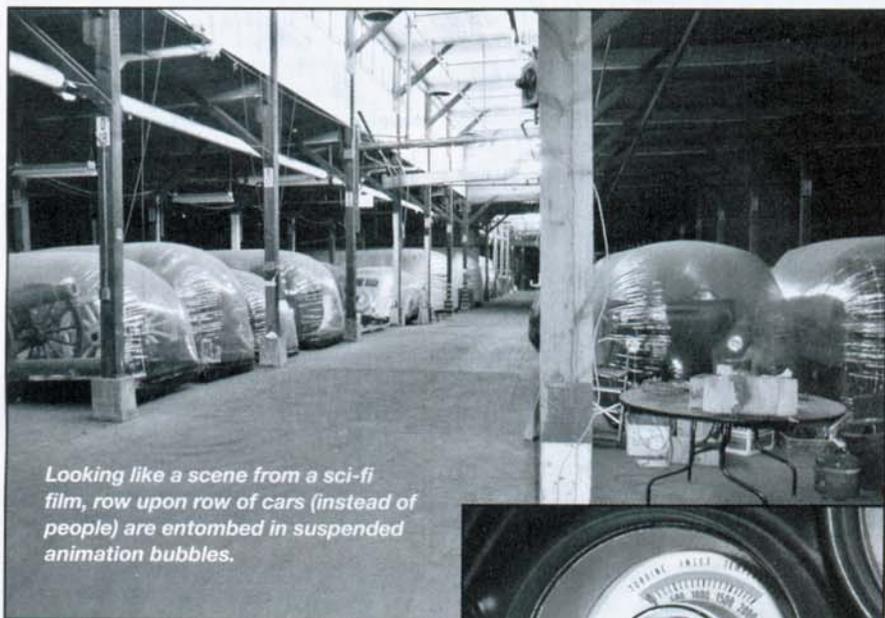
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BUSTING THE BUBBLE



The huge twin air cleaners that also served to muffle intake noise take up literally half the engine compartment.



Looking like a scene from a sci-fi film, row upon row of cars (instead of people) are entombed in suspended animation bubbles.

was known by the Chrysler turbine engineers, was donated to the Detroit Historical Museum (DHM) in January 1967. The paperwork accompanying the car described it as "1-Automobile: Chrysler Corporation turbine car, 1964; experimental..." Its listed value was \$10,000 and it came with a spare crated engine valued at \$5,000. Car 25, like its 54 siblings, was never officially named by Chrysler. Although they had toyed with the idea of calling the car the "Typhoon," Chrysler eventually badged the car the "Turbine" and left it at that.

On a sunny February afternoon in 2005, car 25 sat inside a nondescript warehouse within eyesight of the Detroit River. To average passers-by, the building looks like any other in a warehouse district. Many nearby are missing windows with caved-in roofs; at

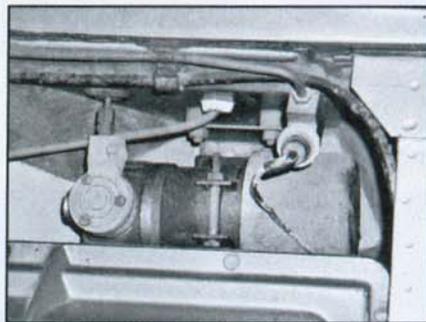


The left pod of the instrument cluster shows a gauge for turbine inlet temperature.

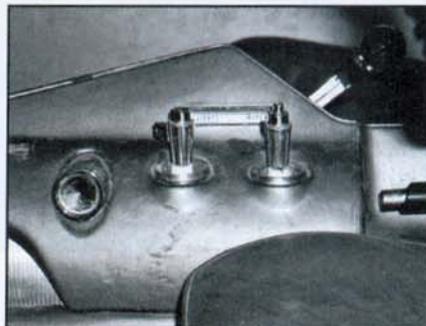
least this building is intact. Several locked doors and a couple of long hallways later, there is a hangar-like cavernous area. Tall ceilings cover a vast floor space, filled with cars in bubbles. The DHM has a large car collection, but not the funding to show it. So, for the time being, the cars—all of them except for a few out on loan to other



One of the engine's two regenerators recirculated the exhaust back into the combustion cycle to lower exhaust temps. The big black box to the right is the reset box. If the engine didn't start properly, you had to pop the hood, and open this box to reset the controls.



The air-assisted brakes used this compressor. The air tank was located under the fender.



Switches for the lights and wiper were located on the console.

museums—sit in a weird style of suspended animation, in their little bubbles. Turbine Car 25 sits among them.

After deflating and peeling the bubble back, the car is amazing to see. For the most part, the other surviving turbine cars are not as accessible as this. Chrysler Museum's is up on a tower; many others are in museums behind ropes. Car 25 was accessible. The hood was raised; the trunk was popped. The doors opened and the seats beckoned. It wasn't hard to imagine turning the key and getting the turbine to whine.

Car 25 wears a coating of dust. Before the bubbles were installed, the cars in the ware-

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BUSTING THE BUBBLE

(Continued from page 48)

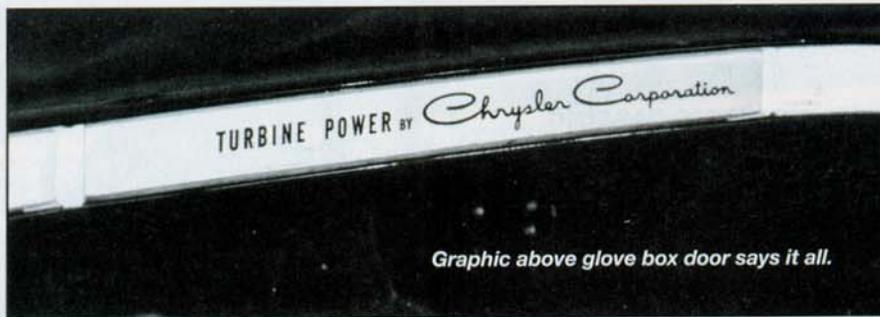
house were exposed to the elements in the drafty building. Even the inside of the car has a light coat of dust. It would only take a bit of wiping with a cloth to remove but the dust adds character. After all, this car was driven 46,000 miles. The body is pristine. The only damage is a slight chip in the Turbine Bronze paint on the deck lid. The damage was there when the car was donated to the museum. The receipt for the car describes the "almost unnoticeable" flaw on the trunk lid.

Other than light dust on the interior, the inside of Car 25 is clean for such an old car with 46,000 miles of use by different drivers. Running down the middle of the car is perhaps the world's most advanced ashtray. An aluminum column that houses the shifter and a few controls in the front, the device is finned between the rear seats. Although many people mistakenly thought the tunnel housed the transmission or exhaust from the turbine, it holds nothing more than a rear seat ashtray. The use of fins throughout the car is quite striking and memorable—even the bar that connects the rearview mirror to the windshield is finned.

The instrument cluster is a reminder of the unique engine. The speedometer is flanked by gauges that could only accompany a jet engine. The tachometer reaches 60,000 rpm (although the engine was not designed to exceed 44,600 rpm) and the temperature gauge reads in the thousands of degrees rather than hundreds: its sending unit is at the turbine inlet by the combustor. There, temperatures hovered in the 1,800-degree range. A plaque above the glove box reads: "Turbine Power by Chrysler Corporation."

The key is not in the switch, which matters little since this car is incapable of driving. Chrysler removed internal parts from the engines of the museum cars intended for static displays. The crate engine was likewise disabled at delivery, although Chrysler gave the museum an operable crate engine a few years later. The missing key raises an interesting point, however. To make things easier for the technicians on these cars, all 55 used the same key pattern. The key from car 1 would work in car 55 and vice versa. Because the cars were dispersed nationally, the odds of the car keys' similarity never became a problem for the users.

Under the hood is the real story of car 25. Immediately behind the grille are two huge air cleaners which also served to quiet the intake of the turbine engine. Turbines swallow massive amounts of air and the housings for the intakes on this engine are larger than some modern-day engines. Between the intakes is an oil cooler for the unique hydraulics of the car. The car used no typical engine oil: it merely had an extra-deep transmission pan and the tranny fluid was used for the transmission, turbine bearings and the power steering on the car. Technically, the cars never needed oil changes, and rarely needed fluid changes.



Graphic above glove box door says it all.

Engine Facts

The engine in the Ghia Turbine Car was the "4th Generation" Chrysler Turbine. The 1st Generation had been successfully placed in a car in late 1953. The 7th Generation was the endpoint, in the 1970s.

Engine Weight: 410 lbs.

Idle Speed: 22,000 rpm.

Maximum RPM: 44,600 rpm.

Rated Horsepower: 130 bhp.

Rated Torque: 425 lb.-ft. at zero rpm output shaft speed.

1st Stage Inlet Temperature: 1,700°f.

Exhaust Temperature at Idle: 180°f.

Fuels: Any flammable liquid.

Recommended: unleaded gasoline, kerosene, JP-4 jet fuel, diesel. Also capable of running on vegetable oil, peanut oil, cognac, Chanel #5, methanol, tequila...

Inside the engine compartment sits an odd object. A black turbine housing is flanked by two aluminum regenerators. The turbine lacks the plumbing and carburetion of a typical engine and looks quite unlike any typical automotive powerplant—or a jet engine, for that matter. Although the concept of this turbine engine is similar to the ones we see on aircraft, the gas generator and power turbines are tucked so nicely into the package that most people could not have guessed what this engine does. Of course, when this engine ran, it *sounded* like a jet engine.

Perhaps most remarkably, the turbine engine in this car ran on a plethora of fuels. Besides the recommended (but hard to find in the '60s) unleaded gasoline, it easily burned diesel fuel, kerosene, peanut oil, tequila, cognac and the much advertised perfume Chanel #5. Recognizing the public relations value of such novelty, Chrysler often demonstrated the car being operated on these bizarre liquids. The president of Mexico got to drive one on tequila. A few years later, Chrysler demonstrated a turbine to then-President Jimmy Carter running on—what else?—peanut oil. Car 25 probably never ran on anything that wasn't pumped at a gas station, but you never know.

The tail end of the car is quite memorable as well. It sweeps back in the corners as if it is winged, and has faux rocket exhausts,

just for the fun of it. Inside the trunk it holds two batteries. The high revving starter motor needed a bit more juice than one battery could furnish and the cabling between them is complex and heavy. In fact, some of the tricky set-up of this car has nothing to do with the unusual engine. For another example, the car has air-assisted hydraulic drum brakes. Since the engine creates no vacuum, so a typical power brake booster was out of the question, so Kelsey Hayes made a small enough air compressor/tank set-up to be tucked under the driver's side fender of the Chrysler Turbine Car. On the dashboard is a small reminder: a red warning light labeled "BRAKE PRESSURE" that warned when the air supply was low or depleted.

Underneath the car sits a TorqueFlite transmission missing its torque converter. Chrysler had discovered that the most foolproof way of putting the turbine power to the wheels was through a simple automatic transmission. Because the turbine itself had no solid connection between its gas generator and its power turbine, the engine would act as its own torque converter. A driver could sit at a stop light and hold the brake to the floor. The first stage merely blew its hot gases over the second stage which was being held in place by the brakes and the TorqueFlite was no worse for the wear.

In fact, brake torque was the best way to get the turbine cars to accelerate quickly. Some users complained of sluggish performance caused by the lag in the jet engine when the gas pedal was stomped on. A savvy user, stomping on the brake and gas pedal simultaneously could launch a Chrysler turbine car into a rather quick start, not unlike a commercial airliner pilot faced with a short runway. Chrysler even demonstrated such a start for the automotive press in California when some had criticized the car for being slow. A Chrysler driver in a turbine car blew away a car with a V-8.

Likewise, under the car is a special exhaust setup. All the air that came in the front end had to go somewhere and it was piped out the rear through dual exhausts that look like heat ducts. Contrary to popular belief, however, the exhaust of the Chrysler Turbine Car was cooler than the exhaust from a contemporary piston-engined car. Chrysler's turbine engine recirculated much of its heat back through regenerators into the combustion process. This made the engines more efficient and the exhaust cooler. Then, the exhaust pipes were made from metals designed to dissipate the heat further.

Chrysler Turbine Car Facts

The Chrysler Turbine Car seen here is the "Ghia" car—body hand-made by Ghia and designed by Elwood Engel. 55 were built; 46 were destroyed. Three are owned by Chrysler, 5 are in public museums, one is privately owned.

Chrysler built a total of 77 different turbine cars, including a show car called the Turboflite. They placed turbine engines in everything from a 1954 Plymouth Belvedere, a 1960 two-and-a-half ton truck, a 1962 Dodge Dart, a 1967 Dodge Coronet, and a variety of other experimental cars.

One of the Ghia turbine cars co-starred in "(Life With) The Lively Set" with James Darren (1964). The film credited "Chrysler Corporation's New Gas Turbine Car," as if it was an actor.

Almost everything associated with the car was made in the same "Turbine Bronze" as the car (although the car that appeared in the "Lively Set" was delivered to Chrysler in white paint). The interior of the car, along with the User's Guide and many of the pamphlets and advertisements, were likewise Turbine Bronze.

Chrysler commissioned a model car (1/25th scale) which was used as a promotion. They were given away by Chrysler and Chrysler dealers during the program.

When Chrysler announced it would lend the cars to members of the public, they received more than 30,000 requests for the car. 203 people were chosen from that group. The average user drove the car for 3 months and 5,500 miles.

Chrysler was known to have its people stand by the exhaust with their hands by the tailpipe to show how cool it was.

After being sat in, inspected, photographed and ogled, Chrysler Turbine Car 25 was closed back up and re-sealed into its bubble. The walk from the car passed the display engine—also in a bubble—and a few other odd cars. There sat the first Pacer off the assembly line, not far from a Scripps-Booth racer from the teens. Too many to list or visit, all were in their bubbles. All waited to see the light of day. Sadly, Detroit has little extra funding, and the Detroit Historical Museum's budget has been cut so many times the few who work there are just happy to have jobs. At least Car 25 is protected from the elements and properly stored. The photos prove that. Perhaps we'll check back in with Car 25 in another decade to make sure it's still alive—and so are we. ★

Steve Lehto has written a history of the Chrysler Turbine Car, which has been published by Tarheel Press. See www.tarheelpress.com

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