

The Forward Look

They joked about putting it on with a trowel. Each year the chrome was getting thicker, wider, more detailed. It was becoming more body part than highlight, as it stretched from nose to tail, roof to roll pan.

The rear quarter panels aped vertical stabilizers and delta wings. The headlight surrounds, jet air intakes, the taillights, rocket exhaust. But it was all cosmetic. The body proportions were still high, occasionally wide, and often, more remarkable than handsome. But as GM's design staff moved into their new architecturally modernist design center in Warren Michigan outside Detroit, they were at the top of their game. And the public seemed to love it. It was all a vision of the future from the nineteen fifties. Then, suddenly, over at Chrysler it was 1960.

I

Suddenly it's 1960 was Chrysler's ad campaign slogan of 1957. From GM and Ford's perspective Chrysler had indeed jumped three years ahead in styling. This was a dramatic turn-around for the Highland Park company. The standing joke in Detroit was, 'Leave a Ford and a Chevy in the same garage overnight, and nine months later you get a Plymouth'. It was designer Virgil Exner sr whose 'Forward Look' design system had changed derision into begrudging admiration, and emulation.

Exner, like so many of his peers in Detroit had come through GM's design system. Hired by Earl in 1933, Exner became Chief of the newly establish Pontiac design studio in 1936. His designs were marked by distinctive, well pro-

portioned shapes, and futuristic detail. He was then hired by the great industrial designer Raymond Loewy in 1938, as a member of the firm's newly established automotive design group.

Nine years later, Exner's rather conspiratorial part in the development of the post war Studebackers, led to his dismissal from Loewy, and hiring as Studebacker's first in-house Director of design. The impact of the '47 Studebaker, on its competitors and the market, placed Exner at the forefront of American design. In 1949 Chrysler decided to bring him on board as their first Director of design. Much like Harley Earl's entry into GM in the thirties, Exner had to fight the established structure of body engineers for control of design. He was well supported in this effort, because he had been personally hired by Chrysler's CEO K. T. Keller. Under the banner of the Forward Look Exner transformed the staid Highland Park operation into an advanced lab for automotive design. And shook things up in Detroit.

The term car guy, in the industry, has come to mean someone who is an enthusiast, destined to fight the good fight with marketing and accounting. It is a term of respect given those rare individuals whose automotive vision produces the cars that excite the public, as well as marketing and accounting. Exner was such a guy. He envisioned the car as a whole design. A cohesive unit of purposefully shaped sheet metal, stretched over capable engineering.

Chrysler's engineering was good. Had been from the time Walter P. built the company on the high-compression six. Following the war Chrysler developed its first V8, it was ready for market in 1951. Highland Park's engineers had taken a radical direction for the engine's design. The target was performance. Taking a page from the super-charged racing engines of the thirties, the engineers designed the new V8 with hemispherical combustion

chambers to greatly increase airflow and power. The engine was initially released with 331 Cubic inch displacement, producing 180 horsepower. This was advanced engineering, and a harbinger of things to come from Chrysler.

As the hemi was reaching completion, Exner was organizing his advanced design department. One of the first projects undertaken was to create a show car for the engine's introduction. It was a car design that was to take a most interesting road to the American auto shows, via Italy.

Under the Marshall Plan for the rebuilding of a war devastated Europe, Chrysler had been asked to assist in the rebuilding of Fiat's production operation. Getting a good look at the Italian auto industry, Chrysler gained an appreciation for the relationship between the Carrozzerias, which designed and built the bodies and the interiors, and the manufacturers, who engineered and built the rolling chassis. Under Exner's direction, Chrysler's Advance Design looked to develop an association with Pinin Farina for the development of their new prototype. When Pinin's heavy workload prevented this, Chrysler was approached by Carrozzeria Ghia. This relationship resulted in some of the most dynamic custom cars, and one-off show cars designed by an American manufacturer during the early fifties.

II

Beginning in 1950 Exner and his new design team Cliff Voss, Maury Baldwin, and consultant Paul Farago, set about establishing a relationship with Carrozzeria Ghia in Turin. Ghia had been around since 1915. Before the war they had designed and built a number of cars for the locals, Fiat, Lancia and Alfa Romeo. The Allied bombing of Turin's industrial centers didn't do Ghia any favors; it

was reduced to rubble in '43. The loss of all he had built proved to be too much for its founder Giacinto Ghia. During the factory's reconstruction in 1944, Ghia collapsed and died of heart failure at the construction site. The company management was taken over by Giorgio Alberti and Felice Mario Boano. Boano had apprenticed with Stabilimenti Farina and then moved on to Pinin Farina. He then started his own scoccheria. A scoccheria gives an interesting insight into how the Italian coachbuilders operated. These companies are industrial carpenter operations that construct the wooden bucks over which the aluminum panels of the cars were hammered out. This method allows the Italians to produce a number of custom body designs, without incurring the cost of producing model specific body panel presses, like those used in Detroit for series production. This flexibility of creating prototypes of production car quality was to provide Exner and his team with a platform for experimentation of shape and construction, while producing a number of their designs in limited series. Chrysler suddenly found itself in the promotionally valuable position of building limited production custom cars.

The first car the team built was the K-310. Built on Chrysler's 125.5 wheelbase chassis, with the new Hemi V8, this car embodied Exner's modern vision, combined with the elegance of Italian craftsmanship. One of the clear statements the design made was Exner's philosophy that "The wheel is one of mankind's greatest inventions. Why attempt to hide it?"

Exner's comment exhibited an observation, and criticism, of the direction car design had taken during the forties and early fifties. The advanced car designs of the late thirties began combining the fenders and the bodies in stylish sweeping art deco lines. As the war wound down, in the States body designers had become infatuated with airplane designs. The first step in this direction were not

the fins and propeller noses so well remembered, but a design theme called monocoque. This had not to do with the sixties racing chassis designs that segued the tube frame, but rather a body that emulated the monolithic design of an airplane's fuselage. These were large, rounded designs that sought to integrate the once individual elements of body design, fenders, grill, hood, into an airplane fuselage whole. An early example of this design is the 1949 Packard Super Eight Victoria, designed in 1942 by John Rienhardt. GM's version was Frank Hershey's Cadillac "C.O.". The monocoque was a design direction that passed quickly, taking some of the smaller car companies with it. Ironically GM and Ford didn't end up releasing any cars in this style, though they had many designs on paper, because of the monumental task of retooling their factory from war material production back over to car production. By the time the factories were ready to go, they had designs that had moved beyond this short-lived trend to more modern design. Many of these post war designs still echoed the thirties statement of desire, 'high, wide and handsome'. The American car during the late twenties and thirties had indeed grown to a rather grand scale. The running board was no design affectation, but a required step up into the interior. Even as the fenders were united with the body on these post war designs, the cars, with rare exception, were grand in scale, and their exterior metal work bore little relation to the mechanicals or interior beneath. Fenders, like their predecessors, were often lower than the hood, which traditionally housed the high and long straight-eight's of the thirties. The high, long hood that had become the subliminal message of power continued after the war. The Europeans took a radically different, if obvious, approach, exemplified by Pinin Farina's groundbreaking Cisitalia 202 of 1949. Here was a design that addressed a subtler, if not more realistic, approach to performance. Rather than proclaiming the

power beneath the large and ascendant hood, the entire front end was reduced for more effective penetration of the air stream. Simple stated, the fenders were above the hood line. The entire design followed a spare, muscular theme, than seemed to stretch the sheet metal closely over the mechanicals. Coming out of the war, this signaled a dramatic design change, and one that presaged post war car design as a whole.

With the K-310 Exner was exhibiting an appreciation of this new direction, and his deep understanding of how skillfully it could be adapted to a large American chassis. When compared to the current Chrysler products that shared this chassis, the K-310 was a revelation. With the wheels as the design's anchor, the fenders, both front and rear, rose in a radius reflecting the perfectly circular wheel wells, and swept back in an contemporary echo of the aerodynamic studies of Jean Andreau, that were so often the basis of the pre-war French design movement. The volumes here are remarkable; the hood and the fenders are on the same level. The rounded fluidity of the cockpit, with highly raked windshield and fastback rear glass, swings down at its sides below the belt line, further defining a low line, aero-swept body style. The trunk line descends below the rear fender line, into an almost tear drop profile. To keep the sweep of the front fender line completely clean, the headlights are place on the fascia, next to the grill. A nod was given the American taste of custom detail with the spare tire metal shape of the truck lid, and the free standing microphone taillights. Two versions were made. The convertible being less successful as an advanced design study. With conservative modification the coupe design was to live on in the Mullner bodied Bentley Continental.

Initially fifty K-310s were contracted by Chrysler to be sold at the princely sum of \$20 thousand dollars, but the recession caused by the Korean War saw only a handful

produced. The car's real significance was the sea-change it signaled at Chrysler.

The next car to come from this American Italian collaboration was the Chrysler Ghia specials of 1953. A fine example of this series is the Thomas Special. The motivating force behind the creation of this exercise was C. B. Thomas, who was then export director of Chrysler. The design was once again based on the 125.5in wheelbase chassis used for all Chryslers, except the Imperial. The design of the Thomas Special advanced Chrysler design into characteristically unique territory. The car produced had the muscular look of a Ferrari Berlinetta, and the lines of a car headed directly for a Concours. Once again it portrayed another Exner design tenet, that you couldn't take a European design and scale it up to American size, or effectively reduce an American design to European dimensions. The Thomas Special was an effective portrayal of a high performance coupe, with taut graceful lines that defined this international relationship. About 18 cars were built.

'53 was a fertile year for the Ghia Exner Chrysler relationship. Simultaneously with the Thomas Special, this international team produced the Chrysler d'Elegance, the Desoto Adventurer I and Dodge Firearrow Roadster. This was a dramatic out-pouring of finished design studies. It went a long way to cementing Exner's position inside Chrysler as director of design. In '54 The Ghia-Exner collaboration released the second Firearrow Roadster, the Firearrow Sport Coupe, then incredibly the third Firearrow Roaster. As implied earlier, these were not static display show cars, but runners; and serious runners at that. With the ever increasing power of the Hemi, and mated to the new Power Flight automatic transmission, the Firearrow Sport Coupe was timed at 143.44 miles an hour on the Chrysler proving grounds. This was a clean, distinctive well proportioned design, whose crisp peeked,

unchromed fenders made one unified shape from front to back, and produced highlights all the chrome of GM could only dream of.

Being able to produce this series of prototype cars in the Italian method, allowed Exner and his team of to quickly explore contemporary shape and volume. From the pages of the magazines, and the American and European autoshow displays, it was becoming obvious an automotive future was being defined at Chrysler. What that future held for the public at large, had yet to be defined. But soon would be.

III.

Impressed by Exner's prodigious creative talents, Keller promoted Exner to Director of Styling on the heels of Ford's pushing Chrysler back to number three in American sales volume. His mandate was simple, to completely revamp the Chrysler line-up for 1955. From the numerous concept cars of '53, and Chrysler's publicity in support of them, it was expected that the Ghia cars presaged Chrysler's new line-up; but a funny thing happened on the way to the body presses in Detroit.

All of the Chrysler Ghias that were making the publicity rounds at the International auto shows in '53 had been on the drawing board since '51 & early '52. It was an event at the Turin auto show of '52, and again in '53 that changed everything.

At the Pininfarina stand at the '52 Turin show was a prototype Lancia based on the B52 chassis. Dubbed the PF 200, it had a nearly circular center grill, rather reminiscent of the K-310, Thomas Special and DeElegance. But the Lancia stepped away from the Frazer Nash, Chrysler Ghia headlight treatment inset from the fenders. Here the headlights defined the leading edge of the front fenders, setting a clean a straight line all the way to the tail; a tail

that became fins shaped by the sloping sides of the trunk.

Another star of the show was at the Bertone stand; the Fiat Abarth 1400. Here too the headlights, with strong chrome rings, defined the leading edge of the front fenders, but from there on was a study in fluid sheet metal shapes. In the Abarth a third headlight and a split grill replaced the central grille, so prevalent in the cars of the period.

The next car to impact Exner's thinking was the most radical expression of the aerodynamic studies then germinating in Italian design and European competition. On the Alfa Romeo stand was a study on the chassis of a 1900 Sprint. Alfa's coupe chassis had been transformed by Bertone's visionary designer, Franco Scaglione. The car was appropriately named Berlina Aerodinamica Tecnica number 5; forever to be known as BAT 5. This was not an exercise in self-indulgent excess, this was a dynamic study of fins as aerodynamic relevance, defining the wedge shape of an entire car.

These were not three obscure Italian cars on display at an out-of-the-way autoshow. The Turin show, along with Paris, were the premier autoshows of the fifties. Harley Earl stood with Bill Mitchell over these cars. Virgil Exner and Serge were crosstown coachbuilders.

These cars represented a dramatic new direction in body design. They also signaled the end of an era. The bulbous body panel shapes of the previous decade were being swept away. Sharper, cleaner, more dynamic contemporary designs were coming to the fore. Exner had not missed the point. He was presented with some unusual choices in the complete make over of the '55 line-up. Primarily, how far could he take the company's cars out of the box. Here was a company whose cars had been traditionally designed by body engineers, and had not changed appreciably since 1946. Whatever Exner chose to do would be a dramatic change, and with Ford having passed

Chrysler in sales, of critical importance to the company.

Exner and his team chose some basic tenets for the entire line. One was a complete re-proportion of the cars. As starting points the bodies were lowered while glass areas was increased. Then much like Pinin's Lancia PF 200, the headlights formed the leading edge of the front fenders; this formed the basis for the clean, unified crest line that followed the front fender, to window sills, ending at the rear fenders. The contemporary proportions of the straight fender design were completed by the hood and trunk being on the same plane as the fenders. On the Chrysler and Dodge cars a split grill design was chosen, echoing the Scaglione designs. Plymouth and Desoto were given a single grill. It was the Plymouth that gave a suggestion of things to come from Chrysler. While the headlights were on the leading edge of the fender, they were slightly recessed beneath a sheet metal hood that formed a dynamic rearward angle leading to the bumper line. This arrow shape was echoed by the chrome and two-tone detailing on the side.

Chrysler's Forward Look ad campaign was more than a good copy line. The cars themselves seemed to be angled forward into a new future for the company. Standing still they seemed to be moving. The impact was immediate. Showroom traffic increased immediately with their release, and the order books quickly filled.

Exner had peeled away the staid and boring sheet metal of Highland Park's cars, to reveal the sheer performance of the hemi. More was to come.

IV

The '55 Chrysler line-up had been a revelation. The engineers, who had been reticent about Exner's influence, suddenly appreciated that the new contemporary body styles had transformed the company's image. The previ-

ously staid bodywork having effectively hidden the engineering beneath. Now Exner's bodies clearly portrayed the hemi's performance engineering. One model in particular was to cement the company's new performance reputation: the Chrysler 300. For this flagship model of the new line-up, the engineers had modified the hemi to produce 300hp, thus the name. With 300 horsepower it was hailed as the most powerful car built in America. It was about to prove it.

In February as part of speed week, all the major manufacturers converged on Ormond Beach Florida. Since 1903 this had been the site of many Land Speed Records. Now America's 1955 models were about to go head to head to prove whose 'stock' products were indeed the fastest. In an official timed two way run the new 300 set the production car record at 127.58. Impressive numbers for a 4,340-pound coupe in stock trim.

Exner had been given a short window, eighteen months, for design & development of the '55 model line up. This meant that Highland Park's cars on the showroom floor for 55, and the basically unaltered 56 models, had come from designs penned in '53. Though a dramatic change for the company and its dealers, Exner had actually held back on the changes he foresaw for the new Chryslers. While the new look Chryslers were rolling off the showroom floors and dealers lots in '55, Exner took the bold step of once again completely revamping the company's cars. These cars, to appear as the '57 models, would embody the full force of his vision.

He had spoken critically of the "Hollywood concepts," taking a rather direct jab at Harley Earl, "and the Buck Rogers coterie (of designers)." He went on to point rather critically at the entire fifties future design movement, "the table cloth artists, air brush experts and plush scale-model stylists of the Sunday magazine supplements...The big responsibility," he emphasized, "of the automobile

stylist is not to predict what the motor car will look like many years from now, but to solve the more exacting problems of next year's model."

One of his primary design tenets was, "To design the car as a whole," not as a piece meal affair with one group working on the rear end, one the front, one the roof, and individually all the detail elements between. But to create it around a central theme, and carry it through the entire car. Having been brought on as head of Chrysler design at a critical time for the company, and having had his first line up of cars such a great success, he was in the position to truly direct the outcome of his second series of cars.

The result was a shock to the American system. These were not cars of the future, but cars that defined a very contemporary present. They stood as one the few significant automotive design transitions. He didn't do it alone. On the experimental side was Ghia's new director of engineering Giovanni Savonuzzi. An accomplished aerodynamic engineer, Savonuzzi had made the transition from aircraft to automobiles at Cisitalia. Through the use of Turin Polytechnic's wind tunnel, Savonuzzi's Supersonic design series at Ghia transformed theoretical automotive aerodynamics into empirical data. One design he and Exner developed in 1954 was a turning point: the Ghia Gilda. It was brought to full Chrysler dimension as the Dart show car of 1956. These studies had fully proven the aerodynamic legitimacy that lay at the foundation of Exner's new designs. On the practical manufacturing side Exner had men like Homer Le Grassy. Le Grassy had been assigned the design of the Fury, one of the most successful cars of the new line up. But it was the Line leader, the Chrysler 300 that embodied most clearly and completely Exner's philosophy, his prototypes at Ghia, and their practical application of current automotive engineering.

The Chrysler publicity department was in full swing in

the summer of '56. The new models would be premiered in the fall, and the factory was working at capacity. This model release would be the full realization of Exner's complete remaking of Chrysler.

So sensational were Chrysler's new cars that they would have a major impact before they were even released to the public; with the help of a little industrial espionage.

During the summer of '56 a new member of GM's design staff, Chuck Jordan, made a surreptitious visit to the fence outside the Chrysler proving grounds. Generally a mission of little concern, the photos taken through the chain-link on this day would cause a major change at GM.

When the photos were passed around during a conference at the GM design center, they at first were greeted with derision. A replay of the Airflow disaster of the 30's with fins, some remarked. Then as the photos were further analyzed it became clear that Exner had rewritten the rules.

The proportion of body height to glass area had been completely altered. The bodies were lower, the glass area greater and the roof pillars thinner. The chrome was sparingly applied, with the highlights coming from the new clean wedge shape. A new shape that was completed by fins that actually served an aerodynamic function.

Suddenly it was utter chaos at GM. The bulbous 58s were already in the pipeline. The LeSabre concept car was being scaled up as a production sedan for '59. Harley Earl, about to leave for his annual trip to the European auto shows, quickly ordered chrome to be ladled on the 58 designs to change their now aged look.

The point was driven home hard as Chrysler's new products were a hit with the public. Everything in GM's pipeline for '59 was tossed. Harley Earl, out of necessity, deferred to Bill Mitchell's thinner crisper lines, with the dictate to "out fin Chrysler." Bill Mitchell and his team's solutions were of course more sophisticated in solution than mere fins, though the fins did grow significantly.

This radical redirection, so quickly implemented, cost GM in the area of 400 million dollars. The 1958 models would stand as the only one-model year cars GM ever produced. And for all intent and purpose, Harley Earl did not so much pass the torch of design leadership at GM to Bill Mitchell, as Virgil Exner sr. handed it to him.

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