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# Nutz Letter

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Fordnutz Collector club is dedicated to the preservation of all collectable Ford and Mercury vehicles

## JIM AND ELAINE'S COUGAR 1 "THE RESTORATION STORY"



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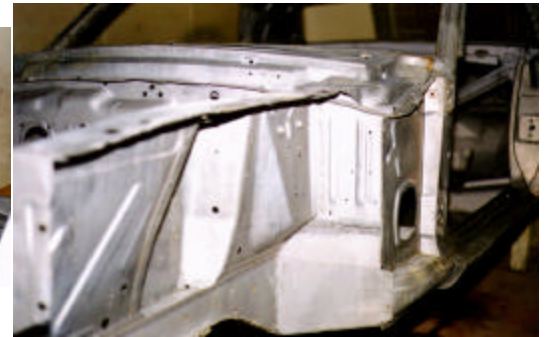
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If you would like your vehicle spotlighted or if you would like to contribute to the Nutz letter give me a call or send it to me by mail or E-mail.

**Next Issue of the Nutzletter:** Alan and Carolin Laary's 67 Cougar (2nd place winner in Bellevue)

**Story and photos by Jim Pinkerton** Left, Cougar One on display in Carlisle, PA. Photo courtesy Carlisle Prod.

Below left, Cougar 1 at Redi-Strip before the first of two acid dips. Below centre, Cougar 1 after the first dip. Below right, Cougar 1 after the second dip and before the zinc phosphate application.



**Editor's note...** The restoration of **Cougar 1** is a **museum quality restoration**. Most people do not go to the unbelievable extremes the Pinkertons did on this job. With that in mind this story will either **encourage** you to do your own restoration on your beloved car, or it will **scare** the hobby right out of you... **I hope that it only encourages you.** And now, the restoration story. (Scott Ferguson)

The restoration process for Cougar 1 began in earnest in April 1996. After many months of discussions with Lincoln-Mercury, their decision was finally made NOT to become involved with the restoration project. This was no doubt based on the corporate decision to discontinue not only the Cougar line, but also the Thunderbird and the Lincoln Mark series. As this history of the restoration project is being written (October 1997), L-M has already announced the return of the Cougar for model year 1999. The proposed "new Cougar" is expected to be a front-wheel drive, small-engined vehicle built on either the Probe platform, or on some other import platform such as Mitsubishi or Mazda.

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Back to Cougar 1 -- it was entrusted to John Benoit of Cascade Classics in Edgewood, WA, where the disassembly process took about 1 week, and began with the removal of the white vinyl top and the interior. This was required for an in-depth view of the sheet metal damage due to rust and corrosion, the two prime enemies of all classic automobiles. Cougar 1, having spent years in the Canadian Province of New Brunswick, was expected to have rust and corrosion as a result of severe winters and salt on the roads in the winter.

While rust was certainly found in the car it was nothing compared with many of the cars found in the East and the mid-West sections of the US. This was probably due to the fact that while Cougar 1 is now 31 years old, about 19 of those the car spent in storage inside either the originating dealership, or a Quonset hut building belonging to the first owner.

Some rust was found on the metal roof surface as well as in the rain gutters and around the rear window frame. All of this damage was correctable with mild bodywork. There was significant rust and previous damage repair to the left rear quarter panel. And, while it could have been salvaged with plenty of Bondo and elbow grease, another option was to cut it out and weld in a new one. Not wanting to make premature decisions, we kept on disassembling and inspecting.

We found more problems with rust in the trunk lid (under the rear moulding lip) as well as irregular and amateurish holes drilled in the lid to accommodate a dealer-sold luggage rack assembly. Those holes were not only irregular and ugly, but they came through the panel sub-structure in such a way as to make repair difficult at best, and costly at worst.

Replacing the trunk lid seemed logical except for one small thing -- the trunk lid was different than the lid on a regular Cougar. By that we mean that again that troublesome sub-structure, upon further investigation, is unique to early Cougars. It is visually and structurally different on the underside of the trunk lid. Research shows that no Cougars built after January 1, 1967 have been found with the early trunk lid type installed from the factory. Oh, that type will fit any '67 or '68 Cougar, and vice versa, but that would not work for Cougar 1. So, what to do for an early trunk lid was another concern.

Rust in the floors was also a pain, in that while it could be repaired, again that would require substantial investments in labour. Also, the inner fender panel between the right shock-tower and the firewall, where the right hood hinge bolts on, was damaged. One of the hood hinge mounting nuts had been damaged beyond repair. These mounting nuts, an integral part of the panel itself, are also "different" than later ones used on Cougars. That meant we couldn't just put in a reproduction panel (since its style was not correct) nor for that matter just put in any other used panel. We would at least need such a used panel to be from an early Cougar, in order to get the correct style.

All of these sheet metal-related restoration issues fostered debate, discussion, and much consternation. Replacing sheet metal in Cougar 1 with reproduction parts was not considered a good idea primarily because this restoration was to be museum quality, which meant that parts needed to be, and all of the sheet metal in a Cougar is date-stamped. One of the options proposed, although not considered very probable at the time, was locating a "donor" vehicle (parts car).

Being a Regional Director for the Cougar Club of America, and having access to the national database on Cougars, I was aware that only a few early Cougars were known to exist. One of those early Cougars, serial #00079 (with a scheduled build date of July 4, 1966, just like Cougar 1) was in Portland, OR and its owner I knew was in the process of restoring it. On a fluke I decided to call him to find out how he was doing on his

*(Cougar 1 continued from page 2)*

car, and to compare notes. As luck would have it, he had decided that restoring the car was not financially feasible, so the car was for sale.

Upon inspection of Cougar #00079, we found that everywhere Cougar 1 had rust, Cougar #00079 was solid. All the sheet metal panels needed to repair Cougar 1 were date-stamped the same as the original Cougar 1 panels, including the entire floor. We salvaged as many parts off of Cougar #00079 as possible, selling the interior, the transmission, disc brakes, and tilt-column almost immediately. This helped reduce the out-of-pocket expense of the sheet metal parts for Cougar 1. Our sheet metal problems now solved, at least on the procurement side, we turned to other needs.

The 390-4V engine was disassembled and inspected. The bottom-end was determined to be sound, so the only change made was a new oil pump, timing gears and roller bearing timing chain. The heads were rebuilt with hardened seats for unleaded fuel. The original, correct carburetor was sent off to Holley for their top quality refurbishing process. The distributor was found to be a Motorcraft replacement, and a search was begun to locate the correct Autolite part with proper date code. The exhaust manifolds were powder coated, along with the mounting bolts and flange washers.

The transmission had been overhauled previously, and upon inspection was found to be fit. The rear end was disassembled, inspected, and also found to be in good condition and not in need of repair. Of course the brake system, the suspension and steering systems would all need restoration or replacement, and a short in the wiring harness that extends through the radiator core support at some time in the past made replacing that harness necessary.

The interior was complete, but worn. The seats would need to be recovered; the headliner and carpets replaced, and of course the white vinyl top would also need to be replaced. The chrome plastic dash gauge panels would need to be re-plated and painted.

Cougar 1, and other very early production Cougars were put on display at such places as the Detroit Auto Show by L-M. Like the other major manufacturers, they wanted their show cars to look their best. It was determined that regular production bodywork and paint would need to be improved. Cougar 1's paint was perfected in the sense that none of the assembly-line "orange-peel", part of the normal painting process used at that time, was allowed to remain, and all of the sheet metal lap-over joints exposed when the doors and trunk are open, were filled-in and smoothed out to provide a seamless look.

John Parkhurst, our upholsterer, found not only the original upholstery material for the headliner and the seats, but also NOS white vinyl roof material. The seat frames were de-rusted, painted and the foam seat bases were replaced. New seat backs were installed. The door panels were found to be restorable; they were cleaned and re-dyed, and the chrome trim was replaced with polished stainless steel inserts. The dashpad was also found to be fit, although stiff and fragile with age. It was re-dyed, along with the horn bulb, the dash facing pad, the console and the console pads. The original steering wheel was retained. New kick panels were re-drilled for proper radio system speaker use.

Back to the body. The largest single aspect of preparing the body was the work on the floors. This required "racking" the car down, aligning it, cutting out the entire rusted floor section of Cougar 1, along the factory seam lines. Then repeating it all with Cougar #00079. Next the donated floor from #00079 was re-attached as a

unit using a spot welding machine that duplicated the factory process. The results were stunning. Cougar 1's new floors looked like they'd been there from the beginning -- just what we had hoped -- and all sheet metal

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*(Cougar 1 continued from page 3)*

date stamps matched. Replacing the left rear quarter panel was difficult but went as expected, as well as the work of preparing the doors, fenders, etc.

In the State of Washington, environmental laws are such that acid-based chemical stripping is not economically practical, so it isn't available. We took the car shell, all of the sheet metal pieces, as well as all the metal parts to the car that would have to be painted, up to Delta, British Columbia, to Redi-Strip. However, getting across the border with the decrepit-looking hulk on a trailer, the backend of a truck full of parts, proved more difficult than we had anticipated. Canadian officials were somewhat sceptical as to why anyone would want to restore "the hulk", and what's more they wanted to be sure we wouldn't just leave it up in Canada. Needless to say, we didn't tell them that the car was Cougar 1. So we had to post a bond through a Customs Agent (who handled regular business for Redi-Strip, but only through their normal freight shipping process). Four hours later we were at Redi-Strip, where the owner was still on the phone to the Customs officials -- howling mad over the treatment of his customers. Seems as though in 17 years of business, no one had ever been stopped at the border and a bond required -that is no one until us troublemakers and "the hulk" showed up. On the return trip we had to stop at the border and prove that we were in fact bringing back "the hulk", never more to darken the Canadian landscape.

At Redi-Strip, the shell was submerged in a tank of acid wash to remove all paint and seam sealants. Then the solution is electrically charged causing the rust to 'leap off' the metal work. This removed every bit of rust, corrosion, and filler, leaving it looking like a newly minted coin. This same process was used on all of the other metal parts to be repainted, and then the body shell and all of the metal parts were zinc-phosphated.

The phosphating process is part and parcel of a museum quality restoration. Another process that is as good, or perhaps better, is known as E-coat, but the nearest place to have that process performed is Michigan (again because of environmental laws), and that seemed to be out of the question for us. Zinc-phosphate provides a uniformly even surface preparation for the adherence of primer, and then paint, not to mention a superior rust-inhibiting barrier.

Other than pausing at the border to reclaim our bond, going up to Canada to bring the body and the parts back was somewhat uneventful. Because of the phosphate coating we could not handle the body and parts with bare hands. We had to use rubber gloves to load the enclosed trailer, and we had to hustle back to the Seattle area where the body and parts needed priming within 3 days. This was necessary to prevent the surfaces from absorbing moisture (or anything else), and to allow a full 30 days for the primed parts to "cure", before painting.

John applied all of the body sealant, and sound deadening using the chassis assembly manual for the layout patterns. The car sat primed for 2 months, ready for painting, until our painter could get to it in his schedule. However, we did not let any grass grow under our feet while we waited for the car to come back to be assembled. We were busy cleaning, sorting, and painting parts. We sent out all of the chrome to be redone, and we searched high and low for various and sundry NOS parts.

The painting on Cougar 1 was two-stage base-coat/clear coat. Brandon Huhtala of Automotive Images in Federal Way, WA performed final bodywork and paint, and began his work on March 1st. John got the car back on April 15th.

The underside of the frame and floors on Cougar 1, unlike that of many later Cougars, was originally black, not red-oxide. Body colour (Cardinal Red; colour code T) over spray was applied to the undersides to duplicate the factory over spray.

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This brings me to one of the most vexing problems in any restoration project -- vendors. With the exception of Brandon Huhtala, we had problems with nearly every other vendor. These problems were myriad and varied, but an underlying theme developed -- namely, they had no sense of urgency. And, I'm not talking about doing work or finding parts on short-notice. No, I'm talking about even having the courtesy to return phone calls, or faxes, or to answer questions once we did make contact. It took constant follow up.

Now you would think that an inquiry to buy parts that are advertised might elicit a prompt response. But, no, not on your life. Some vendors said they would have to check "out back", "upstairs", in "the basement", the "shop", the "barn", the "storage shed", the "other building", etc. I guess that was better than those who said they had it, would ship it, and then never did. I estimate 60 days were totally wasted in unnecessary parts chasing, not to mention the many hundreds of dollars in phone and fax charges.

Anyway, back to the restoration work. We found NOS lower control arms for the front suspension with ball joints in place. They needed to be de-rusted with Oxysol. The upper control arms were refurbished with NOS ball joints. We had machine tools made to correctly apply the rivets to these control arms, since the only known supplier of these discontinued the product line. We also located and purchased all the remaining NOS steering and suspension parts, a process that consumed many hours of 'search and beseech' manoeuvres.

We had new rear leaf springs custom made using the original specs, and applied the correct anti-squeak pads, bushings, U-bolts and shackles. The entire rear axle assembly was detailed. The original brake booster was rebuilt; rotors, callipers, hoses, drums, shoes, kits, and all brake lines were found, purchased and made ready. The styled-steel wheels were shipped to Specialty Wheel in Portland, OR where they were completely stripped, centres re-chromed, outer rims powder-coated and re-riveted together.

The exhaust system was another real sticking point. The original H-pipe was still usable, but pitted from normal wear and tear. The original resonators and transverse muffler had been replaced, as had the tailpipes. Another stroke of good luck arrived in the form of an NOS transverse muffler, which while pricey at \$450.00 was perfect for the car, as it was from the first production run of original mufflers with US Steel's date stamp of August, 1966 clearly showing at the bottom edge of the muffler. Mike Mersman of Dan Fast Muffler Shops in Lynnwood, WA custom made the rest of the system, including machine-bending the H-pipe, using the exhaust manifold flanges and the resonator brackets from the old system to duplicate the original look. While we found 1 NOS resonator, it didn't do us much good without a second, so Mike custom-made the resonators.

There are so many small details in the restoration process, it is hard to know which ones to discuss here and which ones to treat in a more summary fashion. However, one of the most interesting has to do with the 'running cat' emblems, originally planned for the passenger-side headlight door and the trunk lock. Die Cast Mold Corporation in Michigan was the designer of the 'running cat' trunk lock emblem for the prototype Cougars. When Jaguar sued L-M claiming trademark infringement because the running cat was too similar to their logo, an out-of-court settlement was reached wherein L-M was obligated to (1) destroy all existing stocks and contracted-for supplies of running cat emblems; and (2) desist from using the running cat emblem unless it also contained the spelled out word, 'Cougar', for two full model-years.

So, '67 and '68 Cougars do not use just the plain running cat emblem, but it came back in '69, as permitted in the settlement. All emblems were destroyed, except one -- the original trunk lock key door sample used by the sales team to sell L-M on the concept to begin with. When the Die Cast Mold Corporation went out of business, in the 1980's, a parts vendor bought out their supply of emblems for other Ford products. The only

piece

of Cougar trim or emblems left was the prototype in the file cabinet, so he bought it. I found it in Xenia, OH at a swap meet in 1995. It now adorns the only trunk lid in the world that makes any sense at all, Cougar 1's. The key lock base is the original from Cougar 1, just the lock door with the emblem on it has been removed in favour of the, one-of-a-kind, 'running cat.'

Having made the decision to use the prototype trunk key lock door, we faced the problem of having a non-match with the emblem on the right headlight door. So, John Benoit used the chrome base of the original emblem plaque, along with the actual metal 'running cat' portion of the emblem (we had them both re-chromed), re-centering the cat on the base and interleaving a cut-to-fit ribbed black background field from a '69 Cougar grille emblem to approximate the original prototypes, of which no known examples have survived. The question was raised with representatives of Die Cast Mold Corporation, but they were not the suppliers for the headlight door emblems.

Another interesting, time-consuming, frustrating, and costly parts search was launched to find several of the console-mounted convenience light package warning light sockets and the correct lenses. Of the four required, Cougar 1 was missing the ones for "low fuel" and the one for "door ajar". Two problems arose that caused this search to be difficult. The first one was that there is a difference between the lenses and bezels for '67 and for '68. The '68s have the identifying warning words in white on the outside of the lenses, so you can really read them even when they are not backlit. The '67s are printed on the inside of the lenses only, requiring backlight to read. So we couldn't use '68 pieces, even if we could find them. The second problem was that this same basic convenience light package was available on Mustangs. Mustang restorers have pilfered Cougar parts cars to obtain these items to upgrade their restorations, and in the process driven the supply down and the price up, making these "spendy" (try \$400.00, or more, for the group of four with wiring harness, if you can find it). Nonetheless, we persevered and located what we needed through the diligent efforts of some fellow Cascade Cougar Club members.

All of the colour coding for springs, driveshaft, front struts and sway bar, front and rear shocks were duplicated based on documented evidence from L-M or via inspection of other early original, un-restored Cougars with the same power train and suspension components. Chalk marks found on Cougar 1 during the disassembly process, were photographed and duplicated during re-assembly.

John began the re-assembly process on April 29, 1997 and finished it on Saturday, May 24th. After taking 16 pictures of the car, we loaded it on a VIP Transport enclosed car carrier and shipped it to Carlisle, Pennsylvania on Monday, May 26th--just in time for the 30th Anniversary of the Cougar, Cougar Club of America East Nationals and the All-Ford Show and Swap Meet.

The restoration took 14 months. And, I have been asked many times about the cost. Neither bragging nor complaining, you might be interested to know that the restoration itself cost a bit more than \$43,000 --not counting telephone, fax, mail, etc. etc. However, looking at the results, I believe that it was well worth it. With luck and perhaps a re-dawning of the "real car-guys" spirit at L-M (or even at Ford for that matter), if that's possible to imagine, Cougar 1 may one day take up its rightful place next to the first Mustang in the Henry Ford Museum. We can only wait and hope.

**Story by Jim Pinkerton**

**Cougar 1 was featured in the January 1998 issue of Mustang and Fords. Also in this issue is an interesting article Jim Pinkerton wrote on the history and evolution of the Cougar, from it's start to it's demise, to it's new re-birth for 1999.**