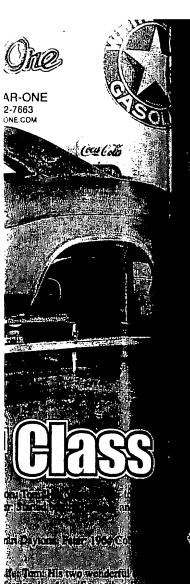




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ON THE COVER

Reeling off the miles in a pristine '71 Hemi 'Cuda is indeed a dream drive, and editor Geoff Stunkard got a chance to do just that when Smith Stokes and Ken Marsh let him get behind the wheel for a real-world test spin. The feature and story about this car is the grand finale of our Sweet E-Motion 'Cudas and Challengers section and can be found on page 68. Photography: Geoff Stunkard





Proper disassembly and documentation

by Roger Gibson
photography by Mr. Norm's Sport Club and Roger Gibson

rtisan Roger Gibson of Kelso, Missouri, is well-respected among Mopar restoration experts. Unlike basic rebuilding, "restoring" is an art based partly on observing, documenting and duplicating just how the factory did it when new. In this first instation of Mopar Muscle's "State of the Art" restoration series, Roger begins by telling us what to do before we stampede to our toolboxes and start pulling apart our prized Mopars.

While not all of us want, need, or can afford a professional concourse restoration, his tips, methods and "secrets" can be applied to any restoration project—major or minor.

TIP 1: An authentic restoration starts before you ever turn a bolt or remove a part from the car

Documenting your car is one of the most important things you can do if you want to restore it to its original state. No two cars that came down the assembly line were the same; they were similar but not identical. The information for your car has to come from your car. For example, what type of bolts hold on the fenders, hood, and deck lid? How much blackout was used behind the grille or on the cowl (Figure 1), were there any factory inspection marks, where and how much seam sealer was used, how much undercoating was used in the wheel wells and trunk? What date code is on your voltage regulator, starter relay, water temperature unit, thermostat housing, oil sending unit, and so on? Your car is different than any other, so if you want to give it back its original identity, this information is the only way.

Begin by photographing the car thoroughly. Notice the word "begin." Do NOT clean the car other than washing the exterior and removing objects from the trunk and interior that do not belong. Do not steam clean the chassis, floor pan, or engine compartment yet. Important things could be lost, such as paper tags that identify the part number and vendor of the wiring harness; labels on the brake booster or carbs; paint-stick marks on the cowl, wheel wells, or valve covers. In a concours project, these things will have to be duplicated later.

In my shop, the teardown and disassembly of the car takes two to three weeks. I usually take at least 100 pictures before I clean anything or remove a part. For instance, I photograph hose and wire routing, all visible inspection marks, decals, labels, and how things are assembled. I also make diagrams of major areas of the car and detail the bolt-head marks that are used at every point (Figure 2).

It is not uncommon to have three or four different types of head markings on the front fender bolts, or have three of one type and one odd both holding the hood on, or all the bolts on the right fender different than the left-fender bolts. I recently disassembled a '69½ Road Runner that had the lower right side radiator bolt missing. After checking this out, I found that the hole was completely covered up by the radiator flange and that it had never been installed (the nut still had blackout on the threads). Now this is a very insignificant thing and should not have happened. With my photographs, I have documented this and it is what is original on this car. When this car enters in judging, and if a judge notices this, the owner will have proof that this is correct for this car. This car was a one-owner original paint car, so it was easy to document. On this car, when I ran into things that were not typical, such as the missing radiator bolt or an unpainted valley pan under the intake, I only had to talk to one guy to find



This is just one of dozens of pictures we took of the application of the blackout on the Fish. In order to properly restore this car we need to know just how and where it was applied. Blackout on the cowi area was a procedure used on '70 E-Body cars. This practice was not in effect for '71 cars, and we have seen "late build" original paint '70 cars without it as well.

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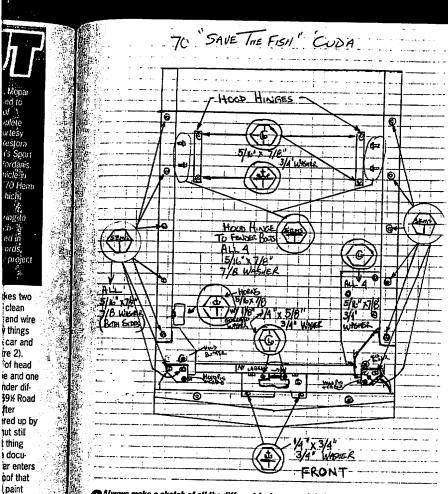
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 $m{g}$ Always make a sketch of all the different fasteners and their size and location. This is just one sketch showing some of the underhood fasteners. We make several more on different areas of the car. Make them for areas that have a lot of details.

out if it had been worked on or changed.

In some instances, you cannot talk to the original owners, or the car has been redone, so research is required. I refer back to other original cars, preferably from the same plant and with close build dates if possible, for reference. I photograph any original car I see, regardless of the engine size, for this purpose.

Look for inspection marks and document by photos and tracing (Figures 3a, 3b and 3c). I trace crayon marks and any writing by overlaying the area with a piece of clear plastic. I usually cut the plastic to fit the area and mark reference points so I can get it back in the same place. Then I trace the marks with a magic marker, usually in the color of the mark, if possible. When it's time to put it back on the car, I take an ice pick and puncture the plastic on my tracing, then place it on the panel where the marks were and dust the plastic with a string line (powdered)

chalk. The holes leave the exact pattern to follow. Here again this seems like insignificant stuff, but it makes your car exactly correct as to how it left the assembly line. Your car will get its original character back.

After the initial documentation of the car. it's time for disassembly. During the disassembly, you can further document every area and individual part of the car. The documentation will consist of how things are assembled (Figures 4a and 4b): what bolts are used, date codes, wiring-harness routing and plating, with you photographing, taking notes, and diagramming everything as you go. Some might ask why all this? First, so you can return the car to the way it was originally assembled. Second, I do this full time and it takes me over a year to complete a car, so my men and I will spend about 2,500 hours on it. We constantly refer to the documentation for assembly. When doing this as a hobby, it could easily take you two or three



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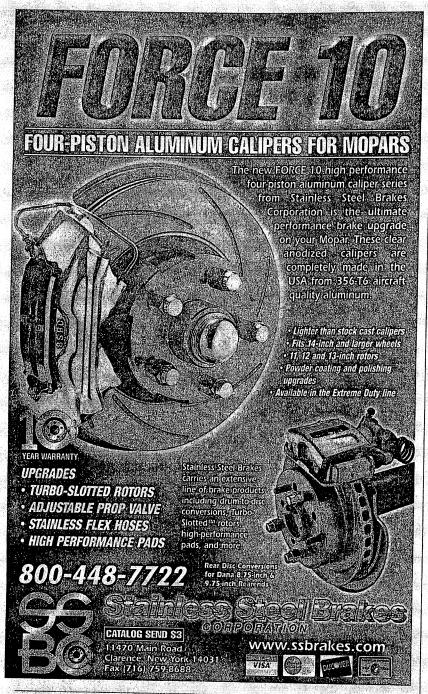
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"State of the Art" Re

years of spare time. My memory is not that good, and frankly, guesswork is not good enough for a state-of-the-art restoration.

I always start up front. I remove the hood, bumper, grille, and front fenders. During this, make diagrams of bolt-head marks with measurements of the length and washer diameter as well as the type of plating used. Very seldom do all the bolts holding the fenders on have the same head markings. Sometimes you will find that different size washers or studs and nuts have been used. It's a lot to remember, and without documentation it's impossible to get it correct. Here, also, you want to photograph the amount and location of seam sealer used on the inner and outer fenders so you can duplicate it later.

Usually, cleaning the parts and areas now exposed is in order, and I document undercoat patterns with photos. How the blackout behind the grille was applied—I document this with photos and match the colors to be used later if I have to restore it. Type of headlamps—clean these and look for date-code ink stamps on back. This helps to validate their originality. For example, the old (usually GE or Westinghouse) headlamps have a different glass "fluting" pattern than the new ones. Document the plating on the headlamp buckets. Every part gets scrutinized. To truly restore the car, every part has to be returned to its original state.

I usually remove the doors, rear bumper, and deck lid next. Disassemble and document as needed. This will be my first load of parts to go to Redi-Strip for de-rusting and paint removal. Just a quick note: I always take steel parts that need to be re-chromed to get de-rusted. Most re-platers take no time to remove rust from the backs of the bumpers and the chrome is already peeling when you pick them up.

I always photograph the doors under the inside panels for paint patterns. This is usually a good place to tell the color of primer that was used on the car as well as the mask pattern used on the inner door color where applicable.

TIP 2: During the disassembly, further document every area and individual part of the car

The inner door color was painted before the exterior color and masked off while the exterior paint was being applied (A- and B- Body cars). This was done because the colors could bleed. You can verify this by examining the edge of the paint where the colors meet or by sanding the paint edges to examine the layers. In the application of paint, the accent color(s) was quite often done first. For example, '67 GTX stripes were applied before the exterior paint.' Cuda



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