Restoration Support

70 Dearborn Unibody (Undercarriage)

This is an ongoing project of mine and just one section of a much larger project. It is a work in progress so it will hopefully be continually updated as we discover and include information as it is discovered and accepted.

By 1970 production, the Dearborn assembly plant, for years, had been using what is being referred to as batch paint/primer to coat the undercarriage of the Mustang and Cougars. As we understand this was a mix of epoxy primer sealer and left over exterior paint. This mixture improved the sealing qualities of the product and saved dollars for the company. In earlier years the color of the batch paint varied as would be expected but normally it fell into a range of grays with green or glue tendencies. Starting in 1970 it's believed that the increasing number of brighter colors being offered in turn affected the tone and tint of the batch colors producing a very wide variety of possible batch colors, some similar to exterior colors while in other cases producing a very contrasting final product.

Basic steps for a 1970 Dearborn built car are as follows. The car was prepped with the doors, trunk lid and the rear valance in place (valance hung from the taillight panel only by the upper mounting screws) End caps were loosely (spaced rearward) installed so that they were painted with the rest of the body.

1– Batch paint was applied to the panels visible from directly under the unibody. Much of the engine compartment area and the top area of the body received the traditional red oxide. Over this a light gray primer surface was applied to address small imperfections. From the firewall rearward (the undercarriage area) the paint was applied by jets mounted below the moving body while the bottom surfaces from the firewall forward were sprayed by hand by a worker standing below the body.

2- Some seams and the seat belt anchors where chalked after painting while other areas were done before. Some were applied out of a chalking gun and left as applied while areas such as quarter or floor drops and the seat belt points were applied out of a gun then smeared with a brush or thinner dipped rag.

3– Interior color is applied next to the A pillars and the interior of the doors depending on interior code.

4- Exterior color was then applied with some over spray flowing onto the undercarriage. The high volume, high pressure spray guns of the period produced allot of overspray and direct application onto the floor panels and features that hung down from the floor and faced the outside surfaces of the body. In the rear wheel wells the surfaces received a nice coat of paint in most cases and a fair amount often found its way onto the exposed rear frame rail that are visible from the wheel well and lighter amounts on panels and brackets inward.

5– Next the engine compartment paint is applied. As the drawings and pictures show, on the wheel side, the black would often stop around the front edge of the spring pocket but it varied. The area above/reward of the firewall pinch weld (in the engine compartment) appears to have been blacked out up to the windshield opening. Will stop there since that is more of an exterior paint detail rather than undercarriage detail.

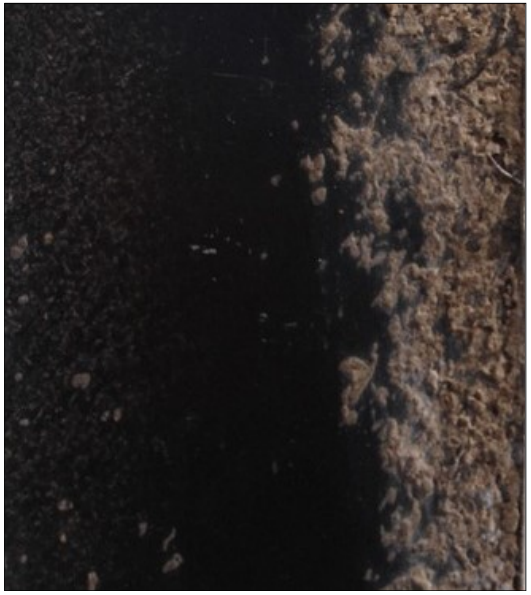
6– Next the pinch weld was blacked out. The outer edge, along the bottom of the rocker and quarter panel. The overspray from this application would again cover some of the undercarriage as the majority of the spray pattern would flow paint onto those closer panels and surfaces. The more part of the pan hung down ,the more paint/black out it received. The amount of overspray generally would be less the distance inward towards the center of the body than the body color traveled as it was applied with less pressure and tighter pattern.

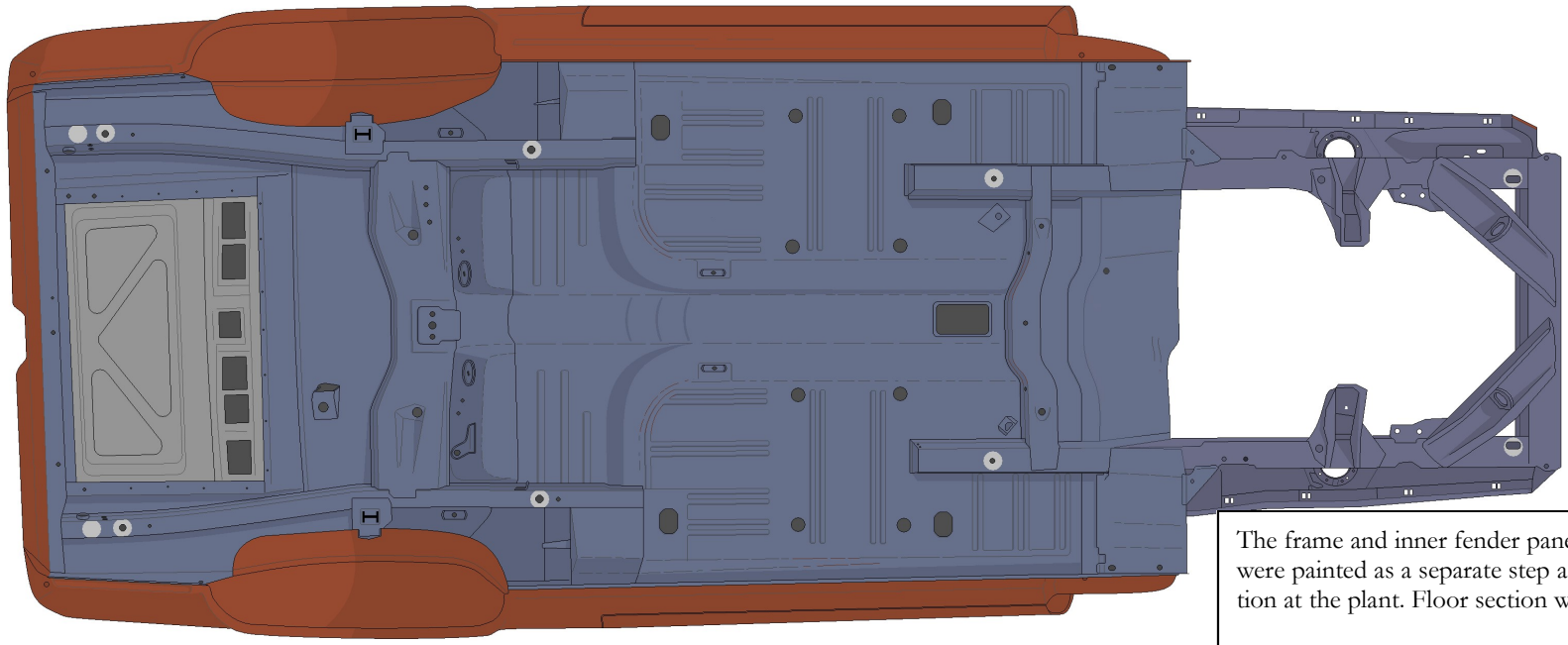
7– Once the front fenders (car assembly basically finished) were installed the front wheel wells were coated with sound deadener. Suspension and such already installed. This was typically applied over the inner fender panel, along the area of the fenders that meet the splash shields and up over the top of the fender. The top surface of the fender was not always completely coated.

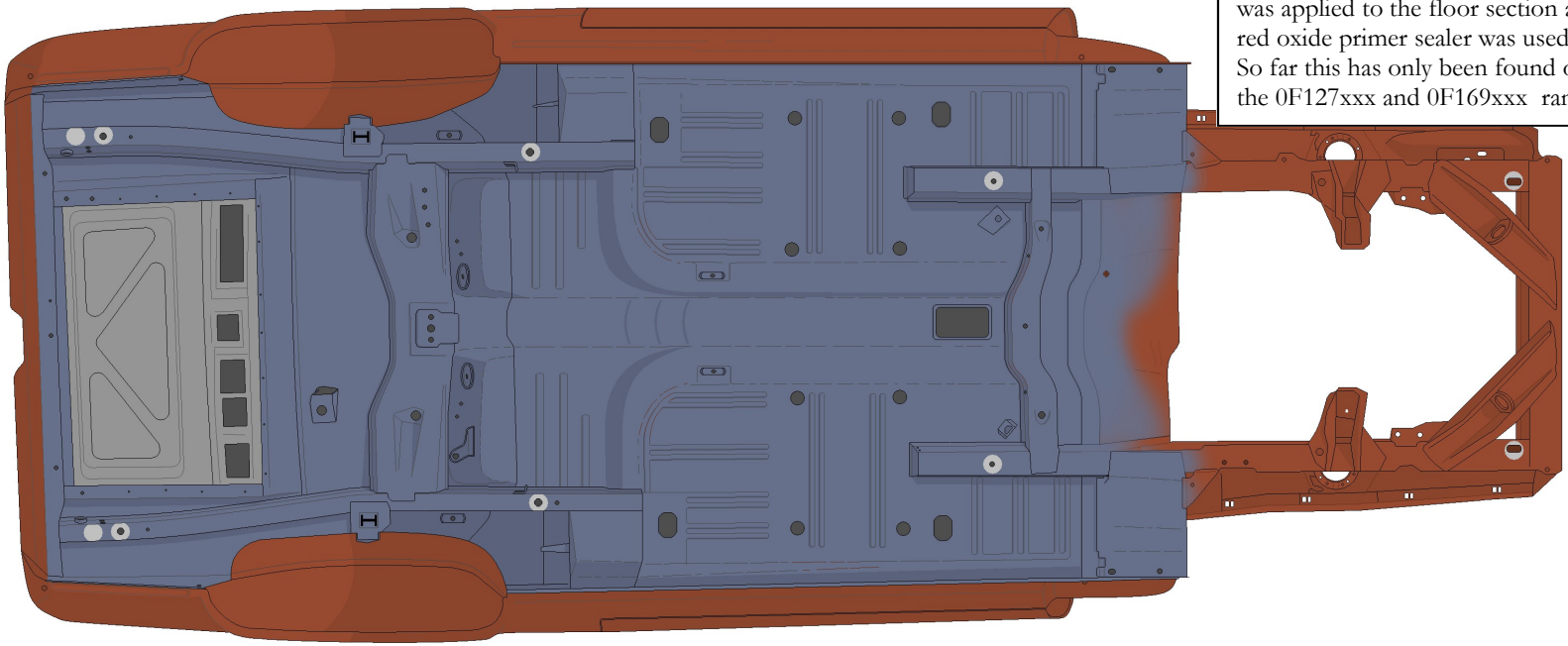
Below are just a few examples to illustrate the wide variety of colors found of batch paint from 1970 Dearborn built Mustangs & Cougars.





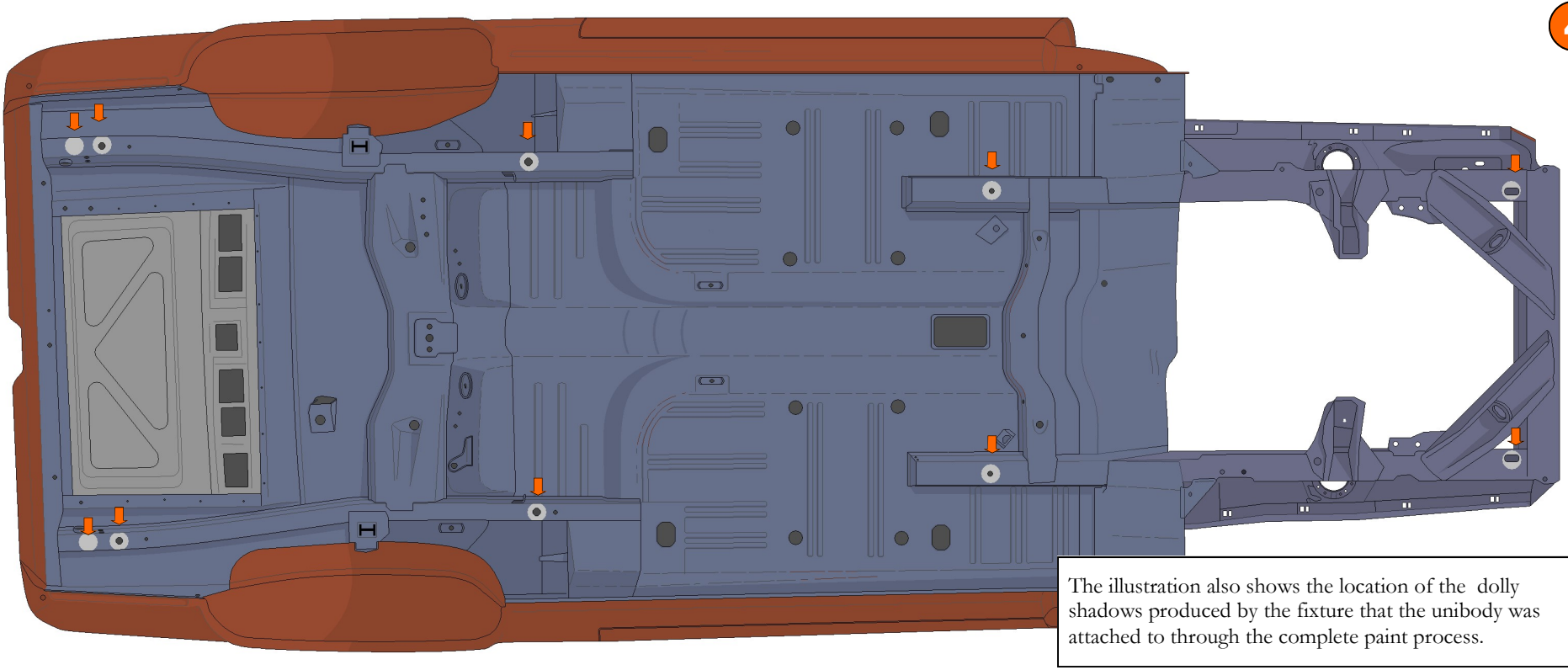


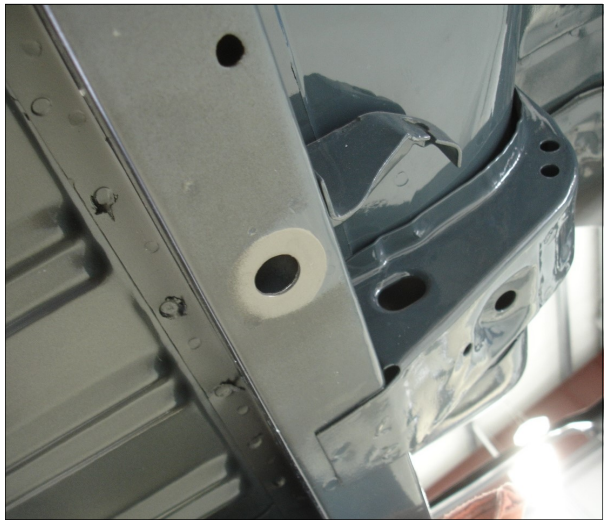


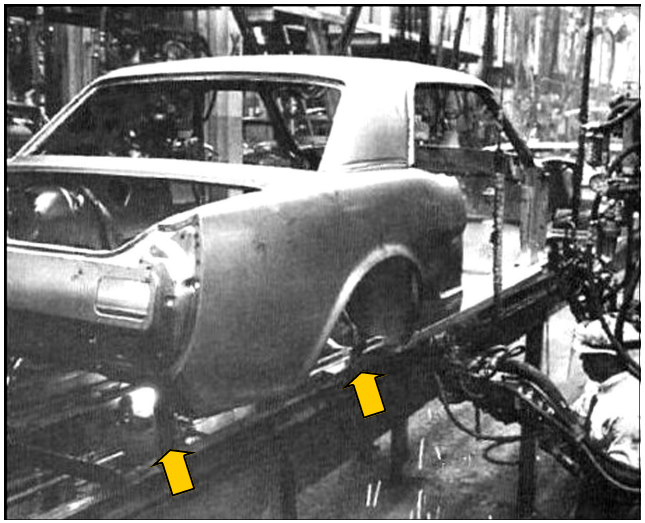
The frame and inner fender panels (forward of the firewall) were painted as a separate step and at a different paint station at the plant. Floor section was painted first.

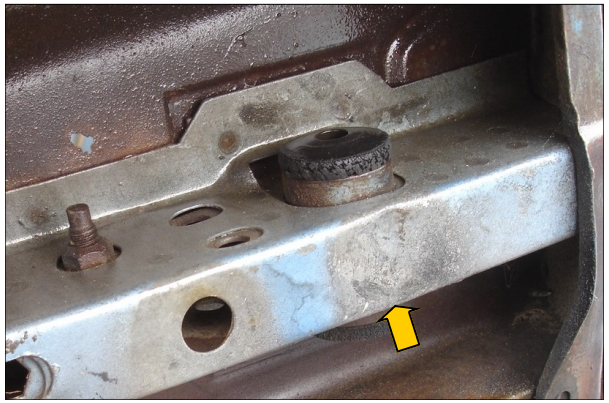
As a result the paint color, tone or tint can vary from what was applied to the floor section and in some cases epoxy red oxide primer sealer was used firewall forward.
So far this has only been found on a few cars with VINs in the 0F127xxx and 0F169xxx range.



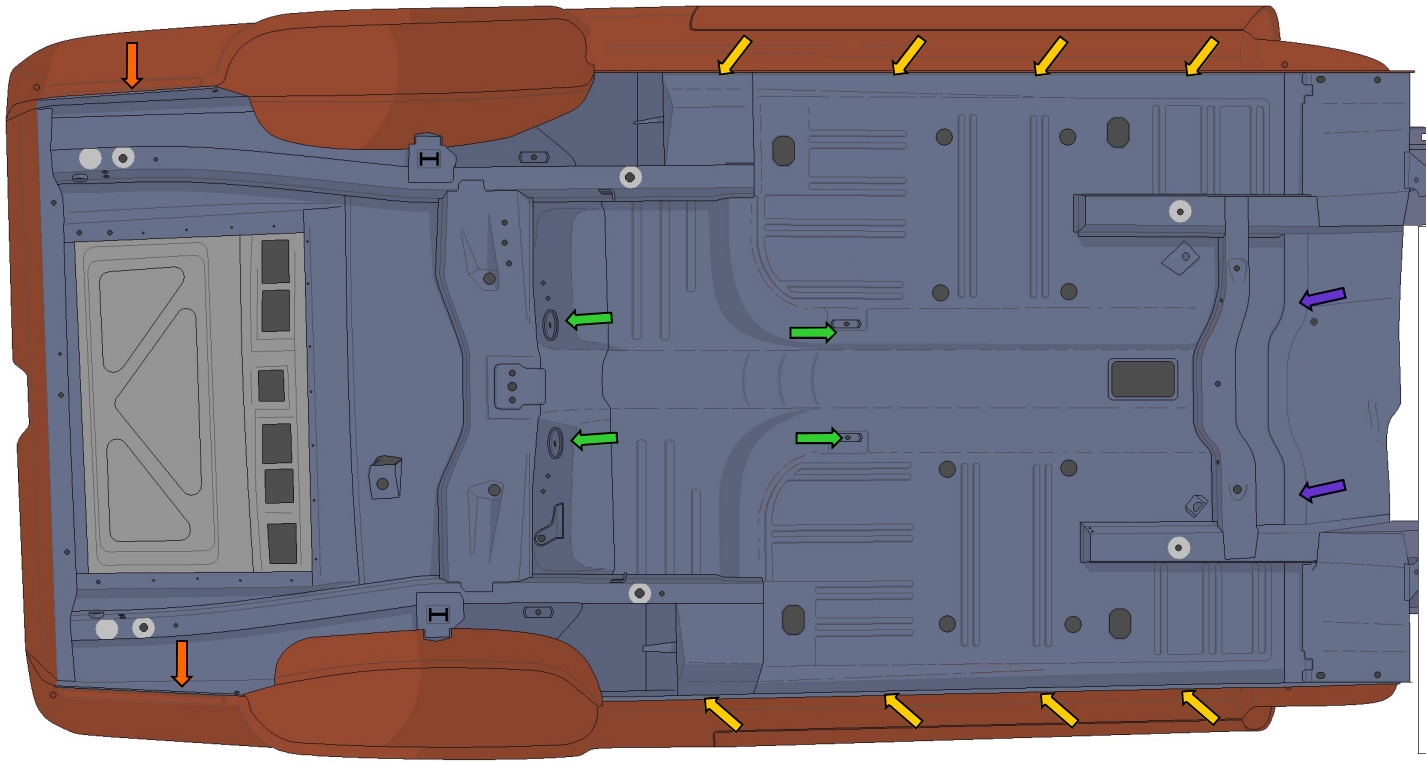
The illustration also shows the location of the dolly shadows produced by the fixture that the unibody was attached to through the complete paint process.







Two additional shadows were produced by the fixture behind the rearmost dolly holes and shadows on the rear frame rail.



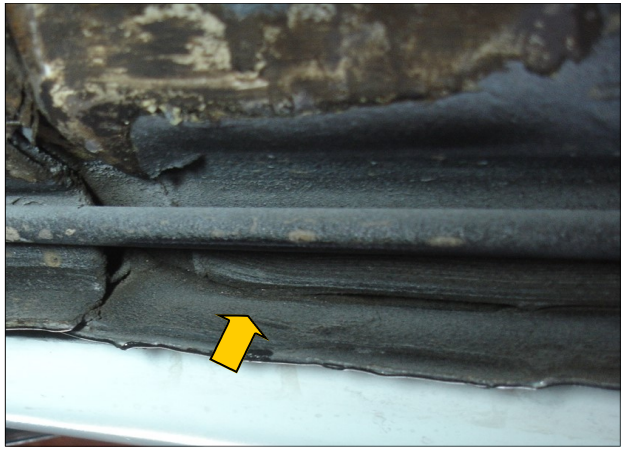
Seams are chalked using black smooth chalking.

Yellow - Rocker panel. Along the inside edge

Green - Seat belt mounting points

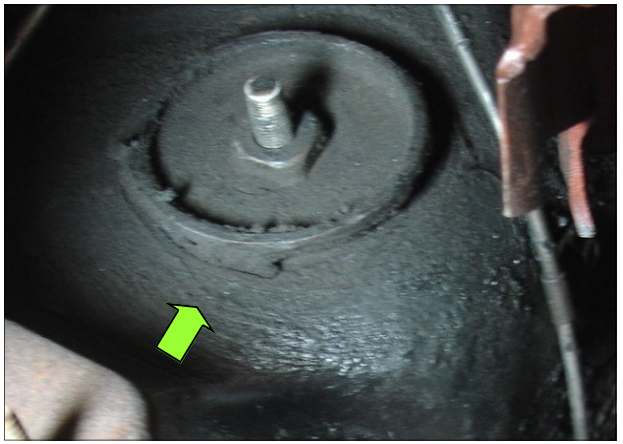
Orange - Trunk floor drop. Approx 1” strip along bottom of inside edge

Purple - Many examples showed these firewall to floor seam sealed with the same sprayed on style found over trunk seams

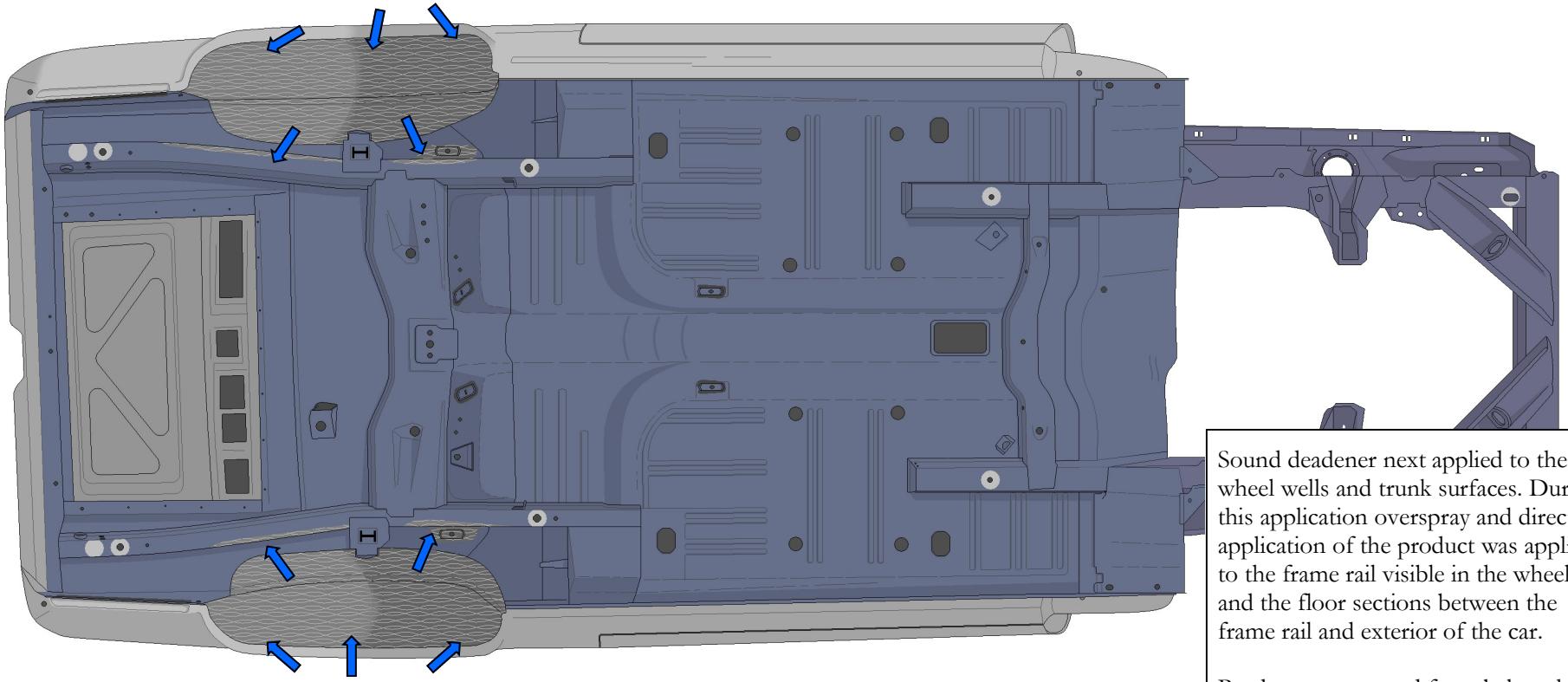


Rocker panel to floor sealant. This is one of the heavier and messier examples of the application.

Trunk drop sealant applied and wiped at the bottom edge of the trunk drop to quarter panel pinch seam.

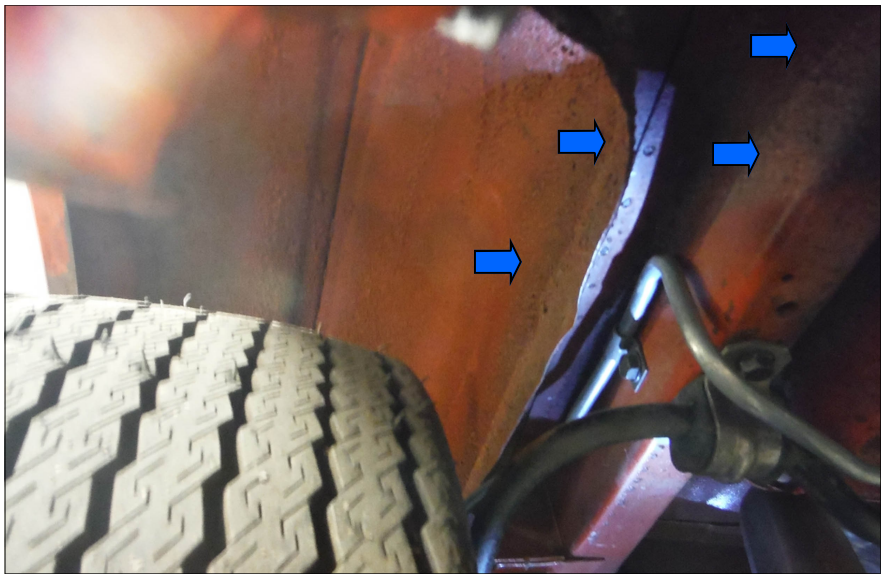


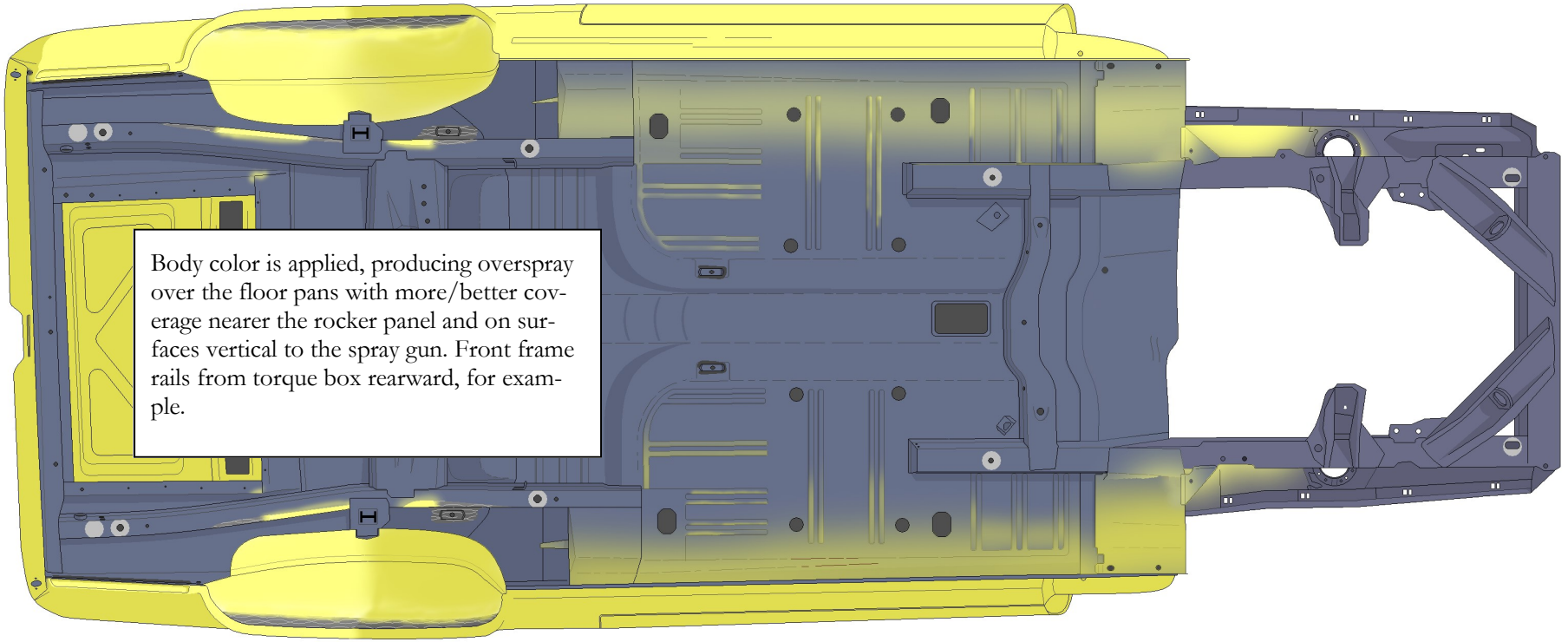
Rear seat belt anchor example. Applied around the anchor then wiped around the anchor



Sound deadener next applied to the rear wheel wells and trunk surfaces. During this application overspray and direct application of the product was applied to the frame rail visible in the wheel well and the floor sections between the frame rail and exterior of the car.

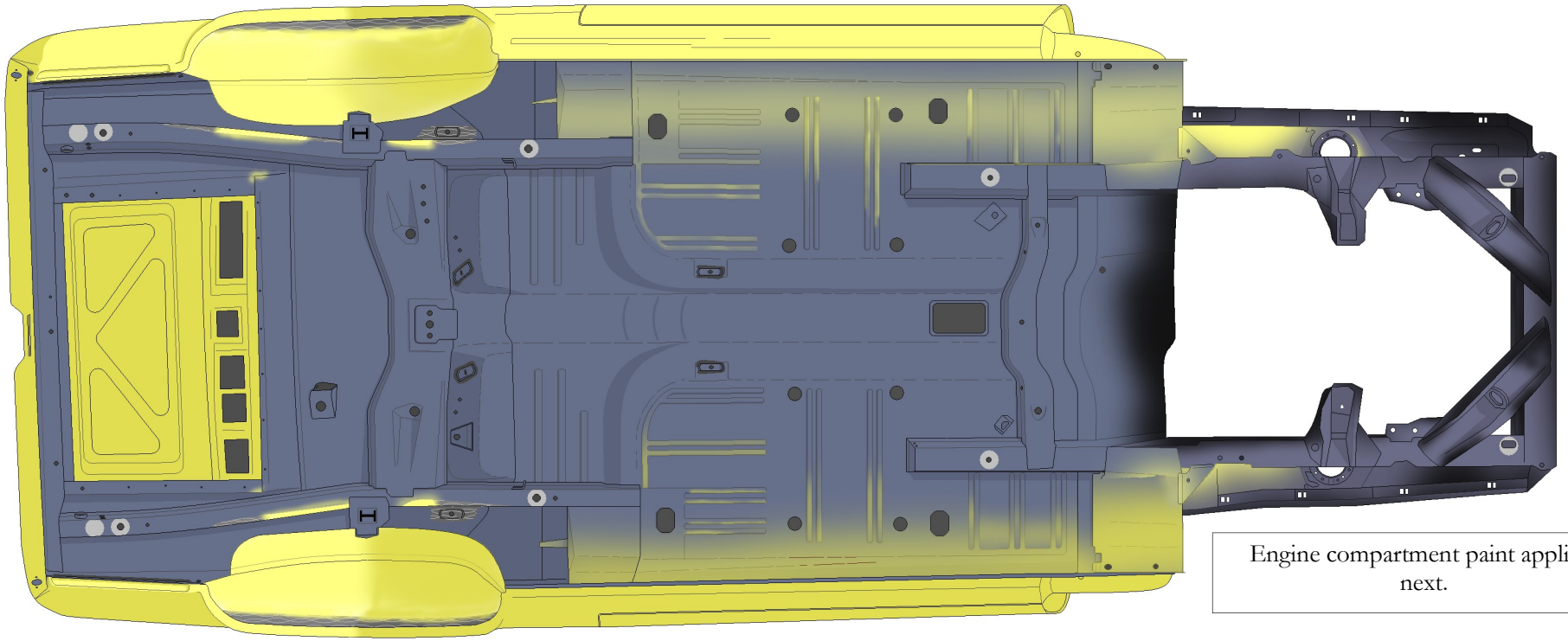
Product was sprayed from below the body from a pit so splatter, overspray and application should reflect this.





Body color is applied, producing overspray over the floor pans with more/better coverage nearer the rocker panel and on surfaces vertical to the spray gun. Front frame rails from torque box rearward, for example.

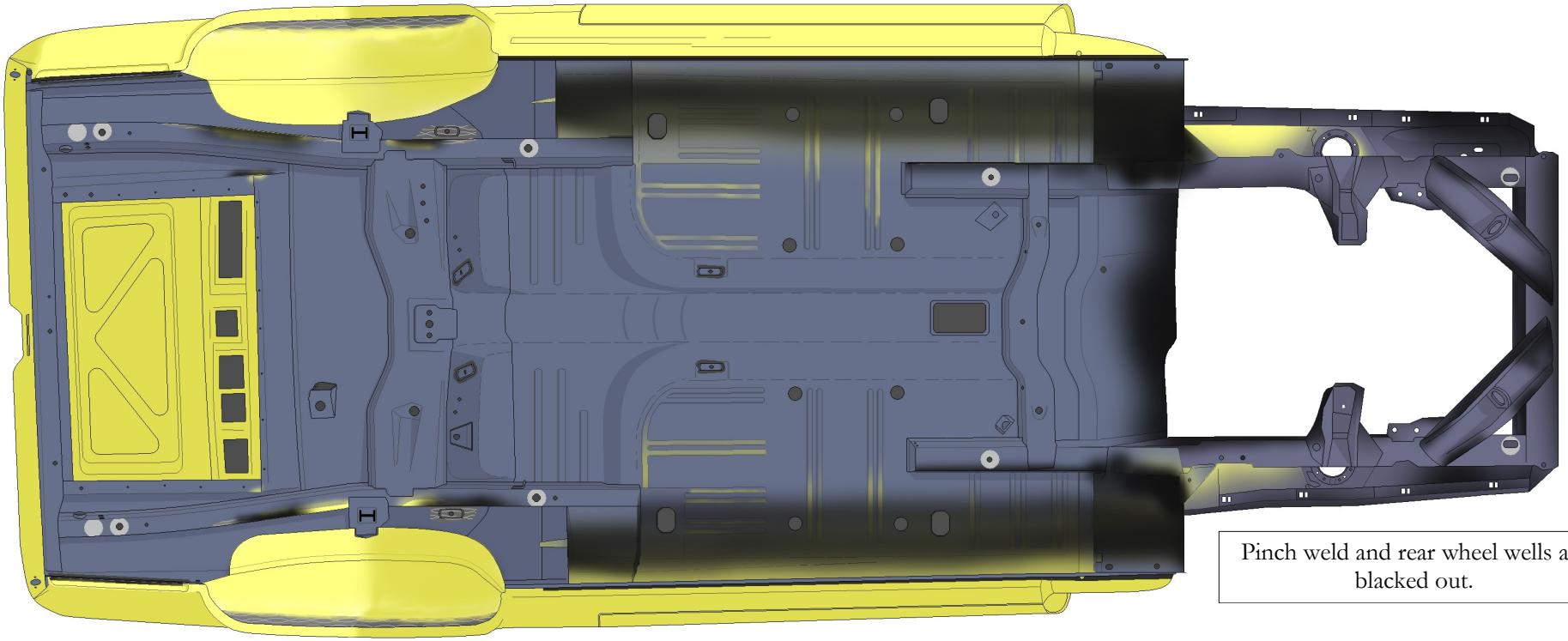
The complete rear wheel well was covered normally with a nice coat of exterior paint as a result of the painter passing a flowing spray gun over the opening as he painted the quarter panel and wheel lip. The paint applied over the sound deadener held up poorly over the years but the pictures give an indication of how nice the paint and the amount was by looking at the frame rails in original examples. In the two pictures above the body color has worn off of the top layer of the sound deadener from driving the car. You can see body color over sound deadener and panel exposed to the painting of the rear wheel well in each of the pictures above .



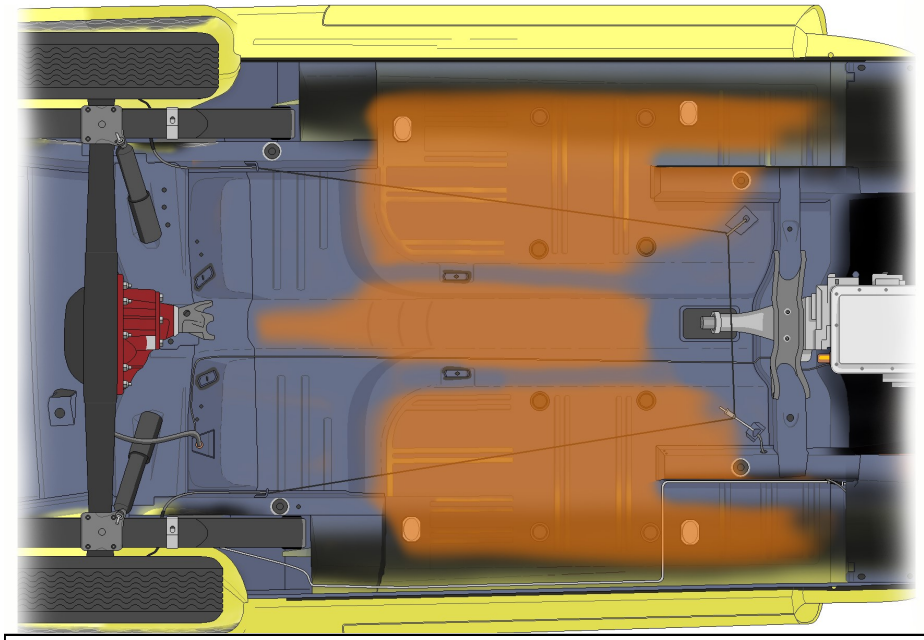
Engine compartment paint applied next.

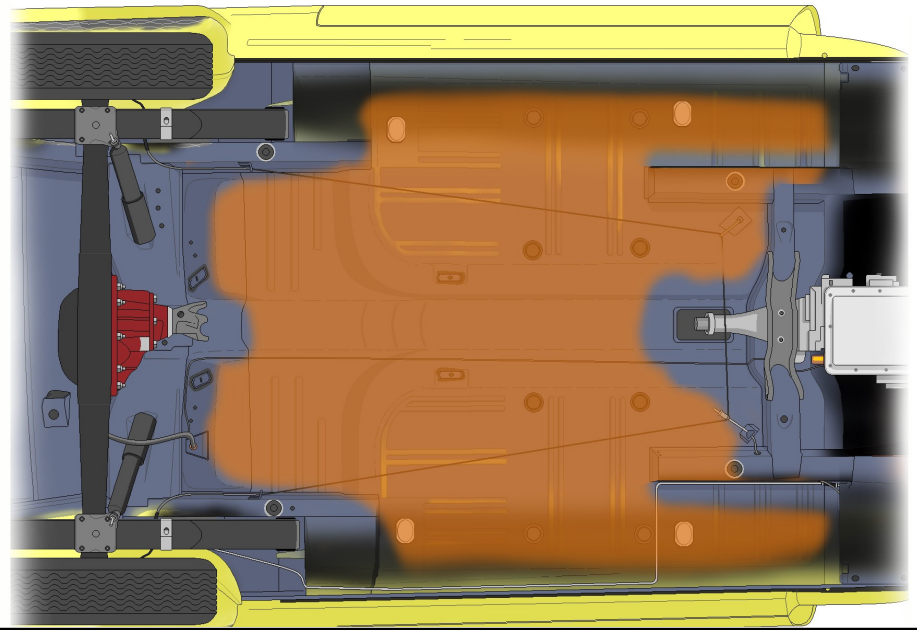
Transition from batch color of the floor/undercarriage to front primer sealer color, then to engine compartment black over both. Heavier at the top and fading away in this area.

And no that's not a factory speedo cable anchor hardware.



Pinch weld and rear wheel wells are blacked out.

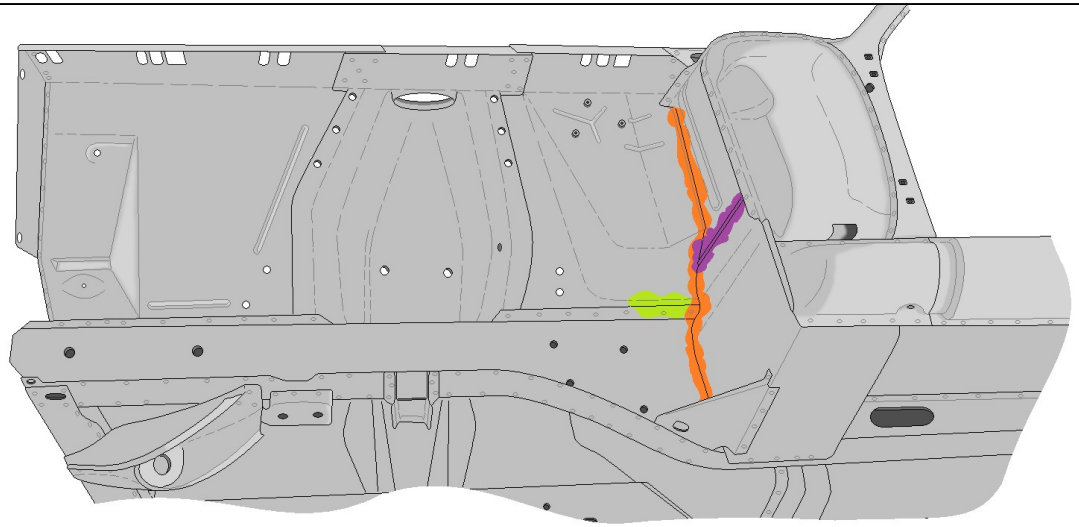




Grande, many Boss 302's, Mach I and Shelby Note: Once fuel line brake lines, rear suspension, engine and trans (basically everything under the car except the exhaust and driveline) the floor sound deadener was applied. (shown in orange for contrast purposes) We've found both the light (left above) and heavier/larger (right above) application on 70 Dearborn cars. Sound deadener patterns show in the rusty red/brown in illustrations above.

Since these items were installed shadows were created as sound deadener was applied over some (example would be brake & fuel lines and emergency brake cables.

Front Wheel Well: Though not really part of the undercarriage though I would include some details since its somewhat related and often prepped and painted at the same time. Over the bare steel an area of the front wheel well was sealed along the seam where the firewall panel is attached to the front toque box surface and the junction between those two panels and the rear inner fender panel and the frame rail joints. This was typically a heavy spray application of sealer similar to what we often find around the rear bumper support brackets attached to the trunk floors and taillight panel Sealant could often be as thick as a half inch in the deepest cross section. Location shown in the illustration below and in the pictures of original examples at the bottom of this page. Take notice that applications could be a little (minimal vertical at torque box) or allot (along all of the shown seams).



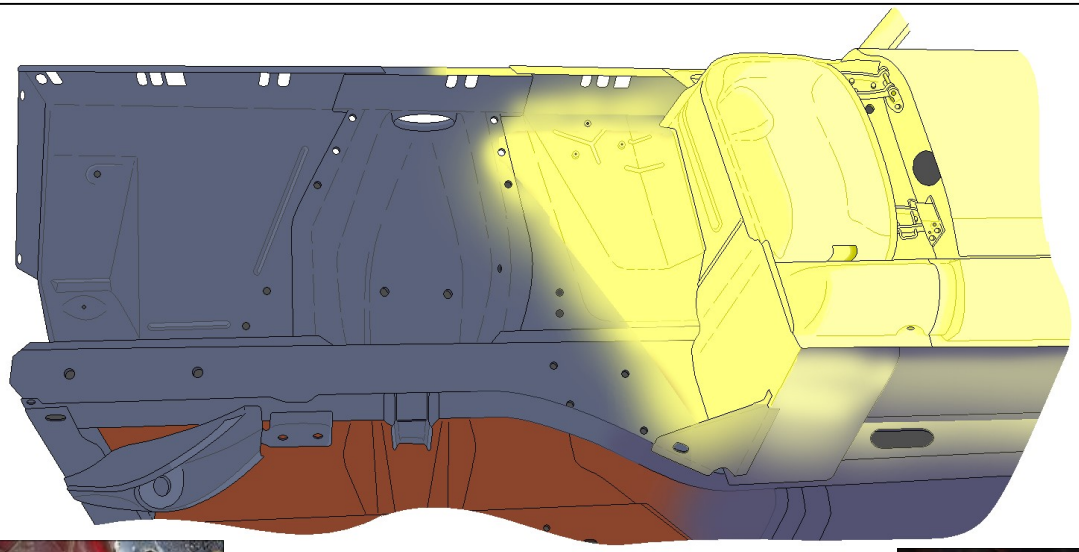
NOTE: The front wheel well details differ in some ways on Boss 429's so owners/restorers of those cars should seek out those details for their restorations.

In the picture above the area covered with the spray on sealant is highlighted.

In the example above the worker the sealer only over the horizontal seam but used allot of product.

In the example above the worker applied the sealer to a larger area and number of seams in the area.

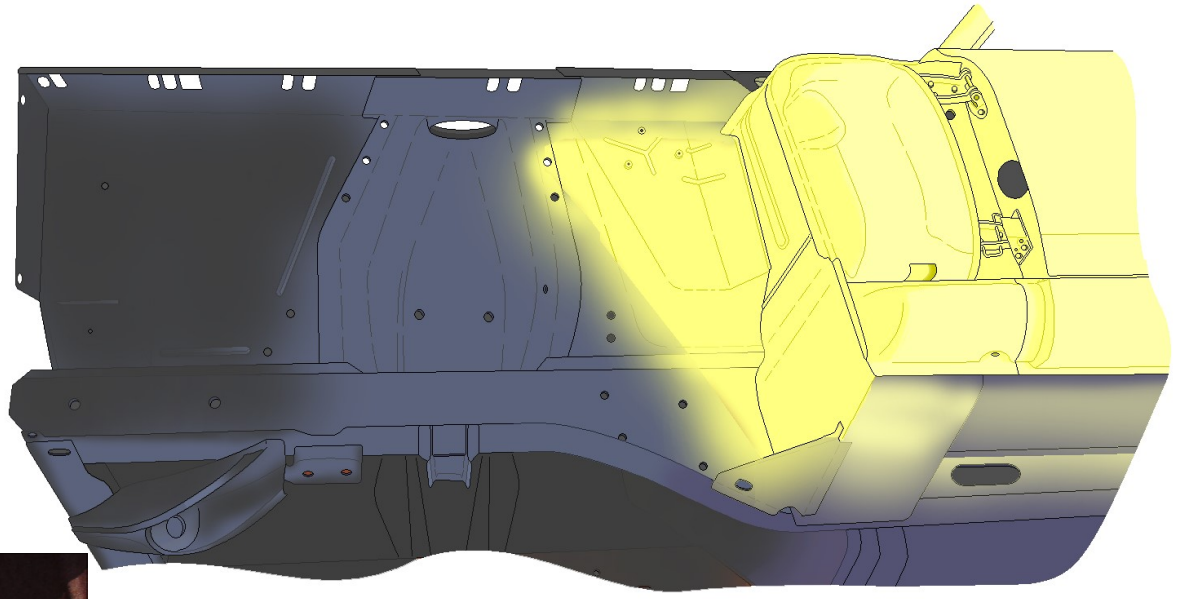
Front Wheel Well Painting: The paint/primer that was used on the bottom of the frame rails, firewall forward, is typically found applied on the wheel side of the inner fender panels as well as the firewall section visible in the front wheel well. During the body color application it was normal that the painter applied body color to at least the rear edge of the shock tower area, angling down and rearward with his passes with the spray gun. In many cases the paint was applied further forward into the shock tower area or even further forward. The amount of coverage and where each stopped and started depended on what the painter wanted to do that moment it appears. Patterns appear to be unrelated so far to body type or month of production.



Example of the typical minimal body color forward application

A Red 70 Dearborn Example; Rear of the car is to the left of the picture. Take notice that in this example the red exterior color was applied forward to the shock tower. Overspray continues in the shock tower and batch color is seen on the forward inner fender panel in the upper right hand corner of the picture.

Grabber Blue 70 Dearborn Example: In this example the amount of body color application is much greater (further forward) than the example on the left. Plus the contrast between the Grabber Blue and the batch color is not as noticeable .

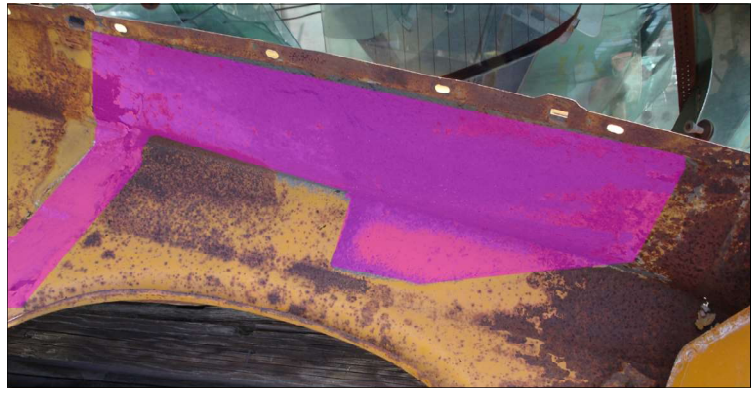


Front Wheel Well: When the engine compartment black was applied to the inner fender panels (engine side and upper lip), firewall (extending up over the cowl to the windshield opening and the radiator support (front and rear surface) it was typical that the black paint, either from a heavy overspray or direct application, would get applied to the wheel side surface of the inner fender panels in front of the shock tower or either side as well as a dusting below the fender lip of the inner fender panel. This fine overspray is often washed/scrubbed away during cleaning of the original surfaces. The extent and how far reward the black extended varied allot as did the exterior paint forward.

Front Wheel Well Sound Deadener: Once the car was assembled, but prior to the installation of the front wheels and tires sound deadener was applied, from below the vehicle, on the inner fender panels (in front and behind the shock towers) , the firewall section in the wheel well, over the front and rear splash panels/ shields as well as the bottom surface of the front fenders. Typically the amount of area covered could be anywhere between a little/minimal (left set of pictures) or allot (right hand set of pictures). Sound deadener was applied by a worker in a pit below the body as it passed over head. The spray pattern will reflect this location and angles it produced.

In these two pictures of the back side of a passenger side fender the worker applying the sound deadener appears to have made a long vertical arch in an attempt to seal the splash shield to the fender and deaden the tinny sound of a uncoated fender.

The picture to the left shows the bottom of a 1970 Dearborn painted fender showing the extent of sound deadener applied. Notice the shadows produced by it being installed at time of application. In some examples more of the surface was covered while others have less. In other examples (right) a minimum effort was done. Pattern highlighted in the picture below.



Additional Points and Comments

Backside of Rear Valance: In an attempt to soften the drone or hum that can sometimes be produced by sheet metal a small amount of sealer was applied by spray onto the forward surface (facing the rear cross member) of the rear valance approximately over each location where the exhaust pipes would exit below on a dual exhaust car. The location was approximately center between the lower edge and the upper mounting lip and applied prior to being installed on the vehicle. Diameter of the product was approximately four to six inches in diameter as illustrated in the picture to the right. Passenger side shown in picture.