

*Mike & Pat Markin's 1938 Graham*

***SHARK***



***START HERE***



***FINISH HERE***



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## *The Concept*

I have always had an affinity for pre-war fat fender cars. So when I decided to build a street rod, it came natural to choose one from the mid-to-late thirties. In my mind, that was the start of the creative design stage of the automotive industry. In my desire to find the “right” car for the project I wanted to focus on a unique American car built with a flare of art deco.

There were many manufacturers building art deco styled cars from which to choose. Some of my favorite styles were the Lincoln Zephyrs, Chrysler Air Flows, and the Cord. Ford and Chevrolet did their part, as well, and have been popular with rodders for quite some time. Nevertheless, I wanted something truly unique and oozing with art deco styling. I found the 1938 Graham Model 97, introduced by Graham-Paige with the slogan “Spirit of Motion”, to be the focus of this project. The Graham did not catch on with the American consumer due to its radical styling surrounding the front of the car. The public later nick named it the "Sharknose Graham", due to its slant nose and front pan.

Between 1938 and its end in 1940, the Graham was available in a 4 door sedan and a 2 door sedan (1939 only). A coupe and a convertible were planned, but never went into production. Had a coupe been put into production, I think it would be a hit with rodders today.

In building the Shark, I wanted to retain some of the unique stock designs, most notably the peaked front window, the bulbous fenders, the headlights, and the tail lights. While the '38 had well-defined lines that gave the car its sense of motion and heavy deco themes, the unpopular car had room for improvement. I wanted a coupe and since there was no coupe to work with, I decided to design and craft one from a sedan. In redesigning the car it was important that the sense of motion and flow of the car be maintained. Elegant as it may be, it had to look smooth and seductively hungry, like a Shark.

As you read through this book, I believe you will come to appreciate the redesign of this truly unique automobile and its rebirth as a custom car unlike anything on the scene today. Thank you and enjoy!

**Thanks** - This magnificent project was challenging and exhilarating. It has to be one of the biggest things I have ever done in my life for fun. Along the way, I had help from many people. However, none of this would have been possible without the support of my wife, Pat. She has had a hand in the car all along with her insights, ideas, prodding, and serving as a dynamic sounding board. She even let me go over budget - just a little. Thank you. Thank you. Thank you!



# Shark Build Team

**The build team was a collaboration of efforts by a number of independents that came together to build this great car.**

## **Creation:**

Mike Markin - Owner

## **Transformation Fabrication:**

T. Lewis

Tony O'Meara - O'Meara's Customs, LLC

Donn McFarlane

Wayne Brixen

Corey Warren

## **Mechanical\Chassis\Engine:**

Donn McFarlane

Wayne Brixen

Mike Yanke

## **Electrical:**

Pat Newville - Northland Transmission

## **Body, Paint, Fitment:**

L'Cars Automotive Specialists:

Wayne Reeves

Jens Knutzen

Blaine Downer

And the rest of the L'Cars team

Tony O'Meara - O'Meara's Customs, LLC

## **Interior:**

L'Cars Automotive Specialists: John Olson

Blaine Downer

## **Check Writing:**

Mike Markin

**A special thanks to all of those who helped us along the way!**

Jimmy Smith - Artist - Brought my ideas to life.

Greening & Company - Grille, Third brake Light, Exterior and Interior trim, Steering Wheel, Shifter Knob

Advanced Plating - Chrome

Gary Dubois, Jr. - Polishing and Plating

Kris Knutson - Headlight Engineering, Dash Knobs, Deck Lid Hinges, Shifter Boot Ring

Midtown Transmission - 700 R4

EVOD Industries - One-off Wheels

Hot Rods and Custom Stuff - Louvers

Kugel Components - IFS, IRS, Under-dash Master Brake and Booster System

Heart Throb Exhaust - One-off Exhaust System

Bob Kries - Machined a lot of great parts and components.

Paul Her - Logo and Display Design

Mark 7 - Custom Radiator

MotorHead Jewelry - Emblems

Classic Instruments - Instrument Gauges

Murray Pfaff - Display Graphics

## **TABLE OF CONTENTS WITH NOTED MODIFICATIONS**

### ***1 Coupe Top Creation***

- Eliminated running boards
- Removed 26” from the roof
- Eliminated the bustle trunk
- Eliminated the rear doors and the C pillar
- Built new rockers
- Redesigned B pillars with expanded support structure
- Channeled the car 4 inches
- Eliminated original drip rail
- Added a faux drip rail with a newly created reveal
- Frenched modified tail lights into reveal

### ***2 Doors***

- Eliminated rear doors
- Stretched front doors 4 inches
- Converted to suicide doors and hinges
- Rebuilt A pillar to accommodate suicide door latches
- Reshaped and laid the back of the doors forward
- Add to and shaped the lower doors to roll under the rockers
- Added thickness to the doors for a flush fit inside for interior
- Deleted the vent windows
- Power windows
- Shaved doors and electric popper/lock
- Electrical wiring hidden in the hinge system

### ***3 Deck Lid***

- Eliminated bustle trunk
- Created a custom deck lid using a '37 Chevy lid
- One-off hinges
- One-off hinge operated actuator system

### ***4 Rear Fenders***

- Eliminated fender skirts
- Shortened the lower portion of fenders due to running board elimination
- Scalloped the rear openings
- Added 2” of height at mid-fender to accommodate larger wheels and tires

- Boxed in fenders eliminated the inner fender braces
- Welded fenders to body

### ***5 Quarter Panels***

- One-off panels made for the restyled coupe

### ***6 Rear Pan***

- Eliminated the rear bumper
- One-off fade away rear pan with scalloped exhaust ports

### ***7 Tubs***

- Tubs were widened and heightened to accommodate new wheels and tires

### ***8 Front Fenders***

- Eliminated the front bumper
- Shortened to reflect running board deletion
- Scalloped back the wheel opening – matches rear fender
- Welded vertical fender seam below the head lights
- Boxed the rear of the fenders for support and appearance
- Restyled the inner fender to blend with the new engine compartment
- Boxed the face of the fender with an access panel for the headlights

### ***9 Frame***

- One-off custom made and modified boxed frame

### ***10 Suspension System and Differential***

- Custom IFS – Power Rack & Pinion
- Power Brakes with 13” polished Drill/Slotted Rotors with 6 Piston Calipers
- Under dash 90-degree Brake Booster and Master Brake Cylinder
- Custom 9” IRS - POSI - 3.70 gears - Drilled/Slotted Rotors

### ***11 Exhaust***

- One-off polished SS pipes with custom mufflers
- One-off exhaust tips
- Hidden couplers

### ***12 Body Mounts***

- Sculpted body mounts

### ***13 Floors***

- Handmade floors for cab and trunk
- Handmade transmission tunnel

### ***14 Cowl and Firewall***

- Recessed, scalloped, and styled to a peak
- Removed cowl vent
- Reinforced cowl sides to accommodate hood mounts
- Hidden firewall ports for engine harness and plug wires running from hidden coil packs
- Hidden port for fuel lines

### ***15 Radiator and Core Support***

- One-off aluminum radiator; electric fan & transmission cooler
- One-off support mounts replicate body mount styling

### ***16 Hood Side Panels and Inner Fender Panels***

- Restyled engine bay coordinated with cowl and firewall redesigned to create continuous eye travel around the engine bay
  - Inner fenders flush with fire wall recession
  - Swooping inside ledge along hood sides
  - A/C hoses disappear into right hood side
  - Hidden brake lines and electrical tunnels hidden in hood sides
- Hood sides rounded to match bulbous features of the front fenders
- Radiator overflow tank added

### ***17 Front Pan***

- Replaced pan's 16 vertical slots with 6 mirror imaged double louvers
- Scalloped and rolled back the bottom line of the pan and front fenders
- Boxed pan for strength and to house electronics, horn, and A/C components
- Welded pan to front fenders creating a front clip

### ***18 Hood***

- Restyled – eliminated original horizontal grille bars
- Pancaked hood
- Re-engineered inner support structure
- Modified original hood mounting system
- One-off prop rod

### ***19 Shark Nose Job***

- Redesigned one-off aluminum grille and mast head trim
  - Reshaped vertical center bar from straight to curved
  - Retained original concept with 3 main horizontal bars
  - Replaced 9 small horizontal bars with 21 narrow bars
  - Replaced original masthead with a continuous flow trim piece ending at a point at the cowl

### ***20 Head Lights and Bezels – Re-engineered***

- Retained original glass
- Modified buckets to accommodate 12V system with hidden directional lights and modern halogen headlights
- Eliminated original 6 piece headlight bezels with redesigned one piece bezels
  - Bezels mirror the bulbous roll of the fenders and hood sides
  - Bezels were frenched into the fenders

### ***21 Exterior Trim***

- Discarded original trim and redesigned new trim congruent with the redesigned grille, mast head, and belt line.

### ***22 Tail Lights and Third Brake Light***

- Reveal added to car to augment the art deco design and to enable the tail lights to be Frenched into the reveal
- Original tail lights were modified
  - Inside fascia was shortened and thinned
  - Re-engineered bulb access by eliminating the screw on the cover plate
  - Stock glass retained and polished



## ***22 Tail Lights and Third Brake Light Continued***

- One-off third brake light designed to match trim and design
- Lens and base were created with 3D printing

## ***23 Wheels and Tires***

- One-off 18" Chrome wheels with Shark logo in center caps
- Alternating spokes
- Bridgestone Potenza Tires

## ***24 Engine and Transmission***

- Dart Aluminum Big Block Chevy 540 – Polished
- Big Brodie Heads - Polished
- Atomic EFI with hidden distributor
- Temperature sending unit relocated to a frost plug
- Chrome valve covers, intake, oil pan, tranny cover
- Chrome serpentine system
- Polished Stainless Steel Ram Headers
- Hidden breather system
- Power Steering pump and overflow tank
- Vintage Air A/C System
- 700 R4 Transmission;
- Polished aluminum drive shaft
- Lokar shifter with one-off shifter knob

## ***25 Air Cleaner***

- One-off air cleaner designed to capture the fenders and hood of the car

## ***26 Inside Cab***

- Handmade firewall and package tray
- One-off battery hold down
- One-off stainless steel gas tank with built in electronic pump

## ***27 Hidden Internals and Electrical***

- Wiring beveled into suicide hinges
- A/C venting through waterfall
- A/C lines disappear into hood side
- Distributor coil pack under dash running through firewall
- Front electrical lines run through cowl and hood sides
- Blue tooth music system under passenger seat;
- Brake lines through cab and hood side panels

- Custom 12 volt system
- Cell phone/FOB access:
  - Remote Start
  - Doors Open/Close
  - Trunk Open/Close
  - GPS Tracking
  - Remote battery disconnect
  - Blue-tooth hidden music system
- Hidden access to center console control panel

## ***28 Steering Wheel***

- One-off steering wheel with working horn button
- Pre-69 GM column

## ***29 Dash and Gauges***

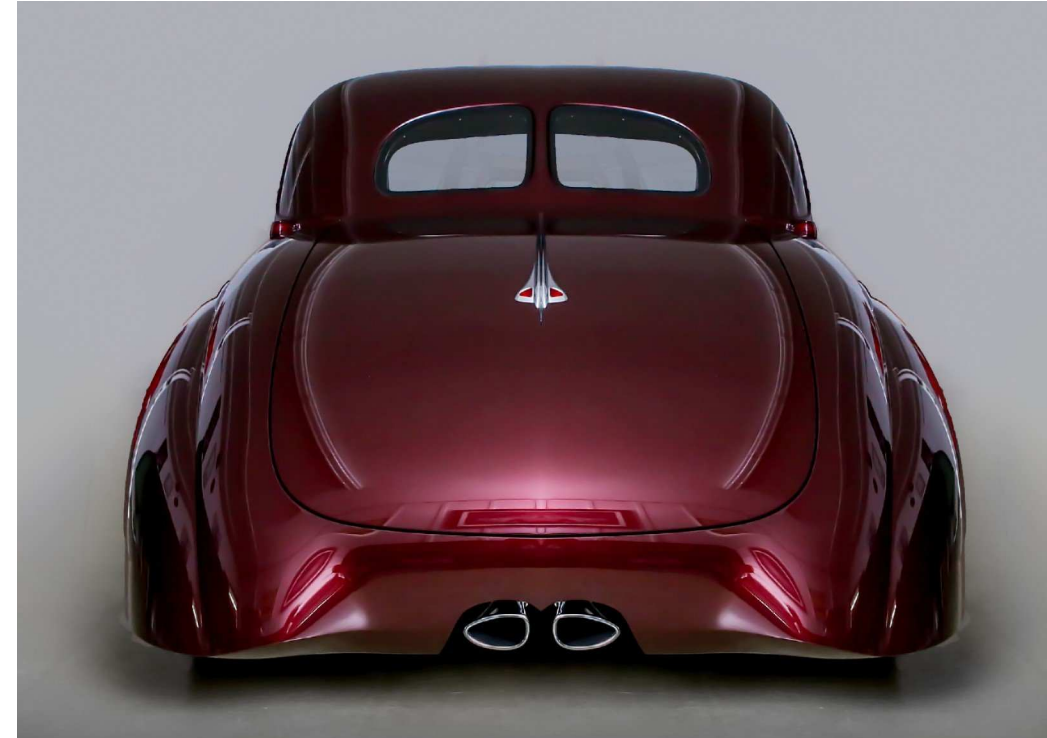
- Heavily modified 1937 Lincoln-Zephyr dash and 1938 waterfall
  - Eliminated glove boxes and ash trays
  - Added one-off steering column bracket
  - Waterfall widened 3/8" and shortened 3"
  - Waterfall radio speaker cage converted to A/C vent for both driver and passenger
- 1937 Gauges restyled with tachometer built into the Speedo
- 1957 Corvette modified rearview mirror base with 1940 Packard mirror
- One-off knobs
- One off dash trim

## ***30 Interior - Customized art deco theme***

- Custom front leather bucket seats with '37 Zephyr tucks
- Deleted back seats
- Custom console
  - Actuator driven access to center console controls
  - Hidden access to open/close the actuator
- Aluminum, leather covered headliner
- Resized garnish moldings
- One off interior trim
- Under dash closed off
- Rear firewall panels
- Unique door panels reflecting fender styling of the car
- One-off tear drop shifter boot ring

### ***30 Interior - Customized art deco theme - Continued***

- Aluminum, leather covered headliner
- Resized garnish moldings
- One off interior trim
- Under dash closed off
- Rear firewall panels
- Unique door panels reflecting fender styling of the car
- One-off tear drop shifter boot ring
- Hidden music system
- Trunk
  - Hidden gas tank port – actuator driven
  - One-off deck lid actuator system
  - Hidden fuse panels
- Styled aluminum trunk panels covered in leather



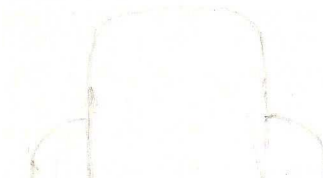
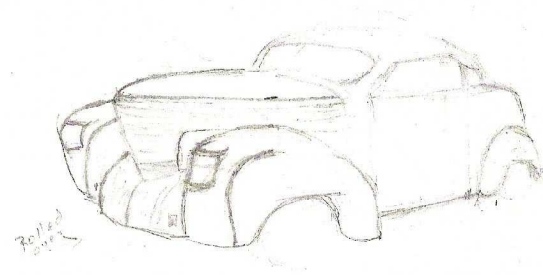
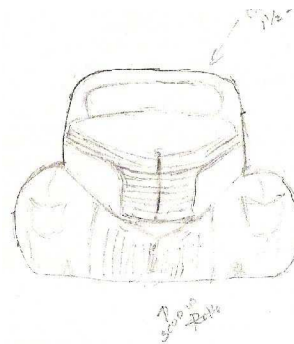
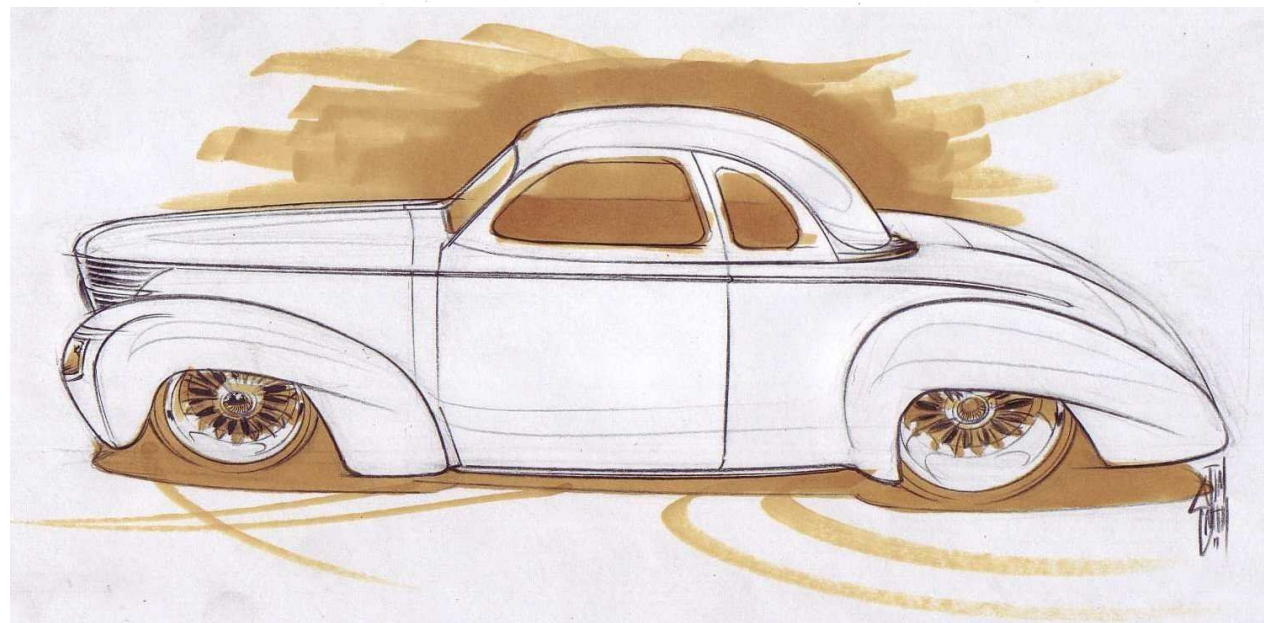
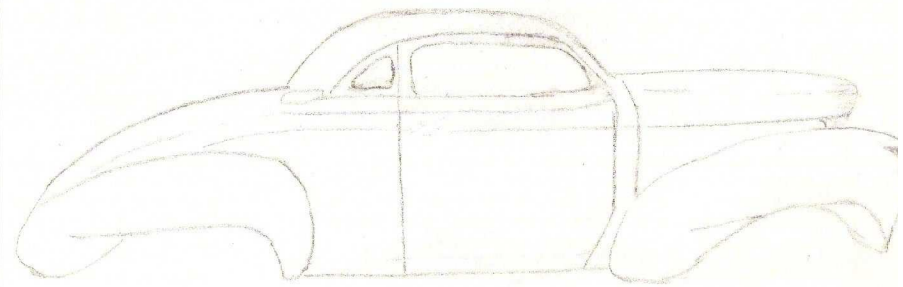
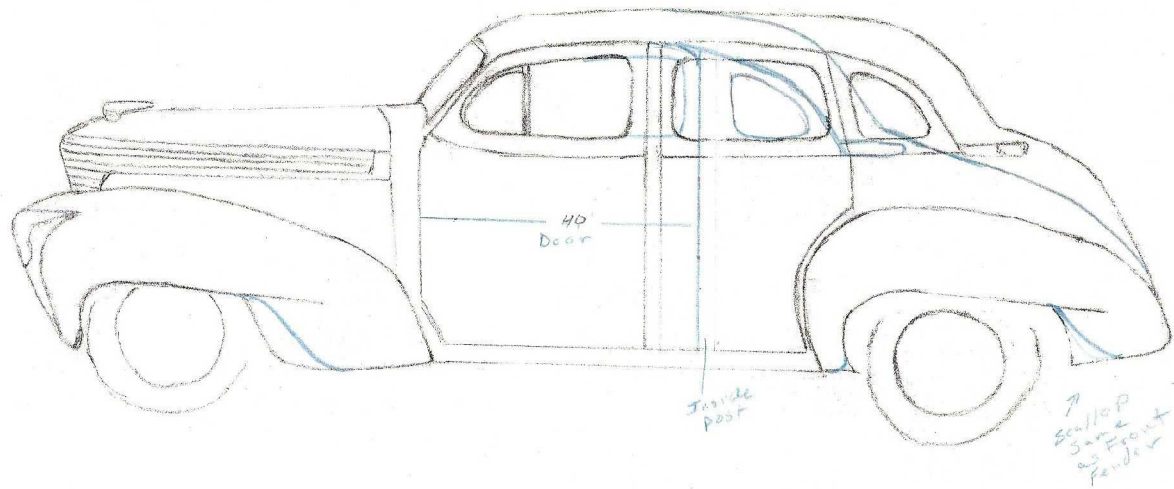
This 1938 Graham became the focus of this project. I found it in a listing on the Graham Owners website. The Shark resided in southern California oozing with potential and looking for a chance to get its game on once again.

Look at that nose!

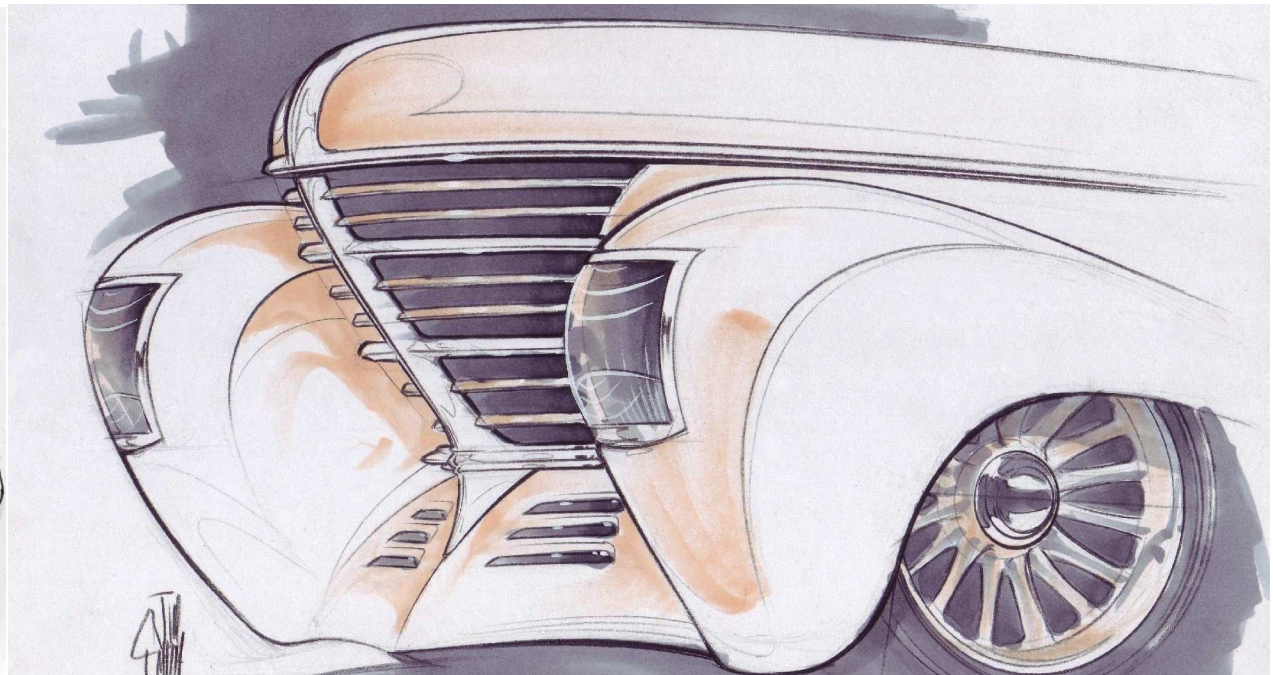
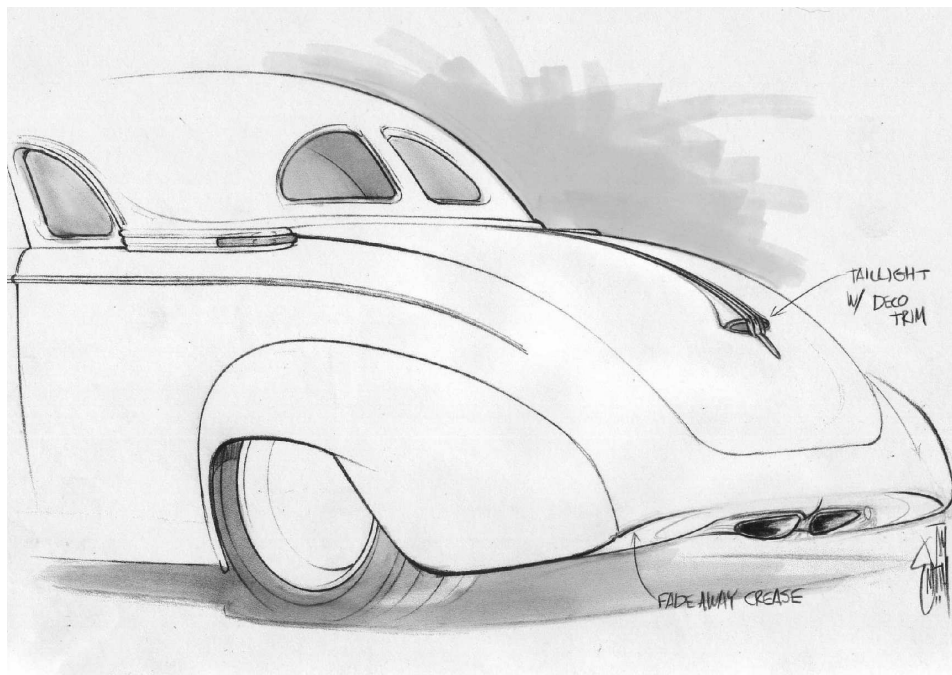


Now that we have a really cool car to work with, we needed to put my vision of its transformation on paper so everyone involved can see the dream. Check out the next page. My crude drawings were brought to life by artist, Jimmy Smith, who added some great ideas.



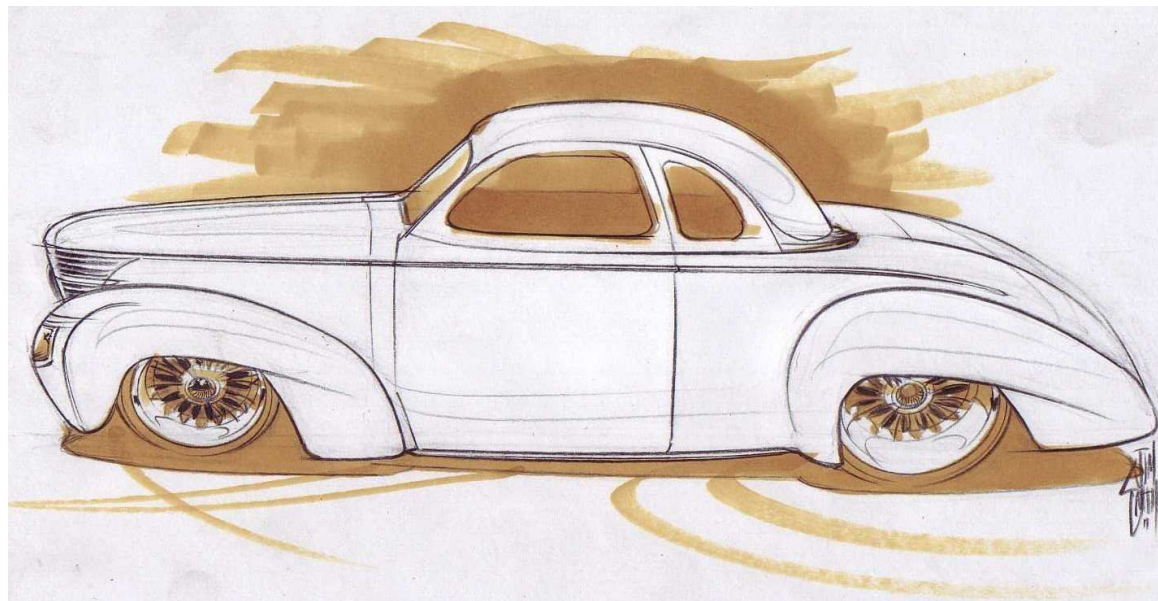


Jimmy Smith helped me take an idea and bring it to life on paper. Our build team took it from there!

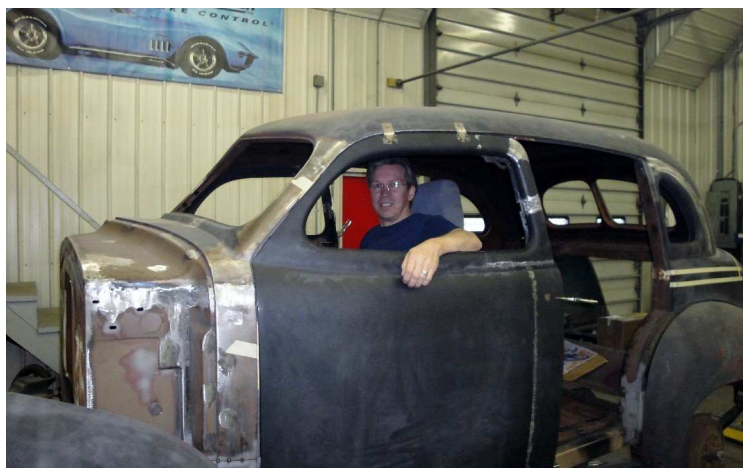
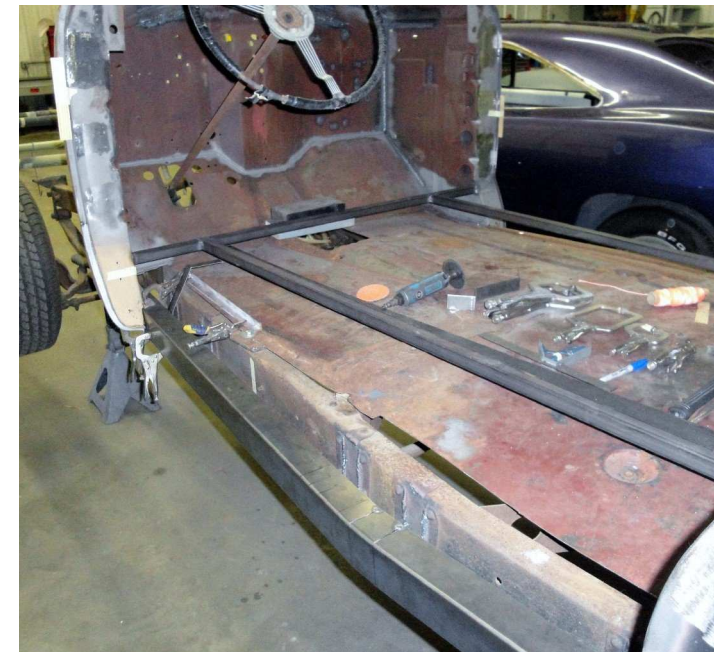


# 1

## *Coupe Top Creation*



Before the sedan was converted into a coupe we had to take care of a couple things. First, the front doors were stretched 4 inches and reshaped (Chapter 2). New rocker panels were built to help maintain the car's shape and to accommodate the performance of the 540 big block engine.



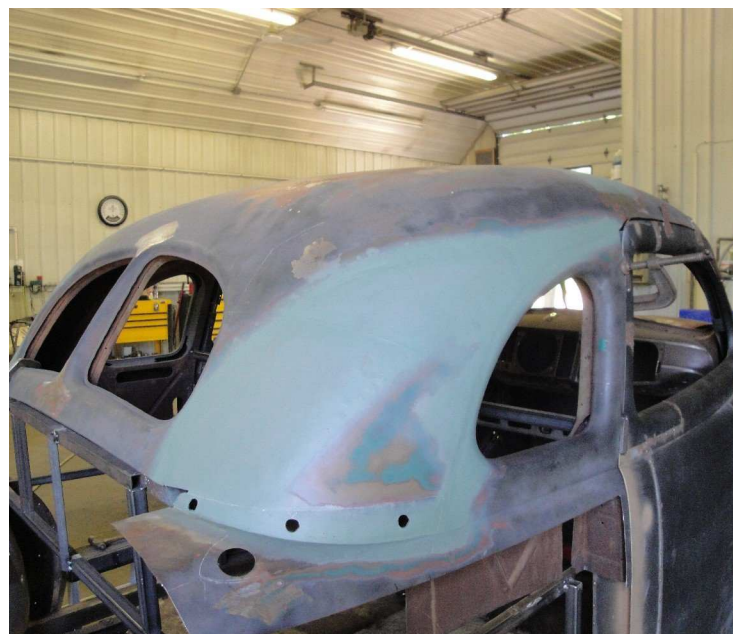
Can't wait to get this baby on the road!

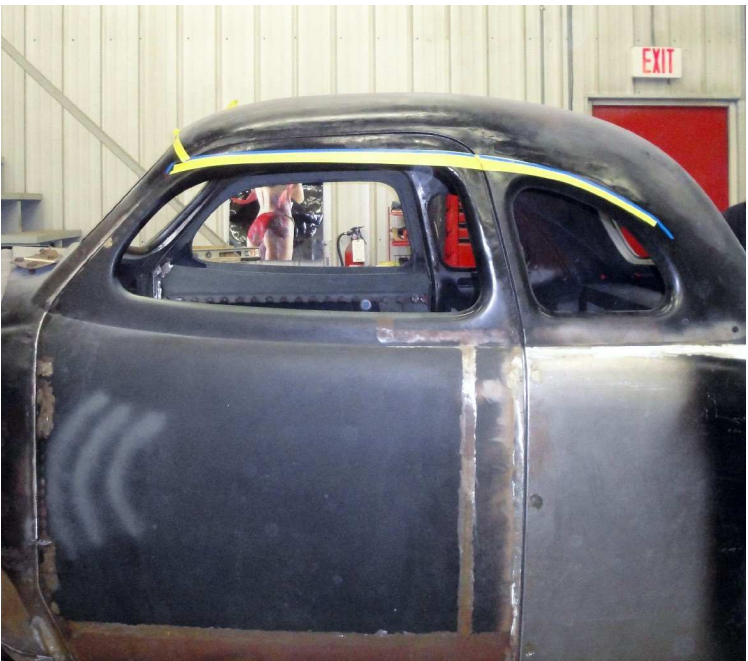
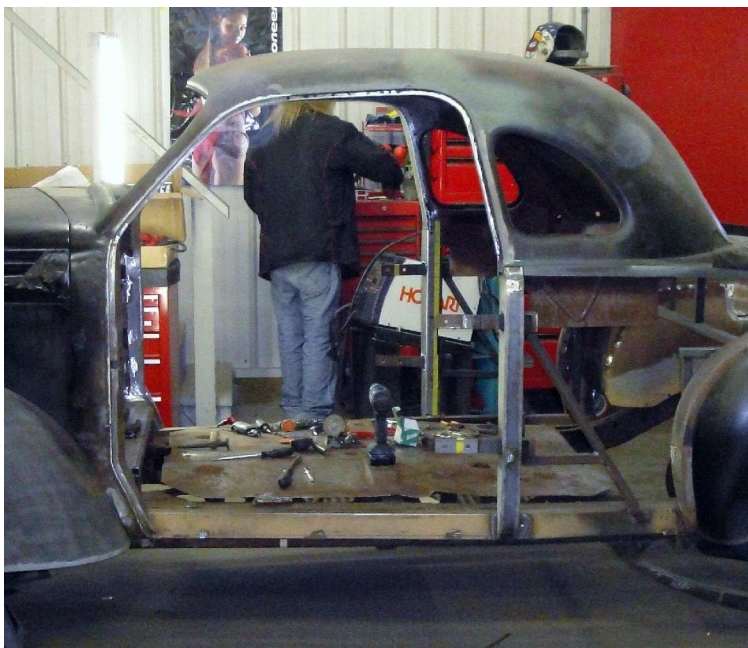


Careful measurements were laid down before cutting the roof and removing a 26" section. We moved the rear of the roof forward giving our first look at the future coupe. Notice that we need to build new B pillars.

Left: Since the center of the body is wider than the rear, pie cuts were made on each side to widen the rear of the roof to fit properly.

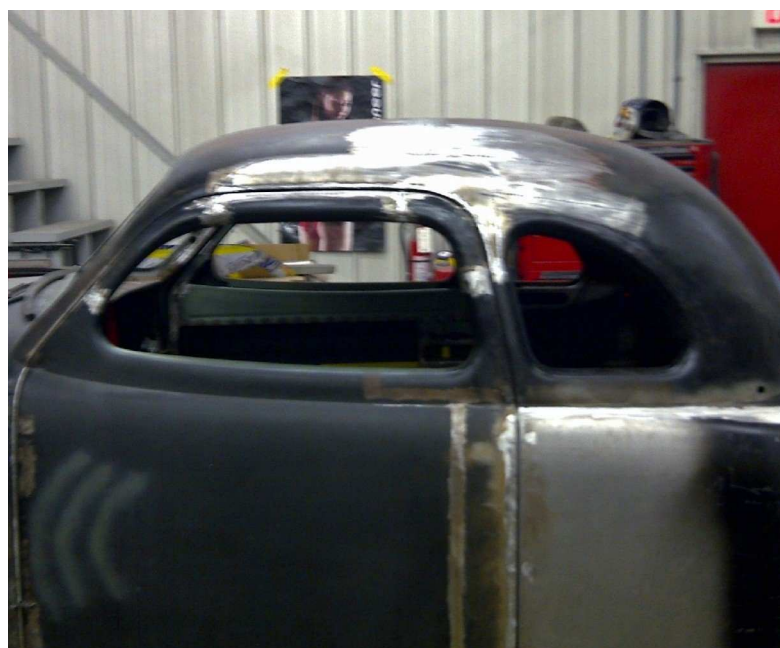
Below: Relief cuts were made to mate up the two sections of roof.





Once we had the coupe top in place it was apparent that the doors needed to lay back and the roof needed more roll down over the sides. The doors and window openings were chopped and straightened to the B pillar side. The roof was opened, relief cuts made, material added and reshaped.





Next, we added a faux drip rail that flows back into a newly designed fade away reveal, reminiscent of the period. The stock tail light was shortened, shaved, and frenched nicely into the reveal continuing the lines of the car.

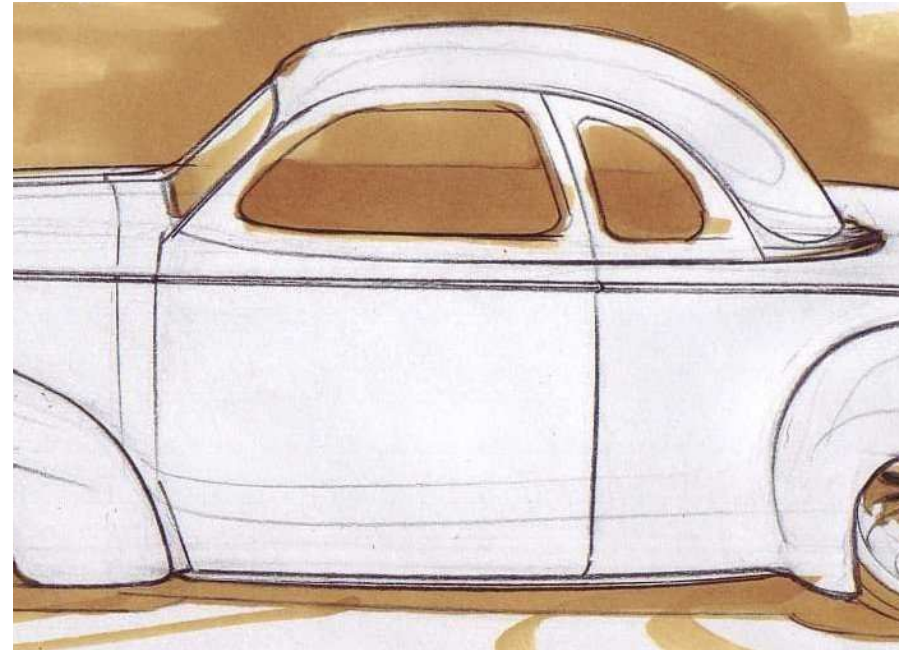
Now we have a new coupe to build on!





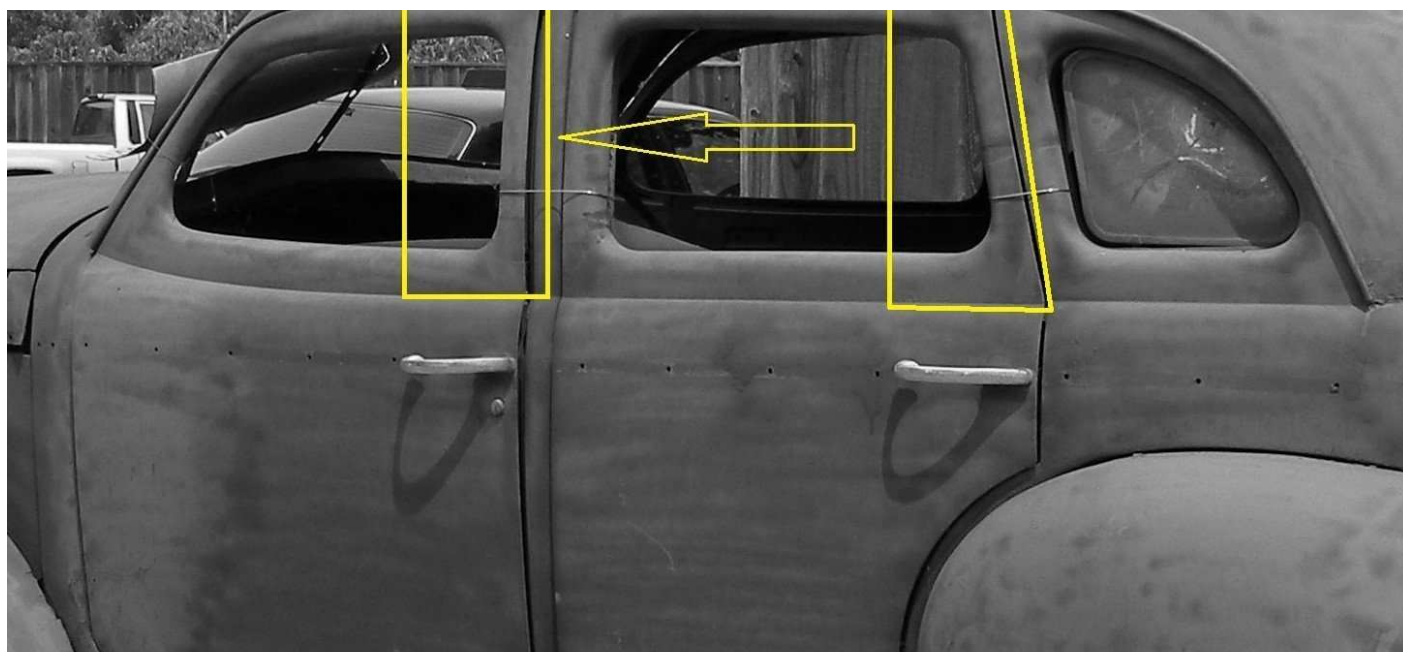
# 2

## Doors



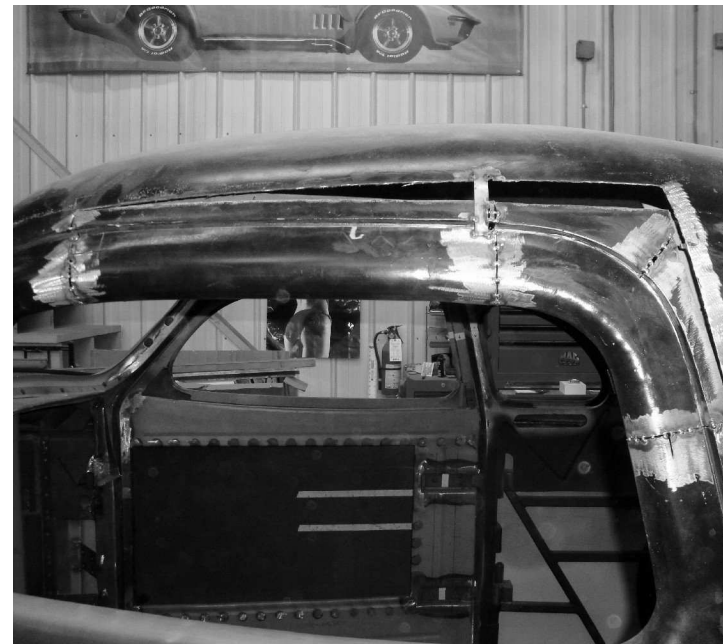
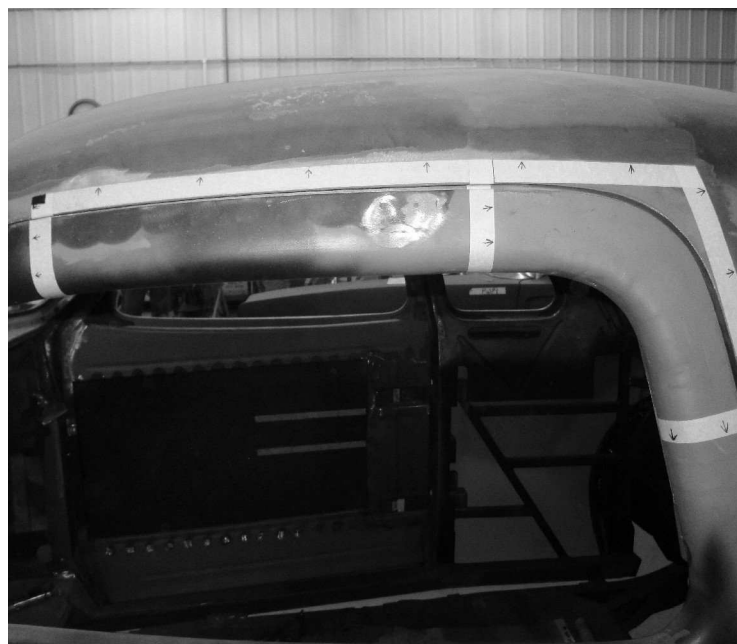
The creation of the coupe top required some tricky engineering when it came to the doors. We eliminated the running boards, rear doors, and C pillar.

To keep the opera window, we laid forward the back of the window by cutting a section from the rear door and grafting it into the front as illustrated to the right. We grafted a section of the old C pillar into our new B pillar for the same effect.



We stretched the front doors 4" giving the doors a balanced look on the car.

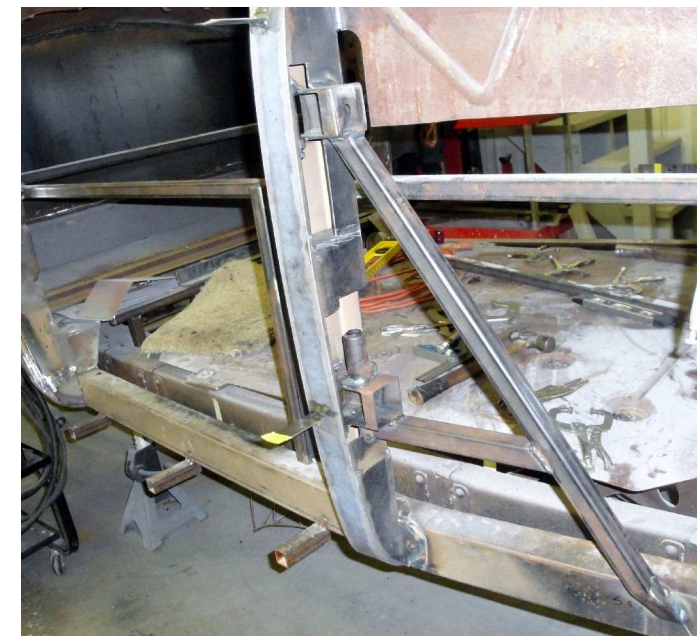
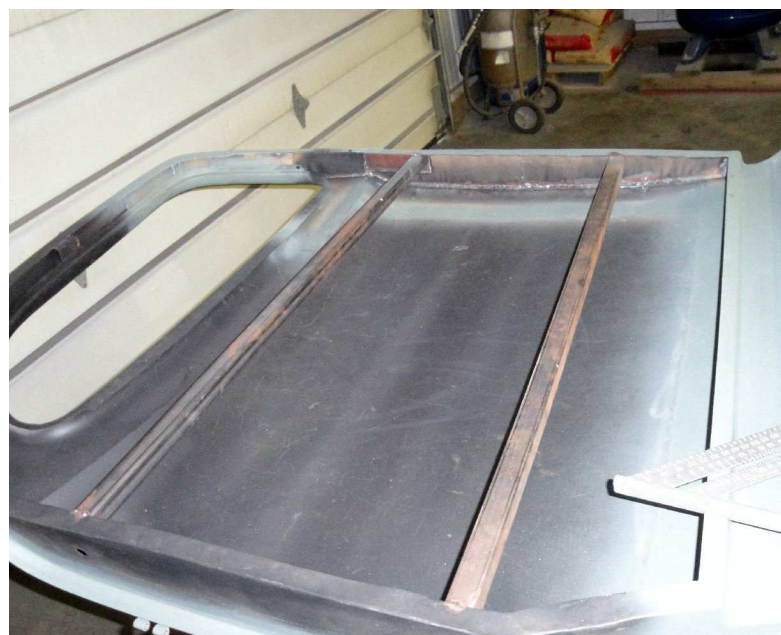


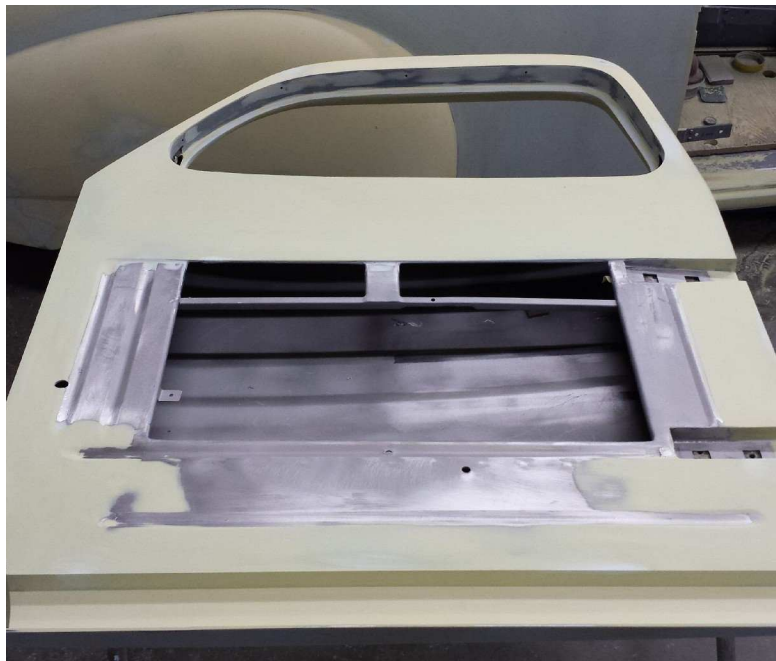


Once the doors and B pillar were in place, it was obvious that the doors rode too high in the coupe roof. Pancaking the upper door structure and laying it inward towards the new roof line solved the problem.

The entire door structure was remade and reshaped. At right, we used 1" tubing to give it strength. We added new material to the door skins and built notches in the bottom of the inner door that fit perfectly to the our new rockers.

The hinge pockets and the reinforced B pillars support the conversion to suicide doors.





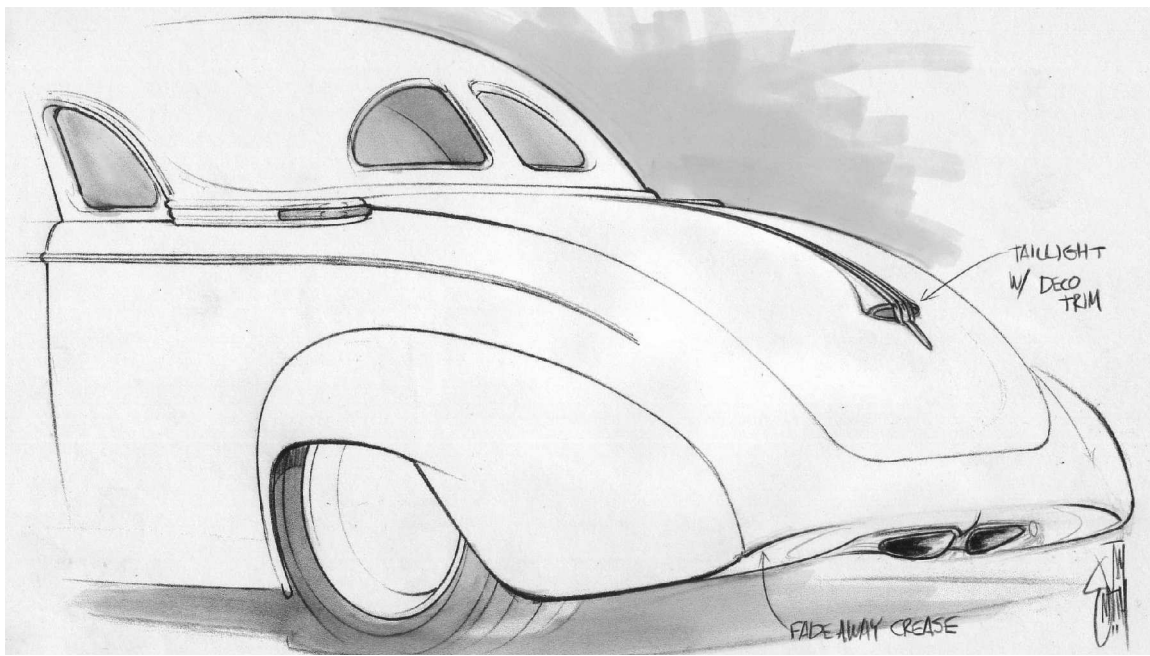
Above you can see the suicide hinges mounted in the reinforced B pillar. The A pillar was reworked with door latches and poppers. The inside of the doors were heavily reworked and finished for interior work.

Final body, paint and fitment brought it together.

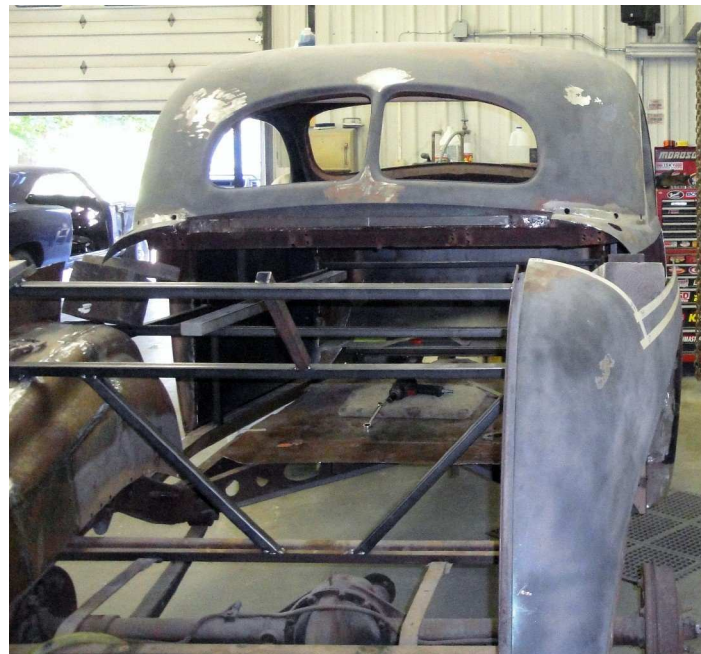


# 3

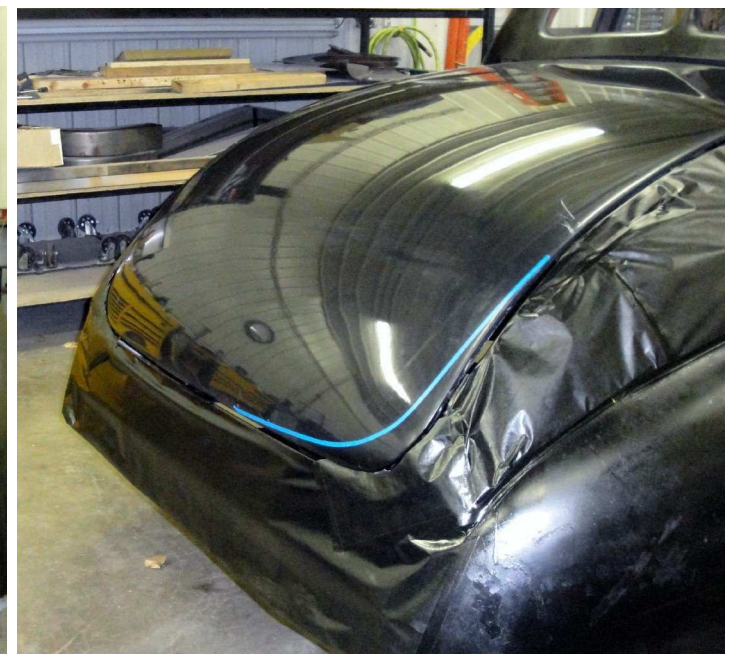
## Deck Lid

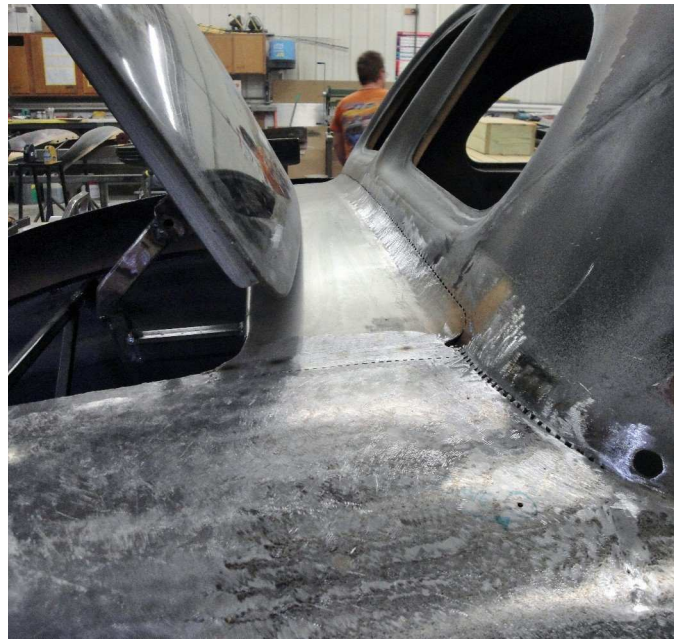
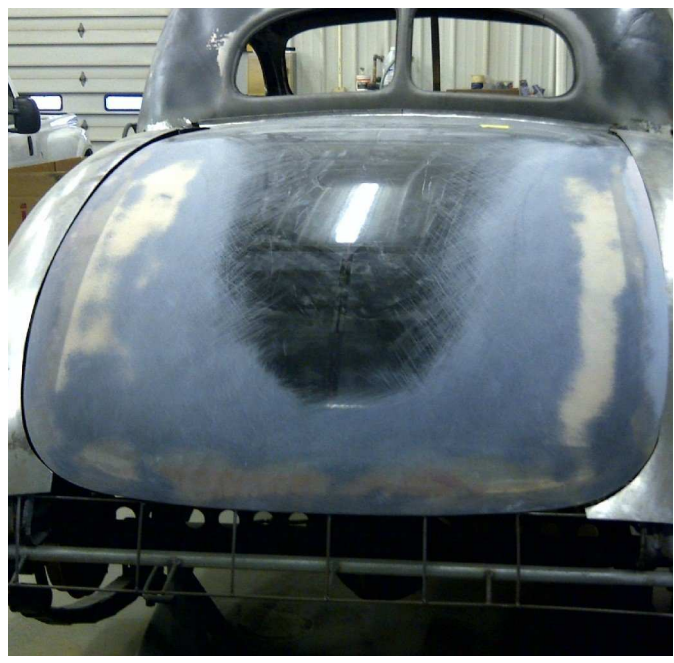
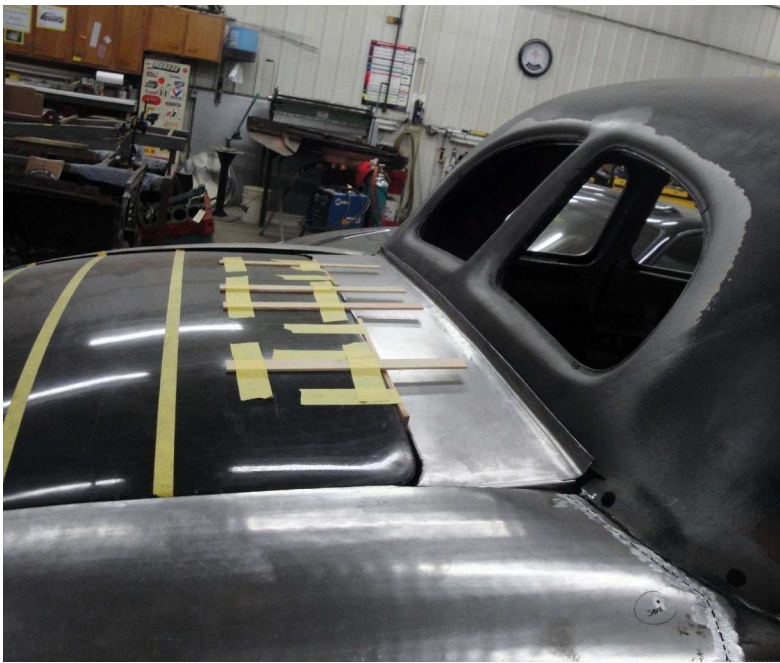


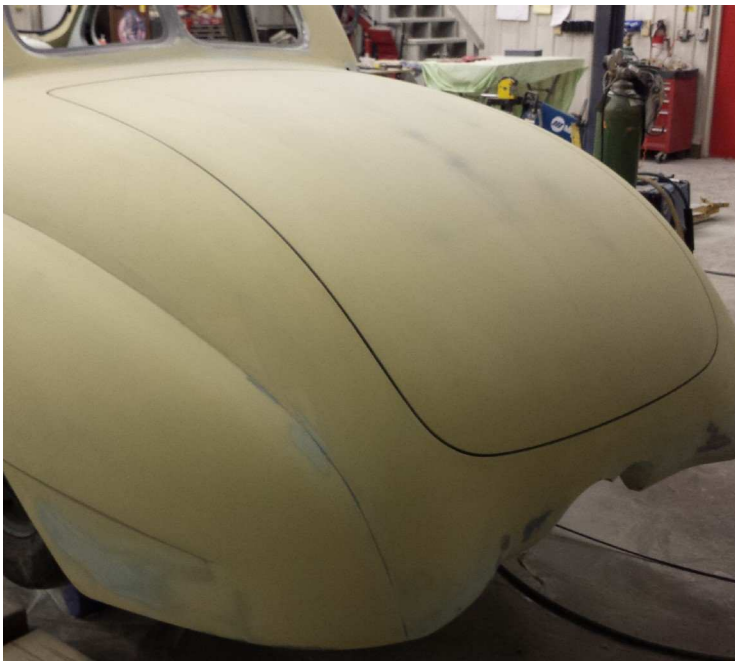
Creating the deck lid required a bit of ingenuity. We needed the right pitch and roll to the back end. Fortunately, we found that heavily modifying a '37 Chevy deck lid gave us a good starting point. We chopped, cropped, spread and shaped it. Then we created an actuator open and closing system coupled with one-off hinges by Knutson Kustoms.



The sides and lower deck lid were trimmed and scalloped as laid out by the blue tape line - far right.

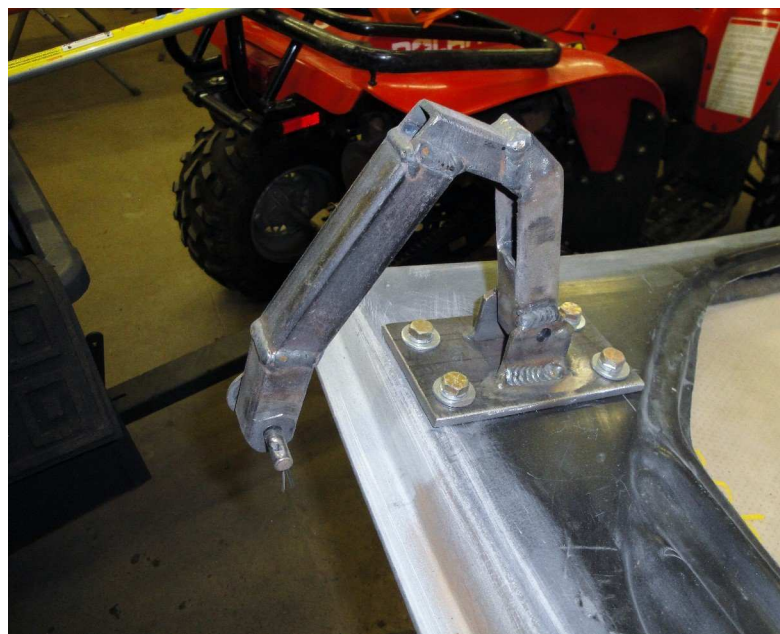


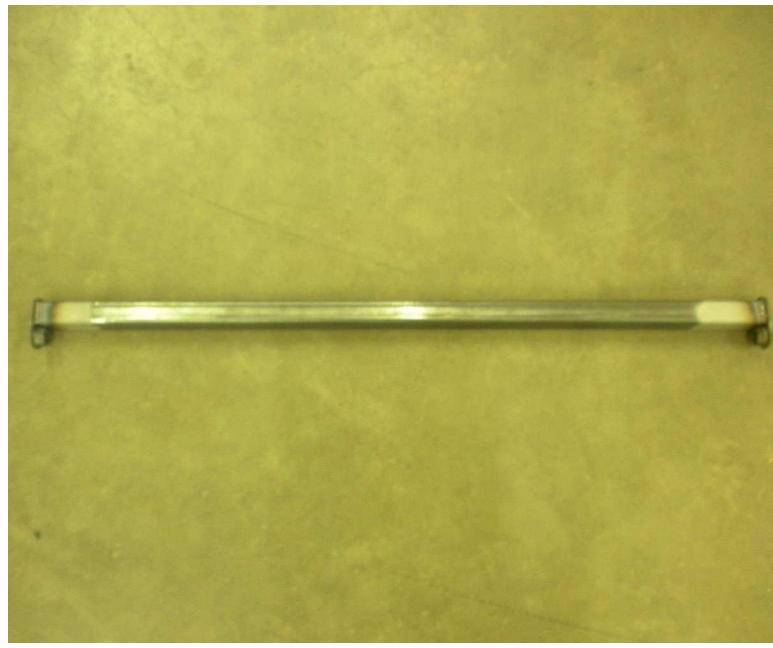




The transformation of the car and base body work took place at Donn McFarlane's shop with some spectacular body and paint work taking place at L'Cars.

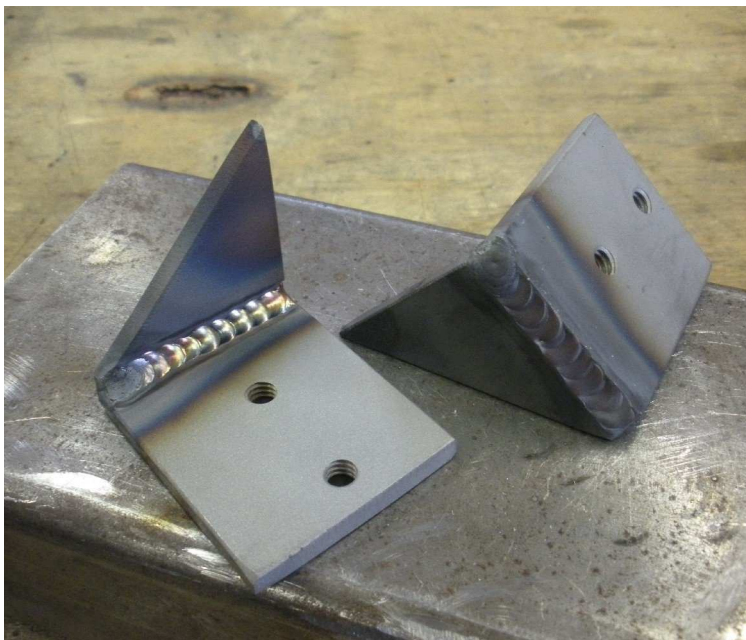
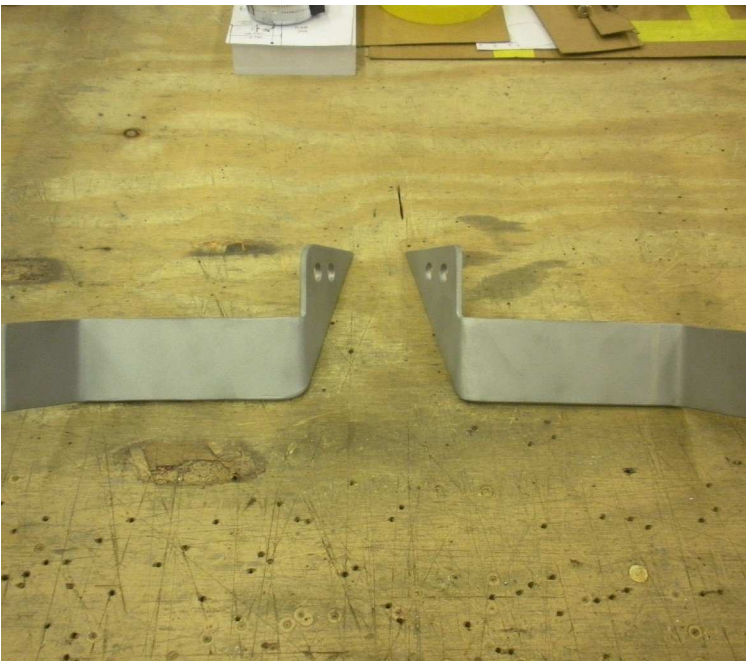
Mock up hinges built by Trent were later designed and machined by Kris Knutson.

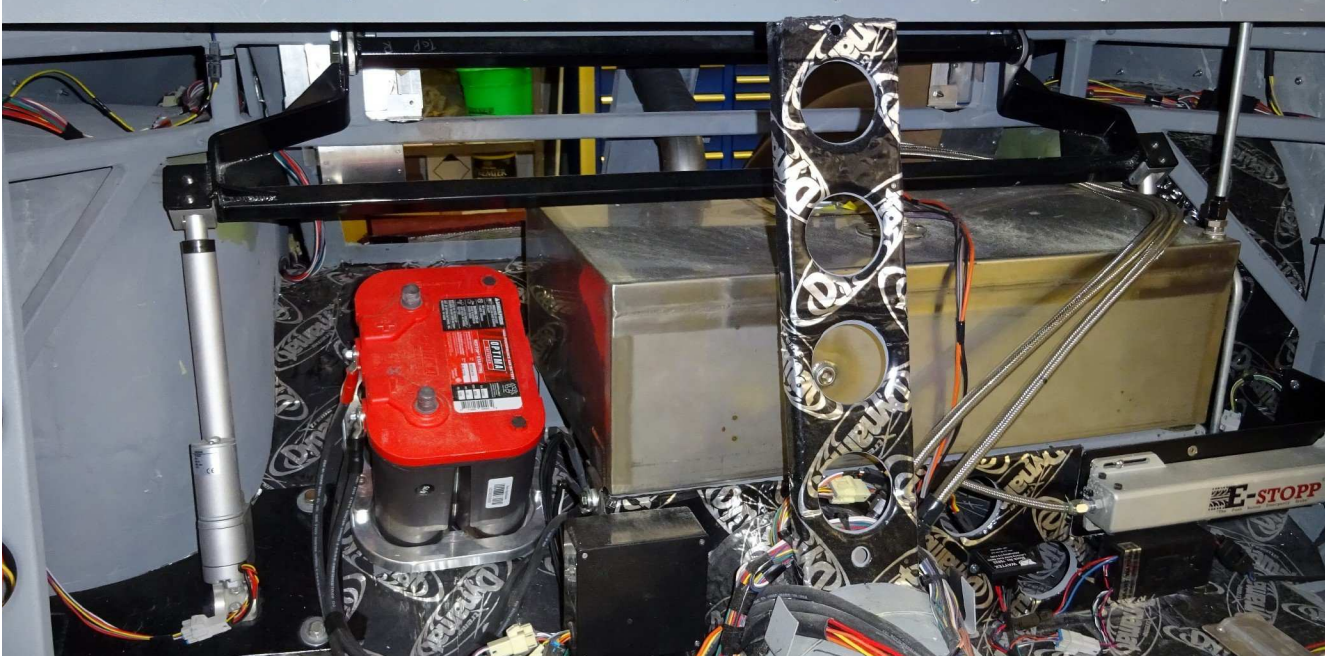
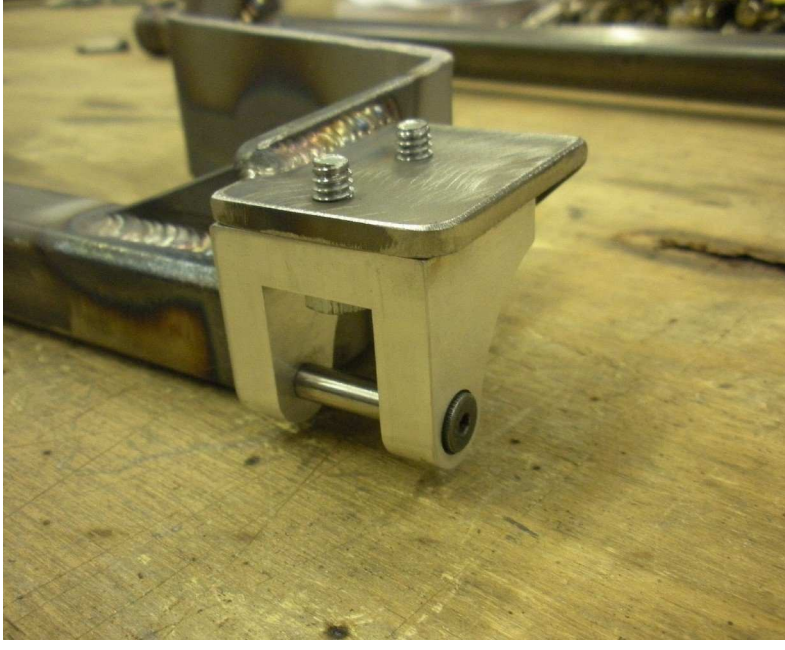




I wanted a deck lid that opened electronically but without bulky arms inside the truck. So we designed one. Our custom actuator system operates off a dual bar cross member. The deck lid is hinged to the cross-member.

Hidden dual actuators work in tandem via a computer and program written by Pat Neville. They lift and lower the deck lid using either a console button, or a fob.

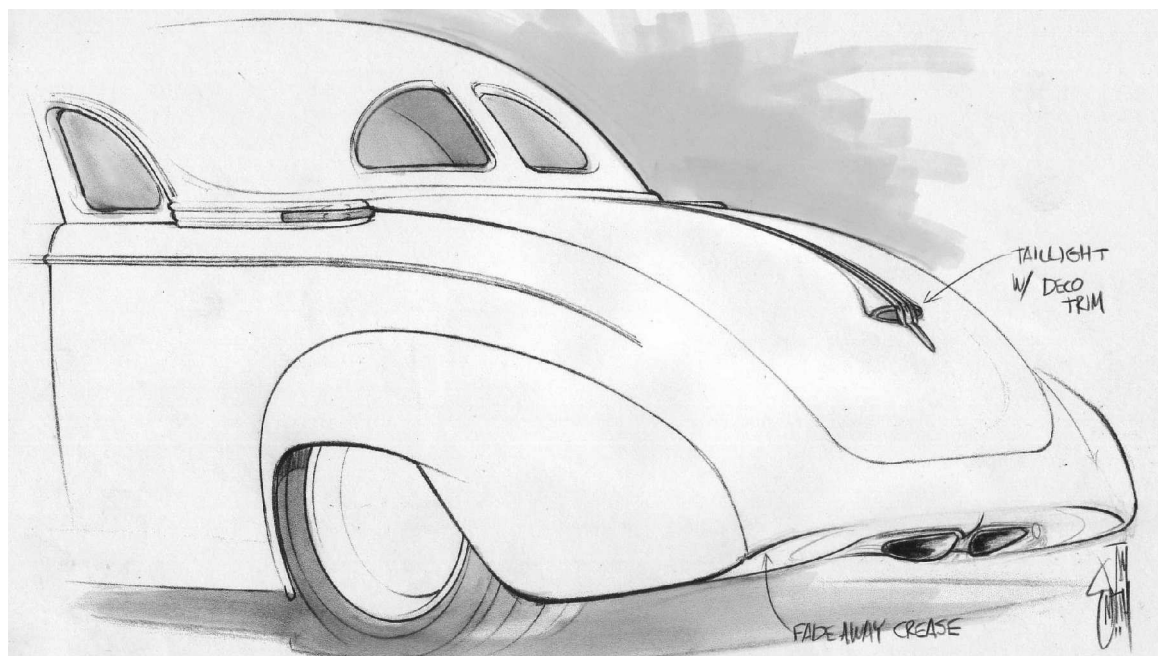






# 4

## Rear Fenders



We eliminated the skirts first. Since we deleted the running boards and channeled the car, the rear fenders were trimmed up as represented by the blue tape line. The back of the fender openings were scalloped to give the car a sense of motion. Finally, the fenders were cut horizontally and heightened 2" to accommodate new wheels and tires.



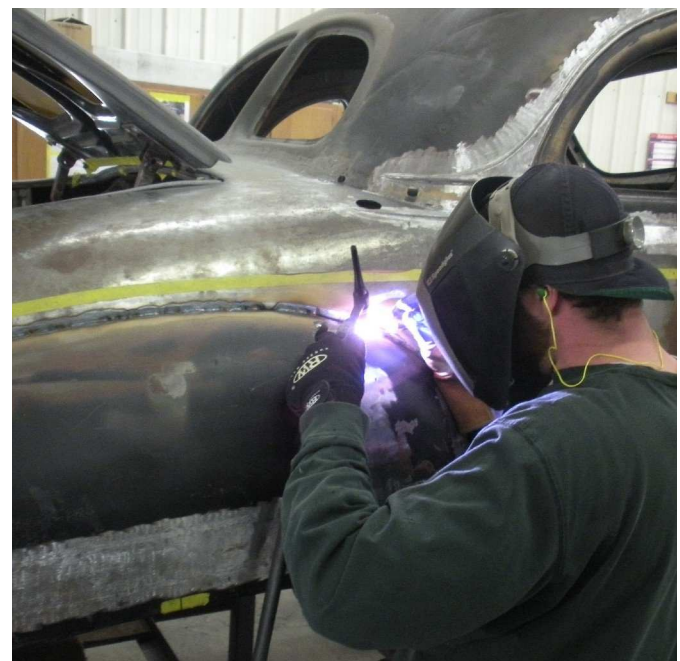
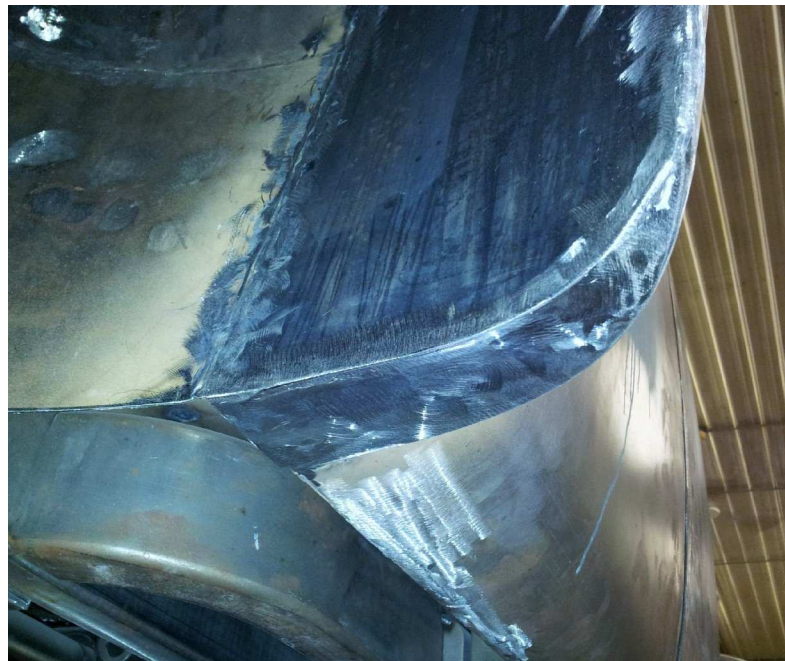
To the far right you can see that we boxed the fenders for strength and styling.



Here we are cutting the rear fenders and adding 2" of height to accommodate those new custom wheels from EVOD Industries.

Above, a tape line was laid across the fender to mark the cut. The tape line above the fender is where we raised the top fender section and heightened the tub area behind the quarter panel.

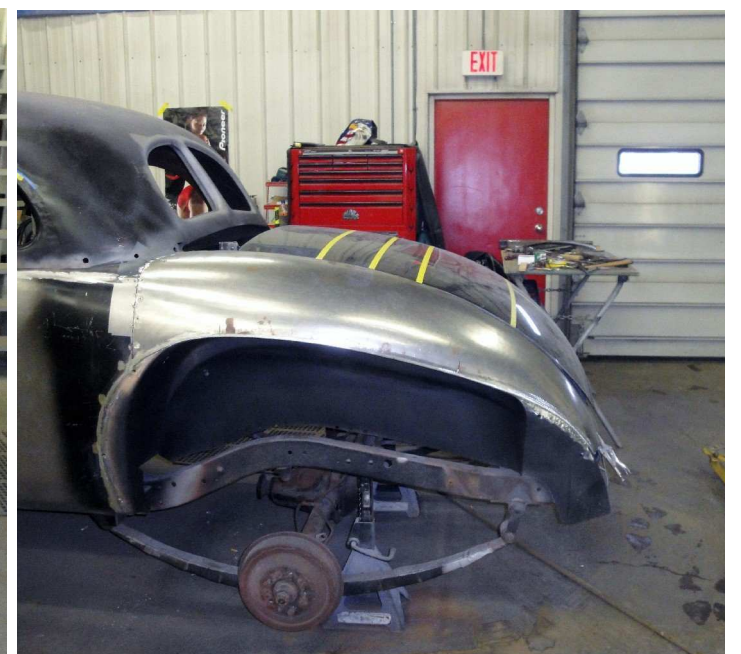
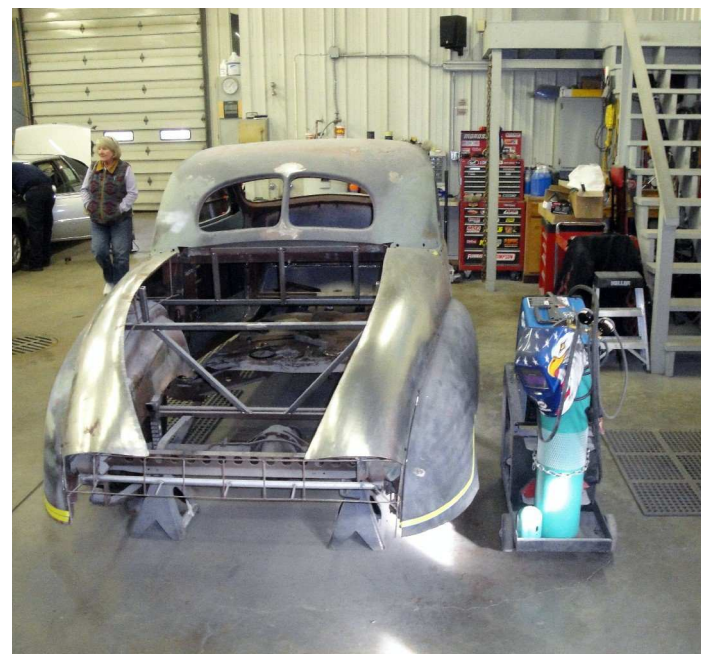
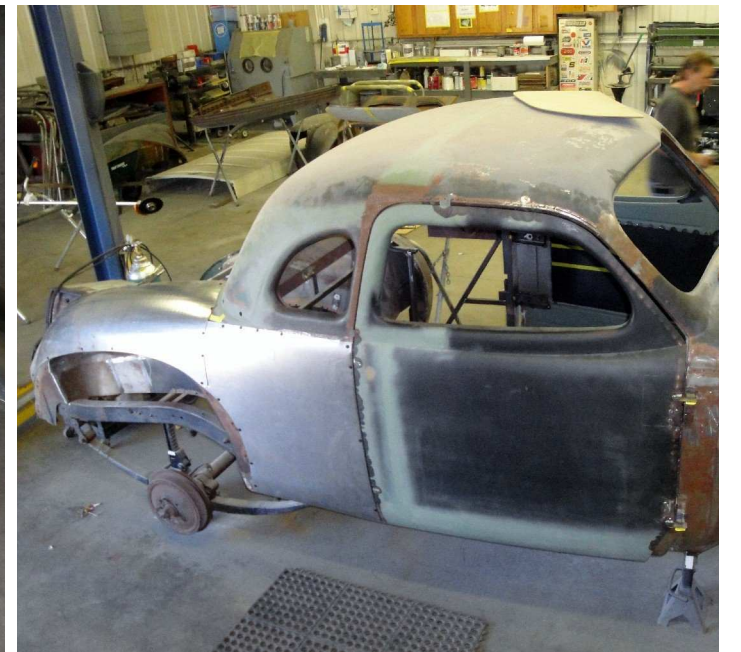
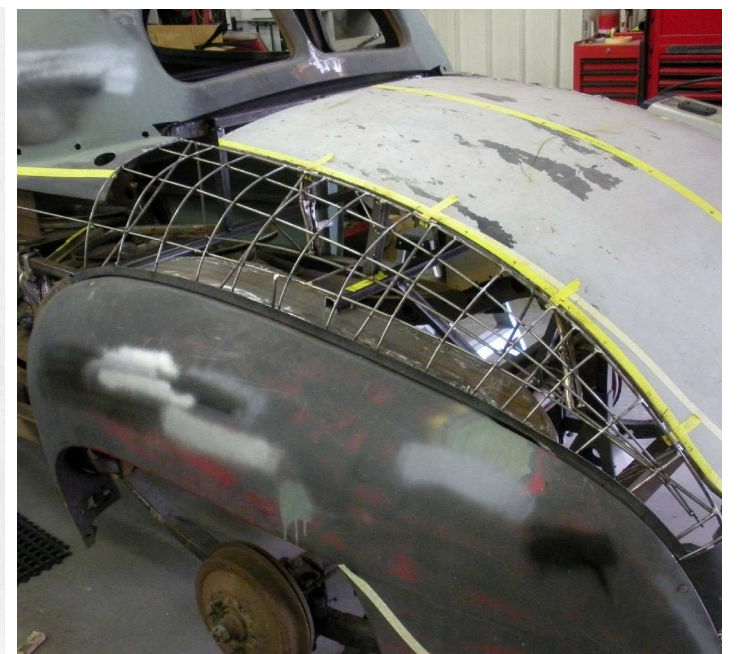
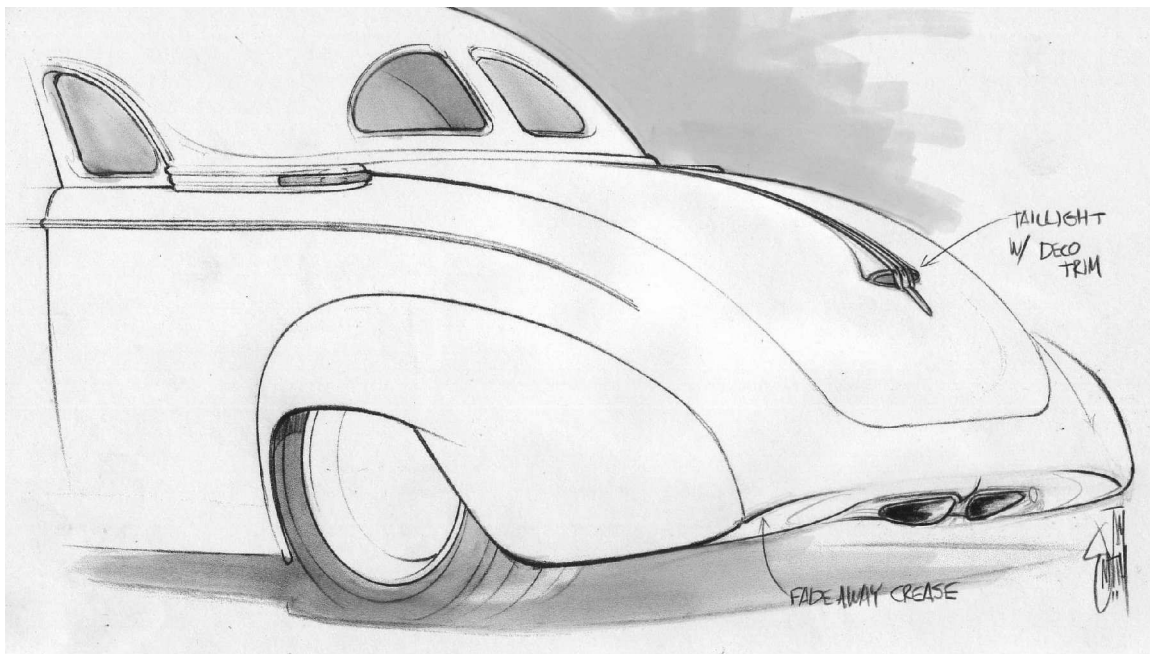


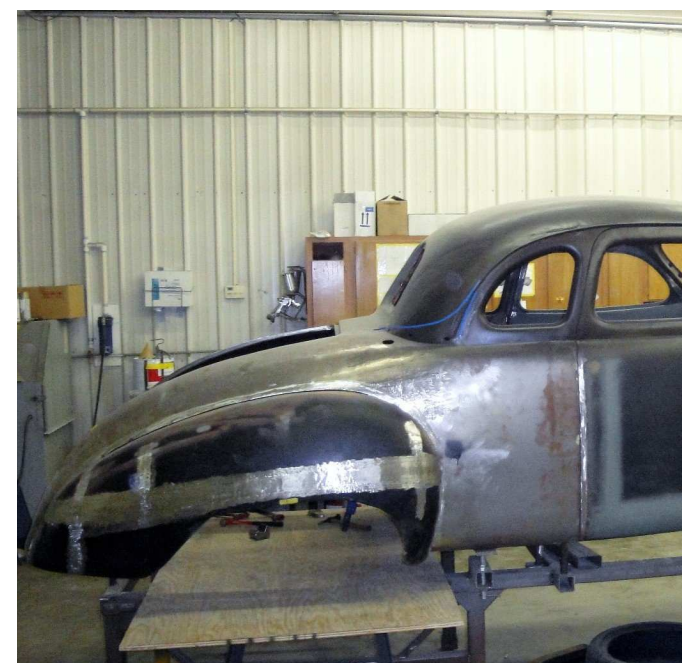
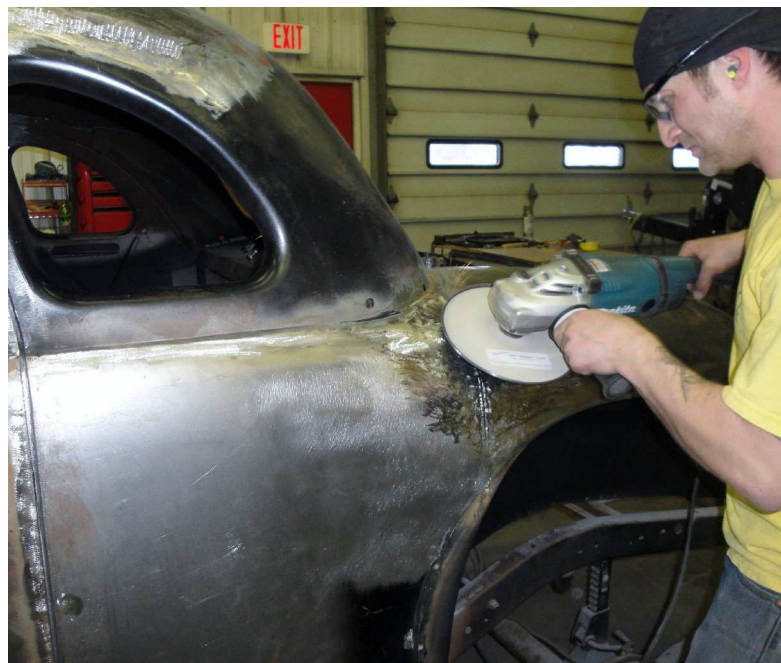
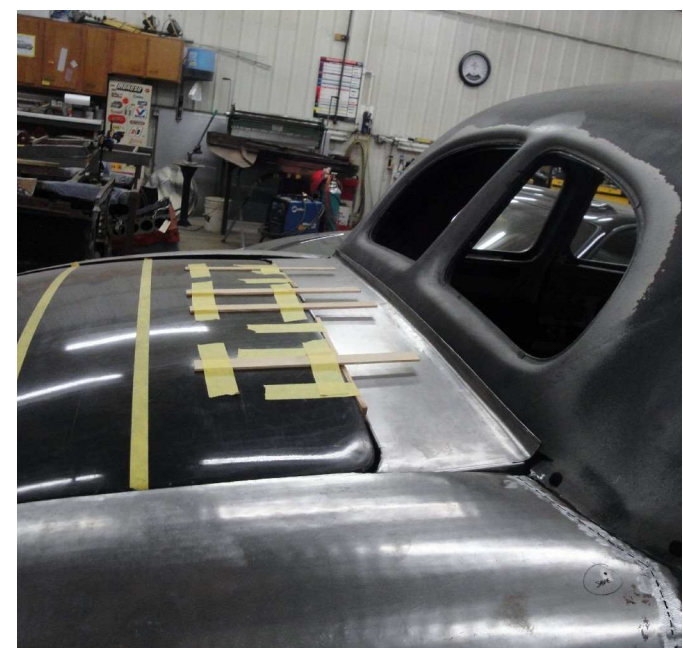
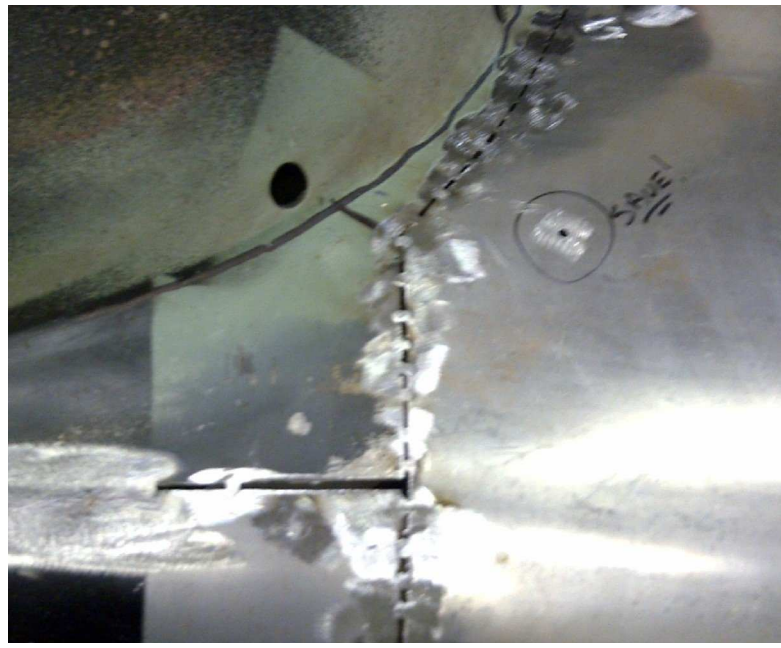
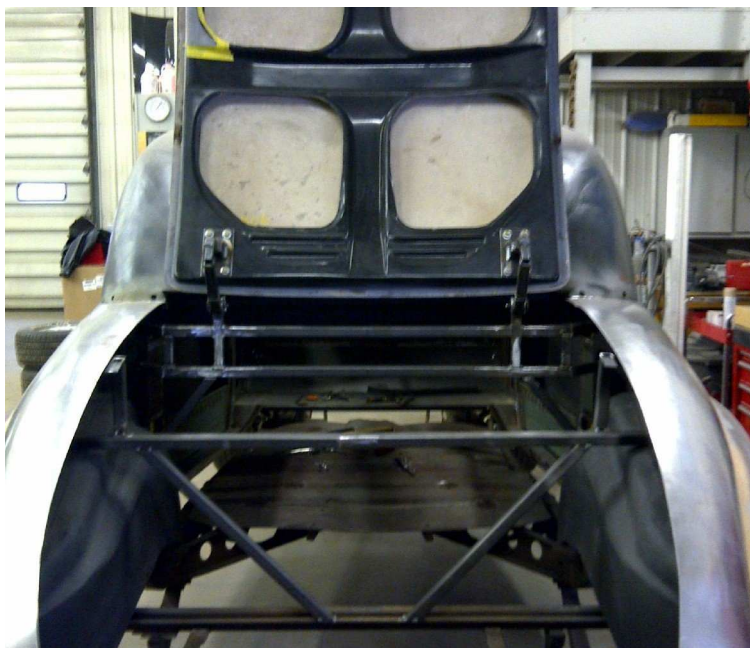


# 5

## Quarter Panels

Every panel on the car was either modified, remade, or recreated. All panels in the rear were hand made by our team. The upper right photo shows the wire buck that was integral in shaping the rear quarter panels.

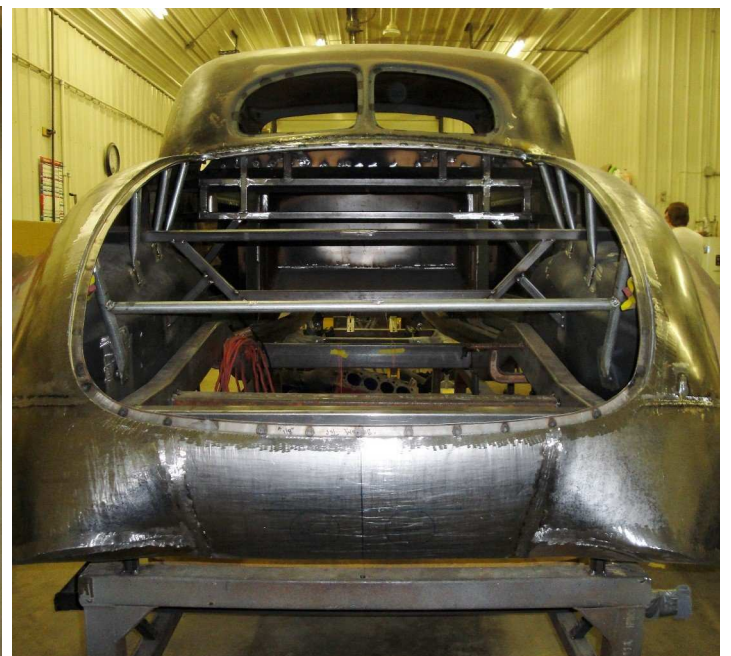
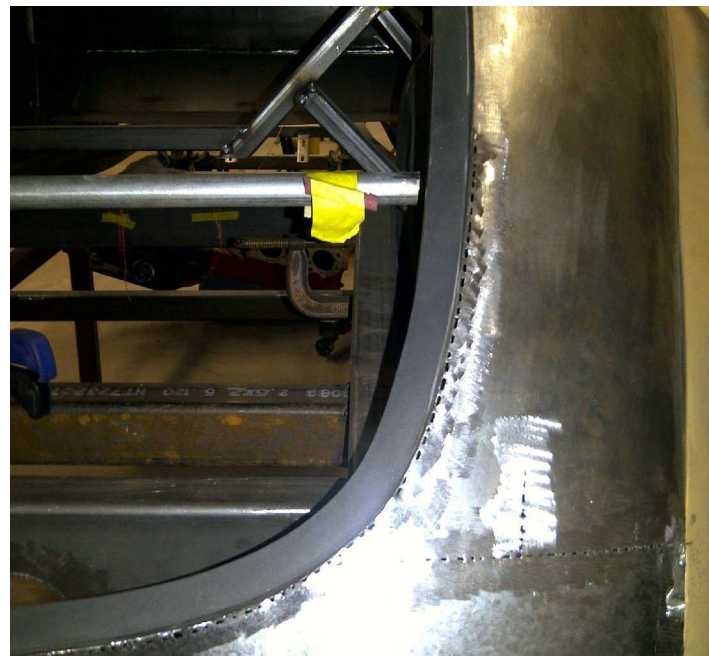
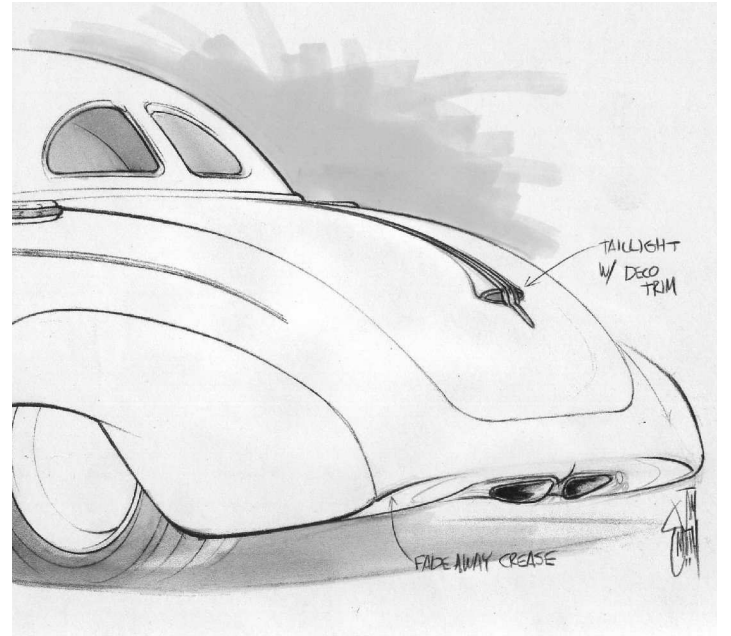


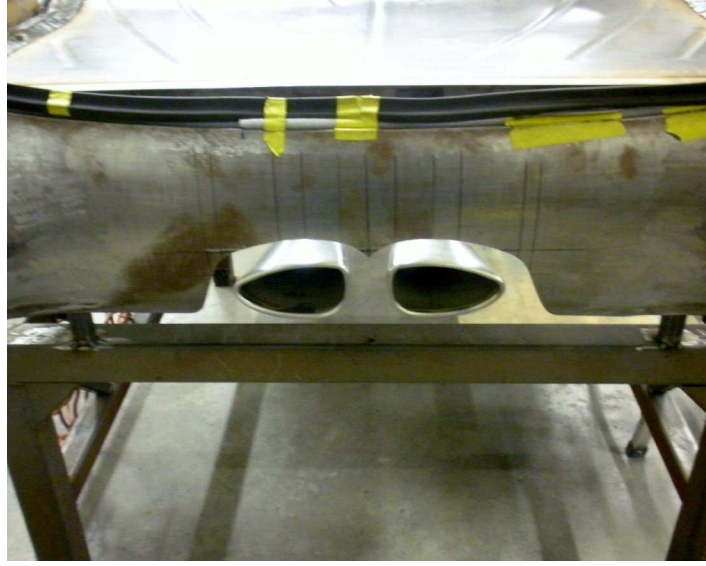


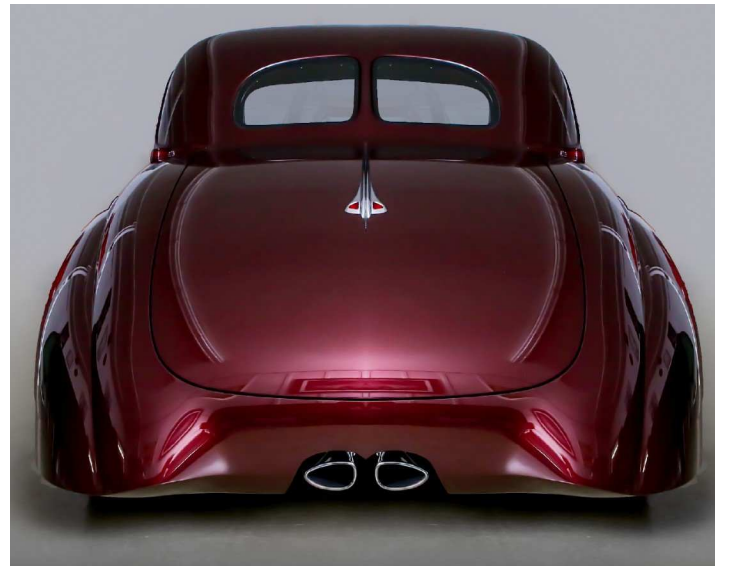
# 6

## Rear Pan

When you cut away the entire rear section of the car you have many options. A flared rear pan with a fade away crease would be a very cool look.









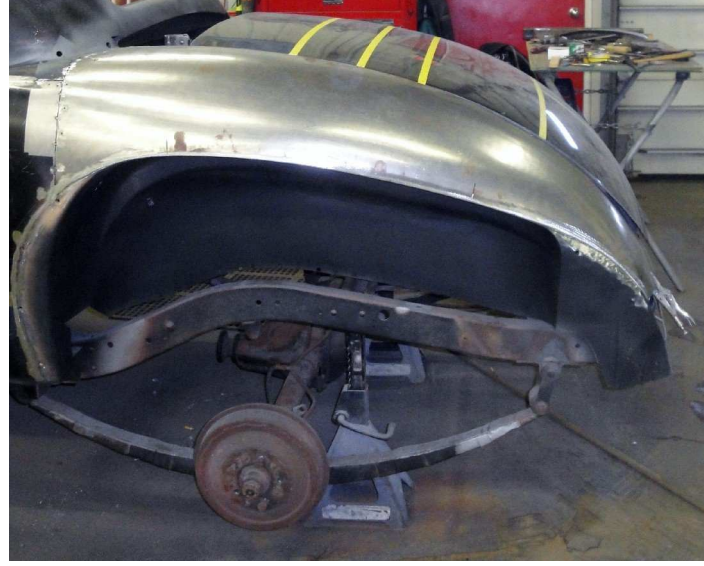
# 7

## Tubs

The fender wells needed enlargement to accommodate larger tires and wheels. High-tech beer can boxes were used for affect. More than one beer was consumed planning this car.

Notice the rework that was done after cutting and raising the height of the fenders.

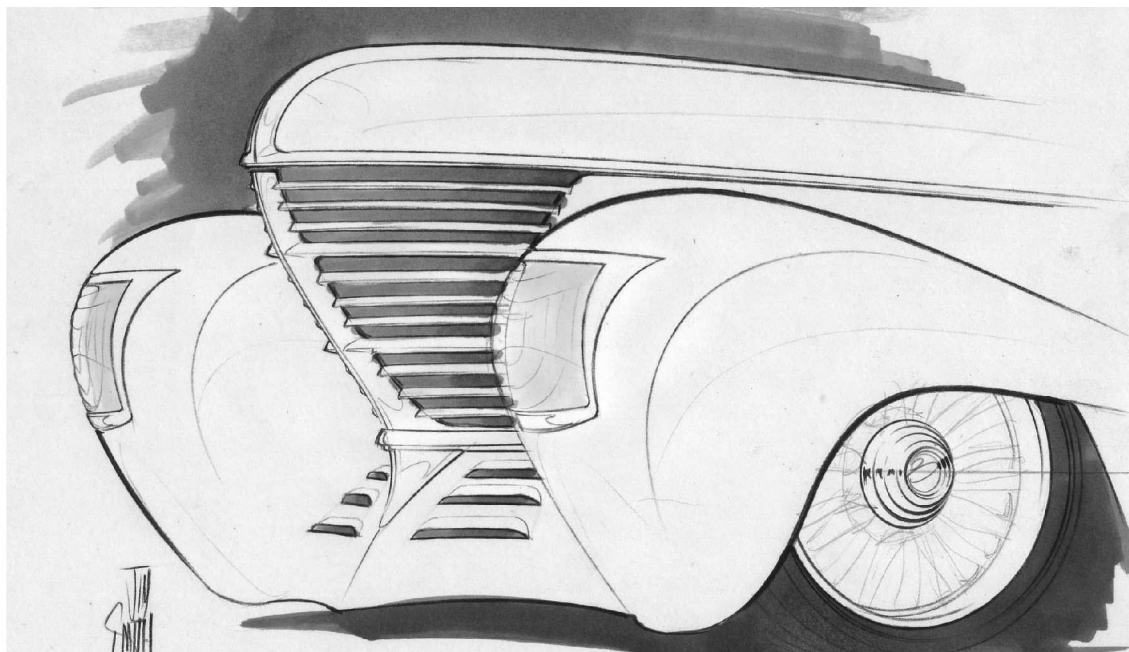




Initially the tubs were patched while the widening process took place. Later, the tubs were rebuilt more square and quarter panel supports were incorporated.

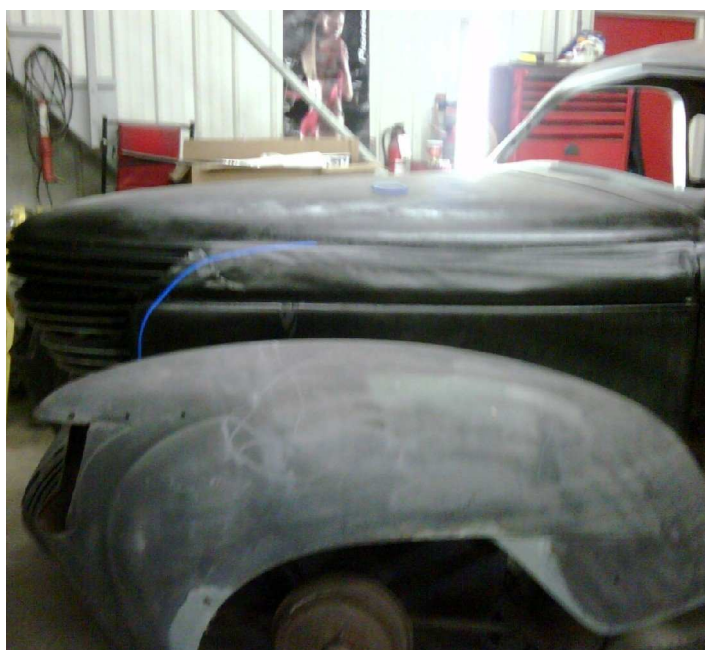
# 8

## *Front Fenders*

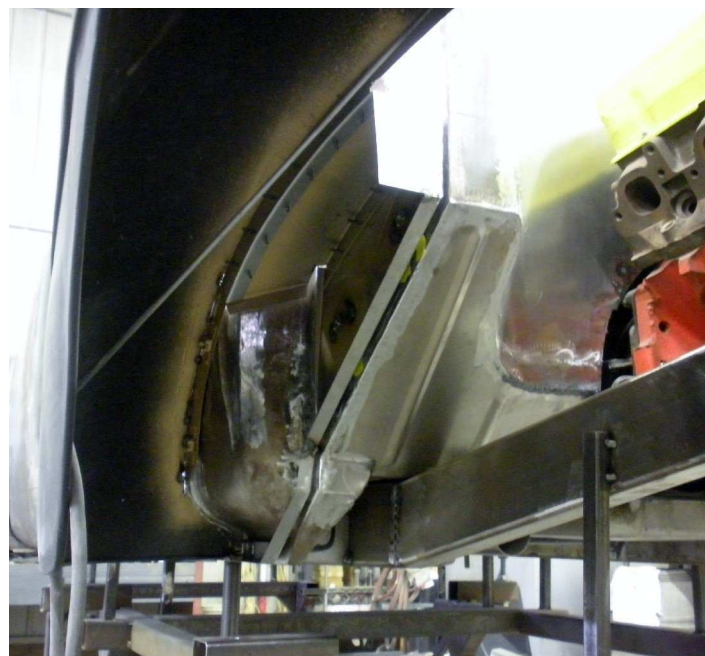


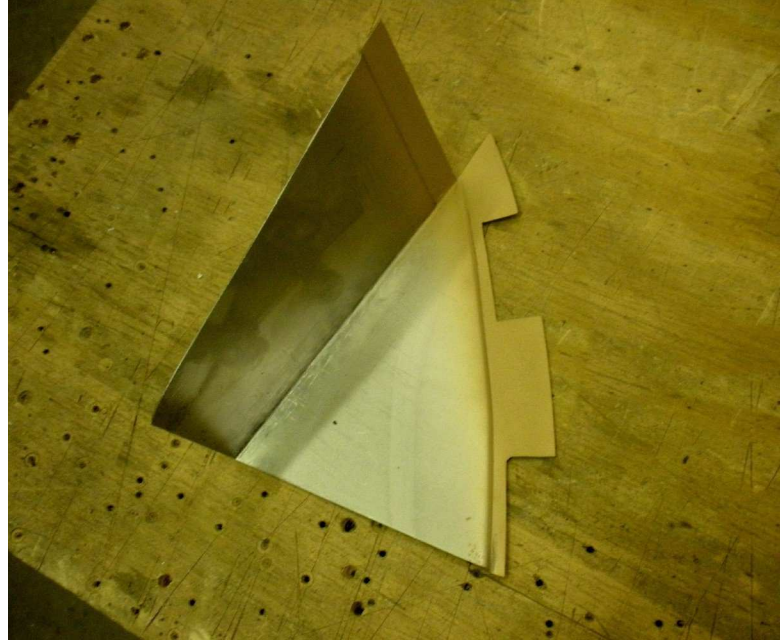
With the removal of the running boards, the fenders were shortened and scalloped back to improve the car's look of motion.

Notice the emphasis on the bulbus curve of the fender. It appears on the side panel (blue tape line). You will see it's theme in the hood sides and headlight bezels later on.



The fenders and pan were cut along the blue tape line giving it a stylish front, as in the drawing.





The inner fenders were boxed and capped for strength, as well as, to reduce the large gap behind the front tires.

Getting the right fitment was important as the front fenders were welded to the front pan and a removable front clip was created.





The inner fenders were capped and boxed for strength and designed to flow smoothly with the lower front cab. Below we ran a hidden electrical line to the headlight bucket. Then we capped the inner fender to hide the headlight bucket and give the inner fender a seamless look.





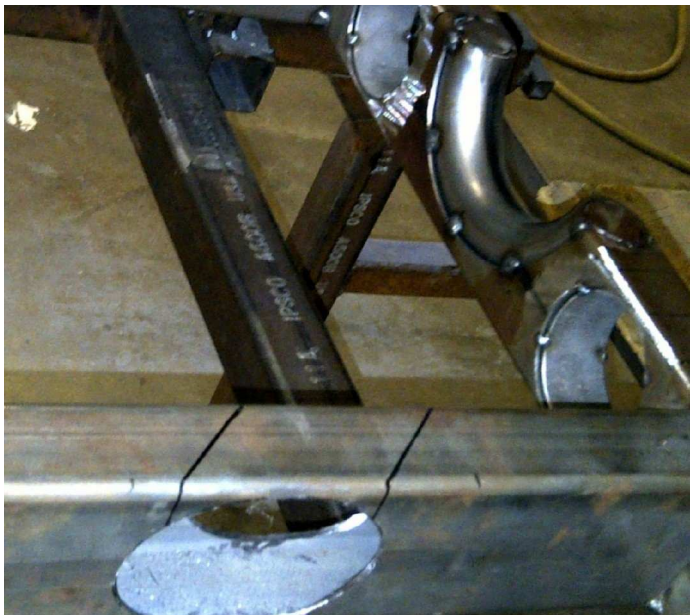
# 9

## Frame



We scrapped the original Graham frame opting to craft our own. We started with some detailed measurements and Art Morrison produced starting rails. After that, the rails were custom modified to fit the design of the car, the Kugel IRS and IFS, as well as, to handle the torque and power of the Big Block 540.





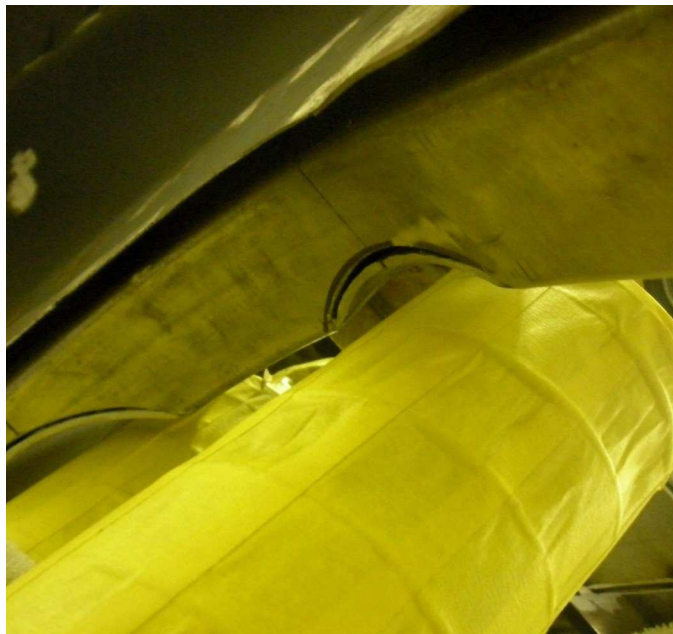
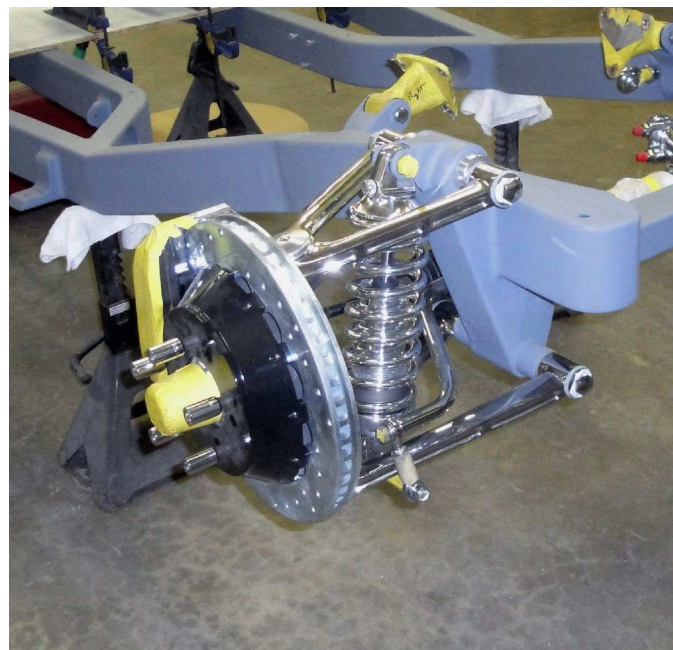


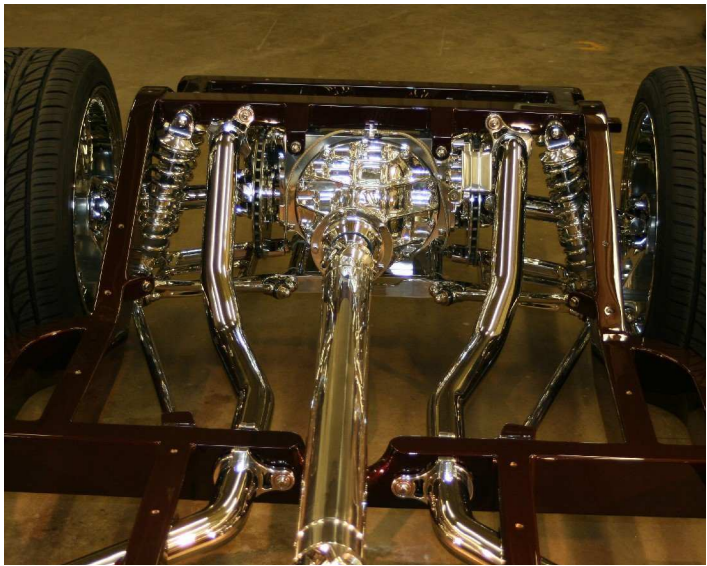
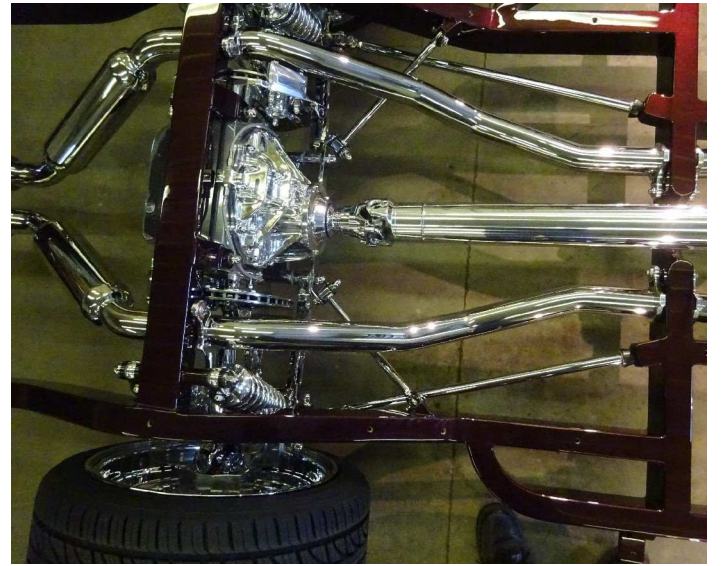
# 10

## Suspension System

I have always been partial to a great handling car so it only made sense to put in the best Jag system out there. We worked closely with Kugel Komponenten to design a system for the Shark. Our first task was to center the wheels and weld in our front mounts. Then we attached the IFS to fit. EVOD provided a prototype mock up wheel to establish proper wheel measurements (i.e. back spacing, etc.)

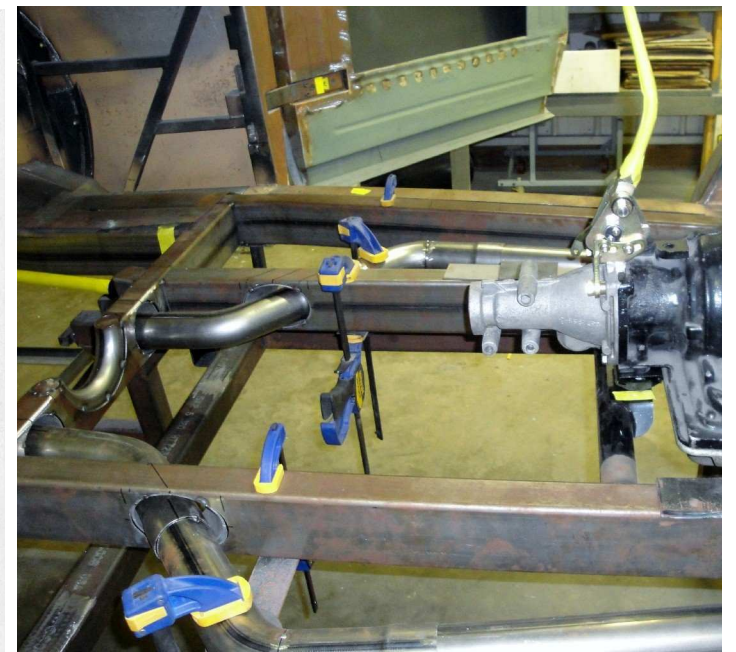
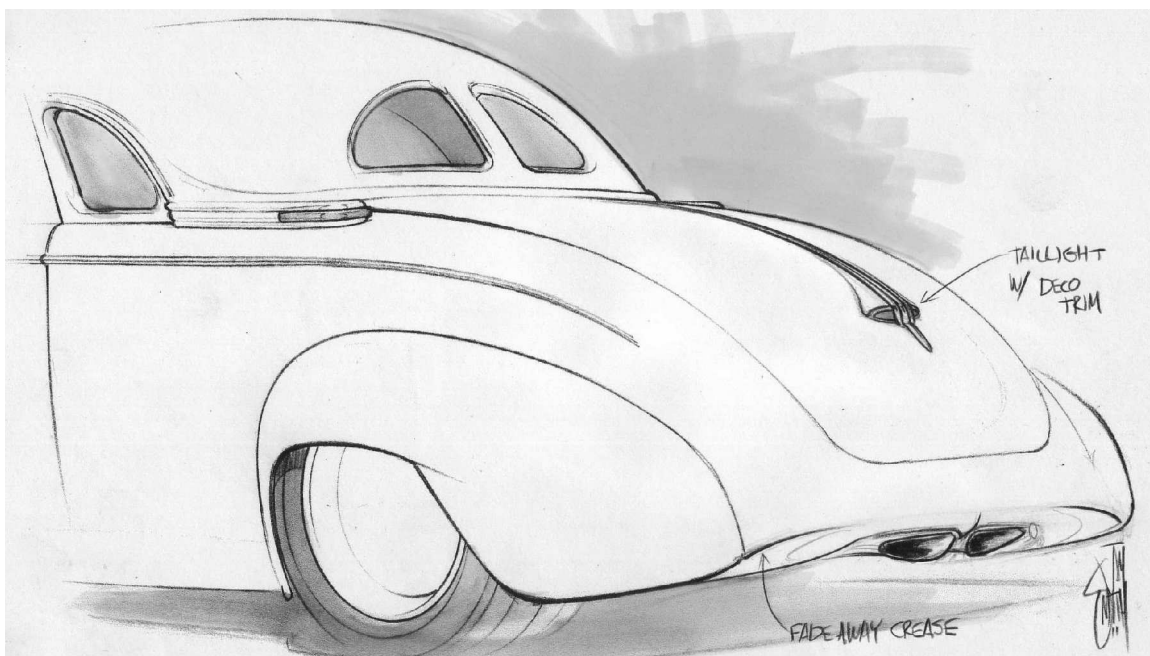






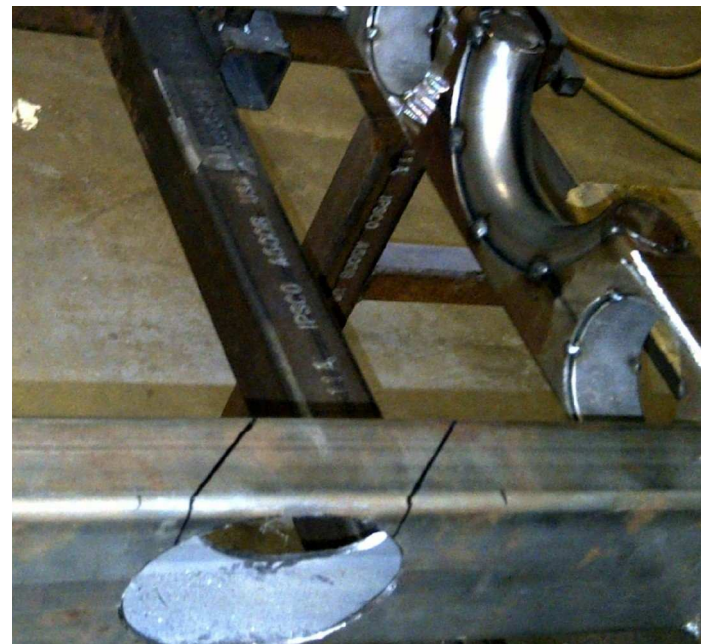
# 11

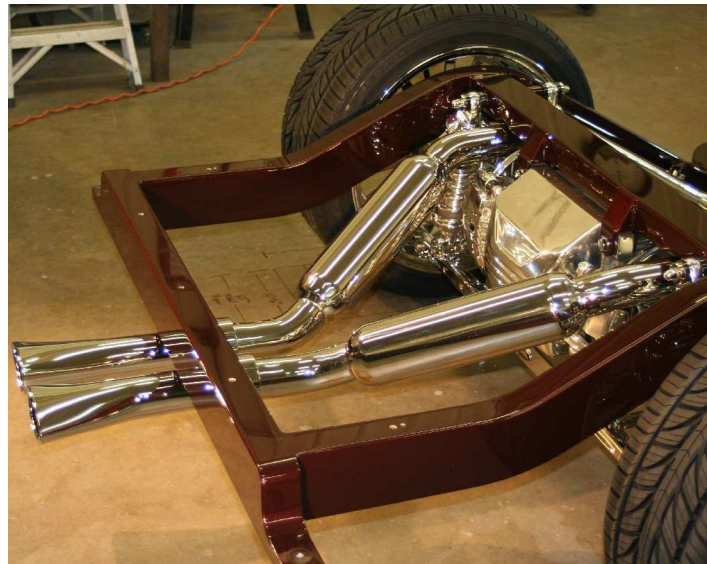
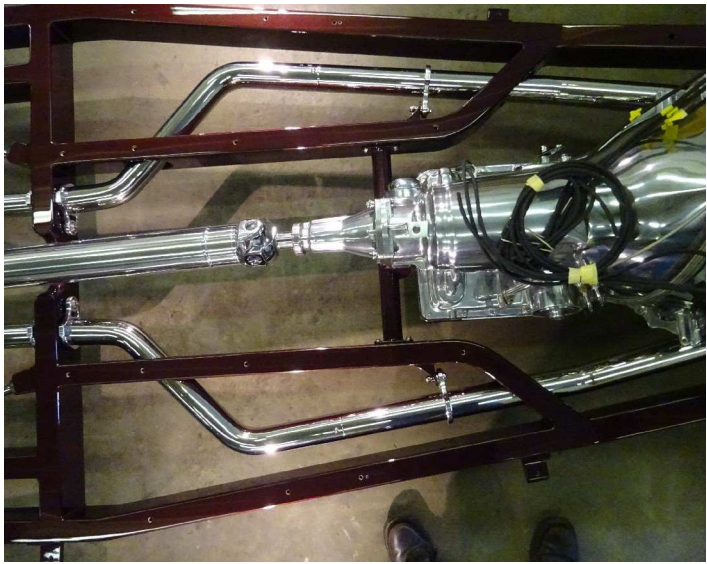
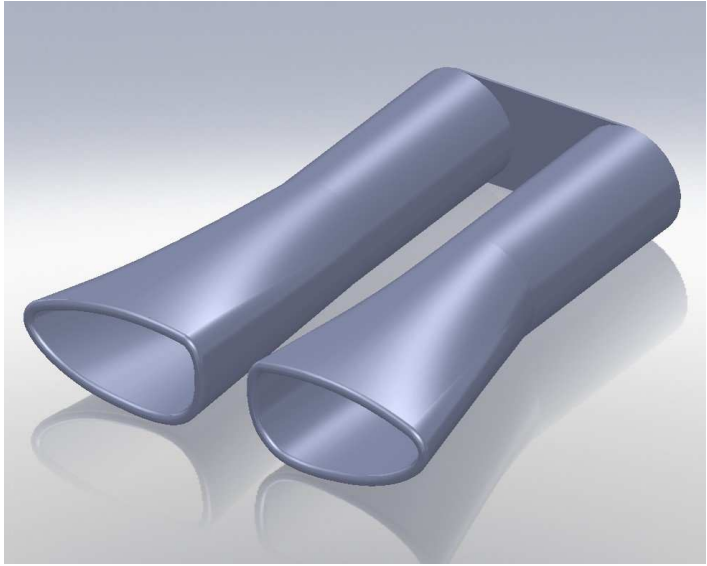
## Exhaust System & Tips



We started our exhaust system with a mock up of our own. The pipes were routed through frame rail holes newly cut out with inserts welded in place. Notice the oval shape of the cut out.

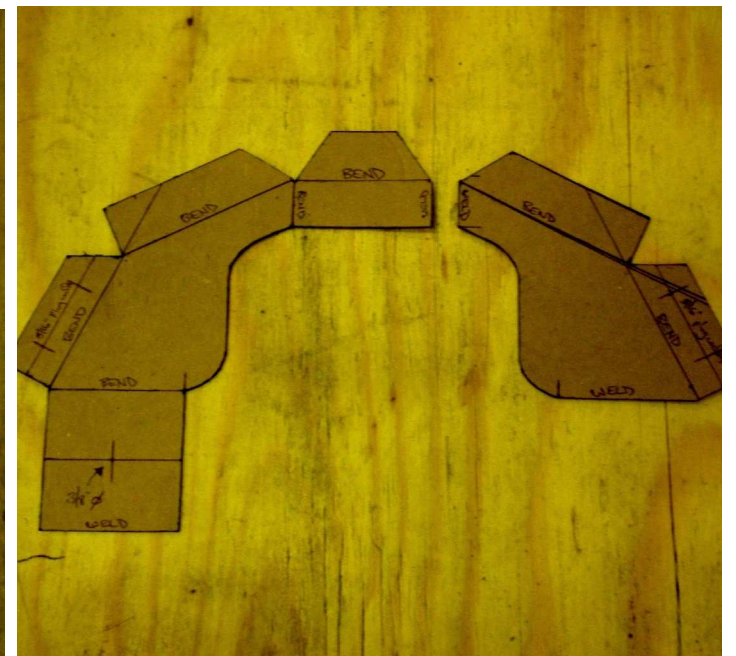
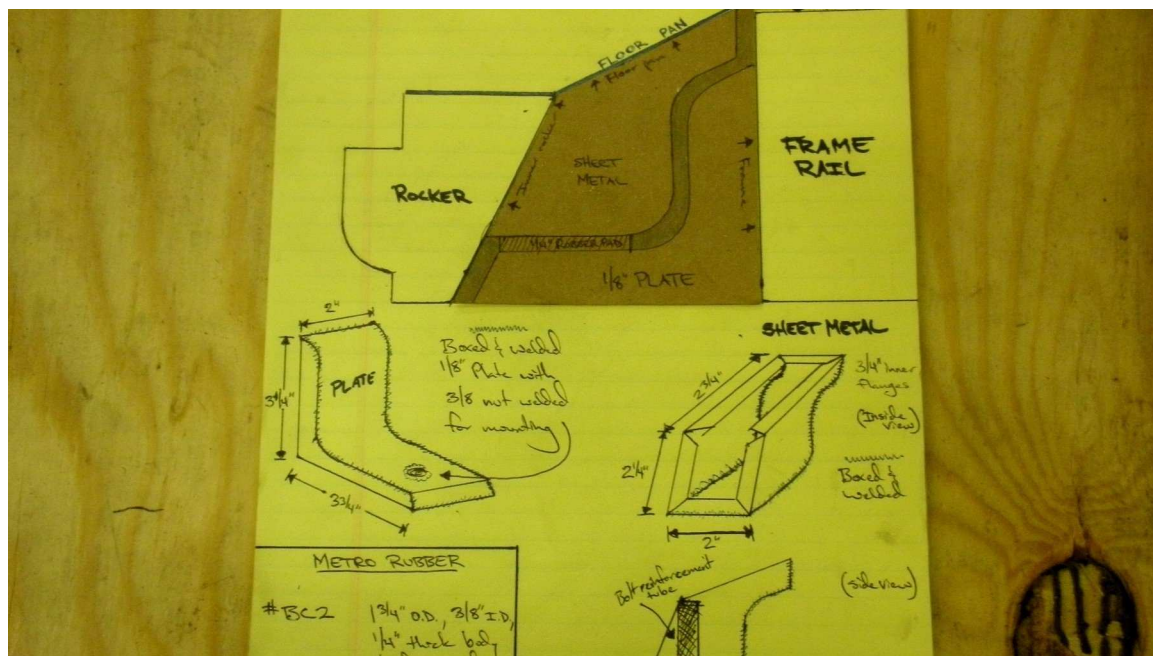
Mock up enabled us to position pipes to run parallel and equal distance between the floor pan beads.





# 12

## Body Mounts



While channeling the car 4 inches and building a new set of floor pans, 24 mounting points were developed. Three sets of body mounts were hand built for joining the body and frame. Notice the curvature in the design, which is consistent with the curving theme of the car.

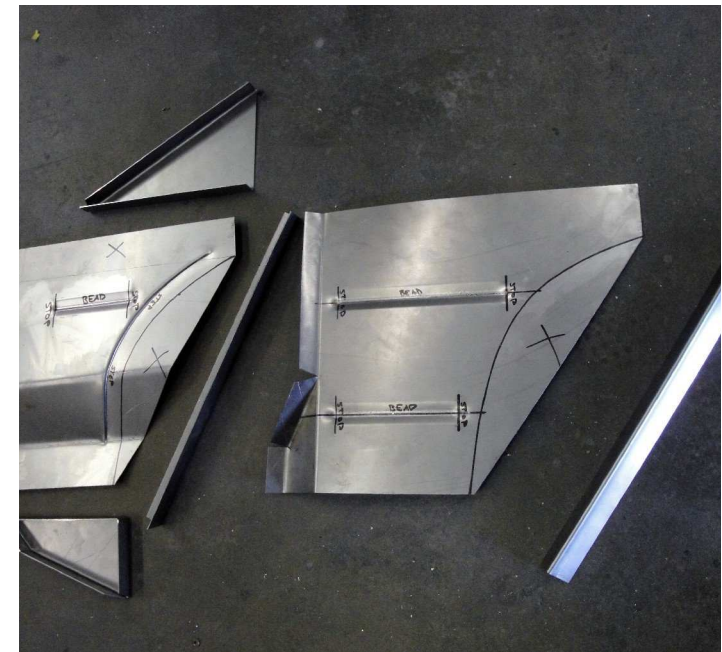
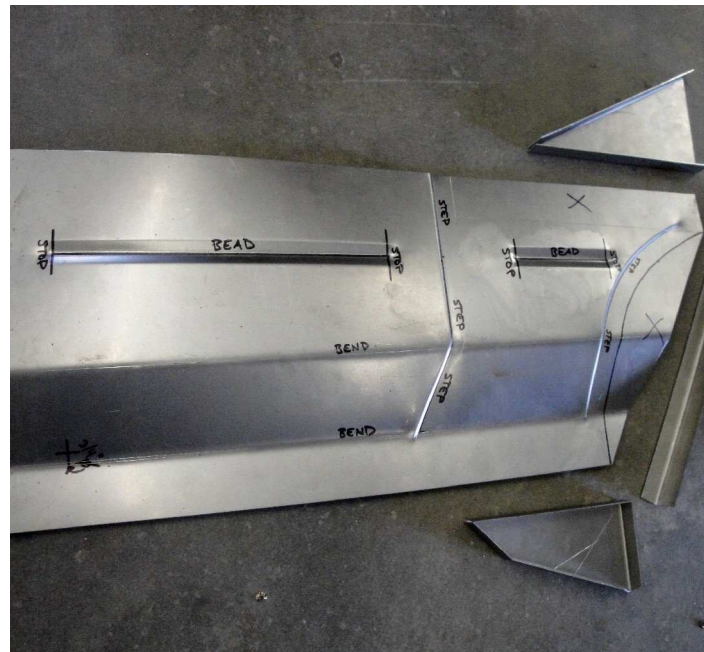


# 13

## Floors

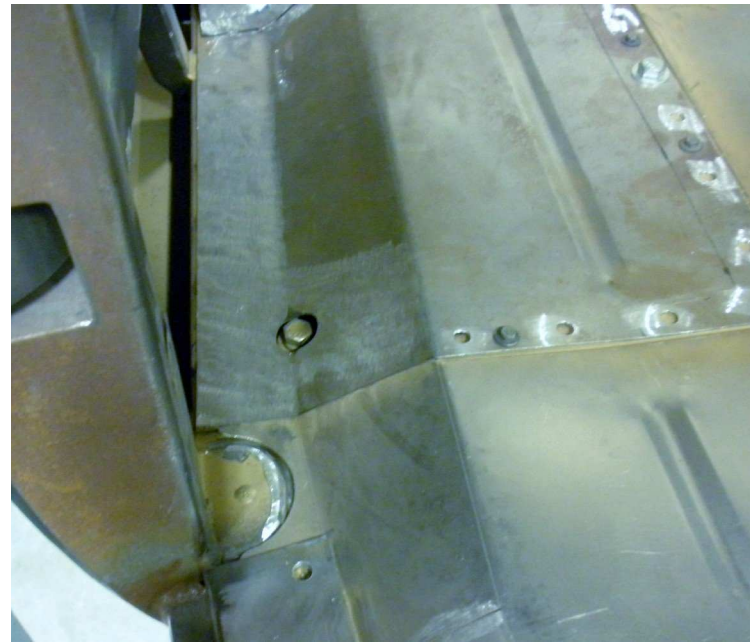
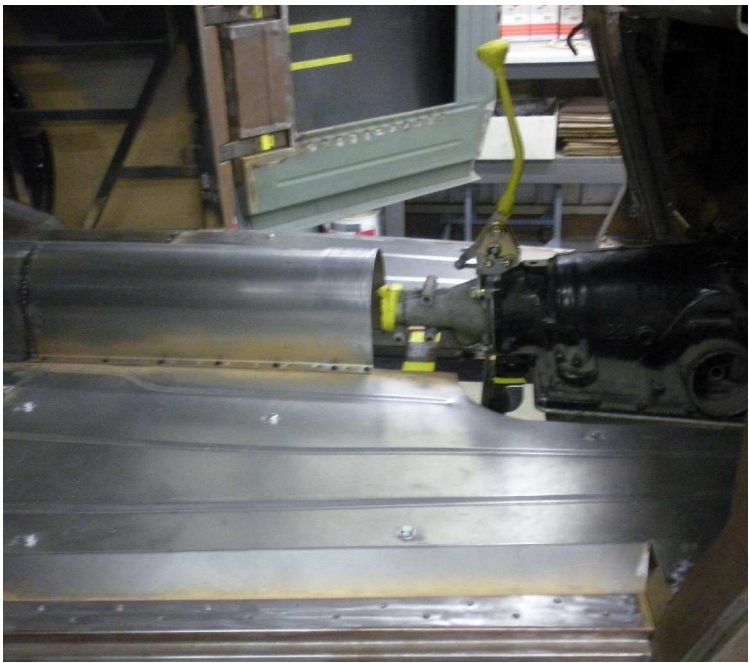
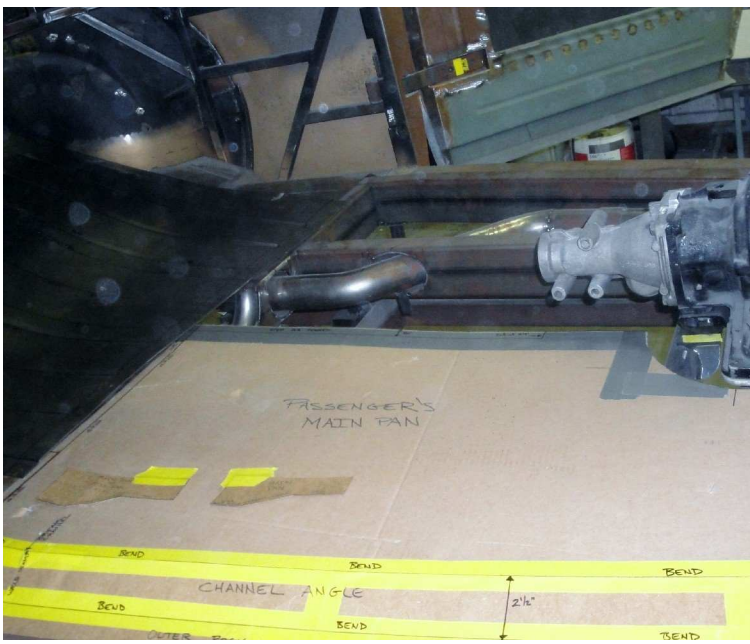


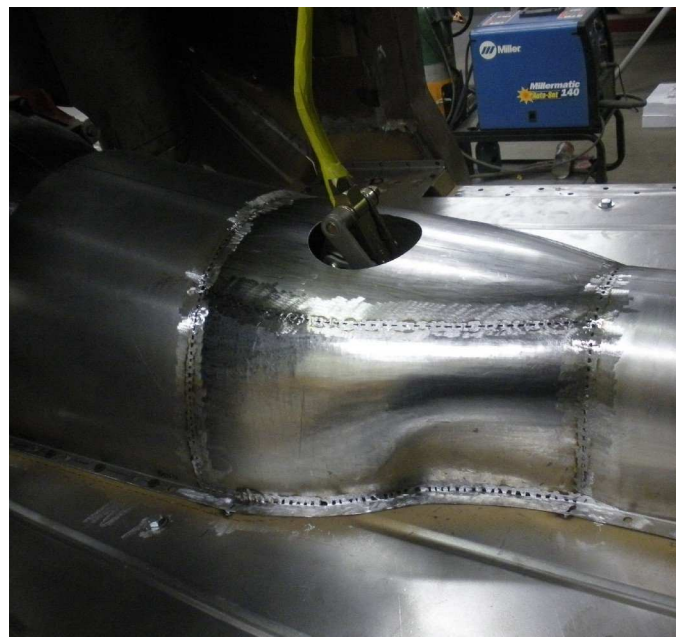
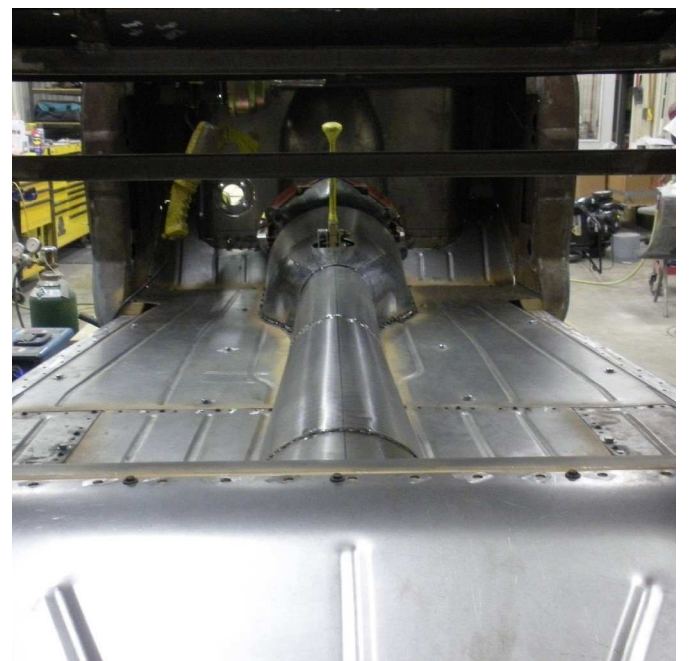
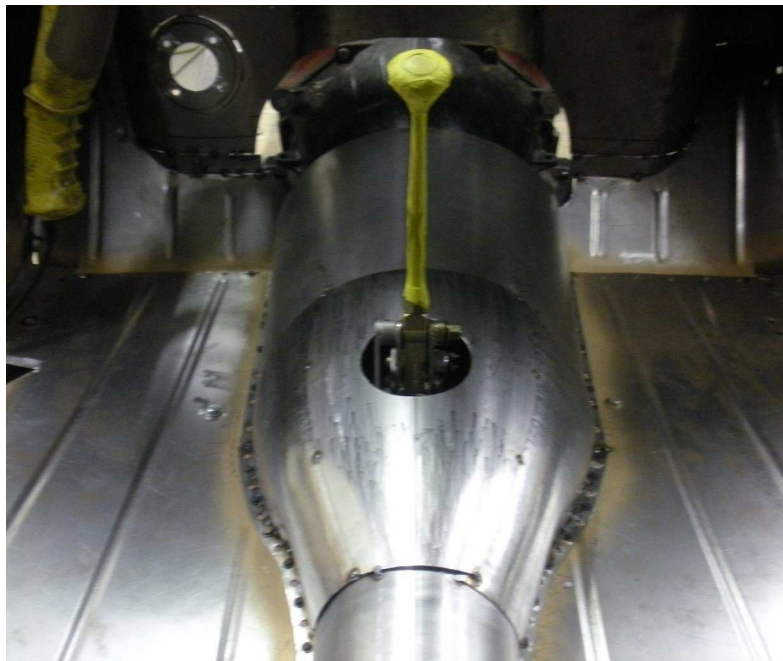
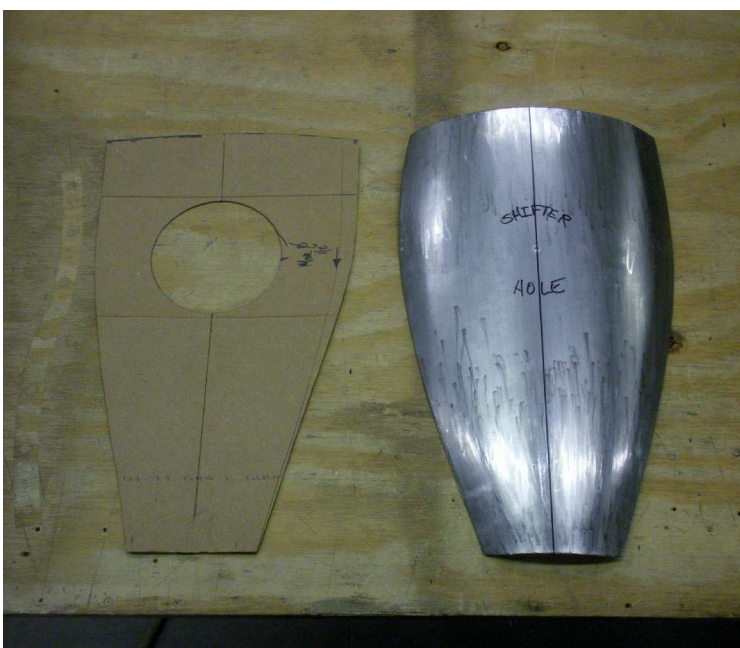
Channeling and lowering the car called for new pans and a transmission tunnel not found anywhere. Notice the intricate craftsmanship employed by Trent Lewis to form the pan perfectly in the car.

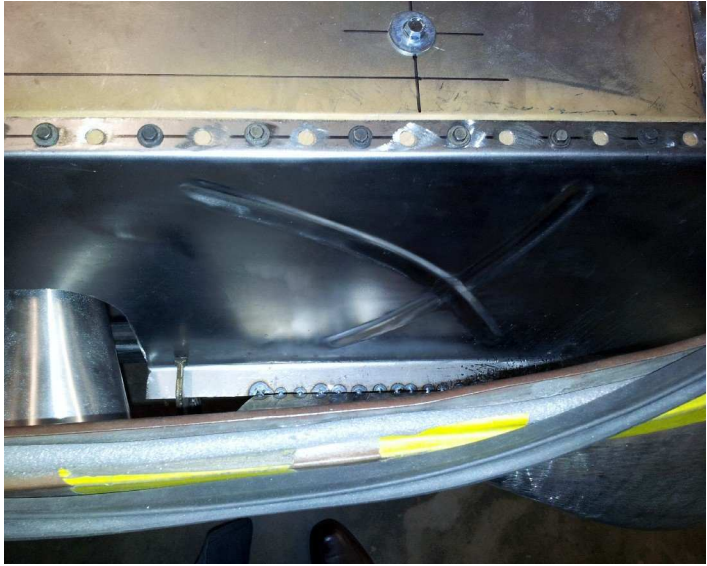






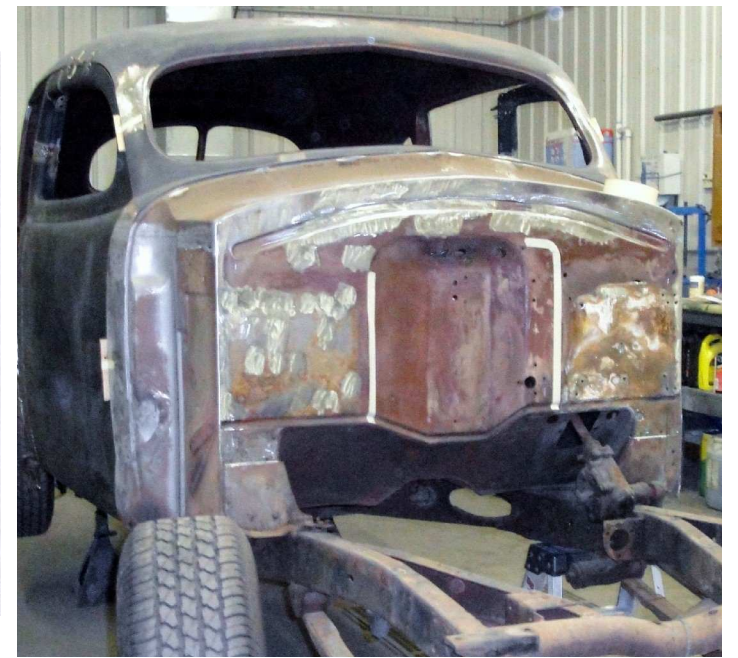
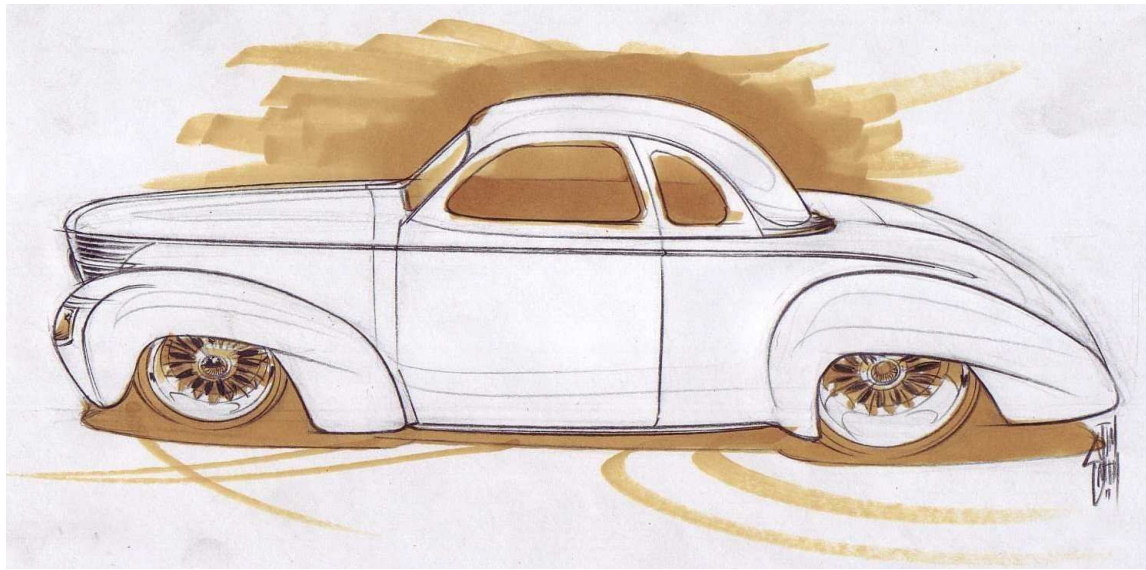




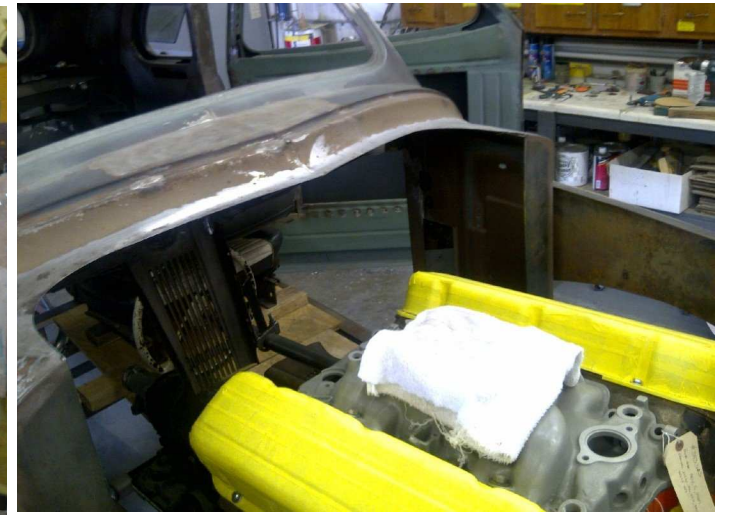


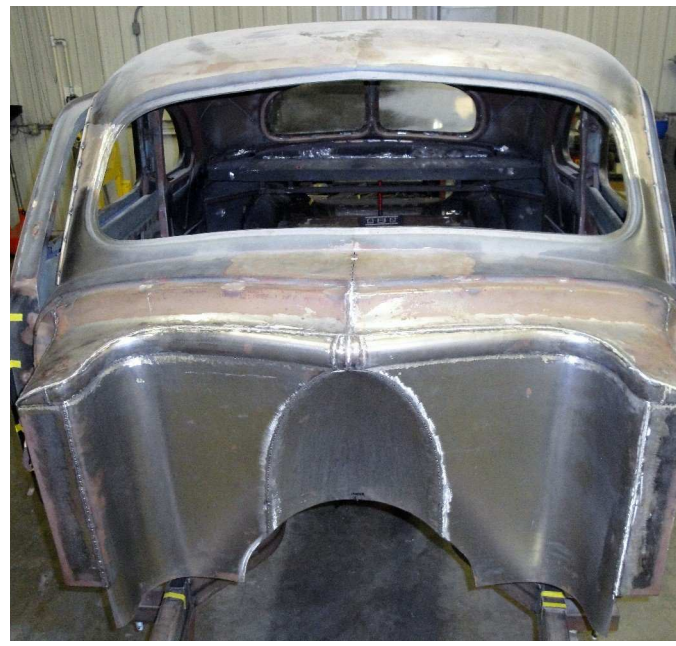
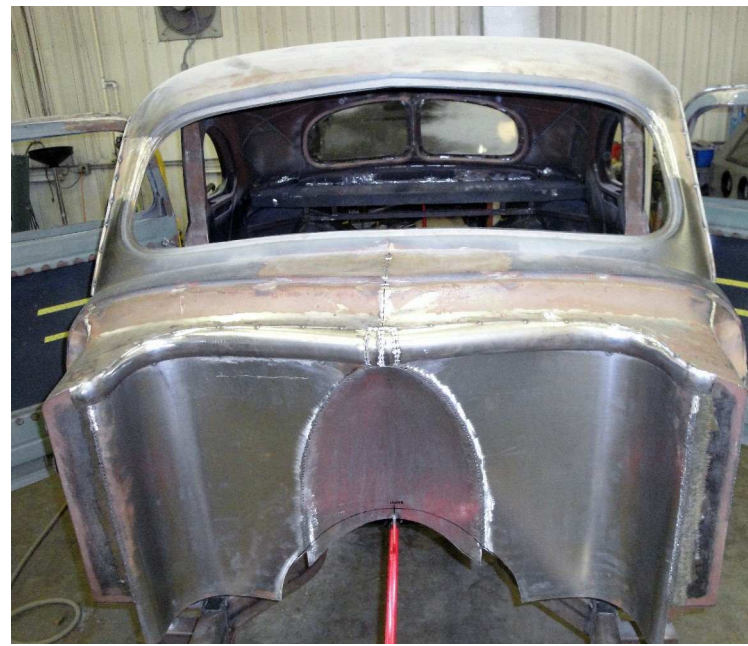
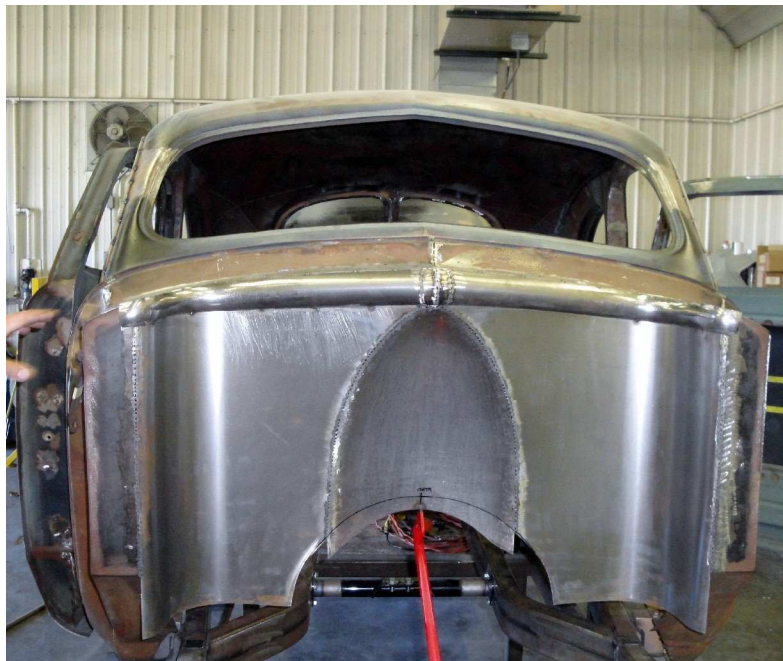
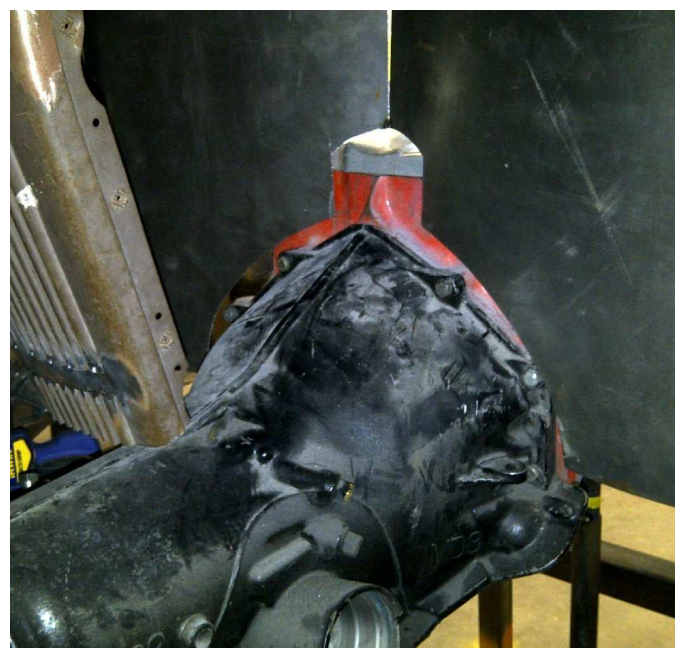
# 14

## *Cowl and Firewall*



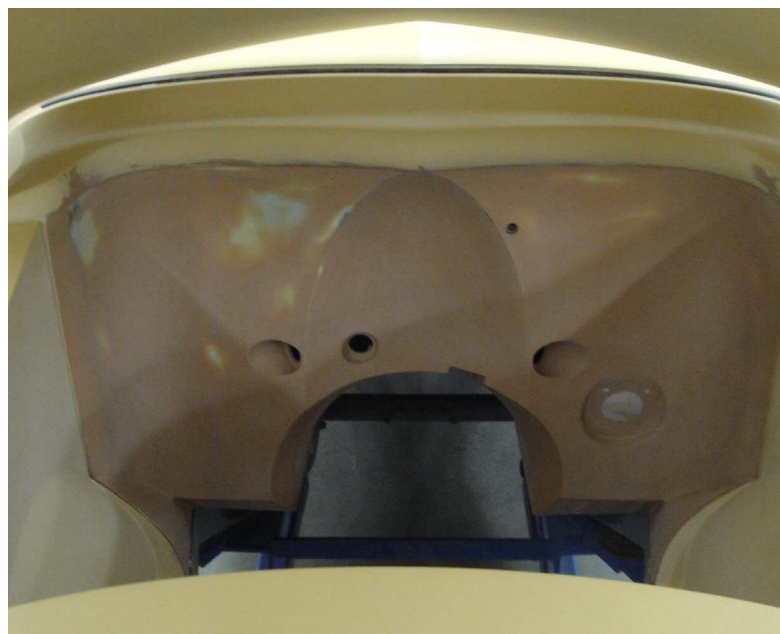
A new firewall was added and then recessed to make room for the BBC 540. Notice the nice curve as the cowl was scalloped back and then forward to a point in the middle. The roll of the cowl frame provides reinforcement and sets a tone for the deco theme of the engine compartment.







Three ports were built into the firewall. Two angled ports are for the plug wires running from the Computronix coil packs (hidden underneath the dash) to the engine. The third port is for the engine harness. The four grommet holes on the far passenger side of the firewall are for a brake line and the A/C hoses running through the hood sides into the Vintage Air heating and cooling system tucked under the dash. The far driver side port makes way for a brake line and up-front electrical wiring.

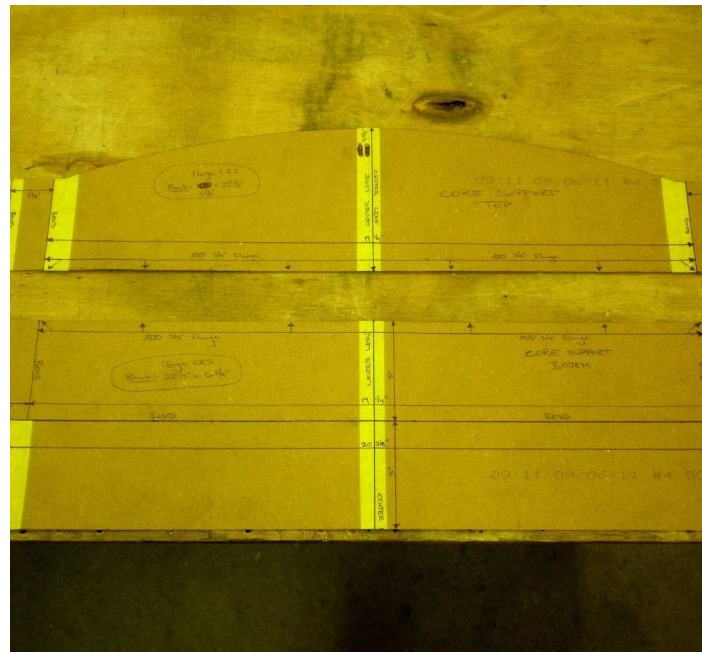


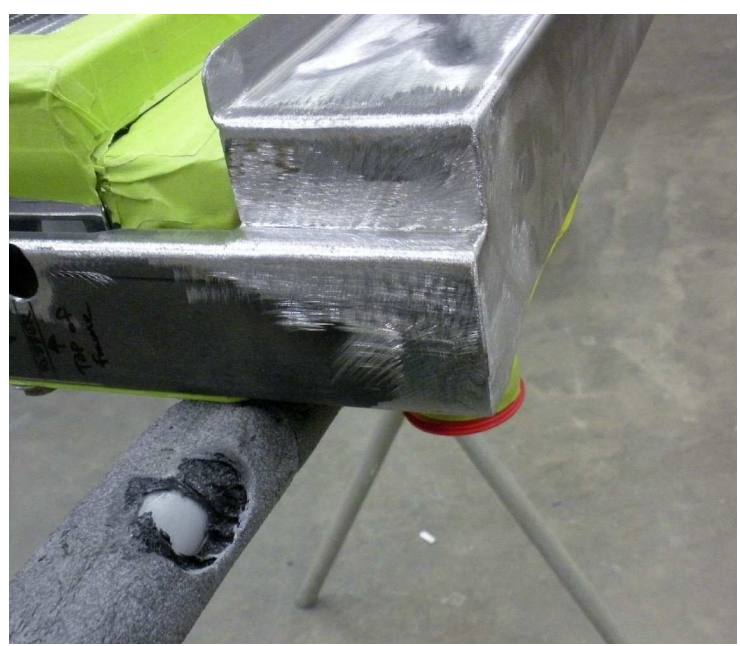
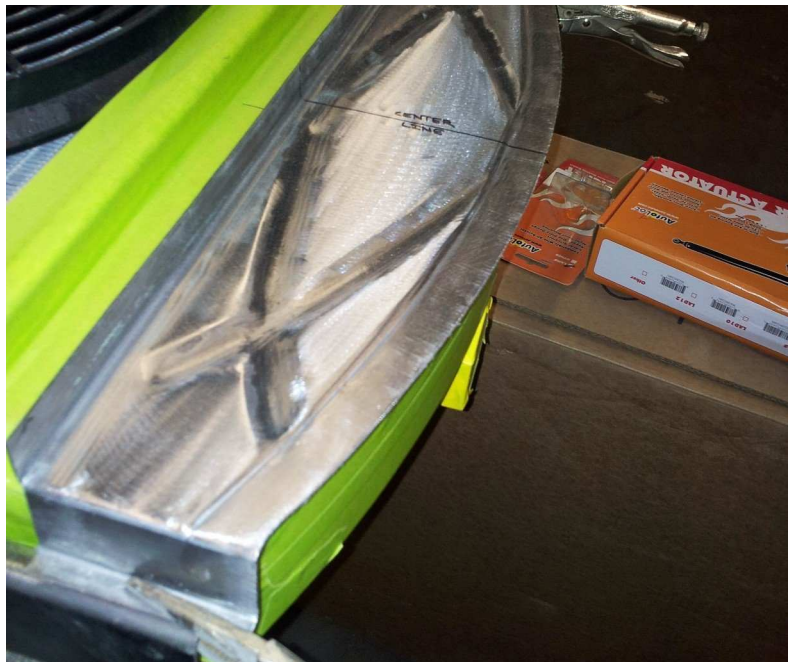
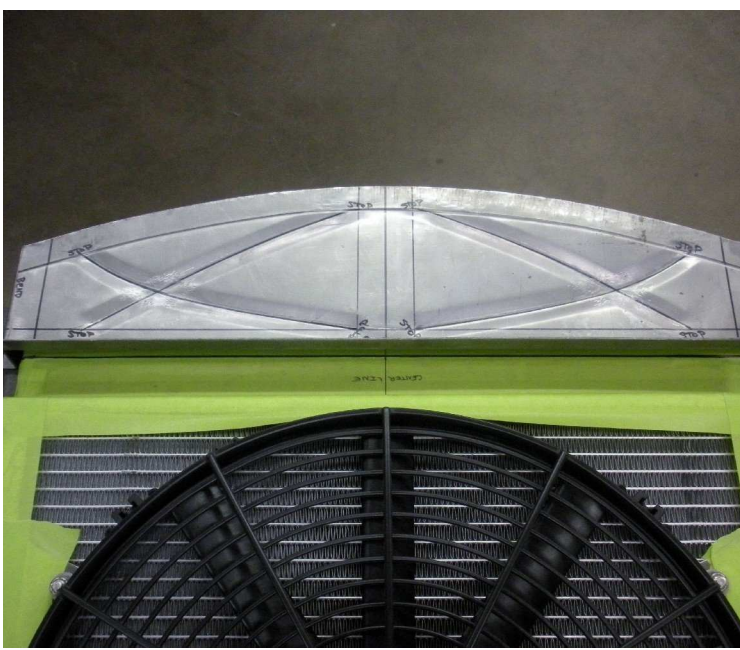
# 15

## Core Support & Radiator

Mark 7 built a new aluminum radiator with pusher fan to fit our specs. With radiator in hand, the next step was to build a home for it along with a solid core to tie the entire front clip together.

The curved X bead rolls in the core support structure can also be found in the internal firewall.

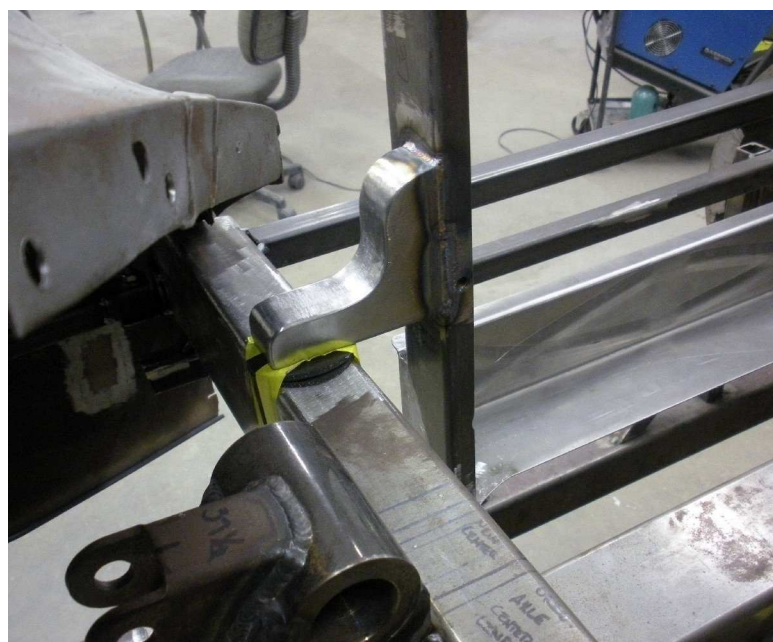






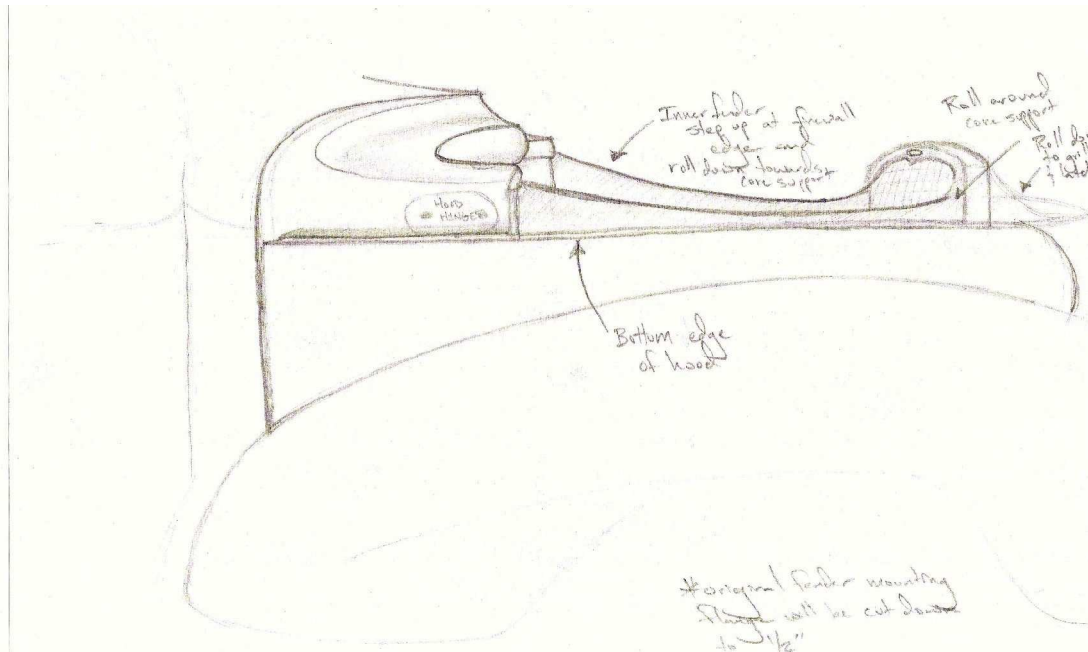


After building the core/ radiator housing, supports were made to attach the unit to the frame rails. Notice the supports are shaped like the body mounts.



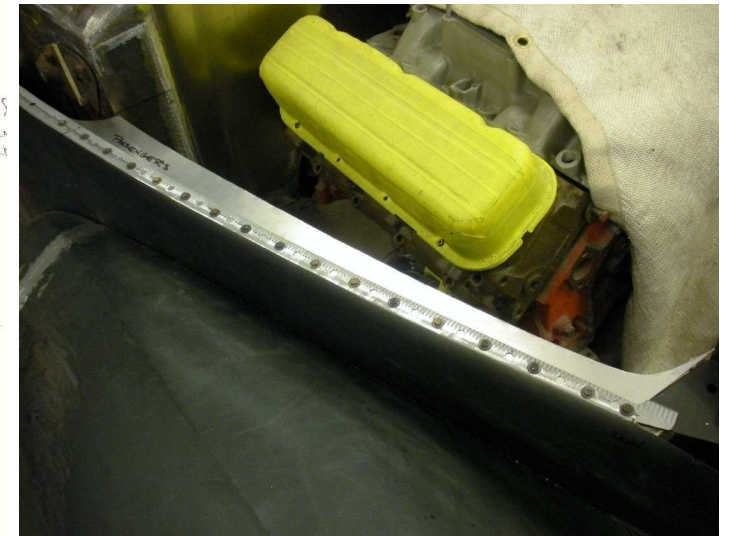
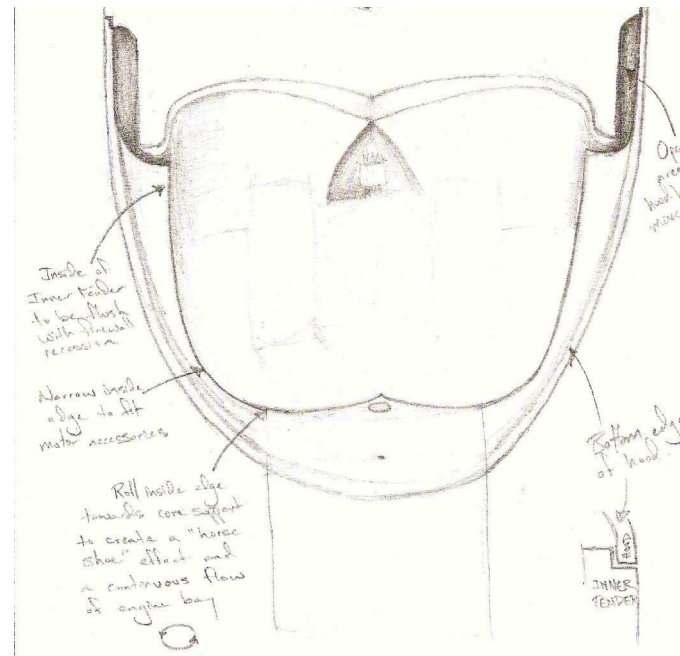
# 16

## Hood Side Panel & Inner Fenders

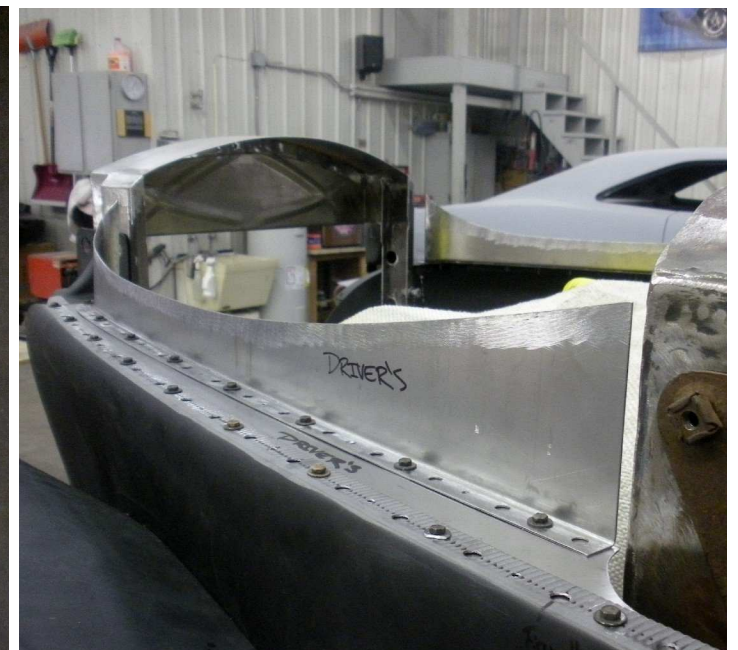


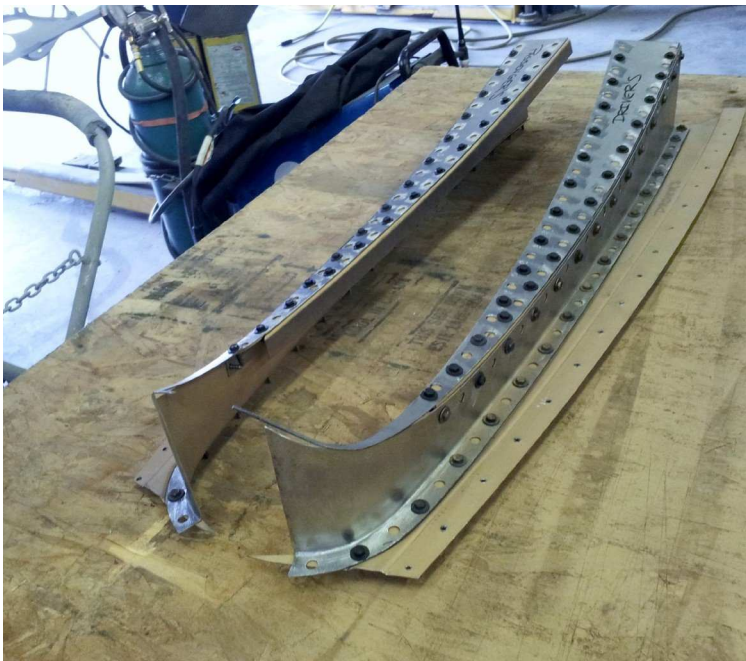
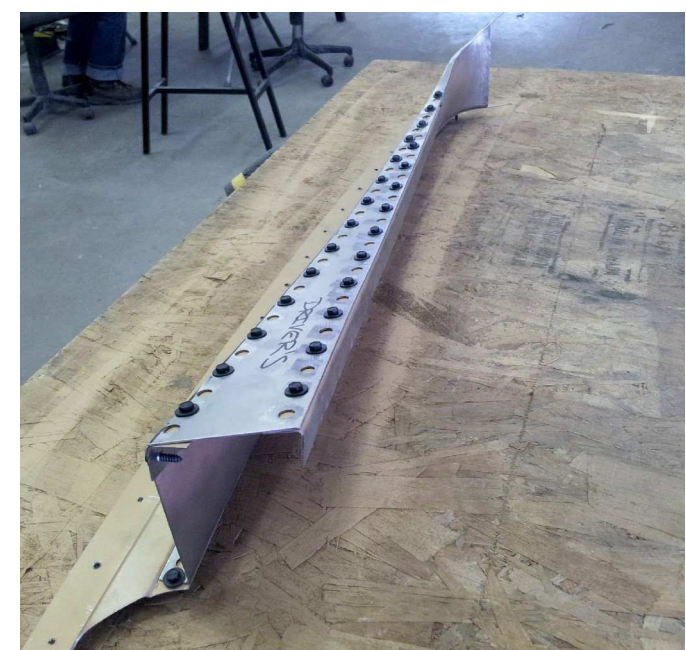
We completely restyled the engine bay. Trent designed an inner fender step-up sweeping down from the cowl and up to the core support, followed by a roll down forward of the core to the grille and hood.

Notice the sweep of the step-up and roll down matches the sweep of the new side trim at the cowl.



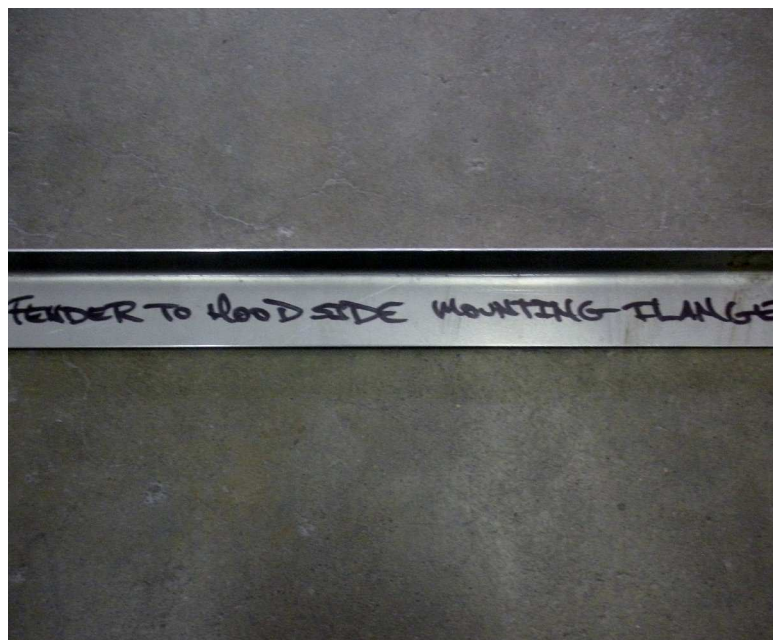
Trent drew up the plans, which began with a base affixed to the hood side followed with the sweeping hood edge channel.





The base was twice stepped while retaining the flow along the hood side. After all fitment the screws were removed as the piece was welded smooth eliminating all evidence of separate pieces. A stepped cap was added. Later the inner fender cap was added.

In order to connect the fender to the hood side, the original fender mounting flange was cut off and a new, narrower (1/2"), mounting flange was added.

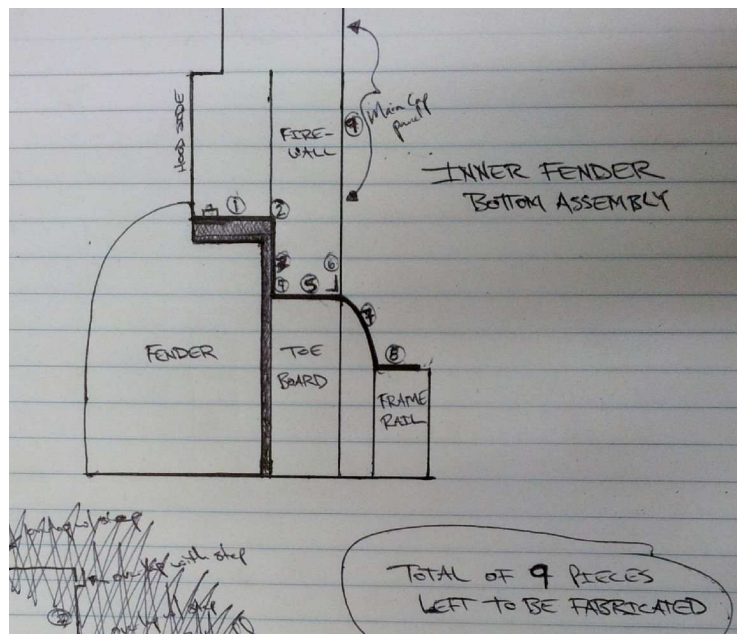


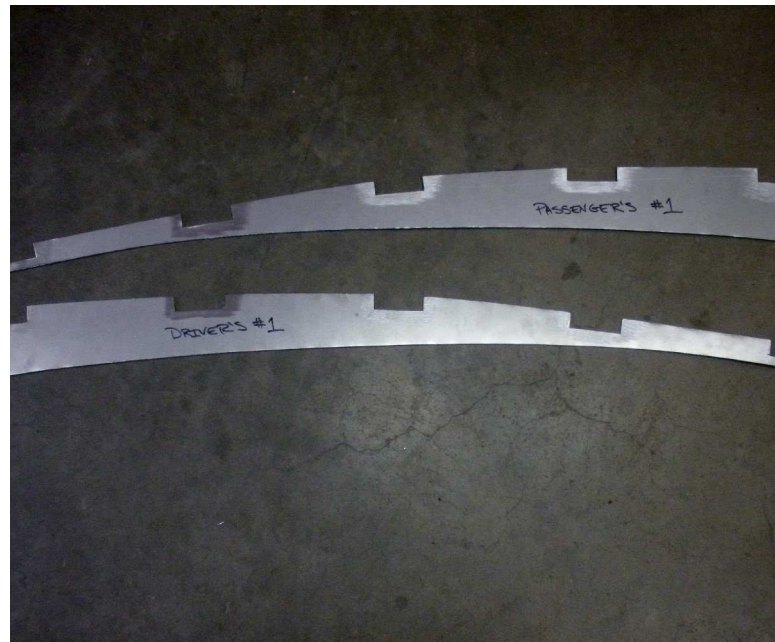


Old mounting flanges were modified on the hood sides to accept the new fender mounting flanges.

In order to secure the fender and hood side to the frame rail an inner fender bottom assembly had to be crafted. This required 9 separate pieces be created before becoming one unit. On completion there will be a hidden cavity in the hood sides that will be used to route A/C hoses, brake lines and electrical lines.

The first piece made was #8. The "inner fender mounting flange to frame rail" piece was made first for alignment purposes.



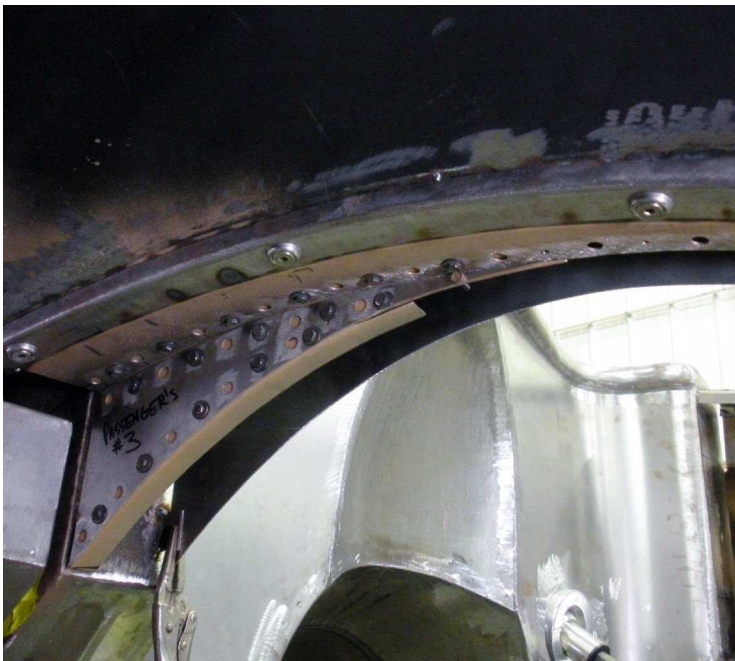


Piece #1 caps the bottom of the hood side as it scallops along the curve of the engine bay.

Piece #9, the main cap panel, was cut to fit next. Once in place it makes it easier to take measurements for the pieces #2 though #6.

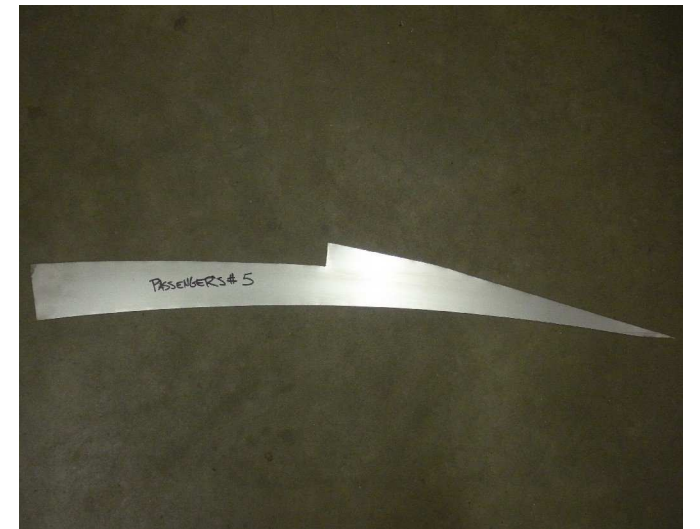
Look closely as each piece is finely crafted and fit by Trent Lewis. A superb job.





Piece # 2 creates a mounting flange for Pieces #3 and #4, which make the inner wall of the toe board sweeping away from the firewall.

Piece #5 is the bottom of the toe board and Piece #6 makes up a mounting flange for Piece #9, the main cap panel.



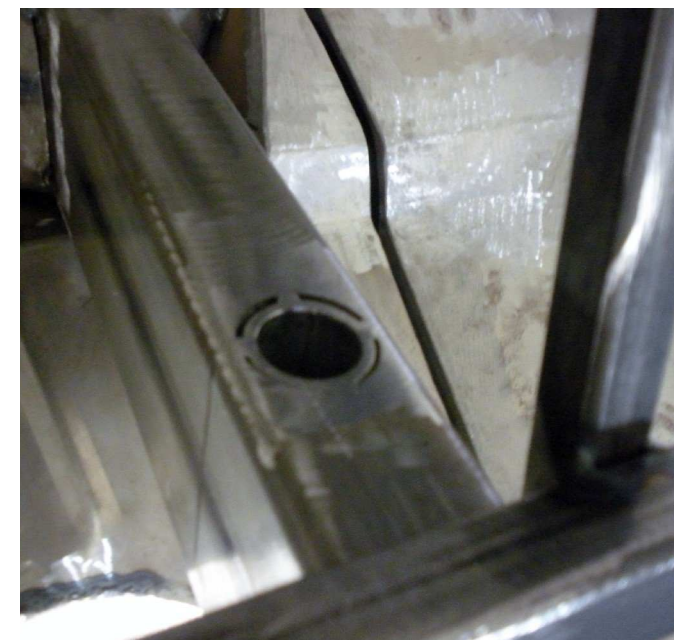


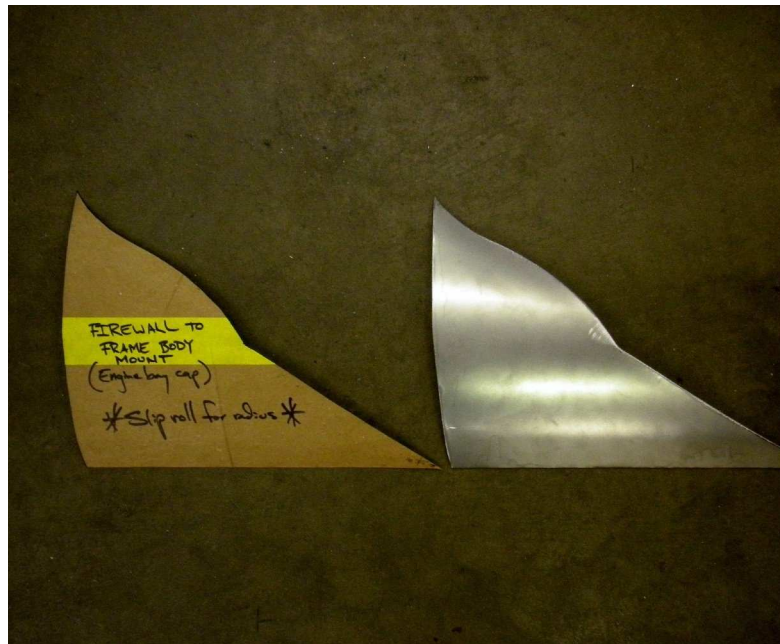
Piece #7 is a complex piece with compound curves. This bulbous piece makes room for the turn of the front tire.

Piece #8 completes the front anchoring of the inner fender panel to the frame. The gap to the front of the inner fender will be capped later in the project.

Our next step was to artfully blend the inner fender panels to the firewall by making an engine bay cap with a body mount built into it.

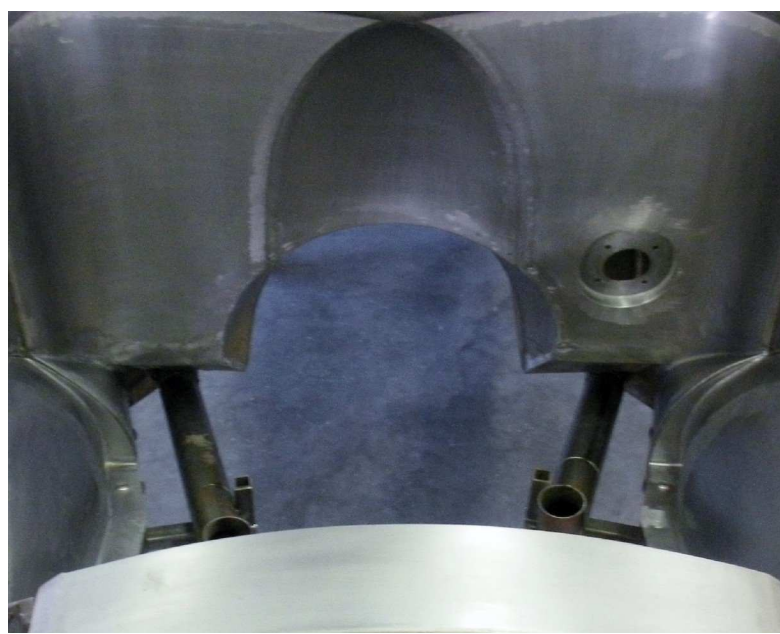
A 1" hole was cut through the frame rail with a steel pipe welded in place to access the mounting bolt from beneath.



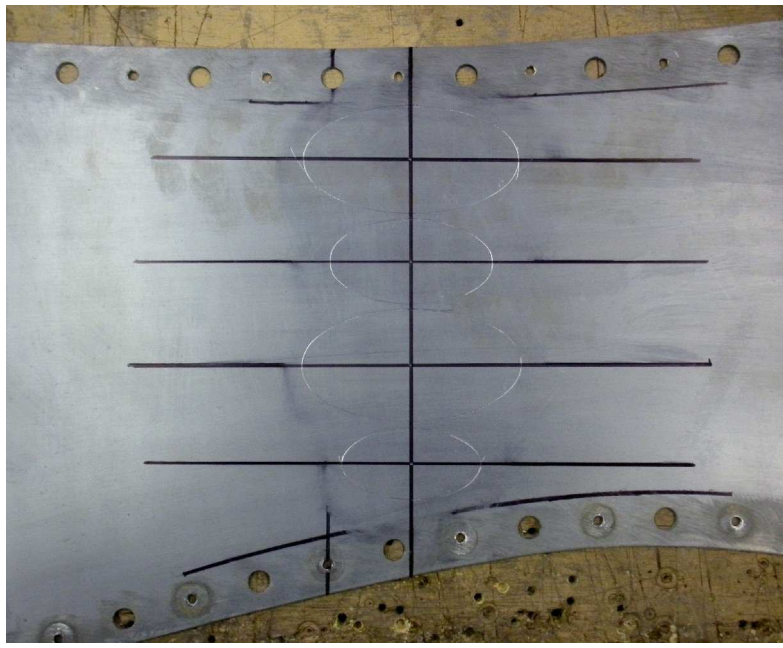


After a body mount base was crafted and secured, engine bay caps were made and rolled with an english wheel to blend with the flow of the inner fender walls. The caps were welded to the firewall.

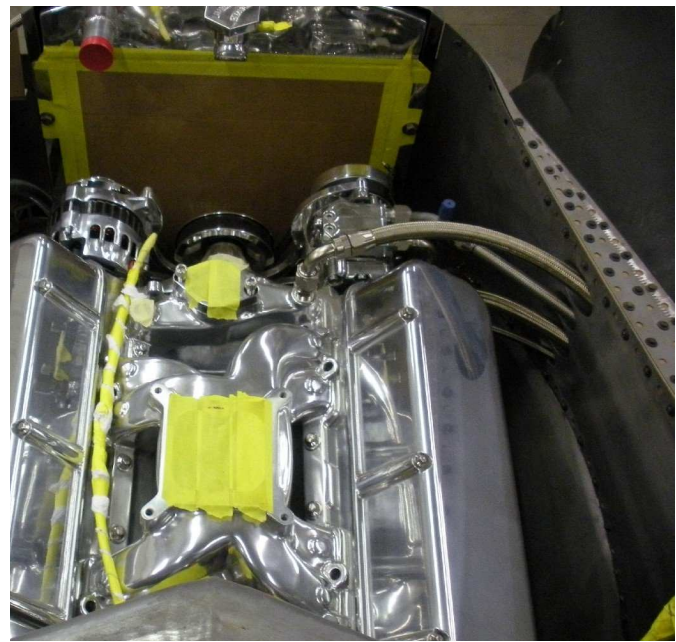
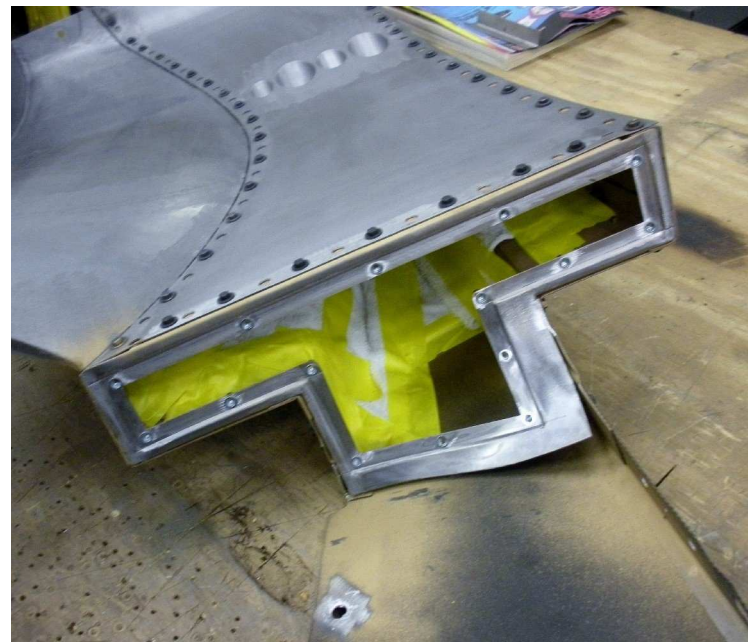
Front caps over Piece #8 were made to secure the unit to the core support frame. Cage nuts were welded into the frame rails and core support for mounting.

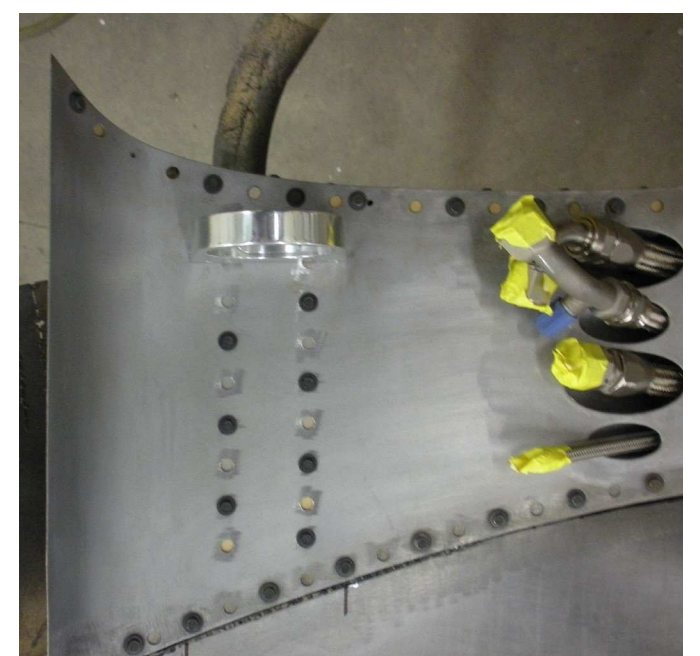
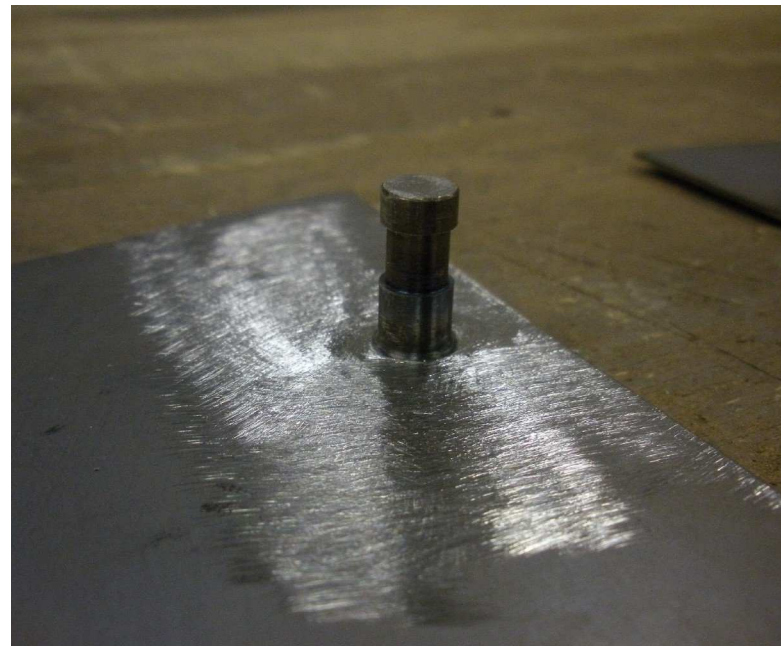
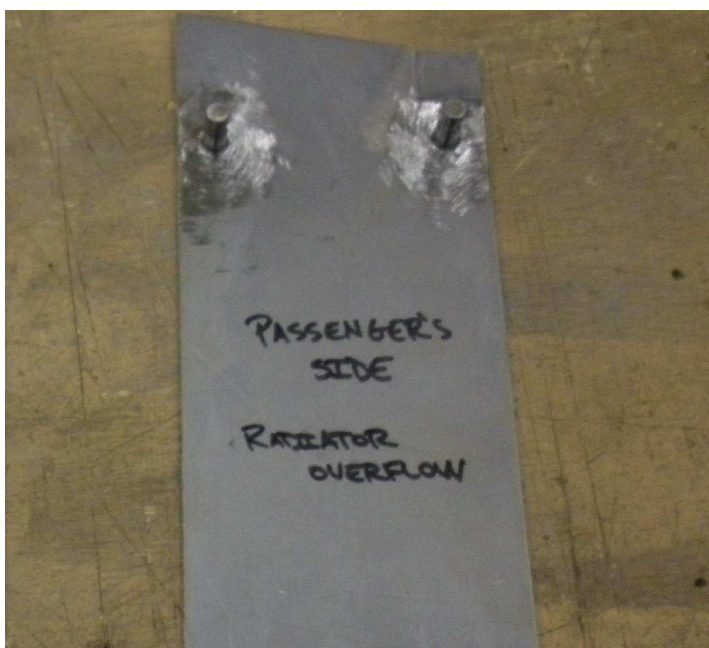






The next step was to make four ports so that the heating and A/C hoses could disappear into the right hood side and flow on to the Vintage Air unit underneath the dash.

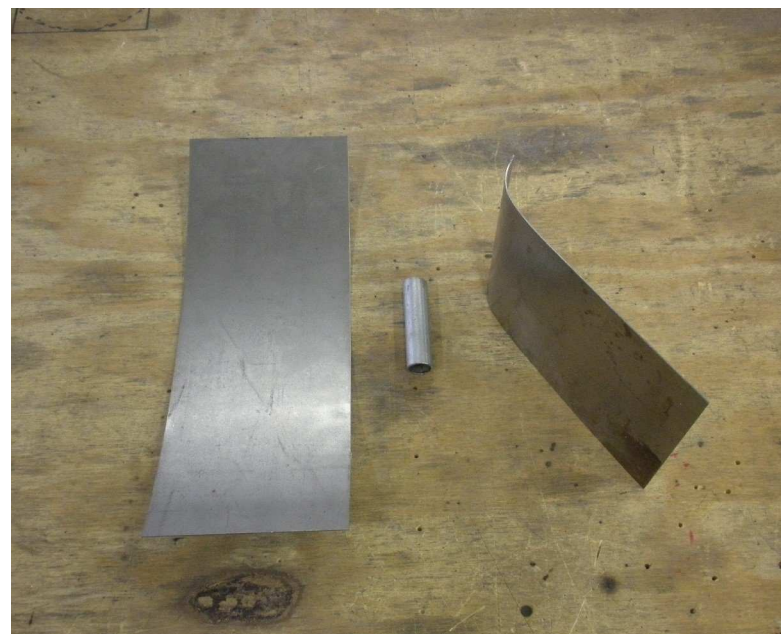




Next up was the addition of the reinforced radiator overflow tank mounts into the passenger hood side.

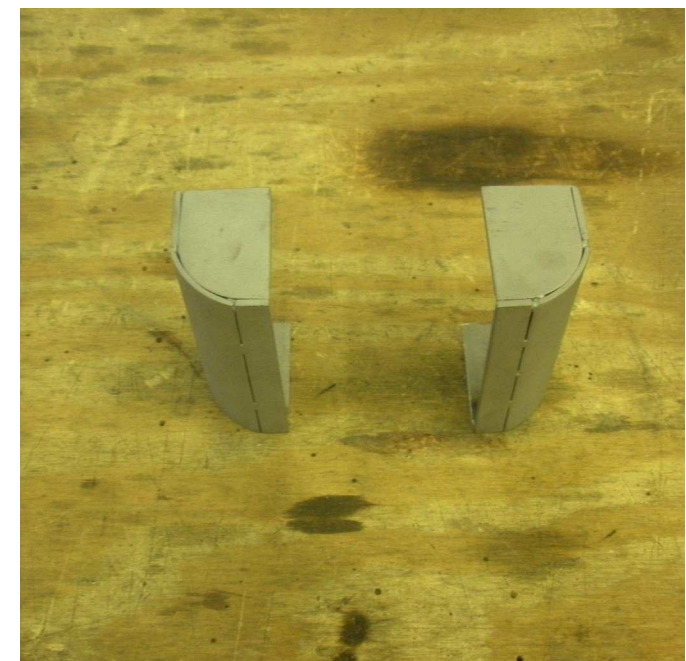
The remainder of the hood sides were appropriately boxed. The roll down of the front of the hood side was originally close to a 90 degree turn. We softened the roll to mirror the bulbus roll in the front fenders.

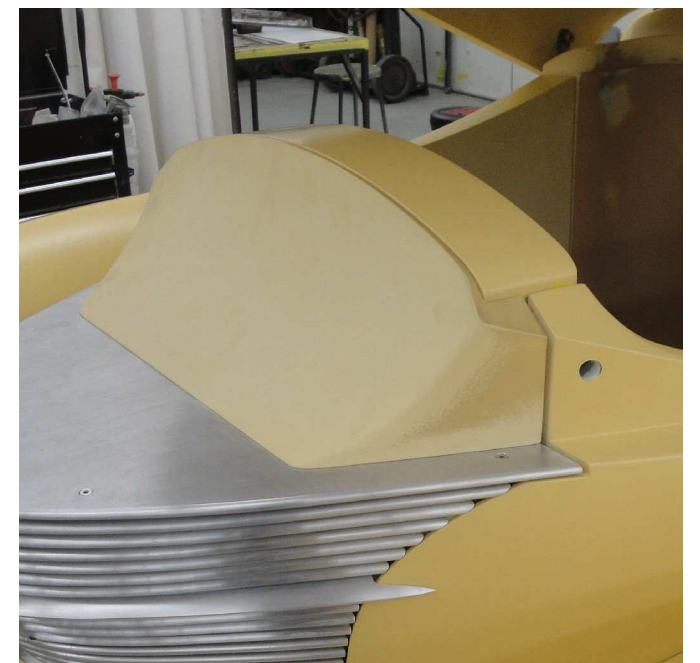
Below the inner fender step up was extended to tie into the core support. The small pipe below was grafted into the piece to secure the unit via a recessed nut built into the core support.





More capping was done to maintain a continuous flow around the engine bay. Circular caps were added to the front pan, which enabled us to reinforce the frame rail. Steel plate, 1/8" thick, was added for support and circular caps were added to the ends of the frame rails. Notice how the frame rail angles toward the inner core support, then notches inward and around continuing an unbroken flow around the engine bay.





Upper left and right you can see the excellent work in the bay. All that is left is to secure the front fenders and pan together creating the front clip.

Tony O'meara built the cool sweeping front radiator cap roll-down that mounts on the upper grille cap.

