

XV MOTORSPORTS PRESENTS

# XCELERATOR MAG

VOLUME 1 ISSUE 1



MOTORSPORTS  
XTREME • VELOCITY

# **XCELERATOR** MAG

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# WELCOME

To the very first issue of **XCELERATOR** MAG, brought to you by XV Motorsports.

So what exactly is this?

Well, around here we have a constant flow of really cool projects and product development going on that we always believed would be of interest to car-crazed auto enthusiasts just like ourselves. We thought that by sharing some of this we could create a resource that would be valuable to both experienced builders and those who are just beginning to think about custom and high performance automotive projects. Hopefully we're able to show you something new, answer some questions you may have had, and provide a source of inspiration towards your existing or future projects.

We're also hoping to share with you some of the huge archive of amazing images we've accumulated over the past five years; including a bit of the bizarre.

We're just getting going on this, so this issue is just the tip of the iceberg.

By the way, **XCELERATOR** MAG is free. If you want to receive an email as each new issue becomes available, just submit your contact info to us from the [xvmotorsports.com](http://xvmotorsports.com) website and we'll take care of the rest!



# SILVER LININGS AND GOLDEN OPPORTUNITIES





The prolonged global recession has, and continues to affect everyone, including those of us who share a passion for all aspects of cars. But as with all things in life there is more than one side to this story and perhaps this may be a great time to move closer realizing your automotive aspirations.

If you follow the collector car market at all you know that the prices of classic muscle cars have come down. While this may not be something you like if you bought a car while prices were at their highest, it does however create some exciting opportunities if you want to buy a car, or cars.

### **Getting a Classic Ride**

Just recently a close friend of mine told me he wanted to get a cool weekend car to enjoy with his wife and kids. Now my friend is by no means what you'd consider a car guy or would know the difference between a slant six and a Hemi. We talked about this on several occasions, discussing the pros and cons of a new car vs an old car, storage, insurance etc. In the end he decided to get a rag top first gen Mustang, his first ever classic car purchase. Aside from the personal appeal of the vehicle itself, he reasoned that this was a great time to buy a classic car, at a great price, enjoy it for a number of years and worst case get all his money back on it. He's right!

Right now you can get whatever type of car you really want at prices that have not been seen in years. You know the old adage about buy low and sell high? Well the buy part of that equation is right now if you are talking classic muscle cars. I'm not suggesting that you can make a killing on a car or should plan on flipping in a matter of months. However,

it is a great time to get one or more of the cars of your dreams and be sure that you are getting it at a great price, have limited to no downside and may well make some money on it over time. Making a smart purchase you can put some of your money into a real (as in physical) asset that you can not only enjoy, but also have fully insured. As my friend concluded, this is a low risk opportunity right now that is sure to bring him miles of smiles.

But it gets better.

### **The Under \$100K Supercar**

Building an over the top resto-mod version of a classic muscle car is typically a very expensive proposition. Generally, putting together a car like this starts with a ground-up restoration and then adds all the goodies that make this type of car so much fun. At any time, this type of build is an expensive undertaking. However, right now there is a way to cut the cost of a custom build in half!

***Right now there is a way to cut the cost of a custom build in half.***

Vehicle acquisition and a complete restoration are a major part of the cost of one of a custom build. However, by purchasing a car that has already been restored you can easily reduce the overall cost of your build tremendously! Finding a well restored car at a good price as the basis of your build is a winning strategy and can easily save many tens of thousands of dollars towards getting the car of your dreams. You don't need (or want) to start with a super rare numbers matching car, which allows you to buy more for less.

We are doing more and more of these types of projects for our customers; the '70 Cuda build featured in this issue is a perfect example. By starting with a restored vehicle your overall budget will go much farther than it would otherwise and numerous changes can be made to the vehicle to get you the most bang for the buck and deliver the car of your dreams at a fraction of the price.

Moreover, many of the pieces that come off the car can be sold, further reducing your overall cost. Want a slick fuel injected modern hemi backed by a 5-speed? Well the drive train that comes in a restored car is typically reasonably fresh and can add dollars back into your build budget; as can wheels and tires, brakes and other pieces you won't be using.

This is a great strategy to get the most car for your money and it has never made more sense than now. We can do almost everything we would on a ground up build, but the total cost will always come in significantly less when you start with a well purchased vehicle that has already been restored. We've even helped customers purchase cars for builds like these.

### **The Silver Lining**

If you've always dreamed of owning an original muscle car, over the top resto-mod or something in-between, this may be one of the best times to make that dream a reality. The current market conditions for classic cars will not last forever, but provides the opportunity to get the car of your dreams at a price that could be a golden opportunity.

# THREE POINT UPGRADE

What's one of the fastest, easiest and most inexpensive safety upgrades you can make on a classic musclecar? Retractable three point seat belts!

One of the safety items that was less than ideal on the typical classic muscle car is the seat belts. The cars either came with two point belts or with an auxiliary shoulder strap that was a hassle to use and worse still, positioned the belt more across your neck than chest.

The good news is you can easily upgrade your seatbelts to something that is not only more convenient and more comfortable, but is also much safer.

The pictures and accompanying text that follow show step by step how to do it yourself on three classic Mopars: Challenger, Charger and Dart (E, B and A body respectively). We've installed these on many other models and they've even gone on Fords and Chevy's.



It's one of the best upgrades you can do on your classic ride that's quick, easy and won't break the bank. Best of all, you'll be all the safer for it!

## Drop Me!

One of the key features of our belts is the "drop" mount they have at the shoulder mounting point. This drop correctly places the belt over your shoulder and across your chest. Mounting the belt all the way where the bolt is will place the belt across your neck.



## Where's My Bolts?

Missing some (or all) of your seat belt bolts? We've got you covered. Just add P/N 30-1304 to your order for as many bolts as you need.





# E-BODY

# B-BODY

# A-BODY



First slide the front seats all the way forward. Remove the factory inner belt from its mount on the transmission tunnel.



Install the short end of the new three point belt that has the push button release and tighten securely. For the E-Body with a console, install it parallel to the console and then rotate it up.



Finish the inner portion of the belt by pressing in place the bolt trim cover.



Next, remove the factory shoulder restraint by prying open the trim cover and then removing the bolt.



# E-BODY

# B-BODY

# A-BODY



Install the shoulder mount of the three point harness and securely tighten.



Press the trim cap in place to cover the bolt.



Start removing the outer belt down by the door. For an E-Body Start with the sill plate.



On the E, you need to remove the trim bezel and lift the carpet exposing the retractor cover.

## No Shoulder Mount?

Many cars pre-1968 did not have a mounting provision for the shoulder belt. It's also common for later cars to have the mounting point under the headliner, but no belts installed. Feel under your headliner to see if there is a factory installed mount in place. If there isn't any mount in place we offer a shoulder belt mounting plate, PN 30-1305. Have this plate professionally installed and welded in place as the shoulder mount is critical to the belts function.





# E-BODY



# B-BODY



# A-BODY



Install the new retractor and shoulder anchor in place. The anchor gets mounted behind and angled forward of the retractor.



The shoulder anchor gets mounted behind and angled forward of the retractor. On the E-Body pulling and smoothing the carpet will get you a professional looking install.



A-Body seat knob needed to be removed to push the seat all the way back.







### How's Your Bench?

We offer three point retractable belts in two varieties – bucket and bench seat. The bench seat requires some additional length over the bucket seat version.



### Matching Rear

We offer matching two point lap belts for your rear seats PN 30-1303.



### Convertible Conundrum

Our three point belts are not designed for use in convertibles as they require a shoulder mounting point above and behind you. We recommend sticking with two point belts in a convertible.

PART #	DESCRIPTION
30-1301	Three Point Belt for Bucket Seat
30-1302	Three Point Belt for Bench Seat
30-1303	Two Point Lap Belt
30-1304	7/16" Seat Belt Shoulder Bolt (1)
30-1305	Shoulder Belt Mounting Plate







# '70 CUDA TRANSFORMED

## PART ONE



We recently finished making major modifications to a customer's '70 Cuda, essentially transforming it into an XV car, other than doing the restoration and some of the cosmetic changes we do on a ground up build. If you haven't already seen it, check out the "Silver Linings and Golden Opportunities" article elsewhere in this issue. This '70 Cuda and the work done to it are exactly what that article is all about.

We thought you might like to see the kinds of modifications that can be done to an already restored car to *completely* transform its performance, handling, braking and reliability, as well as addressing a number of driver comforts and upgrades.

Starting in this issue we'll begin walking you through the entire process and all the upgrades we've done to this Cuda so you get a handle on what can be done with a car like this; and also how we do it. At the end we'll also share with you the owner's driving impressions of the car after all the transformation work has been done.

So sit back, get a cold one, and follow along as this Cuda gets some major mojo!





This car was purchased by one of our customers as a recently restored '70 Cuda as we received it. It came equipped with with a 383 4-BBL, 4-Speed, 15" Rally Wheels and Shaker Hood. His desire was to dramatically improve the car's handling, braking and responsiveness as well as go to all modern equipment like a fuel injected 5.7 Hemi, 5-speed transmission, 4-wheel high performance disc brakes and more. This was all done with a budget in mind with the finished product costing a fraction of what a full ground up build and restoration would have.



First thing we need to do is remove the front fenders and grill in preparation for chassis stiffening components and weld in components of our Level II Suspension. Battery has been removed and will be relocated to the trunk to improve the vehicles weight distribution. We also drain the fluids and begin disconnecting lines and harnesses so we can remove the motor. Also note the factory radiator and brake booster, which will also be removed. Also note that this was originally a Non-A/C car; we will be installing Air Conditioning as part of the project.

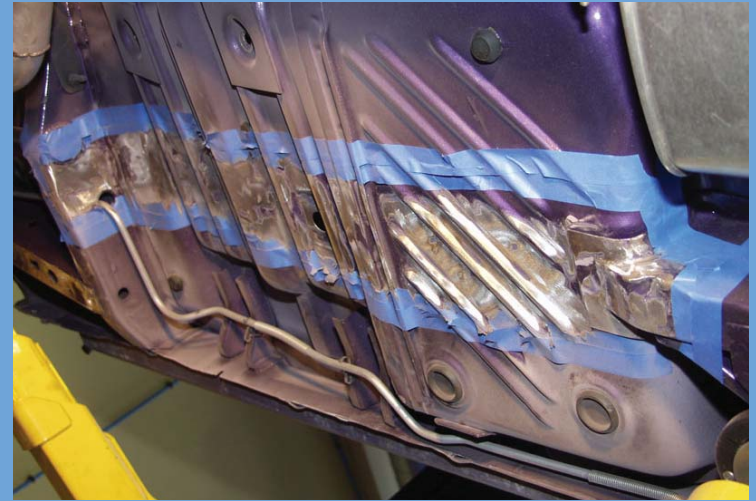


We start installing components of our Chassis Stiffening System which dramatically improve the torsional rigidity of the car. First we install the Lower Radiator Support, a 2" X 2" mandrel bent steel piece that positively ties the frame rails together at the front of the car and replaces the flimsy factory piece. Note that we retain and tie in the sides of the factory radiator support and re-attach the factory hood latch support. Once this and the engine bay are painted, it will all look factory.

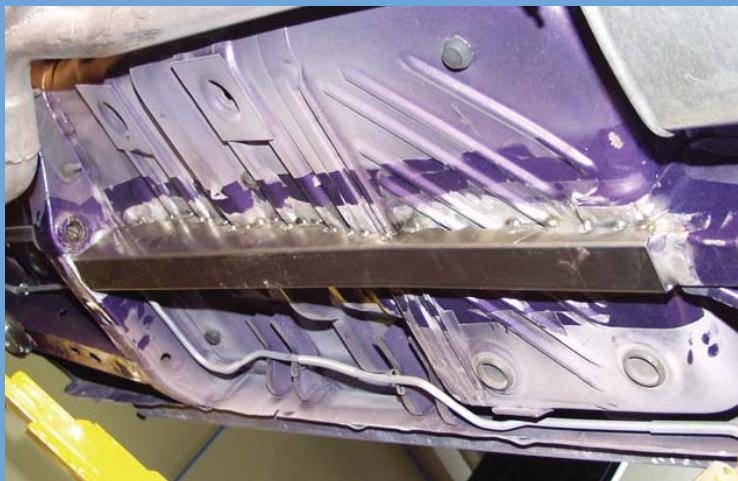




We begin installing Inner Fender Braces which tie the car together from the shock tower to the firewall. There are laser cut gussets that reinforce the factory support brackets that the tube is welded to above the shock tower (pic on left has it installed and on right not yet installed). Also note that we seam weld the perimeter of the factory shock tower as this is only spot welded from the factory. Also note the light-weight stamped factory support above our piece.



We start the installation of our Laser Cut Subframe Connectors. As you can see in the first picture these will tie the car together from the rear frame rails to the transmission/T-Bar cross member. After we test fit them, the floor pan is masked and paint sanded off in preparation for welding. The picture on the right shows what these look like after the floor pan has been re-painted.



The pieces are first tacked in place and then fully welded from front to back. The last piece of chassis stiffening is the engine bay brace, which is temporarily put in place to drill all the mounting holes before the engine bay, inner fenders and floor pan are re-painted. The engine bay brace triangulates the firewall and shocktowers, tying them all together. In conjunction with the other pieces installed this dramatically improves the torsional rigidity of the car which is essential for both handling and getting rid of shakes and rattles.





We next need to remove the drivetrain and front suspension. After removing the brakes, shocks, control arms and spindles, we position our engine cradle in place. The engine cradle supports the engine, mounted on its K-member and the transmission so they can be removed as a complete assembly. Once in position, we lift the car body away from the drivetrain. The new setup will be installed in the same way, just like at the factory.

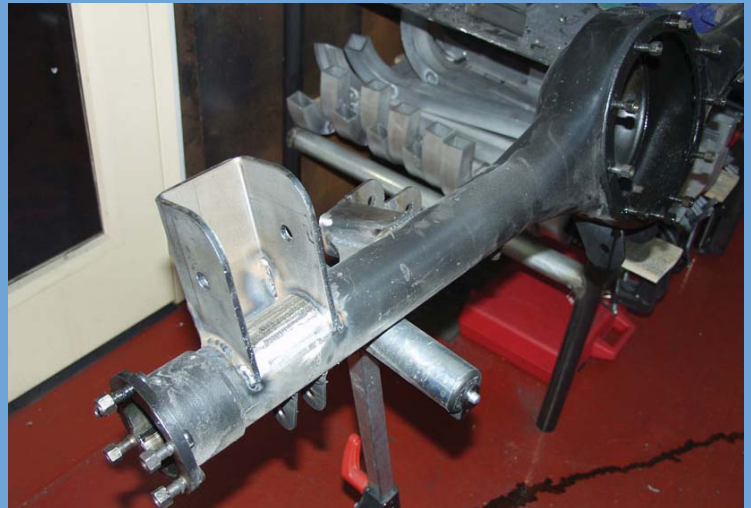


This car is getting the XV Level II Suspension System installed front and rear. Starting at the front, we need to install the Upper Control Arm and Upper Shock Mount Assembly, which comes as a welded assembly in the kit as shown on the left. The assembly fits directly into the shock tower and is then welded in place to the shock tower and frame rail.



The XV Aluminum K-Member uses additional mounting points. To locate these the new K is bolted in place using two of the original mounting holes. A punch and stepped bushing is used to drill the additional holes. The stepped bushing is placed in each of the holes in the K and the Punch makes a center mark on the frame rail. The K-Member is removed and the bottom holes are drilled. The stepped bushing is inserted into the new hole and the punch is then used again to properly mark the holes location on the top frame rail. After the holes are drilled, steel anti-crush sleeves are welded in place as shown on another car on the right..

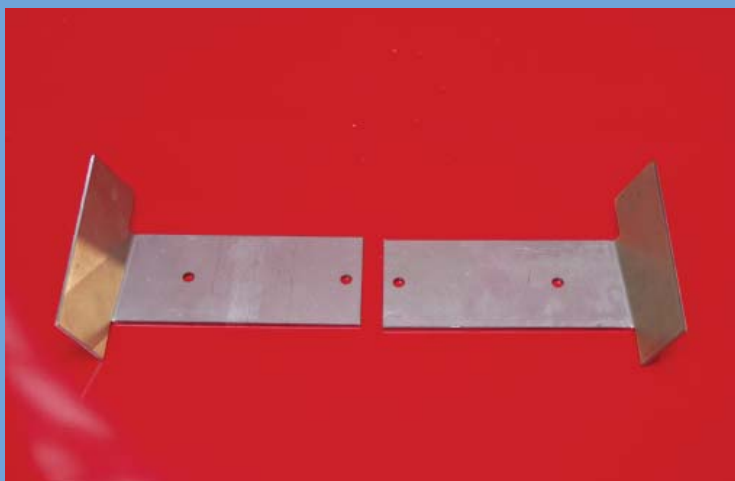




The fuel tank, rear axle, leaf springs and shackles are all removed. The factory stamped steel upper shock mount will also be removed as it is not strong enough for coilover shocks. The car's rear axle housing is disassembled and welded in place are the trailing arm mounts, panhard bar mount, third link mount, lower coilover mounts and rear sway bar mounts.



After carefully measuring, the new upper coilover mount is the first piece to be tacked in place. All measurements are checked and positioned and tacked in place. This includes the panhard bar frame mount, third link chassis mount and rear anti-roll bar axle tube.



The rear anti roll bar mounts through the frame rails. The anti roll bar itself runs inside a tube that mounts between (and through) the frame rails and is tied to the third link chassis mount. It's critical to get the tube running between the frame rails square in the car and located correctly. To make this easy, our kit includes steel templates that bolt into factory holes in the frame rail and provide a fixed point on each side of the frame rail to measure from, ensuring the holes on each side of the frame rail, and across frame rails are square.





Here are some pictures of the rear suspension fully installed. Panhard bar frame mount is supported by a J-Bar brace tied to the upper coilover mount. The upper coilover mount has a filler plate in its center that ties the mount to the structure of the car at its center.

The third link is mounted at the top of the axle and bolts to a bracket welded to the floor pan and the sway bar axle tube that is welded to the frame rails inside and out. The third link is adjustable, allowing you to dial in your pinion angle.

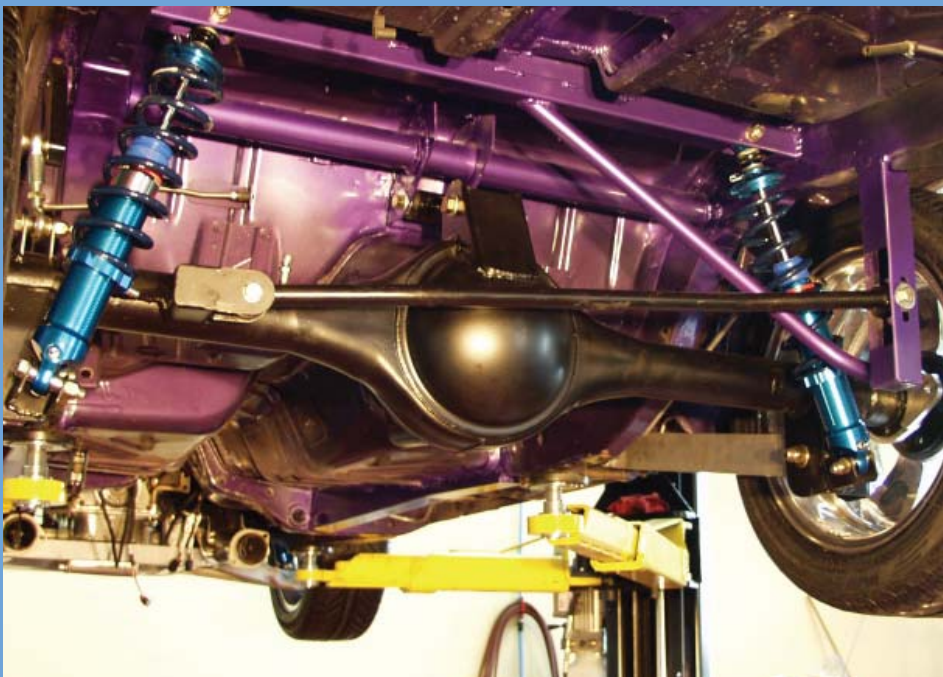
This car has tubular aluminum trailing arms, billet ones are an optional upgrade and provide clearance for bigger tires (this car has 285's installed with no tubing or other modifications). Trailing arms mount at the front into the factory leaf spring mounting bracket. The sway bar is mounted inside the tube you see running between the frame rails and rides on solid nylon bushings.

While hard to see in the photo, the sway bar is a NASCAR style, splined tubular bar with billet arms that link to the axle using rod ends. This allows quite a bit of adjustability, including pre-loading the axle for launches.

The shocks are custom valved by application. In this case the customer chose mono-tube single adjustables which is an excellent choice. You can see the adjuster at the top of the shock. Since these are coilovers, ride height is adjustable as well by turning the collar at the bottom of the spring which threads onto the shock's aluminum body. Spring rates are also defined by application based upon actual testing.

At ride height, the panhard bar should be parallel to the ground and is adjustable to facilitate this. A three link rear is widely regarded as the best live axle setup for handling as it has the least amount of bind. As compared to the stock leaf spring setup, our Level II Suspension will shave over 60 lbs off your car.

In the next issue we'll have Part II and continue with this build and show you how it all comes together. Stay tuned and feel free to contact us with questions at ??????





# MY XTREME MOPAR



Rob C. from St. Louis, MO was kind enough to send us some pics of his bad-ass '70 Charger R/T after he installed a full XV Level I Suspension system including monotube version of our shocks.

We think his car looks awesome and he tells us "I would rate the handling a 10 and rides great!"

Thanks for the pics and feedback Rob!

Would you like to see your car here? If you've installed some XV hardware on your ride, just send us some pics and info about you and your car.

You can email us at:  
[XceleratorMag@xvmotorsports.com](mailto:XceleratorMag@xvmotorsports.com)





# FINAL THOUGHTS



We would never have guessed that a mid '70's Cadillac Coupe DeVille might be recruited into law enforcement, but here it is! We took this picture along a two lane highway where it is real easy to find yourself going over the speed limit. Did Jake and Elwood upgrade their ride for a luxocruiser?

Send us your thoughts on this one. We'll send the author of the best caption an XV Motorsports hat and print the winner's submission in our next issue.

In our next issue we'll be covering the global muscle car phenomenon, how we've worked with customers from around the globe and special opportunities for enthusiasts outside the United States. We'll also have Part II of the '70 Cuda Transformation, tech tips based upon questions we often receive and more.