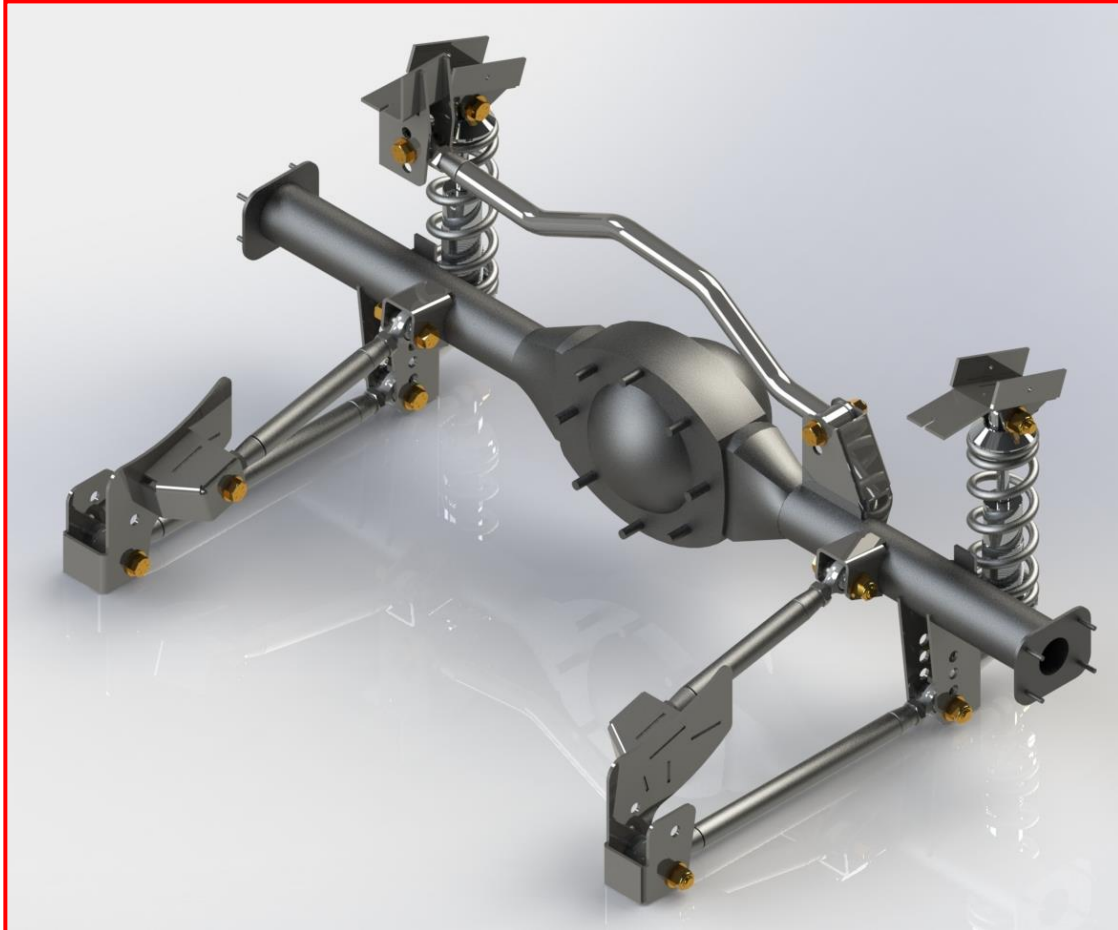


MOPAR

INSTRUCTIONS – 1966-72
A-BODY PARALLEL 4-LINK

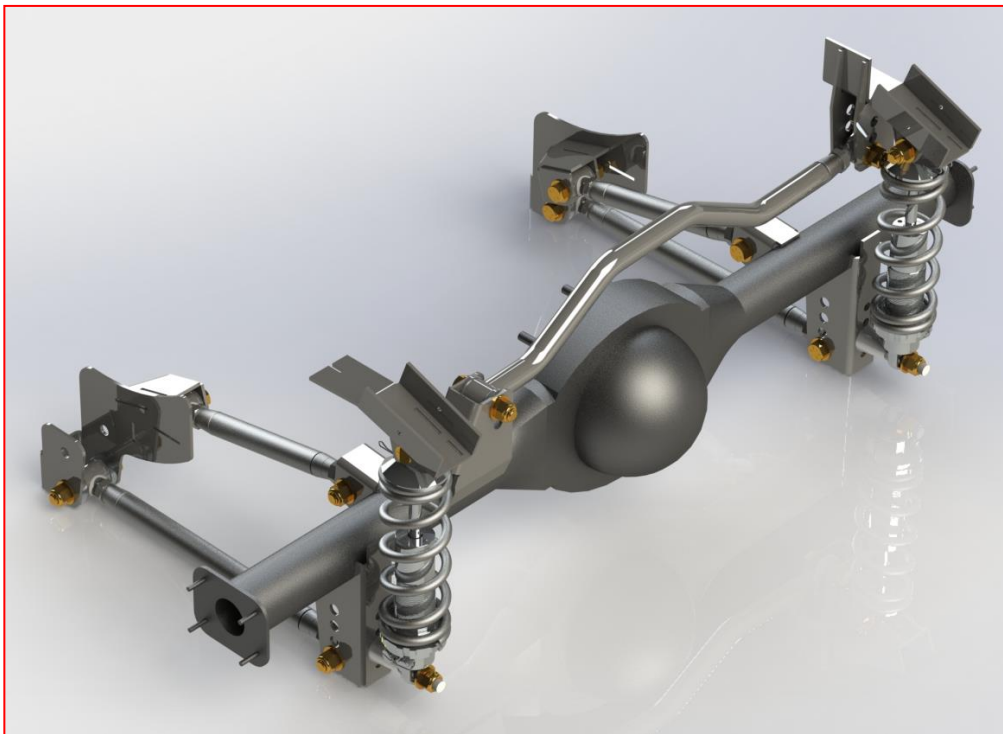
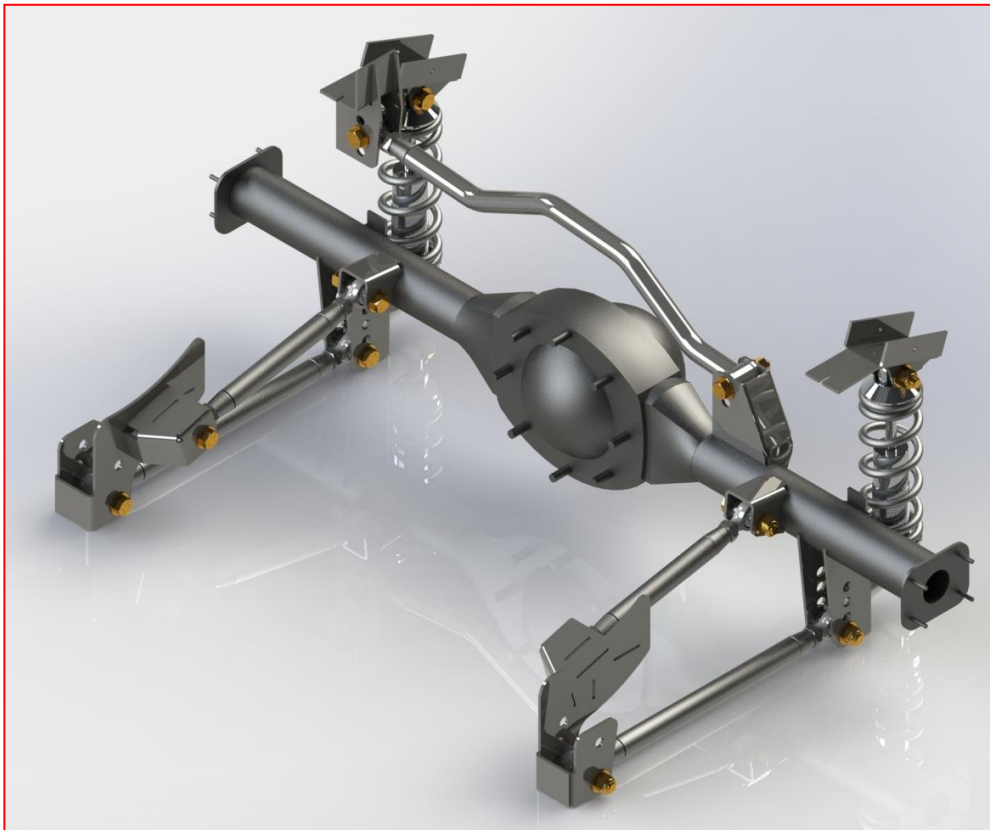
control freak
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**A-BODY PARALLEL W/ PANHARD BAR
RS-5435
1967-1976 DART, SWINGER, VALIANT
1967-1969 BARRACUDA
RS-5435-D
1970+ DEMON & DUSTER**





Installation Instructions

Parallel 4-Link Panhard Bar Rear Suspension System – Part # RS-5435
1967-1976 Mopar A-Body Vehicles

System Contents

- Forward Frame Brackets (1 Left and 1 Right)
- Lower Rear Trailing Arm Differential Brackets (2)
- Upper Rear Trailing Arm Differential Mount (2)
- Lower Trailing Arm Set w/Adjustable Rod Ends (2) & Bushing Housings (2)
- Upper Trailing Arm Set w/Adjustable Rod Ends (2) & Bushing Housings (2)
- Upper Coil-Over Mount Brackets (1 Left and 1 Right)
- Lower Coil-Over Mount Studs With Hardware (2)
- Viking Double Adjustable Coil-Over Shocks w/ Springs (2 Each)
- Grade 8 Mounting Hardware
- Panhard Bar with Brackets with Bushings (2) & Adjustable Rod End (1)

Thank you for purchasing this Parallel 4-Link Rear Suspension System for Mopar A-Body Vehicles. This system is manufactured by Control Freak Suspensions™ in Sanford, Florida. We believe this system is the best available at any price. As with most aftermarket performance suspension products, the end user is solely responsible for determining the suitability of any and all such products, regardless of manufacturer.

This system, and others like it, are typically subjected to uses that could exceed its mechanical limits, so there is no warranty, expressed or implied. Blue Moon Services LLC d/b/a Control Freak Suspensions™ cannot control how this product is installed or used. By purchasing this product, you are assuming all risks associated with its installation and use and agree to having appropriate skills for its installation and use. Blue Moon Services LLC d/b/a Control Freak Suspensions™, our vendors and suppliers will not be held responsible, liable or accountable for any injury, damage, loss, penalties or fines that occur, directly or indirectly, from the installation and use of this product.

Please note that this system includes components that must be welded accurately into place. While installation is relatively easy for those with appropriate skills and experience, novices, or those who question their abilities, should employ a professional for installation. Fit is guaranteed on vehicles that are unmolested...that is cars that have not suffered any chassis or unitized body damage. Such damage can bend or alter the unitized chassis, making installation more difficult and may require chassis adjustment and/or straightening by professionals before installation.

Read all instructions before starting installation.

IMPORTANT NOTES:

1. All brackets in this kit must be welded into place.
2. Be certain to remove carpeting, insulation or other flammables from the area being welded or subjected to welding heat.
3. Installation of this rear suspension system is straightforward, but ease of installation is based upon your level of experience and ability.
4. By following these instructions and measuring accurately, we strongly recommend that all welded parts are **tack welded** into place **prior to final welding**. This allows you to fit the entire system **before** final welding is done.
5. Some parts of this system may have been accurately threaded by our CNC machine shop to receive the supplied adjustable rod and/or bushing ends. Be careful not to cross thread the rod ends into these machined parts. **Use anti-seize compound on all rod ends**. We are not responsible for any cross threaded parts.
6. All rod ends that are threaded into tubes must use the supplied jam nuts for safety.
7. Use extra caution in jacking and stabilizing the vehicle for this installation. The differential will need to be removed and reinstalled, so **we strongly recommend the use of a professional lift to make the job easier and safer**.
8. An assistant is recommended during parts of this installation.

What Else Do I Need?

Everything you need is included in the purchase price. Installation requires welding. **Disconnect your battery BEFORE welding**. If you don't, you run the risk of ruining electronic ignition and entertainment components in the car.

• IMPORTANT NOTES:

Unpacking the System

Your rear suspension system arrives boxed and is not assembled. Since this system requires all brackets to be welded into place, we are unable to pre-assemble the product. You are responsible for making certain all fasteners are installed correctly and appropriately tightened. If you ordered brakes with your system, the brake kit is boxed separately and has its own set of instructions provided by brake manufacturer.

Carefully open all boxes and remove all components. Lay out all the components and familiarize yourself with them using the drawings on page 3 as your guide. This will make installation quicker and easier. Read through the entire instruction book and familiarize yourself with the steps before beginning installation.

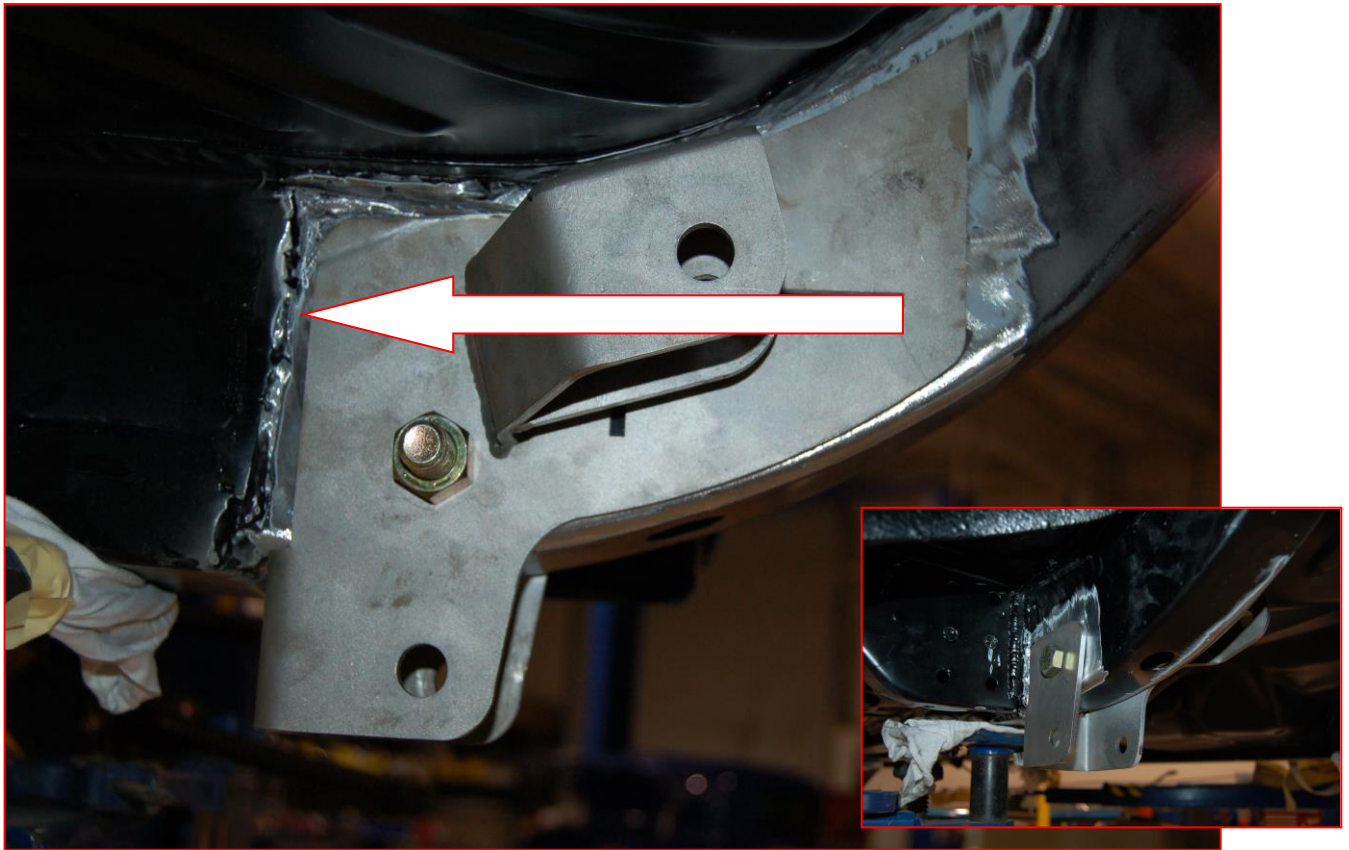
Once you have read through the instructions and identified all the parts, prepare your tools for installation. You are now ready to begin installation.

Preparing for Installation

1. Measure the ride height of the vehicle by taking measurements from the rocker panel to the ground. Take a front and rear measurement on each side and note it in a notebook. We recommend using masking tape at all four measuring points and writing the measurement so it can always be seen. This is your baseline stock ride height.
2. Support the differential with jacks. If you are using a lift, support with tall jacks. With the differential safely supported, remove the sway bar and the end brackets holding it in place against the frame.
3. Remove any exhaust components that may interfere with removing the rear differential.
4. Disconnect the driveshaft from the differential.
5. Remove the shocks from both sides of the differential.
6. Making certain the differential is supported by jacks, with a helper remove the front and rear leaf spring bolts, keeping the differential from turning while doing so. You will remove the entire differential assembly.
7. Once the differential has been removed, take this opportunity to clean it up. After the upper and lower trailing arm brackets have been welded into place, and the original spring perches removed (if you choose to do so), you can paint the rear before reinstalling with the new suspension system.
8. Examine the chassis rails on the car. Over the years, the vehicle may have been incorrectly jacked up in some areas which can slightly “mushroom” or otherwise move the rails slightly out of line. This is an opportunity to straighten or adjust the rails prior to putting the rear suspension brackets in place.
9. Prior to installing the brackets, the area around each bracket must be sanded to raw metal and cleaned. We use an air die grinder with a 3” RoLok sanding disc. 80 grit works fine. Clean at least 1/2” beyond the bracket, leaving ample clean metal for a good weld.

Installation of the Rear Suspension Brackets

1. Place the forward frame brackets into place. There is a right and left bracket. Correct placement is shown from the inside and outside of the rail in the photos. Make certain the area around the perimeter is cleaned to bare metal allowing a good welding surface. The forward edge of the brackets should be perpendicular to the chassis.



2. The pictures above show the forward frame bracket on the inside and outside of the rail, firmly against the sheet metal lip marked with an arrow. You will note that on SOME A-Body vehicles, you can bolt the bracket into place through an existing chassis hole. As noted, the hole is found only on some vehicles. Do this on both sides and tack weld into place.
3. Locate and remove the differential bump stops that are in the upper arch of the frame rail, as shown. Once removed there will be two screw holes. Hold on to the screws because you will use them to locate the upper coil-over mounting brackets.



4. The upper coil-over mount brackets have a left and a right. The right side (passenger) is the larger one, with a drop-down bracket attached to it. It is pictured below. Place the bracket on the car as shown in the picture below. Use one of the screws from the bump-stop you removed in the previous step to locate the bracket. Tack weld into place.

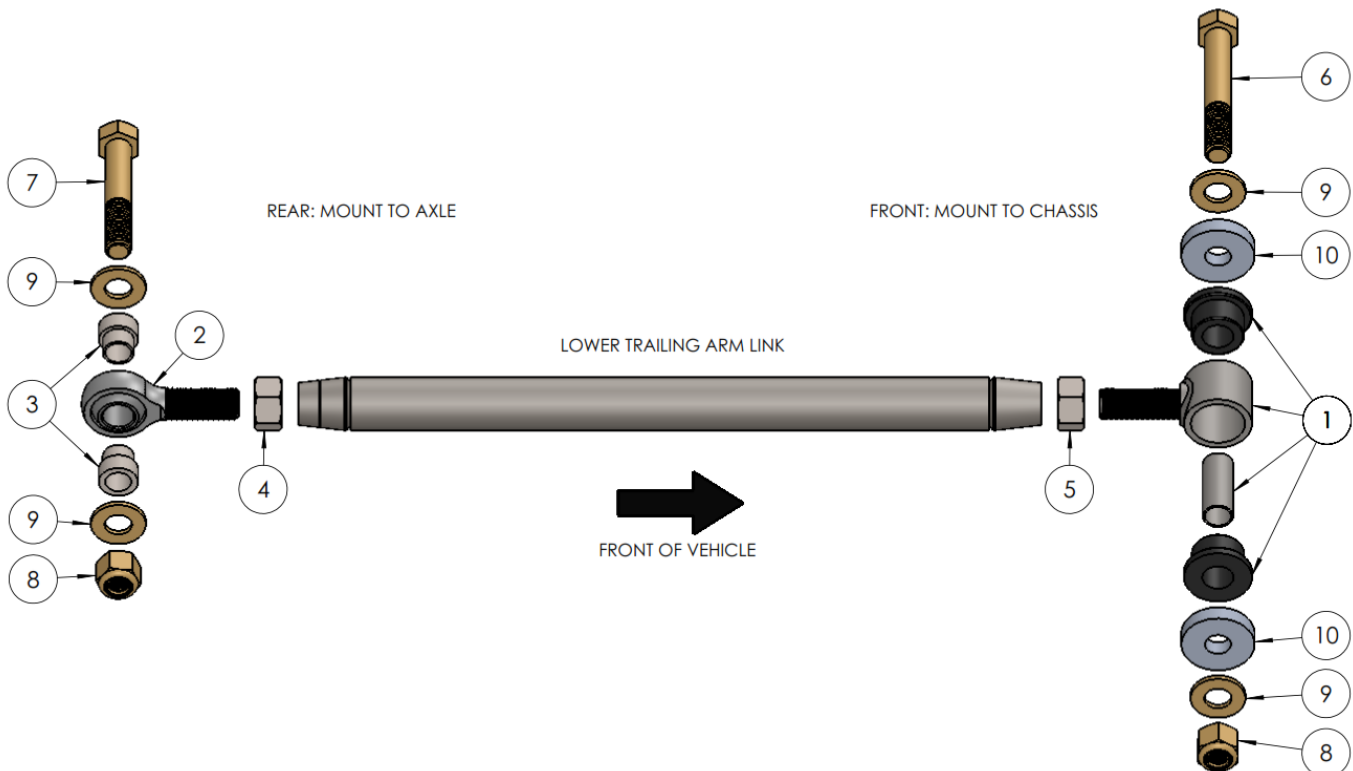


5. Install the left side (driver) upper coil-over mount bracket onto the left chassis rail as shown below. Use the other bump stop screw from Step 3. Installation is pictured below. Tack weld into place.



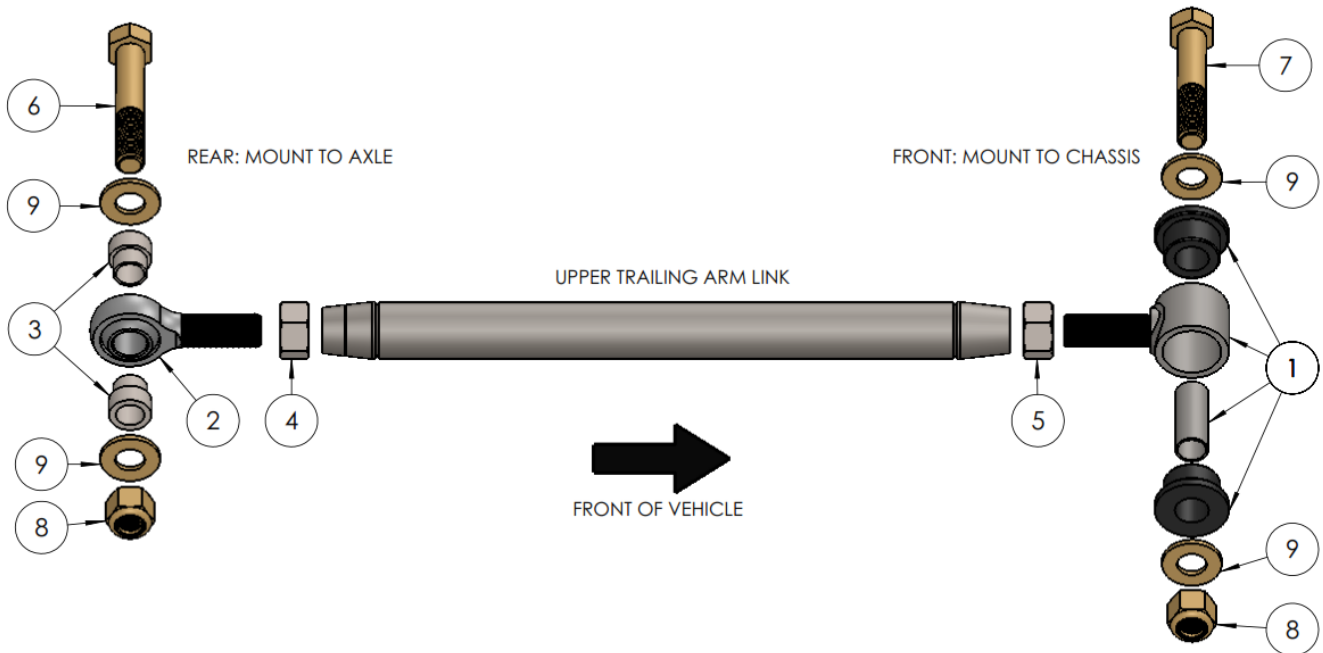
- Get both upper and lower trailing arms and apply anti-seize into each threaded hole and a thin layer on each rod end and bushing housing. Put jam nuts on each of the adjustable end pieces. The rod ends are left hand thread and the bushing housings are right hand thread. Screw the rod ends in until about three threads are showing between the jam nut and the body of the rod end. Do the same for the bushing housing adjustable ends. Only hand tighten the jam nut. The length of both upper trailing arms should match each other as should the lower trailing arms. The trailing arms and components are pictured below.

| LOWER TRAILING ARM PARTS & HARDWARE | | | |
|-------------------------------------|-------------|---|----------|
| ITEM | PART NUMBER | DESCRIPTION | QUANTITY |
| 1 | - | MICROFLEX 3/4" FORGED ROD END W/ P&J BUSHINGS | 1 |
| 2 | XML-12 | 3/4" ROD END - LH THREADS | 1 |
| 3 | RS-9001 | ROD END SLEEVE | 2 |
| 4 | 75FNFJL8Z | 3/4" JAM NUT - LH THREADS | 1 |
| 5 | 75FNFJ8Z | 3/4" JAM NUT - RH THREADS | 1 |
| 6 | 62C400HC8Z | 5/8"-11 X 4.00" HEX HEAD BOLT GRADE 8 YZ | 1 |
| 7 | 62C350HC8Z | 5/8"-11 X 3.50" HEX HEAD BOLT GRADE 8 YZ | 1 |
| 8 | 62CNN8Z | 5/8" -11 GRADE 8 NYLOCK NUT | 2 |
| 9 | 62NWSHZ | 5/8" SAE FLAT WASHER | 4 |
| 10 | RS-1477-375 | LOWER CONTROL ARM SPACER 0.375" THICK | 2 |

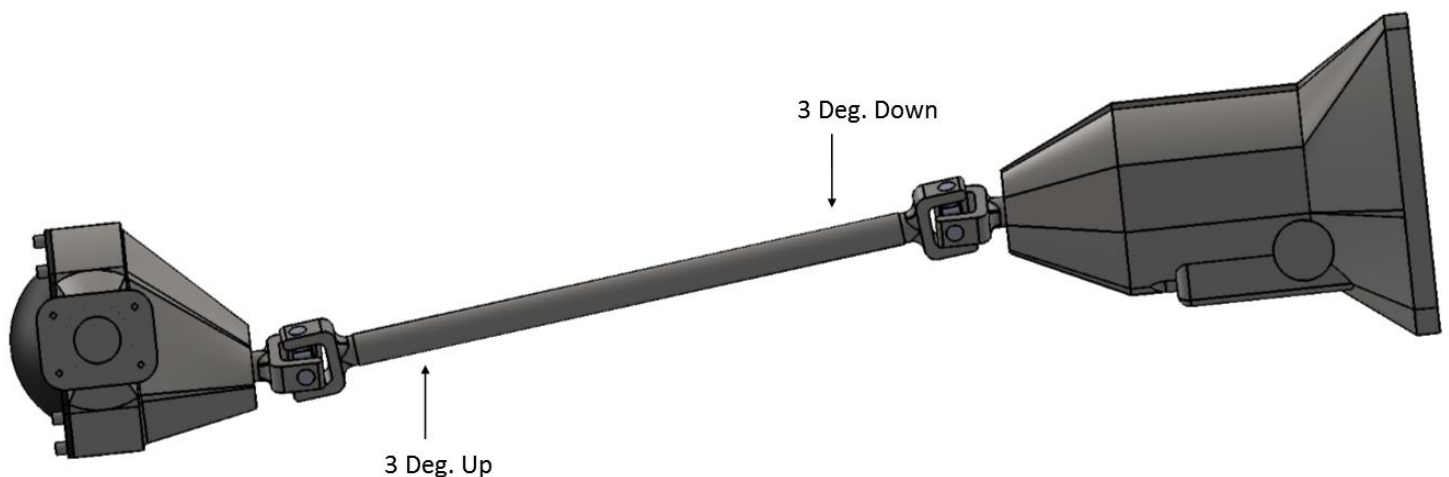


UPPER TRAILING ARM PARTS & HARDWARE

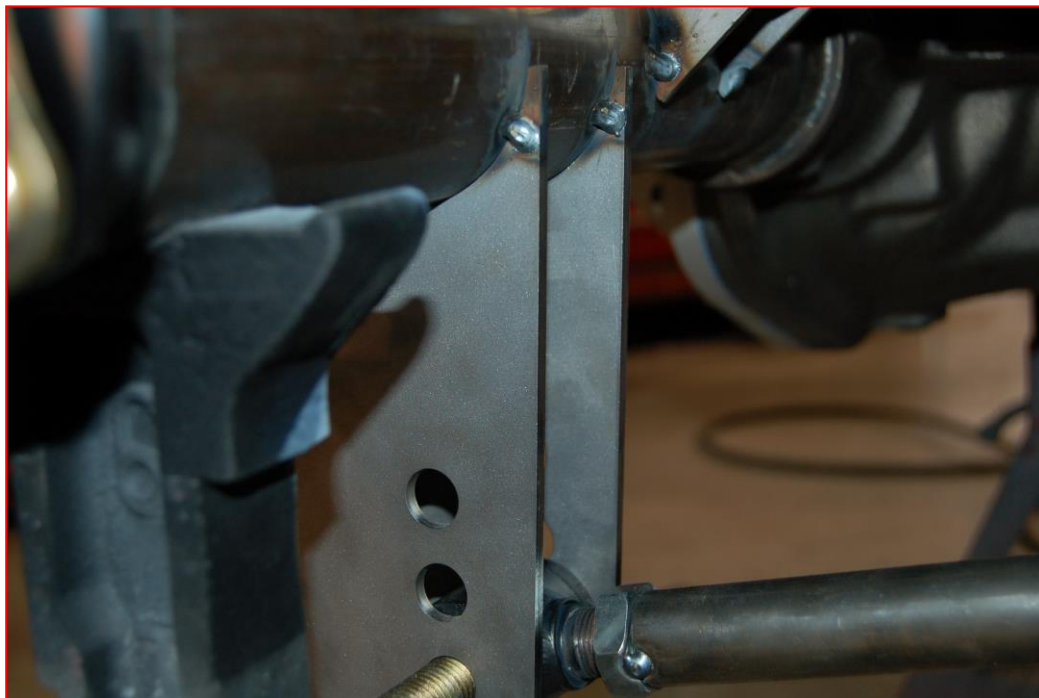
| ITEM | PART NUMBER | DESCRIPTION | QUANTITY |
|------|-------------|---|----------|
| 1 | - | MICROFLEX 3/4" FORGED ROD END W/ P&J BUSHINGS | 1 |
| 2 | XML-12 | 3/4" ROD END - LH THREADS | 1 |
| 3 | RS-9001 | ROD END SLEEVE | 2 |
| 4 | 75FNFJL8Z | 3/4" JAM NUT - LH THREADS | 1 |
| 5 | 75FNFJ8Z | 3/4" JAM NUT - RH THREADS | 1 |
| 6 | 62C350HC8Z | 5/8"-11 X 3.50" HEX HEAD BOLT GRADE 8 YZ | 1 |
| 7 | 62C325HC8Z | 5/8"-11 X 3.25" HEX HEAD BOLT GRADE 8 YZ | 1 |
| 8 | 62CNN8Z | 5/8" -11 GRADE 8 NYLOCK NUT | 2 |
| 9 | 62NWSHZ | 5/8" SAE FLAT WASHER | 4 |



7. Attach the upper and lower trailing arms to the forward frame brackets. Hand tighten the bolts. Attach the rear lower trailing arm brackets to the lower trailing arms. Only hand tighten the bolts. Attach the upper trailing arm to the smaller upper trailing arm brackets. Hand tighten the bolts. This provides ease for the initial tack weld position for the upper and lower trailing arm brackets on the differential.
8. Move the differential into position making certain that it is centered between the rails. Now adjust the height of the rear axle to your desired ride height, which is typically 12-13" between the upper and lower shock mounts. Ride height is entirely up to you and the look / stance you want the car to have. You also must consider tire size. Set the pinion angle from zero degrees to minus one-half degree. You will be able to make adjustments once the system is installed. This setting is a median setting for most applications. The drawing below will help you better understand setting the pinion angle.



9. Place the brackets that are attached to the lower trailing arms onto the differential. Make sure that the closed end, or the back, of the lower trailing arm bracket is perpendicular to the ground. That is to make certain the coil-over does not hit the bracket. When you are satisfied that the brackets are in the appropriate location and perpendicular to the differential axle tubes, place a tack weld in the corners of the brackets just to hold them into position. If you need to make an adjustment later, you will only have to cut through a few tack welds. Positioning and tack welding the brackets is pictured on the next page.

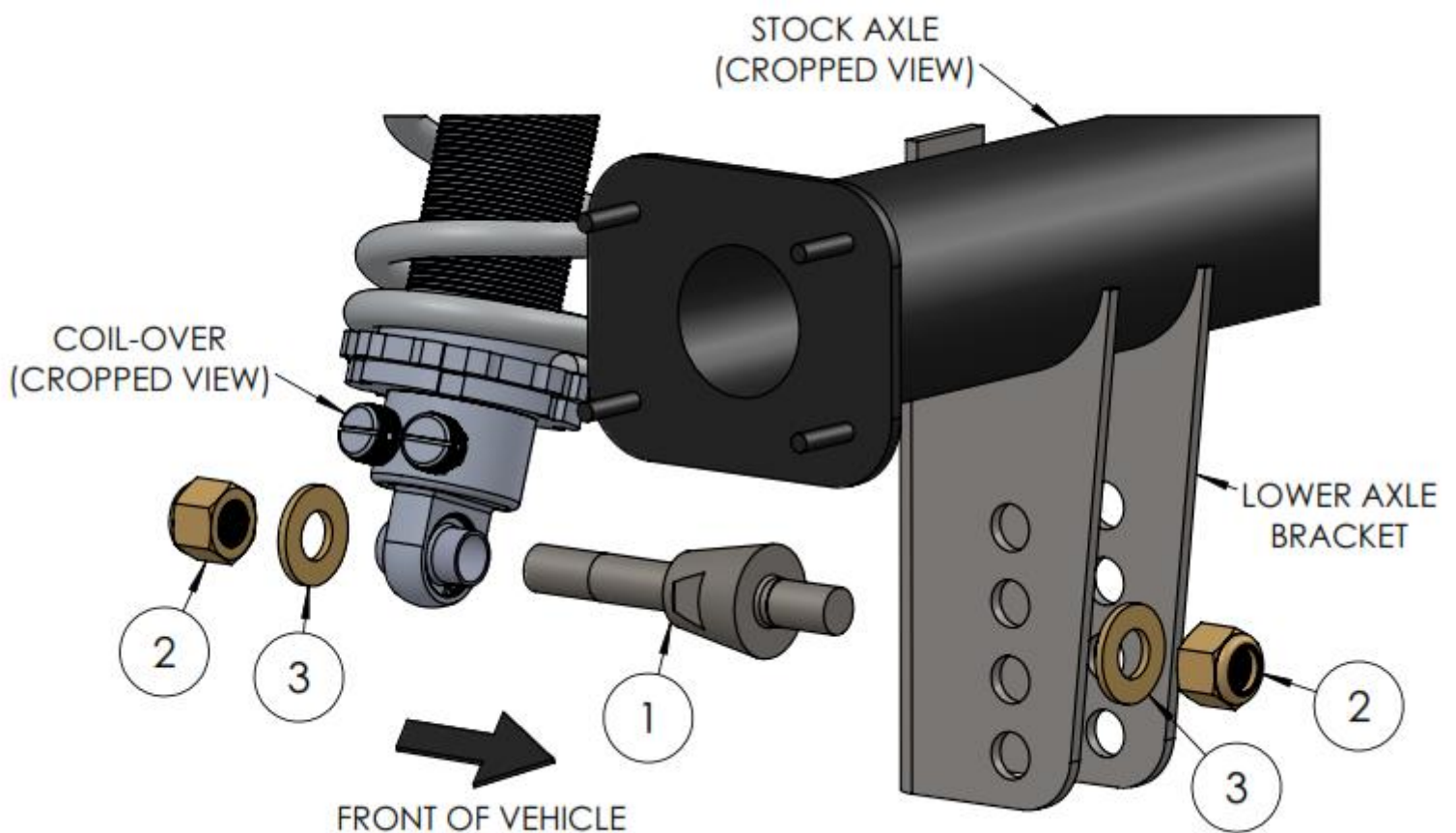


10. Place the upper trailing arm differential brackets into position on the top of the differential tubes. Just like on the lower brackets, tack the upper brackets into position ensuring they are parallel with the lower trailing arms and perpendicular to the differential axle tubes. Place a few tack welds into the corners of the brackets.



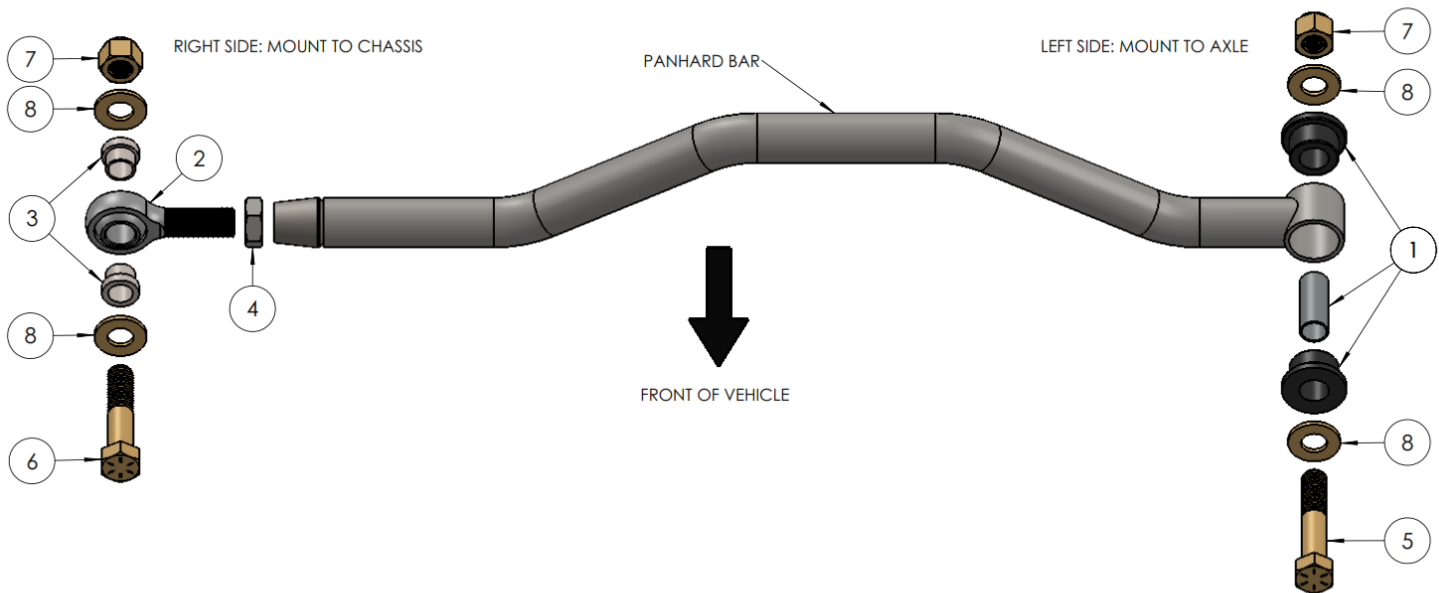
11. Mount the lower coil-over machined studs into place, using the lowest hole on the lower trailing arm bracket on the differential tube. The rear of the brackets should be perpendicular to the ground when viewed from the side. Attach both coil-over shocks to the upper and lower mounts. Again, make certain the coil-overs are straight up and down when viewed from the side. If viewed from the rear they may be slightly angled which is just fine.

| LOWER COIL-OVER STUD HARDWARE | | | |
|-------------------------------|-------------|--------------------------------|-----------------------|
| ITEM | PART NUMBER | DESCRIPTION | QUANTITY (PER SYSTEM) |
| 1 | RS-2401L | COIL-OVER MOUNTING STUD - LONG | 2 |
| 2 | 62FNN8Z | 5/8"-18 NYLOCK NUT GR8 YZ | 4 |
| 3 | 62NWSHZ | 5/8" SAE FLAT WASHER YZ | 4 |

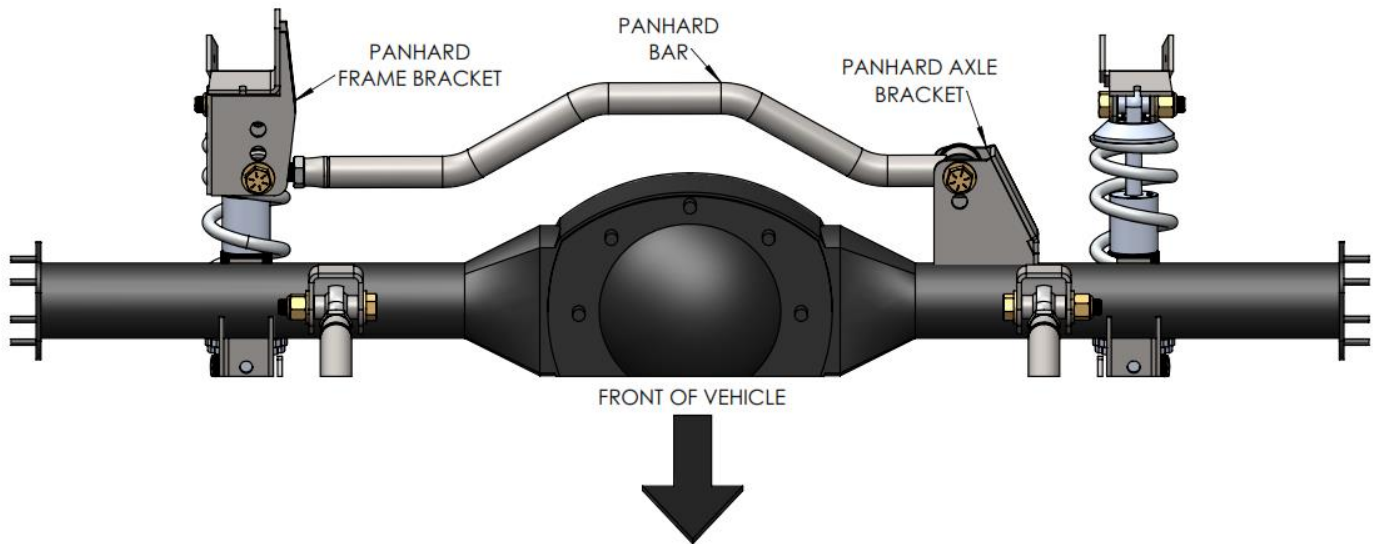


PANHARD BAR PARTS & HARDWARE

| ITEM | PART NUMBER | DESCRIPTION | QUANTITY |
|------|-------------|--|----------|
| 1 | - | P & J BUSHING AND SLEEVE KIT | 1 |
| 2 | XMR-12 | 3/4" ROD END - RH THREADS | 1 |
| 3 | RS-9002 | ROD END SLEEVE | 2 |
| 4 | 75FNFJ8Z | 3/4" JAM NUT - RH THREADS | 1 |
| 5 | 62C325HC8Z | 5/8"-11 X 3.25" HEX HEAD BOLT GRADE 8 YZ | 1 |
| 6 | 62C300HC8Z | 5/8"-11 X 3.00" HEX HEAD BOLT GRADE 8 YZ | 1 |
| 7 | 62CNN8Z | 5/8" -11 GRADE 8 NYLOCK NUT | 2 |
| 8 | 62NWSHZ | 5/8" SAE FLAT WASHER | 4 |



12. Panhard bar installation is next. Below is a breakout of the panhard bar components.



13. Assemble the panhard bar by greasing the bushings with the supplied Teflon lube and press them into place. Some panhard bars already have these pressed in for you. If that is the case move on to step 14. Lube the center of the bushings with the Teflon grease and press the steel sleeve into place. You can use a press or a vise.
14. Apply anti-seize to the inside of the threaded end of the panhard bar and onto the rod end threads. Place the jam nut onto the rod end and carefully screw the rod end into the panhard bar. Keep about three threads showing outside the jam nut.
15. Apply a little Teflon lube to the outside of the bushings and slide the bushing end of the panhard bar into the panhard axle bracket. Use the lower hole and the supplied bolt. Hand tighten. Attach to the rod end to the panhard frame bracket middle hole and hand tighten. Use the supplied bolt. Lower the panhard bar and panhard axle bracket onto the axle tube until the forward face of the bracket is perpendicular to the axle tube. Tack weld the bracket into position. This is pictured on the next page.



16. Now is the time to check the positioning of all components and brackets to be certain everything is where you want it and where it should be. After checking all of the tack welds, and being sure that everything is evenly installed, you can remove the panhard bar, coil-over shocks, lower coil-over machined studs and all four trailing arms.

17. Carefully, and with the aid of a helper, remove the differential from under the vehicle and prepare it for final welding of the brackets.

NOTE: Before final welding of the under-vehicle parts, remove carpeting and anything flammable from the interior of the vehicle.

18. Before welding brackets to the differential, loosen the axles so heat does not build up and melt the axle seals. Weld a little at a time and alternate from side to side. We prefer to turn the differential upside down, making it easier to get a good, clean weld.

19. Weld all of the tack welded brackets and parts under the vehicle into place.

20. Once welded and cooled, take the opportunity to prime and paint the welded brackets and the areas around the welds.
21. You can now reinstall the trailing arms and differential, making certain to tighten all bolts.
22. Prepare the coil-over shocks for assembly. Paint some silver anti-seize compound onto the bottom half of the threads on the coil-over body. This will ensure that when the coil-over is assembled and under load that the nut will still turn without galling. Thread the lower nut onto the body, install the spring and attach the hat to hold the spring. Hand tighten the coil-over until the spring is snug.
23. Install the coil-over shocks. You will not be able to set the final ride height of the vehicle until all the weight is back in the car, right down to carpeting and the full interior. Coil-overs will settle about ½” after ten or fifteen miles of driving. So set the height of your vehicle about ½” higher than you want it. It will settle.
24. You can now put the vehicle on the ground.
25. That’s it. You are done. Drive carefully.

We strongly recommend that all fasteners are re-torqued at between 25-50 miles of driving.

NOTES:

NOTES:

DISCLAIMER In an effort to offer our customers value and service, Blue Moon Services LLC d/b/a Control Freak Suspensions (herein referred to as Control Freak) reserves the right to change suppliers, specifications, colors, prices, materials. Each of the previous items is subject to change without notice. Control Freak is not responsible for any typographical errors or misinterpretations. Quantities are limited on some items.

WARRANTY DISCLAIMER The purchaser understands and recognizes that racing parts, specialized high performance equipment, and all parts and services sold by Control Freak, are exposed to many and varied conditions due to the manner in which they are installed and used. Control Freak makes no warranties, either expressed or implied, including any warranty of merchantability or fitness for a particular purpose other than those contained in its current catalog with respect to the goods identified on the face of the invoice. There is no warranty expressed or implied as to whether the goods sold hereby will protect purchaser or ultimate user of such goods from injury or death. Control Freak assumes no liability for these suspension products.

DAMAGE CLAIMS Always inspect your package upon delivery. Inspect all packages in the presence of the delivery driver. The driver must note any damage. Ask the driver the Carrier's procedures for handling damage claims. You must hold the original box, packing material and damaged merchandise for inspection or the carrier will not honor the claim. Notify Control Freak for instructions on returning damaged goods. Control Freak is not responsible if no notification is given within two (2) days of receipt.

SHORTAGES Always check the contents of your delivery to insure all the parts that you ordered were received. Please read the invoice and Pack Lists. Double check all packing materials, small items may be wrapped inside with these products. Shortages may occur from damage to the box, so save all packing materials. Inspect the box for holes that would allow parts to fall out. If you are missing any item(s) be sure to check your invoice and/or Pack List for back orders or canceled items before calling the customer service department. If Control Freak has to split a shipment into multiple boxes, packages may be delivered on different days. You need to contact the customer service department within 5 days of delivery to assure the prompt replacement. Control Freak assumes no liability after this period.

WARRANTY CLAIMS If an item has a manufacturer's warranty as being free from defects we will exchange that item. If the item has been used and you are requesting warranty work, Control Freak will determine the validity of the claim. If you have any questions, please contact customer service.

RETURNS Our return policy applies to all suspension systems *except* Independent Front Suspension (IFS) systems. Control Freak wants you to be satisfied with your purchase. If within five (5) days after you receive your shipment you are not satisfied, you may return the item for refund, exchange or credit. **This does not apply to any IFS systems.** All exchanged or returned merchandise must be in original factory condition with no modifications or alterations. Returned merchandise must include all original packaging materials, warranty cards, manuals, and accessories. If the items being returned need to be repackaged there will be a re-packing charge of 15%. Pack the item in a sturdy box and include a copy of your invoice and notify us of the return. You must ship orders back **PRE-PAID. WE DO NOT ACCEPT COD SHIPMENTS.** All exchanges need to have reshipping charges included. Items that are returned after 5 days are subject to 15% restocking charges. **Absolutely no returns on custom built suspension systems or other special-order merchandise. All IFS systems are considered custom builds. All exchange and/or repair is at the discretion of Control Freak Suspensions.**

Some items may not be street legal in some countries but may be legal for racing vehicles only which may not be used upon a public roadway.

MOPAR

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