

# AMC

## TUBULAR CONTROL ARMS & COIL OVER KIT

*control freak*  
*suspensions™*

[www.FreakRide.com](http://www.FreakRide.com)

# INSTRUCTIONS

## TUBULAR CONTROL ARMS & COIL-OVER CONVERSION

**FOR AMC MUSCLE CARS:  
1970 AMX  
1970-74 JAVELIN  
SPIRIT, HORNET, GREMLIN, CONCORD**

Revised 6/1/2012





## **Installation Instructions**

Upper & Lower Tubular Control Arms  
1970 & Up AMX, Javelin, Spirit, Gremlin, Concord & Hornet

### **Tubular control arm kit contents**

- Assembled Control Arms
- Grade 8 Hardware
- Instructions

### **Coil-over kit contents**

- Coil Over Shocks & Springs
- Lower Mounting Brackets
- Spring Isolators

### **Torque Specifications – Upper Control Arm**

- Ball Joint Bolts 25 Pounds
- Spring Mount Bolts 35 Pounds
- Opt. Coil Over Mount 35 Pounds
- Control Arms to Chassis 80-100 Pounds

Thank you for purchasing performance tubular control arms from Control Freak Suspensions<sup>®</sup>, manufactured entirely in the USA. We believe these arms are the best available at any price. Please note that while installation is relatively easy for those with mechanical skills and modest experience, novices should employ a professional for installation. Also, fit is guaranteed on vehicles that are unmolested...that is cars that have not suffered any front end damage. Such damage can bend or alter the unibody chassis, making installation more difficult.

### **Installation Of Tubular Control Arms**

1. Measure your vehicles ride height before you begin. Take the measurements with the car at rest on a level surface, measuring the ride height from the front of the rocker panels to the ground and from the rear of the rocker panels to the ground. Write these measurements down as they will be needed later on.
2. The first step is to remove the stock control arms. Please consult a shop manual specific to your vehicle in order to properly dismantle and remove the necessary suspension components. Chilton's, Mitchell or others may be appropriate for your vehicle. A spring compressor is needed to remove and install the front coil springs. **A COIL SPRING COMPRESSOR COMPRESSES THE SPRING. A COMPRESSED SPRING IS EXTREMELY DANGEROUS AND SHOULD BE DONE WITH EXTREME CARE.**
3. Once you have removed the front shocks, springs and upper control arms, the front spindles will still be attached to the lower control arms. If lower control arms are also being installed, the stock lower control arm must be removed and the spindle carefully set aside. It is not necessary to remove the lower control arms or spindle if only upper control arms are being replaced. If you are also replacing the stock lower control arms with our tubular control arms, remove the lower control arm from the chassis and spindle. If only upper control arms are being installed, leave the spindle attached to the stock lower control arm but move them out of the way to provide ample working space on your installation of upper control arms.

4. Check the spring saddles on both sides of your vehicle. If they are chipped, cracked or otherwise damaged, now is the time to replace them. Once the spring saddles are replaced, or if the spring saddles are not damaged, proceed with the installation. Bolt the spring saddle to the tubular upper control arm with the supplied 7/16" Grade 8 bolts. The 7/16" Grade 8 bolts should be torqued to 34-38 ft/pounds.
5. If you are installing our coil over conversion kit, Part #CF-2120CO, now is the time to install the supplied adapter bracket. It will only fit one way. Bolt the spring saddle to the tubular upper control arm with the supplied 7/16" Grade 8 bolts. The 7/16" Grade 8 bolts should be torqued to 34-38 ft/pounds.
6. If you are installing our tubular lower control arms, attach them to the chassis with the factory bolts and supplied spindle nuts. If you are not installing our lower tubular control arms, skip to Step 8.
7. You will notice that the ball joint bolts on the lower control arm have been left a little loose. This is to assist in aligning the factory torque arm. Attach the lower control arm to the chassis with the factory bolt and hand tighten only. Now attach the torque arm to the lower control arm and hand tighten the nuts to the torque arm. With the lower control arm loosely bolted to the chassis, and the torque arm hand tightened to the control arm, tighten the ball joint bolts to 25 foot pounds of torque. You can now mount the spindle to the lower control arm and hand tighten the castle nut on the ball joint.
8. If you are using the stock coil springs, now is the time to reinstall them. **For Coil Over Shocks, skip to Step 9.** All spring insulators (if any) that were removed from the original stock vehicle should be reinstalled. **A COIL SPRING COMPRESSOR COMPRESSES THE SPRING. A COMPRESSED SPRING IS EXTREMELY DANGEROUS AND SHOULD BE DONE WITH EXTREME CARE.** Place the compressed springs into position with the flat end of the coil facing up and the open end is placed on the upper control arm saddle. Once in place, the spring should be indexed to ensure the open coil is firmly against the tang on the lower saddle. Reattach spindle to the control arms.
9. **If you are using our coil over conversion kit, now is the time to install it.** Remove the coil over body and the springs from their cartons. The coil over bodies have already been assembled for you with the correct parts. Screw the coil over lock nut and spring seat onto the coil over body. Slip the spring over the top of the coil over, narrow diameter facing down. Once the spring and coil over body are mated, place the inner bushings and washer over the top coil over stud mount and slip it through the original shock hole, and slip the lower coil over mount into the bracket that is already attached to the upper control arm. Use the supplied Grade 8 bolt to secure the lower coil over bushing to the mount and tighten to 25 Foot Pounds of torque. On the upper coil over mount, go into the engine bay and slip the outer bushing and washer for the upper coil over mount over the stud. Then install the first of two nuts. Tighten to 14 foot pounds of torque and add the second nut. Tighten both nuts together.
10. Go back to the spindle nuts and the ball joint nuts and tighten everything down to the supplied specifications.
11. You should screw the coil over nut up sop about 1" if threads are showing. This is a good starting point to set your ride height.

NOTE: COIL OVER SHOCKS WILL SETTLE ABOUT  $\frac{3}{4}$ " AFTER DRIVING ABOUT TEN TO FIFTEEN MILES. Set your starting ride height accordingly.

12. You are now ready to measure the ride height again. Take the vehicle off the jack stands and roll it a full car length back and forth two times to allow the suspension to settle correctly. Take the same measurements you took in Step 1, from the rocker panels to the ground, both at the front and the rear of the rocker panels. Please remember that tubular control arms will lower your car's front end ride height by about one inch from the stock ride height. If your rear springs are tired or worn, the front end may ride higher.
13. When the correct ride height is reached, have the vehicle aligned by a professional. Once the car is aligned. Torque the  $\frac{9}{16}$ " bolts holding the control arms to the chassis to 80-100 ft/pounds.

### **Recommended Alignment Specifications**

For street vehicles, adjust to the following recommended alignment settings:

Caster Left: +1 Degrees                      Caster Right: +1.5 Degrees  
Camber Left & Right: 0 to  $\frac{1}{4}$  Degrees Negative  
Toe In Left & Right: 0 TO  $\frac{1}{16}$ "

For racing, adjust to the following recommended alignment settings:

Caster Left: +2 Degrees                      Caster Right: +2.5 Degrees  
Camber Left & Right: 1 to 2 Degrees Negative  
Toe In Left & Right:  $\frac{1}{32}$ " to  $\frac{1}{8}$ "  
Note: Race settings vary upon the type of racing done

**For technical support, please call 888-325-6462  
or via e-mail at [tech@FreakRide.com](mailto:tech@FreakRide.com)**

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## GENERAL INFORMATION

### Ordering

Simply give us a call on our Tech Line Toll Free, 888-325-6462, or call our toll number, 407-327-6462. You will be connected to a salesperson that has the technical experience and knowledge to guide you through a successful purchase of a system designed just for your vehicle. Send an Email with questions you may have to [sales@BlueMoonCars.com](mailto:sales@BlueMoonCars.com)

### Warranty

Blue Moon Services LLC (BMS) d/b/a Control Freak Suspensions warrants to the original purchaser that all products of our manufacture are free from defects in workmanship and material under normal use, driving conditions and service for the period of one (1) year. BMS parts used in race applications, and improperly installed components, are not warranted. Components purchased from other suppliers and resold by BMS shall conform to the Warranty policy of that supplier.

Our obligation under this Warranty is limited to making good at our factory any part which shall be returned to us, freight prepaid, and which our examination shall disclose to our satisfaction to have been defective when shipped. Our obligation is limited to the repair or exchange of any part or parts which may thus prove defective. Our Warranty does not cover any costs for installation, re-installation, or removal of any warranted product. A return authorization number and a copy of the original invoice are required prior to returning merchandise. Unauthorized return voids the Warranty. All returns are subject to a 20% restocking charge. We assume no liability for incidental or consequential damages including the cost of diagnosis, cost of replacement parts or installation labor, loss of vehicle use, loss of time, inconvenience or any other expenses.

The foregoing Warranty is exclusive and is in lieu of all other warranties (whether written, oral or implied) including Warranty of merchantability in other respects than expressly set forth above and Warranty of fitness for a particular purpose and of all other obligations or liabilities on our part. We neither assume nor authorize any other person or entity to assume for us any other liability in connection with the sale of our products. This Warranty shall not apply to our products or any part thereof which have been subject to accident, negligence, alteration, abuse, misuse or disassembly. We make no Warranty whatsoever in respect to accessories, labor or parts not supplied by us. The term "Original Purchaser" as used in this Warranty shall be deemed to mean that customer to whom the product was originally sold. There are no warranties which extend beyond the face of the product hereof.

## **Disclaimer of Warranty & Return Policy**

### **THE PURCHASER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF ANY AND ALL PRODUCTS MANUFACTURED BY BLUE MOON SERVICES LLC**

Purchaser understands and recognizes that racing parts equipment and services provided by, manufactured and/or sold by Blue Moon Services LLC d/b/a Control Freak Suspensions, are subject to varied conditions due to the manner in which they are installed and used. Purchaser further recognizes and agrees that suitability of any part sold or manufactured by Blue Moon Services LLC d/b/a Control Freak Suspensions for a particular application is the purchaser's decision and that the purchaser is not relying on the skill or judgment of Blue Moon Services LLC d/b/a Control Freak Suspensions regarding suitability of any product or service. Blue Moon Services LLC d/b/a Control Freak Suspensions makes no warranties whatsoever, expressed or implied, oral or written to purchasers. There is no warranty of merchantability made to purchasers with regard to off road, racing and racing equipment. All systems are custom products and made to order, and cannot be returned or exchanged, nor will any refunds be granted. All deposits are forfeited once the product is in production.

Liability is limited to repair or replacement of defective parts to original purchaser. Blue Moon Services LLC d/b/a Control Freak Suspensions is not liable for any consequential damages, expenses or injury arising from the use, misuse, or improper installation of any product manufactured or sold by Blue Moon Services LLC d/b/a Control Freak Suspensions. Blue Moon Services LLC d/b/a Control Freak Suspensions reserves the right to make changes in design or add to or improve its product without incurring any obligation to install the same on any products previously manufactured. This warranty shall not apply to any product which has been repaired or altered in any way so as in our judgment to affect its performance; nor which has been subject to misuse, abuse, negligence or any other occurrence beyond the control of Blue Moon Services LLC d/b/a Control Freak Suspensions.

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