# FORD/MERCURY INSTRUCTIONS ADJUSTABLE FRONT COIL OVER CONVERSION SYSTEM



> 1962-1971 FALCON & RANCHERO 1964-73 MUSTANG 1962-1967 COMET 1968-1970 CYCLONE 1966-1971 FAIRLANE 1967-71 COUGAR 1968-1971 TORINO, MONTEGO 1970-1977 COMET & MAVERICK







NOTE: Spindle for Location Purposes Only & Not Included





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## **Installation Instructions**

Upper & Lower Tubular Control Arms & Coil Over Kit

## 1964-1973 MUSTANG, 1962-1970 FALCON, 1964-1977 COMET, 1967-1970 COUGAR, 1968-1971 CYCLONE, 1966-1971 FAIRLANE, 1968-1971 TORINO, 1968-1971 MONTEGO, 1962-1971 RANCHERO, 1970-1977 MAVERICK

### <u> Tubular Control Arm Kit</u>

- Assembled control arms
- Adjustable Upper Control Arms
- Lower Control Arms
- Grade 8 hardware
- Instruction Book
- Template
- Adjustable Strut Rods (Optional)

### Coil Over Kit

- Viking double adjustable coil over shocks with springs
- Upper control arm chassis replacement bracket
- Upper shock mount bracket
- New spring isolator
- All new Grade 8 hardware

Thank you for purchasing this performance front coil over system from Control Freak Suspensions<sup>®</sup>, manufactured entirely in the USA. We believe these systems 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. 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.

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

• Upper Ball Joint Bolts to Control Arm	85-100 ft-lbs
• Lower Ball Joint Bolts to Control Arm:	85-100 ft-lbs
Upper Shock Bracket:	35-40 ft-lbs
Upper Control Arm Bracket to Chassis:	65-75 ft-lbs
Upper Control Arm to Bracket:	60-65 ft-lbs
Lower Control Arm to Chassis:	60-65 ft-lbs
Upper Shock to Mount:	40-45 ft-lbs
Lower Shock T-Bar to Control Arm:	
• Sway Bar Bolts:	15-18 ft-lbs
Strut Rod to Chassis:	45-50 ft-lbs
Strut Rod to Control Arm:	45-50 ft-lbs
• Optional Adjustable Strut Rod to Chassis:	45-50 ft-lbs
Optional Adjustable Strut Rod to Lower	
Control Arm Bracket:	45-50 ft-lbs



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

- 1. Measure your vehicle 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.
- 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 may be 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. The stock lower control arm must be removed, and the spindle carefully set aside. Remove the lower control arm from the chassis and spindle. Save the stock lower control arm bolts, nuts and washers. They will be reused to install the new lower control arms.
- 4. Position the template in the picture with the upper large holes aligned to your original upper control arm bolt holes. Fasten it to the shock tower with the original upper control arm bolts. Drill a 3/16" pilot hole through the bottom template pilot holes, remove the template and enlarge the 3/16" pilot holes to 9/16". We recommend using a tapered multi-step drill bit.







- 5. Mount the new upper control arm bracket and spacer shim to the shock tower in the new, lowered holes with the supplied 9/16" grade 8 bolts. The picture on the previous page illustrates installation.
- 6. Install the new upper shock tower brackets. There are two different brackets that are shown below. You will have one or the other and they mount the same way to the shock tower. Remove the stock upper shock tower mounting bracket on each shock tower. Each is attached with three bolts. Install the new steel bracket on each side. The brackets will only fit one way. Bolt them to the shock tower using the stock bolts and the torque specs on Page 4





7. Installing the upper control arms to the brackets is next. The picture below shows the assembly of the upper control arm. Before installing the rod ends, use an air gun to blow out any debris on the control arms threads. Coat the rod end threads with anti-seize to prevent cross-threading and carefully screw the jam nut onto the rod ends, and the rod ends into the arms. Leave about three threads showing above the jam nut. This is just a starting point. Adjustments will be made during alignment.

UPPER CONTROL ARM HARDWARE			
ITEM	PART NUMBER	DESCRIPTION	QUANTITY (PER SYSTEM)
1	50C275HCS8Z	1/2"-13 X 2.75" HEX HEAD BOLT GR8 YZ	4
2	50CNN8Z	1/2"-13 NYLOCK NUT GR8 YZ	4
3	50NWSHZ	1/2" SAE FLAT WASHER	8
4	37C125HCS8Z	3/8" - 16 x 1.25" HEX HEAD BOLT GR8 YZ	4
5	37CNN8Z	3/8" - 16 NYLOCK NUT GR8 YZ	4
6	37NWSHZ	38/" SAE FLAT WASHER	8
7	31C125CS8Z	5/16" - 18 x 1.25" HEX HEAD BOLT GR8 YZ	8
8	31CNN8Z	5/16" - 18 NYLOCK NUT GR8 YZ	8
9	XMR-10	5/8"-18 THREADED ROD END (RH THREADS)	4
10	62FNFJ5Z	5/8"-18 JAM NUT RH THREADS GR5	4
11	CA-2104	MUSTANG ROD END INSERTS	8
12	К8036	UPPER BALL JOINT W/ STOCK LOCK WASHERS	2





- 8. Install the lower control arms to the chassis with the STOCK bolts and nuts removed earlier. Now mount the spindles to the lower control arms, insert the 3/8-inch steel spacer between the spindle and castle nut, and hand tighten the castle nut on the ball joint. DO not attach the strut rods or sway bar at this time.
- 9. The coil over shocks need to be prepared. Remove each shock body from its package. Install the body screw nut onto the coil over body. When the nut is all the way down on the body of the coil-over, paint about an inch of silver anti-seize lubricant on the threads above the nut. This will make adjustment much easier and also prevent galling the threads. Once that is done, install the T-bars with the supplied c-clips on the bottom eye of the coil over shock (below the adjustment knobs) and the coil over shocks are ready for installation.





- 10. Slide the spring (narrow side down) over the coil over body. Place the new spring isolator over the top of the spring.
- 11. Attach the upper coil over shock bearing to the new shock tower bracket with the supplied hardware (pictured below). Make it snug but not torqued. Attach lower coil over T-bar to the mounting holes on the upper control arm with the supplied hardware. Make it snug but do not torque it fully until everything is fitted and in place. Once everything is fitted and checked you can torque the bolts to the specifications on Page 4.

UPPER COILOVER MOUNTING HARDWARE			
ITEM	PART NUMBER	DESCRIPTION	QUANTITY (PER SYSTEM)
1	62C300HCS8Z	5/8" - 11 x 3.00" HEX HEAD BOLT GR8 YZ	2
2	62CNN8Z	5/8" - 11 NYLOCK NUT GR8 YZ	2
3	62NWSHZ	5/8" SAE FLAT WASHER	4





## **OPTIONAL ADJUSTABLE STRUT RODS - INSTRUCTIONS**

SHORT STRUT ROD TO CONTROL ARM HARDWARE			
ITEM	PART NUMBER	DESCRIPTION	QUANTITY (PER SYSTEM)
1	43C125HCS8Z	7/16" - 14 x 1.25" HEX HEAD BOLT GRADE 8	4
2	43NWSHZ	7/16" SAE FLAT WASHER	8
3	43CNN8Z	7/16" - 14 NYLON LOCK NUT GRADE 8 YZ	4



SHORT

LONG STRUT ROD TO CONTROL ARM HARDWARE			
ITEM	PART NUMBER	DESCRIPTION	QUANTITY (PER SYSTEM)
1	43C125HCS8Z	7/16" - 14 x 1.25" HEX HEAD BOLT GRADE 8	8
2	43NWSHZ	7/16" SAE FLAT WASHER	16
3	43CNN8Z	7/16" - 14 NYLON LOCK NUT GRADE 8 YZ	8





STRUT ROD TO CHASSIS MOUNTING HARDWARE			
ITEM	PART NUMBER	DESCRIPTION	QUANTITY (PER SYSTEM)
1	50C275HCS8Z	1/2" - 20 x 2.75" HEX HEAD BOLT GRADE 8 YZ	2
2	50C175HCS8Z	1/2" - 20 x 1.75" HEX HEAD BOLT GRADE 8 YZ	2
3	50NWSHZ	1/2" SAE FLAT WASHER	8
4	50CNN8Z	1/2" - 20 NYLON LOCK NUT GRADE 8	4
5	XMR-8	1/2" - 20 ROD END - RH THREADS	2
6	50FNFJ5Z	1/2" - 20 JAM NUT RH THREADS	2
7	LSA 8-8	1/2" - 20 ADJUSTABLE LADDER BAR	2
8	50FNFJL5Z	1/2" - 20 JAM NUT - LH THREADS	2
9	CA-2126	ROD END SPACER 0.500 I.D.	4
	CA-2122	62-65 FAIRLANE & 62-66 MUSTANG, COMET,	2
10		FALCON	
	CA-2123	65+ FALCON, 66+ FAIRLANE, MUSTANG, COMET,	
		COUGAR, CYCLONE, TORINO, MAVERICK	





- 12. Attach the supplied strut rod mounts onto the lower control arm as shown in the illustration on Page 10. The 1962-66 mount has two holes and uses two (2) bolts for attaching to the lower control arm. The 1967-77 mount has four holes and a steering stop. It uses four (4) bolts for mounting to the lower control arm.
- 13. Attach the strut rod bracket to the strut rod mount on the chassis. The attachment is illustrated on Page 11. Torque the bracket to the specifications on Page 4.
- 14. Make sure the jam nuts are threaded onto the machined hex adjuster and the rod end before installing them. Coat the threads with anti-seize before installing. Thread the hex adjuster into the strut rod tube. Thread the rod end into the hex adjuster. The thread on the hex adjuster into the strut rod is right-hand. The rod end is left-hand thread. Torque all bolts to the specifications on Page 4. The length of the strut rod is adjustable for alignment purposes by loosening the jam nuts and turning the hex adjuster. Be certain to tighten the jam nuts once the correct alignment is completed.
- 15. You should now screw the coil-over body nut until you feel tension from the spring. This is a good starting point for setting ride height.

NOTE: COIL-OVER SHOCKS WILL SETTLE ABOUT 5/8-INCH AFTER DRIVING ABOUT TEN OR FIFTEEN MILES. SET YOUR STARTING RIDE HEIGHT ACCORDINGLY.

- 16. Go back to the ball joint nuts and tighten everything down to the specifications on Page 4.
- 17. You are now ready to measure the ride height again. Take the vehicle off the jack stands and roll the car a full car length back and forth for two times to allow the suspension to settle correctly to the ground. Take the same measurements you took in Step 1 on Page 5. Please remember that this system can lower your cars front-end ride height by up to one-and-one-half inches from stock ride height. If your rear springs are tired or worn, the front end may still be higher.
- 18. When the correct ride height is reached, have the vehicle professionally aligned. Torque the bolts holding the control arms to the chassis to the specifications on Page 4.



#### **Recommended Alignment Specifications**

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

Caster Left:+2 DegreesCaster Right:+2.5 DegreesCamber Left & Right:0 to 1/4 Degree NegativeToe In Left & Right:0 to 1/32"For racing, adjust to the following recommended alignment settings:Caster Left:+3 DegreesCaster Right:Caster Left:+3 DegreesCaster Right:+3.5 DegreesCamber Left & Right:1 to 2 Degrees NegativeToe In Left & Right:1/32" to 1/8"Note:Race settings vary upon the type of racing doneKater Right:Kater Right:

## For technical support, please call 407-696-2772, or via e-mail at <u>tech@FreakRide.com</u>



NOTES:



# IMPORTANT

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Some items may not be street legal in some countries. Such items may be legal for racing vehicles only which may not be used upon a highway

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