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## 1963-82 Corvette Front tubular lower control arm kit

### Part # CTA-31EXT ---- extended travel

#### Parts list:

- Fully assembled right lower arm
- Fully assembled left lower arm
- 4 – 7/16 grade 8 bolts 2-1/2 inches long fine thread
- 4 – 7/16 lock washers
- 2 – 9/16 grade 8 bolts 2 1/8 inches long machined fine thread
- 2 – 9/16 stovelock nuts fine thread
- 4 – 9/16 thick washers



Installation will require jack stands, floor jack, spring compressor, and related hand tools. A Service manual will also have a procedure detailed on removing the lower control arm. The procedure we use is as follows.

1. Make sure the car is in park or in gear and set the parking brake. We also block the rear wheels. Raise the front and support the car with jack stands under the frame rails. Make sure you raise the car up high enough so the lower arm can swing down to the ground without touching the ground.
2. Remove the front shocks.
3. Install a inside spring compressor up through the lower arm and compress the spring.
4. Remove the lower ball joint cotter pin and nut.
5. Use the floor jack and place the jack under the spring pocket offset towards the ball joint side. Raise the jack up until the upper control arm rises up off the frame and bump stop. Use a suitable pickle fork and separate the lower ball joint from the spindle. When the spindle separates, the upper arm assembly with spindle will drop off the ball joint.
6. Raise the upper arm and spindle assembly up and slide a 2x4 up between the frame and upper arm. This will hold the assembly out of the way so you can work on the lower.
7. Lower the floor jack and remove the coil spring.
8. With the spring removed go ahead and unbolt the lower control arm from the frame.
9. Install the lower control arm. The lower control arm is pre-assembled and will only install one way. New hardware is also included. Hold the lower control arm up against the frame and install a 9/16 bolt with large flat washer through the hole in the frame from the top down. Install a 9/16 flat washer and lock nut next. Run the nut down till it loosely supports the arm. Take 2 (7/16 grade 8 bolts with lock washer) supplied in your kit and using the stock threaded block, install the forward part of the control arm. Tighten both 7/16 bolts to 65 foot-pounds. Torque the 9/16 bolt to 120 foot-pounds.
10. For springs: The top of the coil spring will index in the frame pocket. **NOTE: The spring is conical wound so the large end (3.625 id) goes up into the frame and the small flat ground side (2.5 id) indexes on the shock adjusting collar.** Place the spring on the shock with the shock collars already assembled on the shock body. Adjust the collars all the way down to the bottom of the shock. Slide the spring over the shock with the small

end down, extend the shock shaft all the way out of the shock body until it stops, and install the steel shock shaft washer and rubber bushing. Next slide the shock into the frame shock hole and index the spring in the pocket. Place the upper rubber shock bushing on the shock shaft and then the steel washer. Install the shock nut so the shock is supported in the frame. Recheck the spring index in the frame.

11. If you have a coilover shock kit with a bar through the bushing, you will need to remove the cross bar at the base of the shock and install a steel sleeve in the bushings. In the kit you will find a pair of steel sleeves.

12. First remove the bar from the base of the shock. Almost all the shock companies make something similar. They have a c-clip on each side of the bushing.



13. Remove the bar by tapping it out of the bushing with a dead blow hammer. If you have a small press you can use that.



14. Next install the steel sleeve in the bushing, place grease inside the bushing and around the pin. We recommend synthetic grease like NEO Z-12, however any water resistant synthetic grease will work.



15. The steel sleeve will push into the bushing fairly easy. Push the sleeve in till it bottoms out with the bushing.



Your next step will be to install the shock and spring onto the car.



16. Springs: The top of the coil spring will index in the frame pocket. **NOTE: The spring is conical wound so the large end (3.625 id) goes up into the frame and the small flat ground side (2.5 id) indexes on the shock adjusting collar.** Place the spring on the shock with the shock collars already assembled on the shock body. Adjust the collars all the way down to the bottom of the shock. Slide the spring over the shock with the small end down, extend the shock shaft all the way out of the shock body until it stops, and install the steel shock shaft washer and rubber bushing. Next slide the shock into the frame shock hole and index the spring in the pocket. Place the upper rubber shock bushing on the shock shaft and then the steel washer. Install the shock nut so the shock is supported in the frame. Recheck the spring index in the frame. Raise the lower control arm up to the shock and install the lower shock bolts through the shock cross shaft and into the lower arm. Note: The shock bolts on the top of the lower arm.
17. Slowly raise the arm to fit the shock in the lower arm.



18. Next lift the lower ball joint up into the spindle. Install the castle nut on the ball joint and torque to 80 ft-lbs. Next, tighten the nut to line up the slot in the nut and hole in the ball joint and install a new cotter pin.
19. Install the sway bar end link hardware on both sides but do not torque the bolts until the car is back on the ground. Replace the wheels and tires, raise the car, remove the jack stands and lower the car on to the ground. Torque the sway bar end link bolts to 25 ft-lbs.