VAN STEEL
CORVETTE SUSPENSION BRAKES & STEERING PARTS

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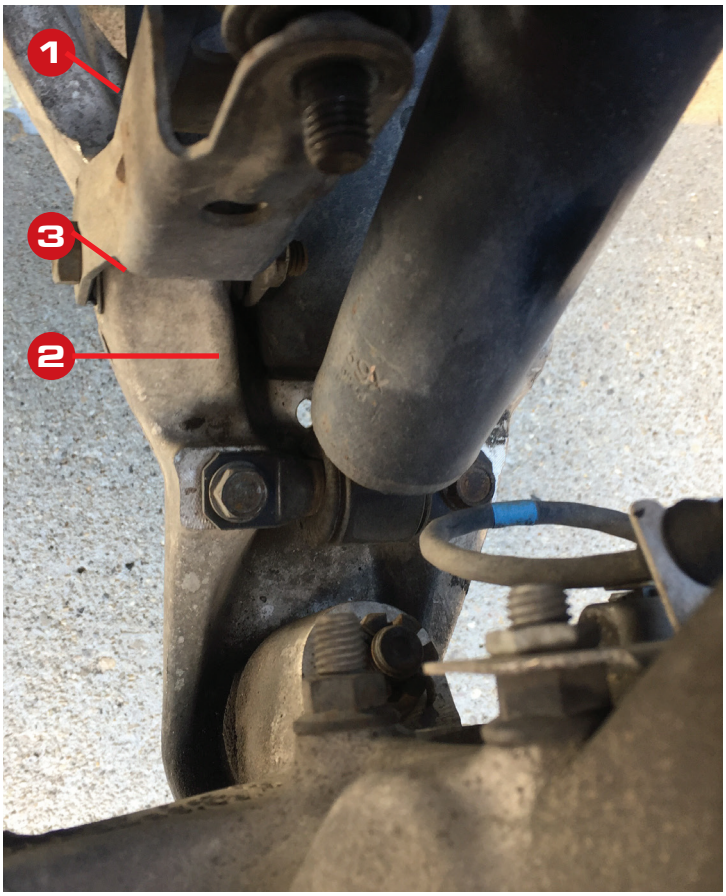
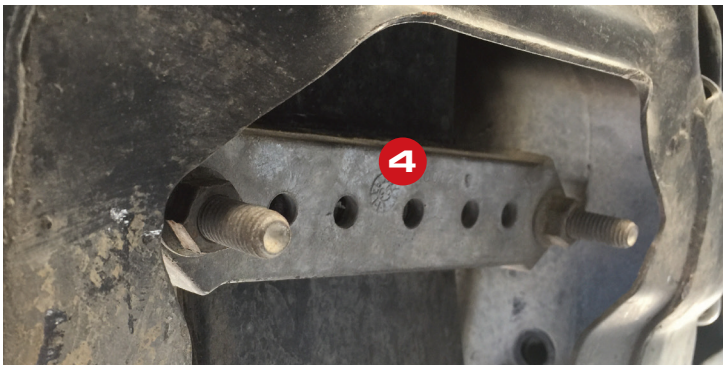
C4 COILOVERS

CO-C4-SA-ST, CO-C4-DA-TK, CO-C4-DA-ST, CO-C4-DA-TK
CO-C4-SA-FRT, CO-C4-DA-FRT, CO-C4-SA-RR, CO-C4-DA-RR





Parts Listing:
2 Front Coilover Shocks Complete
2 Rear Coilover Shocks Complete
Spanners

Optional Parts:
ASB-C4F-250 - front heim endlinks
ASB-C4R-Heim - rear heim endlinks
ASB-C4F-(sway bar size) - Front Sway Bar Relocation Bracket

Front Coilovers

1. Start by securing the car on jack stands.
2. Unbolt the upper front shock mounting hardware.
3. Unbolt the sway bar end links. **1**
4. Next, remove the lower ball joint on the front a-arms. **2** Loosen the ball joint nut and leave the nut on at the top of the stud. Use a brass hammer on the knuckle to loosen the ball joint by hitting the side of the knuckle. When it frees up, the nut will keep the arm from slamming down. Now take a floor jack and jack up the lower a-arm and remove the lower ball joint nut. Once the nut is off, you can slowly lower the a-arm down. Repeat on the other side.
5. Remove the 2 bolts that hold the shock to the a-arm and remove the shock. **3**
6. Next, remove the front spring from the cradle brackets. When the bolts are removed, you can slide the spring out. **4**

NOTE: It is VERY important that the head of the bolt faces the front or rear of the car. If the clevis is mounted on an angle, you will blow the upper heim out and it will cause premature failure.

Thanks to our friends at Fox Speed Division out of Orem, UT for providing photos of their install of our coilover kit.

7. The top hat of the eccentric washer faces down. The purpose of the eccentric is to move the coilover for clearance from the say bar and/or shock tower. The eccentric washer goes into the bushing hole on the shock tower. The ID of the shock mount hole may need to be opened. A file, die grinder or dremel can be used for this step.
8. Mount the bottom of the shock using your stock bolts.
9. Jack up the lower a-arm to reinstall the ball joint nut. Wait to reinstall the sway bar until both sides are done.
10. When installing the sway bar end links, check for clearance issues. There lies a potential interference with the front sway bar end link area of the sway bar and the new coil over shock. There is no specific generation of the C4 Corvette that is exempt. We believe this occurs in the manufacturing tolerance for the sway bar installation. The contact in the random occurrences has been minor. You can use the Van Steel front sway bar heim end links (ASB-C4-Heim) to gain clearance or go to step 11.
11. **5** In the example picture shown, use a high speed die-grinder, slot the sway bar frame mounting bracket, allowing you to move the sway bar forward, approximetly.250" (1/4) forward. By doing so, you slightly move the sway bar end link forward, providing the clearance needed to the lower coil over unit. Do both sides to maintain the bars alignment side to side.

Torque Specs

- Upper Shock M14 Nut: 50 ft/lbs
- Lower Shock Mount Bolts: 22 ft/lbs

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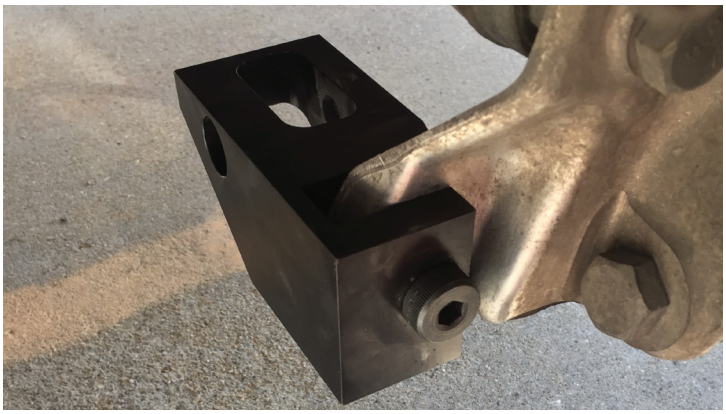
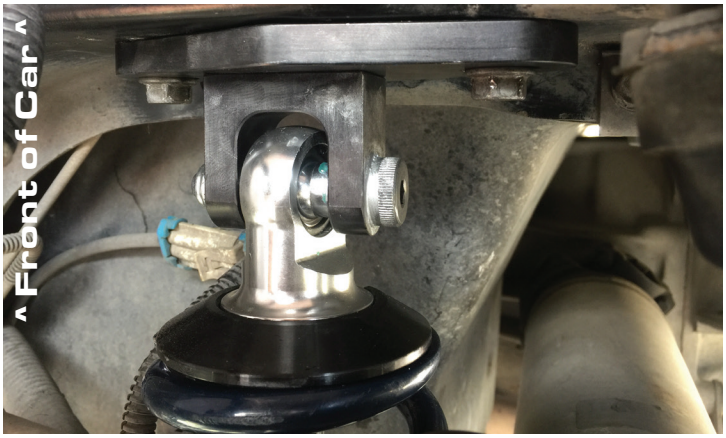
Rear Coilovers

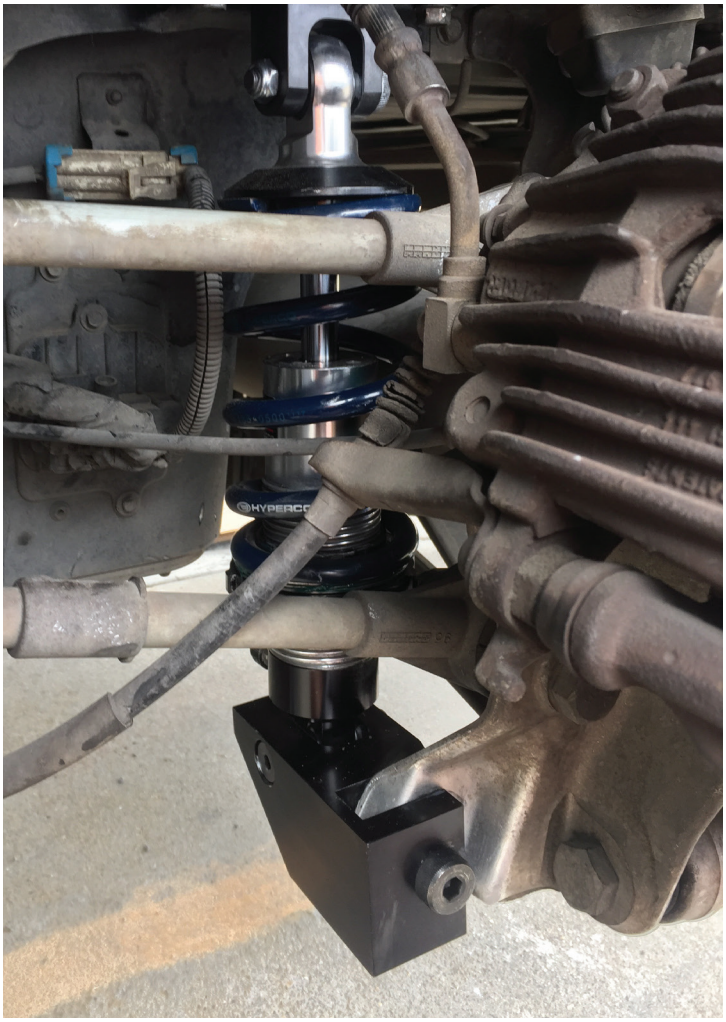


NOTE: Due to casting variances, you may have to shim OR slightly shave the stock knuckle to properly fit the lower shock mount



NOTE: It is VERY important that the head of the bolt faces the front or rear of the car. If the clevis is mounted on an angle, you will blow the upper heim out and it will cause premature failure

1. Remove the rear shocks.
2. Remove the bottom shock mount stud from the knuckle.
3. On the rear spring there is a metal plate at the tips of the spring. Use vice grips and clamp the spring on the metal clamp. **DO NOT CLAMP DOWN ON THE FIBERGLASS.** Take a floor jack and up the spring using the vice grips as a locator. When pressure is off the spring, you can remove the nut on the bottom of the spring bolt. Repeat on the other side.
4. Remove the spring from the 2 cradles.
5. Now install the upper diamond shaped mount with clevis. The clevis is offset from center and that should be to the center of the car. This will move it away from the half shaft. Flip the rear t-arm bolts around (upper and lower) to clear the shock/spring/spanners.
6. Test fit the lower coilover mount to ensure you can slide the bolt through.
7. Remove the lower coilover mount from the shock since this is a file to fit application. A standard file will deburr, remove casting slag and "file to fit" for perfect alignment of the 5/8 shoulder bolt provided in the kit. You have to file to fit the bracket for maximum strength; needed to support the load. The mount is designed to be lightly tapped on to the OEM shock knuckle, once the factory shock stud is removed.



8. Raise the knuckle to slide the bottom of the coilover into place and use the shoulder bolt provided.
9. Make sure everything is tight on the front and rear and lower the car back to the ground. Bounce the car up and down to let everything settle. Once settled, use the spanner wrenches to adjust ride height. Start out high and adjust down. It will also be easier to raise or lower the spanner when there is no weight on the wheel. We use Hyperco springs as these are extremely consistent in spring rate.
10. Drive the car & check ride height again before taking the car for alignment.

Torque Specs

• Upper Shock M14 Nut:	50 ft/lbs
• 5/8" Shoulder Bolt:	90 ft/lbs
• 1/2" Shoulder Bolt:	35 ft/lbs
• Upper Shock Mount Plate Bolts:	22 ft/lbs

SHOCK STARTING POINTS

All specs below for 200TW Tires

Single Adjustable/Street

Front: 7 Clicks / Rear: 5 Clicks

Double Adjustable/Street

Front: C7/R4 / Rear: C3/R6

Double Adjustable/Advanced Street & Track

Front: C10/R5 / Rear: C4/R11

Call for 90 TW/Slicks/Drag

Street Specs

FRONT

Rake	.500" Positive
Toe	.068° Total Toe In
Camber	0°
Caster	6.25-8° Positive

REAR

Toe	.275° Total Toe In
Camber	.25 Degrees Negative

All measurements based on a stock tire, overall height of 26"

Advanced Street Specs

FRONT

Rake	.250° Positive
Toe	0 - Total
Camber	.25-.5° Negative
Caster	6.25-8° Positive

REAR

Toe	.275° Total Toe In
Camber	.25 – .5° Negative

Track Specs

FRONT

Rake	.180" Positive
Toe	0 - .137° Total Toe Out
Camber	.5 – 2.0° Negative
Caster	6.3-7.5° Positive

REAR

Toe	.275 to .688° Total Toe In
Camber	.500 – 1.00° Negative

*All toe amounts are total toe measurements. *You may experience accelerated tire wear with these alignment settings.*