C7 Corvette Control Arm Delrin Bushing Kit Install Instructions

Tools Required:

- Jack and Jack Stands
- Metric Socket and Wrench set
- Pick
- Torx Bits
- Flathead Screwdriver
- Balljoint/Tie Rod Separator
- Internal/external Snap ring Pliers
- Press
- Mallet
- Torque Wrench
- Dial/Digital Calipers
- Sawzall
- Drill and Drill Bit Set

Installation:

1. Lift the rear of the vehicle and safely support it with jack stands under the cradle. **Make sure the parking brake is released.**

NOTE: All of the control arms will need to be removed to change the bushings. Doing so one at a time will make the spindle easier to support, but removing the brake, spindle, toe rod and axle shaft can be done for additional room. Further instructions for removal of the spindle assembly can be found in our 15" Conversion Install Instructions.

2. Using a 10mm wrench, remove the stud from the control arm connecting to the ride height sensor.

NOTE: It is best to leave the ride height sensor linkage connected to the stud to avoid damaging the ball socket

3. With the hub exposed, use a 10mm socket and remove the bolt holding the parking brake line to the spindle.

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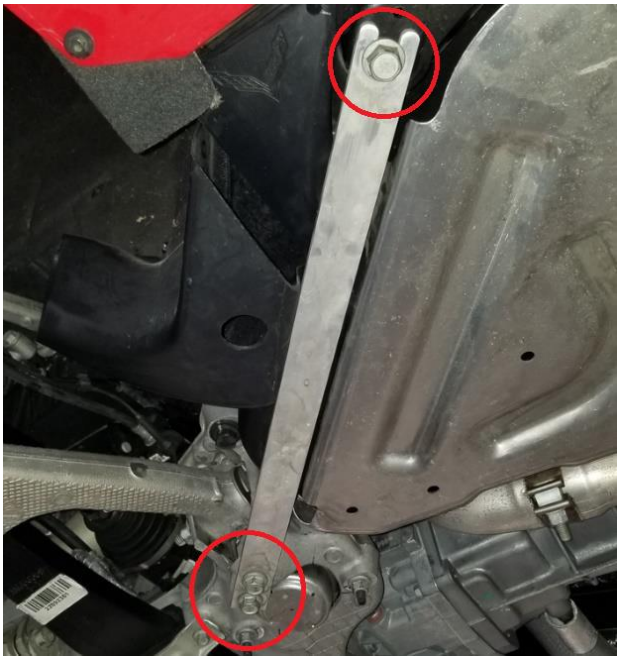
4. To gain more room to work around the control arm, use an 18mm socket and remove the three (3) bolts holding the aluminum strap brace to the chassis and rear cradle.

5. Remove the lower sway bar end link from the control arm using an 18-mm wrench and an 8-mm Allen socket.



6. Using a 21mm socket and wrench, loosen the inner bolts of the lower control arm

NOTE: You must drop the cradle to remove the forward lower control arm bolts. During re-assembly, it is possible to flip the direction of the bolt, so this is not required in the future.

7. Support the lower control arm with a screw jack or a jack and loosen the 21mm bolt holding the shock to the control arm. With the bolt removed, lower the control arm and suspension.

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8. Use a 21 mm wrench to loosen the nut holding the lower control arm ball joint to the spindle. Unseat the ball joint and set aside the spindle and hub. This may need to be done a little at a time to keep from backing the nut into the axle shaft

9. Loosen the nut on the upper control arm ball joint using an 18mm socket or wrench. Unseat the ball joint

10. Disconnect the upper ball joint from the spindle and remove the upper control arm

11. Using a screw jack or a jack, support the transmission. Ensure that the placement of the jack will not interfere with removing the rear cradle.

12. Inspect and follow all wiring, brake lines and cooler lines connecting the rear cradle. Using a trim tool or appropriate socket/wrench. Remove the clips or brackets.

13. In the rear of the cradle, you must disconnect the parking brake lines as shown.

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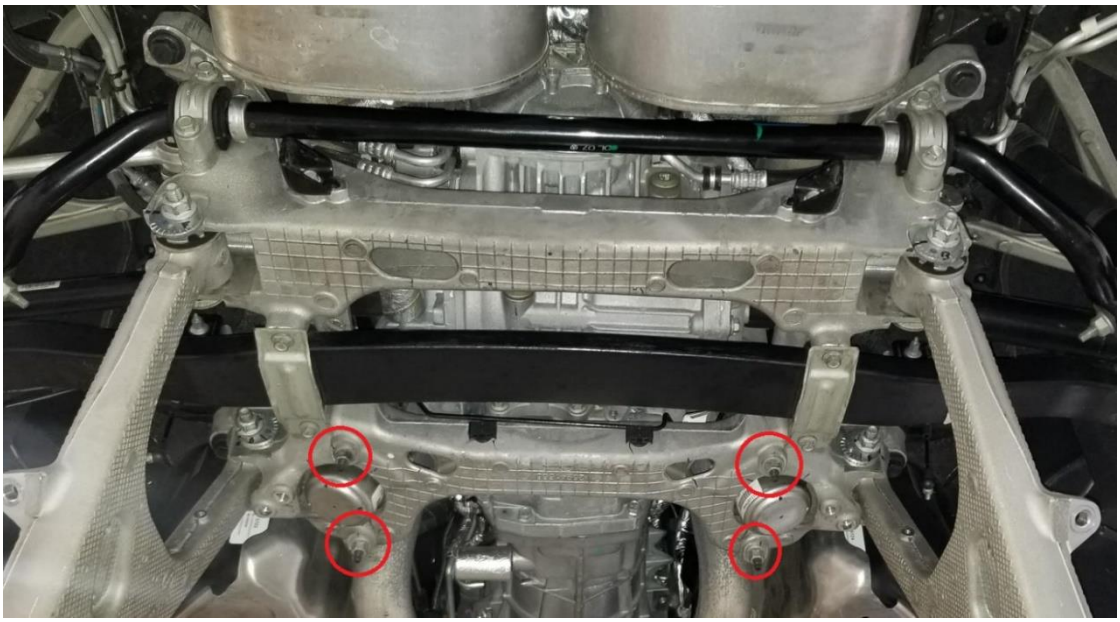
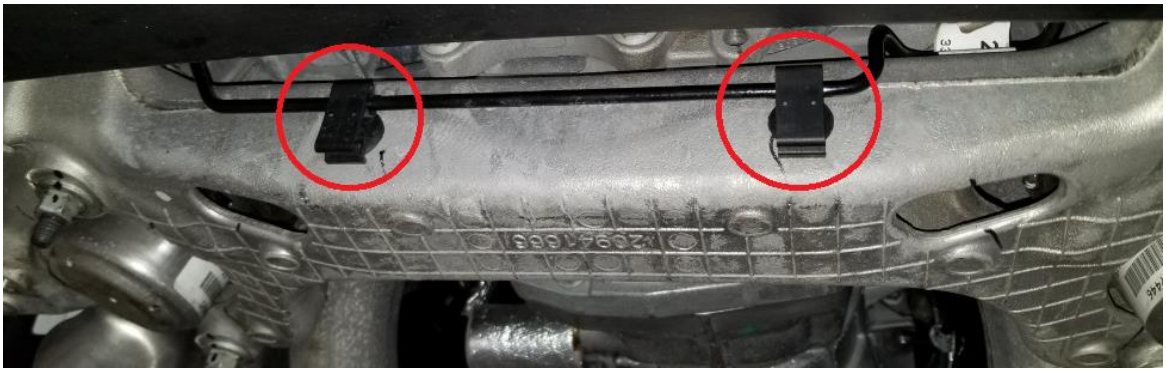


14. Remove the four (4) nuts from the transmission mounts as shown.

15. Ensuring that all wiring, brake hoses, and cooler lines are disconnected and free of the rear cradle, use a 24mm socket and loosen the four (4) bolts holding the cradle to the chassis. Using a screw-jack, transmission jack, or hydraulic jack, support the rear cradle and remove the four (4) bolts holding it to the chassis.



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NOTE: The rear cradle has locating dowels that fit tight in the chassis; lower the cradle slowly to ensure you are not bending or binding on these dowels.

16. Lower the entire rear cradle, sway bar, leaf spring, control arm, and toe rods as one assembly.

17. With the rear cradle secure and at a workable height, remove the lower control arm.

18. After removing the rear lower control arm, the rear cradle can be raised and reinstalled.

19. Remove the rear upper control arm by loosening the (4) 13 mm bolts.

20. Now start removing the front control arms; start by removing the front wheels.

21. First, remove the wheel speed sensor and the ride height sensor and position them so they will not be damaged.

22. Now, support the bottom of the lower control arm with a floor jack or a screw jack.

23. Loosen and remove the two shock mount bolts on the lower control arm.

24. Slowly let the jack or screw jack down.

25. Remove the sway bar link from the lower control arm and the sway bar.

26. Remove the upper ball joint nut. After, a ball joint separator is used to disconnect the upper control arm from the hub.

27. Remove the upper control arm by removing the (4) 13 mm bolts holding the upper control arm to the chassis.

28. Remove the lower ball joint nut and use a ball joint separator to disconnect the lower control arm from the hub.

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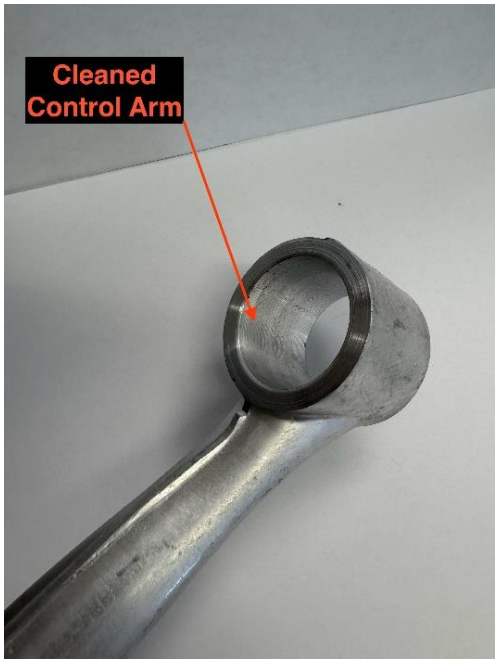
29. Lastly, loosen and remove the lower control arm chassis bolts and remove the lower control arm.

30. Now that all of the control arms are removed, you will need to remove the stock bushings. To begin, start by drilling multiple holes in the bushing to remove the rubber from the bushing.



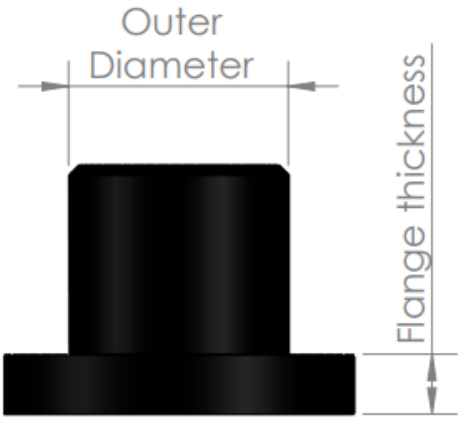
31. Once enough rubber is removed, fit a jab saw into the bushing and cut through the bushing sleeve (being careful not to damage the control arm).

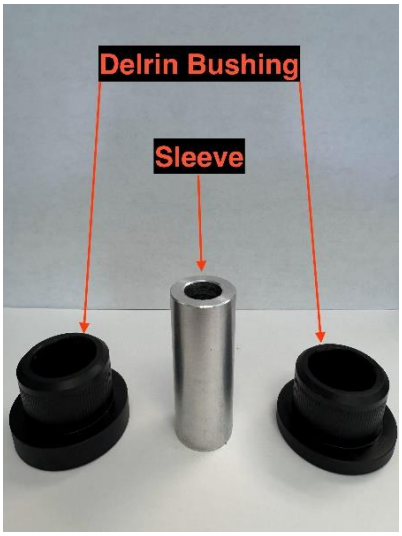
32. Once you cut through the bushing sleeve, remove the old bushing by tapping it out of the control arm.

33. Repeat this step until all the old bushings are removed.

34. Before installing the new Delrin control arm bushings, clean the control arm with brake cleaner to remove any remaining debris from the old bushings.

35. Before proceeding, verify that all the parts are correct by referencing the table below, measuring the flange thickness and outer diameters of every bushing with calipers, and organizing all parts.





C7 Corvette Control Arm Delrin Bushing Kit Install Instructions

Front Control Arm Delrin Bushing Set (CBK571)				
Qty:	Part Description:	Part #:	Measurement (in):	Used with:
8	Front Upper Control Arm Bushing	BMR2694	OD: 1.412’’ Flange Thickness: .25’’	Cross-Shaft
2	Front Lower Control Arm Rear Outer Bushing	BMR2709	OD: 1.999’’ Flange Thickness: .403’’	Sleeve
2	Front Lower Control Arm Rear Inner Bushing	BMR2710	OD: 1.999’’ Flange Thickness: .284’’	Sleeve
2	Front Lower Control Arm Front Outer Bushing	BMR2711	OD: 1.723’’ Flange Thickness: .403’’	Sleeve
2	Front Lower Control Arm Front Inner Bushing	BMR2712	OD: 1.723’’ Flange Thickness: .285’’	Sleeve
4	Lower Control Arm Sleeve	BMR2714	Length: 2.717’’	N/A
4	Front Upper Control Arm Cross-Shaft	BMR2752	Length: 5.446’’	N/A

Rear Control Arm Delrin Bushing Set (CBK572)				
Qty:	Part Description:	Part #:	Measurement (in):	Used with:
2	Rear Lower Control Arm Front Outer Bushing	BMR2701	OD: 1.804’’ Flange Thickness: .403’’	Sleeve
2	Rear Lower Control Arm Front Inner Bushing	BMR2702	OD: 1.804’’ Flange Thickness: .284’’	Sleeve
4	Rear Lower Control Arm Rear Bushing	BMR2704	OD: 1.764’’ Flange Thickness: .335’’	Sleeve
2	Rear Upper Control Arm Rear Outer Bushing	BMR2705	OD: 1.73’’ Flange Thickness: .3’’	Cross-Shaft
2	Rear Upper Control Arm Rear Inner Bushing	BMR2706	OD: 1.73’’ Flange Thickness: .21’’	Cross-Shaft
2	Rear Upper Control Arm Front Outer Bushing	BMR2707	OD: 1.571’’ Flange Thickness: .3’’	Cross-Shaft
2	Rear Upper Control Arm Front Inner Bushing	BMR2708	OD: 1.571’’ Flange Thickness: .21’’	Cross-Shaft
4	Lower Control Arm Sleeve	BMR2714	Length: 2.717’’	N/A
4	Rear Upper Control Arm Cross-Shaft	BMR2753	Length: 4.65’’	N/A

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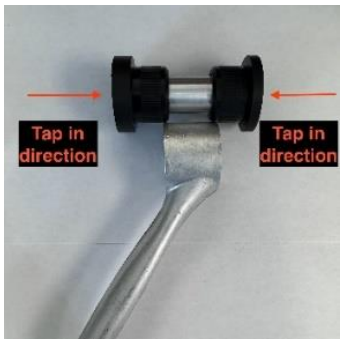
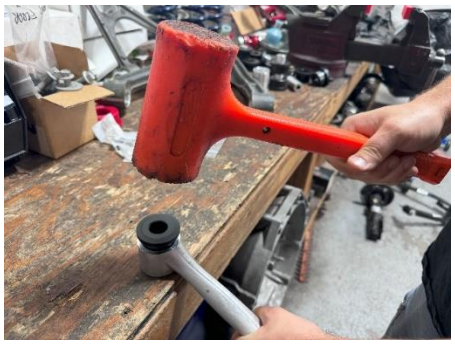
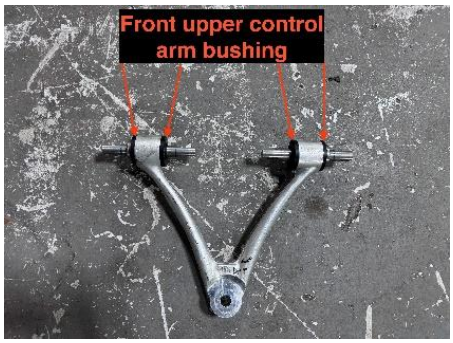


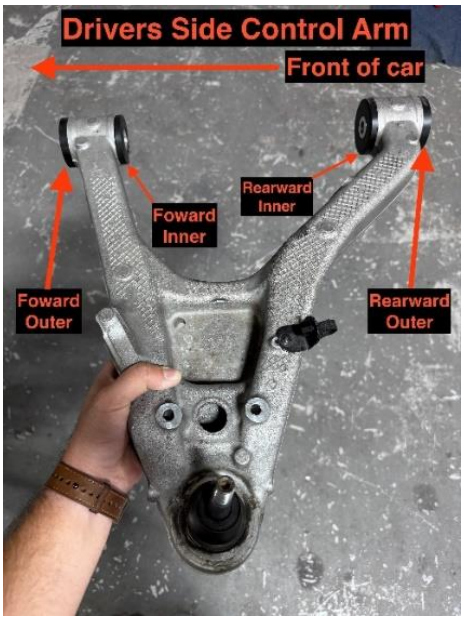


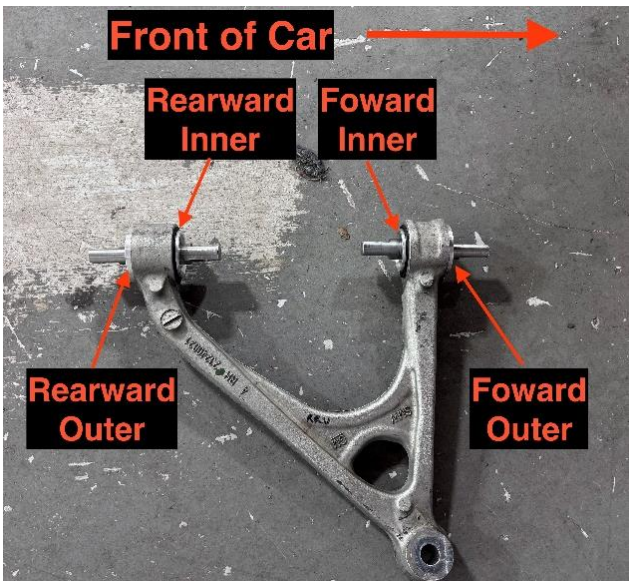


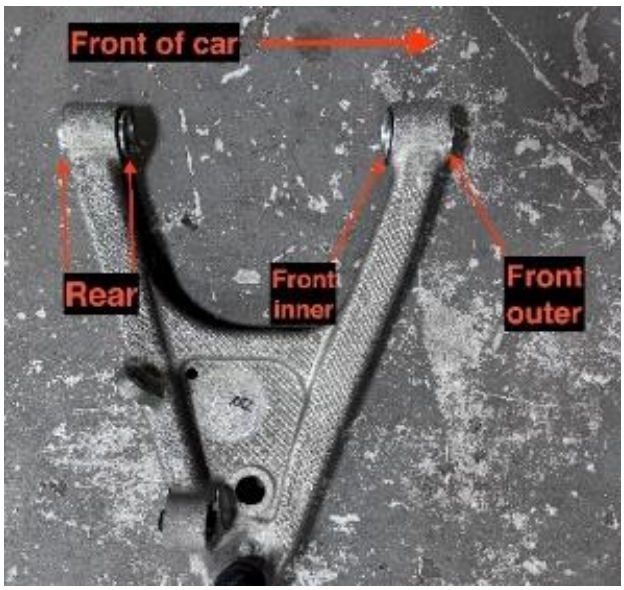
36. According to the figure, tap the bushings into the control arms using a rubber mallet.

NOTE: Make sure the correct bushing part number is tapped in based on the location. Some bushings have the same outer diameter but different flange thickness lengths. The outer bushings will have a thicker flange thickness than the inner bushings.

37. After the bushings are tapped in the lower control arms using a rubber mallet, apply synthetic grease (we recommend Superlube **BMR part# SUL41150)** to the sleeves and tap them into the control arm.







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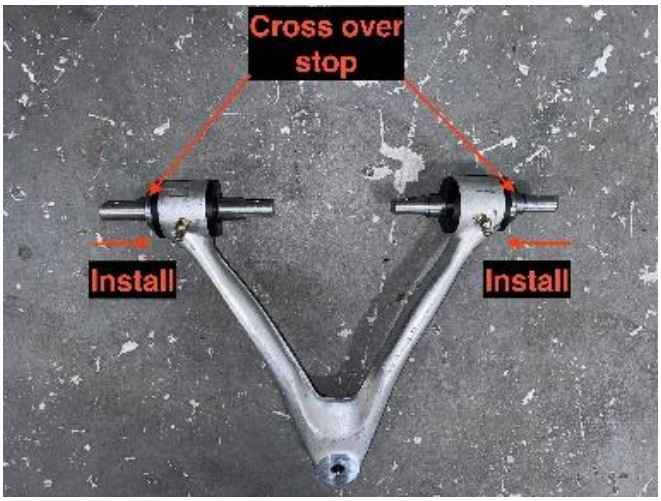
38. After the bushings are tapped into the upper control arms using a rubber mallet, apply synthetic grease (we recommend **Superlube BMR part# SUL41150**) to the cross-shaft and tap them in from the outside of the control arm inward. Then, using an external snap ring plier, assemble them with the snap ring provided, as shown in the figure below.

39. Install the control arms back into the car and assemble all other components taken off during installation.

NOTE: These fasteners are listed as T.A.Y (Torque-Angle-Yield Fasteners), also known as single-use or Torque-to-Yield fasteners.



Although GM recommends that you replace these fasteners, we have not replaced ours at any point during our design and testing process. Re-use these fasteners at your own risk.

Torque Specs:
Front & Rear Lower Control Arm Cam Nuts - 125 ft-lbs.
Upper Control Arm Mounting Bolts - 48 ft-lbs.

Front Upper Ball joint (if using new ball joints) - 22 ft-lbs. then 120 degrees
Rear Upper Ball joint (if using new ball joints) - 22 ft-lbs. then 140 degrees
Front & Rear Lower Ball joint (if using new ball joints) - 22 ft-lbs. then 180 degrees

Front and Rear Upper Ball joint (if using the same ball joints) – 88 ft-lbs.
Front and Rear Lower Ball joint (if using the same ball joints) – 135 ft-lbs.