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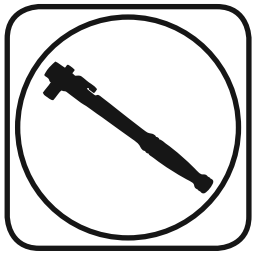
Installation Instructions

Part # 11609500 - 2014 -UP Corvette Delrin Bushing Kit

Recommended Tools



2014 UP Delrin Control Arm Bushing Kit

Installation Instructions

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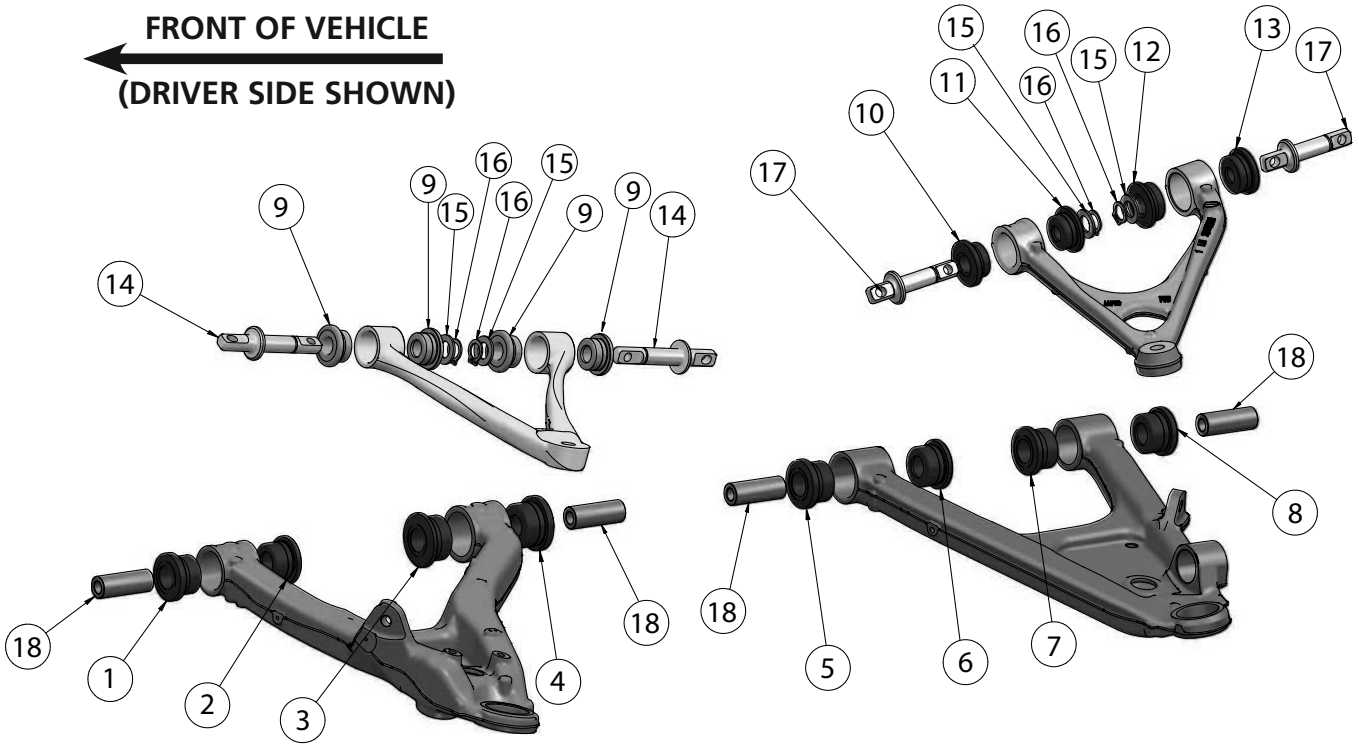
Installation Instructions

Included Components .....In the box



Item #	Part #	Description	QTY
1	70012544	Front Lower Control Arm Bushing; Small Outer Bushing	2
2	70012545	Front Lower Control Arm Bushing; Small Inner Bushing	2
3	70012543	Front Lower Control Arm Bushing; Large Inner Bushing	2
4	70012542	Front Lower Control Arm Bushing; Large Outer Bushing	2
5	70012534	Rear Lower Control Arm Bushing; Large Outer	2
6	70012535	Rear Lower Control Arm Bushing; Large Inner	2
7	70012537	Rear Lower Control Arm Bushing; Small Inner	2
8	70012536	Rear Lower Control Arm Bushing; Small Outer	2
9	70012114-A	Front Upper Control Arm Bushing	8
10	70012540	Rear Upper Control Arm Bushing; Small Outer	2
11	70012541	Rear Upper Control Arm Bushing; Small Inner	2
12	70012539	Rear Upper Control Arm Bushing; Large Inner	2
13	70012538	Rear Upper Control Arm Bushing; Large Outer	2
14	90002125	Front Upper Trunnion **(Long)**	4
15	99753006	3/4" I.D. Washer	4
16	90001634	3/4" Snap Ring	4
17	90002200	Rear Upper Trunnion **(Short)**	4
18	90002544	Inner Sleeve; 1.00" OD x .562" ID x 2.717" OAL	6

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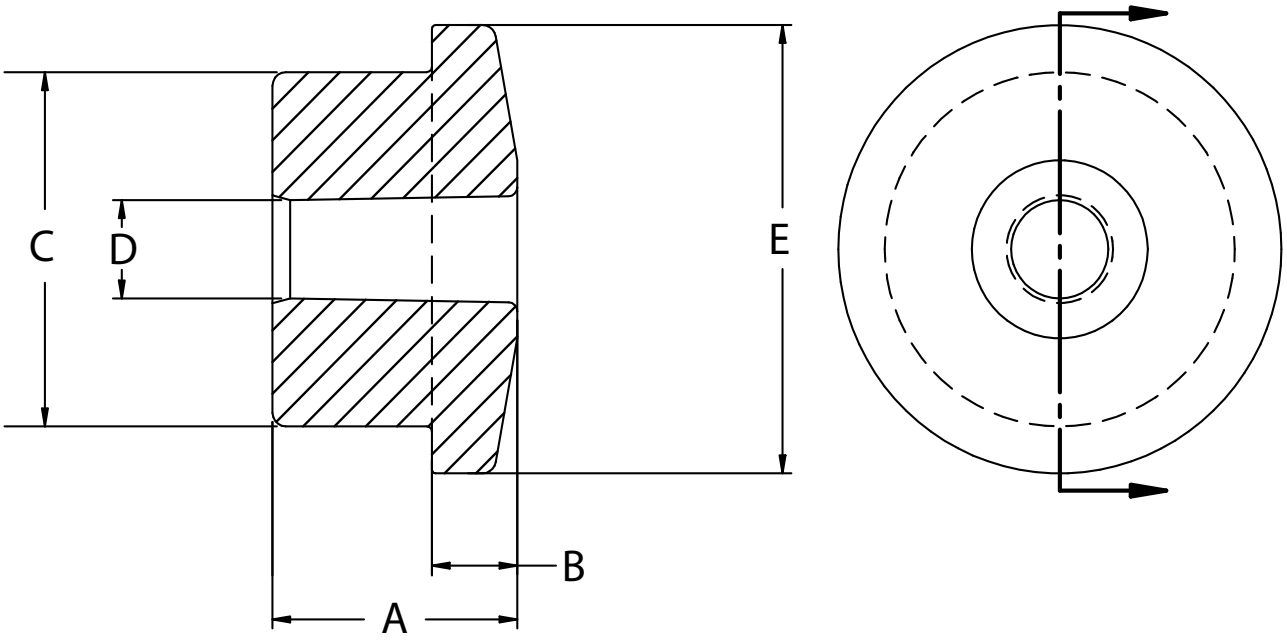
Bushing Dimensions



Bushing Dimensions

Item #	Part #	A	B	C	D	E
1	70012544	1.350	.403	1.722	.995	2.150
2	70012545	1.240	.285	1.722	.995	2.150
3	70012543	1.230	.284	1.998	.995	2.450
4	70012542	1.350	.403	1.998	.995	2.450
5	70012534	1.350	.403	1.803	.995	2.200
6	70012535	1.230	.284	1.803	.995	2.200
7	70012537	1.290	.335	1.763	.995	2.150
8	70012536	1.300	.352	1.763	.995	2.150
9	70012114-A	.900	.250	1.408	.745	1.850
10	70012540	.920	.300	1.570	.745	2.100
11	70012541	.820	.210	1.570	.745	2.100
12	70012539	.820	.210	1.730	.745	2.100
13	70012538	.920	.300	1.730	.745	2.100

Inner Sleeve Dimensions

Item #	Part #	OD	ID	Over All Length
18	90002544	1.00"	.562"	2.717"

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Installation Instructions

Disassembly

Congratulations on your purchase of the Ridetech C7 Control Arm Delrin Bushing Kit. This kit has been designed to help improve your Corvette's handling along with providing a lifetime of enjoyment. The Delrin Bushing Kit will improve your Cars handling characteristics by eliminating the deflection at the bushing.

The C7 OEM bushings consists of rubber bonded to a metal outer sleeve. The entire assembly must be removed from the control arm before installing the Ridetech Delrin Bushings.

MARK THE POSITION OF THE ALIGNMENT CAMS BEFORE DISASSEMBLY. BE SURE TO REINSTALL THE CAMS IN THE LOCATIONS THEY WERE REMOVED FROM.

1. We recommend doing one Control Arm at a time to simplify installation of the bushings.

A Bench Vise will ease the installation of the Bushings.

2. Raise the vehicle and support it by the frame or rear cross member, allowing the suspension to hang freely.

3. With the Wheels and Tires removed, disconnect the Shocks, Springs, and Sway Bar Linkage from the Lower Control Arms, retaining the hardware. Refer to the Factory Service Manual for the proper procedure.

4. Support the Rotor Assembly when removing any of the Control Arms to prevent unnecessary strain on the Brake Lines and ABS Sensor Wires.

Front & Rear Upper Control Arms

5. With the Rotor and Hub supported, remove the Upper Control Arm by , first removing the balljoint nut and using a balljoint separator to release the balljoint front the Control Arm.

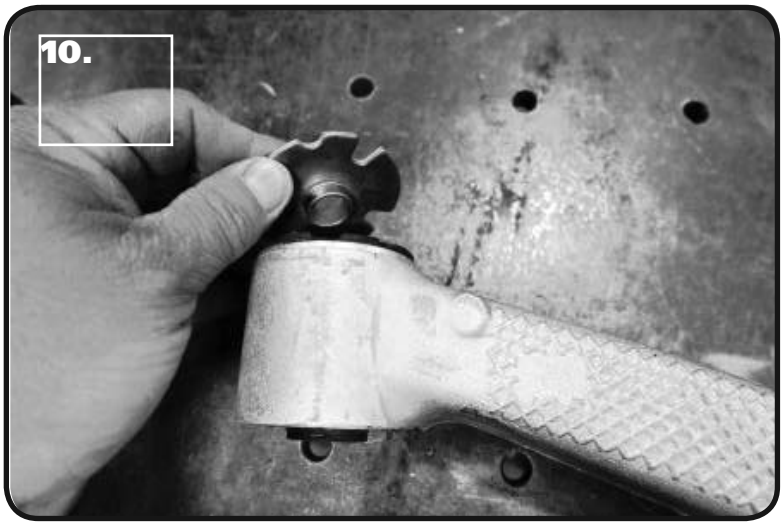
6. Next, remove the (4) bolts attaching the Trunnion to the car. Mark any shims that may be behind the Trunnion. You will need to put these back in the same location when reinstalling the Control arm.

7. We found drilling the rubber out of the bushing and cutting the outer sleeve with a saw, the most effective way to remove the OEM bushings. It is necessary to cut the outer side of the OEM trunnion off to gain access to the rubber bushing for drilling.

8. The Steps to remove the bushings are covered on pages 5 - 7. These steps work for all of the OEM control arm bushings.

Bushing Removal

9. Remove the small T-bushing from the inner side of the OEM bushing. This can be done by simply prying them out with a small pry bar.



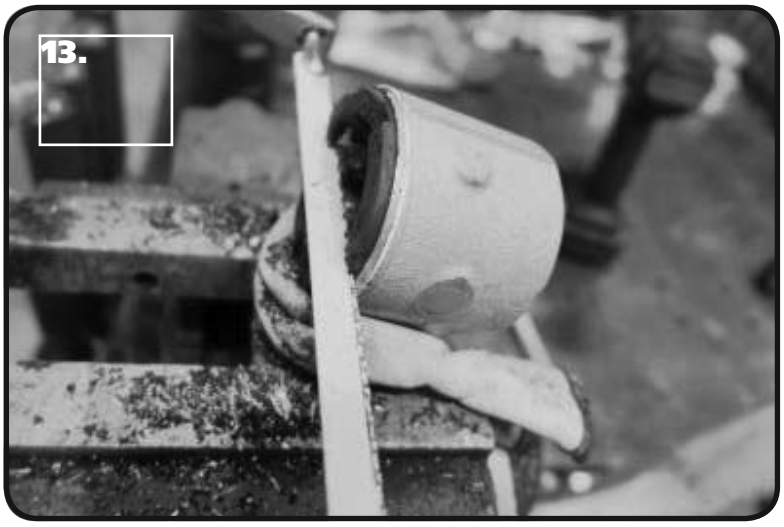
10. Remove the large T-bushing from the outer side of the OEM bushing. This can be done by simply prying them out with a small pry bar.

11. Using a drill and 5/16" drill bit, drill the rubber out of the bushing. You can start by plunging several holes around the bushings. Drill as many holes as you can leaving very little rubber. The remaining rubber can be cut out with the drill bit by going in a circular motion around the inner sleeve. Let the drill do the work for you. Remove the inner sleeve when it comes loose.

Bushing Removal

WE USED A HACKSAW FOR THE NEXT 2 STEPS.

12. Remove the blade from a hacksaw and insert the blade into the bushing hole. Reinstall the blade into the hacksaw. Cut through the bushing shell being careful to not cut into the control arm. You need to make 2 cut opposite of each other. Once you have the 2 cuts made, remove the hacksaw blade from the bushing and reinstall it into you hacksaw.

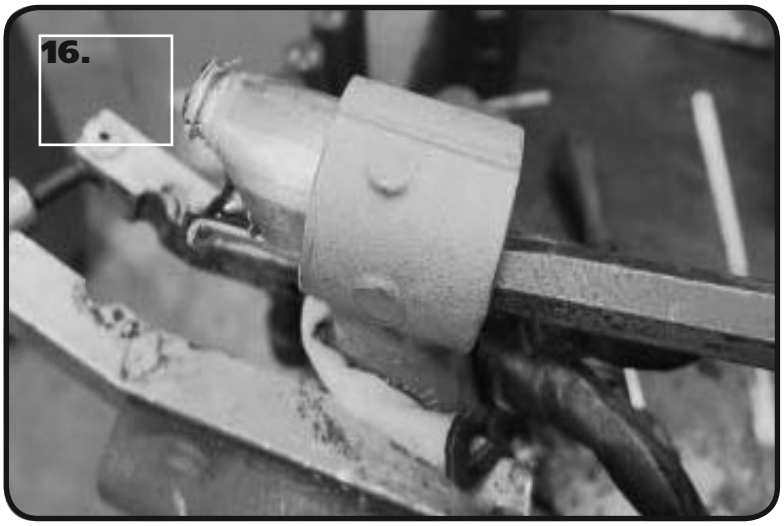


13. Cut through the outer flange of the bushing in line with the 2 cuts made on the inner ID. Try to avoid cutting into the arm.

14. Using a Hammer and Chisel, bend in the outer flange beside one of the cuts. Bent it enough to distort the ID of the bushing. We found bending in the flange beside both cuts on the same 1/2 of the cut bushing sleeve worked the best.

Bushing Removal & Upper Bushing Installation

15. Using a smaller chisel and hammer to fold the inner side of the bushing inward. Again, do this on the same 1/2 of the bushing as the previous step. The bushing will start coming out as you bend it inward.



16. Once the bushing starts moving, knock it the rest of the way out. This will leave you with a clean inside bore that is ready for a Delrin Bushing to be installed.

Repeat these steps on all bushings.

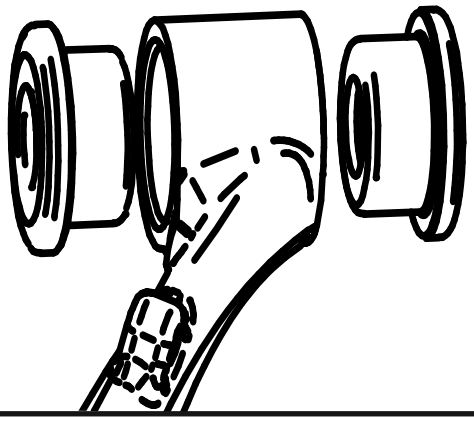
Front & Rear Upper Trunnion & Bushing Installation

17A. Front Upper - Use the Illustration on Page 2 & 3 to determine the parts needed for the Delrin Bushing & Trunnion installation in the upper arms. To do (1) Arm, you will need (4) Upper Control Arm Bushings[9]. You will also need (2) Trunnions[14 Long], (2) 3/4" ID Washers[15], and (2) Snap Rings[16].

17B. Rear Upper - Use the Illustration on Page 2 & 3 to determine the parts needed for the Delrin Bushing & Trunnion installation in the upper arms. To do (1) Arm, you will need (4) Upper Control Arm Bushings[10,11,12,&13]. You will also need (2) Trunnion[17 Short], (2) 3/4" ID Washers[15], and (2) Snap Rings[16].

Front & Rear Upper Trunnion & Bushing Installation

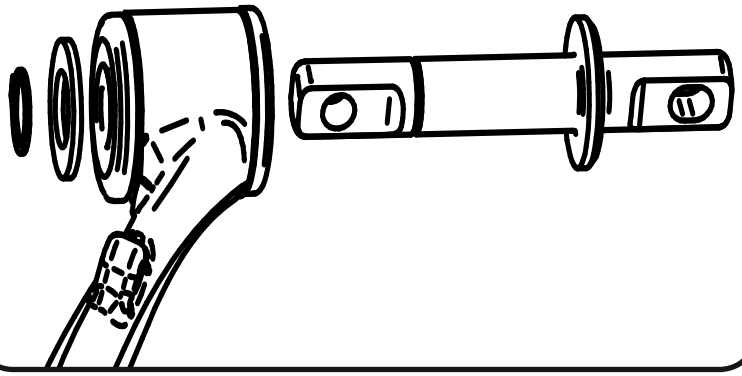
18.



18. Press a set of bushings into each opening of the upper control arm. A bench vise can be used to do this.

Note: Front Upper Uses all the same bushings

19.



19. Install a Trunnion into each set of Bushings installed in the Control Arm. The Trunnions are inserted with the Shoulder to the outside of the Control Arm. Install a 3/4" Washer followed by a Snap Ring on each Trunnion.

20.

20. Reinstall the Control Arm on the car with any shims back into their previous location. Tighten all Fasteners.

Control Arm Mounting Bolts Torque Spec:
48 ftlbs

Repeat on other side.

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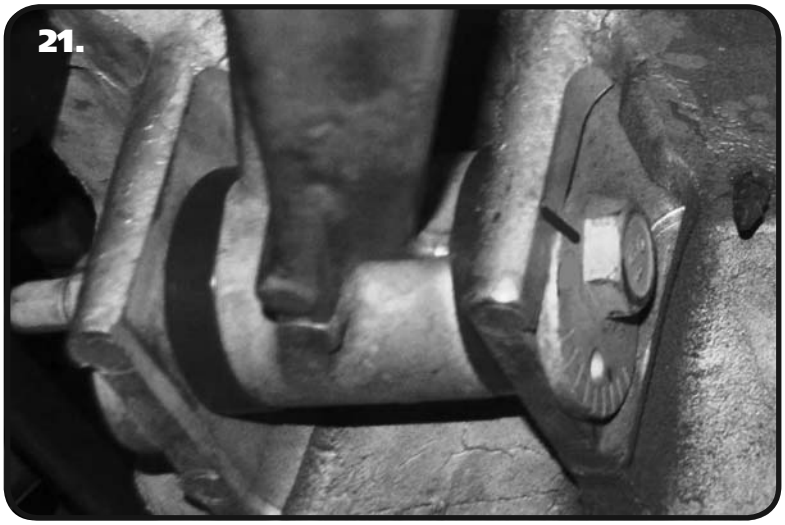
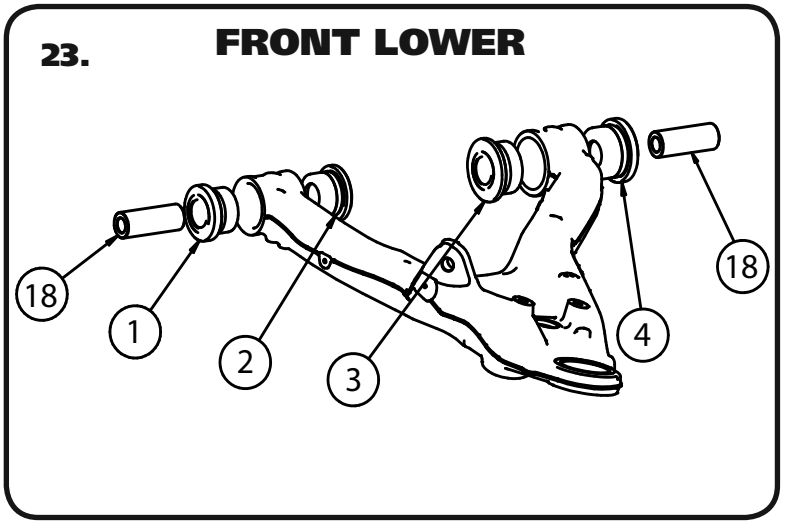
Installation Instructions

Front & Rear Lower Bushing installation



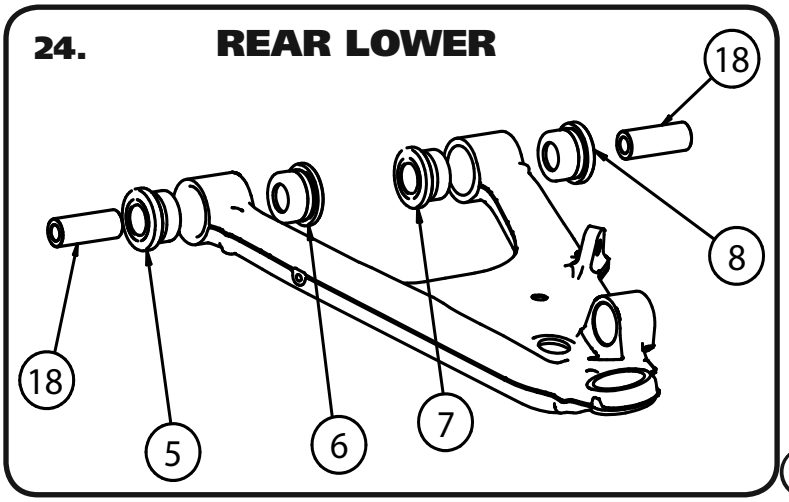
21. Before removing the Lower Control Arms, **use a Marker or something similar to mark the Lower Control Arm Adjusting Cams position**. The marks will get the Alignment close, but Ridetech recommends getting the alignment checked after the install is completed.

22. Remove the Lower Control Arm. Use the steps on pages 5 - 7 to remove the lower control arm bushings.



23. Front Lower - Using the Diagrams on Page 2 & 3, Insert the correct Bushings in the correct locations using a Bench Vise to push them in. Push the Bushings in followed by the correct Inner Sleeve. The Front Lower uses Bushing[1, 2, 3, 4], and Inner Sleeve[18].

Reinstall Arm and repeat for other side.



24. Rear Lower - Using the Diagrams on Page 2 & 3, Insert the correct Bushings in the correct locations using a Bench Vise to push them in. Push the Bushings in followed by the correct Inner Sleeve. The Front Lower uses Bushing[5,6,7,8], and Inner Sleeve[18].

Reinstall Arm and repeat for other side.

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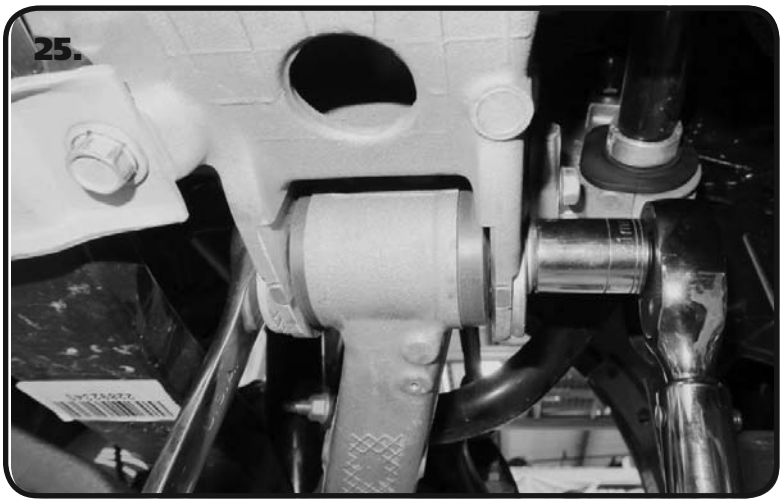
Finishing



25. Tighten each Cam Nut, but first align the mark made on the Cam. Hold the Adjusting Cam Bolt Head in place with a wrench while torquing the Cam nut. Torque the Cam Nut to 125 ftlbs.

26. Repeat Steps 21 - 25 on the remainder of the Control Arms and Bushings using the Diagrams on Page 2 & 3 for bushing location. **Be sure to mark the Adjusting Cams**. The simplest way to do the install is to do one arm at a time.

Torque Specs:

Front & Rear Lower Control Arm Cam Nuts	**-**	**125 ftlbs**
Upper Control Arm Mounting Bolts	**-**	**48 ftlbs**
Front Upper Balljoint	**-**	**22 ftlbs then 120 degrees**
Rear Upper Balljoint	**-**	**22 ftlbs then 140 degrees**
Front & Rear Lower Balljoint	**-**	**22 ftlbs then 180 degrees**

27. Reattach the Shocks, Springs, and Sway Bar Linkage.

28. After installing all Bushings, it is recommended to get the Corvette Alignment checked.