

# Z1 350Z (Z33) FORGED FRONT UPPER CONTROL ARM INSTALLATION MANUAL



This Installation Manual is intended for the following models:

2003-2008	Nissan 350Z (Z33)
2003-2006	Infiniti G35 Sedan
2003-2007	Infiniti G35 Coupe

## PROLOGUE:

Study these instructions completely before proceeding to assembly. The installer must have a thorough knowledge of automotive systems operation, safety, and sound maintenance practices. If unfamiliar with any of the concepts outlined in this instruction, we recommend the installation be completed by a qualified professional.

## WARNING!

Extreme caution should be taken when performing maintenance or performance upgrades to your vehicle. Please observe and abide by any Warning or Caution labels placed on the various components and tools used when servicing your vehicle. If you have any questions regarding installation or the various components included with the Z1 Motorsports 350Z Forged Front Upper Control Arm, consult with a Professional Body Shop or contact Z1 Motorsports for more information.

## PARTS INCLUDED:

Item	Quantity	Description
1	1	Thread Locker
2	1	FUCA Arm – Passenger Side
3	1	FUCA Arm – Driver Side
4	2	M12 x 1.25 Nylon Insert Lock Nut
Track Version FUCA will provide the following:		
5	2	Pre-assembled Camber Arm with Solid Heim Joint Assembly
Street Version FUCA will provide the following:		
6	2	Pre-assembled Camber Arm with Urethane Bushing Assembly

## TOOLS REQUIRED:

- Hydraulic Jack
- (2) 2-Ton (or greater) Jack Stands
- Wheel Chock
- Ratchet w/ extensions
- 10mm Socket
- 10-19mm Assorted Wrenches
- 13mm Deep Well Socket
- Crescent Wrench
- Lanyard Strap
- Soft-blow Hammer
- Pry Bar
- Torque Wrench
- 5mm Hex Key
- Lithium Based Chassis Grease
- Anti-seize

## SAFETY REQUIREMENTS:

- Always wear safety glasses and any necessary protective garments. If using any fluids, chemicals, or solvents, a respirator is recommended.
- Always turn the ignition to the OFF position and disconnect/secure the **NEGATIVE** battery terminal.
- Always use properly rated jack stands when working under your vehicle.
- Always keep limbs and parts away from moving drivetrain parts.
- Only operate drivetrain in safe space and well-ventilated areas.

## BEFORE YOU BEGIN:

Remove contents from the Z1 Motorsports 350Z Forged Upper Control Arms and verify that **ALL** necessary hardware/parts are present.

## **PROCEDURE:**

1. Place the transmission in Park position (or in Reverse gear if equipped with a manual transmission). Apply the parking brake.
2. Open and support the hood of the vehicle.
3. Release tension to lug nuts at front wheels. DO NOT remove lug nuts.
4. Raise and support vehicle using jack and jack stands. Locate proper jacking points on vehicle's chassis (refer to vehicle's Owner Manual).
5. Remove the front wheels and lug nuts.
6. Locate the OEM Front Upper Control Arms (FUCA). They are located at the front left and right ends of the vehicle, between the chassis and front axle. See *Figure 1* below.

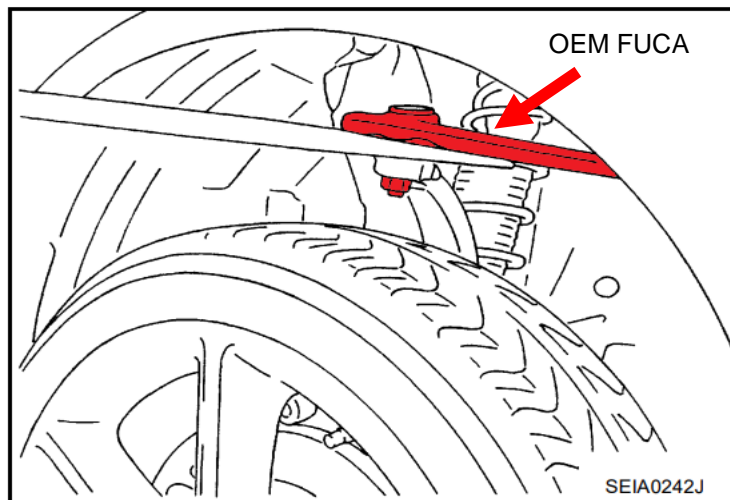


Figure 1

7. Wrap lanyard strap around Steering Knuckle and Strut Assembly. The lanyard will prevent the brake line from becoming stretched/damaged during the installation process.
8. Remove the nut securing the OEM FUCA Ball Joint to the steering knuckle. *Figure 2*.

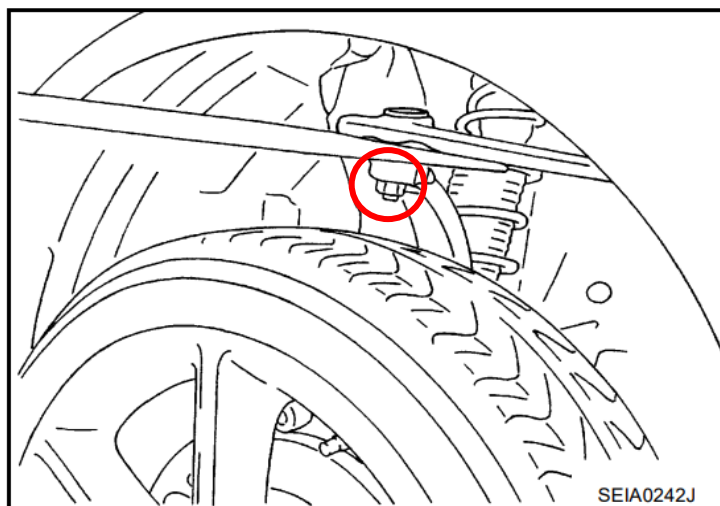


Figure 2

9. Separate the OEM FUCA ball joint from the Steering Knuckle.

**NOTE:** The Ball Joint may be seized in the Steering Knuckle. Use a Ball Joint Separator Fork or Pry Bar with a Soft Blow Hammer to separate.

10. Remove the (2) two bolts that attach the OEM FUCA to Chassis. Keep these bolts as you will reuse them later.

**NOTE:** The Strut Assembly may need to be compressed or removed from chassis in order to remove bolts. See your Factory Service Manual for a reference to remove the strut assembly.

11. Remove the OEM FUCA from vehicle.

12. Locate the Z1 Forged Upper Control Arm (FUCA) and Control Arm Ends. Each FUCA is marked with either a "L" or "R" to indicate the side of the car it is supposed to go on. Apply anti-seize to the threads of the Control Arm Ends. Thread (2) two pre-assembled (solid or urethane depending on your order) Bushing Assemblies into Z1 FUCA ends.

13. Using the OEM Control Arm as a reference, adjust the Z1 Threaded Inserts and Control Arm Ends until they are the same length from the mounting point to the Ball Joint as the OEM FUCA. Both Ends must be the same length. Split adjustment as pictured below in *Figure 3*. The final adjustment will be achieved on the alignment rack. If the OEM Control Arm is not available, 15mm on the Adjuster and 5mm on the Ends is a good starting point.

**NOTE:** Use of Anti-Seize is necessary to prevent any long term corrosion that can cause the Ends to be difficult to adjust.



Figure 3

**NOTE:** If using the **Street Ends**, ensure the Chassis-Side Mounts are threaded equally in length. Failure to do so may result in catastrophic damage to FUCA and/or vehicle.

**NOTE:** **DO NOT** thread the Double Adjuster past the point where the last thread is flush with the arm, as shown below. The maximum safe length of exposed threads on the ends is **15mm**. The maximum safe length of exposed threads on the double adjuster is **20mm**. See *Figure 4* below. For **RACE ENDS ONLY**, you can fine tune caster by having one end threaded slightly further in or out than the other.

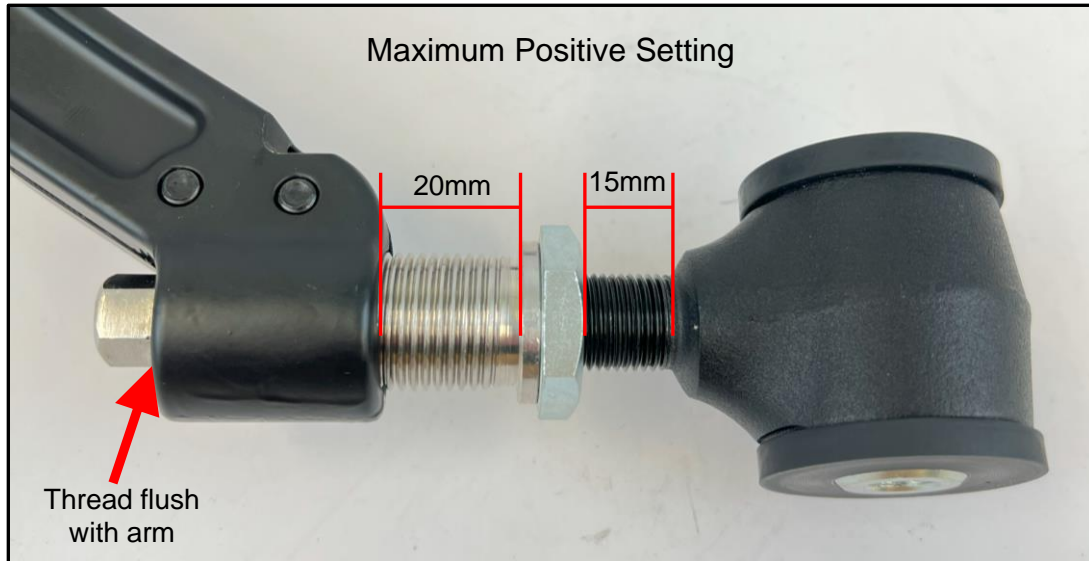


Figure 4

14. Once adjustment is achieved, tighten pinch bolts with a 5mm Allen Socket. It is recommended to apply thread locker on these pinch bolts.
15. Position the Z1 FUCA into the Chassis.

**NOTE:** It is important that the Z1 FUCA is installed both on the correct side of the vehicle, as well as the correct orientation. Critical damage to the suspension arm can occur if installed incorrectly. Each arm is marked with either an “L” (Left/Drivers side) or “R” (Right/Passenger Side). The Z1 FUCA should orient with the ball joint facing DOWN.

**NOTE:** If using the Z1 Street Urethane Bushings, the Zerk fittings must be facing down.

16. Install the (2) two Upper Control Arm Bolts that attach the Z1 FUCA to the chassis. Torque to **52 ft-lbs**.

**NOTE:** If using the Z1 Street Urethane Bushings, now would be a good time to grease the bushings with the installed Zerk fitting.

17. If the strut assembly was removed in *Step 10*, reinstall it now.
18. Position the Z1 FUCA Ball Joint into the mounting hole of the Steering Knuckle.

**NOTE:** Make sure the ball joint is parallel with the Z1 FUCA Body.

19. Install the M12 Locking Nut to the Ball Joint that connects the Z1 FUCA to the steering knuckle. Torque to **43 ft-lbs.**
20. With the Ball Joints installed, use red axle grease or equivalent, add grease into the grease fitting on the Ball Joint. We added between 5-8 pumps on each side until we noticed some grease come out of the boot or the boot start to swell up. Depending on what pump you are using it may require more or less pumps. **DO NOT** overfill the boot to the point that it tears.

**NOTE:** Regrease the Ball Joints every 5000 miles. Failure to pregrease the Ball Joints will result in premature wear.

21. Remove the lanyard strap installed during *Step 7.*
22. Install front wheel and lug nuts.
23. Repeat *Steps 6-21* on the other side of the vehicle.
24. Lower vehicle from jack stands.
25. Torque lug nuts to **80 ft-lbs.**
26. Perform an alignment check and adjust Z1 Forged Upper Control Arms accordingly.

**NOTE:** Fine tuning the adjustment can be done with the Z1 Forged Upper Control Arms attached to the chassis and steering knuckle. For full adjustment, the Z1 Forged Upper Control Arms must be removed from the steering knuckle or chassis. Remember to retighten the pinch bolts after adjustments.

27. Perform a final test drive of the vehicle.



Installed Z1 Forged Upper Control Arm

**END**

**Additional Technical Support:**

Contact Z1 Motorsports at [info@z1motorsports.com](mailto:info@z1motorsports.com)

Or call 770-838-7777 between 9am and 6pm ET