

# Z1 Z34 S-PRO COILOVERS INSTALLATION MANUAL



This Installation Manual is intended for the following models:

2009-2020	Nissan 370Z
2023+	Nissan Z
2009-2013	Infiniti G37 Sedan
2008-2013	Infiniti G37 Coupe

## PROLOGUE:

Study these instructions completely before proceeding to assembly. The installer must have a thorough knowledge of automotive systems operation. 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 Z34 S-Pro Coilovers, consult with a Professional Mechanic or contact Z1 Motorsports for more information.

## **PARTS INCLUDED:**

Item	Quantity	Description
1	4	Z1 Coilover Wrench
2	2	Z1 S-Pro Front Coilovers
3	2	Z1 S-Pro Rear Shock Absorbers
4	2	Z1 S-Pro Rear Springs
5	2	Z1 S-Pro Adjustable Rear Spring Collars
6	2	Rear Spring Seat Rings

## **TOOLS REQUIRED:**

- Hydraulic Jack
- (2) 2-Ton (or greater) Jack Stands
- Ratchet
- Ratchet Extension(s)
- Assorted Metric Sockets
- Assorted Metric Wrenches
- Torque Wrench
- Channel Lock Pliers

## **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 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 Z34 S-Pro Coilovers and verify that ALL necessary hardware is present.

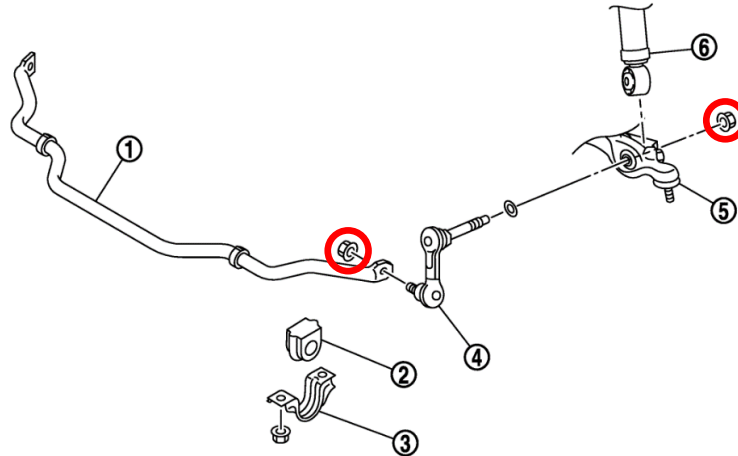
## **PROCEDURE:**

1. Place the transmission in Park position (or in Reverse gear if equipped with a manual transmission). Apply the parking brake.
2. Release tension to lug nuts at all (4) wheels. DO NOT remove lug nuts!
3. Locate proper jacking points on vehicle's chassis (refer to vehicle's Owner Manual). Raise and support vehicle using jack & jack stands.
4. Remove all (4) wheels.

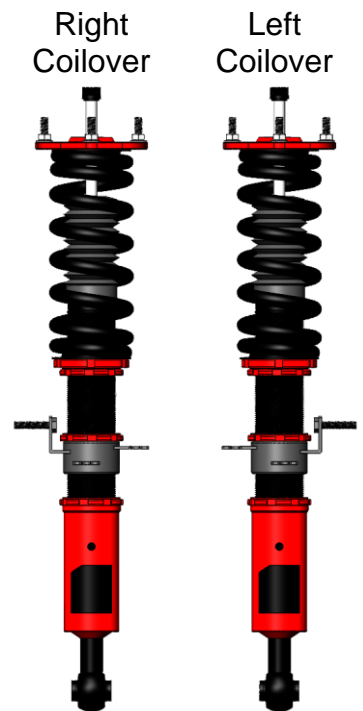
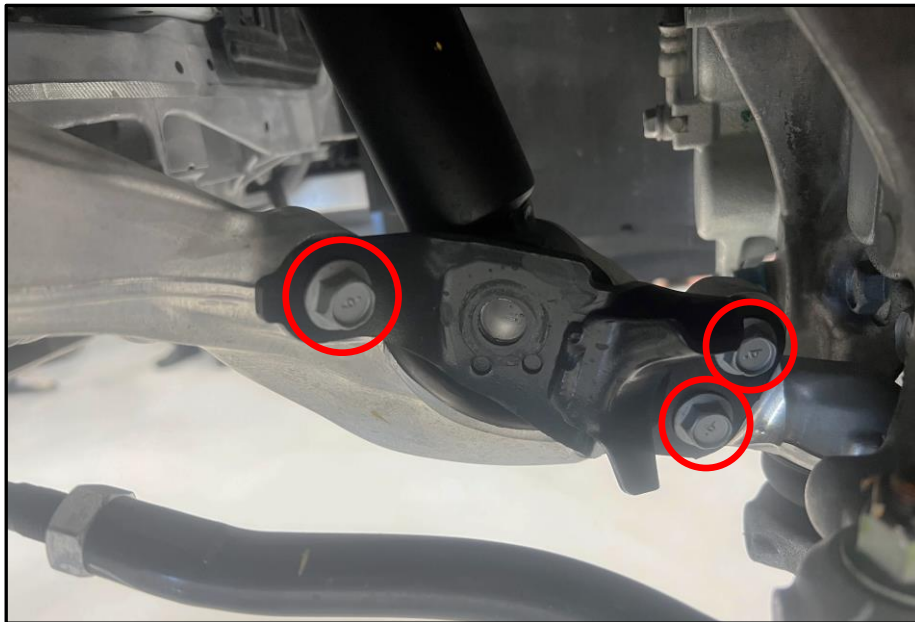
## **Front:**

5. Disconnect any wheel sensor lines or brake lines from brackets on OEM front coilovers.
6. Loosen (3) nuts at the top of each OEM front coilover at the top of the shock towers in the engine bay.

- Remove the nuts securing the sway bar end-links to the lower control arms and OEM coilovers (circled below).
- Remove the nuts securing the sway bar end-links to the sway bar (circled below). Remove end-links and set aside.



- Remove the (3) bolts securing the brackets to the backside of the lower control arms (circled below). Remove brackets and set aside.



- While supporting the coilover, fully remove the (3) nuts at the top of the OEM coilovers at the top of the shock towers in the engine bay.
- Remove the OEM front coilovers. You will likely need to push the upright and lower control arm down to provide clearance to remove it. If it is difficult to push the upright down, loosen the upper control arm mounting bolts near the chassis, just make sure to retorque them after (40ft-lbs).
- Locate the Z1 front coilovers. Set coilovers down side by side. **Ensure the large top nut, the one above the upper bushing in the top hat but below the adjuster knob, is tight.** You will need to use an open ended wrench or crescent wrench as a socket will not fit over the adjust knob.



**SEE STEP 12!**  
**MAKE SURE THE LARGE NUT ON THE TOP OF THE STRUT IS TIGHT!**

13. The front springs should come pre-preloaded out of the box. If you would like to adjust the spring preload, you can do so with the two upper collars. Either way, ensure the upper locking collars are tight.

14. The shock body length should be adjusted so they are the same length for each side. Loosen the lower shock collar and rotate the lower mount body until they are the same length. Then, tighten the lower locking collar.

15. Starting on either side of the vehicle, position the Z1 coilover in place with the metallic logo facing outwards.

16. Reattach the (3) bolts and bracket removed in step # 10. Torque bolts to 38ft-lbs.

17. Reattach the sway bar end-link through the Z1 coilover and lower control arm and secure with the nut that was removed in step # 7.

18. Repeat steps # 15-17 on the opposite side of the vehicle.

19. Using a jack, raise the suspension/steering knuckles so that the studs on the upper mounts poke through the shock towers in the engine bay and secure with the (3) supplied nuts on each side. Torque to 22ft-lbs.

20. Rotate the sway bar up and reattach the sway bar end-links to the sway bar using the same hardware that was removed in step # 8.

21. Reattach any wheel sensor lines or brake lines to the Z1 coilovers that were removed in step # 5.

Note: The brake line bracket can rotate around the shock body to raise or lower it. Once the height is set, tighten the collar against it to lock it in place.

22. Final tightening of components going through rubber bushings should be completed when the vehicle is on the ground. Torque specs can be found below, under the instructions for the rear.



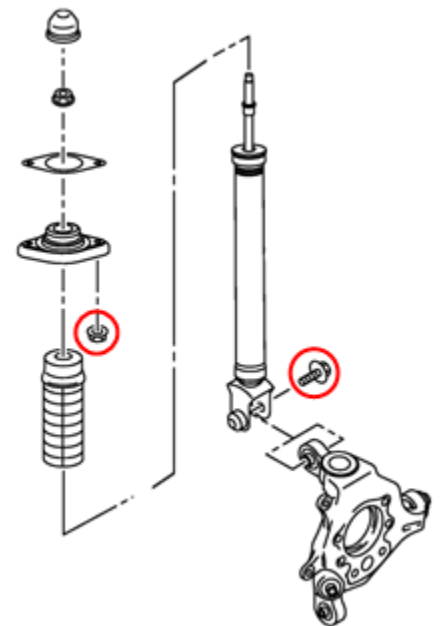
## Rear:

23. Starting on either side of the vehicle, place a jack under the rear knuckle/axle housing to relieve the coil spring tension.

24. Remove the bolt securing the lower mount of the shock absorber to the knuckle (circled at right)

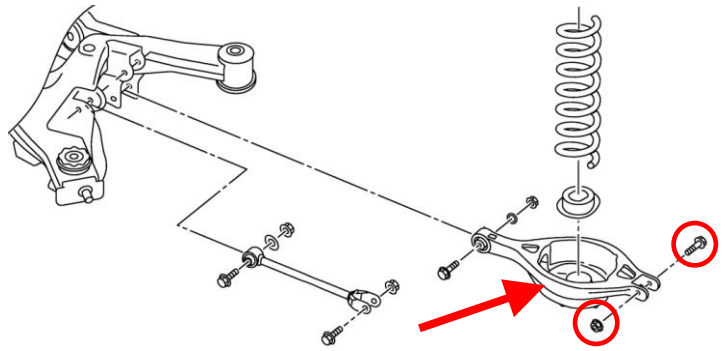
25. Gradually lower the jack to separate the shock absorber from the knuckle.

26. Remove the (2) nuts at the top of the OEM rear shock absorber that secure it to the studs on the chassis (circled at right), then remove the shock absorber.

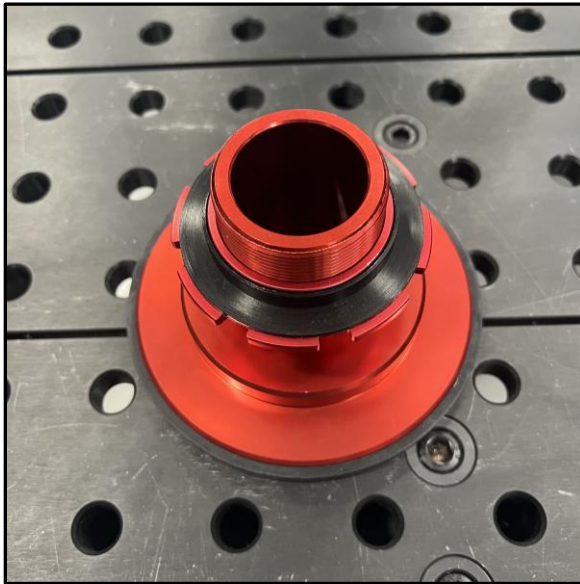




27. Place the jack under the toe arm to support the arm and coil spring (shown at right with arrow).
28. Remove the bolt and nut securing the toe arm to the knuckle (circled at right).
29. Gradually lower the jack to lower/pivot the toe arm, and then remove the coil spring, upper rubber seat, and lower rubber seat. The lower seat will be reused.



30. Repeat steps # 23-29 on the opposite side of the vehicle.
31. Locate the Z1 rear shock absorbers, rear springs, rear spring collars, and rear spring seat rings. Ensure the top nut above the upper rubber bushing is tight.
32. Ride height in the rear is adjusted using the rear spring collars. If you want the vehicle as low as possible start with the perch threaded all the way down. If you want the vehicle as high as possible start with the perch near the end of the threads. If you are not sure, it is recommended to start in the middle as you can always adjust it later. Either way, make sure the locking collars are tight.
33. Place the lower rubber seats, that were removed in step # 29, onto the Z1 rear springs (as shown below).
34. Position the Z1 rear spring seat rings onto the spring collars, then position the springs onto the rings (as shown below).



35. Starting on one side of the vehicle, position the spring and spring collar assembly into the toe arm spring bucket so that it sits flush on the bottom of the arm. The step in the spring and lower rubber seat will match up with a step in the toe arm spring bucket.

36. Swing the toe arm up and position the spring collar in the large seat in the chassis. Then raise the arm until you can secure it to the knuckle using the hardware removed in step # 28. You may need to use a jack to raise the arm so the bolts line up.



37. Position the shock absorber in place on the vehicle, secure the top of the shock absorber to the (2) studs coming off the chassis with the nuts removed in step # 26, torque to 21ft-lbs. Leave the bottom mount disconnected, it will be connected to the knuckle at a later step.

38. It is now time to set the rear spring preload. The spring should be able to wiggle or rotate by hand. Place a jack on the toe arm and raise the arm until the spring touches at both the bottom and top seats and you can no longer rotate it by hand.

39. Insert a tape measure into the spring bucket and measure the spring length.

40. Raise the jack under the toe arm ~5-10mm. Measure at the spring again to confirm it was raised ~5-10mm.

41. Now that the rear spring is preloaded, it is time to adjust the rear shock absorber length.

42. Loosen the lower locking collar on the shock absorber. Rotate the shock body to either lengthen or shorten the overall length to align the mounting hole on the bottom of the shock absorber with the mounting hole on the knuckle.

43. Once the length is set, tighten the lower locking collar on the shock absorber and secure the lower shock mount to the knuckle with the bolt removed in step # 24.

44. Repeat steps # 35-43 on opposite side of the vehicle.



45. Reattach all (4) wheels and lug nuts.
46. Properly lower vehicle from jack and jackstands.
47. Torque lug nuts to 80ft-lbs.
48. Torque front coilover lower mounting nuts (the nuts securing the sway bar end-links to the lower control arms) to 120ft-lbs.
49. Torque rear toe arm nuts to 54ft-lbs.
50. Torque rear shock absorber lower mounting bolts to 91ft-lbs.
51. Perform an alignment check.

## **Ride Height Adjustment:**

Ride height adjustment should be performed with the wheel in the air for the corner of the car you are working on, but measured with the car on the ground.

### **Front:**

Ride height in the front should only be adjust by rotating the shock body into or out of the lower mount. If you raise or lower the spring seat collars you will be adjusting the pre-load not just ride height.

1. Loosen the lower locking collar.
2. Rotate the shock body to thread it into or out of the lower mount. Threading the shock body further into the lower mount will lower the ride height. Threading the shock body out will raise the ride height.
3. Tighten the lower locking collar.

### **Rear:**

Ride height in the rear is a little bit more complicated because you will need to adjust the preload as you adjust the ride height.

1. Remove the shock absorber lower mounting bolt.
2. Loosen the spring seat locking collar.
3. Rotate the seat and collar up or down to raise or lower the ride height
4. Tighten the spring seat locking collar.
5. Follow steps # 38-43 above to set the rear spring preload.

**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