

## INSTALLATION INSTRUCTIONS

# **Progress Technology Competition Series 3 Rebound Adjustable Coilover Suspension System**

90-93 Integra, Part Series 78.0101 94-01 Integra Type R, Part Series 78.1000 1998 Civic, Part series 78.1001 89-91 Honda Civic, Part series 78.1002 92-00 Honda Civic, 94-01 Acura Integra, Part series 78.1003



## WHO SHOULD INSTALL THIS PRODUCT?

Progress Technology products should only be installed by a qualified licensed mechanic experienced in the installation and removal of suspension components. Please read instructions from start to finish and verify all parts are in kit before beginning installation.

**NOTE**: These components are designed for **competition use**, and allow for suspension height adjustment from approximately 1.00" to 3.00" lower than stock height. Please note that knowledge in race preparation is necessary in order to obtain maximum performance for your specific application, and certain modifications may be required to insure proper function. **Since these units have shorter compressed lengths than stock, tire clearance and suspension travel may need to be examined.** 

## **Important Installation Notes:**

- 1) <u>NEVER</u> grab the chrome shock rod with pliers or any tools. Clamping the shock rod with tools will put nicks in the chrome finish and this will ruin the oil seal. Any markings on the shock rod will VOID your warranty!
- 2) Do **NOT** use an impact gun. This will damage the top threads. This will VOID your warranty!

**Spring Rate Chart** 

Part #	Front Spring	Rear Spring
78.0101.3525	9.0" x 350#	9.0" x 250#
78.0101.3535	9.0" x 350#	9.0" x 350#
78.0101.3545	9.0" x 350#	9.0" x 450#
78.0101.3555	9.0" x 350#	8.0" x 550#
78.0101.4535	9.0" x 450#	9.0" x 350#
78.0101.4545	9.0" x 450#	9.0" x 450#
78.0101.4555	9.0" x 450#	8.0" x 550#
78.0101.4565	9.0" x 450#	8.0" x 650#
78.0101.5545	8.0" x 550#	9.0" x 450#
78.0101.5555	8.0" x 550#	8.0" x 550#
78.0101.5565	8.0" x 550#	8.0" x 650#
78.0101.5580	8.0" x 550#	7.5" x 800#
78.0101.6565	8.0" x 650#	8.0" x 650#
78.0101.6580	8.0" x 650#	7.5" x 800#
78.1000.3525	10.0" x 350#	9.0" x 250#
78.1000.3535	10.0" x 350#	9.0" x 350#
78.1000.3545	10.0" x 350#	9.0" x 450#
78.1000.3555	10.0" x 350#	8.0" x 550#
78.1000.4535	9.0" x 450#	9.0" x 350#
78.1000.4545	9.0" x 450#	9.0" x 450#
78.1000.4555	9.0" x 450#	8.0" x 550#
78.1000.4565	9.0" x 450#	8.0" x 650#
78.1000.5545	8.0" x 550#	9.0" x 450#
78.1000.5555	8.0" x 550#	8.0" x 550#
78.1000.5565	8.0" x 550#	8.0" x 650#
78.1000.5580	8.0" x 550#	7.5" x 800#
78.1000.6565	8.0" x 650#	8.0" x 650#
78.1000.6580	8.0" x 650#	7.5" x 800#
78.1001.3525	9.0" x 350#	9.0" x 250#
78.1001.3535	9.0" x 350#	9.0" x 350#
78.1001.3545	9.0" x 350#	9.0" x 450#
78.1001.3555	9.0" x 350#	8.0" x 550#
78.1001.4535	9.0" x 450#	9.0" x 350#
78.1001.4545	9.0" x 450#	9.0" x 450#
78.1001.4555	9.0" x 450#	8.0" x 550#
78.1001.4565	9.0" x 450#	8.0" x 650#
78.1001.5545	8.0" x 550#	9.0" x 450#
78.1001.5555	8.0" x 550#	8.0" x 550#
78.1001.5565	8.0" x 550#	8.0" x 650#
78.1001.5580	8.0" x 550#	7.5" x 800#
78.1001.6565	8.0" x 650#	8.0" x 650#
78.1001.6580	8.0" x 650#	7.5" x 800#

## Spring Rate Chart, cont'd

Part #	Front Spring	Rear Spring
78.1002.3525	9.0" x 350#	9.0" x 250#
78.1002.3535	9.0" x 350#	9.0" x 350#
78.1002.3545	9.0" x 350#	9.0" x 450#
78.1002.3555	9.0" x 350#	8.0" x 550#
78.1002.4535	9.0" x 450#	9.0" x 350#
78.1002.4545	9.0" x 450#	9.0" x 450#
78.1002.4555	9.0" x 450#	8.0" x 550#
78.1002.4565	9.0" x 450#	8.0" x 650#
78.1002.5545	8.0" x 550#	9.0" x 450#
78.1002.5555	8.0" x 550#	8.0" x 550#
78.1002.5565	8.0" x 550#	8.0" x 650#
78.1002.5580	8.0" x 550#	7.5" x 800#
78.1002.6565	8.0" x 650#	8.0" x 650#
78.1002.6580	8.0" x 650#	7.5" x 800#
78.1003.3525	10.0" x 350#	9.0" x 250#
78.1003.3535	10.0" x 350#	9.0" x 350#
78.1003.3545	10.0" x 350#	9.0" x 450#
78.1003.3555	10.0" x 350#	8.0" x 550#
78.1003.4535	9.0" x 450#	9.0" x 350#
78.1003.4545	9.0" x 450#	9.0" x 450#
78.1003.4555	9.0" x 450#	8.0" x 550#
78.1003.4565	9.0" x 450#	8.0" x 650#
78.1003.5545	8.0" x 550#	9.0" x 450#
78.1003.5555	8.0" x 550#	8.0" x 550#
78.1003.5565	8.0" x 550#	8.0" x 650#
78.1003.5580	8.0" x 550#	7.5" x 800#
78.1003.6565	8.0" x 650#	8.0" x 650#
78.1003.6580	8.0" x 650#	7.5" x 800#

#### READ THESE INSTRUCTIONS COMPLETELY BEFORE STARTING YOUR INSTALLATION

- 1. Park vehicle on a smooth, level concrete or asphalt surface. Set the parking brake and block the rear wheels. Raise the front of the vehicle using a floor jack, and support the frame with jack stands. Remove front wheels and tires. Remove the bolts holding the front brake lines to the strut housing, and note the manner in which the brake lines are routed. (TIP: Take a picture with your phone). Remove the factory pinch bolt from the lower mounting fork, and then remove the lower mounting bolt from the shock mounting fork. Remove the fork from the lower end of the shock.
- 2. Remove the upper spring hat mounting bolts from under the hood. **DO NOT** remove the nut from the center shock absorber stud at this time. Remove the spring/shock assembly from the vehicle.

#### Springs store energy and proper tools must be used to avoid injury.

3. Using a McPherson strut type coil spring compressor, compress the spring far enough to allow the factory spring hat to rotate freely. Carefully remove the center nut from the spring hat and remove the spring hat from the shock. Carefully release the spring tension and remove the compressor. You will be re-using the factory spring hats from your old shock assemblies.

4. Thread the spring perch onto the threaded sleeve, near the bottom 1/3 of the threads. Make sure the collar is installed with the spring locator up. If the spring collar is too tight to easily rotate by hand, you may insert the flat blade of a screwdriver into the slot on the collar to ease installation. Do NOT force the screwdriver into the threads! Insert the 1/4-20 socket head clamp bolt loosely in the spring collar. (Figure 1)

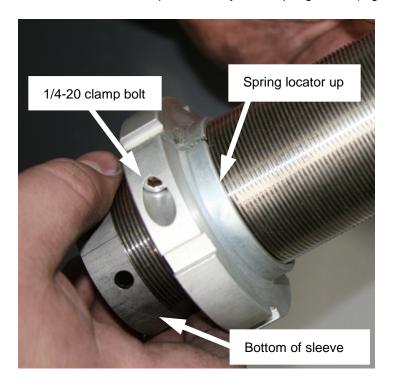


Figure 1

5. Next, place the threaded sleeve over the shock body, with the holes in the sleeve body toward the bottom of the shock. The sleeve fits on the welded ring. Install the threaded sleeve's poly isolator over the shock and into the threaded sleeve, this will require some hand pressure to push into position. (Figure 2)

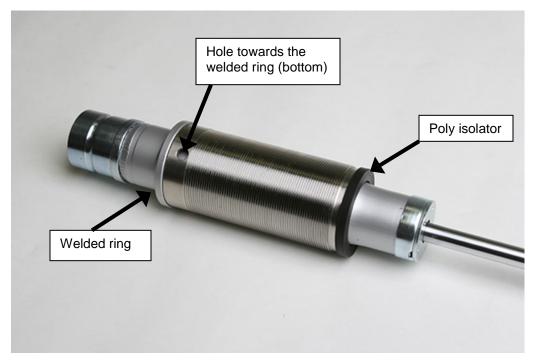


Figure 2

6. Trim the bump stop that comes with the kit and use only the top part when assembling. (Figure 3)

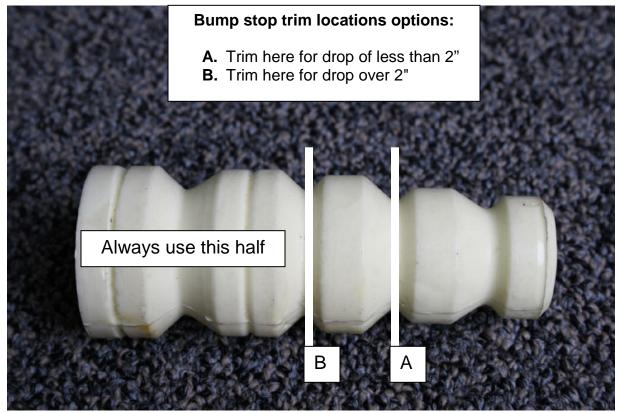


Figure 3

7. Next, assemble the front springs (refer to spring rate chart) bump stop, bushings, steel sleeve, cup washers, polyurethane isolator, and factory (OEM) spring hat as shown in the Assembly illustrations. Do NOT use the factory rubber spring cushion! Install one of the M10-1.25 plain nuts and tighten firmly with a wrench (Figure 4). NO IMPACT! This will be torqued after the assembly is installed back in the vehicle.



Figure 4

8. Raise the lower spring collar up to the spring, until the spring has approximately 1/8" free play between the upper and lower perches, then thread upward (*tighten*) the lower perch 8 to 10 full turns to load the spring. There are two spanner wrenches in the kit. The smaller wrench is used to hold the threaded sleeve (Figure 5) and keep it from turning. The larger wrench is used to turn the spring collar. (Figure 6)





Figure 5 Figure 6

- 9. Tighten the perch nut using the 1/4-20 clamp bolt. (Figure 1)
- 10. Install the front coilover assembly back into the vehicle. Install the new brake line bracket onto the factory pinch bolt as shown in illustration, and tighten securely. Route the brake line as originally noted, and use the M8 x 1.25 bolt, nut, and washers as shown in illustration to retain the brake line.
- 11. Repeat installation on the other side. Install wheels, torque the wheels to spec (80 ft/lbs) and lower the vehicle to the ground.
- 12. Place manual transmission in 1<sup>st</sup> gear, or auto transmission in park. Block front wheels. Raise rear of vehicle with a floor jack, <u>and support the frame with jack stands</u>. Remove rear wheels. Remove lower shock mounting bolt. Remove upper spring perch mounting bolts. **DO NOT** remove the nut from the center shock absorber stud at this time. Remove the spring/shock assembly from the vehicle.
- 13. Using a McPherson strut type coil spring compressor, compress the spring far enough to allow the factory spring hat to rotate freely. Carefully remove the center nut from the spring hat and remove the spring hat from the shock. Carefully release the spring tension and remove the compressor.
- 14. Remove the factory cup washer, bushings and sleeve from the center of the upper spring hat. Remove the factory spring isolator from the spring hat. **You will be using only the factory spring hat**.
- 15. Thread the spring perch onto the threaded sleeve, near the bottom 1/3 of the threads. Make sure the collar is installed with the spring locator up. If the spring collar is too tight to easily rotate by hand, you may insert the

- flat blade of a screwdriver into the slot on the collar to ease installation. Insert the 1/4-20 socket head clamp bolt loosely in the spring collar. (Figure 1)
- 16. Next, place the threaded sleeve over the shock body, with the holes in the sleeve body toward the bottom of the shock. The sleeve should sit on the welded ring. Install the threaded sleeve's poly isolator over the shock and into the threaded sleeve, this will require some hand pressure to push into position. (Figure 2)
- 17. Trim the bump stop that comes with the kit and use only the top part when assembling. (Figure 3)
- 18. Next, assemble the front springs (reference spring rate chart) bump stop, bushings, steel sleeve, cup washers, polyurethane isolator, and factory (OEM) spring hat as shown in the Assembly illustrations. Do NOT use the factory rubber spring cushion! Install one of the M10-1.25 top nuts and tighten firmly with a wrench (Figure 4). NO IMPACT! This will be torqued after the assembly is installed back in the vehicle.
- 19. Raise the lower spring collar up to the spring, until the spring has approximately 1/8" free play between the upper and lower perches, then thread upward (*tighten*) the lower perch 8 to 10 full turns to load the spring. There are two spanner wrenches in the kit. The smaller wrench is used to hold the threaded sleeve (Figure 5) and keep it from turning. The larger wrench is used to turn the spring collar. (Figure 6)
- 20. Tighten the perch nut using the 1/4-20 clamp bolt. (Figure 1)
- 21. Install the rear coilover assembly into the vehicle, using the M10 x 80mm bolts for the lower mounts. (Figure 7). On 1996-2000 models, the four clevis spacers shown in the illustration will be necessary.

#### Note for #77.1000 & #77.1001

Integra Type R and 1988 Civic/CRX applications use the "loop-style" rear shock mounting as shown (Figure 8). The special (thick) washers are required, ONE per side. The washers are zip-tied to the lower mounts. See the arrow in the photo.





Figure 7 Figure 8

- 22. Repeat installation on the other side. Install wheels, torque the wheels to spec (80ft/lbs) and lower the vehicle to the ground.
- 23. Torque all four of the top strut nuts to 32-38 ft/lbs. Install the second M10-1.25 plain nuts and lock them firmly against the first top nuts using two wrenches as shown in Figure 9.

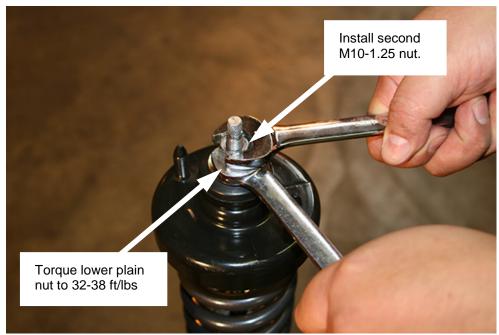


Figure 9

24. Roll the vehicle back and forth several times to settle the suspension. You are now ready to set your ride heights.

## **Setting Ride Height**

25. Measure ride height as shown in the photo from center of the wheel to the top of the fender.



Figure 10

- 26. Determine the desired ride height. Ideal ride height range is between 11 1/2" 12 1/2", front and rear. Note that each full turn of the lower spring collar will result in approximately 1/16" of ride height change.
- 27. Ride height may be changed at each corner by raising the vehicle, removing the wheel, loosening the 1/4-20 socket head clamp bolt, and turning the spring collar. Remember to tighten the 1/4-20 clamp bolt hand tight after each adjustment.
- 28. Wheel alignment must be checked and adjusted after each change in ride height in order to maximize tire life and suspension performance.
- 29. Install the M4 set screws in the four knobs using the hex wrench provided in the kit. Place the knob over the knurled cylinder on the top of the damper, and tighten the set screw using the hex key. Snug it down using only your fingers. That's tight enough. Install all four knobs. (Figure 11 and 12)





Figure 11 Figure 12

30. Turn the knobs counter clockwise (left) to the stop. This is full soft on the rebound setting. Do not force the adjuster. There are 24 clicks going clockwise (right). Each click adds more rebound damping.

## CS3/RA adjustment and tuning suggestions:

**For daily drivers**, suggested settings for best ride are 1 through 6. 1/1 is the softest ride. Add rebound for more ride control. You will likely prefer more front rebound than rear, as the front end has more mass, and does more work: the acceleration, braking & turning. So test some "split settings" like 3f/1r or 5f/2r.

With more **aggressive spring rates** exceeding 450#, you may want more rebound. This will depend on your vehicle usage and road quality. Insufficient rebound (too soft) will feel floaty, and may bob around too much on bumpy pavement. If this is the case, add more damping until you are satisfied with the ride quality.

**Auto-crossers and track day drivers** will want to use the rebound settings to tune the balance and vehicle transition speed. More rebound control will speed up the chassis reactions. For a looser setup, induce some oversteer by adding more rear rebound.

If you are working on a drag-launch setup, run the front end at or near FULL rebound (clockwise). This will help control the power transition through the front wheel during the launch. The tight rebound setting will manage the wheel hop and minimize the tire chatter. The rear does NOT require a lot of rebound, so set it light so the car is manageable and compliant (safe). This will make it easier to drive, and more stable on the big end.

### Enjoy tuning your new CS3/RA system and Thank You for choosing Progress!

# **Maintaining Your Coilovers**

In order to simplify height adjustment and extend the life of the coil-over finishes, we suggest the following maintenance procedures for your PROGRESS Coil-over system.

- A) Occasionally, RINSE the coil-over units with FRESH WATER using the garden hose and a spray nozzle. Spray off the springs and suspension links as well. This will remove caked-on mud, grimy accumulation and salt. It's simple to do during a car wash, after an oil change, or a vehicle service at home.
- B) If you are having difficulty ADJUSTING the vehicle HEIGHT, review the use of the two spanners (included) as shown in Figure 6. Also SPRAY a light application of Boeshield T-9 © to lubricate the threaded sleeves and perch nuts. We suggest the use of this excellent dry lubricant/protectant product.

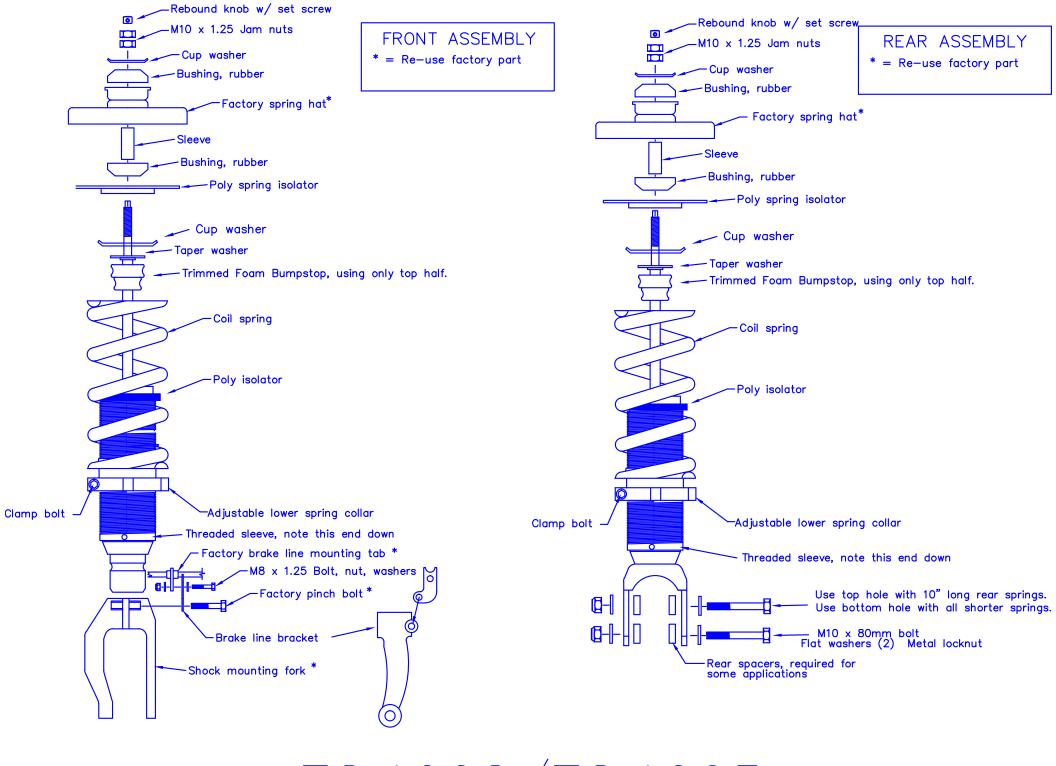
C) PROTECT the coil-over bodies with regular applications of Boeshield T-9 ©. First RINSE OFF any caked-on grime and let the suspension DRY if possible per (A) above. Then apply a liberal coating of Boeshield T-9 © to the strut housings, threaded sleeves and perch nuts. Allow it to DRY without wiping. The fluid will evaporate, leaving a protective layer of paraffin wax coating.

## D) More about BOESHIELD T-9 ©

Boeshield T-9 is a lubricant/protectant developed and licensed by BOEING for aircraft, marine, and automotive use. It is readily available at select retail stores and online. We suggest the purchase of the 12 oz. aerosol spray can for ease of use and the best value.

NOTE: We do NOT suggest the use of Rust-free © as it is ACIDIC and will affect anodized coatings, paint, plastics and other automotive materials.





78.1002/78.1003