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**Part # 11326110**  
**78-88 GM "G" Body Rear CoilOver Kit**  
**HQ Series**

**Shock Assembly:**

|   |          |                           |
|---|----------|---------------------------|
| 2 | 24159999 | 5" stroke HQ Series shock |
| 2 | 90002024 | 1.7" Eyelet –adjustable   |
| 4 | 90001994 | .625" bearing             |
| 8 | 90001995 | Bearing snap ring         |

**Components:**

|   |          |                                     |
|---|----------|-------------------------------------|
| 2 | 59120150 | Coil spring – 12" long / 150 # rate |
| 2 | 90002222 | Spring retainer kit                 |
| 8 | 90002043 | Aluminum spacer - .5" I.D.          |
| 4 | 70010828 | Delrin Spring Washer                |
| 2 | 90002327 | Upper shock bracket                 |
| 1 | 90002325 | Driver side lower shock bracket     |
| 1 | 90002326 | Passenger side lower shock bracket  |
| 2 | 90002158 | Lower Shock Bracket                 |

**Hardware:**

|    |          |                             |                                       |
|----|----------|-----------------------------|---------------------------------------|
| 4  | 99311001 | 5/16"-18 x 1" Gr. 5 bolt    | Upper bracket to frame                |
| 4  | 99312003 | 5/16"-18 Nylok nut          | Upper bracket to frame                |
| 8  | 99313002 | 5/16" SAE flat washer       | Upper bracket to frame                |
| 2  | 99501027 | 1/2"-13 x 3 3/4" Gr. 5 bolt | Shock bracket to trailing arm bracket |
| 6  | 99501002 | 1/2"-13 x 1 1/2" Gr.5 bolt  | Shock bracket                         |
| 4  | 99501003 | 1/2"-13 x 2 1/2" Gr. 5 bolt | Shock to upper & lower brackets       |
| 12 | 99502001 | 1/2"-13 Nylok nut           | Lower shock bracket                   |
| 8  | 99503001 | 1/2" SAE flat washer        | Lower shock bracket                   |

# COILOver

## Installation Instructions

1. Raise and safely support the vehicle by the frame rails.
2. Using a jack, slightly raise the axle approximately 1". Remove the shock absorbers.
3. Lower the axle down enough to remove the coil springs.
4. The exhaust tail pipes may need to be removed and/or modified for Shockwave installation.



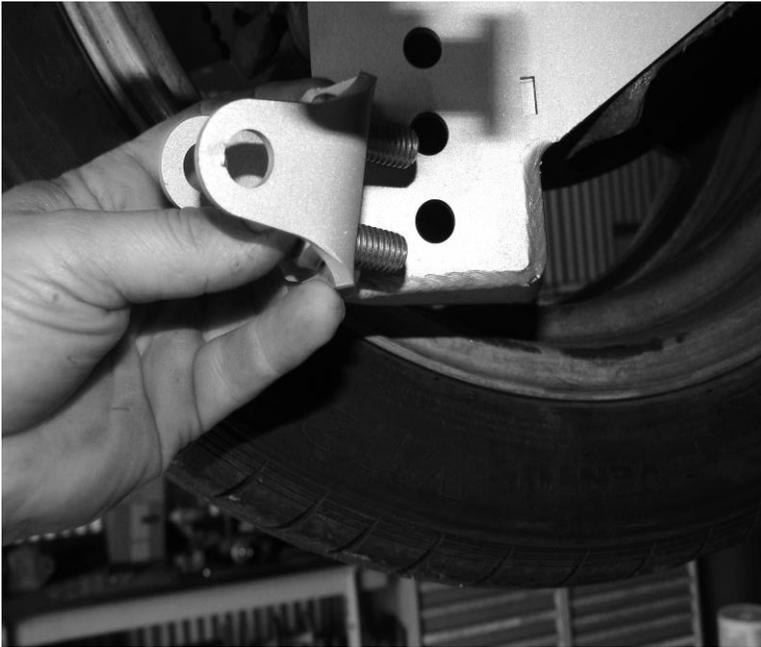
5. Fasten the new upper shock bracket into the factory shock location using the 5/16" x 1" bolts, flat washers and Nylok nuts supplied.

**Note:** Position the bracket to offset the shock toward the center of the car.



6. Remove the lower trailing arm mounting bolt. (Do one side at a time to keep the axle from rotating).

7. Place the new lower shock bracket up against the factory lower shock bracket. Use a 1/2" x 1 1/2" bolt, Nylok nut and flat washers to fasten the new bracket to the factory bracket. Install the longer 1/2" x 3 3/4" bolt through the lower trailing arm mount, secure w/ the supplied flat washers and Nylok nuts.



8. Install the Lower Bolt on Shock Bracket in the top 2 holes using (2)  $\frac{1}{2}$ " x  $1\frac{1}{2}$ " Hex Bolts, and (2)  $\frac{1}{2}$ " Nylok Nuts.

The lower Bracket has 3 holes. The top 2 holes are the holes that the kit will normally use. If a lower ride height is desired, the bottom 2 holes can be used.



9. Install the aluminum spacers into the upper and lower eyes of the shock.



9. Fasten the shock to the upper bracket using a  $\frac{1}{2}$ " x  $2 \frac{1}{2}$ " bolt and Nylok nut.

10. Fasten the ShockWave to the lower bracket using a  $\frac{1}{2}$ " x  $2 \frac{1}{2}$ " bolt and Nylok nut.

12. Double check CoilOver clearances throughout full suspension travel.

13. Ride height on this shock is 14.5" from center eye to center eye.



### **Ride Height**

We have designed most cars to have a ride height of about 2" lower than factory. To achieve the best ride quality & handling, the shock absorber needs to be at 40-60% overall travel when the car is at ride height. This will ensure that the shock will not bottom out or top out over even the largest bumps. Measuring the shock can be difficult, especially on some front suspensions. Measuring overall wheel travel is just as effective and can be much easier. Most cars will have 4-6" of overall wheel travel. One easy way to determine where you are at in wheel travel is to take a measurement from the fender lip (center of the wheel) to the ground. Then lift the car by the frame until the wheel is just touching the ground, re-measure. This will indicate how far you are from full extension of the shock. A minimum of 1.5" of extension travel (at the wheel) is needed to ensure that the shock does not top out. If you are more than 3" from full extension of the shock then you are in danger of bottoming out the shock absorber.

### **Adjusting Spring Height**

When assembling the CoilOver, screw the spring retainer tight up to the spring (0 preload). After entire weight of car is on the wheels, jounce the suspension and roll the car forward and backward to alleviate suspension bind.

- If the car is too high w/ 0 preload then a smaller rate spring is required. Although threading the spring retainer down would lower the car, this could allow the spring to fall out of its seat when lifting the car by the frame.
- If the car is too low w/ 0 preload, then preload can then be added by threading the spring retainer up to achieve ride height. On 2.6" - 4" stroke shocks, up to 1.5" of preload is acceptable. On 5-7" stroke shocks, up to 2.5" of preload is acceptable. If more preload is needed to achieve ride height a stiffer spring rate is required. Too much preload may lead to coil bind, causing ride quality to suffer.

## Assembly...



First using the supplied lower adjuster nut(90002222) thread the nut onto the shock from the bottom side as seen in figure 1



Slide the Derlin washer over the spring, Next slide the upper spring mount (90002222) over eyelet as seen in figure 4.



Next install delrin washers then coil spring over the top of the shock as seen in figure 2



Install upper spring mount retainer clip (90002057) into the groove on the upper eyelet as seen in figure 5. Then reinstall adjuster to complete assembly.



Before the upper spring mount can be installed screw the adjuster knob on the upper eye mount to the firmest setting (clockwise) as seen in figure 3.



The included set of bearing spacers (900002044) are used to adapt the coil-overs to just about any application. The supplied spacers allow the coil-overs to accept 5/8" or 1/2" bolts.

## Shock adjustment 101- Single Adjustable

### Rebound Adjustment:

How to adjust your new shocks.

The rebound adjustment knob is located on the top of the shock absorber protruding from the eyelet.

You must first begin at the ZERO setting, then set the shock to a soft setting of 20.



-Begin with the shocks adjusted to the ZERO rebound position (full stiff). Do this by rotating the rebound adjuster knob clockwise until it stops.

-Now turn the rebound adjuster knob counter clock wise 20 clicks. This sets the shock at 20. (settings 21-24 are typically too soft for street use).

Take the vehicle for a test drive.



-if you are satisfied with the ride quality, do not do anything, you are set!



-if the ride quality is too soft increase the damping effect by rotating the rebound knob clock wise 3 clicks.

Take the vehicle for another test drive.



-if the vehicle is too soft increase the damping effect by rotating the rebound knob clock wise 3 additional clicks.

-If the vehicle is too stiff rotate the rebound adjustment knob counter clock wise 2 clicks and you are set!

Take the vehicle for another test drive and repeat the above steps until the ride quality is satisfactory.

Note:

One end of the vehicle will likely reach the desired setting before the other end. If this happens stop adjusting the satisfied end and keep adjusting the unsatisfied end until the overall ride quality is satisfactory.