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**Part # 11102401**  
**61-64 Cadillac HQ Series Front ShockWaves**

**Shockwave:**

|   |          |                                    |
|---|----------|------------------------------------|
| 2 | 24090199 | Master Series 255c bellow assembly |
| 2 | 24129999 | 2.9" stroke HQ series shock        |
| 2 | 90001994 | .625" bearing                      |
| 4 | 90001995 | Bearing snap ring                  |
| 2 | 90009989 | 2.75" Stud top (with 70012161)     |

**Components:**

|   |          |                              |
|---|----------|------------------------------|
| 2 | 90002313 | 2.75" Stud top base          |
| 2 | 90001902 | Aluminum cap for Delrin ball |
| 2 | 90001903 | Delrin ball upper half       |
| 2 | 90001904 | Delrin ball lower half       |
| 2 | 90002067 | .625" bearing spacer         |
| 4 | 90000457 | (A538) Lower Spacer          |
| 4 | 90000456 | (A537) Lower Bracket         |

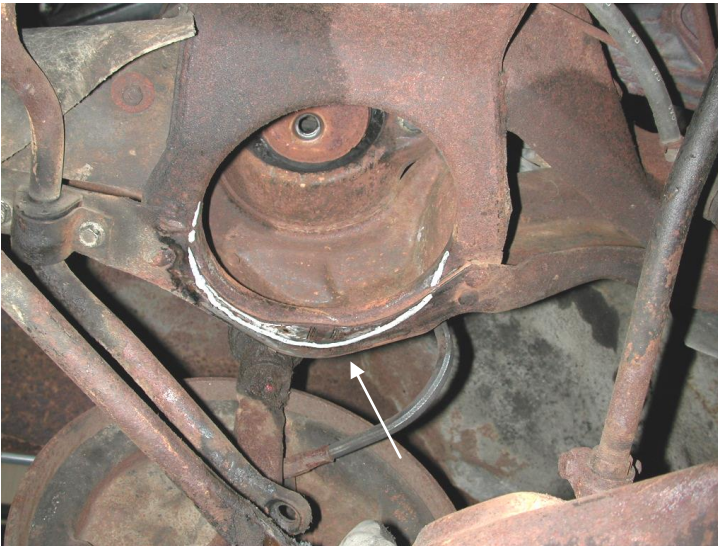
**Hardware:**

|   |          |                         |             |
|---|----------|-------------------------|-------------|
| 2 | 99562003 | 9/16" SAE Nylok Jam Nut | Stud Top    |
| 2 | 99622006 | 5/8 thin nyloc          | Lower Mount |
| 2 | 99621007 | 5/8 X 5 Gr. 8 SAE Bolt  | Lower Mount |
| 8 | 99623001 | 5/8 SAE Flat washers    | Lower Mount |

**WARNING: ATTEMPTING TO REMOVE THE AIR FITTING WILL DAMAGE IT AND VOID THE WARRANTY.**

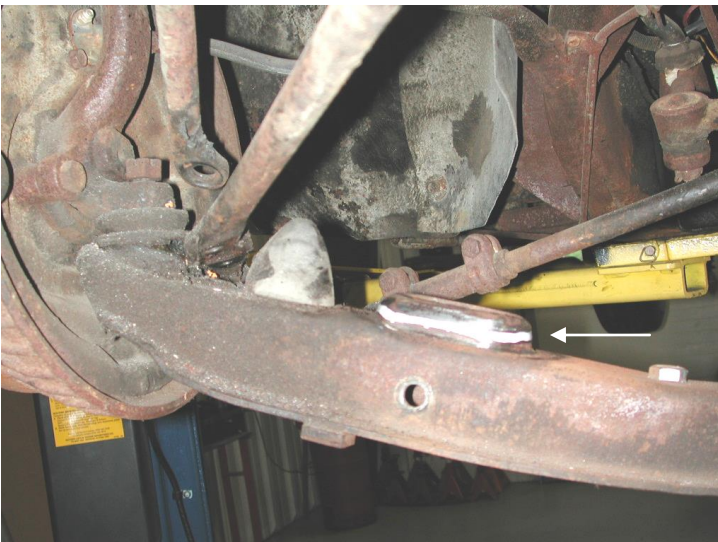
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1. Raise and support vehicle at a safe, comfortable working height. Let the front suspension hang freely.
2. Remove coil spring and shock absorber. Refer to service manual for proper disassembly procedure.



3. The white mark indicates where the coil spring pocket will need to be trimmed for air spring clearance. Make sure the bag cannot touch the frame at any point through full suspension travel. **Check clearance between the top of the Shockwave and the upper coil spring retainer.**

4. The coil spring retainer on the lower control arm must also be cut off for Shockwave clearance. See picture below.



5. Airline must also be routed at this time. Use a grommet if needed when passing through the frame.

6. Install the aluminum stud top base over the stud top, then the bottom Delrin ball half. Place stud through oem shock hole (may need to be drilled to  $\frac{3}{4}$ "), then place upper Delrin ball over stud, then aluminum cap. Secure with two  $\frac{9}{16}$ " jam nuts.

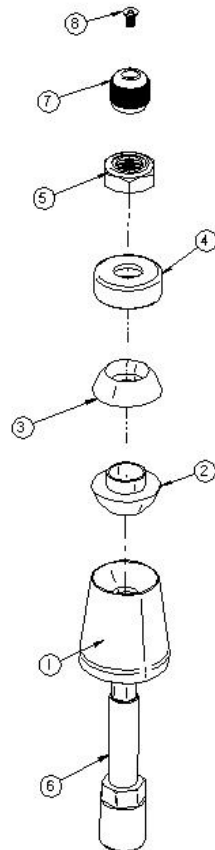


7. Drill shock hole in arm to 5/8".

8. Insert 5/8" x 5" bolt through plate, control arm, spacer, and shockwave as shown in diagram.

Double check to make sure the air spring cannot touch the frame at any point through full suspension travel. Driving pressure should be around 105psi, but can vary.

1. Tall Delrin stud top base
2. Delrin ball lower half
3. Delrin ball upper half
4. Aluminum cap
5. 9/16" SAE nyloc nut
6. Tall Delrin stud top
7. Black adjustment knob
8. Detent clip
9. Screw
10. Washer



## 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.

## The care and feeding of your new ShockWaves

1. Although the ShockWave has an internal bumpstop, **DO NOT DRIVE THE VEHICLE DEFLATED RESTING ON THIS BUMPSTOP. DAMAGE WILL RESULT.** The internal bumpstop will be damaged, the shock bushings will be damaged, and the vehicle shock mounting points may be damaged to the point of failure. **This is a non warrantable situation.**
2. Do not drive the vehicle overinflated or "topped out". Over a period of time the shock valving will be damaged, possibly to the point of failure. **This is a non warrantable situation!** If you need to raise your vehicle higher than the ShockWave allows, you will need a longer unit.
3. The ShockWave is designed to give a great ride quality and to raise and lower the vehicle. **IT IS NOT MADE TO HOP OR JUMP!** If you want to hop or jump, hydraulics are a better choice. This abuse will result in bent piston rods, broken shock mounts, and destroyed bushings. **This is a non warrantable situation.**
3. Do not let the ShockWave bellows rub on anything. Failure will result. **This is a non warrantable situation.**
4. The ShockWave product has been field tested on numerous vehicles as well as subjected to many different stress tests to ensure that there are no leakage or durability problems. Failures have been nearly nonexistent unless abused as described above. If the Shockwave units are installed properly and are not abused, they will last many, many years. **ShockWave units that are returned with broken mounts, bent piston rods, destroyed bumpstops or bushings, or abrasions on the bellows will not be warrantied.**