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Installation Instructions

Part # 12300298 - 1965-1972 Ford Galaxie Air Suspension Kit

Front Components:
12302401 Front Shockwaves

Rear Components:
12304010 Rear CoolRide Kit

Recommended Tools

1965-1972 Ford Galaxie Air Suspension Kit

Installation Instructions

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Installation Instructions

Part # 12302401 - 65-72 Ford Galaxie Front HQ Shockwave, OEM Control Arms

Recommended Tools

1000 Series Bellow, 2.0" Stud/Trunnion 2.9" Shock

Installation Instructions

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ShockWave Dimensions:

Mount to Mount:	
Compressed:	9.60"
Ride Height:	11.00"
Extended:	11.90"

THE DELRIN BALL REQUIRES A 3/4" HOLE FOR THE FLANGE TO GO THROUGH. THIS CAN BE DRILLED WITH A UNIBIT.

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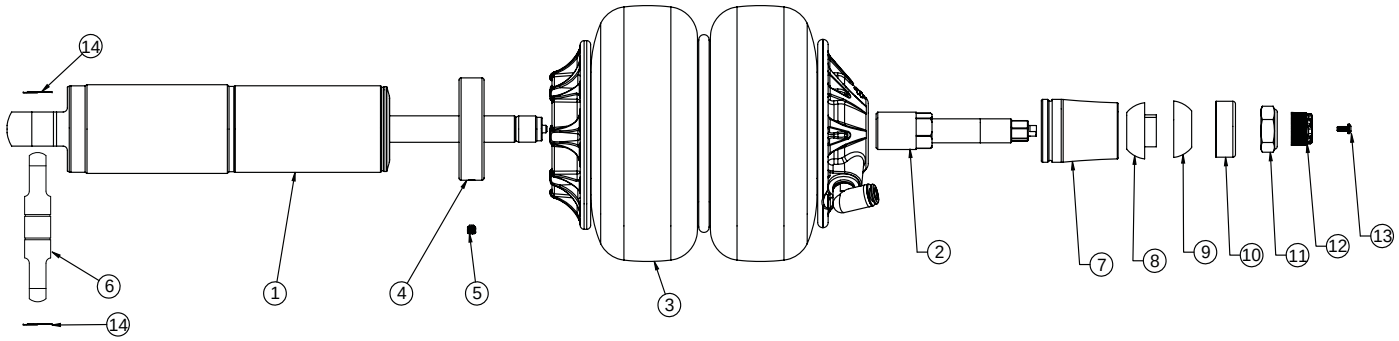
Major Components .....In the box

THE CONTROL ARM REINFORCEMENT MUST BE INSTALLED BETWEEN THE TRUNNION AND CONTROL ARM. See Image 8.

Item #	Part #	Description	QTY
1	982-10-802	2.9" Stroke HQ Series Shock	2
2	90009986	2" Stud Top (Installed on Shock) - Includes Adjuster Knob & Screw	2
3	24090199	1000 Series 6.5" Double Convoluted AirSpring	2
4	234-00-153	AirSpring Locking Ring (Installed on shock)	2
5	99055000	Locking Ring Set Screw (Installed on shock)	2
6	90002060	Universal Trunnion	4
7	90002312	2" Aluminum Stud Top Base	2
8	90001904	Bottom Delrin Ball	2
9	90001903	Top Delrin Ball	2
10	90001902	Delrin Ball Aluminum Top Cap	2
11	99562003	9/16"-18 Thin Nylok Nut	2
12	210-35-120-0	Adjuster Knob - (90009986 assembly)	2
13	90009969	#4-40 X 1/4" SS, 18-8 Pan Head Torx Cap - (90009986 assembly)	2
14	90001980	Trunnion Locking Rings	4
	90003323	Control Arm Reinforcement Plate (NOT SHOWN)	2
	70012160	2" Stud Top Metering Rod (installed in stud top)	2
	90001994	5/8" ID Bearing (installed in shock and eyelet)	4
	90001995	Bearing Snap Ring (installed in shock and eyelet)	8



THE DELRIN BALL REQUIRES A 3/4" HOLE FOR THE FLANGE TO GO THROUGH. THIS CAN BE DRILLED WITH A UNIBIT.

Hardware List .....In the box (Kit# 99010175)

Part Number	Description	QTY
FRONT LOWER CONTROL ARM BRACE		
99311030	5/16"-18 x 1" Hex Bolt	4
99312003	5/16"-18 NYLOK NUT	4
99313001	5/16" SAE Flat Washer	2

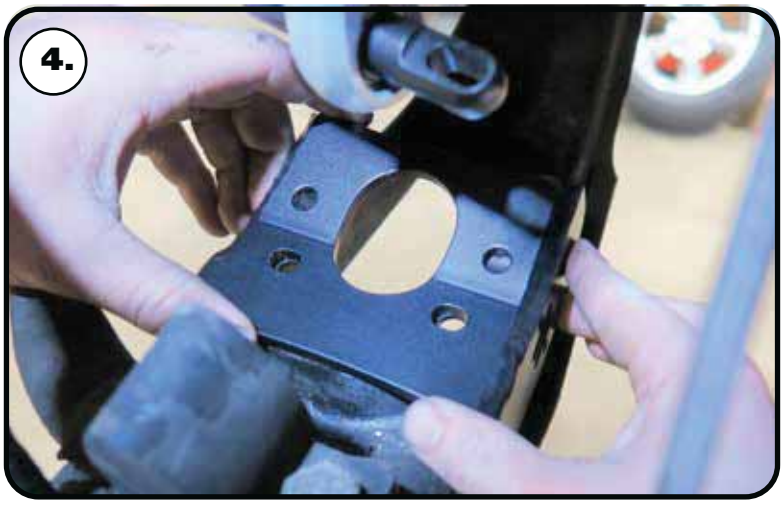
Part Number	Description	QTY
TRUNNION TO CONTROL ARM		
99373006	3/8" Split Lock Washer	4
99373002	3/8" SAE Flat Washer	4
99371024	3/8"-16 x 1 3/4" Hex Bolt	4

ShockWave Installation

1. Raise and support vehicle at a safe, comfortable working height. Let the front suspension hang freely.

2. Remove the coil spring and shock absorber. Refer to factory service manual for proper disassembly procedure.

3. The upper shock hole needs drilled to 3/4". A Unibit works well for to drilling the hole.



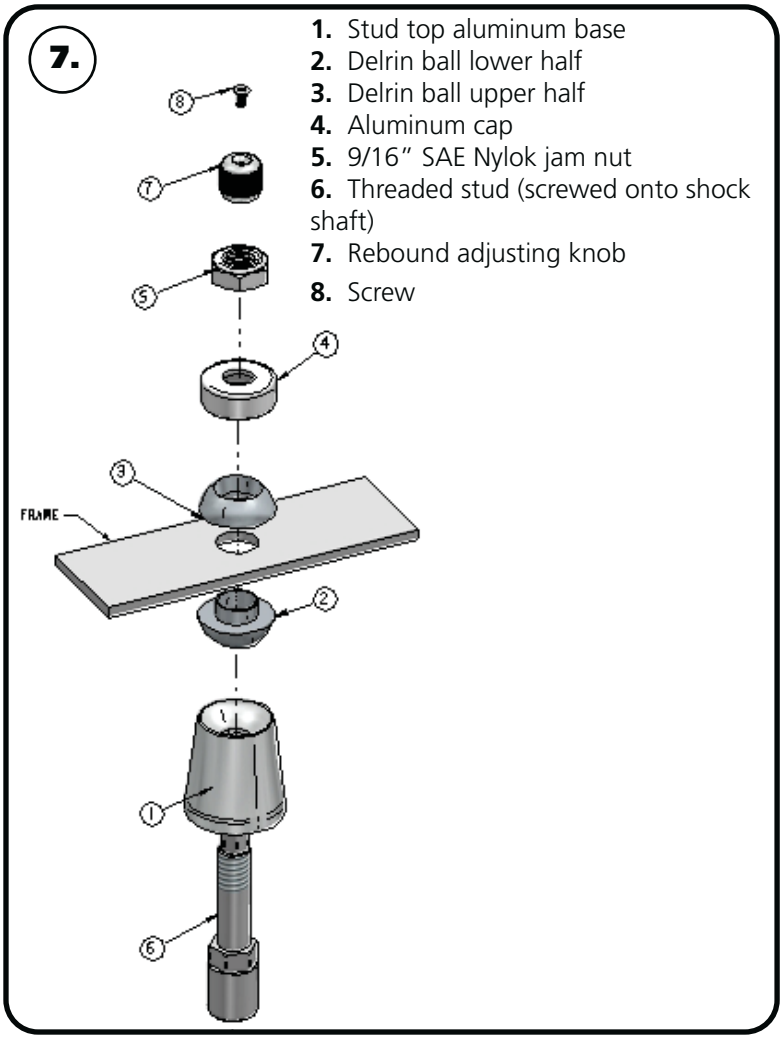
4. Lay the lower shock mount on the lower control arm aligning the outer holes with the OEM shock mounting holes. This mount strengthens the control arm and relocates the bottom of the shock toward the engine.

5. Install a 5/16" flat washer on each of (2) 5/16"-18 x 1" bolts. Insert the bolt/washer in the aligned holes of the lower mount and control arm. Install a 5/16" flat washer & 5/16" nylok nut on each of the bolts. Torque to 25 ft-lbs.

Installation

6. Use a 5/16" drill bit to drill the (2) inner holes using the lower mount as a guide.

Note: The airline must also be routed at this time.



1. Stud top aluminum base
2. Delrin ball lower half
3. Delrin ball upper half
4. Aluminum cap
5. 9/16" SAE Nylok jam nut
6. Threaded stud (screwed onto shock shaft)
7. Rebound adjusting knob
8. Screw

7. Apply thread sealant to a 90 degree air fitting and screw it into the top of the Shockwave. The air fitting location can be rotated by twisting the bellow assembly separate of the shock. Place the Shockwave into the coil spring pocket with the stud sticking through the OEM shock hole. See assembly **Diagram 7**. OEM Shock hole **must** be drilled out to ¾"

1. Stud top aluminum base
2. Delrin ball lower half
3. Delrin ball upper half
4. Aluminum cap
5. 9/16" SAE Nylok jam nut
6. Threaded stud (screwed onto shock shaft)
7. Rebound adjusting knob
8. Screw

TIGHTENING THE TOP 9/16"-18 NUT: SNUG THE NUT DOWN AGAINST THE TOP CAP. YOU NEED TO BE ABLE TO ARTICULATE THE SHOCK BY HAND. WE TORQUE THE NUT TO 80 IN-LBS USING A 7/8" CROWS FOOT WRENCH ON A TORQUE WRENCH.

ShockWave Installation

8. Raise the lower arm up to the Shockwave and bolt them together using the 5/16" x 1 1/2" bolts, washers, & nylok nuts supplied with the ShockWaves. Torque to 25 ftlbs.

9. The best ride quality will occur around 50-60% suspension travel; depending on vehicle weight this typically occurs around 100-110 psi.

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

TIGHTENING THE TOP 9/16"-18 NUT: SNUG THE NUT DOWN AGAINST THE TOP CAP. YOU NEED TO BE ABLE TO ARTICULATE THE SHOCK BY HAND. WE TORQUE THE NUT TO 80 IN-LBS USING A 7/8" CROWS FOOT WRENCH ON A TORQUE WRENCH.

You can clock the airfitting location on the ShockWave by turning the AirSpring assembly of the shock. Make sure the fitting doesn't contact the frame.

When cutting the airline, use a razor blade. The cut needs to be a clean cut and square for the airline to seal properly.

The Locking ring on the shock is NOT adjustable. These rings are set at the factory to optimize the AirSpring stroke with the shock stroke.

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 that 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.

4. Do not let the ShockWave bellows rub on anything. Failure will result. This is a non warrantable situation.

5. 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.

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Installation Instructions

Part # 12304010 - 1965-1972 Galaxie Rear CoolRide Kit

Recommended Tools

1965-1972 Galaxie Rear CoolRide Kit

Installation Instructions

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Air Spring Kit Components .....In the box

Item #	Part Number	Description	QTY
1	90009002	5" Diameter Rolling Sleeve Air Spring	2
2	90003326	Upper Air Spring Mount	2
3	70015498	Upper Mounting Spacer	4
4	90003328	Air Spring Roll Plate	2
5	90003324	Lower Clamping Plate	2
6	90003327	Bumpstop Mount	2
7	90002284	Upper Mount Cotter Pin	2
8	70013322	Bumpstop	2
9	23289999	7.55 Universal Bottom Shock	2
10	70011138	.750" ID Shock Bushing (installed in shock)	2
11	90002103	.625" ID x 1.312" Shock Sleeve (installed in shock)	2
12	72000224	Shock Stud (installed in shock)	2
13	70012188	Shock Stud Bushing Kit	2
14	99372006	3/8"-24 Shock Stud Jam Nut	4

Hardware List .....In the box (Kit# 99010176)

The Hardware Kit contains bags to help aid in selecting the correct hardware for the component being installed. The hardware list shows how the hardware is bagged.

Part Number	Description	QTY
REAR BAG TO UPPER CUP		
99371071	3/8"-16 x 1/2" Hex Bolt	4
99373002	3/8" SAE Flat Washer	4
BUMPSTOP		
99372004	3/8"-16 Hex Nut	2

Part Number	Description	QTY
REAR BAG TO REAR END		
99371072	3/8"-16 x 1" Hex Bolt	2
99373006	3/8" Split Lock Washer	2
99373002	3/8" SAE Flat Washer	2

Getting Started.....

1. Raise the vehicle up to a comfortable work height. You will need the support the car by the frame to be able to freely raise and lower the rear axle. Use a jack under the differential to support it.

2. Remove the rear shocks, coil springs. Retain the lower shock hardware for installation of the new shocks supplied with this kit.

3. Remove the bump stops from the OEM location, retaining the OEM hardware. A new bumpstop and bracket will be installed later.

4. Drill a 3/4" hole in the center of the upper coil spring locator. A unibit works well for this.

Installation

5. Thread the bumpstops in the bumpstop mounts. Thread a 3/8"-16 nut on the threads of the bumpstop. Tighten the nut against the bumpstop mount.

6. Install the bumpstop/mount in the OEM location using the OEM hardware.

7. Insert the (2) upper mount spacers in the top side of the coil spring locator. The center hole should line up with the hole drilled in **Step 4.**

Installation

8. Put thread sealant on air fittings and thread them into the top of each air spring and tighten.

9. Align the upper air spring mount with the mounting holes in the top of the air spring. The upper mount is notched out to clear the air fitting. Align the notch with the air fitting and the 2 mounting holes with the mounting holes of the air spring. Install a 3/8" flat washer on each of (2) 3/8"-16 x 1/2" hex bolts. Thread the bolt/washer in the top of the air spring. Torque to 23 ft-lbs.

10. The pin of the upper air spring will get inserted into the hole drilled in previous steps. The upper mount is positioned in the car with the air fitting to the rear of the car. The pin will go through the center of the spacers installed in **Step 7**.

Installation

11. Insert the pin of the upper air spring mount through the hole drilled in the frame and the upper spacer. While holding it in place insert the long cotter pin in the hole of the pin. This will hold the air spring in place.

12. Install the lower air spring roll plate on the lower coil spring mount. The center hole of the roll plate will sit over the coil spring locator.

13. The piston of the air spring will sit over the coil spring locator with the center of the piston nesting into the center hole of the locator.

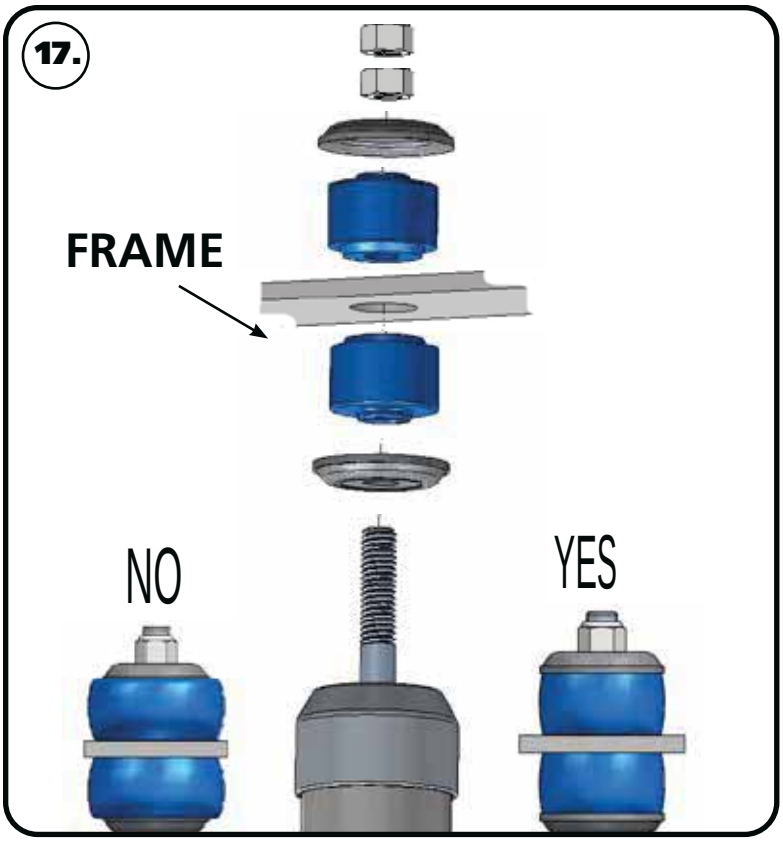
Installation

14. The "D" shaped clamping plate will clamp the bottom of the air spring in place. The CURVED side of the plate will go to the front of the car, away from the axle tube.

15. Install a 3/8" split lock washer & 3/8" SAE flat washer on each a 3/8"-16 x 1" hex bolt. Insert the bolt in the hole of the clamping plate, threading it into the bottom of the air spring. Torque the bolts to 23 ft-lbs.

16. Use **Images 16 & 17** for proper installation of the shock to the frame of the car. The new shock will be installed in place of the OEM shock. The shock length is designed to work in relation to the air spring stroke length.

Installation



17. Use **Images 16 & 17** for proper installation of the shock to the frame of the car. Install a bushing support washer on to the stud of the shock body followed by a shock stem bushing. Insert the assembly through the factory shock hole in the frame. With the shock stud sticking through the frame, install a shock stem bushing on to the shock stud followed with a bushing support washer. Install a 3/8"-24 thin jam nut onto the threads and tighten to 35 in-lbs. The bushing should be tight, but not to the point that the bushing is bulging past the support washer. Install the 2nd 3/8-24 thin jam nut and tighten it against the first nut.

18. Attach the eyelet of the shock to the OEM shock stud using the OEM hardware. We recommend positioning the adjuster knob to he inside of the car for easier access. You may need to raise or lower the axle to align the shock eyelet with the shock stud.

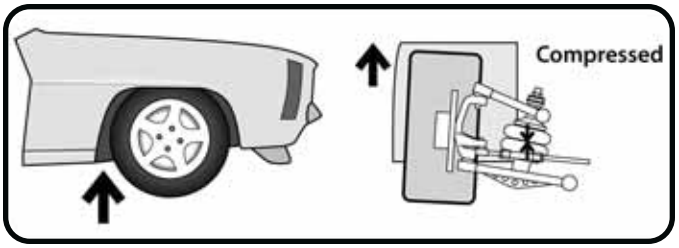
19. Attach the air lines to the air springs.

Bump Stop Adjustment

20. The bumpstop nut can be moved to the bottom side of the bump stop bracket to limit the amount of compression travel your car has. You can use this to limit how low your car will go when deflated.

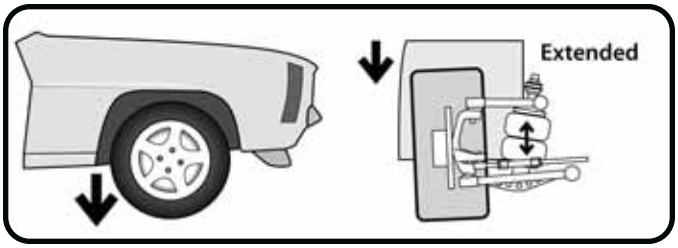
TUNING GUIDE
SINGLE-ADJUSTABLE SHOCKS

The Basics...



COMPRESSION

This typically occurs when you hit a bump in the road. The bump forces the wheel/tire/suspension assembly to "compress" or move upwards into the car.



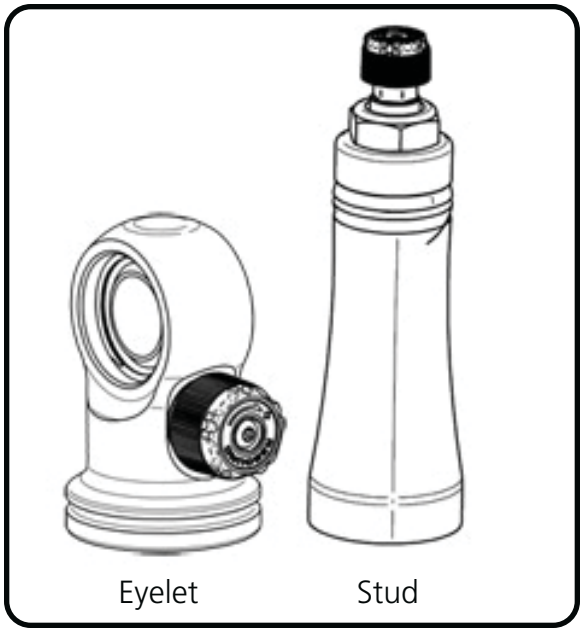
REBOUND

Rebound is the opposite of compression. This occurs when the wheel/tire/suspension assembly falls into a pothole, or simply "rebounds" from being compressed.

Where Are The Knobs?

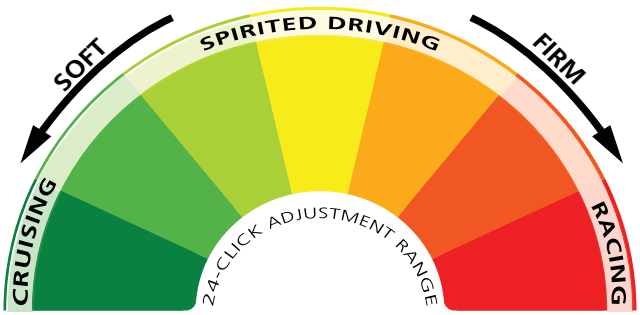
HQ Series Shocks

- **The adjustment knob is located on the top of the shock, either protruding from the side of the eyelet, or atop the stud.**
- **This knob provides rebound adjustment only.**



Knob Function

Counterclockwise = Softer



Clockwise = Firmer

TUNING GUIDE
SINGLE-ADJUSTABLE SHOCKS

Initial Rebound Setting

NOTE: Before jumping straight to a middle-of-the-road shock setting, we recommend you experience the full range of adjustment potential of your new shocks by first driving your vehicle at both the "full stiff" and "full soft" settings. Understanding how your shocks behave at these extremes will provide recognizable reference points as you attempt to dial in your settings.

1. Begin by setting your shocks to the "full stiff", or minimal rebound position. You do this by turning the adjustment knob clockwise until it stops.

2. Now turn the adjustment knob counterclockwise 12 clicks. This is the approximate center of the adjustment range.

3. Take the vehicle for a test drive. Try to determine if you are experiencing any of the unwanted behaviors found at the extremes of the adjustment range. If you are satisfied with the ride quality and handling, you're all set. Enjoy the ride!

4. If the vehicle feels too "floaty" or soft, turn the knob a few clicks clockwise to increase the damping effect.

If the ride quality is still too harsh or stiff, turn the knob a few more clicks counterclockwise to decrease the damping effect.

5. Take the vehicle for another test drive. If necessary, repeat the steps above until your desired optimal ride quality has been acheived.

General Guidelines

- The rear shocks typically have the the most influence on ride quality. This is due to your seating position being closer to the rear than the front.
- Adjustments to the front shocks will generally require 3-4 clicks in any direction to be noticable, while adjustments to the rear shocks may only require 1-2 clicks to be felt.
- Don't be afraid to turn the knobs and experience the full adjustment range. You are not going to hurt anything and you can always go back if you adjust too far one way or the other.