



*Fortune Auto cannot be held responsible for damage to suspension components, vehicle, or injury to persons. Warranty will become null and void if the instructions are not adhered to.*

*During storage and transportation, especially at higher temperatures, some oil and grease used during assembly may leak inside the package. This is not unusual and is in no way detrimental to the suspension components.*

- 1** Please study and make sure that you fully understand all of the instructions before handling this suspension. If you have any questions regarding proper installation procedures, contact Fortune Auto or a qualified shop.
- 2** When installing Fortune Auto's product, wearing gloves is highly recommended to avoid risk of hand injury.
- 3** The top hat used with this shock must be the original Fortune Auto component.
- 4** Fortune Auto suspension components and tools are not to be used with suspension from other brands and vice versa.
- 5** Fortune Auto will not take any liability for damage to the shock or accidents that are caused by components made by other manufacturers being used with this shock. Be sure to observe local vehicle regulations concerning aftermarket suspension components.
- 6** Fortune Auto will not be held liable for any violation against local vehicle regulations or laws.
- 7** Avoid rough road surfaces that may cause damage to the suspension.
- 8** Make sure that all components are torqued to the correct specifications and that there are no oil leaks.
- 9** Make sure nothing is fouling or restricting movement of the suspension.

## **TORQUE SPECS**

**M5 hex bolts: 4.5-6 ft lb**  
**M8 studs: 14.75-18.5 ft lb**  
**Camber plate bolts: 10.5 ft lb**

**M6 hex bolts: 7.5-10.5 ft lb**  
**M10 studs: 33-37 ft lb**

## **KIT CONTENTS**

*Before installing the suspension components, please check the contents of the kit. If anything is missing, contact Fortune Auto USA.*

**SPANNER WRENCHES**  
**FORTUNE AUTO STICKERS**

**2MM ALLEN KEY**  
**5MM ALLEN KEY**

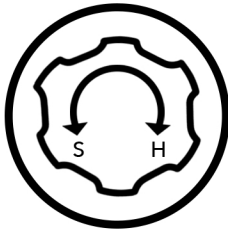
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# DAMPING ADJUSTMENT

Fortune Auto 510 Series coilovers have 24 clicks of rebound adjustment. Be careful not to force the knob past the physical limits as this will cause damage to the damper.

*On occasion, some coilovers may have 23-25 clicks. This does not have any negative affect on functionality and still allows the same range of adjustment.*

When you receive your coilovers, the rebound adjustment will be preset to the default setting of 5 clicks from soft.



## REBOUND ADJUSTMENT

On most vehicles, there is a knob located on the top of the shock which is used to adjust rebound. Rebound is the extending force exerted on the shock after being compressed by a bump or body roll from weight transfer and controls the motion of the car's sprung weight. Use rebound to control the overall handling balance of the car.



**TURN COUNTER CLOCKWISE  
TO SOFTEN**



**TURN CLOCKWISE TO STIFFEN**

Fortune Auto dampers utilize a jetting assembly to control rebound and compression. This damper adjustment mechanism uses a needle to open and close an orifice to restrict and permit flow. Because of this special design, adjustments on the shock, between 1 through 18 clicks from soft, are recommended to be adjusted in 2 click increments. However, from 18-though 24 clicks from soft, 1 click increments are recommended for the most precise and optimal tuning.

*This chart is only meant to be used as a loose guideline since there are so many factors that come into play when setting up a vehicle's handling characteristics.*

|                                | FRONT REBOUND | REAR REBOUND |
|--------------------------------|---------------|--------------|
| <b>CORNER ENTRY UNDERSTEER</b> | ▲ INCREASE    |              |
| <b>MID-CORNER UNDERSTEER</b>   | ▲ INCREASE    |              |
| <b>CORNER EXIT UNDERSTEER</b>  | ▲ INCREASE    |              |
| <b>CORNER ENTRY OVERSTEER</b>  |               | ▲ INCREASE   |
| <b>MID-CORNER OVERSTEER</b>    |               | ▼ DECREASE   |
| <b>CORNER EXIT OVERSTEER</b>   |               | ▼ DECREASE   |

There are many complicated factors to consider when setting up a vehicle's handling characteristics. Different chassis can respond to different inputs and situations contrastingly. However, fundamental adjustments can be made to achieve a potentially more controlled and composed driving configuration. This information is only meant to be used as a loose guideline for basic setup. Please consult a professional to optimize your specific application.

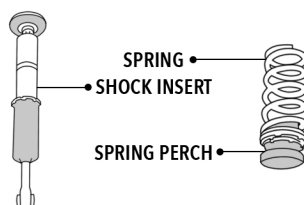
| VEHICLES SUFFERING FROM UNDERSTEER |          |                            | VEHICLES SUFFERING FROM OVERSTEER |          |  |
|------------------------------------|----------|----------------------------|-----------------------------------|----------|--|
| FRONT                              | REAR     |                            | FRONT                             | REAR     |  |
| DECREASE                           |          | <b>RIDE HEIGHT</b>         |                                   | DECREASE |  |
| DECREASE                           | INCREASE | <b>SPRING RATE</b>         | INCREASE                          | DECREASE |  |
| DECREASE                           | INCREASE | <b>SWAY BAR</b>            | INCREASE                          | DECREASE |  |
| INCREASE                           | DECREASE | <b>TIRE WIDTH/PRESSURE</b> | DECREASE                          | INCREASE |  |
| MORE NEG                           | MORE POS | <b>CAMBER</b>              | MORE POS                          | MORE NEG |  |

## PRELOAD SETTINGS

Having the correct preload tension on the front shocks is imperative. Preload tension prevents spring bind and spring noise.

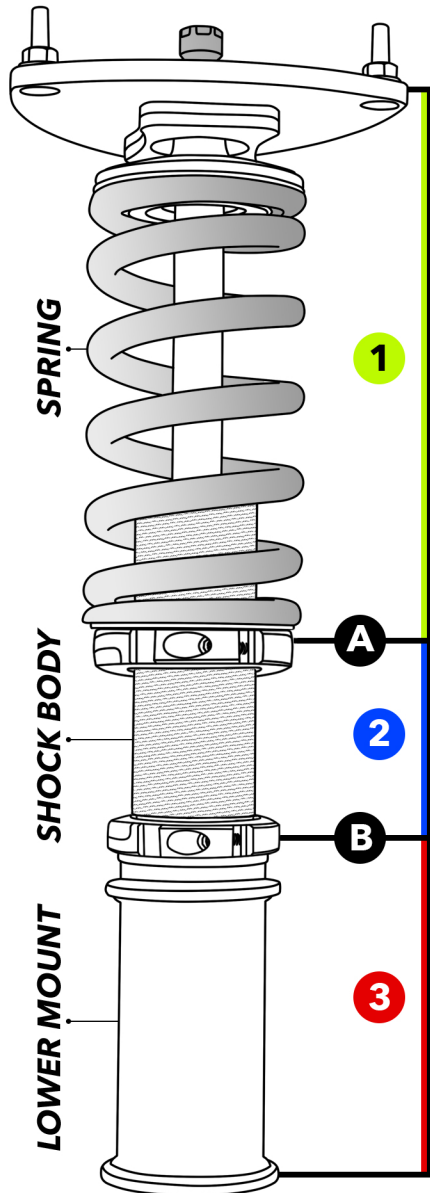
| MACPHERSON SUSPENSION                                                   | DOUBLE WISHBONE AND MULTILINK                                           |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------|
| <b>FRONT:</b> 1/4" PRELOAD<br><b>REAR:</b> MUST NOT EXCEED 1/8" PRELOAD | <b>FRONT:</b> 1/8" PRELOAD<br><b>REAR:</b> MUST NOT EXCEED 1/8" PRELOAD |

To set the preload of a shock, first measure the length of the uncompressed spring. Spin the spring perch to compress the spring by the desired amount of preload. For example, to achieve 1/4" of preload on a 7" spring, the spring must be compressed to 6 <sup>3</sup>/<sub>4</sub>" with the spring perch before it is locked into place.



Rear divorced spring setups have the spring mounted on a separate adjustable spring perch. The ride height must be set with the rear spring and spring perch assembly before the shock can be extended so that there is no slack and the spring is preloaded exactly to the shock length.

# RIDE HEIGHT ADJUSTMENT



On a true coilover (as shown on the left), always adjust the coilover height from the lower mount (B/3) and NOT the spring perch (A/1). Using the spring perch (A) to adjust the ride height will result in premature wear on the shock and reduce suspension travel. On a divorced rear (as shown on the previous page), the ride height must be set with the rear spring and spring perch assembly.

To adjust ride height, start by unlocking the lower mount (3) by spinning the locking collar (B) counter clockwise. Once the shock body (2) is free to spin, it can be threaded into the lower shock mount (3) to shorten the shock assembly and lower the vehicle or unthreaded out of the lower shock mount (3) to extend the overall shock assembly and raise the vehicle.

Measure the space between the the spring perch (A) and lower locking collar (B) highlighted in blue before and after adjusting. The measurement is not necessarily going to directly apply to the height of the vehicle, but can be used as a reference for the remaining shocks that need ride height adjusting.

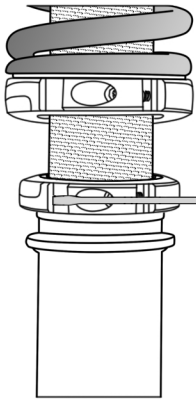
*You may need to repeat these steps a few times until desired ride height is achieved. Also, keep in mind that suspension tends to settle in after driving and vehicle height may become slightly lower.*

When the desired ride height is achieved, make sure the lower spring perch (A) bolt has been torqued and the lower locking collar (B) has been properly tightened against the lower mount (3) and the bolt torqued to complete the ride height adjustment.

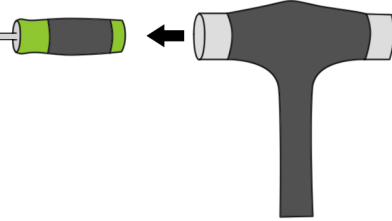
**DOUBLE WISHBONE AND MULTILINK SUSPENSION:** make sure to leave at least 25mm of threaded body inside the lower mount for safety.

**MACPHERSON SUSPENSION:** make sure to leave 50mm of threaded body inside the lower mount for safety.





*Do not use the adjustment wrench to lock the lower mount, it is only used to adjust the ride height. If the lower locking collar is tightened by the adjustment wrench, it **MAY COME LOOSE**.*



Use a flathead screwdriver and hammer/mallet to lock the locking collar against the lower mount, as shown in the picture. Then use the correct size allen wrench to tighten the bolt on the locking collar.

## MAINTENANCE

### RECOMMENDED SERVICE INTERVALS



#### **NO TRACK USE**

Rebuild every 60,000 miles.



#### **MIXED USE**

Rebuild every 15,000 to 30,000 miles.



#### **TRACK USE ONLY**

Rebuild every 1,000 miles.

- 1 Fortune Auto coilover systems utilize high performance, monotube shocks. Therefore, to prevent damage and premature wear, avoid obstacles such as potholes and carefully slow down for speedbumps to limit unnecessary force.
- 2 Inspect and clean out dirt or small pebbles that may get wedged between the spring perches as well as the threads of the shock body to avoid potential damage.
- 3 Salt/snow mixtures can be detrimental to all metal surfaces. After driving through salt/snow environments, be sure to thoroughly clean your coilovers using a mild soap, water, and a brush. Precaution can be taken by applying anti-seize to the threads of the shock body where the locking rings and lower mount will be placed.
- 4 Fortune Auto offers in-house rebuild services in Virginia, USA. You can rebuild, re-valve, and upgrade your current coilover system with a quick turnaround time. For more information, visit [www.fortune-auto.com/service](http://www.fortune-auto.com/service).



## TROUBLESHOOTING

Before contacting Fortune Auto, try out these troubleshooting tips to isolate and remedy your issue. If your problem still persists, contact us and one of our technicians will gladly assist you.

**MY COILOVERS ARE SQUEAKING.** A squeak is typically caused by a rubber or poly-urethane bushing on a control arm, ball joints, trailing arm, or even sway bar bushings. Worn parts can show themselves that may not have been noticed before under the insulated factory suspension. The bushings on the affected arms will need to be greased and/or indexed. When lowering your vehicle stress is being added to these bushings as they are flexing far more than they are designed to, thus resulting in squeaking noises and possible premature wear. Make sure all the mounting hardware is secure.

**MY COILOVERS ARE CLUNKING WHEN I GO OVER BUMPS.** Something somewhere is loose. Most commonly it's usually a loose locking collar so make sure those have been locked into place. May also be the top hat nut or mounting hardware. Also check for sway-bar clearance and end-link hardware.

There is the chance that there is an issue internal to the shock. One way to isolate a shock issue is to see how the sound changes when adjusting the shock damping force. Does the noise change from full soft to full hard, and if so how? Contact us and let us know of your results or if you have any other questions.

## PRODUCT WARRANTY

Fortune Auto North America products are covered by a 1 year limited manufacturers (non-transferable) warranty (from purchase date). This limited warranty covers parts and products that are only used in off road use or motorsport environments. This limited warranty covers hard parts such as mounts and shock bodies. It also covers consumable parts such as seals, shafts, fluids and leaking shocks. This warranty is limited to the United States and Canada. Fortune Auto parts are covered, however, shipping and shop labor (if used) are not covered.

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Generation 4, 5, 6, 7, & 8 products are covered by a 5 year limited manufacturers (non-transferable) warranty limited to the United States and Canada. This limited warranty covers hard parts such as mounts, top hats, camber plates and shock bodies for 5 years from the purchase date. It also covers consumable parts such as seals, shafts, fluids, pillow ball mounts and leaking shocks 1 year from the purchase date. Fortune Auto parts are covered, however shipping and shop labor (if used) are not covered.

Generation 4, 5, 6, 7, & 8 hard parts are defined as: Lower Mounts, Locking Collars, Spring Seats, Spring Gaskets, Top Hats or Camber Plates and Hardware such as studs and bolts. All hard parts carry a 5 year limited warranty on Generation 4, 5, 6, 7, & 8 shock absorbers.

Generation 4, 5, 6, 7, & 8 consumable parts are defined as: Pillow balls, Piston Shafts, Jetting Assemblies, Shaft Seals, O-ring Seals, Shock Absorber Internals, Springs, Shock Absorber Oil, Shock Absorber Fluid & Gas Leaks. All consumable parts carry a 1 year limited warranty on Generation 4, 5, 6, 7, & 8 shock absorbers.

Fortune Auto North America warrants its products to the original retail purchaser against defects in workmanship and material.

The warranty does not apply to the following:

- 1** Any products not purchased through authorized Fortune Auto North American dealers.
- 2** Any products that show abuse, improper installation or collision.
- 3** Any products that are used on public roads, highways, government maintained roads or non motorsport conditions.
- 4** Any products that have been altered in any way.
- 5** Any products that are not professionally installed.
- 6** Any products that show normal corrosion wear and tear.

## **TERMS**

All Fortune Auto coilovers and products are for off road use or Motorsports use ONLY, and may never be installed on vehicles that will be driven on a public road or highway.

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- 1** Prices, products and applications are subject to change without notice.
- 2** Claims for missing or damaged goods must be made within 5 days after receipt.
- 3** Any failure or delay in shipment or delivery caused by lack or failure of transportation, delay in shipping, breakdowns, accidents, strikes, flood, or any cause beyond our control, shall not constitute breach of contract, nor shall any damages attach to such failure or delay.
- 4** Shipping deadline is 12:00 PM EST for all Ground Shipping and 4:00 PM EST for overnight shipping, all orders received after our deadline will ship the next business day. No delivery or shipping on weekends or holidays. Saturday deliveries will be priority overnight plus extra fee for Saturday delivery.
- 5** Shipping charges are not refundable.
- 6** These instructions indicate acceptance of all terms and conditions.

## **WARNING**

### ***MOTORSPORT CAN BE DANGEROUS AND INVOLVE INJURY OR DEATH.***

All Fortune Auto coilovers and products are for off road use or Motorsports use **ONLY**, and may never be installed on vehicles that will be driven on a public road or highway.

MOTORSPORTS for the purposes of this disclaimer are classified as any automobile activity that takes place off of a public highway in a competitive or timed racing environment (race track).

Purchaser of any Fortune Auto products expressly **ASSUMES THE RISK** of all personal, property and economic injury, death, damage or loss, either direct or indirect, arising from the use and misuse of Fortune Auto products in all environments including racing, motorsports, timed motorsport events, on high way use, street use, and conventional passenger vehicle use.

## **RETURNS**

Fortune USA takes great pride in our products and the quality. In the unlikely event that you should encounter difficulty with a product or a defect is suspected, you are encouraged to first speak with Fortune Auto. In the event that the product needs to be returned to Fortune Auto, you will need to fill out our Warranty & Service form. This form must with all returned goods.

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- 1** No returns or exchanges on used/installed Fortune Auto products.
- 2** All warranty returns must have a Warranty & Service form accompanying the returned goods.
- 3** Shipping charges to and from Fortune Auto North America are the responsibility of the customer. Additional charges for expedited shipment are the responsibility of the customer.
- 4** Fortune Auto products can be returned within 14 days of receipt of shipment.
- 5** Returns will require a 25% restocking fee based on the MSRP price of the order as advertised by Fortune Auto North America. For all custom orders, such as super low spec, custom private label coilovers, coilovers with +4K higher than default spring rates, the restocking fee will be 50%.