

## HEIGHT ADJUST PARAMETER

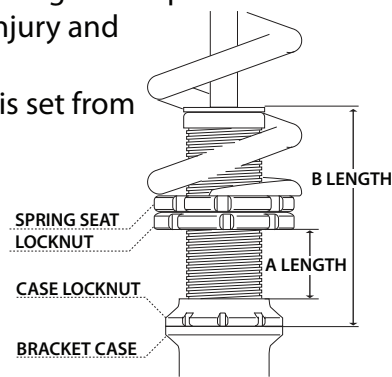
**WARNING** THE 'B LENGTH' MUST NEVER BE EXTENDED BEYOND ITS MAXIMUM CAPACITY. (GROOVE INDICATES MAXIMUM LENGTH)

Stay within the allowed parameter when adjusting the suspension height. Failure to do so may result in serious injury and or damages.

Factory setting refers to what the suspension is set from Cusco, straight out of the box.

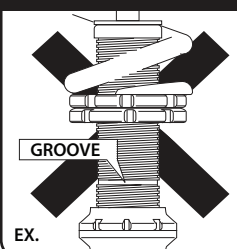
	B PARAMETER	FACTORY SETTING
FRONT	190 mm ~ 145 mm	155 mm
REAR	260 mm ~ 215 mm	230 mm

\*REFER TO SEPARATE RIDE HEIGHT SETTING INSTRUCTIONS

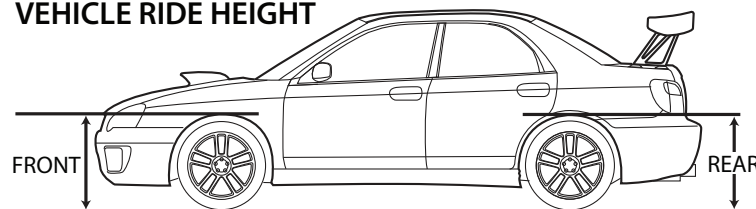


### CAUTION

The groove in the shock body thread indicates the maximum height the suspension is capable of being set. Make sure that this groove is not visible above the locknut after setting the suspension height. Beware that the suspension assembly may collapse and fail if it is set too high.



## VEHICLE RIDE HEIGHT



**WARNING** ALWAYS PERFORM AN 4 WHEEL ALIGNMENT AFTER ALTERING VEHICLE RIDE HEIGHT.

\* Tire size and tread wear rate may alter results.

## RIDE HEIGHT vs. STOCK

Front A = 30mm	Rear A = 115mm
Front Height = -30mm	Rear Height = -35mm

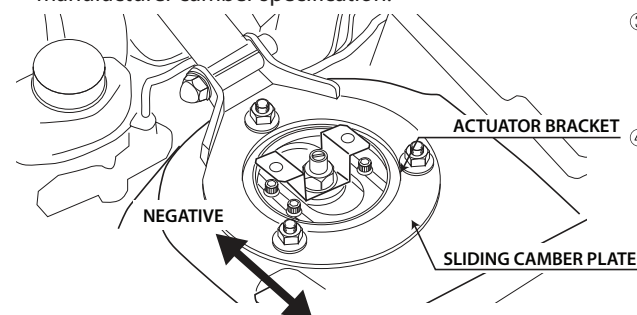
### WARNING

The numbers indicated in the charts represent data taken from the Cusco test vehicle. Use for reference only, always measure and take into consideration alternate factors such as wheel size and supporting modifications.

## CAMBER ADJUSTMENT

**WARNING** The numbers and degree gauge on the sliding portion of the upper mount is for reference only. Always do a proper camber adjustment with the correct tool after adjusting suspension

**WARNING** Too much camber on the wheels will cause uneven and premature tire wear as well as hinder performance. Please follow manufacturer camber specification.



- Loosen the four allen head cap bolts to enable the sliding mechanism.
- Slide the plates to adjust the camber angle.
  - \* Sliding it towards the inside will be negative camber, sliding it towards the outside is positive.
  - \* If the adjustment allen head bolts make contact with the chassis and limits the camber adjustment, relocate the allen bolts to a different threaded hole.
- Install a proper camber gauge to the left and right wheels. Adjust the degree of the camber by sliding the plate towards the inside or outside until the desired degree is achieved.
  - \* Adjust the toe with a proper toe gauge afterwards.
- Recheck the measurement on both sides with the camber gauge to confirm that it is within its allowed parameter. Tighten the four allen head bolts. (Torque=12~14Nm) Turn the actuator bracket clockwise to enable access to the camber adjustment bolts.

POSITIVE

## TEST VEHICLE DATA SPEC

\*Data below represents specifications from the Cusco test vehicle. Results may vary depending on year, grade, model.

VEHICLE	2004 Subaru Impreza GH-GDB			
GRADE	WRX STi Spec C			
WHEEL SIZE	Front	8.0JJ-17	OFF	+53
	Rear	8.0JJ-17	OFF	+53
TIRE SIZE	Front	235/45-17	Rear	235/45-17
TOE	Front	0~±3mm	Rear	0~±3mm
CAMBER	Front	-0° 20' ±45'	Rear	-1° 25' ±45'
CASTER	Front	3° 30' ±30'		
	Front	-50 ~ 0mm	Rear	-50 ~ 0mm

\*Refer to the manufacturer factory service manual for the wheel alignment specifications.

\*The suspension unit shown in the illustration may not depict actual unit.

PROGRESSIVE EQUIPMENT®  
**CUSCO ZERO-2E**



# @con. ELECTRONIC DAMPER CONTROL COMPLIANT INSTALLATION MANUAL

ALWAYS USE THE FACTORY SERVICE MANUAL AS REFERENCE



## SUBARU IMPREZA WRX STI APPLIED E~ GDB (6MT) STi 2005-2007 & GDA WRX 2004-2007

**NOTE** PURCHASE 667 ### ## SERIES SUSPENSION KIT FOR 2002+ WRX & 2004+ STI.

NOT COMPATIBLE WITH S204 (ST1 REAR PERFORMANCE DAMPER) EQUIPPED VEHICLES.

[ PART NO. 672 60M CN ] (REAR ALUMINUM MOUNT)  
[ PART NO. 672 60M CP ] (REAR PILLOWBALL MOUNT\*)

\*PILLOWBALL MAY INCREASE SUSPENSION NOISE

@con. CONTROLLER IS AN ELECTRONIC DEVICE WHICH ENABLES DAMPER ADJUSTMENT FROM THE DRIVER SEAT. MUST BE PURCHASED SEPARATELY.

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★ Please refer to separate document for height & damper adjustment

**WARNING** Damper adjustment is performed using the dial located on top of the shock absorber shaft. Some models may require removal of plastic trims, upholstery, and even the rear seats for adjustment.

CONTACT:  
**CUSCO USA INC.**

16631 Gemini Lane  
Huntington Beach, CA 92647 USA  
Phone: (714) 907-0033 Fax: (714) 369-8142



## SUSPENSION KIT CONTENTS

Please confirm kit contents before starting installation

FRONT SUSPENSION KIT	×2	INSTRUCTION MANUAL	×1
REAR SUSPENSION KIT	×2	INSTALLATION MANUAL	×1
CAMBER ADJUSTMENT WRENCH (6 SIDED)	×1	SUSPENSION ADJUSTMENT GUIDE	×1
HEIGHT ADJUSTMENT WRENCH	×2	1. HEIGHT ADJUSTMENT	
DAMPER ADJUSTMENT TOOL	×1	2. DAMPER RATE ADJUSTMENT	
<hr/>			
<b>REAR RUBBER/ALUM UPPER MOUNT TYPE</b>	ECON ACTUATOR BRACKET (REAR)		×2
	ECON ACTUATOR BRACKET NUT (M12X1.25)		×2

## WARNING BEFORE STARTING INSTALLATION



### 1) BEFORE REMOVING EXISTING SUSPENSION UNIT

- GET FAMILIARIZED WITH THE MOUNTING AREAS AND ALL SURROUNDING COMPONENTS.
- CLEAN MOUNTING POINTS AND OTHER IMPORTANT AREAS WITH BRUSH.
- APPLY AND SOAK PENETRATION OIL BEFORE ATTEMPTING TO REMOVE RUSTED HARDWARE.
- DO NOT COMPLETELY DISCARD REMOVED COMPONENTS UNTIL THE NEW SUSPENSION IS FULLY INSTALLED.



### 2) WHEN INSTALLING NEW SUSPENSION UNIT

- CHECK PRODUCT PART NUMBER AND VEHICLE APPLICATION BEFORE HANDLING PRODUCT.
- INSPECT ALL INCLUDED COMPONENTS AND MAKE SURE NOTHING IS MISSING.
- CHECK TO SEE IF INSTALLED COMPONENT DOES NOT MAKE CONTACT WITH BODY, TIRES, OR WHEELS.



#### HOW TO READ THE WARNING ICONS

This installation manual contains these warning icons. Acknowledge each and every warning before starting.



#### WARNING

Ignoring this warning icon may result in serious injuries or even death. Fully acknowledge the instructions and follow with extreme caution.



#### CAUTION

Ignoring this caution note may result in injury or damages inflicted upon the product and/or vehicle.



#### OTHER WARNING ICONS



PROHIBITED



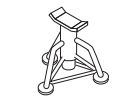
FIRE HAZARD



DO NOT DISASSEMBLE / MODIFY



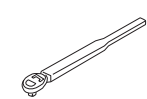
CHECK



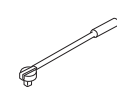
Jack Stands



Coilover Wrench



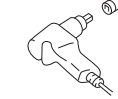
Torque Wrench



Socket Wrench



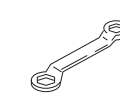
Hydraulic Jack



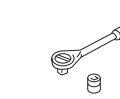
Impact Gun



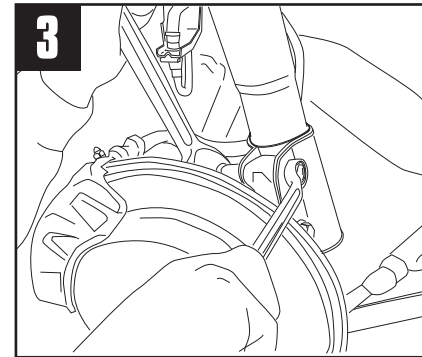
Open-end Wrench



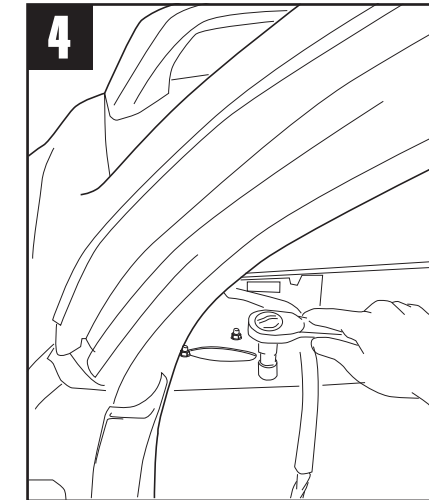
Eyelet Wrench



Ratchet Wrench



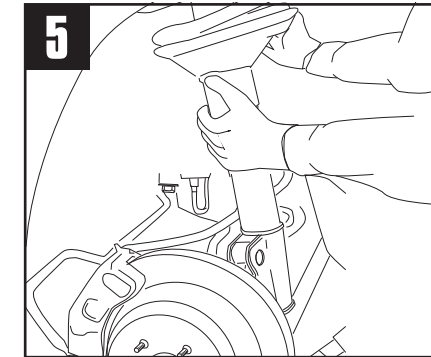
Loosen the nut and bolt that holds the knuckle bracket. Do not remove the nut and bolt yet.



Take off the rear seat by removing 2 seat and 3 backrest bolts. Remove the three nuts that hold the suspension to the strut towers on each side.



The nut closest to the seat belt hanger may be difficult to remove. Use appropriate tools for these types of areas.



Gently lower the hydraulic jack that is holding up the rear link and remove the 2 flanged bolts that mounts the bottom bracket. Using both hands, remove the suspension strut assembly from the vehicle.



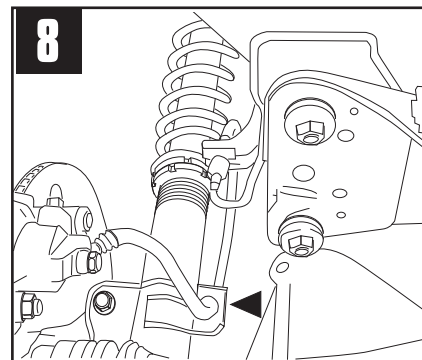
#### WARNING

Always use both hands when handling strut assembly. Dropping the unit may cause serious injury & damage to the component.

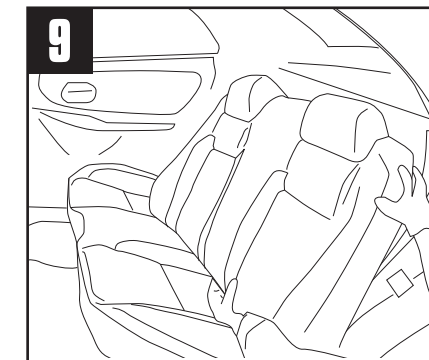


#### CAUTION

Use caution when removing strut assembly not to damage the ABS sensor harness.



Completely remove the hydraulic jack from underneath the vehicle and reinstall brake line hose to the strut tab. Use factory clip and secure the brake line.

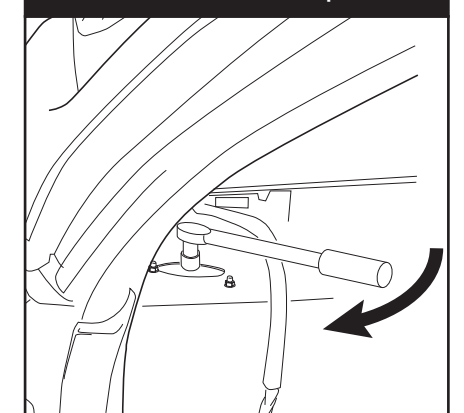


Reinstall the rear seats in the reverse order it was taken off. Tighten the 3 seat back & 2 seat bolts to (Torque spec 20Nm).



#### WARNING

When installing the e-con step-motor



For rear aluminum upper mount applications, the actuator bracket for the e-con unit is installed on top of the existing nylon nut. The bracket is sandwiched between the two upper shaft nuts. (Torque=25Nm) Please see assembly diagram on page 2.

※ For e-con step motor mounting instructions, please see e-con installation manual.

※ Make sure there is at least 5mm of clearance for the area around the step motor.



#### WARNING

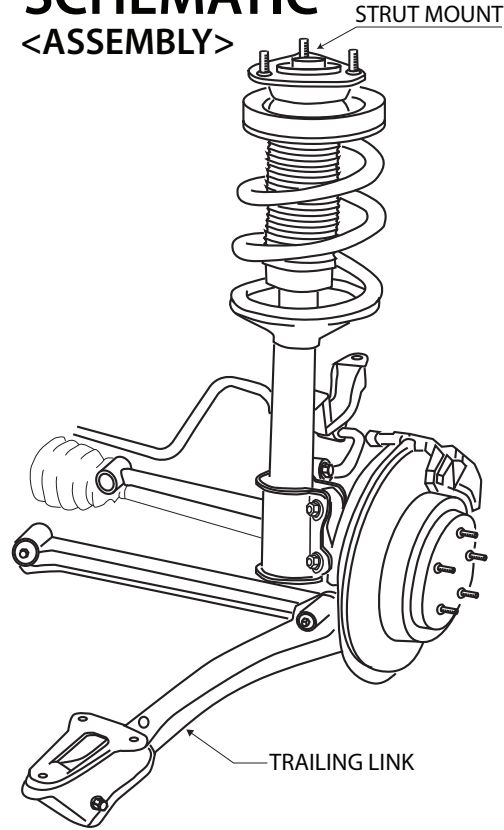
The factory metal upper mount caps will not be reused on the Cusco suspension.

※The suspension unit shown in the illustration may not depict actual unit.

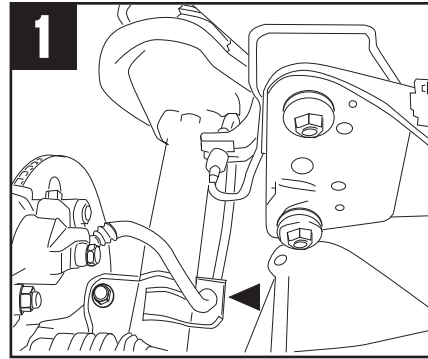
# REAR REAR SUSPENSION

**WARNING** OEM FACTORY PARTS WILL BE USED. PLEASE PREPARE NEW FACTORY COMPONENTS BEFORE STARTING INSTALLATION.

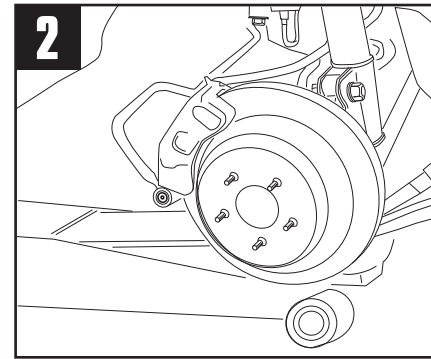
## SCHEMATIC <ASSEMBLY>



### REMOVAL



Remove the clip that holds the brake line from the strut.

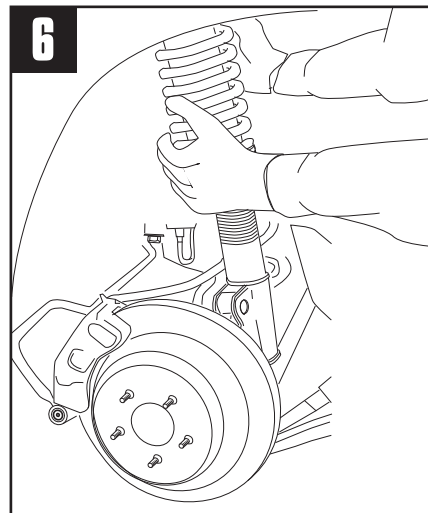


Place hydraulic jack under the trailing link and slightly raise up.

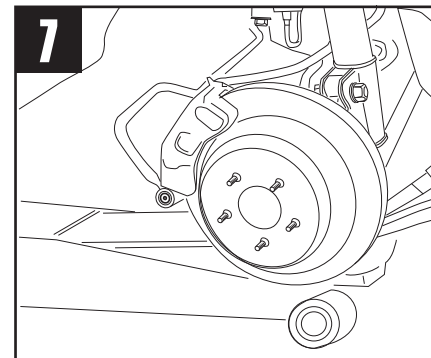
### WARNING

Use caution when handling the brake line, prevent kinks and tears by taping it away from the work area. The clip will be reused so avoid bending it from its original shape and form.

### INSTALLATION



Mount the Cusco suspension to the upper strut area using the 3 factory OEM nuts. It is highly recommended to use new OEM hardware. Torque according to the specification listed. (Torque Spec: 20N-m)

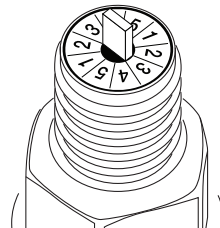


Install the bottom bracket bolts by raising and lowering the hydraulic jack to the position where the 2 holes line up. It is highly recommended to use new OEM hardware. The nuts are self locking. Torque according to the specification listed. (Torque Spec: 200N-m)

Completely remove both sides (L & R) of the suspension first before proceeding to install the new units. This applies to both front and rear.

### WARNING

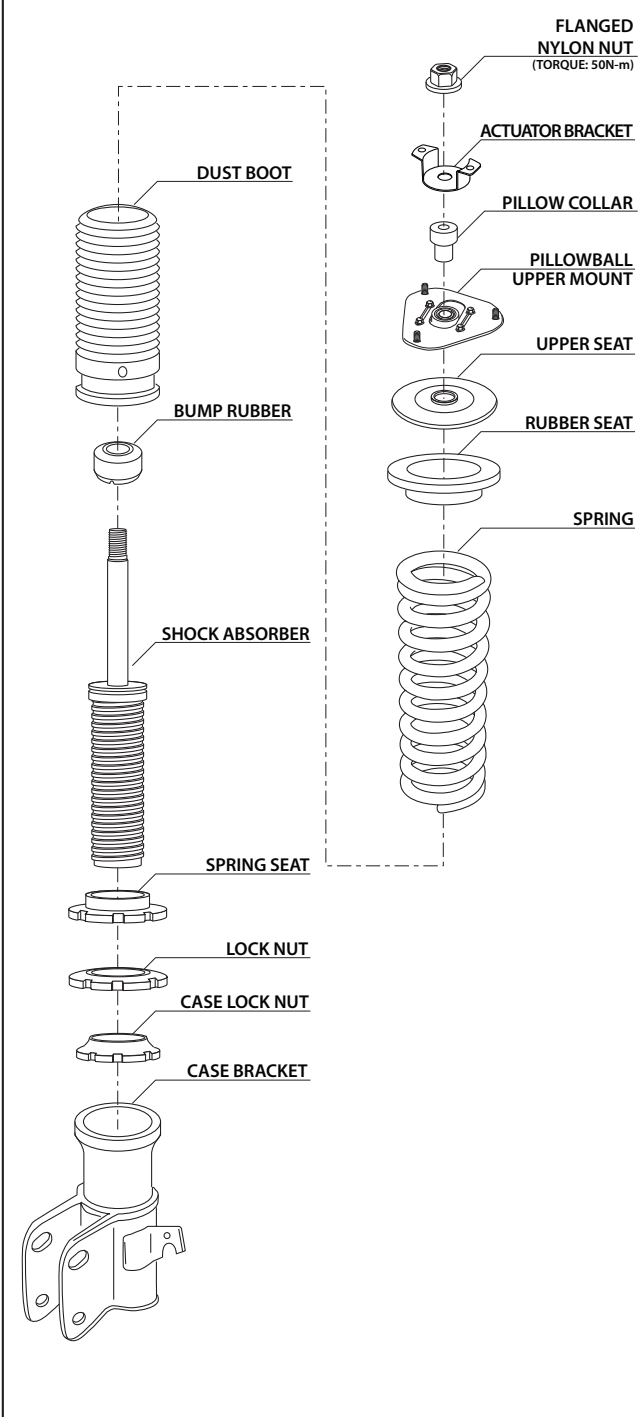
**TAKE EXTRA PRECAUTION FOR ADJUSTMENT DIAL** Take extra care when installing the suspension and be extra careful not to damage the adjustment dial. Doing so will inhibit the shock absorber adjustment capabilities as well as other vital features.



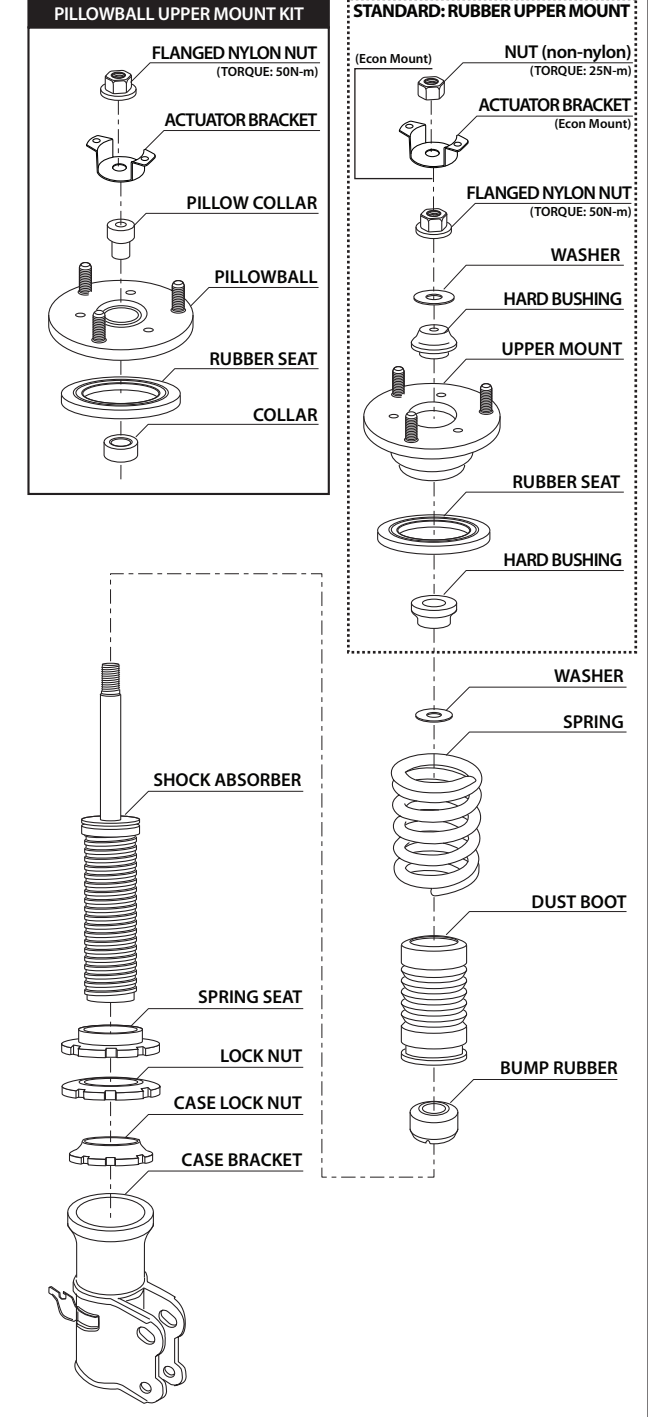
#### REQUIRED FACTORY OEM COMPONENTS

OEM PART NUMBER	QTY
205505AA010	4
Rear lower strut nut	
902350013	6
Rear upper mount nut	

## FRONT SUSPENSION ASSEMBLY DIAGRAM



## REAR SUSPENSION ASSEMBLY DIAGRAM



### WARNING PRECAUTION WHEN ASSEMBLING THE SUSPENSION

Take extra care when assembling the suspension kit not to overtighten the upper most nut. Tightening above the indicated torque specification may cause irreversible damage to the shock absorber.

### WARNING OEM FACTORY PARTS ARE NECESSARY FOR THIS INSTALL. PLEASE ACQUIRE BEFORE STARTING THE INSTALLATION PROCEDURES.

OEM PART NO. 20550AA010 FRONT / REAR STRUT BRACKET NUT 8 qty  
OEM PART NO. 902350013 FRONT / REAR UPPER MOUNT NUT 12 qty

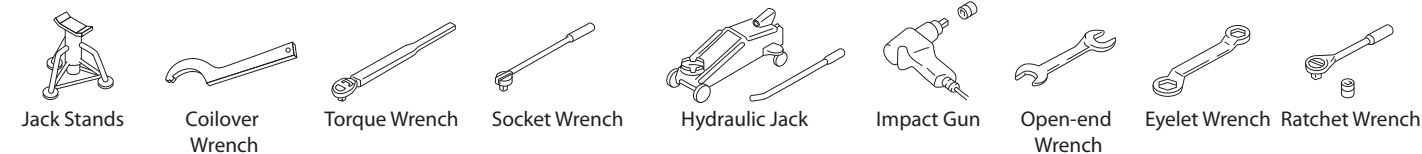
#### REPLACEMENT COMPONENTS

POSITION	PART DESCRIPTION	PART NUMBER	MSRP	NOTES
FRONT	ECON Compliant Shock Absorber	00B 6CA S51AS	\$347.00 (USD)	RH / LH
REAR	ECON Compliant Shock Absorber	00B 6CA S53AS	\$347.00 (USD)	RH / LH

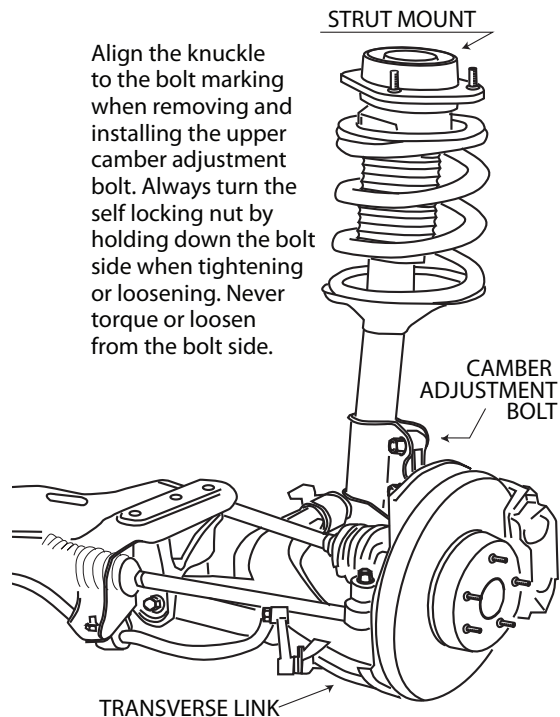
Please refer to the assembly diagram for other replacement components and inquire within.

# FRONT FRONT SUSPENSION

**WARNING** OEM FACTORY PARTS WILL BE USED. PLEASE PREPARE NEW FACTORY COMPONENTS BEFORE STARTING INSTALLATION.



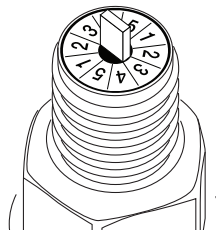
## SCHEMATIC <ASSEMBLY>



Align the knuckle to the bolt marking when removing and installing the upper camber adjustment bolt. Always turn the self locking nut by holding down the bolt side when tightening or loosening. Never torque or loosen from the bolt side.

**WARNING** Completely remove both sides (L & R) of the suspension first before proceeding to install the new units. This applies to both front and rear.

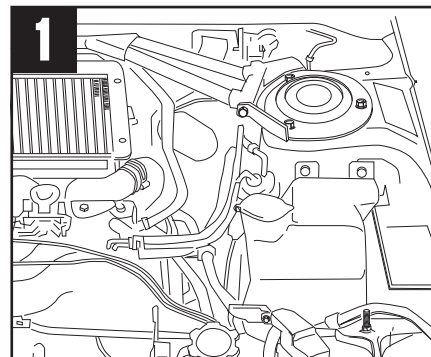
**WARNING** TAKE EXTRA PRECAUTION FOR ADJUSTMENT DIAL Take extra care when installing the suspension and be extra careful not to damage the adjustment dial. Doing so will inhibit the shock absorber adjustment capabilities as well as other vital features.



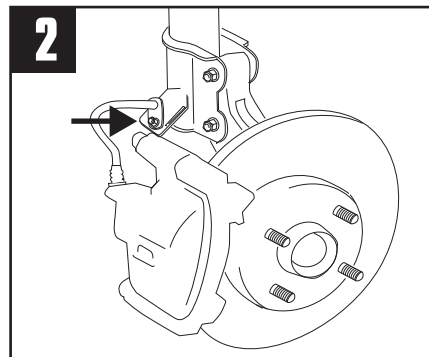
### REQUIRED FACTORY OEM COMPONENTS

OEM PART NUMBER	QTY
20550AA010	4
Front lower strut nut	
902350013	6
Front upper mount nut	

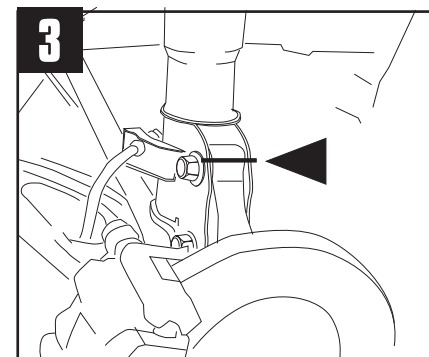
## REMOVAL



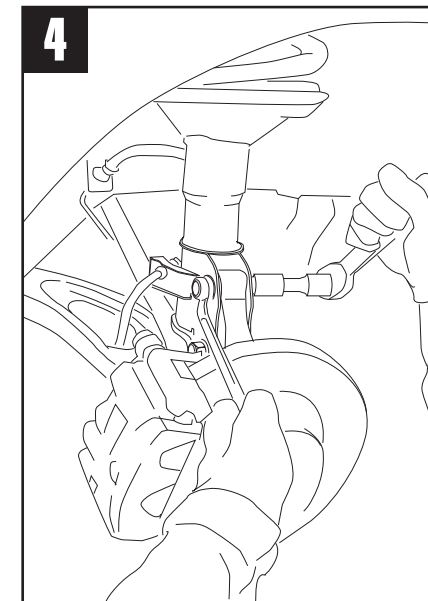
1 Loosen the 3 strut tower nuts inside the engine bay. Only loosen and do not remove these nuts just yet.



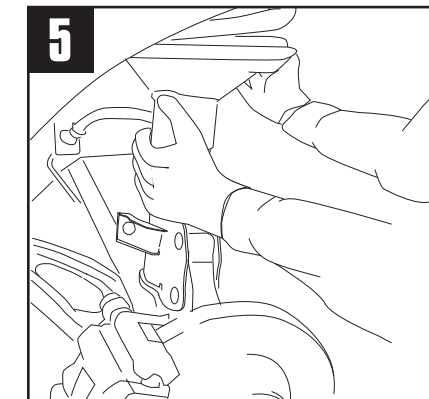
2 Remove the bolt that holds the brake line to the bracket.



3 Mark the knuckle and the upper bolt to the strut camber position. Remove the sensor harness bolt for vehicles equipped with an ABS system.



4 Lift the transverse arm area with the hydraulic jack, then proceed to loosen the 2 flanged nuts and bolts.

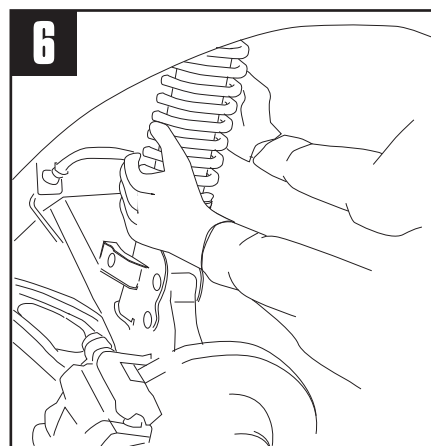


5 Hold the strut assembly while removing the three strut tower nuts that were loosened on step 1. Carefully remove the strut assembly from the vehicle.

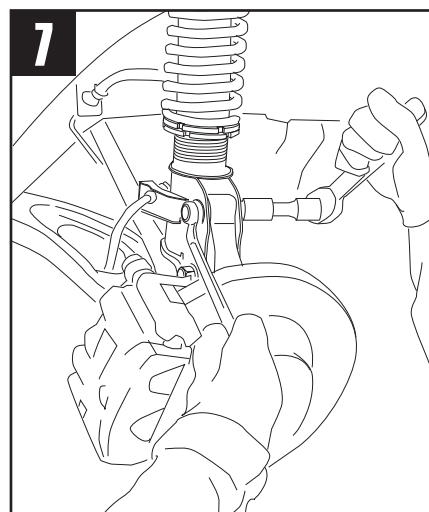
**WARNING** Always use both hands when handling strut assembly. Dropping the unit may cause serious injury & damage to the component.

**CAUTION** Use caution when removing strut assembly not to damage the ABS sensor harness.

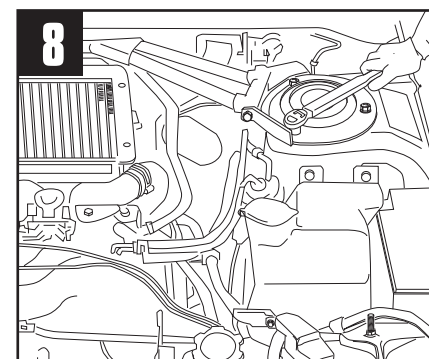
## INSTALLATION



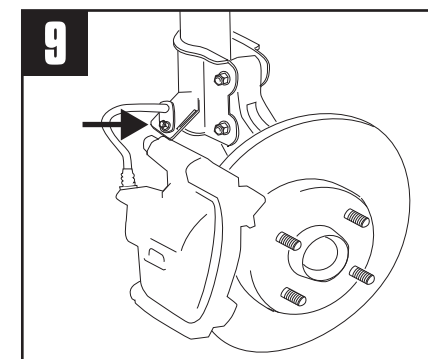
6 Position the Cusco suspension strut assembly to the right location. Hand tighten the three upper strut nuts.



7 Install the bottom bracket bolts by raising the hydraulic jack to the transverse link where the 2 holes line up. It is highly recommended to use new OEM hardware. The nuts are self locking. Torque according to the specification listed. (Torque Spec: 175N-m)



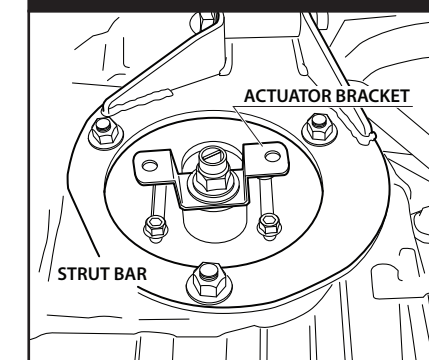
8 Install the 3 nuts for the strut tower section. (Torque Spec: 20N-m)



9 Remove the hydraulic jack from underneath the vehicle. Re-install the brake hose to its designated strut tab. (Torque Spec: 33N-m)

Re-install the ABS sensor harness to its designated bracket and torque down accordingly. (Torque Spec: 33N-m)

**WARNING** Allow atleast 5mm of clearance for the actuator bracket.



An e-con step motor bracket is mounted on top of the front suspension.

Make sure there is atleast 5mm of clearance for the area around the step motor. The bracket will rotate so please make sure there is enough clearance for 360 degree operation. ※ For e-con step motor mounting instructions, please see e-con installation manual.