

HOTCHKIS
HOTCHKIS
SPORT SUSPENSION

Part # 19445
Scion FR-S -- Subaru BRZ
Sport Coil Spring Kit



Thank you for your purchase from our new line of Scion parts. Please call us at 877 - 4NO - ROLL if you have any questions regarding the service or installation of your Hotchkis Performance products.

PLEASE READ THE ENTIRE MANUAL BEFORE STARTING. SPECIAL TOOLS MAY BE REQUIRED TO PROCEED.

Front Coil Spring Install

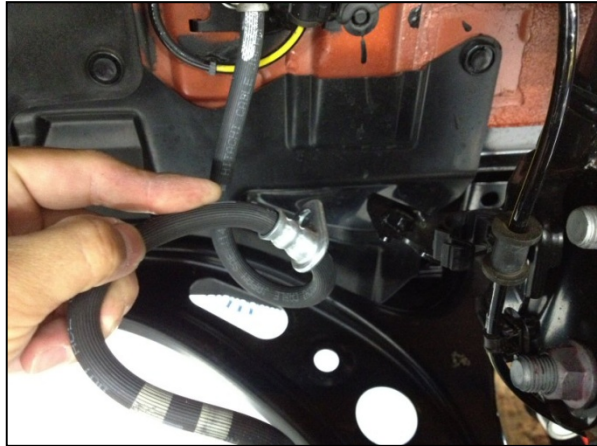
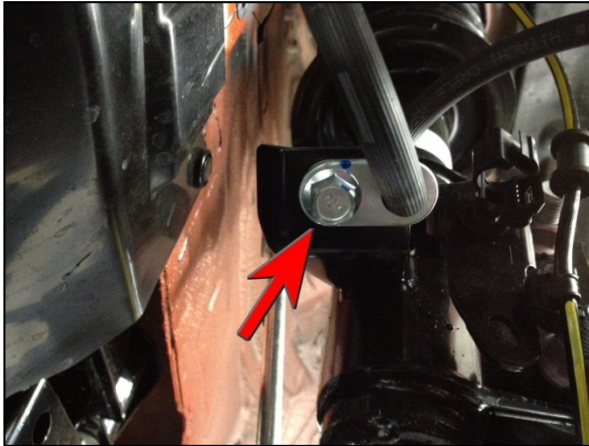
1F. Raise front end of the vehicle using a floor jack or other lifting device. Chock the rear wheels to prohibit the vehicle from rolling. Secure the car using jack stands for safety.



2F. Remove the front wheels. (19mm socket)



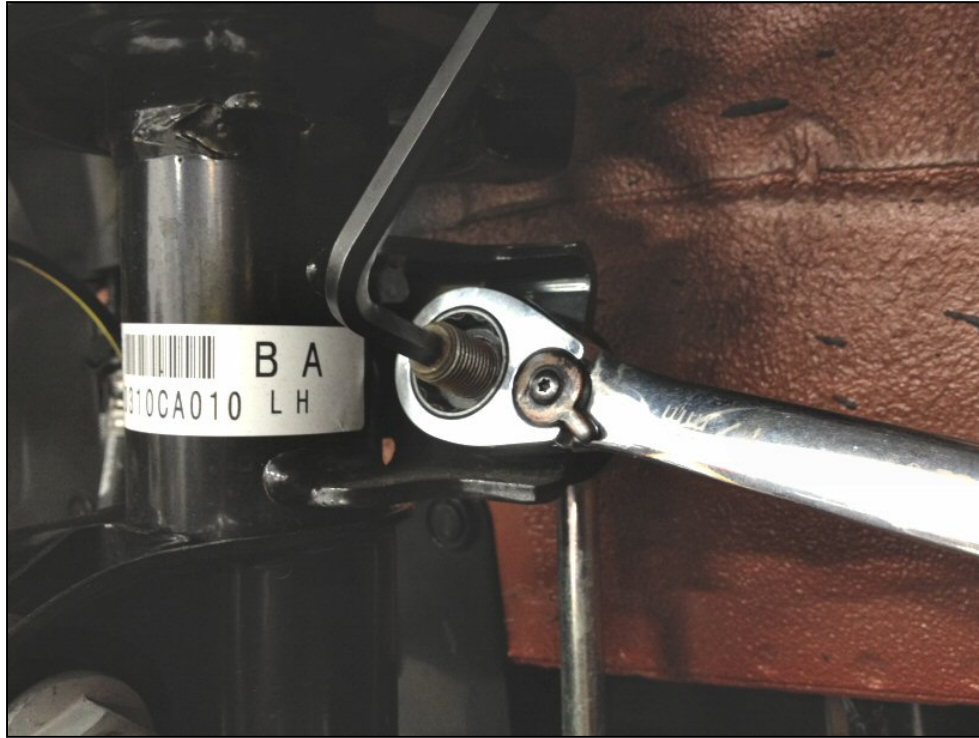
3F. Unbolt the brake line tab attached to the strut body. (10mm socket or wrench)



4F. Use a slotted screwdriver and unclip the barrel clip holding the abs to the strut. Next, using needle nose pliers, compress the plastic clip on the inside of the strut bracket to release the ABS/speed sensor line from the strut body.



5F. Unfasten the stabilizer bar end link from the strut (17mm socket/wrench)

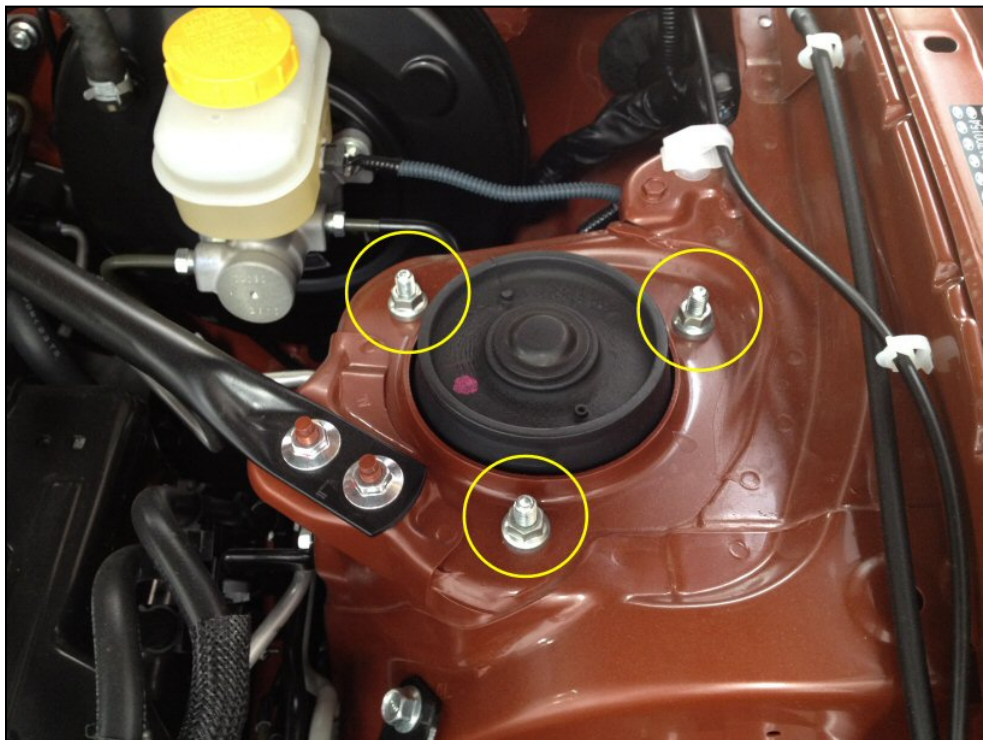


6F. Unbolt the two strut bolts. Keep track of the top bolt and the bottom bolt. They are different. The upper bolt has a larger shoulder than the lower bolt. (19mm socket and 19mm wrench)





7F. Unbolt the 3 strut top nuts. Support the strut from the bottom since these are the last fasteners holding the strut assembly to the vehicle. (12mm socket)



8F. Remove the strut assembly from the vehicle. Mount assembly in a spring compressor.



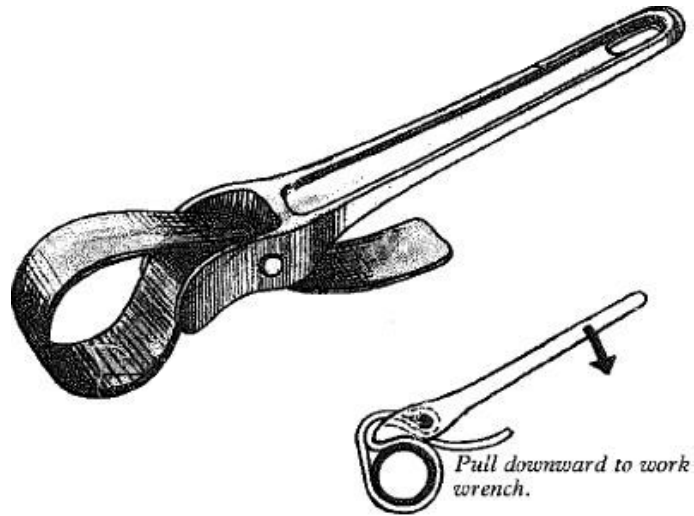
9F. Pop the rubber cap off to expose the strut shaft nut. Secure the spring tension using the spring compressor. Using a pass-through 17mm socket wrench and 6mm allen key, carefully unfasten the strut shaft nut. (Method 1)



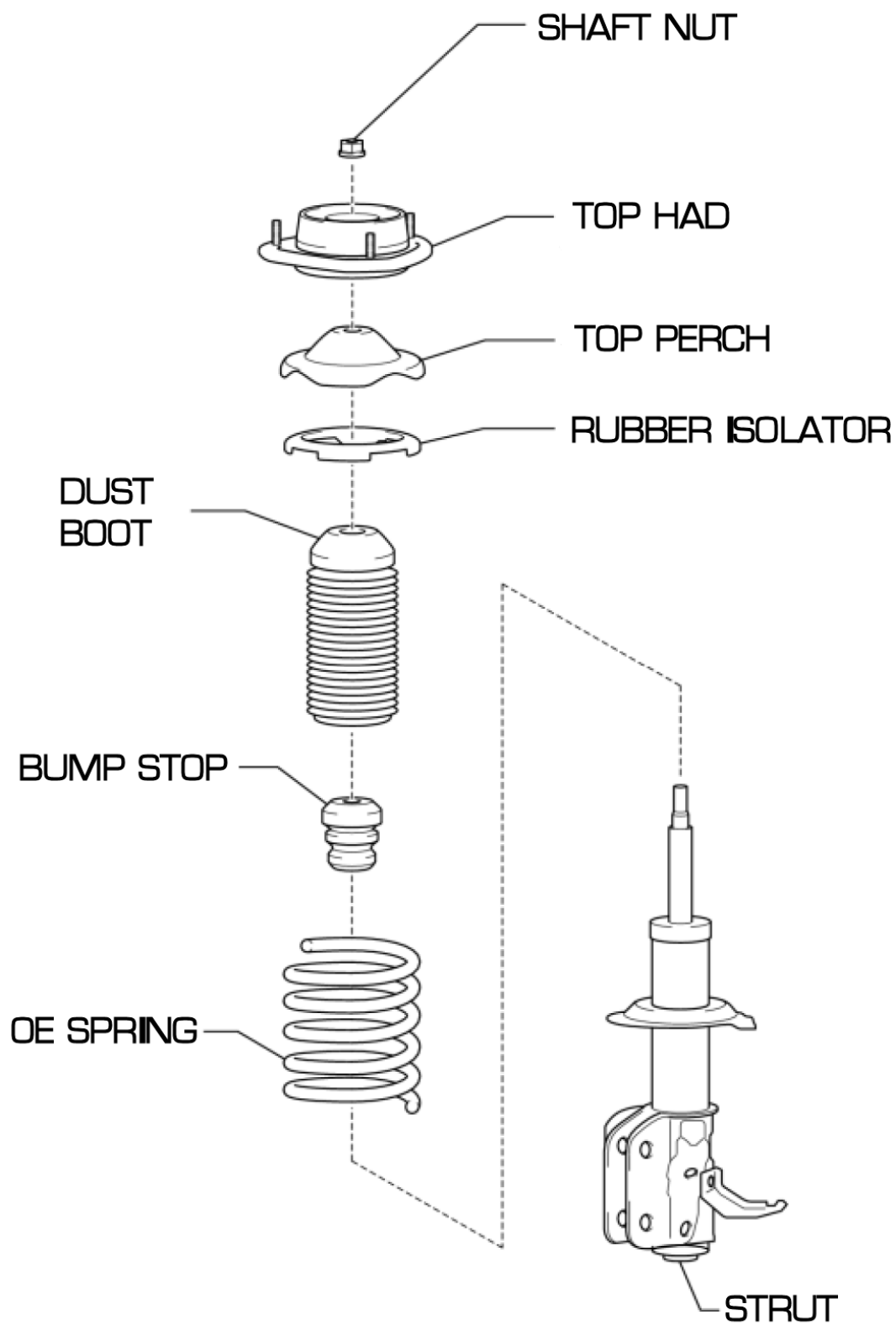
Method 1 GearWrench Pass-thru Ratchet:



Method 2 Strap Wrench



If a pass through ratchet is not available, you can use a strap wrench to hold the strut shaft as you loosen the shaft nut with a normal 17mm socket. Do not scratch the shaft surface.



10F. Release the tension in the spring compressor. Remove the top hat. Remove top spring perch. Remove OE coil spring. Remove boot and bump stop.





11F. Cut the OE bump stop as shown in the picture.



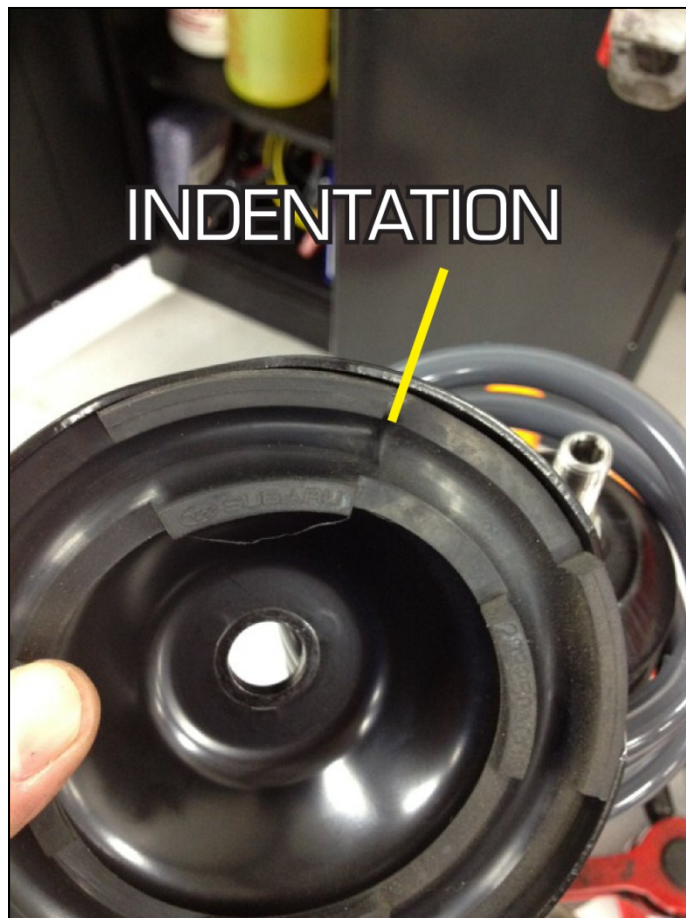
12F. Reinstall the cut OE bump stop onto the strut shaft. Reinstall the plastic boot as well.



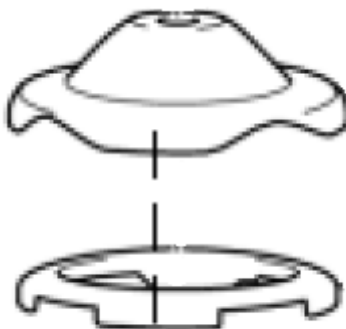
13F. Install Front Hotchkis Spring onto the strut. (part # 19830404)



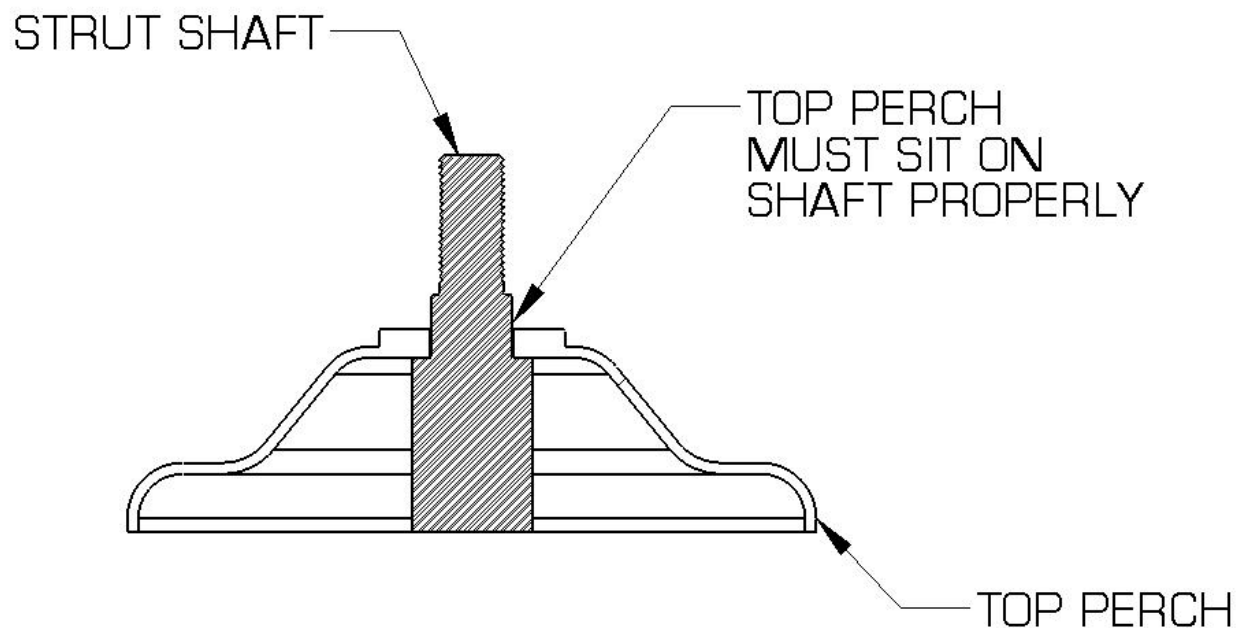
14F. Install the top perch onto the top of the coil. This part is tricky. Make sure the rubber isolator indentation made by the stock coil matches the new coil.



Also make sure the top metal perch and isolator are clocked as shown below.

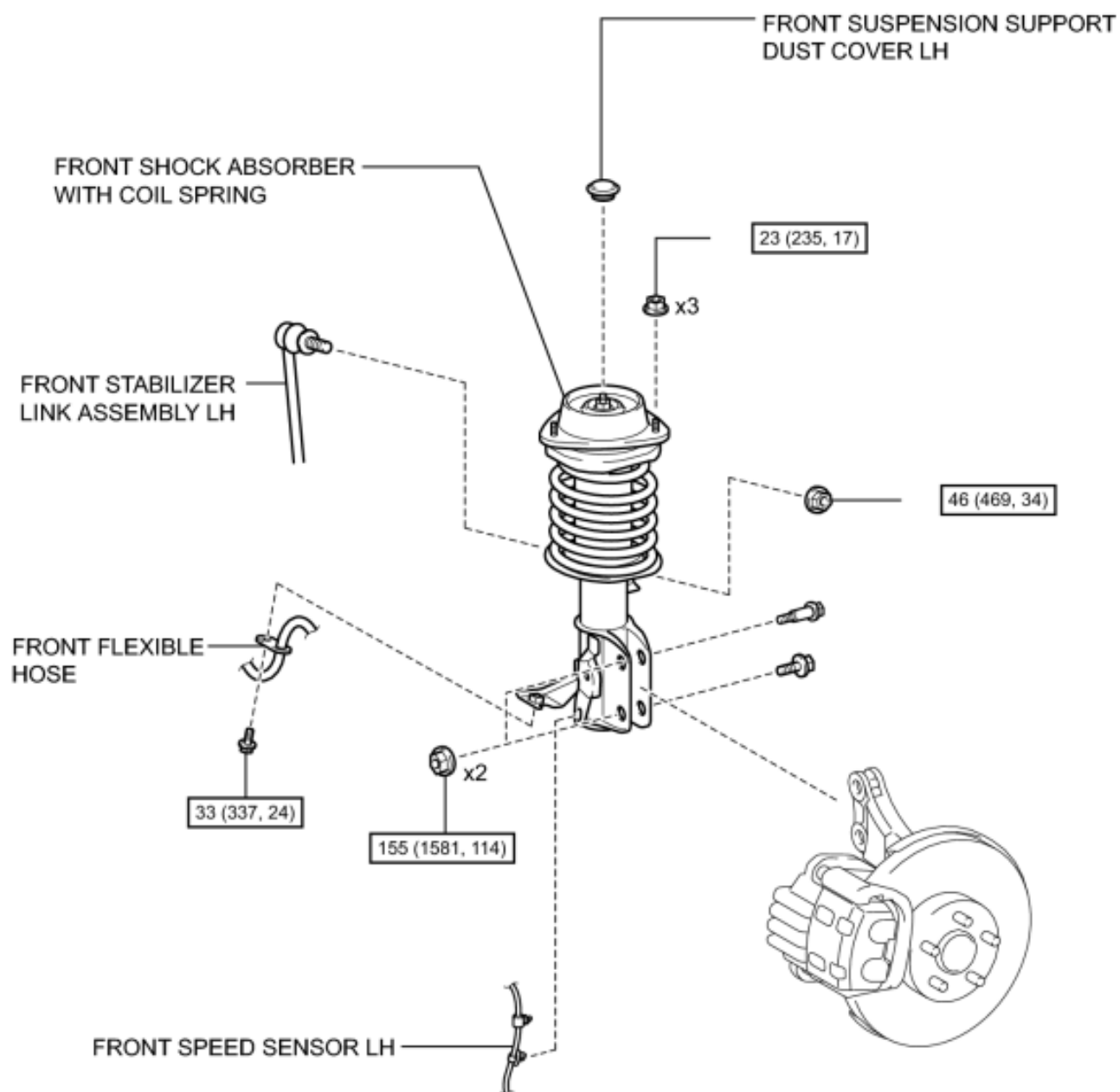


15F. Compress the coil with the spring compressor. It is imperative that the top metal perch sets into shaft properly. Install the bearing hat.



Tighten the strut shaft nut in the same manner as removal. (17mm pass through wrench & 6mm allen key)

16F. Repeat steps 1F-8F in reverse order. Torque bolts and nuts according to the diagram below:



N*m (kgf*cm, ft*lb) : Specified torque

Rear Coil Spring Install

- 1R. Raise rear end of the vehicle using a floor jack or other lifting device. Chock the front wheels to prohibit the vehicle from rolling. Secure the car using jack stands for safety.
- 2R. Remove the rear wheels.(19mm socket)



- 3R. Locate the rear lower control arm (LCA). Unbolt the stabilizer bar end links from the LCA. (14mm socket & wrench)



4R. Unbolt the rear shock from the LCA. (17mm socket & wrench)



5R. Unbolt the rear upright from the LCA. (17mm socket & wrench)



6R. Loosen, but do not remove the inner pivot bolt. (17mm socket & wrench) This will allow the arm to swing down and out of the way.



7R. Wash your hands! You will be touching interior parts and your hands are no doubt pretty dirty from those LCA's.

8R. Make your way towards the trunk. Open the trunk and remove the trunk mat and trunk panel to expose the spare tire.



9R. Unclip the 3 plastic push clips securing the plastic center panel. (slotted screwdriver or 90 (slotted screwdriver or 90 degree pick) Remove plastic panel



10R. Unclip the 4 plastic push clips on each felt side panel in the trunk. Remove felt panels from the trunk.





11R. Unfasten the 2 shock nuts in the trunk. Have an assistant hold the shock assembly while you undo these nuts. (14mm socket)



12R. Remove the shock assembly from the vehicle. Mount assembly in a spring compressor.

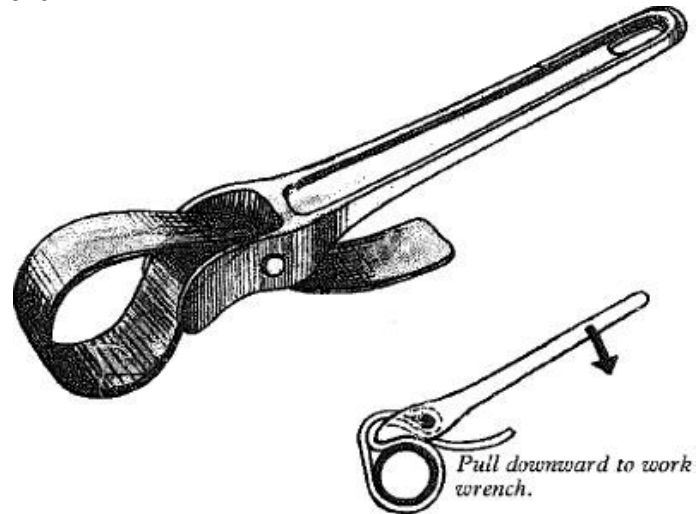


13R. Secure the spring tension using the spring compressor. Note clocking of the top hat. You will need to reinstall the hat in the same orientation as before. Use whiteout or marker to mark the top hat and shock body so you can line them up again. Using a pass-through 14mm socket wrench and 5mm allen key, carefully unfasten the shock shaft nut. (Method 1)

Method 1 GearWrench Pass-thru Ratchet:

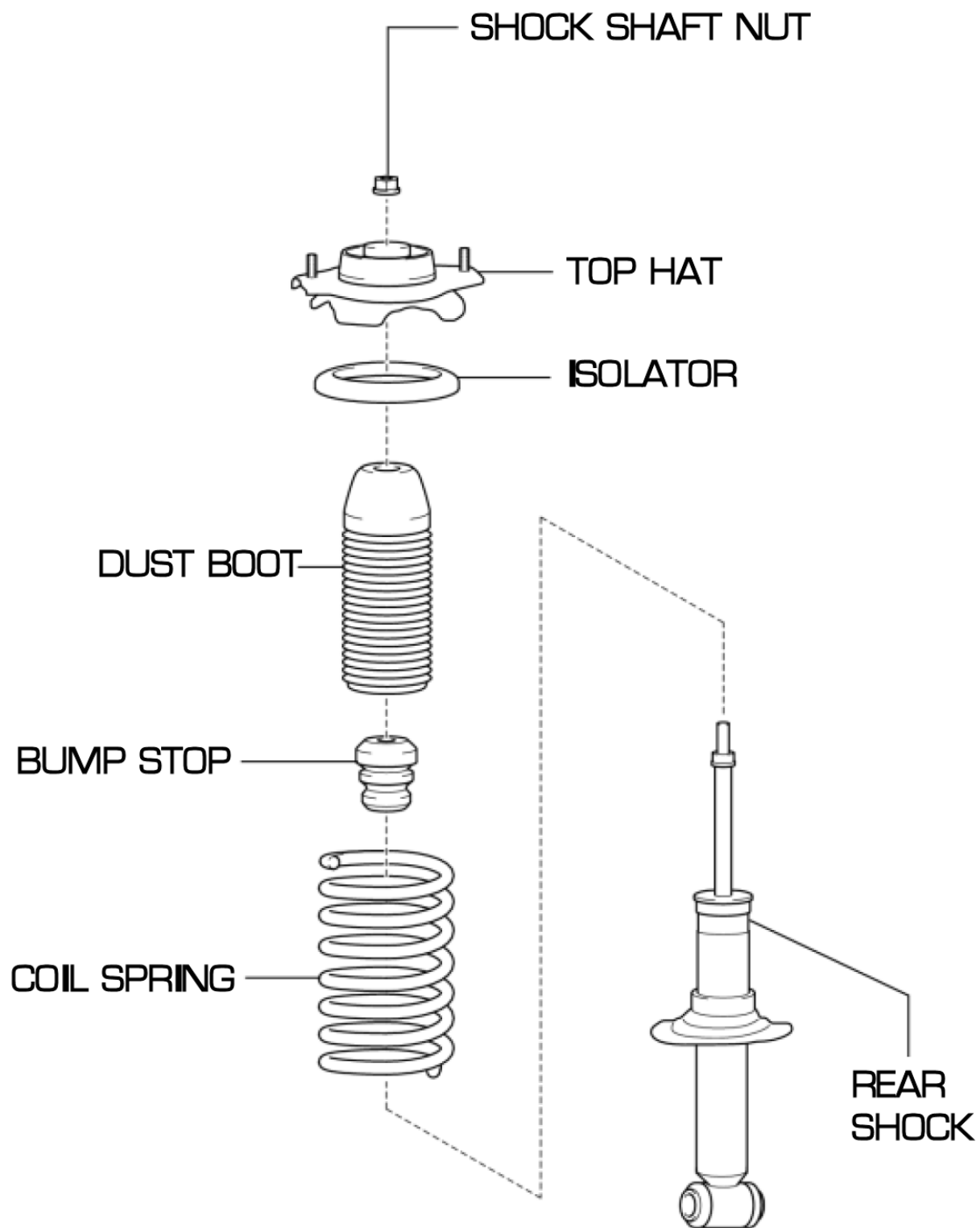


Method 2 Strap Wrench



If a pass through ratchet is not available, you can use a strap wrench to hold the strut shaft as you loosen the shaft nut with a normal 14mm socket.





14R. Release the tension in the spring compressor. Remove the top hat. Remove OE coil spring. Remove boot and bump stop.





15R. Cut the OE bump stop as shown in the picture.



16R. Reinstall the OE bump stop onto the shock shaft. Reinstall the plastic boot as well.



17R. Install Rear Hotchkis Spring onto the shock. (part # 19930404)



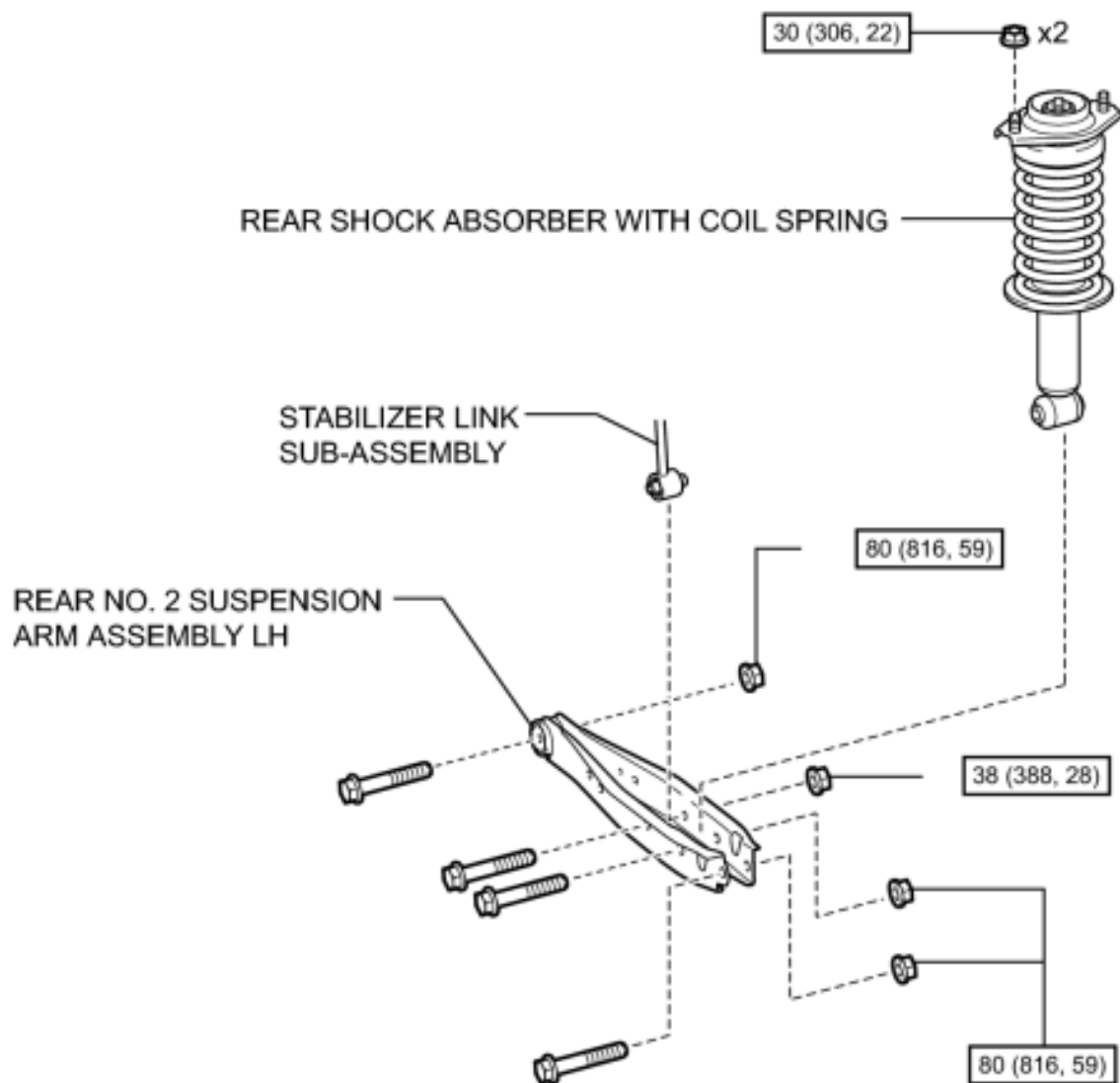
18R. Install the top perch onto the top of the coil. Make sure the rubber isolator indentation made by the stock coil matches the new coil. Also make sure the top hat is in the same orientation as you marked with whiteout.



19R. Compress the coil with the spring compressor and install the top bearing hat. Tighten the strut shaft nut in the same manner as removal. (14mm pass through wrench & 5mm allen key)



20R. Repeat steps 1R-12R in reverse order, EXCEPT 6R. See the last section in this instruction manual titled "relieving bushing preload". Torque bolts and nuts according to the diagram below:



N*m (kgf*cm, ft*lb) : Specified torque

Relieving Bushing Preload

I'm sure you thought you were done with the install right? There is one more thing you must do to achieve the complete 1" drop from your Hotchkis kit.

From factory the suspension arms are torqued down at specific angles in order for the control arm bushings to operate with the least amount of stress and bind. When you lower the vehicle, the inner bushings on the lower control arm should be reset so there is no preload in the bushings. Preload can alter ride height and cause your car to be higher than intended.

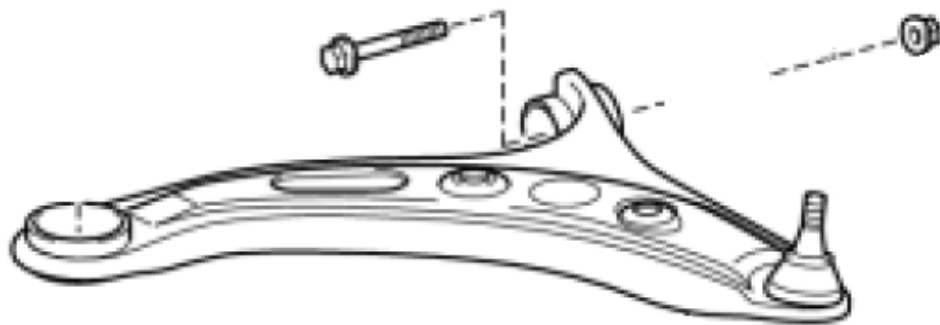
1. There are basically two bolts to worry about. Let's talk about the front end first. The lower control arm has 2 inner mounting bushings. The front bushing is a horizontal style bushing and does not require any preload resetting. The rear bushings are a normal hinge type bushing and this is the bushing that will require resetting. Loosen this bolt on both arms. Do not remove, just loosen a few turns to relieve the preload. At this time, do not tighten these bolts. (17mm socket & wrench)

2. For the rear, there are two control arms to be concerned about. The lower lateral control arm and the diagonal link. The inner pivot bolt on the lower lateral control arm should be loose if you followed step 20R. If not, loosen this bolt, but do not remove. The outer bolt on the lower lateral control arm is attached to a ball joint type joint, so it does not build up preload. Do not worry about the upper control arm.

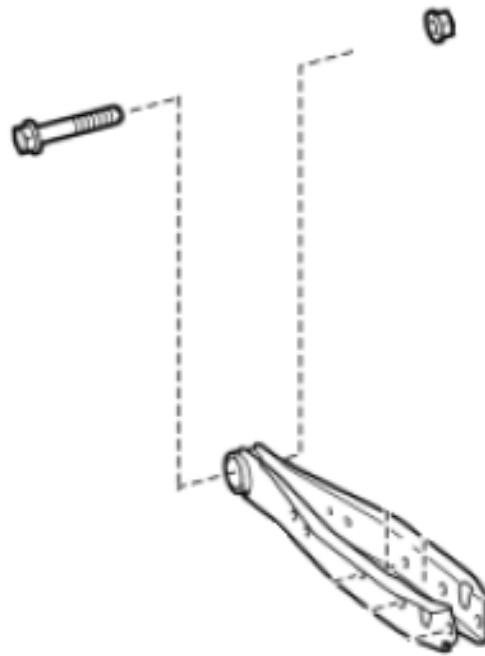
The diagonal link will need to have both ends loosened. Again, do not remove these bolts. Only loosen. (17mm socket & wrench)

The next step will require an alignment rack (preferable) or floor ramps. With all of the bolts discussed loosened, lower the car back on the ground and roll the car about 10 feet back and forth. Drive up onto the alignment rack or floor ramps and tighten up all of the bolts. The point of this exercise is to tighten up the bolts with the suspension arms at the new lower ride height angles.

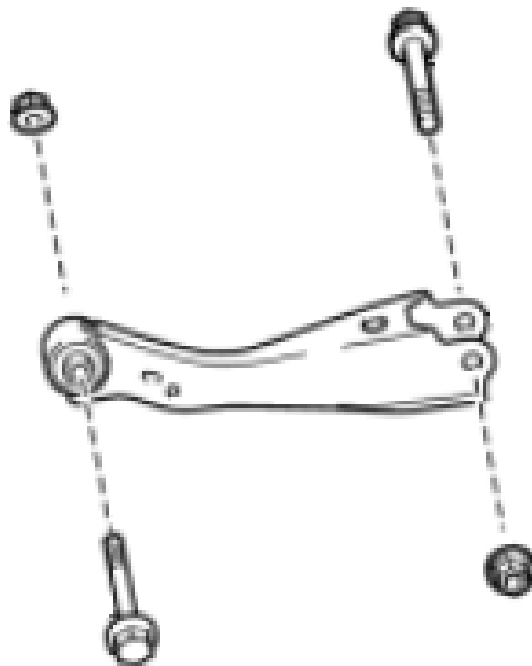
Front lower control arm Rear Bolt): 63 ft-lbs



Rear lower lateral control arm (Inner Bolt): 81 ft-lbs



Rear diagonal Link (both bolts): 81 ft-lbs



Installation is complete

More Hotchkis products for your Scion FR-S and BRZ!

- Front and Rear Adjustable Stabilizer Bars (Sway bars)
 - Front is 2-hole adjustable
 - Rear is 4-hole adjustable
- Camber/Caster Plates
 - Includes strut mount bolts to achieve 3° of negative camber for more cornering grip
 - Built in caster for added stability and camber gain while steering
- Front 3-point All Aluminum Strut Brace
 - No hinges. All welded
 - Light-weight aluminum
- Rear Camber Links
 - Adjust your rear camber when lowering your car
 - Great for racing or prolonging tire life
- Harness Bar + Rear Shock Tower Brace
 - Easily add a safety harness for autocrossing and track
 - Integrated with the rear shock tower brace
 - Easily removable for rear seat use

Hotchkis Performance LLC

Return Policy & Limited Warranty

Effective December 1, 2010 all Hotchkis products must be registered to qualify for warranty at www.hotchkis.net or via the mail-in warranty card, included with the product, within 30 days of the original purchase date.

IMPORTANT: This warranty supersedes all other warranties included with this product.

Return Policy

We want you to be completely satisfied with your Hotchkis Performance product. For products, presenting signs of shipping damage please contact the freight carrier immediately. All our products are guaranteed to be free from manufacturer's defects. If your order arrives with a manufacture defect, please contact our Customer Service Department at (562) 907-7757. You will be assigned a Returned Goods Authorization Number (RGA). The package you return must show the RGA on the outside of the package, include the original invoice and be shipped prepaid to our facility. The product has to be unused and in its original packaging materials. Exchanges or refunds made after 30 days will be subject to a 20% restocking charge. If you purchased your Hotchkis Performance product from an authorized dealer, you are still covered by this return policy. All returns however, should be made to your dealer, not to Hotchkis Performance directly.

Limited Warranty

Hotchkis Performance offers a Limited Warranty against defects in materials and workmanship for the term of 36 months (3 years) from the date of purchase of this product. This Warranty only applies to the original retail purchaser who retains ownership of the vehicle on which the product was originally installed. If the product is determined to be defective, Hotchkis Performance will repair, replace or refund the purchase price of the defective product at Hotchkis Performance's sole discretion, which shall fully satisfy and discharge any and all warranty claims. Any repaired or replaced product will be returned to the sender excluding the cost of freight. Products must be registered to qualify for warranty at www.hotchkis.net or via the mail-in warranty card, included with the product, within 30 days of the original purchase date.

Exclusions from Warranty

Items offered but not manufactured by Hotchkis Performance are warranted according to the manufacturer's terms and are not covered by this limited warranty. Hotchkis Performance shall not be responsible for any labor, removal, installation, re-installation or maintenance costs. This warranty does not cover the cosmetic finish or plating of any product or any normal wear and tear to any product including, but not limited to bushings, brackets, end-links, hardware, steering components, shocks or springs. In addition, this warranty does not apply to any products that have been:

Improperly installed or installed by someone other than a qualified, licensed auto mechanic experienced in the installation and removal of suspension products;

Improperly serviced, misused, or modified, altered or subjected to abuse, negligence, accident or collision;

Installed in any vehicle that has been modified;

Installed on any vehicle that has carried loads in excess of automobile manufacturer suggested weight limits; or

Installed on any vehicle that has been subject to abnormal or excessive use, including rallying, racing, or racing-type activities or off-road use.

Limitation of Warranty

This limited warranty is the entire and only warranty for the products and may not be modified or supplemented by any other person or company in any form. Any description of the products, by anyone, is for the sole purpose of identifying them and is not part of the basis of the bargain, and does not constitute a warranty that the products will conform to that description. The statements of any salesperson do not constitute part of this limited warranty and cannot be relied upon as a warranty.

THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. ANY IMPLIED WARRANTIES ARE DISCLAIMED TO THE FULLEST EXTENT PERMITTED BY LAW. THIS WARRANTY DOES NOT COVER



CONSEQUENTIAL DAMAGES, LOSS OF TIME OR REVENUES, INCONVENIENCE, LOSS OF USE OF THE VEHICLE, DAMAGE TO THE VEHICLE OR COMPONENTS OF THE VEHICLE, ANY OTHER TYPE OF CONSEQUENTIAL DAMAGES, OR OTHER INCIDENTAL OR INDIRECT DAMAGES. HOTCHKIS' MAXIMUM LIABILITY UNDER THIS WARRANTY SHALL IN NO EVENT EXCEED THE PURCHASE PRICE OF THE PRODUCT.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages and in such states the above limitations or exclusions may not apply. This limited warranty gives the purchaser specific legal rights and the purchaser may have other rights that may vary from state to state.

Technical Information

Hotchkis Performance makes every effort to ensure that you are provided with the most accurate and up-to-date technical information. However, all technical information is approximate and may vary upon application. Additional suspension components may be needed in some applications, depending upon the make, model, engine and chassis of the vehicle. Hotchkis Performance is not responsible for any consequences resulting from manufacturer's technical mid-year changes. Hotchkis Performance products should only be installed by a qualified, licensed auto mechanic experienced in the installation of such products.

Warranty Claim Procedure:

The answer to ALL the following questions should be YES before making a warranty claim:

Did you register the product at www.hotchkis.net or via the mail-in warranty card within 30 days of purchase?

Is the product appropriate to your application?

Did you carefully and thoroughly read the instructions provided along with the product?

Do you have the original invoice or sales receipt?

Is the return date within 36 months from the purchase date?

Are you the original purchaser?

Was the product properly installed by a qualified, licensed auto mechanic?

Has the product been installed on the original vehicle on which it was installed at all times?

Is the product unmodified and clean?

Is the reason for return a legitimate product defect?

If the answer to all these questions is YES, please contact our Customer Service Department at (562) 907-7757. You will be given a Returned Goods Authorization Number (RGA) valid for 60 days. You will also be asked to ship the product prepaid to our facility. All shipments MUST be (i) prepaid, (ii) include the original invoice or sales receipt, (iii) show the RGA on the outside of the package and (iv) include your name, address, make and model of the vehicle, and a brief description of the claimed defect, including the circumstances under which the defect occurred. If the warranty claim is deemed valid then Hotchkis will estimate shipping costs to return the repaired or replacement part and contact you for payment. Hotchkis's Limited warranty requires that any repaired or replaced product will be returned to the sender excluding the cost of freight. Warranty related inquiries should be sent to the following address:

HOTCHKIS PERFORMANCE, LLC
C/O CUSTOMER SERVICE
8633 Sorensen Avenue
SANTA FE SPRINGS, CA 90670

Hotchkis Performance will not accept product returns without the RGA number, receipt and the information described above. C.O.D. or collect shipments will be refused. Once the returns are received at Hotchkis Performance, we will evaluate the products, verify the sales receipt, and investigate the warranty claim. Any repaired or replaced product will be returned to the sender.

Effective December 1, 2010. This return policy and limited warranty supersedes all previous policy and warranty statements. Policies and warranties are subject to change without notice. Hotchkis Performance is not responsible for printing errors.