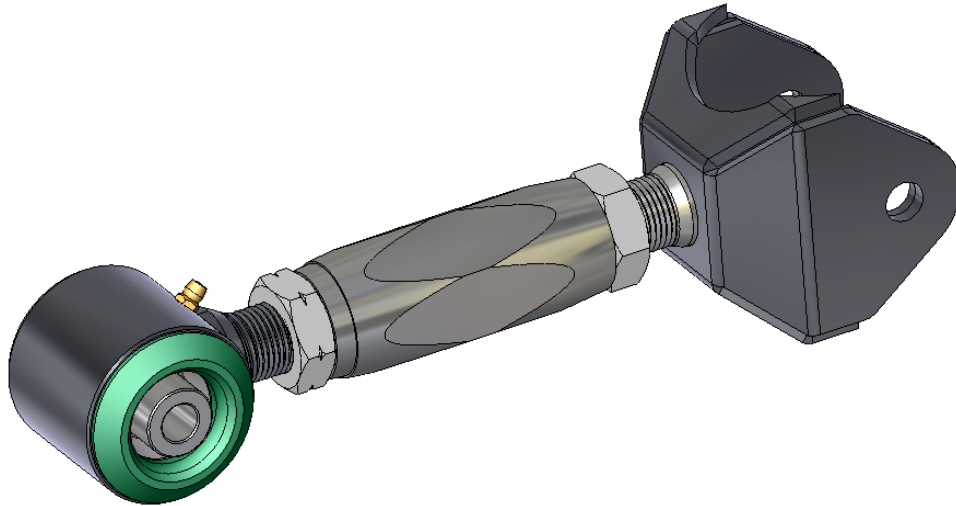


# **HOTCHKIS** **HOTCHKIS** **SPORT SUSPENSION**

*1204AA*  
*79 - 04 Ford Mustang*  
*Double Adjustable*  
*Trailing Arms*



**Thank you for your purchase from our new line of Ford parts.**  
**Please call us at (877) 4NO-ROLL if you have any questions**  
**regarding the service or installation of your Hotchkis products.**  
Visit us online @ [www.hotchkis.net](http://www.hotchkis.net)

#### Special Tools Required for this Installation

- 4 post lift or alignment rack preferable
- Air Chisel, Angle Finder (Digital Preferred), Dead blow hammer

### *REMOVAL OF STOCK UPPER TRAILING ARMS*

1. There are various methods for installing your new upper trailing arms. Preferences in methods are mainly based on the way you remove the old rubber Can Bushings from the differential. Some may find it easier to detach the entire differential (rear end) from the car in order to remove the Can Bushings. This makes it easier to get at the Can bushings for removal and replacement. The only problem with this method is that it requires much more to be disconnected e.g. brake lines, parking brake, axle u-joint, and lower trailing arms. However, it is possible to remove the Can Bushings without taking the rear end off the car, but it's tricky.

In this manual, we will describe how to replace the Can Bushings without removing the rear end from the car.

2. First, raise the rear of the vehicle so that the rear wheels are off the ground. If you are using a 2-post lift, support the differential with a hydraulic tranny jack.

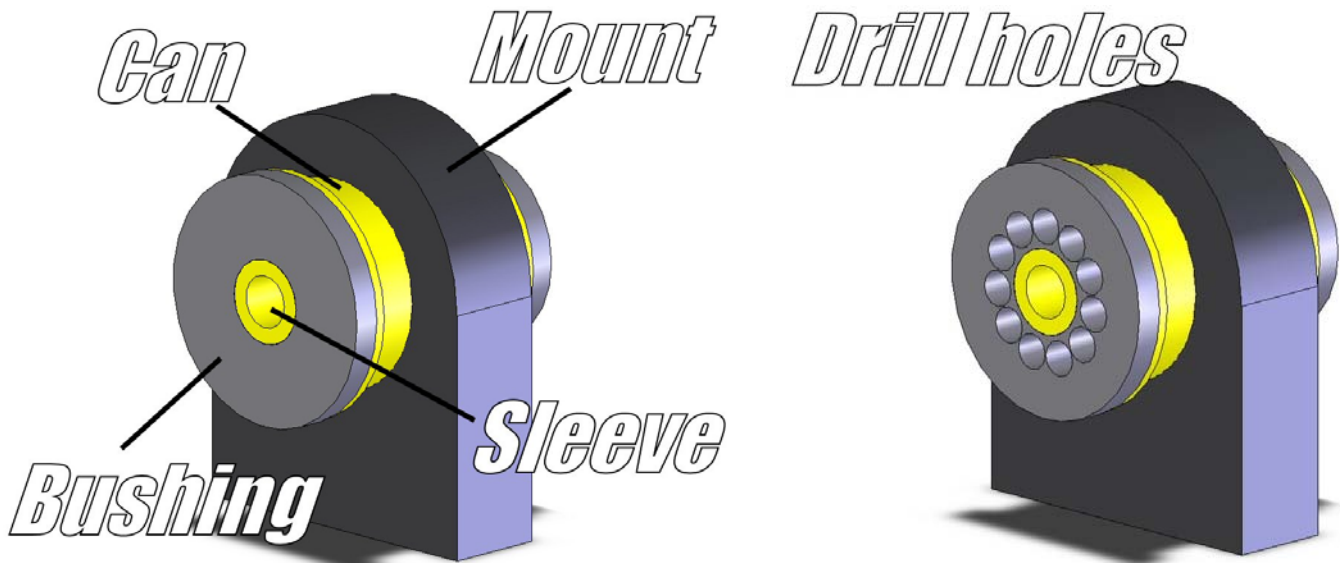


3. Remove the stock upper trailing arms.

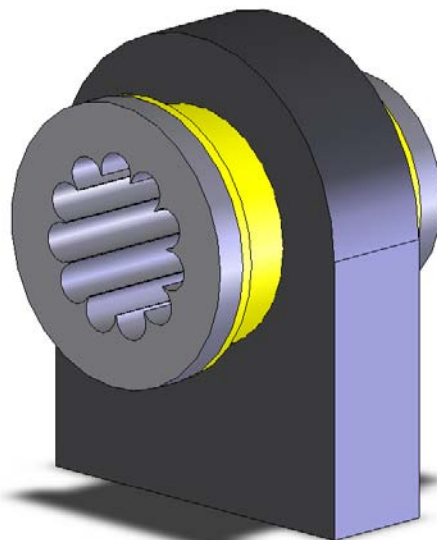


Now here comes the difficult part; removing the stock Can Bushings. These are the bushings that connect the aft end of the upper trailing arms to the differential.

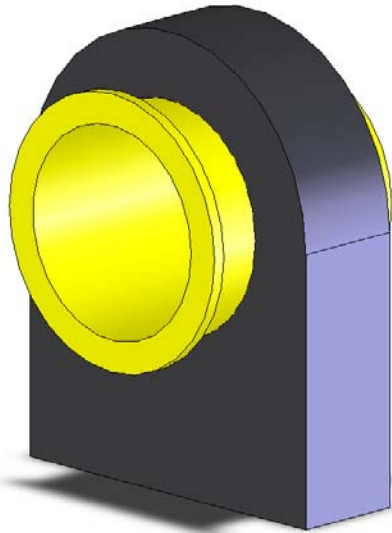
- First step is to drill out the rubber bushing. Drill a sequence of holes in a circular pattern in the rubber.



- Once the rubber surrounding the inner metal sleeve is pretty much drilled out, you should be able to punch out the metal sleeve.

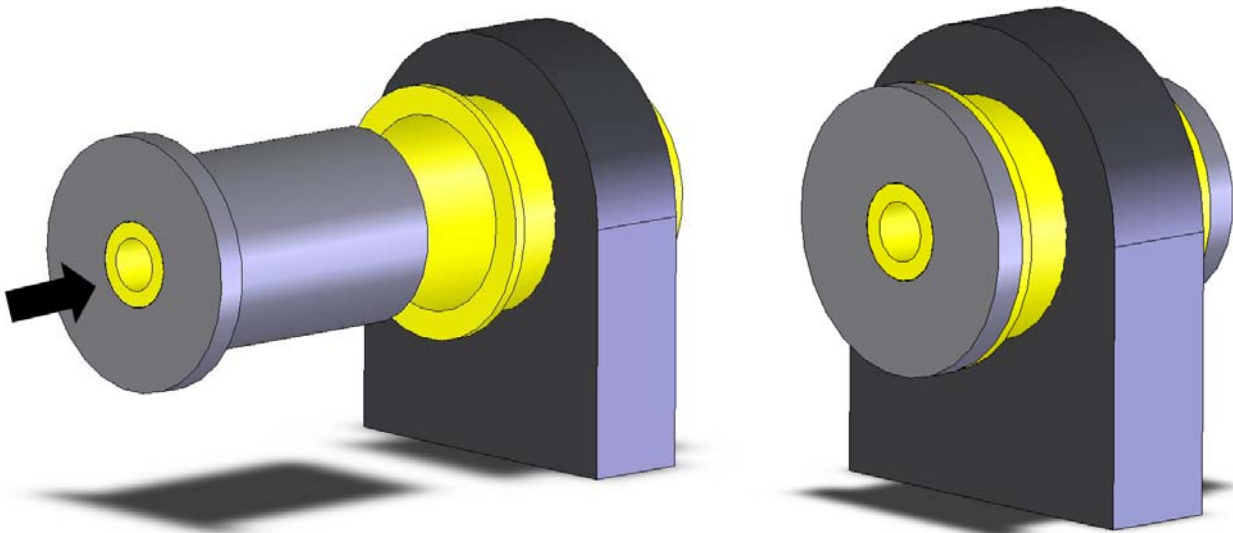


- Scrape or pull out the remaining rubber in the bushing can. All that should be left is the metal can

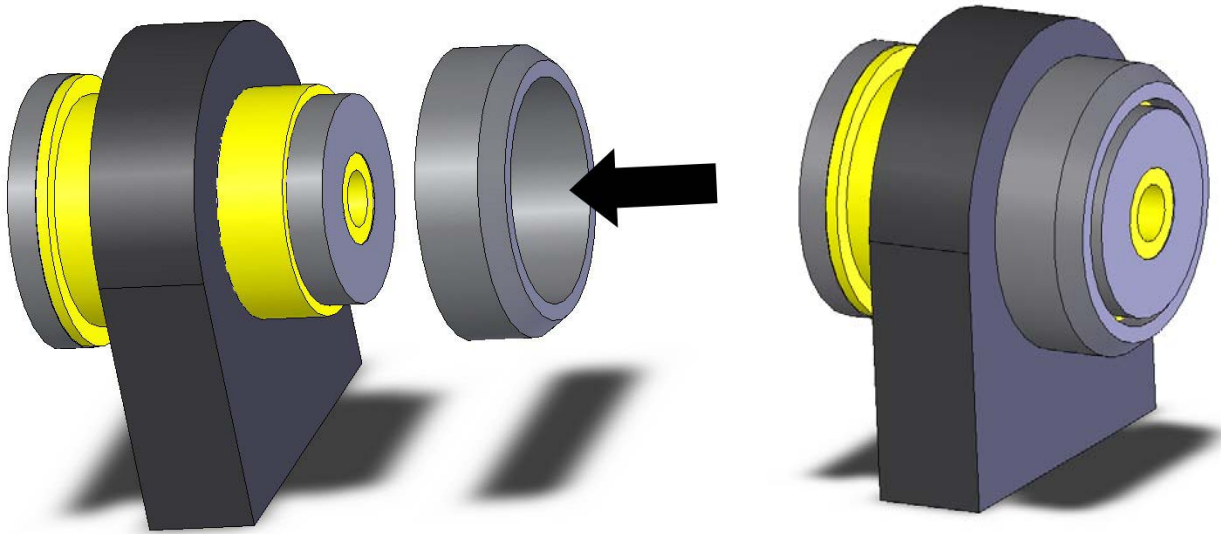


### *INSTALLING NEW UPPER TRAILING ARMS*

4. Lube the polyurethane bushings and push them into the can. You may need to use a dead blow hammer or large channel locks to get the bushing in all the way. It's sometimes easier to remove the steel sleeve from the polyurethane before pushing it in the can.



5. Install the thrust washer onto the unflanged side of the can.



6. Set the Hotchkis Trailing Arms to the same length as the stock arm. This will give us a good starting point before we adjust for pinion angle.



7. Install your new Hotchkis adjustable upper trailing arms in the same manner as the stock removal. Make sure the grease fittings on the front end are facing downward. Use all new hardware provided in your kit. Grease any polyurethane surface that contacts metal with the provided lube.

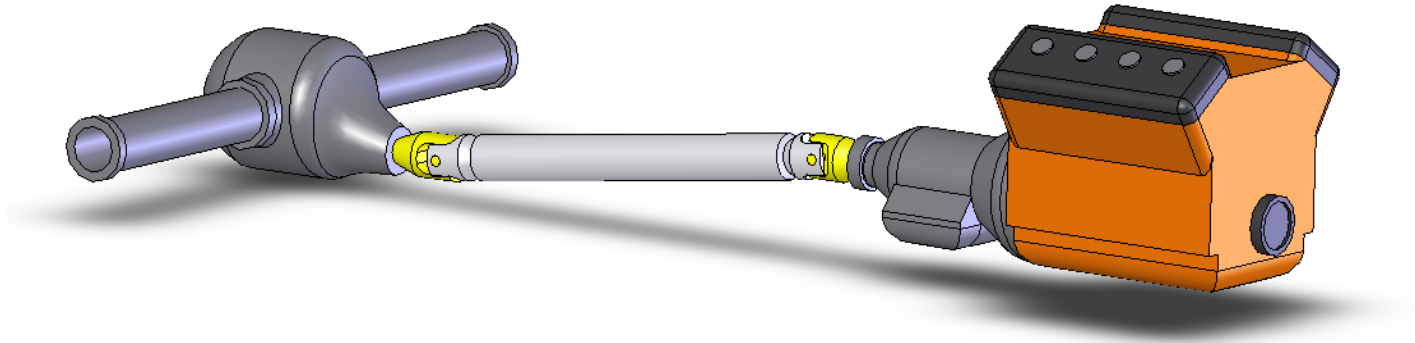


7. Make sure all hardware is fully tightened.

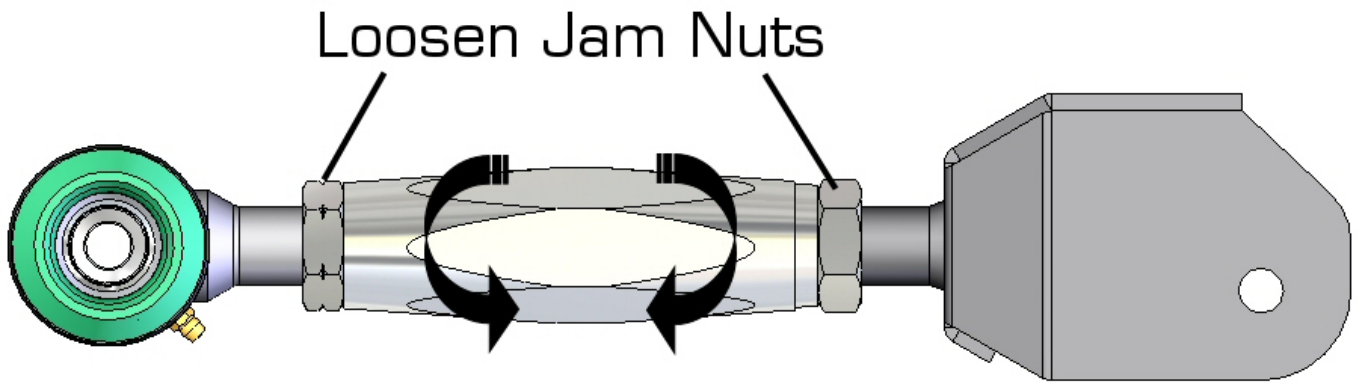
# SETTING PINION ANGLE

It may be necessary to set pinion angle after installation of your new Hotchkis upper trailing arms.

First of all, what is pinion angle? Pinion angle is basically the angle between the centerline of the differential pinion and the drive shaft centerline. This angle changes during acceleration and braking. If the pinion angle is excessive, then vibration and increased U-joint wear will occur.

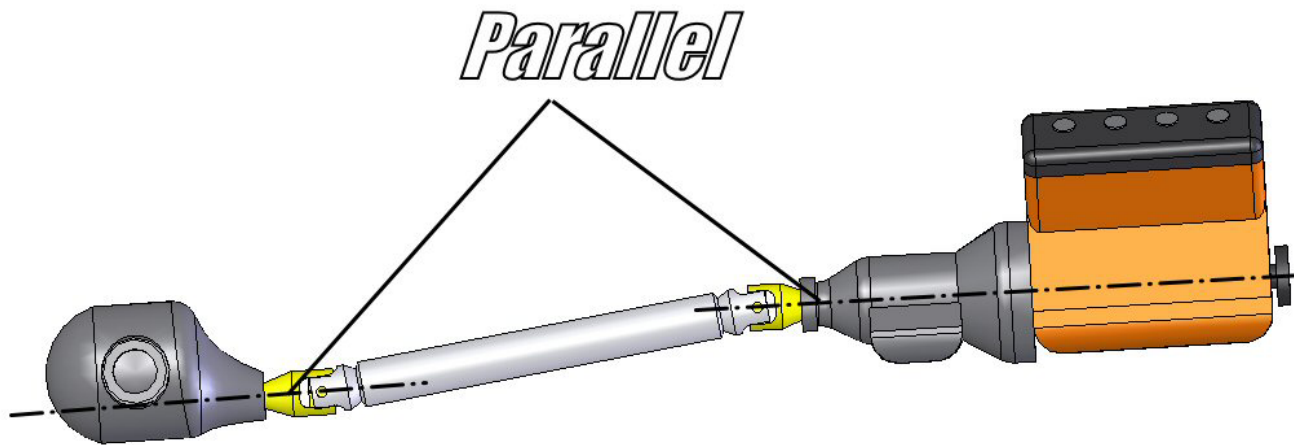


The Hotchkis double adjustable trailing arms allow you to adjust the pinion angle with ease. Simply loosen the two jam nuts and rotate the aluminum turnbuckle to lengthen or shorten the arm. So, how does one set the pinion angle?



The simplest rule of thumb is:

**The centerline of the differential pinion should be parallel to the centerline of the engine's crankshaft without being the same line.**



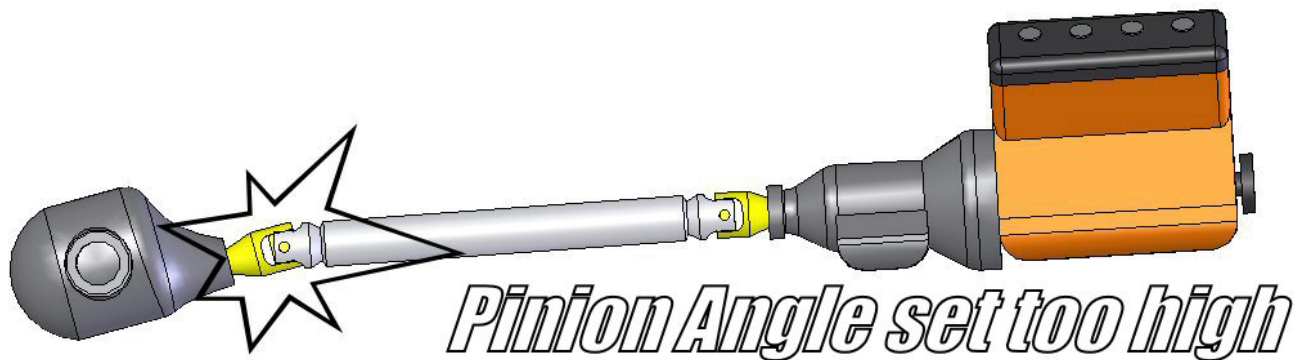
FYI... The centerlines should not be the same line because the U-joints would wear in the same areas all the time. Having an angle at the joint itself allows the joint to articulate and wear evenly along the entire bearing race.

So, the first thing to do is to find out the angle the engine's crankshaft is sitting at. One way to do this is to set a digital angle finder on the front crank pulley or harmonic balancer. Record this angle. Next, set the digital angle finder on the front flat face of the differential yoke. This angle needs to be the same as the recorded crank angle. Adjust your Hotchkis trailing arms to obtain the angle needed.

Tighten all hardware and drive the car. Test for driveline vibration by accelerating.

**If there is vibration during acceleration, then the pinion angle is set too high!**

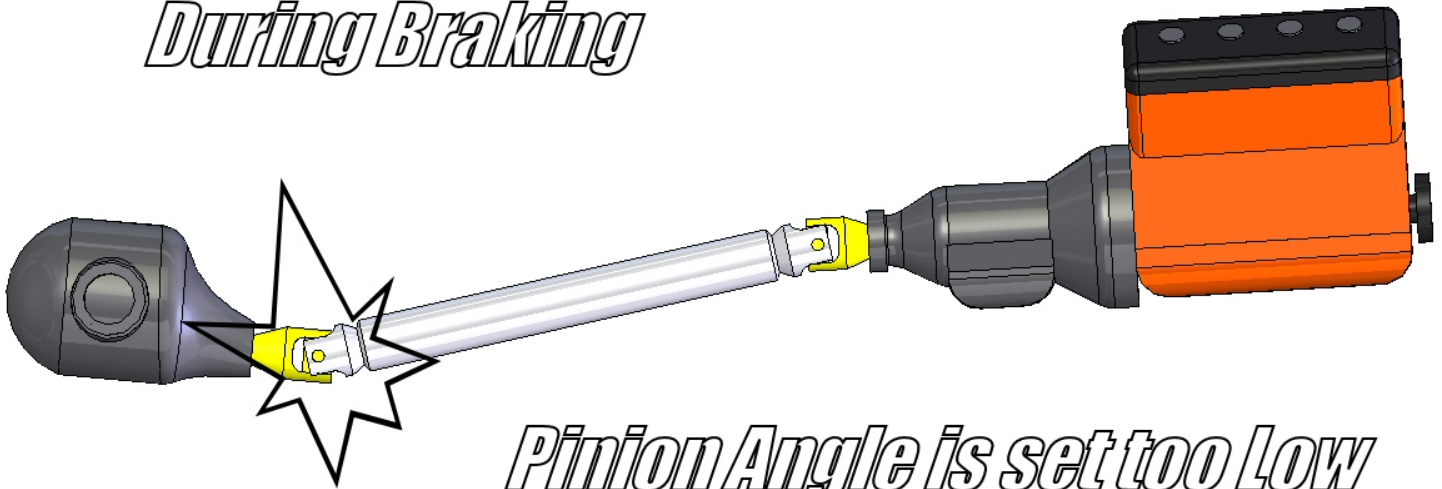
*During Acceleration*





If there is vibration during braking, then the pinion angle is set too low!

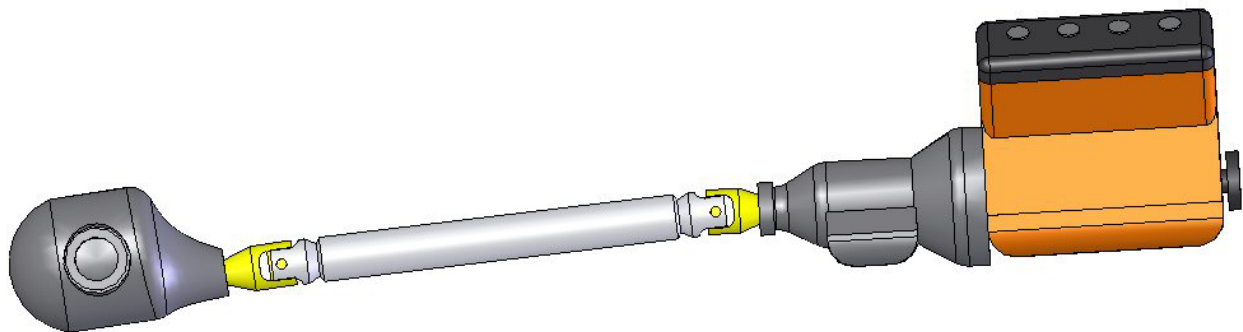
*During Braking*



*Pinion Angle is set too Low*

Fine tune your Hotchkis trailing arms to achieve the perfect setting for your driving style and horsepower.

*During Acceleration*



*Adjusted Pinion Angle*



## Hotchkis Performance LLC Return Policy & Limited Warranty

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### 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

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- 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**

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- 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**

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## INSTALLATION INSTRUCTIONS

# 1304, 1304R AND 1311 MUSTANG LOWER TRAILING ARMS

Please read these instructions carefully and if you have any questions regarding installation please do not hesitate to call Hotchkis Performance directly, we will be more than happy to help.

### THANK YOU FOR PURCHASING HOTCHKIS PERFORMANCE PRODUCTS

- 1) With the front wheels securely blocked, raise the rear of the vehicle to an adequate working height, then support the vehicle / chassis / body **securely** with jack stands, leaving the differential slightly supported with the jack.
- 2) Remove the rear wheels then remove the bolts that retain the lower shock absorber mounts. If you have a **Quad-Shock** equipped car remove the nuts on the frame side of the axle dampening shock and pull it from the pivot.
- 3) Gradually lower the differential far as possible ( be very careful not to over extend the flexible brake line that runs from the chassis to rearend.). At this point there should be little or no tension on the rear springs so they can be easily removed from the car allowing the easiest and safest trailing arm installation possible. **NOTE** – pay attention to the position of the cutoff spring end and be sure to re-install the springs clocked in the same position as this will affect ride height and ride quality.
- 4) Unbolt the rear sway bar from the lower trailing arms and remove the bar.
- 5) Working on one side of the car at a time, remove the two trailing arm pivot bolts. The front pivot bolt has very limited clearance between the muffler and frame rail, but can be reached with a deep socket / ratchet combination. Remove the old trailing arm. Be sure to only remove and install one trailing arm at a time, failure to do so will let the rearend housing rotate and will make your installation much more difficult.
- 6) Clean the surface of the pivot points on the car checking to make sure there are no rough edges that may tear into the new bushings. After apply a light coat of grease to the outer surfaces of each bushing, slide the forward end of the new trailing arm up into the position and reinstall the front pivot bolt. **Note** – for proper sway bar installation – make sure the arms are positioned so that the stickers are towards the outside of the vehicle – the arms are marked left and right.

- 7) Slide the rear of the trailing arm into place, reinstall mounting bolt and torque both bolts to 70 ft./lbs. **Note** – locating and aligning the rear pivot bolt is a little tougher and may require the use of a small pry bar or similar tool to line up the mounting holes correctly.

Repeat steps 5 & 6 for the opposite side of the vehicle

- 8) Reinstall the rear springs, making sure of proper position. (See note in step 3)
- 9) Remove the nut clips from the sway bar and slip them over the holes on the tabs of the new trailing arms with the threads towards inside of vehicle. Install sway bar onto trailing arms with the ends on the outer sides of the tabs.
- 10) Raise the rearend assembly, reinstall the lower shock mounting bolts and the Quad-Shock mounts (if required). Reinstall the rear wheels. Road test and recheck all bolts after driving a few miles.

**Note** – 1983 to 1985 vehicles with the original anti-hop / slapper bars will require removal of these bars, however, due to the increased rearend stability accomplished by these trailing arms, traction and anti-hop ability will not suffer. For this same reason, Quad – Shocks may also be safely removed from cars so equipped for increased tire clearance.



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