

2019- Present GM1500 Lowering kit Instructions

Applies 2019-Present All Cabs.

FRONT

IF your IHC Suspension product has a damaged or missing part, please contact customer service directly and a new replacement part will be sent to you immediately. For warranty issues, please return to the place of installation and contact IHC Suspension.

(956) 424-6901

Monday-Friday 8AM-6PM CST

Or

EMAIL: Sales@ihcsuspension.com

WEBSITE: www.ihcsuspension.com

LIMITED LIFETIME WARRANTY

This unique product warranty proves our commitment to the quality and reliability of every product that IHC Suspension manufactures. The IHC Suspension product warranty only extends to the original purchaser of any IHC Suspension product, if it breaks, we will give you a new part. Warranty does not apply to discontinued parts.

Our Limited Lifetime Warranty excludes the following IHC Suspension items, bushings, bump stops, ball joints, and shock absorbers. These parts are subject to wear and are not considered defective when worn. They are warranted for 12 months from the date of purchase for defects in workmanship.

This product warranty is voided if the vehicle is not aligned after kit installation and proper maintenance is routinely done.

Product purchased directly from IHC Suspension has a 30-day return policy on uninstalled products from the date of purchase (may be subject to restocking fee). Uninstalled product returns must be in the original IHC Suspension packaging. Please call 956-424-6901 to get an RMA# for any return. Customer is responsible for shipping costs back to IHC Suspension. **Returns without RMA# will be refused.** Contact IHC Suspension directly about any potentially defective parts prior to removal from vehicle.

IHC Suspension products are **NOT** intended for off-road abuse. Any damage or failure as a result of abuse voids the warranty of the IHC Suspension product. IHC Suspension is **NOT** responsible for any subsequent damages to any related vehicle parts due to misuse, abuse, improper installation, or lack of maintenance. Furthermore, IHC Suspension reserves

the right to change, modify or cancel this warranty without prior notice.



READ INSTRUCTIONS THOROUGHLY AND COMPLETELY BEFORE BEGINNING INSTALLATION.

INSTALLATION BY A **CERTIFIED PROFESSIONAL TECHNICIAN** IS HIGHLY RECOMMENDED.

IHC Suspension IS **NOT** RESPONSIBLE FOR ANY DAMAGE OR FAILURE RESULTING FROM IMPROPER INSTALLATION.

Safety Warning

MISUSE OF THIS PRODUCT COULD LEAD TO INJURY OR DEATH.

Suspension systems or components that enhance the on and off-road performance of your vehicle may cause it to handle differently than it did from the factory. Extreme care must be used to prevent loss of control during abrupt maneuvers.

Always operate your vehicle at reduced speeds to ensure your ability to control your vehicle under all driving conditions. Failure to drive safely may result in serious injury or death to driver and passengers.

Driver and passengers must ALWAYS wear your seat belts, avoid quick sharp turns and other sudden maneuvers. IHC Suspension does not recommend the combined use of suspension drop spindles, drop struts, drop springs or other lowering devices.

You should never operate your vehicle under the influence of alcohol or drugs.

Constant maintenance is required to keep your vehicle safe. Thoroughly inspect your vehicle before and after every drag race/race use.

It is the responsibility of the retailer and/or the installer to review all state and local laws, with the end user of this product, related to bumper height laws and the lowering of their vehicle before the purchase and installation of any IHC Suspension products.

It is the responsibility of the driver/s to check their surrounding area for obstructions, people, and animals before moving the vehicle.

All lowered vehicles may have increased blind spots; damage, injury and/or death can occur if these instructions are not followed.

Installation Warning

All steps and procedures described in these instructions were performed while the vehicle was properly supported on a two-post vehicle lift with safety jacks.

Use caution during all disassembly and assembly steps to ensure suspension components are not over extended causing damage to any vehicle components and parts included in this kit.

Included instructions are guidelines only for recommended procedures and are not meant to be definitive. Installer is responsible to insure a safe and controllable vehicle after performing modifications.

IHC Suspension recommends the use of an OE Service Manual for model/year of vehicle when disassembly and assembly of factory and related components. Unless otherwise specified, tighten all bolts and fasteners to standard torque specifications listed within the OE Service Manual.

Suspension components that use rubber or urethane bushings should be tightened with the vehicle at normal ride height. This will prevent premature wear or failure of the bushing and maintain ride comfort.

Larger tire and wheel combinations may increase leverage on suspension, steering, and related components. Due to payload options and initial ride height variances, the amount of drop is a base figure. Final ride height dimensions may vary in accordance with original vehicle ride height. Always measure the vehicle ride height prior to beginning installation.

PRE-INSTALLATION MEASUREMENTS

It is imperative that you record the following measurements and factory components in the tables below. IHC Suspension tests and records as much data from each application as available at the time of product development. Vehicle manufacturers may change components or add models with different options. Recording and not exceeding the fender-to-hub-center IHC Suspension calls out will ensure the drop on the vehicle is correct.

These measurements will affect the performance of this lowering kit. Failure to ensure proper stock conditions may result in over lowering, causing premature failure on ball joints, if 4wd, axles, CV boots and drivetrain. Over lowering a vehicle will also result in an incorrect wheel alignment. This will wear tires incorrectly. Incorrect alignment will cause poor vehicle handling issues including but not limited to under steer. Over lowering the vehicle will also cause incorrect suspension geometry resulting in poor ride quality accompanied by pops and clunks which are symptoms of prematurely wearing components.

Failure to adjust head lamps may cause dangerous driving conditions for you and other drivers on the road. Record the head lamp position before the installation of this lowering kit and adjust to original factory position after the completion to ensure a safe and enjoyable experience. Refer to Owner's Manual.

VEHICLE HEIGHT MEASUREMENTS

	DRIVER BEFORE	DRIVER AFTER	PASS BEFORE	PASS AFTER
FRONT				
REAR				

****MEASUREMENT IS TO BE PERFORMED FROM CENTER OF HUB TO FENDER EDGE STRAIGHT UP FROM HUB ****

- Make sure vehicle is on leveled pavement.
- All 4 tires are same size (if running stagger fitment measurement will vary)
- All 4 tires have corrected air pressure.



WARNING

INSTALLATION WARNING

IHC Suspension recommends all steps and procedures described in these instructions be performed while the vehicle is properly supported on a two-post vehicle lift with safety jacks.

Otherwise, park vehicle on a clean flat surface and block the rear wheels for safety. Engage the parking brake.

Disconnect the vehicle power source at the ground terminal on the battery. Lock the steering wheel in the straightforward position with the column lock or steering wheel locking device.

Raise the front of the vehicle and support with safety jack stands at each frame rail behind the lower control arms.

Before starting installation

IHC Suspension highly recommends that the installation of this product be performed by a professional technician with experience working on and installing suspension products. Professional knowledge and skill will typically yield the best installation results. If you need an installer in your area, please contact IHC Suspension Customer Service to find one of our IHC Suspension Authorized dealers.

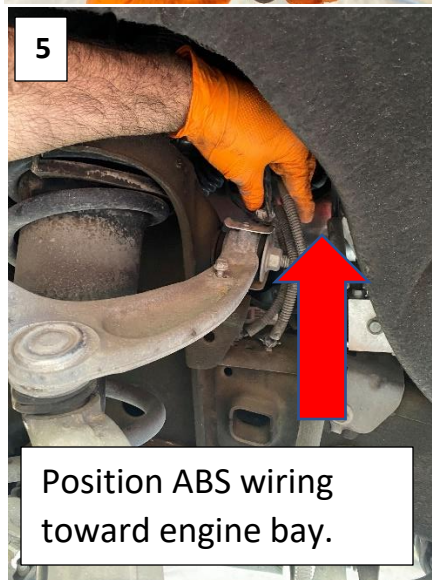
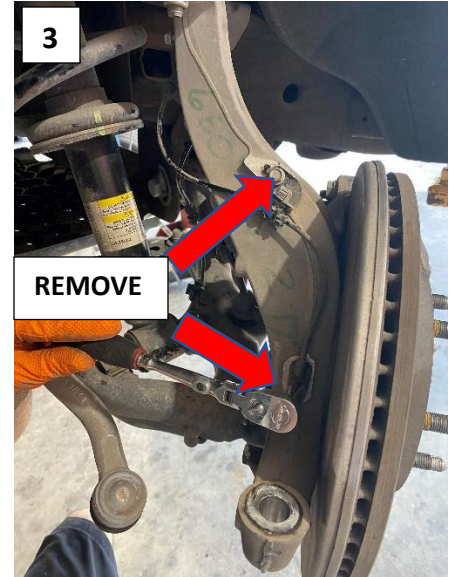
INSTALLATION BY A PROFESSIONAL IS HIGHLY RECOMMENDED

- A Factory Service Manual for your specific Year / Make / Model is highly recommended for reference during installation.
- All lifted vehicles may require additional driveline modifications and / or balancing.
- A vehicle alignment is REQUIRED after installation of this product.
- Speedometer / Computer recalibration is required if changing +/- 10% from factory tire diameter.
- A vehicle lift or hoist greatly reduces installation time.
- Installation time estimates are based on an available vehicle hoist.

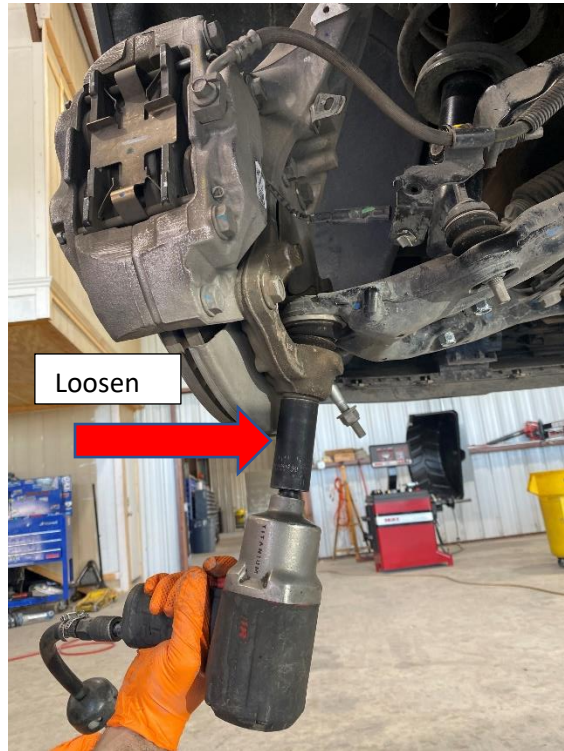
Vehicle must be in excellent operating condition. Repair or replace any and all worn or damaged components prior to installation of lowering kit

- INSTRUCTIONS -FRONT SUSPENSION- DISSAEMBLY

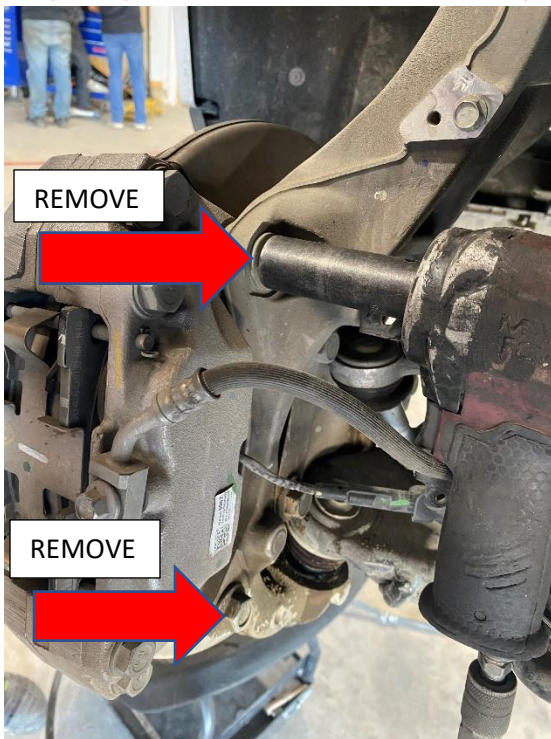
1. Disconnect the negative terminal on the battery. Jack up the front end of the truck and support the frame rails with jack stands. NEVER WORK UNDER AN UNSUPPORTED VEHICLE! Remove the front tires.
2. Remove tie rod from knuckle to allow to move freely.
3. Continued to disconnect ABS wiring and brake line brackets from knuckle. **NOTE: DO NOT OPEN UP BRAKE LINES. REFER TO PIC 1,2,3,4,5**



6. Continue to loosen upper ball joint and lower ball joints. **NOTE: DO NOT REMOVE YET.** REFER TO PIC



- 7.
8. Remove brake caliper mounting bolts and hang caliper out of the way. **NOTE: Do not hang the caliper by the brake line. Retain factory hardware.** Refer to PIC BELOW



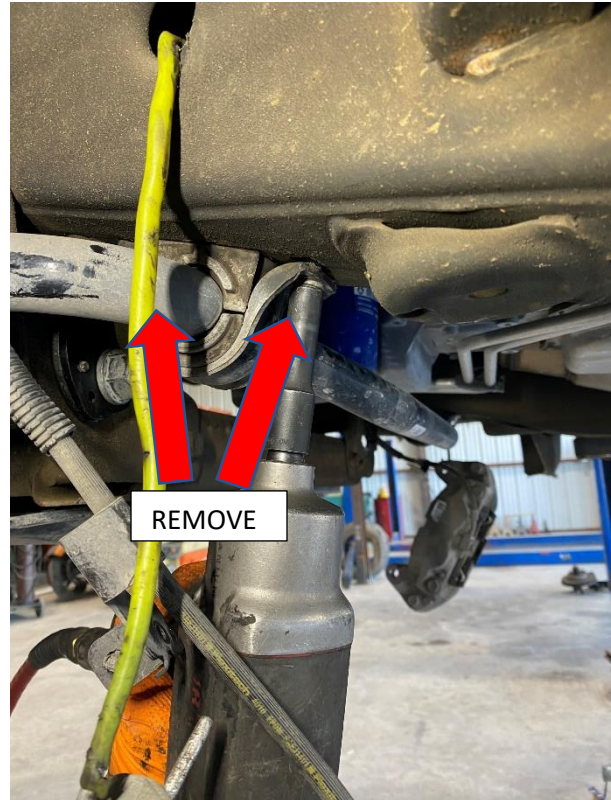
- 9.
10. 4WD VEHICLE ONLY- Remove the axle nut. Press axle back through hub to allow for greater misalign-ment and ease in the removal/installation process. **NOTE: It is imperative that the axle be pushed back thought the hub assembly. Failure to do so can lead to damage to the CV boot or the CV joint itself. Care MUST be taken when handling these CV axles. 2WD SKIP TO STEP 11.**

11. Remove spindle and rotor assembly.

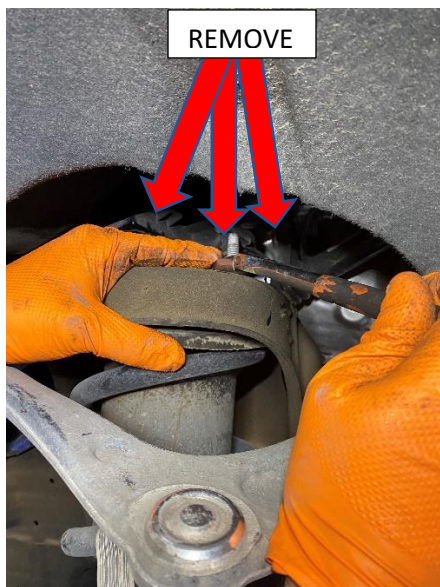
12. Remove sway bar link from lower control arm and Sway bar from frame. Refer to pic below.



13.



14. Remove strut assembly Refer to pic Below.



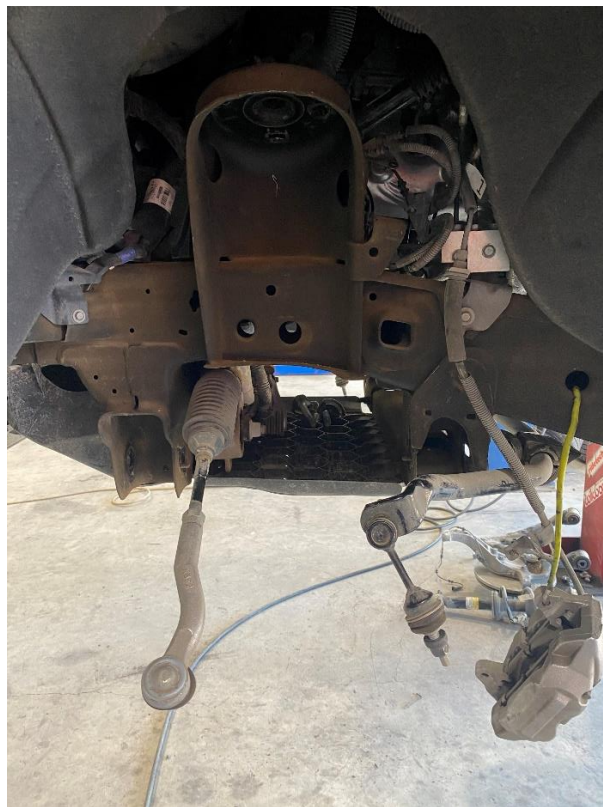
15.



16. Remove upper and lower control arms. Refer to pic below.



17. Front suspension should look like picture below.



18. You are now complete with disassembly. Continue with assembly.

-FRONT SUSPENSION ASSEMBLY-

19. Continue to lubricate upper and lower control arms bushing walls and frame pocket. This will pro-long busing life and prevent noises. NOTE: IF THIS STEP IS SKIPPED NOISES MAY OCCUR. Refer pic below.



20.



21.

22. **NOTE: GENERAL MULTIPURPOSE GREASE BEING USED IN PICTURE**

23. **NOTE: FLARING OUT LOWER CONTROL ARM FRAME POCKETS 1/8" EACH SIDE WILL HELP DURING INSTALLATION. REFER TO PIC BELOW**

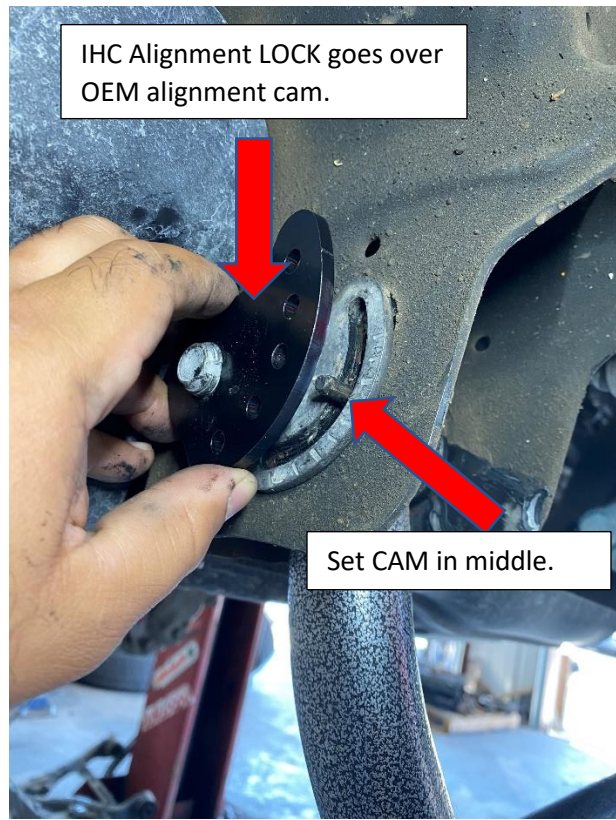


24. Install lower control arm. Refer to pic below. DO NOT TIGHTEN YET.



25. Install OEM bolts. Remove & discard alignment plastic from OEM alignment CAM. Install IHC Alignment LOCK over the OEM alignment CAM **ON NUT SIDE**. DO NOT TIGHTEN BOLTS AT THIS TIME

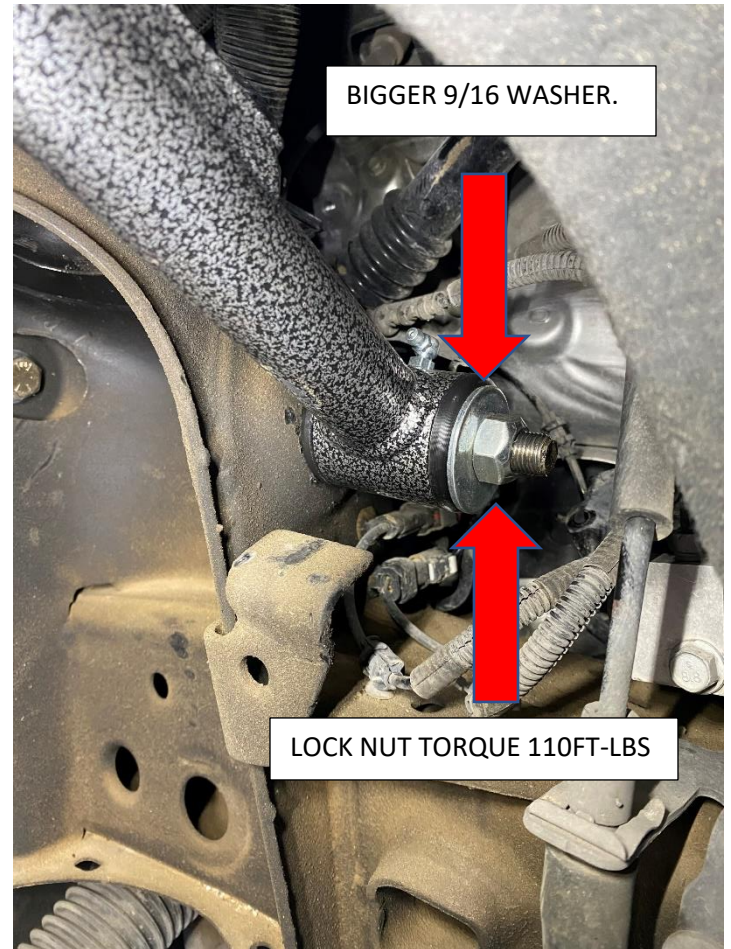
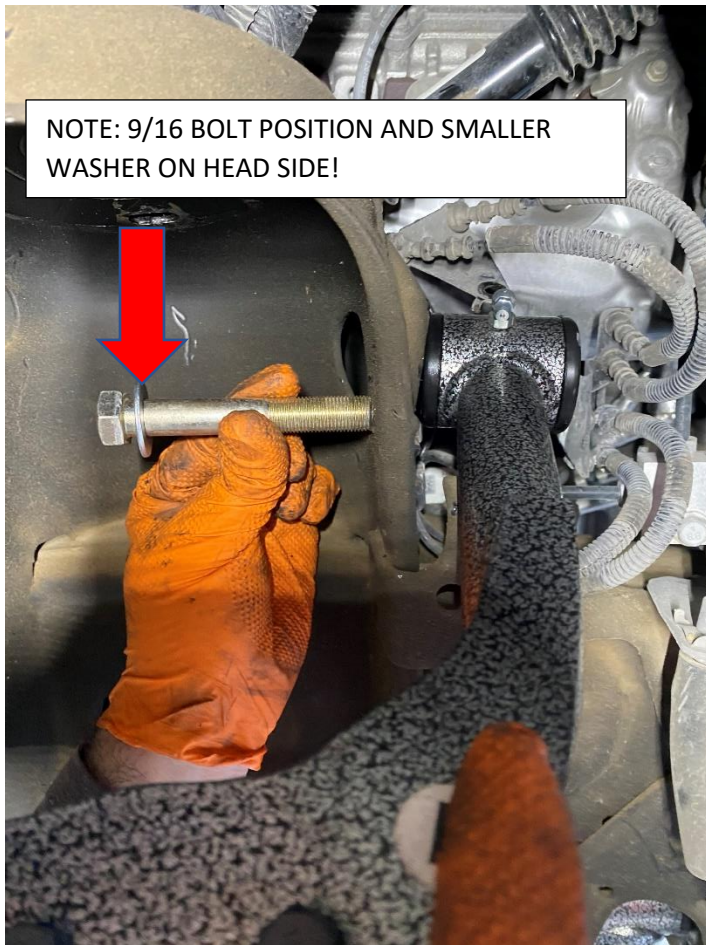
! NOTE: RECOMMENDED TO SET ALIGNMENT IN MIDDLE MARK. THIS WILL ALLOW FOR EASIER COMPUTER ALIGNMENT. REFER TO PICS BELOW



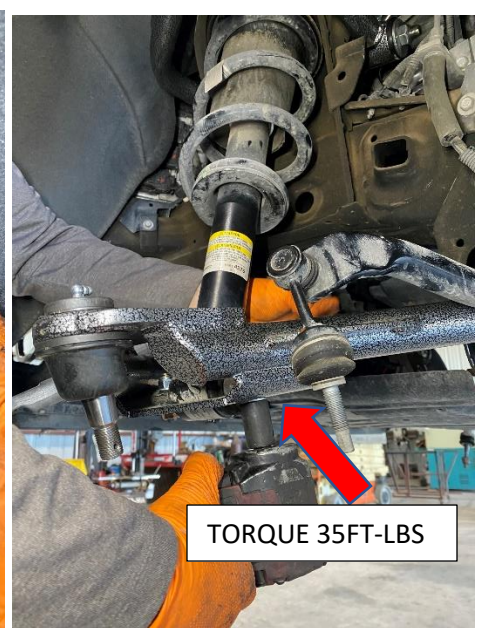
26. Install upper ball joint onto IHC upper control arm with hardware provided. **TORQUE 18FT-LBS** Refer to pic below



27. Install IHC upper control arm. **NOTE: Install 9/16 smaller washer towards head of bolt and 9/16 bigger washer towards nut side.** Refer to pic below. **TORQUE TO 110 FT-LBS**



28. Install strut assembly. Toque upper and Lower strut bolts to **35 FT-LBS**. Refer to pic below.

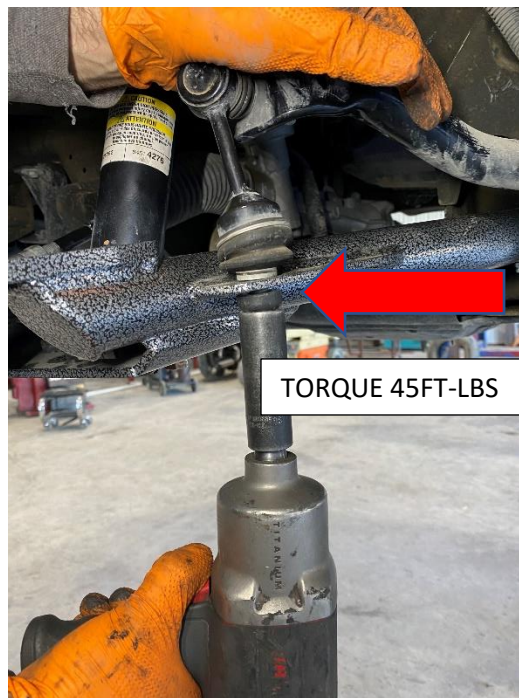


29. Continue to tighten lower control arms. **DO NOT TORQUE yet.** Refer to pic below.

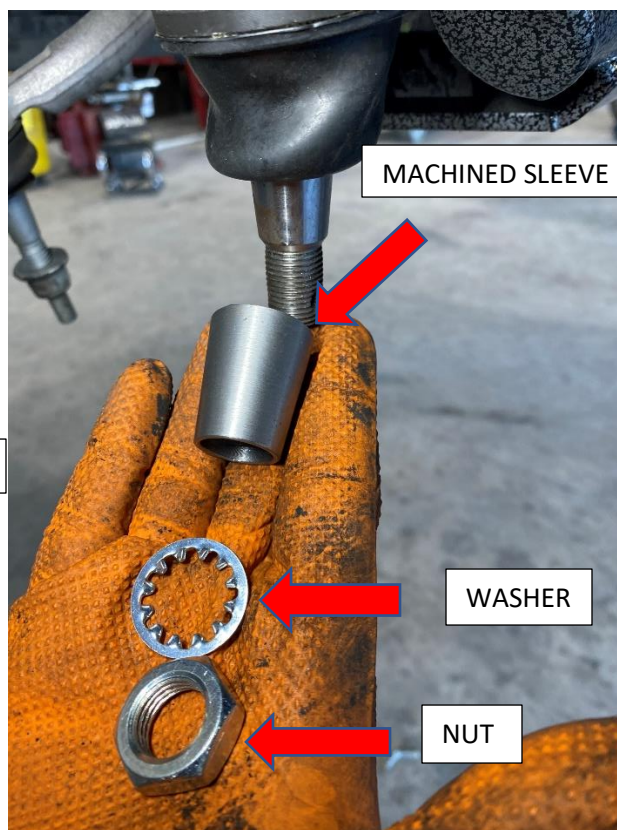
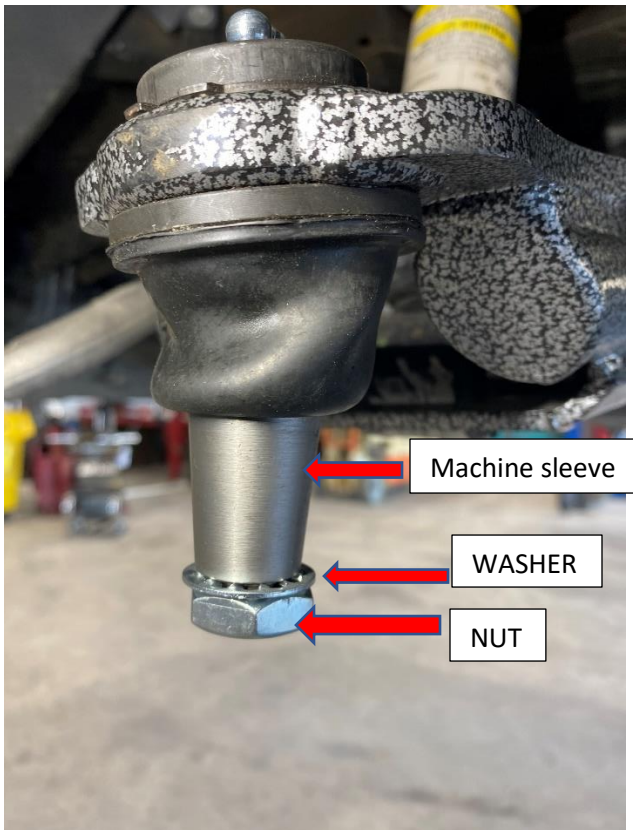
NOTE: HOLD HEAD WITH WRENCH WHEN Tightening TO PREVENT ALIGNMENT PIN DAMAGE!



30. Install sway bar **TORQUE TO 35FT-LBS** and install sway bar link **TOQUE TO 45 FT-LBS**. REFER TO PIC BELOW.



31. **NOTE: LOWER BALL JOINT COMES WITH MACHINES SLEEVE MUST BE REMOVED AND INSERTED ONTO SPINDLE! IF THIS STEP IS SKIPPED DAMAGE TO VEHICLE WILL OCCUR!**
REFER TO PIC BELOW



32. Install spindle assembly to Lower control arms. REFER TO PIC

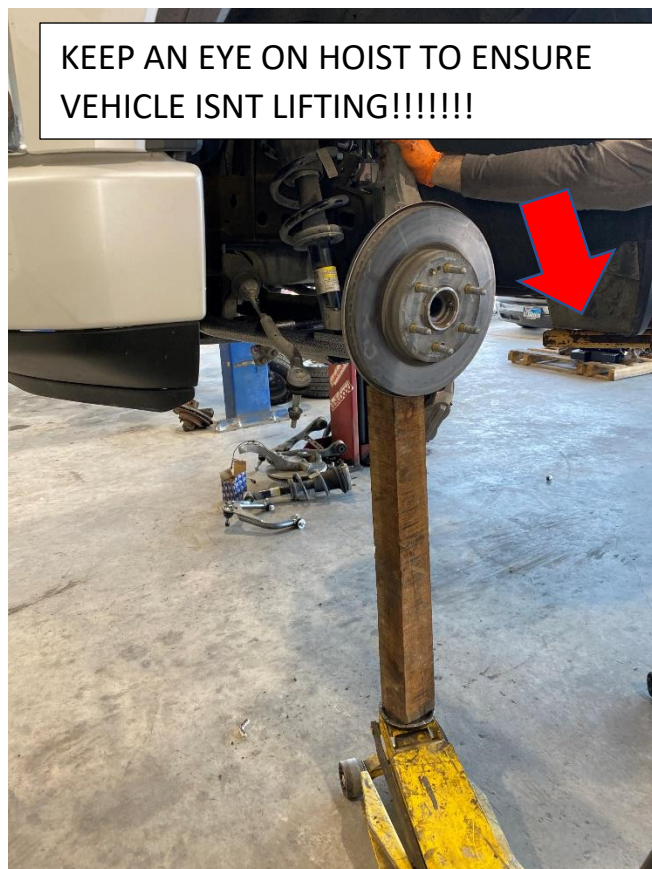
4WD VEHICLE READ NOTES! 2WD vehicles continue with step 33 picture.

NOTE: 4WD VEHICLES. Install the complete spindle assembly to the lower ball joint using the IHC provided hard-ware while guiding the CV axle through the hub. Ensure the CV axle is properly inserted in-to the hub assembly. Install and tighten axle nut. Torque the axle nut to 160 ft-lbs.

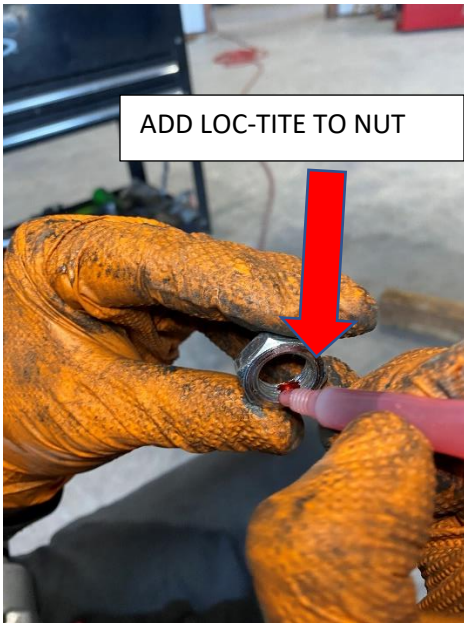
NOTE: It is important that the axle nut is fully seated and tightened prior to tighten-ing the upper control arm ball joint. Non-compliance will potentially pinch the outer CV boot causing damage and/or failure to the half shaft assembly.

33. You will need to raise the lower control furthest away from pivot point to be able to bolt up upper ball joint to spindle. **DO NOT RAISE FROM LOWER CONTROL ARM POCKET!** With floor jack raise lower control arm couple inches to install upper ball joint onto spindle. REFER TO PIC

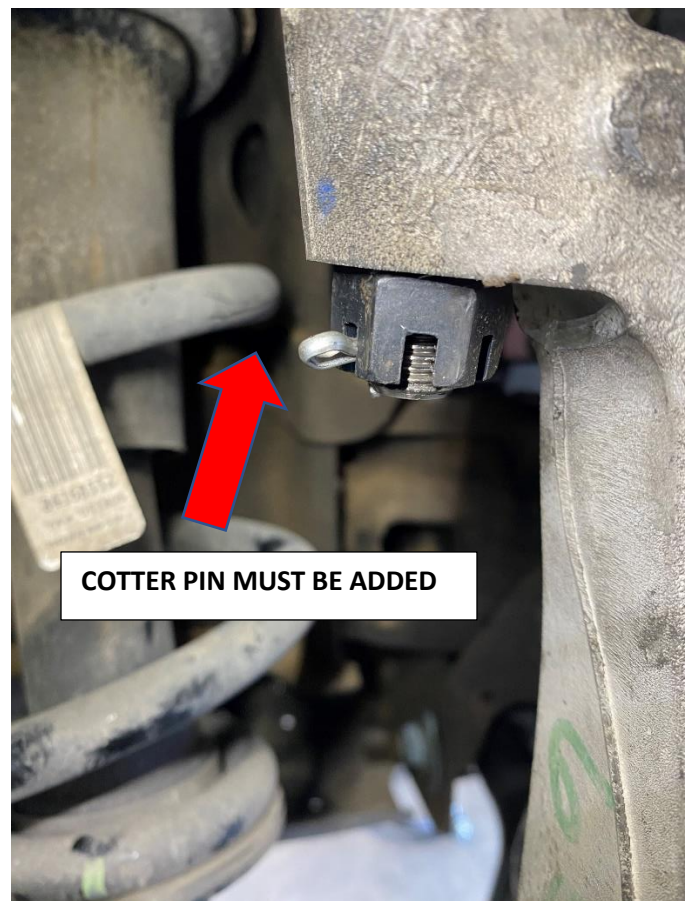
NOTE: MAKE SURE YOU DO NOT RAISE VEHICLE OFF HOIST. DAMAGE OR SERIOUS MAY INJURY OCCUR!!!!



34. ADD red loc-tite provided in the kit to lower ball joint thread and nut refer to pic. Install locking washer and **TORQUE TO 120 FT-LBS**

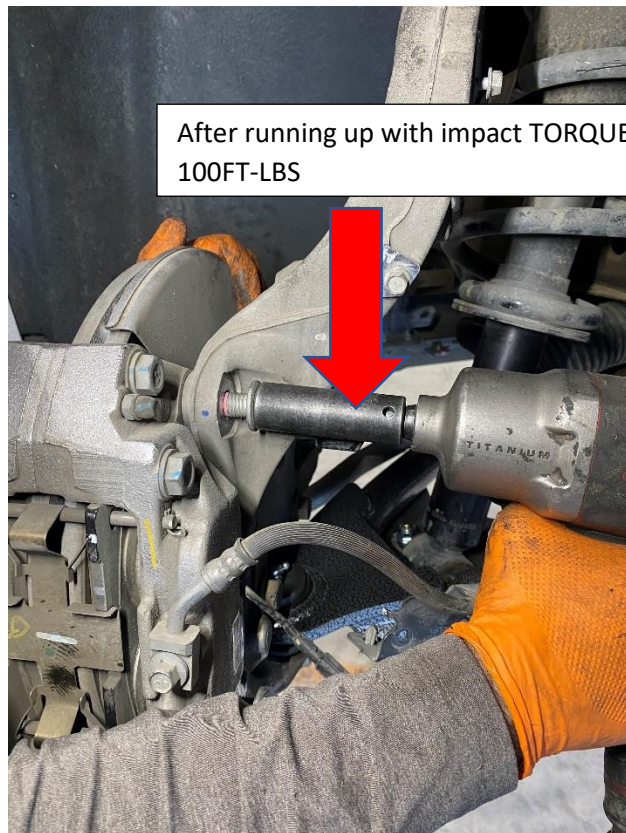
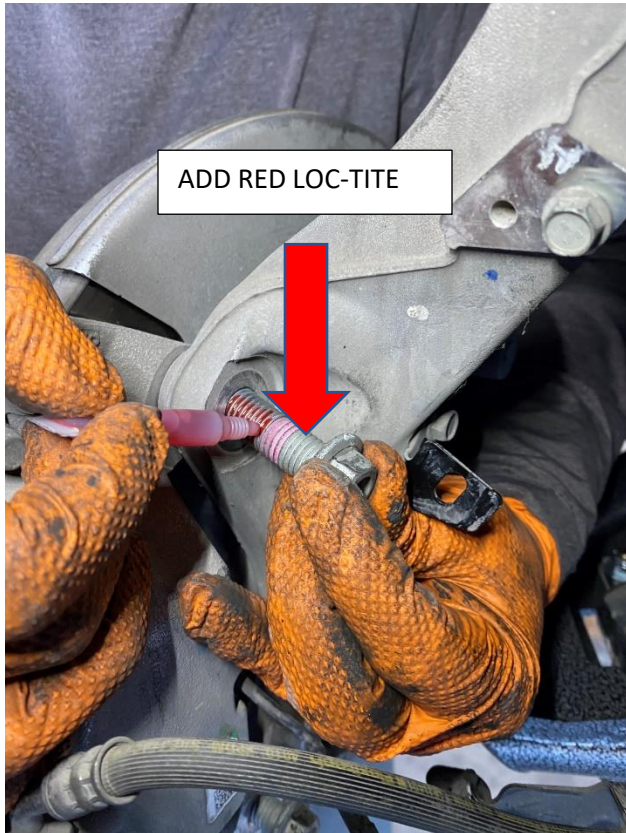


35. Install upper ball joint castle nut and **TORQUE TO 65 FT-LBS**. Add cotter pin. Refer to pic



36. Install brake caliper assembly. **TOQUE TO 100FT-LBS**. Refer to pic

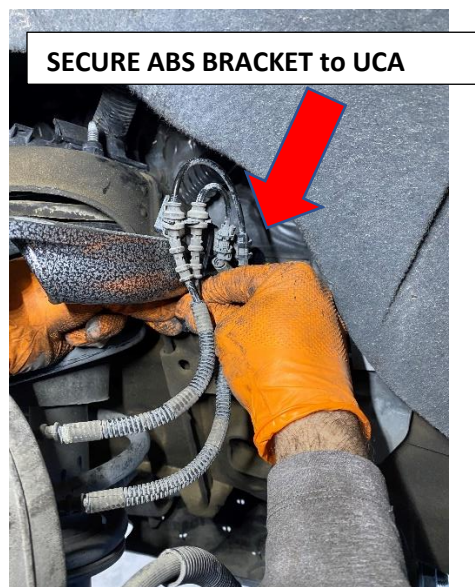
NOTE: RED LOC-TITE MUST BE ADDED. IF THIS STEP IS SKIPPED DAMAGE OR SERIOUS INJURY MAY OCCUR.



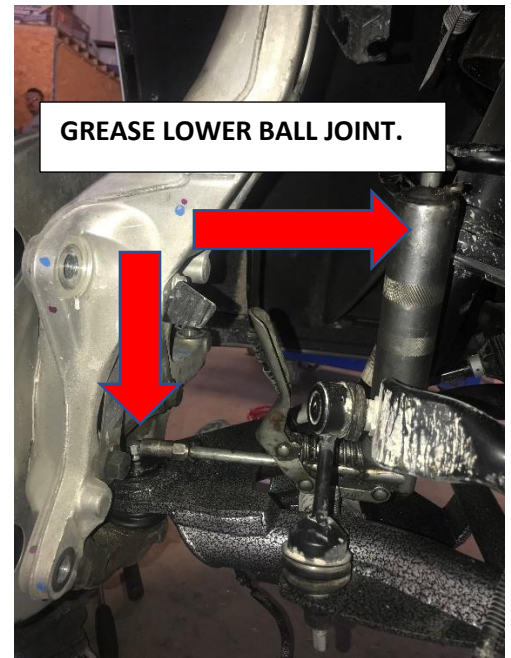
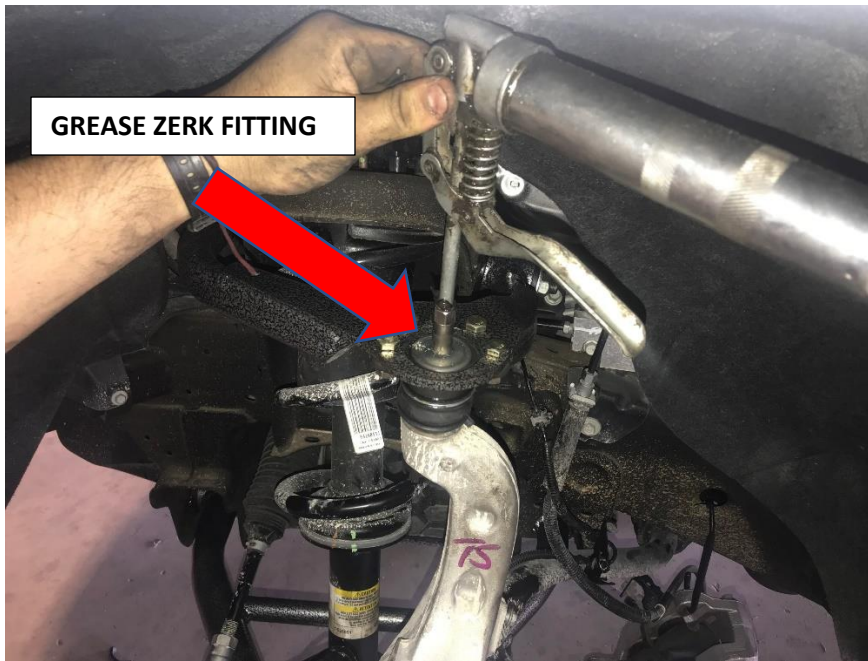
37. Install all ABS bracket and **TORQUE TO 80 INCH-LBS**

38. Install ABS SENSOR onto OEM spindle. **TORQUE TO 80 INCH-LBS**

38. Bolt down ABS wiring to UPPER control Refer to pic below



39. With everything tightened and torque to the specified specifications, install front tires and lower vehicle. With the steering wheel centered, turn the tie rod ends until the tires are straight.
40. **NOTE: If the steering wheel is not centered properly, the ABS/traction control lights may activate.** Turn the wheels from lock to lock and make sure the brake lines and ABS routing clears all suspension components adequately. Reposition if necessary.
41. Using the appropriate tool, grease the upper ball & lower ball joint just until the boot just starts to expand. Do not over grease. Over grease can cause pre-mature wear. REFER PIC BELOW

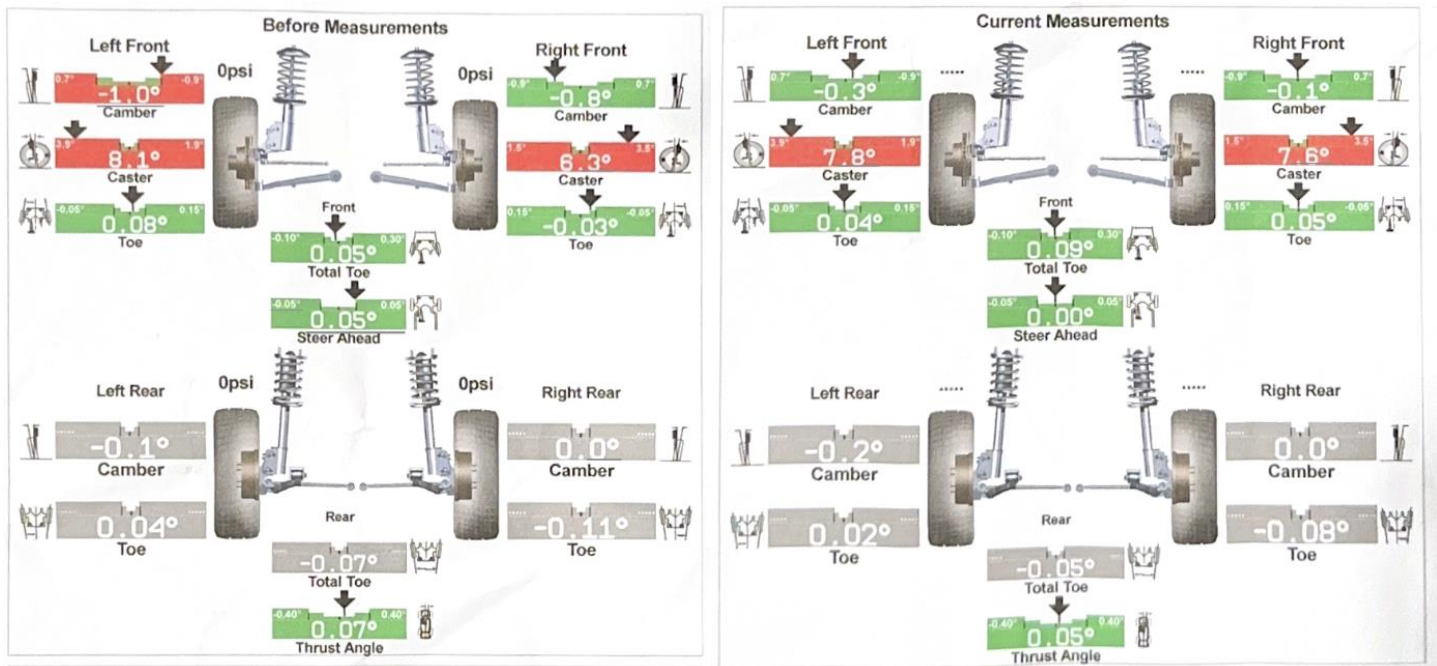


42. Final torque to be set by alignment technician.
43. Torque lower control arms 150ft-lbs.
44. Prior to installing wheels, complete all installation steps on the opposite side. Install the wheels and lower the vehicle to the ground. Torque the lug nuts to the wheel manufacturers specs. Jounce the vehicle to settle the suspension to the new ride height. Torque the lower control arm hardware to 150 FT-LBS. Final torque to be done by the alignment technician. Reconnect the battery ground terminal. Start the vehicle and turn the steering wheel lock to lock and verify all clearances between tire, body, and suspension components. Adjust, as necessary.
45. **NOTE:** Have a reputable alignment shop set alignment to the recommended specs. If driving vehicle to an alignment shop, adjust toe prior to vehicle operation. Recheck that all hardware is of proper torque values and all electrical connections are hooked up. Start vehicle and verify that all dash warning lights are off. Cycle the steering wheel from lock to lock to check for any interference of wheels, tires, brake lines, hoses, wires, etc. and ensure adequate clearance throughout the suspension cycle. Adjust, as necessary.
46. **NOTE:** The camber and toe are the most important alignment angles that need to be in green. Caster will be in RED due to the vehicle coming down and the wheel staying centered to fender wheel. Caster needs to be set relatively close to each other. Attached is a sheet as reference for actual alignment that was performed on the truck.

RECOMMENDED ALIGNMENT SPECS

	DRIVER	PASSENGER	TOLERANCE	SPLIT
CAMBER	+0.1	+0.1	+/- 0.5	0.0
CASTER	7.5	7.5	+/- 0.5	0.0
TOE	.05	.05	+/- 0.05	+ .20

Attached is a sheet that is reference for actual alignment that was performed on the truck.



FAILURE TO PERFORM THE POST INSPECTION CHECKS MAY RESULT IN VEHICLE COMPONENT DAMAGE AND/OR PERSONAL INJURY OR DEATH TO THE DRIVER AND/OR OTHERS

Final Checks & Adjustments

Once the vehicle is lowered to the ground, check all parts which have rubber, Delrin or urethane components to ensure proper torque. Torque lug nuts to the wheel manufacturer specs. Move vehicle backwards and forwards a short distance to allow suspension components to adjust. Turn the front wheels completely left then right and verify adequate tire, wheel, brake line, and ABS wire clearance. Test and inspect steering, brake and suspension components for tightness and proper operation. Inspect brakes hoses and ABS lines for adequate slack at full extension, adjust, as necessary.

MAINTENANCE

RECHECK ALL HARDWARE FOR PROPER TORQUE VALUES AFTER 500 MILES, AND THEN PERIODICALLY AT EACH SERVICE INTERVAL THEREAFTER. RECOMMENDED TO PERFORM MAINTENANCE ON ALL BALL JOINTS AND CONTROL ARMS. ADD GREASE EVERY 6 MONTHS OR EVERY 10K MILES. FAILURE TO PERFORM MAINTENANCE WILL CAUSE PREMATURE WEAR ON BALL JOINTS AND BUSHING.

Vehicle Handling Warning

Lowering the height of your vehicle lowers the center of gravity and can affect stability and control. Use caution on turns and when making steering corrections. Vehicles with larger tires and wheels will handle differently than stock vehicles. Take time to familiarize yourself with the handling of your vehicle.

Wheel Alignment/Headlamp

Adjustment It is necessary to have a proper and professional wheel alignment performed by a certified alignment technician. Align the vehicle to IHC Recommended specifications. It is recommended that your vehicle alignment be checked after any race/drag race driving. In addition to your vehicle alignment, for your safety and others, it is necessary to check and adjust your vehicle headlamps for proper aim and alignment. If the vehicle is equipped with active or passive safety/collision monitoring and/or avoidance systems including, but not limited to, camera- or radar-based systems, check and adjust your vehicle's systems for proper aim and function.



Questions or concerns call 956-424-6901 or email tech support at Tech@ihcuspension.com. M-F 8am-5pm PST