



# 2021- PRESENT F-150 LOWERING KIT INSTRUCTIONS

## APPLIES TO ALL CABS

If your IHC Suspension product has a damaged or is missing a 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

sales@ihcsuspension.com  
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 from off-road 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.



# WARNING



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 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	PASSENGER BEFORE	PASSENGER AFTER
FRONT				
BACK				

**\*\*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 lowered 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.

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

Installation time estimates are based on an available vehicle hoist.

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 the tie rods from the knuckle. Strike the tie rod boss on the knuckle with a dead blow hammer to dislodge the taper from the knuckle.



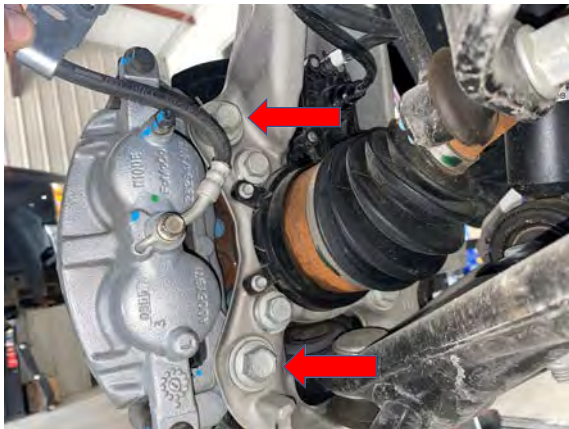
3. Continue to disconnect all abs wiring/brackets from knuckle.



4. Remove the sway bar end link from the knuckle.



5. Remove the caliper from the knuckle and hang out of the way using suitable hook. DO NOT let the caliper hang by the brake hose.



6. Remove **brake rotor**





7a. Remove the **axle nut dust cover**. Remove the **axle nut**. 2WD SKIP this step.



7b. Disconnect **IWE connectors**.  
Will be removed with knuckle assembly.



8. Loosen the **upper ball joint nut**.  
Strike the ball joint boss on the knuckle with  
a dead blow hammer to dislodge the taper.



9. Remove the **lower ball joint nut** and  
separate the upper control arm ball joint  
from the knuckle.



10. Remove **knuckle** while being careful **not to damage 4WD actuator**. Carefully slide cv axle back while removing knuckle.

**USE CAUTION TO NOT DAMAGE THE 4WD ACTUATOR!**



11. Do Not let CV axle hang.

**Hang CV axle**



12. Remove **strut** hardware





13. Remove **strut** assembly.



14. Remove lower **sway bar**.



16. Remove **upper control arms** hardware.



17. Remove **UCA**.



18. Remove **lower control arm** hardware.



19. Remove **lower control arm**.





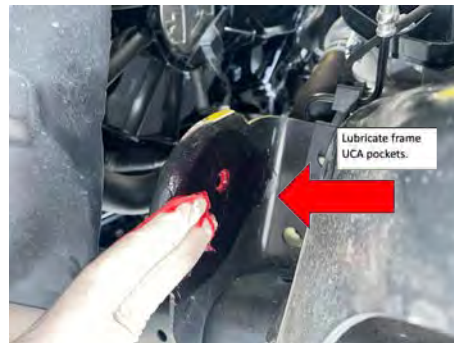
20. Your front suspension should be **completely disassembled**.



## INSTALLATION

DO NOT SKIP THIS STEP. FAILURE TO LUBRICATE FRAME POCKETS AND CONTROL ARM BUSHING WALLS WILL CAUSE NOISES AND PRE-MATURE BUSHING FAILURE.

21. **Lubricate frame pockets and control arm bushing** prior to installation. Multi-purpose grease.



22. Recommended to **flare out lower frame pockets** 1/8" each side for easy installation.



23. **Install lower control arm and OEM hardware.**  
**DO NOT TIGHTEN AT THIS TIME.**



24. **Install UCA and OEM hardware.**  
**DO NOT TIGHTEN AT THIS TIME**



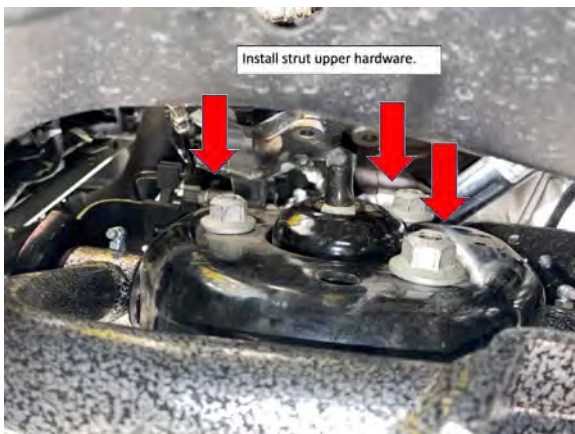
25. **Install UCA Ball joint to UCA.**  
**TORQUE TO 18FT-LBS**



26. **Remove strut hardware from strut.**  
**IHC lower arm has new hardware provided.**



27. **Install strut assembly.** Use OEM hardware for UPPER. **TORQUE TO 30FT-LBS**



**NOTE: IHC ARMS INCLUDE LOWER STRUT SPACER. THIS IS USED ON 2WD VEHICLE ONLY TO ADJUST TO FROM 4" TO 3". CAN BE ALSO USED ON 4WD BUT MAY PUSH POSITIVE CAMBER.**



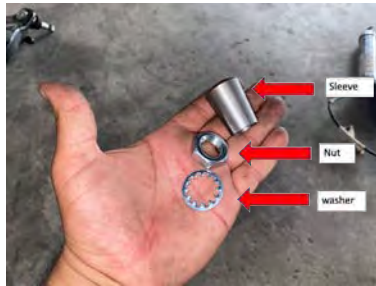
**28. SPACER SHOWN WITH STRUT REMOVED**



**29. Front suspension should look like this.**



**30. NOTE:** Lower ball joint has machined sleeve that must be inserted to knuckle. Failure to install will cause damage to spindle and may break ball joint.



**31. Install knuckle assembly.**  
Guide CV axle through 4WD actuator.  
**Careful not to damage 4WD Actuator.**  
Install.



**32. INSTALL lower ball joint hardware.**  
Lock washer and flush nut.  
**DO NOT TIGHTEN JUST YET.**

**33. REAM Spindle** with 9/16 drill bit.

**34. NOTE:** You are not drilling the spindle or making taper larger. You are reaming the portion to allow thread to pass through.

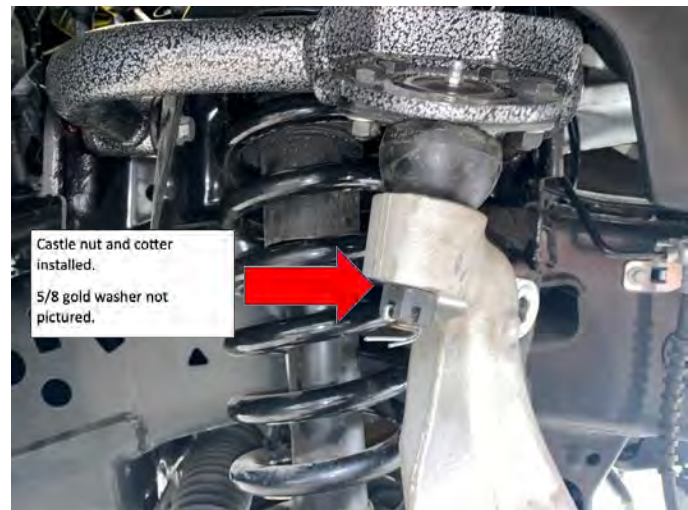




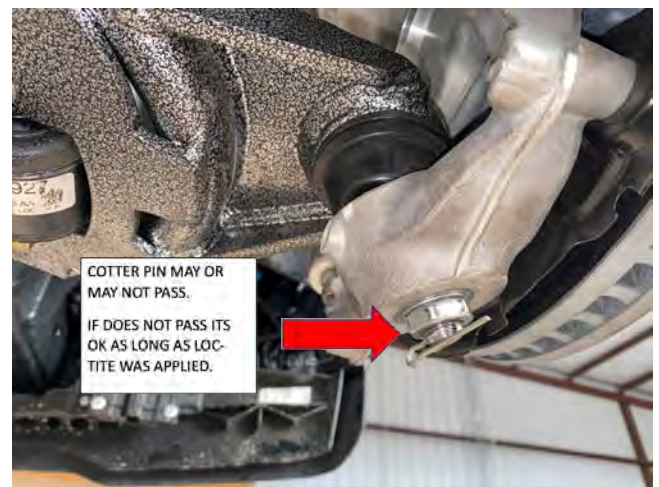
35. Install **UCA ball joint to spindle.**  
**TORQUE TO 65FT-LBS.**

36. **NOTE: 5/8 GOLD WASHER MAY BE REQUIRED SO COTTER PIN FITS CORRECTLY IN CASTLE NUT. NOTE: PICTURED NO WASHER WAS USED.**

37. Tighten **lower control arm ball joint.** **TORQUE TO 120FT-LBS.**



38. **NOTE: MUST ADD LOC-TITE TO NUT AND THREADS. COTTER PIN IS PROVIDED IN SOME CASES IT MAY NOT PASS THROUGH. REASON FOR LOC-TIGHT. FAILURE TO ADD LOC-TIGHT MAY CAUSE NUT TO LOOSEN CAUSING DAMAGE TO VEHICLE.**



39. Install **CV AXLE nut**  
**TORQUE 18 FT-LBS.**

40. **NOTE: DO NOT OVERTORQUE CV AXLE NUT. IF BROKEN WILL NEED TO REPLACE CV AXLE**

41 **NOTE: ADD LOC-TITE.**

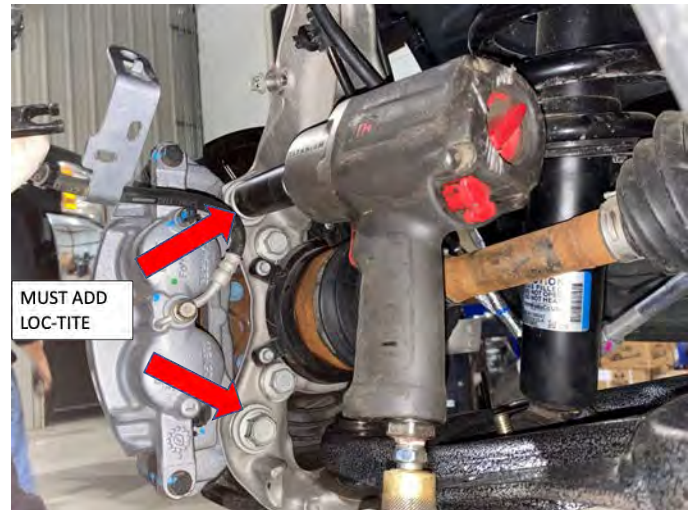


42. Install **DUST CAP**

43. Install **brake rotor**

44. Install **Brake Caliper**.  
TORQUE TO 148FT-LBS

45. **NOTE: ADD LOC-TITE TO HARDWARE**

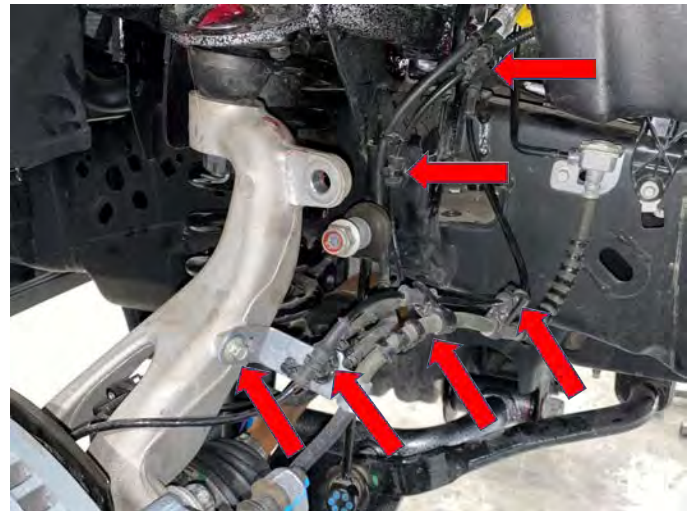


46. Install the factory **brake line bracket** to knuckle. Install **ABS wire** to knuckle using factory hardware. Connect 4WD actuator connector. Torque all 5 ft-lbs.

47. Install sway bar. TORQUE TO 35FT-LBS

48. Install sway bar link. TORQUE 45FT-LBS

49. Install Tie Rod. TORQUE 110 FT-LBS



50. Jounce the front of the vehicle to settle the front suspension. Move the lower control arm to middle. Initial torque to 120FT-LBS. (Final torque to be set by alignment technician)

51. **TIGHTEN UCA** hardware.  
TORQUE 60FT-LBS





52. Using the appropriate tool, **grease the upper ball and lower ball joint** just until the boot starts to expand. **NOTE:** Do not over grease.



53. **Grease upper and lower control arms** until the grease exists from outer bushing walls.



54. 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 120FT-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.

**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.

**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.

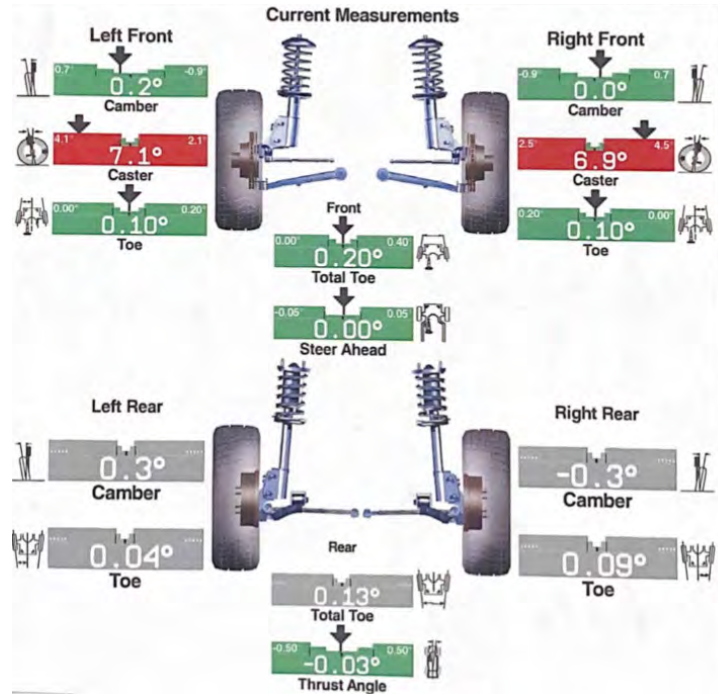
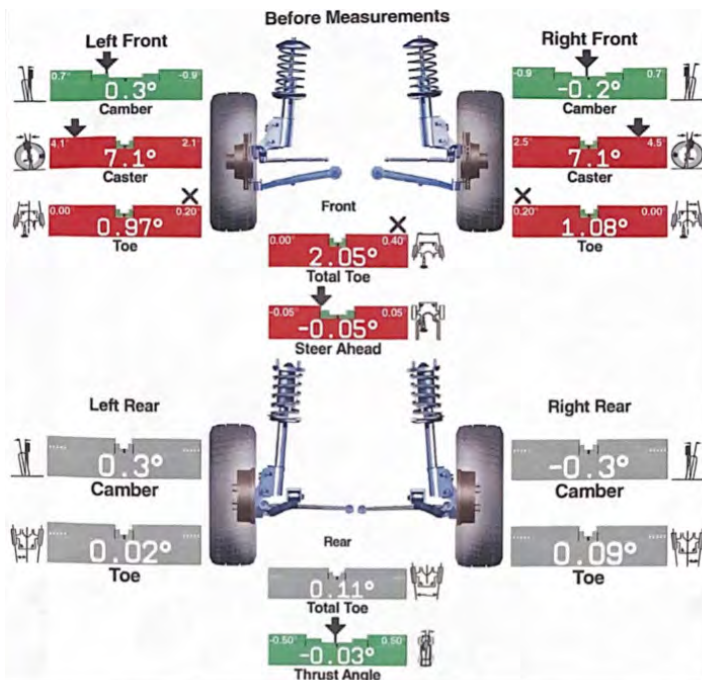


## RECOMMENDED ALIGNMENT SPECS

	DRIVER	PASSENGER	TOLORANCE	SPLIT
<b>CAMBER</b>	<b>0.0</b>	<b>0.0</b>	<b>+/- 0.5</b>	<b>0.0</b>
<b>CASTER</b>	<b>7.0</b>	<b>7.0</b>	<b>+/- 0.5</b>	<b>0.0</b>
<b>TOE</b>	<b>0.10</b>	<b>0.10</b>	<b>+/- 0.05</b>	<b>+.20</b>

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

### RECOMMENDED ALIGNMENT SPECIFICATION





# WARNING



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.

**IMPORTANT NOTE:** Due to the nature of Ford's lane keeping/lane departure features, it may be necessary to have the vehicles camera and sensors recalibrated to ensure these systems functions as they did prior to install. Please contact your local Ford dealership to set up an appointment.

