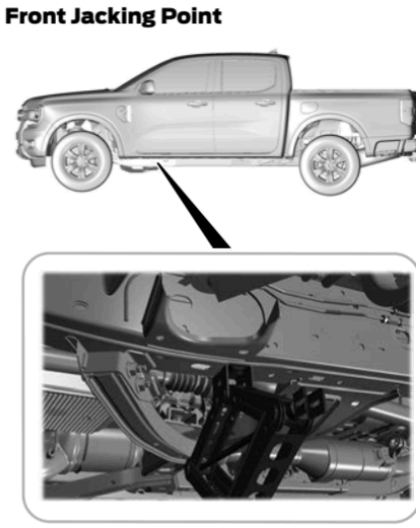
BLUESTRA1N's Guide for Installing 1" leveling Kit (0.5" spacer)

- **HIGHLY RECOMMEND TO DO ONE CORNER AT A TIME**
- Park on level surface.
- Activate E-brake.
- Chock rear wheels.
- Remove both forward most splash tray/skid plate and oil pan splash tray/skid plate. Do so by removing (2) bolts (all 15mm Socket) at the front of the vehicle and loosening (3) bolts (15mm Socket) slightly rearward of the previous bolts. Remove (3) bolts at the rear most tray/skid, then remove all trays/plates (Note: the qty. of fasteners above correspond to the plastic splash guards. Qty. may differ for skid plates).
- Loosen tire lugs (19mm socket).
- Jack up front corner by placing a jack slightly rearward of the jacking point shown below. Jack vehicle until tire is off the ground and then place a jack stand at the recommend jacking point shown below:

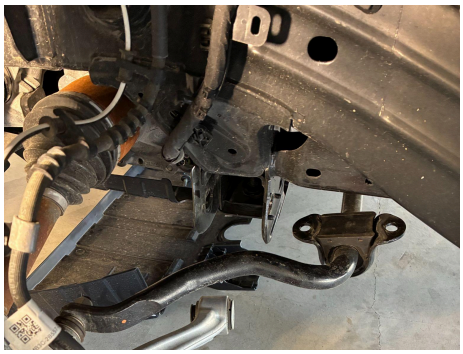


- Remove (6) tire lugs.
- Remove wheel .
- Mark lower control arm cam plates using a paint pen on the outside cam plates. Mark the largest center timing mark on the plate and the corresponding location on the LCA bracket.

- Loosen (3) top hat bolts (15mm Socket), **DO NOT REMOVE.**

- Remove (2) lower strut bolts (18mm Socket).

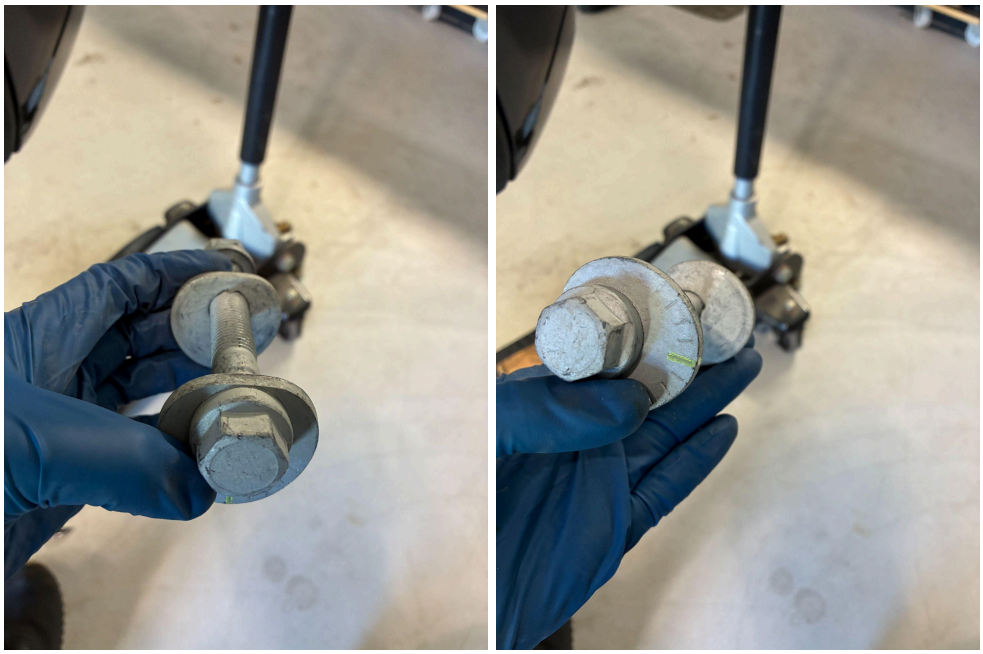
- Remove sway bar bracket fasteners, (1) bolts, (1) stud with nut. Both (18mm Socket).



- Remove Sway bar end link at connection to knuckle (18 mm Socket and 6mm allen) with a pass thru socket and allen key.

- Move sway bar link down and out of way.

- Remove Lower Control Arm bolts (2) by using a wrench (24mm) to hold the nut (located on inside of LCA) and an impact (21mm Socket) to remove the bolt (Located on the outside of LCA). Once the bolt is removed far enough to get the nut and nut side cam plate off, continue to drive the bolt out with the impact, or use a punch and hammer to drive the bolt out. **KEEP THE CAM BOLTS/PLATES/NUTS TOGETHER FOR THEIR RESPECTIVE LOCATIONS. DO NOT MIX AND MATCH COMPONENTS BETWEEN THE FRONT AND REAR LCA HARDWARE.**



- Wiggle and push the LCA down until the struct studs clear the LCA mounting holes. The LCA should now hang freely from the Lower ball joint and give enough clearance to remove the strut.

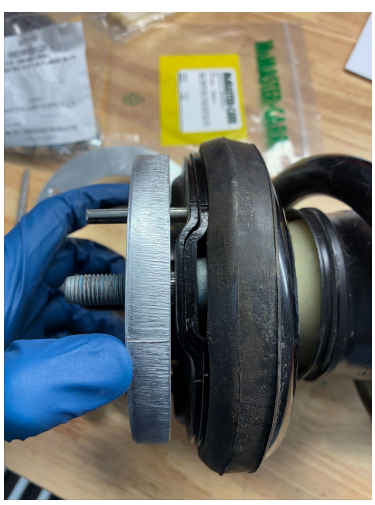
- Completely remove (2) top hat nuts (15mm socket). It is recommended to remove the inner most nut and either of the remaining nuts.

- Remove the last top hat nut (15mm socket) **BEING SURE TO SUPPORT THE STRUT ASSEMBLY WITH ANOTHER HAND.**

- Fish the strut assembly out from the vehicle by lowering it and rotating so the strut bolts go towards the inside of the vehicle until the top hat studs can clear underneath the UCA. Then the strut assembly can be pulled out from the front side of the vehicle.

- Install 0.5” spacer on top of top hat. Align so the fourth hole clears the strut pin.

- The spacer may not naturally rest on the top hat. If there is a mild interference due to the strut stud knurling, snug down (3) M10 x 1.25 Flange nuts until the spacer is pressed flush against the top hat steel structure.



- Remove the (3) M10 x 1.25 Flange nuts.
- Install **BLUE** Loctite on the top hat studs.
- Install the strut assembly back into the vehicle by reversing the methodology from the removal step above.
- Insert the strut into the top mounting holes and loosely install (1) M10X1.25 Flange nut to hold the strut in place.
- Manipulate the LCA until the the lower strut studs go into the LCA mounting holes. Loosely install the (2) flange nuts on the lower strut studs. *(Tip - These are the only flange nuts that have floating washers).*
- Manipulate the LCA until the mounting holes align with the frame bracket. (*Tip - Use a hammer/mallet as a 3rd hand by placing a hammer/mallet at any angle with one side touching the ground and the other end resting under the LCA mounting hole. “Straighten” the hammer/mallet so it pushes up on the LCA until the mounting holes align).*

- Install the appropriate LCA bolts (the front hardware returns to the front location and rear hardware returns to the rear location) by installing the bolt portion from the outsides of the LCA. Slide the cam plate on the bolt from the insides of the LCA as well as the nuts.

- Snug the LCA bolts and nuts so all cam plates are located between the frame bracket locator pins and the earlier witness marks are in approximately the correct location.

- Place a jack under the bracket rotator and jack up until the strut is all the way seated in the top mounting bracket.

- Install the other (2) top hat flange nuts and snug down all (3) flange nuts with a 15 mm socket.

- Snug down the (2) Strut lower nuts that were loosely installed earlier. Then Torque to 66 ft/lbs.

- Torque the (3) top hat flange nuts to 46 ft/lbs.

- Place the sway bar end link back into the nuts and tighten by using a 18mm pass-thru socket and a 6mm hex wrench to support the end link's rod end.

- Once the sway bar end link is as tight as possible using hand tools, torque to 85 ft/lbs (*Tip - If tightened properly with hand tools, the end link should not rotate when applying the final torque with a standard torque wrench. You can verify this by placing a hand on the back side of the knuckle and feeling if the end link boot is rotating when applying the final torque).*

- Use a jack once again under the rotor to raise the suspension assembly until the sway bar bracket is close enough to the frame mounting holes to insert and snug the (1) bolt and (1) stud with nut. Both (18mm Socket). *(Tip - The bolt goes towards the front of the vehicle and the stud with the nut goes towards the rear of the vehicle).*

- Torque sway bar bracket fasteners to 50 ft/lbs.
- Remove the jack from under the rotor and position back at the first location on the frame and jack up enough to fit tire.
- Install tire and snug (6) lug nuts (19mm Socket).
- Remove jack stand and lower vehicle back to ground.
- Torque lug nuts to 100 ft/lbs

Repeat all above steps for other side of vehicle.

- Remove chocks and release e-brake.
- Raise the front of the vehicle by driving on ramps (to gain clearance for torque wrench).
- Engage E-brake and place chocks at rear of vehicle.
- Align LCA cam bolts (bolts are located on the outsides of LCA) with a 21 mm wrench so the timing marks align with the mark on the frame bracket.
- Torque LCA nut to 196 ft/lbs (24 mm socket).
- Repeat for other bolt locations (4 in total, 2 per side) ***FYI - Reaching 196 ft/lbs sucks if you are working on your back under the vehicle with minimal clearance.**

Recommended to have another person hold the cam bolt on the alignment location so you can have two hands free to apply the torque on the LCA nut.

- Remove chocks, disengage e-brake, and drive off wheel ramps.

- Drive for 5-10 minutes occasionally cutting the steering wheel left and right to settle suspension.
- Professional alignment recommended as soon as possible to preserve tire life / proper wear.

Torque Specs			
Item	**Socket/Wrench Size**	**Torque**	**Quantity (Per side of vehicle)**
Top Hat Nuts	15 mm	46 ft/lbs	3
Bottom Strut Nuts	18mm	66 ft/lbs	2
Sway Bar End link Nut	18mm (and 6mm hex)	85 ft/lbs	1
Sway Bar Bracket Bolt and Stud w/ Nut	18mm	50 ft/lbs	1 ea
Lower Control Arm Bolt	21mm	N/A - Hold in Position	2
Lower Control Arm Nut	24mm	196 ft/lbs	2
Splash Tray/Skid Plate	15mm	Snug	8 Total

New Hardware				
Item	**Size**	**Material/class**	**Quantity (Per side of vehicle)**	**Recommended Supplier**
Flange Nut	M10 X 1.25	Class 10	3	McMaster-Carr 95003A216
Spacer	0.5” THK	Al 6061	1	Send Cut Send

Spacer Detail