I haven't seen anything detailed on here providing an algorithm for diagnosing and fixing true DW and felt this method may help save folks alot of time, money and headaches. As parts wear out, this issue seems to eventually affect the majority of solid axle vehicles(especially when lifted) and I waded through ALOT of info dealing with recent DW that ran the full gamut. This included significant time researching, working on it, talking with a dealer, going to 2 offroad shops and talking with several very knowledgeable guys on here to learn how to isolate the root cause. Most know it can be caused by 1 issue or a multitude of issues combined and unfortunately, it seems there are alot of misconceptions and many Jeep owners/dealers/offroad shops don't know how to properly diagnose it and simply give up or blindly start throwing costly new parts at it. Or they resort to blaming the steering stabilizer...when in reality, a properly setup jeep should be able to drive without DW with the steering stabilizer taken off.

At 29k miles, my jeep began experiencing true DW driving 25-45mph over certain pot holes/manhole covers and I had to brake below 5mph or stop the jeep for it to stop. I slowly drove home and retorqued everything and worked with an experienced friend performing steps 1-4 listed below without fixing it. I then tried to ask the lead mechanic at my dealer if he would check ball joints while the jeep was there for yet another electrical issue. The mechanic referred me to a well known local offroad shop(no surprise...it's lifted 2.5" on 37s) and they couldn't find the cause after 3 days and essentially did nothing more than what I had already done and even charged for it.

I took it to another shop that claimed they would do whatever it took to find the root cause or they wouldn't charge anything. This shop had a different approach and was calculated...it was apparent they had alot more experience working on DW. They treated it like the jeep has a 100% curable disease and they're a physician trying to efficiently and cost effectively isolate the root problem(s) and fix it. They had a checklist for ruling out potential causes beginning with the most common that are the least expensive/easiest to check. They also emphasized the importance of properly inspecting each part because many people unknowingly overlook issues and spend alot more $/time chasing it than should be needed. Below is the algorithm that was used and I will be following in the future:

1. Have a knowledgeable person lay under jeep with someone rocking the steering wheel back and forth from 10 o'clock to 2 o'clock and look closely for movement/slop in the trackbar/draglink/tie rod bushings and then firmly pull on them to see if you get any movement. It's even better to do this with a tire against a curb to add stress to help uncover slop in a bad joint. Pay careful attention to the trackbar joints as it seems to the be the culprit the majority of the time. Also, pull on control arms to see if anything feels loose. If any joints or brackets have movement, inspect further and check mounts/brackets to see if welds look good and nothing is obviously bent/flexing. Retorque or replace as needed and test drive it.

2. With the jeep on the ground, loosen bolts in trackbar/draglink/tie rod and control arms and rock the jeep and then retorque to spec to make sure bolts weren't loose or bound up. Check lugnut torque and grease joints if you have greasable joints and haven't recently. Test drive jeep.

3. Lift each front tire off the ground at the axle and use a pry bar under tire to lift up and check for movement at ball joints. This typically works if ball joints are in very poor shape flopping around. However, you likely won't see movement if the ball joints are moderately bad and arent applying preload to the knuckles like mine and several others have experienced. Ball joints may still be the root cause of DW, so dont rule them out based on this test alone. The 1st offroad shop I took it to stopped at this step and thought they had eliminated ball joints as the cause bc they didn't see any movement and they felt it was unlikely on a 2 year old jeep with 29k miles mainly riding on lightweight wheels and 33" and 35" ko2's. Fully inspecting them requires significant labor removing the brakes & knuckles and is addressed in the last step.

4. Check shocks and steering stabilizer(bolts and compression for consistent compression/extension) and make sure steering box is bolted to frame at proper torque.

5. Have wheels/tires rebalanced dynamically....or better yet, swap on a friends set of wheels/tires.

6. Check alignment and caster.

7. Retorque ball joint castle nuts to spec and insert new cotter pins.

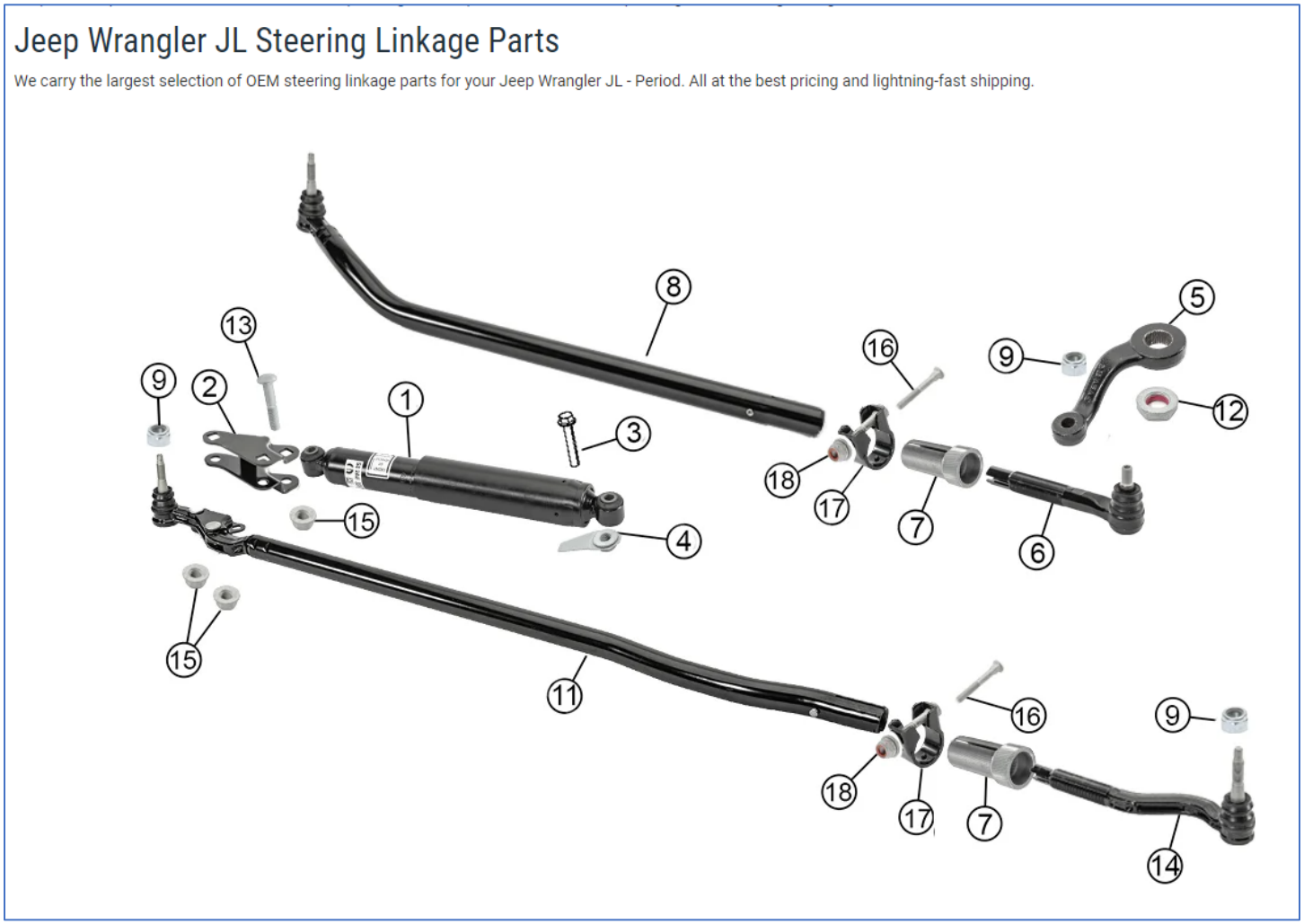
7. Time to start swapping in different steering parts and checking the bolt holes to see if they are wallowed out and then test driving it after each new part. I had my takeoff stock parts available and used them. Begin with trackbar and test drive it...and then draglink, tie rod.

8. If none of that is fixing it, you're narrowing it down to ball joints or steering box with ball joints being much more likely. Time to get serious and have an experienced shop disassemble the brakes/knuckles and check preload on ball joints.(6 hour ish job) The mechanic said my ball joints weren't applying preload on the knuckle, but were not flopping around like you see with ball joints that are completely shot. He said that is a classic sign that the ball joints are the culprit and replaced them with Dana Spicer ball joints and reassembled everything.

With the new ball joints, the jeep drives like new. Very frustrating and drawn out experience....glad it's resolved!

## Jeep Wrangler JL Steering Linkage Parts

We carry the largest selection of OEM steering linkage parts for your Jeep Wrangler JL - Period. All at the best pricing and lightning-fast shipping.



| | Jeep Replacement Part | Item Numbers | Brand | Price | |
|---|---|---|---|---|---|
| 1 | **Damper, Steering, 18-22 Wrangler** | Item: 12112-4409<br>MFG#: 68251580AC | | **$40.49** | Details |
| | **Damper, Steering, 18-22 Wrangler** | Item: 12112-3409<br>MFG#: 68251580AE | | **$39.99** | Details |
| 2 | **Bracket, Steering Damper, Standard Axle, 18-22 Wrangler** | Item: 12112-3412<br>MFG#: 68309363AB | | **$29.99** | Details |
| | **Bracket, Steering Damper, Wide Axle, 18-22 Wrangler** | Item: 12112-3413<br>MFG#: 68309366AB | | **$226.99** | Details |
| 4 | **Nut And Retainer, Hex Flange Locking, M12x1.50, 18-22 Wrangler** | Item: 12112-3411<br>MFG#: 06512425AA | | **$4.99** | Details |
| 5 | **Pitman Arm, 18-22 Wrangler** | Item: 12112-3398<br>MFG#: 68252098AA | | **$92.99** | Details |
| 6 | **Socket, Drag Link, Outer, 18-22 Wrangler** | Item: 12112-3401<br>MFG#: 68258760AE | | **$99.99** | Details |
| 7 | **Adjuster Sleeve, 18-22 Wrangler** | Item: 12112-3397<br>MFG#: 68260466AB | | **$56.99** | Details |
| | **Adjuster Sleeve, 18-22 Wrangler** | Item: 12112-3389<br>MFG#: 68260466AB | | **$24.99** | Details |
| 8 | **Socket, Drag Link, Inner, Standard Axle, 18-22, LHD Wrangler** | Item: 12112-3390<br>MFG#: 68258759AC | | **$234.99** | Details |
| | **Socket, Drag Link, Inner, Wide Axle, 18-22, LHD Wrangler** | Item: 12112-3392<br>MFG#: 68309364AC | | **$244.99** | Details |
| 9 | **Nut and Washer, M14X1.50, 02-11 Wrangler** | Item: 56015-9900<br>MFG#: 6505623AA | | **$1.49** | Details |
| 11 | **Socket, Tie Rod, Outer, Right, Standard Axle, 18-22 Wrangler** | Item: 12112-3403<br>MFG#: 68258761AD | | **$269.99** | Details |
| | **Socket, Tie Rod, Outer, Right, Wide Axle, 18-22 Wrangler** | Item: 12112-3405<br>MFG#: 68309365AD | | **$266.99** | Details |
| 12 | **Nut, Pitman Arm, 18-22 Wrangler** | Item: 12112-3400<br>MFG#: 06036780AA | | **$6.99** | Details |
| 13 | **Bolt, Stabilizer Bracket, 18-22 Wrangler** | Item: 12112-3408<br>MFG#: 06510774AA | | **$4.99** | Details |
| 14 | **Socket, Tie Rod, Outer, Left, 18-22 Wrangler** | Item: 12112-3406<br>MFG#: 68258762AD | | **$112.99** | Details |
| 15 | **Nut, M12X1.50, 05-22 Wrangler** | Item: 51212-0106<br>MFG#: 6104718AA | | **$3.99** | Details |
| | **Nut, M12X1.50, 07-22 Wrangler** | Item: 56015-0044<br>MFG#: 6104718AA | | **$12.99** | Details |
| 16 | **Bolt, Square Neck, 18-22 Wrangler** | Item: 12112-3396<br>MFG#: 68261666AA | | **$2.99** | Details |
| 17 | **Clamp, Tie Rod or Drag Link, 18-22 Wrangler** | Item: 12112-3394<br>MFG#: 68260467AB | | **$36.99** | Details |
| 18 | **Nut, M10X1.50, 18-22 Wrangler** | Item: 12112-3395<br>MFG#: 06512885AA | | **$1.99** | Details |

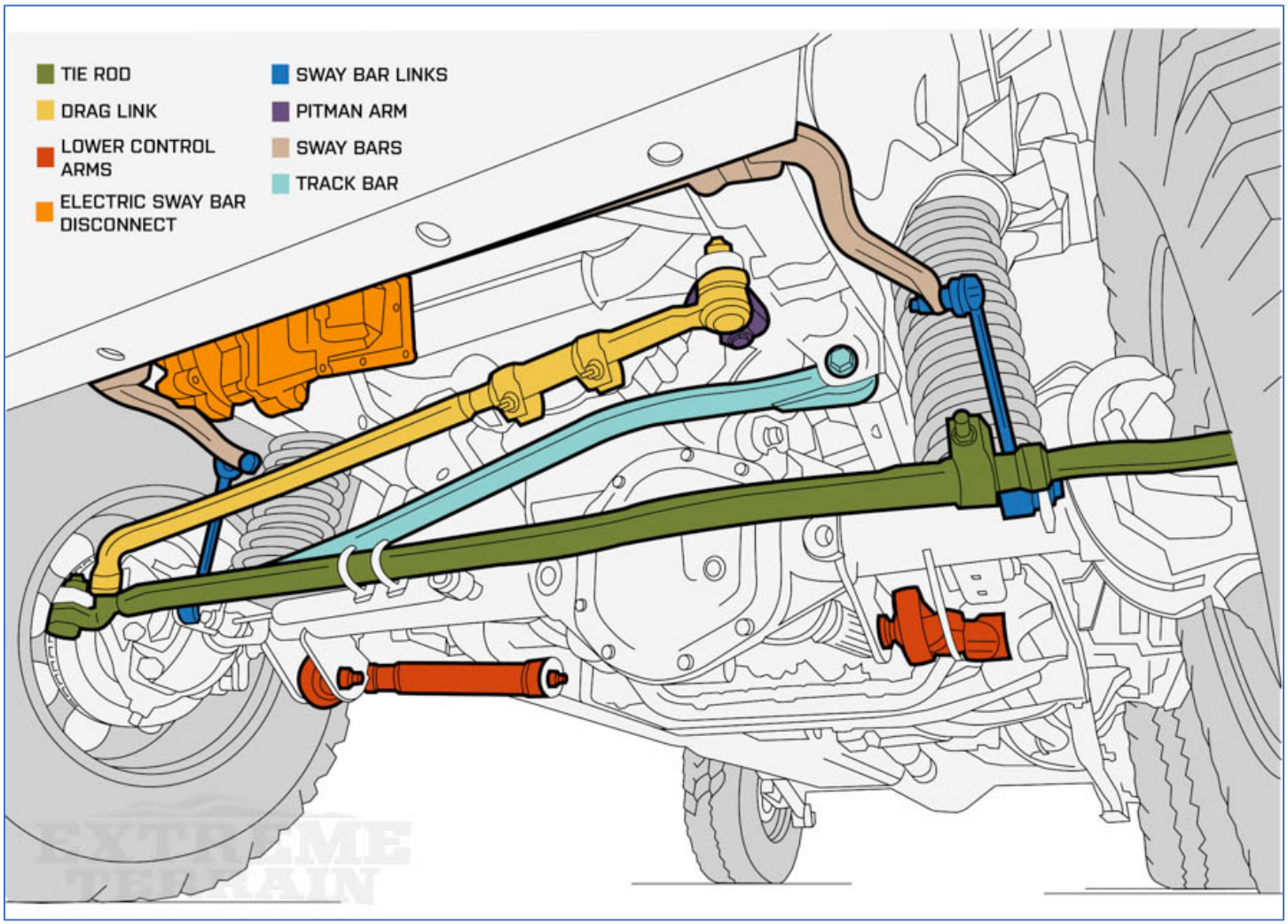
https://www.autoblog.com/2020/03/04/2020-jeep-wrangle-rubicon-suspension-deep-dive/

https://www.extremeterrain.com/wrangler-jeep-death-wobble.html

**What Causes Wrangler Death Wobble?**
Death wobble is caused by loose or damaged steering components, however, it can also be caused by incorrectly installing steering or suspension parts. The first thing you should check is if anything is bent or broken. Look at all of your front suspension components, and if anything's damaged, your first priority is to replace it. Below is a checklist of possible causes from most probable to least probable.

- Front Track Bar
- Ball Joints
- Drag Link/Tie Rod Ends
- Upper Control Arms
- Lower Control Arms
- Suspension Bushings
- Steering Stabilizer
- Steering Knuckles

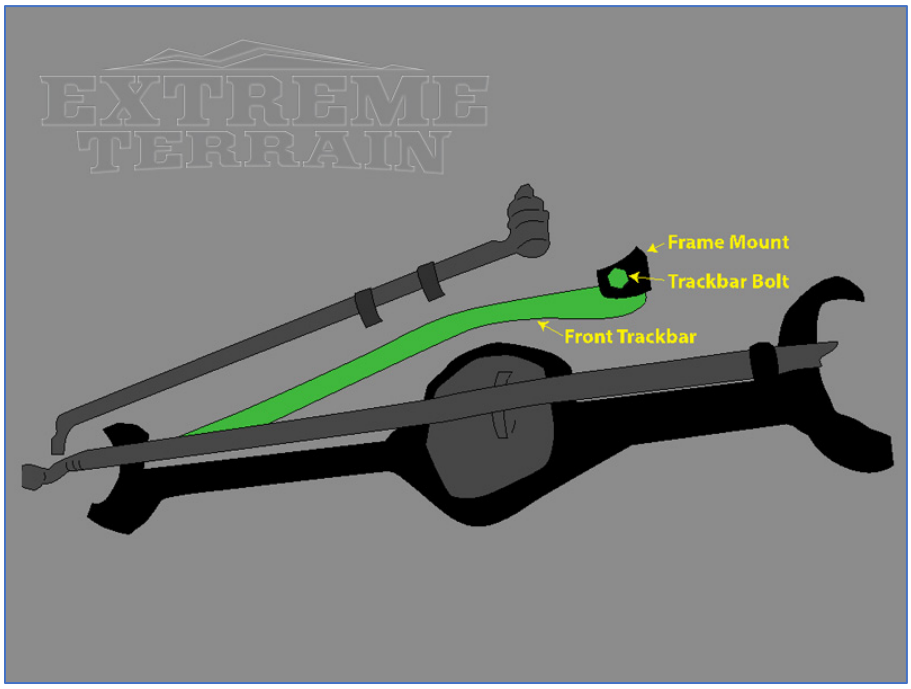
Your front track bar, drag link, steering knuckles, ball joints, steering stabilizer, upper and lower control arms, and even bushings should be checked for damage or excessive wear. In addition to ensuring that all hardware is properly tightened to the correct torque specifications, check your wheels, tires, and alignment. While unbalanced tires and wheels being out of alignment won't usually cause death wobble, it can help trigger or even amplify it.



**How to Fix Death Wobble?**

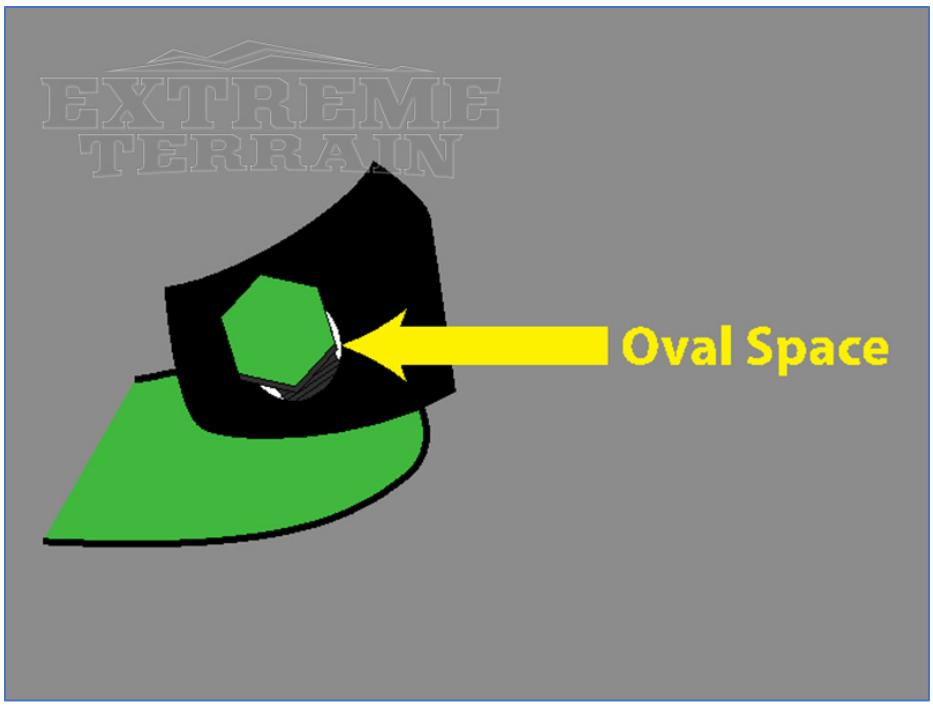
Fixing the dreaded Jeep wobble can be something of a calculus problem. At its root, we're dealing with a vibration issue. Fixing it requires finding which part of the Jeep suspension puzzle is the catalyst. The first step is to check your suspension components for wear or damage. Most likely it will be the front track bar, tie-rod ends, or the ball joints. After replacing any suspension piece, get your rig's alignment checked. Something as simple as a tire's misaligned camber or toe could cause enough vibration to trigger the wobble again.

One thing many people do is install a new steering stabilizer, but this is not a permanent fix. Jeep steering stabilizers can temporarily get rid of death wobble, therefore masking a more serious problem. During your diagnosis, it sometimes helps to disconnect the stabilizer to properly pinpoint the problem.




Diagnosing Jeep Track Bar Problems

The front track bar is designed to absorb a tremendous amount of force. As a result, the two anchoring points are extremely critical and should be the first stop in your track bar investigation.
The “frame mount” bolt is known to be especially problematic. This high-grade bolt requires 125 ft./lbs. of tightening torque. If loose, the bar’s shimmying could oblong/enlarge the frame mount’s hole, causing the bar to have excessive play.




Another way to see if your track bar needs replacement requires grabbing one of your buddies. Have your friend hop into your Jeep and start it up, and then put it in neutral with the parking brake on or put it in park if you drive an automatic. Next look underneath your Wrangler at the front axle. You should see a bar that connects the passenger side of your axle to the driver's side of the frame, and it will have a curve to part of it (closer to the driver's side). This is your track bar.

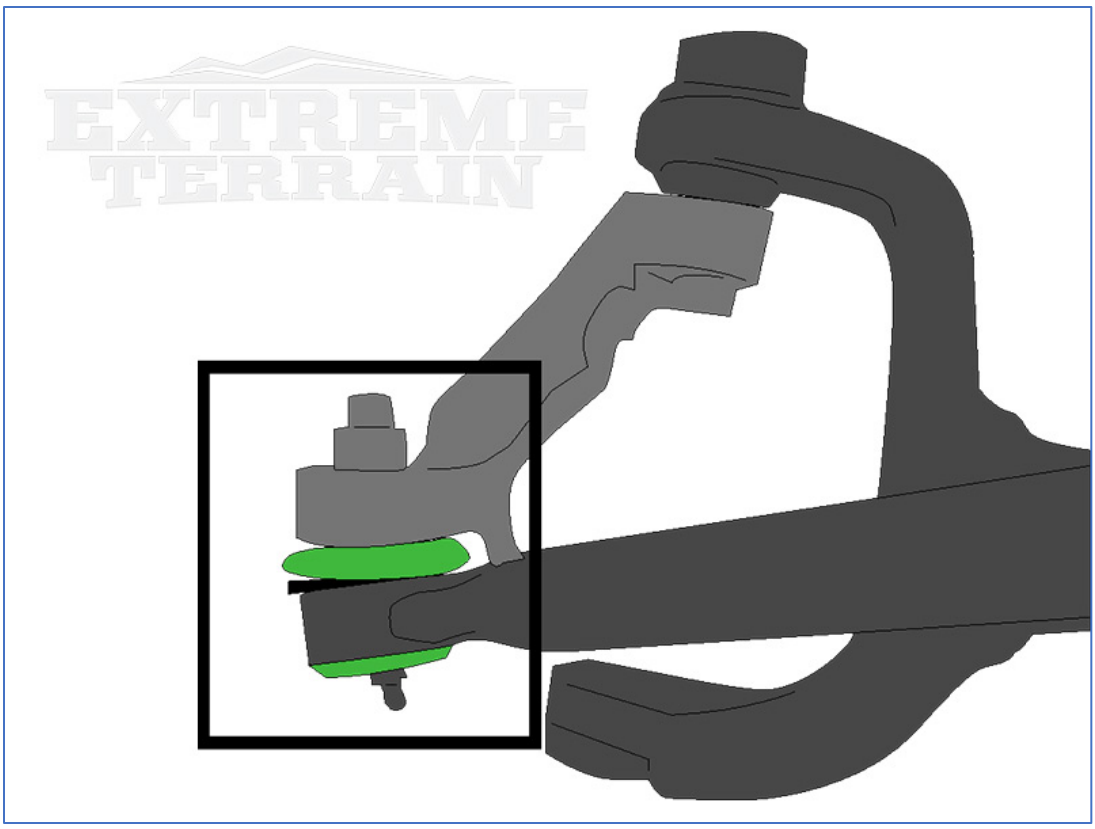
Look directly underneath the passenger side connection point of the track bar while your friend turns the steering wheel back and forth just under a quarter turn each way. The track bar should remain in place. If one connection is moving without the other then you have a bad track bar bushing. Similarly, if your track bar was moving around but your bolt was staying in place, then your bushing is worn out and should be replaced.

Related to the track bar is the relocation bracket. In order to keep suspension geometry in order, some lifted Jeeps require a track bar relocation bracket. If this bracket isn't braced properly, it could act as a lever on your suspension, gradually pushing against mounting bolts and breaking things loose. Should the relocation bracket be bent from abuse or simply wear, replace it immediately.

Testing Your Jeep's Ball Joints

If your track bar checks out, your next step is the ball joints. They're covered with a soft rubber boot filled with lubricating grease. The joint is designed to articulate and provide soft and controlled steering. If the protective boot has ruptured or the grease has leaked out, the joint could be compromised, causing dangerously excessive movement vertically or horizontally. A quick visual inspection will be sufficient. In the case of the boot being intact and if you have a dial indicator handy, you can check vertical and horizontal movement that way.

Another test you can do with a jack is to lift one of your wheels off the ground while your friend watches a ball joint. Take a pry bar and place it in between the floor and your tire. Using the pry bar, push up on the tire a couple of times. If your friend sees any slight movement between the ball joint and the steering knuckle then it is worn out and should be replaced. Allowable ball joint play is in the millimeters. If there's obvious movement, the ball joints have failed. Have your friend watch the other ball joint for that wheel and do the test again to see if the second joint is worn out. After you finish testing that side, move to the other side and repeat the tests.



How to Check Your Jeep's Tie-Rod Ends

Checking your tie-rod ends is quite simple and can be done in just a couple of minutes. Start by using a jack to lift one of your front wheels off the ground. Next, have your friend (who may have been helping you check your track bar) watch the tie rod end for the lifted wheel. Place your hands on the left and right side of the wheel and try to wiggle it from side to side. If your friend sees the tie-rod wiggle back and forth, but the tie-rod bar itself (sometimes referred to as a drag link as well) is not moving, then the tie-rod end is worn out. If the tie-rod is worn out or if the rubber boot on the tie-rod is damaged (or missing altogether) then the tie-rod should be replaced. Repeat this test on each wheel to check the other tie-rods.

Inspect Your Jeep's Control Arms & Wheel Bearing

**Control arms:** You can perform a quick visual inspection of the upper and lower control arms to see if they are bent or have any cracks in them. You should also check the control arm bushings for gouged or missing rubber.

**Wheel bearings:** The wheel bearings on your Wrangler are tested in a manner much like your tie-rod ends. Begin by using a jack to lift one of your front wheels off the ground and place your hands on the top and bottom of the wheel. Try to wiggle the wheel from the top and bottom, if you feel movement, your wheel bearing is most likely worn out and should be replaced. Move to the other side and repeat this test.

After any of your steering components are replaced it is a good idea to bring your Wrangler in for a front wheel alignment.

Can Tires or Wheels Cause Death Wobble?

Yes, in some cases. Granted, an unbalanced wheel or an improperly worn tire being the cause of your Wrangler's death wobble is less probable, but it's certainly not impossible. Hop onto any of the off-roading forums and you'll find a case of someone noticing missing wheel weights, getting their tires re-balanced, and their Jeep's shakes disappearing. By far your cheapest option when diagnosing the source of your misfortune is double-checking the condition of your wheels and tires.

After every off-roading venture, be sure to clean off any caked mud, and make sure your air pressure is back up to where it should be. Uneven tire wear can also cause unnecessary vibrations, triggering the wobble. This comes back to alignment issues we've mentioned previously. If your tire lugs are chamfered or the inside/outside of your tire is more worn than the opposite side, you have uneven tire wear and you should have an alignment done.

The worst case scenario as far as wheels and tires are concerned is having a bent rim. Depending on how badly damaged the rim is, no amount of wheel balancing will help. The constant, improper rotation can rattle things loose, setting the stage for a catastrophic evening.

Can a Bad Alignment Cause Death Wobble?

Yes, 100% yes. As mentioned previously a bad alignment can, at the very least, exacerbate an existing issue. One of the reasons why the community sees lifted Wranglers as a more common victim of the wobble is because of how lifting the suspension effects caster. Factory caster for Wranglers should be **4.2 degrees positive**. In other words, the traction pad of the tire is in front of the tire (when looking at the tire from the rim facing side). When you lift a Jeep you decrease the caster. Lower caster numbers result in more forward moving resistance. Not something anyone wants in any vehicle. More rolling resistance leads to a harder working suspension, more vibration, and a recipe for disaster.
Excessive toe-in can also be problematic. Toe-in is when the front tires are angled towards the vehicle's center (from a bird's eye view). Similar to an improper caster setting, excessive toe-in can increase rolling resistance leading to heavier wear on your tires and suspension components. Some Jeepers have even reported toeing out their front wheels helped stave off death wobble, but doing so won't eliminate the root cause if there are more gremlins at work.

**Can I Fix My Jeep at Home?**

An inexpensive and easy preventive solution is replacing the factory bolts with a higher grade alternative. Bolt kits from Synergy, for example, provide high-grade alternatives to the factory hardware and allow you to tighten the components at a higher torque.
In addition, if you plan on upgrading your Jeep's suspension, it is critical you loosen the bolts for the front & rear track bars and all control arms, then shake the Jeep. This allows important suspension components to settle properly and prevent mounting points from binding. Once settled all bolts should be properly tightened to the torque recommendations. Marking the bolt and mounting point with a line using a white marker provides a quick visual indicator if the bolt has moved/loosened. It's also recommended to have your Jeep properly aligned by a professional after any steering/suspension modification as well as part of your routine maintenance.
Finally, it's good practice to inspect all these mounting points as well as all joints/rubber protective boots for excessive wear or damage. Immediately replacing or addressing issues early on will help prevent future problems.
Jeep Death Wobble Recall Issue

The FCA has been under fire regarding death wobble. Some are upset that instead of issuing a recall, FCA suggested upgrading the steering stabilizer. As we've established, this is a temporary fix at best and can hinder proper diagnosis. Time will tell if lawsuits determine the FCA should be held accountable, but something to keep in mind is all front solid axle vehicles can experience death wobble. The best "cure" is preventative maintenance.

Over 15k miles, I got the death wobble twice with my JLU Sport (stock suspension and wheels). I had the recall done during a scheduled service, and had the death wobble 6 or 7 times in 20 miles.

After a whole morning at the dealership trying another new damper (same), going back to my old one (better but still a bit), tightening bolts etc, the mechanic figured it out:
A steering damper needs to be primed before and right after installation.
This involves 5 cycles of full extension - full compression before mounting it, and then full right - full left when on the car.
I assume it's to move oil and bubbles where they belong.

Everything was fine after he did that with a NEW DAMPER.

The official procedure for this recall mentions the priming, but mechanics probably don't read it because it looks so simple (just 2 bolts).

If you are getting the recall, make it clear you want the priming to be done.
If you do get some wobble after installation, a series of lock to lock left-right might do the trick.

**MEASUREMENT SPECIFICATIONS**

**Front Wheel Alignment Service Measurement Check Specifications**

| Total Toe** | Caster | Cross Caster* | Camber - Left | Camber - Right | Cross Camber*
Sport | 0.20° +/- 0.20° | 5.35° +/- 1.00° | 0.00° +/- 0.50° | -0.25° +/- 0.50° | -0.25° +/- 0.50° | 0.00° +/- 0.50°
Sahara | 0.20° +/- 0.20° | 5.05° +/- 1.00° | 0.00° +/- 0.50° | -0.25° +/- 0.50° | -0.25° +/- 0.50° | 0.00° +/- 0.50°
Rubicon and 3.0L Diesel Sport / Sahara | 0.20° +/- 0.20° | 4.80° +/- 1.00° | 0.00° +/- 0.50° | -0.25° +/- 0.50° | -0.25° +/- 0.50° | 0.00° +/- 0.50°
**Note: Caster values required to be greater than or equal to 4.0° for all variants**
* Cross Alignment values are determined by taking the left side value minus the right side value.
** TOTAL TOE is the sum of both left and right wheel toe setting. TOTAL TOE must be equally split between each wheel on the same axle to ensure the steering wheel is centered after setting toe. Positive toe-in and negative toe is toe-out.

**Rear Wheel Alignment Service Measurement Check Specifications**

| Individual Toe* | Sum Toe* | Thrust Angle | Individual Camber* | Cross Camber*
All Models | 0.125° +/- 0.25° | 0.25° +/- 0.25° | 0.00° +/- 0.25° | -0.25° +/- 0.50° | 0.00° +/- 0.50°
* For reference only. These are non adjustable angles.

**SET-TO SPECIFICATIONS**

**Front Wheel Alignment Set-To Specifications**

Model | Total Toe** | Caster | Cross Caster* | Camber - Left | Camber - Right | Cross Camber*
Sport | 0.20° +/- 0.15° | 5.35° +/- 1.00° | 0.00° +/- 0.50° | -0.25° +/- 0.37° | -0.25° +/- 0.37° | 0.00° +/- 0.50°
Sahara | 0.20° +/- 0.15° | 5.05° +/- 1.00° | 0.00° +/- 0.50° | -0.25° +/- 0.37° | -0.25° +/- 0.37° | 0.00° +/- 0.50°
Rubicon and 3.0L Diesel Sport / Sahara | 0.20° +/- 0.15° | 4.80° +/- 1.00° | 0.00° +/- 0.50° | -0.25° +/- 0.37° | -0.25° +/- 0.37° | 0.00° +/- 0.50°
**Note: All wheel alignments are to be set at curb height**
**Note: Caster values required to be greater than or equal to 4.0° for all variants**

* Cross Alignment values are determined by taking the left side value minus the right side value.
** TOTAL TOE is the sum of both left and right wheel toe setting. TOTAL TOE must be equally split between each wheel on the same axle to ensure the steering wheel is centered after setting toe. Positive toe-in and negative toe is toe-out.

**Rear Wheel Alignment Set-to Specifications**

| Individual Toe* | Sum Toe* | Thrust Angle | Individual Camber* | Cross Camber*
All Models | 0.125° +/- 0.25° | 0.25° +/- 0.25° | 0.00° +/- 0.25° | -0.25° +/- 0.29° | 0.00° +/- 0.50°
* For reference only. These are non adjustable angles.

**Front Wheel Alignment Set-To Specifications**

| Model | Total Toe** | Caster | Cross Caster* | Camber - Left | Camber - Right | Cross Camber* |
|---|---|---|---|---|---|---|
| Rubicon and 3.0L Diesel Sport and Sahara | 0.20° +/- 0.15° | 4.80° +/- 1.00° | 0.00° +/- 0.50° | -0.25° +/- 0.37° | -0.25° +/- 0.37° | 0.00° +/- 0.50° |
| Sahara | 0.20° +/- 0.15° | 5.05° +/- 1.00° | 0.00° +/- 0.50° | -0.25° +/- 0.37° | -0.25° +/- 0.37° | 0.00° +/- 0.50° |
| Sport | 0.20° +/- 0.15° | 5.35° +/- 1.00° | 0.00° +/- 0.50° | -0.25° +/- 0.37° | -0.25° +/- 0.37° | 0.00° +/- 0.50° |

**Note: All wheel alignments are to be set at curb height**
**Note: Caster values required to be greater than or equal to 4.0° for all variants**
* Cross Alignment values are determined by taking the left side value minus the right side value.
** TOTAL TOE is the sum of both left and right wheel toe setting. TOTAL TOE must be equally split between each wheel on the same axle to ensure the steering wheel is centered after setting toe. Positive toe-in and negative toe is toe-out.

**Rear Wheel Alignment Set-to Specifications**

| Model | Individual Toe* | Sum Toe* | Thrust Angle | Individual Camber* | Cross Camber* |
|---|---|---|---|---|---|
| all models | 0.125° +/- 0.25° | 0.25° +/- 0.25° | 0.00° +/- 0.25° | -0.25° +/- 0.29° | 0.00° +/- 0.50° |

* For reference only. These are non adjustable angles.

Most likely track bar or mount, ball joints, or caster issue.

try going underneath with a torque wrench and check some of the links, especially track bar and ball joints. I found more than a few bolts that were not torqued up to spec. You can find the specs on this forum

## STEERING LINKAGE

Part |Nm |ft. lbs. | in. lbs. | Comments
Drag link inner nut (at pitman arm) | 105 | 77 | - |
Drag link outer nut (at steering knuckle) | 64 | 47 | - |
Drag link adjuster clamp | 46 | 34 | - |
Tie rod end nut (at steering knuckle) | 64 | 47 | - |
Tie rod end adjuster clamp | 46 | 34 | - |
Steering damper bolt (at axle) | 80 | 59 | - |
Steering damper nut (at tie rod) | 80 | 59 | - |
Steering damper bracket nut | 75 | 55 | - |

## SUSPENSION (FRONT)

Part |Nm |ft. lbs .| in. lbs. | Comments
Hub and bearing bolts | 102 | 75 | - |
Hub and bearing nut | 136 | 100 | - |
Lower control arm rear nut | 140 + 145° | 103 +50° | - |
Lower control arm front nut | 140 + 145° | 103 +50° | - |
Lower ball joint nut (initial torque) | 20 | 15 | - |
Lower ball joint nut (final torque) | 45 | 33 | - |
Shock absorber lower bolt | 100 | 74 | - |
Shock absorber upper bolt | 110 | 81 | - |
Stabilizer bar bolts | 63 | 46 | - |
Stabilizer bar link upper nut | 93 | 69 | - |
Stabilizer bar link lower bolt | 80 | 59 | - |
Track bar frame nut | 70 + 115° | 52 + 115° | - |
Track bar axle bolt | 70 + 115° | 52 + 115° | - |
Upper control arm front nut | 55 + 185° | 41 + 185° | - |
Upper control arm rear bolt | 50 + 135° | 37 + 135° | - |
Upper ball joint nut | 75 | 55 | - |

## SUSPENSION (REAR)

Part |Nm |ft. lbs .| in. lbs. | Comments
Lower control arm front bolts | 100 + 50° | 74 + 50° | - |
Lower control arm rear nut | 100 + 50° | 74 + 50° | - |
Shock absorber upper bolt | 110 | 81 | - |
Shock absorber lower nut | 100 | 74 | - |
Stabilizer bar bolts | 63 | 46 | - |
Stabilier bar link upper nut | 90 | 66 | - |
Stabilizer bar link lower nut | 80 | 59 | - |
Track bar nut (frame end) | 100 + 30° | 74 + 30° | - |
Track bar bolt (axle end) | 100 + 60° | 74 + 60° | - |
Upper control arm front bolt | 100 + 80° | 74 + 80° | - |
Upper control arm rear nut | 100 + 65 ° | 74 + 65° | - |