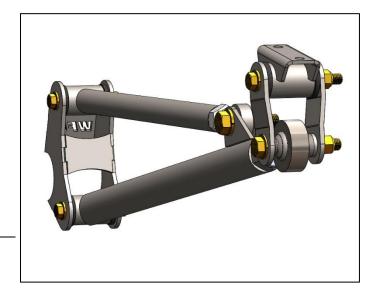


Part #	Description	
WFO 5500	Torque Arm Kit	

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#### **WFO 5500**

BILL OF MATERIALS		
WFO 5500 ***	Torque Arm Kit	
TOOLS NEEDED		
Standard Socket & Wrench set		
Grinder with sanding disc		
Welder		
Angle Finder		
Spray Paint		
Grease		
Anti-Seize		
Tape Measure		



#### **WARNING!**

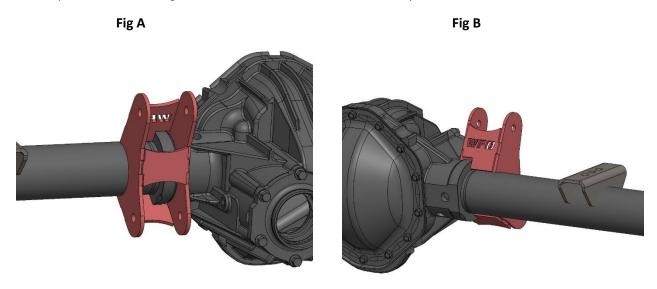
- \*\*\* Read all instructions thoroughly from start to finish before beginning the job! If these instructions are not properly followed, severe frame, suspension, tire, or body damage may result to the vehicle!
  - \*\*\* WFO Concepts recommends you exercise extreme caution when working under vehicles supported by jack stands.
- \*\*\* WFO Concepts recommends all installation to be performed by a professional shop/service technician. Product failure due to improper installation will not be covered under WFO's warranty policy.

## **TECH NOTES:**

- Torque arms are installed to counteract pinion wrap, or "wheel hop", when accelerating or 4low torque loads when crawling over obstacles.
- All vehicles are different and there are multiple ways on how to setup the torque arm. Use this guide as a general rule of thumb to setup your torque arm.
- DO NOT install this when on a lift with suspension drooped. This will cause extreme binding when vehicle is sitting at ride
- Be sure to finalize all suspension work prior to installing torque arm. Make sure the desired ride height is set, pinion angle is correct for the specified driveline, brake lines are run, and all shocks are mounted.
- Using aluminum mock up bushings like part # WFO 4273-PR will make your install a lot smoother and you won't ruin your rubber bushings before final installing them.

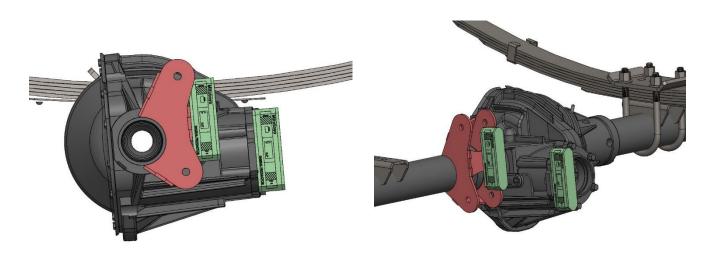
## **INSTALLATION:**

- 1. First, make sure all suspension work is done FIRST. Ride height is set, pinion angle is correct per driveline you are running, you have ample room between the casting of the diff and the spring perch, exhaust isn't going to interfere, and that you have a solid crossmember or mount up on the frame to mount the shackle side of the torque arm.
- 2. Torque arms will always be installed on the Passengerside, so it counteracts the torque load of the engine traveling through the drivetrain and down into the axles.
- 3. Choose the appropriate size torque arm axle bracket for your size axle tube. Some will only be welded on the axle tube and some will span from axle tube over onto the cast diff section.
- 4. You will need to grind any paint away from the area you are going to weld on the axle. Loosely mock up your torque arm plates with the ¾" OD x 3" long spacers. Place on Passengerside axle tube, or part way on diff if needed, and mark the area where you need to clean. **Fig A & B** shows a 14 Bolt HD bracket assembly.



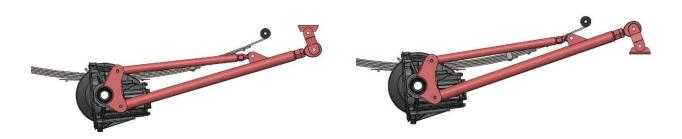
5. Once axle tube and housing are prepped, you can now tack the brackets in place. Using an angle finder, you want to match the front face of the bracket to the pinion. See **Fig. C & D** below. You want the bushings and pinion to be parallel to each other.





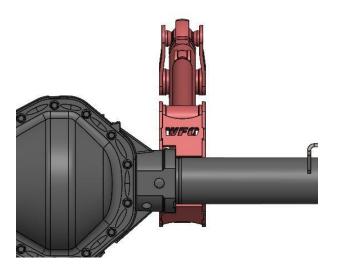
- 6. Next, you will need to make sure you have a substantial crossmember in place. Or, a strong enough location on the frame that you can mount the upper shackle hanger to.
- 7. There are 2 ways you can mount the shackle, swing right side up, or swing upside down. See Fig E & F



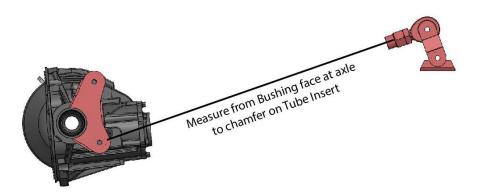


- 8. Pay attention to the way the shackle is mounted in the above pictures. To allow for free movement of the rear suspension, the shackle needs about 15° to 20° of angle from its mounting location.
- 9. You also want to have the torque arm brackets on the axle in line with the shackle up on your crossmember. A good way of doing this is to take a long straight edge and hold it to the inside of your axle brackets and run it up to your crossmember. You can mock up the ½" thick bent shackles on the shackle hanger to line them up. Fig G

Fig G

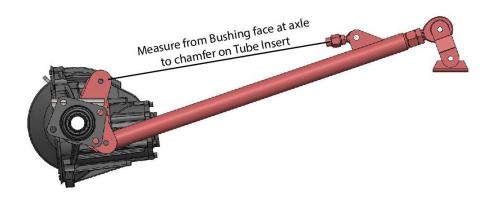


- 10. Once the upper shackle hanger is tacked in place you can now measure for the tubes.
- 11. Mock up both upper and lower bushing sets in the axle side brackets as well as up in the shackle hanger on your crossmember.
- 12. With the upper shackles mocked up as well, grab the large 1.25" Heim, WFO 1125R tube insert, 1.25" Jam Nut, and both WFO 5125-5625 Misalignment spacers and assemble them together. Mock the heim into the upper shackle. Make sure the bent shackles bend in towards the heim from the bushing.
- 13. Set the shackles at a 15° to 20° lean back towards the rear of the vehicle, reference Fig E & F again if needed.
- 14. Next, you will need to measure for the tube length. This step must be performed when the vehicle is sitting on the ground at ride height. See **Fig H.** One side of the tube is pre notched, measure from this side and cut off what is needed. Chamfer the end where it will be welded to the WFO 1125R Tube Insert. Mock tube up in vehicle.



15. Once the lower tube is mocked in, you can follow the same procedure for the top tube. The WFO 5304 Tabs can be placed on the lower tube near the top. This positioning isn't critical, they can be placed anywhere up near the tube insert to within 10" down the tube. Mock in the 3/4" heim, jam nut, and tube insert to get an accurate dimension. See Fig I.

Fig I



- 16. Now that all tubes and mounts are mocked in, remove everything and final weld. Make sure you get some good tacks around the axle side bushing sleeves so they don't get tweaked during removal or welding. Remember to remove all bushings and heim's before any welding is done.
- 17. Final paint once cooled.
- 18. You will want to grease all bushings prior to installing them into the bushing sleeves. It's a good idea to install the center bolt sleeve with a little grease as well. Always use anti-seize when threading in the heim's into the tube inserts.
- 19. Using the longer 9/16"-12 x 5" long Grade 8 hardware, assemble the crossmember shackle first, leave loose.
- 20. Install the 1.25" Heim into the lower tube next, remember to use anti seize! Using another 9/16" x 5" Bolt, install it into the bottom part of the axle mount. Then, make sure the bent shackles are facing the correct way and use the 9/16"-12 x 4" long G8 Hardware through the shackle and 1.25" Heim with misalignments.
- 21. Repeat for the upper tube. Use the  $5/8"-11 \times 2.75"$  Grade 8 Hardware for the  $\frac{3}{4}"$  heim and tabs on the lower tube.
- 22. Reference the torque table below for tightening.

Torque Table		
916"-12 Grade 8 Hardware	85 Ft. Lbs.	
5/8"-11 Grade 8 Hardware	110 Ft. Lbs.	

23. Double check everything and tighten your jam nuts.



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