

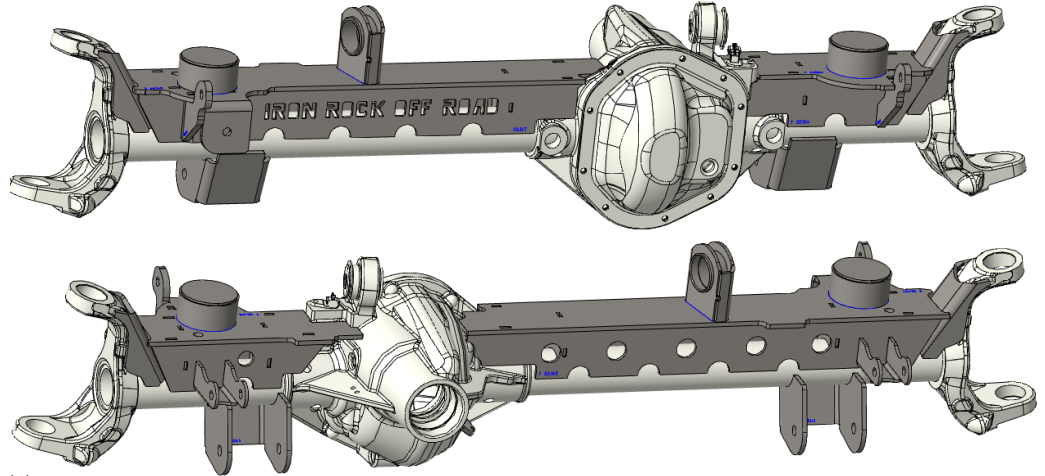
IRON ROCK OFF ROAD

WJ – JK D44 Swap
Kit Instructions

1-877-919-JEEP www.ironrockoffroad.com

Parts List:

- Iron Rock Off Road Decal 10001 (1)
 - Upper C Gusset 88149 (2)
 - Front Left Plate 88364 (1)
 - Rear Left Plate 88365 (1)
 - Front Right Plate IRO 88367 (1)
 - Top Left Plate, Spring Mount 88366 (1)
 - Rear Right Plate, Long 88368 (1)
 - Top Right Plate, Long 88369 (1)
 - Track Bar Inner Bracket 88336(1)
 - Inner Gusset Plate 88341 (4)
 - Shock Mount 88342 (2)
 - Left Sway Bar Link Mount 88345 (1)
 - Right Sway Bar Link Mount 88346 (1)
 - WJ Coil Spring Mount, Tube 92243 (2)
 - WJ Coil Spring Mount, Cap 92054 (2)
 - Optional:** UCA Mount, Passenger 88374 (1)
 - UCA Bracket 88375 (2), Bushing Tube 92025 (1)
 - Optional:** Lower Control Arm Mounts (choose width)
 - WJ Width 88343 (2)
 - Standard (2-5/8") Width 88344 (2)
 - Optional:** WJ Offset Bump Stop, Front (choose height) 14636
 - 2.25" 92332 (2)
 - 3.25" 92338 (2)
 - 4.25" 92340 (2)
- #257 – WJ Offset Bump Stop Hardware**
- M8 x 30 hex bolt, cl 8.8 (4)
 - M8 hex nut, (4)
 - 1/4" USS washer (4)

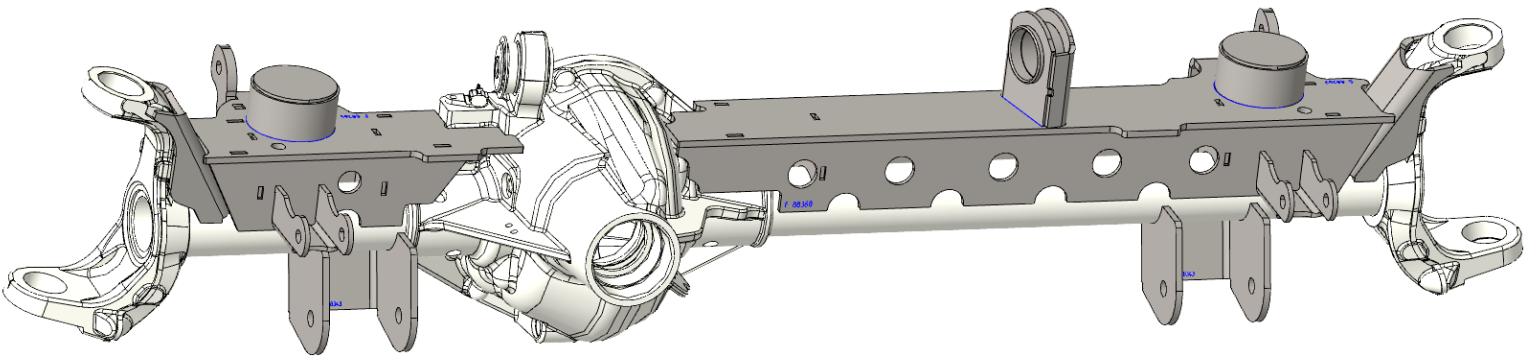
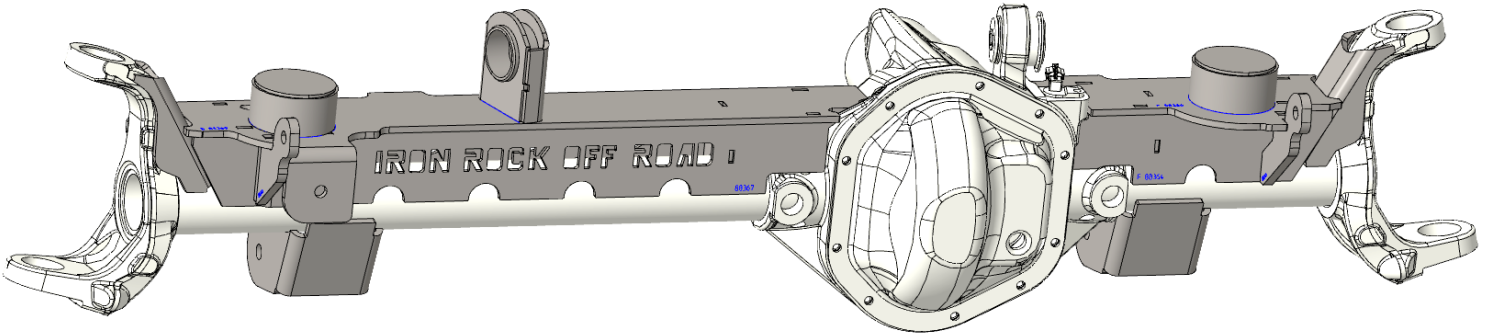


Safety Warning: *Important! Read Before Installation. *****

We recommend that this kit be installed by a qualified professional. Knowledge of suspension component function is necessary for safe installation and post installation inspections. We recommend that all welds be performed by a certified welder. A weld failure may result in serious injury or death, in addition to severe vehicle damage. Be sure to re-torque all suspension components after the first 100 miles of use, and frequently inspect all safety critical suspension components.

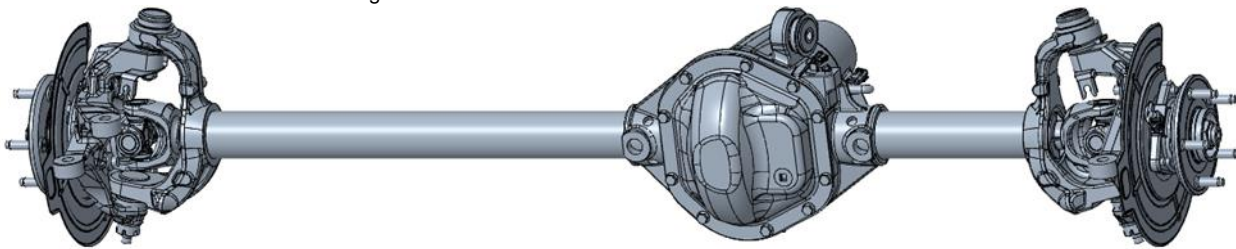
Before you begin:

- Fitment requirements:
 - For optimal performance these modifications have been made compared to OEM parts: Make any necessary accommodations.
 - Bump stop pads raised 1-1/4"
 - Sway bar link mounts moved out 1/2"
 - Shock mounts moved up 1/2" per side
 - Coil spring pads moved back 1/2" (to accommodate pushing the axle forward)
- If using products from other manufacturers verify fitment before installation.**
- This product has not been tested at OEM suspension height and likely will not work. IRO recommends 4" lift or more.
- Minimum 4" of lift recommended for adequate suspension up-travel; 3" of lift is possible but ride quality will be compromised due to limited up-travel.
- Not compatible with Iron Rock Off Road Iron-Y long arm suspension.
- It is recommended to replace axle seals and ball joints after installation due to welding heat.
- Read all safety warnings and understand installation instructions.
- Check all suspension components for wear and replace as needed.
- Contact Iron Rock Off Road with any questions before, during, or after installation.
- Ensure that all parts are present and in good condition using the included shipping checklist before scheduling installation.
- Be sure you have the following tools and supplies:
 - Basic hand tools
 - 4-1/2" Angle grinder with grinding, sanding, and cut-off wheels.
 - Sawzall
 - Welder
 - Torque wrench
 - Propane or MAP gas torch



Prepare the axle housing:

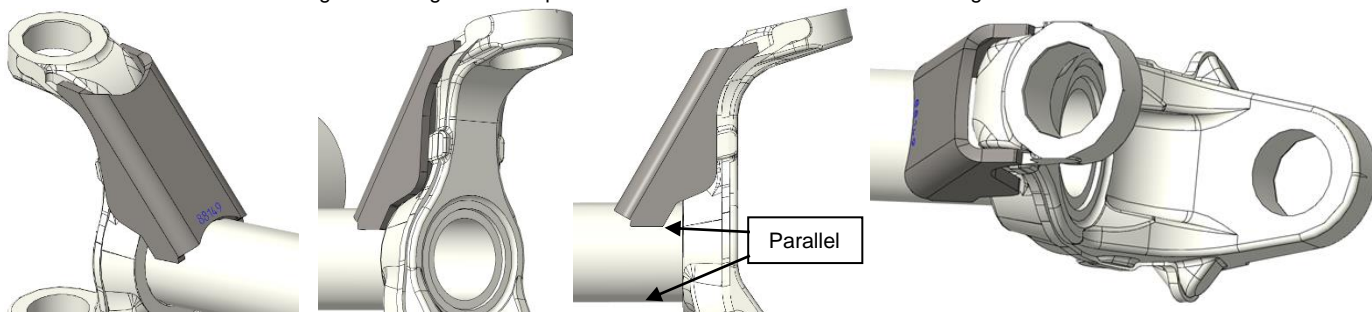
1. Remove the axle shafts and plug the axle tubes with rags to prevent metal shavings from entering into the axle housing.
2. Cut off all brackets from the axle housing. Be careful not to cut into the tubes at all.



3. Clean off any paint or any remaining bracket residue. A 4-1/2" angle grinder with a flap wheel works well for this.
4. Check the axle housing and tubes for straightness: Using an angle finder, with the pinion horizontal, check the slope along the entire length of each tube. Any variance of 1/4 degree or more must be straightened or the housing replaced. Be sure to remove any rust or dirt from under the angle finder. Perform the same check with the pinion vertical.
5. Clean off any paint or rust from the axle Cs. A wire wheel on a 4-1/2" angle grinder works well for this.

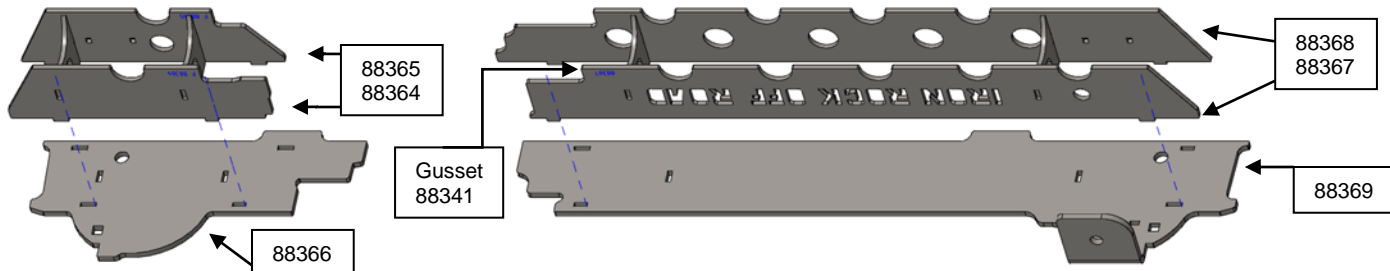
Truss Installation:

6. **C gussets:** Locate the axle C gussets, 88149. Test fit the C gussets onto the upper portion of the Cs. The bottom edge to the C gusset should be parallel to the axle tube. Some minor grinding inside the tips may be required to make a nice, tight fit.
7. Using the C gussets as a guide, mark any areas around the edges that might need to be cleaned. Remove the gussets, clean, and reinstall.
8. Double check that the bottom edge of the C gussets are parallel to the axle tube then tack weld the C gussets.

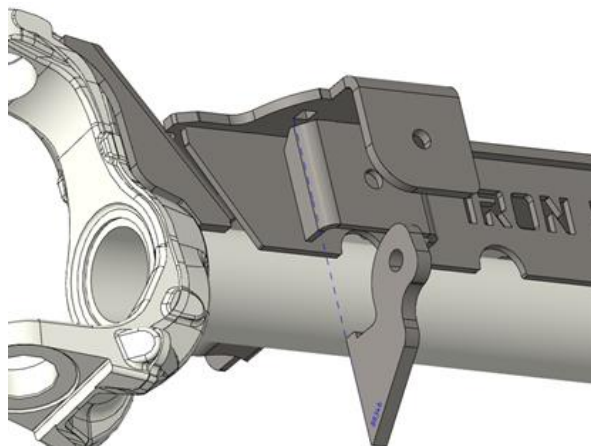
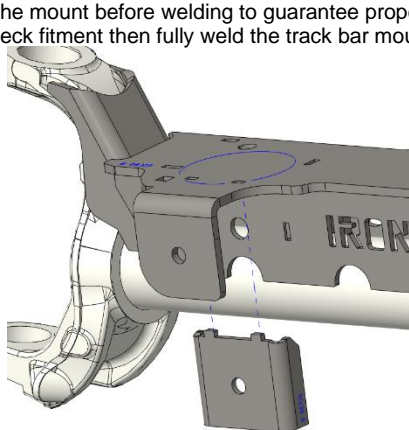


9. **Truss Assembly:** Locate the plates, 88364, 88365, 88366, 88367, 88368, 88369, and 88341.
10. Place two 88341 gussets between plates 88364 & 88365 then insert into 88366. Use a few small tack welds to hold the pieces together.
11. Place two 88341 gussets between plates 88367 & 88368 then insert into 88369. Use a few small tack welds to hold the pieces together.

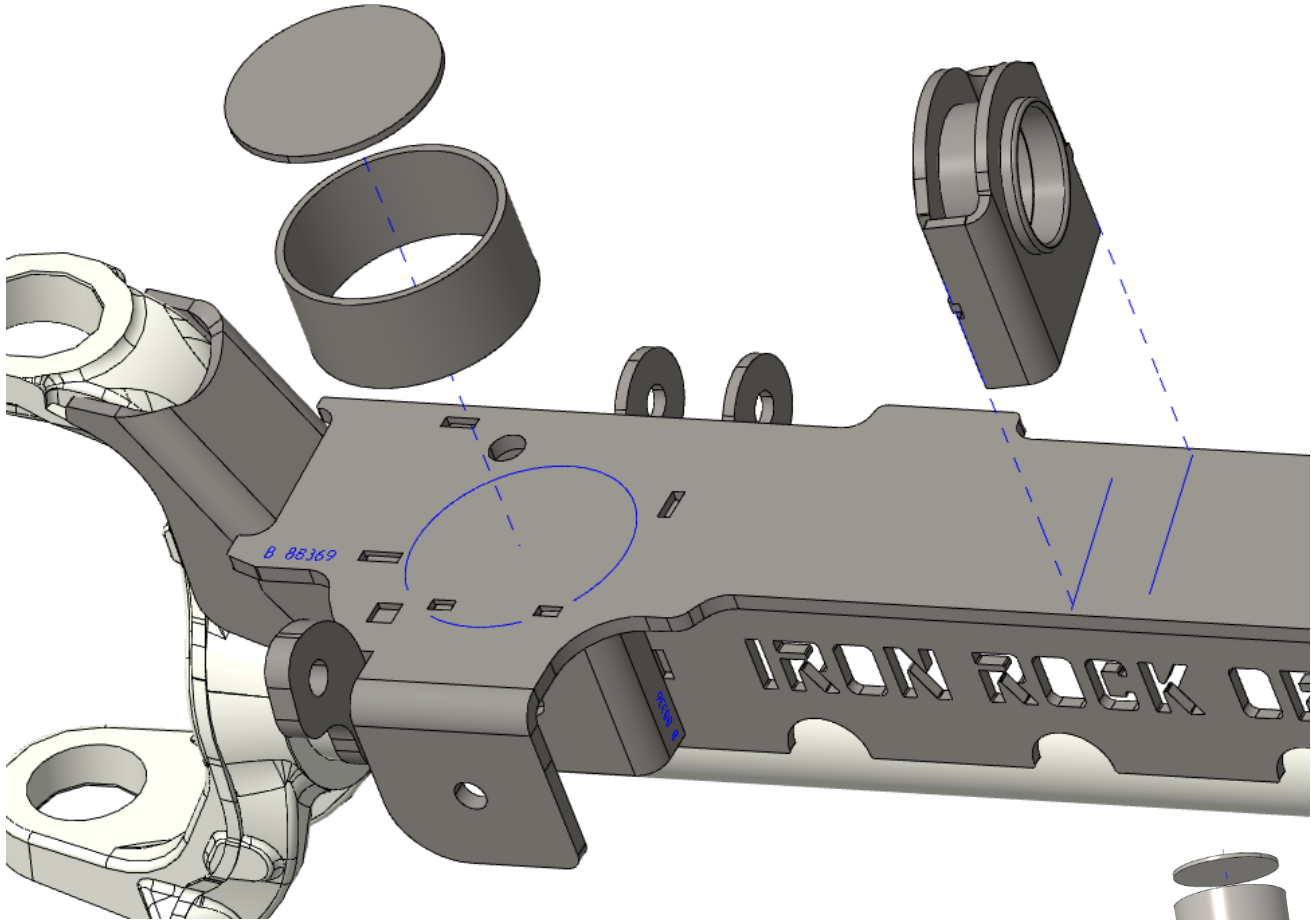
****Ensure that all joints are tight and that your truss assembly matches the picture below before tack welding.**



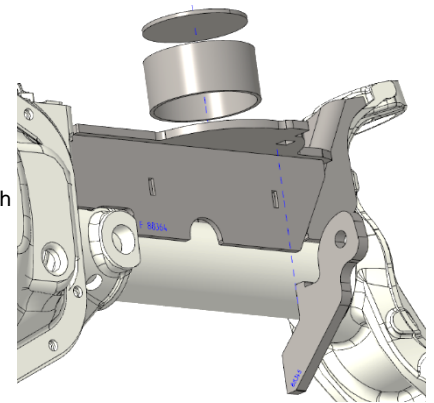
12. Set the two truss pieces onto the axle housing. Check that all the surfaces of the axle that meet up with the truss are clean and ready to weld.
13. Using the truss pieces as a guide, mark the areas of the differential that need to be cleaned. Remove the truss, clean the axle, and reinstall.
14. Tack weld the truss to the axle assembly at several locations along the truss. Some minor clamping might be necessary to achieve a tight weld joint.
15. Fully weld the truss to the axle tubes. Weld in short alternating 2" segments on opposite sides of the axle assembly. Allow a short cooling off period between welds. Ensure good weld penetration but try to minimize the amount of heat applied and the heat affected zone. Preheat the cast differential housing before welding and wrap with a welding blanket to avoid cracking after welding.
****When welding the truss assembly be sure to leave clearance near locating slots for the rest of the components to be easily assembled onto the truss.**
16. Cover with welding blanket to ensure a slow, even cooling process.
17. **Track Bar Mount:** Locate 88336 and 88346. Insert 88336 up, into the top plate then add a small tack to hold it in place.
18. Add the sway bar link mount 88346 beside 88336. Use a small tack weld to hold it in place.
19. Check that the track bar bolt holes are aligned and verify the width is 1-5/8" inside the track bar mount. ****Tip:** Install your track bar bushing sleeve in the mount before welding to guarantee proper fitment.
20. Double check fitment then fully weld the track bar mount to the truss.



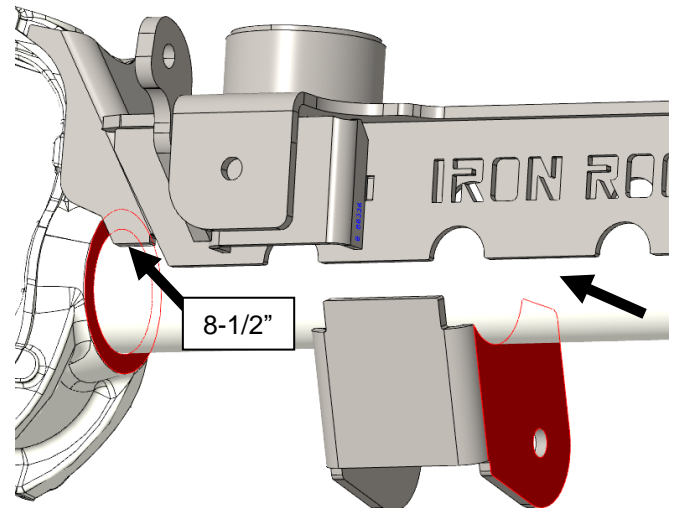
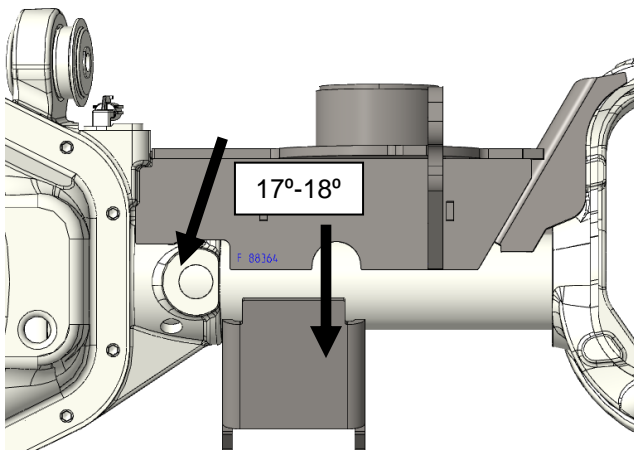
21. **Spring Mount:** Locate tube 99243 and cap 92054. Align the tube 99243 to the etched circle on the top plate of the truss and tack into place.
22. Center the cap on top of the tube and tack it into place.
23. Repeat this process for the other spring mount.
24. Double check placement then fully weld the spring mount to the truss.



25. **Optional: Upper Control Arm Mount:** Locate the assembled upper control arm mount 88374.
26. Align the long UCA mount to the etched lines on the top plate of the truss, tack in place. The passenger UCA mount does not have a specific mounting orientation, it can mount either way.
27. Double check fitment then fully weld the upper control arm mount to the truss.
28. **Sway Bar Mount:** Locate 88345. Insert 88345 onto the front of the driver side spring mount and secure it with a small tack weld.
29. Double check fitment then fully weld the sway bar mount.
30. **Shock Mounts:** Locate the two shock mounts 88342. Insert 88342 tabs into the slots on the back side of the truss. The open side of the bracket faces up, secure them with a small tack weld.
31. Double check fitment then fully weld the shock mounts.
32. **Lower Control Arm Mounts:** Locate 88343 or 88344 and an angle finder. With the driver side lower control arm mount touching the differential, set the angle between 17°-18°. Measure the angle from the front face of the bracket to the differential cover mounting surface (arrows). Tack in place.
33. Measure 8-1/2" from the passenger axle C to the outside surface of the passenger side lower control arm bracket. See picture below.
34. Set the angle of the passenger bracket between 17°-18°. Measure the angle from the front face of the bracket to the differential cover mounting surface.
35. Tack the bracket into place then recheck measurements for both brackets and fully weld them to the axle.

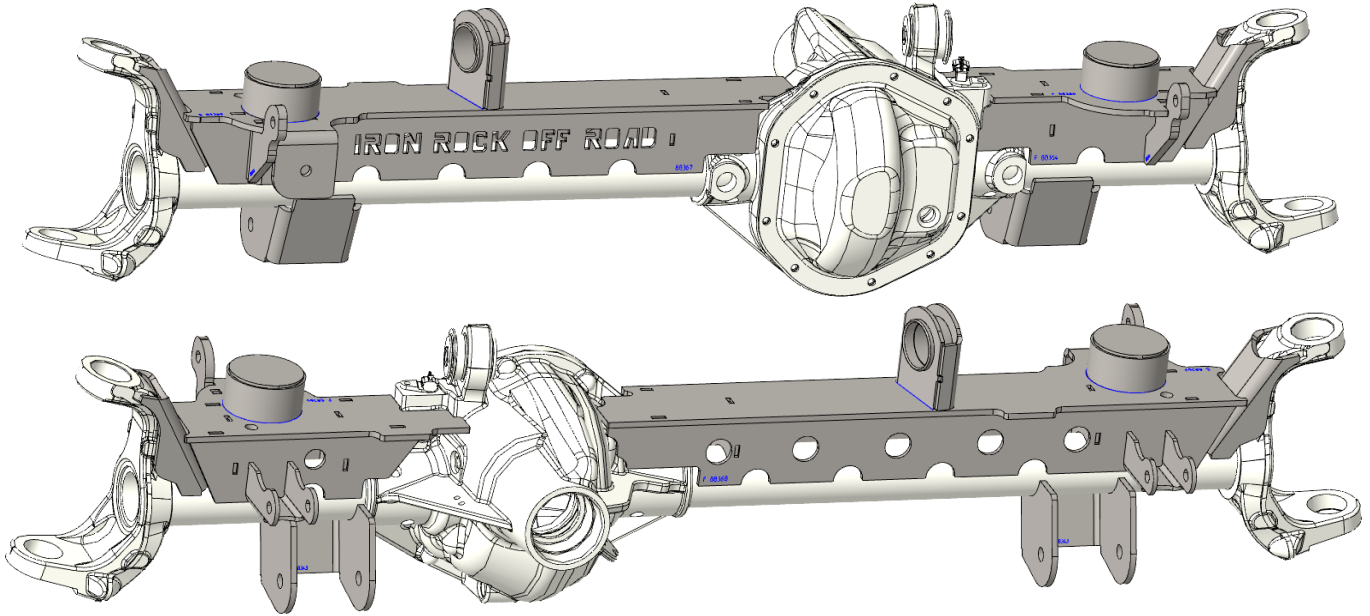


**Driver side LCA mount: Preheat the cast differential before welding. Wrap welded area in a welding blanket to avoid cracking after welding.



Final Check and Paint:

36. Recheck the truss and axle assembly for any section that may have been left unwelded during assembly. Weld any area that may have been missed and allow a short cooling off period between welds. Ensure good weld penetration but try to minimize the amount of heat and the heat affected zone.
37. Cover with welding blanket to ensure a slow, even cooling process.
38. Remove any weld spatter and prepare axle assembly for paint.
39. Repeat step 4 to verify that the axle housing and tubes are still straight. The axle must be completely cool for this measurement.
40. It is recommended that you install new axle seals and ball joints due to welding heat.
41. Paint axle assembly and install in your Jeep.



Final Safety Warning:

* Re-torque all fasteners after 100 miles, and frequently inspect all safety critical suspension and steering components. It is the responsibility of the installer to ensure all fasteners are properly tightened after installation and to ensure the owner knows his/her ongoing responsibility. It is the responsibility of the owner of the vehicle to be sure all safety critical components are inspected frequently, especially after off road or other demanding use.

