

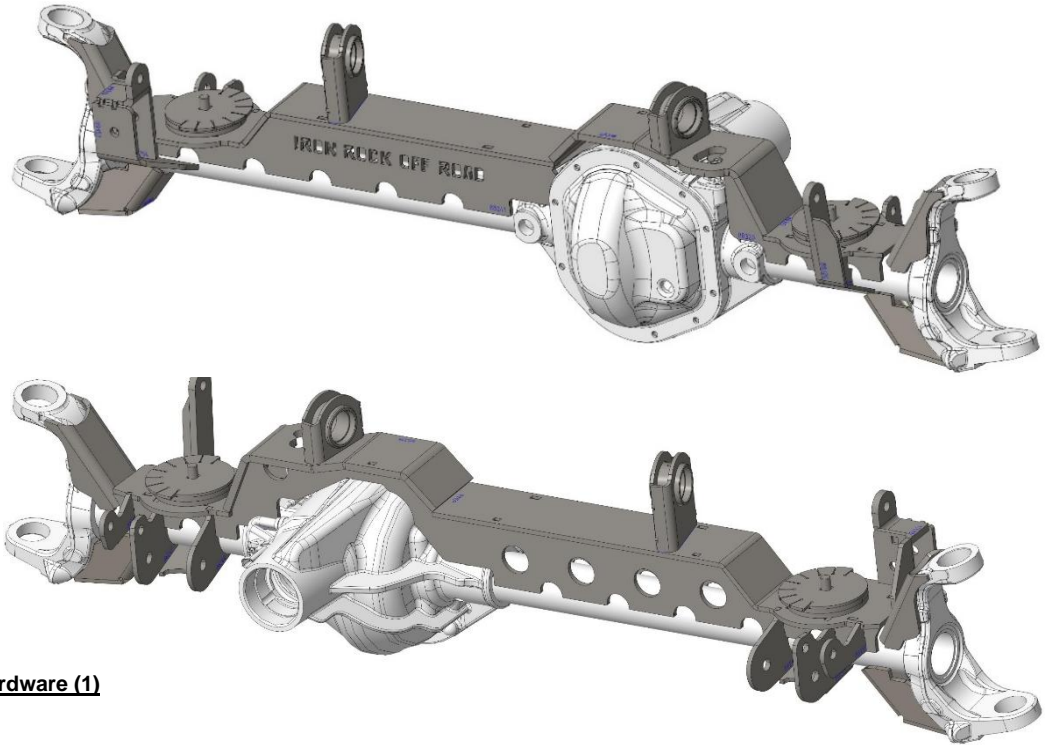
# IRON ROCK OFF ROAD

XJ/ZJ/TJ Swap Truss  
JK D44 Instructions

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

## Parts List:

- Instructions
- Truss Front Plate 88241 (1)
- Truss Rear Plate 88242 (1)
- Inner LCA Tab 88248 (2)
- Outer LCA Tab 88249 (2)
- Outer Shock Mount 88250 (2)
- LCA Mount Gusset 88307 (2)
- Passenger Side UCA Mount 88358 (1)
- Differential Top Cap 88318 (1)
- Driver Side Spring Mount 88319 (1)
- Truss Front Plate, Left 88320 (1)
- Driver Side UCA Mount 88356 (1)
- Track Bar Mount Gusset 88323 (1)
- Passenger Sway Bar Mount 88324 (1)
- Driver Side Sway Bar Mount 88325 (1)
- Driver Side Sway Bar Gusset 88326 (1)
- Outer Track Bar Mount 99153(1)
- Inner Track Bar Mount 99154 (1)
- Truss Top Plate, Long 99159 (1)
- Upper C-Gusset 88149 (2)
- Lower C-Gusset 88150(2)
- Lower coil spring retainer 99054 (4)
- Upper coil spring retainer 99059 (2)
- #237 - XJ/ZJ/TJ Swap Truss JK D44 Hardware (1)**
  - 1/2 x 1-1/2" carriage bolt, gr5 (2)
  - 1/2 USS flat washer (12)
  - 1/2 hex nut, gr8 (2)
  - M12 x 80 hex bolt, cl 10.9 (3)
  - M12 x 70 hex bolt, cl10.9 (2)
  - M12 nylock nut (5)
  - 12mm shock sleeve (2)



## **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.
  - Coil spring pads moved back 1-1/2".
  - Track bar mount moved up 2" and outwards 2-1/2".
  - Sway bar link mounts raised 1-7/8" and moved back 2-3/8".
  - Shock mounts moved outward 1-3/4" per side.
- Works with all Iron Rock Off Road suspension components.
- 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. We recommend 3" lift or more.
- Extended bump stops may be required to avoid interference with engine oil pan.
- It is recommended to replace axle seals after installation due to welding heat.
- Read all safety warnings.
- Read 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

## Prepare the axle housing:

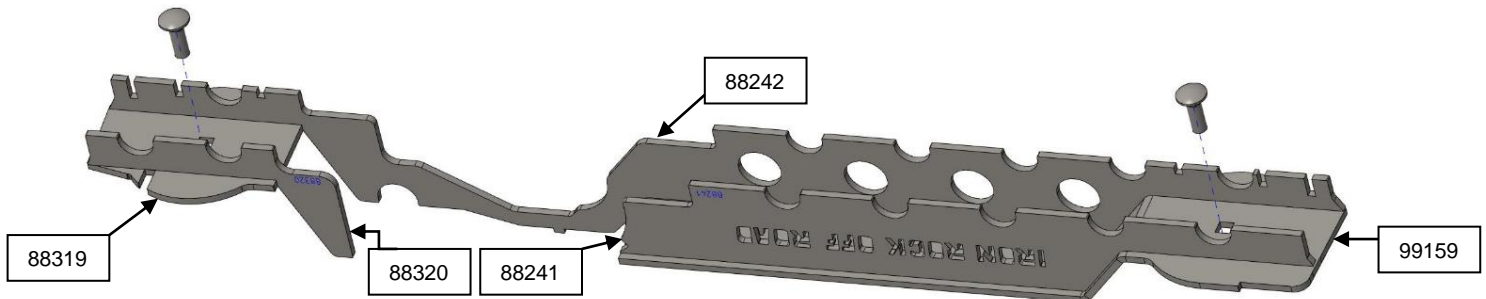
1. Remove the knuckles from the axle and upper/lower ball joints. It is recommended that you replace the upper and lower ball joints and install new axle seals due to possible damage from welding heat.
2. Remove all brackets and control arm mounts from the JK D44 axle. Including the cast upper control arm mount on the top of the differential. Be careful not to cut into the tubes at all.



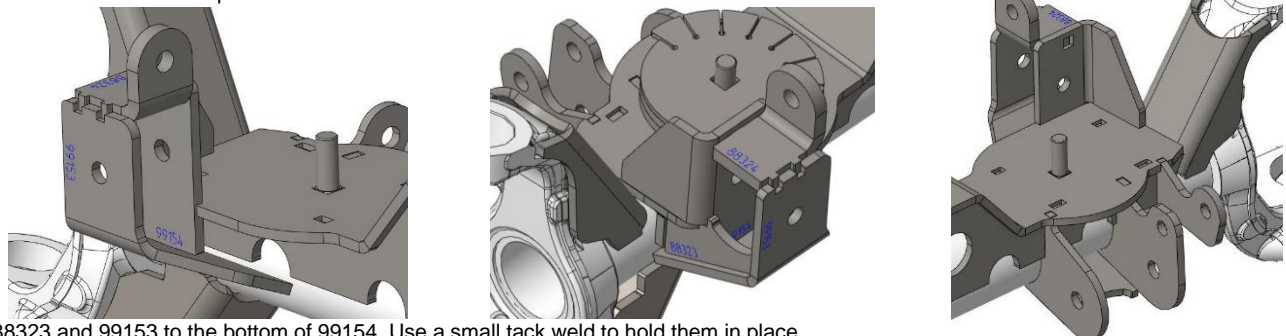
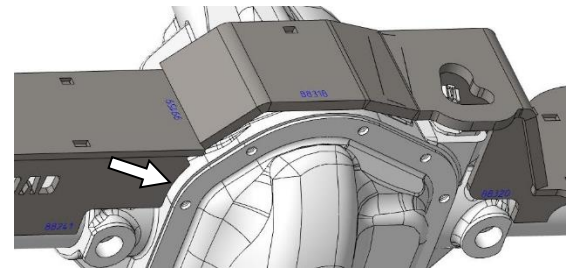
3. Check the axle housing and tubes for straightness: Using an angle finder, with the pinion horizontal, check the slope along the entire length of each tube. Any variance of 1/4 degree or more must be straightened or the housing replaced. Be sure to remove any rust or dirt from under the angle finder.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

## Installation:

6. **C Gussets:** Locate the axle C gussets. Part number 88149 and 88150, 2 of each. 88149 is for the top, 88150 for the bottom.
7. Align the C gussets to the axle tube and the curved shape of the axle C and tack them in place. 88149 will need a small amount of grinding inside the small tabs at the top to fit perfectly.
8. Double check the C gusset fitment and fully weld 88149 to the axle and C.
9. **Truss Assembly:** Locate the carriage bolts, 88319, 88320, 88241, 88242, and 99159.
10. Using 99159 as a guide, insert the tabs on 88241 and 88242 into the slots, then tack into place. Repeat with 88319 and 88320. **\*\*Ensure that 88320 is parallel with 88242\*\***Use only a few, small tack welds in case they need to be cut off later.
11. Insert the carriage bolts into the square holes in 88319 and 99159, then fully weld them into place.



12. Set the truss assembly onto the axle housing.
13. Insert 88318 onto the truss assembly by matching the tab to the slot. Ensure the front and rear edges are flush with the truss assembly then tack weld in place. The edge of 88241 should be touching or close to touching the differential housing (arrow).
14. The front and rear plates of the truss should extend down to nearly the center of the axle tube at front and rear.
15. 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.
16. 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 and the heat affected zone. **\*\*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.**
17. Cover with welding blanket to ensure a slow, even cooling process.
18. Optional: If you choose to weld the truss to the cast differential be sure to preheat before welding then cover with a welding blanket to avoid cracking.
19. **Track Bar Mount:** Locate 99153, 99154, 88323, and 88324. Place 99154 in the notch on the outside corner of the passenger side spring mount then add a small tack to hold it in place.



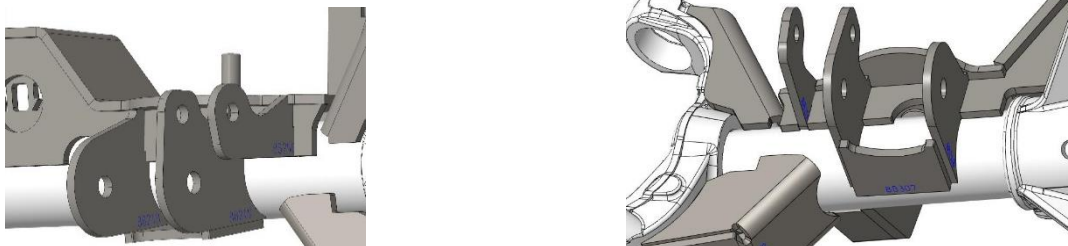
20. Add 88323 and 99153 to the bottom of 99154. Use a small tack weld to hold them in place.
21. Add 88324 as shown then tack weld it in place. Check that the track bar bolt holes are aligned and verify the width is 1-9/16" inside the track bar mount. **\*\*Tip:** Install your track bar bushing sleeve in the mount before welding to guarantee proper fitment.
22. Double check fitment then fully weld the track bar mount to the truss.



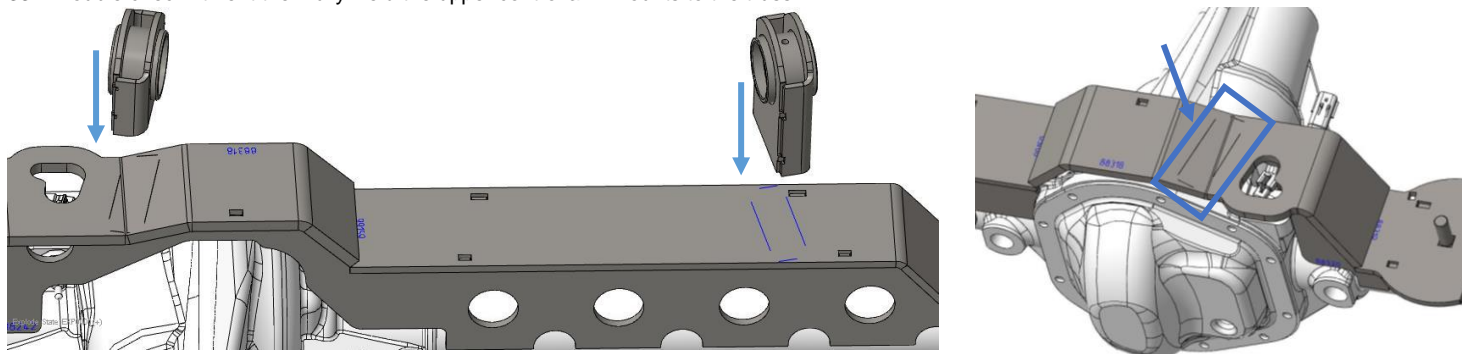
23. **Sway Bar Mount:** Locate 88325 and 88326. Insert 88325 onto the front of the driver side spring mount and secure it with a small tack weld.
24. Add 88326 to the front of 88325. Make sure the edge of each bracket is flush to the other and the axle tube, then tack it in place.
25. Double check fitment then fully weld the sway bar mount.



26. **Lower Control Arm Mounts:** Locate 88248, 88249, 88250, and 88307. Insert 88248, 88249, and 88250 into the back of the spring mount. 88248 is the inside control arm mount, 88249 is the outside mount. Ensure there is a minimum of 2-5/8" between the plates. Leave extra space to make installing the lower control arms easier.
27. Align the mounts with a bolt then tack them in place.
28. Insert 88250 outside of the control arm mount. Verify mounting width then tack weld it in place.
29. Add 88307 to the bottom of the control arm mount. Ensure it touches the axle tube and has equal amounts of overlap on each control arm tab.
30. Double check fitment then fully weld the lower control arm mounts and shock mounts.



31. **Upper Control Arm Mounts:** Locate the assembled upper control arm mounts 88356 and 88358.
32. Align the UCA mounts to the etched lines on the top plates of the truss and tack in place. The driver side UCA mount is made to match the angle of the top plate and can only go on the truss one way. The passenger side UCA mount does not have a specific mounting orientation, it can mount either way.
33. Double check fitment then fully weld the upper control arm mounts to the truss.



34. **Final Check and Paint:** 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.
35. Cover with welding blanket to ensure a slow, even cooling process.
36. Remove any weld spatter and prepare axle assembly for paint.
37. Repeat step 3 to verify that the axle housing and tubes are still straight. The axle must be completely cool for this measurement.
38. It is recommended that you replace the upper and lower ball joints and install new axle seals.
39. Paint axle assembly and install.

