

# IRON ROCK OFF ROAD

## Ford 8.8 Axle Swap Bracket Kit Installation Instructions

1-877-919-JEEP [www.ironrockoffroad.com](http://www.ironrockoffroad.com)

XJ 84-01 Jeep Cherokee

### Parts Checklist:

#### \*BOX 1\* 42x15x7

- ☐ HD Leaf Spring Perch 91020 (2)
- ☐ Shock Mount 99060 (2)
- ☐ Over The Axle Truss 88076 (1)
- ☐ Heavy Duty U-Bolt Plates 88071 (2)
- ☐ Heavy Duty U-Bolt set 10515 (1)
- ☐ **#77 - Shock Mount Hardware (1)**
  - ☐ M12 x 60 hex bolt (2)
  - ☐ M12 nylock nut (2)
  - ☐ 7/16 USS washer (4)
  - ☐ M12 shock sleeve (2)



### Installation Instructions:

#### Before you begin:

1. This kit requires welding and advanced fabrication skills. If this project is beyond your capabilities, check with a 4wd shop, welding shop, or other fabrication shop for assistance.
2. Read and understand all installation instructions.
3. If you have any questions before, during, or after installation contact Iron Rock Off Road (see contact information above).
4. Ensure that **all parts are present** and in good condition per shipping checklist above.
5. Tools required: Oxy/Acetylene torch, welder capable of welding 1/4" plate, angle grinder, wire wheel on an angle grinder or drill, good quality angle finder (slope gauge), dial indicator with magnetic base, sharpie marker (silver works well), tape measure, basic hand tools

#### Find and inspect donor axle:

6. Recommended axle to use: Ford 8.8 rear axle assembly from 1995 -01 Ford Explorer with disc brakes. Older axles will work but will not have disc brakes, very old or car axles may have undesirable smaller axle shafts. Many Ford 8.8s have limited slip differentials. Be sure to get the correct gear ratio. Avoid excessive rust, excessive oil leaks, and rolled over donor vehicles. Be sure to get brake calipers, brake lines, and companion flange and bolts for pinion yoke. [www.car-part.com](http://www.car-part.com) is a great place to look for a donor axle assembly.
7. Check 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 1/2 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.
8. Check for mechanical issues: Remove differential cover and inspect all internal components for rust, metal shavings, excessive play, wear pattern, etc.....
9. Check for bent axle shafts: Using a dial indicator, check wheel mounting surface of each axle shaft for runout. Runout must be less than .008". Do not skip this step, if you do not have a dial indicator, an unwarp brake rotor bolted tightly to the wheel mounting surface can be used. Spin the axle shaft and look very closely, if you see any runout replace the axle shaft and check it again. A slightly bent axle shaft can cause a difficult to diagnose driveline vibration.



#### Jeep measurements:

10. Do you want to move your shock mounts up from their stock location?
11. Do you want to change the angle of your leaf spring perch?

#### Prepare the axle assembly:

12. Cut off any brackets attached to the axle tubes. A plasma cutter, oxy/acetylene torch, or angle grinder with a cut off wheel can be used. Be careful not to cut into the axle tubes.
13. Using an angle grinder, remove any remaining bracketry. Be careful not to grind away any axle tube material.

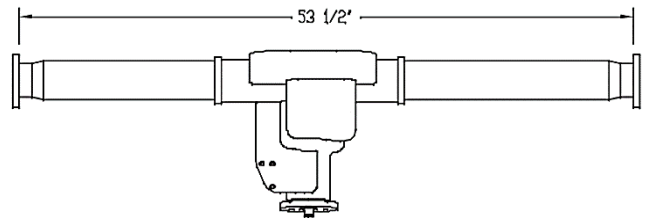


#### Weld tubes to housing:

14. The tubes should be welded to the housing for added strength. Be sure your welding material is suitable for welding to cast iron.
15. Thoroughly clean the surfaces where the axle tubes meet the differential housing. Failure to remove all contaminants will result in weld porosity.
16. Preheat the differential housing where it meets one axle tube to 425 degrees. Heat the entire area slowly and uniformly. Weld the tube to the axle housing. Weld a 1.5" bead, then move to the opposite side of the same tube and repeat. Continue until weld is complete. Repeat for other axle tube. Allow the assembly to cool as slowly as possible.
17. Remove all rust and debris from entire axle assembly as desired. All surfaces to be welded must be free of rust or contaminants.
18. Repeat step 7 to verify the axle has not warped.

### **Measure:**

19. Verify width measurement on your axle. It should be 53-1/2" from inside of flange to inside of flange. If not adjust all dimensions to compensate. See drawing.
20. Support the axle assembly on jack stands. Set the pinion angle to exactly 10 degrees up. If you wish to adjust your pinion angle up or down compared to a stock axle, do so at this time

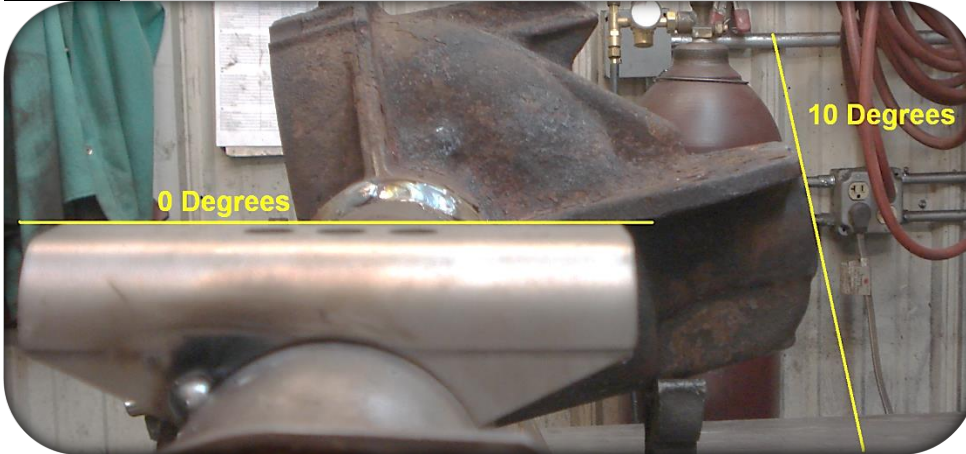


### **Install brackets:**

21. Locate leaf spring perch 3-11/16" from inside of flange to outside edge of leaf spring perch. Rotate to 0 degrees and tack weld in place. (Leaf spring perches should be 43 5/8" center to center.)
22. Locate shock mounts 6-1/2" from inside of flange to the center of the bolt hole, rotate to 90 degrees from leaf spring perch, tack weld in place.  
**Note:** passenger side shock mount goes onto the front side of the axle and the driver's side shock mount goes onto the back side of the axle.
23. Locate truss so that it clears all parts of housing and any and all mounts. Rotate truss so that it is perpendicular to the axle tube, meaning it is straight up when the pinion angle is set to where you want it to be. Some grinding for clearance is normal depending on the pinion angle you chose.

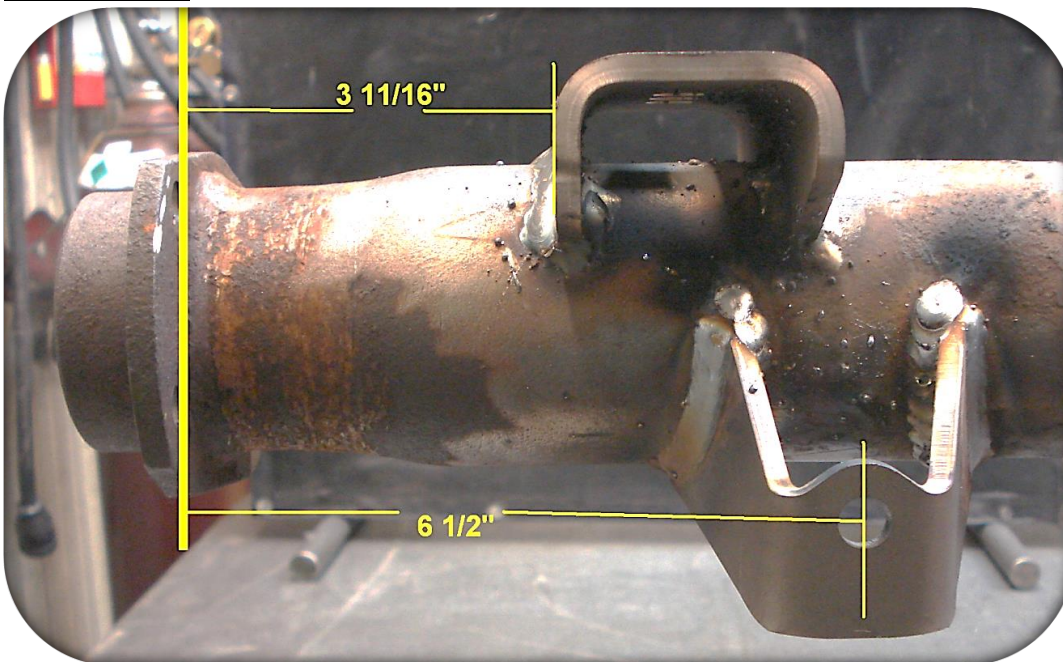
\*\*\*If rotating leaf spring perches out of OE location, shock mounts will also need to be rotated to match\*\*\*

### **Test fit:**



24. Test fit axle assembly into vehicle:
25. Place leaf springs on perches to verify fitment.
26. Measure side to side and make sure axle is centered under the vehicle
27. Verify that weight applied to the rear suspension exactly matches typical driving conditions.
28. Verify pinion angle, leaf spring perch angle, and shock mounting locations are perfect.
29. Make adjustments as needed.

### **Finish weld:**



30. Remove axle assembly from the vehicle and fully weld each bracket to the axle tubes.  
\*\*\*Tip: Weld inside of brackets as well as outside for an easy and cheap strength upgrade compared to OE mounts!  
\*\*\*Tip: to avoid warpage, avoid excessive heat buildup. Weld in short time increments in one area then move to another part of the axle. Allow time to cool between welds in the same spot. **Be sure to weld the vertical bend reliefs on the front and back side of the truss.**
31. Repeat axle for straightness to verify the axle has not warped.
32. Prep and paint, then run brake lines. Install in Jeep and enjoy!