

# IRON ROCK OFF ROAD

## Basic Truss Installation Instructions

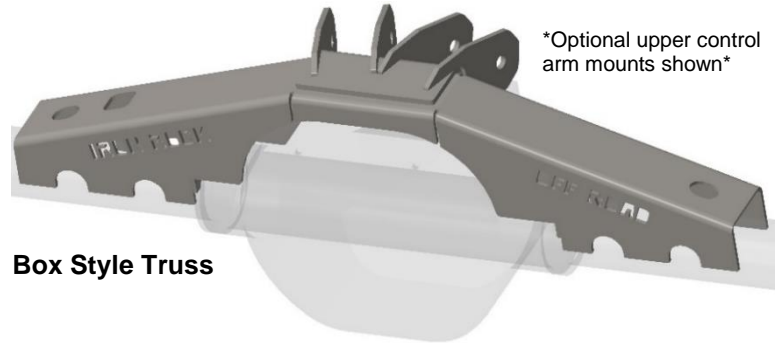
1-877-919-JEEP www.ironrockoffroad.com

### Safety Warning: **\*\*\*Important! Read before installation.\*\*\***

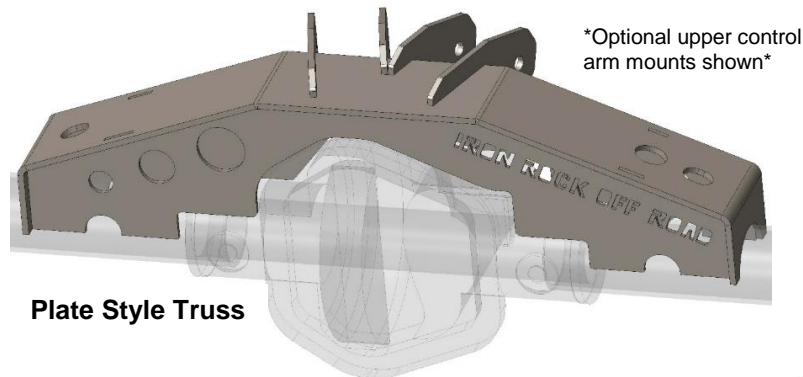
This kit requires welding. IRO recommends that this be installed by a qualified professional. Knowledge of suspension/drivetrain component function is necessary for safe installation and post installation inspections. Be sure to re-torque all suspension/drivetrain components and lug nuts after the first 100 miles of use, and regularly inspect all safety critical suspension/drivetrain components.

### Before you begin:

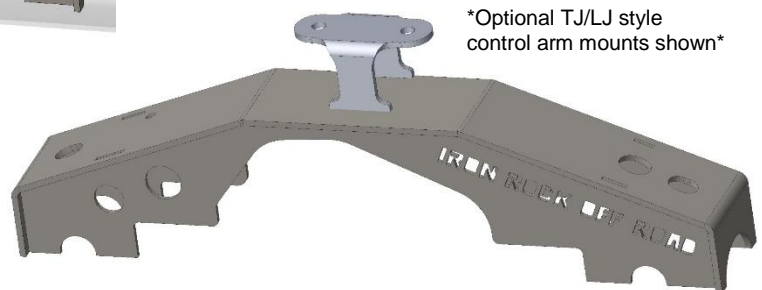
- \*\*\*Ensure that all parts are present and in good condition\*\*\***
- Read and understand all installation instructions.
- Tools required:
  - Floor jack and jack stands
  - Basic hand tools (Sockets, ratchet, wrenches)
  - Paint (Spray paint, primer, etc.)
  - Metal cutting tools (grinder, etc.)
  - Welder (for welding the truss to the axle).
  - 3/16 Double Flaring Tool for brake lines.
  - Tubing cutter for brake lines.
  - 3/8" flare nut wrench
  - Medium strength threadlocker such as Locktite® blue



\*Optional upper control arm mounts shown\*



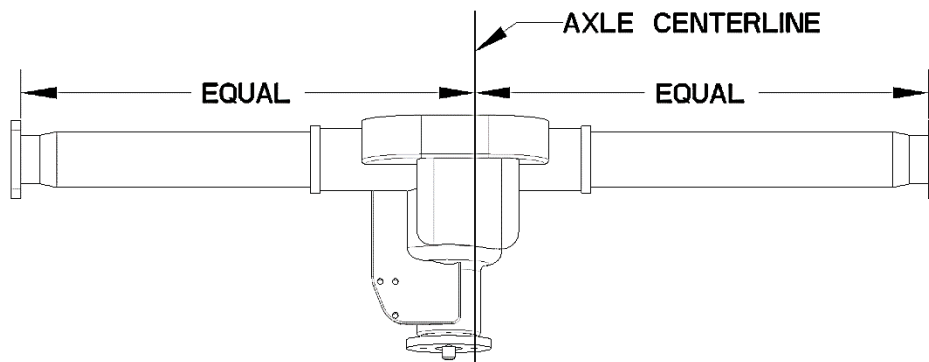
\*Optional upper control arm mounts shown\*



\*Optional TJ/LJ style control arm mounts shown\*

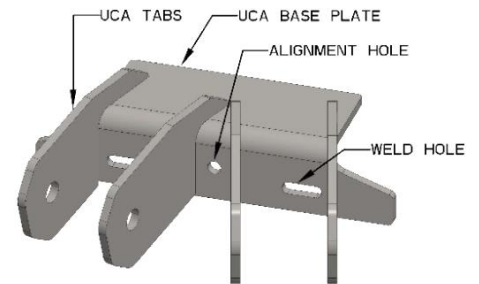
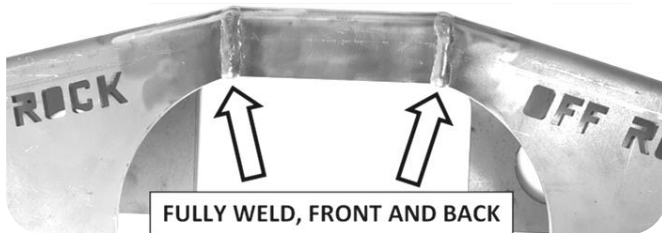
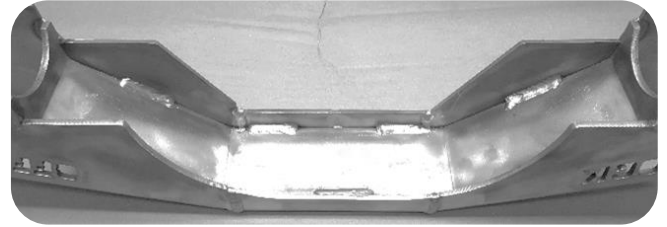
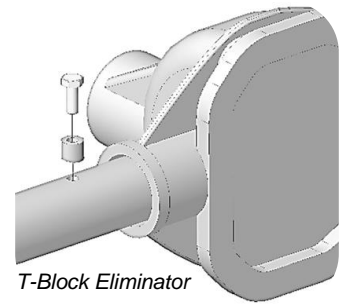
### Prepare the Axle Assembly:

1. It is highly recommended that the axle be removed from the vehicle for truss installation. These instructions assume the axle has been removed from the vehicle.
2. Remove brake (hard) lines from rear brakes to T-block and remove T-block. Cover or plug bolt hole.
3. Cut off upper any brackets attached to the axle tubes that would be in the way of the truss assembly. 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.**
4. Locate the axle centerline by measuring the same distance from each (left and right) wheel mounting surface or axle tube end flange.



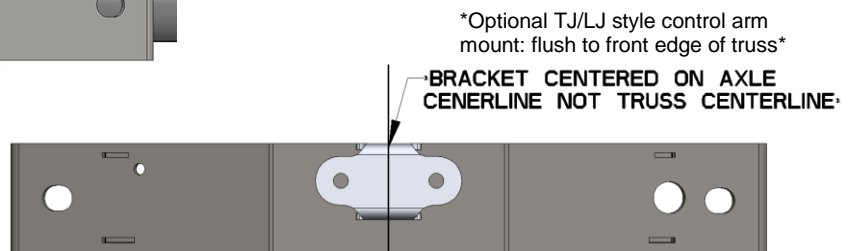
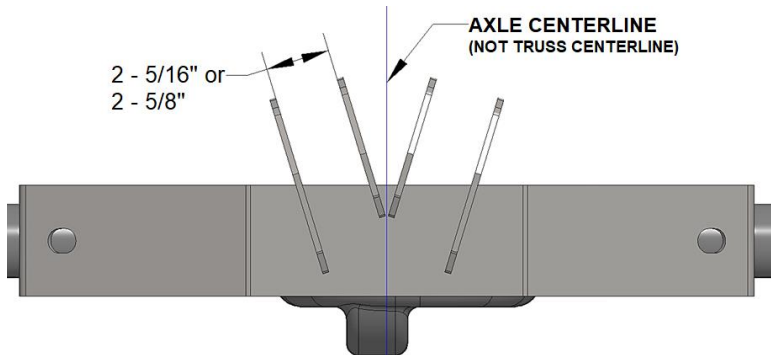
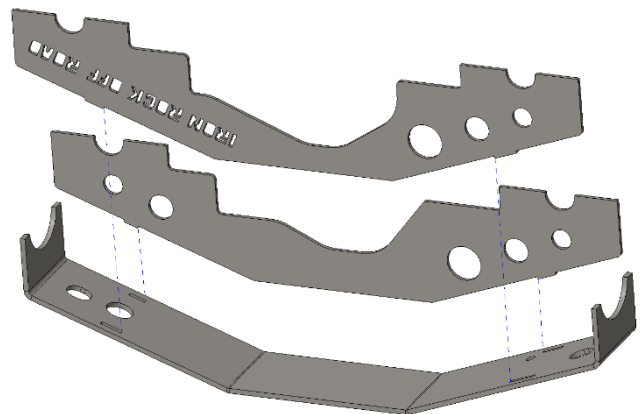
## Box Style Trusses:

5. *\*If your axle is equipped with a brake line T-Block attached to the axle tube\* Apply medium strength threadlocker to original brake line T-Block bolt and install T-Block Eliminator (#184) where original brake line T-block was located on axle tube. The brake line T-Block will be relocated onto the finished truss.*
6. Slide the internal gusset into the truss and test fit truss assembly to axle. The alignment hole should match the axle centerline and the internal gusset should rest on the axle tubes outside of the cast center section. Remove the truss and stitch weld the gusset into the truss.
7. Fully weld the vertical slots in the truss (near the center). Tack weld the ends of the slots first to avoid warpage. Grind the front sides flush as needed to clear the Upper Control Arm (UCA) base plate.
8. With the truss cool, paint the inside of the truss including above and below the gusset to prevent rust.
9. Tack weld truss to the axle with the face of the truss parallel to rear diff cover mounting surface and the gusset resting on the axle tubes.
- \*\*\*When tack welding, ensure your tack welds are strong enough for a test fit, but easy to cut apart if necessary.
10. Tack weld upper control arm mount tabs to base plate with shorter tabs in the center.
11. Tack weld upper control arm mount to truss with front hole aligned with hole in truss.
12. Weld truss to axle and weld upper control arm mounts to truss.
- \*\*\*To avoid warping, 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.
13. Weld all the way around UCA mounting tabs and UCA base plate.



## Plate Style Trusses:

14. Tack weld vertical truss plates to truss top plate. Vertical plates are inset 3/8" from outer edge of top plate. Test fit truss assembly to the axle. Ensure vertical plates contact axle tubes.
15. Tack weld truss to the axle with the face of the truss parallel to rear diff cover mounting surface and the top plate resting on the axle tubes.
- \*\*\*When tack welding, ensure your tack welds are strong enough for a test fit, but easy to cut apart if necessary.
16. Tack weld upper control arm mount tabs to truss with shorter tabs in the center. See diagram for dimensions.
17. Fully weld truss assembly, weld truss to axle and weld upper control arm mounts to truss.
- \*\*\*To avoid warping, 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.
18. Weld all the way around UCA mounting tabs.



### **All Truss Options:**

19. Prep, prime and paint the axle assembly.
20. Mount rear brake hose T-block to the axle truss.
21. Route brake lines from the T-block to rear brakes. Route in a location safe from hazards such as moving suspension components and trail obstacles such as rocks. Insert flare nuts before flaring and double flare per the instructions provided with your flaring tool.
22. Install flare nuts into brake hoses/brakes. Fully tighten.
23. Secure brake lines with cable ties or clamps as needed.
24. Reinstall axle assembly into vehicle.
25. Check that all hoses, brake lines, and wiring are routed to avoid the driveshaft and any moving suspension components and are tied securely.
26. Bleed the brake system.
27. Tighten any loose bolts to factory spec.

### **Final Safety Warning:**

\* Re-torque all fasteners including lug nuts after 100 miles, and frequently inspect all safety critical suspension/drivetrain components. It is the responsibility of the installer to be sure 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 suspension/drivetrain components are inspected frequently, especially after off road or other demanding use.

