

INSTALLATION INSTRUCTIONS

Jeep JK Rear Super Duty Axle Swap Kit

Ballistic Fabrication produces products for custom vehicles. Many products require general welding and fabrication skills. Welding should only be done by a competent welder. Ballistic Fabrication is not liable for improper installation. Check with local laws if your vehicle is driven on the street as some Ballistic Products may not be street legal in all states.

Dis-assembly of Ford Superduty Rear axle

- Cut Off existing leaf spring and shock mounts and remove all brake lines. A plasma cutter is preferred for removing the mounts, but a torch or angle grinder will get the job done.
- Grind the axle tubes smooth where the mounts were removed to ensure proper fitment of the axle swap kit.
- Clean axle housing to prepare for welding. Sand blasting is recommended, but the axle can be prepped with a grinder if necessary.
- Remove the bearing caps after marking them so the can be replaced in the same position.
- Remove the carrier from the housing. Keep the shims separate for each side so they can be re-installed the same as they were removed.
- The pinion does not need to be removed, but if it is left in place care needs to be taken not to overheat the pinion bearings.

Assemble The Axle Truss

- Review the parts list for the truss in *Figure 1-1* and familiarize yourself with all of the components.

ITEM NO.	QTY.	Cut List Name
1	2	Spring Locators
2	1	Diff Cover Mount
3	1	Rear Plate
4	1	Front Plate
5	2	Inner Gussets
6	1	Top Plate

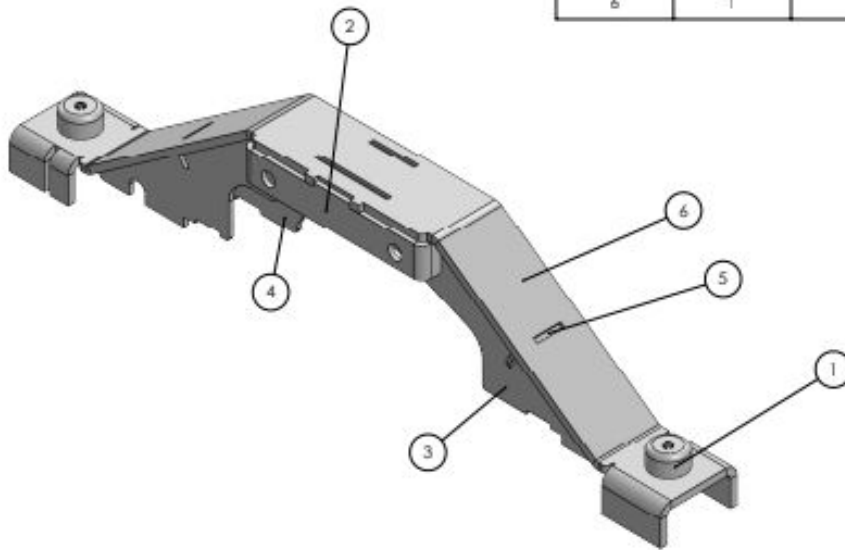


Figure 1-1

- Assemble the truss components on the axle to ensure proper placement and fit of the components. Due to casting variation on the axle housings, some grinding may be required.
- Tack weld the truss together. Do not fully weld the truss at this time. Also, do not weld the truss to the axle.
- Bolt the Differential Cover to the axle and bolt it to the truss. The differential cover is what locates the truss to the axle.

- VERY IMPORTANT - This modification will require professional level welding by a person qualified to weld cast ductile iron / Nodular iron. The sterling casting is NOT STEEL and CANNOT be welded by conventional means.
- When welding to the nodular iron casting observe the following
 - Heat the casting to between 250 - 400 degrees F. Use Tempsticks (*Figure 1-2*) to ensure that the casting is heated correctly.

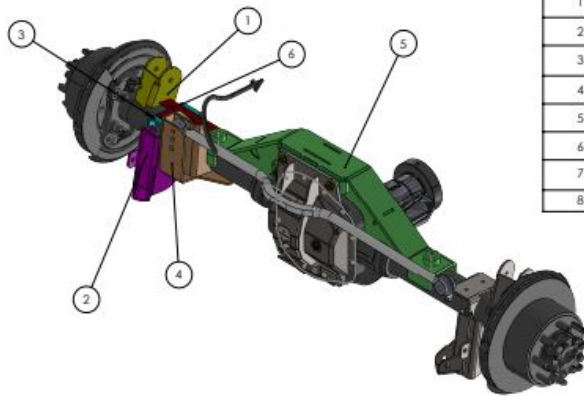


Figure 1-2

- Weld using Nicore 55 mig wire using spray transfer in two passes.
- Use Tempsticks to gauge heat or tape a thermocouple to the housing 6 or 7 inches from the weld area. Be careful to not overheat the welding area by ensuring that the 400 degree temp stick won't melt 1" or more away from the weld
- Stress relief of welds by needle scaling or moderate to light air-hammering after each pass.
- When welding to the axle tubes or the truss use ER70 or ER80 mig wire.
- Prolong the cool-down process when done welding the truss to the axle housing with heat blankets. Wrap the housing in welding blanket and stuff differential with fabric as well.

Assemble Brackets

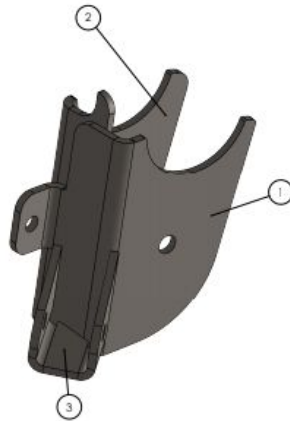
- See *Figure 1-3* for bracket locations.



ITEM NO.	PART NUMBER	QTY.
1	17.154_Upper CA_Rev00	1
2	17.154_Lower CA+Shock Tab_Rev01	1
3	17.154_Bump Stop Mount_Rev00	1
4	17.154_TrackBar Mount_Rev00	1
5	17.154_Truss w. Brackets_Rev01	1
6	17.154_Truss Bracket Fixture_Rev00	1
7	Hex Bolt_500 NC_MASTER - Copy	2
8	93975A400	2

Figure 1-3

- Assemble the lower link mount. See *Figure 1-4*.

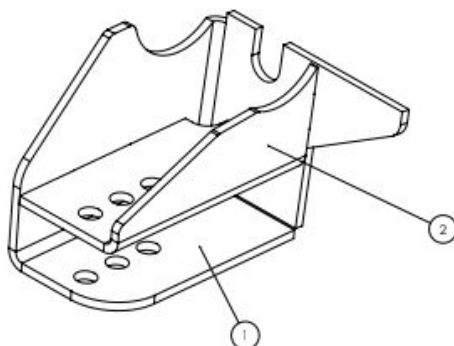


ITEM NO.	QTY.	Cut List Name
1	1	LCA Inner
2	1	LCA Outer
3	1	Shock Mount



Figure 1-4

- Assemble the Track Bar mount, see *Figure 1-5*.



ITEM NO.	QTY.	Cut List Name
1	1	TB-Outer
2	1	TB-inner

Figure 1-5

- Set up axle on jack stands so it can be secured throughout the assembly process. There are critical angles that need to be set so ensure that the axle can not be moved once set up. A scissor jack under the pinion works great for fine adjustments.
- Set the coil spring face to 0 degrees.
- Use the alignment tool to position the Bump Stop Pad and set the angle to 5 degrees. See *Figure 1-7*.

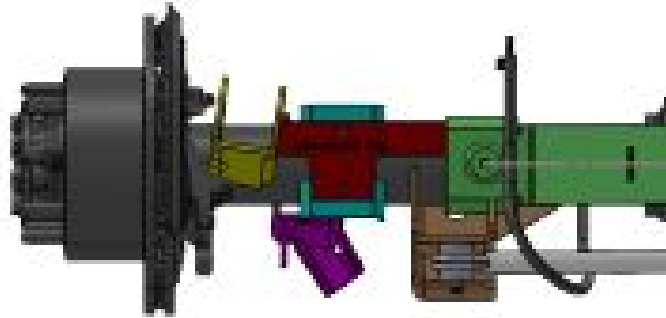


Figure 1-7

- The upper Control Arm mount is also positioned by the Alignment Tool. Set the angle to 70 degrees. See *Figure 1-8*.

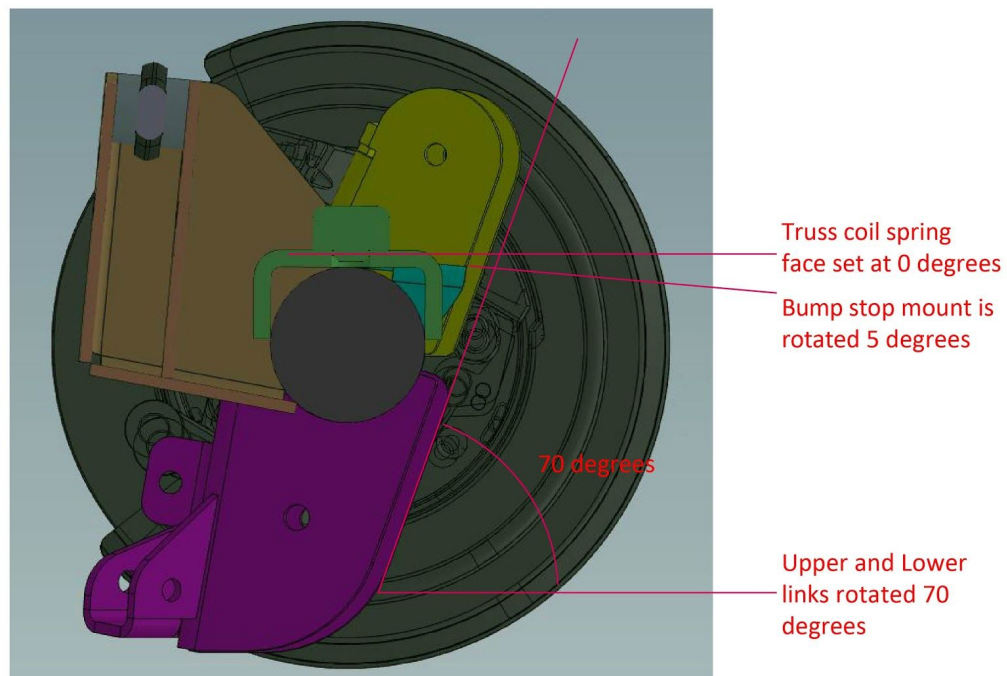


Figure 1-8

- The Lower Link Mount indexes off of the Bump Stop Mount and is also set at 70 degrees.
- The Track Bar Mount fits into the notch in the truss.
- Finish Welding the brackets to the axle tubes.
- Paint the axle assembled axle and install in the Jeep.