

## INSTALLATION INSTRUCTIONS: 5934,5934+1,5935,5935+1

### Leaf Spring Perch

#### CONTENTS:

2 Perches

#### TOOLS NEEDED:

Floor Jack	3/8" Ratchet	Torque Wrench
Jack Stands	1/2" - 15/16"	
Frame Stands	Sockets and Wrenches	
Wheel Chocks	Angle Grinder	
Measuring Tape	Die Grinder	
Center Punch	Angle Gauge	
Line Wrenches	MIG Welder	

**IMPORTANT: Read and understand ALL directions before attempting this install, Professional Welding is Required.**

**NOTE: IF YOU CURRENTLY HAVE A JAMES DUFF TORQUE TAMER INSTALLED WITH WELD ON BRACKETS ON THE REAR AXLE, THE WELD ON TORQUE TAMER BRACKETS MAY HAVE TO BE CUT OFF AND REPOSITIONED ONCE THE NEW LEAF PERCHES ARE IN PLACE.**

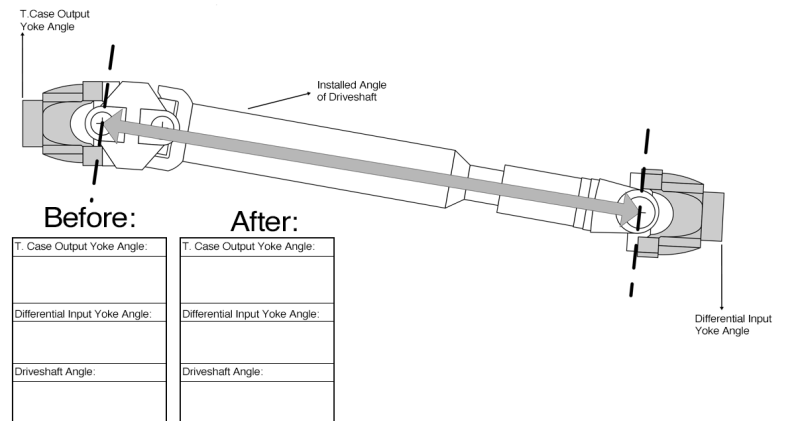


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1/2 10/21



#### INSTALLATION INSTRUCTIONS:

- 1.) Park your Bronco on solid, level ground.
- 2.) Place wheel chocks at the front and rear of a front tire.
- 3.) Measure your existing pinion angle. Record info ->
- 4.) Measure the distance from the inside of your backing plate, or rear of rotor, to the inside & outside edge of your existing leaf spring on both sides and write these measurements down. (This will be used to recenter your axle with the new perches). We strongly recommend you use a center punch and make an indent on both sides of the original perch, front and rear, to help you locate your new perches in later steps. Record info on chart to the right ->



Take all measurements at ride height with vehicle at operating weight.

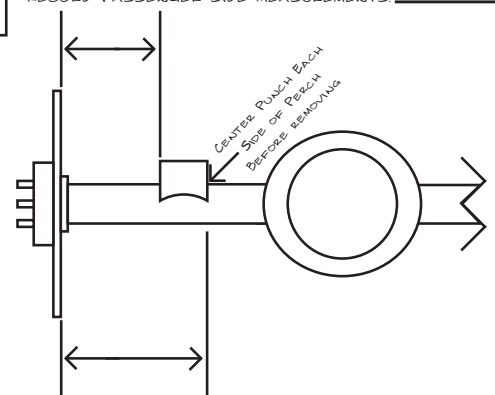
5.) The next steps below are optional If you want to completely disconnect and remove the axle from vehicle for removal of existing perches, final welding and paint.

- 5a.) Remove your frame to axle brake line from the rear axle.
- 5b.) Remove your axle vent tube from the rear axle.
- 5c.) Remove your parking brake cables at the rear drums/discs or from the tub
- 5d.) Remove your brake hard lines from your axle or loosen them up so they are out of harms way when grinding and welding.

- 6.) Unbolt and remove your shocks from the rear axle.
- 7.) Remove the rear driveshaft from the rear axle.
- 8.) Jack up the rear of the vehicle until the rear tires are off the ground, remove rear wheels from rear axle.
- 9.) Jack the Bronco up higher if needed to place a frame/jack stand under each frame rail directly in front of the rear bumper.
- 10.) With the frame stands in place, lower the floor jack until it is free. Then, pump the floor jack back up to raise the axle an inch or less to relieve tension off the leaf springs. Place a jack stand under the rear axle tube on each side of the differential at the same height on each side. Lower the floor jack again until all weight is off of it but do not move it. Be sure the jack stands hold the axle up where the floor jack positioned it before proceeding. **Caution: DO NOT lift the frame back off of your jack stands and be sure the jack stands are holding the weight of the axle.**
- 11.) Remove the leaf spring u bolts then lower the axle down so it is free of the leaf springs.
- 12.) At this time you can decide to remove the axle from underneath the vehicle or leave it on jack stands and proceed to the next steps. **WARNING: IF YOU DECIDE TO LEAVE IT UNDER THE VEHICLE BE SURE THERE IS NO LEAKING**

RECORD DRIVER SIDE MEASUREMENTS: \_\_\_\_\_

RECORD PASSENGER SIDE MEASUREMENTS: \_\_\_\_\_



MEASURE BACKING PLATE/BACK OF ROTOR TO OUTSIDE AND INSIDE OF PERCH

## **GAS, GAS FUMES OR OTHER FLAMMABLE FLUIDS OR VAPORS NEARBY.**

- 13.) Using a grinder, remove your existing spring perches. Clean down to bare metal to allow proper metal adhesion when welding the new perches on. Be sure to not grind into the axle tube.
- 14.) If your axle tube is a larger diameter than the James Duff perches, grind off the tabs on the perches to enlarge the hole spacing.

**NOTE: With these perches you can position the axle 1" or 1 1/4" back by placing the centering pin to the corresponding holes in the perch. Double check and make sure your centering pins of your leaf springs are in the same position on both sides. This does require the Heavy Duty U-Bolt plates offered by James Duff #5932**

- 15.) Set your axle back under your leaf springs with the new perches in place (not welded on yet) and reinstall your U-Bolts firm but loose enough to move with a bump of the hammer, you will need it this loose to rotate the axle under the perches.
  - 16.) Center the axle using the measurements you took earlier in step 4.
  - 17.) Reinstall the wheels with the lug nuts tight but not final torqued, jack the Bronco up to remove the frame stands and axle stands and lower your Bronco back on its tires.
  - 18.) Stand back from the side of your vehicle and verify the rear wheel & tire placement in the wheel well is correct on each side. Use a tape measure to confirm they are the same from side to side.
  - 19.) Using your angle gauge, set your pinion angle. If the pinion is too low, use the floor jack under the yolk to get it to rotate up. Use a dead blow hammer and tap the yolk to rotate the axle back down. **Important: Triple check your math on this, you do not want to get it wrong and have to re-weld your perches.**
  - 20.) Once your pinion angle is set and your axle is centered on the new perches, tack weld the perches in place, repeat steps 8-11 so you can remove the axle from the leaf springs.
  - 21.) Fully weld the perches into place.
  - 22.) Once the welds have cooled, prep and paint the perches and axle tube with a material of your choice.
  - 23.) Reinstall your axle, lower the vehicle down and allow it to settle at ride height.
- Important: Tighten your u-bolts with the weight of the vehicle on them.**
- 24.) Reinstall the driveshaft and re-measure your pinion angle to confirm it is correct. If measurements are not within spec, James Duff offers pinion shims in 2, 4 and 6 degree correction #5542/5544/5546 @ [dufftuff.com](http://dufftuff.com).
  - 25.) Reinstall your shocks

*26.) If you removed the axle completely and disconnected the brake lines from the vehicle using step 5. Use the steps below to reinstall it.*

- 26a.) Reinstall your axle vent.
- 26b.) Reinstall your parking brake cables.
- 26c.) Reinstall your frame-to-axle brake line.
- 26d.) Bleed your brakes and check for leaks.

- 27.) Reinstall the wheels with the lug nuts tight but not final torqued, jack the Bronco up to remove the frame/jack stands and axle stands and lower your Bronco back on its tires.
- 28.) Torque the rear wheel lug nuts and at this time double check the front lug nuts too. Make sure the vehicle is in gear and make sure the parking brake cables are functioning properly if used.
- 29.) Torque the leaf spring U-bolts to manufacturer specifications.

**ProTip: The HD U-Bolt Plates #5932 @ [dufftuff.com](http://dufftuff.com), they have a curve built-in and will act like a spring and will take multiple passes in an cross pattern to torque them down. This spring action will follow the natural curve of the leaf spring, reducing wear and tear.**

- 30.) Remove wheel chocks
- 31.) Test drive vehicle.
- 32.) After 50 miles or your first off road excursion, re-torque all nuts/bolts and every 500 miles there after.

**In order to get the most out of your spring perches, eliminate premature rear driveshaft failure and axle wrap, we strongly suggest purchasing and installing our Leaf spring anti-wrap device we call the Torque Tamer #5326**

### **LIMITED WARRANTY**

James Duff Inc. warrants our products to the original purchaser to be free from defects in materials and workmanship. Warranty periods begin at the date of purchase and varies by product. Shocks have a limited lifetime warranty. Headers, Radiators and Suspension Products, Power Brake Boosters and Master Cylinders have a one year warranty. Adapters and soft goods such as upholstery, vinyl and rubber products have a 90 day warranty. All warranties are to the original purchaser with proof of purchase only. Such obligations under this warranty shall be limited to the repair or replacement, at JDI's discretion, of any assembly or part which upon examination by JDI proves to be defective. Any costs of removal, installation, re-installation or freight charges are expressly excluded from this warranty. This warranty covers only manufacturers defects, and does not cover product finish or damage resulting from abuse, misuse, negligence, racing, alteration, accident or damage in transit. All returns must be pre-authorized by JDI and accompanied with a Return Goods Authorization Number (RGA) and a dated proof of purchase. Returns must be made within 90 days of purchase, packaged sufficiently to prevent damage in shipment and sent prepaid to JDI, 6609 Bronco Lane, Knoxville, TN 37921. Returns without an RGA# will be refused. This warranty is expressly in lieu of all other warranties, expressed or implied, including the implied warranties of merchantability and fitness for use. This warranty gives you specific legal rights including other rights that vary from state to state. Some states do not allow limitations on how long an implied warranty lasts, or do not allow the exclusion of limitation of incidental or consequential damages, so the above limitations and/or exclusions may not apply to you.