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Y-Link™ Extreme Duty Long Arm Upgrade
Jeep Cherokee
Installation Instructions

Congratulations for purchasing a TNT Extreme Duty Y-LinkTM Long Arm Upgrade for your Jeep® Cherokee. Begin by unpacking your kit and comparing the contents of the box to the packing list provided as attachment A to this manual. Please observe proper shop safety procedures when performing this install. Use proper eye and hearing protection as required and use safe jack stands/supports, place appropriately for supporting the vehicle while you work on it.

STEP 1:

Begin by removing the factory or aftermarket transmission crossmember. Jack the transmission up until it is firmly against the body to give yourself the most room possible during the install of the XD Belly Pan, support the transmission with an appropriate support.

STEP 2:

Tap the forward nutsert in the Uni-body rail to M10 X 1.5 on both sides. This insert is drilled to the proper dimension but not tapped by the factory. This nutsert will now be used to help secure the XD belly pan to your Jeep.

STEP 3:

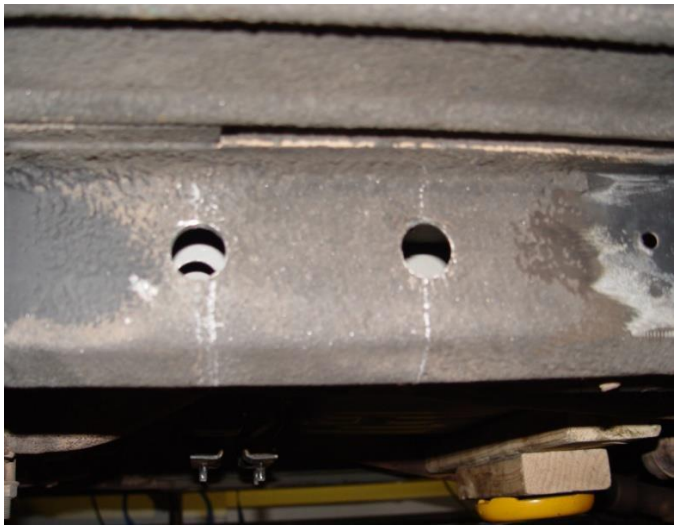
Carefully remove the fuel and brake line plastic support/mount clips along the inside of the driver s side uni-body rail. Gently pull the lines away from the body and tuck them up along the floorboard. Secure them to the transfer case linkage with a nylon zip tie to temporarily hold them out of the way during the install of the XD Belly Pan.

STEP 4:

Place the XD belly pan in position under the vehicle and temporarily secure it to the unibody with the 6 - M10-1.5 X 30mm bolts and washers. Do not tighten the bolts at this time; allow the XD belly pan to hang from the uni-body for positioning the XD Belly pan against the drivers side frame rail. The XD belly pan transfer case skid support must fit

tightly to the inside of the driver s side uni-body rail for proper installation. Once in place tighten the 6 - M10 X 1.5 X 30mm mounting bolts hand tight. Using a suitable marking device mark the inside of the Driver s side uni-body rail through the bolt slots in the transfer case skid support where they intersect the body. Remove the XD Belly Pan from the vehicle.

STEP 5 - Transfer Case Skid support:
Mark the centerline of the bolt holes you marked on the body in the previous step. Transfer this centerline down, under and up the outside of the body. Place a straight edge against the bottom of the body and measure up to find the center of the slots you marked in the previous step on the inside of the body. Transfer this measurement to the outside of the body and mark the intersection of the vertical line you just made. At these intersections you will drill two 13/16 holes in the outside of the uni-body rail as shown in the picture below. We suggest using a uni-bit or step drill to make the initial penetration through the outside of the uni-bdy rail.



Drill the inside of the uni-body rail in the center of the slots you marked earlier to ¼ also using the step drill. Using a ¾ hole saw drill/cut from the outside of the body inwards through the interior supports (some models do not have interior supports) until the centering drill bit of the hole saw arbor comes through the ¼ hole. DO NOT cut through the inside uni-body rail. Once both holes have been cut through the interior supports, drill the inside uni-body rail to ½ as shown in the picture below.

The following procedure applies to the driver s and passenger s side of the vehicle. Careful and accurate measurements in the following steps will ensure a successful interior support brace installation.

STEP 6 - Upper interior Brace install:

Begin by marking the centerline of the center uni-body rail nutsert used to secure the XD Belly Pan. Mark the centerline of this nutsert both up the outside and inside of the unibody rail to the floorboard, use caution transferring the centerline around the pinch seam found on the inside of the body; from this centerline measure 4 ¼ towards the rear of the vehicle and place another centerline around the uni-body rail.

Place the appropriate interior brace against the inside of the uni-body rail with the brace resting on the pinch seam; center the horizontal slots on the marks you just made. Braces can be identified by the clearance notch; notch should face the front of the vehicle when installed correctly.

Using an appropriate marking device mark the horizontal slots on the body through the brace using a straight edge placed against the bottom of the body measure up to the center of the slots just marked. Transfer this measurement to the outside of the uni-body rail and mark the intersection of the vertical centerlines.

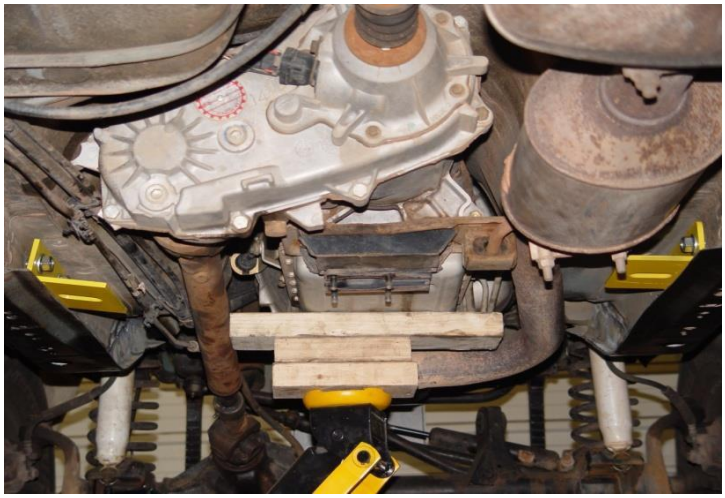
At these intersections you will drill two 13/16 holes in the outside of the uni-body rail. Drill the inside of the uni-body rail in the center of the holes you marked earlier to ¼ . Using a ¾ hole saw drill/cut through the interior supports (some models do not have interior supports) until the centering drill bit of the hole saw arbor comes through the ¼ hole. DO NOT cut through the inside uni-body rail. Once both holes have been cut

through the interior supports, drill the inside uni-body rail to ½ .
Repeat this procedure for the opposite side of the vehicle. Final install of the driver s side upper interior brace is shown below.

STEP 7 - Install XD belly pan:
Begin by locating the following hardware from the hardware kit:
6 - anti-crush sleeves
6 – 7/16 X 5 bolts
6 – 7/16 top lock nuts
12 – 7/16 flat washers
6 - M10-1.5 X 30mm bolts
6 - M10 flat washers
Select an outer support plate and the appropriate upper interior brace, braces can be distinguished by the notch - notch should face the front of the vehicle when installed properly.

NOTE: Anti-crush sleeves are supplied at 3.75 in length. This length is optimal for installing the T&T Customs, Inc. HD frame StiffnerZ and the XD Belly pan, if you are installing the XD Belly Pan only the anti-crush sleeves will need to be shortened 3/16 for proper fitment. Outer support are not needed if vehicle has 3/16" chassis stiffeners installed.

Place a flat washer and crush sleeve on a 7/16 X 5 bolt, insert the bolt and crush sleeve through the outer support plate and place assembly on the uni-body rail so that the 7/16 X 5 bolt protrudes through the inside of the body. Place the inner upper brace over the 7/16 X 5 bolt threads and secure with a flat washer and 7/16 top lock nut. Repeat process until both upper interior braces are installed, as shown below. Do not tighten fasteners at this time.



Begin the final installation of the XD Belly Pan by selecting the 6 - M10-1.5 X 30mm bolts and corresponding flat washers. Position and support the XD Belly Pan under your Jeep with the transfer case skid support against the Driver s side uni-rail.
Place the 6 - M10-1.5 X 30mm bolts with flat washer through the XD Belly Pan and thread them into the nutserts on your Jeep. Tighten the bolts only finger tight at this time so that the XD Belly Pan can be positioned as needed.
Place a flat washer and crush sleeve on a 7/16 X 5 bolt, insert the bolt and crush sleeve through the outer support plate and place assembly on the uni-body rail so that the 7/16 X 5 bolt protrudes through the inside of the body and the transfer case skid support flange of the XD Belly Pan, secure with a flat washer and 7/16 top lock nut. Do not tighten at this time.
From the hardware kit select the 2 - 5/8 X 1 bolt and top lock nuts with 2 flat washers per bolt. Insert the 5/8 X 1 bolt with flat washer up through the outer access hole, through the upper interior brace. Secure with flat washer and top lock nut. Repeat process for opposite side of your Jeep.
Begin the tightening sequence by first tightening the M10-1.5 X 30mm bolts to where they place the XD belly pan against the body. Do not over tighten as the XD Belly Pan will still need to move slightly. Follow the order given below to properly tighten down the XD Belly Pan.
Tighten and torque the 2 – 7/16 X 5 bolts in the transfer case support flange of the XD Belly Pan to 65 ft-lbs
Tighten and torque the 6 - M10-1.5 X 30mm bolts in the XD Belly Pan outer flange to 25 ft-lbs. We suggest using Loctite 242 on these bolts.
Tighten and torque the remaining 4 – 7/16 X 5 bolts for the upper interior support braces to 65 ft-lbs
Tighten and torque the 2 - 5/8 X 1 bolts securing the upper interior braces to the XD Belly Pan to 145 ft-lbs

STEP 8 - Control Arm removal:
Begin by properly supporting your Jeep to facilitate the removal of the factory or aftermarket control arms. T&T Customs Y-Link™ Extreme Duty Long Arm Upgrade will restore the correct wheel base dimension to your Jeep, in most cases the front axle

will need to be moved forward to accomplish this.
Remove the upper and lower control arms observing all precautions to prevent the vehicle from falling.

STEP 9 - Lower Control Arm bracket removal:
To facilitate the installation of the Y-Link™ Long Arms both factory lower control arm brackets must be removed from your Jeep s chassis. Extreme caution must be observed during this procedure, take care not to cut or damage the uni-rail during removal. Care must also be taken when working on the driver s side as the fuel lines and rear brake lines run in close proximity to the lower control arm bracket. Remember to wear proper personal safety equipment while removing the lower control arm brackets. Completely remove both lower control arm brackets, once removed the remaining pinch seam must be trimmed slightly for maximum clearance during full compression of the suspension. Inspect the pinch seam, you will find that the upper portion of the pinch seam half extends approx. 1/8 past the lower portion of the pinch seam half. Mark the lower pinch seam approx. 1/8 for the length of where it was covered by the lower control arm brackets taking care not to cut past the spot welds that hold the upper and lower pinch seams together. Once all cutting and grinding operations are complete paint the areas with your choice or paint or undercoating.

STEP 10 - Y-LinkTM Lower Control arm installation:
Begin by assembling the flex joints in the chassis end of the Y-Link™ Lower Control arms. Assemble the wide 2 poly bushings in the axle end of the Y-Link™ Lower Control arms.
Select the appropriate control arm for the side of the vehicle you are working on. From the hardware kit select a 9/16 X 4 bolt, 1 flat washer and a 9/16 top lock nut. Install the flex joint end of the Y-LinkTM Lower Control arm into the mount of the XD belly pan. Insert the 9/16 bolt with flat washer into the control arm mount and through the flex joint just that the threads come through the outside of the control arm mount. Start the top lock nut, then tighten the bolt to 150 ft-lbs. Repeat the process for the opposite side of the vehicle.
Swing the axle end of the of the Y-Link™ Lower Control arm up into the lower control arm mount on the axle assembly. Axle repositioning may be required to get the bushing to insert squarely into its mount. Select a 9/16 X 4 bolt, 2 flat washers and a top lock nut from the hardware kit. Insert bolt and flat washer assembly into the mount and bushing securing it with a flat washer and top lock nut. Do not over tighten; tighten this fastener only until the slack in the threads of the bolt is taken up. Proper tightening of this fastener is reached when the head of the bolt can still be rotated with minimal effort. Over tightening of this bolt will deflect the lower control arm mount and bind the bushing assembly decreasing performance of the suspension. Repeat process for opposite side of vehicle.

STEP 11 - Y-Link™ Upper Control arm installation:
Begin by selecting a M10-1.5 X 80MM socket head bolt, 2 M10 flat washers and a M10 nylock nut; also select a 1/2 X 3 ¼ bolt, 2 1/2 flat washers and a 1/2 top lock nut from the hardware kit. Assemble the narrow 2 poly bushings in the lower control arm

end of the upper control arm. Assemble the upper control arm, first we suggest using anti-seize compound on the adjustment threads and installing the jam nut all the way to the end of the threads closest the bushing end. Thread the threaded joint into the opposite half of the upper control arm to make a complete assembly. Before installing the upper control arm, caster and pinion angles should be checked. T&T Customs suggests setting the caster angle to 6.5 degrees using the following procedure:
Using the following formula, you can find the caster angle on the HP Dana 30, 9 - differential cover angle = caster. For the low pinion Dana 30 used on the 2000-2001 XJ use this formula instead, 12 - differential cover angle = caster angle. Measure the differential cover angle using an angle finder placed on the side of the cover in a vertical position. To preposition the axle into the right caster angle use a floor jack under the pinion to decrease pinion angle or under the track bar bracket to increase caster angle. When the desired caster angle preset is achieved measure from the center of bushing in the axle housing bushing and the center of the hole in the mount on the lower control arm. Adjust the upper control arm length by threading the adjustable bushing assembly on the upper control arm as need to get the center to center measurement as close to the measurement you just made. When satisfied with the adjustment lock the jam nut down against the tube of the upper control arm securely.
Install the axle end of the Upper Control arm first by positioning the mount over the bushing in the axle mount. Install the M10-1.5 X 80mm socket head bolt and flat washer through the control arm and mount, secure with a flat washer and M10 nylock nut. Do not over tighten the fastener, when properly tightened the bolt should still spin. Finish the install by rotating the lower control arm end of the upper control arm into the mount on the lower control arm. Slight repositioning of the front axle may be necessary to get the 9/16 X 3 bolt to go through the mount and control arm bushing, install the bolt so that the head of the bolt is facing the inside of the vehicle and the ground. Secure the 9/16 X 3 bolt with a 9/16 flat washer and 9/16 top lock nut. Do not over tighten the fastener, when properly tightened the bolt should still spin. Repeat process for the remaining side of the vehicle.

STEP 12 - Adjust Track Bar:
Double check that all fasteners are properly tightened and all parts are installed per this manual, when satisfied with results lower the vehicle to sit back on the suspension. Test drive vehicle for a short distance and finish the install by adjusting the track bar assembly as need to center the front axle under the body. TNT recommends setting the track bar biased to the driver s side of the vehicle. When center is found, rotate the adjustment one more turn to pull the front axle slightly to the driver s side. This bias is suggested to ensure proper clearance of the suspension during full compression of the passenger side of the suspension.

Appendix A
Parts List:
1- XD Belly Pan
1 - Left lower control arm
1 - Right lower control arm
2 - Wide poly bushing assemblies
2 - Narrow poly bushing assemblies
2 - Interior braces
3 - Outer support plates
2 - Upper control arms
2 - Upper control arm threaded assemblies w/jam nuts
1 – T-case Skid

Bellypan Hardware Kit:
6 - M10 X 1.5 X 30mm bolts and flat washers
4 -7/16 X 5 bolts
8 -7/16 flat washers
4 -7/16 top lock nuts
2 – 5/8 X 1 bolts
2 – 5/8 nuts
4 – 5/8 washers
4 - Through frame crush sleeves
2 - Inner braces
2 – Outer support braces

T-Case Skid Hardware Kit:
2 – 7/16 X 5 bolts
4 – 7/16 flat washers
2 – 7/16 nuts
2 – 3/8 X 1 ¼ bolts
4 – 3/8 washers
2 – 3/8 nuts
2 – Through frame crush sleeves
1 – Outer support brace

Control Arm Hardware:
4 - 9/16 X 4 bolts
8 - 9/16 flat washers
4 - 9/16 top lock nuts
2 – 12mm X 80mm
4 – 12mm washers
2 – 12mm nuts
2 - M10 X 1.5 X 80mm socket head bolts, flat washers and nylock nuts