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### **Steering Box Relocation Kit for TJ/LJ WRANGLER Installation**

#### **Instructions:**

Thank you for purchasing TNT Steering box relocation kit for your Jeep Wrangler. Please note that this modification is not recommended for use for the factory steering linkage setup. For best results Crossover steering is recommended. Factory pitman arm or PSC flat Pitman arm can be used with this kit

Please observe proper shop safety procedures when performing this install. Use proper eye and hearing protection as required and use safe jack stands/supports, placed appropriately for supporting the vehicle while you work on it if needed. Welding is required so safe welding practices should be followed.

Tools Needed: Drill

5/8” drill bit

1” hole saw

Sawzall

Welder

Ream Tool – Matco RR220 or equivalent



## **Steering Box Removal**

### **Step 1:**

With the vehicle properly supported on jack stands proceed in removing the front tires. To ease removal of existing components and installation of the new relocation kit we recommend removing the drivers side fender.

### **Step 2:**

Unbolt and remove your draglink from the pitman arm. Remove power steering lines from the steering box and hang out of the way. Next unbolt and remove the steering shaft both from the steering box and the firewall. **\*\*Note: Once steering shaft is removed do not turn the steering wheel.**

### **Step 3:**

Unbolt steering box and set aside.

## **Crossmember Removal**

### **Step 1:**

Unbolt the grill body mount located on the underside of the grill and set aside. Using a grinder, grind off the welds that connect the factory frame crossmember to the frame, both on inside and outside of the frame rails. Next, using a sawzall, cut the crossmember tube flush with the inside of the frame rails. Repeat this procedure for the tube that sticks out past the frame rails. Once completed, grind off any tube that continues to protrude past the frame.

## **Installation of T&T Steering Box Brackets & Crossmember Tube**

### **Step 1:**

Using a tape measure, locate center of the Drivers' side frame rail along the front edge and mark. Measure 1" above and below this mark, mark these two points on the frame rail. Using a sawzall, notch the front of the frame and remaining crossmember tube so that the crossmember tube supplied can be installed as seen in Figure 1. Repeat for Passenger side rail.

**Fig. 1**



**Step 2:**

Locate the drivers side inner and outer plates that were supplied with your kit. (*Note: Bracket supplied may have 4 holes as seen in Fig 2 or it may have 3 holes depending on steering box used*). Align outer bracket along front and top of frame rail as seen in Figure 2, tack heavily into place then repeat for inner bracket. Locate passenger side brackets and repeat step (Fig 3).

Fig. 2 – Drivers Side brackets





**Fig. 3 – Pass. Side brackets**



**Step 3:**

Take the supplied crossmember tube and slide it through the frame rail brackets. Center tube in mounts and tack into place.

**Installation of Crush Sleeves**

**Step 1:**

With the bracket as your guide use a 1” hole saw and begin drilling the front most hole through the frame rail. Once the maximum depth of the hole saw has been reached proceed to finish drilling the hole from the inside of the frame rail. Repeat this process on the rearward hole. *Note: Due to the location of the front hole, the hole saw pilot bit may need to be removed.*

**Step 2:**

Insert crush sleeves through frame. (Do not weld at this time). Locate steering box and supplied bolts and washers. Bolt steering box to crush sleeves and tighten. Once steering box mounting bolts are tight and steering box is in the correct location proceed with welding the crush sleeves in place. When you have completed welding all that can be welded with steering box bolted in place, unbolt steering box and finish welding crush sleeves.

**Step 3:**

Finish welding steering box relocation brackets and crossmember tube. Install supplied bracket over upper most crush sleeves and weld in place.

**Installation of Grill Mount**

Locate the provided grill support and attach to grill reusing rubber grill mount removed earlier. Once in place weld grill support to the new crossmember tube.

**Installation of Steering Joints and Heim Support****Step 1:**

Install steering box using the supplied 7/16" x 5" bolts and washers. Tighten all bolts.

*Refer to Figure 4 for reference when completing steps 2&3. Note: TNT is not responsible for replacing damaged or unusable steering shafts. Please take care when performing the following steps.*

**Step 2:**

In the hardware provided, locate the box with u-joint (splined on one end, double "D" on the other). Loosen set screws and set screw locknuts, slide splined end of joint over end of steering input shaft and tighten setscrew and locknut. Locate the section of double "D" shaft that was included in your hardware kit, insert into u-joint and tighten setscrew and locknut. Locate u-joint which incorporates a double "d" profile on both ends. Loosen setscrews and locknuts. Install u-joint on the supplied section of "DD" shaft and tighten both setscrew and locknut.

**Step 3:**

Carefully cut the end off the factory steering shaft (right behind u-joint at steering box) being careful not to turn the steering wheel. Slide provided heim joint over steering shaft and insert into supplied mounting bracket with lock nut above and below bracket to allow for adjustment. Insert steering shaft into u-joint and tighten setscrew. Clamp heim support bracket to frame and rotate steering to check for binding. If binding occurs slowly trim factory steering shaft and continue fitting until there is no binding in the steering linkage. Once fitment has been completed tack weld support bracket to frame. Again verify that there is no binding, once satisfied, finish welding the heim joint support bracket.

**Fig. 4 – Steering U-joint & heim assembly**



#### **Step 4:**

Reinstall steering components and tighten all necessary setscrews and mounting bolts.

#### **Installation of Coil Mounts**

##### **STEP 1: Installation of coil mount cup**

Once the truss is installed on the axle, position the axle under the Jeep. Locate one of the provided coil cups and thread 1 – 3/8” x 1 1/12” bolts found in the hardware kit through the nut welded in the center of the cup. Several threads will protrude out the bottom of the cup; place the cup on the drivers side mount using the exposed portion of the bolt to line up with the slot in the truss. To retain the factory location, slide the cup in the forward most position. (*Note: Before making wheelbase adjustments, you will need to check with your suspension manufacturer regarding the maximum adjustment their arms will allow. TNT is not responsible for incompatibility or failure of another manufacturers arms*) If additional wheelbase is desired, the rear most position will provide 1 ½” of additional wheelbase. Any position between stock and maximum stretch can be utilized. Once the desired location of the cup has been achieved, center cup side to side, tack weld into place. Repeat steps for passenger side cup. Install coils and control arms, verify fitment of components. If satisfied, remove coils and weld caps approximately 1” across front and 1” across the rear.

#### **Installation of Factory Pitman arm**

TNT Steering Box Relocation requires your factory pitman arm to be reinstalled on the vehicle. Drilling and reaming of the pitman arm is required as your draglink will need to be inserted into the pitman arm from the top side. When reaming the pitman arm please be sure to have your drag link end present to test fitment so as to avoid over reaming the pitman arm.

5/8” Drill bit

Matco #RR220 Reaming tool or equivalent

#### **Installation of Flat Pitman arm**

Flat Universal Pitman Arm, capable of being machined straight or tapered hole, top-down or bottom-up, with 5.25 Inch to 7 Inch center-to-centers. Matching factory pitman arm length is ideal in most situations.

#### **Appendix A Parts List:**

Outer frame plates

Inner frame plates

Crossmember tube

Grill Mount

Steering Components

Heim joint mount

##### **Hardware Kit:**

3 – 1”x4” .250 wall spacers

1 – 1” x 3 ½ .250 wall spacers

Steering U-joints –

Double D shaft

Heim Joint

1 – lock nut



1 – jam nut

4ea - 7/16" X 5" bolts and flat washers (Mercedes box uses three bolts).

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