



1/18/10

INSTALLATION INSTRUCTIONS

'97-'06 4WD JEEP WRANGLER TJ
4" SUSPENSION SYSTEM
P/N 10-45497

NOTE: Each lift kit, and options to lift kits, are packaged separately. Therefore installation procedures are covered in separate instructions. Familiarize yourself with each specific set of instructions before beginning.

PART LIST

ITEM

DESCRIPTION

QTY.

ILLUS.

Box 1 of 4

20-55497-1	Lower Control Arm	4	4, 5
20-55497-4	Rear Tracbar Relocation Bracket	1	15, 16
20-55497-7	Rear Upper Bumpstop Extension	2	14
50-084404	Pitman Arm	1	3, 7
15-11772	Front Upper Replacement Bumpstop	2	6
20-69982	Hardware Pack Containing: (Control arms/Shifter)		
13-22171	Bolt, 6mm x 20mm	4	12
13-30590-Z	Flat Washer, 6mm	8	12
13-10735-Z	Nyloc Nut, 6mm	4	12
20-55497-3	Bracket, Shifter Drop	2	12
20-830996	Sleeve, 3/4" x .095w x 2-5/8"	4	4
15-11252	Bushing, Lower Control Arm	8	4
20-69995	Hardware Pack Containing: (Rear TracBar Mnt)		
13-21703-Z	Bolt, 1/2" x 3" Gr. 8	1	15
13-22990-Z	Bolt, 12mm x 80mm Gr. 10.9	1	16
13-21534-Z	Bolt, 3/8" x 1" Gr. 8	1	15
13-23341-Z	Bolt, 5/16" x 1" Gr. 8	3	15
13-30382-Z	Flat Washer, 1/2" HRDN	2	15
13-30546-Z	Flat Washer, 12mm HRDN	2	16
13-30408-Z	Flat Washer, 3/8" HRDN	2	15
13-30421-Z	Flat Washer, 5/16" HRDN	6	15
13-10514-Z	TopLoc Nut, 1/2"	1	15
13-10696-Z	TopLoc Nut, 12mm	1	16
13-10553-Z	TopLoc Nut, 3/8"	1	15
13-10566-Z	TopLoc Nut, 5/16"	3	15
11-13932	Sleeve, 7/8" x .188 x 1.60"	1	15
20-70112	Hardware Pack Containing: (Front Sway Bar Link)		
13-21482-Z	Bolt, 3/8" x 2-1/2" Gr. 8	2	9
13-23471-Z	Bolt, 3/8" x 1-1/2" Gr. 8	2	9
13-30408-Z	Flat Washer, 3/8" HRDN	8	9
13-10553-Z	TopLoc Nut, 3/8"	4	9
20-55397-1	Front Sway Bar Link	2	9
20-55397-3	Front Sway Bar Mount Bracket	2	9
20-831451	Sleeve, 5/8" OD x 12mm ID x 1.48"	2	
20-831399	Sleeve, 5/8" OD x .120 ID x 1.48"	2	
15-11083	Bushing, Hour Glass	4	

PART LIST

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>QTY.</u>	<u>ILLUS.</u>
20-70008	Hardware Pack Containing: (Rear Sway Bar Links)		
20-55497-6	Sway Bar Link, Rear	2	
20-832374	Sleeve, 5/8" x .035w x 1.47"	4	
15-11083	Bushing, Hour Glass	4	
20-70021	Hardware Pack Containing: (X-Case Spacer)		
13-22249-Z	Bolt, 1/2" x 3-1/2" Gr. 8	6	10, 11
13-22990-Z	Bolt, 12mm x 80mm Gr. 10.9	6	10, 11
13-30382-Z	Flat Washer, 1/2" hrdn.	6	11
13-30028-Z	Lock Washer, 1/2"	6	11
20-831893	Conical Spacer, 1/2"ID	6	11
20-833830	Spacer, T-Case Manual Old Style	6	10, 11
20-833791	Spacer, T-Case Auto Old Style 1/4"	6	10, 11
20-833804	Spacer, T-Case Auto New Style 1/4"	6	10, 11
20-833817	Spacer, T-Case Manual New Style	6	10, 11
20-70034	Hardware Pack Containing: (Front Trac Bar Drop)		
13-23198-Z	Bolt, 5/8" x 2-1/2" Gr. 8	1	8
13-23510	Set Screw, 1/4"-20 x 1/2"	1	
13-30369-Z	Flat Washer, 5/8" HRDN	1	8
13-10501-Z	NyLoc Nut, 5/8"	1	8
20-833843	Trac Bar Drop, Upper "female" half	1	8
20-833856	Trac Bar Drop, Lower "male" half	1	8
20-70047	Hardware Pack Containing:		
13-22158-Z	Bolt, 10mm x 65mm	2	14
13-30577-Z	Lock Washer, 10mm Split	2	14
13-90815	Cotter Pin, 3/32" x 1"	2	7, 8
20-834155	Shim, 2 Deg. Caster	4	
13-90490	LocTite	1	
20-68305	Hardware Pack Containing: (Brakeline Support)		
13-20447-Z	Unslot Hex, #10 x 1/2"		4
15-10966	Clamp, 3/8" x 3/8" x .203"		4
15-11395	Wire Tie, 6"		4
15-11447	Wire Tie, 8"		2
15-11460	Wire Tie, 11"		2

Box 2 of 4

20-20361-1	4" TJ Front Lift Coils	2	6
------------	------------------------	---	---

Box 3 of 4

20-20348-1	4" TJ Rear Lift Coils	2	
------------	-----------------------	---	--

Box 4 of 4

50-BE5-2731-H5 or 50-BE5-6241-H5	Shock, 4" TJ Front	2	6
-------------------------------------	--------------------	---	---

50-BE5-2732-H5 or 50-BE5-6242-H5	Shock, 4" TJ Rear	2	
-------------------------------------	-------------------	---	--

INTRODUCTION

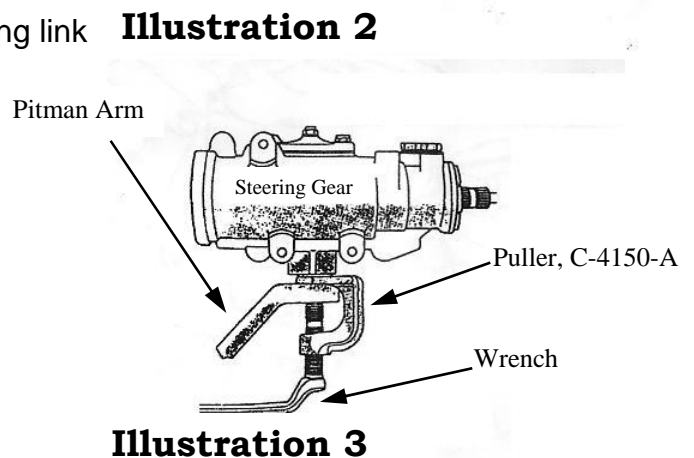
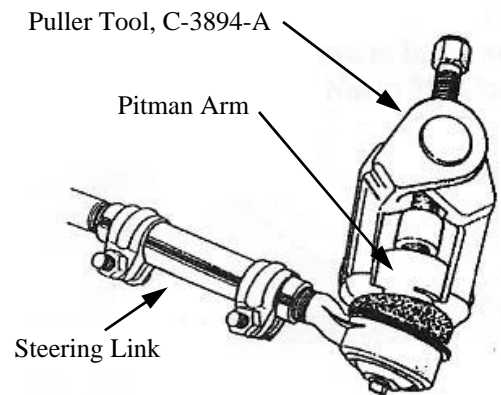
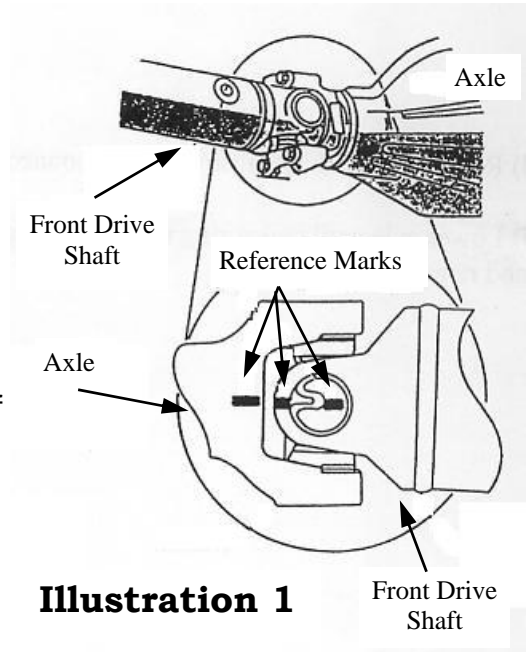
- Installation by a professional mechanic is recommended. Use of the appropriate tools, a Jeep service manual, and a shop hoist can greatly reduce installation time.
- Prior to installation, carefully inspect the vehicle's steering and drive train systems, paying close attention to the tie-rod ends, pitman, ball joints and wheel bearing pre-load. Also check steering-to-frame and suspension-to-frame attachment points for stress cracks. The overall vehicle must be in excellent working condition; repair or replace worn parts.
- Read instructions carefully and study illustrations before attempting installation. *RCD Suspension* is not responsible for damage, failure or injury resulting from improper installation or parts substitution of this kit.
- Check parts and hardware against the parts list to assure that your kit is complete. Report any shortages to RCD Suspension at (1-619-588-4723). The parts and hardware supplied are of high-grade material and must not be replaced by inferior parts or failure may result.
- Separate parts according to the areas they will be used. Placing the hardware with brackets before you begin will save installation time.
- All components in this kit come with a protective coating. Do not plate (i.e. chrome, cadmium, zinc etc.) or otherwise alter the finish in any way. This could weaken the structural strength of the components.
- Secure and properly block vehicle prior to beginning installation.
- Always wear safety glasses when using power tools.
- Foot-Pound torque readings are listed on the Torque Specifications chart at the end of the instructions unless specifically stated in an instruction. **DO NOT USE AN IMPACT WRENCH TO TIGHTEN ANY OF THE BOLTS.**

PLEASE NOTE

- ❑ **WARNING:** DO NOT USE WHEEL SPACERS
- ❑ Front end realignment is necessary.
- ❑ Speedometer recalibration is necessary if larger tires (10% more than stock diameter) are installed.
- ❑ System is designed to accommodate up to a 33" x 12.50" tire on stock wheel.
- ❑

FRONT INSTALLATION

- 1) Raise and support vehicle with jackstands on frame located behind front lower control arms and in front of rear lower control arms. Support axle with a floor-jack. Remove wheels and tires.
- 2) Place reference marks on the front drive shaft and axle. Disconnect the front drive shaft from axle. **(Illustration 1)**
- 3) Remove front shock absorbers. Disconnect and remove stabilizer links.
- 4) Lower axle until coil spring is free from upper mount. Remove coil spring retainer bolt and remove the coil spring.
- 5) Unbolt upper bumpstop from chassis. Thread supplied rubber bumpstop (15-11772) into frame where stock one was removed.
- 6) Using Puller (C-3894-A) to disconnect steering link from Pitman arm **(Illustration 2)**. Once removed, use puller (C-4150-A) to remove stock pitman arm. **(Illustration 3)**
- 7) Remove Track Bar completely from Jeep.
- 8) Unbolt and remove stock lower links.



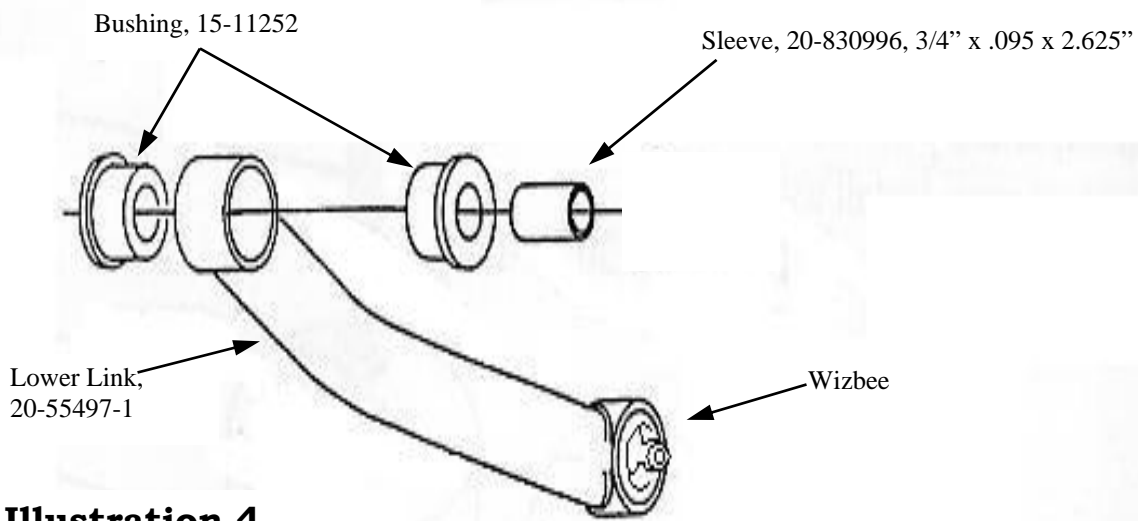


Illustration 4

- 9) Install bushings (15-11252) supplied into end of two new Lower Links Supplied. (20-55497-1) Press Sleeve (20-830996) thru center of bushings just installed in links. **(Illustration 4)**

- 10) Install 2 new Lower Links (20-55497-1) as shown in **Illustration 5**. Wizbee end faces front of vehicle and attaches to differential. If existing bolt at wizbee/differential end uses cam bolt install in original position. If the existing bolt uses a round pressed on washer hammer washer off of bolt. Install 2 Degree Caster Shim with hole offset facing towards rear of jeep on both the bolt head side and the nut side. **Torque Link to upper frame bracket to 130 ft/lbs. Torque Lower bolt at Differential to Wizbee end of Link to 65 ft/lbs and use LocTite supplied. Over tightening these bolts will cause damage to wizbee joint.**

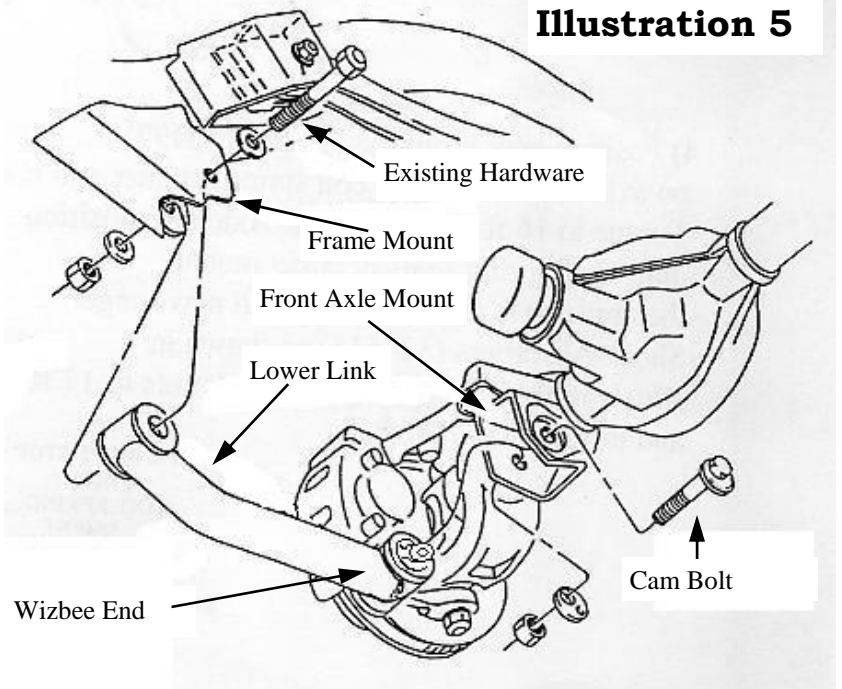
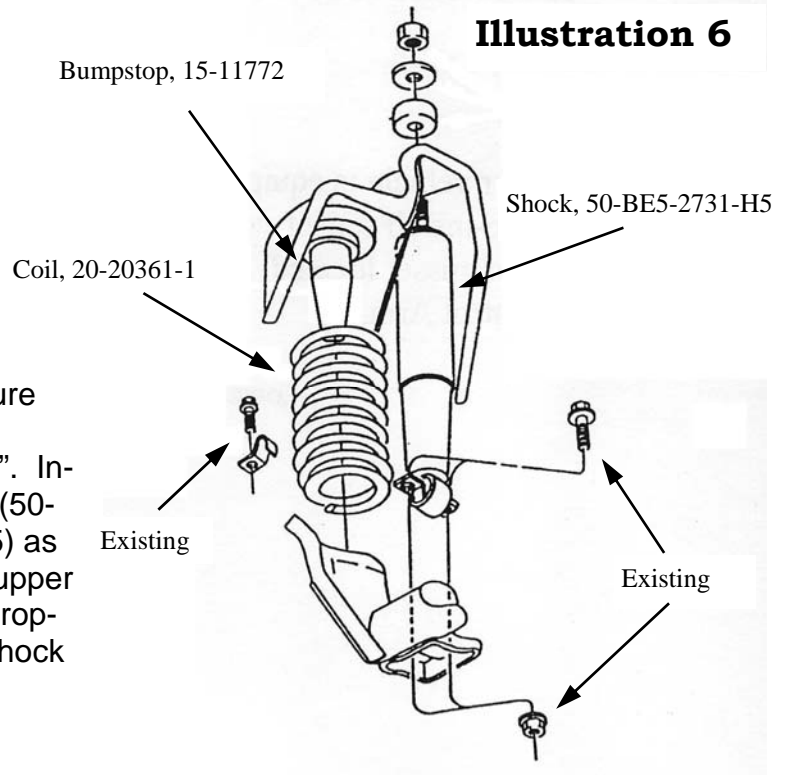


Illustration 5

- 11) Position new front coil spring (20-20361-1) on axle pad. Re-install coil spring retainer and bolt. Torque to 16 ft. lbs.

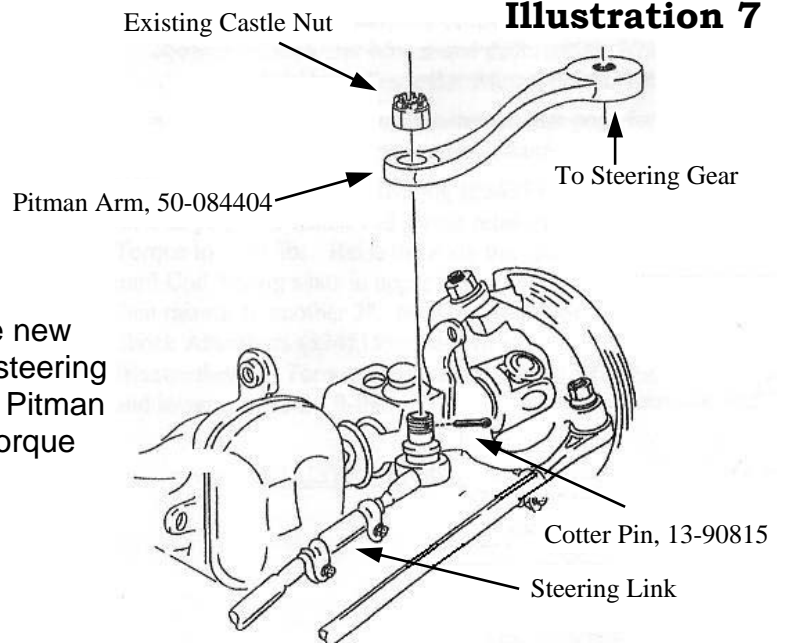
- 12) **Repeat steps 5 & 6 on opposite side of vehicle.**

Illustration 6



- 13) Raise axle into position making sure **BOTH** coil springs seat in upper mounts, then raise axle another 2". Install new longer shock absorbers (50-BE5-2731-H5 or 50-BE5-6241-H5) as shown in **Illustration 6**. Tighten upper shock nut till snug and rubber is properly compressed. Torque lower shock nut to 20 ft. lbs.

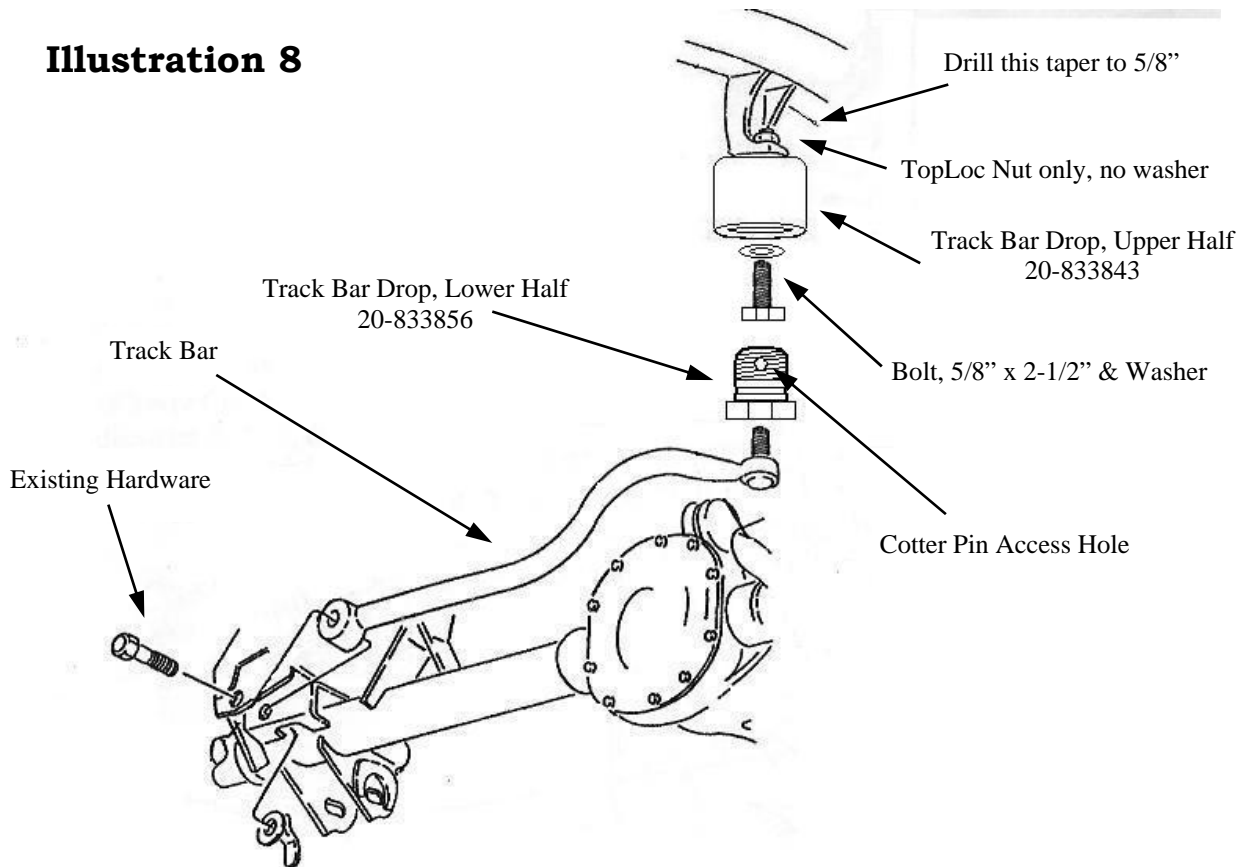
Illustration 7



- 14) Using existing hardware, install the new Pitman Arm (50-084404) onto the steering link and Torque to 60 ft/lbs. Install Pitman Arm onto steering gear shaft and torque to 185 ft/lbs. **Illustration 7**

- 15) With Track Bar off of vehicle slide Lower Track Bar Drop (20-833856) onto tapered end making sure cotter pin hole is lined up with access holes in threaded area of track bar drop. **Illustration 8** Torque nut to 75 ft/lbs using open ended wrench on track bar drop to hold. Install new cotter pin supplied (13-90815)

Illustration 8



- 16) Drill taper on chassis where the track bar originally bolted on the driver's side frame rail out to 5/8".

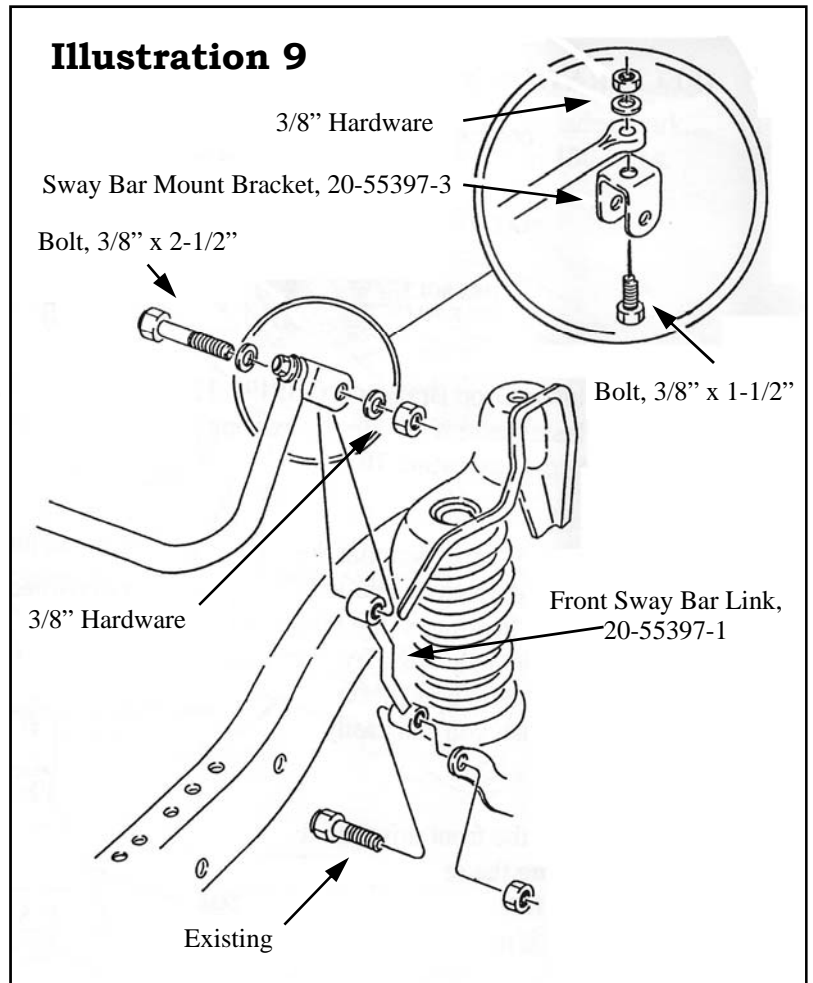
- 17) Insert 5/8" x 2-1/2" Gr. 8 bolt supplied into Upper Track Bar Drop (20-833843) with washer supplied. Slide bolt through hole drilled in frame and position Track Bar Drop flat against mating surface. Grind if necessary to provide flat contact area. Install 5/8" nut supplied and torque to 175 ft/lbs.

- 18) Start lower half of track bar drop threading into upper half. Use large adjustable open ended wrench and tighten. Install 1/4-20 set screw into upper half to lock two halves together to prevent them from coming apart during use.

- 19) Install opposite end of track bar into original location using existing hardware.

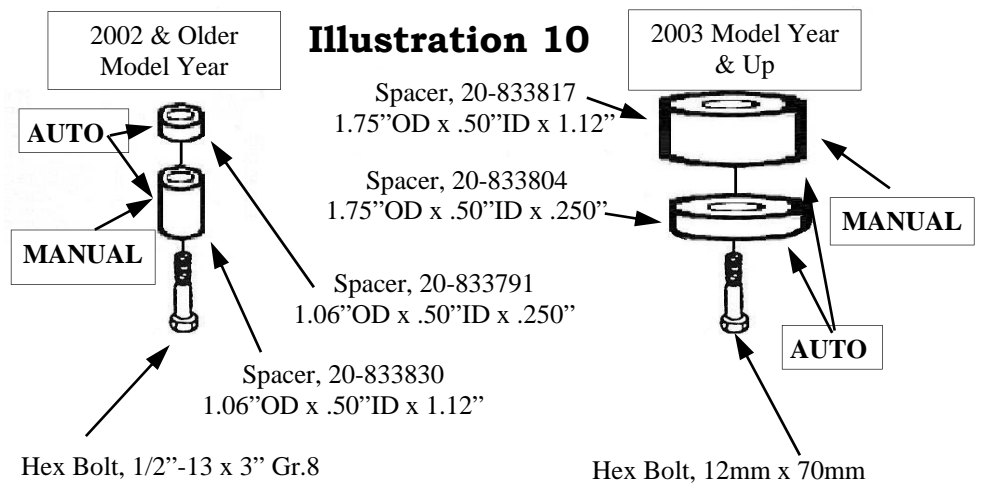
20) Press Hour Glass Bushings (15-11083) into sway bar. Press Sleeve 20-831399 (5/8"OD x 3/8"ID x 1.48") in top bushing and Sleeve 20-831451 (5/8"OD x 12mm ID x 1.48") into lower bushing.

21) Mount Sway Bar Mount Bracket (20-55397-3) to sway bar using 3/8" x 1-1/2" Bolt and hardware provided. Attach Front Sway Bar Link (20-55397-1) using provided hardware as shown in **Illustration 9**. Torque nuts to 30 ft/lbs.



22) Support the transfer case skid plate. **The transfer case and transmission are supported by the skid plate. Before removing the skid plate ensure that the transmission is properly supported.** Remove the (6) bolts connecting the skid plate to the frame. Choose

the correct Transfer Case Spacers and hardware depending on your year of vehicle and type of transmission (auto/manual) as shown in **Illustration 10** above. (Jeeps up to 2002 model year with manual transmission use spacer 20-833830, up to 2002 auto transmissions use spacers 20-833830 & 20-833791 and both



use SAE hardware. Jeeps 2003 and newer with manual transmission use only spacer 20-833817, 2003 and newer Jeeps with auto transmissions use both spacers 20-833817 & 20-833804 and both use metric hardware.) Install correct Transfer Case Spacers & Conical Spacers (20-831893) using correct supplied hardware as shown to the left in **Illustration 11**. Torque bolts to 55 ft. lbs.

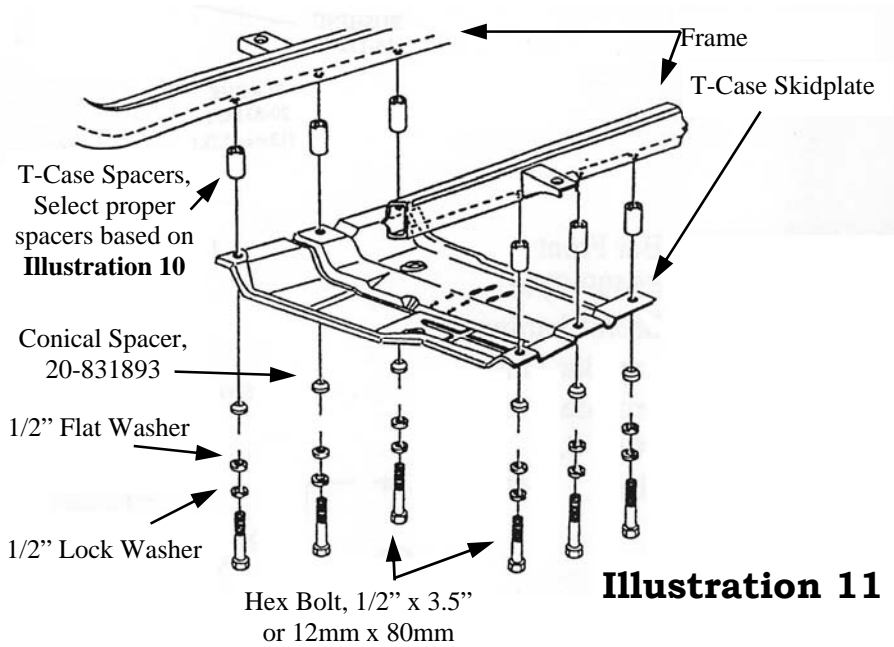
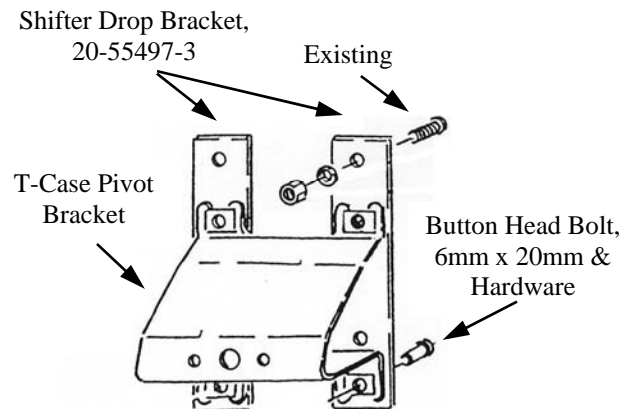


Illustration 11

Illustration 12

23) Remove the (4) 6mm bolts that fasten the transfer case pivot bracket to the floor pan. This can be accessed by lifting the carpet on the drivers side of the vehicle. Slide pivot bracket from pivot rod and set aside. Install Shifter Drop Bracket (20-55497-3) to pivot bracket using 6mm hardware provided. Install assembly into the existing mounting location using hardware previously removed. See **Illustration 12**.



NOTE: It is very important that the Shifter Pivot Rod protrudes through the self-aligning bearing on the pivot bracket approximately 3/8". By bending the opposite bracket on the Transfer Case, you can easily achieve this.

24) Re-connect the front drive shaft to the axle using the reference marks as guides. Refer back to **Illustration 1** if necessary.

REAR INSTALLATION

- 1) Make sure frame is still securely supported by jackstands on frame right in front of rear lower control arm mounts. Support rear axle with jack and remove rear tires.
- 2) Disconnect lower track bar mount as shown in **Illustration 13**.
- 3) Locate and disconnect rear stabilizer bar end links and rear shock absorbers.
- 4) Lower rear axle until coil springs are free from upper seat. Remove coil springs.
- 5) Install new rear Bumpstop Extensions (20-55497-7) using the supplied 10mm hardware as shown in **Illustration 14**.
- 6) Refer to **Illustration 15** and install rear Track Bar Bracket (20-55497-4) using 1.60" Sleeve (11-13932) and supplied hardware. Torque existing track bar bracket bolt to 74 ft. lbs. Drill out the 3/8" hole at the three 5/16" hole locations using the bracket as a template.

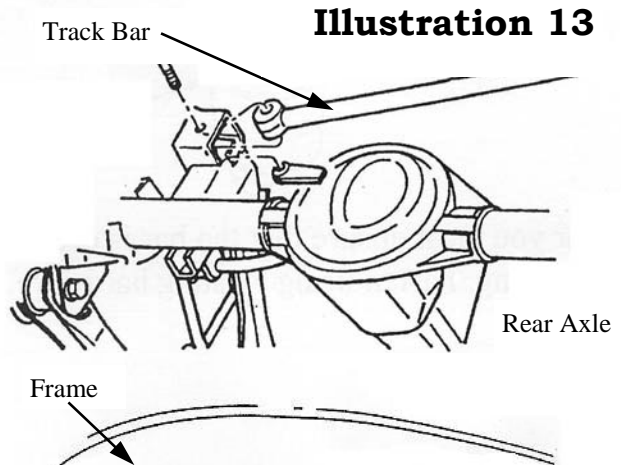


Illustration 13

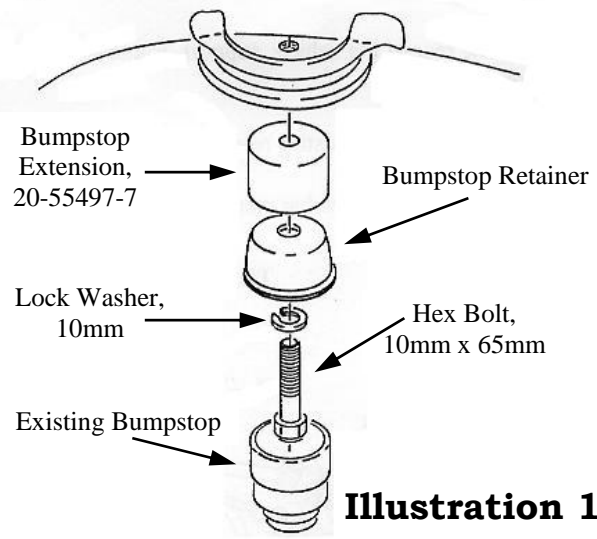


Illustration 14

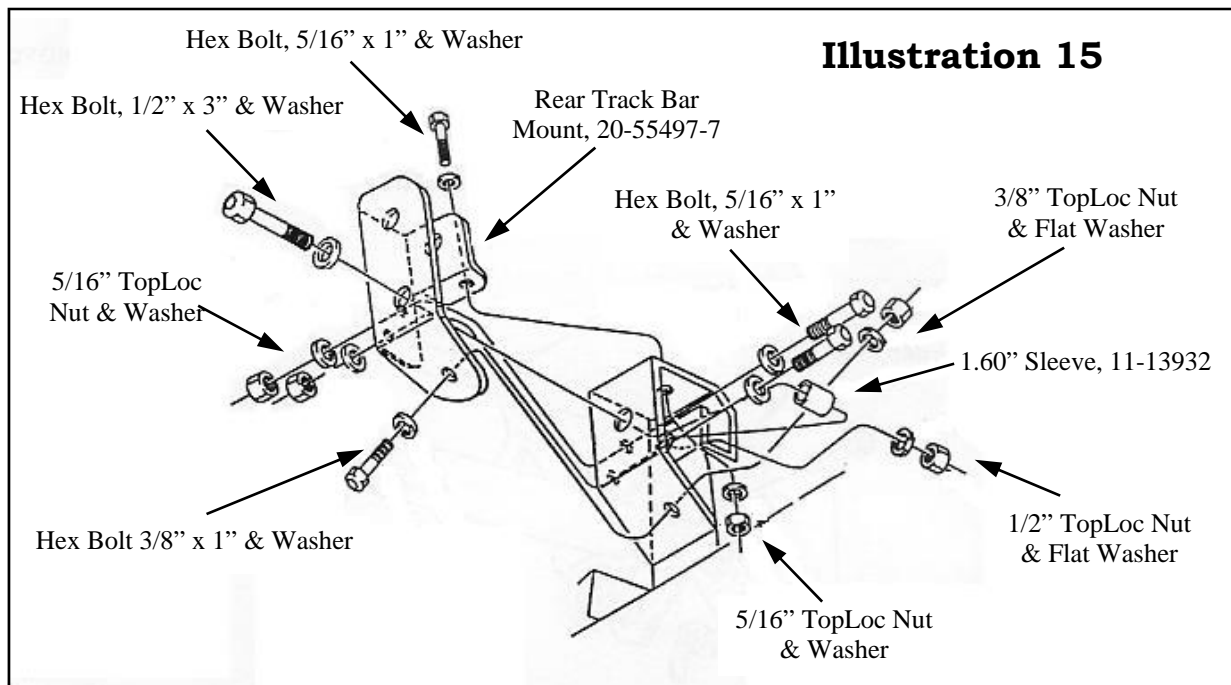


Illustration 15

- 7) Attach track bar into new Track Bar Mounting Bracket as shown in **Illustration 16** using 12mm x 80mm bolt and hardware provided.
- 8) Remove stock lower links.
- 9) Press Bushings (15-11252) and sleeve (20-830996) into new Lower Links (20-55497-1) in same way as done in front links.

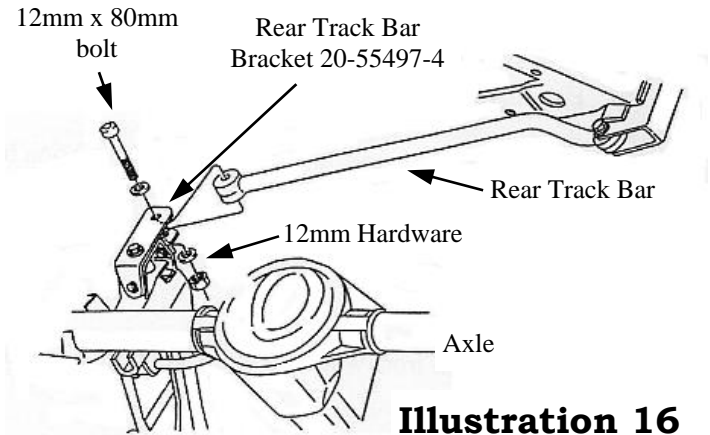


Illustration 16

- 10) Using existing hardware install new lower links using existing hardware. **Torque Frame Bracket to bushing end of link to 130 ft/lbs. Torque lower bolt at Differential to Wizbee end of Link to 65 ft/lbs and use LocTite supplied. Over tightening these bolts will cause damage to wizbee joint.**
- 11) Install new rear Coil Springs (20-20348-1) and new longer shock absorbers (50-BE5-2732-H5 or 50-BE5-6242-H5).
- 12) Press Hour Glass Bushings (15-11083) into ends of both Rear Sway Bar Links (20-55497-6). Press Sleeve (20-832374) into center of hour glass bushings. Install new Sway Bar Links into original position on vehicle using existing hardware.
- 13) Cycle steering lock to lock and inspect steering, suspension and driveline systems for proper operation, tightness and adequate clearance. Recheck brake hose/ fittings for leaks. Be sure all hoses are long enough.
- 14) Install the wheels and tires. Remove the jackstands and lower the vehicle.

SOME FINAL NOTES

- Recheck all hardware for tightness after the first 100 miles.
- Steering stops can be adjusted by use of spacers behind welded jam nuts or by use of a secondary jam nut (not provided).
- Headlights should be adjusted to factory specifications.
- Rotate front and rear driveshafts with suspension hanging. Depending on engine, transmission and differential combinations, it may be necessary to increase the drop on the transfer case if U-joint-to-yoke interference is found. This can be accomplished with the use of 1/2" flat washers (not provided). 1/4" addition drop is usually sufficient.
- Alignment of front wheels will be required, use factory specifications.

TORQUE SPECIFICATIONS

5/16" NUTS	20 FT. LBS.	M6	9 FT. LBS.
3/8" NUTS	35 FT. LBS	M8	23 FT. LBS.
7/16" NUTS	60 FT. LBS.	M10	45 FT. LBS.
1/2" NUTS	90 FT. LBS.	M12	75 FT. LBS.
9/16" NUTS	160 FT. LBS.	M14	120 FT. LBS.
5/8" NUTS	175 FT LBS.	M16	165 FT. LBS.