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Jeep Wrangler TJ Value Flex Long Arm 6" Installation Instructions

REQUIRED TOOL LIST:

- * Metric and Standard wrenches and sockets
- * Allen Wrenches
- * Assorted Drill Bits
- * Floor Jack
- * Jack Stands
- * Measuring Tape
- * Torque Wrench



Before beginning the installation, read these instructions and the enclosed driver's WARNING NOTICE thoroughly and completely. Also affix the WARNING decal in passenger compartment in clear view of all occupants. If any of these items are missing from this instruction packet, do not proceed with installation, but call SKYJACKER® to obtain needed items. If you have any questions or reservations about installing this lift kit, call SKYJACKER® at 318-388-0816 for Technical Assistance or Customer Service departments.

Make sure you park the vehicle on a level concrete or asphalt surface. Many times a vehicle is uneven (side-to-side) from the factory, but usually not noticed until a lift kit has been installed which makes the difference more visible. Using a measuring tape, measure the front and rear (both sides) from the ground up to the center of the fender opening above the axle. Record below for future reference.

Driver Side Front: _____ Passenger Side Front: _____

Driver Side Rear: _____ Passenger Side Rear: _____

IMPORTANT NOTES:

- **6-Speed Transmission models may require additional modifications, contact Skyjacker @ 318-388-0816 for additional information.**
- **Exhaust Modifications may be necessary.**
- A professional mechanic is recommended to perform the installation.
- Please refer to Parts List to insure that all parts and hardware are received prior to disassembly of vehicle. If any parts are found to be missing, contact your dealer as soon as possible.
- ***Slip Yoke Eliminator Kit # FIX231 and rear C.V. Drive Shaft is required.***
- ***Rubicon models require C.V. Yoke # CVR680 and Replacement C.V. Drive Shaft.***
- ***Models with Automatic Transmission must remove front Transmission skid plate for Driveshaft clearance.***

Kit Box Breakdown:

TJ601-SVX:

<u>ITEM#</u>	<u>DESCRIPTION</u>	<u>QTY</u>
TJ60DFB-B	TJ,6"DRIVER SUB FRAME BRACKET	1
TJ60PFB-B	TJ,6"PASSENGER SUB FRAME BRACKET	1
TJ6VXRDRB-B	6"TJ VAL FLEX,REAR DRIVER RELOC BRACKET	1
TJ6VXRPRB-B	6"TJ VAL FLEX,REAR PASSENGER RELOC BRACKET	1
TJ6VXFDRB-B	6"TJ VAL FLEX,FRT DRIVER RELOC BRACKET	1
TJ6VXFPRB-B	6"TJ VAL FLEX,FRT PASSENGER RELOC BRACKET	1
TJ60RTB-B	TJ 6-8"/ REAR TRACK BAR BRKT	1
TJLL6R-VX	6"TJ LOWER LINKS,VALUE FLEX PAIR W/ INSERTS	2
HB-LL-SX	HRDWR BAG/ LWR LINK VALUE FLEX	2
SSP10	STEERING BOX SKID PLATE	1
JSRB2315U	SHIFTER RELOC BRACKET/05 UNLTD	1
SBE226	SWAY BAR END LINK FRT 6" TJ	1
SBE606	END LINKS REAR 6-8" TJ	1
TBA60	FRT TRK BAR 6" XJ CHEROKEE W/ HARDWARE	1
BP50S	BUMP STOP WRANGLER TJ	4
ABSS252	BUMP STOP SPACER,3"OD-2"TALL	4
JA750	PITMAN ARM TJ, W/PWR STRG	1
FBL44	FRONT BRK LN,84-01CHER,3-6"	1
RBL98	REAR BRK LN,97-05 TJ ,3-6"	
HB-TJ6VX	HDWR BAG" 6" TJ VALUE FLEX	1
HB-ABSS252	HDWR BAG FOR ABSS252	1
TJRSB10	TJ,REAR SHOCK RELOC BRKT	1
TJ68SP	SKID PLATE MOD BRACKETS	1

Hardware Bag Breakdown:

JSRB231A

Transfer Case Bracket

<u>ITEM#</u>	<u>DESCRIPTION</u>	<u>QTY</u>
TJSRB-1	TJ MAIN SHIFT RELOCATE BRKT	1
TJSRB-2	TJ AUX. SHIFT RELOCATE BRKT	1
516X1FTB	5/16 X 1 FINE THRD BOLT	2
516FTN	5/16" FINE THRD N/I LOCKNUT	2
38FSFTN	3/8-24 FLANGE SERRATED NUT	2
516SAEW	5/16 SAE WASHER	2
FSB3838	FLANGED SLV BRG 3/8" X 3/8"	2
TS38	EXT.TUBE,3.25"/FOR JSRB KIT	1

Kit Box Breakdown:

TBA60

Front Adjustable Track Bar

<u>ITEM#</u>	<u>DESCRIPTION</u>	<u>QTY</u>
TBA60-B	TRACK BAR FOR 6" TJ	1
RE34X34R	ROD END 3/4" RIGHT HAND THREAD	1
34RFTJN	3/4" RIGHT HAND JAM NUT	1
7400WS	WHITE STEERING DAMPER	1
BTIE	RED BOOT TIE	1
B10RS	RED BOOT	1
NSS	NITRO SHOCK DECAL	1
TJDLB	TJ DRAG LINK BUSHING,1.125"	2
12X212BHFTB	1/2 X 2 1/2 BUTTON HEAD BOLT	1
12X312FTB	1/2 X 3 1/2 FINE THREAD BOLT	1
12USSW	1/2 USS WASHER	1
12SAEW	1/2 SAE WASHER	1
12STVFTN	1/2" STOVER LOCKNUT, FINE THREAD	2
2888	BUSHING JEEP TRACK BAR	2
142121	ES24 SLEEVE/402087 1.38"	1
81004	TAPERED SLEEVE, 1/2" I.D.	1
LT100	THREAD LOCK COMPOUND 1 ML TUBE	1
HOURLASS 5/8	HOURLASS 5/8 SHOCK BUSHING	2
P837	TAPERED STUD/141264	1
140629	EB6 STUD BAG - P932/140629	1
7111-B	TJ BRACKET-TRACK BAR	1

Hardware Bag Breakdown:

HB-TJ6VX

Main Hardware Bag

<u>ITEM#</u>	<u>DESCRIPTION</u>	<u>QTY</u>
38X1TCFB	3/8 X 1 THRD-CUTTER FLG BLT	16
10MMX80MMB	10 X 80 METRIC BOLT/ 10.9	4
10MMN	10 MM N/I LOCKNUT	4
38SAEW	3/8 SAE WASHER	8
12X114FTB	1/2 X 1 1/4 FINE THD BOLT	1
12FTN	1/2-20 FINE N/I LOCK NUT	1
12SAEW	1/2 SAE WASHER	8
516X34TCFB	5/16 X 3/4 THD CUT FLG BOLT	1
CCTJ	COIL SPRING CLIP / JEEP TJ	1
12X3FSB	1/2 X 3 FLAT SOCKET BOLT	6
12X70MMB	12 X 70 METRIC BOLT/10.9	1
12MMN	12 MM NUT (METRIC)	1
516X1FTB	5/16 X 1 FINE THRD BOLT	1
516FTN	5/16" FINE THRD N/I LOCKNUT	1
516SAEW	5/16 SAE WASHER	2
12X412FTB	1/2 X 4 1/2 FINE THD GRD. 8	4

HB-ABSS252**Bump Stop Hardware Bag**

<u>ITEM#</u>	<u>DESCRIPTION</u>	<u>QTY</u>
38X234FTB	3/8 X 2 3/4 FINE THREAD BOL	4
38FTN	3/8-24 FINE N/I LOCK NUT	4
38SAEW	3/8 SAE WASHER	4

HB-LL-SX**Hardware Bag For Lower Links**

<u>ITEM#</u>	<u>DESCRIPTION</u>	<u>QTY</u>
2617	BUSHING FOR LOWER LINK	4
LS2645	LINK SLEEVE 2.645" LOWER	2
ZF316	ZERK FITTING ALEMITE, 3/16"	2
REB118-14	ROD END BUSHING 1 1/8"X14MM ID	4

TORQUE SPECIFICATIONS

INCH SYSTEM			METRIC SYSTEM		
Bolt Size	Grade 5	Grade 8	Bolt Size	Class 8.8	Class 10.9
5/16	15 FT LB	20 FT LB	6MM	5 FT LB	9 FT LB
3/8	30 FT LB	35 FT LB	8MM	18 FT LB	23 FT LB
7/16	45 FT LB	60 FT LB	10MM	32 FT LB	45 FT LB
1/2	65 FT LB	90 FT LB	12MM	55 FT LB	75 FT LB
9/16	95 FT LB	130 FT LB	14MM	85 FT LB	120 FT LB
5/8	135 FT LB	175 FT LB	16MM	130 FT LB	165 FT LB
3/4	185 FT LB	280 FT LB	18MM	170 FT LB	240 FT LB

*The above specifications are not to be used when bolt is being installed with a bushing.

Pre-Installation Tips:

Now you are ready to "set" the length of the new Rock Ready™ link assemblies.

- A) It is very important to position the swivel ball socket so that the bushings are exactly centered.
- B) Measure the length of the link assembly between the center of each eye on each end. Rotate the rod end(s) as needed, being sure to keep the ends square with each other until link assembly measures:

6" Measurements

Lower Front should be set @ 30 1/8"

Lower Rear should be set @ 29 1/8"

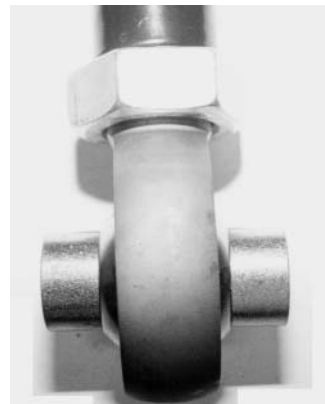
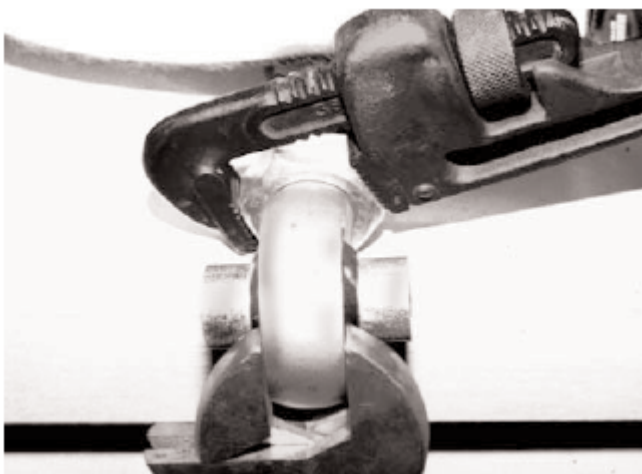
These are pre-alignment measurements only. Final Measurements to be set by a qualified alignment facility.

- C) On each rod end, rotate jam nut against steel tubing. Hold the rod end in place with a crescent wrench, and using a pipe or crescent wrench on the jam nut, completely tighten. On Double Flex link assemblies, one end is right hand threaded, and one end is left hand threaded so be sure to tighten properly.

NOTE: Jam nuts must be tight against steel tubing before installation.

- D) Recheck center-to-center measurement to be sure it is correct, and that the ends are square with each other.

IMPORTANT: Under no circumstances should rod end (heim) be adjusted out more than 1/2" (approx. 6 threads) from the ball casing!



Front:

1. Secure and properly block the tires of vehicle on a level concrete or asphalt surface.
2. Jack up front of vehicle and place jack stands under piped cross member behind front bumper. Remove tires and front shocks. Next remove steering damper and track bar.
3. Remove draglink from pitman arm, and install new pitman arm at this time. Remove sway bar end links and calipers from mounts. See Photo #1.
4. Lower front differential and remove coils. Remove factory bump stop and install new longer poly stops. Drill a 3/8" hole in the indent of the lower coil seat and install polymer bump stop spacer as shown in Photo #2. Tighten the 3/8" bolt until the top of the washer is flush with the top of the bump stop. (See Photo #3)
5. Disconnect upper front control arm from frame. Note: Only disconnect one arm at a time so that the axle does not roll. (See Photo #4)

Important Note:

Exhaust modifications will be necessary to allow for articulation, and clearance of the new drop down bracket. The cross over pipe will need to be shortened so that it does not run under the control arm and new bracket.

6. Install new upper arm relocation bracket. Attach to factory control arm position using OEM hardware. Attach factory upper control arm to new bracket using 10x80 mm bolt supplied. There are 4 more mounting locations that attach this bracket to the frame. Two on the outside and two on the bottom. With bracket sitting flush on frame, drill these locations using a 9/32" drill bit. Once drilled, install the 3/8" thread cutter bolts in these locations. (See Photo #5 and #6)
8. Remove front lower control arms. Using care grind off the factory lower control arm mounts and paint-exposed surface. See Photo #8
9. Place a jack under the transmission skid pan; remove mounting hardware and lower pan by 2". Place left and right sub frame rails in between the bottom of frame and pan. Fasten using the 1/2 X 3" flat socket bolts on 97-02 models. Use the 12x80mm bolts on the 03 and newer models. Note: On some models it may be necessary to grind down the factory rear ward step bar nut insert on the outside of the frame. This will allow for the sub-frame rail to pull up flush.



Photo #1

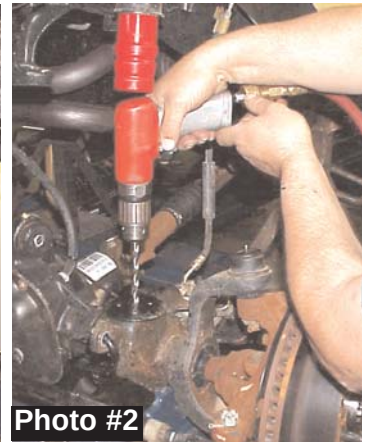


Photo #2



Photo #3



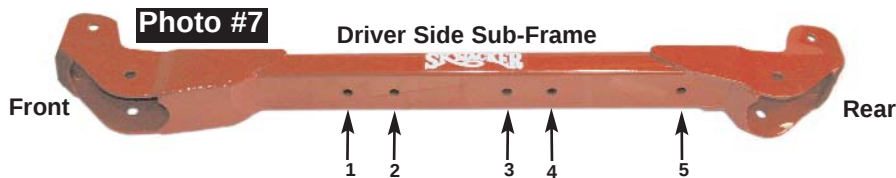
Photo #4



Photo #5

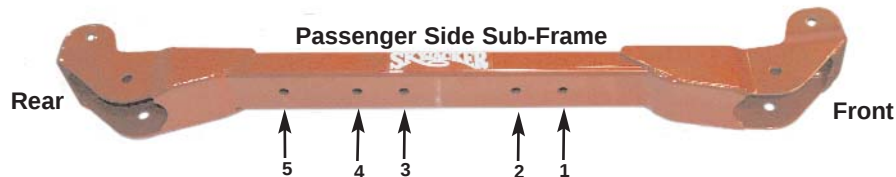


Photo #6



Note: Skyjacker Sub-Frames are designed to work on 1997 and newer Jeep TJ's. Therefore, each Sub-Frame will have multiple mounting holes.

- 1997-2002 models use mounting holes 1,3 and 5.
- 2003 and newer models will use holes 2 and 4. See page #10 for instructions on 3rd mounting bolt and skid plate modifications.



10. Install the new transfer case shifter bracket (part # JSRB231A) using the instructions provided.
11. With new Sub-Frame attached by the bottom bolts, drill the outer mounting locations using a 1/2" drill bit. Drill completely through frame and mounting tab located on back side of sub frame rail. (See Photo #9) Once Drilled , install the 1/2 x 4" fine thread bolt, washers and nuts. Torque to 70 Ft. Lbs.
12. The new lower control arms (22.75" tube length) mount to the OEM lower location at the differential and to the new position of the sub frame. Insert 2 large stepped spacers into each rod end of the new lower control arms and fasten using the original hardware. Install bushings, sleeves and grease fitting into opposite end. Install with bushing end at the frame. (See Photo #10)
13. Lower front differential and install the new coils placing the top of the coil over the upper bump stop mount first. Provided with the springs is the clip and hardware (See Photo #11) to fasten the passenger front coil like the driver's side. The manufacturer provides the hole in the left lower coil mount to fasten the coil to its seat. Install same as driver side.



5/16" x 3/4" thread cutter flange bolt.

14. Install new adjustable track bar by first greasing and installing poly bushing #2888 and sleeve #51792. Insert poly end into the OEM steering damper location on passenger side of axle, NOT the original track bar location. Install new steering damper mounting bracket: tab goes over the sway bar end link stud with original nut, use the new 1/2" x 2 1/2" flat socket head bolt and stover nut to bolt new bracket to track bar. See Photo #12. In extreme situations depending on pinion angle and caster settings, the drag link may contact this bracket when turning. This bracket can be ground for additional clearance. Next install frame end of track bar by following the hardware as shown in Photos #13 & 14, being sure to keep rod end square (parallel) with frame mount. NOTE: Be sure not more than 1/2" of threads are extended from bar (including jam nut). Hold the rod end in place with a crescent wrench, using a wrench on the jam nut, completely tighten.



15. Install steering damper mounting stud in hole of drag link and upper mounting hole on new track bar bracket. Install the provided 5/8 hour-glass bushings into new steering stabilizer and attach onto new studs. (See Photo #15) Install front brake lines using instructions packaged with brake line kit.



Photo #15

16. **NOTE:** Sway bar end must be drilled or filed to allow clearance for the provided 7/16" x 1 1/2" bolt (See arrow in Photo A). The new end link mounting bracket should be mounted to the bottom of the sway bar with the bolt pointing up through the sway bar and the nut and 7/16 USS washer applied on top (see picture A). Apply lithium grease to the polyurethane bushings. Insert them into the end link eyes along with the metal sleeve (#54314). The top 1/2" x 2 1/2" bolt connecting the bracket to the end link must be installed with the nut to the outside of the vehicle to provide adequate clearance to the frame. Install new double disconnect end links on the inboard side of the axle bracket, being sure that the offset is turned inward. (See Photo B).



Photo #16

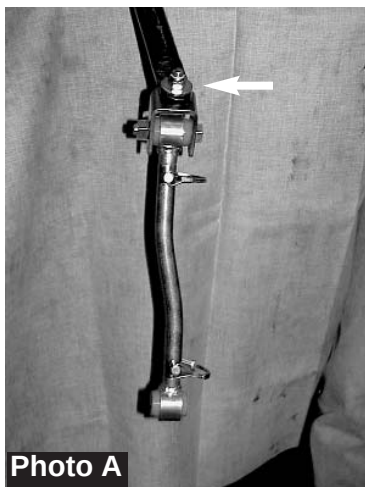


Photo A

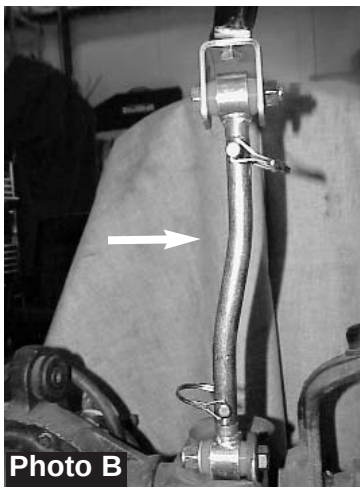


Photo B



Photo #16A



Photo #17

17. Raise and support vehicle under rear cross member with two jack stands. Remove rear tires and shock absorbers.
18. Disconnect rear track bar from differential and sway bar end links, lower differential and remove rear coils.
19. Drill a 3/8" hole into center of rear lower spring seat and install polymer bump stop spacer. See Photo #16. Tighten the 3/8" bolt until the top of the washer is flush with the top of the bump stop. (See Photo #16A) Remove upper bump stop by pulling back and forth with pliers. Remove 10mm bolt from inside bump stop cup. Install graphite bump stop spacer and original cup using 10mm x 70mm to install new poly bump stop. See Photo #17.
20. Place new track bar relocating bracket over the oem track bar mount at differential. Place the new 12mm x 70mm bolt through the original track bar location. Use the supplied spacer (#54314) to fill the space where the oem track bar was located. Apply lock nut and tighten. Drill a 1/2" hole through the hole in the driver's side of the new bracket. Install the 1/2" x 1 1/4" bolt with washers on each side through the newly drilled hole and tighten with self locking nut. Install the 5/16" x 1" fine thread bolt, washers and nut into the forward hole of the new bracket. (See Photo #18). Place the track bar into the upper hole of the new bracket using the original hardware and tighten once vehicle has been lowered to the ground. Be sure to install both upper and lower bolts from the rear, forward as shown in Photo #18. 8" lifts come with an adjustable rear track bar and special instructions.



Photo #18

21. Remove upper control arms from frame (freeing rear brake line and emergency cables) and rear sway bar. Install new upper arm relocating brackets. These brackets will install the same as the front. **Note:** Only install one at a time so that the axle does not roll. Be sure to mount the upper arm in the rearward most mounting hole. (See Photo #19) Install the new Skyjacker rear brake line bracket using the OE hardware at the factory position on the driver side frame. Attach the factory bracket to the Skyjacker bracket using the 5/16 x 1" fine thread bolt, washers, and nut. Be sure to line the tab on the factory bracket up with the indentation on the Skyjacker bracket. (See Photo #19).



22. Assemble the new rear sway bar end links by applying grease to the poly bushings and insert them into each eye along with a sleeve #54587. Install using original hardware.

23. Remove lower control arms and rear lower control arm mounts at frame. Repeat process from front lower control arm mount. The new rear lower control arms (22.75" tube length) mount to the OEM lower location at the differential and to the new position of the sub frame. Insert 2 large stepped spacers into each rod end of the new lower control arms. Grease and install polyurethane bushings and sleeves into the opposite end of control arm. Install new lower control arm being sure to install the poly end at the axle. Fasten using the original hardware. See Photo #20.



25. Install rear brake line. Install rear coils and shocks. Reinstall tires and lower vehicle to ground.

Final Notes:

- Alignment is necessary, so after the lift is installed have a qualified alignment center realign the vehicle to factory specifications.
- Rotate driveshafts and check for interference at differential yoke and cardan joint. If necessary, lightly dress casting(s) and/or U-joint tabs in order to eliminate binding.
- Ensure there is adequate clearance between exhaust and brakelines, fuel lines, fuel tank, floor board, and wiring harnesses. Check steering gear for interference and proper working order. Inspect brakelines for damage and adequate clearance. Test brake system before driving.
- With the vehicle on the floor, cycle steering lock to lock and inspect steering, suspension, driveline and brakeline systems for proper operation, tightness and adequate clearance.
- Have headlights readjusted to proper settings

Available Accessories:

- Heavy Duty Tie Rod Tube Part # TR300

1. 2003 and newer models will require modification to the factory skid plate in order to bolt up th the Skyjacker Sub-Frame.
3. With Skid Plate removed, Use the supplied templates on page #11 and page #13 to scribe and cut the rear of the factory transfer case skid plate. (See Photo #1, #2, and #3).
4. Photo #4 shows the portion removed from the driver side. Photo #5 shows the portion removed from the passenger side.
5. With Transfer Case Skid Plate modified, locate the new rear mounting brackets. Mount the new bracket to the new control arm mounting point on the sub frame. Mount using factory lower control arm bolt. Install bracket so that it sits flush against sub frame and the back of the skid plate. (See Photo #6). Once installed, mark and drill the new mounting point on the skid plate. Drill to accept the 3/8" bolt supplied. Install and tighten the new 3/8 x 1 1/4" bolt and hardware at this time.

Refer back to Lift Kit instructions at this time.

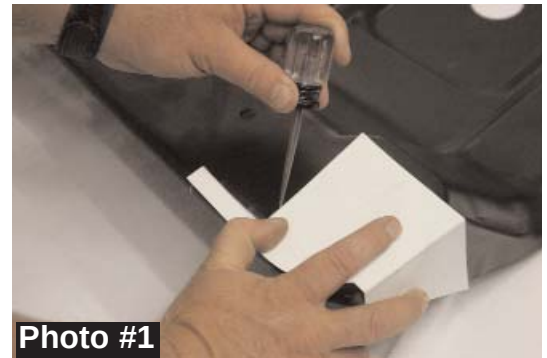


Photo #1
Driver Side Shown Above



Photo #2
Passenger Side Shown Above



Photo #3



Photo #4



Photo #5



Photo #6

**2003
Rubicon/Wrangler
Skid Plate Modification
Template
(Driver Side)**

Fold Down 90°

**2003
Rubicon/Wrangler
Skid Plate Modification
Template
(Passenger Side)**

Fold Down 90°



Skyjacker® 97-05 Jeep Accessories

- Steering Box Skid Plate Part # SSP10



- Heavy-Duty Tie Rod Tube Part# TR300



- High Capacity Oil Pan
(97-02 Models w/ Automatic Transmission)
Part# OPA999



- Shifter Relocation Bracket
(Included in Rock Ready® Kits)
Regular TJ with NP231 Transfer Case
Part# JSRB231A
Unlimited, Rubicon and Rubicon Unlimited
Part# JSRB2315U



- 1" Motor Mounts Part # MM100



- Rear Shock Relocation
Brackets Part# TJRSB10



- Heavy-Duty Limiting Straps

LS16K 16"	LS28K 28"
LS20K 20"	LS32K 32"
LS24K 24"	



- Rock Ready® Grab Handles

RRGH20-K	2" Black
RRGH20-R	2" Red
RRGH30-K	3" Black
RRGH30-R	3" Red



- C.V. Yoke (Rubicon Models Only)
Part# CVR680



- High Clearance Transfer Case Skid Plate.
97-02 Models Part# SP28
03-05 Models Part# SP283



- Heavy-Duty Adjustable Rear Sway Bar
Part #RSBA410



- Stainless Steel Brakelines 4 - 10" Lift
Front Part# FBL44 Rear Part# RBL98



Contact your distributor and get your Skyjacker® Jeep Accessories Today!!