

# 2003-2008 Dodge Ram 2500 4WD 2003-2008 Dodge Ram 3500 4WD & MEGACAB With Diesel Engine Installation Instructions

## **Required Tools List:**

- SAE Sockets \ Wrenches (1/4", 1/2", 5/8", 3/4", 13/16", & 1-1/16")
- Metric Sockets \ Wrenches (13mm, 15mm, 18mm, 21mm, 22mm, 24mm & 33mm)
- Diagonal Cutting Pliers
- Tie Rod Removal Tool
- Pitman Arm Puller Tool
- Adjustable Locking Pliers
- Large Flat Screwdriver
- Cut-Off Tool or Hacksaw
- Hammer
- Center Punch
- Power Drill
- **Drill Bits** (1/8", 7/16" & 15/32")
- C-Clamps
- Grease Gun
- Paint Marker
- Safety Glasses
- Jack Stands
- Wheel Chock
- Floor Jack
- Measuring Tape
- Torque Wrench



Before beginning installation, read these instructions & enclosed driver's WARNING NOTICE thoroughly & completely. Also affix WARNING decal in passenger compartment in clear view of all occupants. Please refer to Parts List to insure that all parts & hardware are received prior to disassembly of vehicle. If any parts are found to be missing, contact SKYJACKER® Customer Service at 318-388-0816 to obtain needed items. If you have any questions or reservations about installing this product, contact SKYJACKER® Technical Assistance at 318-388-0816.

# Please Record the Important Measurement Information Below for Reference. It is very helpful on determining an Accurate Achieved Lift Height Measurement.

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

Driver Side Front:		Passenger Side Front: _	
	BEFORE / AFTER		BEFORE / AFTER
Driver Side Rear:		Passenger Side Rear:	/
	BEFORE / AFTER		BEFORE / AFTER

# **Important Notes:**

- Lift Kit Height is Based off of Front Lift Height with Less Rear Lift for a More Level Stance.
- If Larger Tires (10% More Than the OEM Diameter) Are Installed, Speedometer Recalibration Will Be Necessary. Contact Your Local RAM Dealer or an Authorized Skyjacker® Dealer for Details.
- After Installation, a Qualified Alignment Facility Is Required to Align the Vehicle to the OEM Specifications.

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- If After Installation a Front Driveline Vibration Becomes Apparent, Part # IXR20K Must Be Ordered. # IXR20K Indexing Ring Rotates Transfer Case Downward to Improve Driveline Angle.
- Some Models Come Equipped with a (Larger) Sterling Rear Axle. These Models Will Require Wider \ Longer Rear U-bolts. Part # #U9B12R Must Be Ordered.
- For Vehicles with a Rear Driveshaft Carrier Bearing, Lowering Brackets are Available if a Vibration Occurs.
   1" Drop Part # CBL3401
   2-1/4" Drop Part # CBL214
- Under NO Circumstances Are SKYJACKER® Coil Springs to Be Used in Conjunction with Any Type of Coil Spring or Spring Tower Block\Spacer. The Use of Coil Spring Block\Spacer Will Allow ANY Coil Spring to Exceed Its Designed Stress & Travel Loads Allowing It Be Overstressed, Over Sprung, Fatigued & Possibly Breakage. SKYJACKER® Warranty Is Void Under Any Such Application.

### Kit Breakdown:

#### Part # D4513K

Item #	Description	Qty
D45	COIL SPRINGS, SOFTRIDE®	1
D45523	COMP BOX: 03-08 DODGE, 6"	1
D4513	COMP BOX: FOR ADD-A-LEAF	1

#### Part # D4513KS

Item #	Description	Qty
D45	COIL SPRINGS, SOFTRIDE®	1
D45523	COMP BOX: 03-08 DODGE, 6"	1
D4513S	COMP BOX: FOR LEAF SPRINGS	1
DR374S	LEAF SPRINGS, SOFTRIDE®	2

#### Part # D4523K Class II

Item #	Description	Qty
D45	COIL SPRINGS, SOFTRIDE®	1
D45523	COMP BOX: 03-08 DODGE, 6"	1
D4523	COMP BOX: FOR ADD-A-LEAF	1

#### Part # D4523KS Class II

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Item #	Description	Qty
D45	COIL SPRINGS, SOFTRIDE®	1
D45523	COMP BOX: 03-08 DODGE, 6"	1
D4523S	COMP BOX: FOR LEAF SPRINGS	1
DR374S	LEAF SPRINGS, SOFTRIDE®	2

# **Component Box Breakdown:**

#### Part # D4513

Item #	Description	Qty
R334S	DODGE RAM ADD-A-LEAF, SINGLE	2
H-BOX D4513	HDWR BOX: D4513 COMP BOX	1

#### Part # D4513S

Item #	Description	Qty
916X312X11U	9/16 X 3-1/2 X 11 U-BOLT, ROUND	4
7013	STEERING STABILIZER W/BOOT	1
HB-916	HDWR BAG: 9/16 N/I LOCK NUT	1

# **Component Box Breakdown:**

#### Part # D4523 Class II

Description	Qty
DODGE RAM ADD-A-LEAF, SINGLE	2
WEDGE SHIM PLATE, 4 DEGREE	2
1/2 X 6 TIE BOLTS, PAIR W/NUT	2
9/16 X 3-1/2 X 11 U-BOLT, ROUND	4
STEERING STABILIZER W/BOOT	1
SHOCK KIT, DODGE DUAL FRONT	1
HDWR BAG: 9/16 N/I LOCK NUT	1
	DODGE RAM ADD-A-LEAF, SINGLE WEDGE SHIM PLATE, 4 DEGREE 1/2 X 6 TIE BOLTS, PAIR W/NUT 9/16 X 3-1/2 X 11 U-BOLT, ROUND STEERING STABILIZER W/BOOT SHOCK KIT, DODGE DUAL FRONT

#### Part # D4523S Class II

Item #	Description	Qty
916X312X11U	9/16 X 3-1/2 X 11 U-BOLT, ROUND	4
7013	STEERING STABILIZER W/BOOT	1
DS393	SHOCK KIT, DODGE DUAL FRONT	1
HB-916	HDWR BAG: 9/16 N/I LOCK NUT	1

#### Part # D45523

Item #	Description	Qty
DUL253-L	UPPER LINK, DODGE RAM	2
DLL45-L	LOWER LINK, DODGE RAM	2
DULRB3-B	UPPER LINK BRACKET, DR & PA	2
DTB53-B	TRACK BAR BRACKET, FRONT	1
SBL20-L	SWAY BAR BRACKET, DR LEFT	1
SBL20-R	SWAY BAR BRACKET, PA RIGHT	1
DA303	PITMAN ARM, 2003-2008	1
BP60S	BUMP STOP, DODGE RAM	2
HB-D4552-LK	HDWR BAG: UPPER LINK	1
HB-D4513-ULB	HDWR BAG: LINK & TRACK BAR	1
HB-D4513-BL	HDWR BAG: BRAKE LINE	1
HB-DTB53-TB	HDWR BAG: TRACK BAR	1

#### Part # DS393 Class II

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Item #	Description	Qty
DS393-UL	DUAL SHOCK BRKT, UPPER DR	1
DS393-UR	DUAL SHOCK BRKT, UPPER PA	1
DS393-BL	DUAL SHOCK BRKT, LOWER DR	1
DS393-BR	DUAL SHOCK BRKT, LOWER PA	1
DS390-TR	SHOCK TOWER RING	2
HB-DS393	HDWR BAG: FOR DS393	1

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### **Hardware Box Breakdown:**

### **Part # H-BOX D4513**

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Item #	Description	Qty
WSP334S	WEDGE SHIM PLATE, 4 DEGREE	2
1206	1/2 X 6 TIE BOLTS, PAIR W/NUT	2
916X312X11U	9/16 X 3-1/2 X 11 U-BOLT, ROUND	4
7013	STEERING STABILIZER W/BOOT	1
HB-916	9/16 X 3-1/8 X 13-1/2 U-BOLT	4

# **Hardware Bag Breakdown:**

#### Part # HB-D4552-LK

Item #	Description	Qty
2618	BUSHING, UPPER LINK	8
LS20DU	SLEEVE, UPPER LINK 2.375	4
2617	BUSHING, LOWER LINK	8
LS20DL	SLEEVE LOWER LINK 2.645	4
ZF316	ALEMITE ZERK FITTING, 3/16	8

#### Part # HB-D4513-ULB

Item # Description		Qty	
LS20DU	UPPER LINK SLEEVE, 25.35	2	
12USSW	1/2 USS WASHER	1	
716X112FTB	7/16 X 1-1/2 FINE THREAD BOLT	12	
716FTN	7/16-20 FINE N/I LOCK NUT	12	
716SAEW	7/16 SAE WASHER	24	
916X5FTB	9/16 X 5 FINE THREAD BOLT	2	
916FTN	9/16-18 FINE N/I LOCK NUT	2	
916SAEW	9/16 SAE WASHER	5	
916X6FTB	9/16 X 6 FINE THREAD BOLT	1	
916STVFTN	9/16-18 FINE THRD STOVER NUT	1	

#### Part # HB-D4513-BL

Item #	Description	Qty
DBE23	BRAKE LINE BRACKET, FRONT	2
516X1FTB	5/16 X 1 FINE THREAD BOLT	2
516FTN	5/16 FINE THREAD N/I LOCK NUT	2
516SAEW	5/16 SAE WASHER	4

# Hardware Bag Breakdown:

#### Part # HB-DS393

Item #	Description	Qty
LS20DU	SLEEVE, LINK BRKT, 2.375 LONG	2
12X212CTB	1/2 X 2-1/2 COARSE THRD BOLT	4
12CTN	1/2-13 COARSE N/I LOCK NUT	4
12SAEW	1/2 SAE WASHER	8
716X112FTB	7/16 X 1-1/2 FINE THREAD BOLT	4
716X112CARB	7/16 X 1-1/2 CARRIAGE BOLT	8
716CTN	7/16 COARSE N/I LOCK NUT	8
716CTSN	7/16 COARSE STANDARD NUT	6
716FTN	7/16-20 FINE N/I LOCK NUT	4
716SAEW	7/16 SAE WASHER	10
916X5FTB	9/16 X 5 FINE THREAD BOLT	2
916FTN	9/16-18 FINE N/I LOCK NUT	2
916SAEW	9/16 SAE WASHER	4

#### Part # HB-DTB53-TB

Item # Description			
12X412FTB	1/2 X 4-1/2 FINE THREAD BOLT G8	1	
12SAEW	1/2 SAE WASHER	2	
12STVFTN	1/2 FINE THREAD STOVER NUT	1	
916X3FTB	9/16 X 3 FINE THREAD BOLT	1	
916SAEW	9/16 SAE WASHER	2	
916FTN	9/16 NYLON INSERT LOCK NUT	1	

#### Part # HB-916

l	Item #	Description	Qty
l	916FTN	9/16 NYLON INSERT LOCK NUT	8

#### Part # HB-7013

Item #	Description	Qty
HOURGLASS 5/8	HOURGLASS, 5/8 X 1.50, RED	2
141509	ES25 SLEEVE, 1.50 LONG	1
142121	ES24 SLEEVE, 1.38 LONG	1
12X412FTB	1/2 X 4-1/2 FINE THREAD BOLT	1
12FTN	1/2-20 FINE N/I LOCK NUT	1
12SAEW	1/2 SAE WASHER	1
12USSW	1/2 USS WASHER	1
81004	TAPERED SLEEVE, 1/2 ID	1
58SP	SPACER, 5/8 ID X 1-1/4 OD	1

# Pre-Installation Tips: Install Shock Boots, Bushings & Sleeves.

- 1. Install supplied Shock Boot over Skyjacker Shock. Attach boot to cylinder body with supplied Boot Cable Tie. Remove excess cable tie with diagonal cutting pliers.
- 2. Coat Hourglass Bushings with a water resistant grease & press into each shock eye. Coat Sleeve & press into shock eye bushings.

# **Pre-Installation Tips**: Install Stabilizer Boot, Bushings and Sleeves.

- 1. Install supplied Stabilizer Boot over Skyjacker Steering Stabilizer. Attach boot to cylinder body with supplied Boot Cable Tie. Remove excess cable tie with diagonal cutting pliers.
- Coat Hourglass Bushings with a water resistant grease & press into each stabilizer eye.
   Coat 1.50" Steel Sleeve with a water resistant grease & press into each stabilizer eye bushing.

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# Pre-Installation Tips: Install Zerk Fittings, Bushings & Sleeves into Link Arms.

- 1. Install supplied Alemite Zerk Fitting into each end of Skyjacker Link Arms. Drive-in Zerk fittings using a 1/4" socket over the fitting, strike slightly with a hammer until fitting is completely tapped in. **Tech Note:** Positioned Zerk fittings as follows: Front eye of link = fitting pointing forward toward end. Rear eye of link = fitting pointing downward.
- 2. On # DLL45-L Lower Links, Coat # 2617 Lower Link Bushings with a water resistant grease & press into each link arm eye. Coat # LS20DL 2.645" Long Sleeve & press into link arm eye bushings.
- 3. On # DUL253-L Upper Links, Coat # 2618 Link Bushings with a water resistant grease & press into each link arm eye. Coat # LS20DU 2.375" Long Sleeve & press into link arm eye bushings.



### Front Installation: Note: Save all factory components & hardware for reuse, unless noted.

- 1. Chock rear tires\wheels. Ensure that vehicle transmission is in PARK and engage emergency brake. Note: Be sure steering wheel\wheels are pointing straight forward.
- 2. From inside the engine compartment, disconnect both OEM front shock upper stud mounts from upper shock tower bracket using a 18mm socket\wrench. (Photo # 1)

Note: OEM shocks will be removed when OEM coils are removed.

Remove four (4) bolts from

OEM upper shock tower bracket. Remove bracket. (Photo # 2)

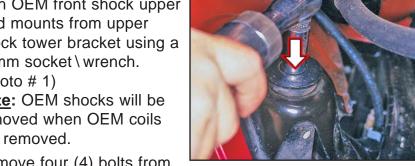
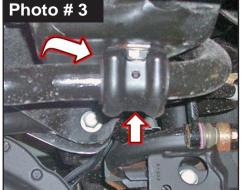


Photo #1



3. On Driver & Passenger sides, remove OEM front sway bar from OEM frame mounts using a 15mm socket\wrench. (Photo # 3)

Disconnect OEM sway bar link upper stud mount from sway bar. (Photo #4) Remove hardware & bushings from sway bar studs. Roll sway bar forward & down.





I-D4513 REV1 04/23 Page 4 of 16 4. Loosen OEM front track bar from lower passenger side axle mount. Disconnect OEM front track bar from upper frame mount using a 24mm socket\wrench. (Photo # 5)

<u>Tech Note</u>: It may be necessary to turn steering wheel to help remove bolt.

5. Disconnect OEM drag link assembly from OEM pitman arm using a 21mm socket \ wrench. (Photo # 6)
Use a tie rod remover tool to detach drag link from pitman arm. Caution: Do not tear drag link grease boot.





- 6. Raise front of vehicle, support frame rails using jack stands at indicated lift points in OEM service manual. <u>Tech Note</u>: Do Not place jack stands on frame between lower control arms & transmission crossmember.
- 7. Remove the front tires \ wheels using a 22mm socket.
- 8. Place a floor jack underneath front axle for support. Put a slight load on axle\jack to prevent axle from moving. Allow ample room to lower front axle.

### If installing Optional Class II Skyjacker # 7013 Replacement Steering Stabilizer Kit

- 9. Remove OEM steering stabilizer from passenger side frame mount & from drag link \ tie rod assembly stud mount. (Photo # 7)
- 10. Mark position of OEM pitman arm on steering gear box sector shaft. Transfer an index mark over to Skyjacker pitman arm.

Remove OEM nut & washer from steering gear box using a 33mm socket\wrench.

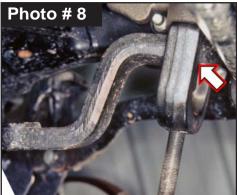
Use a pitman arm puller tool to remove pitman arm from OEM steering gear shaft. (Photo # 8) Align marks & splines on the Skyjacker # DA303 Pitman Arm with sector shaft for correct indexing & install. Attach with OEM washer & nut.

Tighten using 33mm socket\wrench. Torque 185 ft-lbs.

11. On Driver & Passenger sides, scribe alignment marks on OEM adjustable cam bolts. Mark cams with DR & PA to indicate driver & passenger side. (Photo # 9)

Marks are used for installation reference.







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12. On Driver & Passenger sides, remove OEM brake line bracket from axle mount behind coil & between upper & lower links using a 13mm socket\wrench. (Photo # 10)

# Note: Perform Steps 13-22 on One Side at a Time.

- 13. Disconnect OEM front shock lower mount using a 21mm socket\wrench. Bolt is accessed through a hole in front of axle spring perch. Retain OEM hardware.
  - While checking for appropriate driveshaft clearance, slack in ABS lines, brake lines, differential vent hose & etc, lower the front differential until OEM front coil spring become loose.
  - Remove OEM coil spring & front shock. Remove & retain OEM spring isolator & 3-bolt shock tower ring.
- 14. Locate OEM front rubber bump stops, mounted on OEM frame rail behind the coils. (Photo # 11) Remove bump stop from it's pocket by using a large flat screwdriver to pry bushing out or using a pair of channel lock pliers working bushing back & forth.
- 15. Remove & replace OEM lower link arm. First, disconnect lower link arm at axle mount using a 21mm & a 24mm socket \wrench. Next, disconnect lower link arm at frame mount using a 21mm & a 1-1/16" socket\wrench.
- 16. Attach Skyjacker # DLL45-L Lower Link Arm with OEM hardware at axle mount using a 21mm & a 24mm socket\ wrench. (Photo # 12) Note: Be sure OEM brake line is running above lower control arm & under upper control arm. Tech Note: Positioned Zerk fittings as follows: Front eye of link = fitting pointing forward toward end. Rear eye of link = fitting pointing downward.

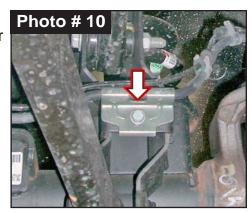
Attach Skyjacker # DLL45-L Lower Link Arm with OEM hardware at frame mount using a 21mm wrench & a 1-1/16" socket\wrench. Secure, but **Do Not Completely Tighten** links at this time. To set bushings properly for ride height, these will be tightened once vehicle is on ground with full vehicle weight on tires\wheels. **CAUTION:** GREASE Skyjacker Lower Link Arm Bushings using a grease gun.

17. Disconnect upper link arm at axle mount using a 21mm socket \ wrench. Disconnect upper link arm at frame mount using a 21mm socket \ wrench. Tech Note: On passenger side, OEM upper link arm frame bolt makes contact with OEM exhaust. Bolt can be cut, removed &

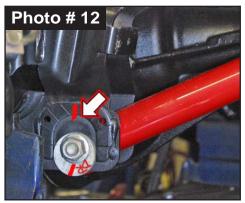




replaced or the exhaust separated. (Photo # 13 & # 14) Replace with supplied 9/16" x 6" Fine Thread Bolt, 1/2" USS Washer & 9/16" Fine Stover Nut using a 13/16" socket\wrench.

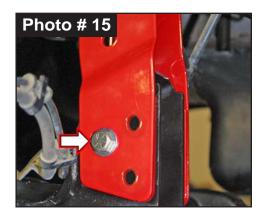






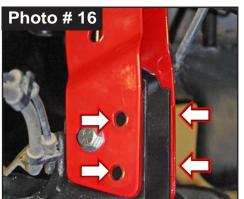
Note: Skyjacker Upper Link Brackets Are Not Side Specific: # DULRB3-B Driver\Passenger Side.

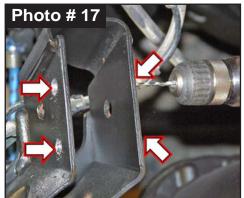
18. Place Skyjacker Upper Link Bracket down over appropriate side of OEM control arm mount. Be sure bracket is straight with backside of OEM control arm mount. (Photo # 15) Install 9/16" x 5" Fine Thread Bolt with 9/16" SAE Washer from outside-to-inside through OEM mount hole. Attach with 9/16" SAE Washer & 9/16" Nylon Insert Lock Nut on outside using a 13/16" socket\wrench. Secure, but **Do Not Completely Tighten** at this time.

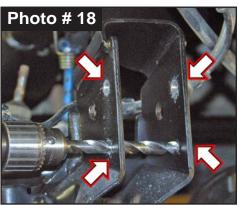


19. Use Skyjacker bracket as a guide for two (2) holes on each side of OEM mount. (Photo # 16) Mark, center punch & drill 1/8" pilot holes. Remove hardware & Skyjacker bracket.

Drill out pilot hole using a 15/32" drill bit. (Photo # 17 & # 18) **Tech Note**: It may be easier to drill with OEM brake caliper removed. Remove two (2) brake caliper mounting bolts & remove brake caliper from OEM knuckle using a 24mm socket\wrench. **Note**: Hang brake caliper on frame out of way using a hook or bungee. Do Not hang by rubber brake line.







NOTE: If installing Optional Class II Skyjacker # DS393 Dual Shock Kit, Proceed to Step 21.

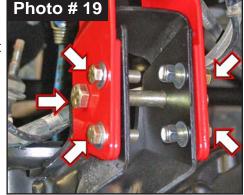
20. Install 9/16" x 5" Fine Thread Bolt with 9/16" SAE Washer from outside-to-inside through OEM mount hole. Insert 3/4" OD x 9/16" ID x 2.375" Long Crush Sleeve inside OEM bracket & attach with 9/16" SAE Washer & 9/16" Nylon Insert Lock Nut on outside using a 13/16" socket \ wrench. (Photo # 19)

Secure, but **Do Not Completely Tighten** at this time.

Install all four (4) 7/16" x 1-1/2" Fine Thread Bolts into bracket & drilled holes. (Photo # 19) Run 7/16" x 1-1/2" Bolts with 7/16" SAE Washers from outside-to-inside. Attach with 7/16" SAE Washers & 7/16" Nylon Insert Lock Nuts on inside using a 5/8" socket \wrench.

Tighten all bolts to bracket.

Torque Specifications: 7/16" Bolts = 60 ft lbs. 9/16" Bolt = 130 ft lbs.



<u>Tech Note</u>: If removed, reinstall brake caliper to OEM knuckle with OEM bolts using a 24mm socket\wrench.

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21. Skyjacker Dual Shock Lower Brackets Are Side Specific & Must Be Installed on Appropriate Side: # DS393-BL Driver Side & # DS393-BR Passenger Side.

Note: Optional Class II Dual Shock Lower Bracket attaches with all three (3) bolts on outside

of bracket. (Photo # 20)

Install 9/16" x 5" Fine Thread Bolt with 9/16" SAE Washer from outside-to-inside through OEM mount hole. Insert 3/4" OD x 9/16" ID x 2.375" Long Crush Sleeve inside OEM bracket & attach with 9/16" SAE Washer & 9/16" Nylon Insert Lock Nut on outside using a 13/16" socket\wrench. (Photo # 20) Secure, but **Do Not Completely Tighten** at this time.

Install all four (4) 7/16" x 1-1/2" Fine Thread Bolts into bracket & drilled holes. (Photo # 20) Run 7/16" x 1-1/2" Bolt with 7/16" SAE Washer from outside-to-inside. Attach with 7/16" SAE Washer & 7/16" Nylon Insert Lock Nut on inside using a 5/8" socket \ wrench. Tighten all bolts to bracket.



22. Slide Skyjacker Upper Link Arm front eye into Skyjacker Upper Link Bracket axle mount, then slide rear eye into OEM frame mount. Secure rear frame mount first with OEM hardware using a 21mm socket\wrench. Secure, but **Do Not Completely Tighten** links at this time.

Attach front eye mount to Skyjacker Upper Link Bracket with OEM hardware using a 21mm socket\wrench. (Photo # 21) Secure, but **Do Not Completely Tighten** links at this time. **CAUTION**: GREASE Skyjacker Upper Link Arm Bushings using a grease gun.



Photo # 20

# Note: Perform Steps 13-22 on Opposite Side at This Time.

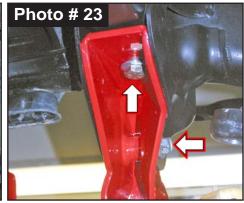
23. Position Skyjacker # DTB53-B Track Bar Bracket up into OEM track bar upper frame mount. (Photo # 22) Attach with OEM hardware using a 24mm socket\wrench. Secure, but **Do Not Completely Tighten** at this time.

Rotate Track Bar Bracket so that brace is flat against crossmember.

Insert supplied 1/2" x 4-1/2"
Fine Thread Bolt with 1/2"
SAE Washer up through
Skyjacker bracket & OEM
frame mount. (Photo # 23)
Attach with supplied 1/2"
SAE Washer & 1/2" Stover
Lock Nut using 3/4" socket\
wrench.

Torque Specifications: 1/2" Bolt = 90 ft lbs. OEM Bolt = 110 ft lbs.





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### Standard Skyjacker Single Shock Kit

24. To begin coil installation, place 3-bolt OEM shock tower ring inside top of coil tower & attach with OEM nuts. Hand Tighten Only to hold ring in place.

Photo # 24

Optional Class II Skyjacker # DS393 Dual Shock Kit (Photo # 24 Overview)

25. One bolt at a time, align supplied 7/16" X 1-1/2" Carriage Bolts up through Skyjacker # DS390-TR Shock Tower Ring into 3-bolt OEM coil tower. Attach with supplied 7/16" Standard Nut. Hand Tighten Only just to hold ring in place. **Tech Note**: Be sure each carriage bolt aligns & locks into

square holes of Skyjacker Shock Tower Ring.

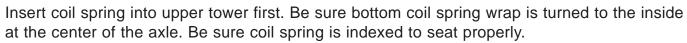
A fourth (4th) mount hole (located between the

shock mount tabs) must be drilled. (Photo # 25) Using Skyjacker bracket as a guide, mark, center punch & drill 7/16" mount hole.

Install supplied 7/16" X 1-1/2" Carriage Bolt up through Skyjacker Ring & drilled mount hole. Attach with supplied 7/16" Standard Nut. Hand Tighten Only.

<u>Note</u>: Skyjacker **D45** Front Coil Springs Are Not Side Specific.

26. Place OEM spring isolator on top of Skyjacker Front Coil Spring. (Photo # 26)



Raise axle enough to hold the coil springs in place.



27. Now remove OEM nuts from shock tower ring.

From inside the engine compartment, install Skyjacker shock down through coil spring tower.

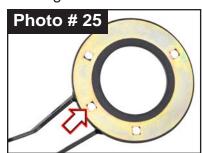
Place supplied retaining washer & poly stem bushing onto shock stem. (Photo # 27)

Install OEM upper shock tower bracket onto OEM shock ring with OEM nuts.

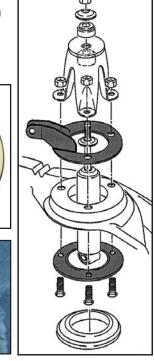
Extend shock stem up through OEM upper shock tower bracket.

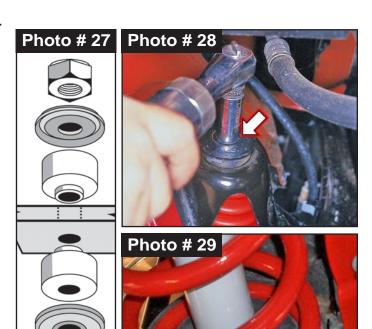
Place supplied poly stem bushing & retaining washer onto shock stem. Attach with supplied lock nut using a 5/8" socket\wrench. (Photo # 28)

Attach shock lower mount at axle with OEM nuts using a 21mm socket\wrench. (Photo # 29)









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### Optional Class II Skyjacker # DS390 Dual Shock Kit

28. Now remove 7/16" Standard Nuts from Skyjacker Shock Tower Ring.

From inside the engine compartment, install Skyjacker stem eye shock down through coil spring tower.

Place supplied retaining washer & poly stem bushing onto shock stem. (Photo # 30)

Skyjacker Dual Shock Upper Brackets Are Side Specific & Must Be Installed on Appropriate Side: # DS393-UL Driver Side & # DS393-UR Passenger Side.

Install appropriate Shock Upper Bracket onto Shock Tower Ring. (Photo # 31)

<u>Tech Note</u>: Shock tab mount should curve slightly rearward.

29. Install OEM upper shock tower bracket (also Side Specific) onto Skyjacker Upper Bracket & Shock Tower Ring. (Photo # 32) Attach with supplied 7/16" Nylon Insert Lock Nuts using a 5/8" socket\wrench. Torque 60 ft lbs.

Extend shock stem up through OEM upper shock tower bracket.

Place supplied poly stem bushing & retaining washer onto shock stem. Attach shock to OEM bracket with supplied lock nut using a 5/8" socket\wrench.

Attach shock lower mount at axle with OEM nuts using a 21mm socket\wrench.

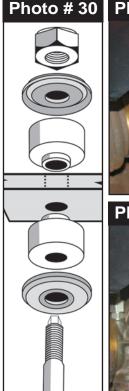
30. Install Skyjacker Eye-to-Eye Mount Shock to Dual Shock Brackets. (Photo # 32) At Skyjacker Upper Bracket, install shock with supplied 1/2" x 2-1/2" Course Thread Bolt with 1

shock with supplied 1/2" x 2-1/2" Course Thread Bolt with 1/2" SAE Washer from outside-to-inside. Attach with 1/2" SAE Washer & 1/2" Nylon Insert Lock Nut using a 3/4" socket\wrench.

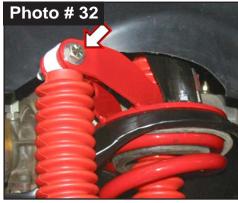
At Skyjacker Lower Bracket, install shock with supplied 1/2" x 2-1/2" Course Thread Bolt with 1/2" SAE Washer from rear-to-front. Attach with 1/2" SAE Washer & 1/2" Nylon Insert Lock Nut using a 3/4" socket\wrench. (Photo # 33)

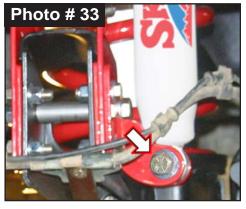
31. Install Skyjacker # DBE23 Front Brake Line Relocation Brackets. Skyjacker bracket has a short 90° bend at bottom. Position 90° bend facing forward & align with OEM brake line bracket axle mount. Attach with OEM bolt using a 13mm socket \ wrench. (Photo # 34)

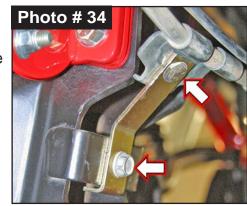
Attach OEM brake line bracket to Skyjacker Bracket with supplied 5/16" x 1" Fine Thread Bolt with 5/16" SAE Washer from back-to-front. Attach with 5/16" SAE Washer & 5/16" Nylon Insert Lock Nut using a 1/2" socket\wrench.











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32. On Driver & Passenger sides, install Skyjacker # BP60S Poly Bump Stops. Install Poly Bump Stop into OEM bump stop cup. (Photo # 35) By using leverage against the bottom of bump stop, force the bump stop up into place.

**Tech Note:** Use a flat block or a 2x4 for better leverage.

# If installing Optional Class II Skyjacker # 7013 Replacement Steering Stabilizer Kit

33. Install Skyjacker #7013 Steering Stabilizer. Install shaft eye of stabilizer to tie rod with supplied hardware. (Photo # 36 Hardware & # 37 Overview)

Insert Tapered Sleeve into tapered hole of OEM drag link assembly stud mount.

Place supplied large OD 1/2" USS Washer onto 1/2" x 4-1/2" Bolt.

Insert bolt with washer through shaft eye of stabilizer (with sleeve in eye).

Place supplied 5/8" ID x 1-1/4" OD Spacer

between stabilizer & drag link. Continue bolt through drag link. Attach with 1/2" SAE Washer & 1/2" Nylon Insert Lock Nut. Secure, but **Do Not Completely Tighten** at this time using a 3/4" socket\wrench.

- 34. Install cylinder eye of stabilizer into passenger side OEM frame mount with OEM hardware.
- 35. Tighten Steering Stabilizer at frame mount. Torque 56 ft-lb. Tighten Steering Stabilizer at drag link mount. Torque 65 ft-lb.
- 36. Skyjacker Sway Bar Brackets Are Side Specific: # SBL20-L Driver Side & # SBL20-R Passenger Side. Attach appropriate Skyjacker bracket to frame with OEM hardware using a 15mm socket\wrench. **Note:** Bracket's side profile angles / slopes to front. (Photo # 38)

Attach OEM sway bar frame mount with two (2) supplied 7/16" x 1-1/2 Fine Thread Bolts with 7/16" SAE Washers up from bottom-to-

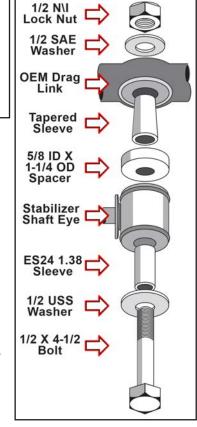
top. Attach with 7/16" SAE Washer & 7/16" Nylon Insert Lock Nut using a 5/8" socket \wrench.

Roll OEM sway bar upward. Connect OEM sway bar link upper studs to OEM sway bar with OEM hardware & bushings. (Photo #39) Secure, but Do Not Completely Tighten this time.

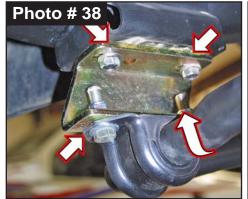




**Photo #35** 



**Photo #37** 





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- 37. Install front tires\wheels using a 22mm socket. Lower vehicle to ground. Torque lugs to OEM service manual specifications.
- 38. Make sure that tires\wheels are pointed straight ahead.

Loosen adjuster clamps on OEM drag link. Rotate drag link end to pitman arm 180°. Attach

drag link end up through bottom of Skyjacker pitman arm.

Tighten using a 24mm socket\wrench. Torque 185 ft-lbs. Align & install OEM cotter pin into castle nut.

39. Rotate drag link adjuster sleeve clamps 'up' to topside of drag link for clearance. (Photo # 40) Tighten clamps into place.

### **NOTICE:** Relay this information to alignment shop:

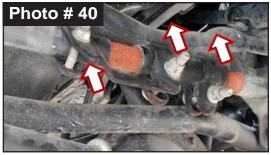
In order to achieve proper adjustment sleeve clamping force, drag link & tie rod clamp\bolt assemblies must be positioned as shown (Photo # 41). The open side of each clamp must align with the slot in the threaded adjustment sleeve. Improper positioning and\or improper bolt torque will promote linkage deflection. This deflection may contribute to tire shimmy. Torque clamp bolts 45 ft-lbs.

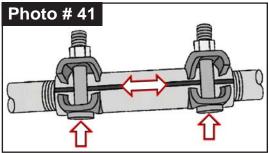
40. Connect OEM front track bar to Skyjacker Track Bar
Bracket with supplied 9/16" x 3" Fine Thread Bolt from frontto-back.

Attach with supplied 9/16" SAE Washer & 9/16" Nylon Insert Lock Nut 13/16" socket\wrench. (Photo # 42)

Secure, but **Do Not Completely Tighten** this time.

<u>Tech Note</u>: It may be helpful to turn steering wheel to align track bar end with mount.







# Rear Installation: Note: Save all factory components & hardware for reuse, unless noted.

- 1. Chock front tires\wheels. Raise rear of vehicle & support frame rails using jack stands at indicated lift points in OEM service manual.
- 2. Remove rear tires\wheels using a 22mm socket.
- 3. Place a floor jack underneath rear axle for support. Put a slight load on axle \ jack to prevent axle from moving. Allow ample room to lower rear axle.
- 4. Remove OEM rear shocks. Retain factory mounting hardware for re-use.
- 5. Remove OEM U-bolts. Discard U-bolts & hardware. Retain lower OEM U-bolt plate.
- 6. While checking for appropriate slack in brake lines, sway bar, E-brake lines, differential breather hose, & etc, lower axle several inches away from leaf springs.

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# Rear Lift Option 1: Add-A-Leaf Installation

Note: Perform Steps 7-12 on One Side at a Time.

7. Loosen OEM leaf spring mounts. Loosen front spring eye bolt. Loosen rear spring eye bolt. Loosen shackle eye bolt.

<u>Note</u>: Installation of Skyjacker Add-A-Leafs properly, you must use two (2) large C-clamps to contain elastic potential energy of OEM leaf springs when OEM tie bolts are being removed. <u>Tech Note</u>: Spray a good penetrating oil onto each tie bolt to help loosen nut.

Attach C-clamp on each side of OEM leaf spring center tie bolts to hold leaf spring assembly securely together. Tighten C-clamp equally on each side. (Photo # 43)

Use locking pliers to hold head of each OEM tie bolt. Loosen & remove nuts. Remove tie bolts.

Carefully & slowly loosen
 C-clamps equally on each
 side until leaf spring
 expands completely.
 Remove C-clamps.

Separate leafs & install





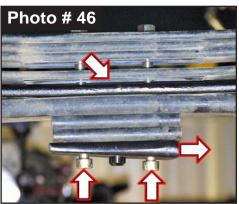
Skyjacker Add-A-Leaf above OEM overload leaf into spring pack so leaves remain progressive (longest at top & shortest to bottom). (Photo # 44)

9. With tie bolts removed, remove OEM plastic center dial pin from bottom OEM shim plate.

(Photo # 45) (Skyjacker # WSP334S Wedge Shim Plate has a built-in dial pin.)

Insert supplied 1/2" x 6" Tie Bolts up through Skyjacker Wedge Shim Plate (place taller end of shim plate toward rear of vehicle).
 Continue up through two (2) OEM shim plates, OEM overload leaf, Skyjacker





add-a-leaf & through remaining spring pack. Attach with supplied 1/2" Tie Bolt Nuts. Hand Tighten Only to hold ring in place. (Photo # 46)

11. Attach C-clamp on each side of tie bolt hole to hold leaf spring assembly. Tighten C-clamps equally on each side until leaf spring compresses. Once compressed, use locking pliers to hold each tie bolt head & tighten tie bolt nut with a wrench. (Photo # 47)

<u>CAUTION</u>: Do Not Use Skyjacker Tie Bolts to Draw OEM Leaf Springs Together. Failure of Any Component Can Cause an Explosive Disassembly & Possible Injury!

Torque Specifications: 1/2" Tie Bolt = 41 ft lbs.



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12. Remove C-clamps. Cut off any excess tie bolt length with cut-off tool or hacksaw.

## Note: Perform Steps 7-12 on Opposite Side at This Time, Then Proceed to Step 13.

- 13. Clean spring pads of all debris. Raise axle to mate leaf springs to axle pad. **Note**: Be sure that leaf spring center bolt heads & dial pin seats properly into OEM axle pad.
- 14. Install Skyjacker 9/16" U-bolts over axle up into OEM upper U-bolt plate. Install supplied 9/16" Nylon Insert Nuts using a 13/16" socket\wrench. Tighten U-bolts evenly using an 'X' crisscross tightening sequence. Torque to 175 ft-lbs.
- 15. Install Skyjacker rear shock with OEM hardware at upper shock tower mount. Connect Skyjacker shock at lower axle mount with OEM hardware. Secure, but **Do Not Completely Tighten** at this time. To set bushings properly for ride height, these will be tightened once vehicle is on ground with full vehicle weight on tires\wheels.
- 16. Install rear tires\wheels using a 22mm socket. Lower vehicle to ground. Torque lugs to OEM service manual specifications.

# Rear Lift Option 2: Replacement Softride® Leaf Spring Installation

17. To access driver side front spring eye bolt, the OEM fuel tank must be loosened & pried away from OEM frame to gain clearance.

<u>Caution</u>: Do Not pry fuel tank over too much or lower it down too far to protect top OEM fittings from damage.

Safely support fuel tank. Loosen vent & fill hoses on filler neck. Loosen, but do not remove, OEM fuel tank front strap bolt. (Photo # 48) Disconnect & remove OEM fuel tank rear bolt & strap.

Carefully slide \ pry fuel tank away from frame toward center of vehicle to acquire sufficient room to access Driver side front spring eye bolt.

# Note: Perform Step 18 on One Side at a Time.

18. **Note**: Direction of OEM hardware into springs.

Loosen front spring eye bolt.

Loosen rear spring eye bolt. Loosen rear shackle eye bolt. Disconnect spring eye bolts & remove leaf spring with rear shackle attached.

Install Skyjacker leaf spring. First, attach spring eye to forward frame mount with OEM hardware. **NOTE**: Place taller end of shim toward rear of vehicle. (Photo # 49)

Attach spring eye to rear shackle & rear shackle mount with OEM hardware.

Secure OEM hardware, but **Do Not Completely Tighten** leaf spring hardware at this time.

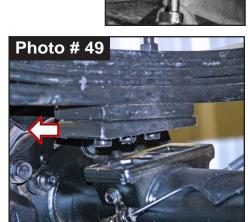


Photo # 48

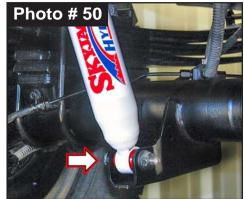
# Note: Perform Step 18 on Opposite Side at This Time, Then Proceed to Step 19.

19. Clean spring pads of all debris. Raise axle to mate Softride® Leaf Springs to axle pad.

Note: Be sure that leaf spring center bolt heads & dial pin seats properly into OEM axle pad.

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- 20. Reconnect driver side rear fuel tank strap & bolt. Tighten front fuel tank strap bolt. Tighten vent & fill hoses on filler neck.
- 21. Install Skyjacker 9/16" U-bolts over axle up into OEM upper U-bolt plate. Install supplied 9/16" Nylon Insert Nuts using a 13/16" socket\wrench. Tighten U-bolts evenly using an 'X' crisscross tightening sequence. Torque to 175 ft-lbs.
- 22. Install Skyjacker rear shock with OEM hardware at upper shock tower mount. (Photo # 50) Connect Skyjacker shock at lower axle mount with OEM hardware. Secure, but **Do Not Completely Tighten** at this time. To set bushings properly for ride height, these will be tightened once vehicle is on ground with full vehicle weight on tires\wheels.
- 23. Install rear tires\wheels using a 22mm socket. Lower vehicle to ground. Torque lugs to OEM service manual specifications.



# Final Clearance Check & Torque Steps:

1. Jounce vehicle a couple of times. This will help suspension settle to new ride height. Cycle steering lock-to-lock & check all components for proper operation & clearances. Pay special attention to clearance between driveshafts, tires\wheels, shocks, brake hoses, ABS wiring, etc.

## 2. Front Tighten & Torque Sequence.

Front track bar at lower passenger side axle mount. Front track bar at Skyjacker Track Bar Bracket using a 24mm socket\wrench. Torque 110 ft-lbs.

**Note**: Cycle steering to full left & right turns checking clearance between sway bar end links mounts at front base of coil springs & drag link \ tie rod assembly.

3. Front shock absorber upper OEM mount using a 5/8" socket\wrench. Torque 35 ft-lbs. Front shock absorber lower OEM mount using a 21mm socket\wrench. Torque 100 ft-lbs. Front dual shock absorber upper & lower mount using a 3/4" socket\wrench. Torque 90 ft-lbs.

Front sway bar at Skyjacker mount at frame using a 15mm socket\wrench. Torque 40 ft-lbs. Front sway bar at Skyjacker lower mount using a 5/8" socket\wrench. Torque 45 ft-lbs. Front sway bar end link upper stud bolt using a 15mm socket\wrench. Torque 27 ft-lbs.

Front upper link arm at axle mount using a 21mm socket\ wrench. Torque 120 ft-lbs.

Front upper link arm at frame mount using a 21mm socket\wrench. Torque 120 ft-lbs.

Front lower link arm at axle mount using a 21mm & 24mm socket\wrench. Align eccentric cam bolt marks. (Photo # 51) Torque 140 ft-lbs.

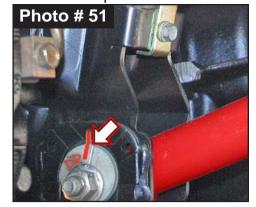
Front lower link arm at frame mount using a 21mm & 1-1/16 socket\wrench. Torque 140 ft-lbs.

# 4. Rear Tighten & Torque Sequence.

Rear shock absorber upper mount & lower mount. Torque 100 ft-lbs.

Tighten Leaf Springs in this sequence:

Front spring eye bolt. Rear spring eye bolt. Rear shackle eye bolt. Torque 110 ft-lbs.



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# **Final Notes:**

- After installation is complete, double check that all nuts & bolts are tight. Refer to following chart
  for proper torque specifications. (<u>Note</u>: Do not re-tighten the nuts & bolts where thread lock
  compound was used.)
- With vehicle placed on ground, cycle steering lock-to-lock & inspect steering, suspension, brake lines, front & rear drivelines, fuel lines & wiring harnesses for proper operation, tightness & adequate clearance.
- Rotate driveshafts & check for interference at differential yoke & Cardan joint. If necessary, lightly dress casting(s) and/or U-joint tabs in order to eliminate binding.
- For Vehicles with a Rear Driveshaft Carrier Bearing, Lowering Brackets are Available if a Vibration Occurs.
   1" Drop Part # CBL3401
   2-1/4" Drop Part # CBL214
- Check to ensure there is adequate clearance between ALL rotating, mobile & fixed members. Check clearance between inner side wall of tires. It may be necessary to reset steering stops to eliminate interference.
- Ensure there is adequate clearance between exhaust and brake lines, fuel lines, fuel tank, floorboard, & wiring harnesses. Check steering gear for interference & proper working order. Inspect brake lines for damage & adequate clearance. Test brake system.
- Have headlights readjusted to proper settings.
- Have a qualified alignment center align vehicle to OEM specifications.
- After first 100 miles, check all hardware for proper torque & periodically thereafter.

TORQUE SPECIFICATIONS					
INCH SYSTEM			METRIC SYSTEM		
Bolt Size	Grade 5	Grade 8	Bolt Size	Class 8.8	Class 10.9
5/16	180 in-lbs	240 in-lbs	6MM	60 in-lbs	108 in-lbs
3/8	30 ft-lbs	35 ft-lbs	8MM	216 in-lbs	23 ft-lbs
7/16	45 ft-lbs	60 ft-lbs	10MM	32 ft-lbs	45 ft-lbs
1/2	65 ft-lbs	90 ft-lbs	12MM	55 ft-lbs	75 ft-lbs
9/16	95 ft-lbs	130 ft-lbs	14MM	85 ft-lbs	120 ft-lbs
5/8	135 ft-lbs	175 ft-lbs	16MM	130 ft-lbs	165 ft-lbs
3/4	185 ft-lbs	280 ft-lbs	18MM	170 ft-lbs	240 ft-lbs
The Above Specifications Are Not to Be Used When the Bolt Is Being Installed With a Bushing.					

Seat Belts Save Lives. Please Wear Your Seat Belt.

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