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Part#: **014671, 014682, 014683(std), 014684(Rubicon)**

Product: **Long Arm Suspension System**

Application: **2007-2011 Jeep Wrangler JK 4dr/4wd**

READ AND UNDERSTAND ALL INSTRUCTIONS AND WARNINGS PRIOR TO INSTALLATION OF SYSTEM AND OPERATION OF VEHICLE.

SAFETY WARNING BDS Suspension Co. recommends this system be installed by a professional technician. In addition to these instructions, professional knowledge of disassembly/ reassembly procedures and post installation checks must be known.

PRODUCT SAFETY WARNING Certain BDS Suspension products are intended to improve off-road performance. Modifying your vehicle for off-road use may result in the vehicle handling differently than a factory equipped vehicle. Extreme care must be used to prevent loss of control or vehicle rollover. Failure to drive your modified vehicle safely may result in serious injury or death. BDS Suspension Co. does not recommend the combined use of suspension lifts, body lifts, or other lifting devices.

You should never operate your modified vehicle under the influence of alcohol or drugs. Always drive your modified vehicle at reduced speeds to ensure your ability to control your vehicle under all driving conditions. Always wear your seat belt.

PRE-INSTALLATION NOTES

1. Special literature required: OE Service Manual for model/year of vehicle. Refer to manual for proper disassembly/ reassembly procedures of OE and related components.
2. Adhere to recommendations when replacement fasteners, retainers and keepers are called out in the OE manual.
3. Larger rim and tire combinations may increase leverage on suspension, steering, and related components. When selecting combinations larger than OE, consider the additional stress you could be inducing on the OE and related components.
4. Post suspension system vehicles may experience drive line vibrations. Angles may require tuning, slider on shaft may require replacement, shafts may need to be lengthened or trued, and U-joints may need to be replaced.
5. Secure and properly block vehicle prior to installation of BDS Suspension components. Always wear safety glasses when using power tools.
6. If installation is to be performed without a hoist, BDS Suspension Co. recommends rear alterations first.
7. Due to payload options and initial ride height variances, the amount of lift is a base figure. Final ride height dimensions may vary in accordance to original vehicle attitude. Always measure the attitude prior to beginning installation.

POST-INSTALLATION WARNINGS

1. Check all fasteners for proper torque. Check to ensure for adequate clearance between all rotating, mobile, fixed, and heated members. Verify clearance between exhaust and brake lines, fuel lines, fuel tank, floor boards and wiring harness. Check steering gear for clearance. Test and inspect brake system.
2. Perform steering sweep to ensure front brake hoses have adequate slack and do not contact any rotating, mobile or heated members. Inspect rear brake hoses at full extension for adequate slack. Failure to perform hose check/ replacement may result in component failure. Longer replacement hoses, if needed can be purchased from a local parts supplier.
3. Perform head light check and adjustment.
4. Re-torque all fasteners after 500 miles. Always inspect fasteners and components during routine servicing.

PARTS LIST

Part # Qty Description

Front

034611R	2	Front Spring
084402R	1	Pitman Arm
3396	2	Front Bump Stop Extension
763	1	Bolt Pack - Rear Bump Stop
	2	5/16"-18 x 1-1/4" bolt grade 8 yellow zinc
	2	5/16"-18 x 7/8" bolt grade 8 yellow zinc
	4	5/16"-18 prevailing torque nut yellow zinc
	8	5/16" SAE washer yellow zinc
438	1	Bolt Pack - Front Bump Stop
	2	3/8"-16 x 3-1/2" bolt grade 5
	2	3/8" USS washer
	1	3/8"-16x1" seft-tapping bolt

Brake Lines

22542	1	DS Front Brake Line (shorter)
22543	1	PS Front Brake Line (shorter)
CCW-03-050	4	Crush Washer
B06103C	2	Brake Line Bracket
5188	2	Clip

Front LCAs

A155	2	Front LCA Assembly
3523RB	4	LCA Bushing
61	2	Sleeve - 0.875 x 0.156 x 2.620
516	2	Grease Zerk
60107	2	90° Grease Zerk
01983	1	Front LCA Mount (drv)
01984	1	Front LCA Mount (pass)
760	1	Bolt Pack - Front LCA Mounts
	2	1/2"-13 x 1-1/4" bolt
	2	1/2"-13 x 1-1/2" bolt
	2	1/2"-13 prevailing torque nut
	6	1/2" SAE washer yellow zinc
	2	9/16"-12 x 4" bolt grade 8 yellow zinc
	2	9/16"-12 prevailing torque nut
	4	9/16" SAE washer yellow zinc
01998	2	Nut Tab - LCA Mounts

Front UCAs

A157	2	Front UCA Assembly
516	2	Grease Zerk
01980	1	Front UCA Mount - pass side
01424	1	Front UCA Mount - drv side
92	2	Crush Sleeve - 0.750 x 0.134 x 1.980
761	1	Bolt Pack - Front UCA Mounts
	2	12mm-1.75 x 90mm class 10.9 clear zinc
	2	12mm-1.75 x 100mm class 10.9 clear zinc

4	12mm-1.75 prevailing torque nut clear zinc
8	1/2" SAE washer clear zinc
4	7/16"-14 x 1-1/4" bolt grade 8 yellow zinc
4	7/16"-14 prevailing torque nut
8	3/8" USS washer yellow zinc

Front Track Bar Bracket

01964	1	Front Track Bar Bracket
562	1	Bolt Pack - Track Bar Bracket
	2	7/16"-14 x 1" bolt grade 8 yellow zinc
	4	7/16" SAE washer yellow zinc
	2	7/16"-14 prevailing torque nut yellow zinc
	1	9/16"-12 x 3" bolt grade 8 yellow zinc
	2	9/16" SAE washer yellow zinc
	1	9/16"-12 prevailing torque nut yellow zinc
	1	1/2"-13 x 1" bolt grade 8 yellow zinc
	1	1/2"-13 heavy square nut yellow zinc
	1	1/2" SAE washer yellow zinc
69	1	Crush Sleeve - 0.750 x 0.090 x 1.375
01942	1	Track Bar Bracket Gusset - Lower
01943	1	Track Bar Bracket Gusset - Upper

Sway Bar Disconnects (014673 only)

A100	2	Disconnect Assembly
01302	2	Disconnect Stud
912	1	Bolt Pack - Sway Bar Disconnect
	2	1/2"-13 x 3" bolt grade 5 clear zinc
	2	1/2"-13 prevailing torque nut clear zinc
	8	1/2" SAE washer clear zinc
	2	1/2"-20 prevailing torque nut clear zinc
	2	#10-16 x 5/8" self-drilling screw clear zinc
	2	1-3/8" OD x 1/2" ID x 3/16" Thk washer yellow zinc
54314	2	Sleeve - 5/8" x 0.060" x 1.475"
01316	2	Lanyard

Sway Bar Links (014674 only)

911111	2	Sway Bar Link
51792	4	Sleeve - 0.625 x 0.060 x 1.375
B12X3G5	2	1/2" x 3" Bolt
N12PT	2	1/2" Nut
W12S	4	1/2" Washer

Rear

Part #	Qty	Description
034619R	2	Rear Coil Spring
01928	2	3" Rear Bump Stop
099000	2	Zip Ties
342701	1	Loctite

Control Arm Mounts

01985	1	Control Arm Mount (drv)
01986	1	Control Arm Mount (pass)
762	1	Bolt Pack - Rear Control Arm Mount
4		9/16"-12 x 4" bolt grade 8 yellow zinc
4		9/16"-12 prevailing torque nut yellow zinc
8		9/16" SAE flat washer
1		9/16"-18 high nut - yellow zinc
4		1/2"-13 x 1-1/2" bolt grade 8 yellow zinc
3		1/2"-13 x 2-1/2" bolt grade 8 yellow zinc
3		1/2"-13 Nylock nut - clear
11		1/2" SAE flat washer
1		1/2" external tooth lock washer - clear zinc
2		7/16"-14 x 1-1/4" bolt grade 8 yellow zinc
2		7/16"-14 prevailing torque nut yellow zinc
4		3/8" USS flat washer
2		12mm-1.75 x 100mm bolt
1		12mm-1.50 x 35mm bolt
1		12mm flat washer - clear zinc
2		12mm ID Large OD washer
01797	3	Bolt Tab - 1/2" x 1-1/2"
27031	1	1/2" Bolt Fish Wire
95105A169	4	1/2" short rivet nut
95105A170	2	1/2" long rivet nut

Rear Track Bar Bracket

01987	1	Rear Trackbar Bracket
563	1	Bolt pack - rear trackbar bracket

1	9/16"-12 x 3" bolt grade 8 yellow zinc
1	9/16"-12 x 3-1/2" bolt grade 8 yellow zinc
4	9/16" SAE washer yellow zinc
2	9/16"-12 prevailing torque nut yellow zinc
1	3/8"-16 x 1-1/4" bolt grade 8 yellow zinc
2	3/8" SAE washer yellow zinc
1	3/8"-16 prevailing torque nut yellow zinc
1	Sleeve - 0.750 x 0.090 x 1.575

Brake Lines

22540	1	DS Rear Brake Line (Longer)
22541	1	PS Rear Brake Line (Longer)
CCW-03-050	4	Crush Washer
B06103C	2	Bracket Line Bracket
5188	2	Clip
099002	2	Mountable Zip Tie

Rear LCAs

A156	2	Rear Fixed LCA
61	2	0.875 x 0.156 x 2.620
3523RB	4	Bushings
60107	4	90° Grease Zerk

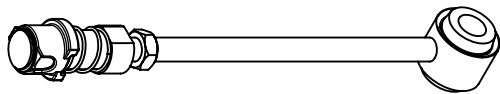
Rear UCAs

A158	2	Rear Adjustable UCA
91	2	0.750 x 0.095 x 2.290
M02957RB	4	UCA Bushing
60107	4	90° Grease Zerk

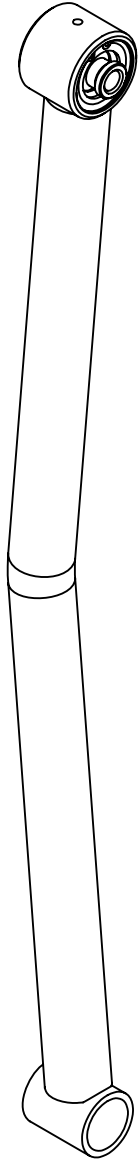
Rear Sway Bar Drop

01976	1	Sway Bar Drop Brackets (drv)
01977	1	Sway Bar Drop Brackets (pass)
759	1	Bolt Pack - Sway Bar Drop
4		7/16"-14 x 1" bolt grade 5 clear zinc
4		7/16"-14 prevailing torque nut clear zinc
8		7/16" SAE washer clear zinc
2		3/8"-16 x 1" self-tapping bolt clear zinc

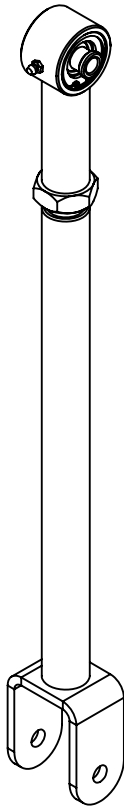




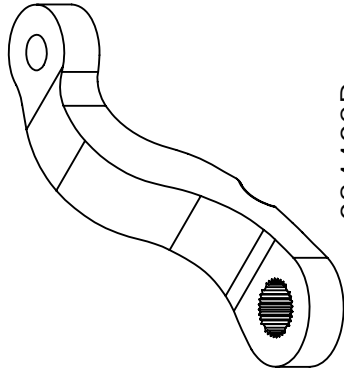
A100
SWAY BAR LINKS



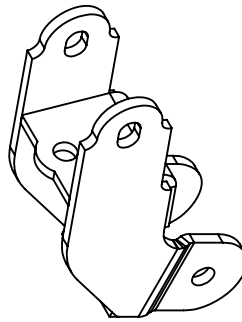
A155 - FRONT LOWER
CONTRL ARM ASSEMBLY



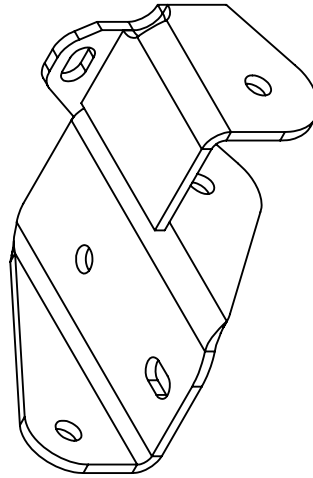
A157 - FRONT UPPER
CONTRL ARM ASSEMBLY



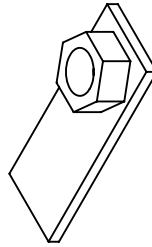
084402R
PITMAN ARM



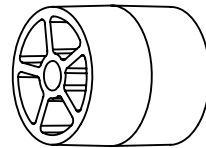
01980 - DRV / PASS
UPPER CONTROL
ARM BRACKET



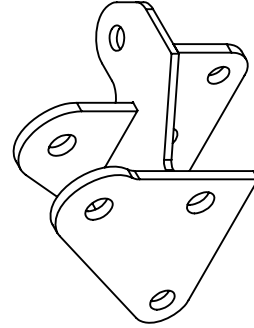
01983-01984 DRV / PASS
LOWER CONTROL ARM BRKT



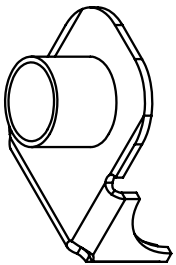
01998
NUT TAB



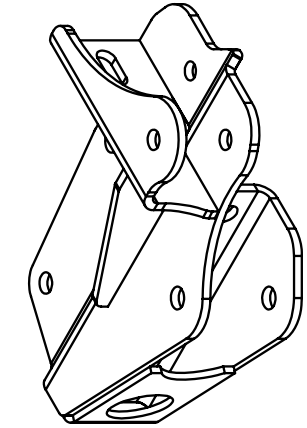
3396 - FRONT
BOLT ON BUMP STOP



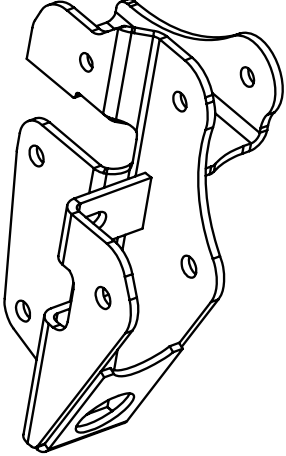
01964 - FRONT
TRACK BAR BRACKET



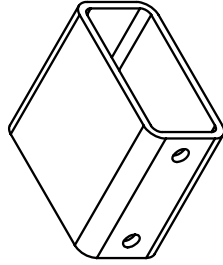
01997
REAR COIL MOUNT
(2 DOOR 7.5" KIT ONLY)



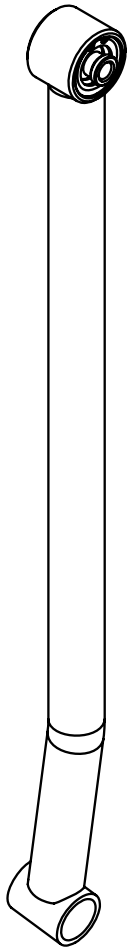
01985
REAR LONG ARM BRKT (DRV)



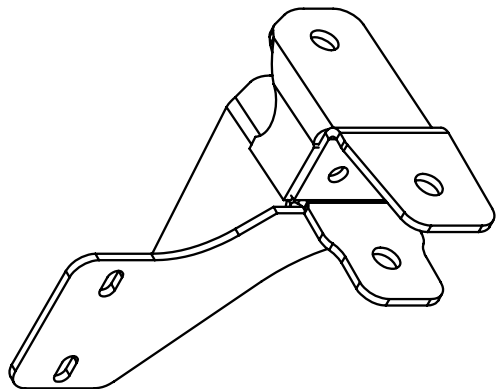
01986
REAR LONG ARM BRKT (PASS)



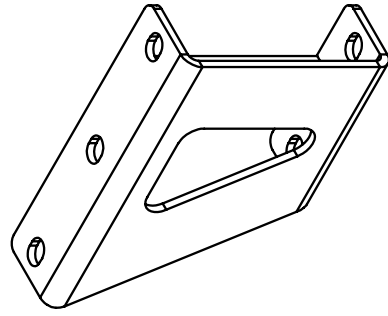
01999
REAR 4" BUMP STOP



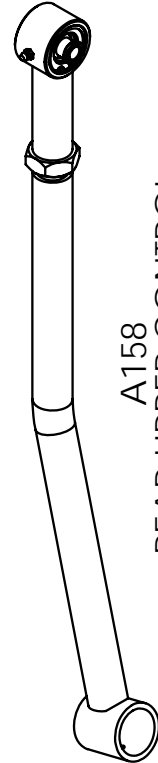
A156
REAR LOWER CONTROL
ARM ASSEMBLY



01987
REAR TRACK BAR BRKT



01976-01977
REAR SWAY BAR
DROP BRACKETS



A158
REAR UPPER CONTROL
ARM ASSEMBLY

LCA: Lower Control Arm

UCA: Upper Control Arm

OE: Original Equipment (factory parts)

INSTALLATION INSTRUCTIONS

1. Park the vehicle on a clean, flat surface and block the rear wheels for safety.
2. Welding is required in the kit, disconnect the battery at this time.
3. Disconnect the front track bar from the axle mount (Fig 1). Retain mounting hardware.

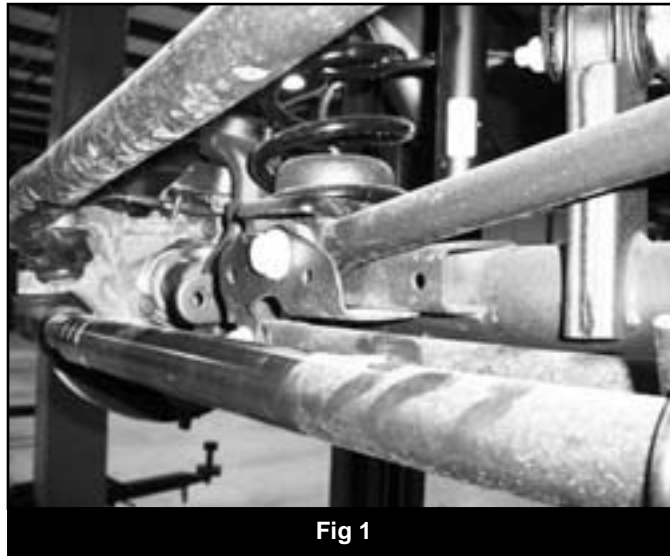


Fig 1

4. Raise the front of the vehicle and support with jack stands under the frame rails. These stands may need to be moved during the installation to allow access/clearance to certain components.
5. Remove the front wheels.
6. Support the front axle with a hydraulic jack.
7. Disconnect the front sway bar links from the axle and sway bar. Discard links and save hardware.
8. Disconnect the track bar from the frame and remove from the vehicle. Retain the track bar and hardware.
9. Disconnect the steering drag link from the pitman arm (Fig 2). Remove the tie rod end nut and dislodge the tie rod end from the pitman arm with the appropriate puller or pickle fork, do not damage the rubber boot. Retain tie rod end nut.

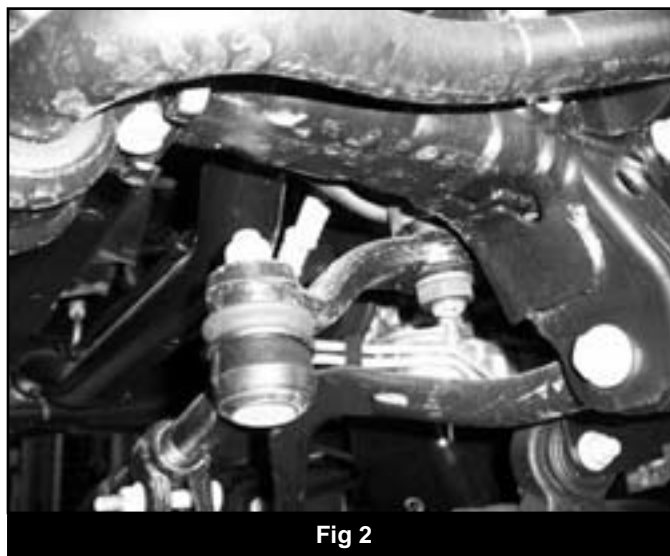


Fig 2

10. Make indexing marks on the pitman arm to indicate the position relative to the splines. Remove pitman arm from steering box with appropriate puller. Retain hardware.
11. Transfer indexing marks on pitman arm to the new pitman arm. Install new pitman arm (084402R) with OE hardware. Torque to 185 ft-lbs.
12. Remove the front axle breather hose from the driver's side front shock tower (Fig 3). Leave the metal retaining clip on the hose. It will be reattached later at a lower position on the shock tower to compensate for the increase suspension travel.
13. Disconnect the ABS wire from the brake line and retaining bracket on the knuckle (Fig 4).



Fig 3

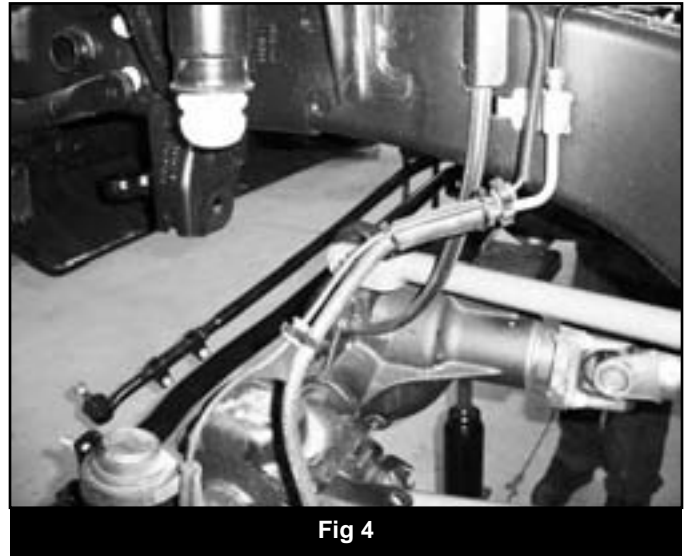


Fig 4

14. Disconnect the factory front brake line from the hard line at the frame and caliper on the axle. Remove bolt mounting the brake line to the frame and discard the brake line. Retain the lower banjo bolt and the frame bracket mounting bolt.
15. Install the provided brake line mounting bracket (B06103C) to the frame using the original mounting hole and bolt. Leave hardware loose.
16. Attach the new brake line (22542-drv, 22543-pass, this is the shorter set of brake lines) to the caliper with the original banjo bolt and two new crush washers (CCW-03-050). Place a crush washer on each side of the fitting. Torque banjo bolt to 30 ft-lbs. Notes: Make sure that the old crush washers are removed from the bolt and caliper. When installed in the correct position the brake line fitting will point up and slightly away from the caliper.
17. Run the upper end of the new brake line through the frame bracket and fasten to the hard line securely. Fasten the line to the bracket with the provided clip (5188). Torque the bracket mounting bolt to 10 ft-lbs.
18. With the front axle supported with a jack, remove the lower shock mounting bolts. Lower the axle and remove the coil springs. Raise the axle and reattach the shocks to the axle. Leave hardware loose. Note: Leaving the shock attached at this point will aid in supporting the axle during the installation of the new control arms.
19. Position the provided "L" shaped front track bar gusset (01943) between the inside edge of the factory track bar mount and the driver's side UCA axle mount. Position the bracket so it is flush to the OE mount and the front edge is square to the front face of the OE mount (Fig 5). Note the areas to be welded and remove the gusset. Remove the paint from the areas to be welded, reposition the gusset and weld in place. Be sure to weld the gusset to the OE mount along all 3 edges, the gusset to the axle and the gusset to the UCA mount.

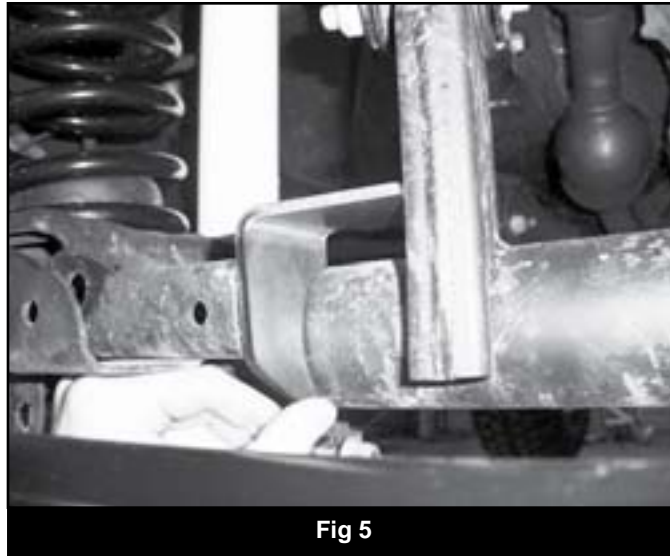


Fig 5

20. Position the new flat track bar mount gusset plate (01942) so that it spans the two passenger's LCA mounting plates and the narrow end butts up against the bottom side of the OE track bar mount. Note the areas to be welded, remove the gusset and remove paint from the areas to be welded (Fig 6). Reposition the gusset and weld in place. Allow all welds to cool and paint the entire area where there is any bare metal.
21. Drill the three small existing holes in the OE track bar mount to 1/2" (Fig 7).

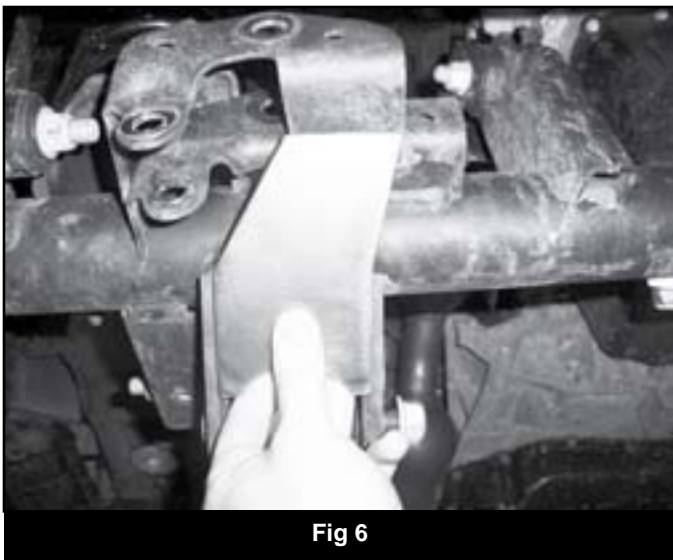


Fig 6

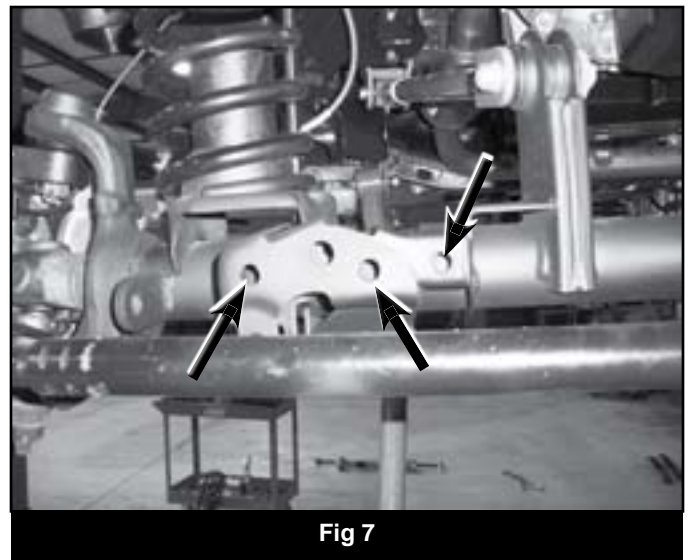


Fig 7

22. Install new front track bar bracket (01964) with the provided crush sleeve (69) to the OE mount with the provided 9/16" x 3" bolt, nut and washers (BP 562). Fasten the bracket with two 7/16" x 1" bolts, nuts and washers in the two front face holes and a 1/2" x 1" bolt and washer in the remaining hole (BP 562). The 1/2" bolt will use the provided square nut, a wrench is not needed to hold the nut (Fig 8). Use Loctite on the 1/2" bolt threads. After all the hardware is installed torque the 9/16" hardware to 100 ft-lbs, the 1/2" hardware to 60 ft-lbs and the 7/16" hardware to 50 ft-lbs.
23. Remove the three bolts mounting the transmission skid plate to the frame rails and transmission crossmember (Fig 9). This skid plate will not be reused. Retain the mounting hardware.
24. Remove the outer transmission crossmember mounting bolt on each end of the crossmember (Fig 10). Retain the mounting hardware.
25. Position the provided front LCA mount (01983-drv, 01984-pass) up to the frame rail and against the front face of the transmission crossmember (Fig 11). Loosely fasten the bracket to the frame with the OE skid plate bolt and to the crossmember with the OE crossmember hardware.
26. With the bracket positioned flush to all the mounting surfaces, mark the outer mounting hole to be drilled in the frame (Fig 12). Remove the bracket and drill a 1/2" hole at the mark.

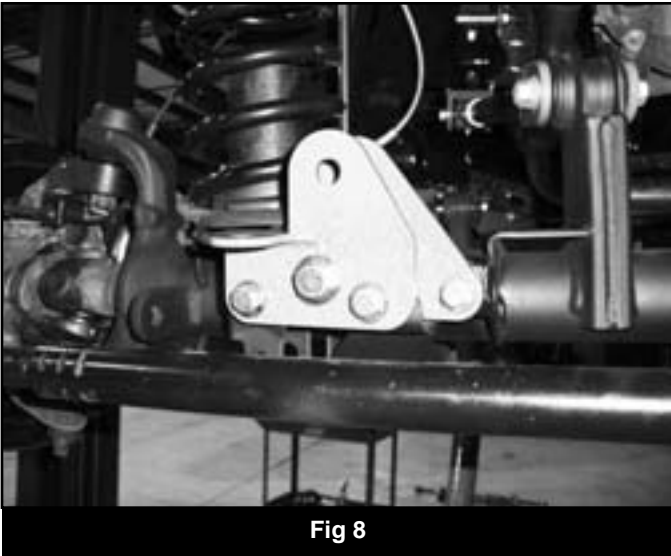


Fig 8

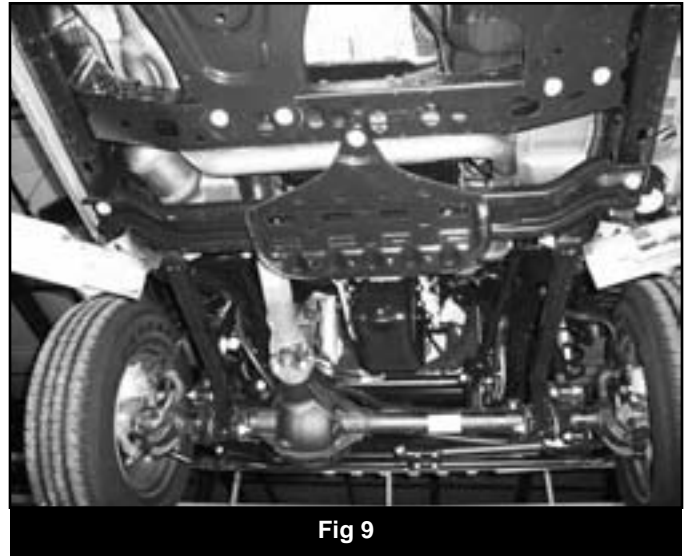


Fig 9

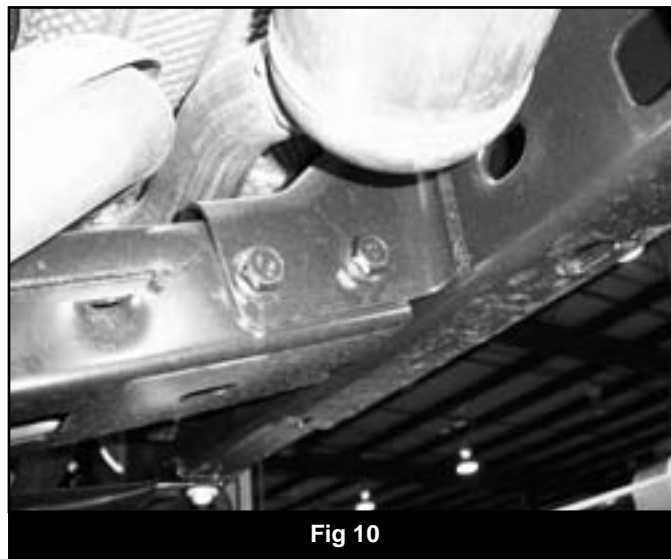


Fig 10

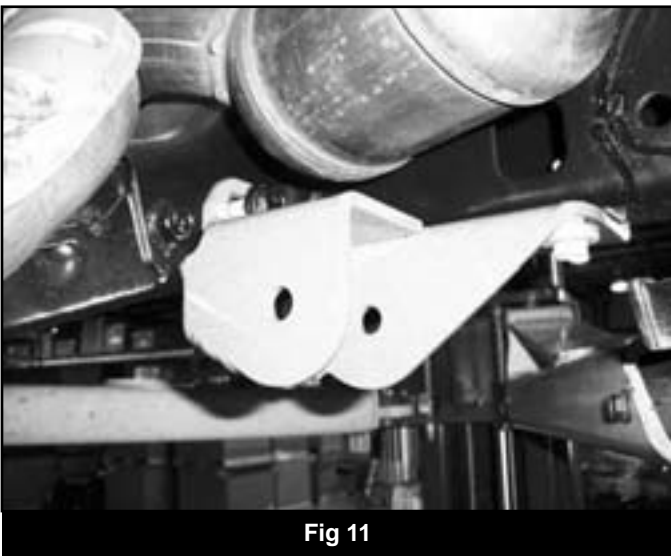


Fig 11

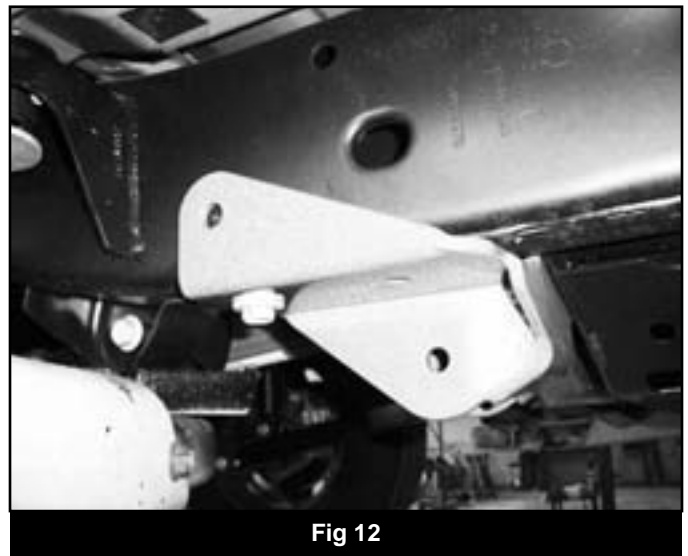


Fig 12

27. After the mounting hole is drilled in the frame, reattach the LCA mount to the frame with the OE crossmember bolt and a $\frac{1}{2}$ " x 1-1/4" bolt, nut and $\frac{1}{2}$ " SAE washers (BP 760) through the newly drilled hole. Install a $\frac{1}{2}$ " x 1-1/2" bolt and $\frac{1}{2}$ " SAE washer (BP 760) up through the rear-most hole in the bracket into the existing frame hole and fasten with the provided nut tab (01998). Loosely install the OE skid plate bolt.

28. With all of the LCA mount hardware installed, torque fasteners to 65 ft-lbs. The OE skid plate bolt should be the last bolt to be tightened (Fig 13).

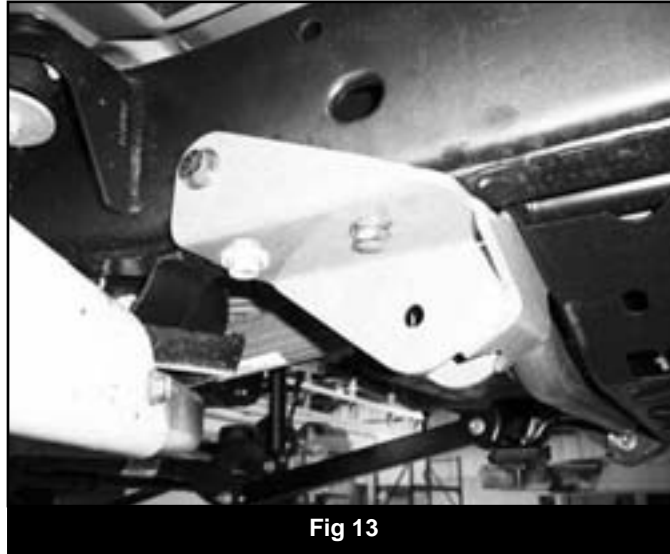


Fig 13

29. Locate the new front LCAs (01981). Lightly grease and install the provided bushings (3523RB) and sleeves (61) in the control arm ends. The frame end of the control arms come preassembled with a flex joint. Install a 90° grease fitting (60107) in the flex joint end of the control arm and a straight grease fitting (516) in the bushing (axle) end.
30. Install the flex end of the new control arms into the new LCA mounts and fasten with 9/16" x 4" bolts, nuts and 9/16" SAE washers (BP 760). Leave hardware loose. Be sure the arms bend in toward the center of the vehicle and the grease fittings at the frame are pointing down.
31. With a jack supporting the front axle, remove the factory driver's side LCA.
32. The inside portion of the factory LCA mount must be cut off to provide clearance for the new arms under suspension compression. Using a reciprocating saw, cut the inside of the pocket off flush with the outer pocket mounting surface (Fig 14A/B). The outer portion of the OE mount can stay intact. Deburr and paint any exposed metal to prevent corrosion.

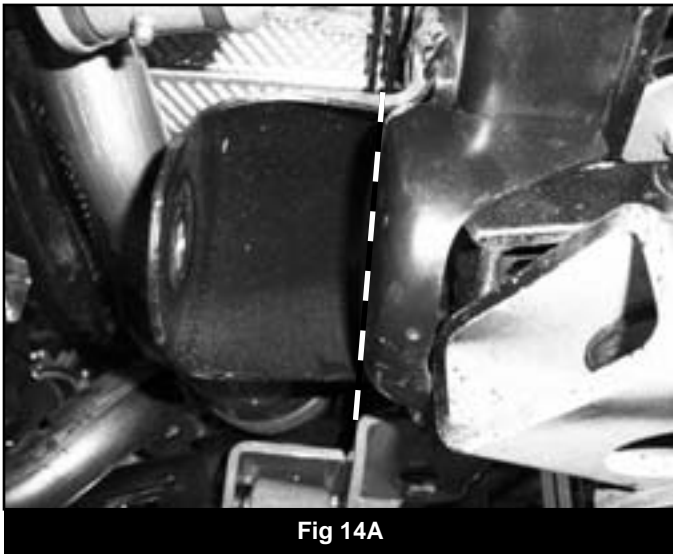


Fig 14A

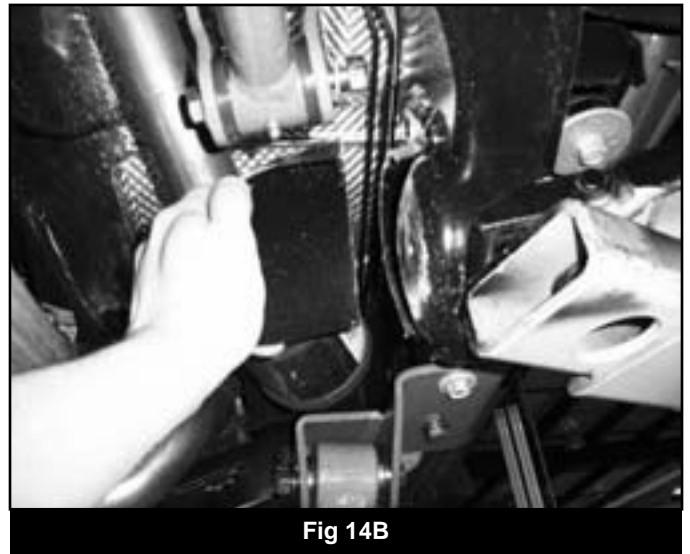


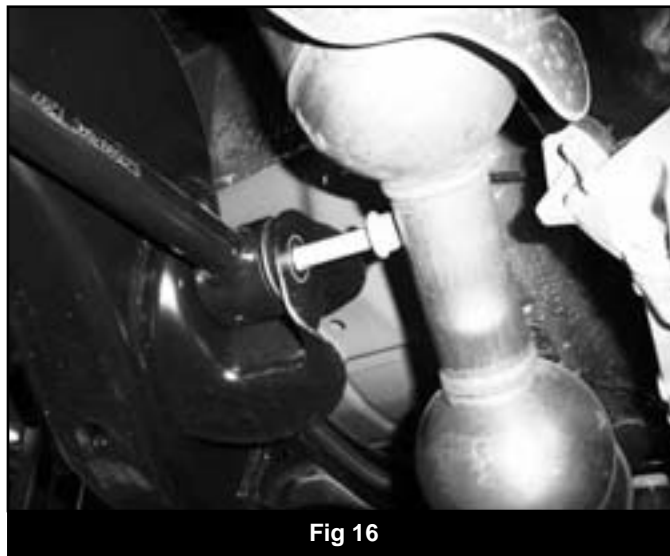
Fig 14B

33. Remove the passenger's side lower control arm. With the axle still well supported, rotate the axle until the new driver's side arm can be installed in the factory axle mount. Fasten with the original LCA mounting hardware. Leave hardware loose.
34. Cut the passenger's side factory LCA mount in the same manner as the driver's side and install the new arm in the axle mount with the original hardware. Leave hardware loose.
35. Locate the new front UCA assembly (A157). Adjust the length of the arm to 22-1/4" from the center of the clevis bolt hole to the center of the flex end. Leave the jam nut loose.

36. Install a provided straight grease fitting (516) in the flex end of the control arm. When installed the grease fitting will need to point down.
37. Locate the provided UCA mount drill template at the end of the instruction sheet and cut it out. Position the drill template on the bottom face of the factory upper control arm mount so that the profile of the template matches the mount. The straight edge of the template should be parallel to the frame rail (Fig 15). Mark the center of the hole in the template on the mount. Remove the template and repeat procedure on the other side of the vehicle.



38. Drill a 1/2" hole at the marks made on the factory UCA mounts.
39. Remove the passenger's side UCA from the axle and the frame. The UCA bolt at the frame will need to be cut in half in order to clear the exhaust (Fig 16). Retain the bolt/nut from the axle end.



40. Position a provided UCA bracket (01980) onto the backside of the original passenger's side UCA mount. Do not slide it all the way on yet. With the bracket in position, install one of the front upper control arms in the bracket (Fig 17) and loosely fasten with a 12mm x 90mm bolt, nut and 1/2" SAE washers (BP 761).



Fig 17

41. With the passenger's side UCA loosely fastened to the new bracket, attach the bracket to the frame mount with 7/16" x 1-1/4" bolts, nuts and washers (BP 761) through the newly drilled lower hole and the existing hole in the backside of the OE mount. Leave hardware loose.
42. Position a provided crush sleeve (92) in the OE UCA mount (Fig 18a & 18b) and fasten the bracket through the OE UCA mount holes and sleeve with a 12mm x 100mm bolt, nut and 1/2" SAE washers. Run the bolt from the outside.
43. With all the UCA mount hardware installed, torque the 7/16" hardware to 45 ft-lbs and the 12mm hardware (including the control arm bolt) to 65 ft-lbs.
44. With the axle still well supported, remove the driver's side UCA and rotate the axle to install the new passenger's side UCA to the axle with the factory hardware. Leave hardware loose.
45. Repeat the UCA bracket installation on the driver's side of the vehicle. The drivers bracket will have clearance for the catalytic converter on late model 09's and new vehicles. It will still install just the same on 07- 09 models. On the driver's side it is not necessary to install the arm in the bracket before installing the bracket to the frame until after the bracket bolts are tightened. (Fig 18a / 18b)

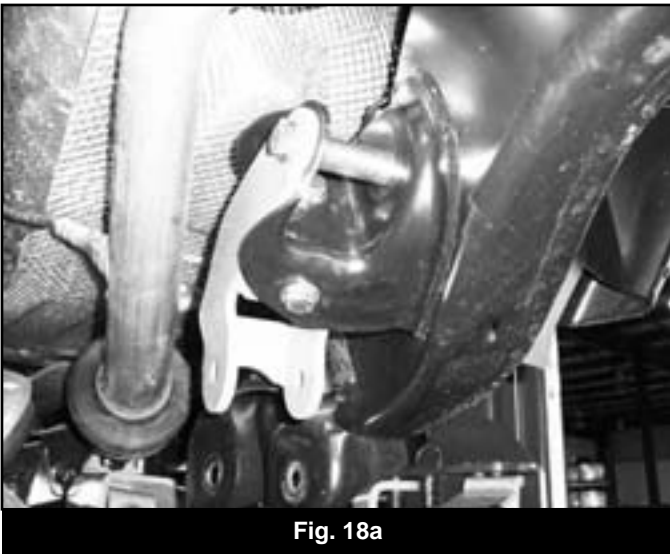


Fig. 18a

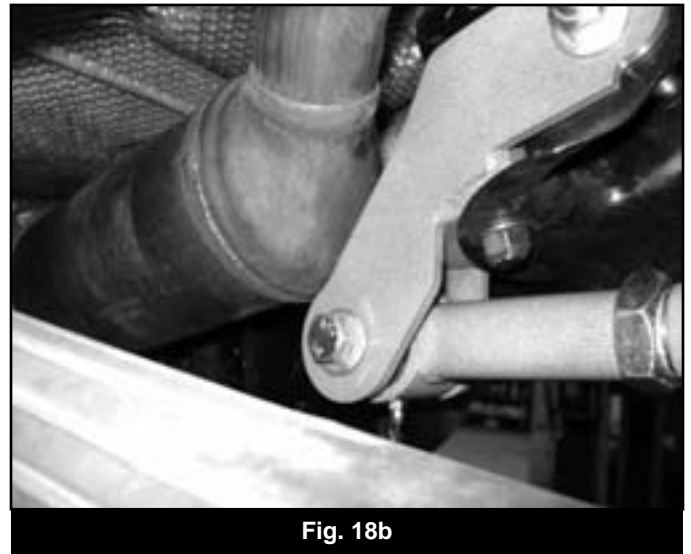


Fig. 18b

46. Install the new driver's side UCA to the new bracket (new hardware) and OE axle mount (factory hardware). Torque the new hardware at the frame to 65 ft-lbs and leave the axle hardware loose. Note: Make sure the UCA is installed with the grease fitting pointed down.
47. Be sure the UCA flex ends are square in the pockets and lock off the control arm jam nuts securely.
48. Disconnect the factory shocks from the axle and the frame. Save the lower mount hardware.

49. Locate and mark the center of the coil spring mount on the axle (Fig 19). Drill a 5/16" hole at the mark. Using a provided 3/8" x 1" self-tapping bolt (BP 438) cut threads in the hole and then remove the bolt. This hole will be used to attach the provided bump stop extension to the axle.

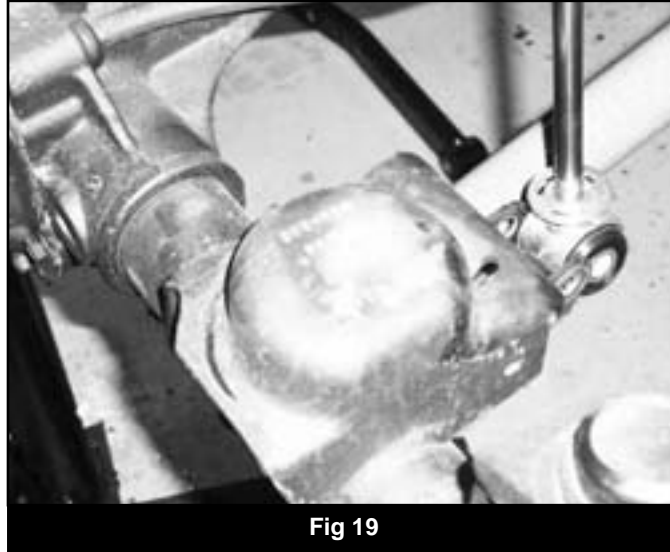


Fig 19

50. Place the provided 3" bump stop extension (3396) in the new coil spring and install the coil spring in the vehicle. Rotate the coil so it seats properly in the axle mount. Attach the bump stop extension to the axle with the 3/8" x 3-1/2" self-tapping bolts and 3/8" USS washers (BP 438). Use Loctite on the bolt threads and tighten to approx. 20 ft-lbs.
51. Install the new BDS shocks to the axle and frame. Tighten the upper hardware until bushings begin to swell. In the lower mount use the provided sleeve with the small ID. Torque the lower bolt to 65 ft-lbs.

Sway Bar Disconnects (NON-Rubicon)

52. Install the new sway bar link disconnect ball stud to the original sway bar link mount on the axle. Attach the stud so that the ball is toward the center of the vehicle. Use one 1/2" SAE washer on each side of the mount and fasten with a 1/2" nut (BP 912). Torque nut to 65 ft-lbs. (Fig 20)

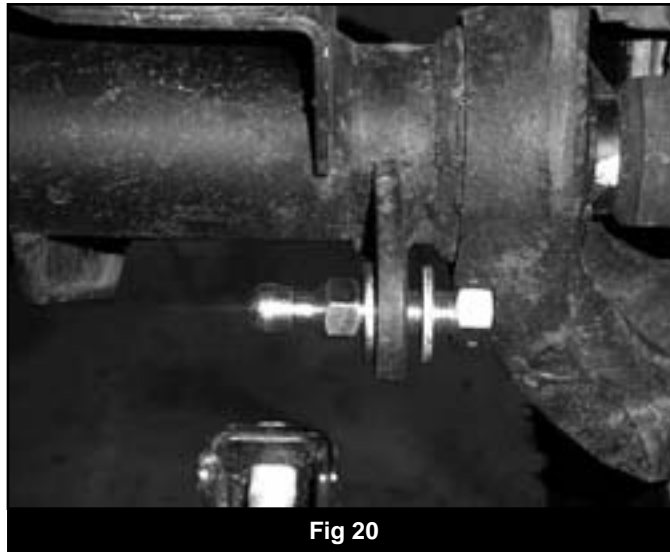


Fig 20

53. Locate the new sway bar link assemblies (A100). Ensure that the sway bar disconnect ends are threaded all the way on to the link. Compare the two links side by side to see that they are adjusted to the same length. Leave the jam nut loose at this time.
54. Lightly grease and install the provided sleeves (54314) in the new sway bar links assemblies. Attach the new sway bar link assembly to the sway bar with a 1/2" x 3" bolt, nut and 1/2" SAE washers (BP 912). The link will mount to the outside of the sway bar with a 1-3/8" OD extra thick 1/2" washer positioned between the bushing and the sway bar (BP 912). Install the bolt from the outside in and torque to 65 ft-lbs (Fig 21)



Fig 21

55. Connect the sway bar links to the ball studs on the axle. Adjust the sway bar link ends so that they are square on the ball stud and lock off the jam nut securely.
56. Locate the existing inner fender bolt up near the front body mount. Remove the bolt and attach the new lanyard to the inner fender with the bolt. Torque bolt to 10 ft-lbs.



Fig 22

57. Slide the male clip up the lanyard and attach the female clip to it (Fig 23). This will be the stowed position for the lanyard when not in use (when the sway bar is connected)



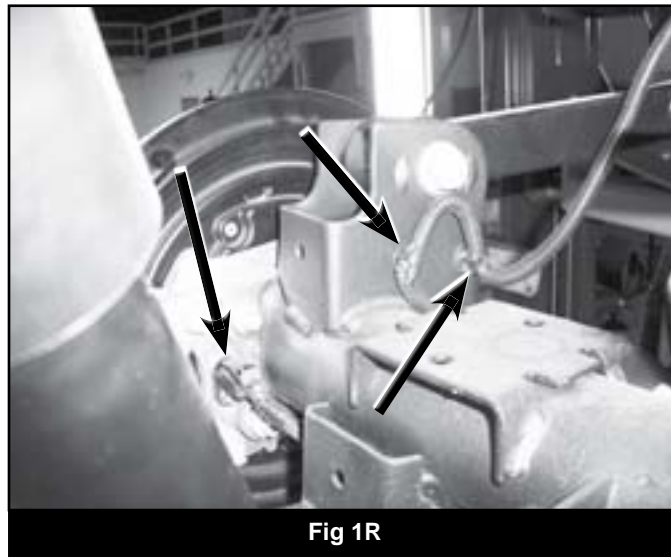
Fig 23

Sway Bar Links (Rubicon)

58. Grease and install the provided sleeves (51792) into the preinstalled bushings in the new front sway bar links (911111). Attach the links to the inside of the original sway bar link mount on the axle with the original hardware. The link should run inward as it goes up toward the sway bar.
59. Attach the top end of the sway bar links to the outside mounting surfaces of the sway bar with the 1/2" x 3" bolts, nuts and washers provided. Torque the upper and lower hardware to 60 ft-lbs.
60. Continue installation for both Rubicon and Non-Rubicon
61. Install the OE front track bar to the driver's side frame mount with the original hardware. Leave hardware loose. The track bar will be attached to the axle when the weight of the vehicle is on the suspension.
62. Install the steering drag link to the new pitman arm with the OE nut. Torque nut to 65 ft-lbs.
63. Install the front wheels and lower the vehicle to the ground.
64. Bounce the front of the vehicle to settle the suspension. Torque the LCA bolts at the axle and frame to 95 ft-lbs and the UCA bolts at the axle to 65 ft-lbs.
65. Install the track bar in the new axle bracket with the OE bolt and nut tab. Have an assistant turn the steering wheel to help align the track bar with the hole. Torque both track bar bolts to 125 ft-lbs.

REAR INSTALLATION

1. Block the front wheels for safety. Note the orientation of the rear track bar (driver's side end verses passenger's). Remove the rear track bar from vehicle. Retain hardware and track bar.
2. Raise the rear of the vehicle and support with jacks stands at the rear portion of each frame rail.
3. Remove wheels.
4. Disconnect the ABS sensor wires from axle hubs and remove the retaining clips from axle (Fig 1R).



5. Disconnect the parking brake cable from brakes and axle mounts (Fig 2R). Compress the tabs on the retain clips and pull the cable out of the axle brackets to remove.

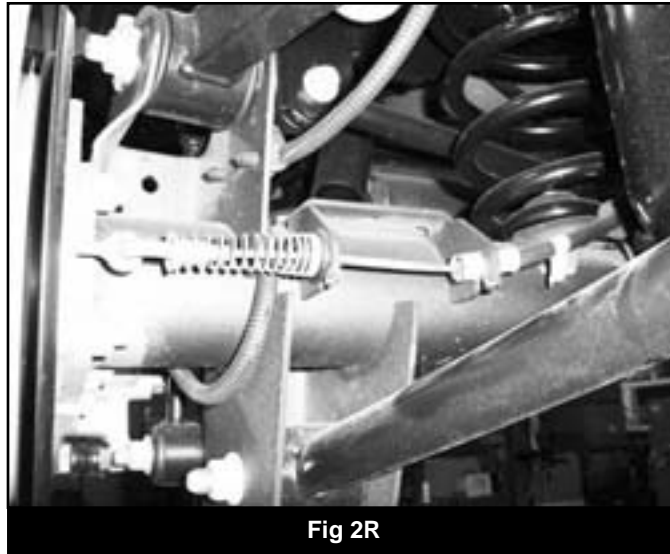


Fig 2R

6. Disconnect the rear driveshaft from the axle. Retain hardware. Note: Depending on the lift amount being installed and the vehicle model, the rear driveshaft may need to be replaced. If this is the case remove the driveshaft from the transfer case as well.
7. Disconnect the factory rear brake line from the hard line at the frame (Fig 3R) and caliper on the axle. Remove bolt mounting the brake line to the frame and discard the brake line. Retain the lower banjo bolt and the frame bracket mounting bolt.

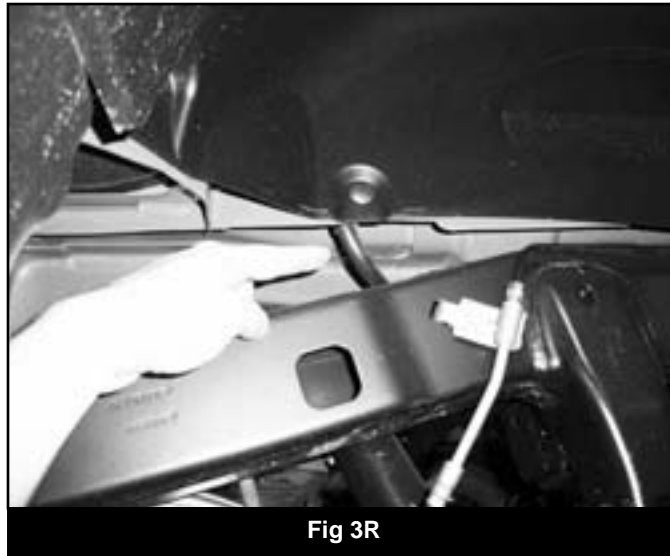


Fig 3R

8. Attach the new brake line (22540-drv, 22541-pass, this is the longer set of brake lines) to the caliper with the original banjo bolt and two new crush washers (CCW-03-050). Place a crush washer on each side of the fitting. Torque banjo bolt to 30 ft-lbs. Notes: Make sure that the old crush washers are removed from the bolt and caliper. When installed in the correct position the brake line fitting will point up and slightly away from the caliper.
9. Install the new brake line mounting bracket (B06103C) on the hard line and then fasten the new brake line to the hard line securely. Do not attach the bracket to the frame at this time.
10. Disconnect the axle breather tube from the plastics retainer (Fig 3R) at the body (passenger's side inner fender). Also, free the tube from the frame by releasing the metal clip. The clip should remain on the tube.
11. Support the axle, disconnect the shocks at the axle. Retain hardware.
12. Disconnect the sway bar links from the sway bar and axle. Retain the links and all mounting hardware.
13. Disconnect the sway bar from the frame and remove it from the vehicle. Retain the sway bar, bushings, and hardware (Fig 4R).

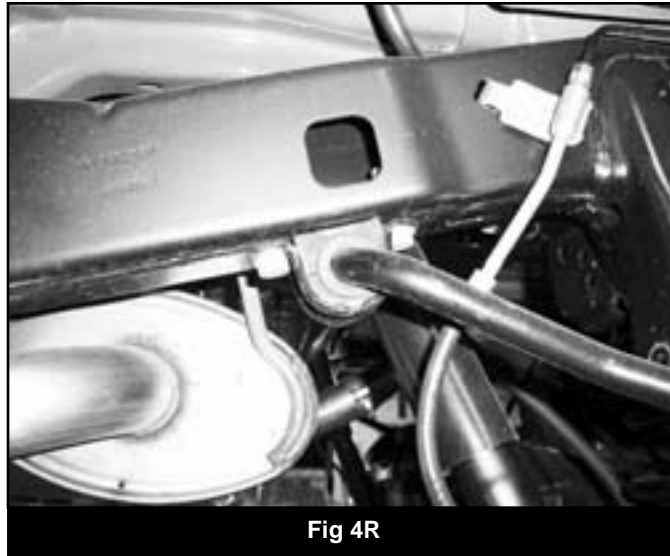


Fig 4R

14. Lower the rear axle and remove rear springs/upper rubber isolators.
 15. Loosely reattach shocks to axle. This will help stabilize the axle during the remaining rear suspension installation.
 16. Remove the passenger's side LCA from the frame and axle. Retain the hardware and discard the LCA.
- Warning: The vehicle's fuel tank is located just inside the passenger's side frame rail and close in proximity to the passenger's side LCA mount. Use caution when performing the next step of removing this factory bracket. DO NOT use any type of flame or plasma cutting to perform this procedure. While using any cutting method, a properly charged fire extinguisher should be located close by.*
17. The factory LCA mount must be cut off to provide clearance for the new arms under suspension compression. Mark and cut the LCA mount at frame. Cut off bottom and outside of bracket. The inside wing of the bracket can remain intact on the passenger's side, the driver's side can be completely removed. Note: Take care not to cut into the frame. (Figures 5R/6R)

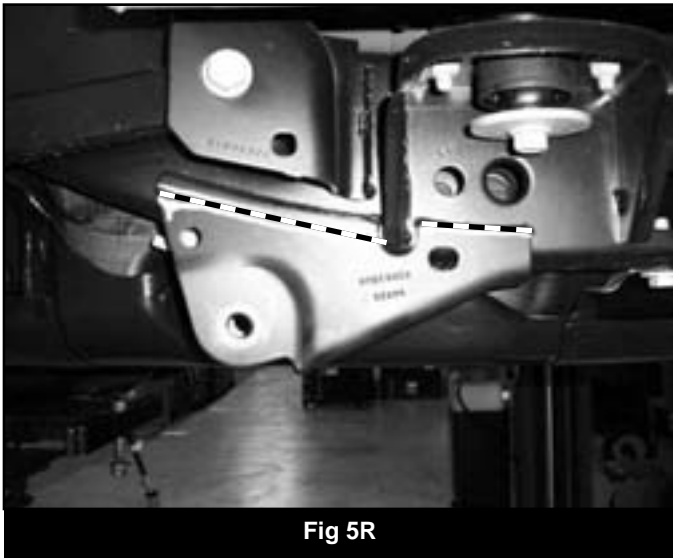


Fig 5R

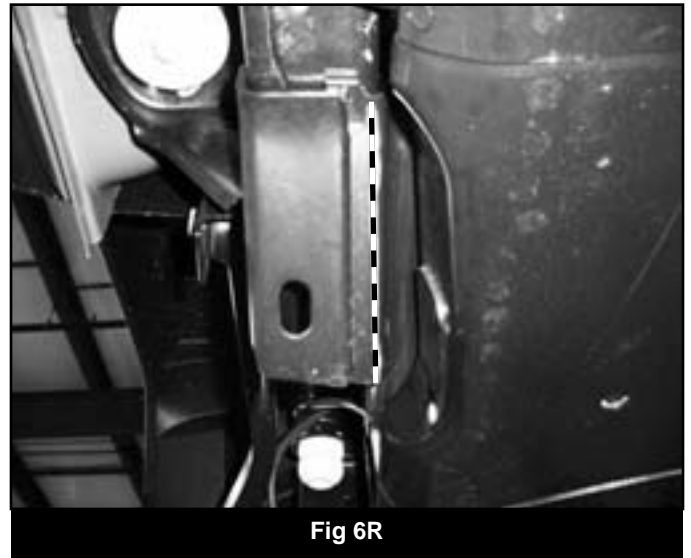


Fig 6R

18. After removing the bracket, go back and grind the weld located within the body mount smooth 1" from the end. This will allow the new mounting bracket to lay flush against the frame when installed. (Fig 7R)

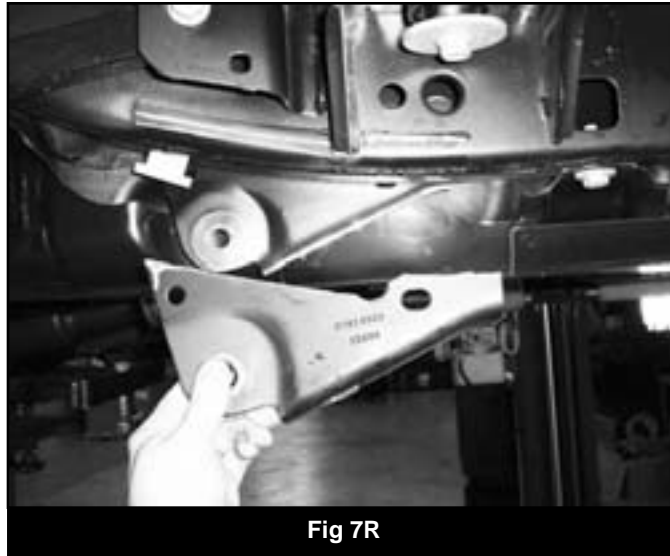


Fig 7R

19. Measure up 2-1/4" from the bottom edge of the body mount, measure from frame over 3/8" and remove section from the body mount. (Figure 8R, 9R)

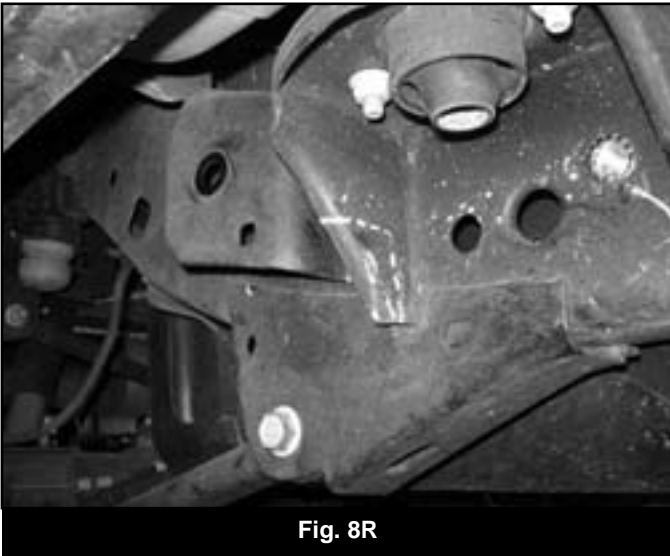


Fig. 8R

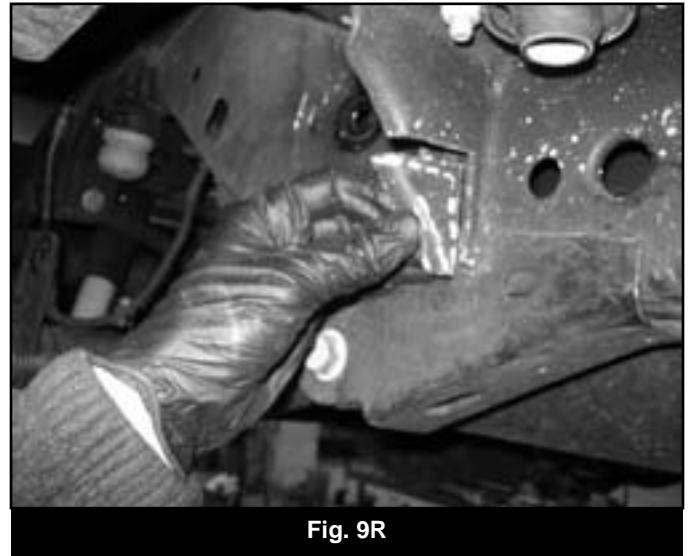


Fig. 9R

20. Remove the upper control arm pocket from the frame with a sawzall. Trim 1/4"-1/2" away from the frame all of the way up. (Figure 10R, 11R)



Fig. 10R



Fig. 11R

22. Remove gas tank skid plate bolt located just ahead of the factory lower control arm mount. Retain skid plate bolt.
23. Temporarily install the new bracket passenger's side control arm bracket (01986) with the new 12mm x 35mm bolt (Fig 12R).

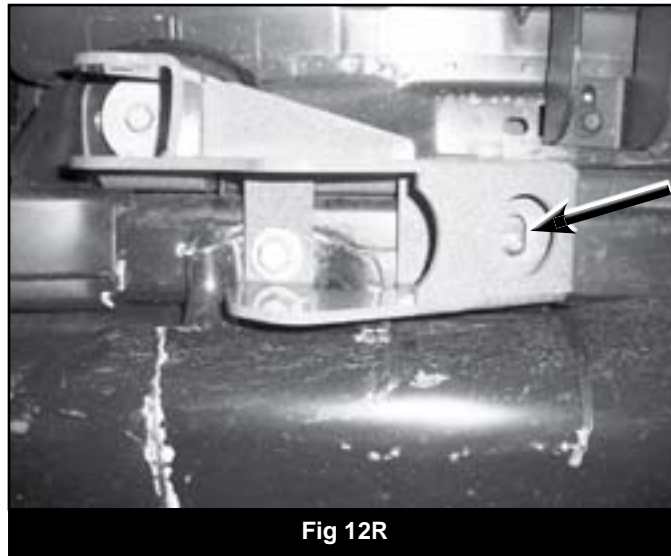


Fig 12R

24. Mark holes to drill (Fig 12R/13R). Use drill template at the end of this instruction sheet to locate the hole to be drilled through the front side of the body mount (Fig 14R – driver's side shown). Set the edge of the template up flush to the frame surface.

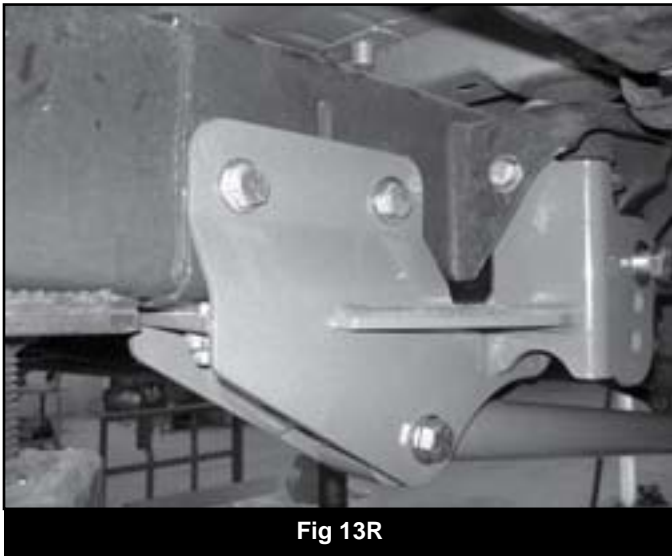


Fig 13R



Fig 14R

25. Remove the bracket and drill 11/16" holes at each of the 3 marks made on the frame rail. Drill the body mount hole to 1/2". Drill the hole in the bottom of the frame out to 9/16". This will provide clearance for the bolt to pass through with the fish wire attached.
26. Install the rivet nuts into the frame rail with 1/2" x 2-1/2" bolt, 9/16" high nut, washer, and serrated edge washer as shown. The rear 2 holes will take the short rivet nut, the forward most hole will take the long rivet nut. Tighten until the rivet nut is secure. (Fig 15R, 16R, 17R)



Fig. 15R

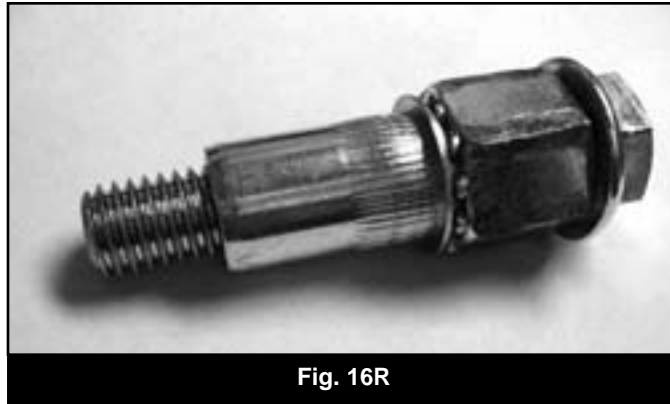


Fig. 16R



Fig. 17R

27. Use the provided fish wire to pull the 1/2" bolt tab (01797) through the frame (Fig 18R). Note: Do not put a washer on the bolt tab.

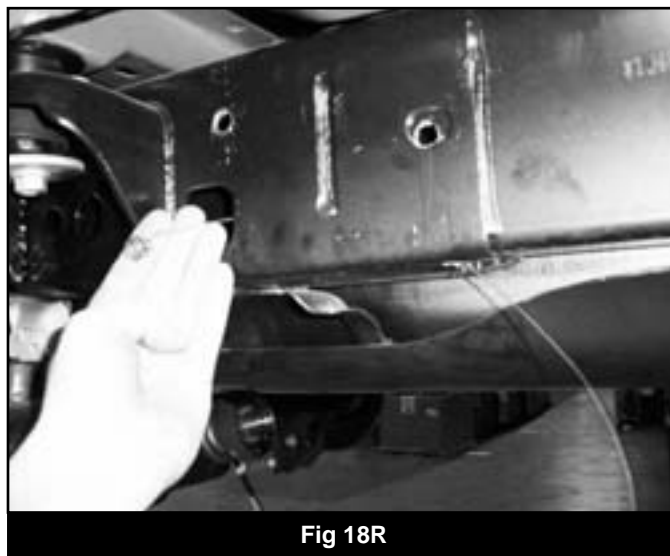
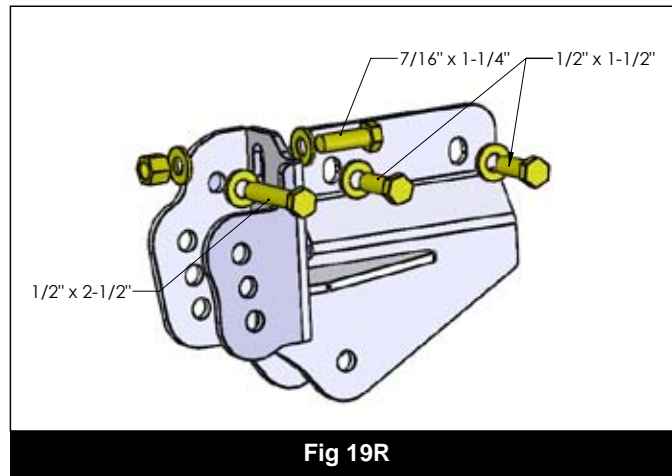


Fig 18R

28. Install nut tab (01995) through the square opening in the frame rail, positioned in the direction of the holes that were just drilled.
29. Reattach the bracket to the frame with new 12mm-1.50 x 35mm bolt with 12mm flat washer thru the OE skidplate mount. All the hardware for the rear control arm brackets is located in bolt pack #762. Install 1/2" x 1-1/2" bolts and 1/2" SAE washers into the rivet nuts. Fasten the bracket through the hole drilled into the body mount with a 7/16" x 1-1/4" bolt, nut and 3/8" USS washers. Fasten the bolt tab running out the bottom of the frame with a 1/2" nut and

1/2" SAE washer. Leave hardware loose until all hardware is installed. Torque 1/2" hardware to 65 ft-lbs and 7/16" hardware to 50 ft-lbs. Note: Use Loctite on bolts that go into rivet nuts. (Figure 19R)



30. Install the new control arm bracket (01985) on driver's side frame. Locate the bracket just like the passenger's side. Clamp bracket into place and mark all holes to be drilled.
31. Drill holes at the marks to the same sizes as on passenger's side. Use the drill template to locate the body mount hole. (Fig 20R). The 3 holes into the side of the frame rail will need to be drilled to 11/16" to accept rivet nuts. The hole thru the body mount will be 1/2" and the 2 holes that run from the bottom - up into the frame will need to be 9/16"



32. Use 1/2" x 2-1/2" bolt to install the rivet nuts just like on the passengers side. The front hole will take the long rivet nut, the rear 2 holes will take short rivet nuts.
33. Use the fish wire to pull bolt tabs (01797) through the frame into the 2 bottom holes (Fig 20R).
34. Attach the bracket to the frame with the 1/2" nuts and 1/2" SAE washers on the two bolts tabs running out the bottom of the frame. Fasten the bracket through the hole drilled into the body mount with a 7/16" x 1-1/4" bolt, nut and 3/8" USS washers. Install a second 7/16" x 1-1/4" bolt and 3/8" USS washer through the hole located inside the body mount. Install a 1/2" x 1-1/2" bolt and 1/2" SAE washer through the remaining holes into the rivet nuts. Leave hardware loose until all hardware is installed. Torque 1/2" hardware to 65 ft-lbs and 7/16" hardware to 50 ft-lbs. Note: Use Loctite on bolts that go into rivet nuts.
35. Install new body mount bolt with large OD washer from bolt pack # 562. Repeat on opposite side. Tighten to 65 ft-lbs.
36. Go back and double check hardware. Torque 1/2" hardware to 65 ft-lbs and 7/16" hardware to 50 ft-lbs.
37. Grease and install bushings (3523RB) with sleeves (61) into the provided rear LCAs (A156). Install 90° grease fittings (60107) into both ends of the arm. Note: The LCAs come with preinstalled flex ends in the frame end of the arm.

38. Install the new LCA into the axle with the OE hardware. The LCAs are formed inward to clear the tire. Position the grease fittings so they will be accessible.
39. Install flex end into new LCA bracket. Attach with 9/16" x 4" bolt, washers, and nut. Leave loose at this time.
40. Grease and install the bushings (M02957RB) and sleeves (91) into rear UCAs (A158). The adjustable end will mount to the frame and comes preassembled with a flex end.
41. Adjust length to 25-1/2" - 4 door 6.5" kit, 26" - 2 door 5.5" kit. Measurement is from the center of end, to center of end. Install 90° grease fittings into both ends of the UCAs. Position the fittings so they will be accessible once installed. It is recommended to use the upper most hole in the long arm bracket for all lift kits. To reduce rear squat, choose a lower hole. (Figure 21R)

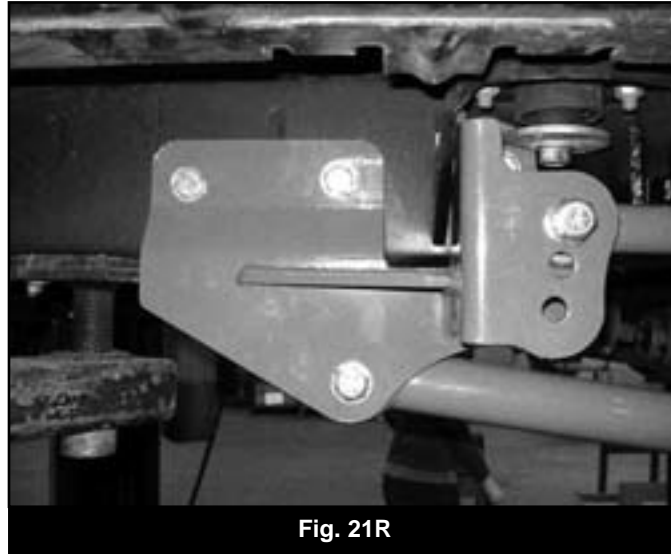


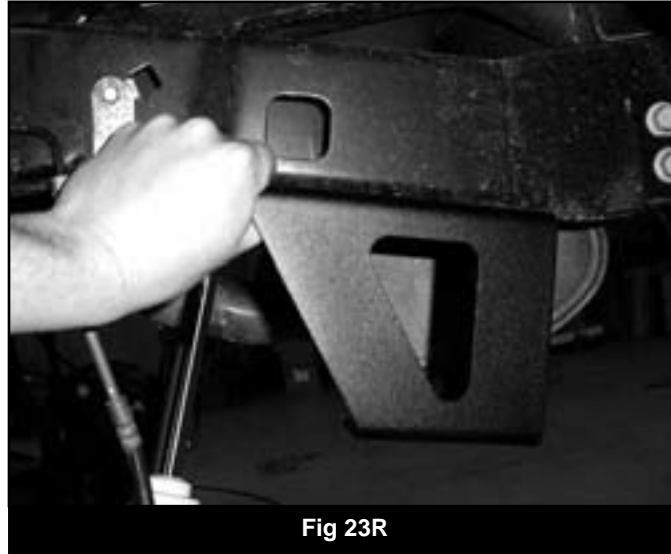
Fig. 21R

42. Install the UCAs to the axle with the OE hardware. Attach the adjustable end to the frame bracket with a 9/16" x 4" bolt, washers, and prevailing torque nuts (BP 762). Leave hardware loose at this time.
43. Install the new track bar bracket (01987) over the OE axle bracket so that the support wing rests on the flat bump stop pad on the axle. Mark hole to be drilled on the top of the OE bracket using the hole in the new bracket as a guide.
44. Remove the bracket and drill a 7/16" hole at the mark.
45. Install the bracket with 3/8" x 1-1/4" hardware (BP 563) in the new hole. Position the provided crush sleeve (54587) in the factory mount position and install a 9/16" x 3-1/2" bolt, nut and 9/16" washers (BP 563) through the bracket a crush sleeve. Leave hardware loose (Fig 22R).
46. Place a provided bump stop extension (01999) over the track bar wing and line up the holes in the bracket with the holes in the wing and axle mount. Fasten the bump stop and track bar wing to the axle with 5/16" x 1-1/4" bolts, nut and 5/16" washers (BP 763). Run the bolts from the bottom up (Fig 22R).



Fig 22R

47. With all of the track bar hardware installed, go back and torque the 9/16" bolt to 95 ft-lbs, 3/8" hardware to 30 ft-lbs and 5/16" hardware to 17 ft-lbs.
48. Install OE rear track bar into the relocation bracket with a 9/16" x 3" bolt, nut and 9/16" washers (BP 563) making sure track bar is orientated correctly. The bolt must run from FRONT TO REAR to avoid contact between the coil spring and the bolt. Leave bolt loose.
49. Install bump stop pad on passenger's side with 5/16" x 7/8" hardware (BP 763), tighten to 17 ft-lbs.
50. Support the rear axle with a jack and remove OE shocks (save hardware). Lower the axle and install the new rear coils with OE rubber isolator on top. The small end of the coil spring should be installed at the axle. Do not overextend the brake lines.
51. Install the new rear shocks with the OE hardware. Torque the upper bolts to 30 ft-lbs and lower bolts to 60 ft-lbs.
52. Install sway bar drop brackets with OE sway bar mounting bolts to frame rails. Brackets will be offset toward the rear (Fig 23R). Mark the hole to the rear of the existing OE holes.



53. Remove bracket and drill a 5/16" hole at the mark.
54. Reinstall bracket with OE hardware and 3/8" x 1-1/4" self tapping bolt (BP 759) in the new hole. Torque hardware to 30 ft-lbs.
55. Install the sway bar to the new drop brackets with 7/16" x 1-1/4" bolts, nuts and 7/16" SAE washers (BP 759). Torque 7/16" hardware to 50 ft-lbs.
56. Disconnect the wire parking brake cable retainer from the body (Fig 24R). Remove the cables from the retainer. Reroute the cables under the OE frame rail cross member and reattach them to the brakes and axle brackets.
57. Reattach the ABS wire connectors to the brakes by routing them over top of the axle. Use provided zip ties (099002) with press in retainer plug into an existing hole in the upper control arm mount (Fig 25R).



Fig 24R



Fig 25R

58. Attach new brake lines 'L' bracket to the frame rail with OE hardware. Tighten hardware securely.
59. Attach the OE sway bar links to the sway bar and axle with the OE hardware. Torque hardware to 55 ft-lbs.
60. Reattach the driveshaft to the rear axle with the OE hardware or install new drive shaft if required.
61. Reconnect the axle breather tube to the frame using the original metal clip. With the axle hanging the tube should have a slight amount of slack. Be sure to position it away from the exhaust so it will not rest against it at any point during normal suspension travel.
62. Install the wheels. Lower the vehicle and install rear track bar into OE frame mount with OE hardware. Torque the track bar bolts at the axle and frame to 95 ft-lbs.
63. Torque the LCA and UCA bolts at the axle to 95 ft-lbs, the LCA bolts at the frame to 95 ft-lbs and the UCA bolts at the frame to 55 ft-lbs.
64. Make sure the UCA flex end is square in the pocket and securely lock off the jam nut.

POST INSTALLATION

1. Bleed the complete brake system.
2. Check all hardware for proper torque.
3. Lubricate all greaseable control arm ends.
4. The steering wheel must be adjusted before driving the vehicle.
5. Check all hardware after 500 miles, at every schedule service interval and after any heavy offroad use.
6. Check the rear tire clearance to the sharp point of the rear pinch weld. Depending on the tire/wheel setup used, the pinch weld may need to be trimmed or bent over to ensure it will not hit the tire under full suspension compression.

NOTICE TO DEALER/INSTALLER

These instructions, the warning card, and included decals must be given to the owner of this BDS Suspension product.

For questions, technical support and warranty issues relating to this BDS Suspension product, please contact your distributor/installer before contacting BDS Suspension directly.

Sold/Installed by:

