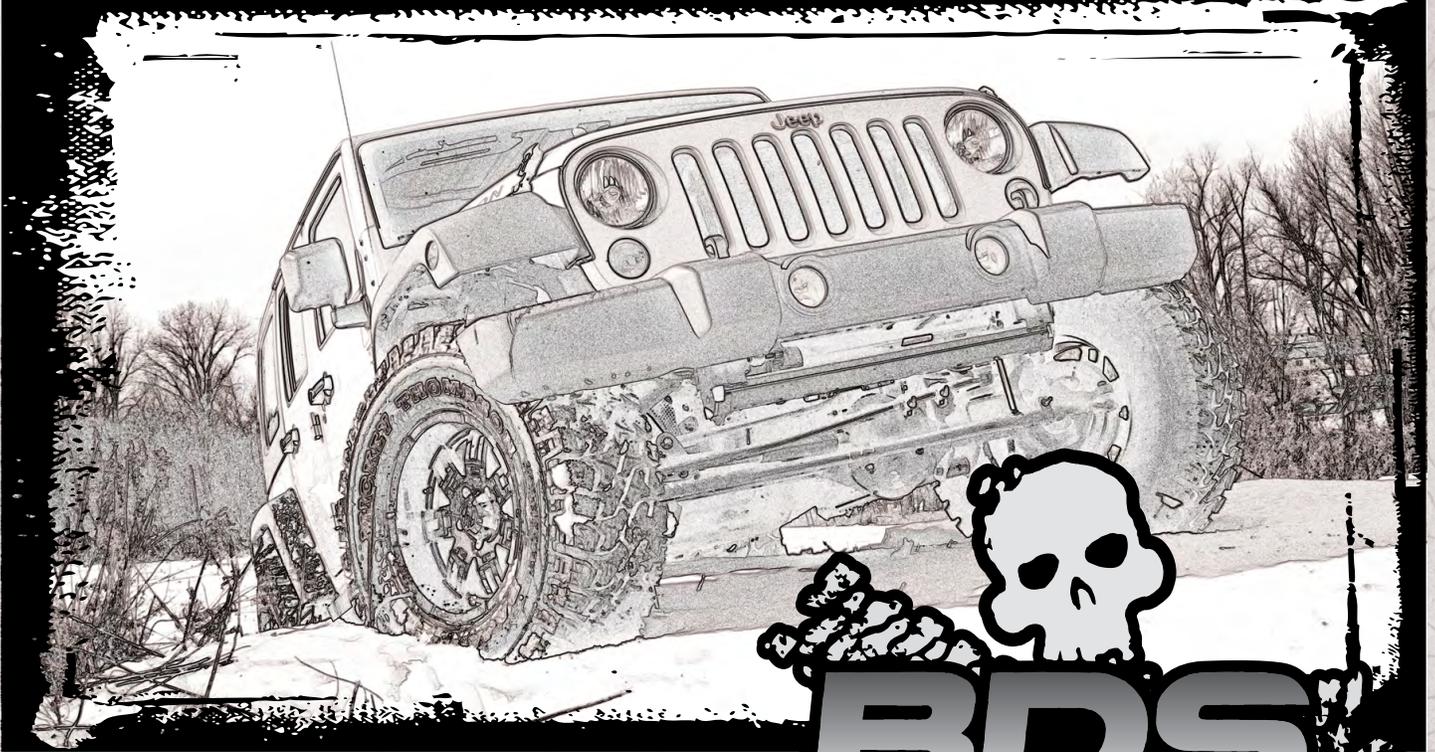


INSTALLATION GUIDE



Part#: 014310 - 014311



HARDCORE LIMITED LIFETIME WARRANTY

3" Suspension System

Jeep Wrangler JK | 2007-2018

Rev. 011523

491 W. Garfield Ave., Coldwater, MI 49036 • Phone: 517-279-2135

Web: www.bds-suspension.com • E-mail: tech-bds@ridefox.com

Read And Understand All Instructions And Warnings Prior To Installation Of System And Operation Of Vehicle.



THANK YOU

Your truck is about to be fitted with the best suspension system on the market today. That means you will be driving the baddest looking truck in the neighborhood, and you'll have the warranty to ensure that it stays that way for years to come. Thank you for choosing BDS Suspension!

BEFORE YOU START

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.

FOR YOUR SAFETY

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.

BEFORE INSTALLATION

- Special literature required: OE Service Manual for model/year of vehicle. Refer to manual for proper disassembly/reassembly procedures of OE and related components.
- Adhere to recommendations when replacement fasteners, retainers and keepers are called out in the OE manual.
- 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.
- 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.
- Secure and properly block vehicle prior to installation of BDS Suspension components. Always wear safety glasses when using power tools.
- If installation is to be performed without a hoist, BDS Suspension Co. recommends rear alterations first.
- 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.

BEFORE YOU DRIVE

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.



Visit 560plus.com for more information.

TRACTION CONTROL

In an effort to reduce the risk of rollover crashes the National Highway Traffic Safety Administration (NHTSA) established the Federal Motor Vehicle Safety Standard (FMVSS) No. 126 requiring all new passenger vehicles under 10,000 lbs GVWR include an electronic stability control (ESC) system as standard equipment. Effective August 2012 this law requires after-market products to be compliant with these same standards.



TIRES AND WHEELS

FITMENT GUIDE

35x12.50 on 16x8 with 4.5" backspacing



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.

Perform head light check and adjustment.

Re-torque all fasteners after 500 miles. Always inspect fasteners and components during routine servicing.

CONTENTS OF YOUR KIT

014310 Box Kit		
Part #	Qty	Description
B970	1	Bag Kit - 3" JK
704	1	Bolt Pack - Front Brake Line Relocation
	2	1/4"-20 Prevailing Torque Nut
	2	1/4" SAE Flat Washer
709	1	Bolt Pack - Rear Sway Bar Brkt
	4	10mm-1.50 x 60mm Bolt
	4	10mm-1.50 Prevailing Torque Nut
	8	3/8" USS Flat Washer
748	1	Bolt Pack - Rear Track Bar Brkt
	1	9/16"-12 x 3" Bolt
	2	9/16" SAE Washer
	1	9/16"-12 Prevailing Torque Nut
	2	7/16"-14 x 1-1/4" Bolt
	3	7/16" SAE Washer
	1	7/16" USS Washer
	2	7/16"-14 Prevailing Torque Nut
749	1	Bolt Pack - Misc.
	4	5/16"-18 x 7/8" Bolt
	12	5/16" SAE Washer
	4	5/16"-18 Prevailing Torque Nut
	2	3/8"-16 x 3" Bolt
	4	3/8" USS Washer
	2	3/8"-16 Prevailing Torque Nut
	2	1/4"-20 x 1" Bolt
	2	1/4"-20 Nylock Nut
	2	1/4"-20 x 3/4" Self Threading Bolt
48	1	0.7500D x 1.400 Track Bar Spacer Sleeve
01828	4	JK Octo Cam
JKBL-D	1	JK Rear Brakeline Brkt - DRV
JKBL-P	1	JK Rear Brakeline Brkt - Pass
01715	2	Front Brakeline Brkt w/ Stud
3296	2	3" x 2" Tall Front Bump Ext.
01975B	2	JK Rear Sway Bar Drop
01948B	1	JK 3" Rear Track Bar Brkt
03574	1	Drv Rear Bump Spacer
03575	1	Pass Rear Bump Spacer

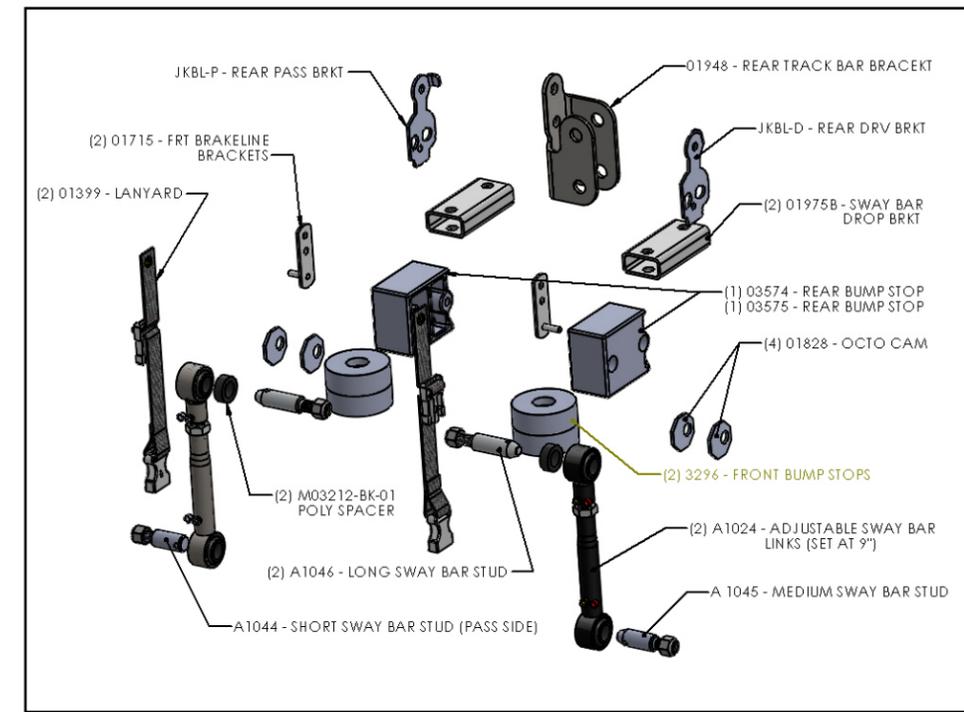
124314 Exhaust Extension Kit (2012 and newer only)		
Part #	Qty	Description
01839	1	Exhaust Extension - Driver
01840	1	Exhaust Extension - Passenger
814	1	Bolt Pack

014310 Box Kit (cont'd)		
Part #	Qty	Description
B1234	1	Bag Kit - 3" JK Front Sway Bar Links
3005	4	Quick Disconnect Pin
M03212	2	Offset Poly Sway Bar Spacer
A1046	2	Stainless Steel Stud w/ Nut
03013	1	Stainless Steel Disconnect Post
37130	1	1/2"-20 Nylock Nut
A1045	1	Stainless Steel Stud w/ Nut
03017	1	Stainless Steel Disconnect Post
37130	1	1/2"-20 Nylock Nut
A1044	1	Stainless Steel Stud w/ Nut
03018	1	Sainless Steel Disconnect Post
37130	1	1/2"-20 Nylock Nut
01399	2	11.5" Long Lanyard
768	1	Bolt Pack - Brake Line Relocation
	2	1/4"-20 x 3/4" bolt grade 5 clear zinc
	2	1/4"-20 nylock nut clear zinc
	4	1/4" USS flat washer clear zinc
A1024	2	Sway Bar Disconnects
03010	1	Female Disconnect End - Long
03011	1	Male Disconnect End - Long
M00475	2	Spherical Bushing
7050R	2	Grease Zerk Cap
7607	2	Press In Grease Zerk
36264	1	5/8"-18 Jam Nut

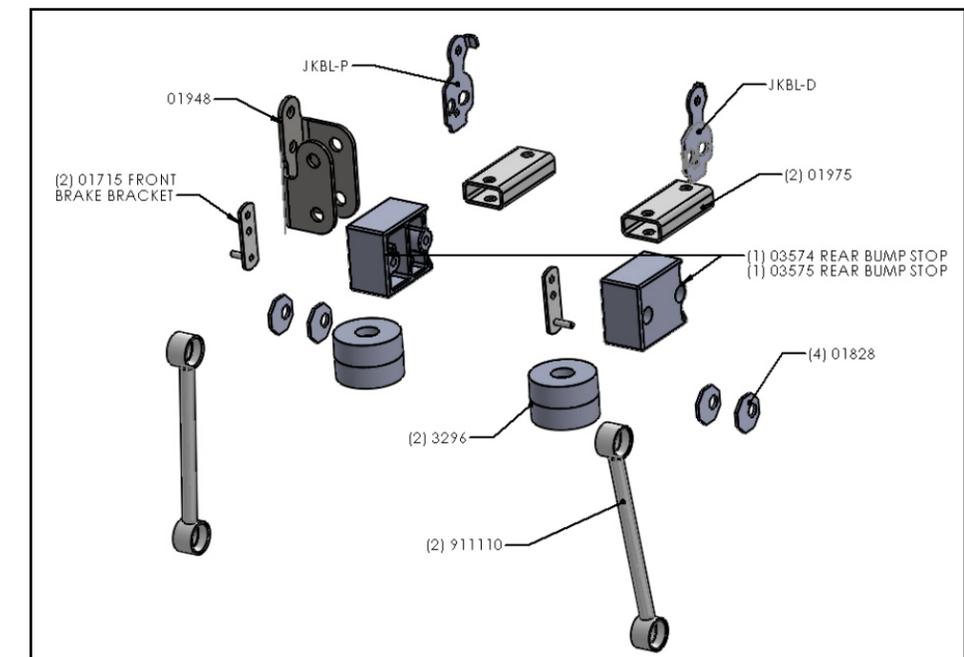
Coil Springs		
Part #	Qty	Description
034311	2	3" Front Coil Springs - 4 Door (Taller)
034319	2	3" Rear Coil Springs - 4 Door
034312	2	3" Front Coil Springs - 2 Door (Taller)
034209	2	3" Rear Coil Springs - 2 Door

014311 Box Kit		
Part #	Qty	Description
3296	2	3" x 2" Tall Front Bump Ext.
01975B	2	JK Rear Sway Bar Drop
01948B	1	JK 3" Rear Track Bar Brkt
03574	1	Rear Bump Stop - Drv
03575	1	Rear Bump Stop - Pass
911110	2	Rubicon Front Sway Bar Links
A128	1	Rear Sticker Tube
01715	2	Front Brakeline Brkt w/ Stud
768	1	Bolt Pack - Brake Line Relocation
	2	1/4"-20 x 3/4" bolt grade 5 clear zinc
	2	1/4"-20 nylock nut clear zinc
	4	1/4" USS flat washer clear zinc
709	1	Bolt Pack - Rear Sway Bar Brkt
	4	10mm-1.50 x 60mm Bolt
	4	10mm-1.50 Prevailing Torque Nut
	8	3/8" USS Flat Washer
748	1	Bolt Pack - Rear Track Bar Brkt
	1	9/16"-12 x 3" Bolt
	2	9/16" SAE Washer
	1	9/16"-12 Prevailing Torque Nut
	2	7/16"-14 x 1-1/4" Bolt
	3	7/16" SAE Washer
	1	7/16" USS Washer
	2	7/16"-14 Prevailing Torque Nut
749	1	Bolt Pack - Misc.
	4	5/16"-18 x 7/8" Bolt
	12	5/16" SAE Washer
	4	5/16"-18 Prevailing Torque Nut
	2	3/8"-16 x 3" Bolt
	4	3/8" USS Washer
	2	3/8"-16 Prevailing Torque Nut
	2	1/4"-20 x 1" Bolt
	2	1/4"-20 Nylock Nut
	2	1/4"-20 x 3/4" Self Threading Bolt
46	4	3/4" x 1/2" ID x 1.450 Sleeve
48	1	3/4" OD x 9/16" ID x 1.400 Track Bar Spacer
SB34BK	4	Hourglass Bushing 3/4" ID
B12X3G5	2	1/2" x 3" Bolt
W12S	4	1/2" Washer
N12PT	2	1/2" Torque Nut
JKBL-D	1	JK Rear Brakeline Brkt - DRV
JKBL-P	1	JK Rear Brakeline Brkt - Pass
01828	4	JK Octo Cam

014310 COMPONENT BREAKDOWN



014311 COMPONENT BREAKDOWN



TROUBLESHOOTING INFORMATION FOR YOUR VEHICLE

1. Will not fit 2wd models
2. Exhaust modification may be required
3. 2012 and newer vehicles require exhaust extension kit 124314

**TECH
TIPS**

INSTALLATION INSTRUCTIONS

INSTALLATION INSTRUCTIONS

1. Park the vehicle on a clean, flat surface and block the rear wheels for safety.
2. Measure from the center of the wheel up to the bottom edge of the wheel opening

LF _____ RF _____ LR _____ RR _____

SPECIAL TOOLS

Drill with 3/8" and 1/2" drill sizes
Rotary grinder or chisel to remove control arm cam knock out

FRONT INSTALLATION

1. Disconnect the front track bar from the axle. Left Hand Drive models shown in Figure 1. Save hardware. (Fig 1)

FIGURE 1



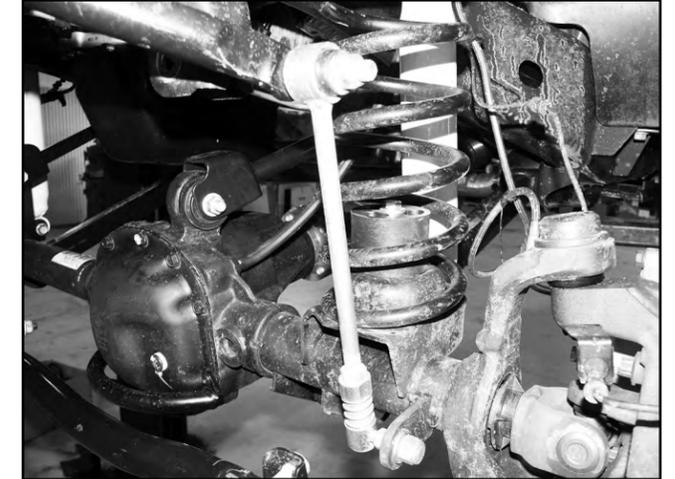
2. Raise the front of the vehicle and support the frame with jack stands behind the front lower control arm pockets.
3. Remove the wheels.
4. Support the front axle with a hydraulic jack. Remove the front shocks from the vehicle. Retain lower mounting hardware.
5. Disconnect the sway bar links from the axle and sway bar.
6. Disconnect the brakelines from the frame to keep them from being over extended, retain hardware, they will be reattached later in the installation. 2011 and newer models, disconnect brakeline from the axle, retain hardware.
7. Disconnect the steering drag link from the pitman arm. Remove the tie rod end nut and dislodge the tie rod end from the pitman arm with the appropriate puller or pickle fork. Save tie rod end nut.
8. 2012 models only: Locate and install the 124314 Exhaust Extension Kit with the instructions included in the kit.
9. Lower the front axle and remove the coil springs from the vehicle.
10. Make a mark in the center of the lower coil spring mount pad. Drill a 3/8" hole at the mark. This hole will be used to attach the provided bump stop extension to the axle. (Fig 2)

11. Place a provided bump stop extension inside one of the new front coil springs and install the spring in the vehicle. Make sure the spring is seated properly in the axle mount. Note: The new front coil springs are the taller set.
12. Attach the bump stop extension to the axle through the hole that was drilled earlier using a 3/8" x 3" bolt, nut and 3/8" USS washers (BP 749). Torque bolt to 20-30 ft-lbs. Repeat the spring/bump stop installation of the other side of the vehicle. (Fig 3)

FIGURE 2



FIGURE 3



13. Install the new shocks with the OE lower hardware and new upper bushings/hardware. Torque the lower bolt to 60 ft-lbs and the upper nut until the bushings begin to swell.
14. Reattach the drag link to the pitman arm with the OE tie rod end nut. Torque nut to 65 ft-lbs.

SWAY BAR LINK INSTALLATION - 014310 ONLY (NON-RUBICON MODELS)

15. Adjust Sway Bar Links to 9" long center to center.
16. Install the long stainless steel posts onto the sway bar with included 1/2" nylock nut. Tighten to 65 ft-lbs. Place polyurethane spacer over the disconnect stud. Use a screw driver or punch to keep the pin from rotating while tightening stud. (Fig 4a, 4b).

FIGURE 4A

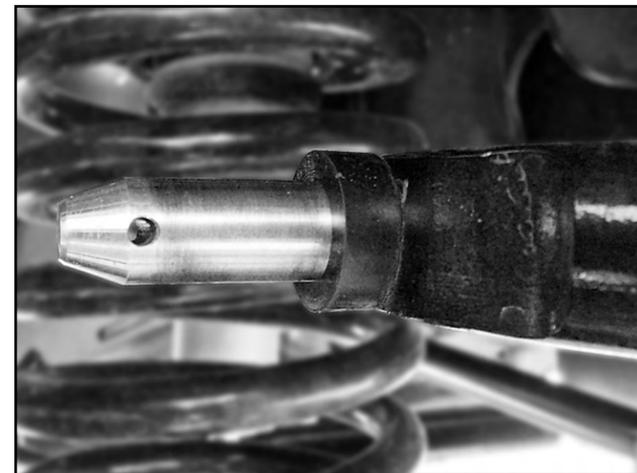


FIGURE 4B



17. Attach the lower studs to the axle with included 1/2" nylock nuts. Tighten to 65 ft-lbs. The shortest stud will go on the Passenger's side, medium length stud goes on the Driver's side (Opposite for RHD vehicles). (Fig 4c, 4d)

FIGURE 4C



18. Place sway bar links onto pins, secure with click pins as shown. (Fig 4e, 4f)

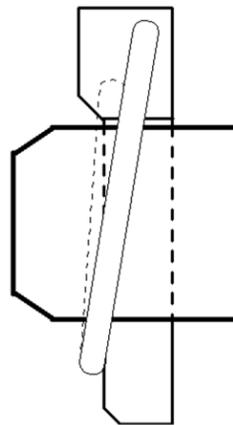
FIGURE 4D



1/2" Lower Tapered Mounting Posts

FIGURE 4E

CORRECT



WRONG

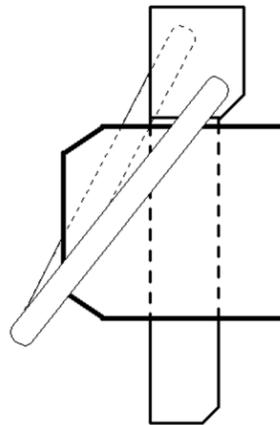


FIGURE 4F



19. 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. Slide the male clip up the lanyard and attach the female clip to it. This will be the stowed position for the lanyard when not in use. Do not wrap around the swap bar when the sway bar is connected.

FIGURE 5



Note: The links must be completely removed from the vehicle when sway bar is disconnected and stowed in the vehicle with the retaining pins and spacers. Swinging the sway bar up so that it is LEVEL and retain with straps. Do not drive the vehicle on-road with the sway bar disconnected.

SWAY BAR LINK INSTALLATION - 014311 ONLY (RUBICON MODELS)

20. Grease and install sway bar link bushings (SB34BK) and sleeves (#46) into sway bar links. Links are offset, and they will kick out at the bottom. Use factory hardware at the lower mount and new 1/2" x 3" bolts at the sway bar. Minor clearancing may be necessary to get the bolt through the sway bar. Tighten hardware to 55 ft-lbs.

FRONT AXLE CAM SLOT MODIFICATION

21. With the front axle still supported with a jack, remove the passenger's side lower control arm bolt at the axle. The OE lower control arm mounts are perforated from the factory so that they can be changed to slots for alignment cams. The perforated sections must be removed to accepted the new cam washers supplied in this kit. Special tools are made to perform this operation but are not necessary. The perforated sections can be removed with a rotary grinding tool, chisel or a combination of both, only the rear section needs to be removed. (Fig 6)

22. When the perforated sections are removed from the lower control arm mount, reinstall the control arm to the axle with the factory bolt with octagon shaped washers. Rotate the cam so that the bolt will be as far back in the slot as possible (most rearward setting / max caster). Just snug the cam hardware so that the cams are retained within the stops. Final torque will be completed with the weight of the vehicle on the suspension. (Fig 7)

FIGURE 6



FIGURE 7



23. Repeat cam bolt installation on the driver's side.

24. Cut or bend the tab on the factory bracket so it will set flat against the frame (Fig 8a). Install the provided front brake line brackets (01715) with the 1/4" stud to the original brake line frame mount with the factory hardware. Attach brakeline to the new brake stud with provided

1/4" nuts and washers as shown in figure 8b (BP #704). 2011 or newer models: reattach the brakeline routing bracket to the axle with factory hardware.

FIGURE 8A

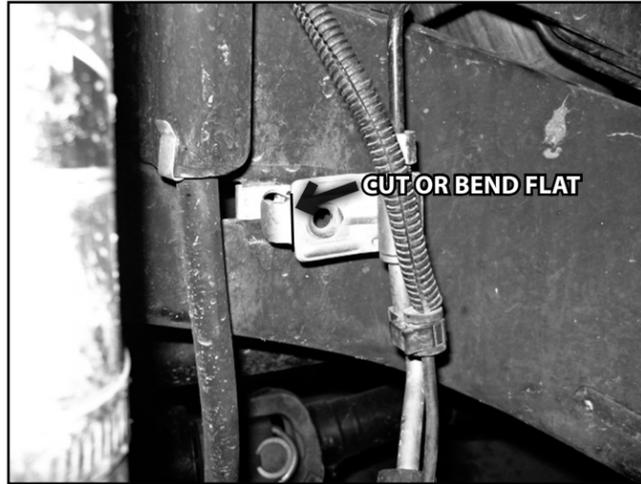
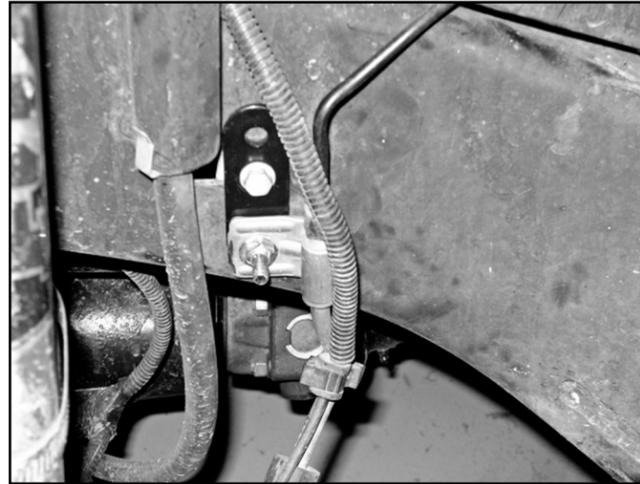


FIGURE 8B



25. Install the wheels and torque lug nuts to manufacturer's specifications.
26. Lower the vehicle to the ground and bounce the front to settle the suspension. Torque the front lower control arm bolts at the axle where the octagon washers were installed to 110 ft-lbs. Make sure the washers are rotated so the bolt is in the rear most position with the octagon washers retained between the factory stops.
27. Reattach the front track bar to the axle with the OE hardware. Have an assistant turn the steering wheel to aid in aligning the track bar bolt. Torque the track bar bolt to 125-135 ft-lbs.

REAR INSTALLATION

1. Block the front wheels for safety.
2. Disconnect the rear track bar from the frame (passenger's side). Retain hardware. (Fig 9)

FIGURE 9



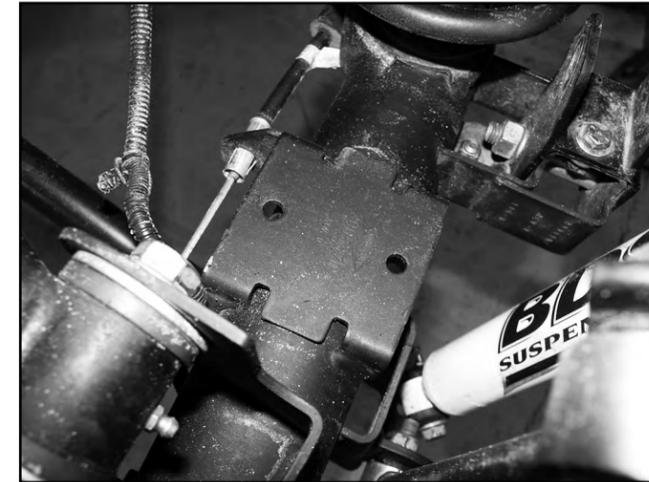
3. Raise the rear of the vehicle and support the frame with jack stands in front of the lower control arm mounts.
4. Remove the wheels.
5. Remove the shocks. Save the upper and lower mounting hardware.
6. Disconnect the sway bar from each frame rail, discard hardware. Allow the sway bar to rest on the exhaust.
7. Disconnect brakeline brackets from the frame, Save hardware. (Fig 8)
8. Lower the axle and remove the rear springs.



Tip Do not overextend the brakelines or ABS wires. It may be necessary to remove these from their retaining clips temporarily.

9. Install the new rear springs in the vehicle, making sure the OE upper rubber isolator is in place. Raise the axle to slightly compress the spring.
10. Install the new shocks with the OE hardware. Tighten upper mounting hardware to 30 ft-lbs, and lower hardware to 55 ft-lbs.
11. Install the provided bump stop spacers on the axle so that the 3" tall side is up and offset forward. Use the existing holes in the axle to attach bump stop pad. Fasten the bump stop spacer to the axle with 5/16" x 7/8" bolts, nuts and 5/16" SAE washers (BP 749). Torque bolts to 20 ft-lbs. (Fig 10)

FIGURE 10



12. Temporarily install the new track bar bracket (01948) into the OE frame bracket with the new provided 9/16" hardware. The bracket mounts to the back and outside faces of the OE mount and against the front inside surface on left hand drive models. On right hand drive models, the bracket mounts to the front and outside faces of the OE mount and against the inside rear surface. (Fig 11a,11b).
13. Using the bracket as a template, mark the outside hole to be drilled. Remove the bracket and drill a 1/2" hole at the mark

FIGURE 11A - LHD SHOWN



FIGURE 11B



14. Reinstall the track bar bracket with the 9/16" hardware (BP 748) along with the provided crush sleeve (48) inside the factory mount. Run the bolt through the new bracket, OE mount and sleeve (Fig 12). Leave hardware loose.

FIGURE 12 LHD SHOWN



15. Fasten the new bracket to the frame through the outer holes using the provided 7/16" hardware (BP 748). The bottom hole uses the larger diameter USS washer on the inside to go against the slot in the frame. Torque 7/16" hardware to 40 ft-lbs (Fig 13).
16. Install the sway bar drop spacers between the frame and the OE sway bar mounts with 10mm x 60mm bolts and washers (BP #709). Torque bolts to 30 ft-lbs.
17. Install brakeline relocation brackets as shown, there are drv and pass side brackets, they will be located into the factory locating tab. The the factory brakeline will be mounted towards the center of the vehicle on the 'inside' of the relocation bracket. Attach with OE and new 1/4" x 1" hardware (BP #749), tighten to 10 ft-lbs. (Fig 14, Note: do not disconnect brakeline, shown for inst. sheet pictures only)

FIGURE 13 LHD SHOWN



FIGURE 14



18. Reinstall wheels and torque to factory specifications. Lower vehicle to ground.
19. Install the rear track bar into the new relocation bracket with the original track bar hardware. An assistant may be needed to push on the body of the vehicle to help align the track bar in the bracket.
20. With the track bar installed, torque the 9/16" bracket hardware and OE track bar hardware to 125 ft-lbs.
21. Double check all hardware for proper torque.
22. Have a front end alignment performed to correct caster angle.
23. Check all fasteners after 500 miles and at regularly scheduled maintenance intervals.



WE WANT TO SEE YOUR RIDE!

Grab photos of your BDS-equipped truck in action and send them in for a chance to be featured. Send it in to our Bad Ass Rides customer gallery at bds-suspension.com/bar and post them on the BDS Fan Page on Facebook at facebook.com/BDSSuspensions. Don't forget about your BDS swag! BDS offers t-shirts, hoodies, decals and more available on the BDS website or through your local BDS distributor.

TIME TO HAVE SOME FUN

Thank you for choosing BDS Suspension.

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