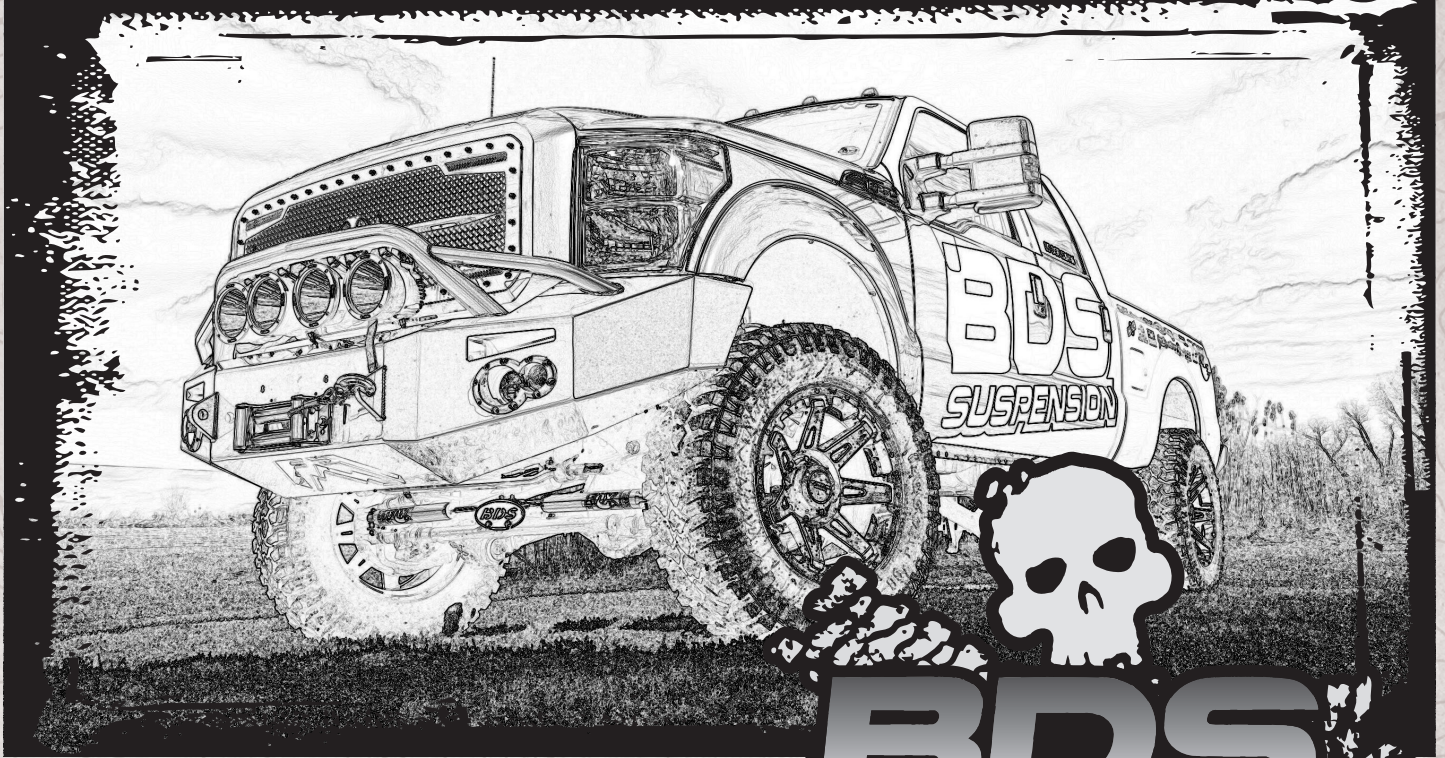


# INSTALLATION GUIDE



Part#: 123605, 123615



**HARDCORE LIMITED LIFETIME WARRANTY**

## Transfer Case Indexing Ring Kit

Ford Super Duty 4WD- Diesel | 2017-2019

Ford Super Duty 4WD- 10 Speed | 2020

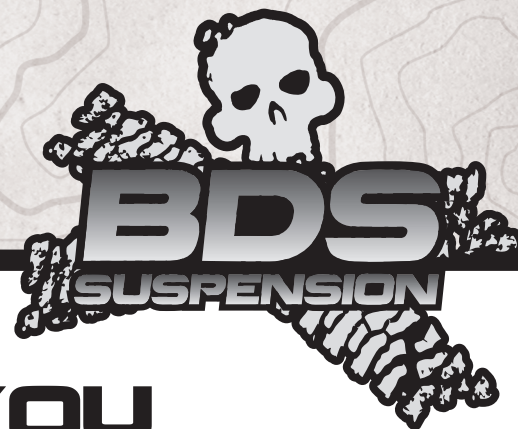
Rev. 060920

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# 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.



Visit [560plus.com](http://560plus.com) for more information.

### 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.

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

## 123605 Box Kit (6" indexing Ring Kit)

Part #	Qty	Description
03416	1	6" Transmission Cross member
03424	1	Transfer Case Skid Plate Relocation
A281	1	6" Indexing Ring Assembly
03413	1	6" Indexing Ring
ARP15AJ1	11	3/8" x 1.645" Stud
987	1	Bolt Pack
	11	10mm-1.50 x 30mm Flat Head Socket Cap Screw
	11	3/8"-24 Hex Nut
	11	3/8" SAE Washer
	2	3/8"-16 x 1" Bolt
	2	3/8" SAE Washer
	2	3/8"-16 Serrated Edge Flanged Nut
099002	2	8-3/8 x.18 Cable Tie Tree
342701	1	Loctite - 1ml (11094-00764)

## 123615 Box Kit (8" indexing Ring Kit)

Part #	Qty	Description
03477	1	8" Transmission Cross member
03479	1	Transfer Case Indexing Bracket
A296	1	8" Indexing Ring Assembly
03478	1	8" Indexing Ring
ARP15AJ1	11	3/8" x 1.645" Stud
B1225	1	Indexing Ring Bag Kit
03424	2	Transfer Case Skid Plate Relocation
987	1	Bolt Pack
	11	10mm-1.50 x 30mm Flat Head Socket Cap Screw
	11	3/8"-24 Hex Nut
	11	3/8" SAE Washer
	2	3/8"-16 x 1" Bolt
	2	3/8" SAE Washer
	2	3/8"-16 Serrated Edge Flanged Nut
099002	2	8-3/8 x.18 Cable Tie Tree
997	1	Bolt Pack
	2	1/2"-13 Prevailing torque nut - yellow zinc
	2	1/2" SAE Washer - yellow zinc
	2	3/8"-16 x 1" Bolt - Grade 5 - Clear Zinc
	2	3/8" SAE Washer - Clear Zinc
	2	3/8"-16 Serrated Edge Flanged Nut - Clear Zinc
342701	1	Loctite - 1ml (11094-00764)

## TROUBLESHOOTING INFORMATION FOR YOUR VEHICLE

1. This indexing ring is only compatible with 2017-2019 Diesel trucks, and 2020 10 speed transmission trucks. Please verify your truck's equipment before installing.
2. Indexing ring has not been designed to work on manual shift transfer case models. Modification to the shift cable mount will be required.



**TECH  
TIPS**

## INSTALLATION INSTRUCTIONS

### SPECIAL TOOLS

(2) 3/8" Universal Joint Socket Adapter  
3" and 6" extensions

### INSTALLATION INSTRUCTIONS

1. Remove the transfer case skid plate if equipped. Save hardware for later installation (Fig 1).

**FIGURE 1**



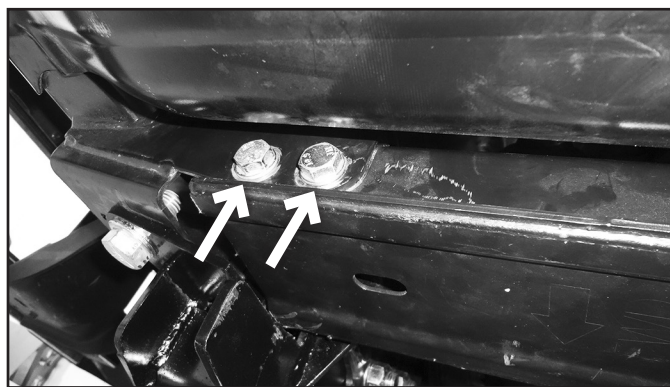
2. Mark orientation of the front drive shaft to the transfer case flange for later installation. Remove the four bolts attaching the front drive shaft to the transfer case. Save the hardware and using a strap, support the drive shaft from falling.
3. Mark orientation of the rear drive shaft to the rear axle flange for later installation. Remove the four bolts attaching the rear driveshaft to the rear axle. Save the hardware. Slide the rear driveshaft out from the transfer case and set aside for later installation.
4. Support the transmission with a hydraulic jack. It is best to use a piece of wood to prevent damage to the transmission oil pan.
5. Remove the two nuts attaching the transfer case isolator to the cross member (Fig 2).

**FIGURE 2**



6. Remove the four 12mm bolts attaching the cross member to the frame. Lower the cross member from the frame. The factory cross member will not be used again (Fig 3). Save the bolts for later installation.

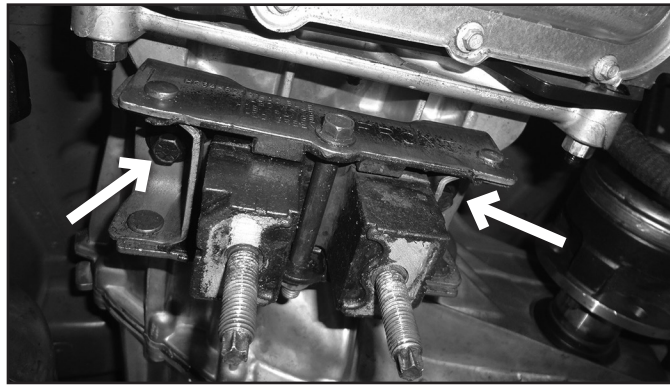
**FIGURE 3**



7. Remove the transfer case isolator from the transfer case (Fig 4). Save the isolator and hardware.



**FIGURE 4**



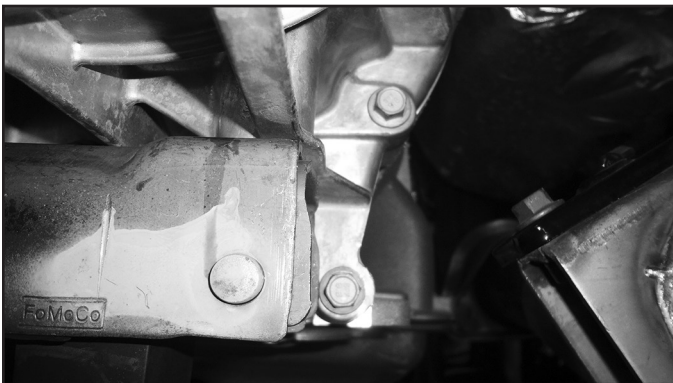
8. Disconnect the transfer case shift mechanism wiring harness, disconnect wiring harness clips from the transfer case (Fig 5).

**FIGURE 5**

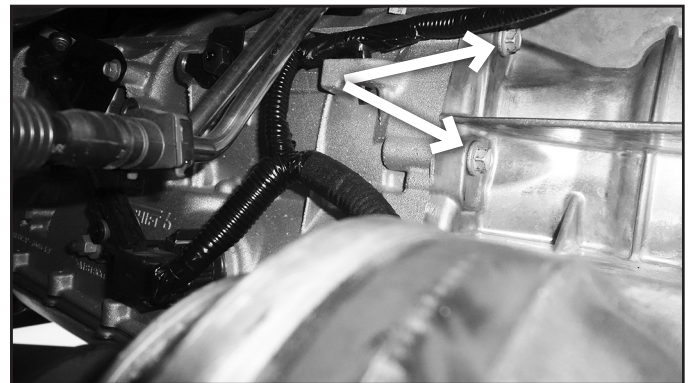


9. Disconnect the breather from the top of the transfer case.
10. Remove the 11 bolts attaching the transfer case to the transmission (Fig 6A & 6B). The hardware will not be reused. A combination of 3/8" universal joint socket adapters and 3/8" extensions works best to access all of the hardware.

**FIGURE 6A**

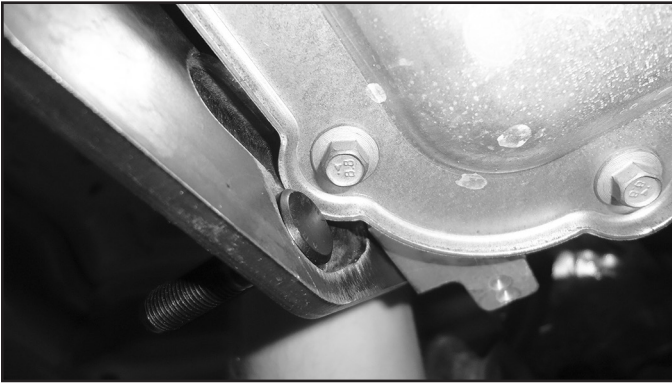


**FIGURE 6B**



11. With additional help, remove the transfer case from the vehicle by sliding it towards the rear of the vehicle. The transfer case may need to be rotated downwards to clear the body on the top side. Make sure the rear of the transfer case is supported so fluid does not spill out when set aside.
12. The transmission oil pan will need clearance for installation of the indexing ring at the driver side bolt. This can be done by either grinding the flange on the oil pan or flattening it with a hammer (Fig 7A & 7B). Test fit the indexing ring on to the transmission to ensure a flat fit and there is no gap between the transmission and indexing ring.

**FIGURE 7A**

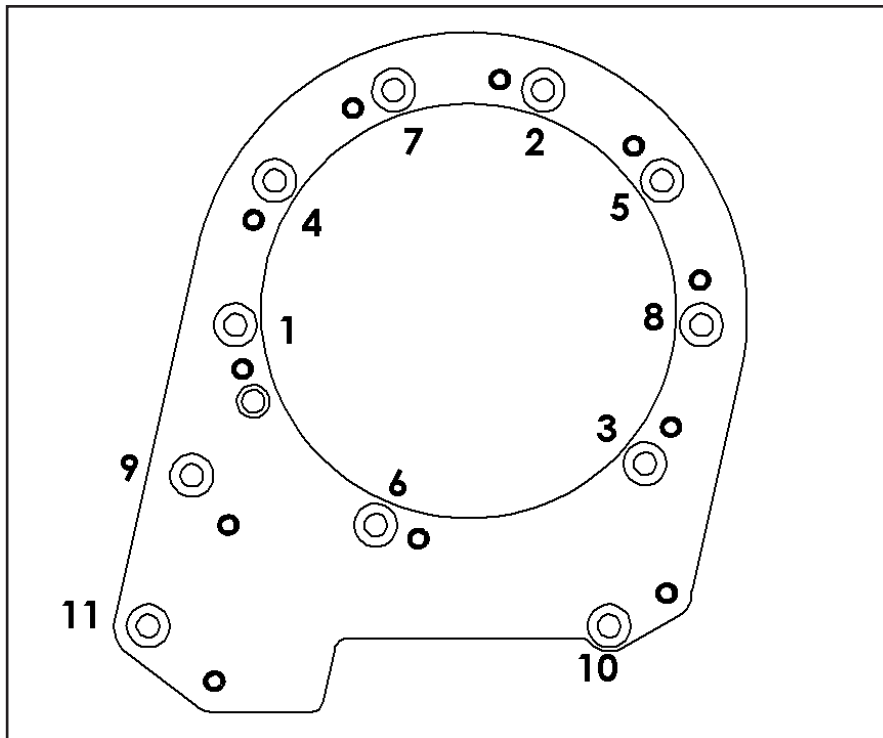


**FIGURE 7B**



13. Apply thread locker and loosely attach the indexing ring to the transmission with the provided flat head Allen bolts.  
*Note: The indexing ring has a specific orientation, it will only go on one way, rotate until all of the holes align.*
14. Tighten the indexing ring in the sequence below to 35ft-lbs.

**FIGURE 8**





15. Remove the hook on the transfer case (Fig 9). This will not be reinstated.

**FIGURE 9**



16. 2020+ Models only: Remove the alignment pin from the transfer case. It is indexed differently than 2017-2019 models and will interfere with a stud position on the indexing ring. It is easiest to cut the alignment pin flush with the case being careful to not cut into the transfer case.
17. Apply thread locker to all of the studs on the indexing ring.
18. Reinstall the transfer case to the transmission , ensuring the output shaft aligns with the transfer case and all of the studs on the indexing ring line up with the transfer case.
19. Using the provided 3/8" washers and nuts, tighten the transfer case to the studs on the indexing ring (Fig 10A & B). Torque to 45 ft-lbs. Follow the same tightening sequence as before.

*Hint: The transfer case can be lowered a little to help aid in tightening the nuts on the top side of the transfer case.*

**FIGURE 10A**

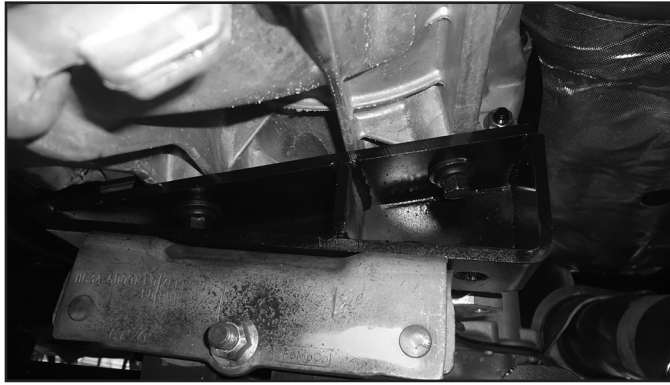


**FIGURE 10B**



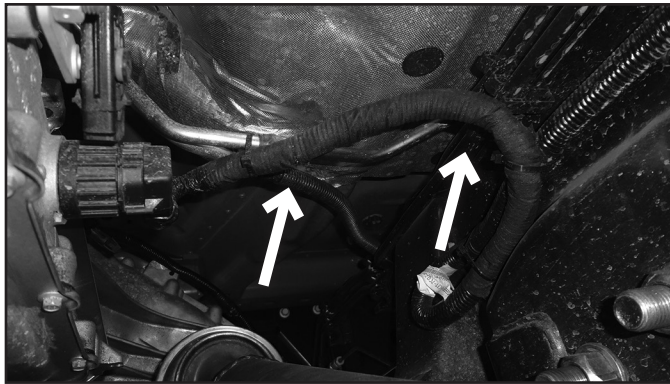
20. (123605 - 6" Kit only) Reinstall the transfer case isolator with the factory hardware and thread locker.
21. (123615 - 8" Kit only) Install the transfer case indexing bracket (03479) to the transfer case with the factory hardware and thread locker Figure 11. There is a clearance hole in the bottom of the bracket to allow a 3/8" extension through with the socket on the factory bolt on the inside of the bracket. Attach the transfer case isolator to the transfer case indexing bracket with the 1/2" nuts and washers in Bolt Pack 997 to the studs on the transfer case indexing bracket.

**FIGURE 11**



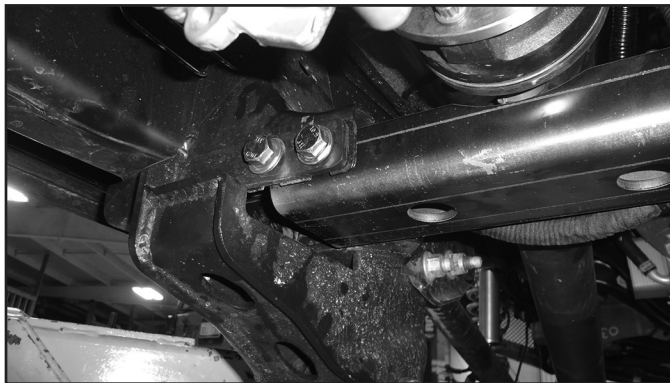
22. Route the wire harness above the front drive shaft. Attach wiring harness using the provided cable ties as shown in Figure 12. Plug the wire harness back into the transfer case

**FIGURE 12**



23. Reattach the transfer case breather into the transfer case.
24. Reinstall the front and rear drive shafts with the factory hardware and thread locker. Line up the marks for orientation of the drive shafts. Tighten to factory specifications.  
*Note: If the indexing ring is being installed in conjunction with a suspension lift kit, do not install the front drive shaft at this time.*
25. Install the new cross member with the factory 12mm hardware through the flanges on the frame. Tighten the factory 12mm hardware to 50 ft-lbs.. The cutout in the cross member will be on the driver's side to provide clearance to the front drive shaft (Fig 13).  
*Note: If the indexing ring is being installed with a 4-link suspension kit, do not tighten the factory 12mm hardware at this time.*

**FIGURE 13**



26. Lower the transmission / transfer case so that the isolator is resting on the new cross member. Remove the hydraulic jack / support from the transmission.
27. Attach the isolator to the cross member with the factory nuts (Fig 14). Tighten to factory specifications.



**FIGURE 14**



28. (123605 - 6" Kit only) Reattach the transfer case skid plate on the passenger's side with the factory hardware.

*Note: If the indexing ring is being installed with a 4-link suspension kit, do not install the transfer case skid plate at this time.*

29. (123605 - 6" Kit only) Attach the transfer case skid plate relocation bracket to the driver's side with the factory hardware. Position the bracket such that it is offset towards the rear of the vehicle. Use the provided 3/8" bolt, washer, and flange lock nut to attach the transfer case skid plate to the relocation bracket (Figure 14).

30. (123615 - 8" Kit only) Attach the transfer case skid plate relocation bracket to the driver's and passenger's sides with the factory hardware. Position the bracket such that it is offset towards the rear of the vehicle. Use the provided 3/8" bolt, washer, and flange lock nut (Bolt Packs 997 & 987) to attach the transfer case skid plate to the relocation bracket (Fig 15).

*Note: If the indexing ring is being installed with a 4-link suspension kit, do not install the transfer case skid plate at this time.*

**FIGURE 15**



**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](http://bds-suspension.com/bar) and post them on the BDS Fan Page on Facebook at [facebook.com/BDSSuspensions](https://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.

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**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.