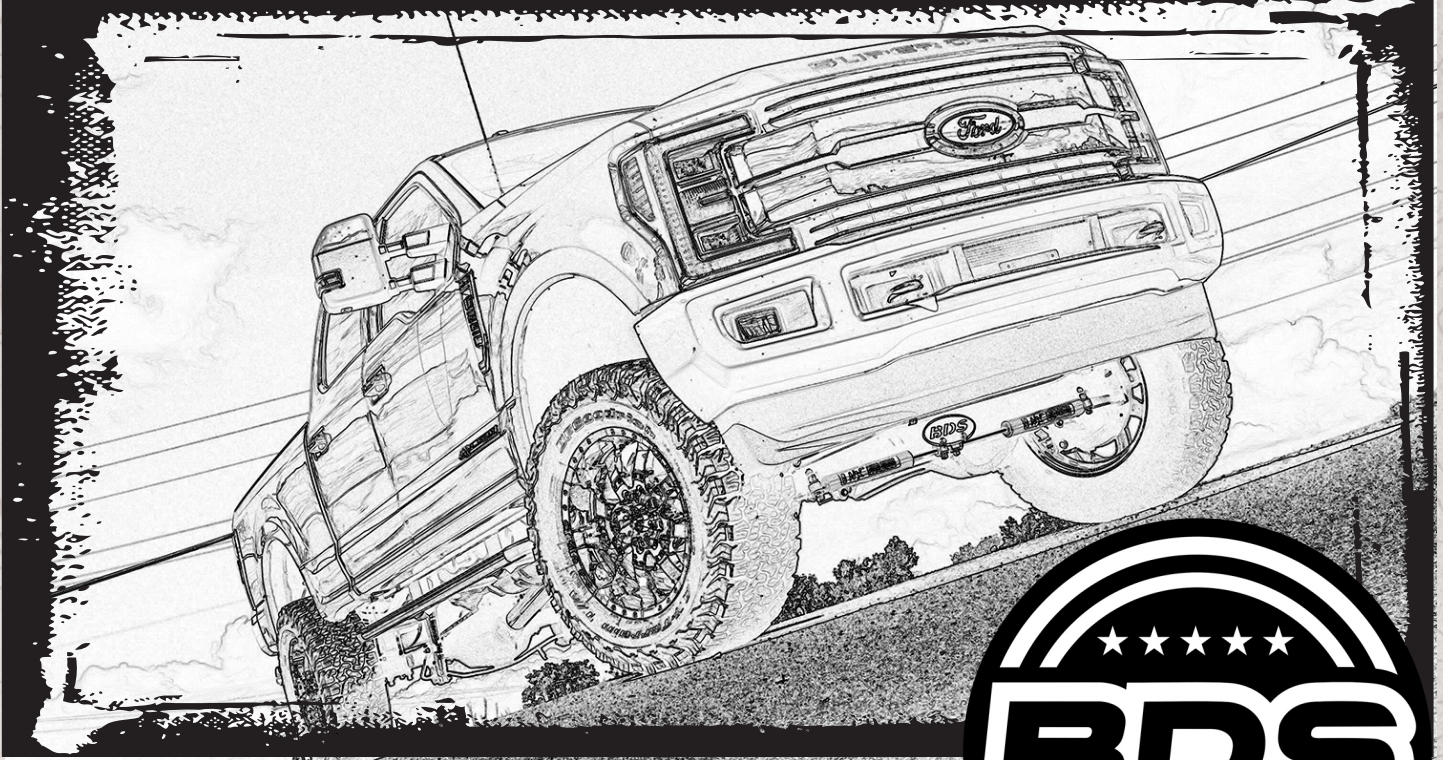
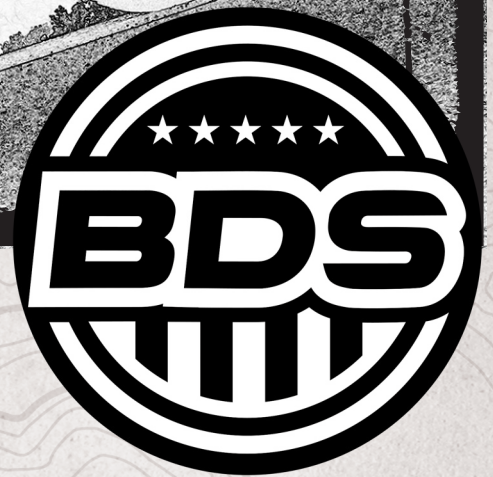


# INSTALLATION GUIDE



Part#: 123605, 123615, 123805



**HARDCORE LIMITED LIFETIME WARRANTY**

## Transfer Case Indexing Ring Kit

Ford Super Duty 4WD - Diesel | 2017-26

Ford Super Duty 4WD - 10 Speed | 2020-26

Rev. 020626

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

E-mail: [tech-bds@ridefox.com](mailto: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.



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 Cbletie Tree                     |
| 342701   | 1   | Thread locker                               |

## 123805 Box Kit (2020+ 8" indexing Ring Kit)

| Part #   | Qty | Description                                    |
|----------|-----|--|
| 05054    | 1   | 8" Transmission Cross member                   |
| 05055    | 1   | Transfer Case Indexing Bracket                 |
| A420     | 1   | 8" Indexing Ring Assembly                      |
| 05111    | 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   | Thread Locker - 1ml (11094-00764)              |

## 123615 Box Kit (2017-2019 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   | Thread Locker - 1ml (11094-00764)              |

## TROUBLESHOOTING INFORMATION FOR YOUR VEHICLE

1. This indexing ring is only compatible with 2017+ Diesel trucks, including the 2020+ 10 speed transmission trucks. Will not work with Gas model trucks due to exhaust interference.
2. Indexing ring has not been designed to work on manual shift transfer case models. Modification to the shift cable mount will be required.
3. **DO NOT USE FILL PORT FOR FLUID LEVEL ON AN INDEXED TRANSFER CASE. THE FILL PORT WILL BE LOWER THAN OE FILL LEVEL HEIGHT:** If any maintenance requiring fluid change or refill has or is being done, before reinstalling transfer case check fluid levels on bench and fill transfer case with manufacturer recommended volume of fluid.

**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. If equipped with a u-joint flange at the transfer case, make an index mark between the driveshaft and u-joint flange. Save u-joint straps and hardware for reinstallation.
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). Save nuts for reinstallation.

**FIGURE 2**



6. 2023+ diesel owners: Using a trim tool, pry loose the two clips fastening the hard lines to the front of the transmission crossmember (Fig 3.)

**FIGURE 3**

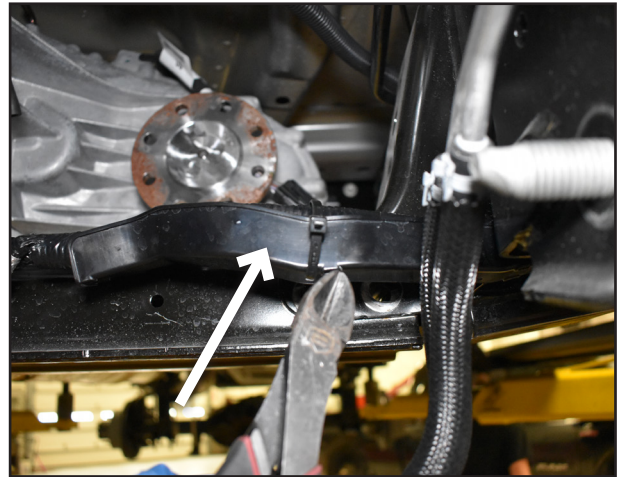


7. 2023+ models: Trim levels equipped with on-board scales, pry loose the load scale wiring harness retainers at the transmission crossmember. Two clips are located on the rearward side of the crossmember (Fig. 4A), one additional clip at/near each end of the crossmember: record/note routing path for reinstallation. All models, remove the harness routing tray from the transmission/load scale harness at the driver side frame rail (Fig. 4B).

**FIGURE 4A**

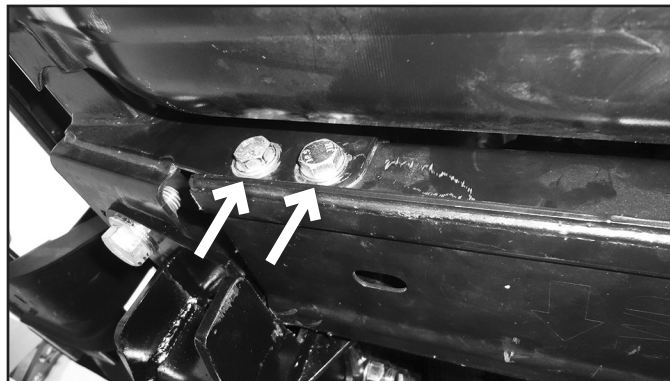


**FIGURE 4B**



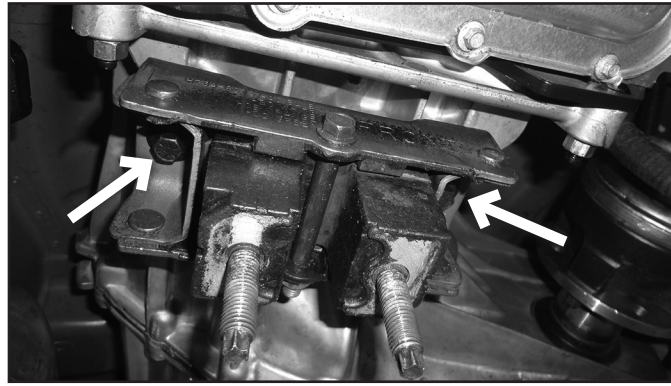
8. Remove the four 12mm bolts attaching the cross member to the frame. Lower the cross member from the frame. The factory cross member will not be used again (Fig 5). Save the bolts and nuts for later re-installation.

**FIGURE 5**



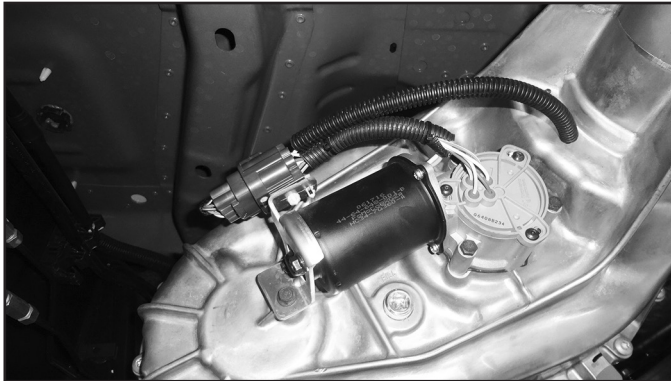
9. Remove the transfer case isolator from the transfer case (Fig 6). Save the isolator and hardware.

**FIGURE 6**



10. For 2019-2022 models, disconnect the transfer case shift mechanism wiring harness, disconnect wiring harness clips from the transfer case (Fig 7A). For 2023 and newer models, disconnect the harness jumper forward of the transfer case shift mechanism on the driver side (Fig 7B & Fig 7C). Disconnect the main transmission connector and pry loose the harness retaining clip (Fig. 7D) on the bottom of the transmission pan

**FIGURE 7A**



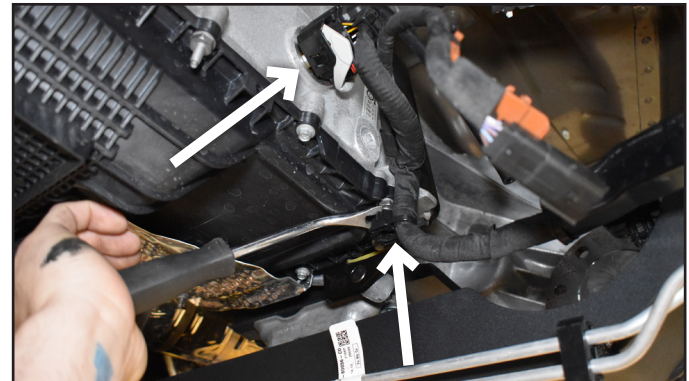
**FIGURE 7B**



**FIGURE 7C**

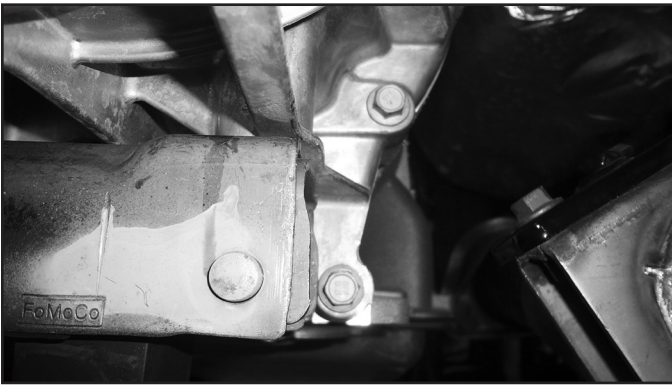


**FIGURE 7D**

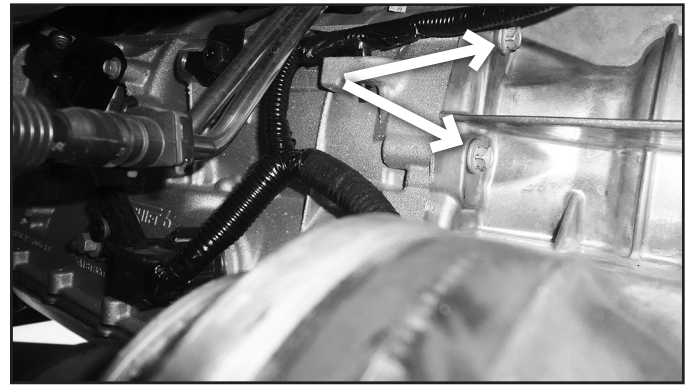


11. Disconnect the breather from the top of the transfer case.
12. 2017-2022 models. Remove the 11 bolts attaching the transfer case to the transmission (Fig 8A & 8B). The hardware will not be reused. A combination of 3/8" universal joint socket adapters and 3/8" extensions works best to access all of the hardware.

**FIGURE 8A**



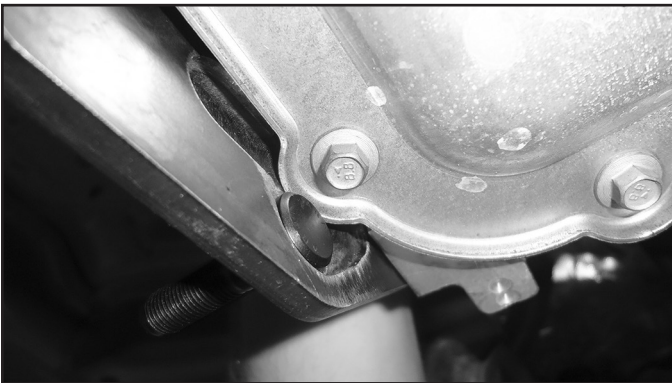
**FIGURE 8B**



13. For 2023+: Models equipped with 10R140 transmission, remove the five passenger side transfer case-to-transmission bolts. Ensure the transmission is supported. Remove the six transfer case-to-transmission bolts accessible on the driver's side.
14. 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 cab floor. Make sure the rear of the transfer case is supported so fluid does not spill out when set aside.
15. The transmission oil pan will need clearance for installation of the indexing ring at the driver side lower bolt. This can be done by either grinding the flange on the oil pan or flattening it with a hammer (Fig 9A & 9B). For 2023 and newer models with a plastic transmission fluid pan, mark and carefully grind the driver side rear pan mounting boss (Fig. 9C & 9D). Test fit the indexing ring on to the transmission to ensure a flat fit and no gap exists between the transmission and indexing ring.

*Tip: A rotary air tool with abrasive disc works well for grinding the transmission pan boss. Use caution and lightly remove material, repeatedly checking indexing ring flatness to the transmission.*

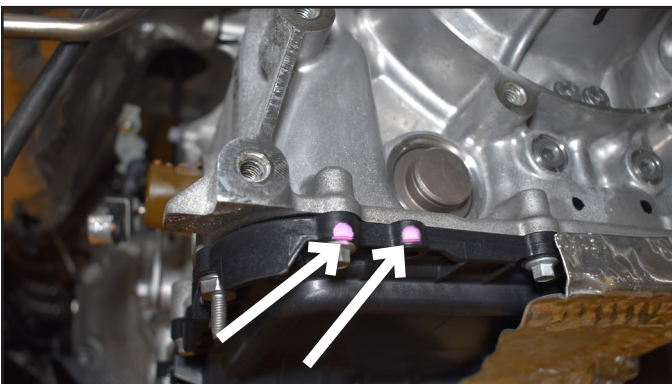
**FIGURE 9A**



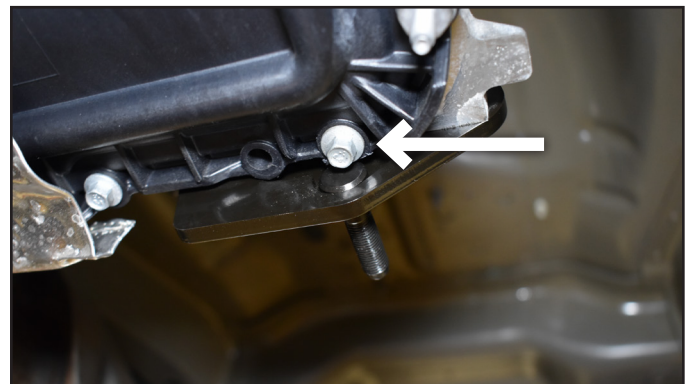
**FIGURE 9B**



**FIGURE 9C**



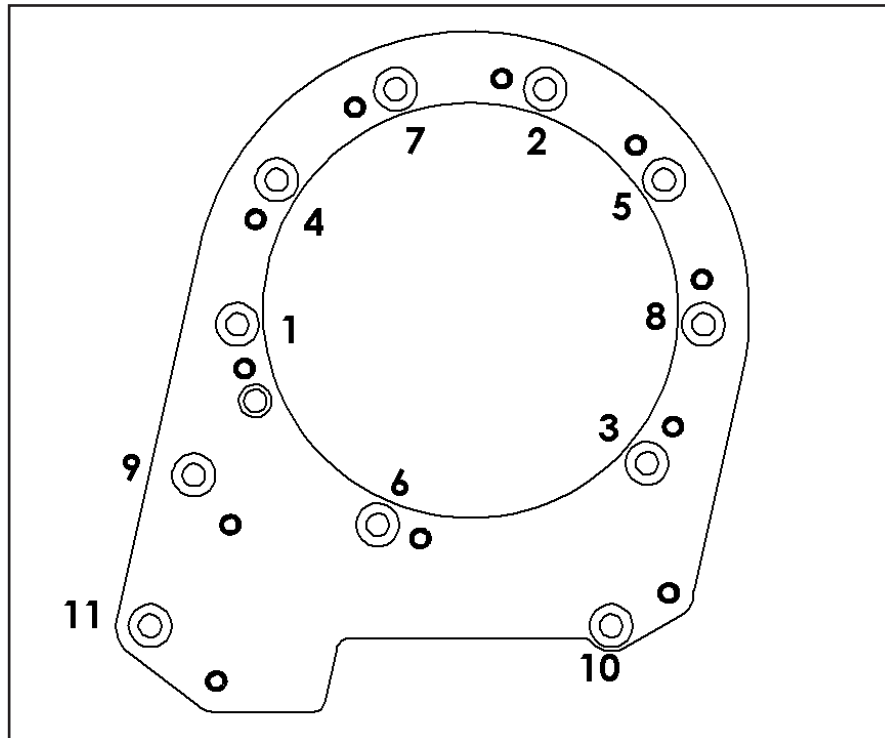
**FIGURE 9D**



16. 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.*

17. Tighten the indexing ring in the sequence below to 35 ft-lbs (Fig.10).

**FIGURE 10**



18. Remove the hook on the transfer case (Fig 11). This will not be reinstalled.

**FIGURE 11**



19. 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.
20. Apply thread locker to all of the studs on the indexing ring.
21. 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.
22. Using the provided 3/8" washers and nuts, tighten the transfer case to the studs on the indexing ring (Fig 12A & 12B). 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 12A**



**FIGURE 12B**



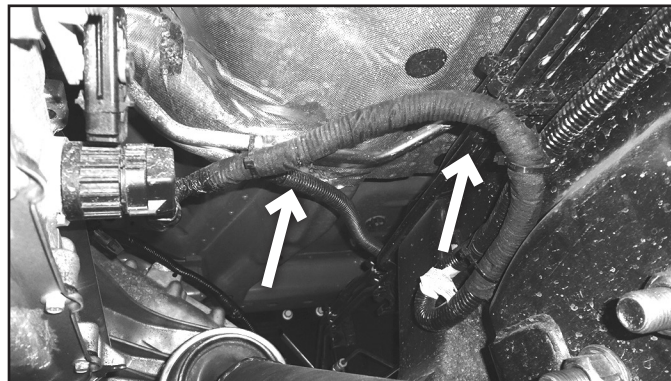
23. (123605 - 6" Kit only) Reinstall the transfer case isolator with the factory hardware and thread locker.
24. (123615/123805 - 8" Kit only) Install the transfer case indexing bracket (03479/05055) to the transfer case with the factory hardware and thread locker. There is a clearance hole in the bottom 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 13**



25. Route the transmission wire harness above the front drive shaft. Attach wiring harness using the provided cable ties as shown in Figure 14. Plug the wire harness back into the transfer case.

**FIGURE 14**



26. 2023+ models will route the transmission wiring harness up and over the frame rail (Fig 15A). Use provided zip ties to secure the harness up and out of the way of the driveshaft (Fig. 15B) Models equipped with on-board scales will need the scale harness split from the transmission harness wrap (Fig 15C) and route in the stock location underneath the front driveshaft across the transmission cross member.

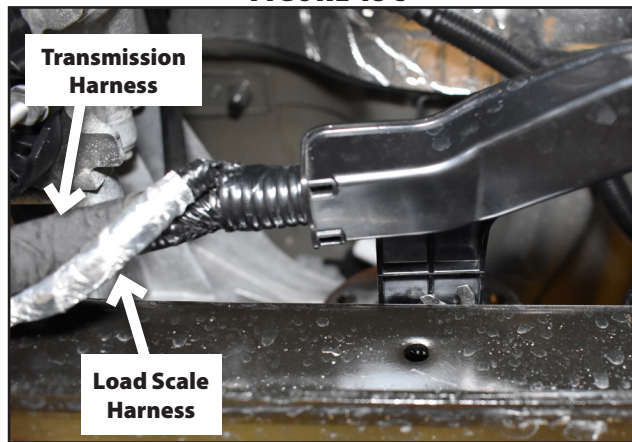
**FIGURE 15A**



**FIGURE 15B**



**FIGURE 15C**



27. Reattach the transfer case breather into the transfer case.
28. 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.

29. Install the new cross member with the factory hardware through the flanges on the frame. Torque to 81 ft-lbs.. The cutout in the cross member will be on the driver's side to provide clearance to the front drive shaft (Fig 16).

**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 16**



30. Lower the transmission / transfer case so the OE isolator rests on the new cross member. Remove the hydraulic jack / support from the transmission.
31. Attach the isolator to the cross member with the factory nuts (Fig 17). Torque to 81 ft-lbs.

**FIGURE 17**



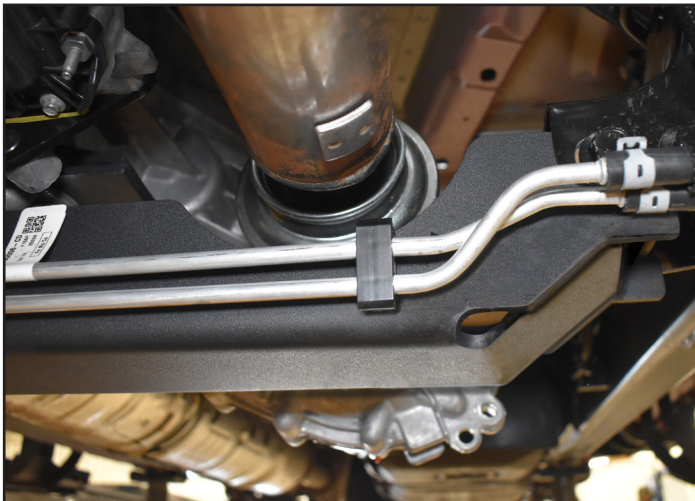
**NOTE:** Transfer case skid plate cannot be reinstalled on 2020+ model year trucks.

32. (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.

33. If equipped, reattach the hard lines to the new transmission cross member using the stock retaining clips. The clips can be slid along the hard lines to the new mounting positions (Fig. 18A). On-board scale optioned trucks: mount the harness clips in the provided slots on the new transmission crossmember (Fig. 18B) following the OE routing path.

**FIGURE 18A**



**FIGURE 18B**



34. (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).
35. (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 19).

*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 19**



### **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.

