

# Cam Alignment Lockout Plates

Ford Bronco | 2021

Part #: 123302

Rev. 020421



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## SAFETY WARNING

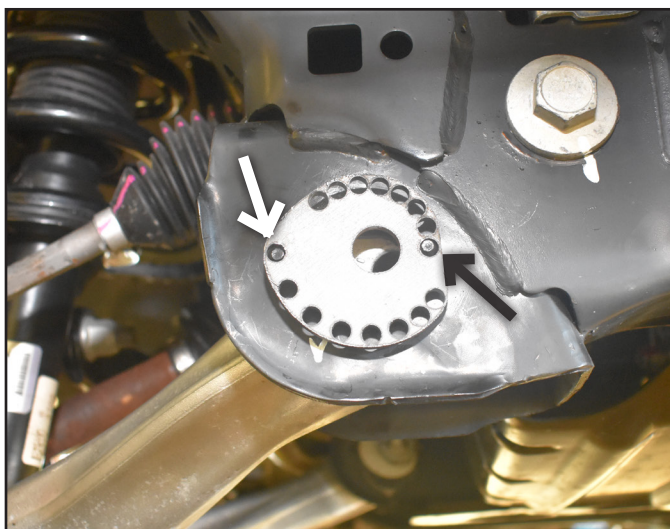
BDS Suspension Co. recommends this system be installed by a professional technician. In addition to these instructions, professional knowledge of disassembly/ reassembly procedures and post installation checks must be known.

Box Kit 123302		
Part #	Qty	Description
05050	8	Cam Alignment Lockout Plates
366	1	Bolt Pack
	4	5/8"-11 X 5-1/2" Bolt, Grade 8, Yellow Zinc
	4	5/8"-11 Prevailing Torque Nut, Yellow Zinc
	8	5/8" Small OD Washer

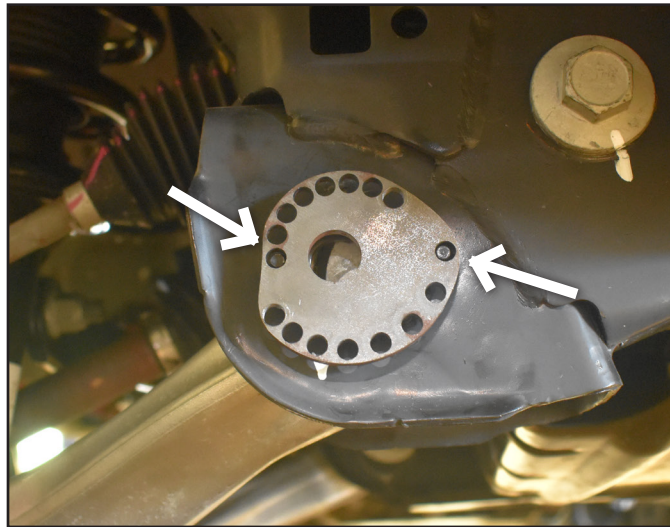
## PRE-INSTALLTION INSTRUCTIONS

1. These cam styles are uncommon for a typical alignment shop. Once installed, to adjust the alignment the nuts must be loosened and the bolt / cam plate slid past the pins in the frame and adjusted to the new position. Although these are not as easy to initially adjust, these will provide a locked in position that will not allow the alignment to slip when used in offroad situations.
2. Cams can be used in 15 different positions to allow for precise alignment of the front suspension. The cams can be flipped around to make sure there is clearance to the weld joint on the control arm pocket. Each position provides about 0.050" of adjustment along the cam slot while still being allowed to go to the min and max position of the slot.

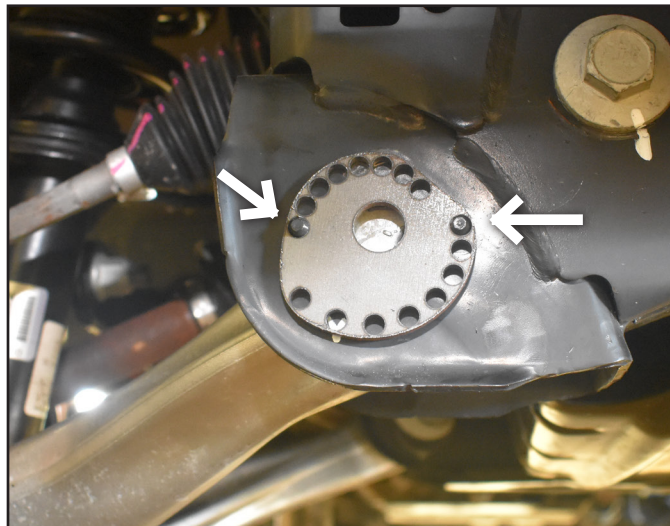
**FIGURE A (CAMS MINIMIZED INWARDS)**



**FIGURE B (CAMS MAXIMIZED OUTWARDS)**



**FIGURE C (CAMS CENTERED)**



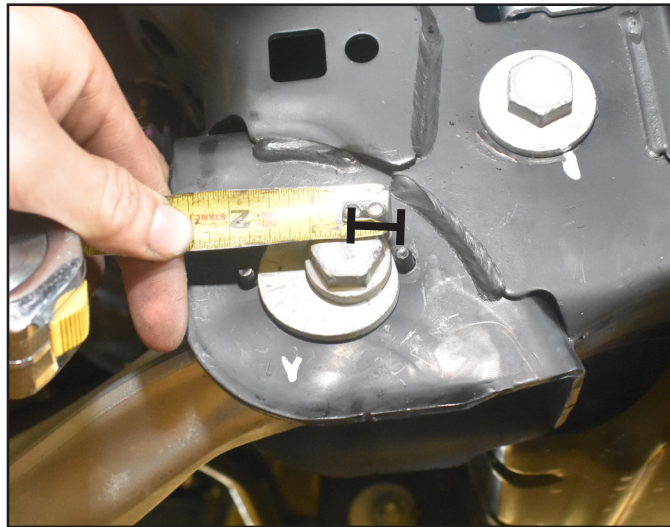
## INSTALLATION INSTRUCTIONS

1. Park the vehicle on a clean, flat surface and block the rear wheels for safety.
2. Raise the front of the vehicle and support with jack stands under the frame rails, just behind the lower control arm mounts.
3. Remove the front wheels.
4. Support the lower control arm / steering knuckle assembly.
5. Starting with the front cam bolt. Note the position of the bolt head relative to the slot. The easiest way to do this is measure the distance from the center of the bolt head to the inner pin in the cross member **Figure 1**.

Record the measurements here:      Driver Front \_\_\_\_\_      Passenger Front \_\_\_\_\_

Driver Rear \_\_\_\_\_      Passenger Rear \_\_\_\_\_

**FIGURE 1**

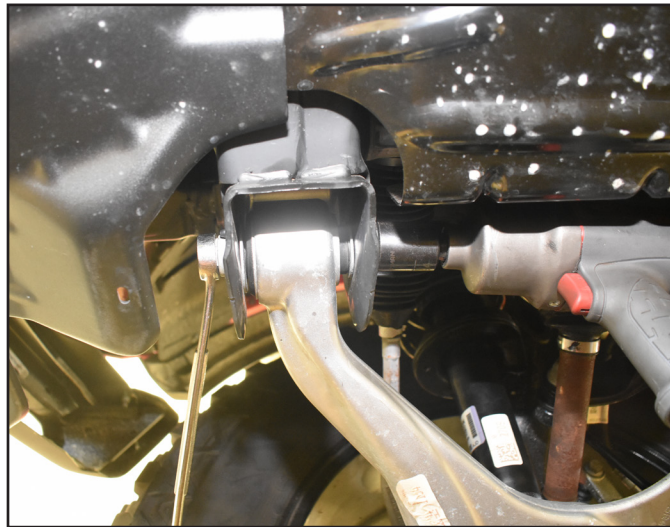


6. Remove the front cam bolt. Discard the OE cam bolt, washer, and nut **Figure 2**.



**Tip** *An alignment tool can be used to hold the lower control arm in place while the cam bolt is removed.*

**FIGURE 2A**



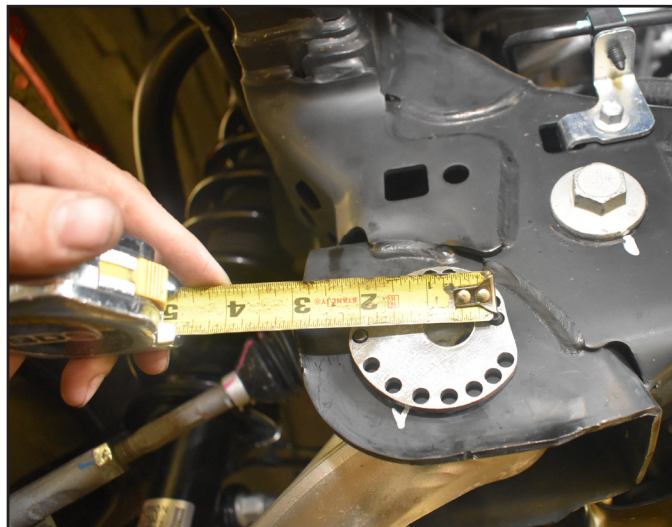


**FIGURE 2B**



7. Noting the position of the OE cam bolt when removed. Install the bolt side cam plate (cam plate with the larger hole) on the front side of the control arm pocket into the pins **Figure 3**. The center of the hole on the cam plate to the inner pin measurement should be the same or within an  $1/16$ " to the measurement that was recorded earlier. If it is not, then the cam needs to be moved to the next hole position.

**FIGURE 3**



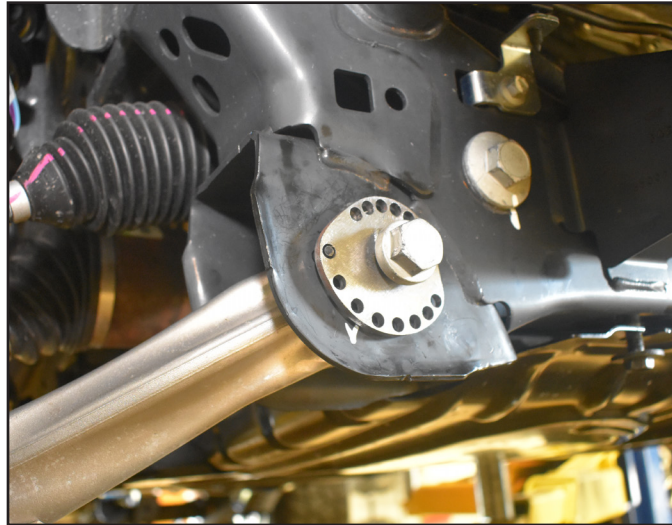
8. While holding the front cam in place, install the new provided  $5/8$ " bolt and washer through the cam plate and into the lower control arm **Figure 4**.



**Tip**

*A pry bar can be used to help line up the bolt with the cam and lower control arm.*

**FIGURE 4A**

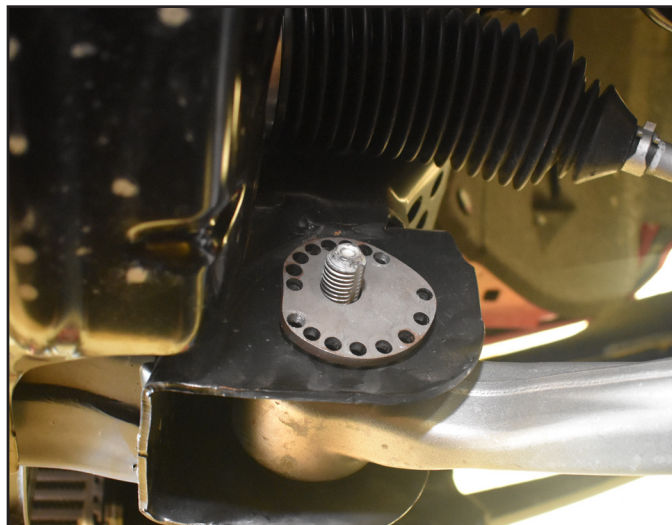


**FIGURE 4B**



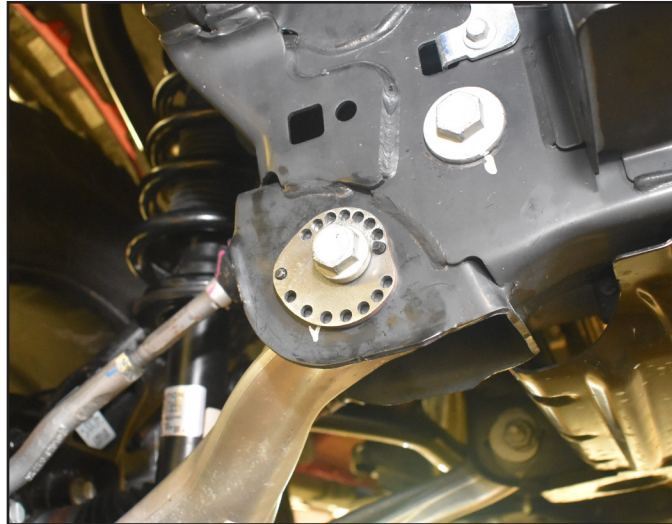
9. Install the cam plate on the back side of the control arm pocket with the cam position the same as the front cam plate so that the bolt goes straight through the control arm Figure 5.

**FIGURE 5**

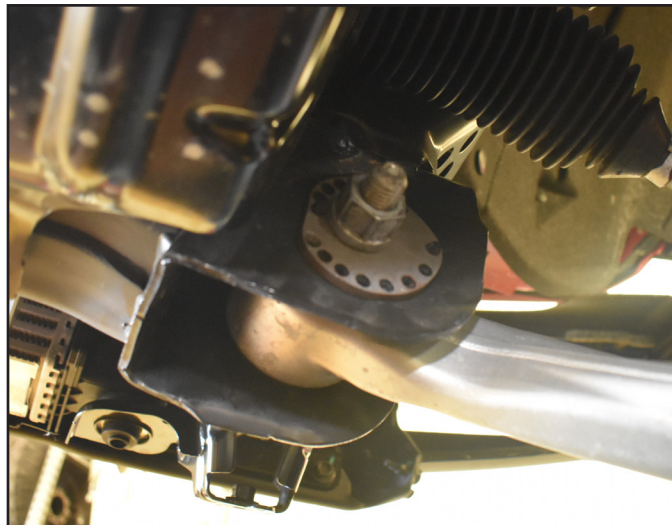


10. Install the washer and nut onto the cam bolt and snug up the hardware such that the bolt head / washer is snug against the cam plate **Figure 6**. The cam bolt / nut will be torqued on the ground under the weight of the vehicle.

**FIGURE 6A**



**FIGURE 6B**

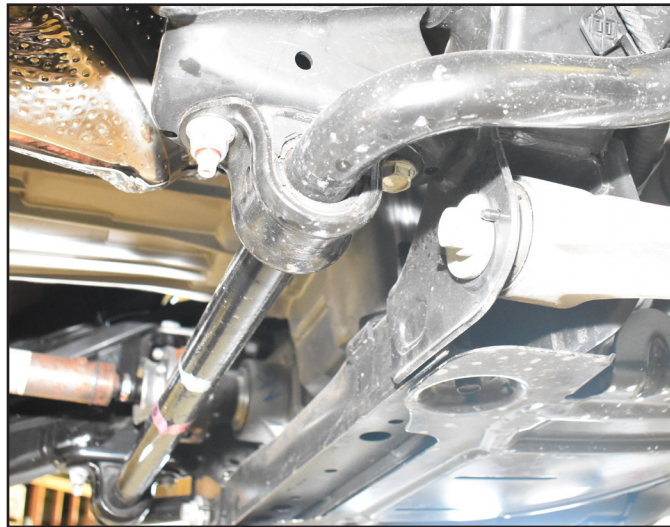


## **FINAL INSTALLATION**

11. Repeat the installation on the back cam bolt now. Note that the nuts must both be on the inner side of the control arm pockets, same as the OE position. The sway bar will be need to be removed from the frame in order to remove the rear cam bolt **Figure 7**.



**FIGURE 7**



12. Once both front and rear cam bolts are replaced, repeat installation on the opposite side of the vehicle.
13. Reinstall wheels and lower the vehicle to the ground.
14. Bounce the front of the vehicle to settle the suspension.
15. Torque the lower control arm cam bolts to 210 ft-lbs.
16. Check hardware after 500 miles.
17. If installing these cams with a suspension kit, a full alignment is required now.
18. **These cam styles are uncommon for a typical alignment shop. Once installed, to adjust the alignment the nuts must be loosened and the bolt / cam plate slid past the pins in the frame and adjusted to the new position. Although these are not as easy to initially adjust, these will provide a locked in position that will not allow the alignment to slip when used in offroad situations.**

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## **TIME TO HAVE SOME FUN**

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