F5301 Installation Instructions
2021-22 Ford Bronco 2 Door / 4 Door
Cam Alignment Lockout Plates

Read and understand all instructions and warnings prior to installation of product and operation of vehicle.

Zone Offroad Products 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. Minimum tool requirements include the following: Assorted metric and standard wrenches, hammer, hydraulic floor jack and a set of jack stands. See the "Special Tools Required" section for additional tools needed to complete this installation properly and safely.

» Product Safety Warning

Certain Zone 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. Zone Offroad Products 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.

» Technical Support

www.zoneoffroad.com may have additional information about this product including the latest instructions, videos, photos, etc.

Send an e-mail to ***tech-zone@ridefox.com*** detailing your issue for a quick response.

888.998.ZONE Call to speak directly with Zone tech support.

Difficulty Level

easy 1 (2) 3 4 5 difficult

Estimated installation: 1 hour

Special Tools Required

24mm Socket

21mm Wrench

Alignment Tool

Pry Bar

Hammer or Air Hammer

» 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 Zone Offroad Products. Always wear safety glasses when using power tools.
6. If installation is to be performed without a hoist, Zone Offroad Products 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.

F5301 Kit Contents

Qty	Part
4	Alignment Cam Plate - Nut Side
4	Alignment Cam Plate - Bolt Side

Pre-Installation Notes

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.

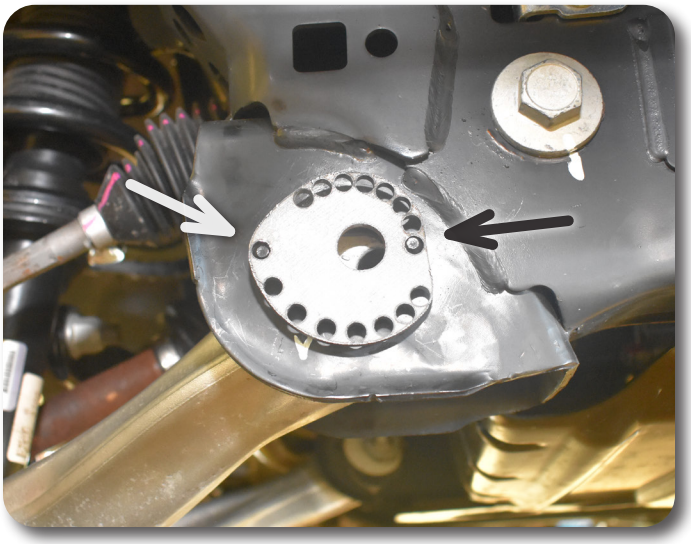

Figure A (Cams minimized inwards)

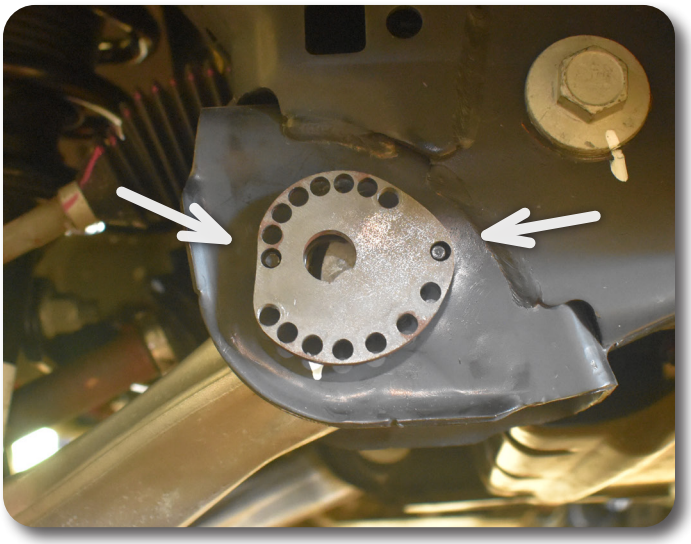

Figure B (Cams maximized outwards)

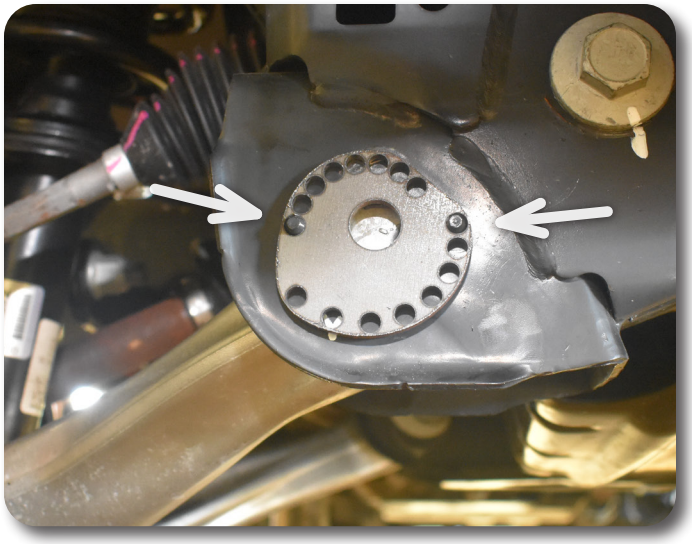

Figure B (Cams centered)

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 this measurement.

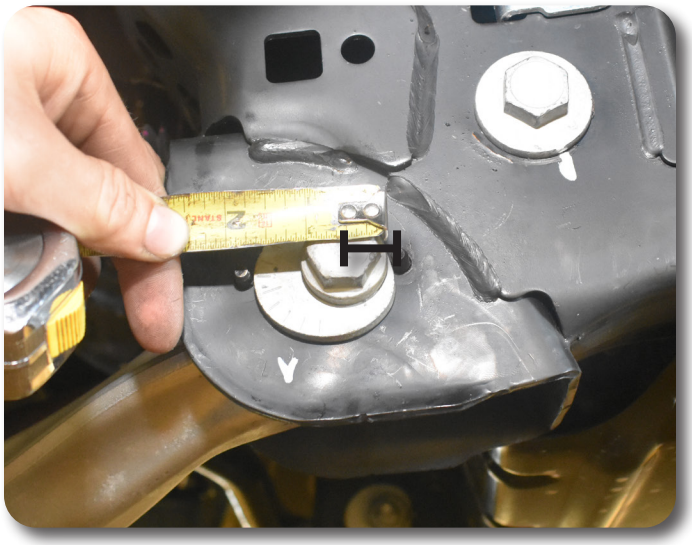

Figure 1

6. Remove the front cam bolt. Save the bolt and nut for later installation. Discard the OE cam washer Figure 2.

Step 5 Note

Record the measurements here:

Driver Front _____

Passenger Front_____

Driver Rear _____

Passenger Rear _____

Step 6 Note

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

Figure 2A

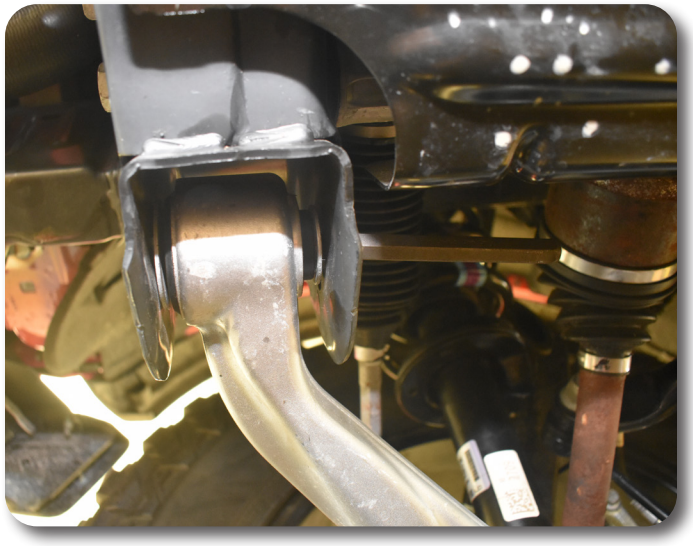

Figure 2B

Step 7 Note

Be careful to not hit the threads of the bolt when removing the OE cam washer.

7. Using a bench top vise and hammer or air hammer, remove the OE cam washer from OE bolt. The cam washer is pressed onto the knurling of the bolt. Discard the OE cam washer Figure 3.

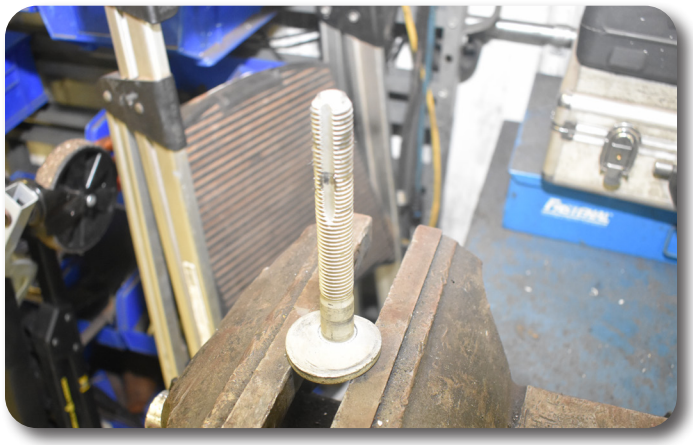

Figure 3A

Figure 3B

8. 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 4. 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.

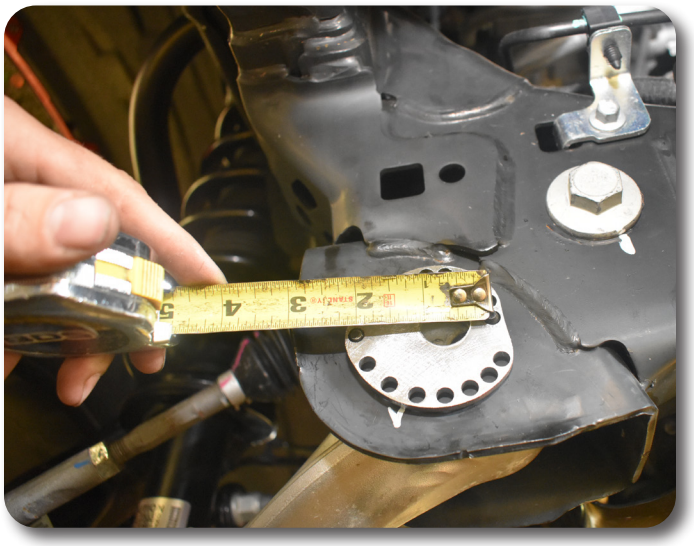

Figure 4

9. While holding the front cam in place, install the bolt head through the cam plate and into the lower control arm Figure 5.

Step 9 Note

The knurling may prevent the bolt from going all the way through the cam plate. Once tightened the bolt should draw through the cam plate.

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

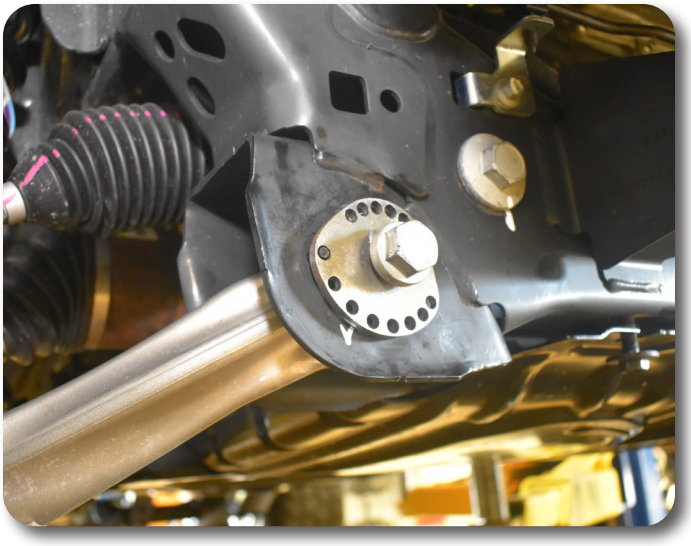

Figure 5A

Figure 5B

10. 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 6.

Step 10 Note

The nut side cam plate will have a smaller hole, same as the thread diameter.

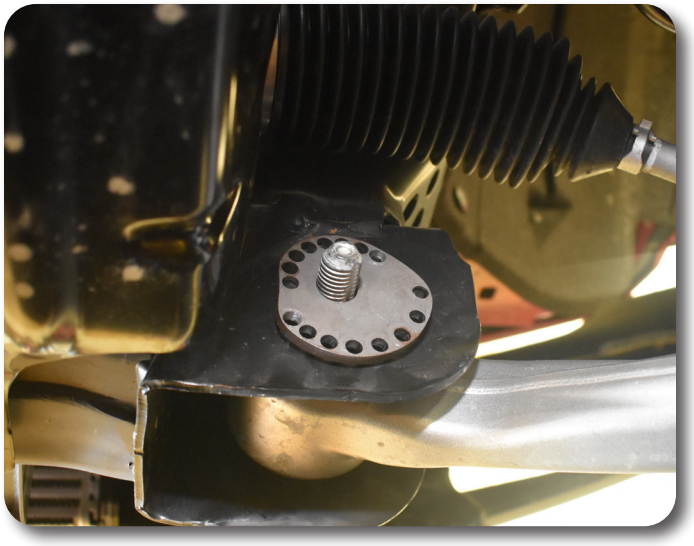

Figure 6

11. Install the nut onto the cam bolt and snug up the hardware such that the bolt head is snug against the cam plate and pulled through the knurling **Figure 7**. The cam bolt / nut will be torqued on the ground under the weight of the vehicle.

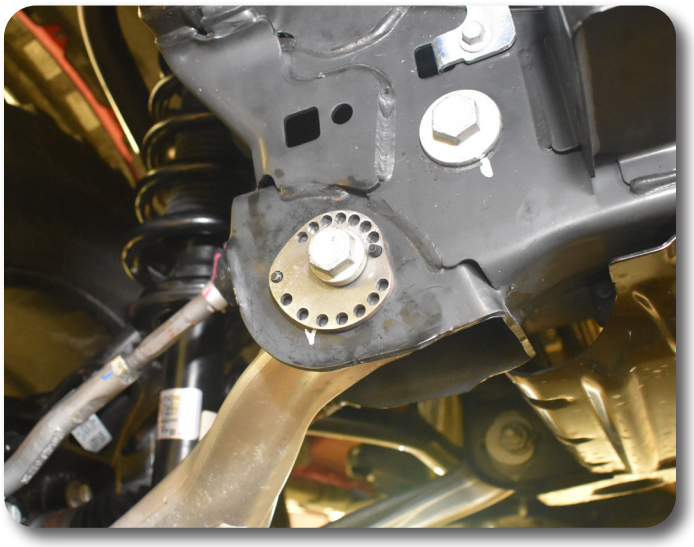

Figure 7A

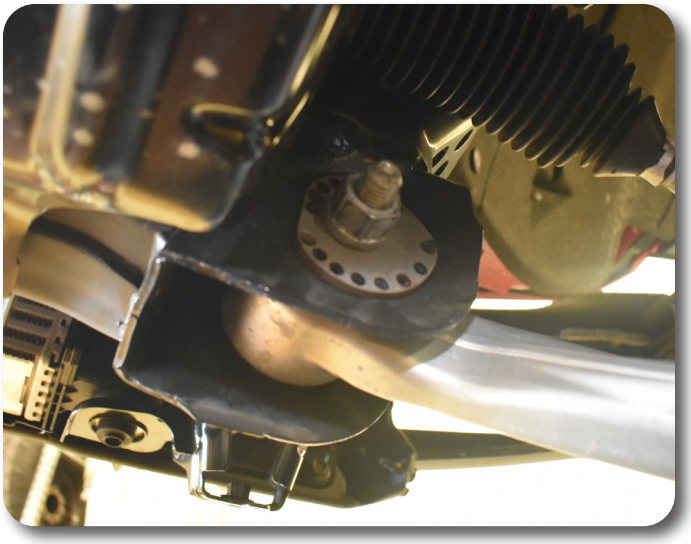

Figure 7B

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.

3. Perform head light check and adjustment.

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

Recommend Alignment Specifications

Caster

3.18˚ ± 0.60˚

Camber

+0.20˚ ± 0.50˚

Toe

+0.10˚ ± 0.15˚

Final Installation

12. 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 8.

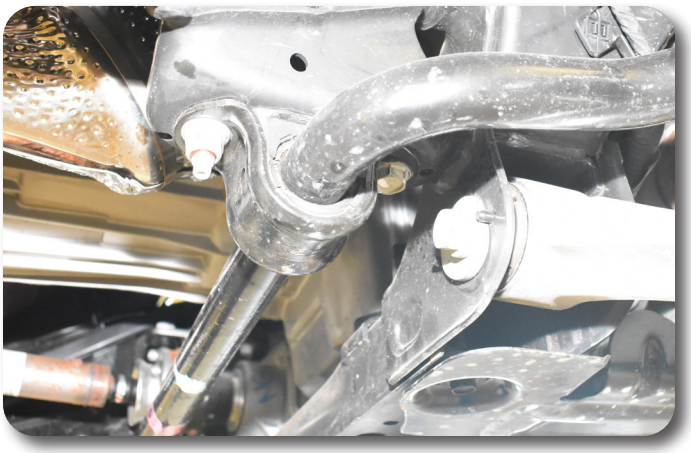

Figure 8

13. Once both front and rear cam bolts are replaced, repeat installation on the opposite side of the vehicle.
14. Reinstall wheels and lower the vehicle to the ground.
15. Bounce the front of the vehicle to settle the suspension.
16. Torque the lower control arm cam bolts to 210 ft-lbs.
17. Check hardware after 500 miles.
18. If installing these cams with a suspension kit, a full alignment is required now.
19. **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.**