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BD Cam Caster Adjustor

Ford Powerstroke 2005-2010 Models



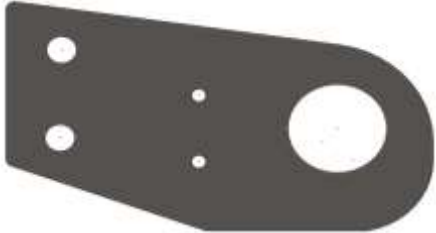









P/N# 1032100

PLEASE READ ALL INSTRUCTIONS BEFORE INSTALLATION
**** A certified welder will be required for welded connections ****

BD Engine Brake Inc.
Plant Address: 33541 MacLure Rd. Abbotsford, BC, Canada V2S 7W2
U.S. Shipping Address: 88-446 Harrison St, Sumas, WA 98295 U.S. Mailing Address: P.O. Box 231, Sumas, WA 98295
Phone: 604-853-6096 | Fax: 604-853-8749 | Internet: www.bd-power.com

KIT CONTENTS

Please check to make sure that you have all the parts listed below before installation

1302102		1302103		1302101	
					
<i>Cam Caster Adjustment</i>		<i>Retaining Plate Caster Adj.</i>		<i>Cam Holder Caster Adjustment</i>	
Qty: 4		Qty: 4		Qty: 4	
1302106	1453127	1302111	1302109	1302108	
					
<i>Bolt M6</i>	<i>M10 Washer</i>	<i>Nyloc Nut M10</i>	<i>Nut M18</i>	<i>Bolt M10</i>	
Qty: 8	Qty: 8	Qty: 8	Qty: 2	Qty: 8	
1302107		1302110	1302105	1302104	
					
<i>Bolt M18</i>		<i>Washer M18</i>	<i>Jig Caster Adjustment</i>	<i>Hole saw 1 3/8"</i>	
Qty: 2		Qty: 4	Qty: 1	Qty: 1	

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Introduction

Suspension lifts, level lifts or even larger tires can cause negative caster, resulting in potential wandering, wobble, pulling, stuff steering or even the inability to keep your truck on the road.

The BD Control Arm Caster adjustment kit allows for up to 6 degrees of adjustment and moves the nominal caster position forward from stock. This kit is intended for lifted trucks and will allow you to adjust caster back to stock or positive caster. If installed on a stock ride height truck the minimum caster adjustment will be approximately 4.5 degrees positive. Positive caster will help the steering wheel return to center and reduce wandering.

Installation should occur on a vehicle properly secured to prevent rolling. Always wear your eye and ear protection when using power tools and avoid inhaling any fumes when cleaning, prepping or welding.

For the ultimate in control of your caster you can install a secondary kit (PN# 1032101) on the top mounts as well.

Required Tools

- 18 mm Socket/Wrench
- (x2) 2" Open End Wrench
- 24 mm or 15/16" wrench
- 10.5 mm or 27/64" Drill Bit
- Hole Saw Arbor
- File/Flap Wheel
- 1/2" Drive Torque Wrench up to 250 ft/lbs
- 3/8" Drive Torque Wrench 10-100 ft/lbs
- 1/4" Drive Torque Wrench in in/lbs
- MIG or TIG Welder

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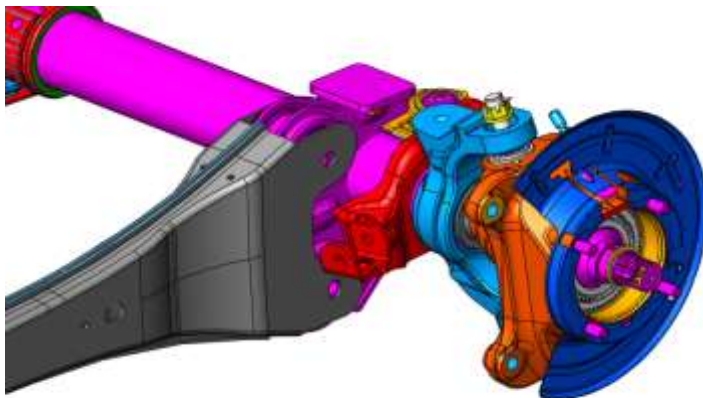
INSTALLATION

VEHICLE SHOULD BE SAFELY SECURED BEFORE INSTALLATION.

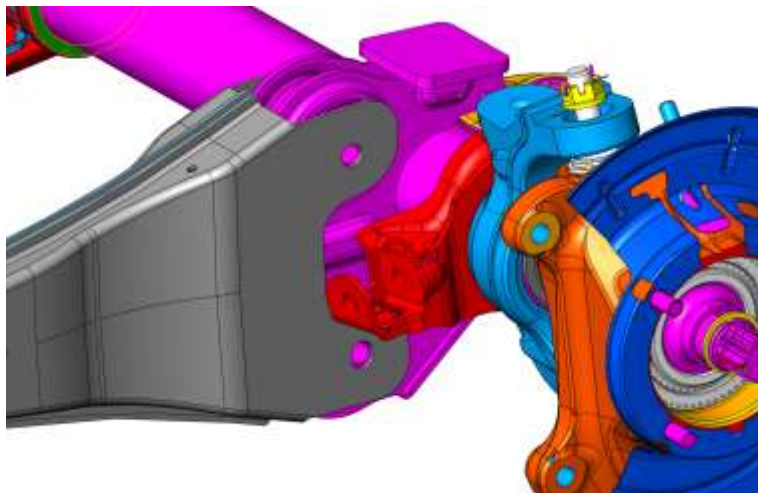
1. With the vehicle on a hoist, block the wheels and set the parking brake.

2. Remove the ABS wire support brackets from both radius arms.

NOTE Depending on the model there will be a push in clip or a 13mm bolt.



3. Remove the lower mounting bolts on the shock absorber from both sides of the vehicle. (18mm socket) then move the bottom of the shock out of the mount.



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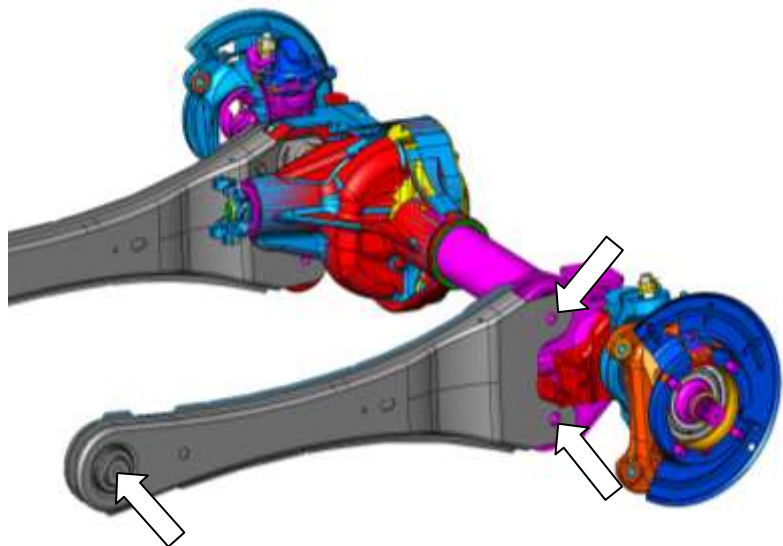
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4. Loosen the three mounting bolts located on both radius arms and remove the rear mounting bolt on the passenger side radius arm. (24mm or 15/16" wrench)

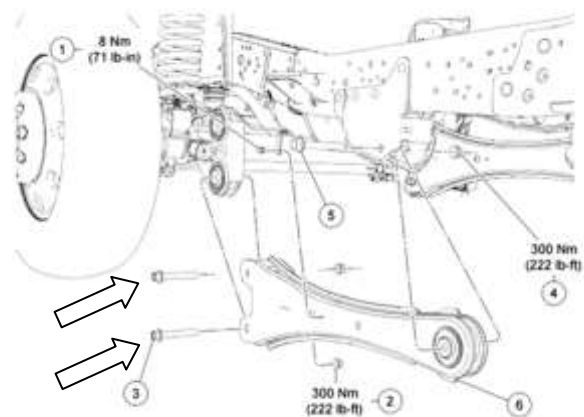
NOTE DS front upper mounting nut is welded to the radius arm.



5. Removing the front two bolts on the passenger side radius arm, will release the arm from the vehicle.

IMPORTANT The lower section of the shock will need to be moved away, to gain access to the bolts.

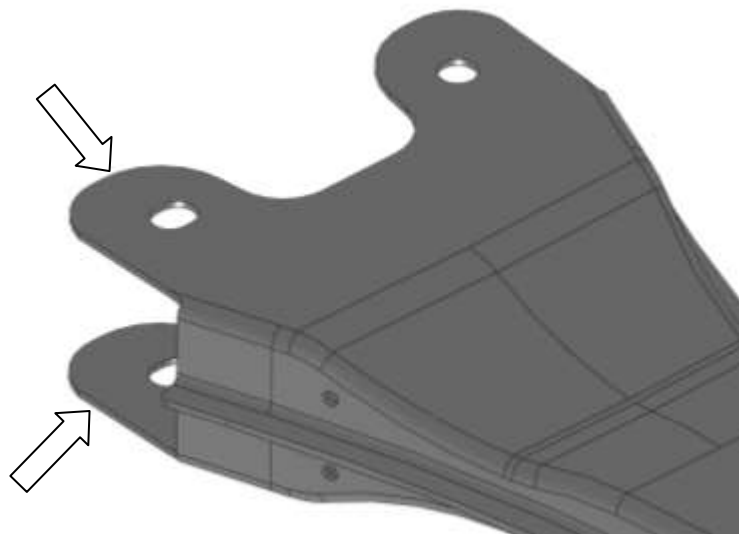
Refer to step 13 for driver side arm.



NOTE: *These steps will be required for both sides of both radius arms.*

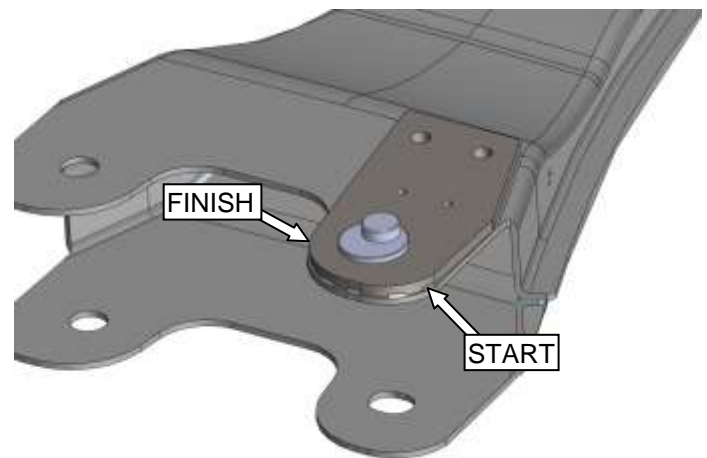
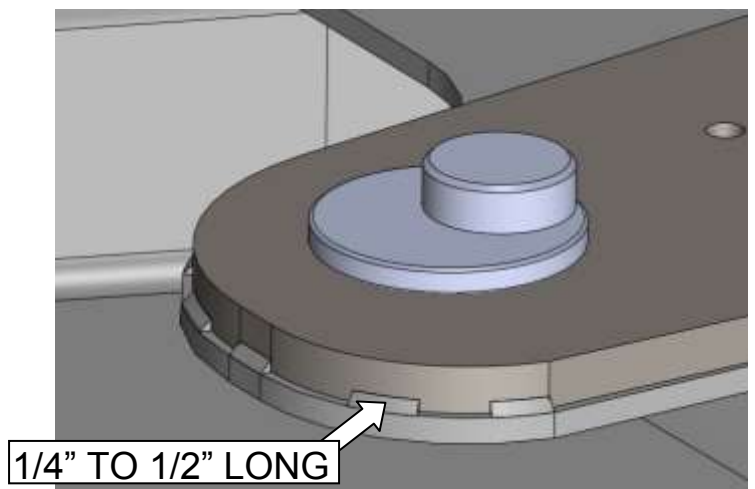
6. Clean & Prep the control arm on both sides.

IMPORTANT *Steps 6-9 are only to be done to the lower mounting holes only.*



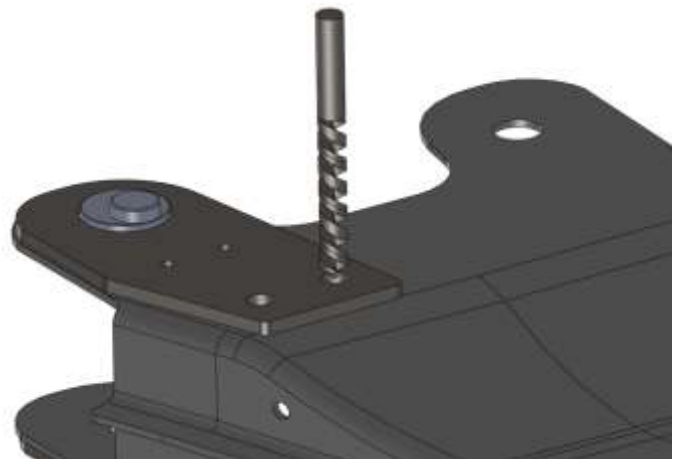
7. Insert the locating jig (1302105) into the radius arm and place the plate onto the locating jig, set the plate's position by ensuring the bottom edge of the plate is parallel with the edge of the radius arm & weld several 1/16" fillets x 1/4-1/2" long into place.

CAUTION Welding zinc plated metals will give off poisonous fumes. Wear a respirator and work in a well ventilated area.



8. Using the plate to locate the hole positions drill the radius arm with the recommended 10.5mm drill bit or a 27/64" drill bit will do as well.

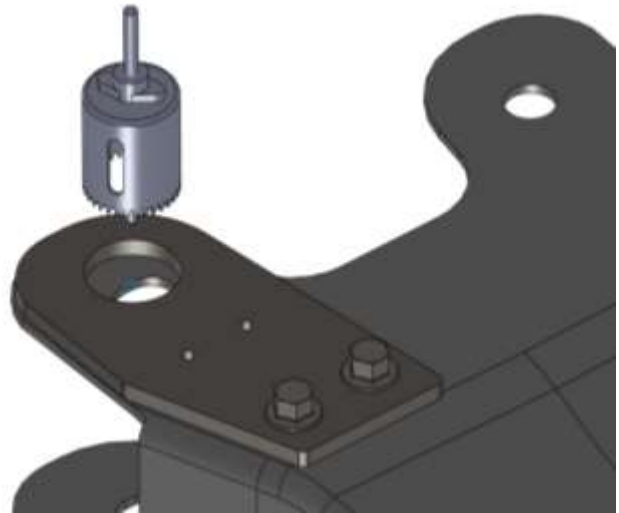
Once completed insert the supplied M10 bolts and nuts into the radius arm. (13mm wrench and socket) and torque to 23 ft/lbs.



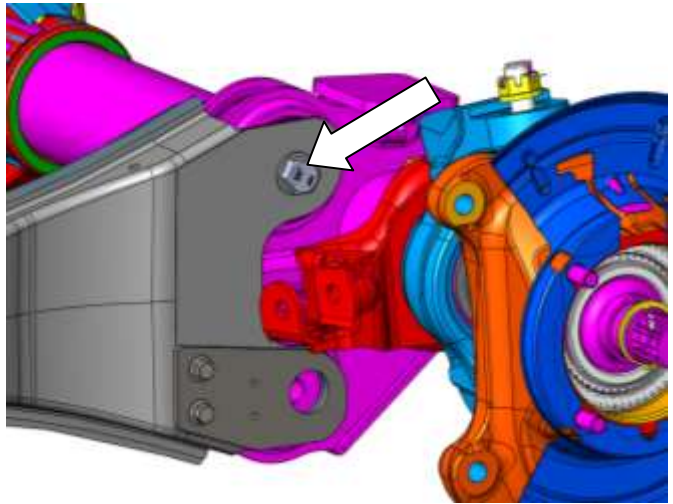
9. You can now remove the locating jig and enlarge the large hole with the supplied 1 3/8" hole saw.

Deburr the now larger hole with a file or flap wheel until the cam caster moves freely.

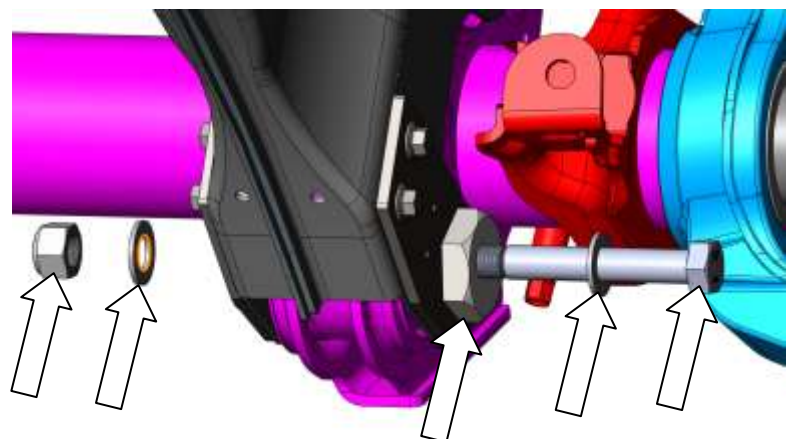
IMPORTANT Ensure to coat all bare metal with rust inhibitor ensuring the cam caster still moves freely.



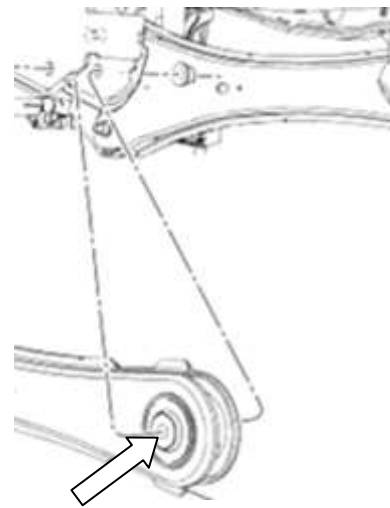
10. Reinstall the radius arm by installing the factory top bolt first.



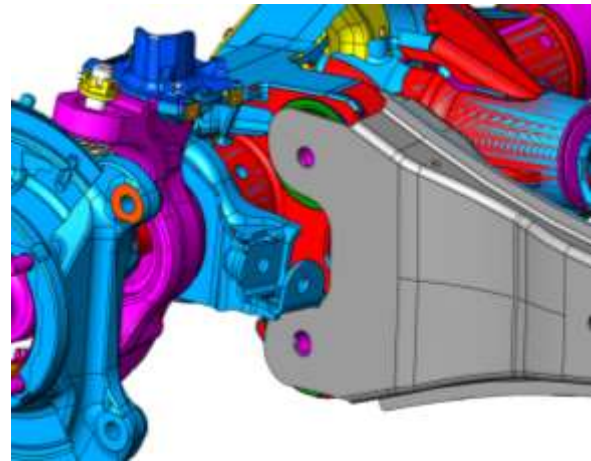
11. Install the supplied caster adjusters (1302101) into the lower connection using the supplied bolt (1302107), washers (1302110) and nut (1302109) do not completely tighten.



12. Install the rear factory mounting bolt do not completely tighten.

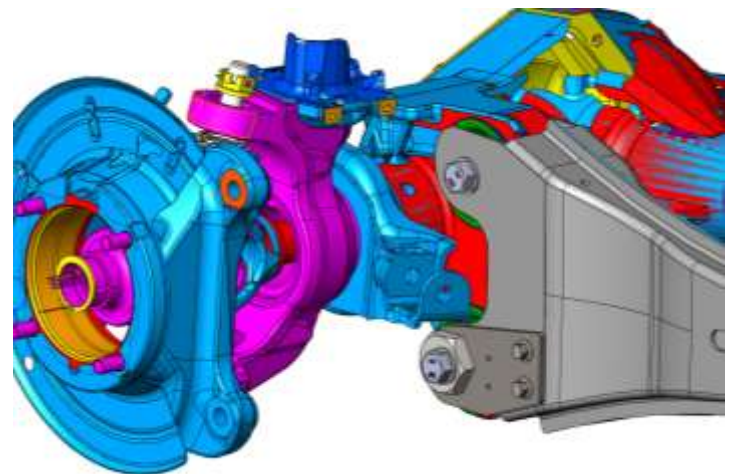


13. On the driver side remove the rear mounting bolt on the radius arm (24mm or 15/16" wrench). Then repeat the removal procedure following step 5.



14. Repeat the arm modifications on the driver side radius arm following steps 6,7,8 and 9.

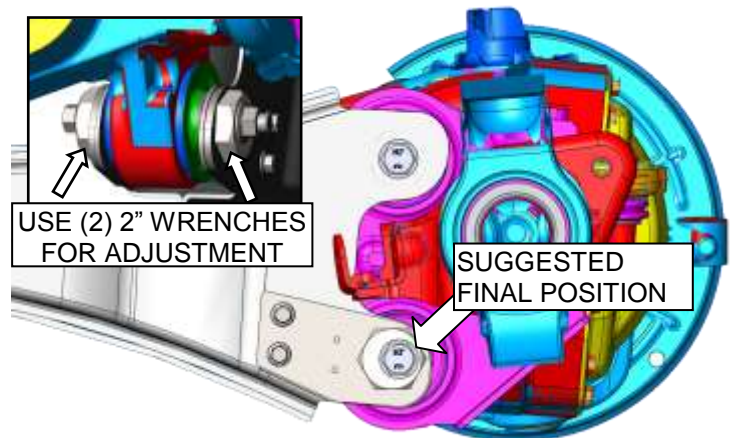
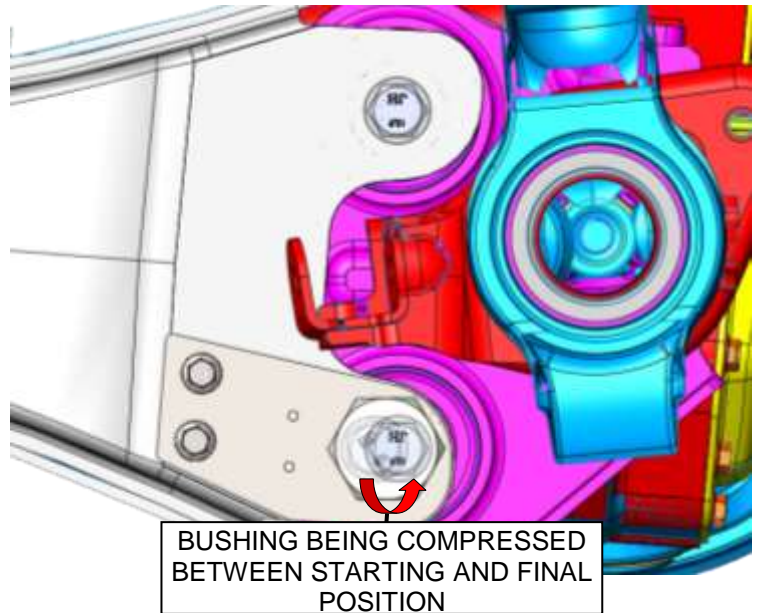
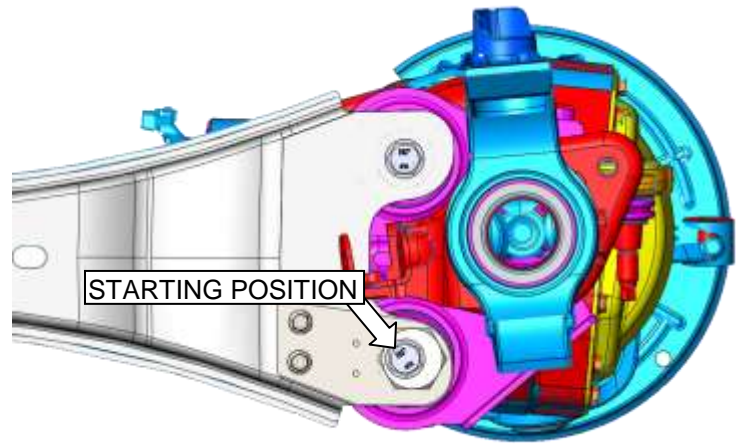
15. Reinstall the driver side radius arm following steps 10 to 11.



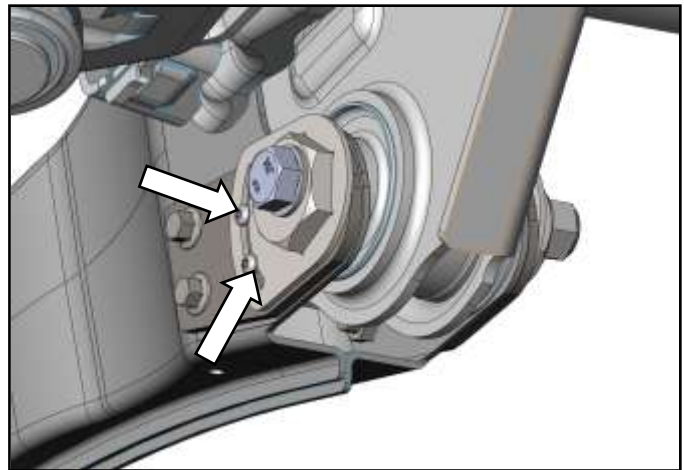
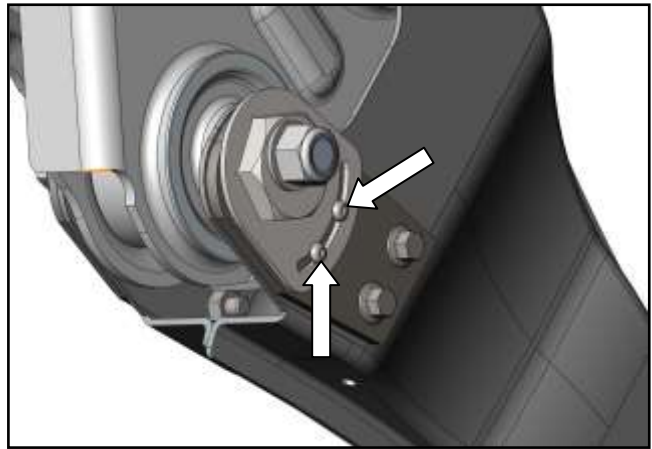
16. Now using two 2" box end wrenches rotate the adjustment cam until the bolt is at the most forward position on both DS/PS arms.

IMPORTANT The bushing has no resistance on it in the starting and final positions. However in all positions between the starting and final, the bushing is compressed and it is undesirable to leave it in those positions as the bushing will wear faster than expected.

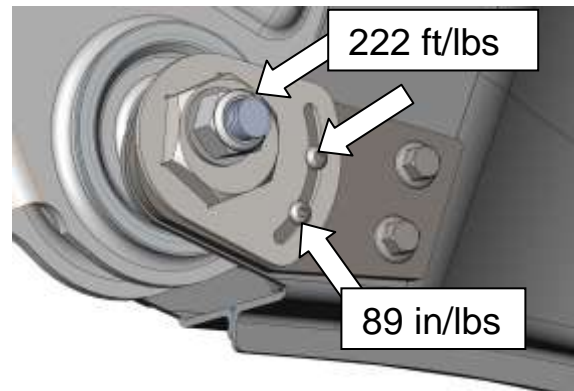
If you require greater adjustment we suggest the use of a secondary kit (P/N# 1032101) that can be installed on the top mounting position of the arm.



17. Install the lock plates (1302102) over the adjustment cams on each side of the arm and use the supplied lock plate bolts (1302106) to hold the plate down. Do both arms DS/PS and do not tighten completely.

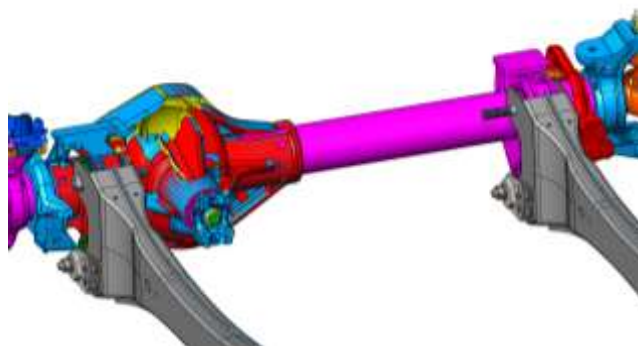


18. Adjust the adjustment cams so they are even on both sides and torque the lock plate bolts to 89 in/lbs. **Then torque all radius arm (M18) mounting bolts to 222ft/lbs on DS/PS.**



19. Reinstall the shock absorber lower bolt on the DS/PS and torque to 111 ft/lbs.

Reinstall ABS wire support brackets and torque to 13 ft/lbs.



The vehicle is now ready for a front end alignment. We suggest the vehicle be taken to an alignment shop for proper alignment.

The factory caster angle specification is positive 1.2°-2.5°.

If installed on a stock ride height vehicle, adjust for minimum caster attainable, this will be approximately 4.5°.

If the vehicle is lifted the suggested caster angle is 4.0°- 4.5° to improve stability but lower values may be used if desired.



DO NOT DRIVE THE VEHICLE WITHOUT COMPLETING A PROPER ALIGNMENT.