



Instruction # 7055

Cognito Motorsports, Inc., GM 2011-present 8-Lug truck Pitman/Idler Arm Support Kit

SKU# PISK3008

UTILITY PATENT US 7,475,891 B2

Introduction

- This application is for stock and lifted applications that use the factory steering center link in the factory location. Aftermarket steering stabilizers may interfere with this system.
- Installation requires a qualified mechanic.
- Read instructions carefully and study the pictures (if included) before attempting installation.
- Check the parts and any hardware packages against the parts list to assure that your kit is complete.
- Tools needed: 46mm end wrench or 18" adjustable wrench, 21mm open end wrench, 24mm open end wrench, 30mm open end wrench qty. 2 of 15/16" box end wrench, 15mm and 21mm socket, 24mm deep socket, 1" socket or box end wrench
- If using a factory or aftermarket steering stabilizer be sure to cycle the steering before driving to ensure clearance at the steering stabilizer shock area.

Parts List

- 8257 Pitman arm bracket for traditional GM centerlink.
- 8272 Pitman arm bracket for new GM centerlink with isolator
- 8258 Idler arm bracket
- (2) 16mm lock washer
- (2) 7/8"-5/8"-18 rod ends
- (4) 5/8" jam nuts
- (2) Coarse thread shank nuts 16mmX2.0 (normally gold)
- Thread locker



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Installation Instructions

1. Remove the shroud and skid plate shown in Figure 1 with a 15mm socket to access the pitman and idler arms and set aside for re-installation later.



Figure 1: shroud and skid plate

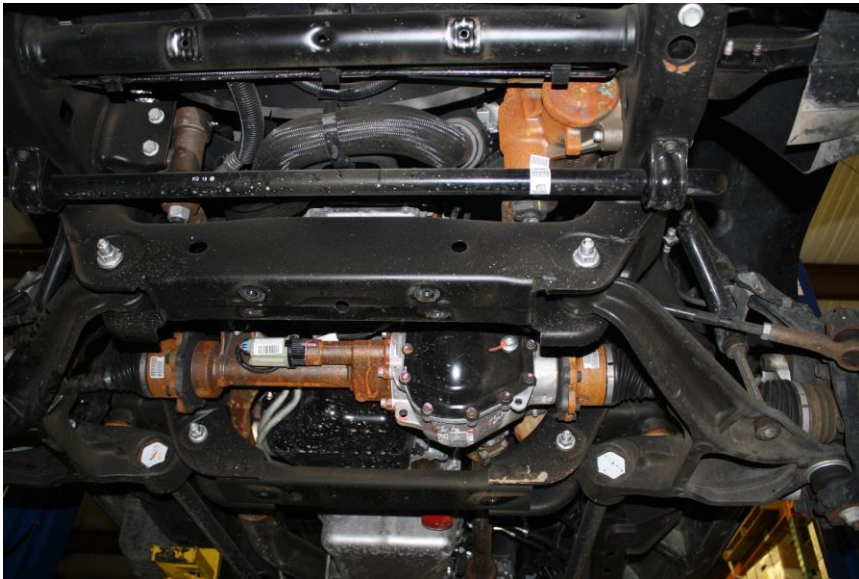


Figure 2: shroud and skid plate removed

2. unbolt the sway bar mounting clamps from the frame with 10mm socket and let the sway bar hang from the end links. see figures 3 and 4
3. Unscrew the factory lock nuts that hold the drag link to the pitman and idler arms, using a 24mm deep socket, and discard them.

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Figure 3: unbolt sway bar from frame

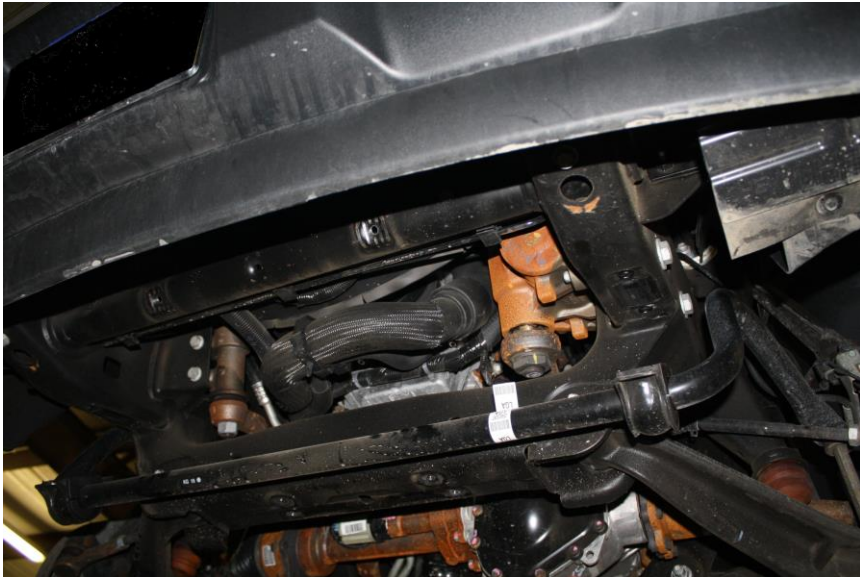


Figure 4: sway bar hanging

4. Unscrew the large nut holding the pitman arm to the steering box using a 46mm open end wrench, or an 18" adjustable wrench. Figure 5
5. unbolt the steering box from the frame by removing the 3 bolts using a 21mm socket as shown in figure 6
6. use a screw jack to prop the steering box up away from the cross member as shown in figure 7
7. Loosen the nut holding the idler arm to the idler arm pivot with a 30mm end wrench. Then unbolt the idler pivot from the frame and pry it out of the mounting pocket as shown in figure 8.

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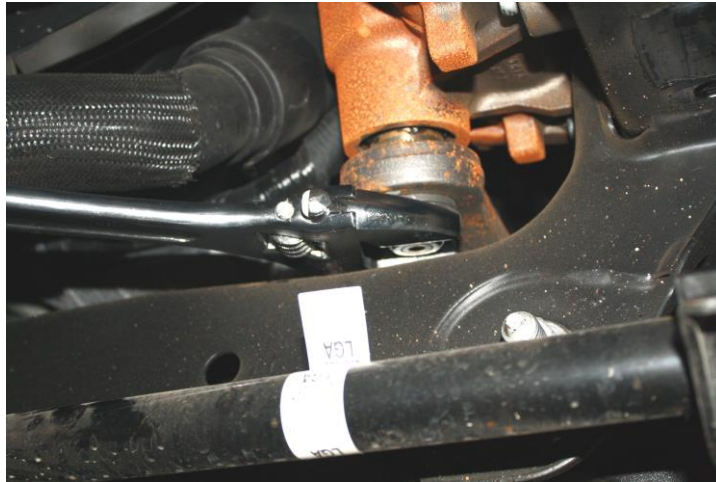


Figure 5: remove large nut and washer holding pitman arm onto steering box



Figure 6: unbolt steering box from frame



Figure 7: prop the steering box up away from the cross member

8. there are 2 pitman arm support brackets included in this kit, as of June 20th, 2011. On some of the 2011 and newer GM trucks, there is a new design center link that has a large rubber bushing in the center link where the pitman arm attaches to it. If this vehicle has the new center link, you

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must use pitman support bracket #8272. If this vehicle has the traditionally designed center link, use the pitman arm support bracket #8257.

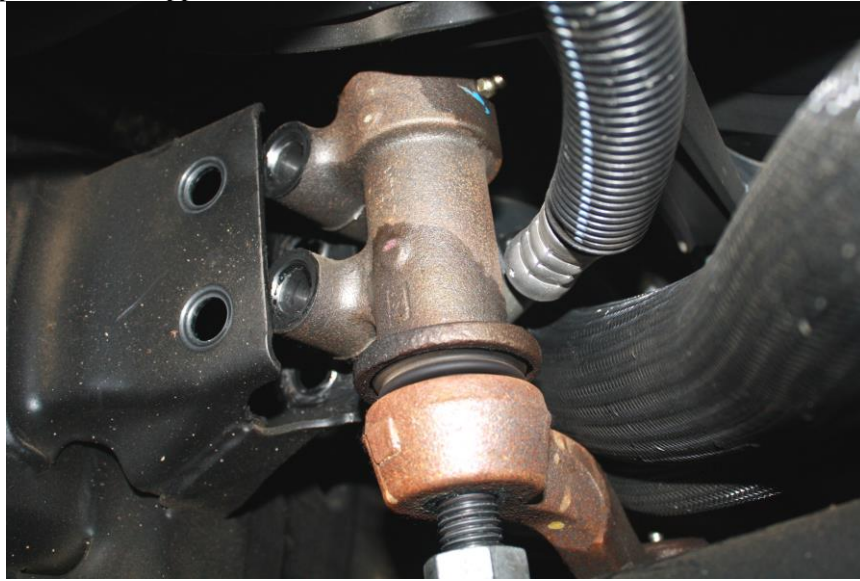


Figure 8: idler arm and idler pivot

9. to aid in moving the idler arm and idler pivot up, the passenger side tie rod can be removed from the spindle to allow more flexibility. To do this, remove the nut holding the outer tie rod end to the spindle, then while prying the tie rod away from the spindle, hit the spindle with a hammer in the position as shown in figure 9.



Figure 9: remove passenger tie rod from spindle

10. Apply a small amount of thread locker on all of the threads on both of the 5/8"x 7/8" rod ends, then thread one 5/8" jam nut all the way on to both of the rod ends. Then insert the rod end through the 5/8" diameter hole on both the pitman and idler arm brackets as shown in the layout

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picture on page 1. Now thread a second jam nut on to both rod ends, but do not tighten at this time.

11. Insert one lock washer over each of the drag link studs, and then install the pitman and idler arm brackets on to the pivot ends, at the same time place the rod end which is connected to the Cognito Motorsports brackets over the drag link studs so that the lock washer is in between the Cognito rod end and the drag link as shown in figure 10. Apply a small amount of thread locker on the threads of the shank nuts and insert a shank nut on to each of the drag link studs, passing through the rod ends and locking against the lock washer and drag link as shown in Figure 10. future torque on the shank nuts is 70 ft/lb.

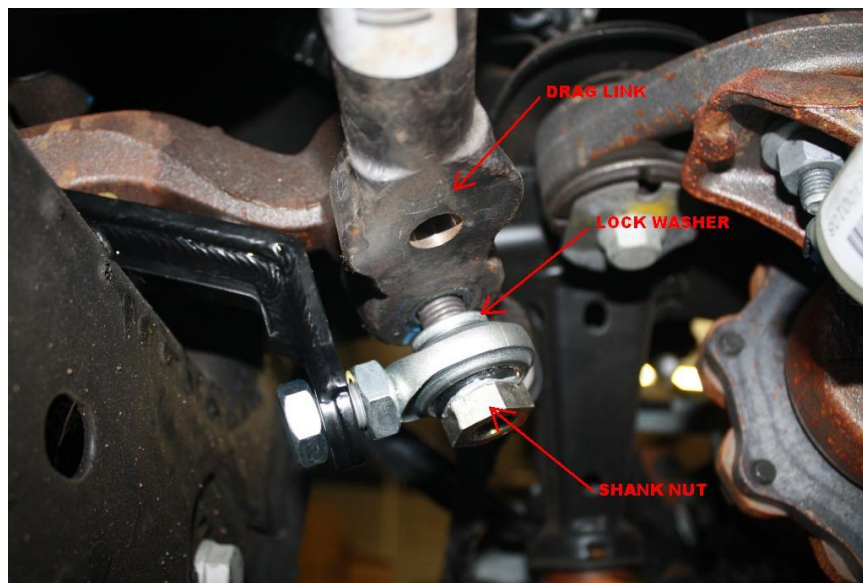


Figure 10: assembly

12. Re-install the factory lock nut on the pivot stud of the idler arm but do not tighten yet, replace the idler pivot into the mounting pocket and refasten and tighten the 2 bolts to 90 ft/lbs. seen in figure 11. Re-install the factory lock washer and nut on the pivot shaft of the steering box, Do not tighten yet. see figure 12
13. Refasten the steering box to the frame rails with the 3 factory bolts, torque to 70 ft/lbs.
14. If the passenger side tie rod was previously removed from the spindle, reinstall now and torque nut to 50 ft/lb.

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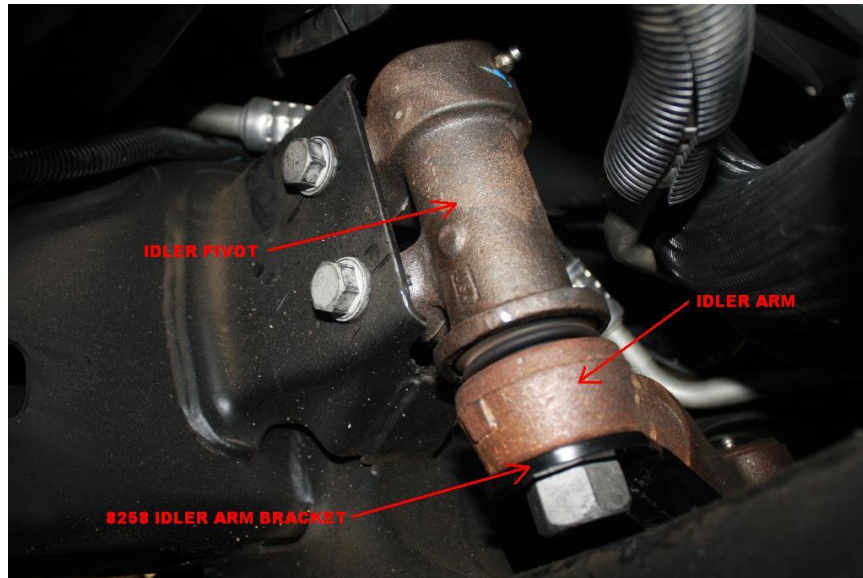


Figure 11: assembly

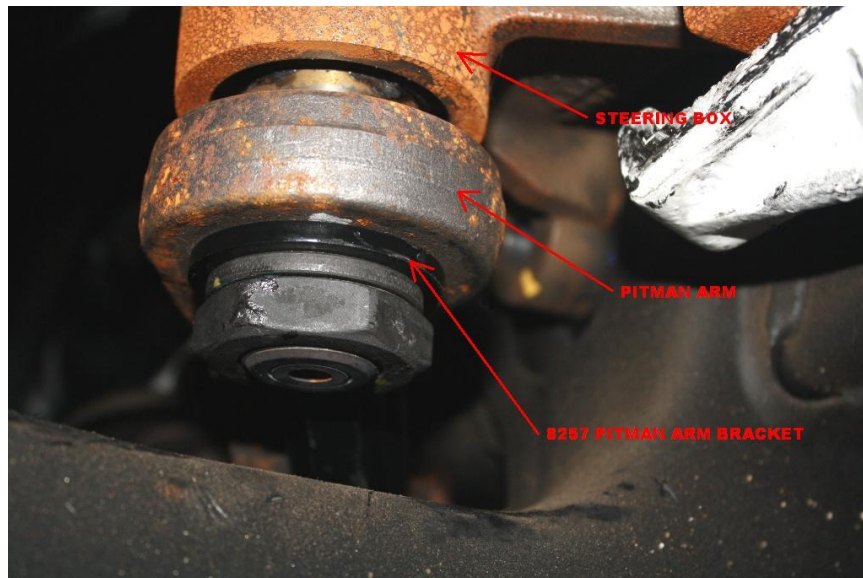


Figure 12: assembly

15. Tighten shank nuts with 1" socket to 70 ft/lbs. Now jam each support bracket in between the jam nuts with both 15/16" boxed end wrenches, to 60 ft-lb. now tighten the factory nuts shown in figures 11 and 12 on the idler arm pivot to 70 ft/lb and the pitman arm to 120 ft/lb, these 2 will only permit an open end wrench due to space constraints, so get them really tight by hand with the wrenches.
16. If using a factory or aftermarket steering stabilizer be sure to cycle the steering before driving to insure clearance at the steering stabilizer shock area.
17. Reinstall the skid plate and fan shroud, tightening fasteners to 40 ft/lbs. a toe setting alignment may be needed.

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Cognito Motorsports

Limited Lifetime Warranty

Cognito Motorsports warrants, to the original retail purchaser, that its suspension products are free from defects in workmanship and material for as long as the purchaser owns the vehicle on which the product was originally installed. Cognito Motorsports does not warrant the product for finish, alterations, modifications, and/or original installation contrary to specifications of Cognito Motorsports. Cognito Motorsports suspension products are not designed nor intended to be installed on vehicles used in race applications or for racing purposes or for similar activities involving abnormal abuse other than the vehicle was originally designed to handle or endure. (A "RACE" is defined as any contest between two or more vehicles, and/or contest of one or more vehicle against the clock, whether or not such contest is for a prize.)

This warranty is for a one-time replacement of each Cognito Motorsports product and does not cover any part that Cognito Motorsports has previously replaced under this warranty. This warranty does not include coverage for police or taxi vehicles, race vehicles, or vehicles used for government or commercial purposes. Also excluded from this warrant are sales outside of the United States of America. Alterations to the finish of the parts including but not limited to painting, powder coating, plating, and/or welding will void all warranties. Cognito Motorsports obligation under this warranty is limited to the repair or replacement, at Cognito Motorsports option of the defective product. Any and all costs of removal, installation or re-installation, freight charges, incidental or consequential damages are expressly excluded from this warranty.

This warranty excludes the following items: bushings, bumpstops, tie-rod ends, limiting straps, and heim joints. These parts are subject to wear and are not considered defective when worn. They are warranted for 60 days of purchase for defects in workmanship. Cognito Motorsports suspension components must be installed as a complete system. Any substitutions or exemptions of required components will immediately void the warranty. Some finish damage may happen to parts during shipping and is not covered under warranty. This warranty shall not apply to any product that had been subject to accident, negligence, alteration, abuse, or misuse. Cognito Motorsports does not warrant products not manufactured by Cognito Motorsports. Cognito Motorsports reserves the right to supersede, discontinue, or change the design, finish, part number and/or application of parts when deemed necessary by Cognito Motorsports without written notice, and in the sole and absolute discretion of Cognito Motorsports.

Warranty Claims

All warranty claims must be submitted through the original company of purchase. All claims must be shipped back to the original company of purchase with an approved RMA number listed as a reference on the shipping label and clearly printed on two opposing sides of the package(s); product in question must be inspected by Cognito Motorsports before replacement parts are shipped out.

Product Consumer Safety and Warning

The installation of this kit will modify the suspension of your vehicle and may cause it to handle significantly different than a factory equipped vehicle. Installing larger tires with modified suspension and increased ground clearance will significantly alter the handling characteristics of the vehicle, and may result in increased braking distances as well as changes in vehicle maneuverability and handling compared to the factory equipped vehicle. As with any vehicle, extreme caution and care must be used to prevent loss of control or roll-over during sharp turns or abrupt maneuvers. Always wear seat belts and drive safely, recognizing the reduced speeds and specialized driving techniques is required.

This suspension system will not strengthen nor reinforce the stock frame of the vehicle, nor will it increase rollover protection. It is necessary to periodically inspect all suspension and drive train components for tightness of fit or any damage. Installation of these parts will modify the height of the vehicle and will raise the center of gravity. Altered height modifications and off-road operation may increase your vehicle's susceptibility to roll over conditions and may cause serious injury or death. Many states regulate the height modification to each vehicle. Check the laws in your state for exact specifications. Height modifications may affect the reaction, ride, handling, and wear factor of your vehicle's components.

Failure to drive this vehicle safely may result in injury or death! Do not drive this vehicle unless you are familiar with its unique handling characteristics and are confident of your ability to maintain control under all driving conditions. Some modifications and combinations of modifications are not recommended, unsafe, and may not be permitted in your state. Consult your vehicle owner's manual, the instructions accompanying this product, and your state laws before undertaking these modifications. The owner of the modified vehicle and the qualified mechanic required to install this product are responsible for the legality and safety of the vehicle being modified.