2021 FORD F150

6” LIFT KIT

CAUTION: MAKE SURE YOU HAVE THE CORRECT LIFT FOR YOUR VEHICLE:
Double check the Year, Make, Model, Lift Height and KIT Part Numbers.

Prior to beginning the installation, OPEN the boxes and CHECK the included components compared to the parts breakdown. Check all parts and hardware in the box with the parts list below. Be sure you have all needed parts and know where they install.

If you find a packaging error, contact ENTHUZE directly. Do not contact the dealer where the system was originally purchased. You will need the control number from each box when calling; this number is located at the bottom of the part number label and to the right of the bar code.

THANK YOU FOR CHOOSING ENTHUZE FOR ALL YOUR SUSPENSION NEEDS!!

Read And Understand All Instructions And Warnings Prior To Installation Of System AND Operation Of Vehicle.

INTRODUCTION BEFORE INSTALLATION...

Installation requires a professional mechanic. In addition to these instructions, professional knowledge of disassembly / reassembly procedures and post installation checks must be known.

PRIOR to beginning, inspect the vehicles steering, driveline, and brake systems, paying close attention to the suspension link arms and bushings, sway bars and bushings, tie rod ends, pitman arm, idler arm, ball joints and wheel bearings. Also check the steering sector-to-frame and all suspension-to-frame attaching points for stress cracks. The overall vehicle must be in excellent working condition; repair or replace all worn parts.
Read instructions several times before starting.
Read each step completely as you go.

Be sure you have all needed parts and know where they install...

⚠ NOTES:

- Recommended wheel is 20" diameter not exceeding 9" wide with 5" of backspacing.
- Do NOT install this suspension system in conjunction with any other type of aftermarket or fabricated components to gain additional suspension height.
- Do not fabricate any components to gain additional suspension height.
- Prior to drilling and/or cutting, check behind the surface being worked on for any wires, lines, or hoses that could be damaged. Prep all cutting surfaces by removing all debris and frame coatings.
- After drilling and/or cutting, file smooth any burrs and sharp edges.
- Prior to operating a torch or saw, protect any heat-sensitive components located in the immediate area by covering them with a water-saturated cloth. Most undercoating are flammable but can be extinguished using a water-filled spray bottle. Have a spray bottle and an ABC rated fire extinguisher on hand.
- Paint or undercoat all exposed metal surfaces.
- Prior to attaching components, be sure all mating surfaces are free of grit, grime, grease, undercoating, etc.
- Front end alignment is necessary.
- Tool and Wrench/Socket size is given in brackets [ ] after each appropriate step.
- A foot-pound torque reading is given in parenthesis ( ) after each appropriate fastener.
- Always wear safety glasses when using power tools.
- A factory service manual should be on hand for reference.
- 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 stance.

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 components 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.

Perform head light check and adjustment.

⚠WARNING: It is the ultimate buyer's responsibility to have all bolts / nuts checked for tightness after the first 100 miles and then every 1000 miles. The steering, suspension and driveline systems, plus wheel alignment should be inspected by a qualified professional mechanic at least every 3000 miles.

TIRES & WHEELS...

This kit was developed using a 35 x 12.50 x 20 tire and a 20 x 9 wheel.
Any larger or wider tire & wheel combination other than listed may require vehicle trimming.

⚠NOTE: ALL tire & wheel combinations should be test fit prior to installation. Some minor trimming may be required.

FRONT DISASSEMBLY AND INSTALLATION

Save all factory components and hardware for reuse, unless noted.

BATTERY

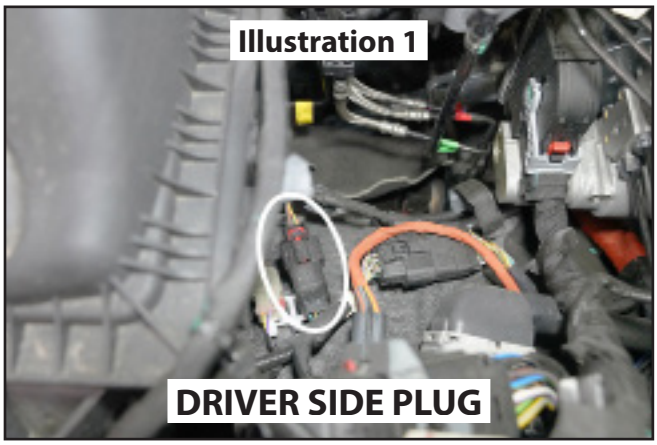
1. Disconnect the battery.

HUB ASSEMBLY

2. Under the hood on both the driver and passenger side, the hub assembly will need to be unplugged. These plugs are black with red safety lock clips.

3. [Illustration 1] On the driver side, the plug is located behind the air cleaner box and is clipped to the inner fender liner.

4. [Illustration 2] The passenger side plug is behind the battery and is clipped to the fuse box.



5. Once unplugged, the wires will need to be unclipped and from the retainers and pulled out toward the knuckle to allow the knuckle assembly to be removed from the vehicle in a later step.

RAISING VEHICLE

6. Chock rear tires and place transmission in neutral.

7. Raise the front of the vehicle with a jack and secure a jack stand beneath each frame rail. Ease the frame down onto the stands, place transmission in park for automatic transmissions and low gear for manual.

8. Remove the front tires and wheels.

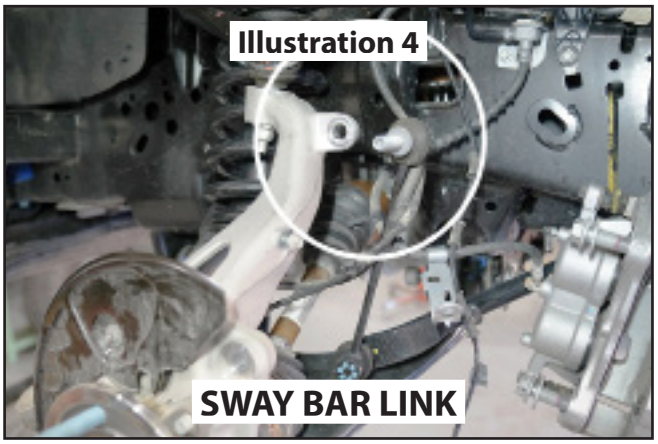
SPLASH SHIELD(S)

9. [Illustration 3] Remove the factory splash shield(s).

SWAY BAR

10. [Illustration 4] Unbolt the sway bar links from the sway bar body and the knuckle. [18mm]

11. [Illustration 5] Mark the orientation of the sway bar body then unbolt the sway bar body from the frame. [15mm]

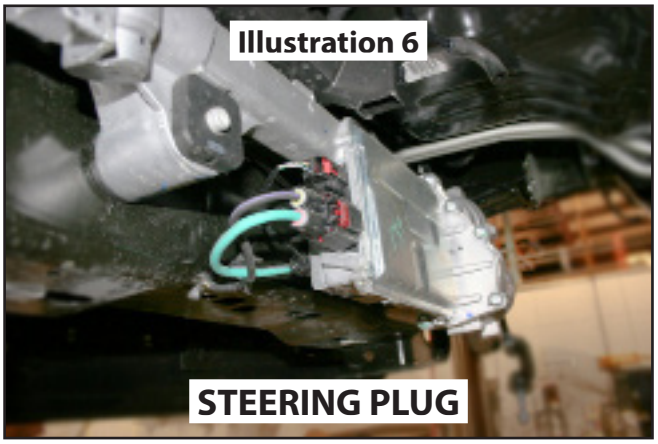


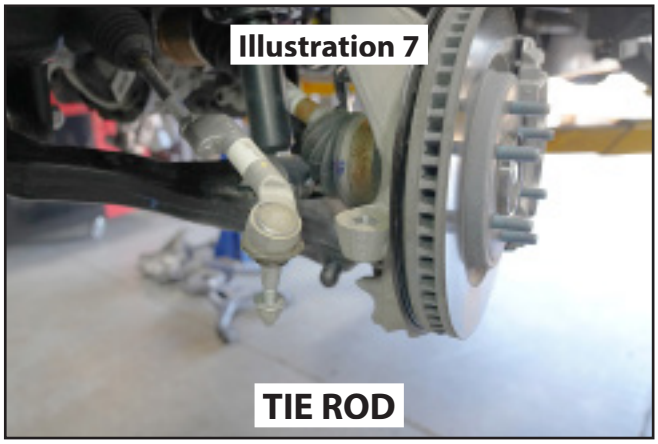
STEERING

11. [Illustration 6] Unplug the electronic power steering plugs on the front of the steering assembly by the front differential. This must be done before installation begins.

12. Remove the nut from the tie rod. [21mm]

13. [Illustration 7] Disconnect the tie rod from the knuckle.



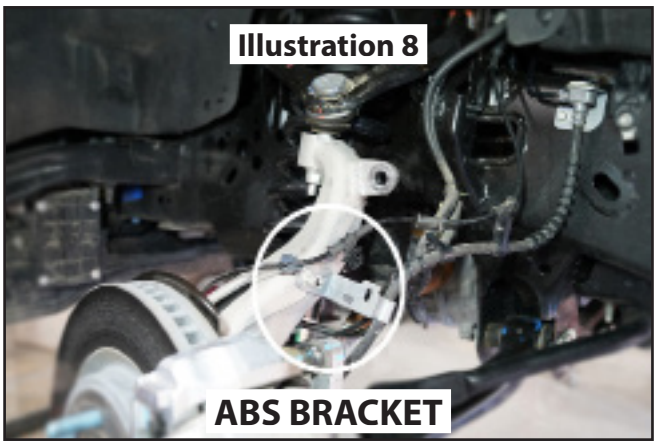


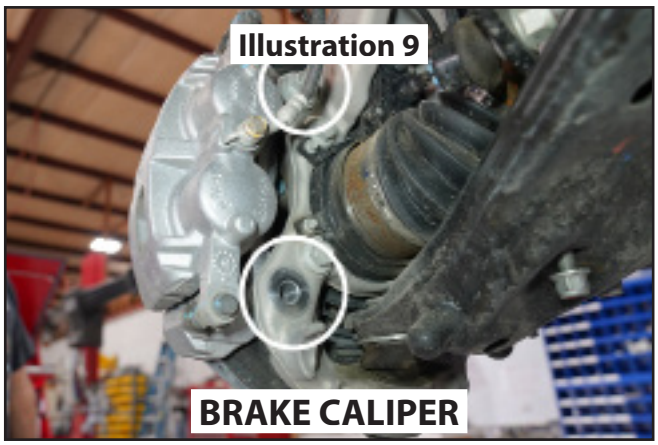
BRAKES

14. [Illustration 8] Unbolt the ABS wire bracket from the knuckle. [10mm]

15. [Illustration 9] Unbolt the brake caliper and hang out of the way. DO NOT LET CALIPER HANG FROM BRAKE LINES. [21mm]

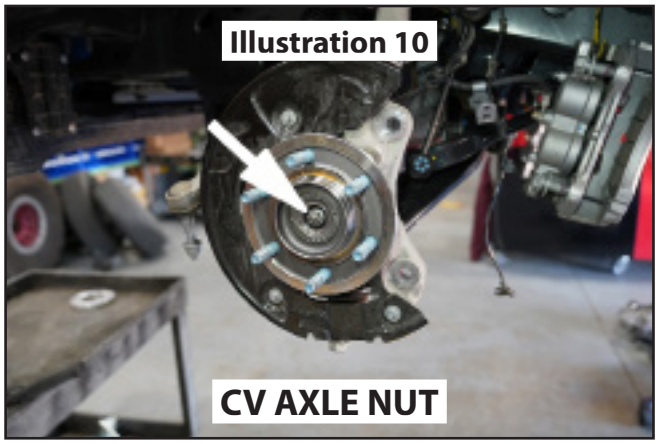
16. Remove the brake rotor. [T30]





CV AXLE

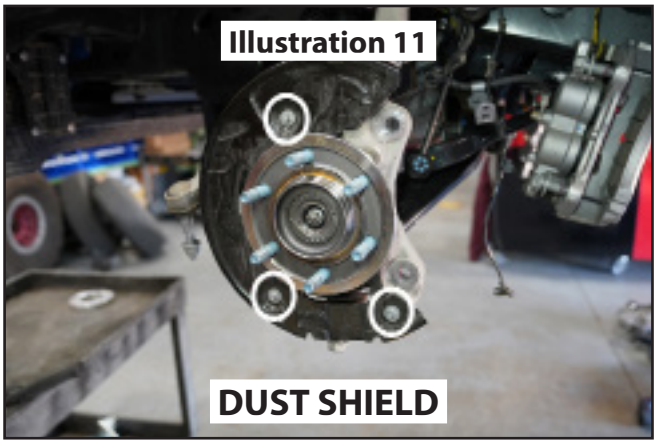
17. [Illustration 10] Remove the axle nut dust cap then remove the axle nut. [15mm]

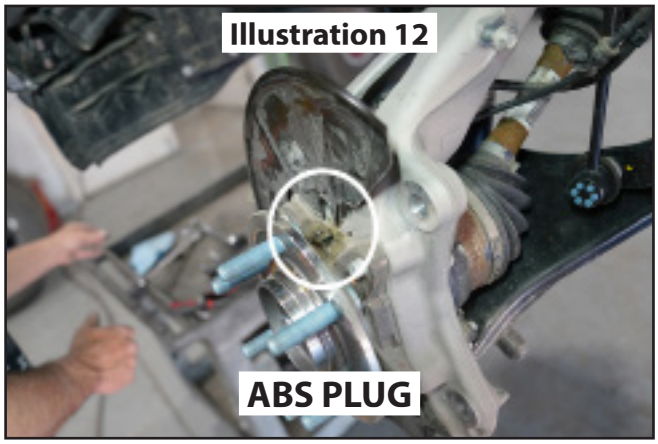


ABS

18. [Illustration 11] Remove the brake dust shield. [8mm]

19. [Illustration 12] Unbolt the ABS sensor from the knuckle. [5mm allen]

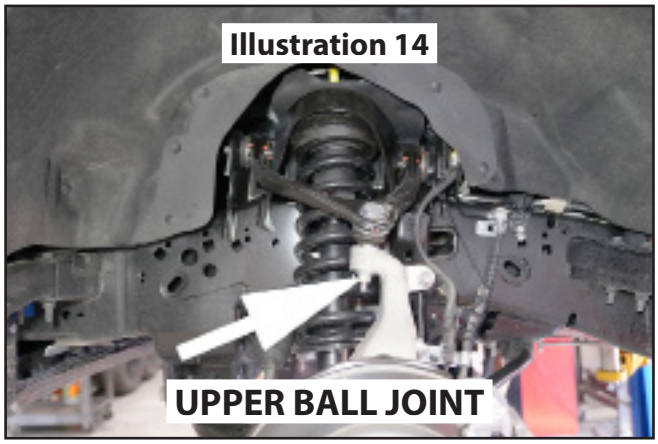


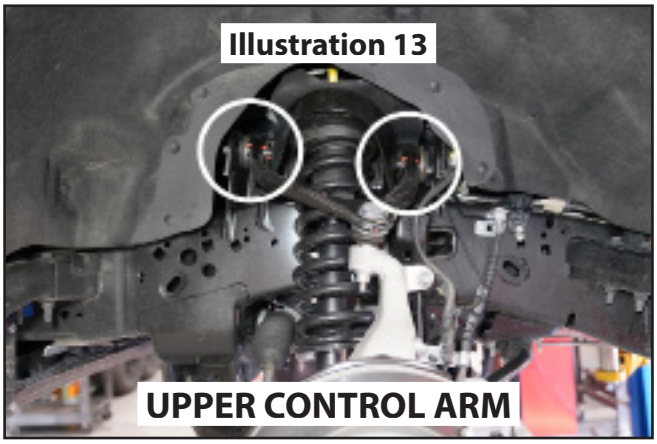


UPPER CONTROL ARM

20. [Illustration 13] Loosen but do not remove the bolts securing the upper control arm to the frame. [18mm, 21mm]

21. [Illustration 14] Remove the upper ball joint nut. [18mm]





KNUCKLE

22. [Illustration 15] Double check the everything has been disconnected from the knuckle except for the lower ball joint nut. Remove the lower ball joint nut and remove the knuckle and hub assembly from the vehicle. [21mm]

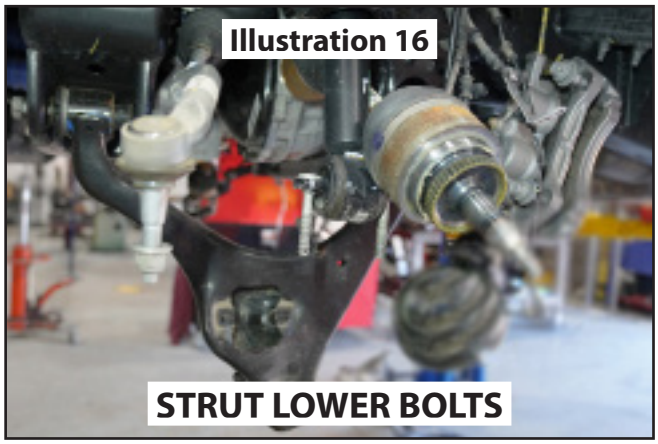
23. Secure the axle up and out of the way so it will not be hanging and over-extend in next steps.

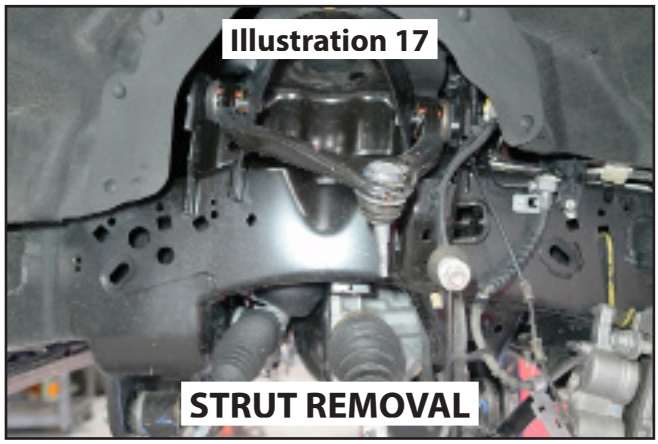
LOWER CONTROL ARM

24. Loosen but do not remove bolts securing the lower control arm to the frame. [21mm, 27mm]

STRUT

25. [Illustration 16] Remove the two nuts from the lower strut mounting studs and allow the lower control arm to swing down and out of the way. [18mm]

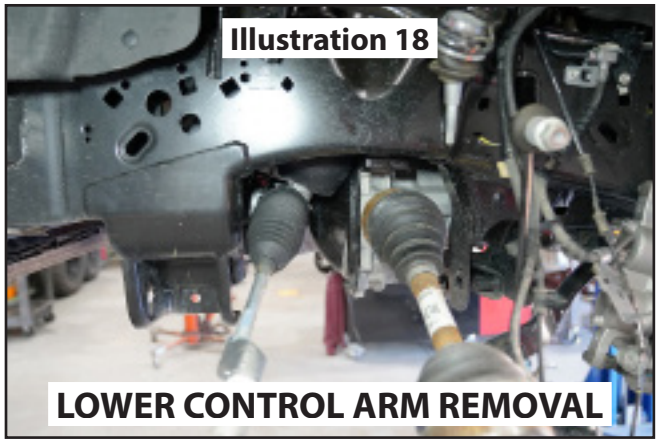




26. [Illustration 17] Remove the upper strut nuts and remove the strut from the vehicle. [18mm]

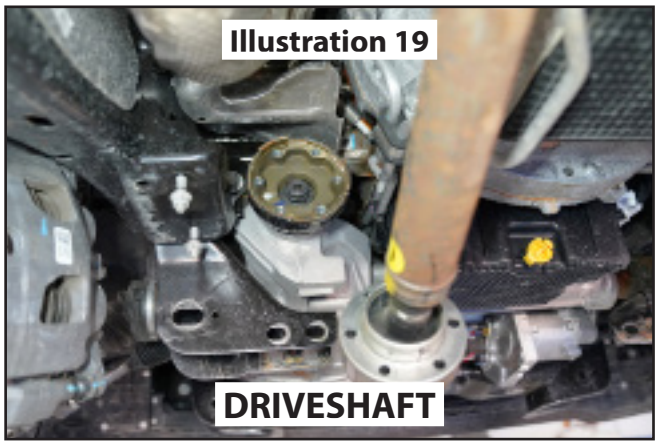
LOWER CONTROL ARM

27. [Illustration 18] Remove the lower control arm from the vehicle. [21mm, 27mm]



DRIVESHAFT

28. [Illustration 19] Mark the orientation of the driveshaft and remove the bolts. [10mm]



20. Secure the driveshaft up and out of the way.

DIFFERENTIAL

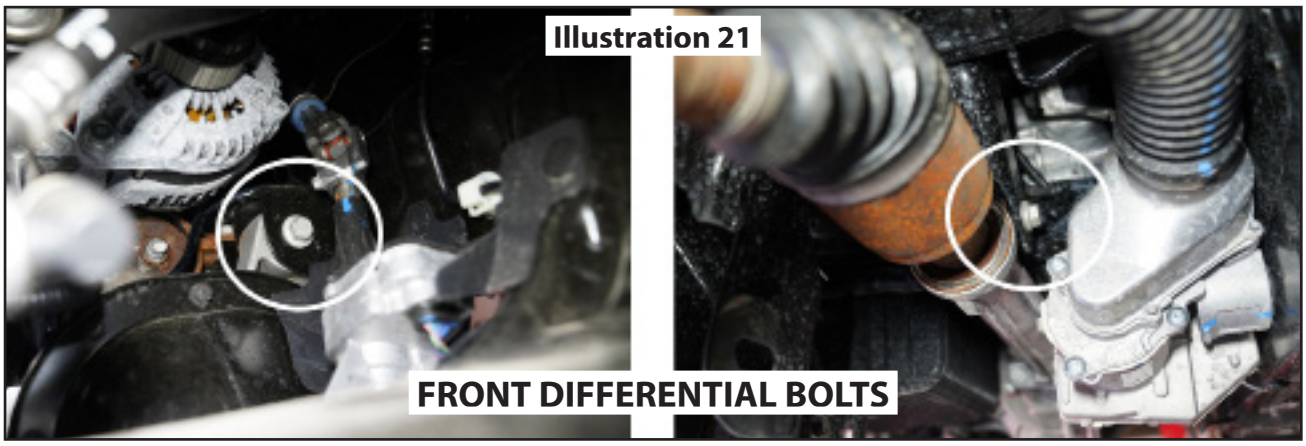
21. Disconnect the differential vent hose.

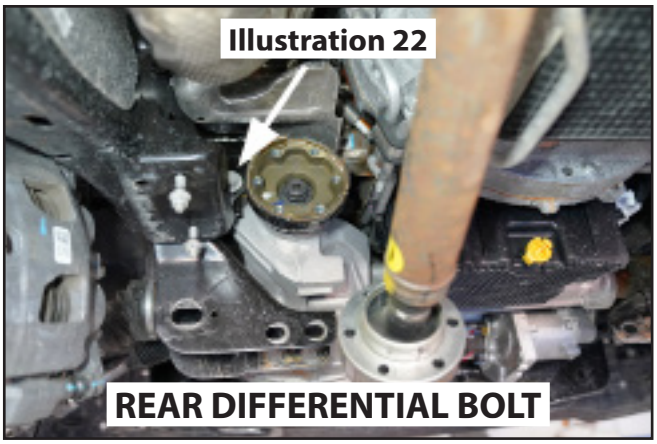
22. Support the differential using a jack or jack stands.

23. [Illustration 20] Remove the bolts securing the rear crossmember to the frame. [18mm] Remove the rear crossmember from the vehicle.

24. [Illustration 21] Remove the front differential mounting bolts. [18mm]

25. [Illustration 22] Remove the rear differential mounting bolt. [21mm]

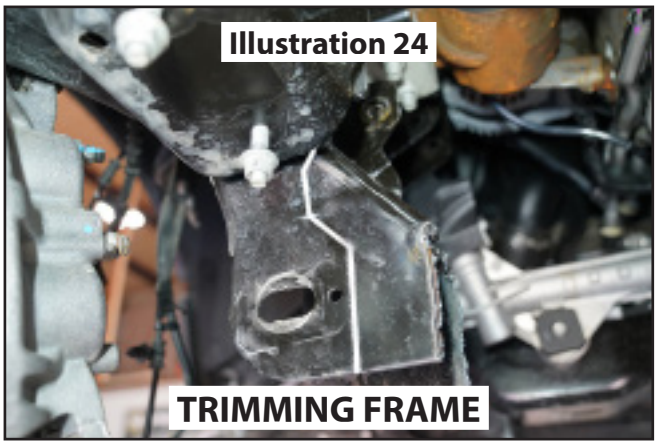




NOTE: It is easier to remove the differential by performing the following step but not required.

26. [Illustration 23] On the driver side lower control arm rear mount, mark a line on the edge of the outermost crossmember bolt hole on both the front and rear sides of the bracket. Connect the lines over the top of the bracket and using the appropriate cutting tool trim the frame to allow for the removal of the differential.

27. Carefully lower the differential and remove from vehicle.



FRONT AND REAR LOWER CONTROL ARM FRAME POCKET

28. [Illustration 24] Start on the rear of the rear driver side lower control arm mount and measure from the outside to the inside 3" and mark. Measure from the bottom to top 2-3/4" and mark. Draw a line from the 2-3/4" up.

29. [Illustration 24] Measure from the outside to the inside 2-1/8" and mark and measure from the outside to the inside 3-3/4" and mark. Draw a line from the 3-3/4" up.

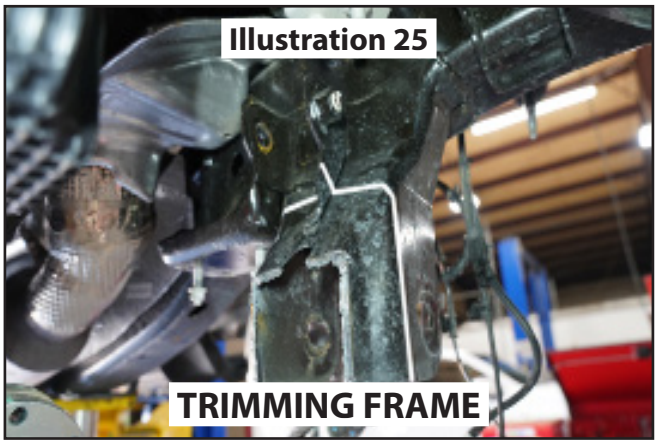
30. [Illustration 24] Connect the two lines diagonally.

31. [Illustration 25] Move to the front side of the rear driver side lower control arm mount and measure from the outside to the inside 3" and mark.

32. [Illustration 25] Connect the lines from the front to the back.

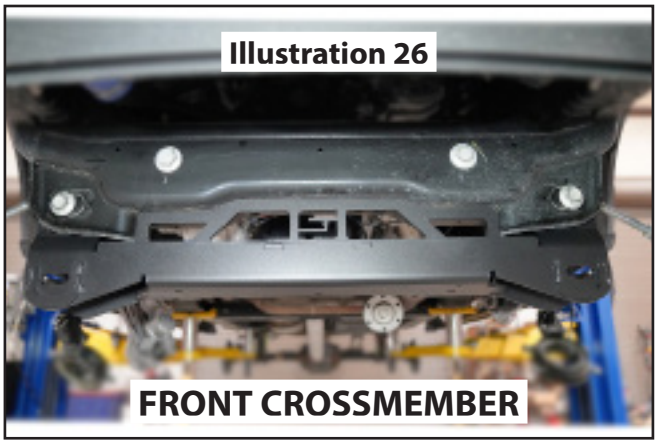
33. Using the appropriate tool, cut along the lines.

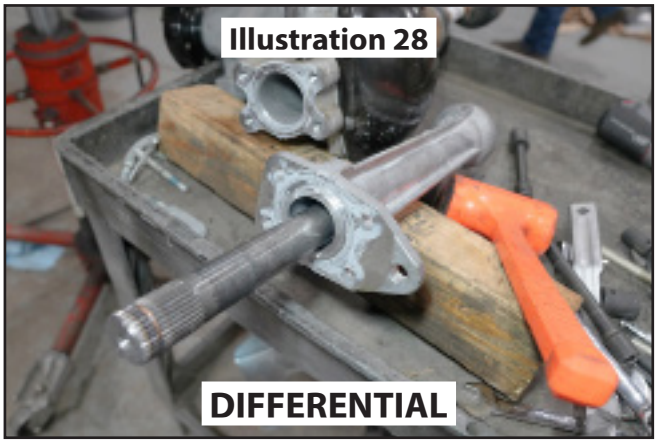
34. Grind all the cut edges smooth and paint.



FRONT CROSSMEMBER

35. [Illustration 26] Install the new front crossmember (55-03-9955) and secure using the supplied 18mm hardware; snug, do not tighten. [27mm]



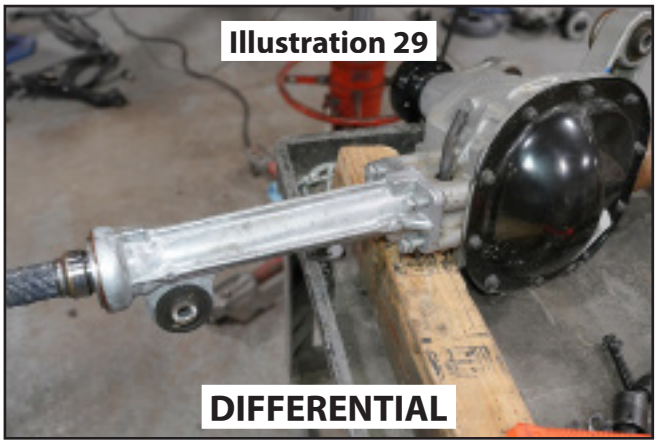


DIFFERENTIAL

36. [Illustration 27] Remove the four bolts retaining the passenger side axle tube housing to the differential. [15mm]

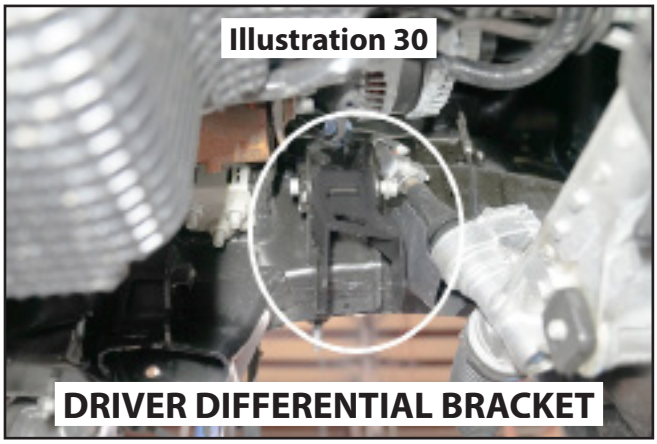
37. [Illustration 28] Separate the axle housing and clean the mounting surfaces of both the axle housing and the differential to remove all old gasket material and oil from the differential.

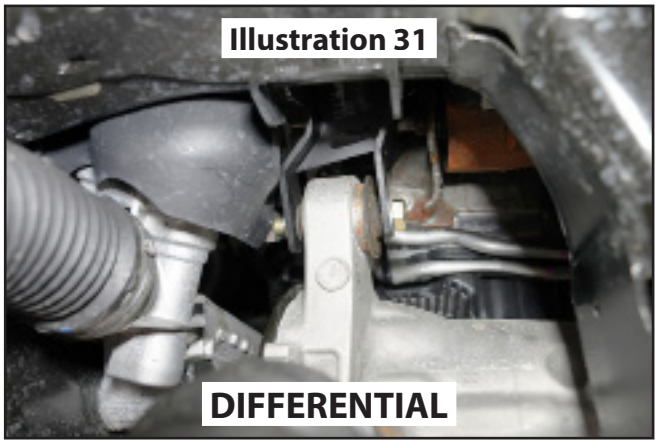
38. [Illustration 29] Rotate the axle housing 180° and reattach using the factory hardware. This will now have the passenger side mount pointing downward.



39. Apply the supplied RTV gasket maker to the axle housing, making sure there are no gaps of RTV in the application.

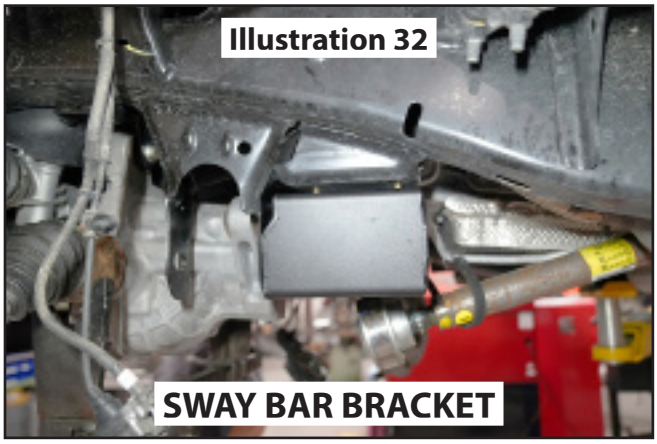
40. Install the factory bolts and tighten. [15mm] (40)

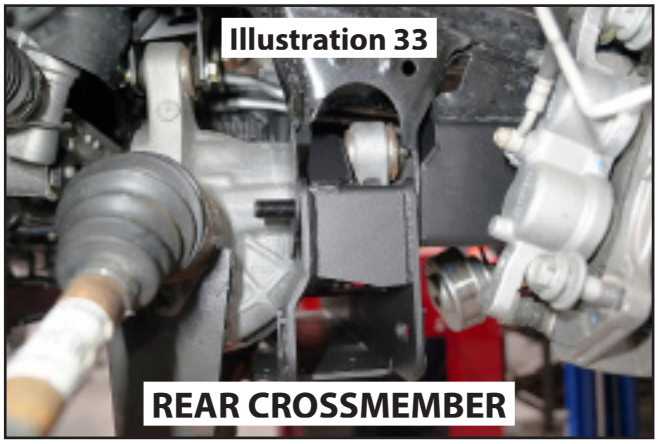




41. [Illustration 30] Install the new driver side front differential bracket (55-05-9955) to the frame using the factory hardware, installing bolt from front to back. Make sure the offset of the bracket is to the front (i.e.... moving the differential to the front of the vehicle.)

42. [Illustration 31] Carefully raise the differential into place with the front driver mount positioned into the new bracket. Install the supplied 9/16" mounting hardware from the rear to front; do not tighten. Leave the differential positioned high enough to allow for the rear crossmember to be installed.





SWAY BAR BRACKET

43. [Illustration 32] Install the new sway bar brackets (55-07-9955 driver side, 55-08-9955 passenger side) on the frame using the supplied 7/16" hardware with the bolts installed from the top down; do not tighten.

REAR CROSSMEMBER

44. [Illustration 33] Install the new rear crossmember (55-04-9955) into the frame and secure using the supplied 18mm hardware with the bolt installed from the rear forward going through the sway bar bracket, frame and crossmember at the original lower control arm location; do not tighten.

45. Install the supplied 1/2" hardware through the rear passenger side holes bolting the crossmember to the original crossmember mounting holes.

DIFFERENTIAL

46. [Illustration 33] Position the differential to allow for supplied 9/16" hardware to be installed on the driver side, with the bolt installed from the rear to the front; do not tighten.

47. [Illustration 34] Install the new passenger side differential mount bracket (55-06-9955) onto the differential using the supplied 9/16" hardware; do not tighten.

48. [Illustration 34] Loosely attach the passenger side differential bracket to the front and rear crossmembers using the supplied 3/8" hardware.

49. Remove the jack.

LOWER CONTROL ARM

50. [Illustration 35] Install the factory lower control arms into the new crossmembers using the supplied cam bolts (55-16-9955 cam bolt, 55-17-9955 cam washer) with the front bolt installed front to rear and the rear bolt installed rear to front; do not tighten.

TIGHTENING SEQUENCE

51. [Illustration 26] Front crossmember bolts to frame. [27mm] (190)

52. [Illustration 33] Rear crossmember bolts to frame. [27mm, 3/4] (190) (50)

53. [Illustration 30] Front differential bracket to the frame. [18mm] (90)

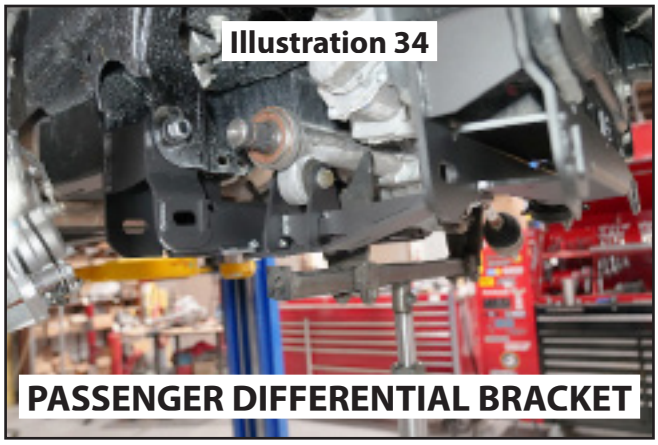
54. [Illustration 31] Front differential bracket to differential. [13/16", 7/8"] (100)

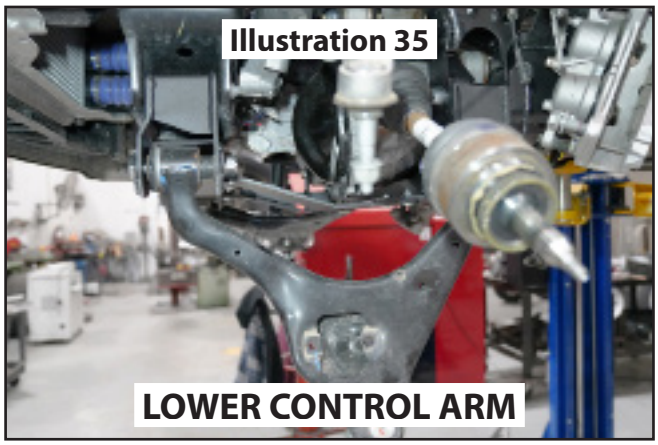
55. [Illustration 34] Passenger side differential bracket to differential. [13/16", 7/8"] (100)

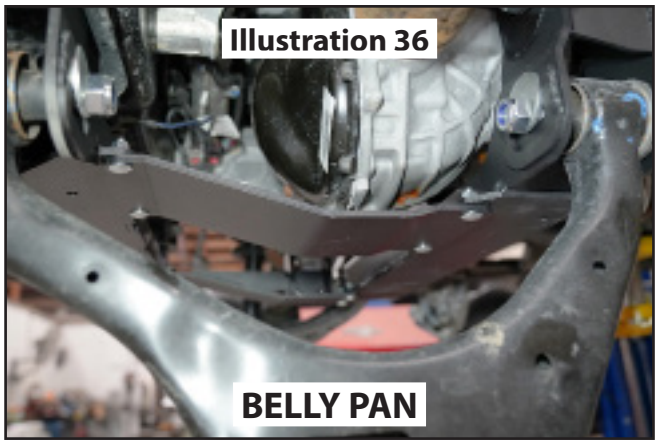
56. [Illustration 34] Passenger side differential bracket to the crossmembers. [1/2"] (35)

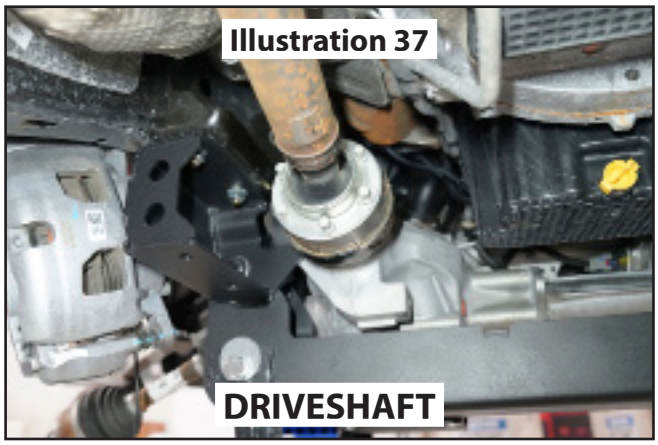
57. [Illustration 32] Sway bar brackets to the frame. [5/8"] (50)

58. Reconnect the differential plug.

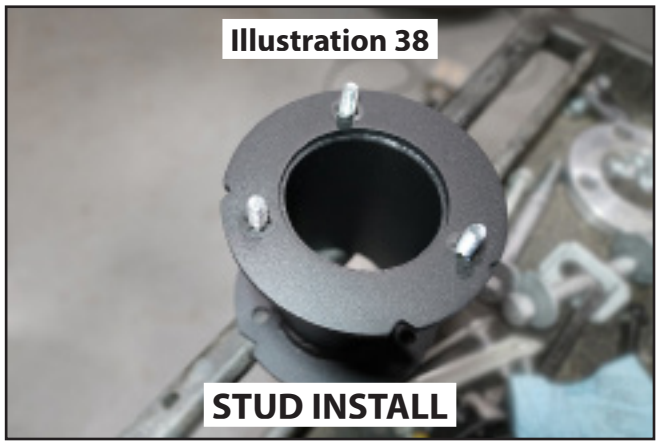








59. Install the new adapter and the new vent hose to the differential vent hose then attach to differential.

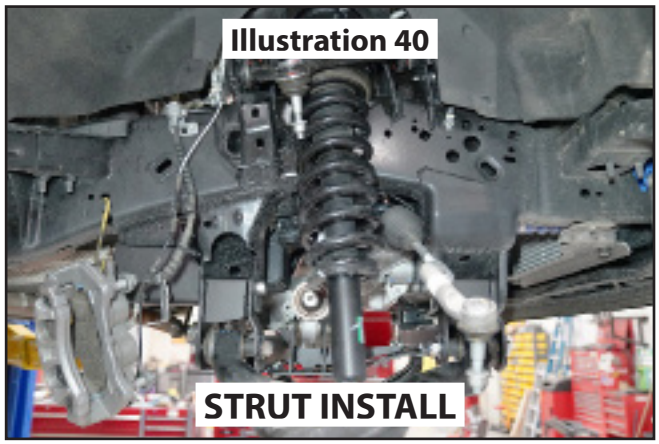


BELLY PAN

60. [Illustration 36] Install the new belly pan securing it to the front and rear crossmembers using the supplied 3/8" hardware. [1/2"] (35)

DRIVESHAFT

61. [Illustration 37] Align the marks previously made on the front driveshaft and differential, secure using the factory hardware. [10mm] (35)



STRUT SPACER

NOTE: Skip this step if you purchased King Coilovers.

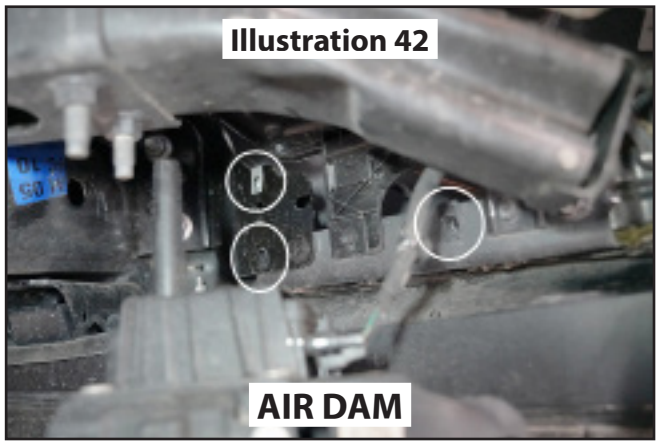
62. [Illustration 38] Install the 10mm carriage bolts in the new strut spacer (55-09-9955) and secure by placing a supplied 10mm push nut onto the bolt. Force the push nut down to the strut spacer making sure the head of the bolt is tight against the spacer.

63. [Illustration 39] Install the strut spacers onto the top of the factory struts using the factory hardware. [18mm] (55)

64. [Illustration 40] Install the strut assembly into the vehicle and using the supplied 10mm flange nuts; do not tighten.

65. [Illustration 40] Lift the lower control arm into place and secure the lower strut studs using the factory hardware. [18mm] (80)

66. Tighten the upper strut hardware. [15mm] (55)



KNUCKLE

75. [Illustration 44] On the factory knuckle, carefully remove the actuator. [8mm]

76. [Illustration 44] Remove the hub assembly. [18mm]

77. [Illustration 45] Install the hub assembly on the new knuckle (66-01-9955 driver, 66-02-9955 passenger) using the factory hardware and the supplied thread locker. [18mm] (150)

78. [Illustration 45] Install the actuator using the factory hardware. [8mm]

79. [Illustration 46] Install the knuckle assembly loosely attaching it to the lower ball joint and upper ball joint, make sure the axle shaft is aligned properly with the actuator as the knuckle is installed.

TIGHTEN

80. Tighten the lower ball joint. [21mm] (110)

81. Tighten the upper ball joint. [18mm] (100)

82. Tighten the CV axle nut; DO NOT USE AN IMPACT! [15mm] (30)

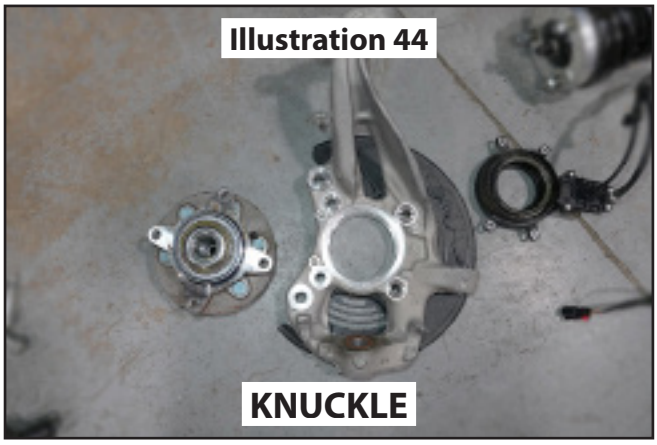
BRAKE LINE

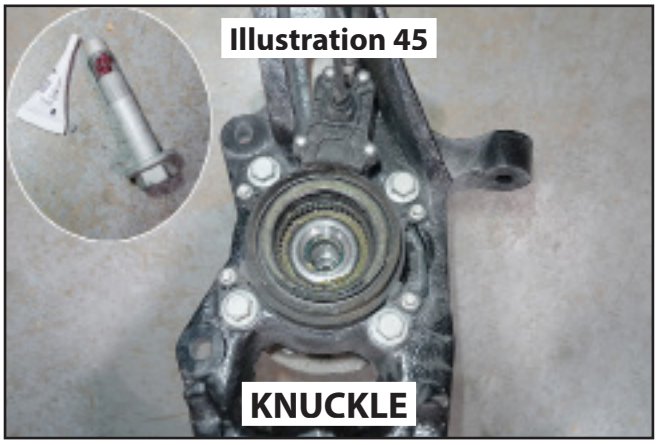
83. Unbolt the brake line bracket from the frame. [10mm]

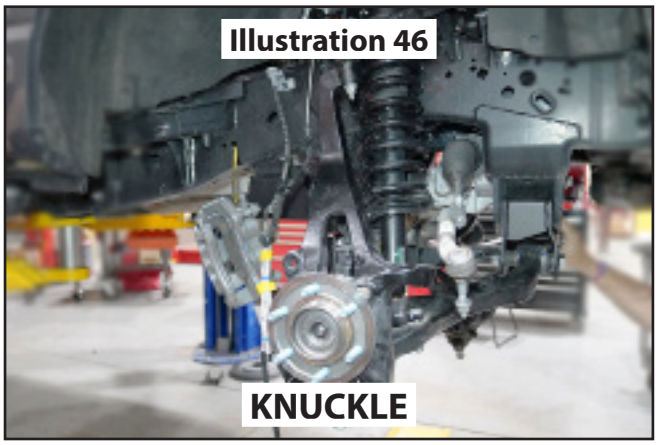
84. Locate the new brake line brackets (55-13-9955 driver, 55-14-9955 passenger) and the supplied 1/4" self-tapping bolt; thread the self tapping bolt into the top 1/4" hole in the bracket (the self tapping bolt is just acting as a locator pin). [7/16"]

85. [Illustration 47] Install the new brake line bracket to the frame using the factory hardware. [10mm] (15)

86. [Illustration 47] Attach the factory brake line bracket to the new bracket using the supplied 5/16" hardware. [1/2"] (18)





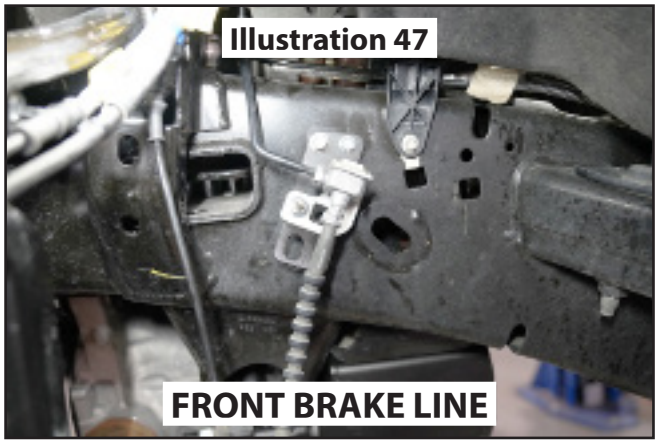


BRAKES

87. [Illustration 48] Install the ABS sensor into the knuckle. [8mm] (5)

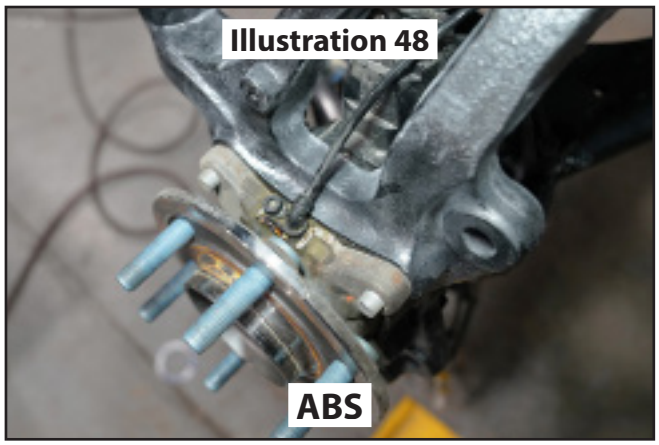
88. [Illustration 49] Install the brake dust shield. [8mm] (5)

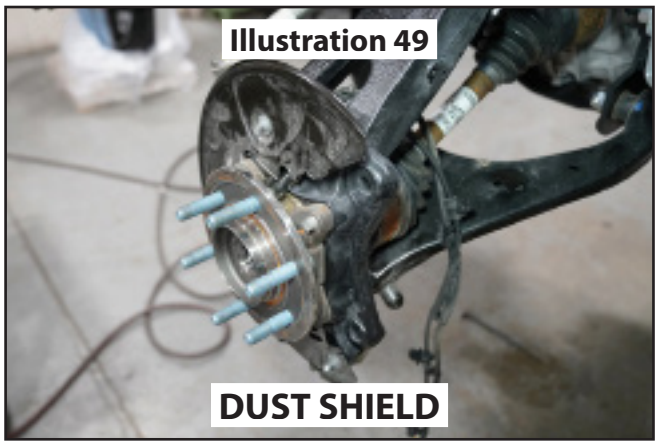
89. Install the brake rotor. [T30] (5)
90. Install the brake caliper using the factory hardware; apply thread locker to the bolt threads. [21mm] (126)



SWAY BAR

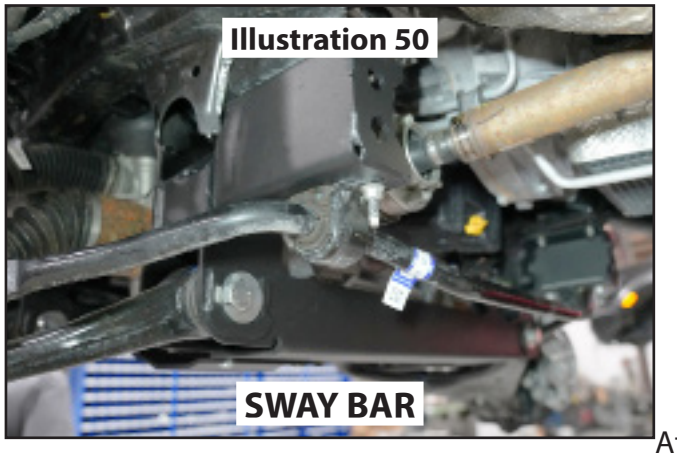
91. [Illustration 50] Attach the sway bar to the new sway bar brackets using the factory hardware. [18mm] (20)

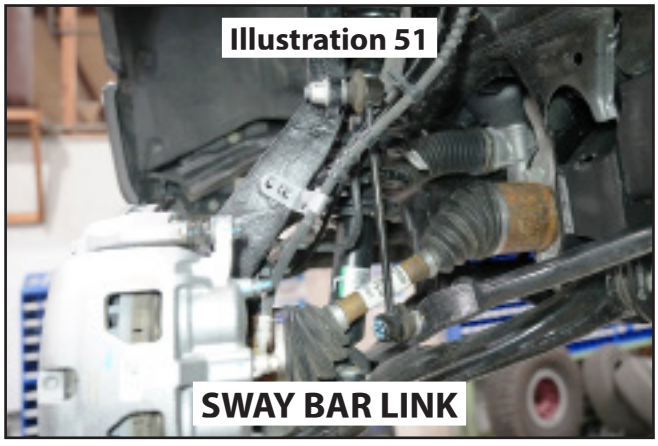




92. [Illustration 51] Connect the sway bar link to the steering knuckle and secure using the factory hardware. [18mm] (60)

STEERING





93. Attach the tie rod to the knuckle. [21mm] (126)

94. Reconnect electrical plugs for steering.

TIRES AND WHEELS

103. Reinstall the front tires and wheels.

104. With the suspension 'hanging' at full extension travel, cycle the steering lock-to-lock and check all components or proper operation and clearances. Pay special attention to the clearance between the tires and wheels and knuckles, brake hoses, wiring, etc.

105. Lower the vehicle to the ground.

106. With the vehicle on the ground, cycle the steering lock-to-lock and check all components for proper operation and clearances. Pay special attention to the clearance between the tires and wheels and knuckles, brake hoses, wiring, etc. NOTE: Re-tighten lug nuts at 500 miles after any wheel change, or anytime the lug nuts are loosened. Failure to do so could cause wheels to come off while vehicle is in motion.

TIGHTEN

107. Tighten the lower control arm bolts, placing the cam washers in the neutral position (center / up) until an alignment can be performed. [27mm] (220)

108. Tighten the upper control arm to frame bolts. [18mm] (100)

REAR DISASSEMBLY AND INSTALLATION

PREPARE VEHICLE FOR REAR INSTALLATION

109. Disconnect the battery.

110. Chock front tires. 111. Raise the rear of the vehicle with a jack and secure a jack stand beneath each frame rail. Ease the frame down onto the stands.

112. Remove the rear tires and wheels.

BRAKE LINE BRACKET

113. Unbolt the rear brake line bracket, where the hard lines connect to the hoses, from the frame. [10mm]

114. Unclip the ABS lines from the frame on both the driver and passenger side. [plastic fastener removal tool]

SHOCKS

115. [Illustration 56] Unbolt the shock absorbers from the frame and axle; then remove from vehicle. [15mm, 18mm]

U-BOLTS

116. Unbolt the u-bolts from the axle. [21mm]

117. [Illustration 57] Lower the axle to install the new lift block (55-31-9930) with the notches facing the front of the vehicle.

118. [Illustration 57] Install the new u-bolts (11832) and secure with the supplied 9/16" u-bolt hardware. [7/8"] (110)

SHOCKS

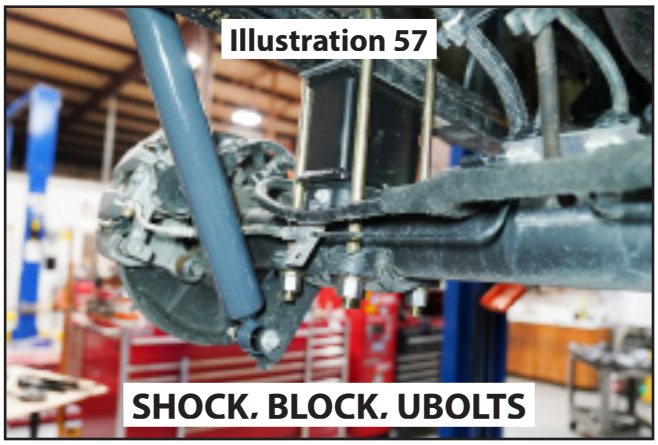
119. Install the supplied bushings and sleeves into the new shock absorber (659582 ENTHUZE, 33-185569 Bilstein, 985-24-193 FOX); no bushings or sleeves will need to be installed in the King shocks.

120. [Illustration 57] Install the new shock absorbers, secure using the factory hardware, placing a supplied 3/4" washer on one side of the shock absorber at the top and bottom mounts; no washer will be needed in the King installation. [15mm, 18mm] (60)

BRAKE LINE BRACKET

121. [Illustration 58] Install the new brake line bracket (55-16-9955) and secure it to the frame using the factory hardware and the supplied 1/4" hardware. [10mm, 7/16"]

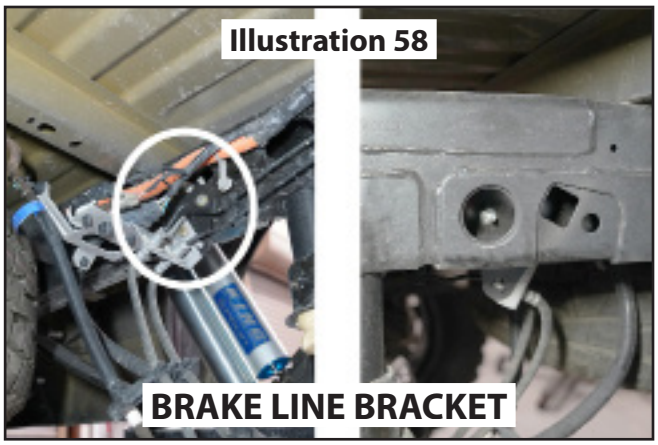
122. [Illustration 58] Attach the factory brake line bracket to the new bracket using the supplied 5/16" hardware. [1/2"] (6)



BUMP STOP

123. Unbolt the rear bump stop from the frame. [13mm]

124. [Illustration 59] Install the new bump stop spacer (55-12-9930) on top of the factory bump stop and secure to the frame using the supplied 10mm hardware. (30)



TIRES AND WHEELS

125. Install tire and wheels.

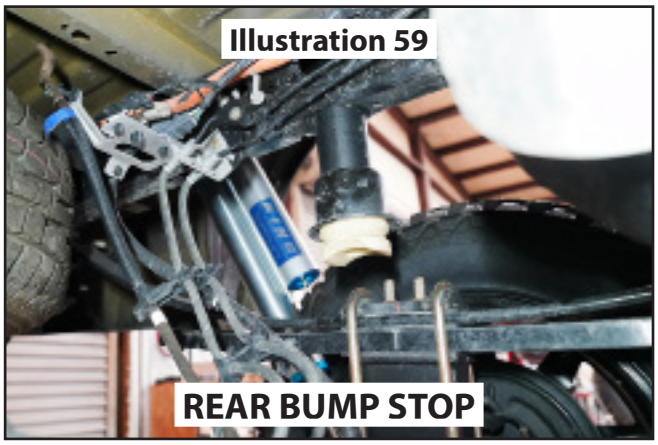
126. Remove jack stands and lower vehicle to the ground.

FINAL CHECKS

CLEARANCE CHECK

127. Reconnect the battery.

128. Check all hardware for proper torque specifications.



129. With the vehicle on the ground, check all components for proper operation and clearances. Pay special attention to the clearance between the tires and wheels, brake hoses, wiring, etc.

130. Check tire and wheel clearance with the fenders and bumper as well as with the steering knuckle. Depending on your choice of tire size and wheel width, it is not uncommon to trim the lower plastic valance of the bumper and inner fender shroud slightly to add proper tire clearance while turning.

WHEEL ALIGNMENT

131. Align vehicle to factory specifications.

HEADLIGHTS

132. Adjust headlights to proper setting.

FOUR WHEEL DRIVE

133. Activate the four wheel drive system and check for proper engagement.

IMPORTANT MAINTENANCE INFORMATION

It is the ultimate buyer's responsibility to have all bolts / nuts checked for tightness after the first 100 miles and then every 1000 miles. The steering, suspension and driveline systems, plus wheel alignment should be inspected by a qualified professional mechanic at least every 3000 miles.

LIMITED LIFETIME WARRANTY / WARNINGS

Your ENTHUZE® product is covered by the Limited Warranty explained below that gives you specific legal rights. This limited warranty is the only warranty ENTHUZE® makes in connection with your product purchase. ENTHUZE® neither assumes nor authorizes any retailer or other person or entity to assume for it any other obligation or liability in connection with this product or limited warranty.

ENTHUZE, LLC, LIMITED LIFETIME WARRANTY

What is covered? Subject to the terms below, ENTHUZE® will repair or replace its products found defective in materials or workmanship for so long as the original purchaser owns the vehicle on which the product was originally installed. Your warranter is ENTHUZE, LLC, doing business as ENTHUZE® Suspension Systems ("ENTHUZE®").

What is not covered? Your ENTHUZE® Limited Warranty does not cover products ENTHUZE® determines to have been damaged by or subjected to:

- Alteration, modification or failure to maintain.
- Normal wear and tear (bushings, rod ends, etc.). Scratches or defects in product finishes (powder coating, plating, etc.).
- Damage to, or resulting from, the vehicle's electronic stability system, related components or other vehicle systems.
- Racing or other vehicle competitions or contests. Accidents, impact by rocks, trees, obstacles or other aspects of the environment.
- Theft, vandalism or other intentional damage.

If a replacement part is needed before the ENTHUZE® part in question can be returned, you must first purchase the replacement part. Then, if the part in question is deemed warrantable, you will be credited / refunded.

OTHER LIMITATIONS - EXCLUSION OF DAMAGES - YOUR RIGHTS UNDER STATE LAW

- Neither ENTHUZE® nor your independent ENTHUZE® dealer are responsible for any time loss, rental costs, or for any incidental, consequential or other damages you may have.
- This Limited Warranty gives you specific rights, and this is the only warranty ENTHUZE® makes in connection with your product purchase. You may also have other rights that vary from state to state. For example, while all implied warranties are disclaimed herein, any implied warranty required by law is limited to the terms of our Limited Lifetime Warranty as described above. Some states do not allow limitations of how long an implied warranty lasts and / or do not allow the exclusion or limitation of incidental or consequential damages, so the limitations and exclusions herein may not apply to you. ENTHUZE® neither assumes nor authorizes any retailer or other person or entity to assume for it any other obligation or liability in connection with this product or Limited Warranty.

IMPORTANT PRODUCT USE AND SAFETY INFORMATION / WARNINGS

As a general rule, the taller a vehicle is, the easier it will roll over. Offset, as much as possible, what is lost in rollover resistance by increasing tire track width. In other words, go "wide" as you go "tall"; always use as wide a tire and wheel combination as feasible to enhance vehicle stability. We strongly recommend, because of rollover possibility, that the vehicle be equipped with a functional roll bar and cage system. Seat belts and shoulder harnesses should be worn at all times. Avoid situations where a side rollover may occur.

Generally, braking performance and capabilities are decreased when significantly larger / heavier tires and wheels are used. Take this into consideration while driving. Also, changing axle gear ratios or using tires that are taller or shorter than factory height will cause an erroneous speedometer reading. On vehicles equipped with an electronic speedometer, the speed signal impacts other important functions as well. Speedometer recalibration for both mechanical and electronic types is highly recommended.

Do not add, alter, or fabricate any factory or aftermarket parts to increase vehicle height over the intended height of the ENTHUZE® product purchased. Mixing component brands is not recommended.