

READ THESE ENTIRE INSTRUCTIONS BEFORE STARTING ANYTHING

2020+ GM 2500/3500 TRUCK

LIFT KIT INSTRUCTIONS (PART #52456/#52459)

* This kit will not work on vehicles with factory auto ride suspension.

* The factory wheels and tires will not fit on the front of the vehicle once the lift kit is installed.

* You must use at least a minimum size of a 17" wheel, 8" wide. With a maximum of 5" back spacing.

Spindles and u-bolts are shipped with protective coating on surface. This allows them to be delivered to you without rust. We recommend you clean and paint the parts before you install, to protect against any future rust. Remember, spindles and u-bolts are bare metal. And will rust without paint.



- | | | |
|----------------------------------|--|--|
| 1. Lift Spindles (2) | 10. Front Shocks (2) | 19. Driver Side Diff. Drop Bracket |
| 2. Rear U-Bolts (2) | 11. Front Brake Lines (2) | 20. Passenger Side Diff. Drop Bracket |
| 3. Skid Plate | 12. Front Sway Bar End Links (2) | 21. Rear Axle Wiring Relocation Bracket |
| 4. Front Crossmember | 13. Lower A-Arm Support Rods (2) | 22. Rear Brake Line Bracket |
| 5. Rear Crossmember | 14. Rear Lift Blocks (2) | 23. Compression Strut Lock Nuts (2) |
| 6. Compression Struts (2) | 15. Torsion Bar Drop Brackets (2) | 24. Driver Side CV Axle Spacer |
| 7. Bushings for Comp. Struts (8) | 16. (Front) Front Bump Stop Brackets (2) | 25. Front Compression Strut Brackets (2) |
| 8. Sleeves for Comp. Struts (4) | 17. (Rear) Front Bump Stop Brackets (2) | 26. Rear Compression Strut Brackets (2) |
| 9. Rear Shocks (2) | 18. Front Upper Shock Mounts (2) | 27. Hardware Psacks (2) |
| | | 28. Weld-In Filler Plate |



McGAUGHYS
S U S P E N S I O N P A R T S

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**READ THESE ENTIRE INSTRUCTIONS
BEFORE STARTING ANYTHING**

- If you are the installer only, and not the owner of the vehicle, please make sure the owner of the vehicle gets these instructions. They contain very important information about the lift kit, maintenance, and warranty.
- Before moving forward with installation, please layout all parts from boxes and ensure everything is present. If any parts are missing, please contact McGaughy's Suspension immediately at 559-226-8196.
- If you alter the finish of any of the provided components, like zinc plating, chroming, or powder-coating, which can cause damage to the strength and structure of the metal, any warranties will be null and void.
- If any components are ground on or modified in any way, then no returns or exchanges will be accepted and any warranties will be null and void.
- NO welding is required to install any part of this lift kit. Do not weld any components.
- Over-sized tires and heavier wheels can cause premature wear on factory and aftermarket components like ball joints, bushings, tie-rod ends, wheel bearings, idler arms, drive-lines, etc.... You may need to replace / install new components sooner than factory recommendations based on the tires and wheels you choose. Please note that the heavier and wider wheels and tires combined with aggressive driving (off-road and on highways) will cause more wear on ALL moving parts, factory and aftermarket. Especially when vehicle is in 4wd or Auto-4wd / AWD modes.

WARRANTY INFORMATION

-McGaughy's warrants all **McGaughy's** products against manufacturer's defects in materials or workmanship for a period of **ONE-YEAR** from the date of original purchase. All McGaughy's spindles carry a **LIFETIME** warranty against manufacturer's defects.

-Warranty will not extend to any product or part there in, that has been improperly installed, abused, or neglected.

-Any warranty will be void on lift kits or components that are installed along with another company's components. All McGaughy's parts are designed to work with factory components or other McGaughy's components only.

-McGaughy's will not warranty any product(s) that were modified in any way. Check fit all products prior to custom painting, powder-coating, or any form of fabrication (sanding, drilling, painting, chroming, etc).

-There are **NO WARRANTIES** neither expressed nor implied for powder-coating on any McGaughy's products.

-McGaughy's is not responsible for damages and/or warranty of other vehicle parts (factory or aftermarket) related or non-related to the install of McGaughy's component(s).

-Warranty is limited to the repair or replacement (of McGaughy's product only), at McGaughy's discretion. And only after inspection of the defective part, once returned to McGaughy's with proof of purchase, date of purchase, and all shipping costs prepaid.

-Any cost of labor, freight, incidental or consequential damages are expressly excluded from warranty.

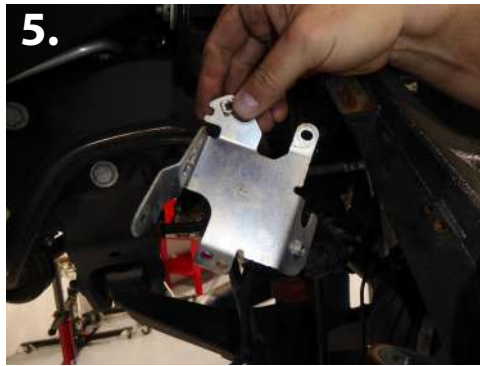
FRONT INSTRUCTIONS: (Be sure to read the entire instructions before you start)

THIS KIT REQUIRES THE FRONT BRAKE LINES TO BE CHANGED OUT BY A GM / ASE CERTIFIED MECHANIC

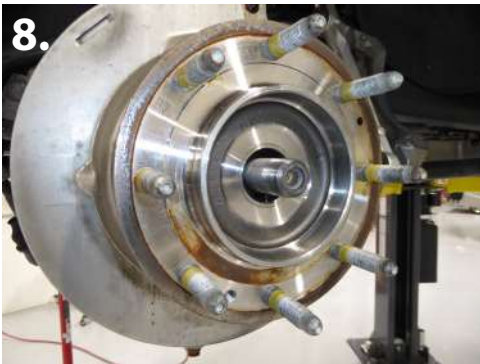
1. Place wheel chocks behind the rear tires. With the parking brake set, use a jack and lift the front of the vehicle and place jack stands under the frame on each side.



2. Remove the factory skid plate if your vehicle has one. Not all of the models will have a skid plate. (pic 1)
3. Take a note on where the bolts are (how many threads are showing) on the torsion keys. This will be where you need to re-install them at later. (pic 2)
4. Unload both torsion key bolts. Remove the bolts completely. Use a torsion removal tool clamp to remove the threaded blocks on both sides to remove pressure on the suspension. (pic 3)



5. Remove tie rod ends from spindle using 21mm socket.
6. Disconnect brake lines and any electrical wires that are attached to the spindles.
7. Remove the brake line/abs wire factory steel bracket. You will NOT re-use this bracket. (pic 4-5)
8. Disconnect the caliper from the spindle using 21 mm socket. Secure caliper out of the way. (pic 6)



9. Remove the dust cap. (pic 7)
10. Remove keeper bolt and remove rotor. (pic 8)
11. Remove CV axle nut using 36mm socket. (pic 8)
12. Using 21mm socket, remove the four bolts from the back of the spindle to remove the bearing. Because of the tight fit, loosen with socket first then remove by hand. (pic 9)



10.



11.



12.

- 13. Remove upper ball joint nut using 18mm socket. (pic 10)
- 14. Use a 24mm socket to remove the lower ball joint nut. (pic 11)
- 15. Now remove factory spindles from the vehicle.
- 16. Disconnect and remove the factory sway bar end links using 18mm socket. These will NOT be re-used. (pic 12)
- 17. Remove the upper and lower shock bolts using 21mm socket and remove from vehicle. You will NOT re-use the factory shocks.



13.



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15.

- 18. Remove the factory torsion bars by pushing the bar through the A-arm to the front of the vehicle. Be sure to hold on to the factory torsion key because it will fall. Set keys aside, they will be use again. (pic 13)
- 19. With the torsion bar still inside the A-arm, un-bolt and remove lower A-arms from the vehicle. Now remove torsion bars from the lower A-arms. Make sure not to mix them up. They must go back in facing the same way and on the same side they came out.
- 20. Using 18mm socket, remove the CV axles from the vehicle. (pic 14-15)



16.



17.

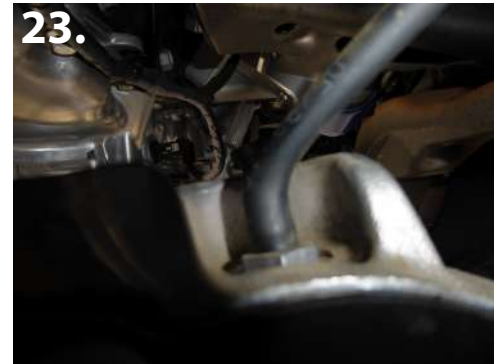
- 21. Using 18mm socket, remove the factory rear crossmember. (pic 16)
- 22. Remove the four bolts and clamps that are mounting the front drive line. Set them aside, you will re-use them. Next, secure the front drive line out of the way. (pic 17)
- 23. Now use a jack to support the differential. Be sure to keep differential upright when removing from vehicle.



24. Use 18mm socket to remove the bolt on the driver side top of differential. (pic 18)

25. Remove the bolt on the driver side bottom front of the differential using 15mm socket. (pic 19)

26. Use 18mm socket to remove the bolt on driver side bottom rear of differential. (pic 20)



27. Use 21mm socket to remove the bolt on the passenger side bottom front and rear. (pic 21)

28. Disconnect the plug on the passenger side of differential. (pic 22) Also disconnect the three plastic clips on the differential. And the vacuum line on the top of the differential. (pic 23)

29. Once all the lines and hose are disconnected and out of the way, drop and remove the differential. Be sure to keep it up right, as it is full of fluid.



30. Use a die-grinder or sawzall to cut the inside of the driver side lower A-arm pocket where the new rear cross-member will mount. Measure 4-1/4" from the inside edge and make a vertical cut straight down. (pic 24)



31. Install the differential drop bracket on the driver side. Use m12 x 1.75tp x 30mm at the front and middle hole. (pic 27) Snug the bolts only.

32. Use 1/2" x 3-1/2" bolt with laser cut washer on the rear hole. The bolt will go through the top of the factory differential mount with the laser cut washer. The laser cut washer prevents the bolt from falling through. (pic 28) Snug the bolt only. Do not tighten yet.

33. Install the differential drop bracket on the passenger side. Make sure the wide part is on the bottom and tall side is at the front of the vehicle. (pic 29)

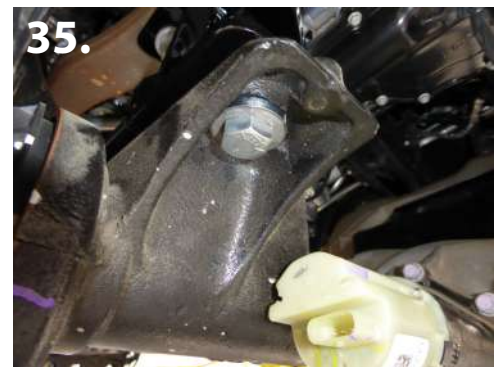
34. Use the original hardware on the top two holes. (pic 30) Snug the bolts only. Do not tighten yet.

PLEASE NOTE: The differential will be a 1/2" closer on the passenger side once fully installed. You may have to adjust the differential over towards the passenger side.

34. Using a jack for support, bolt up the differential. Start on the driver side. Use 1/2" x 3-1/2" bolts on the front two holes. (pic 31)

And 12mm x 1.75tp x 30mm bolt on the back hole. (pic 32)

Snug bolts only. Do not tighten yet.



35. Now bolt up the passenger side of the differential. Use 1/2" x 1-1/2" bolts with top lock nuts and laser cut washers for both holes. (pic 33) The laser cut washers will be used on the head side of the bolt going up through the differential. (pic 34-36) Snug bolts only. Do not tighten yet.

36. Once all bolts are installed and snug. You can now start to tighten them.

37. Start on the driver side upper. Tighten the front two bolts first with a 19mm socket, then tighten the back bolt with 3/4" socket and wrench.

38. Next tighten the passenger side upper bolts using 21mm socket.

39. Now tighten the driver side lower bolts. Do the middle one first with a 3/4" socket and wrench. Then tighten the front bolt. Tighten the back bolt last with 19mm socket.



- 37.**
40. Lastly, tighten the two lower bolts on the passenger side using 3/4" socket and wrench.
41. Now plug the factory front diff wiring back into its original location on the diff solenoid. (from pic 22) Make sure the wires are not stretched or rubbing against anything, causing them to be cut or frayed.
42. The kit comes with a new vacuum hose extension, allowing you to hook the breather hose back up to the front diff. (pic 37)



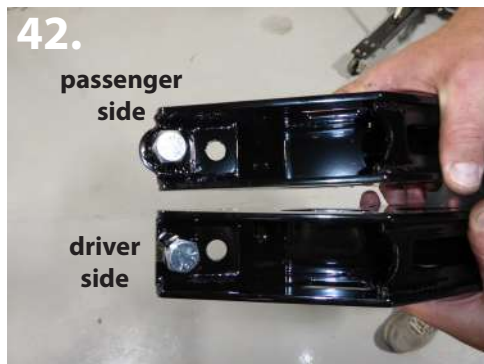
43. Re-install the factory front drive line using the factory bolts and clamps. Be sure to loctite each bolt before installing. Torque to factory specs. (pic 38-39)



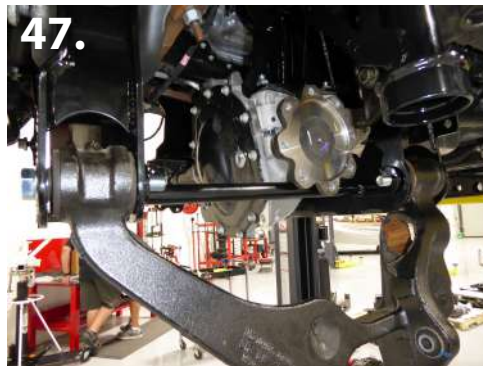
38.

39.

44. Install the rear crossmember using the original A-arm bolts. Snug only. Do not tighten yet. (pic 40-41)



- 42.**
- passenger side
- driver side
- 43.**
- 44.**
45. Install front / front bump stop brackets. The bracket with the "bump" where the upper bolt is. Is the passenger side. (pic 42)
46. Use a scribe or scratch-all to mark where to drill for the bolt. (pic 43)
47. With the hole marked, drill out to 1/2". (pic 44)
48. Use 1/2" x4-1/2" bolt and 1.75" laser cut washer to mount. Laser cut washer will go on the outside where the bolt head is. (pic 45)
49. Tighten the lower bolt. Now install and do the same on the opposite side of the vehicle.

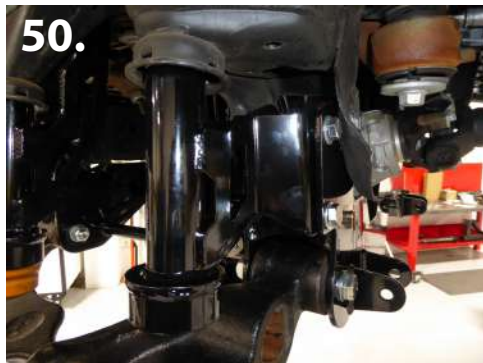


50. Bolt up the front crossmember. Use the original A-arm bolts to install. Snug only. Do not tighten yet. (pic 46)

51. Re-install the factory lower A-arms. Make sure to install the support rods between the front and rear A-arms as well. Use 18mm x 120mm for the front crossmember and 18mm x 140mm for the rear crossmember. Snug only. Do not tighten yet. (pic 47) Install both driver side and passenger side.

52. Install skid plate using 1/2" x 4" bolt on the front and 1/2" x 1-1/4" bolt for the rear. Snug only. Do not tighten. (pic 48)

53. With everything installed and snug. You can now tighten the bolts. Start by tighten the upper bolts on both crossmembers. These are the where the crossmembers are mounted to the frame in the factory A-arm mounts. Next tighten the lower A-arm bolts on both sides. Make sure the support rod between the two crossmembers is pushed up in to place against the stopper plates. Also, be sure to hold the lower A-arm up as to mimic where it will be at ride hieght, and not just hanging. Lastly, tighten the bolts on the skid plate using 3/4" socket.



54. Bolt the front / rear bump stop brackets using 1/2" x 1-1/4" bolts and lock nuts. Make sure the bracket has the extension overlapping the front of the crossmember. (pic 49-51) Install both the driver side and passenger side.



55. Install new provided sway bar end links. The end link will now install inside the lower A-arm instead of on the outside. Use 19mm and 8mm wrenches to tighten. (pic 52) Install both the driver side and passenger side.



53.



54.

56. Now install the new lift spindles. Bolt up the upper and lower A-arms using the factory hardware. Torque to factory specs. Install both the driver side and passenger side.

57. Next, install the factory dust shield and O-ring onto the hub and slide onto spindle. Use the factory bolts to bolt the hub back onto the spindle. Be sure to loctite each bolt. (pic 53-54) Torque to factory specs. Install both the driver side and passenger side.



56.



55.

58. Install CV axle nut. Loctite and torque to factory specs. Install rotor using the factory hardware. Torque to factory specs. (pic 55) Install both the driver side and passenger side.

59. Install new lift shocks into the factory location. The upper "T" bracket will need to be installed on to the new shocks prior to installing. Use factory hardware on the lower mount. (pic 56) Install both the driver side and passenger side.



57.

60. Re-install the CV axles. Use the factory hardware on the passenger side. On the driver side, you will use the supplied spacer and 12mm x 1.75 x 55mm bolts. (pic 57)

61. Use a 21mm socket to remove the factory torsion bar crossmember bolts from both side of the crossmember. Make sure you support the crossmember or it will fall. Before you remove it completely, make sure any lines that are attached to the crossmember are disconnected and out of the way.



58.



59.

62. Install torsion bar drop brackets. Use 9/16" x 3-1/2" bolt to mount the bracket to the original mount. Use the original bolts to mount the crossmember to the drop brackets. You will also use the provided 3/8" x 1" bolt to mount inside the crossmember. (pic 58-59) Install both the driver side and passenger side.



60.



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62.



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64.



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63. Re-install the torsion bars and torsion keys. Be sure to install the torsion bars the exact same way they came out of the truck. Do not swap sides or turn around. Using a key clamp, install block and tighten up the bolt on the torsion key. (pic 60-62) Install both the driver side and passenger side.

64. Make sure the bolt is centered on the torsion key. (pic 63) Tighten bolt to where it was when originally removed. 65. Bolt the compression struts to the rear crossmember using the supplied 1/2" x 3-3/4" bolts. (pic 64) Next, bolt the rear brackets on to the compression struts using the 1/2" x 3-3/4" bolts. Now lift up the compression struts so that the bracket is in place and against the transmission crossmember. Mark the hole on the mount where you will need to drill.

66. Drill out where you marked to 1/2" (pic 65) Install both the driver side and passenger side.



66.



66b.

compression strut lock nuts

67. Once drilled, hold the compression strut back in place and bolt in using 1/2" x 1" bolt and special locking nuts. (pic 66 & 66b.)

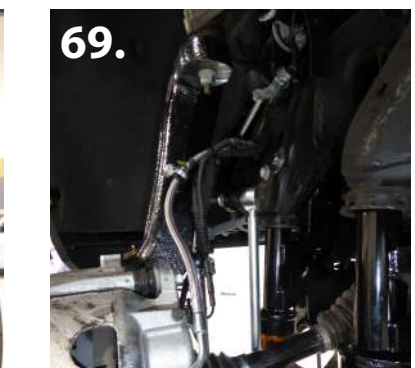
68. Tighten bracket to crossmember first. Then tighten up bolts on the compression struts. Install both the driver side and passenger side.



67.



68.



69.



FACTORY FRONT BRAKE LINES WILL NOT WORK WITH THIS KIT. NEW PROVIDED BRAKE LINES MUST BE INSTALLED AND BLED BY GM / ASE CERTIFIED MECHANIC.

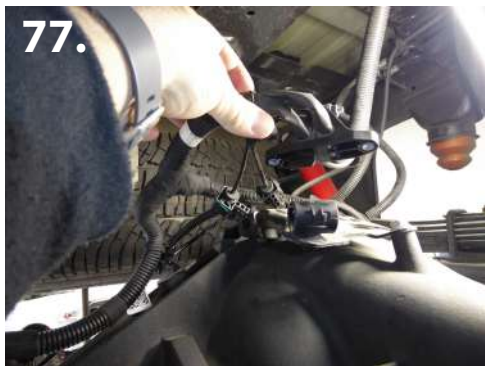
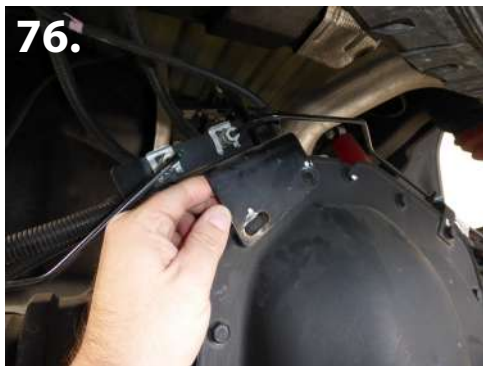
66. Once brake lines have been replaced with the new provided brake lines, re-install your caliper. Use the original bolts and provided loctite. Torque to factory specs.

67. Use provided rubber adel clamps to connect the brake lines to the lift spindles. Use the provided zip-ties to attach the abs wiring and brake sensor wires along the side of the new brake lines. Be sure to turn the spindles back and forth at full droop to make sure nothing touches or rubs any of the brake lines or wiring. (pics 67-74)



68. Now re-connect factory outer tie rod ends into the new lift spindles. Use the factory hardware. Torque to factory specs. (pic 75) Install both the driver side and passenger side.

REAR INSTRUCTIONS:



69. Disconnect brake line bracket that is attached to the rear end housing. (pic 76)

70. Disconnect wiring that is bolted on top of the rear end. (pic 77)

71. Now use a jack to support the rear end.

72. Remove the factory shocks using 21mm socket.



73. Use 27mm to loosen all U-bolt nuts, but do not remove. Do one side at a time. Remove the U-bolts from the driver side. Slowly drop the rear end making sure no lines or wires are being over extended. Now install the lift block and use the new provided U-bolts. Snug the bolts only. Make sure the bump stop pad is on the inside of the vehicle. And the smaller end on the block is towards the front of the vehicle.

74. Once the one side is done, now drop the opposite side and do the same. Once both sides are snug, now tighten all the U-bolts. Torque to 190 ft lbs. (pic 78-80)



75. Install new rear lift shocks. They will mount in the factory location using the factory hardware. (pic 81)

76. Install provided wiring bracket onto the top of the rear end using the factory hardware. Bolt the factory wiring to the new bracket using the provided 1" x 1/4" bolts and lock nuts.. (pic 82)



- 77. Re-install brake line bracket that was removed in pic 76, back in the factory location on the rear end housing.
- 78. Install new rear upper brake line bracket to the factory location on the frame using the factory hardware. (pic 83)
- 79. Install the factory brake line bracket to the new bracket installed on to the frame using the provided 1" x 5/16" bolts and lock nuts. (pic 84)

*** Double check all of the front and rear fasteners and components, making sure everything has been torqued to the proper specifications. This MUST be done before operating the vehicle.**

*** Vehicle MUST be properly aligned before driving.**

*** After 500 miles, be sure to go over all of the front and rear suspension and lift components to make sure nothing has come loose and everything is still tight.**

*** We recommend periodically checking all of the front and rear suspension and lift components to be sure they are tight and in proper working order.**