

# McGAUGHYS

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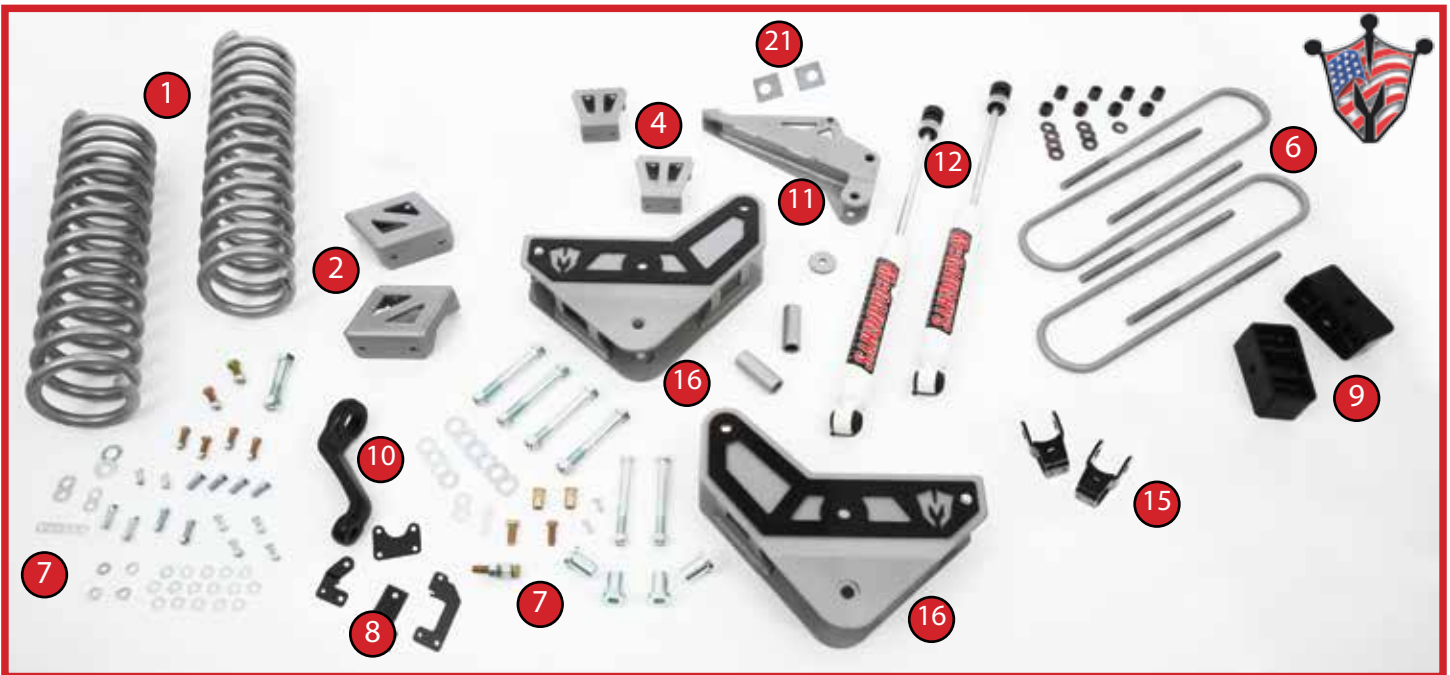
## 2013+ DODGE RAM 3500 4" Kit PART# 54346

### STOP! READ THIS FIRST!

\*\*READ THESE ENTIRE INSTRUCTIONS BEFORE STARTING ANYTHING\*\*

#### NOTE:

- The factory wheels and tires WILL fit on the front of the vehicle once the lift kit is installed if they are 18" or larger.
- If you alter the powder-coating or finish of any of the provided parts or stock components like the zinc plating or chroming, which can damage the strength and structure of the metal, any warranties will be null and void.
- If any parts are ground on or modified in any way then no returns will be accepted.
- NO welding is required to install any part of this lift kit. Do not weld any components.
- Oversized tires and heavier rims can cause premature ball joint, tie-rod, and idler arm wear. You may need to install new components sooner than factory recommendations based on the tires and rims you choose.



1. Coil Springs
2. Front Sway Bar Mounts
4. Front Bump Stop Extension Brackets
6. U-Bolts w/ Hardware
7. Hardware Pack

8. Brake Line Brackets
9. Lift Blocks
10. Pitman Arm
11. Front Track Bar Relocation Bracket

12. Front Shocks
15. Rear Shock Extenders
16. Radius Arm Drop Downs (Pass. / Driver)
21. Track Bar Relocation Bracket Keys

## FRONT INSTALLATION:

Before starting this installation, we recommend loosening the factory front shocks with the truck on the ground. Once the vehicle is in the air, it is extremely difficult to access the upper shock nuts and they have a significant amount of tension on them. Loosen the top nut with a 21mm wrench but **DO NOT** remove it all the way off since it holds up the front suspension. (Photo 1)



Always use the proper tools and consult the factory service manual for recommended torque values and procedures. With the parking brake set and chocks behind the rear tires, use a jack and lift the front of the vehicle and place jack stands under the frame on each side. Remove the front tires and wheels.

1. Using a 13mm wrench, unbolt the brake line brackets (L&R) from the frame. Also, unbolt the brake line bracket from the front axle for extra maneuverability. (Photo 2)

2. Support the front driveline with a suitable strap and remove the four front driveshaft flange bolts using a 15mm socket. (Photo 3)



3. Remove the driver's side drag link to pitman arm nut using a 21mm socket. Use a tie-rod removal tool to avoid damaging your stock tie-rod ends. (Photo 4)

4. Remove the pitman arm-to-steering box nut using a 46mm socket. (Photo 5)

5. Using a pitman arm puller, remove the pitman arm from the steering box output shaft. (Photo 6)

6. Remove the sway bar end link top nuts (L&R) using a 18mm socket. Separate the sway bar from the end links. (Photo 7)







PHOTO 8

7. Remove the sway bar mounting bolts from the frame using a 15mm socket. (Photo 8)

8. Remove the sway bar.

9. Support the front axle and remove the front shock top nuts.

10. Remove the front shock lower mounting bolt using a 21mm socket. Remove the shocks from the vehicle. (Photo 9)

11. Lower the front axle until the front coil spring tension is released.

12. Remove the coil springs. (Photo 10)

13. Remove the track bar from the factory track bar bracket using a 27mm socket. (Photo 11)



PHOTO 9

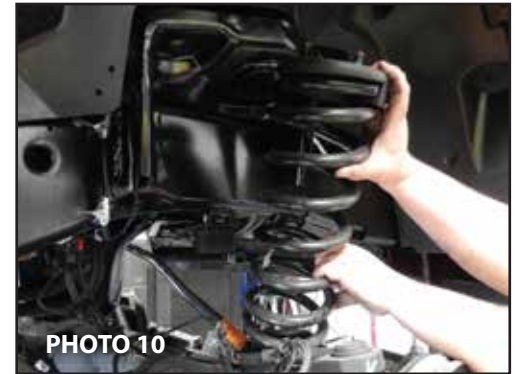


PHOTO 10

14. Use a cut-off wheel to remove the front bump stop mounts (L&R) from the frame. **NOTE: The frame mounts will be reused so do not destroy them, cut the factory weld only.** (Photo 12)



PHOTO 11



PHOTO 12

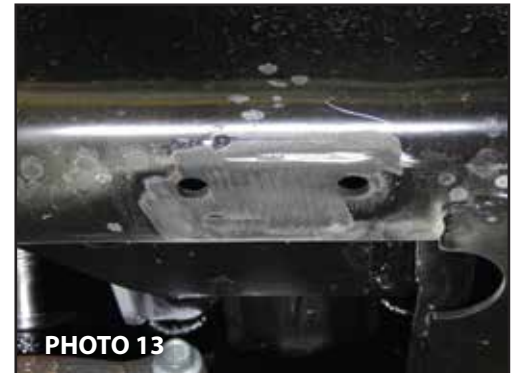


PHOTO 13

15. Clean the remaining weld material from the frame using an abrasive disc or flap-wheel. Clean and paint the bare metal to prevent rust. (Photo 13)

16. Clean the remaining weld material from the bump stop mount you just removed using an abrasive disc or flap-wheel. Clean and paint the bare metal to prevent rust.



PHOTO 14



PHOTO 15

17. Install the bump stop mounts to the extension brackets with the supplied 3/8" buttonhead allen bolts, washers, and locking nuts. (Photo 14)

18. Install the new bump stops to the factory mounts. This will take some force to do. (Photo 15)

19. Re-thread the bump stop mounting holes in the frame using the supplied 7/16" tap. Next, install the new bump stop assemblies into the vehicle using the supplied 7/16" x 3/4" bolts. (Photo 16)



20. To mount the McGaughy's track bar relocation bracket, start by placing the factor bolt through the track bar bracket and drill the brace hole using a 7/16" drill bit. (Photo 17 Place something firm between the crossmember and oil pan to prevent damage. **NOTE: The top hole on the bracket may or may not require drilling with a 1/2" drill bit, due to the production variances on Ram frames.** (Photo 18)

21. For the top mounting hardware, Install the supplied 1/2" x 1 1/2" bolt from the rear with washers, and locking nut. Next, install the supplied Grade 8 7/16" x 1 1/2" bolts, washers, and locking nuts in the lower mounting holes. (Photo 19)



22. Remove the upper radius arm to axle bolts using a 27mm socket. Remove the lower radius arm to axle bolts using a 24mm socket and a 27mm wrench. (Photo 20)

23. Remove the radius arm to frame bolts using a 27mm socket. Remove the radius arms from the vehicle. (Photo 21)

24. Insert the frame spacer into the factory hole of the frame. (Photo 22)

25. Position the radius arm drop down and use a 5/8 x 5-1/2" bolt through the factory radius arm hole where the frame spacer was installed in the previous step. Also use a Metric 18 x 130" bolt through the center hole. (Photo 23)





26. Center punch where to drill the frame. Remove the radius arm drop down and drill into the frame to 43/64". Start with 1/4" drill bit, then 3/8", 1/2", and then the final bit size. (Photo 24)

27. Using the tool in Photo 25, insert into the previously drilled hole. (You might have to tap it into the hole in order to fit properly). Tighten with impact. (Photo 26 & Photo 27)



28. Insert spacer (3.300 long) into the center of the radius arm drop down and insert the Metric 18 x 130" bolt and tighten. (Photo 28). Bolt the 1/2-13 x 3/4" long bolt into the previous drilled hole and tighten. (Photo 29 & Photo 30)



29. Reattach the original radius arm to the the radius arm drop down using a Metric 18 x 130" bolt and tighten (Photo 31). And factory hardware in the Front Mounts of the radius arm attaching in to the front axle. (Photo 32)



30. Duplicate steps 22 thru 29 for the other side.

31. Track bar alignment cam must be used in this position for a 4.0" lift. Place the cams in front and behind the McGaughy's track bar bracket so that the bolt can pass through with no obstruction.

Track Bar Alignment Cam (4.0" Lift)



32. Install the track bar into the McGaughy's bracket using the supplied 18mm x 90mm bolt, washers, alignment cams, and locknut. Torque all bolts to factory specifications.

33. Trim the protrusion off the stock coil insulators as shown. (Photo 33)

34. Install the McGaughy's lift coils with lower tag aligned at 9 o'clock on the left side of the vehicle and 3 o'clock on the right side of the vehicle with the motor being the 12 o'clock position. The tighter coil windings face up and the open windings face down. (Photos 34 & 35)



35. Install the shocks with the supplied new upper hardware and original lower hardware using a 21mm wrench for the upper nut and a 21mm socket and wrench for the lower hardware. (Photo 36)



36. Tighten the track bar hardware previously left loose in step 31.

37. Install the McGaughy's supplied driver's side brake line drop bracket on frame with stock hardware. Next, install the OE brake line bracket to the McGaughy's drop bracket with the supplied 5/16" x 3/4" bolts, washers and nut. (Photos 37 & 38)

38. Install the McGaughy's supplied passenger side brake line drop bracket on frame with stock hardware. Next, install the OE brake line bracket to the McGaughy's drop bracket with the supplied 5/16" x 3/4" bolts, washers and nut. (Photo 39)



39. Re-attach the L&R lower brake line brackets to the axle using a 13mm socket.

40. Install new drop pitman arm. Apply the supplied red thread locker to the factory pitman arm retention nut and tighten to factory specifications. **NOTE: Re-check this nut after the first 500 miles of driving.** (Photo 40)

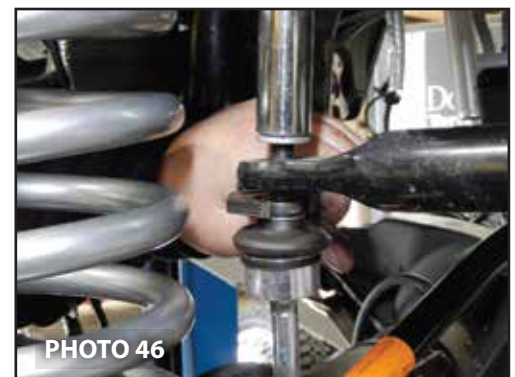


41. Loosen the drag link adjuster lock nuts. Turn the adjuster until the drag link is free.

42. Cut off the unthreaded portions of the end and link as shown. (Photos 41 & 42)

43. Reinstall end back on the drag link. Insert the drag link end back into the pitman arm from the bottom as shown. Tighten the nut to factory specifications. (Photo 43)

44. Adjust the drag link to center the front axle at ride height.



45. Mount the supplied sway bar drop brackets to the frame with the original hardware. Mount brackets so that the angle is away from the axle. (Photo 44)



46. Attach the sway bar to the drop brackets using the supplied 3/8" x 1 1/4" Grade 8 bolts, washers, and lock nuts and tighten. (Photo 45)

47. Install the sway bar end links and tighten to factory specifications. (Photo 46)

48. Apply the supplied thread-locking compound to the driveshaft flange retaining nuts. Align the driveshaft flange to the axle flange and thread in the bolts. Tighten bolts to factory specification. (Photo 47)

**REAR INSTALLATION:**

49. Support the rear axle.

50. Remove parking brake cable from the frame, located in the driver's side wheel well.

51. Remove the rear shock top nuts using a 21mm socket.

52. Remove the rear shock lower bolts using a 21mm socket and 21mm wrench. (Photo 49)

53. Remove the rear shocks from the vehicle.

54. Remove the nut from the axle bracket to release the parking brake cable. (Photo 50)

55. Pull the brake line retaining clips. (Photo 51)



56. Remove the bracket to axle stud using a 9/16" socket. (Photo 52)

57. Undo the parking brake cable at union. Do this by squeezing the clip and pulling the cable through the cab mount. (Photo 53)



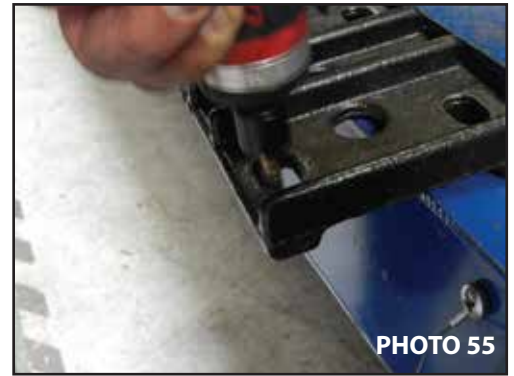
58. Pull the parking brake cable through both holes in the cab mount and front leafspring hanger. (Photo 54)

59. Re-route the cable back through the leafspring hanger front hole and skip the rear hole. Re-connect at union.



60. Remove the U-Bolt nuts using a 21mm socket. Remove the U-Bolts from the axle housing. (Photos 56 & 57)

61. Grind the holes in the U-Bolt plate towards the outside just enough to allow the U-Bolts to fit freely through the bracket. The OE U-Bolts are 9/16" diameter and the supplied McGaughy's are 5/8" diameter. (Photo 55)



62. Lower the axle to separate the axle and leaf spring pack.



63. Insert the supplied 2 1/2" lift block with the tapered side facing forward. (Photo 58)

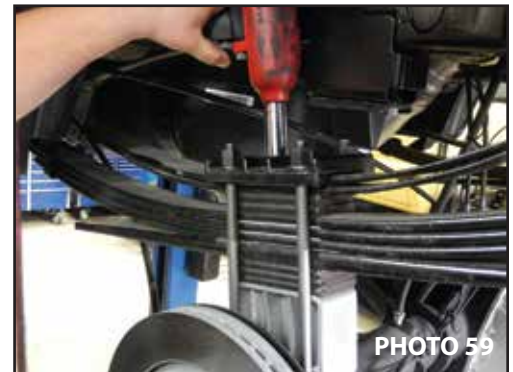
64. Install the new U-Bolts around the axle and through the previously modified spring plates.

65. Thread the new nuts and washers onto the replacement U-Bolts, do not tighten them yet.

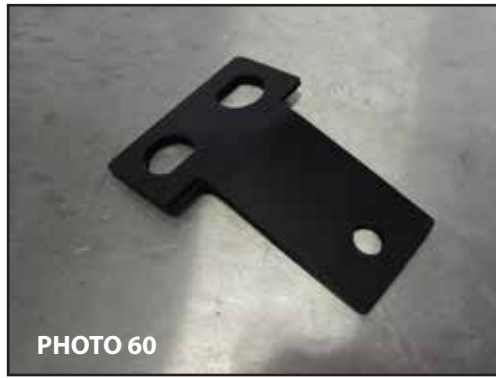
66. Repeat steps 59 through 61 for the opposite side of the vehicle.

67. Tighten the U-Bolt nuts using a 15/16" socket to 135 ft lbs. Check the torque of all nuts twice. (Photo 59)

68. Remove the bolts holding the rear bumpstops to the frame using a 15mm socket.



69. Install the McGaughy's brake line bracket with the stock stud and 9/16" nut. Position the bracket so the bend comes over the axle. (Photos 60 & 61)



70. Mount the parking brake cable onto the stud using the factory hardware. (Photo 62)

71. Install the brake lines to the McGaughy's bracket using the factory spring clips. (Photo 63)



72. Install the new shock extender and 9/16" x 3" bolt. (Photo 64)

73. **IMPORTANT:** Double check all of the fasteners and components, making sure everything has been properly torqued as outlined in these instructions to factory specifications. This **MUST** be done prior to operating the vehicle. We recommend periodically checking all of the front suspension and lift kit components and fasteners to be certain they are tight and in proper working order.