



# 2019-2021 GM 1500 3/5

## LOWERING KIT WITH HELPER BAGS

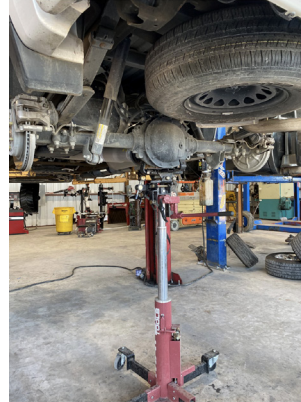
### REAR INSTALLATION

**43.** Support the rear differential with a jack. Refer to the picture on the right.

**44. NOTE: STRAP THE DIFFERENTIAL TO JACK TO PREVENT IT FROM FALLING.**

**45. NOTE: THE FRONT JACK STAND MUST BE PLACED ON THE ENGINE SIDE TO PREVENT THE VEHICLE FROM SWAYING.**

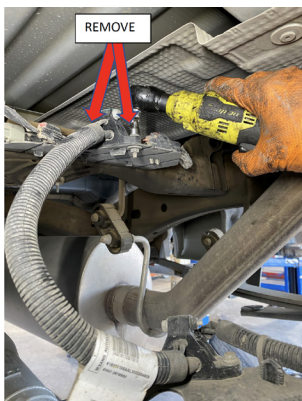
**46.** Remove both rear shocks. Refer to the picture on the right.



**47.**



**48.** Remove the brake line bracket. It's located on the inside of the frame rail on the driver's side of the vehicle. Remove the two bolts that mount the bracket and retain hardware. Refer to the picture on the right.



**49.**



**50.** Remove the ABS sensor harness bracket from the top of the rear differential. Retain the factory hardware will be re-used.

**51. Disconnect ALL ABS WIRING CONNECTORS FROM THE BRACKET.**

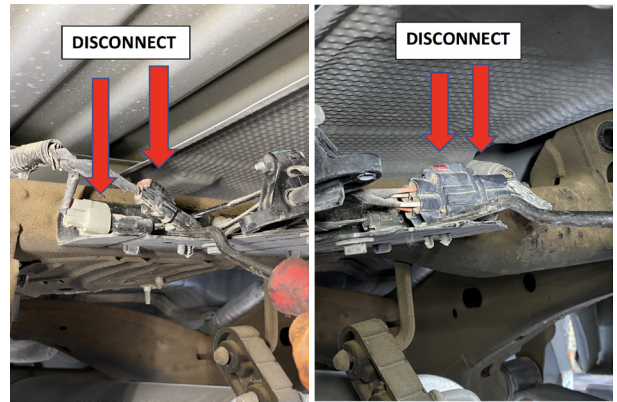


**54. Remove both ABS/BRAKE line brackets from the differential. Refer to the picture on the right.**

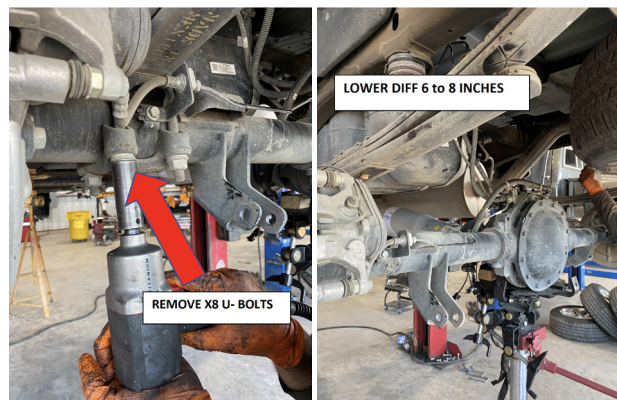
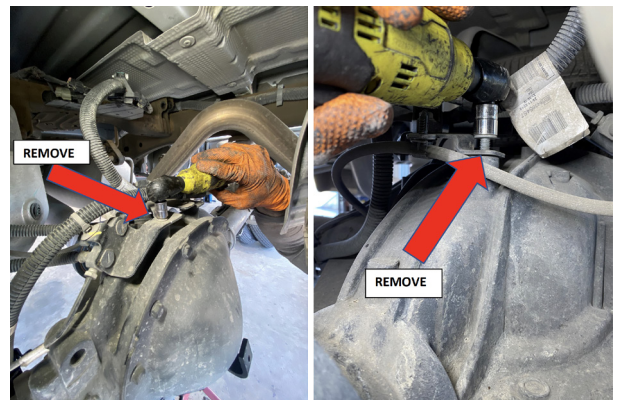


**55. REMOVE the U-bolts and lower the differential. Refer to the picture on the right.**

**52.**



**53. REFER TO PICTURE. NOTE: MAKE SURE ALL WIRING IS CLEAR!**



**56. Remove the REAR shackles from the rear hanger. Refer to the picture on the left.**

**57. Both leaf packs should be removed from the rear hanger.**

**58. Continue to flip the leaf pack under the differential.**



59. **NOTE: 2 TECHNICIANS ARE REQUIRED.**

60. Have one tech slide the differential away from the leaf pack that is going to be flipped and the second tech flip the leaf pack. Refer to the picture on the right.

61. **NOTE: THE PASSENGER SIDE EXHUAUST HANGER GROMENT WILL NEED TO BE REMOVED TO HAVE MORE PAY ON THE EXHUAUST.**

62. The rear differential should now be flipped. Leaf pack under DIFF. Refer to the picture on the right.



63. Remove the REAR bump stops. Refer to the picture on the left.



64. CUT off the REAR bump pocket. Refer to the pictures on the left.

65. **NOTE: ALWAYS CUT WITH FLAMES GOING AWAY FROM THE FUEL TANK. WE RECOMMEND COVERING THE TANK WITH A FIREPROOF BLANKET.**

66. **NOTE: BUMP STOPS MUST BE CUT COMPLETELY FLUSH WITH THE FRAME RAIL**

67. Remove the REAR BRAKE LINE bracket. Move out of the way.

68. Cut off the DIFFERENTIAL brake line bracket. Refer to the pictures above.

69. **NOTE: DO NOT CUT INTO THE DIFFERENTIAL!**



70. Clamp the leaf pack with C-CLAMP.

71. Continue to remove the center pin bolt.

72. With a Vise Grip, hold the head of the bolt. Refer to the pictures on the left

73. Install the lower helper bag to the bracket and tighten the leaf pack center pin bolt. Refer to the pictures on the left.



74. **NOTE: DISCARD THE STOCK U-BOLT PLATE.**

75. **NOTE: DISCARD THE STOCK PINION SHIM.**

76. Raise the differential upward.

77. Install the IHC shackles onto the leaf pack.

78. Install the IHC shackles into the rear hanger. Refer to the picture on the left.



79. Continue to install the FLIP KIT SADDLES.

80. Lower the Diff onto the flip kit saddles. Refer to the picture on the left.

81. **NOTE: SADDLES ARE DIRECTIONAL. WELD THE NUT TO THE REAR OF THE VEHICLE!**

82. Bolt up the bracket line bracket to the saddle using OEM hardware. **TORQUE 80 INCH-LBS.**

83. Install the OEM U-BOLTS.

84. BOTTOM PLATE is directional. Spade facing the rear of the vehicle. Leaf pack center pin bolt goes on the furthest hole to front. Refer to picture on the left.



85. **NOTE: U-BOLTS ARE DIRECTIONAL. FRONT 2 U-BOLTS ARE THEN TIGHTENED STARTING BY TIGHTENING 2 even. Continue to **TORQUE 120 FT-LBS.****

86. **NOTE: DO NOT TIGHTEN THE FRONT 2 U BOLTS FIRST! READ STEP 84**



87. Install the Helper bag top brackets on the passenger and driver sides.

88. Cut out the inner liner to have access to the top bolts. Refer to the picture on the right.

89. THE HELPER BAG BRACKET GOES IN FRONT OF THE AXLE! Slide the helper bag bracket until it meets the bump stop edge.



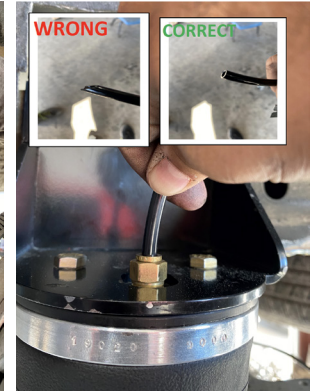
90. Install hardware with the head facing the inside frame. **Torque to 45FT-LBS.** Refer to the picture on the right.



91. Install the air bag to the lower bag bracket and then pull upward to install two 3/8 bolts. Refer to the picture on the right.

92. Install the air fitting to bags and connect 1/4" airline.

93. **NOTE: CUT THE 1/4 AIR LINE CORRECTLY. REFER TO THE PICTURE ON THE RIGHT.**



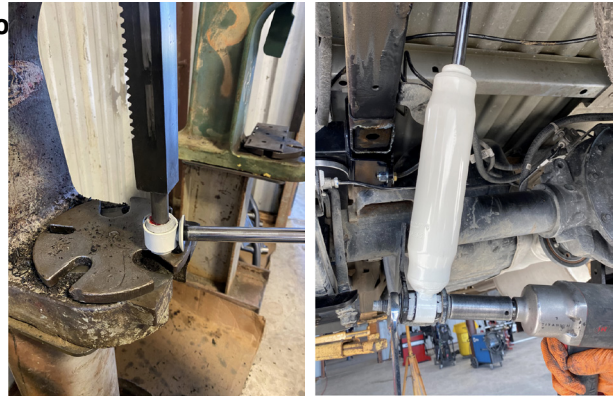
94. Install the 1/4 air line from bag to bag to T-fitting, then route to the accessible area and connect the Schrader valve. Refer to the picture on the right.



95. Continue to connect the ABS wiring and brackets back to the OEM positions.  
(What was removed in steps 50, 51, 52, 53, and 54.)

96. Insert the inner sleeve into the shocks.  
Refer to the pictures on the right.

97. Install the IHC drop shocks.  
Refer to the pictures on the right.



98. Install the rear wheels and lower the vehicle to the ground. Torque the lug nuts to the wheel manufacturer specs.

99. Attach the vehicle negative power source. Have the alignment set to the recommend specs at the end of the instructions.

## FINAL CHECKS AND ADJUSTMENTS

Once the vehicle is lowered to the ground, check all parts which have rubber or urethane components to ensure proper torque. Torque lug nuts to wheel manufacturer specs. Move the vehicle backwards and forwards a short distance to allow suspension components to adjust. Turn the front wheels completely left then right and verify adequate tire, wheel, brake line, and ABS wire clearance. Test and inspect steering, brake, and suspension components for tightness and proper operation. Inspect brakes hoses and ABS lines for adequate slack at full extension. Adjust as necessary. **RECHECK ALL HARDWARE FOR PROPER TORQUE VALUES AFTER 500 MILES AND THEN PERIODICALLY AT EACH SERVICE INTERVAL THERAFTER.**

### ALIGNMENT SPECIFICATIONS RECOMMENDATIONS

	DRIVER	PASSENGER	TOLORANCE	SPLIT
<b>CAMBER</b>	<b>-0.1</b>	<b>-0.1</b>	<b>+ OR - 0.7</b>	<b>0.0</b>
<b>CASTER</b>	<b>+7.0</b>	<b>+7.0</b>	<b>+ OR - 0.5</b>	<b>0.0</b>
<b>TOE</b>	<b>+0.5</b>	<b>+0.5</b>	<b>+ OR - 0.5</b>	<b>+14</b>

**NOTE:** The camber and toe are the most important alignment angles that need to be in green. Caster will be in RED due to the vehicle coming down 3" and the wheel staying centered to fender wheel. Caster needs to be set relatively close to each other. Preferably .5 degrees higher on the driver side to prevent crown pull (road curvature).

Attached is a sheet as reference for actual alignment that was performed on the truck.

## **GMC 2019 SIERRA 1500 4X2 CCAB 70" BOX EXPRESSALIGN TOTAL ALIGNMENT**

