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3" DUALSPORT REAR SUSPENSION RAM TRUCK 3500



AEV30243AH

Last Updated: 08/16/21

INSTALLATION GUIDE



PLEASE READ BEFORE YOU START

TO GUARANTEE A QUALITY INSTALLATION, WE RECOMMEND READING THESE INSTRUCTIONS THOROUGHLY BEFORE BEGINNING ANY WORK. THESE INSTRUCTIONS ASSUME A CERTAIN AMOUNT OF MECHANICAL ABILITY AND ARE NOT WRITTEN NOR INTENDED FOR SOMEONE NOT FAMILIAR WITH AUTO REPAIR.

INCLUDED PARTS	QTY
Rear Axle Kit	1
Shocks PN: 33-241562	2



3500 REAR SUSPENSION

NOTE: For Long Bed configurations you will need PN: NRM43400AA

1. Support the vehicle by the frame until the rear wheels are off the ground.
2. Remove the wheels and tires.
3. Disconnect parking brake cable (fig. 1).
 - a. Note the tension on the forward and rear parking brake cables loosen the brake adjustment nut to just short of the end of the threads.
 - b. Disconnect forward section of the rear brake cable.
 - c. Disconnect rear section of the rear brake cable.
 - d. Disconnect rear brake line pass through fitting.

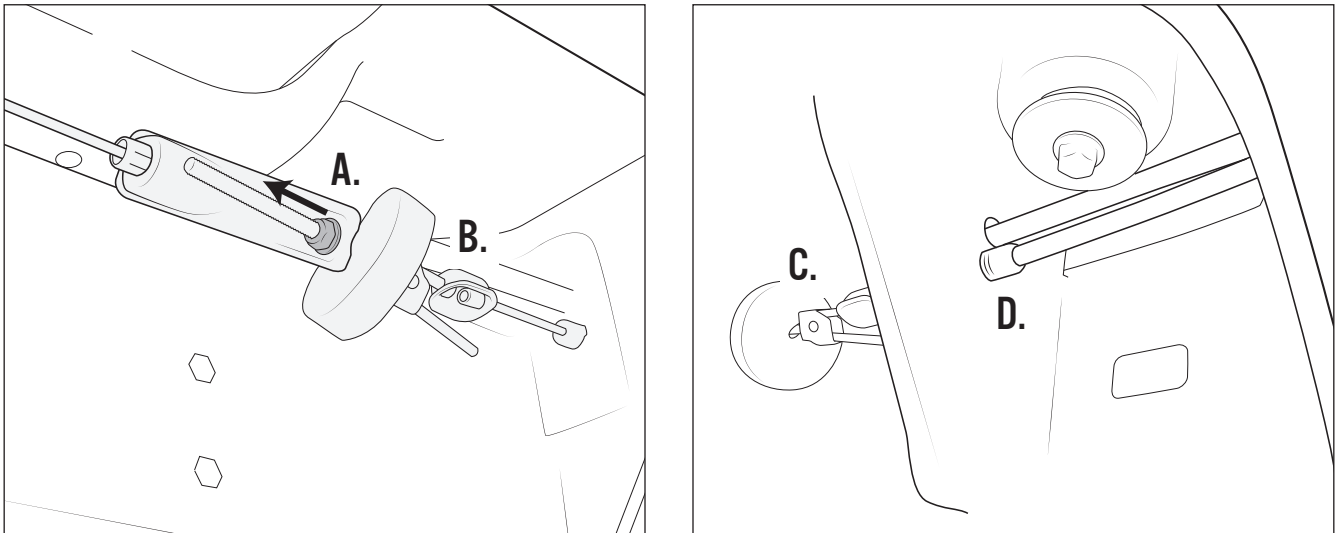


Figure 1

4. Support the axle and remove the shocks, save hardware.
5. AIR SUSPENSION ONLY – Remove the two bottom air spring bolts, save hardware.
6. Remove the axle U-bolts from one side (SAVE nuts and washers).
7. Lower the axle enough to insert the lift block (fig. 2).
8. Install the new U-bolts using factory nuts and washers and snug (fig. 2).
9. Repeat steps 4–6 for the opposite side.
10. Torque the U-bolts to **111 lb-ft**

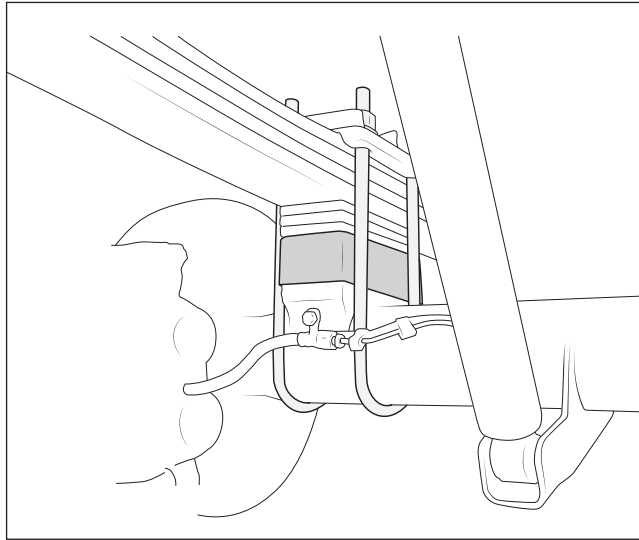


Figure 2

11. AIR SUSPENSION ONLY – Insert the rear air spring spacer. Secure at the bottom using the supplied 8mm bolts, nuts, and washers. Secure at the top re-using the factory hardware (fig. 3).

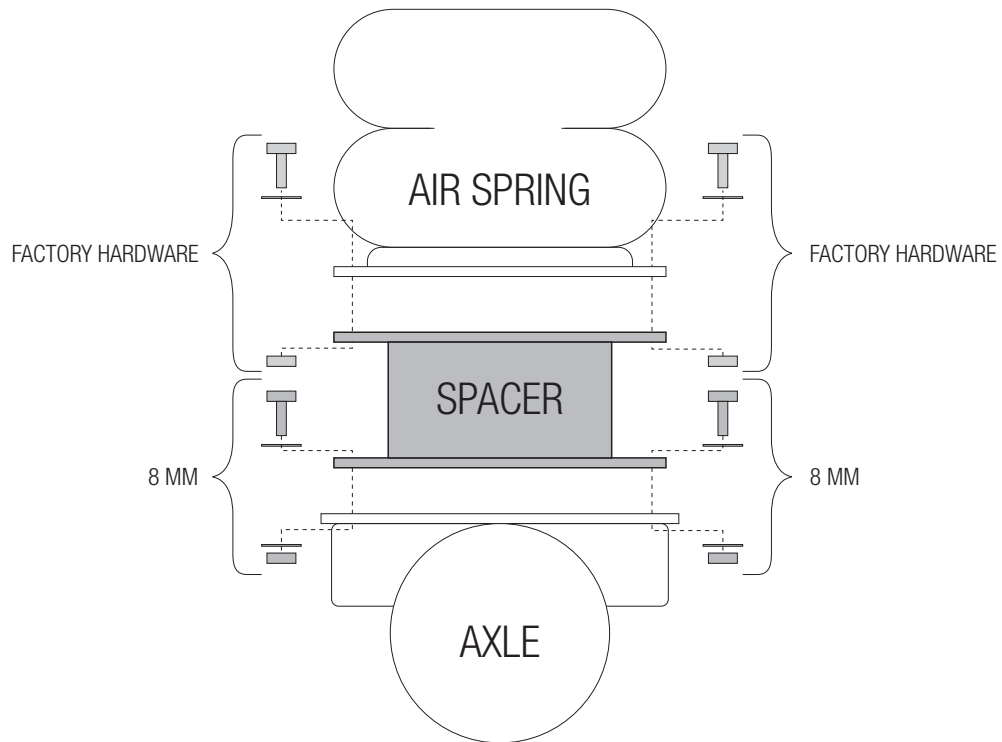


Figure 3



CAB CHASSIS ONLY – ALL OTHER APPLICATIONS SKIP TO STEP 16.

12. Remove factory shocks.

13. Remove factory shock brackets by cutting the off at the welds.

- a. Cut bracket at factory welds along outside radii along the top of the bracket (Fig. 4).
- b. Grind surface smooth.

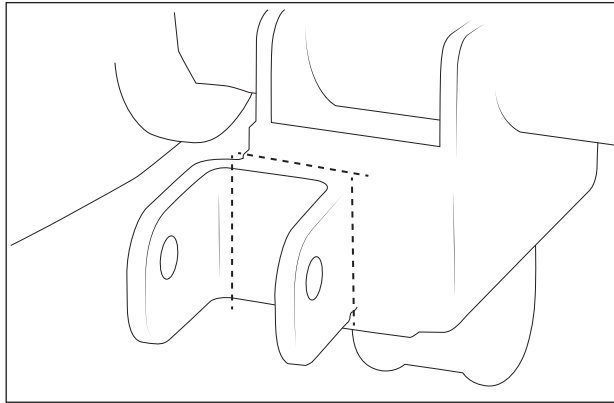


Figure 4

14. Attach AEV brackets.

- a. Prepare surfaces on both the axle and AEV shock bracket for welding.
- b. Weld AEV brackets in the same location and orientation as the factory brackets (Fig. 5).
- c. Weld brackets along outside radii and on the back sides of the brackets.
- d. Paint all bare metal.

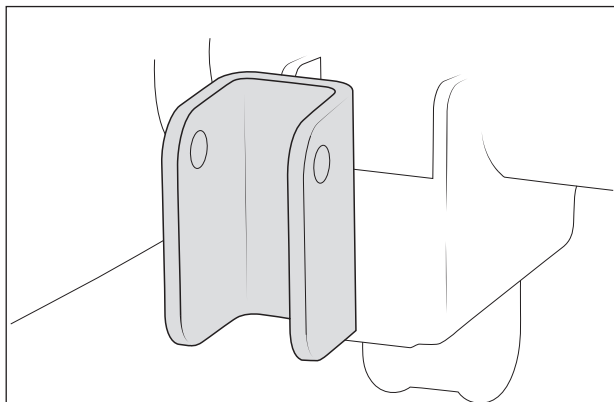


Figure 5

15. Reinstall shocks.



16. Install AEV shocks. Torque to **111 lb-ft.**

17. Install AEV parking brake line spacer (fig.6).

- a. Install the AEV rear brake line spacer onto the pass-through fitting on the forward part of the rear brake line.
- b. Insert the brake line and spacer back into its original location and secure with AEV provided jam nut using anti-seize, torque to **14-16 lb-ft.**
- c. Reconnect the rear section of the rear brake line to its OE position.
- d. Reconnect the forward section of the rear brake line to its OE position.
- e. Adjust nut in a tightening direction and set to previously not tension.
- f. Check the operation of the parking brake and adjust as needed to ensure proper tension.

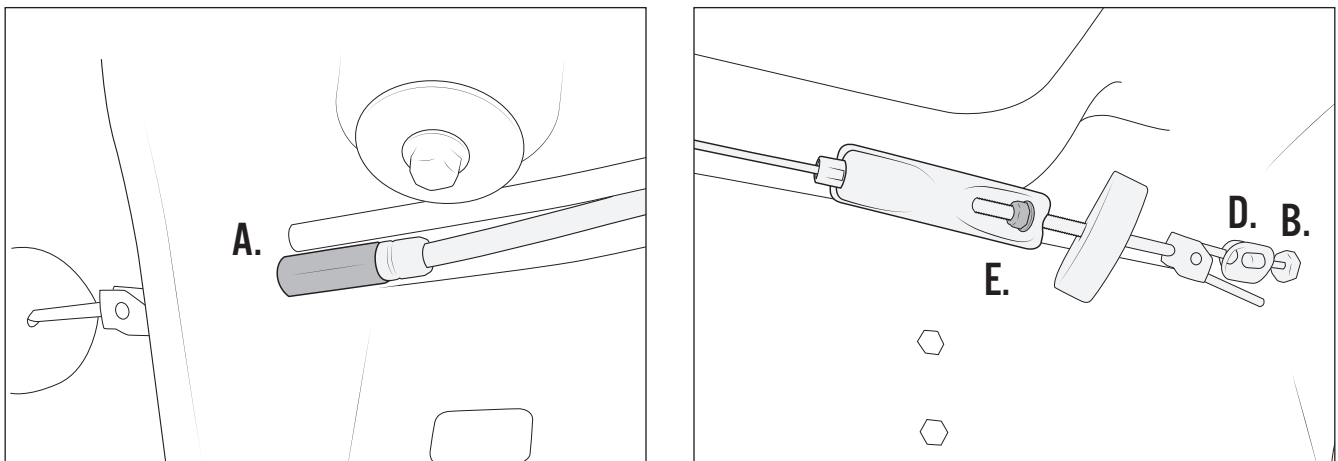


Figure 6

18. Install the wheels.

After everything is tight, drive the vehicle back and forth on flat ground to check steering wheel position. Adjust the drag link to straighten the steering wheel as needed.



CARRIER BEARING SPACERS

Carrier Bearing spacers are required to maintain proper drive shaft angles and help to eliminate drive shaft vibrations.

1. Support the carrier bearing and drive shafts in place.
2. Remove the two (2) carrier bearing bolts and discard (fig. 7).
3. Consult the spacer allocation chart (fig. 8) to determine the number of spacers required for your application.
4. Lower the carrier bearing assembly and slide in the required spacer(s).
5. Insert the supplied hardware and torque to 56 lb-ft.

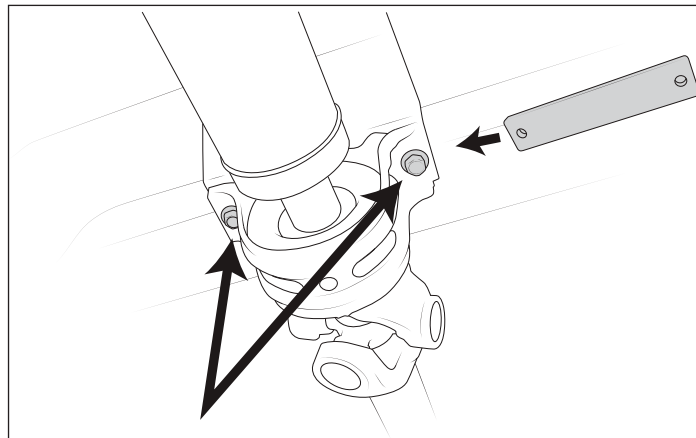


Figure 7

Model	Cab	Bed	Powertrain	Transmission	Spacer(s)
2500	Crew	Long	Diesel	6 Speed Auto	4
3500	Mega	Short	Diesel	6 Speed Auto	1
3500	Crew	Long	Diesel	Aisin	2
3500	Crew	Long	Gas	6 Speed Auto	2
3500	Crew	Long	Diesel	Manual	2

Figure 8