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| Revisions | | | |
|-----------|--------------------------------|---------|----------|
| Rev. | Description | Date | Approved |
| A | Initial Release Per ECO 24-034 | 5/16/24 | RG |



RAM 1" REAR LIFT SHACKLES

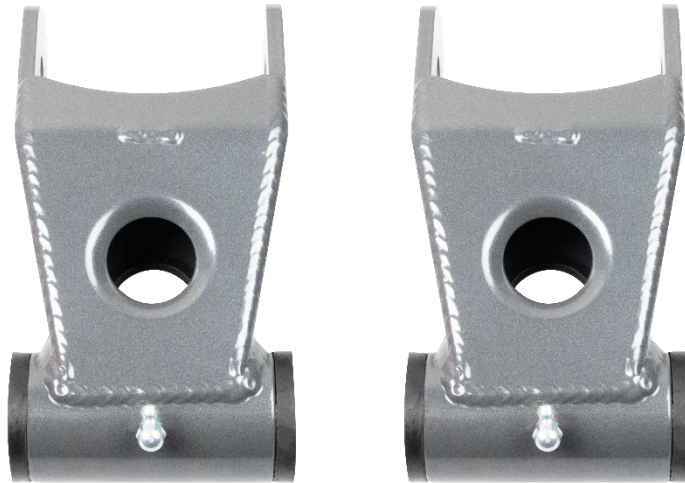
Installation Instructions

Applications:

2003-2013 RAM 2500

2003-2012 RAM 3500

2006-2008 RAM 1500 Megacab



TITLE:

**RAM 1" REAR LIFT SHACKLES
INSTALLATION INSTRUCTIONS**

| | | |
|------------------|---------------------|-------------|
| SIZE A | DWG NO: | REV |
| | 8566-01-INST | A |
| SCALE: N/A | | PAGE 1 OF 6 |



RAM 1" REAR LIFT SHACKLE INSTALLATION INSTRUCTIONS

Thank you for purchasing the best aftermarket products available for your vehicle. We strongly feel that the parts you are about to install should meet or exceed your expectations for performance. Proper assembly is critical to the performance of these components and the vehicle as a whole. Please take the time to carefully read these instructions and familiarize yourself with the installation procedure before working on your vehicle. If you have any questions PLEASE contact Synergy Manufacturing BEFORE beginning installation. Thanks again for supporting Synergy – enjoy the performance benefits of the best aftermarket products available for your vehicle!

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Modifying or otherwise altering vehicle components may cause the vehicle to handle differently than originally designed. It is the driver’s responsibility to familiarize themselves with the performance and handling characteristics of the modified vehicle. Vehicles with larger diameter than stock tires must be driven carefully and cannot be expected to perform as stock or meet OEM performance with regard to handling, braking or crash performance. Ensure all replacement components are compatible with vehicle capacities so as not to overload components, especially tires. It is up to the individual to ensure that the vehicle and all components are compatible with the intended vehicle use, including load ratings, road conditions, and driver abilities. Thorough and frequent vehicle inspections are recommended to ensure a safe and reliable state of readiness, especially after off-highway use.

PARTS LIST

| 8566 RAM 1" EXTENDED REAR LIFT SHACKLE | | |
|---|--------------------|---------------------------------|
| QTY | Part Number | Description |
| 2 | 856601 | Ram 03-13 1" Rear Lift Shackles |

GENERAL NOTES

- These instructions are also available on our website; www.synergymfg.com. Check the website before you begin for any updated instructions and additional photos for your reference.
- The installation of these 1" lift rear shackles will replace the factory shackles and increase the rear height of the truck by about 1/2".
- These shackles feature a laser cut and CNC formed 1/4" HRPO plate steel main body construction and durable powder coat finish.
- The shackles use polymer bushing pivots that move easier and have a higher range of motion when compared to the factory shackles. These features allow for smoother suspension operation and less binding through the leaf spring travel.



TOOLS REQUIRED

- 24mm wrench or socket
- T-60 Torx bit (low profile)
- Torque Wrench
- Jack and jack stands
- Grease gun

ESTIMATED INSTALLATION TIME

1 Hour

INSTALLATION

1. Make sure the vehicle is parked on a flat, level surface. Ensure the vehicle is in park or in gear with the parking brake set.
2. Support the frame of the truck with jack stands or put the vehicle on a lift.
3. Loosen the upper and lower shackle bolts on one of the shackles with a 24mm wrench and t-60 torx bit. Do not remove. **See Figure 1.**



Figure 1. Shackle Bolts to be Loosened

4. With the lower bolts loosened, lower the axle until pressure on the shackle bolts has been relieved and the bolts can be moved from side to side through the mounting hole. Remove the bolts at this time.
5. Remove the factory shackle from the truck.
6. Grease the face of the bushings on the new shackle. **See Figure 2.**



Figure 2. Greased Bushing Faces on New Shackles.

7. Grease the bearing surface on the frame side mounting location. **See Figure 3.**

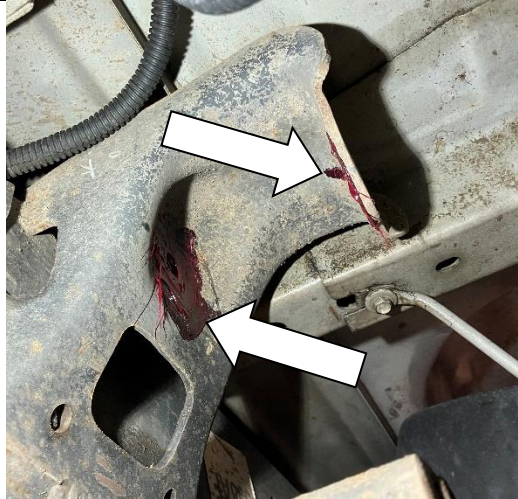


Figure 3. Greased Bearing Surface on Frame Side Shackle Mount.

8. Loosely install the new shackle to the leaf spring using the factory bolt and factory bolt orientation. See **Figure 4**.



Figure 4. New Shackle Loosely Bolted to the Leaf Spring Eyelet.

9. Guide the bushings of the shackle up into the shackle mount on the frame of the truck.
10. Loosely install the upper shackle bolt using the factory nut tab and factory bolt. See **Figure 5**.



Figure 5. Upper and Lower Shackle Assembly Bolt Installed.

11. Repeat steps 3-10 on the remaining shackle.
12. With both sides of the truck complete up to step 10, lower the vehicle to the ground and allow the full weight of the truck to rest on the axles.
13. Tighten and torque all 4 bolts for both shackle and leafspring assemblies. This is done to prevent any torquing of the factory leaf spring vulcanized bushings. Refer to **Table 1** for torque values.
14. Add grease to the shackles through the 90 degree zerk fitting. Continue pumping grease until either significant pressure is built up inside the bushing tube or grease begins to seep out of the bushing surface.
15. Re-check bolt torques after the first 100 miles and again after each off-road trip.

Installation is complete

Table 1. Ram HD Bolt Torques

| Bolted Joint Location | Wrench Size | Torque |
|---|--------------------|---------------|
| Upper Frame Side Shackle Pivot Bolt | 24 mm | 130 lb-ft |
| Lower Leaf Spring Side Shackle Pivot Bolt | 24 mm/ T-60 | 130 lb-ft |