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Revisions			
Rev.	Description	Date	Approved
A	Initial Release Per ECO 18-066	7/20/18	A.S.
B	Revision Per ECO 20-012	1/23/20	A.S.
C	Revision Per ECO 24-016	3/28/24	P.J.



RAM HD Leveling System

Installation Instructions

Applications:

2014+ Ram 2500 4WD

2013+ Ram 3500 4WD



TITLE:

RAM HD LEVELING SYSTEM INSTALLATION INSTRUCTIONS

SIZE	DWG NO:	REV
A	8750-XX-INST	C
	SCALE: N/A	PAGE 1 OF 8



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!

Synergy Manufacturing

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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.

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.
- Final truck front end height is dependent on several factors, including cab configuration and trim level.
- Springs are left and right. Be sure and check that each spring is installed on the correct side of the vehicle.

TOOLS REQUIRED

- Basic Hand Tools – 21mm, 19mm or 3/4", 18mm, 8mm wrenches and sockets
- Jack and jackstands
- Torque Wrench

ESTIMATED INSTALLATION TIME

1.5 Hours



PARTS LIST

8750-10 RAM 2500 DIESEL LEVELING SYSTEM		
QTY	Part Number	Description
1	8755-20-01-B	RAM DIESEL LEVELING SPRING LEFT SIDE (DRIVER)
1	8755-20-02-A	RAM DIESEL LEVELING SPRING RIGHT SIDE (PASSENGER)
2	FOX-986-24-105	SYNERGY TUNED RAM 2500/3500 FRONT SHOCK
2	FOX-986-24-104	SYNERGY TUNED RAM 2500 REAR SHOCK

8750-11 RAM 3500 DIESEL LEVELING SYSTEM		
QTY	Part Number	Description
1	8755-20-01-B	RAM DIESEL LEVELING SPRING LEFT SIDE (DRIVER)
1	8755-20-02-A	RAM DIESEL LEVELING SPRING RIGHT SIDE (PASSENGER)
2	FOX-986-24-105	SYNERGY TUNED RAM 2500/3500 FRONT SHOCK
2	FOX-980-24-943	SYNERGY TUNED RAM 3500 REAR SHOCK

8750-20 RAM 2500 GAS LEVELING SYSTEM		
QTY	Part Number	Description
2	8754-20-01	RAM GAS LEVELING SPRING
2	FOX-986-24-105	SYNERGY TUNED RAM 2500/3500 FRONT SHOCK
2	FOX-986-24-104	SYNERGY TUNED RAM 2500 REAR SHOCK

8750-21 RAM 3500 GAS LEVELING SYSTEM		
QTY	Part Number	Description
2	8754-20-01	RAM GAS LEVELING SPRING
2	FOX-986-24-105	SYNERGY TUNED RAM 2500/3500 FRONT SHOCK
2	FOX-980-24-943	SYNERGY TUNED RAM 3500 REAR SHOCK

2500/3500 Front Installation

1. Park the vehicle on a flat, level surface. Ensure the vehicle is in park, the parking brake is set and the wheels are chocked.
2. Remove the front lower shock bolts with a 21mm wrench or socket. The nut is a tabbed nut. Save factory hardware.
3. Remove the nut from the top of the front shocks. There is a narrow area to get to the nut under the factory plastic inner fenders. A 18mm ratcheting wrench is very useful. It can be helpful to use a prybar to move the plastic fender liner up and away from the shock tower.
4. With the top shock nuts removed, remove both factory front shocks.
5. Spring removal requires the truck be lifted from a point other than the factory lift pads on the radius arms. This can be done with a jack on the frame right behind the frame side radius arm mount. Alternatively, if the truck has plow front frame horns under the front bumper then it is best to lift from the plow mounts. **See Figure 1.**



Figure 1. Factory Plow Mounts

6. Remove the factory springs. Pay close attention to the orientation of the upper spring isolators and the plug on the top of them that fits into a hole in the factory coil tower.
7. Install the Right (Passenger) side leveling spring. The diesel spring is marked with part number 8755-20-02. It is important that the spring ending in -02 is installed on the right (passenger) side of the vehicle. The gas spring is marked 8754-20-01. Be sure to orient the spring so that the text printed on the spring is right side up and the upper coil wind interfaces with the upper spring isolator correctly.
8. Install the Left (Driver) side leveling spring. The diesel spring is marked with part number 8755-20-01. It is important that the spring ending in -01 is installed on the left (driver) side of the vehicle. The gas spring is marked 8754-20-01. Be sure to orient the spring so that the text printed on the spring is right side up and the upper coil wind interfaces with the upper spring isolator correctly. Once the springs and isolators are correctly aligned, slowly lower the vehicle so the springs are slightly compressed. Make sure that the plug on the top of the spring isolator is correctly oriented and fits in the corresponding hole in the coil tower. Using some soap or window cleaner as a lubricant can help. **See Figures 2 and 3.**



Figure 2. Synergy Leveling Spring Installed, Spring Isolator Not Fully Seated



Figure 3. Synergy Leveling Spring Installed, Upper Spring Isolator Correctly Seated

9. Once the springs are properly seated, install the Synergy front shocks. Install the stud top first, with a large washer against the shock body, then a rubber isolator, then insert the shock through the shock tower hole, then another rubber isolator, a large washer, and finally the nylock nut. The hardware requires a $\frac{3}{4}$ " or 19mm wrench. As before, a ratcheting wrench makes installation easiest. Tighten the top nut until about $\frac{5}{8}$ " of thread is showing above the nut. **Figure 4** shows the completed installation.



Figure 4. Front Shocks and Springs Correctly Installed

10. With the upper nut tight, install the lower shock bolts. It is easiest to use a jack to lift the truck to the correct height to insert the bolt through the bottom of the shock. Tighten the factory hardware to 100 lb-ft.
11. After the springs have been installed and the truck is on the ground it is necessary to loosen the radius arm and track bar bushing bolts so that the bushings re-center to prevent damage. The hardware must be re-tightened at ride height.
- Loosen the two frame side radius arm bolts and then re-torque them to 220 lb-ft.
 - Loosen both the track bar bolts (frame side and axle side) and re-torque to 200 lb-ft.

2500 Rear Installation (Skip to end for 3500 Installation)

1. Remove the rear inner fender liners. These are held on with 11 8mm head screws per side. There are two in the center against the bed, the rest are around the edge on the fender. Remove the inner fenders from both sides of the truck.
2. Remove the factory rear shocks, starting with the upper 18mm nut. It may be necessary to hold the shaft from rotating by using a small wrench on the flats at the top of the stud. **See Figure 5.**



Figure 5. Using Two Wrenches to Remove Rear Shock Upper Nut

3. With the upper shock nuts removed, remove the lower shock bolts and remove both shocks.
4. Install the new Synergy Shocks, starting with the upper mounts. Tighten like the fronts, until approximately 5/8" of thread is showing. Vehicle can be lifted up to make lower shock bolt installation easier. Re-use factory lower hardware and tighten to 100 lb-ft. **Figure 6** shows completed installation.
5. Re-install inner fender liners.



Figure 6. Completed 2500 Rear Shock Installation (Fender Liners Not Installed)

3500 Rear Installation

1. Remove factory shocks. The upper rear mounts are studs, remove the lower shock bolt first and then slide the shocks off the upper stud.
2. Install new Synergy Shocks. Slide the shocks on to the stud first, then install the lower bolt. Tighten hardware to 100 lb-ft.