



INSTALLATION INSTRUCTIONS

ENT-113-001

OEM SHOCK ABSORBER SPACER KIT TO SUIT RAM 3500
(4WD) 2019+



Lift Height Approx: 3" (76mm) Front / 1" (25mm) Rear - *(No Accessories Fitted)*



NOTE

Not compatible with Snow Plow package, Ambulance package or truck variants with air suspension or air bags.

Some images contained in these instructions are generic and are a representation of the actual model and/or parts used. Some steps may also show parts out of sequence to the instructional steps.



5 Hours
Approximately



SAFETY WARNING

ENTHUZE requires you read and understand the safety and pre-install directions on page 2 and 3 before commencing installation of this product.

**Occupational health and safety procedures
must be observed at all times**

**IMPORTANT WARNINGS**

**BEFORE COMMENCING INSTALLATION OF THIS KIT
IT IS MANDATORY THAT YOU READ THE BELOW WARNINGS.**

**SAFETY WARNING**

- Read and understand instructions fully.
- Check the hardware supplied against the contents list on the following pages.
- This suspension kit can only be fitted to the vehicles Original Equipment Manufacturer (OEM) suspension components.
Do not combine suspension lifts kits, body lifts, or other lifting devices.
- Do not use this product for any vehicle make or model other than specified in these instructions.
- It is highly recommended that this kit be installed by a certified professional mechanic. ENTHUZE CANNOT BE HELD RESPONSIBLE FOR ANY DAMAGE OR FAILURE RESULTING FROM IMPROPER INSTALLATION.
- While working on this vehicle, always use appropriate safety equipment.
- This product and or hardware must not be modified in any way. Do not remove labels from this product.
- Some images contained in these instructions are generic and are a representation of the actual model and/or parts used. Some steps may show parts out of sequence to the instructional steps.
- Fitting instructions are correct at the time of publication date and ENTHUZE cannot be held responsible for any vehicle changes from the manufacturer. It is the responsibility of the installer to ensure correct fitment.
- ENTHUZE recommends consulting a vehicle specific OEM Service Manual for proper disassembly and reassembly.
Tighten all bolts and fasteners to the torque specifications in the OEM Service Manual unless specified otherwise.
- Generally, altering your suspension system may change the way your vehicle handles. Take care when driving both on and off the road.
- Laws in regards to suspension modification vary from state, retailer and installers must inform end users about local laws and any breaches prior to installation.
- The vehicle must be in optimal operating condition prior to fitting this suspension kit. Repair or replace any worn or damaged components before proceeding.
- After installation of this product, a wheel alignment **MUST** be performed
- Read SAEJ2492 warning below.

**SAEJ2492 WARNING**

By installing this product, you acknowledge the suspension of this vehicle has been modified. As a result, this vehicle may handle differently than that of factory equipped vehicles. As with any vehicle, extreme care must be used to prevent loss of control or roll-over during sharp turns or abrupt maneuvers.

Always wear seat belts and drive safely, recognizing that reduced speeds and specialized driving techniques may be required. Failure to drive this vehicle safely may result in serious injury or death. Do not drive this vehicle unless you are familiar with its unique handling characteristics and are confident of your ability to maintain control under all driving conditions.

Some modifications (and combinations of modifications) are not recommended and may not be permitted in your State. Consult your owner's manual, the instructions accompanying this product and State laws before undertaking these modifications. You are responsible for the legality and safety of the vehicle you modify using these components.

**CUSTOMER INFORMATION**

Customer Name: _____ Date: _____

Contact: _____

Part Number: _____ Batch Number: _____

PRE-INSTALLATION PROCEDURES

Prior to starting the installation it is mandatory to measure vehicle heights and head light positions. With the vehicle on a level surface, measure the vertical distance from hub center to fender on each of the four corners and recording the measurements in the below table. Once the installation is finished, roll the vehicle forward and back to settle the suspension and then remeasure the vehicles hub center to fender values. After installation, readjust the headlights close as possible to factory heights to prevent safety hazards.

VEHICLE HEIGHT MEASUREMENTS

	Left-hand Side Before	Left-hand Side After	Right-hand Side Before	Right-hand Side After
Front				
Rear				

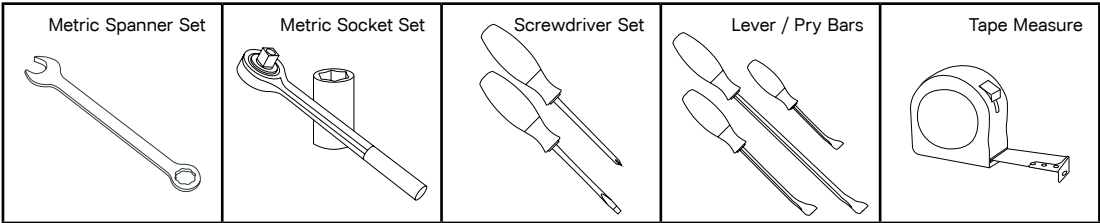
Measurement is to be performed from the center of the hub to fender edge, straight up from the hub.

HEADLIGHT MEASUREMENTS

Left-hand Side Before	Left-hand Side After	Right-hand Side Before	Right-hand Side After

- We strongly recommend using a Factory Service Manual for the specific Year / Make / Model as reference while installing.
- Before proceeding with this installation, the vehicle should be in optimal operating condition, and any worn or damaged components replaced first.
 - All lifted vehicles may require additional driveline modifications and / or balancing.
 - After installation of this product, a wheel alignment MUST be performed.
 - If changing +/- 10% from OEM tire diameter, a Speedometer / Computer recalibration is required.

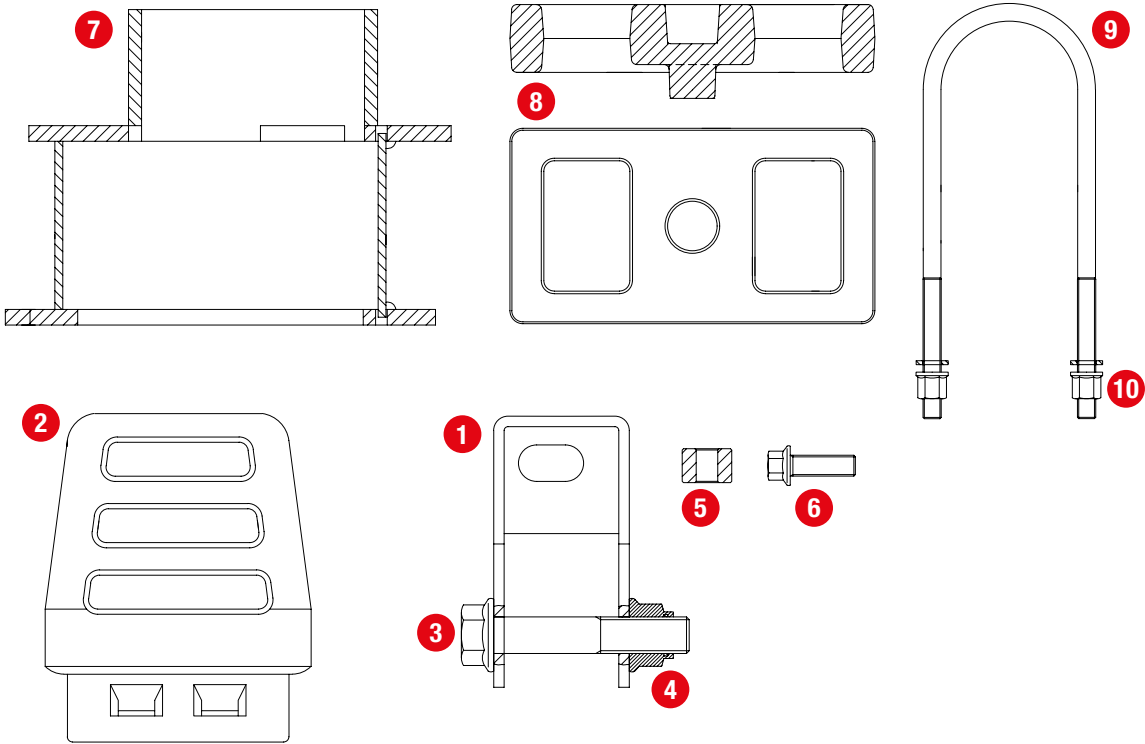
TOOLS REQUIRED



Any damage or loss caused by improper installation, application or failure to observe and follow our recommendations, goes beyond our quality warranty.

ENT-113-001 KIT PARTS LIST

SPACER KIT TO SUIT OEM SHOCK ABSORBERS			
No.	Description	Qty	
Front Extension Shock Kit			
1.	Spacer - Shock	2	
2.	Bump Stop - Extended	2	
3.	Bolt - Hex Flange (M14 x 2 x 75mm)	2	
4.	Nut - Hex Flange Nyloc (M14 x 2mm)	2	
5.	Spacer - Brakeline	2	
6.	Bolt - Hex Flange (M8 x 1.25 x 25mm)	2	
No.	Description	Qty	
Coil Spacer Kit			
7.	Spacer - Coil Steel	2	
Rear Lift Kit			
8.	Spacer - Leaf Cast	2	
9.	U-Bolt	4	
10.	Nut - Hex Flange (M14 x 2mm)	8	



PRE-INSTALLATION

1. Before installing, ensure spacer kit application is compatible with the vehicle.

Unwrap all components taking care not to damage or scratch in the process. Inspect for any damage.



NOTE

Retain all OEM (factory) hardware and components unless advised to discard.



TIP

It is good practice to lay out all parts to cross-reference against the parts list and record Batch Numbers.



2. All of the following steps should be repeated on the opposite side of the vehicle, unless otherwise specified.

REMOVAL AND INSTALLATION PROCEDURES - FRONT

3. Set the vehicle on a clean, level area and block the rear wheels for safety.

Engage parking brake.

Disconnect the vehicle power by removing the ground cable from the battery.

Fix the steering wheel in a straight position using a steering or column lock.

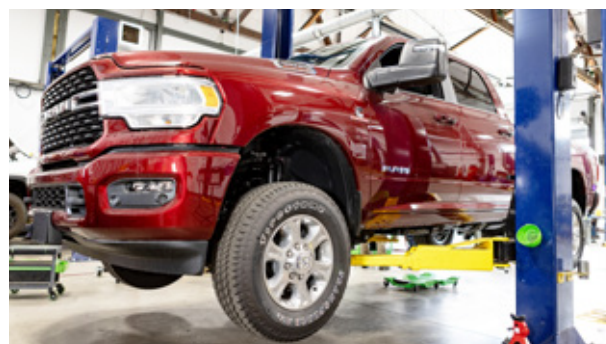
Lift the front of the vehicle and support it with jack stands under each frame rail.

Remove the front wheels and use a suitable workshop stand to support the front axle.



TIP

We suggest using a two (2) post vehicle lift if available, to lift and support the vehicle while completing the front and rear installation simultaneously.



- 4.** Using a 10mm and 21mm wrench, remove the lower sway bar end links from the chassis.



- 5.** Using a 13mm socket, unbolt the brake lines brackets from differential.

Unbolt the bracket lines from on top of the radius arms using a 13mm socket.



- 6.** Unhook the wheel speed sensor wire line from the mount on the right-hand side of the axle.
If equipped, unhook differential breather tube from inside the frame.

- 7.** Use an 18mm socket and remove the front shocks lower fasteners from the axle.
Do not remove the shock top mount.



8. Carefully lower the axle. This will allow for easier removal of the front coil springs.



WARNING

Do not overextend the ABS and brake lines.



9. Remove the OEM bump stops from the chassis.



10. Install the extended bump stops.

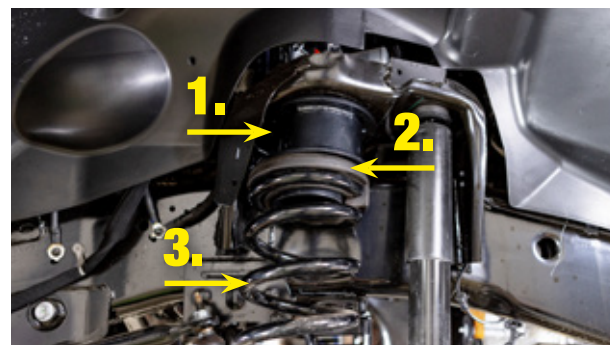


11. The rubber coil isolator has a locating nipple on it that requires leveling.
Using a grinder or suitable cutting device, remove these flush with the isolator.



- 12.** Install the coil spacer **(1)** onto OEM spring isolator **(2)** onto coil spring **(3)**, then insert into the vehicle. Take note of the order of components.

You may need to further lower the axle to allow for easier installation of the spring.



NOTE

The coil spacer should be orientated so the spring is offset to the front of the coil pocket and to the inside of the frame to correct and prevent the spring from bowing.



WARNING

Do not overextend the ABS and brake lines.

- 13.** Raise the axle slightly to compress the springs.



WARNING

Do not over-compress the springs, as this may result in the vehicle lifting off the hoist pads.



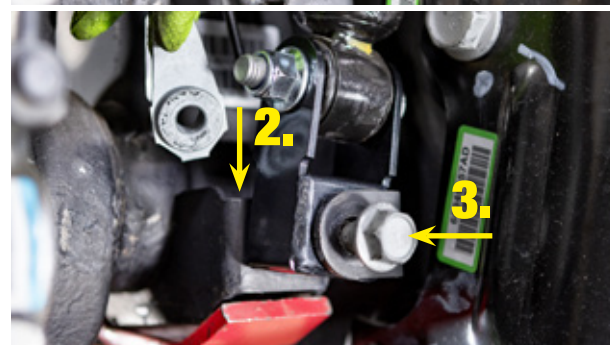
- 14.** With the slot favoring to the outside, install the shock extension using an 18mm and 21mm wrench.

The bolt **(1)** must be inserted into the extension and shock eye first.

Once the bolt is in place, rotate the shock and the extension 90° to sit correctly.

With the triangular OEM nut plate **(2)** in behind the shock mount, secure the base of the extension in place with OEM bolt **(3)**.

Torque to 125lb.ft (170Nm).



NOTE

Ensure the slot orientates to the outside.

- 15.** Install the brake line spacers using a 10mm socket and the longer bolts supplied.
Torque to 35lb.ft (47Nm).



- 16.** Using a 21mm wrench, reinstall the sway bar end links.
Torque to 45lb.ft (61Nm).



- 17.** Refit the wheels and lower the vehicle to the ground.
Torque lug nuts to manufacturer specification.
Bounce the vehicle a few times to settle the suspension to the new ride height.



NOTE

Skip this step if you are using a hoist to lift the vehicle and complete the install.

REMOVAL AND INSTALLATION PROCEDURES - REAR

18. Block the front wheels and raise the rear of the vehicle using a suitable jack and support with jack stands at each frame rail.

**NOTE**

Skip the above if you are using a hoist to lift the vehicle and complete the install.



19. Support the front axle with a suitable jack stand. Support and load the rear axle until the shock compresses approximately 1/4".

**WARNING**

Do not overlift the axle, as this may result in the vehicle lifting off the hoist pads.



20. Using an 18mm and 21mm socket and wrench, unbolt the rear shock lower mount from the axle.

**WARNING**

Ensure the rear axle is supported prior to removing the shock bolt.



21. Using a 21mm wrench, remove the u-bolts and mounting plate from the axle.



- 22.** Carefully lower the axle enough to allow clearance for installing the lift block.



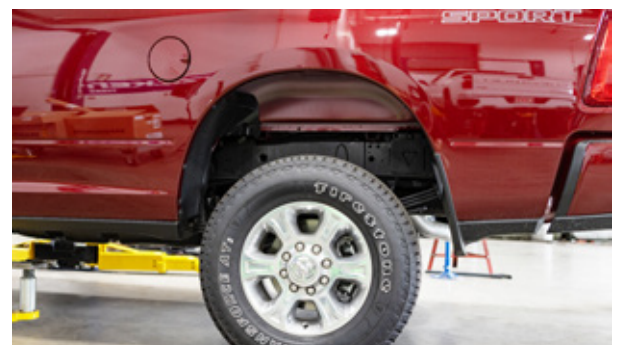
- 23.** Install the mounting plate and longer u-bolts using a 19mm wrench.
Torque to 125lb.ft (170Nm).



- 24.** Using an 18mm and 21mm socket and wrench, refit the rear lower shock bolt.



- 25.** Lower the vehicle to the ground and check the torque on the lug nuts are to the wheel manufacturer specifications.



- 26.** Bounce the vehicle to get the suspension to settle to the new ride height.
On the rear, torque lower shock hardware to 110lb.ft (149Nm) and shock bolts to 66lb.ft (90Nm).

- 27.** Reconnect the battery ground terminal.

With the steering wheel centered, turn the tie rod ends until the tires are straight. If the steering wheel is not centered properly, the ABS/traction control lights may activate.

Turn the wheels from lock to lock and to ensure brake lines and ABS routing clear all suspension components adequately and reposition if necessary.

Measure and record ride height after initial test drive and record these on the table on page 3.

- 28.** Ensure a mandatory wheel alignment is performed by a qualified technician and the alignment is set to the recommended specs following.

**NOTE**

On completion of the installation, have the suspension and headlights realigned.

After 310 miles (500km) recheck for proper torque on all newly installed hardware. Recheck all hardware for tightness after off road use.

Make sure to have any, and all electronic systems calibrated as indicated by the manufacturer for the features of your vehicle.

This includes but not limited to the steering wheel angle sensors, yaw sensors, cruise control, lane departure, etc.

WHEEL ALIGNMENT**NOTE**

Professional wheel alignment is required.

A strong understanding of wheel alignment procedure is required. ENTHUZE recommends wheel alignment be carried out by a trained alignment professional only.

Adjustments to caster, toe and the centering of steering wheel will be required. This should be performed to OEM specifications.

Always set wheel alignment settings in relation to tire wear for each individual vehicle.

ONCE INSTALLED...



POST-INSTALLATION WARNINGS

It is mandatory to perform post-installation checks after installing suspension components.

Failure to do so can lead to dangerous consequences, including vehicle damage, personal injury, or even death, therefore, post-installation safety checks are essential before driving the vehicle.

POST-INSTALL INSPECTION AND REFINEMENT

- Torque wheel lug nuts to manufacturer specifications.
- Inspect and test all steering, brake and suspension components for tightness and proper operation.
- Inspect wheels, brake lines/hoses and ABS lines, ensure adequate tire clearance and adequate looseness at full extension by turning the steering wheel completely to the left and then to the right.
- Inspect all rubber parts ensuring correct torque at ride height.
- Seat suspension components correctly by rocking the vehicle back and forth.
- A full professional wheel alignment to OEM specifications is mandatory and must be performed by a certified alignment technician.
- Inspect and adjust vehicle headlights to ensure correct aim and alignment.
- If vehicle is fitted with active or passive safety/collision monitoring and/or avoidance systems, these should be professionally checked and adjusted to ensure correct aim and function.
- Recheck all bolts and suspension components for correct torque values after two weeks or at 310 miles (500km).



Any damage or loss caused by improper installation, application or failure to observe and follow our recommendations, goes beyond our quality warranty.