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Revisions			
Rev.	Description	Date	Approved
A	Initial Release Per ECO 21-076	6/2/2021	K.B.



Jeep Gladiator 1-2” Lift Starter Suspension System

Installation Instructions

Applications:

2019+ Jeep Gladiator Truck (JT)



TITLE:
**JEEP GLADIATOR STAGE 1 SYSTEM
INSTALLATION INSTRUCTIONS**

SIZE	DWG NO:	REV
A	JT-STARTER-INST	A
SCALE: N/A		PAGE 1 OF 7



JEEP GLADIATOR STARTER SYSTEM 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!

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 and videos for your reference.
- These instructions are intended as a supplement to the instructions included with each of the components in this kit. These instructions describe the best way to install all of these components together. For specific instructions, reference the instructions included with each product.
- This system is designed to improve the off-road and on-road performance of the Jeep while allowing for larger tires to be installed. This is considered a Stage 1 System. For improved performance, many additional options are available from Synergy Manufacturing. See www.synergymfg.com for additional systems and upgrade paths.
- Synergy Manufacturing coil springs are much longer than the stock springs to allow for additional wheel travel. Because of this, spring installation can be challenging without proper tools and experience. We recommend a coil spring compressor with interchangeable yokes such as the Fairmount 31655 or similar.
- If you have a Gladiator with the diesel engine you will not be able to use the 8808-01 Rear Sway Bar Drop Brackets, but will instead need to use the 8861-11 JT Rear Sway Bar Links.
- Go to our Youtube Channel, Synergy Manufacturing, for a detailed installation video
 - “Synergy MFG Jeep Gladiator 1-2” Starter Suspension System”
 - <https://www.youtube.com/watch?v=nkYmW8kpiBo&t=10s>



PARTS LIST

8850-1000 JEEP JT 1" STARTER SYSTEM		
QTY	Part Number	Description
1	8863-10	Jeep JL/JT Front Lift Springs W/Lower Isolators – 1.0" (Pair)
1	8865-10	Jeep JT Rear Lift Springs – 1.0" (Pair)
1	8855-02	Jeep JL Front Sway Bar Relocation Brackets
1	8808-01	Jeep JT Rear Sway Bar Drop Brackets

8850-2000 JEEP JT 2" STARTER SYSTEM		
QTY	Part Number	Description
1	8863-20	Jeep JL/JT Front Lift Springs W/Lower Isolators – 2.0" (Pair)
1	8865-20	Jeep JT Rear Lift Springs – 2.0" (Pair)
1	8855-02	Jeep JL Front Sway Bar Relocation Brackets
1	8057-10	Jeep Bump Stop Spacer Kit (2-4")
1	8858-20	Jeep JL/JK/JT Rear Bump Stop Spacer – 2.0"
1	8808-01	Jeep JT Rear Sway Bar Drop Brackets

TOOLS REQUIRED

- Wrenches and Sockets, both SAE and metric
- Torque Wrench
- Spring Compressor (Recommended)
- Jack and Jackstands

ESTIMATED INSTALLATION TIME

4-5 Hours

INSTALLATION

REAR OF VEHICLE

1. Start with the vehicle on flat, level ground. Make sure the vehicle is in gear or park and the front wheels are chocked. If working on the ground, raise vehicle up and place frame on jack stands. Support axle with jackstands.
2. Remove rear wheels and tires.
3. Remove the rear shocks.
4. Remove the sway bar end links.
5. Loosen, but do not remove, all control arm hardware.
6. Loosen, but do not remove, both track bar bolts.



INSTALLING 8808-01 REAR SWAY BAR DROP BRACKETS

7. Remove the 8mm bolts just above the rear sway bar mounting holes that hold the brake line brackets to the frame.
8. Install the Synergy Rear Sway Bar Drop Brackets over the factory sway bar mounting points and in between the brakeline bracket and frame rail. Use the factory bolt to hold the brakeline bracket and sway bar drop bracket on to the frame.
9. Use the shorter M12 bolt and washer from the 8808-01 hardware kit to secure the drop bracket to the frame in the original sway bar link bolt hole.
10. Torque the small brake line bracket bolt to 20lb-ft and the large sway bar mount bolt to 70lb-ft.

INSTALLING 8858-20 REAR BUMP STOP SPACERS - Skip for 1" Lift Starter System

11. You will need to drill two holes in each bump pad in order to mount the bumpstop spacers. Use the supplied template or measure and mark out the holes on each bumpstop. The holes are on the centerline of each bump pad and 7/8" and 3 7/8" back from the front edge of the bump pad.
12. Center punch the marks you made and drill the holes out to 3/8".
13. Then line up the holes in the bumpstop extension with the holes you just drilled in the rear axle bump pad. The bumpstop extension is angled and the overhanging portion should be towards the front of the Jeep.
14. Insert two 3/8-16UNC x 1" long bolts with washers into the holes from the top down. Install a 3/8-16UNC top lock nut and washer onto each bolt. Tighten the bolts. Torque to 60lbs-ft.

INSTALLING 8865 REAR SPRINGS

15. If working with the vehicle on the ground, it is easiest at this point to support the center of the axle with a floor jack and remove the jackstands from under the axle. If using a lift, lower the axle.
16. Lower the axle far enough to remove the rear springs and upper isolators. Be very careful not to damage any brake lines or electrical lines. Unplug the rear locker harness from the diff and you can pull the vent tube off the axle breather.
17. Install the upper isolators on the Synergy springs.
18. Install the Synergy rear springs, making sure the upper isolators are properly seated. There is a 'nub' on the top of the upper spring isolator that must fit into a hole in the spring perch on the frame.
19. With the springs in place raise the axle back up to prevent them from falling out. Replace jack stands under axle.
20. Install the rear shocks in the upper mounts.
21. Raise the axle up (use a tall jack stand to support the front of the vehicle if it is on a lift) or lower the vehicle down so that the rear shocks fit into the mounting brackets. Torque upper shock bolts to 80lb-ft and lower shock mounting hardware to 75lb-ft.
22. Re-install the locker wiring and vent tube.
23. Re-install the sway bar links. It is easiest to loosely install both links and then tighten them in case the sway bar isn't perfectly lined up. Torque the upper sway bar bolt to 70lb-ft and the lower stud to 602lb-ft.

REINSTALLING WHEELS AND FINAL TORQUE (MAY BE DONE AFTER FRONT IS DONE)

24. Re-install wheels and tires (if removed) and put vehicle back on the ground. Make sure the suspension is settled by rocking it back and forth carefully.
25. Torque the frame side track bar hardware to 92 lb-ft with the vehicle on the ground at ride height. Torque the axle side track bar hardware to 100 lb-ft with the vehicle on the ground at ride height.
26. Torque the lower control arm hardware to 120 lb-ft with the vehicle on the ground at ride height.
27. Torque the upper control arm frame side bolts to 120 lb-ft with the vehicle on the ground at ride height.



FRONT OF VEHICLE

1. Start with the vehicle on flat, level ground. Make sure the vehicle is in gear or park and the front wheels are chocked. If working on the ground, raise vehicle up and place frame on jack stands. Support axle with jackstands.
2. Remove front wheels and tires.
3. Disconnect the sway bar end links at the axle.
4. Loosen, but do not remove, the frame side and axle side track bar bolts.
5. Loosen but do not remove all control arm bolts.
6. Disconnect the electrical plug from the front axle disconnect. If the vehicle is a Rubicon model, remove the front locker harness from the differential. Loosen wiring by removing zip ties and clips.
7. Remove the front shocks (18mm socket and wrench).
8. If working with the vehicle on the ground, it is easiest at this point to support the axle with a floor jack and remove the jackstands from under the axle. Due to the differential being off to one side it may be difficult to lower the axle evenly.
9. With axle fully lowered, remove the stock springs. Remove the springs by unseating them from the lower spring perch and removing the bottom towards the rear of the vehicle.
10. Pay close attention to orientation of upper spring isolators. Do not remove from the bump stop tube.
11. Remove the lower spring isolators. These are hard plastic and clipped to the axle.

INSTALLING 8855-02 FRONT SWAY BAR RELOCATION BRACKETS

12. Install the Synergy sway bar relocation brackets. Brackets are not right/left specific. They have a radius to accommodate the axle tube. Insert relocation brackets in between stock axle side sway bar link brackets and coil mounts. It may be necessary to tap brackets into place with a mallet.
13. Loosely install an M12 bolt through the stock sway bar mount and the Synergy sway bar link relocation bracket. Use a washer under the head of the bolt and under the nut. We recommend installing the hardware with the bolt head facing 'out' towards the wheel/tire.
14. Align the inner Synergy sway bar link relocation bracket hole with the hole in the lower spring perch. Loosely install an M12 bolt through the spring perch and the Synergy sway bar link relocation bracket. Use a washer under the head of the bolt and under the nut. We recommend installing the hardware with the bolt head facing 'out' towards the wheel/tire.
15. With both pieces of hardware installed, tighten and torque to 70 lb-ft.

INSTALLING 8057-10 FRONT STACKING BUMPSTOP SPACERS – Skip for 1” Starter System

16. If your front coil spring perch does not have a 3/8” hole in the center of it, centerpunch and drill the spring perch.
17. Tape together one stacking bumpstop spacer and one bumpstop top cap with painters tape and insert one assembly into each front spring. Continue 8057-10 install by installing the front springs.

INSTALLING 8863 FRONT SPRINGS

18. Install the new Synergy lower spring isolators.
19. The new Synergy springs are stamped with a part number. The last two digits of the part number indicate which side of the vehicle they go on. The -01 is the driver side (left) spring. The -02 is the passenger side (right) spring. The flat end of the spring is the bottom.
20. Install the new Synergy springs, being careful to ensure the upper spring isolators are correctly oriented. There is a 'nub' on the top of the upper spring isolator that must fit into a hole in the spring perch on the frame. If installing a 2” lift starter system let the taped together bumpstops rest at the bottom of the spring for now.
21. With the springs in place, raise the axle back up to prevent them from falling out. Replace jack stands under axle.



JEEP GLADIATOR STARTER SYSTEM INSTALLATION INSTRUCTIONS

22. If installing a 2" starter system, un-tape the bumpstop spacer parts at the bottom of the coil spring. Push the top cap out of the way and insert a 3/8 socket cap screw through the stacking spacer and into the hole in the spring perch. Thread a washer and nut onto the bottom of the screw and torque to 35ft-lbs. Accessing the driver side nut can be done from either the front or the back of the spring perch. The passenger side can only be accessed from the rear.
23. Install a cap on each of the bump stop spacers. The cap can be 'snapped' on to the lower spacer with a mallet or a large prybar.
24. Install front shocks at this time. Torque upper shock bolts to 80 lb-ft and lower bolts to 75 lb-ft.
25. Re-install brake line brackets, front axle disconnect and locker wiring (if so equipped).
26. Install the sway bar links on the 8855-02 relocation brackets. It is easiest to install the ends loose and then tighten in case the sway bar is not perfectly aligned.

REINSTALLING WHEELS AND FINAL TORQUE

27. Re-install wheels and tires (if removed) and put vehicle back on the ground.
28. Torque track bar hardware to 110 lb-ft with the vehicle on the ground at ride height.
29. Torque lower control arm hardware to 190 lb-ft with the vehicle on the ground at ride height.
30. Torque upper control arm hardware to 80 lb-ft with the vehicle on the ground at ride height.

SETTING FRONT TRACK BAR LENGTH, CASTER AND CENTERING STEERING WHEEL

31. With the vehicle back on the ground, the steering wheel needs to be set to straight. Drive the Jeep forwards and backwards a short distance while making sure the Jeep is going straight. Notice the orientation of the steering wheel. Stop the vehicle, put in park or in gear and set the parking brake. Adjust the drag link so that the steering wheel is pointing straight ahead. With the steering wheel adjusted, take a short test drive. It is usually necessary to adjust the drag link length at least twice to get the steering wheel perfectly centered.

INSTALLATION IS COMPLETE

**CHECK ALL BOLT TORQUES AFTER APPROXIMATELY 100 MILES OF DRIVING, AND
AFTER EACH OFF-ROAD TRIP**



**JEEP GLADIATOR STARTER SYSTEM
INSTALLATION INSTRUCTIONS**

Table 1. Jeep Wrangler JT Bolt Torques

Bolted Joint Location	Wrench Size	Torque
Front Upper Control Arm	18mm	80 lb-ft
Front Lower Control Arm	21/24mm	190 lb-ft
Front Track Bar	21mm	110 lb-ft
Front Sway Bar Relocation Brackets	17mm	70 lb-ft
Front Sway Bar End Links to Sway Bar	15mm	60 lb-ft
Front Sway Bar End Link Studs	¾" or 19mm	80 lb-ft
Front Upper Control Arm Heat Shields	10mm	40 lb-in
Front Bump Stop Spacer Bolt	5/16 Allen	35 lb-ft
Upper Shock (Front and Rear)	18mm	80 lb-ft
Lower Shock (Front and Rear)	18mm	75 lb-ft
Rear Track Bar Frame Side Bolt	21mm	92 lb-ft
Rear Track Bar Axle Bracket Bolt	21mm	100 lb-ft
Rear Upper Control Arm	21mm	120 lb-ft
Rear Lower Control Arm	21mm	120 lb-ft
Rear Sway Bar Brackets to Frame Large Bolt	19mm	70 lb-ft
Rear Sway Bar Brackets to Frame Small Bolt	10mm	20 lb-ft
Rear Sway Bar Link to Frame Brackets	19mm	70 lb-ft
Rear Sway Bar Link to Sway Bar	15mm	60 lb-ft
Rear Bump Stop Spacers	9/16"	60 lb-ft
JT Lug Nuts	22mm	130 lb-ft

Table 2. Jeep Wrangler JT Recommended Tire Size With 2" Bumpstop Spacer

Wrangler Model	Fenders	Wheel Backspacing	Tire Size
Rubicon/Mojave	Unmodified Stock	Stock	36 Inch
Rubicon/Mojave	Unmodified Stock	4.5 Inch or less	35 Inch
Rubicon/Mojave	Trimmed Stock or High Clearance	Stock	37 Inch
Rubicon/Mojave	Trimmed Stock or High Clearance	4.5 Inch or less	37 Inch
Max Tow	Unmodified Stock	Stock	35 Inch
Max Tow	Unmodified Stock	4.5 Inch or less	35 Inch
Max Tow	Trimmed Stock or High Clearance	Stock	37 Inch
Max Tow	Trimmed Stock or High Clearance	4.5 Inch or less	37 Inch
Non-Rubicon	Unmodified Stock	Stock	35 Inch
Non-Rubicon	Unmodified Stock	4.5 Inch or less	35 Inch
Non-Rubicon	Trimmed Stock or High Clearance	Stock	35 Inch
Non-Rubicon	Trimmed Stock or High Clearance	4.5 Inch or less	37 Inch