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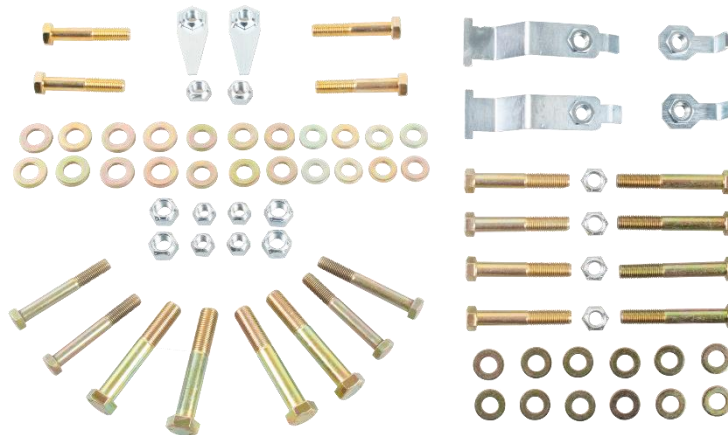
Revisions			
Rev.	Description	Date	Approved
-	Initial Release Per ECO 22-018	3/21/22	R.G.
A	Revised Per ECO 22-031	5/9/22	R.G.



Jeep JL and JT Replacement Bolt Kit

Installation Instructions

Applications:
 2018+ Jeep JL
 2020+ Jeep JT



TITLE:
**JEEP JL AND JT GRADE 8
 REPLACEMENT BOLT KIT.**

SIZE	DWG NO:	REV
A	8850-XX-INST	A
SCALE: N/A		PAGE 1 OF 8



JEEP JL/JT REPLACEMENT BOLT KIT 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.

INCLUDED COMPONENTS:

8850-03 JL HARDWARE KIT:

8850-05 JL/JT FRONT CONTROL ARMS W/ FRONT AND REAR TRACK BAR		
QTY	Part Number	Description
1	885005-01-PL	Plated Track Bar Nut Tab M14-1.5
4	N/A	5/8-18 x 4" Grade 8 Bolt
4	N/A	M12-1.5 x 90mm Grade 10.9 Bolt
2	N/A	M14-1.5 x 80mm Grade 10.9 Bolt
4	N/A	5/8-18 Grade 8 Top Lock Nut
4	N/A	M12-1.5 Grade 10.9 Top Lock Nut
1	N/A	M14-1.5 Grade 10.9 Top Lock Nut
8	N/A	Extra Thick Grade 8 Flat Washer 5/8"
3	N/A	Extra Thick Grade 8 Flat Washer 9/16"
8	N/A	Extra Thick Grade 8 Flat Washer 1/2"



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8850-06 JL REAR CONTROL ARM BOLT KIT		
QTY	Part Number	Description
1	885005-01-PL	Plated Track Bar Nut Tab M14-1.5
2	805005-PL	Rear Upper Control Arm Axle side Nut Tab 9/16-18
2	805004-PL	Rear Upper Control Arm Frame Side Nut Tab 9/16-18
4	N/A	9/16-18 x 4" Grade 8 Bolt
4	N/A	9/16-18 x 3.5" Grade 8 Bolt
2	N/A	M14-1.5 x 80mm Grade 10.9 Bolt
4	N/A	9/16-18 Grade 8 Top Lock Nut
1	N/A	M14-1.5 Grade 8 Top Lock Nut
15	N/A	Extra Thick Grade 8 Flat Washer 9/16"

8850-04 JT HARDWARE KIT:

8850-05 JL/JT FRONT CONTROL ARMS W/ FRONT AND REAR TRACK BAR		
QTY	Part Number	Description
1	885005-01-PL	Plated Track Bar Nut Tab M14-1.5
4	N/A	5/8-18 x 4" Grade 8 Bolt
4	N/A	M12-1.5 x 90mm Grade 10.9 Bolt
2	N/A	M14-1.5 x 80mm Grade 10.9 Bolt
4	N/A	5/8-18 Grade 8 Top Lock Nut
4	N/A	M12-1.5 Grade 10.9 Top Lock Nut
1	N/A	M14-1.5 Grade 10.9 Top Lock Nut
8	N/A	Extra Thick Grade 8 Flat Washer 5/8"
3	N/A	Extra Thick Grade 8 Flat Washer 9/16"
8	N/A	Extra Thick Grade 8 Flat Washer 1/2"

8850-07 JT REAR CONTROL ARM BOLT KIT		
QTY	Part Number	Description
1	885005-01-PL	Plated Track Bar Nut Tab M14-1.5
8	N/A	5/8-18 x 4" Grade 8 Bolt
8	N/A	5/8-18 Grade 8 Top Lock Nut
2	N/A	M14-1.5 x 80mm Grade 10.9 Bolt
1	N/A	M14-1.5 Grade 10.9 Lock Nut
16	N/A	Extra Thick Grade 8 Flat Washer 5/8"
3	N/A	Extra Thick Grade 8 Flat Washer 9/16"



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 following instructions cover the complete installation of 8850 hardware kits, including lower control arm, upper control arm and track bar hardware.
- The installation of this hardware can be done on the ground with the weight of the vehicle sitting on its suspension.

TOOL REQUIRED

- 10mm, 18mm, 19mm, 21mm, 24mm, 13/16", 7/8", 15/16" Sockets and Wrenches
- Torque Wrench
- General Hand Tools

OPTIONAL TOOLS

- Jack and Jack stands
- Hammer and Punch

ESTIMATED INSTALLATION TIME

2-3 HOURS

INSTALLATION

1. We recommend installing the hardware one suspension link at a time. This will enable the hardware to easily be replaced with the vehicle sitting under its own weight.
 - Take note, the rear upper control arm hardware is easier to get to with the rear wheels removed. This will be covered later in the instructions.
2. Begin with the front end. Start with the lower control arms and replace one bolt at a time. Take note of orientation of all hardware as the replacement hardware will be installed in the same orientation. Replace the factory bolts with the supplied 5/8-18 UNF X 4" long bolts. Be sure to use a washer on both sides of the bolts.
 - Torque the lower control arm hardware to 190 ft-lb.
3. Next, replace the front upper control arm hardware. Remove the heat shield on the frame side of the control arm, then replace the factory hardware with the M12 X 1.5 90mm G10.9 bolts. Be sure to install a 1/2" washer on both sides of the bolt. Again, match the bolt orientation to the OEM hardware. Reinstall heat shield after swapping the bolts.
 - The factory nut tabs will not be retained in the upper control arm mounts

4. Remove the axle side bolts. Replace with M12 X 1.50 90mm long G10.9 bolts. Use a 1/2" washer under both the head of the bolt and under the nut.
 - Torque all upper control arm hardware to 80 ft-lbs.
5. Last on the front end is the front track bar hardware. Begin at the frame side and remove the track bar bolt
6. Replace with a M14 X 1.5 80mm long G10.9 bolt.
7. Use a 9/16" washer under both the head of the bolt and under the nut.
 - Torque to 110 ft-lbs.

8. Now move onto the axle side. Remove the bolt. Replace with a M14 x 1.5 80mm long grade 10.9 bolt. Use a 9/16" washer ONLY under the head of the bolt and the supplied nut tab as seen in **Figure 1** on the backside.
 - Torque to 110 ft-lbs.
 - NOTE – It helps to have someone turn the steering wheel to help align the track bar bushing to the bracket.



Figure 1. Nut Tab for Axle Side of Track Bar

9. Move onto the rear suspension next.
 - If you are installing this kit on a JT, skip ahead to step 21.
10. Begin with the rear upper control arms.
 - Note, it is easier to replace these with the rear tires removed. If removing the rear tires, be sure to use jack stands and safely support the vehicle prior to working under it.
11. Remove the hardware attaching the upper control arm to the frame of the vehicle. Replace the bolt with a 9/16-18 UNF X 3.50" long bolt. Use the included nut tabs seen in Figure 2 for installation, do not reuse the OEM nut tabs. Use a 9/16" washer under the bolt head only, do not use a washer under the nut tab.

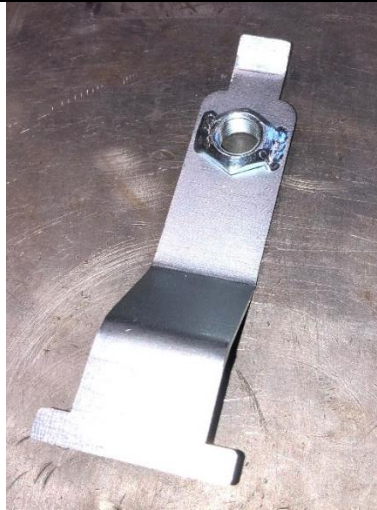


Figure 2. Frame Side Rear Upper Control Arm Nut Tab.

12. Next, remove the factory hardware on the axle side of the upper control arm and install a 9/16-18 UNF X 3.50" long bolt. Use the nut tab pictured in **Figure 3** and install in the same direction as the factory hardware. Use a 9/16" washer under the bolt head only, do not use a washer under the nut tab.



Figure 3. Rear Upper Control Arm Axle Side Nut Tab

13. Repeat steps 11 and 13 on the remaining rear upper control arm
 - Torque upper control arm hardware to 120 ft-lbs.
14. Next, remove the hardware attaching the rear lower control arm. Start at the frame side.
15. Replace the factory M14 hardware with 9/16-18 UNF x 4.0" long G8 bolts. Use a 9/16" washer under both the head of the bolt and the nut. The bolt should be oriented with the bolt head outside of the frame and the nut on the inside.
16. Repeat steps 14 and 15 for the lower control arm bolt at the axle side.
 - Torque lower control arms to 130 ft-lbs.
17. Note orientation of axle side lower control arm bolts. They must be oriented with the bolt head towards the inside of the vehicle, and the nut on the outside nearest the wheel.



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18. Last step is the rear track bar hardware. Begin at the axle side and remove the factory hardware from the mount.
19. Replace the factory hardware with a M14 X 1.5 80mm long G10.9 bolt. Use a 9/16" washer under the head on the bolt only and use the remaining nut tab (as seen in **Figure 1**) on the back side of the mount.
20. Move to the frame side track bar mount. Remove bolt and replace with a M14 X 1.5 80mm long G10.9 bolt. Use a 9/16" washer under both the bolt head and nut.
 - Torque the track bar bolts to 110 ft-lbs.
 - Note, it helps to have a friend push on the jeep from the side to help align the track bar bolt.

JL INSTALLATION IS COMPLETE!

JT instructions continued:

21. Beginning with the rear upper control arms, pull the factory hardware and replace with the supplied 5/8-18 UNF X 4" long G8 hardware. Use a washer under both the bolt and the nut.
22. Repeat step 22 on the lower control arms
 - Torque all rear control arm bolts to 190 ft-lb
23. Now remove the axle side rear track bar bolt
24. Replace the axle side track bar bolt with one of the remaining M14 X 1.5 80mm long G10.9 bolts. Use a 9/16 washer under the bolt head only and use the remaining nut tab (as seen in **Figure 1**) on the backside of the mount.
25. Finally replace the factory bolt at the frame side of the rear track bar with the last M14 X1.5 80mm long G10.9 bolt. Use washers under the bolt and nut.
 - Torque the track bar bolts to 110 foot pounds
 - Note, it helps to have a friend push on the jeep from the side to help align the track bar bolt.

JT INSTALLATION IS COMPLETE!

See next page for wrench sizes and complete torque tables.



Table 1. Jeep JL Wrangler Bolt Torques

Bolted Joint Location	Wrench Size		Torque
	Stock	Replacement	
Front Lower Control Arms Bolts	21mm, 24mm	15/16"	190 ft-lb
Front Upper Control Arm Bolts	18mm	19mm	80 ft-lb
Front Track Bar Bolts	21mm	22mm	110 ft-lb
Rear Upper Control Arms Bolts	21mm	13/16", 7/8"	120 ft-lb
Rear Lower Control Arms Bolts	21mm	13/16", 7/8"	130 ft-lb
Rear Track Bar Bolts	21mm	22mm	110 ft-lb

Table 2. Jeep JT Gladiator Bolt Torques

Bolted Joint Location	Wrench Size		Torque
	Stock	Replacement	
Front Lower Control Arms Bolts	21mm, 24mm	15/16"	190 ft-lb
Front Upper Control Arm Bolts	18mm	19mm	80 ft-lb
Front Track Bar Bolts	21mm	22mm	110 ft-lb
Rear Upper Control Arms Bolts	21mm, 24mm	15/16"	190 ft-lb
Rear Lower Control Arms Bolts	21mm, 24mm	15/16"	190 ft-lb
Rear Track Bar Bolts	21mm	22mm	110 ft-lb