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Revisions			
Rev.	Description	Date	Approved
A	Initial Release Per ECO 18-089	9/4/18	A.S.



**Jeep JK Low Misalignment Tie Rod
End Dust Boots**
Installation Instructions

Applications:
2007-2018 Jeep Wrangler (JK) Tie Rod

TITLE:
**JEEP JK TIE ROD LOW MISALIGNMENT
DUST BOOT INSTALLATION
INSTRUCTIONS**

SIZE	DWG NO:	REV
A	4131-11-INST	A
	SCALE: N/A	PAGE 1 OF 4



JEEP JK TIE ROD LOW MISALIGNMENT DUST BOOT 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

4131-11 JEEP JK LOW MISALIGNMENT TIE ROD END DUST BOOT		
QTY	Part Number	Description
2	413111-01	Low Misalignment Tie Rod End Dust Boot
2	413111-02	Low Misalignment Tie Rod End Dust Boot Cap

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.
- This part is designed to be used exclusively on Synergy HD 4131 tie rod ends on a Jeep JK. It can be used on other brand tie rod ends with modification; however the instructions below cover installation on Synergy ends only.
- This part is designed to hold tie rod ends in a “neutral” state. Installing this tie rod end dust boot in an application where they are generally misaligned will cause premature wear and failure. These are designed for use on tie rods only. These are not for use in drag link assemblies or other applications where significant misalignment is seen.
- This part is recommended for hydro assist applications and will help prevent the ram from trying to ‘roll’ the tie rod, which results in a dead spot in the steering when changing direction.

Tools Required

- Basic Hand Tools
- Tie Rod End Separator
- Grease

Estimated Installation Time

1 Hour

INSTALLATION

1. These dust boots are designed to be installed on both ends of the Synergy tie rod. The tie rod ends must be removed from the steering knuckles in order to install. Remove the cotter pins and back the tie rod end nuts off until they only have one or two complete turns of engagement. This will prevent the tie rod from falling when the taper separates.
2. Separate the tie rod ends from the steering knuckles by striking the steering arms with a large hammer or by using a tie rod separator tool. If using a hammer, do not strike the tie rod end.
3. Remove one tie rod end from the steering knuckle. **Remove and discard the existing dust boot.** With the tie rod end stud in a neutral position, install the low misalignment dust boot. The boot has a snap fit to it which is designed to locate on the dust boot retaining lip of the tie rod end. **Figure 1** shows a correctly installed dust boot.



Figures 1 and 2. Dust Boot and Metal Cap Installed On Tie Rod End

4. Coat the outside of the low misalignment dust boot with grease. Coat the inside of the metal cap with grease. Install the metal cap over the low misalignment dust boot. **Figure 2** shows metal cap correctly installed.
5. Re-install tie rod end back into steering knuckle. Torque castle nut to 55 lb-ft. If cotter pin holes line up with slots on nut, install cotter pin. If not, continue to **TIGHTEN** the castle nut until they align. Never loosen castle nuts to align cotter pin slots.
6. Repeat for other side of vehicle.
7. Make sure the tie rod bar has bends pointing forward, so bar is flat relative to the ground, allowing clearance for diff cover. If not, loosen jam nut and pinch bolt and rotate bar. Re-torque pinch bolt to 90 lb-ft max.