



ARROW
SUSPENSION

OWL INSTALL GUIDE

2015-UP MERCEDES SPRINTER 2500 12-PACK LEAF SPRING KIT

UPDATED FALL 2025

NOTES

For the most up-to-date and current installation instructions, please visit our website at **www.owlvans.com**

- Please read all instructions carefully before installing Owl products on your vehicle.
- This is a bolt-on spring kit designed for easy installation using basic hand tools.
- The Owl 12-Pack Springs are shipped in their fully assembled “Max Spring Rate” configuration. Refer to the Spring Configuration Chart at the end of these instructions to properly set up the springs according to the vehicle’s weight.

Note: The chart serves as a **general guide**—final adjustment should be made by the **installer and end user** to achieve the **desired balance of ride quality and ride height**.

- This spring kit is fully removable, allowing the vehicle to be returned to its original stock configuration if desired.

PARTS LIST

2015-Up, Mercedes Sprinter 2500 12-Pack Leaf Spring Kit

PART	P/N	QTY.	✓
MERCEDES SPRINTER 2500 12 PACK LEAF SPRINGS		2	
U-BOLT 12 PACK		4	

TOOLS NEEDED

1. Quality jack and two jack stands
2. Basic hand tools:
 - Wrench and socket set, including:
 - Metric sizes: 10mm, 18mm, 19mm, 21mm
 - SAE sizes: 9/16", 7/32" allen
3. Torque wrench
4. Dykes or similar tool for cutting zip ties.

INSTALLATION

These instructions show installation on the driver's (left-hand) side. Passenger side installation is similar; any differences will be noted in the steps.

1.

Loosen lug bolts then safely support the vehicle on an appropriate lift or jack stands so the rear suspension can hang freely. Ensure the support method follows the vehicle manufacturer's specifications.

2.

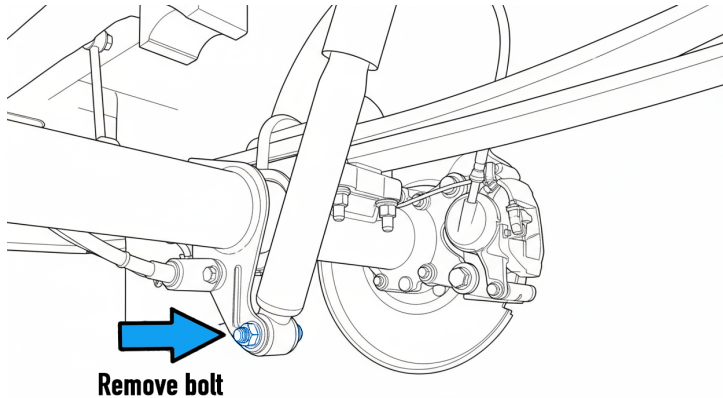
With the suspension supported, remove the rear wheels and tires. **Factory lug bolts typically have a 19mm head.**

3.

If the vehicle is equipped with a **headlight adjuster bracket**, disconnect it at the **axle** by removing the **10mm nut** securing the **L-bracket** to the axle. **Retain the nut** for reinstallation later in the process.

4.

Support the rear axle with a jack or stand, then **remove the lower shock bolt** using an **18mm socket and wrench**. This allows the axle to droop freely for leaf spring removal.

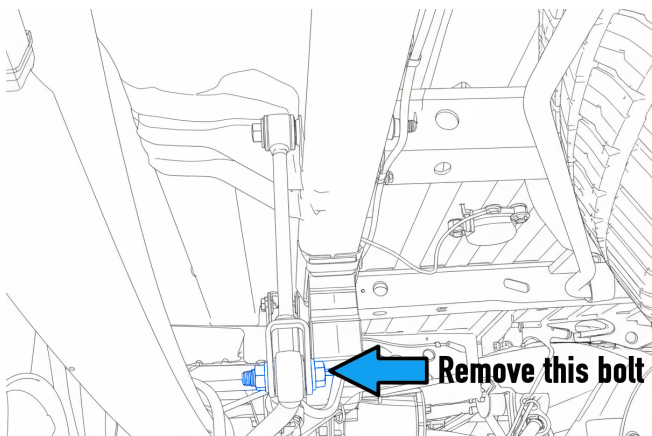
**5.**

With the **lower shock bolt removed**, proceed to remove the **upper shock bolt** using a **21mm socket**. **Retain all OEM hardware**, as it will be reused during installation. Once both bolts are removed, **remove the shock assembly** from the vehicle.

6.

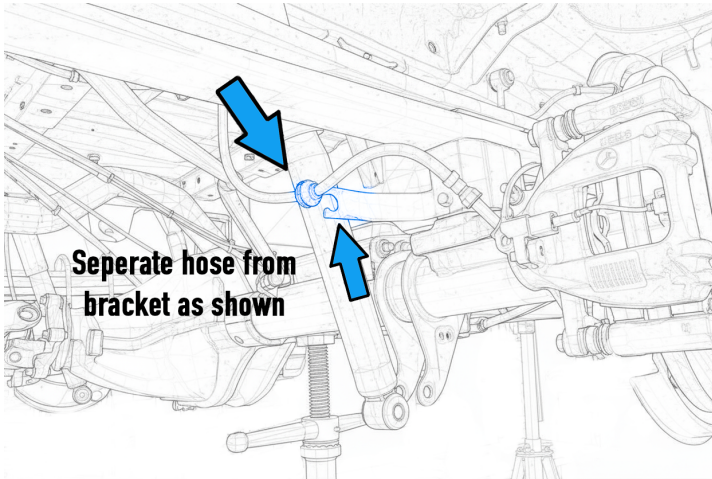
Using an **18mm socket and wrench**, remove the lower sway bar end link bolt on both sides of the vehicle.

Note: **Retain all hardware, as it will be reinstalled during assembly.**

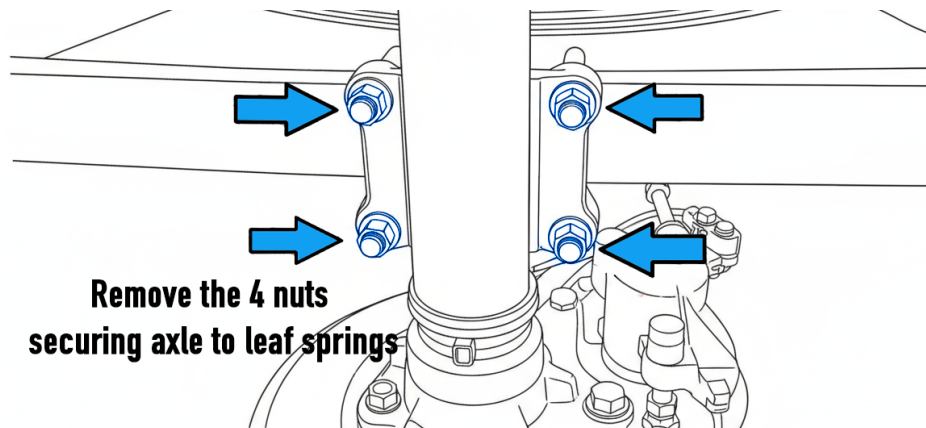


7.

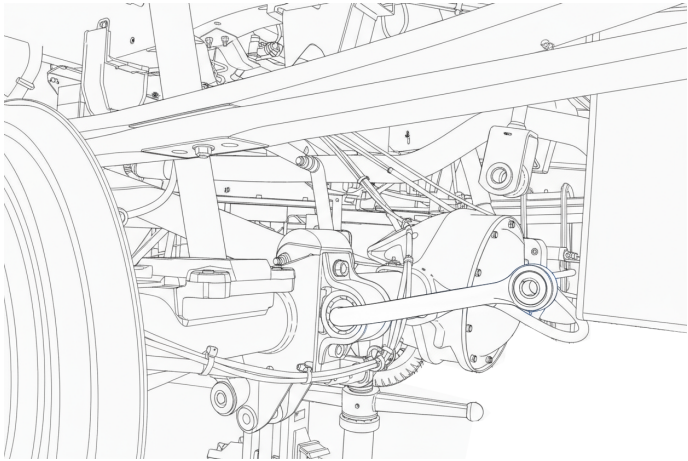
Remove the **brake hose** from the **factory lift block** to free the line before removing the block assembly. *See image below for reference.*

**8.**

Using a **19mm socket or wrench**, remove the U-bolt nuts securing the axle to the leaf spring, then remove the U-bolts completely. *See image below for reference.*

**9.**

Slowly lower the rear axle until the factory lift block can be removed. **Carefully remove the block and set it aside for reinstallation later in the process.**

**10.**

Using an **18mm socket or wrench**, remove the **forward leaf spring bolt** from the front spring mount. **Retain the bolt and nut, as they will be reused during reassembly.**

11.

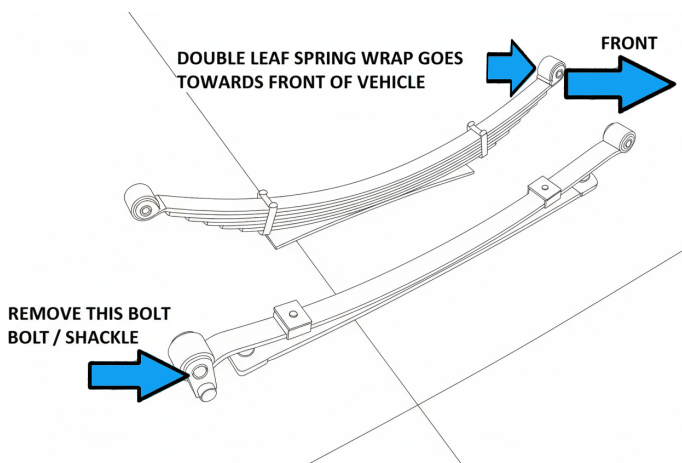
Remove the lower shackle bolt and carefully lower the leaf spring onto the axle. Then, remove the axle and shackle assembly from the vehicle.

It is often easier to perform this step with the help of a **second person** to safely guide the spring from its mounts. Once removed, **place the factory spring next to the Owl 12-Pack Spring** for comparison and configuration setup.

12.

Note the **double military wrap** on one end of the **Owl 12-Pack Leaf Spring** – this identifies the **front** of the spring and must be installed **toward the front of the vehicle**.

Next, **remove the bolt** securing the **shackle to the rear of the leaf spring** to prepare for installation.



13.

Attach the shackle to the rear of the new **Owl 12-Pack Leaf Spring**, ensuring it is positioned perpendicular to the arch of the main spring. Once properly aligned, torque the shackle bolt to **100 ft-lbs (136 N·m)**.

14.

Position the **Owl 12-Pack Leaf Springs** under the vehicle. The easiest method is to **install the springs upside down**, then **rotate them up into position** once aligned with the mounts.

Ensure the **brake hose is routed over the spring** during installation.

Note: On **RWD vans**, the **Owl Drop Brackets** must be installed. If they have not yet been fitted, **refer to the 2" Lift Kit instructions** included with this package before proceeding.

15.

With the **leaf springs rotated into position**, install the **forward spring bolt** through the **spring hanger** and thread on the nut. **Do not fully tighten** at this stage—leave the hardware loose to allow for proper spring and shackle alignment during final installation.

16.

Raise or lower the **rear axle as needed** to align the **lower shackle mount** with the leaf spring. Once the holes are aligned, **install the lower shackle bolt and nut**, but **do not fully tighten** yet—final torque will be applied at ride height to prevent bushing preload.

17.

Ensure the **leaf spring center pin** is properly **seated in the spring perch pocket** on the axle. Once aligned, **jack up the axle slowly** until the **leaf spring begins to take load**, confirming correct engagement between the spring pack and axle perch.

18.

Install the **new U-bolts and nuts** included with the kit over the axle and leaf spring assembly. Using a **19mm socket or wrench, snug all nuts evenly**, but **do not fully torque** at this stage. Final tightening will be completed once the vehicle is at ride height.

19.

Repeat the **leaf spring installation procedure** on the **passenger side** of the vehicle, following the same steps and ensuring all hardware is installed and snugged evenly prior to final torquing.

20.

Cut the **3/8" ID rubber vacuum hose** (included with the spring kit) into **equal-length sections**. Place one section over each **brake hose** where it makes contact with the **leaf spring**. Split the hose **lengthwise**, then **wrap and secure it** around the brake hose using **multiple zip ties**, as shown. This provides long-term protection against **abrasion or chafing** during suspension movement.

21.

Reinstall the **shock and both mounting bolts** in their original positions.

- **Lower bolt:** Torque to **81 ft-lbs (110 N·m)** using an **18mm socket or wrench**.
- **Upper bolt:** Torque to **102 ft-lbs (139 N·m)** using a **21mm socket or wrench**.

Ensure the **shock bushings are properly seated** and that the shock is not twisted before tightening.

22.

Reinstall the **lower sway bar link bolt** and torque it to **81 ft-lbs (110 N·m)** using an **18mm wrench**. Confirm the sway bar and link bushings are properly seated before tightening.

23.

If equipped, **reinstall the headlight adjuster bracket** to the **rear axle**, using the **hardware removed in Step 3**. Ensure the bracket and linkage are properly aligned and free from tension through the full range of suspension travel.

24.

If the approximate vehicle weight is known, this is the time to configure the Adjustable Preload Spacer (APS). Refer to the Spring Configuration Chart provided at the end of this manual as a setup guide.

Note: The chart serves as a **baseline reference**—final configuration should be determined by the **installer and end user** to achieve the desired **ride height and ride quality balance**.



25.

Important: Always install the slider pad with the countersunk holes facing upward.

- **Countersunk bolts:** Torque to **15 ft-lbs (20 N·m)** using a **7/32" Allen wrench**.
- **APS mounting bolts:** Torque to **20 ft-lbs (27 N·m)** using a **9/16" socket**, ensuring a **flat washer and lock washer** are placed under each bolt head.

26.

Reinstall the wheels and tires, then lower the van to the ground. Torque all wheel bolts on **factory steel wheels** to **177-187 ft-lbs (240-250 N·m)** using a calibrated torque wrench. Tighten in a crisscross pattern to ensure even seating.

27.

With the vehicle at **ride height**, torque both the **lower shackle bolt** and the **front leaf spring bolt** to **100 ft-lbs (135 N·m)**. This ensures proper bushing preload and long-term suspension performance.

28.

Torque all **U-bolt nuts** evenly to **125 ft-lbs (169 N·m)** in a **crisscross pattern** to ensure uniform clamping across the spring pack.

29.

With the vehicle **on the ground at ride height**, adjust the **overload engagement pucks** as needed to achieve **optimal ride height and ride quality**. Fine-tuning puck height allows for proper **load transition and ride compliance** based on vehicle weight and setup.

30.

After 100 miles, recheck bolt torques.

CONGRATS! YOUR INSTALLATION IS COMPLETE.

RELEASE OF LIABILITY

I, the customer, do hereby release and forever discharge Owl Vans LLC, their agents, employees, successors and assigns, and their respective heirs, personal representatives, affiliates, successors and assigns, and any and all persons, firms or corporations liable or who might be claimed to be liable, whether or not herein named, from any and all claims, demands, damages, actions, causes of action or suits of any kind or nature whatsoever, whether known or unknown, fixed or contingent, which I now have or may hereafter have or claim to have, as a result of or in any way relating to the following: Parts sold & installed by Owl Vans LLC or parts sold & installed by end-user; any parts sold online, any parts sold online or installed by a re-seller, any parts installed by an installation shop.

It is understood and agreed that this payment is made and received in full and complete settlement and satisfaction of the aforesaid actions, causes of action, claims and demands; that this Release contains the entire agreement between the parties; and that the terms of this Agreement are contractual and not merely a recital.

Furthermore, this Release shall be binding upon the undersigned, and his respective heirs, executors, administrators, personal representatives, successors and assigns. This Release shall be subject to and governed by the laws of the State of Idaho.

PRODUCT SAFETY WARNING:

Owl Vans LLC strongly recommends the installation of products be done by a certified mechanic. If this does not occur, be certain the person(s) installing the product read, understand and follow all instructions and warnings pertaining to the application before installation. Do not add, alter, or fabricate any factory or aftermarket parts to increase vehicle height over the intended height of the Owl Vans LLC product purchased. Mixing component brands is not recommended.

Installation of suspension lift kits or any other lifting kits or devices will raise the center of gravity. For this reason, Owl Vans LLC urges that extreme caution be used when encountering driving conditions which may cause vehicle imbalance. Furthermore, the driver's field of vision and judgment will not be as good due to the height of the vehicle. Due to the installation of larger tires, the speedometer will read slower than the actual speed being traveled and more distance will be required to stop the vehicle. It is the owner's responsibility to caution and warn any potential driver of the vehicle about these driving and handling conditions. Owl Vans LLC will not be held liable or responsible for damages or personal injuries resulting from the use of lifting devices and or related products. The tires and rims should be changed to sufficiently increase the vehicle's total overall width and stability to help accommodate lifting devices.

Owl Vans LLC aftermarket suspension products and accessories modify a vehicle for uses which exceed conditions anticipated by the vehicle manufacturer. The uses include the high performance demands required during off-road. These conditions vary in the degree of extremity and cannot be controlled by the vehicle or product manufacturer. If the components within the suspension system or accessories become worn due to frequent and/or extreme use, the safety and reliability of the vehicle

is at risk. The maintenance of aftermarket equipment to ensure the vehicle occupants safety is entirely your responsibility. Do not purchase Owl Vans LLC products unless you are willing to accept this responsibility. Do not install any Owl Vans LLC suspension products or accessories unless you feel competent at installing the product without causing present or future injury to yourself or other vehicle occupants; seek an authorized installation center.

Most states have some type of law limiting vehicle height. The amount of lift allowed, and how the lift can be achieved, varies greatly. Several states offer exemptions for farm and commercial registered vehicles. It is the vehicle owner's responsibility to check state and local laws to ensure that their vehicle will be in compliance.

Owl Vans LLC reserves the right to make changes in design, materials and specifications as deemed necessary without prior notice and without assuming obligation to modify any product previously manufactured. Obligation or liabilities will not be assumed with respect to similar products previously advertised.

This Release of Liability and Product Safety Warning has been read and fully understood by the undersigned and has been explained to me.