ENGINEERED BY AIR LIFT

Atlus Air A7500

Kit Number: AA57575

Fits:
GM 2001-10
2500/3500 HD
SRW, DRW

Engineered and Assembled in the USA

Installation Instructions

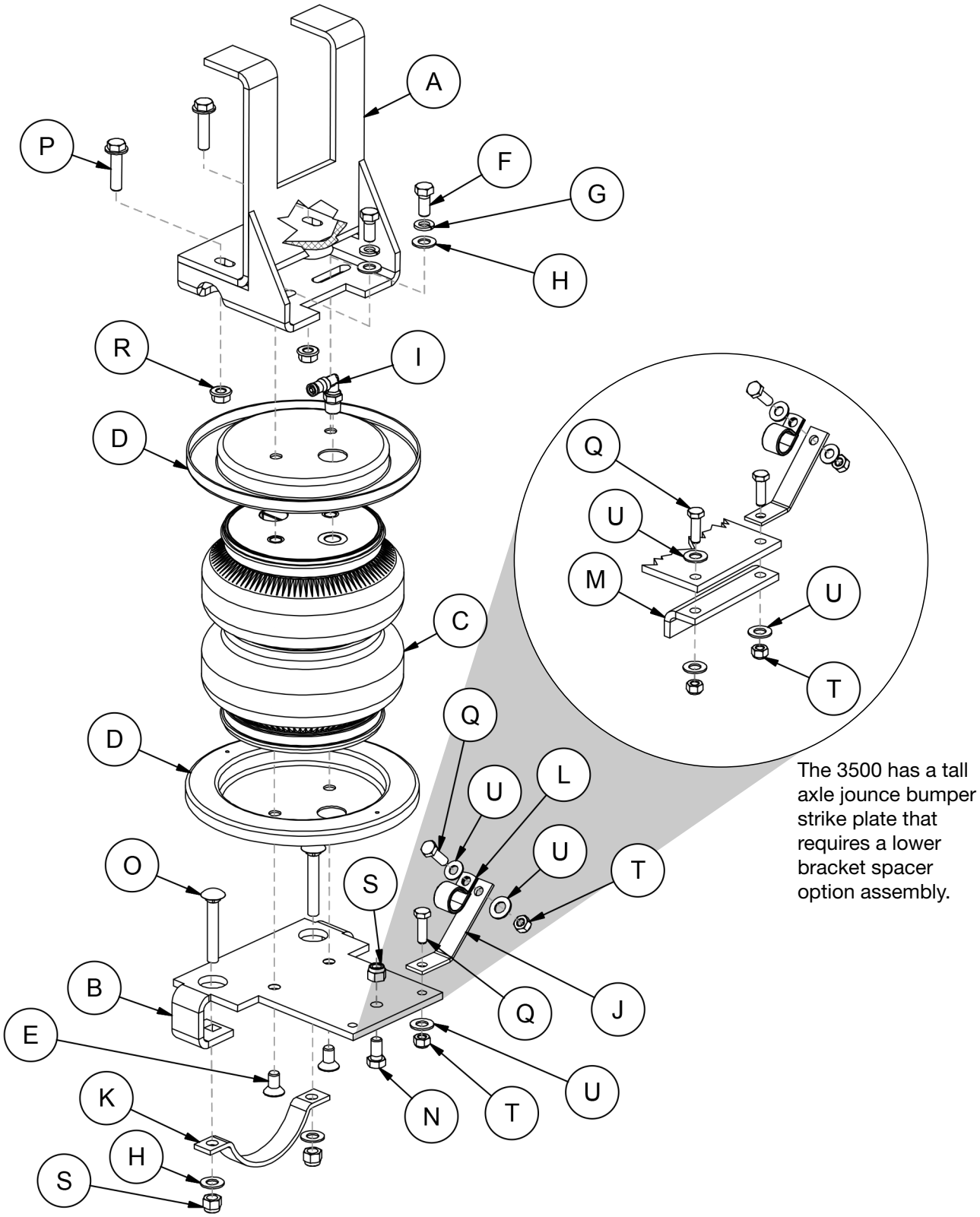
Before Getting Started

For optimal performance and safety, read all instructions thoroughly before beginning the installation. Failure to read and follow these instructions may lead to improper installation and potential safety risks.

Tools Needed

- Metric and standard open-end box wrenches
- Ratchet with metric and standard sockets
- Drill and 5/16" drill bit
- Torque wrench
- Metric and standard hex-key wrenches
- File or grinder
- Hose cutter, razor blade or sharp knife
- Hoist or floor jack
- Safety stands
- Safety glasses
- Air compressor or compressed air source
- Spray bottle with dish soap/water solution

AA57575 Exploded Installation View



The 3500 has a tall axle jounce bumper strike plate that requires a lower bracket spacer option assembly.

Parts List

Part	Part No.	Part Description	QTY
A	07976GR	Upper bracket	2
B	03843GR	Lower bracket	2
C	58126	Air spring	2
D	11897	Roll plate	4
E	17215	3/8″-24 x 3/4″ Flat-head socket cap screw	4
F	17203	3/8″-24 x 7/8″ Hex-cap screw	4
G	18427	3/8″ Lock washer	4
H	18444	3/8″ Flat washer	8
I	21837	90-degree Swivel elbow fitting	2
J	10421GR	Emergency brake cable bracket	1
K	10451GR	Axle strap	2
L	10465	P-clamp	1
M	11117GR	Lower bracket axle spacer	2
N	17101	3/8″-16 x 3/4″ Hex-cap screw	2
O	17141	3/8″-16 x 2 1/2″ Carriage bolt	4
P	17159	3/8″-16 x 1 1/2″ Hex flange bolt	4
Q	17421	5/16″-18 x 1 1/8″ Hex-cap screw	5
R	18422	3/8″-16 Serrated flange nut	4
S	18435	3/8″-16 Nylon lock nut	6
T	18438	5/16″-18 Nylon lock nut	5
U	18433	5/16″ Flat washer	10
AA*		Air line assembly	1
BB*		Zip ties	6
CC*		Valve cap	2
DD*		Star washer	2
EE*		Rubber washer	2
FF*		M8 Flat washer	2
GG*		5/16″ Hex nut	4

* These parts are not shown in the Exploded Installation View section

Introduction

This guide is here to walk you through setting up and taking care of your Atlus Air™ A7500 air suspension kit. They are built tough—commercial-grade and reinforced for durability. Think of the air springs like tires: layers of rubber and strong cords work together to manage pressure and maintain shape to help control your ride.

With Atlus Air A7500, you'll get up to 7500 pounds (3402 kg) of support to keep your ride level, and you can fine-tune the pressure anywhere between 5 and 100 PSI (0.34 to 7 BAR). Before diving into the installation or doing any kind of upkeep, make sure to read through the entire manual—it'll save you time and headaches down the road.

Symbols

THIS MEANS THERE'S AN IMMEDIATE AND SERIOUS RISK. IF IGNORED, IT WILL LEAD TO SEVERE INJURY OR EVEN DEATH. ALWAYS TAKE THESE WARNINGS SERIOUSLY.

SIGNALS A DANGEROUS SITUATION OR UNSAFE ACTION THAT COULD CAUSE SEVERE INJURY OR DEATH. IT'S NOT A GUARANTEE, BUT IT'S A BIG RISK—PROCEED CAREFULLY.

These callouts highlight useful advice or important reminders to keep you on track during the process. Don't skip them—they often save time.

Little tricks of the trade to help installation go more smoothly. These tips can make a big difference if you're aiming for a clean, efficient job.

Information

This kit does not increase the Gross Vehicle Weight Rating (GVWR) or payload capacity of your vehicle. Always refer to your vehicle's Safety Compliance Certification Label or owner's manual, and do not exceed the manufacturer's maximum load rating.

- **Gross Vehicle Weight Rating (GVWR):**
  The maximum allowable weight of a fully loaded vehicle, including passengers, cargo, and fluids. This value—along with other important specifications like tire size, rim size, and inflation pressure—is located on the vehicle's Safety Compliance Certification Label.
- **Payload:**
  The maximum combined weight of passengers and cargo your vehicle is designed to carry. Payload is calculated by subtracting the vehicle's base curb weight from its GVWR.

Air Pressure Guidelines

While Atlus Air A7500 air springs are engineered to handle a **maximum inflation pressure of 100 PSI (7.0 BAR)**, the actual pressure required will vary based on the vehicle's load and total weight. Always adjust air pressure according to your specific load conditions—**not solely based on the maximum pressure limit.**

Ride Height and Suspension Limits

Always maintain the correct ride height by adjusting the air pressure based on your current load. Shock absorbers typically act as the suspension limiters on extension. If they do not, particularly on off-road vehicles, consider using limiting straps to prevent overextension.

Brake System Considerations

Vehicles equipped with a **rear brake proportioning valve** may experience changes in braking performance when using a load-assist product. **Consult your dealer** before installation. If your vehicle **does not** have a proportioning valve or is equipped with an **anti-lock brake system (ABS)**, the installation of an air spring kit **will not affect braking performance.**

Installation

Vehicle Preparation

1. Lift the vehicle and support the frame with safety stands. Drop the axle down low enough to later set the air spring assemblies into position between frame and axle (Fig. 1).

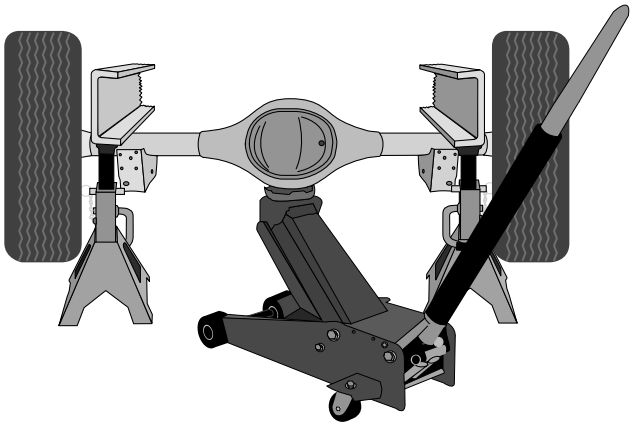


Fig. 1

2. Remove both jounce bumpers from under the frame and discard (Fig. 2).

Fig. 2

3. Insert two 3/8″-16 x 1 1/2″ hex flange bolts (P) through both existing jounce bumper holes on both left and right frame rails (Fig. 3).

Fig. 3

Install the Upper Brackets

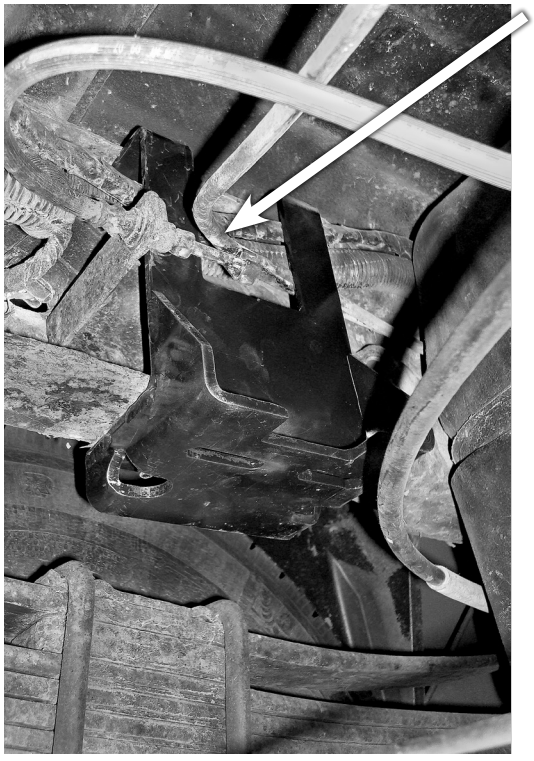
REMEMBER...

On some models it may be necessary to pull the Christmas tree mount on the harness out of the way of the upper bracket by pulling it from the upper frame flange (Fig. 4).

Pull the harness Christmas tree mount out of the upper frame flange on the driver side if equipped.

Fig. 4

1. For the driver's (left) side, carefully position the lower bracket under the frame rail, aligning the slots in the bracket with the previously installed bolts, making sure that the hard brake line is in between the two long frame supports (Fig. 5).



While indexing the upper bracket into position, make sure the hard brake line goes in between the two upper bracket frame supports.

Fig. 5

2. Attach the upper brackets to the frame on both sides using the 3/8"-16 serrated flange nuts (R). Push the bracket against the frame and torque the nuts to 44 lb.-ft. (60Nm) (Fig. 6).

INSTALLER'S HINT

Putting the 3/8" serrated flange nuts into a long 9/16" socket helps in starting and tightening the upper bracket hardware.

CRITICAL RISK

MAKE SURE THE HARD BRAKE LINE THAT GOES IN BETWEEN THE UPPER BRACKET SUPPORTS DOES NOT TOUCH OR RUB THE EDGE OF THE BRACKET. PUSH THE LINE OUT OF THE WAY TO OBTAIN CLEARANCE IF NECESSARY.

The brake line must not be touching or rubbing the upper bracket.

Fig. 6

Vehicle Preparation for Air Spring Assembly Installation

The 2500HD and 3500HD require different methods for installing the lower brackets.

2500HD Lower bracket assembly

On the 2500HD models, the driver's (left) side of the axle may have a small bracket with a nut that has nothing attached to it. This bracket must be trimmed off of the axle in order to install the air spring assembly (Fig. 7).

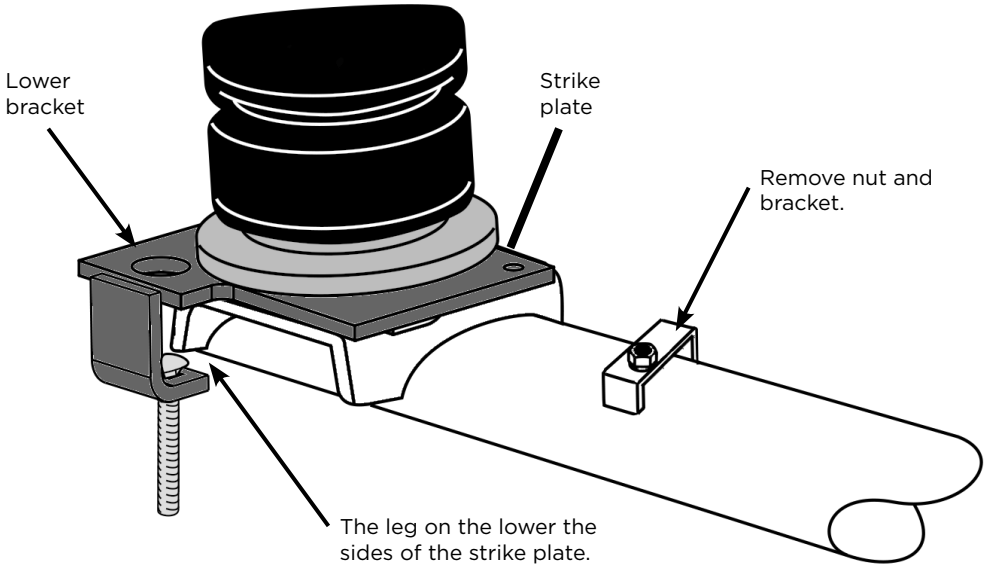
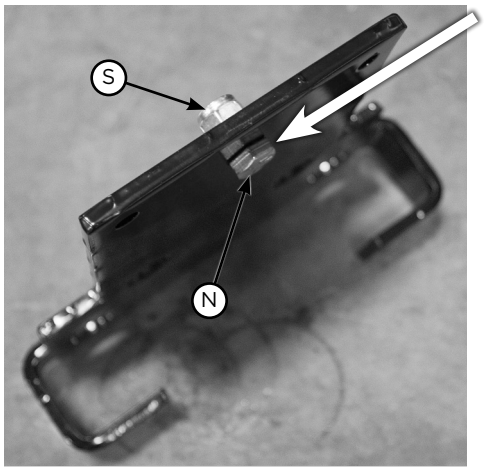


Fig. 7

Also, on some models, the shock brackets may be too tall for the lower bracket to sit flat on the jounce bumper strike plate. For these models, it will be necessary to file or grind down the tops of the shock brackets so the head of the bolt on the inside lower bracket touches the axle and there is clearance between the lower bracket and shock brackets.

1. To check for shock bracket/lower bracket clearance on the 2500HD models (only) install the 3/8"-16 x 3/4" (N) bolt into the center hole on the end of the lower bracket (Fig. 8). Attach the nut with a 3/8" nylon lock nut (S) and tighten securely.

Install the bolt with the head on the flange side of the lower bracket.



For 2500HD models only, install the 3/8" bolt so the head is on the flange side of the lower bracket.

Fig. 8

2. Set the lower bracket on the driver's (left) side jounce bumper strike plate and check to see that the head of the bolt previously installed in the lower bracket hits on the axle.
3. If the shock brackets are keeping the bolt head on the lower bracket from touching the axle, it will be necessary to file or grind down the shock brackets on the top to obtain the clearance needed so that the bracket is flat on the axle (Fig. 9 & Fig. 10).

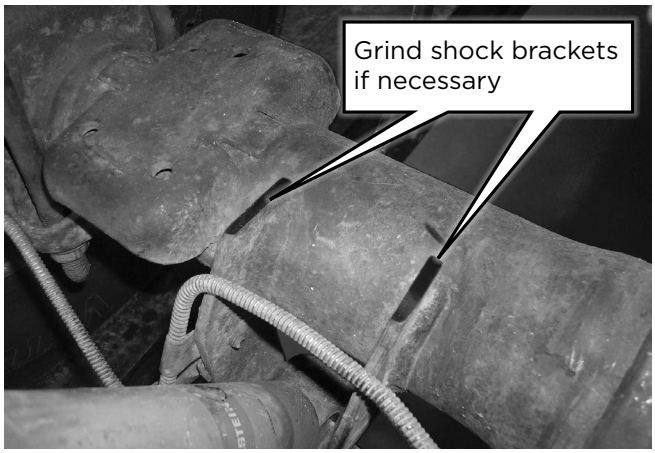
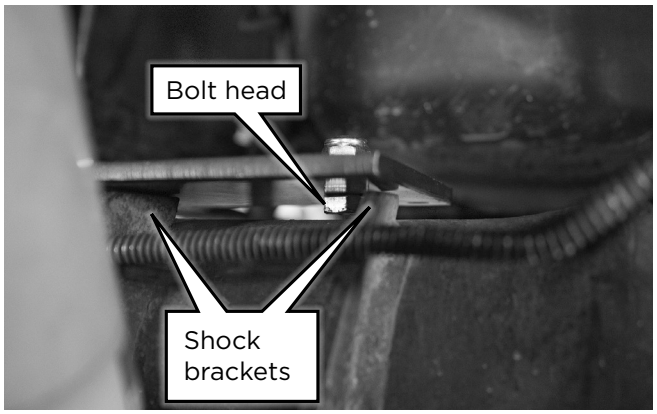


Fig. 9



When the lower bracket is set on the axle, if the head of the bolt does not touch the axle tube, it will be necessary to file or grind down the shock brackets to obtain clearance to allow the lower bracket to fit flat on the axle.

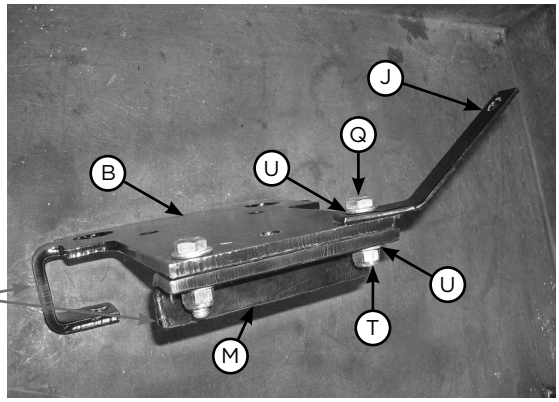
Fig. 10

3500HD Lower bracket assembly

Because the jounce bumper spacer block is high off the axle on this model, it will be necessary to install a spacer on the end of the lower bracket. This spacer will touch or be close to touching the axle once the assembly has been installed on the axle.

It will be necessary to install an emergency brake cable bracket on the driver's (left) side making these assemblies specific to left and right assemblies.

1. Set the lower bracket axle spacer (M) onto the lower bracket (B) on the flange side (Fig. 11).
2. For the driver's (left) side, attach the axle spacer and the emergency brake cable bracket (J) onto the lower bracket with the 5/16"-18 x 1 1/8" hex-cap screws (Q), 5/16" flat washers (U) and 5/16"-18 nylon lock nuts (T). The passenger's (right) side spacer attaches the same way, but does not require the brake cable bracket. Snug the hardware on the emergency brake cable only enough so that it still swivels, torque all the other mounting hardware to 18 lb.-ft. (24Nm).



The spacer goes on the flange side of the lower bracket.

Driver's (left) side lower bracket
Leave the emergency brake cable bracket hardware loose so it can swing.

Fig. 11

Build the Air Spring Assemblies

1. Set roll plates (D) on both ends of the air spring (C). The radiused (rounded) edge of the roll plate will be toward the air spring, enabling the air spring to be seated in both roll plates (Fig 12).
2. Install a 90-degree swivel air fitting (I) to the top of the air spring. Tighten finger-tight plus 1 1/2 turns. Be careful to only tighten on the metal hex nut. Do not overtighten (Fig. 12).

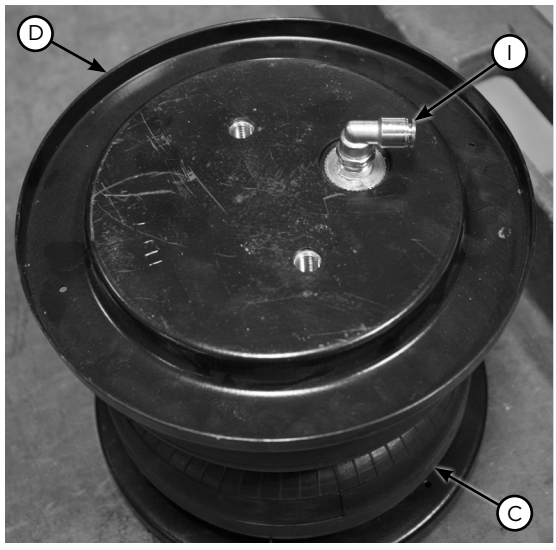


Fig. 12

3. Insert two 3/8″-16 x 2 1/2″ carriage bolts (O) through the large holes in the lower bracket (Fig. 13) and into the square holes on the lower bracket flanges.

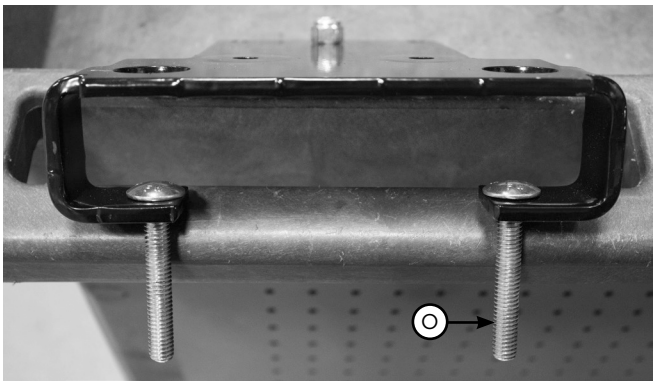


Fig. 13

4. Set the lower bracket onto the roll plate/air spring assembly, making sure the flanges on the lower bracket are on the opposite side of the fitting on the air spring. Attach the lower bracket to the air spring with two 3/8″-24 x 3/4″ flat-head socket cap screws (E) and torque to no more than 20 lb.-ft. (27Nm) (Fig. 14 & Fig. 15).

2500 HD assembly upside down

The flange on the lower bracket needs to be on the opposite side of the fitting at the top of the air spring.

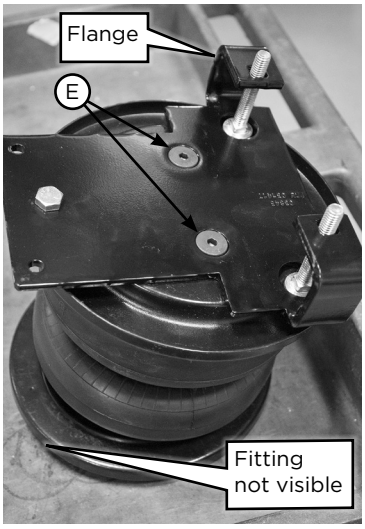
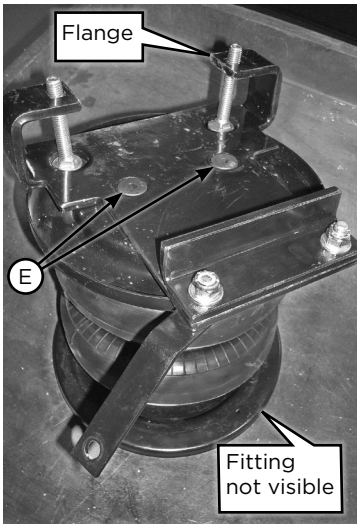


Fig. 14



3500 HD assembly upside down

The flange on the lower bracket needs to be on the opposite side of the fitting at the top of the air spring.

Fig. 15

5. Figure 16 shows a completed assembly.

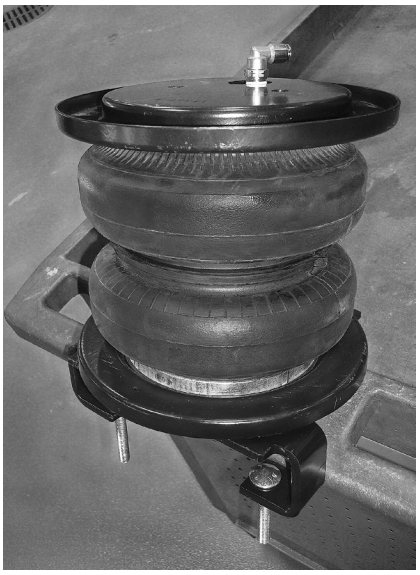


Fig. 16

Install the Assemblies

REMEMBER...

For 2500HD models, the assemblies are not specific to one side.

1. Set the assemblies onto the axle on both sides.

REMEMBER...

It will be necessary to index the lower legs under the jounce bumper strike plate.

2. With the lower bracket parallel to the axle plate, hook one leg under the side of the strike plate and turn the assembly until the other leg is under the strike plate on the other side (Fig. 17). Set the assemblies on both sides and center the assembly somewhat under the upper bracket already installed on the frame.

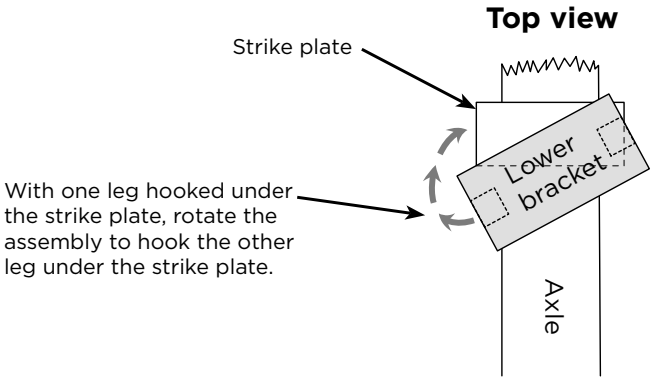


Fig. 17

3500HD models

Install the assembly with the emergency brake cable bracket on the driver's (left) side of the vehicle.

1. Set the assemblies on both sides and center the assembly somewhat under the upper bracket already installed on the frame.

Attach the Assemblies to the Upper Bracket

1. Point the fitting inboard on both sides so as not to damage them while raising the axle.
2. Align the holes in the roll plates close to where the upper mounting holes are in the upper air spring end cap.
3. Raise the axle up to within 1/8″ of the upper bracket. Attach the air spring to the upper bracket with the 3/8″-24 x 7/8″ hex-cap screws (F), 3/8″ lock washers (G) and 3/8″ flat washers (H) (Fig. 18). Lower the vehicle once both air springs are attached to the upper brackets and remove the safety stands. Leave loose at this time.

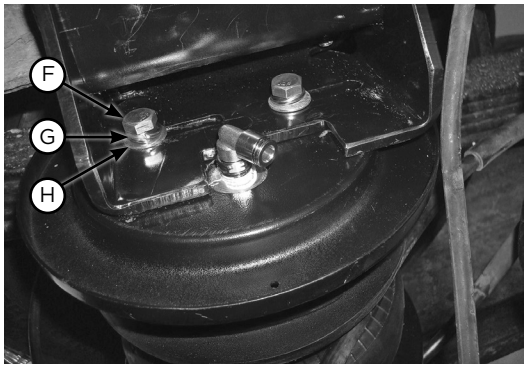


Fig. 18

4. If necessary, move the lower bracket in and out on the axle to locate the air spring perpendicular to the upper bracket. Install the axle strap (K) over the axle and onto the carriage bolts in the lower bracket. Cap with 3/8" flat washers (H) and 3/8"-16 nylon lock nuts (S) and torque evenly to 10 lb.-ft. (14Nm) (Fig. 19).
5. Adjust the upper spring forward or back in the slots of the upper bracket to align and torque the upper mounting hardware to no more than 20 lb.-ft. (27Nm).

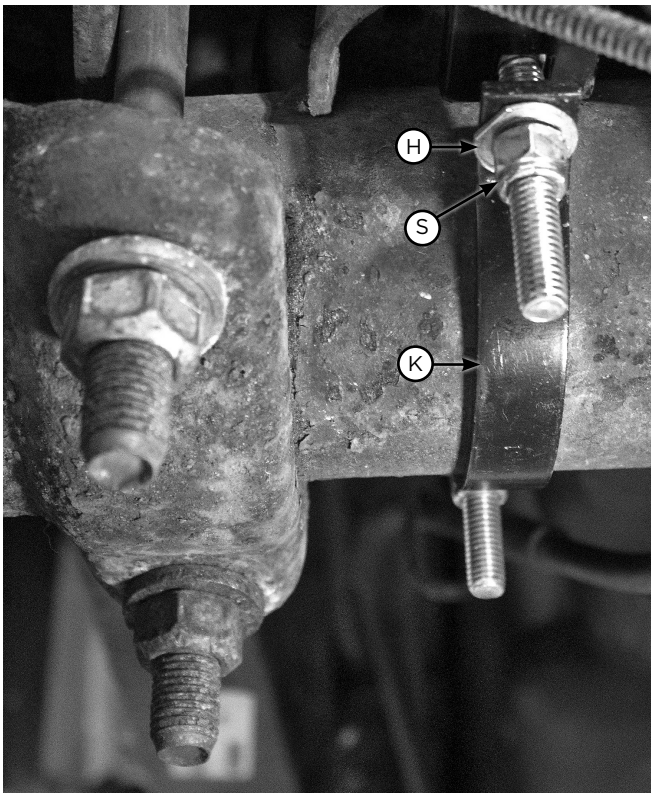


Fig. 19

Emergency Brake Cable Adjustments

1. Remove the wire emergency brake cable bracket off the side of the driver's (left) side frame rail and twist the top cable out of the small loop that is in the top of the bracket (Fig. 20 & Fig. 21). Reattach the wire bracket back onto the side of the frame.

Fig. 20

Fig. 21

Remove the emergency brake cable from the smaller upper loop so that it stays in the lower loop.

For 2500HD models

It will be necessary to attach the emergency brake cable bracket onto the driver's (left)side lower bracket.

1. Attach the emergency brake cable bracket (J) to the front inside corner of the driver's (left) side lower bracket with a 5/16"-18 x 1 1/8" hex-cap screw (Q), 5/16" flat washers (U) and 5/16"-18 nylon lock nut (T) (see the Exploded Installation View & Fig. 22). Snug but leave loose enough so the cable bracket can be rotated on the bracket.

Fig. 22

2. For both 2500/3500HD models, attach the P-clamp (L) over the emergency brake cable and attach it to the emergency brake cable bracket that is attached to the lower bracket with one 5/16"-18 x 1 1/8" hex-cap screw (Q), 5/16" flat washers (U) and 5/16" nylon lock nut (T). Align the bracket and P-clamp so that it is perpendicular to the air spring and tighten all hardware to 18 lb.-ft. (24Nm) (see the Exploded Installation View & Fig. 23).

Fig. 23

3. If the cable is close to the tank, bend the bracket slightly toward the air spring to obtain more clearance (Fig. 24).

Fig. 24

Air Lines Installation

1. Select Schrader Valve Locations

Choose suitable locations for the Schrader valves. If necessary, drill a 5/16″ (8 mm) hole at each selected location. Common locations for mounting are inside fuel tank filler door, inside rear wheel wells, or by the license plate mount or rear bumper area.

2. Measure and Cut the Air Line

Measure the length of air line needed to reach your intended Schrader valve locations. Cut the air line (AA) using a sharp razor blade or hose cutter to make clean, square cuts. Do not use scissors or wire cutters, as these can deform the tubing and compromise the seal.

3. Route and Secure the Air Line

Route the air line (AA) from each air spring to the chosen Schrader valve locations. Plan the route to avoid sharp edges, moving parts, and heat sources. Once routed, use zip ties (BB) to secure the air line to stable points along the vehicle chassis. Do not pinch or kink the line. Leave at least 2″ (51 mm) of slack to accommodate movement. The air line's minimum bend radius is 1″ (25 mm).

Maintain a minimum of 5 1/2" (140 mm) clearance between all air lines and any part of the exhaust system. Avoid routing air lines over sharp edges or making tight bends.

4. Install Schrader Valves

Install the Schrader valves into the selected locations.

Heat Shield Installation (if provided in kit)

1. Position the Heat Shield

Place the heat shield over the exhaust pipe near the air spring. Maintain at least 1/2″ (13 mm) of clearance between the shield and the exhaust surface. Depending on the design of the heat shield included in your kit, you may need to bend the tabs or the shield itself to achieve proper fitment and spacing.

2. Install the Air Line Thermal Sleeve (if included)

If your kit includes a thermal sleeve, slide it over the section of air line that runs closest to the exhaust. This sleeve helps protect the line from excessive heat exposure.

3. Secure Components with Hose Clamps

Use hose clamps to secure the heat shield and thermal sleeve (if used). Apply double clamps where needed for added security. Make final adjustments to ensure all components are properly spaced and firmly in place.

Checklist

Ensure the air suspension system is correctly installed and safe for operation by completing the following checks:

1. Clearance Verification

Inflate the air springs to 50 PSI (3.45 BAR). Confirm a minimum clearance of 1/2″ (13 mm) between the air springs and any adjacent components, including tires, brake assemblies, the vehicle frame, shock absorbers, and brake lines. Adjust as needed to prevent contact during operation.

2. Heat Clearance Check

Verify that all air springs and air lines are positioned at least 5 1/2″ (140 mm) away from any heat sources.

3. Leak Inspection

With the system pressurized to 50 PSI (3.45 BAR) inspect all fittings, air lines, and connections for leaks. All leaks must be fully resolved prior to road testing.

4. Road Test Procedure

Inflate the air springs to the recommended operating pressure and conduct a 10-mile (16 km) road test. Upon completion, re-inspect for adequate clearance, air leaks, and secure fasteners.

5. Torque Confirmation

After 500 miles (800 km) of driving, recheck and torque all hardware to the specified values to ensure long-term stability and safety.

Adjusting Air Pressure

Stability

Properly adjusting air pressure is key to achieving both vehicle stability and correct ride height. Begin by increasing pressure until the suspension feels firm and controlled—without exceeding the maximum of 100 PSI (7 BAR). Ensure the vehicle sits level across all four corners. Uneven loads may require redistributing cargo or adjusting air pressure side to side.

Comfort

Ride quality is also influenced by air pressure. Too much or too little can cause harshness or instability. As a general rule:

- If the vehicle frequently bottoms out on the frame, increase air pressure.
- If the ride feels overly stiff or harsh, reduce air pressure slightly.

Adjust gradually to find the best balance between comfort and control.

Guidelines

1. Check System Pressure Weekly

Inspect the air pressure in the system at least once a week to ensure consistent performance and ride quality.

2. Maintain Proper Ride Height

Always operate the vehicle at the recommended ride height. Do not exceed 100 PSI (7.0 BAR) under any circumstances.

3. Inspect for Air Leaks as Needed

If you suspect a leak, follow these steps to identify and address the issue:

a. Inflate the air springs to 50 PSI (3.45 BAR).

b. Spray all air line connections and the inflation valve with a mild solution of liquid dish soap and water.

c. Wait 30 seconds and observe for any bubbles, which indicate a leak.

d. Recheck the system pressure after 24 hours. A pressure loss of 2–4 PSI (0.14–0.28 BAR) is normal after initial installation. If the pressure drops by more than 5 PSI (0.34 BAR), recheck for leaks.

e. Once testing is complete, adjust the air spring to the minimum pressure required for proper ride height.

4. Inspect Hardware and Component Alignment

Periodically check that all fasteners are properly torqued. Also, check for signs of rubbing or misalignment, and realign components as needed.

5. Clean the Air Springs

Occasionally, spray the air springs with clean water to remove mud, dirt, or debris that may collect during use.

6. Lift the Vehicle with Care

If lifting the vehicle by the frame, reduce system pressure to 5 PSI (0.34 BAR) to relieve tension on the air springs and mounting hardware.

Repair Guide

Fixing Leaks on Barbed Fittings

1. Cut the air line 1 1/2″ (38 mm) behind the existing fitting.
2. Use pliers or locking pliers to twist and pull the air line off the fitting.

Do not cut lengthwise, as this may damage the barbs and lead to future leaks.

3. Reinstall the air line and clamp (if applicable), making sure the air line fully covers all barbs for a proper seal.

Fixing Leaks on Push-to-Connect (PTC) Fittings

To Disconnect:

1. Release all air pressure from the system.
2. Push the air line inward toward the fitting.
3. While holding the air line in, press the collar inward toward the fitting.
4. With the collar depressed, pull the air line out.

Before Reconnecting:

5. Cut off the end of the air line just beyond the witness mark to ensure a clean, undamaged sealing surface.
6. If the fitting leaks at the threads, remove it, apply fresh thread sealant, and reinstall it 1 1/2 turns beyond finger-tight.

To Reconnect:

7. Push the air line into the fitting until fully seated.
8. Gently pull back on the air line to verify a secure connection.

Warranty

What this warranty covers

Atlus Products Company provides a warranty to the original purchaser of its Load Support Products, for the periods of time listed at AtlusProducts.com, by product line, from the date of original purchase, that the products will be free from defects in workmanship and materials when used on cars and trucks as specified by Atlus Products Company and under normal operating conditions, subject to the requirements and exclusions set forth below.

What this warranty does not cover

The warranty does not apply to products that have been improperly applied, improperly installed, or that have not been maintained in accordance with the installation instructions furnished with all products. This warranty does not apply and is void if damage or failure is caused by: accident, abuse, misuse (including but not limited to racing or off-road activities or commercial use), abnormal use, faulty installation, liquid contact, fire, earthquake or other external cause; operating the product outside Atlus Products Company's instructions, specifications or guidelines; or service, alteration, maintenance or repairs performed by anyone other than Atlus Products Company to the product from its purchased condition. This warranty also does not apply to: consumable parts, such as batteries, cosmetic damage, including but not limited to scratches or dents; defects caused by normal wear and tear or otherwise due to the normal aging of the product, or if any serial or identification number has been removed or defaced from the product. Atlus Products Company reserves the right to change the design of any product without assuming any obligation to modify any product previously manufactured.

Limitation of liability

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How to get service

If a defect in workmanship or materials causes your Atlus product to become inoperable within the warranty period, before returning any defective product, email Atlus Products Company at support@atlusproducts.com. The consumer shall be responsible for removing the defective product from the vehicle (including any labor charges) and returning it, shipping costs prepaid, to Atlus Products Company for verification. You must prove to the satisfaction of Atlus Products Company the date of original purchase of your Atlus product. A minimum $10 shipping and handling charge (plus applicable sales tax) will apply to all warranty claims. You must also pack the product to minimize the risk of it being damaged in transit. If we receive a product in damaged condition as the result of shipping, we will notify you and you must seek a claim with the shipper.

What Atlus Products Company will do

If you submit a valid claim to Atlus Products Company during the warranty period, and Atlus determines that the product was defective, Atlus Products Company will, at its option, repair your Atlus product or furnish you with a new or rebuilt product. Atlus Products Company will not reimburse you for repairs or replacement parts provided by other parties. Your repaired or replacement Atlus product will be returned to you (subject to payment of the required warranty claim shipping and handling charge), and it will be covered under the warranty for the balance of the warranty period, if any. When a product or part is replaced, any replacement item becomes your property and the replaced item becomes the property of Atlus Products Company. You are responsible for the installation/reinstallation (including any labor charges) of the product.

How the law relates to this warranty

This warranty gives you specific legal rights and you may also have other rights which vary from state to state. By this warranty, Atlus Products Company does not limit or exclude your rights except as allowed by law. To fully understand your rights, you should consult the laws of your state.

Customer Support

For Customer Service support, please contact us at:
support@atlusproducts.com

Atlus Products Company reserves the right to make changes and improvements to its products and publications at any time.

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California: ⚠WARNING: Cancer and Reproductive Harm – www.P65Warnings.ca.gov