ENGINEERED BY AIR LIFT

Atlus Air A7500

Kit Number: AA57577

Fits:
Ford Super Duty

Engineered and Assembled in the USA

Installation Instructions

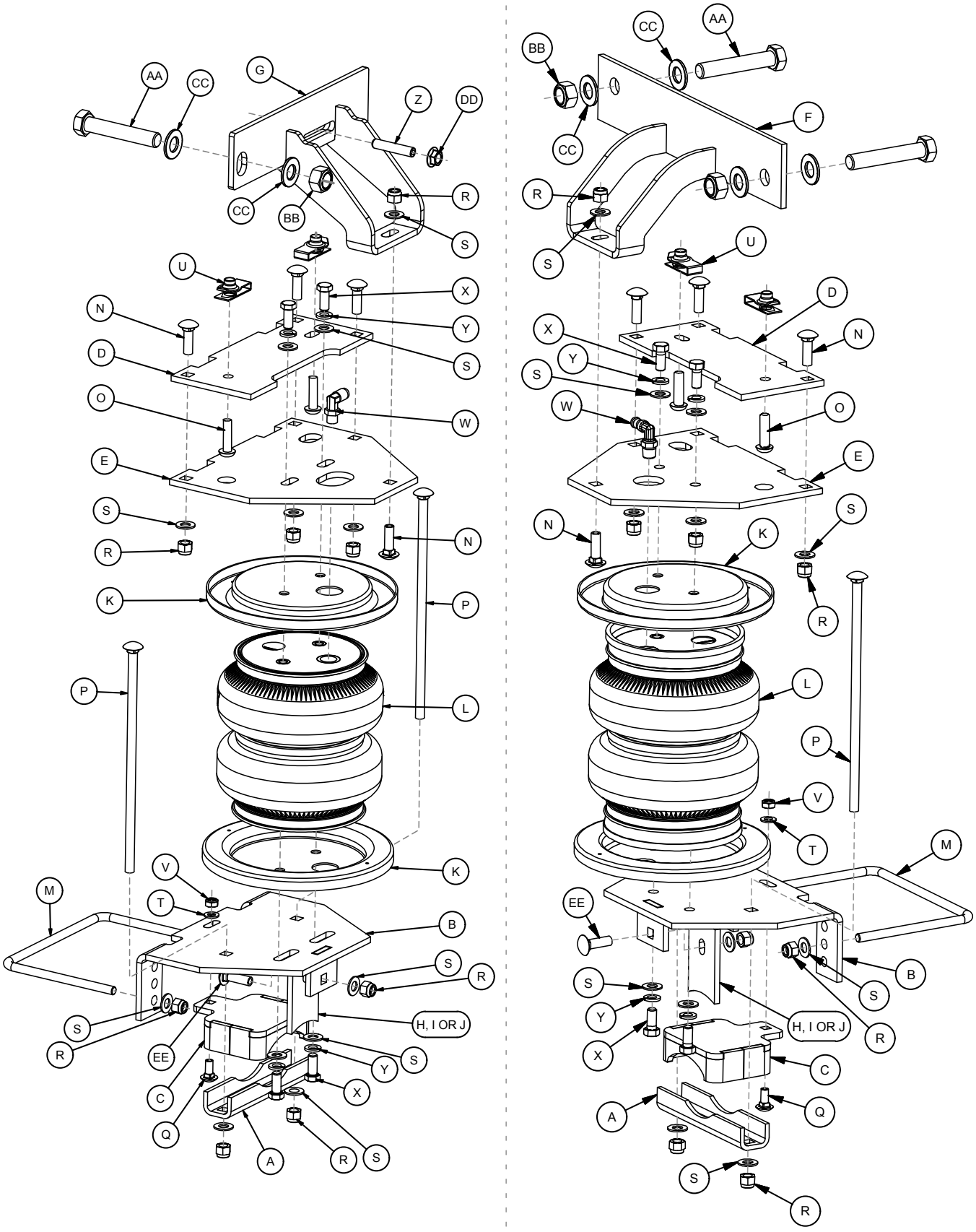
Before Getting Started

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 & standard open-end box wrenches
- Ratchet with metric and standard sockets
- Drill and 5/16″ drill bit
- Torque wrench
- Hex key wrenches metric and standard
- 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

AA57577 Exploded Installation View



Parts List

Part	Part No.	Part Description	QTY
A	01531GR	Clamp bar	2
B	03818GR	Lower bracket	2
C	03225GR	Lower bracket cup	2
D	07974GR	Upper chassis bracket	2
E	07925GR	Upper air spring bracket	2
F	07895GR	RH upper frame brace	1
G	07645GR	LH upper frame brace	1
H	03913GR	Lower leg adapter, 3 1/2" axle	2
I	03914GR	Lower leg adapter, 4" axle	2
J	03915GR	Lower leg adapter, 4 1/2" axle	2
K	11897	Roll plate	4
L	58126	Air spring	2
M	11770	U-bolt	2
N	17361	3/8"-16 x 1 1/4" Carriage bolt	8
O	17366	M10-1.5 x 35mm Button-head cap screw	4
P	17387	3/8"-16 x 10" Carriage bolt	4
Q	17500	5/16"-18 x 3/4" Carriage bolt	2
R	18435	3/8"-16 Nylon lock nut	18
S	18444	3/8" Flat washer	27
T	18501	M8 Flat washer	4
U	18622	M10-1.5mm, Short universal nut	4
V	18613	5/16"-18 Nylon lock nut	2
W	21837	1/8" NPT x 1/4" PTC Swivel, 90 degree fitting	2
X	17203	3/8"-24 x 7/8" Hex bolt	8
Y	18427	3/8" Lock washer	8
Z	17525	M10 x 1.5 x 50mm Set screw	1
AA	17348	5/8"-11 x 4 1/2" Hex-cap screw	3
BB	18548	5/8"-11 Nylon lock nut	3
CC	18449	5/8"-11 Flat washer	6
DD	18651	M10 x 1.5 Serrated flange nut	1
EE	17134	3/8"-16 x 1" Carriage bolt	2
FF*	10466	Zip ties	6
GG*	21230	Valve cap	2
HH*	21234	Rubber washer	2
II*	18411	Small star washer	2
JJ*	21233	5/16" Hex nut	4
KK*	20086	Air line with 2 Schrader valves	1

***** 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. Raise the frame and support the frame with safety stands. Lower the axle as far as it can go (Fig. 1).

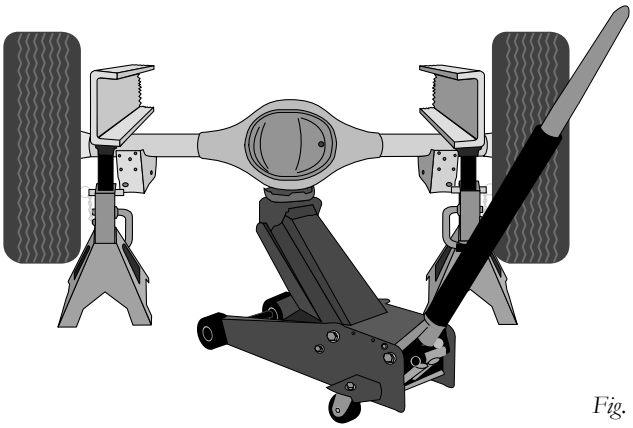


Fig. 1

Install the Upper Chassis Brackets

1. Unbolt and remove the jounce bumper assembly from under the frame on both sides (Fig. 2).

Fig. 2

2. Remove the clip-in studs by prying on the hinged end with a screwdriver to release. Pull all four out of the frame (Fig. 3).

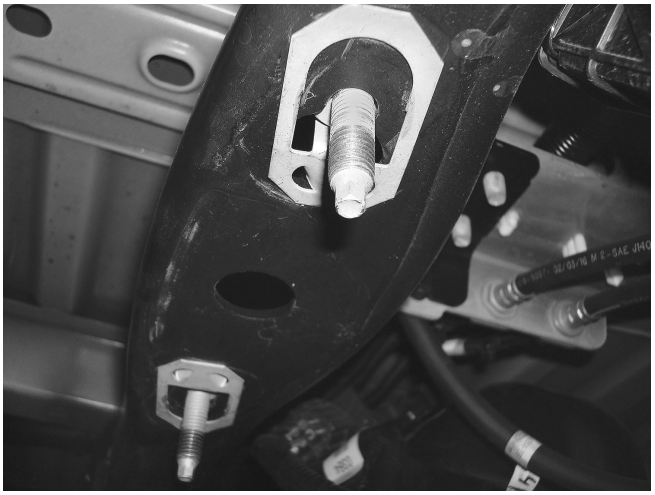


Fig. 3

3. Install the universal nuts (U) into the frame rail, lining up the holes in the frame and the threads in the nuts so that a bolt can be installed (Fig. 4).

INSTALLER'S HINT

A flat-tipped screwdriver works well in prying the universal nut into position.

Fig. 4

4. Insert the 3/8"-16 x 1 1/4" carriage bolts (N) into the upper chassis bracket (D). Install the upper chassis bracket onto the frame using the M10-1.5 x 35mm button-head cap screws (O) so that the large cut-out on the side of the bracket is inboard of the frame rail and the slotted hole in the center is forward (Fig. 5). Torque hardware to 38 lb.-ft. (52Nm).

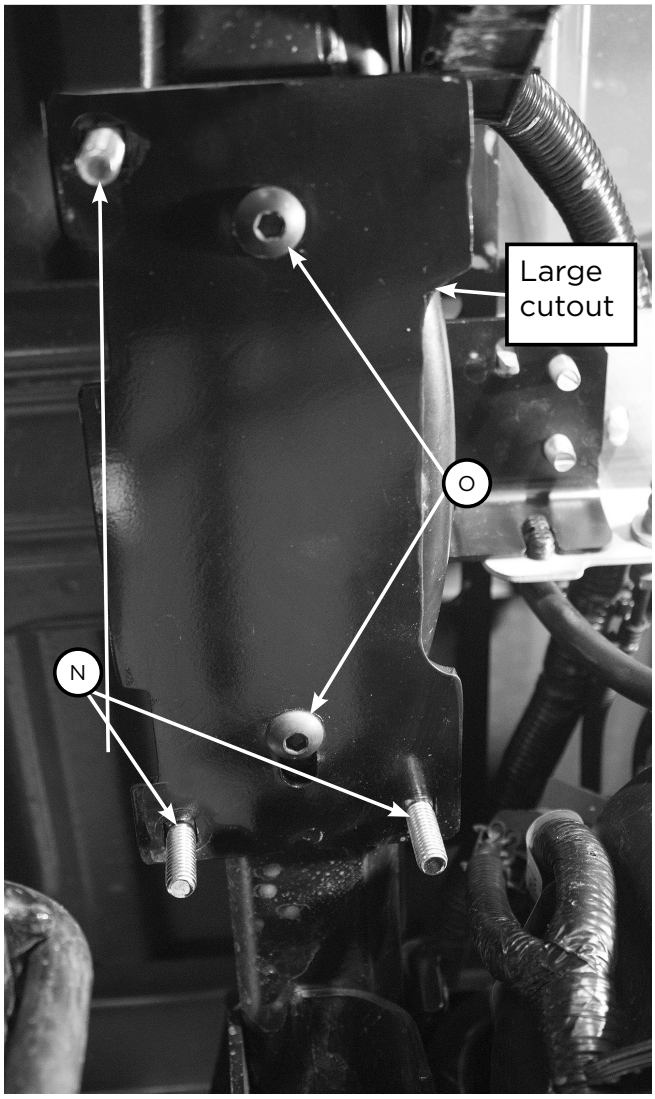


Fig. 5

Air Spring and Bracket Assembly

1. Install the swivel elbow fitting (W) into the top of the air spring (L) finger-tight. Tighten the swivel fitting an additional 1 1/2 turns. Place a roll plate (K) on top of the air spring (Fig. 6).

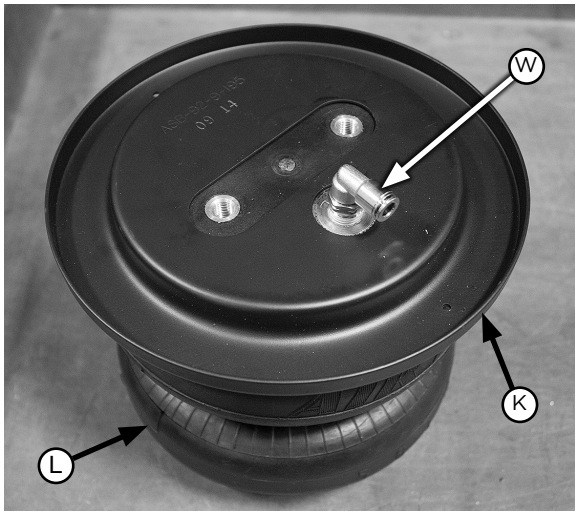


Fig. 6

2. Insert 3/8″-16 x 1 1/4″ carriage bolts (N) into the square holes on the brackets, then secure the upper air spring bracket (E) onto the top of the air springs using 3/8″-24 x 7/8″ hex bolts (X), 3/8″ lock washers (Y) and 3/8″ flat washers (S). At this stage, the air spring assemblies are left- and right-hand units. Push the brackets as far forward as possible (Fig. 7). Torque the hardware to no more than 20 lb.-ft. (27Nm).

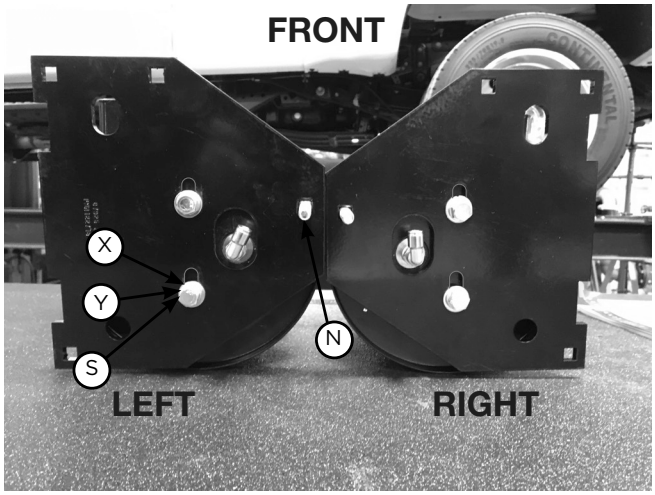


Fig. 7

3. Flip the assemblies over and set a roll plate (K) onto the bottom of the air spring (Fig. 8).

Fig. 8

4. Install the lower bracket cup (C) onto the lower bracket main plate (B) using a 5/16″-18 x 3/4″ carriage bolt (Q) (Fig. 9). Cap with an M8 flat washer (T) and 5/16″-18 nylon lock nut (V) (Fig. 10). Tighten finger-tight only; leave loose enough for the bracket to move freely in the slot.

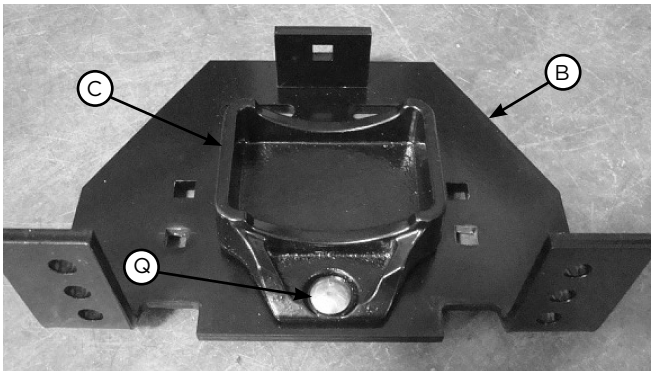


Fig. 9

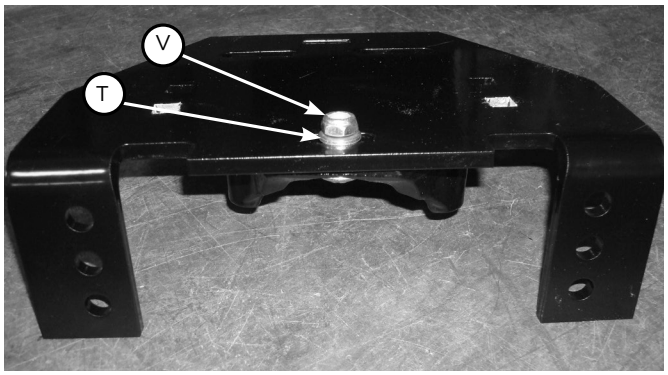


Fig. 10

5. Insert two 3/8″-16 X 10″ carriage bolts (P) through the square holes in the lower bracket main plate (B) as shown. **For models with sway bars:** use the holes farthest from the flanges for the driver's (left) side, and the holes closest to the flanges for the passenger's (right) side installation (Fig. 11). **For all models without sway bar**, use the square holes farthest from the flange for both sides of the installation.

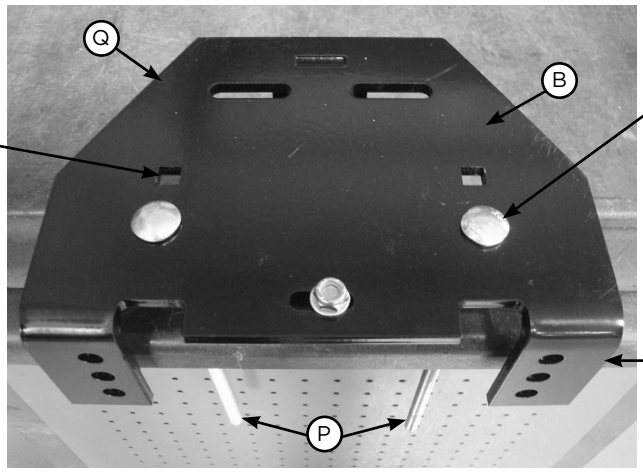


Fig. 11

The assembly shown is for sway bar equipped vehicles and is passenger's (right) side specific

6. When installing the lower brackets onto the air spring assemblies already assembled (step 3, Fig. 8), if you have a sway bar equipped vehicle, make sure the lower bracket assembly you assembled for the passenger's (right) side, is assembled on the passenger's (right) side air spring assembly. Using the holes specified in step 5, for vehicles not equipped with sway bars, it will not matter which assembly the lower bracket fits on.
7. Set the lower bracket main plate assemblies onto the air springs with the roll plates installed. Attach with 3/8"-24 X 7/8" hex bolt (X), 3/8" lock washers (Y) and 3/8" flat washers (S) (Fig. 12). Push the lower bracket as far forward as possible. Torque the hardware to no more than 20 lb.-ft. (27Nm). Refer to Figure 13.

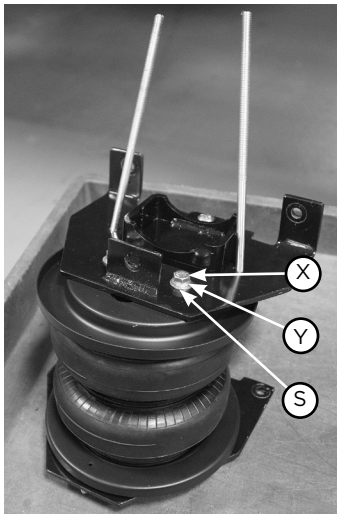


Fig. 12

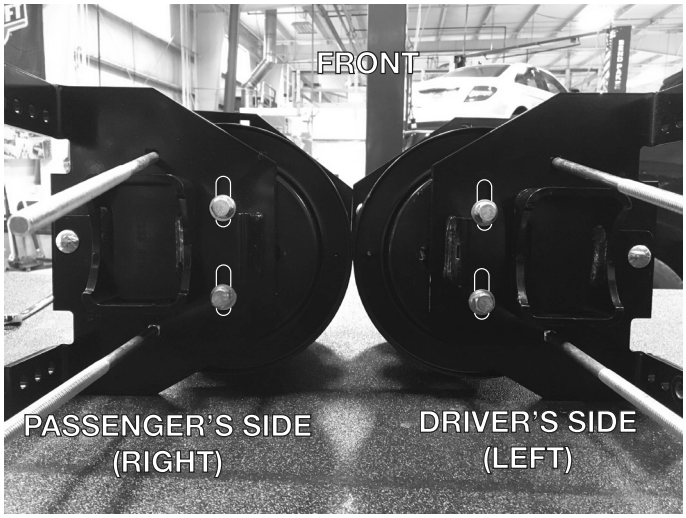


Fig. 13

8. Select the appropriate lower leg adapter for the specific vehicle. This is determined by the diameter of the axle (See Table 1). This brace will be attached with a 3/8"-16 x 1 1/4" carriage bolt (N), a nylon lock nut (R) and a flat washer (S). Torque the nylon lock nut to 10 lb.-ft. (14Nm) (Figs. 14 & 15).

Axle Diameter	Part #
3.5"	03913
4.0"	03914
4.5"	03915

Table 1

REMEMBER...

To determine the diameter of the axle, use a tape measure to measure the circumference. Divide the circumference by pi (3.14) (diameter = circumference/3.14).

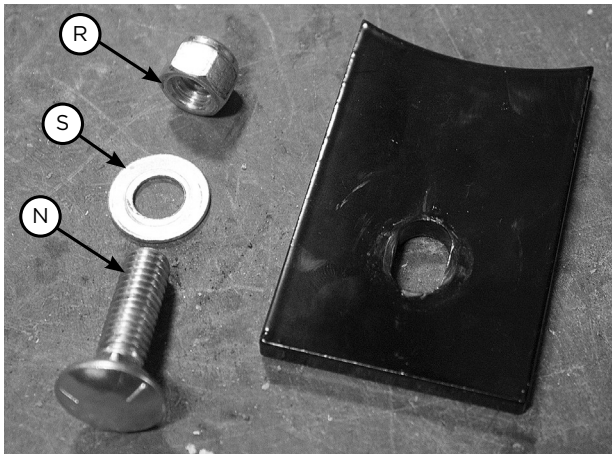


Fig. 14

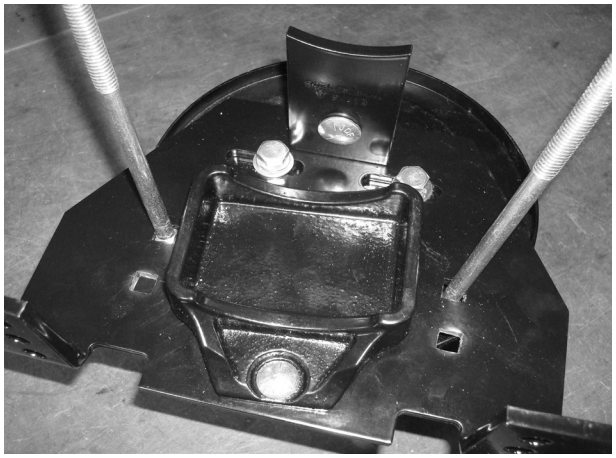


Fig. 15

9. Refer to Figure 16 for the driver's (left) and passenger's (right) side assemblies.

DRIVER'S (LEFT) SIDE **PASSENGER'S (RIGHT) SIDE**

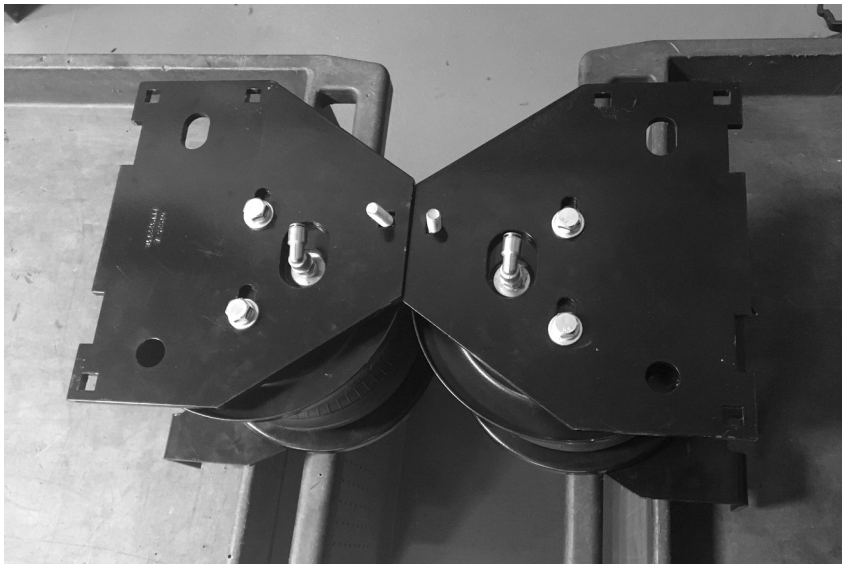


Fig. 16

Install the Assemblies

1. With the vehicle supported by safety stands, drop the axle or raise the body so that the assemblies can be put into position in between the axle and frame. Set the driver's (left) side and passenger's (right) side assemblies into position so that the lower bracket cup nests on the jounce bumper strike plate. Push the lower bracket so that it is flush against the leaf spring stack and both flanges on the lower bracket are locked around the stock U-bolts (Fig. 17).

REMEMBER...

The flanges need to be oriented so that they lock around the truck's existing leaf spring U-bolts.

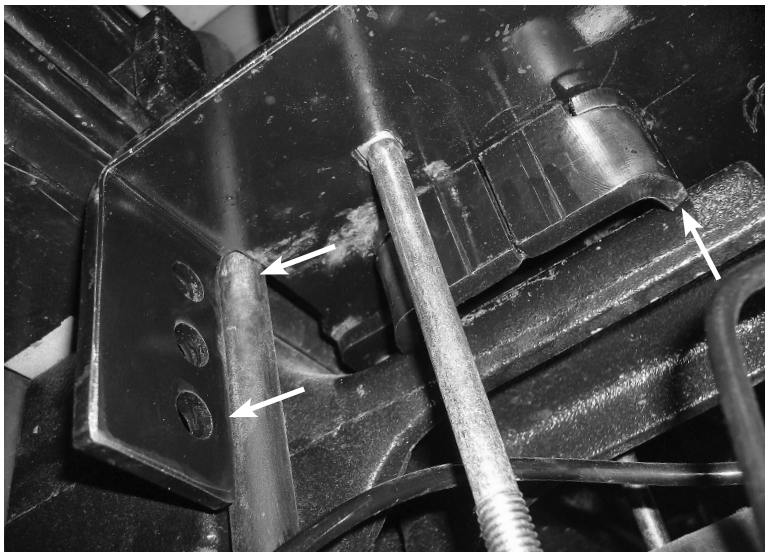


Fig. 17

REMEMBER...

On the driver's (left) side, the long carriage bolt in the lower bracket will be between the hard brake line and axle (Fig. 23). On the passenger's (right) side, the carriage bolt will be on the back side of the brake line (Fig. 24).

2. The ABS sensor line is attached to the axle via a clip on the brake line bracket (circled in Fig. 18). Remove this clip and zip tie the line to the brake hard line to keep it away from the lower support leg (circled in Fig. 19).

Fig. 18

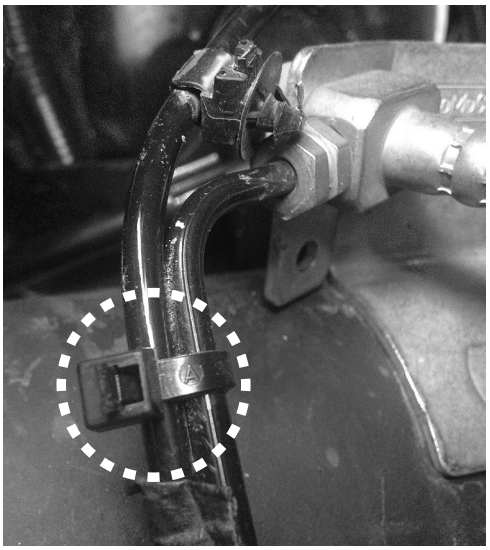


Fig. 19

3. Install the U-bolts (M) around the jounce bumper strike plate/spacer blocks and insert through either set of holes in the lower bracket (Fig. 20). Cap with the 3/8" flat washers (S) and 3/8"-16 nylon lock nuts (R). Snug the bolts evenly, just enough to hold the lower bracket flush against the stock U-bolts.

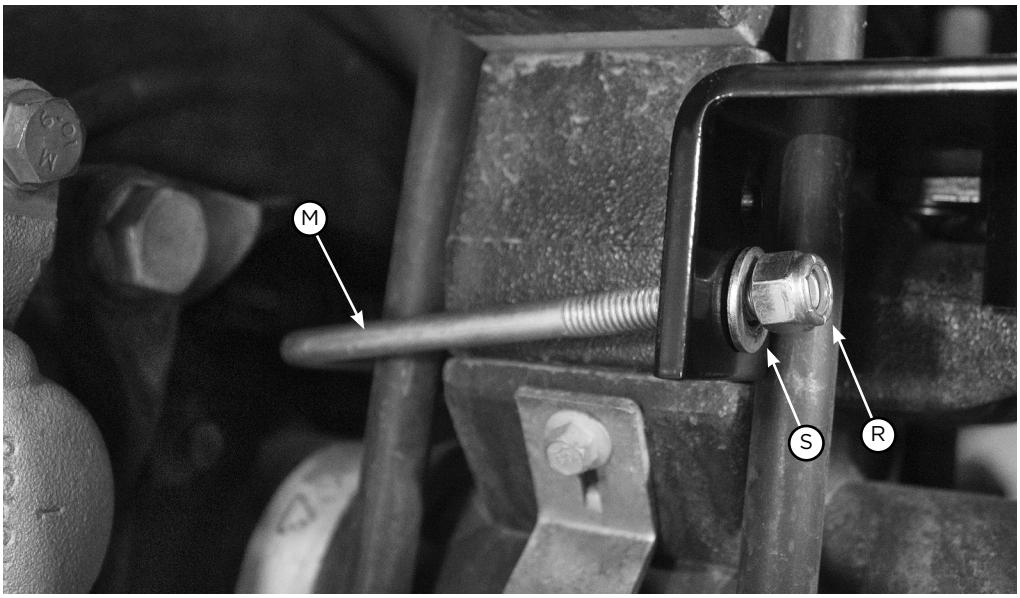


Fig. 20

4. Set the lower clamp bar (A) over the carriage bolts under the axle (Fig. 21). Attach with 3/8" flat washers (S) and 3/8"-16 nylon lock nuts (R). Evenly torque the lower clamp bar hardware to 16 lb.-ft. (22Nm). Finish tightening the U-bolt hardware previously snugged by torquing to 10 lb.-ft. (14Nm).

REMEMBER...

On vehicles with anti-sway bars, it may be necessary to trim the front carriage bolt that secures the clamp bar.

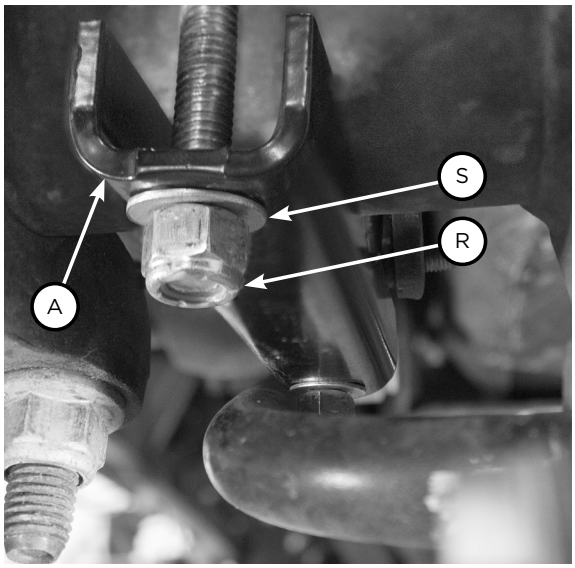


Fig. 21

5. Snug the nut that holds the lower bracket main plate and lower bracket cup together to finish the lower bracket installation (Fig. 22).

INSTALLER'S HINT

This nut will be difficult to tighten. It may be necessary to flip over the wrench a couple times and move to the front/ back side of the axle to tighten completely.

Fig. 22

6. Figures 23 & 24 show the lower bracket installed. Note the location of the carriage bolts in conjunction with the hard brake and ABS lines.

Driver's (left) side

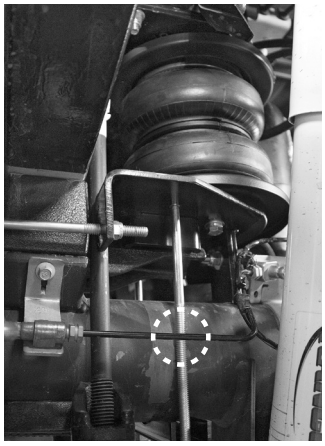
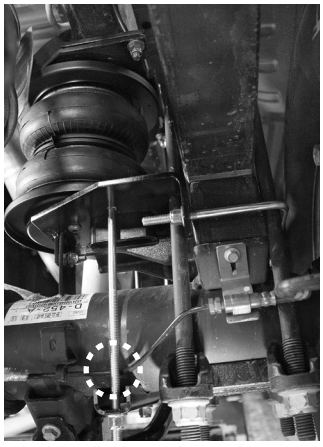


Fig. 23



Passenger's (right) side

Fig. 24

CRITICAL RISK

IT WILL BE NECESSARY TO PUSH THE HARD BRAKE LINE AWAY FROM THE LOWER BRACKET CARRIAGE BOLT IF THE LINE IS RESTING ON IT.

Driver's (left) Side Upper Brace Installation

1. Remove the rearward fifth wheel bracket hardware and set aside (Fig. 25).

Fig. 25

2. Locate the two M10 bolts holding the brake line bracket to the frame (Fig. 26). Unbolt both and pull the bracket away from the frame (Fig. 27).

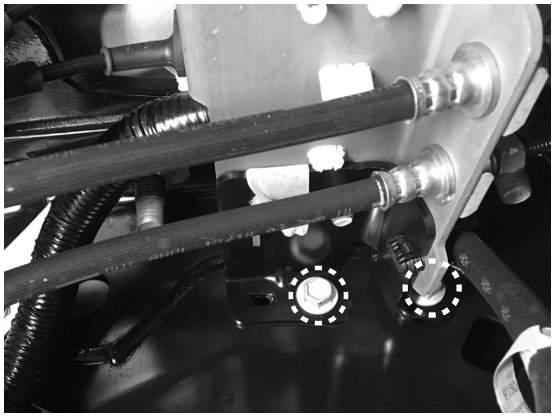


Fig. 26

Fig. 27

3. Install the included set screw (Z) into the rearward threaded hole. Leave about 30mm (1.20″) protruding from the frame (Fig. 28).

Fig. 28

4. Align upper frame brace (G) on the frame and thread the included M10 flange nut (DD) onto the set screw. Put the factory fifth wheel bolt or the included 5/8" hardware (AA) through the frame and the bracket. Thread the matching nut on the bolt (Figs. 29 & 30). Do not fully tighten.

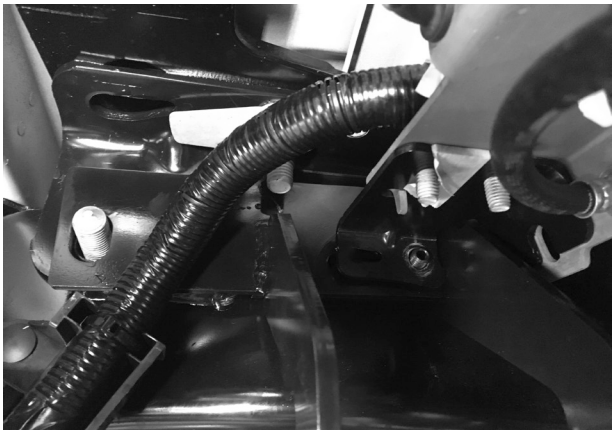


Fig. 29

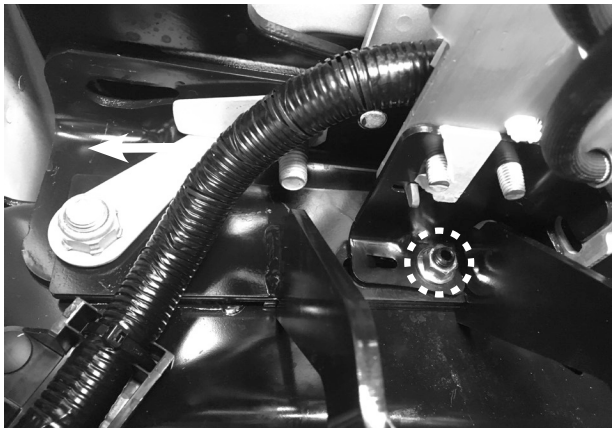


Fig. 30

Passenger's (right) Side Upper Brace Installation

1. Locate the clip (gray circle) that holds the wiring harness for the O_2 sensor. Discard the clip, as it will no longer be needed (Fig. 31).

REMEMBER... *Some models may not have the 0_2 sensor clip.*

2. Some models come equipped with a factory fifth-wheel bracket. It will be necessary to remove the hardware from these holes if the vehicle has this bracket. Find the two holes located under the factory fifth-wheel brackets. Attach the upper frame brace using the included 5/8" hex cap screws (AA), nuts (BB) and washers (CC) (Fig. 32).

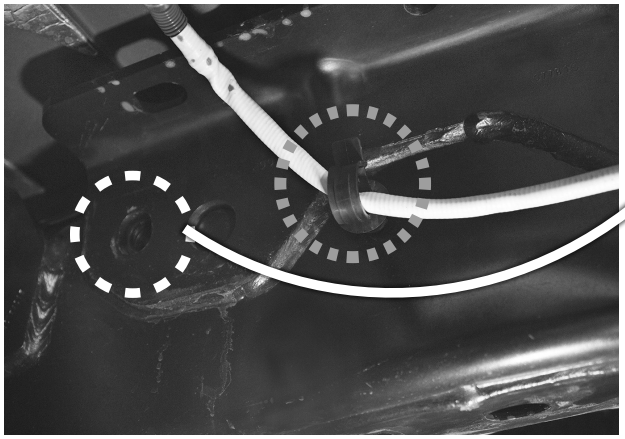


Fig. 31

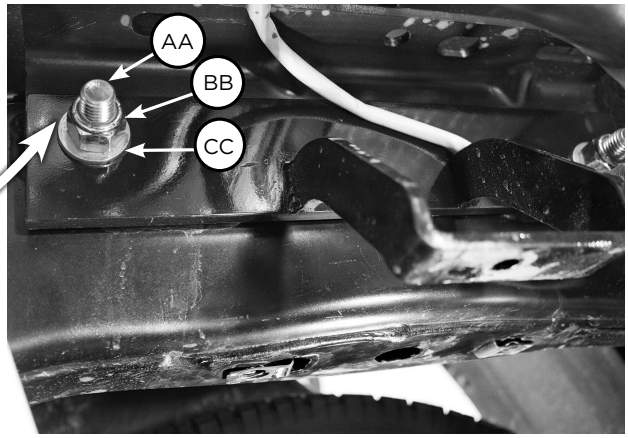


Fig. 32

3. Align upper air spring brackets (E) with the upper frame braces (F [shown] & G) and the upper chassis brackets (D). Secure with flat washers (S), and nylon lock nuts (R) over the carriage bolts (N) (Figs. 33 & 34). Do not tighten. Repeat on both sides. With all hardware hand-tight, torque all 3/8" hardware to 16 lb.-ft. (22Nm). Torque the fifth wheel 5/8" hardware to 150 lb.-ft. (203Nm) for the included hardware (AA and BB). Torque to 180 lb.-ft. (244Nm) for the factory bolt.

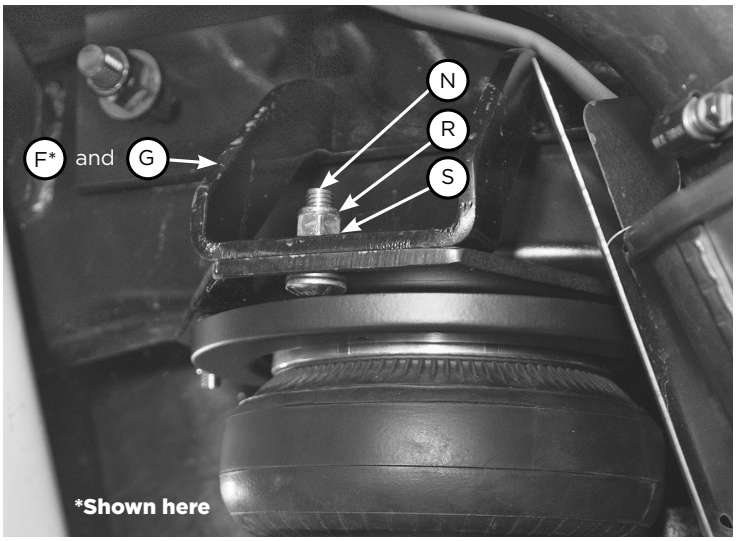


Fig. 33

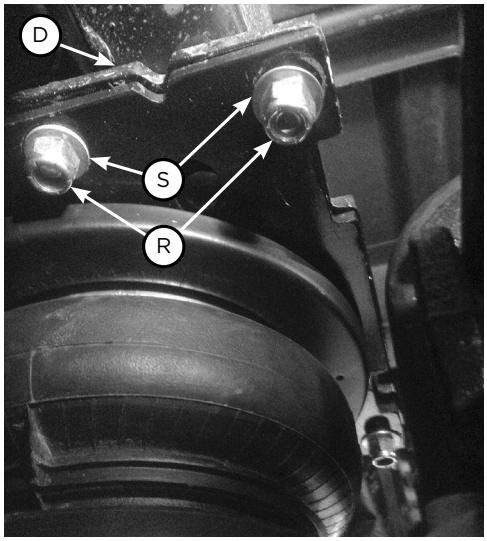


Fig. 34

4. The axle vent tube will also have to be zip tied to one of the brake soft lines in order to keep it out of the way of the air spring assembly (Figs. 35 & 36).

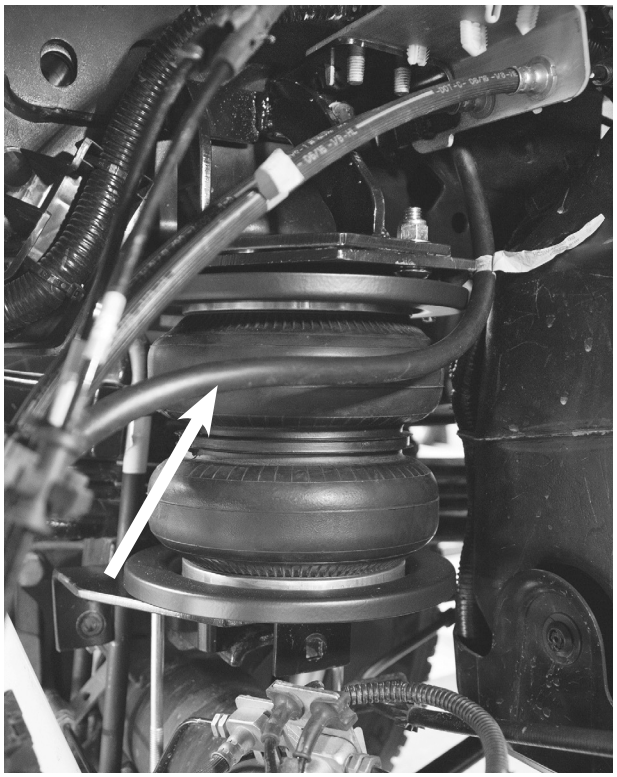


Fig. 35

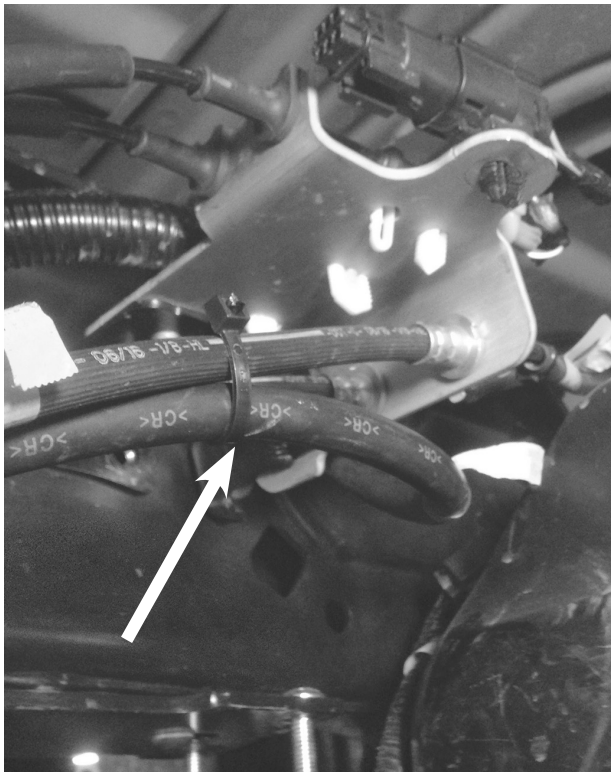


Fig. 36

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.

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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

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