

# Installation Manual

**PACBRAKE®**

www.pacbrake.com 800.663.0096



## HP10005 KIT



*GMC/Chevrolet 2500 HD/3500  
2WD/4WD\**

\* See application guide for proper fitment.

Use the most advanced air springs on the market to eliminate your vehicle's sag, sway and bottoming out. Pacbrake air suspension levels your truck's stance while providing added support for an overall smooth and safe ride.





### CAUTION:

This kit includes “push to connect OR barbed” airline fittings. They require the end of the airline to be round, square and cleanly cut to ensure the internal seal will not leak. The airline must only be cut with a sharp razor knife or hose cutter.

### NOTE:

Make sure all the items shown in the photo are provided in your kit before starting the installation.

### KIT CONTENTS

<b>A</b>	Air Springs (2)	HP10000
<b>B</b>	Upper Bracket (2)	HP0010
<b>C</b>	Lower Bracket (2)	HP1137
<b>D</b>	90° Fitting (2)	HP1100
<b>E</b>	Roll Plate (4)	HP10054
<b>F</b>	Heat Shield (1)	HP0012
<b>G</b>	3/8" Nylock Nut (10)	HP1000
<b>H</b>	5/16" Nylock Nut (2)	C11943
<b>I</b>	3/8" Flat Washer (23)	C653
<b>J</b>	Air Line/Valve Assembly (1)	HP1344
<b>K</b>	3/8" Lock Washer (4)	C18007
<b>L</b>	3/8"-24 x 7/8" Bolt (4)	HP1002
<b>M</b>	3/8"-16 x 3/4" Bolt (2)	C11571
<b>N</b>	3/8"-16 x 1 1/2" Bolt (4)	C18018
<b>O</b>	3/8"-16 x 3" Bolt (4)	HP1003
<b>P</b>	5/16"-18 x 1" Bolt (1)	C11819
<b>Q</b>	3/8"-24 x 3/4" Flat Head Screw (4)	HP1008
<b>R</b>	5/16"-18 x 7/8" Clinch Stud (1)	HP1007
<b>S</b>	5/8" Clamp (1)	HP1006
<b>T</b>	Axle Strap (2)	HP0009
<b>U</b>	Lower Brake Bracket (1)	HP0011
<b>V</b>	Heat Shield Clamp (2)	HP1001
<b>W</b>	Tie Strap (6)	C11618

### REQUIRED TOOLS

- 7/16", 1/2", 9/16" combination wrenches
- Adjustable wrench
- Torque wrench (accurate @ 20ft.lbs / 27Nm)
- 1/2" & 9/16" deep well sockets
- Drill motor (to drill holes for air fill valves only)
- 5/16" drill bit (to drill holes for air fill valves only)
- 5/16" nut driver OR flat blade screw driver
- 7/32" Allen wrench
- Hose cutter, razor blade OR sharp knife
- Air compressor / compressed air source
- Jack and safety stands
- Safety glasses
- Thread sealant
- Diagonal cutters
- Spray bottle with dish soap / water mixture

Thank you and congratulations on the purchase of an AMP air suspension kit.

**IMPORTANT:**

This air suspension kit will not increase the GVWR (Gross Vehicle Weight Rating), as the GVWR is determined by the axle rating. Do not exceed the maximum capacity listed by the vehicle manufacturer.

Before starting, ensure the application information is correct for the make, model and year of the vehicle you are installing it on. Please read the entire installation manual prior to starting the installation to ensure you can complete the installation once started.

Pacbrake recommends using a good quality anti-seize on all fasteners, this will reduce the chances of corrosion of the fasteners, and help facilitate removal if required at a later date.

**PREASSEMBLY OF THE AIR SPRINGS**

**THE UPPER PLATE**

- 1 Place the upper roll plate (with the rounded side towards the air spring) on the top of the air spring (top being the end with the air port). Repeat on the other air spring.



- 2 Install the air fittings supplied into the inlet ports of the air springs, use thread sealant to prevent air leaks. The air spring ports will be installed towards the center of the vehicle. The passengers side fitting will point towards the front of the vehicle. Do not over tighten the fittings.

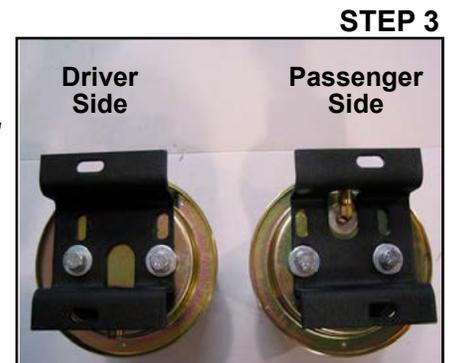


**THE UPPER BRACKET**

- 3 Place the drivers side upper mounting bracket on top of air spring aligning the two mounting holes as shown in the photo.

**Note:** The driver side bracket mounts to the air spring through the elongated holes on each side of the air inlet port cutout. The passenger side bracket mounts to the air spring through the elongated holes opposite the air inlet port cutout.

Install the two capscrews, lock and large flat washers loosely to secure the mounting bracket to the air spring. Repeat on the other air spring using the second set of mounting holes as shown in photo.



**THE LOWER BRACKET**

**4** Install the clinch stud into the drivers side lower bracket hole, shown in the photo. This is an interference fit into the bracket. Clinch stud not required on the passengers side lower bracket.

**2500 model only** (3/4 ton trucks) require a 3/8" bolt and nut to be installed in both lower brackets as shown. The bolt head is installed opposite the air spring. The nut will fit inside the roll plate cavity. Tighten the nut securely.

**THE LOWER PLATE**

**5** Place the lower roll plate (with the rounded side towards the air spring) on the bottom of the air spring. Install the two carriage bolts through the lower bracket into the square holes of the legs, threaded end of the carriage bolt pointing away from the air spring. Then install the lower bracket to the air spring, using the two countersink capscrews and a 7/32" allen wrench. The legs of the bracket must be installed towards the outside of the vehicle as shown in the photo. Tighten the countersink capscrews securely. Repeat on the other air spring.

**INSTALLATION ON THE VEHICLE**

**6** Raise the vehicle enough for a comfortable working height with a floor jack or hoist if available, then support the frame and axle with jack stands.

**7** Remove the jounce bumpers on both sides and discard.

**STEP 4**



**STEP 5**



**STEP 7**



8 2500 models only (3/4 ton) may have a nut and bracket welded to the axle tube. It must be removed if interference exists with the lower air spring bracket.

9 Insert the air spring assembly between the jounce bumper and the axle plate. Some vehicles may require the axle to be lowered or raised slightly to attain enough clearance to insert the air spring assembly. Rotate the lower mounting bracket to position so one leg is in front and the other leg is behind the axle plate.

**ATTACH THE UPPER BRACKET**

10 Install the upper bracket to the frame using the holes of the jounce bumper with the 4 capscrews, 8 flat washers and 4 nylock nuts supplied. Torque to 20 lbs.ft. 27 N•m.

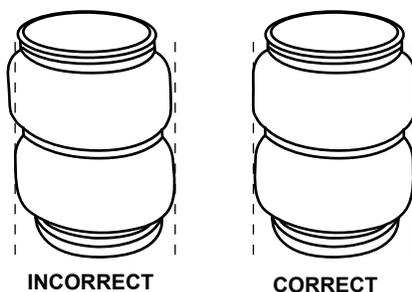
**THE AXLE STRAPS**

11 Loosely install the 2 axle straps with the 4 nylock nuts and 3/8" flat washers supplied.

**ADJUST THE AIR SPRING**

12 Adjust the air spring to the upper bracket and the lower bracket on the axle tube to ensure the air spring is aligned, as shown in the diagram.

AIR SPRING ALIGNMENT



STEP 9



STEP 10



STEP 11



## CHECK THE CLEARANCE

- 13** Ensure sufficient clearance exists between the brake lines and carriage bolts. Once alignment is correct, tighten the upper bracket to air spring capscrews. Then the 2 carriage bolt nuts to axle straps to 20 lbs.ft. 27 N•m. Repeat on the other air spring.

STEP 13



## SECURING THE EMERGENCY BRAKE CABLE

- 14** Install the bracket supplied to the clinch bolt on the drivers side lower air spring bracket installed in step 4. Use the 5/16" x 1" bolt, nylock nuts and flat washers provided. This is to secure the emergency brake cable away from the air spring assembly.

STEP 14



## INSTALL THE HEAT SHIELD

- 15** Attach the heat shield with the gear clamps supplied to the exhaust pipe to protect the air spring from heat.

STEP 15



## AIRLINE INSTALLATION

- 16** Provided in the basic air spring kit are two fill valves, the most common place to install them is to replace the license plate fasteners with the fill valves. Alternatively, two holes can be drilled in a convenient location. Install one airline provided, route the nylon hose to an air spring fitting, cut the hose and connect to the air spring fitting. Repeat with the other fill valve. Secure airlines with the tie-straps provided away from moving items and heat sources.

STEP 16



If an in cab inflation kit is being installed, follow the instructions provided with it.

**NOTE:** This kit contains push to connect fittings, using scissors or wire cutters to cut the nylon airline will distort the line and cause the connection to leak. **THE AIRLINE MUST BE CUT OFF SQUARELY WITH A SHARP RAZOR KNIFE.** Moisten the end of the airline prior to inserting it into the fitting and push it in until it stops.

**IMPORTANT!** Double check all the fasteners are torqued to specifications

## 17 LEAK CHECK

Inflate both the air springs to 90 PSI, use a dish soap and water mixture on all airline connections to detect air leaks. Repair as necessary and retest. Inflate your air springs to a predetermined value, then the following day recheck the pressure, if one or both the air springs have lost pressure a leak is present, the leak must be repaired, then retest until no leaks exist.

### SPECIAL NOTE:

**Retorque all the fasteners after the first 500 miles of driving.**

### STEP 17




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### OPTIONAL ACCESSORIES

Pacbrake offers an optional dual needle air gauge to monitor the pressure in each air spring from the vehicles cab. Pacbrake offers a full line of air compressors, air tanks and solenoids to control your air spring system.

### OPERATING YOUR VEHICLE WITH PACBRAKE AIR SUSPENSION

Air springs have minimum and maximum pressure requirements, never operate your vehicle with less than 10 PSI in the air spring and never inflate the air springs over 100 PSI, damage to the air springs will result.

Check the air pressure in the air springs daily for the first couple of days to ensure a leak does not develop. The air springs are designed to maintain the vehicles stock ride height with a load. Do not use the air springs as a means to lift the vehicle with no load, a rough ride will result.

### SERVICING YOUR VEHICLE WITH PACBRAKE AIR SUSPENSION

When lifting the vehicle with a floor jack or hoist on the frame never allow the air spring to limit the travel of the axle, try to always jack the vehicle on the axle. Suspending the axle with the air spring limiting the axle travel will damage the air spring and void the air spring warranty.

### WARRANTY

To be eligible for warranty, owner must submit their warranty card (or register online at [pacbrake.com/warranty](http://pacbrake.com/warranty)) within 30 days of purchase date.

**NOTE:** *The owners warranty will be void if air springs run with less than the minimum of 10 PSI.*