Installation Manual

PACBRAKE®

www.pacbrake.com 800.663.0096

HP10147 KIT

*Dodge, Sprinter 2500**
*Freightliner, Sprinter 2500**
*Mercedes, Sprinter 2500**

* See application guide for proper fitment.

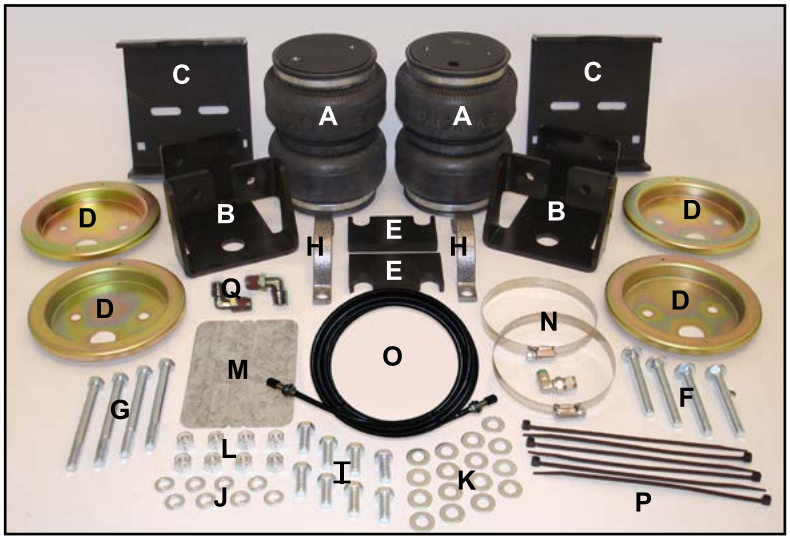
Use the most advanced air springs on the market to eliminate your vehicle's sag, sway and bottoming out. Pacbrake air suspension levels your truck's stance while providing added support for an overall smooth and safe ride.

AMP AIR MANAGEMENT by Pacbrake

HP10147 AMP AIR SUSPENSION KIT

L6037

KIT CONTENTS



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

KIT CONTENTS		
A	Air Springs (2)	HP10000
B	Upper Brackets (2)	HP0122
C	Lower Brackets (2)	HP0120
D	Roll Plates (4)	HP10054
E	Spacer Brackets (2)	HP0121
F	3/8" NC x 3" Carriage bolts (4)	HP1003
G	3/8" NC x 4" bolts (4)	HP1175
H	Axel strap (2)	HP0016
I	3/8" NF x 7/8" capscrews (8)	HP1002
J	3/8" Lock Washer (8)	C18021
K	3/8" Flat Washer (16)	C653
L	3/8" Nylock Nuts (8)	HP1000
M	Heat Shield (1)	HP0012
N	Gear Clamps (2)	HP1001
O	Air Line/Valve Assembly	HP1344
P	Tie Straps (6)	C11618
Q	Air Fitting (2)	HP1100

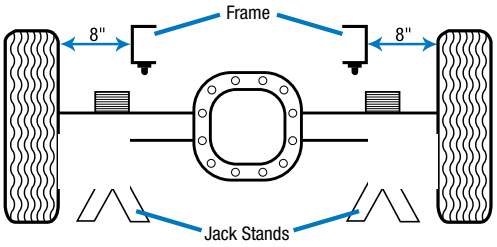
REQUIRED TOOLS

- 1/2" and 9/16" open end or box wrenches
- Adjustable Wrench
- Torque Wrench
- 7/32" Allen Wrench
- 9/16" deep well sockets
- Heavy Duty Drill
- 3/8 and 5/16 drill bits (very sharp)
- Pipe Thread Sealant
- Hose Cutter, Razor Blade or Sharp Knife
- Air Compressor/Compressed Air Source
- Hoist or Floor Jack
- Safety Stands
- Safety Glasses
- Spray Bottle with Dish Soap/Water
- Hammer
- Center Punch

Thank you and congratulations on the purchase of an AMP air suspension kit. Please read the entire installation manual prior to starting the installation to ensure you can complete the installation once started.

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.



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.

PRE ASSEMBLY OF THE AIR SPRINGS ON THE UPPER BRACKET

1 Locate the end of the air spring with the 1/4" NPT air port, place the air spring on a bench with the air port up.

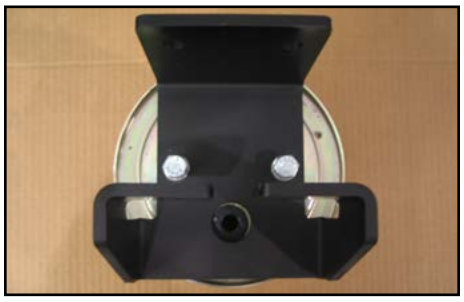
Arrow shows end with NO air port

Place the roll plate over the end of the air spring, aligning the two mounting holes and inlet air port.

Note: The rounded side of the roll plate must be towards the air spring.

2 Place the upper mounting bracket on to the air spring aligning the two mounting holes and inlet airport.

3 Using the two 3/8" NF x 7/8" capscrews and lock washers provided, loosely install the fasteners, securing the air spring, roll plate and upper bracket together.



Install and tighten the 90º airline fitting in to the air spring using thread sealant**.**

4 Torque the upper bracket to air spring fasteners to 20 ft-lbs. Repeat steps 1-4 on the other air spring.

MOUNTING THE AIR SPRING ASSEMBLY INTO THE VEHICLE

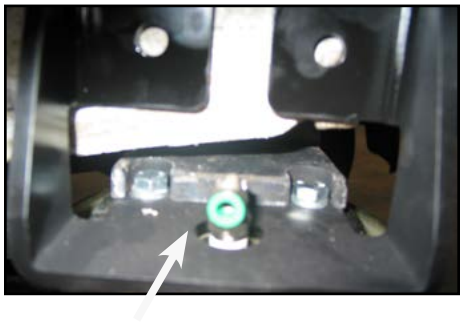
5 Remove the factory jounce bumper, by grasping it with your hand and pulling it toward the out side of the frame.

Jounce bumpers are no longer required, however they should be returned to the customer, in the event the air springs are removed.

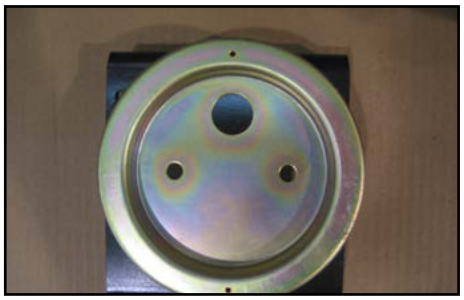
6 Using a hammer, modify the small lip used to retain the jounce bumper. It needs to be flush with the lowest part of the frame.

7 Install the air spring and upper bracket up onto the frame with the air port facing out towards the wheel. Do not push the bracket up tight against the bottom of the frame at this point of the installation.

8 Now install the frame spacer on top of the upper bracket. This spacer will straddle the bolts attaching the upper bracket to the air spring. Push the assembly up until the frame spacer is located within the pocket the jounce bumper was removed from.



9 Locate the two square holes on the lower brackets (shown by an arrow in the photo). These are to be positioned towards the center of the vehicle. Place the roll plate on top of the lower bracket (rounded side towards the air spring) and install the roll plate and lower bracket underneath the air spring.



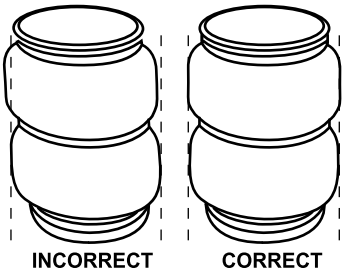
10 Insert two of the ⅜" x 16 x 3" carriage bolts provided down into the square holes in the lower bracket, now loosely install the axel strap on to these bolts using the ⅜" flat washer and Nyloc nuts supplied.

11 During installation the roll plate may have turned or has shifted slightly making it difficult to install the lower bolts, from below the vehicle visually align the roll plate and the slots of the lower bracket to the threaded holes in air spring

Loosely Install the two ⅜" - 24 x ⅞" bolts with lock and flat washers, up from the bottom to attach the lower bracket to the air spring assembly.

12 Align the air spring, by adjusting the position of it to the lower bracket slots, now snug up the bolts attaching the lower bracket to the air spring. Tighten the two carriage bolt that secure the axle strap to the lower plate, and torque to 16 ft-lbs, 21 Nm.

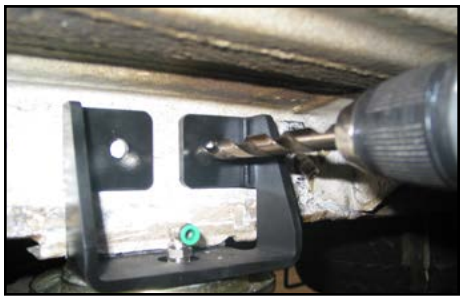
AIR SPRING ALIGNMENT



13 Ensure the alignment of the air spring has not changed. Using a center punch, to locate the center of the two holes in the upper bracket to the frame.

14 Check the inside of the frame for obstructions like electrical harnesses, fuel lines before drilling.

Using a 5/16" drill bit, drill thru both side of the boxed frame. Ensure you have the drill positioned level and perpendicular to the frame. Ensure the hole on the inside of the frame falls into the center of the mounting bolt hole of the upper bracket. Once confirmed, enlarge the two holes in the frame to ⅜".



15 Insert two ⅜"-16 x 4" bolts provided through the upper bracket and frame using the flat washers and nylock nuts. Torque the bolts to 16 ft-lbs, 21 Nm.

16 Torque the lower bracket to air spring bolts to 20 ft-lbs, 27 Nm.

Repeat steps 4 to 16 on the other side of the vehicle.

17 Using the gear clamps provided, secure the heat shield to the exhaust

AIRLINE INSTALLATION

18 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.

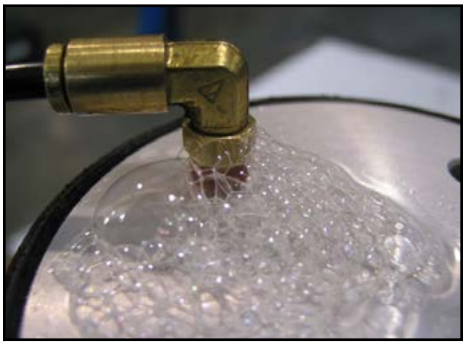
If an in cab inflation kit is being installed, follow the instructions provided with it.

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 torques to specification

LEAK CHECK

19 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 the air springs to a predetermined value and then the following day recheck the pressure. If one or both of the air springs have lost pressure, a leak is present. The leak must be repaired and then retest the vehicle until no leaks exist.



OPTIONAL ACCESSORIES

Pacbrake offers an optional dual needle air gauge to monitor the pressure in each 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 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.