

# Installation Manual

**/// PACBRAKE®**



## HP10071 KIT

*Dodge Ram 1500\**

\* 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.



## KIT CONTENTS



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.

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

### KIT CONTENTS LEGEND

A	Air Springs (2)	HP1000
B	Lower Bracket (2)	HP1137
C	Upper Frame Bracket (2)	HP1143
D	90° Fitting (2)	HP1100
E	Roll Plate (4)	HP10054
F	Heat Shield (1)	HP0012
G	3/8" Nylock Nut (4)	HP1000
H	5/16" Flat Washer (4)	C11944
I	3/8" Lock Washer (6)	C18007
J	3/8"-24 x 7/8" Bolt (6)	HP1002
K	3/8" Flat Washer (12)	C18006
L	1/2" Lock Washer (4)	HP1173
M	3/8"-16 x 2" Carriage Bolt (4)	HP1005
N	Lower Bracket Stanchion (2)	HP1144
O	3/8" - 24 x 3/4" Countersink Screw (4)	HP1008
P	Heat Shield Clamp (2)	HP1001
Q	Axle Strap (2)	HP0009
R	Air Line/Valve Assembly	HP1344
S	Tie Straps (6)	C11618

### REQUIRED TOOLS

- 7/16", 1/2", 9/16" open end or box wrenches
- Adjustable Wrench
- Torque Wrench
- 9/16", 1/2" deep well sockets
- Heavy Duty Drill
- 3/8" and 5/16" drill bits (very sharp)
- 3/8" Nut Driver
- 7/32" Allen Wrench
- Screw Driver, Flat Blade
- 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

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

**IMPORTANT:**

The air suspension kit will not increase the GVWR (gross vehicle weight rating), as this 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

### 1 THE UPPER ROLL PLATE

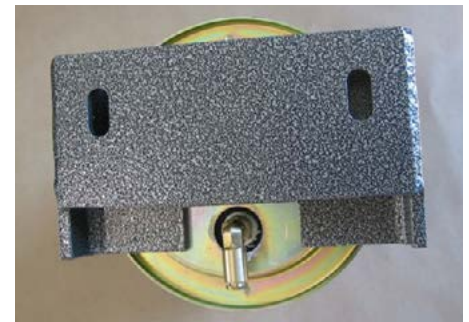
Place the upper roll plate (with the rounded side towards the air spring) on the top of the air spring (the top being the end with the air inlet port). Install the supplied 90° air fitting using thread sealant to prevent air leaks.



STEP 1

### 2 THE UPPER BRACKET

Place the upper air spring mounting bracket on top of the air spring and roll plate, as shown in the photo. Loosely install the 3/8" NF capscrews with the provided flat and lock washers. Do not tighten fully at this point as a final adjustment will be necessary once installed on the vehicle.



STEP 2

### 3 THE LOWER BRACKET

Locate the lower mounting bracket and insert one 3/8" x 1" capscrew in the outermost hole from the bent legs. Then, install one lock washer on the protruding side of this capscrew. Finally, install the hex shaped stanchion, as shown in the photo. Torque this to 20 ft-lbs, 27 N•m.



STEP 3

**4 THE LOWER PLATE**

Place the lower roll plate on the bottom of the air spring (with the rounded side towards the air spring). Install the two carriage bolts provided through the lower bracket into the square holes of the legs (with the 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 with a 7/32" allen wrench. The legs of the bracket must be installed towards the opposite side to the airline fitting. Tighten the countersink capscrews securely.

Repeat steps 1 - 4 on the other air spring

**INSTALLATION ON THE VEHICLE**

**5** Raise the vehicle enough for a comfortable working height with a floor jack (or hoist if available) and support the axle with jack stands.

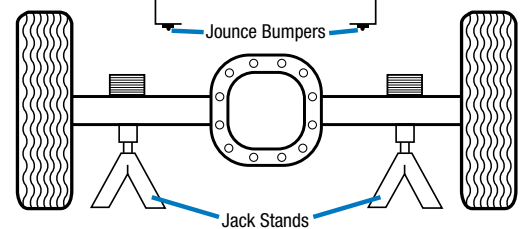
**6** Remove the jounce bumpers on both sides and discard. Retain the capscrews for use later in the installation.

**7** Insert the air spring assembly between the jounce bumper and the axle plate with the 90° airline fitting pointing towards the center of the vehicle. Some vehicles may require the frame to be raised slightly to attain enough clearance to insert the air spring assembly. Rotate the lower mounting bracket to position one leg in front of the axle pad and the other leg behind the axle pad.

STEP 4



STEP 5



STEP 6



STEP 7



- 8 Install the 1/2" lock washers provided on to the original jounce bumper capscrews. Loosely install these through the upper air spring bracket to the frame.



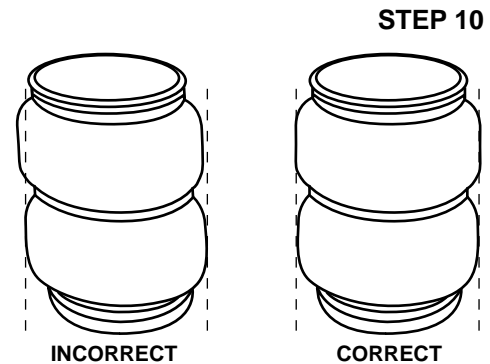
- 9 Loosely install the axle straps to the carriage bolts using the 3/8" flat washers and the 3/8" nylock nuts provided



Repeat steps 7 - 9 on the other air spring assembly

## ADJUSTING THE AIR SPRING

- 10 Adjust the air spring assembly to the upper bracket by moving the lower bracket on the axle tube to ensure the air spring is correctly aligned, as shown here.

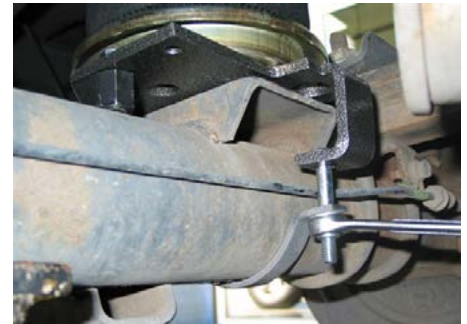


- 11 Once the air springs are aligned, torque the original jounce bumper bolts to 30 ft-lbs, 40 N•m. Then, torque the 3/8" capscrews that secure the upper bracket to the air spring to 20 ft-lbs, 27 N•m.



- 12 Now torque the axle strap carriage bolt to 20 ft-lbs, 27 N•m.

STEP 12



Repeat steps 10 - 12 on the other air spring assembly

## INSTALLING THE HEAT SHIELD

- 13 Bend the two center tabs of the heat shield supplied for fastening to the exhaust pipe as shown. Attach the heat shield with the gear clamps supplied to the exhaust pipe to protect the air spring from the heat of the tail pipe.

STEP 13



## AIRLINE INSTALLATION

- 14 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 airline 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.

STEP 14



NOTE: This kit contains push to connect fittings, using scissor 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 that all the fasteners are torqued to specifications.*

**AIR LEAK CHECK**

- 15 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.

**STEP 15**



**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.