

# Installation Manual

**PACBRAKE®**

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## HP10224 / HP10226 KIT

**HP10224: GMC Canyon & Chevrolet Colorado**  
Z71 (2/4 WD), Z85 (4 WD) & YC1 (2/4 WD) Suspension Packages\*

\*See page 1 for a complete list of sub-model applications.

**HP10226: GMC Canyon & Chevrolet Colorado**  
Z85 (2 WD) & ZQ8 (2/4 WD) Suspension Packages\*

\*See page 2 for a complete list of sub-model applications.

\* See application guide for proper fitment.



# HP10224/HP10226 AMP AIR SUSPENSION KIT



L6383

## APPLICATIONS: HP10224

YEAR	SUB MODEL	DRIVE	SUSPENSION PACKAGE
MAKE: CHEVROLET		MODEL: COLORADO	
2012			
2011			
2010			
2009	LT	4 WD	Z71
2009	LT	4 WD	Z85
2009	WT		
2008	LS	4 WD	Z71
2008	LS	4 WD	Z85
2008	LS	REAR WD	Z71
2008	LS	REAR WD	Z85
2008	LT	4 WD	Z71
2008	LT	4 WD	Z85
2008	LT	REAR WD	Z71
2008	LT	REAR WD	Z85
2008	WT		
2007	LS	4 WD	Z71
2007	LS	4 WD	Z85
2007	LS	REAR WD	Z71
2007	LS	REAR WD	Z85
2007	LT	4 WD	Z71
2007	LT	4 WD	Z85
2007	LT	REAR WD	Z71
2007	LT	REAR WD	Z85
2007	WT	4 WD	Z71
2007	WT	4 WD	Z85
2006	LS	4 WD	Z71
2006	LS	4 WD	Z85
2006	LS	REAR WD	Z71
2006	LS	REAR WD	Z85
2006	LT	4 WD	Z71
2006	LT	4 WD	Z85
2006	LT	REAR WD	Z71
2006	LT	REAR WD	Z85
2006	WT		
2005	SPORT		
2005	SPORT LS		
2005	Z71	4 WD	
2005	Z71	REAR WD	
2005	Z71 LS	4 WD	
2005	Z71 LS	REAR WD	
2005	Z85	4 WD	

YEAR	SUB MODEL	DRIVE	SUSPENSION PACKAGE
MAKE: CHEVROLET		MODEL: COLORADO	
2005	Z85 LS	4 WD	
2004	BASE MODEL		
2004	Z85	4 WD	
2004	Z85	REAR WD	
2004	Z85 LS	4 WD	
2004	Z85 LS	REAR WD	
MAKE: GMC		MODEL: CANYON	
2012			
2011			
2010			
2009	SLE	4 WD	Z71
2009	SLE	4 WD	Z85
2009	SLE	REAR WD	Z71
2009	SLE	REAR WD	Z85
2009	SLT	4 WD	Z71
2009	SLT	4 WD	Z85
2009	SLT	REAR WD	Z71
2009	SLT	REAR WD	Z85
2009	WT		
2008	SL	4 WD	Z71
2008	SL	4 WD	Z85
2008	SL	REAR WD	Z71
2008	SL	REAR WD	Z85
2008	SLE	4 WD	Z71
2008	SLE	4 WD	Z85
2008	SLE	REAR WD	Z71
2008	SLE	REAR WD	Z85
2008	SLT	4 WD	Z71
2008	SLT	4 WD	Z85
2008	SLT	REAR WD	Z71
2008	SLT	REAR WD	Z85
2008	WT		
2007	SL	4 WD	Z71
2007	SL	4 WD	Z85
2007	SL	REAR WD	Z71
2007	SL	REAR WD	Z85
2007	SLE	4 WD	Z71
2007	SLE	4 WD	Z85
2007	SLE	REAR WD	Z71
2007	SLE	REAR WD	Z85
2007	SLT	4 WD	Z71
2007	SLT	4 WD	Z85

YEAR	SUB MODEL	DRIVE	SUSPENSION PACKAGE
MAKE: GMC		MODEL: CANYON	
2007	SLT	4 WD	Z85
2007	SLT	REAR WD	Z71
2007	SLT	REAR WD	Z85
2007	WT	4 WD	Z71
2007	WT	4 WD	Z85
2007	WT	REAR WD	Z71
2007	WT	REAR WD	Z85
2006	SL	4 WD	Z71
2006	SL	4 WD	Z85
2006	SL	REAR WD	Z71
2006	SL	REAR WD	Z85
2006	SLE	4 WD	Z71
2006	SLE	4 WD	Z85
2006	SLE	REAR WD	Z71
2006	SLE	REAR WD	Z85
2006	SLT	4 WD	Z71
2006	SLT	4 WD	Z85
2006	SLT	REAR WD	Z71
2006	SLT	REAR WD	Z85
2006	WT		
2005	Z71 FLEET	4 WD	
2005	Z71 FLEET	REAR WD	
2005	Z71 SL	4 WD	
2005	Z71 SL	REAR WD	
2005	Z71 SLE	4 WD	
2005	Z71 SLE	REAR WD	
2005	Z85 SL	4 WD	
2005	Z85 SLE	4 WD	
2004	BASE MODEL		
2004	Z71 FLEET	4 WD	
2004	Z71 FLEET	REAR WD	
2004	Z71 SL	4 WD	
2004	Z71 SL	REAR WD	
2004	Z71 SLE	4 WD	
2004	Z71 SLE	REAR WD	
2004	Z85 SL	4 WD	
2004	Z85 SL	REAR WD	
2004	Z85 SLE	4 WD	
2004	Z85 SLE	REAR WD	





**APPLICATIONS: HP10226**

YEAR	SUB MODEL	DRIVE	SUSPENSION PACKAGE
<b>MAKE: CHEVROLET</b>		<b>MODEL: COLORADO</b>	
2009	LT	REAR WD	Z85
2008	LS	REAR WD	Z85
2008	LT	REAR WD	Z85
2007	LS	REAR WD	Z85
2007	LT	REAR WD	Z85
2007	WT	REAR WD	Z85
2006	LS	REAR WD	Z85
2006	LT	REAR WD	Z85
2005	Z85	REAR WD	
2005	Z85 LS	REAR WD	
2004	Z85	REAR WD	
2004	Z85 LS	REAR WD	

YEAR	SUB MODEL	DRIVE	SUSPENSION PACKAGE
<b>MAKE: GMC</b>		<b>MODEL: CANYON</b>	
2009	SLE	REAR WD	Z85
2009	SLT	REAR WD	Z85
2008	SL	REAR WD	Z85
2008	SLE	REAR WD	Z85
2008	SLT	REAR WD	Z85
2007	SL	REAR WD	Z85
2007	SLE	REAR WD	Z85
2007	SLT	REAR WD	Z85
2007	WT	REAR WD	Z85
2006	SL	REAR WD	Z85
2006	SLE	REAR WD	Z85
2006	SLT	REAR WD	Z85
2005	Z71 FLEET	4 WD	
2005	Z71 SL	4 WD	
2005	Z71 SLE	4 WD	
2005	Z85 SL	4 WD	
2005	Z85 SL	REAR WD	
2005	Z85 SLE	4 WD	
2005	Z85 SLE	REAR WD	
2004	BASE MODEL		
2004	Z71 FLEET	4 WD	
2004	Z71 FLEET	REAR WD	
2004	Z71 SL	4 WD	
2004	Z71 SL	REAR WD	
2004	Z71 SLE	4 WD	
2004	Z71 SLE	REAR WD	
2004	Z85 SL	4 WD	
2004	Z85 SL	REAR WD	
2004	Z85 SLE	4 WD	
2004	Z85 SLE	REAR WD	

**KIT CONTENT**



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

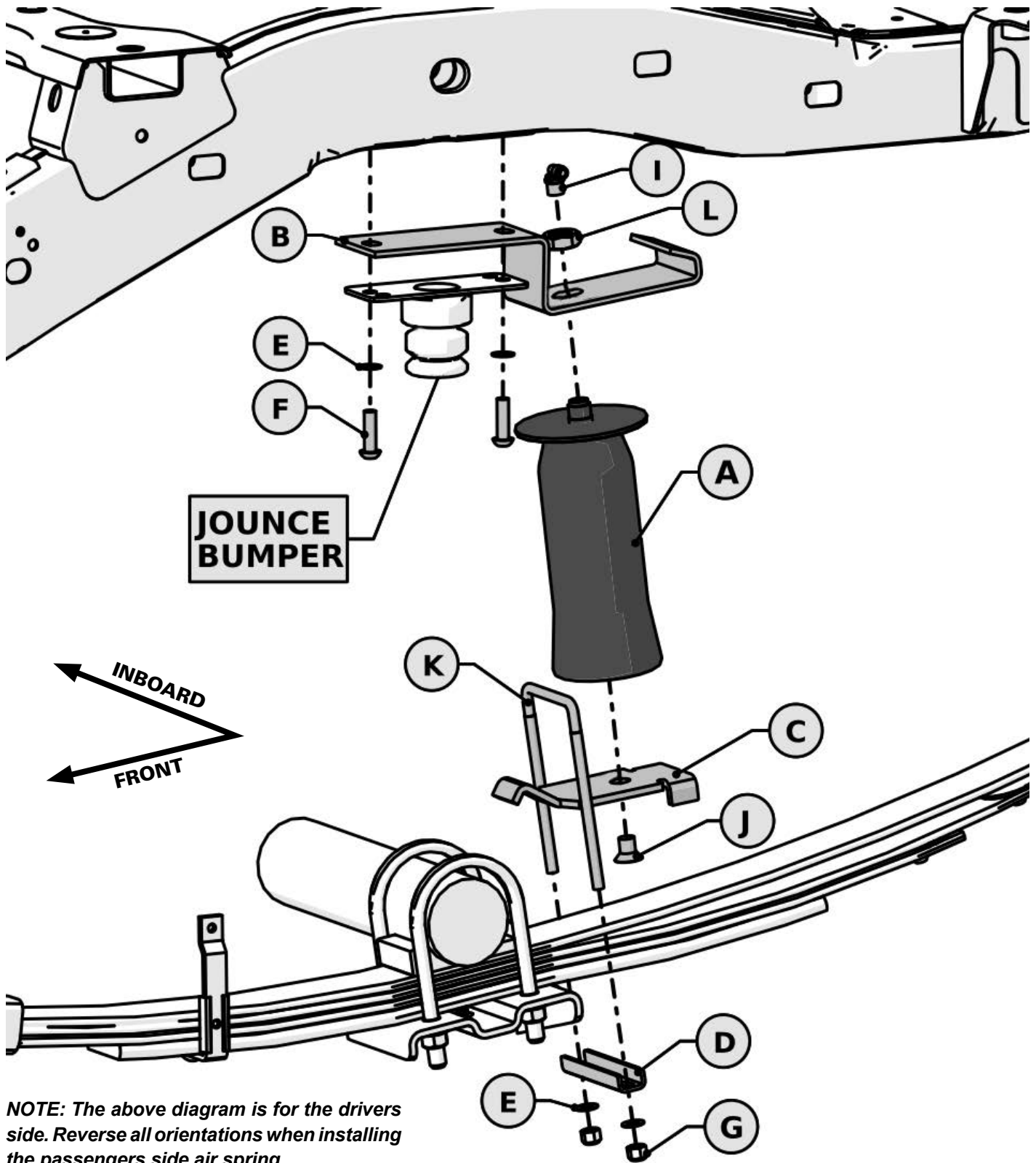
**KIT CONTENTS**

<b>A</b>	Air Spring	(2)	HP10001/ HP10173
<b>B</b>	Upper Bracket	(2)	HP1448
<b>C</b>	Lower Bracket	(2)	HP1298/ HP1313
<b>D</b>	Clamp Bar	(2)	HP0013
<b>E</b>	3/8" Flat Washer	(8)	C653
<b>F</b>	M10 - 1.50 x 35 Button Head Cap Screw	(4)	HP1414
<b>G</b>	3/8"-16" Nylon Nut	(4)	HP1000
<b>H</b>	Tie Straps	(6)	C11618
<b>I</b>	90° Swivel Fitting	(2)	HP1019
<b>J</b>	1/2-13 X 3/4" Taper Head Bolt	(2)	HP1342
<b>K</b>	3/8" U-Bolt	(2)	HP1018
<b>L</b>	3/4"-16 Jam Nut	(2)	HP1076
<b>M</b>	Heat Shield	(1)	HP0012
<b>N</b>	Hose Clamp	(2)	HP1001
<b>O</b>	Air Line Assembly	(1)	HP1344
<b>P</b>	Tube Cutter	(1)	C3941

**REQUIRED TOOLS**

- Torque Wrench
- 7/16", 9/16", 1-1/8", 13/16" & 15 mm Sockets or Wrenches
- 6mm & 5/16" Allen Key
- Compressed Air Source
- Hoist or Floor Jack
- Safety Stands
- Safety Glasses
- Spray bottle with Dish Soap & Water Solution

**KIT CONTENTS**



**NOTE:** The above diagram is for the drivers side. Reverse all orientations when installing the passengers side air spring.

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.

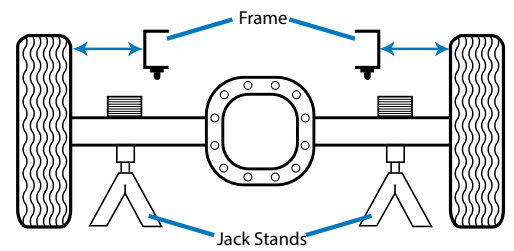
**BEFORE YOU START:**

*NOTE: Some vehicles are equipped with a rear wheel brake proportioning valve. Check with the manufacturer before installing the air spring kit, as it may affect braking performance.*

1. Ensure the application information is correct for the make, model and year of the vehicle you are installing the kit on.
2. Pacbrake recommends using a good quality anti-seize on all fasteners. This will reduce the chance of corrosion on the fasteners and will help facilitate removal, if required at a later date.

**1 RAISE THE REAR AXLE**

- Remove any unnecessary weight from the vehicle to attain normal ride height. This is important for correct initial air spring setup and adjustment.
- Park the vehicle on a level surface.
- Record the vehicle's normal ride height, which is the distance between the center of the axle and the horizontal wheel well flange. Ensure both sides are the same before raising the vehicle.
- Raise the rear axle high enough to remove both rear wheels and attain a comfortable working height.
- Place two jack stands under the chassis (photo 1A).
- Lower the floor jack until the vehicle chassis is supported by the jack stands.
- Ensure the normal ride height measurement recorded earlier is the same. Adjust if necessary before proceeding.
- Once the vehicle is raised correctly, remove the rear wheels.

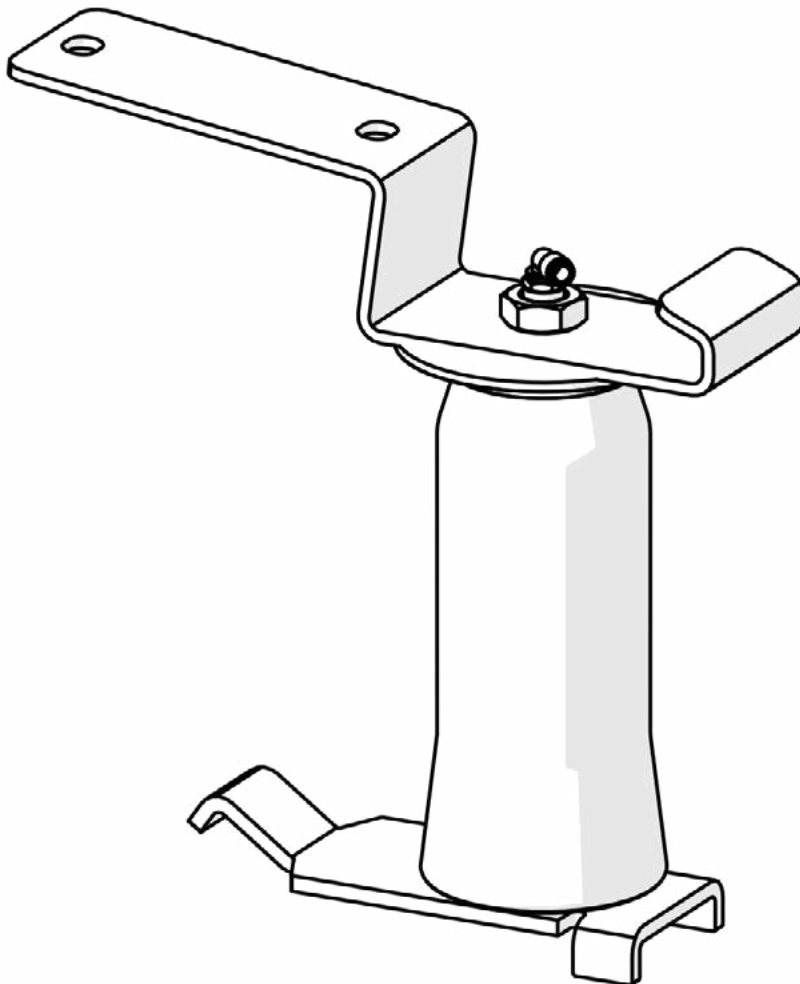


1A

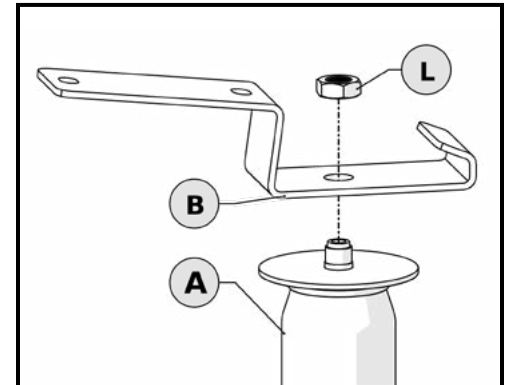
## 2 PRE ASSEMBLE THE AIR SPRING

- Prepare the air spring by ensuring that it is collapsed with the rubber part of the bag folded over the bottom end cap. See Figure 2A.
- Fasten the upper bracket (B) to the threaded post on the air spring (A) with a  $\frac{3}{8}$ " jam nut (L). Tighten the jam nut to 25 ft-lbs (34 N•m) with a 1- $\frac{1}{8}$ " wrench. See Figure 2B.
- Install the 90° swivel air fitting (I) into the top of the air spring (A). Finger tighten the air fitting and turn an extra 1.5 turns with a  $\frac{7}{16}$ " wrench to tighten. See figure 2C.
- Install the taper head bolt (J) through the center hole in the lower bracket (C) and fasten it to the bottom of the air spring (A) with a  $\frac{5}{16}$ " allen key. See figure 2D.
- Tighten the taper head bolt (J) to 25 ft-lbs (34 N•m).
- See the finished assembly below.

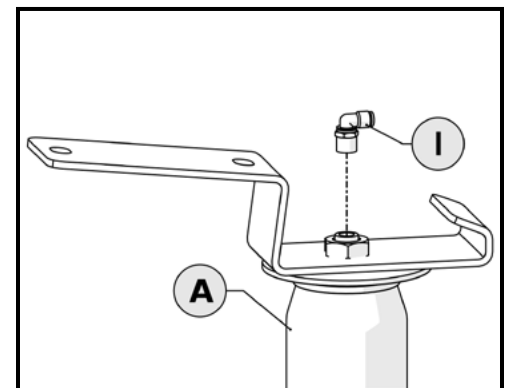
Repeat step 2 for the other air spring.



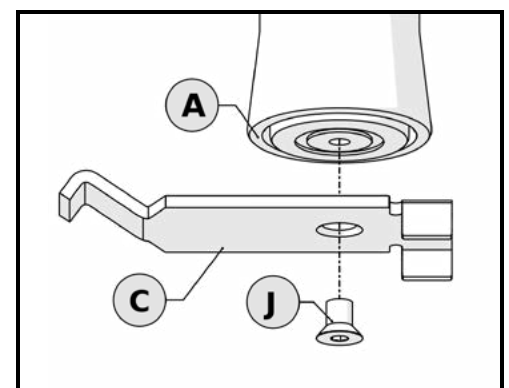
2A



2B



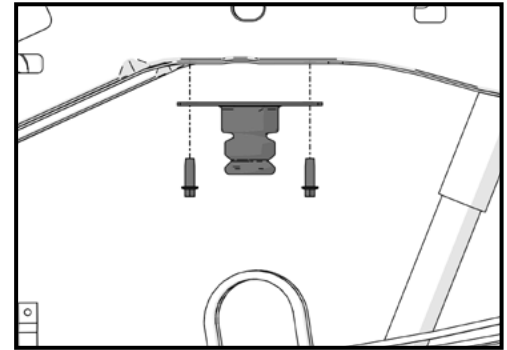
2C



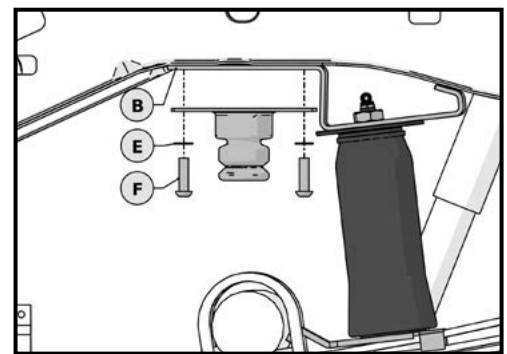
2D

### 3 ATTACH THE UPPER BRACKET

- Remove the two bolts securing the jounce bumper in place. Discard both bolts. See figure 3A.
- **NOTE:** The jounce bumper on your vehicle may be different than the one pictured in Figure 3A.
- Fasten the upper bracket (B) and jounce bumper to the frame with two M10 bolts (F), and two washers (E). Use a 6 mm Allen key to tighten. See figure 3B.
- Tighten the M10 bolts to 30 ft-lbs (40 N•m).



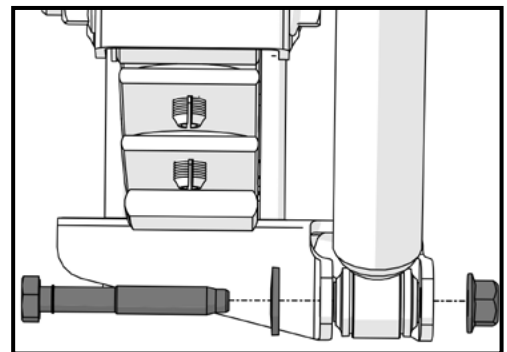
3A



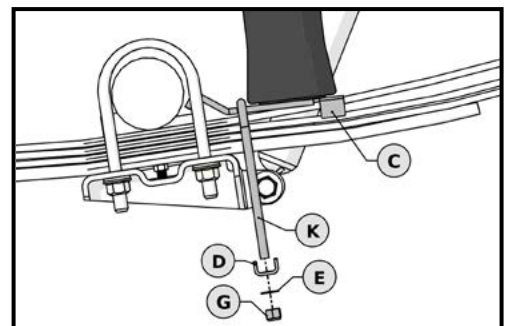
3B

### 4 ATTACH THE LOWER BRACKET

- It may be necessary to remove and reverse the lower shock bolts with a  $\frac{13}{16}$ " socket so that the bolts are inserted from the outside in. This will provide enough clearance for the u-bolt used in the following steps. See figure 4A.
- Set the tab of the lower bracket (C) over the spring perch in order to lock the assembly in place.
- Guide the U-Bolt (K) around the lower bracket (C) and through the slots in the clamp bar (D).
- Fasten the lower bracket (C) to the leaf spring by using two washers (E), and two nyloc nuts (G) to tighten the clamp bar (D) around the leaf spring. See Figure 4B
- Tighten the clamp bar hardware to 20 ft-lbs (27 N•m) with a  $\frac{9}{16}$ " deep socket.



4A



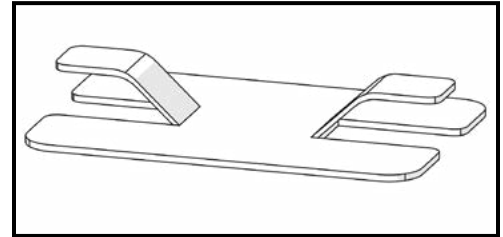
4B

The installation is complete for this side. Reverse any orientations and repeat steps 3 and 4 for the other air spring.

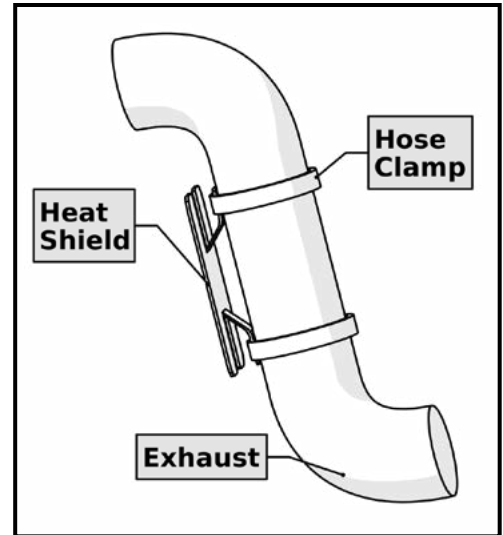


## 5 INSTALL THE HEAT SHIELD

- Bend the tabs on the heat shield (M) so there will be the necessary 1/2" dead space between the heat shield and the muffler when the heat shield is attached. See figure 5A.
- Attach the heat shield to the exhaust pipe on the passenger side using two hose clamps (N). Each hose clamp holds a tab against the exhaust pipe. Make sure the heat shield is facing toward the air spring.



5A



5B

## 6 INSTALL THE AIR LINE

- 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 OR THE NYLON HOSE CUTTER PROVIDED IN THE KIT.**

- Moisten the end of the airline prior to inserting it into the fitting and push it in until it stops.
- After the airline is cut, insert one end into the air line fitting, as shown in photo 6B and the other into the fill valve. Moisten the end of the air line with liquid soap prior to inserting it, and then push it in until it stops.

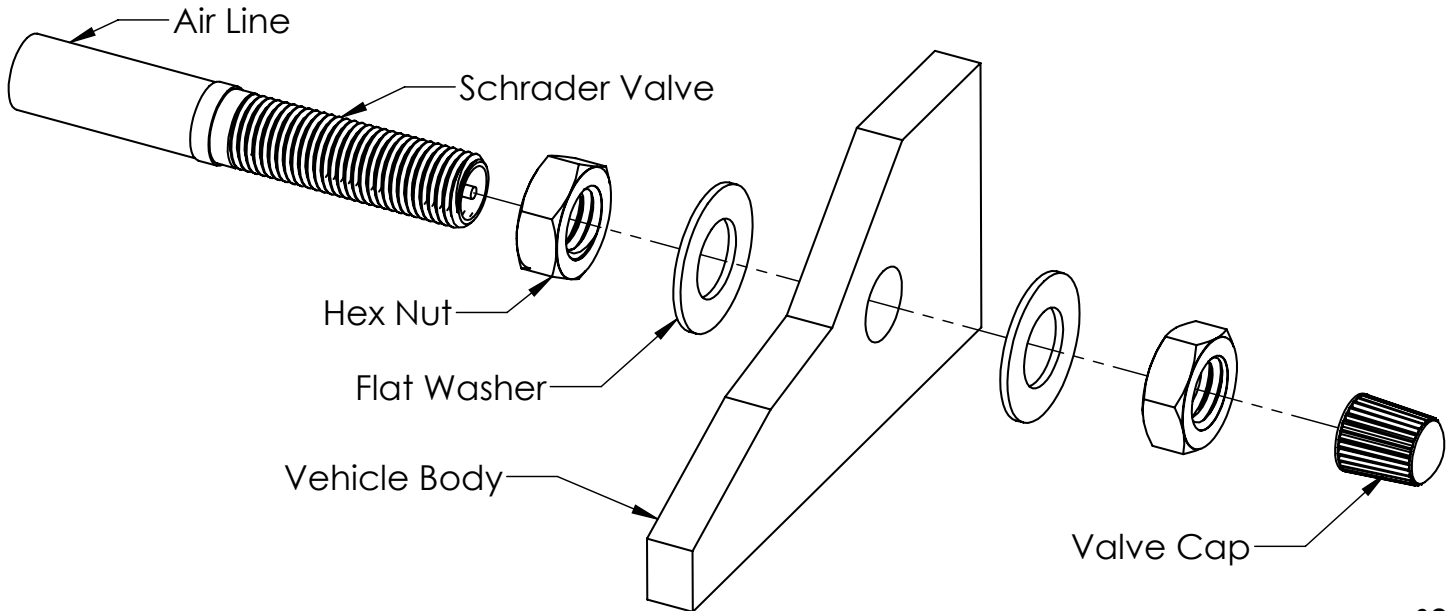
See figure 6C on the next page of the entire airline assembly



6A



6B



6C

## 7 CHECK SYSTEM FOR LEAKS

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



7A

## 8 AFTER THE INSTALLATION IS COMPLETED, PLEASE REMEMBER

- Install the wheels, and torque the fasteners to the manufacturer's specifications.
- Re-torque all the fasteners after the first 500 miles of driving.
- For safe and proper operation, never operate the vehicle under the minimum of 10 PSI or over the maximum of 100 PSI. Staying within the pressure limit will ensure maximum air spring life. Failure in doing so may result in a void warranty



**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.*