

3651 N. HWY 89 • Chino Valley, AZ 86323 (928) 636-3175 • www.p-a-g.net

# JEEP LIBERTY 2" COIL SPRING SPACER LIFT INSTALLATION INSTRUCTIONS 2002-2006 KIT# JL243PA

# **MWARNING**

Read and understand all instructions, warnings, cautions, and notes in this sheet and in your owners manual before you begin the installation of this coil spacer lift kit.

# **MWARNING**

Proper installation of a Performance Automotive Group coil spacer lift kit requires knowledge of the factory recommended procedures for disassembly and assembly of original equipment components. We recommend that the factory shop manual and any special tools necessary to your vehicle be on hand during the installation. Installation of this coil spacer lift kit without proper knowledge of the factory recommended procedures may affect the performance of these components and the safety of your vehicle. We strongly recommend that a certified mechanic familiar with the installation of similar components install this coil spacer lift kit.

# **MWARNING**

Ensure that your vehicle tires are properly blocked and secured before you begin installation of this coil spacer lift kit.

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It is the customer's responsibility to ensure that all mounting hardware is correctly tightened before, during and after use of coil spacer lift kit. DO NOT EXCEED manufacturer's load specifications for your vehicle. Always operate your vehicle in a safe manner. If your vehicle is equipped with any type of extra duty suspension or special towing package, this coil spacer lift kit may not fit properly. If your vehicle is equipped with any type of aftermarket springs, lift kits, or bushings. this coil lift kit may not fit properly.

# **∆NOTE**

Special tools, such as coil spring compressors, are required for installation of this coil lift kit.

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Many states now have laws restricting bumper heights and vehicle lifts. Local laws should be consulted to determine if the changes you intend to make to your vehicle comply with state laws. Before adding suspension lift, consult an installation professional to see how this will affect your specific application.

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This coil spacer lift kit should only be installed on vehicles in good working condition. Before installation, the vehicle should be thoroughly inspected for evidence of corrosion or deformation. This coil spacer lift kit should not be installed on any vehicle that is suspected to have been in a collision or misused. Failure to observe this warning may result in serious personal injury and/ or severe damage to your vehicle.

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To ensure the Supplemental Restraint System (SRS, or air bag) is not accidentally deployed during coil spacer lift kit installation, always ground yourself and the vehicle. Do not use power or pneumatic tools. Exercise extreme caution while working near SRS sensors and wiring. Do not allow anyone near air bags during kit installation. Accidental deployment can result in serious personal injury or death.

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Always wear eye protection when operating power tools.

# **∕**∆NOTE

Performance Automotive Group recommends using the Loctite® supplied in the kit on all hardware unless noted in the instructions.

# **∆NOTE**

Performance Automotive Group recommends getting a tire alignment performed after installation of this coil lift kit.

# A. Before you start.

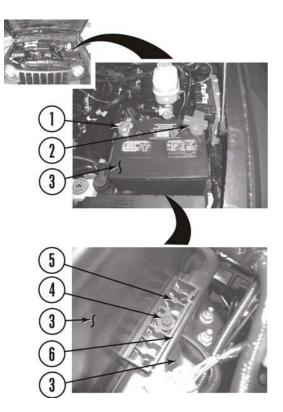
### **∆NOTE**

Keep track of hardware quantity and position. Kit parts are prefaced by the word *kit* in italics.

- 1. Read all warnings and instructions completely and carefully before you begin.
- 2. Check to make sure the kit is complete (refer to the Parts List, Section F).
- 3. Special tools, such as coil spring compressors, are required for installation of this coil lift kit.
- 4. Only install this kit on the vehicle for which it is intended. If anytime during the installation you encounter something different from what is outlined in the instructions, call <u>technical support</u> at (928) 636-3134.
- 5. Park the vehicle on a clean, dry, flat, level surface and block the tires so the vehicle cannot roll in either direction.
- 6. Disconnect both battery cables. Disconnect the negative cable (1) first, then the positive cable (2) from the battery (3).

# B. Get ready to install front coil spring lifts.

- 1. Under the hood driver side.
  - a. Remove bolt (4), battery hold down (5), and battery (3) from battery tray (6) and vehicle.

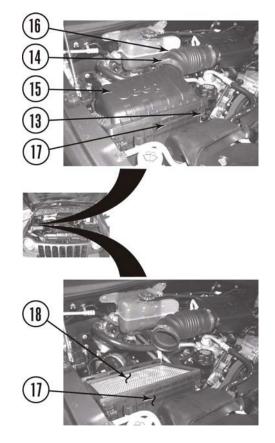


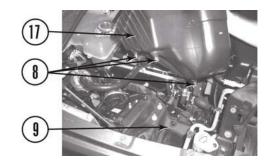
b. Remove two bolts (7), nipple (8), and battery tray (6) from inner fender (9). Do not disconnect battery tray from wiring harness (10).
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- 2. Under the hood passenger side.
  - a. Remove four clips (13), clamp (14), and air box cover (15) from air duct (16) and air box (17).

b. Remove air filter (18) from air box (17) and vehicle.

c. Remove three nipples (8) and air box (17) from inner fender (9) and vehicle.

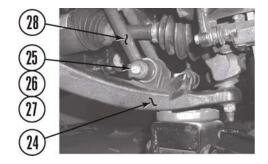


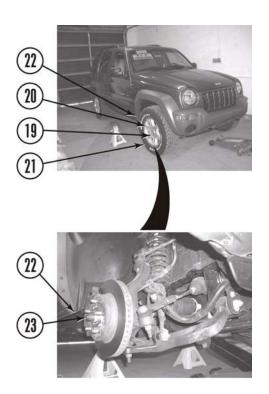


- 3. Lift front of vehicle.
  - a. Loosen five lug nuts (19) each from two front wheels (20).

- b. Using a hydraulic jack, slowly lift front of vehicle so that two front tires (21) are three to five inches off of ground. Position two jack stands under body (22) in the factory recommended lifting positions. Lower body onto jack stands. Remove hydraulic jack from vehicle chassis.
- c. Remove five lug nuts (19) each and two front wheels (20) from axle (23).

- 4. Remove front axle passenger side hardware.
  - a. Position hydraulic jack under lower A-arm (24) and apply pressure. Do not lift.
  - b. Remove nut (25), bolt (26), and bolt keeper (27) from strut fork (28) and lower A-arm (24).

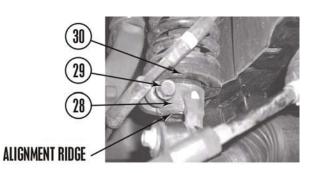




# **∕**∆NOTE

Before removing the strut fork be sure to note position of strut fork in relation to strut fork alignment ridge for installation later in these instructions.

c. Remove bolt (29) and strut fork (28) from strut assembly (30).

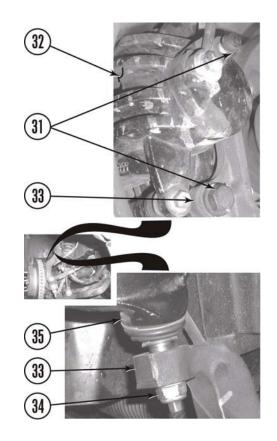


d. Remove two bolts (31) and brake caliper (32) from spindle assembly (33).

### **MNOTE**

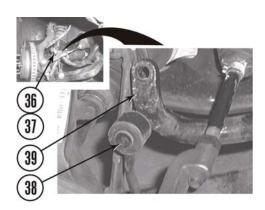
To remove spindle assembly from the A-arm assembly, loosen nut until threads do not show outside of nut and tap the ball joint stud with rubber mallet.

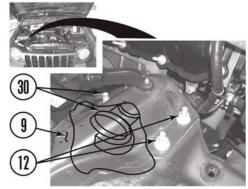
e. Remove nut (34) and upper A-arm assembly (35) from spindle assembly (33).



f. Remove nut (36), bolt (37), and sway bar link (38) from sway bar (39).

- 5. Remove passenger side coil spring.
  - a. Remove four nuts (12) and strut assembly (30) from inner fender (9).

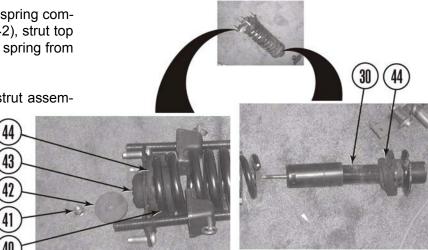




#### **∆NOTE**

Step B.5.b below, requires the use of coil spring compressors. Note position of top plate in relation to bottom of strut and strut fork alignment ridge, for installation later in these instructions.

- b. Compress coil spring (40) using coil spring compressor. Remove nut (41), washer (42), strut top plate (43), top bushing (44), and coil spring from strut assembly (30).
- c. Remove bottom bushing (44) from strut assembly (30).



# C. Install kit spring lift spacer on front strut.

1. Install passenger side kit coil lift spacer.

#### **∧**NOTE

When installing the *kit* spring lift spacer be sure to align the locating notch on the strut with the notch on the *kit* spring lift spacer.

- a. Position *kit* spring lift spacer (45) on strut assembly (30).
- b. Install bottom bushing (44) on *kit* spring lift spacer (45) and strut assembly (30).

### **∆NOTE**

Be sure to align the locating notch on the strut, *kit* spring lift spacer, bottom bushing, and coil spring.

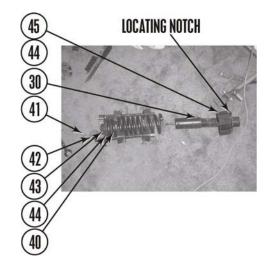
c. Install compressed coil spring (40) on bottom bushing (44), *kit* spring lift spacer (45), and strut assembly (30).

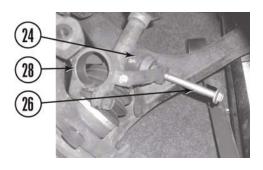
#### **∆NOTE**

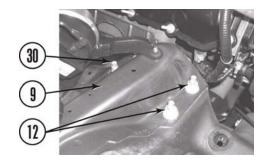
Performance Automotive Group recommends using Loctite® supplied in the kit for all mounting hardware.

- d. Install top bushing (44), top plate (43), washer (42), and nut (41) on strut assembly (30). Remove spring compressor.
- e. Position strut fork (28) on lower A-arm (24). Do not install bolt (26).

f. Install strut assembly (30) on inner fender (9) with four nuts (12). Do not tighten.







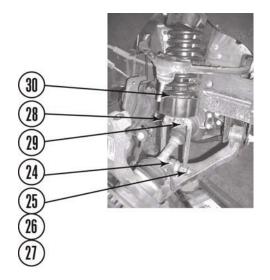
# **∆NOTE**

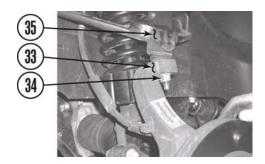
It may be necessary to lower, lower A-arm for step C.1.g below.

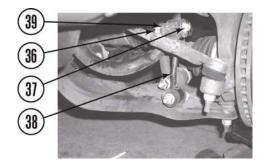
- g. Install strut fork (28) on strut assembly (30) with bolt (29). Tighten bolt to 100 lb-ft.
- h. Install strut fork (28) on lower A-arm (24) with bolt (26), bolt keeper (27), and nut (25). Tighten bolt and nut to 85 lb-ft.

- 2. Install front axle passenger side hardware.
  - a. Install spindle assembly (33) on upper A-arm (35) with nut (34). Tighten nut to 60 lb-ft.

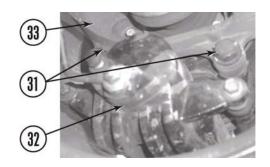
b. Install sway bar link (38) on sway bar (39) with bolt (37) and nut (36).







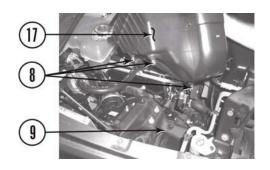
- c. Install brake caliper (32) on spindle assembly (33) with two bolts (31).
- d. Repeat steps B.2.a. through C.2.d. for frame driver side front axle.



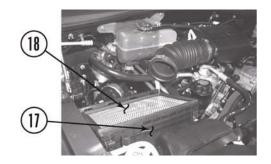
- 3. Finish front lift.
  - a. Install two front wheels (20) on front axles (23) with five lug nuts (19) each.
  - b. Using a hydraulic jack, slowly lift front of vehicle so that front tires (21) are three to five inches off of ground. Remove jack stands from body (22). Lower vehicle to ground and tighten ten lug nuts (19) to 85 lb-ft.



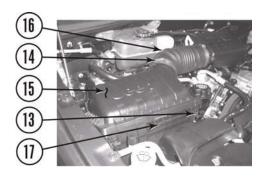
- 4. Under the hood passenger side.
  - a. Install air box (17) and three nipples (8) on inner fender (9).



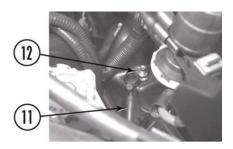
b. Install air filter (18) on air box (17).



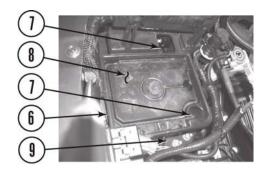
c. Install air box cover (15) on air duct (16) and air box (17) with four clips (13) and clamp (14).



- 5. Under the hood driver side.
  - a. Install vent line (11) on nut (12).



b. Install battery tray (6) on inner fender (9) with two bolts (7) and nipple (8).



c. Install battery (3) on battery tray (6) and vehicle with battery hold down (5) and bolt (4).



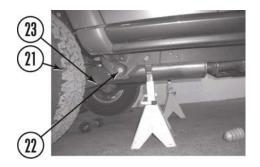
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# D. Get ready to install rear axle coil lifts.

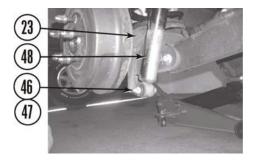
- 1. Lift rear axle.
  - a. Loosen five lug nuts (19) each from two rear wheels (20).



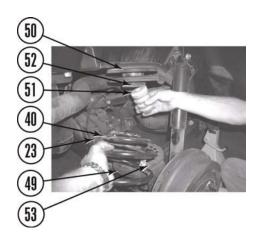
- b. Using a hydraulic jack, slowly lift rear axle (23) so that two rear tires (21) are three to five inches off of ground. Position jack stands under body (22) in the factory recommended rear lifting positions. Lower body onto jack stands. Unload but do not remove hydraulic jack from axle.
- c. Remove five lug nuts (19) each and two rear wheels (22) from rear axle (23).



- 2. Remove rear axle passenger side hardware.
  - a. Remove nut (46) and bolt (47) from shock (48) and rear axle (23).



- 3. Remove passenger side coil spring.
  - a. Push down on rear axle (23) and remove coil spring (40) from rear axle spring perch (49) and frame perch (50).
  - b. Remove bump stop bushing (51) from bump stop cup (52).
  - c. Remove spring disk (53) from rear axle spring perch (49).



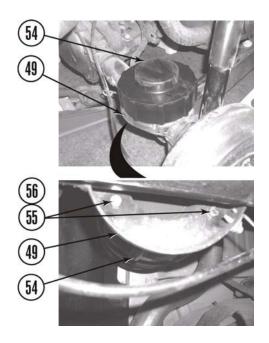
# E. Install kit spring lift spacer on rear axle.

- 1. Install kit coil lift spacer passenger side.
  - a. Position *kit* coil lift spacer (54) on rear axle spring perch (49).

### **∆NOTE**

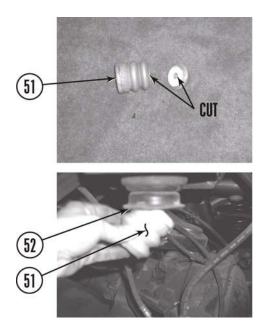
Performance Automotive Group recommends using Loctite® supplied in the kit for all mounting hardware.

- b. Coat threads of *kit* 3/8" x 2" bolts (55) with Loctite®.
- c. Install *kit* coil lift spacer (54) on rear axle spring perch (49) with three *kit* 3/8" loc-washers (56) and *kit* 3/8" x 2" bolts (55). Torque *kit* 3/8" x 2" bolts (55) to 10 lb-ft.



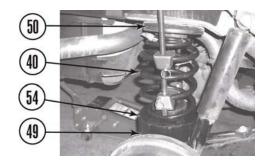
d. Cut bump stop bushing (51) as shown.

e. Install bump stop bushing (51) in bump stop cup (52).



- 2. Install rear axle passenger side hardware.
  - a. Compress coil spring (40) using coil spring compressor.
  - b. Position compressed coil spring (40) on frame perch (50), *kit* coil lift spacer (54), and rear axle spring perch (49). Remove coil spring compressor.

- c. Install shock (48) on rear axle (23) with bolt (47) and nut (46).
- d. Repeat steps D.2.a. through E.2.c. for rear axle driver side (23).



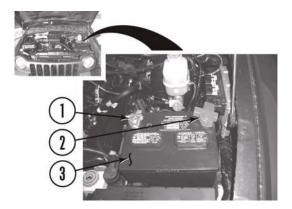


- 3. Finish rear axle.
  - a. Install two rear wheels (20) on rear axle (23) with five lug nuts (19) each.
  - b. Using a hydraulic jack, slowly lift rear axle (23) high enough to remove jack stands. Remove jack stands from body (22). Lower vehicle to ground and tighten ten lug nuts (19) to 85 lb-ft.
  - c. Connect the positive cable (2) first, then the negative cable (1) on the battery (3).
- 4. Double check the vehicle.

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Retorque all fasteners after 500 miles and after off road use. All coil spring lift components should be visually inspected and fasteners retorqued during routine vehicle servicing.

a. Check all mounting hardware to ensure it is properly tightened.



- b. Start vehicle and check the steering in both directions to ensure that there is no bind. Check all steering connections. Ensure that the steering gear box has no interference and is in proper working condition.
- c. Check the operation of the brakes and the parking brake. Check brake lines for adequate travel. Ensure brake lines do not touch any surfaces, moving or otherwise. If necessary, adjust brake lines and or brake line brackets to eliminate all contact.
- d. Check clutch operation. Check both shift levers' operation. Ensure that there is proper engagement in all gears and 4 wheel drive ranges.
- e. Ensure that all OEM or aftermarket bump stops are installed. Suspension overtravel can result in serious damage or failure of OEM components and aftermarket equipment.
- f. Test drive vehicle in all gears and 4 wheel drive ranges. Pay close attention to all vehicle systems. Check all hardware again in 500 miles and as part of your regular maintenance schedule.

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After installing this coil spacer lift it may be necessary to have your alignment checked and or corrected, to prevent excess wear on tires.

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Performance Automotive Group does not recommend any particular wheel and tire combinations for use with its coil spacer lifts and cannot assume responsibility for the customer's choice of wheels and tires. Reference your owner's manual for recommended tire sizes and warnings related to the use of oversized tires. Larger wheel and tire combinations increase stress and wear on steering and suspension components, which leads to increased maintenance and higher risk for component failure. Larger wheel and tire combinations also alter speedometer calibration, braking effectiveness, center of gravity, and handling characteristics. Consult with an experienced local off road shop to find what wheel and tire combinations work best with your vehicle.

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All warranty information, instruction sheets, and other documents regarding the installation of this product must be retained by the <u>vehicle owner</u>. Information contained in the instructions and on the warranty card will be required for any warranty claims. The vehicle owner needs to understand the modifications made to his vehicle and how they affect vehicle handling and performance. Failure to provide the customer with this information can result in damage to the vehicle and severe personal injury.

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# F. 2" Coil Spacer Lift Kit Parts List.

Callout	Quantity	Description
(45)	2	Front coil spacers
(54)	2	Rear coil spacers
. ,	1	6ml bottle Loctite
	1	warning sticker
	1	logo sticker
	1	Bolt Pack
(55)	6	3/8" x 2" bolts
(56)	6	3/8" lock washers