

AIR LIFT 1000

MITSUBISHI PAJERO CK Series
WITH INDEPENDENT SUSPENSION (from 1999)

BY



60731B1

INSTALLATION

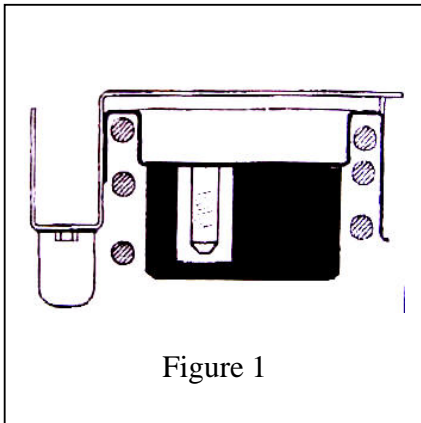


Figure 1

1. Air cylinders are shipped in the as moulded shape. For ease of installation, remove plastic cap from the barbed stem on end of cylinder. Squeeze the air cylinder to exhaust as much air as possible. Replace cap on stem to maintain flat shape.
2. Remove the lower shock mounting. Lower axle or raise the body of vehicle until the suspension is fully extended. For installing this product on the Mitsubishi Pajero it is necessary to remove the coil spring from the suspension. Extreme care must be taken by removing the coil. The vehicle must be safely supported on axle stands. Take care not to pull on the brake pipes. Undo the the control arm mounting to allow the coil to be removed.
3. The larger spacer must be installed with the hole facing upwards as shown in **Figure 1** to protect the bellow from the protruding stud.
4. The air spring is inserted into the coil spring so that the air connection faces downwards. Cut the tubing in half and push one end onto the barbed fitting. Use the small clamps supplied to hold the tubing onto the barb fitting.

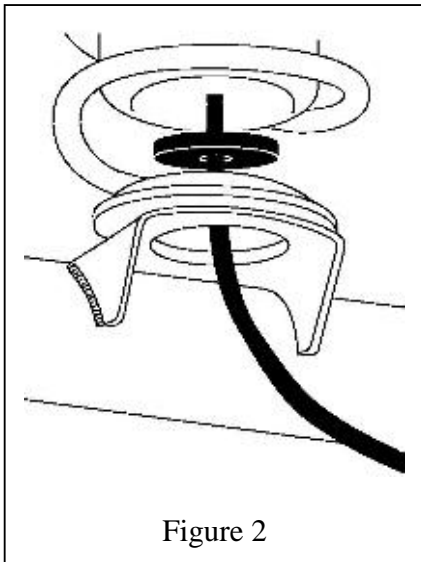


Figure 2

The small spacer is then placed on the bottom hole of the spring retainer with the tubing through the middle. See **Figure 2**.

6. Replace the coil spring with the whole air spring arrangement in place and reinstall the shock absorber and control arm. Ensure that all bolts are torqued to the manufacturers specifications.
7. Ensure that the bellow is centralised and that both spacers are correctly in place before lowering the suspension.
8. It is recommended that dual airlines are used as this provides the greatest stability and allows for levelling the vehicle from left to right. There are several routes to lead the airline from the air bellow to the chassis. Choose the route most suitable for you. Use black plastic split sleeving to protect the tubing from sharp edges.

AIR LINE INSTRUCTIONS

Caution: Leave sufficient airline slack to prevent any strain on fittings during axle motions.

To prevent airline from melting, keep it at least 300mm from exhaust system, engine and heat sources.

Caution: Avoid areas, which may cause failure of the air line. For example: battery, exhaust, engine and moving parts such as steering, suspension and cables.

DUAL AIR LINE CONNECTION

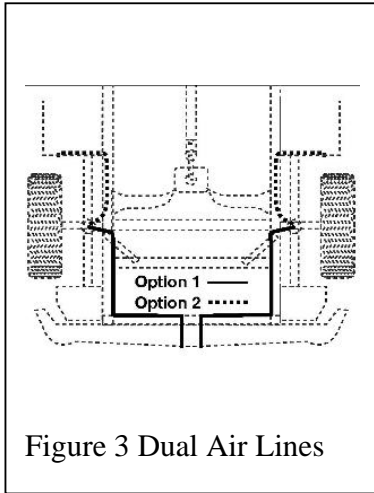


Figure 3 Dual Air Lines

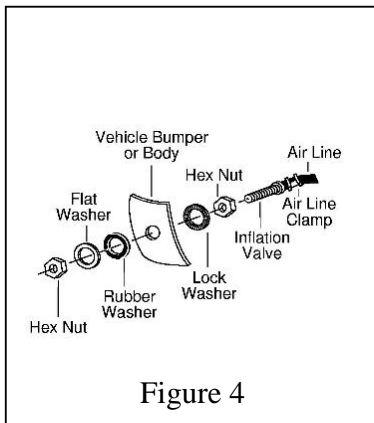
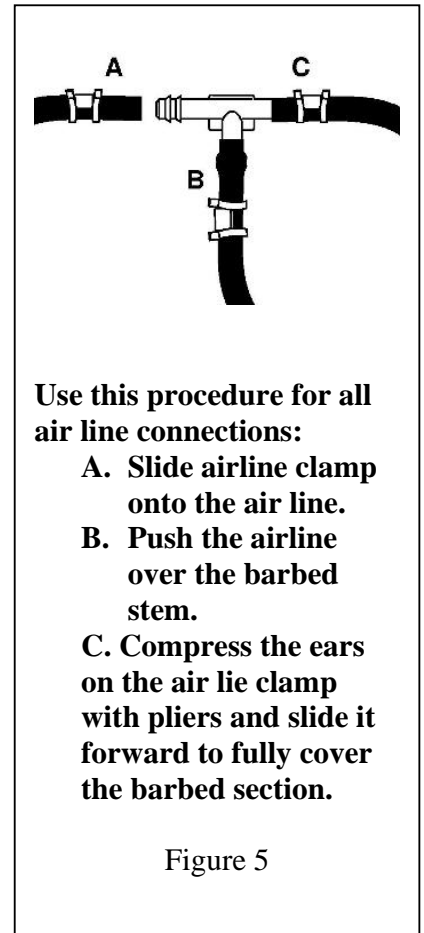


Figure 4

- A. Select a location for the inflation valves in the rocker panel flange or by hood release insuring that each valve will be protected and accessible with an air hose.
- B. Determine and cut adequate length, not longer than 90" of airline to reach from valve location to left side air cylinder.
- C. Slide airline clamp onto the air line. Push the airline over the barbed end of straight fitting. Compress the ears on the air line clamp with pliers and slide it down to cover the barbed section (**Figure 5**). Repeat for other side
- D. Connect the straight fitting to the right and left air spring and tighten securely.
- E. Route airline along frame or under fender panel to desired inflation valve location (**Figure 3**). Attach airline to the chassis with plastic



Use this procedure for all air line connections:

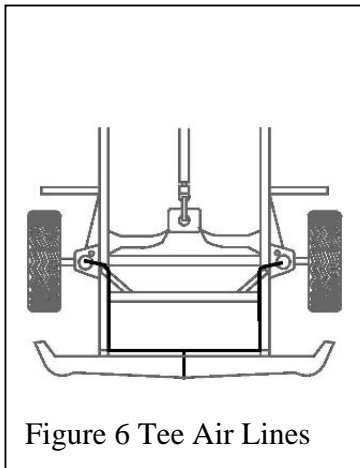
- A. Slide airline clamp onto the air line.**
- B. Push the airline over the barbed stem.**
- C. Compress the ears on the air lie clamp with pliers and slide it forward to fully cover the barbed section.**

Figure 5

straps or wire.

- F. Drill 8 mm hole for inflating valves and mount as illustrated (Rubber washer is for outside seal, **Figure 4**).
- G. Connect the airline to the inflation valve.
- H. Repeat process for right side.
- I. Continue with step 9.

TEE AIR LINE CONNECTION



- A. Find desired tee location on the frame rail or radiator core support bracket (**Figure 6**)
- B. Determine and cut adequate length of airline to reach from tee to left and right side on air cylinders.
- C. Connect the airline to the two opposite legs on the tee (See **Figure 5**).
- D. Route air line to left and right air springs, generally along inner fender panel or frame rails.

E. Slide an air line clamp onto the air line. Push the airline over the barbed end of straight fitting. Compress the ears on the airline clamp with pliers and slide it down to cover the barbed section (See **Figure 5**). Repeat for other side.

F. Connect the straight fitting to the right and left air springs and tighten securely.

G. Select a location for inflation valve in the hood release, front bumper, fender flange or behind the license plate, insuring that the valve will be protected and accessible with an air hose.

H. Connect the remaining airline over the last fitting on tee and route along frame to desired inflation valve location. Attach airline to chassis with plastic cable ties.

I. Drill a 8 mm hole for inflation valve and mount as illustrated (Rubber washer is for outside seal) Figure 7.

J. Connect the airline to the inflation valve.

K. Continue with step 9.

INSTALLATION CONTINUED

9. Inflate Air Springs to 2.4 bar. Check for air leaks at all fittings and valve core with soapy solution.

10. Replace wheels, remove safety stands and carefully lower vehicle to ground. Check to ensure cylinder is properly seated in coil spring.

11. Deflate Air Springs in 0.4 bar intervals to determine best ride and handing. Sufficient air pressure should be maintained to help prevent bottoming-out on large bumps, pot holes, etc.

12. Recheck air pressure after 24 hours. A 0.2-0.3 loss is normal after the installation. If the pressure has dropped more than 0.4 bar, re-test for leaks with a soapy water solution. Please read and follow the Maintenance and Operation Tips on page 4.



Airlift 1000 Kits

**FAILURE TO MAINTAIN AIR
PRESSURE WILL VOID
WARRANTY**

MAINTENANCE / OPERATION

MINIMUM Air Pressure	MAXIMUM Air Pressure
0.4 Bar	2.4 Bar

Maintenance Tips:

- 1) Check pressure weekly!
- 2) Always maintain at least 0.4 Bar air pressure to prevent chafing or coil pinch.
- 3) If you develop an air leak in the system, use a soapy solution to check all air line connections and the valve core before removing the bellow.

Inflation Procedures:

- 1) Inflate your air springs to 1.7 Bar before adding the payload. This will allow the air cylinder to properly mesh with the coil spring. After the vehicle is loaded, adjust your air pressure (down) to level the vehicle and ride for comfort.
- 2) When you are carrying a payload it will be helpful to increase the tyre inflation pressure in proportion to any overload condition. Do not exceed the tyre manufacturer's maximum recommended pressure.
- 3) If the air spring bellow bulges out more than half the diameter of the coil spring, reduce the air pressure in the bellow to rectify. This condition means that your vehicle is overloaded, or the air springs are over pressurised.

**CAUTION: DO NOT EXCEED THE VEHICLE
MANUFACTURER'S GROSS VEHICLE WEIGHT RATING**

SAFETY WARNING

If your vehicle is fitted with a rear brake-proportioning valve, we recommend that you have the setting professionally checked by a brake specialist after installing this kit.

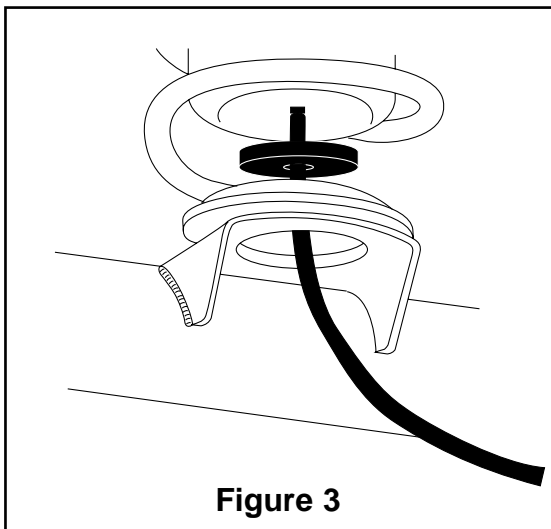
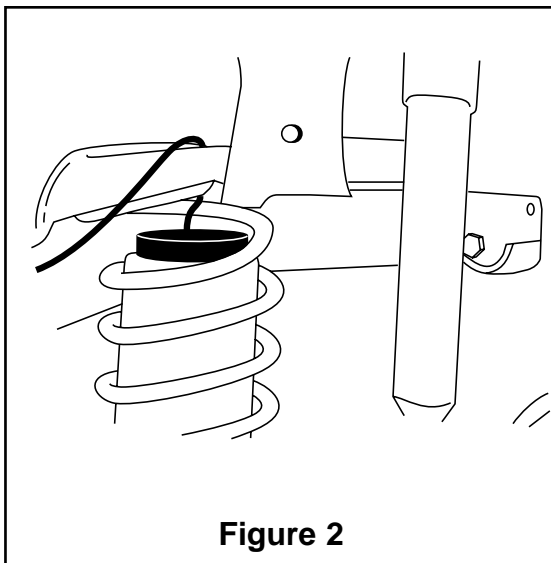
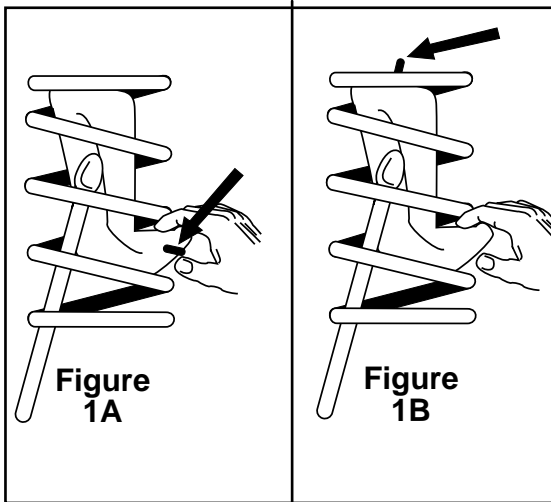
AIR LIFT 1000

MULTIPLE APPLICATIONS - SEE SPECIAL NOTES
FOR YOUR PARTICULAR VEHICLE.

BY



MN-133
(15807)
ECN2547



NOTE
THIS KIT FITS SEVERAL DIFFERENT VEHICLES. PLEASE CONSULT THE FOLLOWING LISTING FOR THE APPROPRIATE SECTION FOR YOUR VEHICLE.

- * General Motors A (Century, Celebrity, Cutlass Ciera 6000) & X (Skylark, Citation, Omega, Phoenix) front wheel drive - w/solid rear axle Cars, Pathfinder (Nissan), Ford, Lincoln, Mercury Full and Mid-Size Cars, Chevy Lumina APV, Olds Silhouette, Pontiac TransSport, Isuzu Trooper and Amigo.....Section **A**
- * Camaro, Firebird, Monza, Skyhawk, Starfire, Astre, Sunbird & VegaSection **B**
- * General Motors E (Toronado, Riviera, El Dorado, SeVille) & H (LeSabre, Electra, Park Ave., DeVille, "88" & "98" and Bonneville) CarsSection **C**

SECTION A INSTALLATION INSTRUCTIONS

1. **NOTE:** Some FORD, LINCOLN, and MERCURY vehicles come equipped with a rubber sleeve inside the rear coil springs. This needs to be removed prior to proceeding with the installation. It can be either cut out or pulled with a pair of vise grips.
2. Air cylinders are shipped in the "as molded" shape. For ease of installation, remove plastic cap from barbed stem on end of cylinder. Push on air cylinder to exhaust as much air as possible. It may be rolled up toward valve stem. Replace cap on stem to maintain flat shape.
3. Lower axle or raise body of vehicle until suspension is fully extended.
4. If necessary, additional clearance between the coil may be obtained by removing the shock absorbers from the lower mountings and lowering the suspension an additional two inches. (CAUTION: OBSERVE TENSION ON BRAKE LINE - DO NOT STRAIN.)
5. Insert stem end of air cylinder into lowest opening of coil (VALVE STEM UP), pushing cylinder upward within the coil by hand or with a blunt instrument such as a spoon-type tire iron (Figure 1B).
6. When the cylinder is completely within the coil, remove the cap and allow the cylinder to assume its "as molded" shape.
7. Push cylinder to the bottom of the coil and insert protector on top of the cylinder (barb stem end) as shown in Figure 2.
8. Complete installation with air line installation instructions. See page 2.

SECTION B

1. Jack up rear of vehicle or raise on hoist. Support frame with safety stands.
2. Detach shock absorber lower ends from axle.
3. Lower axle or raise body to permit removal of the coil spring.
4. **75 & up Vega, Monza, Starfire, Skyhawk & Sunbird only.**
 - A. Remove upper bound bumper/cone assemble with coil spring. These should be discarded as the function will be replaced by the air cylinders (Figure 4).

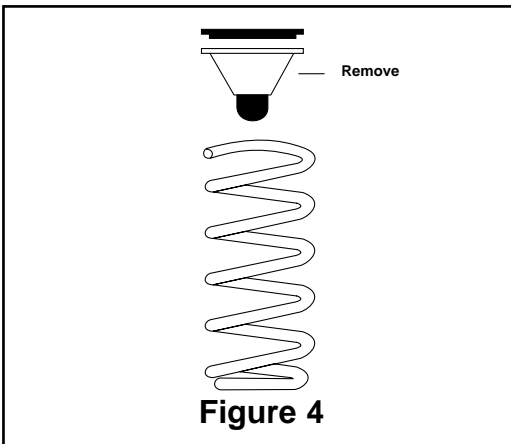


Figure 4

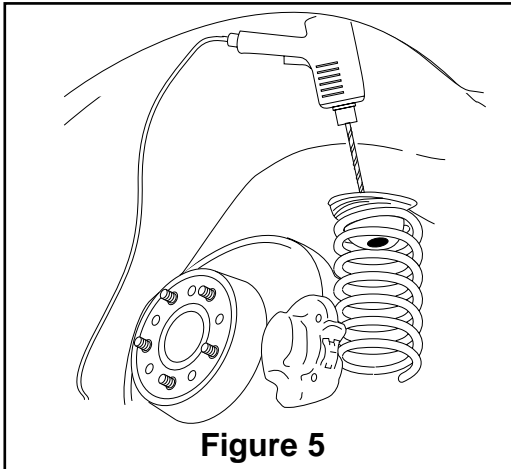


Figure 5

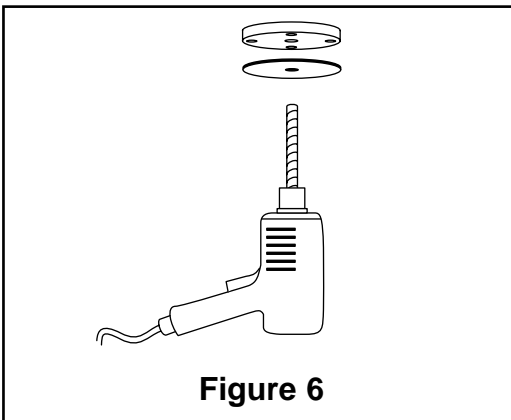
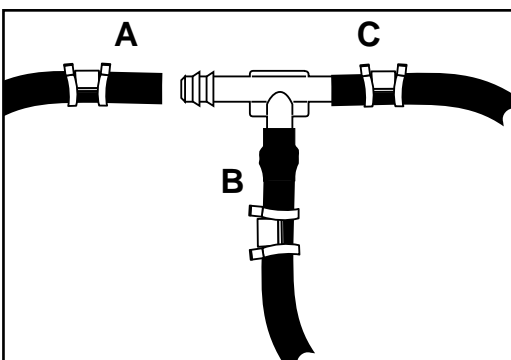


Figure 6



Use this procedure for all air line connections:
A. Slide air line clamp onto the air line
B. Push the air line over the barbed stem.
C. Compress the ears on the air line clamp with pliers and slide it forward to fully cover the barbed section.

Figure 7

- B. Cut out circle "C" on template and place onto lower spring seats with a dab of grease to hold in position. Center punch and drill a 1/2" hole (Figure 6).
5. Insert air cylinder into coil springs with BARBED STEM DOWN (Figure 1A).
6. When the cylinder is completely within the coil, remove the cap and allow the cylinder to assume its "as molded" shape.
7. If removed, place upper spring insulator on top of coil spring. Index it so that notch fits on end of spring.
8. Replace the coil springs and air cylinder assembly into vehicle spring seats, insuring that the end of the spring is indexed properly into the notch in the seat.
9. Push cylinder to the top of the coil spring and insert protector on top of lower spring seat.
10. Complete installation with air line installation instructions.

SECTION C

1. Jack up rear of vehicle or raise on hoist. Support frame with safety stands.
2. Lower axle or raise body until suspension is fully extended.
3. Some of the vehicles in this section do not have a hole in the lower spring. Cut out circle "D" on the template and place into lower spring seat and hold into place with a dab of grease. Center punch and drill a 1/2" hole (Figure 6).
4. Air cylinders are shipped in the "as molded" shape. For ease of installation, remove plastic cap from barbed stem on end of cylinder. Push on air cylinder to exhaust as much air as possible. It may be rolled up toward valve stem. Replace cap on stem to maintain flat shape.
5. Insert stem of air cylinder into lowest opening of coil (VALVE STEM DOWN), pushing cylinder upward within the coil by hand or with a blunt instrument such as a spoon-type tire iron (Figure 1A).
6. When the cylinder is completely within the coil, remove the cap and allow the cylinder to assume its "as molded" shape.
7. Push the cylinder to the top of the coil and insert protector on bottom of the cylinder (barb stem end).
8. See below for complete installation with air line installation.

Tee air line installation recommended unless weight in vehicle varies from one side to the other and unequal pressures are needed to level the load. Dual air lines are used in this case.

TEE AIR LINE ROUTING

TO PREVENT AIR LINE FROM MELTING, KEEP IT AT LEAST EIGHT INCHES FROM EXHAUST SYSTEM.

- A. Locate desired tee location on the frame rail or cross member.
- B. Determine and cut adequate length of air line to reach from tee to left and right side on air cylinders.

CAUTION: LEAVE SUFFICIENT AIR LINE SLACK TO PREVENT ANY STRAIN ON FITTING DURING AXLE MOTIONS.

- C. Slide air line clamp onto the air line.

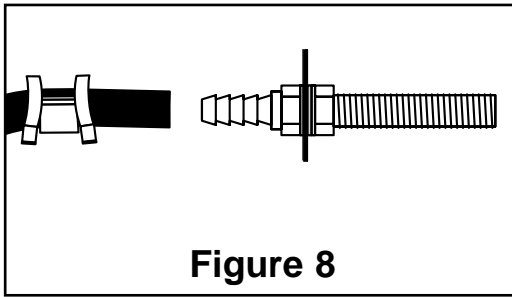


Figure 8

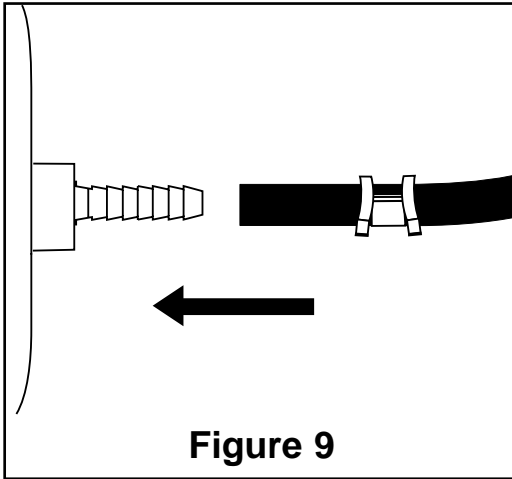


Figure 9

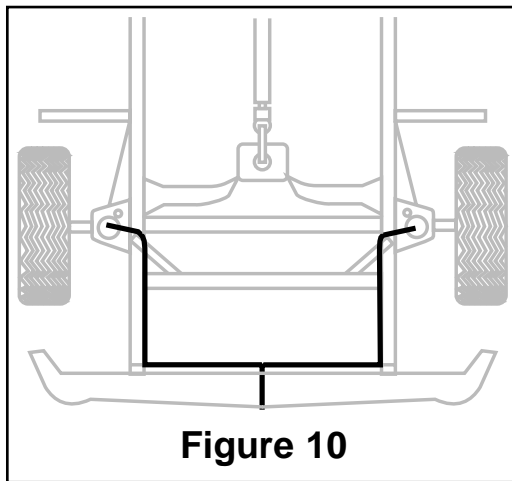


Figure 10

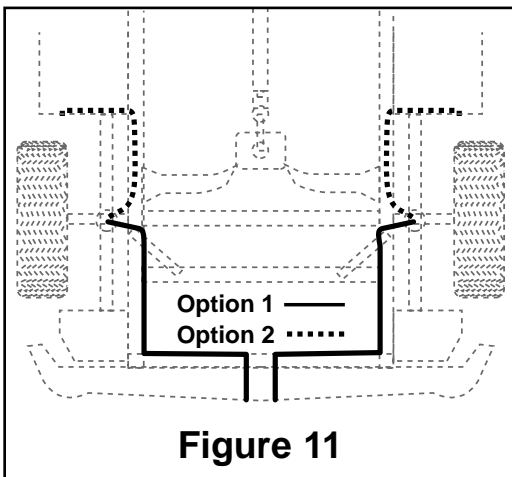


Figure 11

- D. Push the air line over one side of the tee until all the barbs are covered. Repeat procedure for other leg of tee. With pliers slide the air line clamp forward until it fully covers the barbed section. Repeat for other leg of tee (Figure 7).
- E. Route along cross member and either lower control arm or upper spring seat to air cylinder.
- F. Insert air line through spring seat and spacers.
- G. Push the air line onto the stem, covering all the barbs (Figure 9). With pliers slide the air line clamp upward until it fully covers the barbed section.
- H. Push the remaining air line over the last fitting on tee and route along frame to desired inflation valve location (Figure 10). Attach with plastic straps or wire.
- I. Select a location for inflation valve in the gas cap well, the trunk, rear bumper, fender flange or behind the license plate, insuring that the valve will be protected and accessible with an air hose.
- J. Drill a 5/16" hole for inflation valve and mount as in illustration (Figure 12). Rubber washer is for outside weather seal.
- K. Slide air line clamp over the air line. Push air line onto fitting covering all barbs, with pliers slide the air line clamp forward until it fully covers the barbed section (Figure 8).
- L. Raise axle or lower body until air cylinders lightly touch upper spring seat and lower spacers.
- M. Check TAILPIPE clearance and insure that it is at least 2-3 inches from air cylinder. If necessary, loosen clamps and rotate or move to obtain additional clearance. If heat shield is provided, install. Attach shock absorbers if removed earlier in the installation.

DO NOT INFLATE AIR CYLINDERS BEFORE READING MAINTENANCE & OPERATING TIPS.

- N. Continue with step 11, page 4.

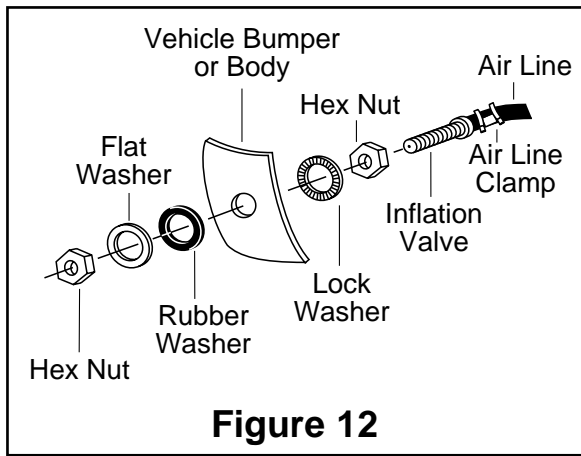
DUAL AIR LINE ROUTING

TO PREVENT AIR LINE FROM MELTING, KEEP IT AT LEAST EIGHT INCHES FROM EXHAUST SYSTEM.

- A. Select a location for the inflation valves in the rocker panel flange, or rear bumper, assuring that each valve will be protected and accessible with an air hose (Figure 11).
- B. Determine and cut adequate length of air line to reach from valve location to left side air cylinder.

CAUTION: LEAVE SUFFICIENT AIR LINE SLACK TO PREVENT ANY STRAIN ON VALVE STEM DURING NORMAL AXLE MOTIONS.

- C. Insert the air line through the spring seat and spacer.
- D. Slide air line clamp onto the cut air line.
- E. Push the air line onto the stem, covering all the barbed section (Figure 9). With pliers slide the air line clamp forward until it fully covers barbed section.
- F. Repeat process for right side.
- G. Drill 5/16" hole for inflating valves and mount as illustrated. Rubber washer is for outside weather seal (Figure 12).
- H. Route air line along control arm and frame to inflation valve location and cut off excess.



- I. Slide a clamp onto the air line and push the air line over the fitting, covering all the barbs. With pliers slide the air line clamp forward until it fully covers the barbed section (Figure 8).
- J. Raise axle or lower body until air cylinders lightly touch upper spring seat and lower spacers.
- K. Check TAILPIPE clearance and insure that it is at least 2-3 inches from air cylinders, If necessary, loosen clamps and rotate or move to obtain additional clearance. If heat shields are supplied, install them. Attach shock absorbers if removed earlier in the installation.

DO NOT INFLATE AIR CYLINDERS BEFORE READING MAINTENANCE & OPERATING TIPS.

L. Continue with step 11.

- 11. Inflate cylinders to 35 lbs. air pressure. Test for air leaks by applying a liquid soap/water solution to all valve cores, fittings and connections.
- 12. Lower vehicle to the ground. Read Maintenance/Operation Tips for proper care of your air cylinders.
- 13. Recheck air pressure after 24 hours. A 2-4 PSI loss after initial installation is normal. If pressure has dropped more than 5 lbs. Retest for leaks with a soapy/water solution.

FAILURE TO MAINTAIN MINIMUM PRESSURE WILL VOID THE WARRANTY

MINIMUM AIR PRESSURE 5 P.S.I.	MAXIMUM AIR PRESSURE 35 P.S.I.
<p>MAINTENANCE TIPS:</p> <ol style="list-style-type: none"> 1. Check pressure weekly! 2. Always maintain at least 5 p.s.i. air pressure to prevent chafing or coil pinch. 3. If you develop an air leak in the system, use a soapy solution to check all air line connections and the valve core before removing cylinder. <p>OPERATING TIPS:</p> <ol style="list-style-type: none"> 1. Inflate your air springs to 35 p.s.i. before adding the payload. After vehicle is loaded, adjust your air pressure (down) to level the vehicle and for ride comfort. 2. When you are carrying a payload it will be helpful to increase the tire inflation pressure in proportion to any overload condition. We recommend a 2 p.s.i. increase above normal (not to exceed tire manufacturers maximum) for each 100 lbs. additional load on the axle. 	
<p><i>Thank you for purchasing Air Lift Products</i></p> <p>AIR LIFT COMPANY P.O. BOX 80167 Lansing, MI 48908-0167</p>	
<p>FOR TECHNICAL ASSISTANCE CALL 1-800-248-0892</p>	
<p>Caution: DO NOT EXCEED THE VEHICLE MANUFACTURERS MAXIMUM GROSS VEHICLE WEIGHT RATING.</p>	

