

AIR LIFT 1000

ADJUSTABLE AIR SPRING SUSPENSION



MN-439
(05706)
ECR 6162

Kit No. 60740

Please read these instructions completely before proceeding with the installation.

AIR SPRING KIT PARTS LIST

Item	Part number	Description	Quantity
A	46160	Air Spring	2
B	34365	Heat Shield Kit	1

A



B



AIR LINE ASSEMBLY PARTS LIST

Item	Part number	Description	Quantity
AA	20315	Air Line Assembly	15'
BB	10466	Tie Strap	6
CC	21230	Valve Caps	2
DD	18405	5/16" Flat Washer	2
EE	21234	Rubber Washer	2
FF	18411	Star Washer	2
GG	21233	5/16" Hex Nut	4
HH	21236	Plastic Tee	1
JJ	10638	Line Clips	6
KK	21455	Inflation Valve	2

AA



BB



CC



DD



EE



FF



GG



HH



JJ



KK

TOOLS NEEDED

Open-end or box wrenches
Pliers
Drill and $\frac{5}{16}$ ", $\frac{1}{2}$ ", and $\frac{3}{4}$ " bit
Sharp Knife
Aluminum Shears
File, Air Grinder, Dremmel Tool

Hoist or Floor Jacks
Safety Stands
Safety Glasses
Air Compressor, or Compressed Air Source
Spray Bottle with Dish Soap/Water Solution

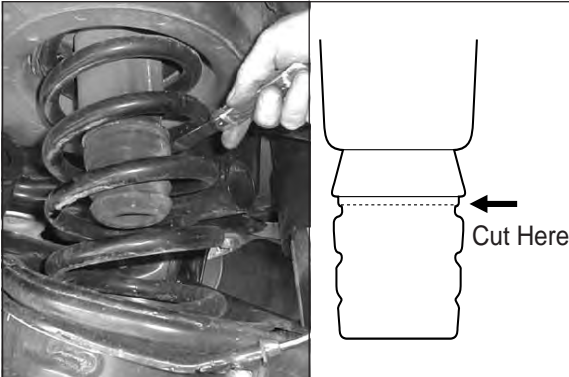


Figure 1



Figure 2



Figure 3

I. REMOVING THE JOUNCE BUMPER

1. Jack up the rear of the vehicle. Put safety stands under the frame so wheels hang. Removing bottom shock bolt may aid in lowering suspension. Caution: Observe brake line, do not over extend.

2. Cut jounce bumper off $\frac{1}{8}$ " under the steel cup where the rubber jounce bumper is attached. See illustration and Figure 1.

CAUTION: Be extremely careful cutting jounce bumper off. A screw driver may aid in opening the jounce bumper up while cutting it off (Figure 2).

3. Once the jounce bumper is cut off, it is necessary to remove it. Use a spring spreader or cut the jounce bumper in two with shears or bandcutters (Figures 3 and 4).



Figure 4

II. INSTALLING THE AIR BAG

1. Cut out the template provided, and stick it to the underside of the lower control arm, aligning the template so that the hole to be drilled is towards the inside of the vehicle. See Figure 5. (The template is on page 9 at the end of this manual.)



Figure 5

2. Center punch and drill a $\frac{3}{4}$ " hole to provide valve stem clearance (Figure 6).

NOTE: As an option, to a $\frac{3}{4}$ " bit, the picture shows a $\frac{1}{2}$ " bit. Hole can be ground out to $\frac{3}{4}$ " by using an air grinder or dremmel tool.

3. Remove cap from valve stem, and step on cylinder to remove air. With cylinder flat, replace cap and fold like a hot dog bun (Figure 7).

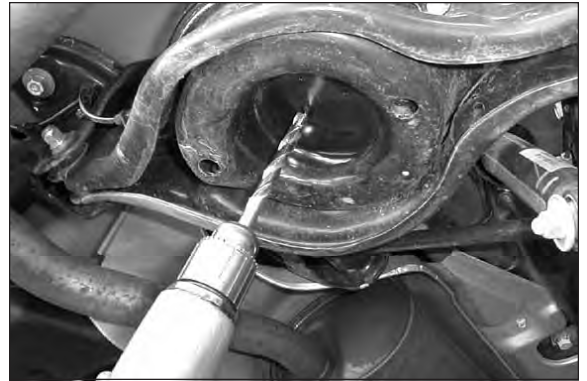


Figure 6

4. Insert into spring with stem pointing downward (Figure 8).

5. A flat, blunt instrument may aid in positioning cylinder inside the coil spring. Remove cap and let cylinder resume its molded shape. Push the cylinder down so the barbed stem protrudes through the hole drilled previously (Figure 9).

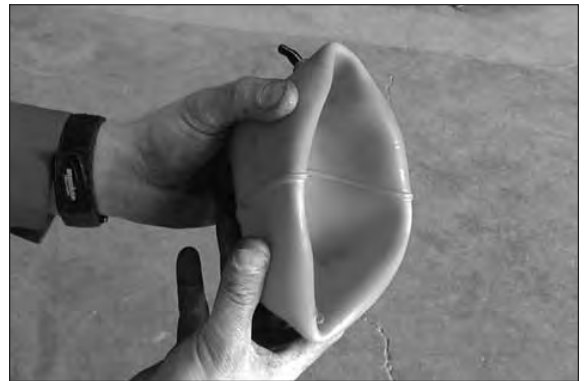


Figure 7



Figure 9



Figure 8

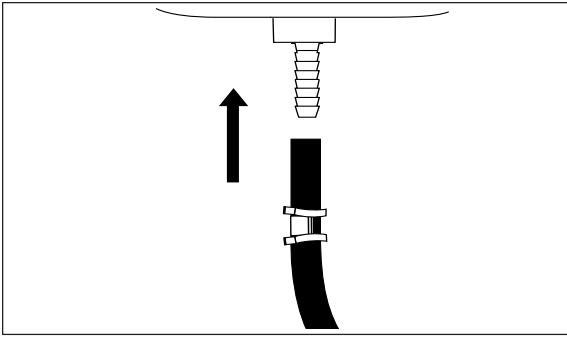


Figure 10



Figure 11



Figure 12



Figure 13



Figure 14

III. INSTALLING THE AIR LINES

CAUTION: Leave sufficient air line slack to prevent any strain on fitting during axle movements.

1. Slide one line clip (JJ) over one end of the hose. Insert hose onto barbed end of the cylinder. Using pliers, slide line clip over barbs (Figure 10).

2. Route hose up to cross member. Tie off with tie strap (BB) to existing hole forward of lower control arm (Figure 11).

3. Route line across to driver side, above cross member. Use hose heat shield (B) where line goes over exhaust (Figure 12).

4. Find a location on driver side for a tee. Route hose from passenger side to this location. Cut hose and install a line clip (JJ). Insert hose into one leg of tee (HH) and slide line clip over barbs. Repeat for driver side and attach to other side of tee (Figure 13).

Note: You can opt to use a single line per bag, skip step 4 and, proceed to step 5.

5. Determine a location for the inflation valve, (or valves) such as under the bumper (Figure 14). Route the remaining hose from this spot to the last leg of the tee and attach in the same manner.

6. Drill a $\frac{5}{16}$ " hole for inflation valve, (or valves) and mount as illustrated (rubber washer is for outside weather seal). See Figure 15. Slide hose clip onto free end of remaining line, push line onto inflation valve and put on hose clip to secure line.

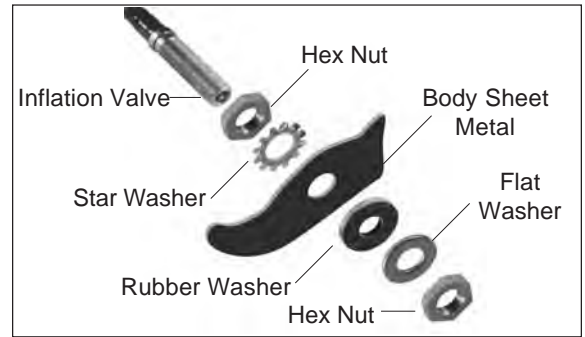


Figure 15

7. Bend heat shield tabs out at a 90° angle. Then bend again half the distance up at 90° angle to form an "L" shape. Position heat shield between spring and pipe. Clamp to pipe using radiator clamps (Figure 16).



Figure 16

NOTE: There should be a dead airspace between exhaust pipe and heat shield (Figure 17).

8. Inflate air springs to 10 p.s.i. Spray all connections and the inflation valves with a solution of $\frac{1}{5}$ dish soap and $\frac{4}{5}$ water to check for leaks. You should be able to spot leaks easily by looking for bubbles in the soapy water. Now adjust air pressure for optimal comfort and performance (minimum 5 p.s.i and maximum 35 p.s.i.).

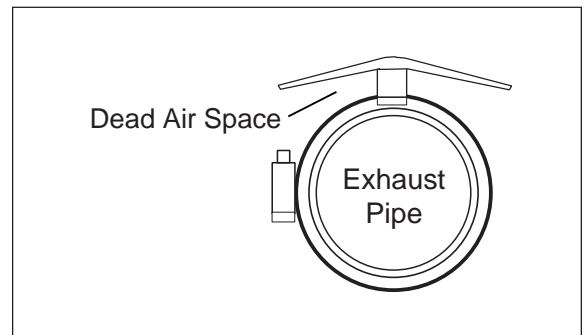


Figure 17

9. Check the air pressure again after 24 hours. A 2–4 p.s.i. loss after initial installation is normal. Retest for leaks if the loss is more than 5 p.s.i.

IV. TROUBLESHOOTING GUIDE



Figure 18

1. Leak test all the air line connections (Figure 18). Repair or replace as needed.



Figure 19

2. Inspect air line for holes and cracks (Figure 19). Replace as needed.

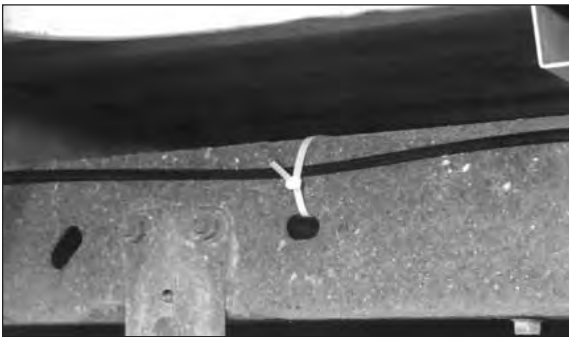


Figure 20

3. Inspect air lines to be sure it is not pinched. Tie straps may be too tight (Figure 20). Replace strap.



Figure 21

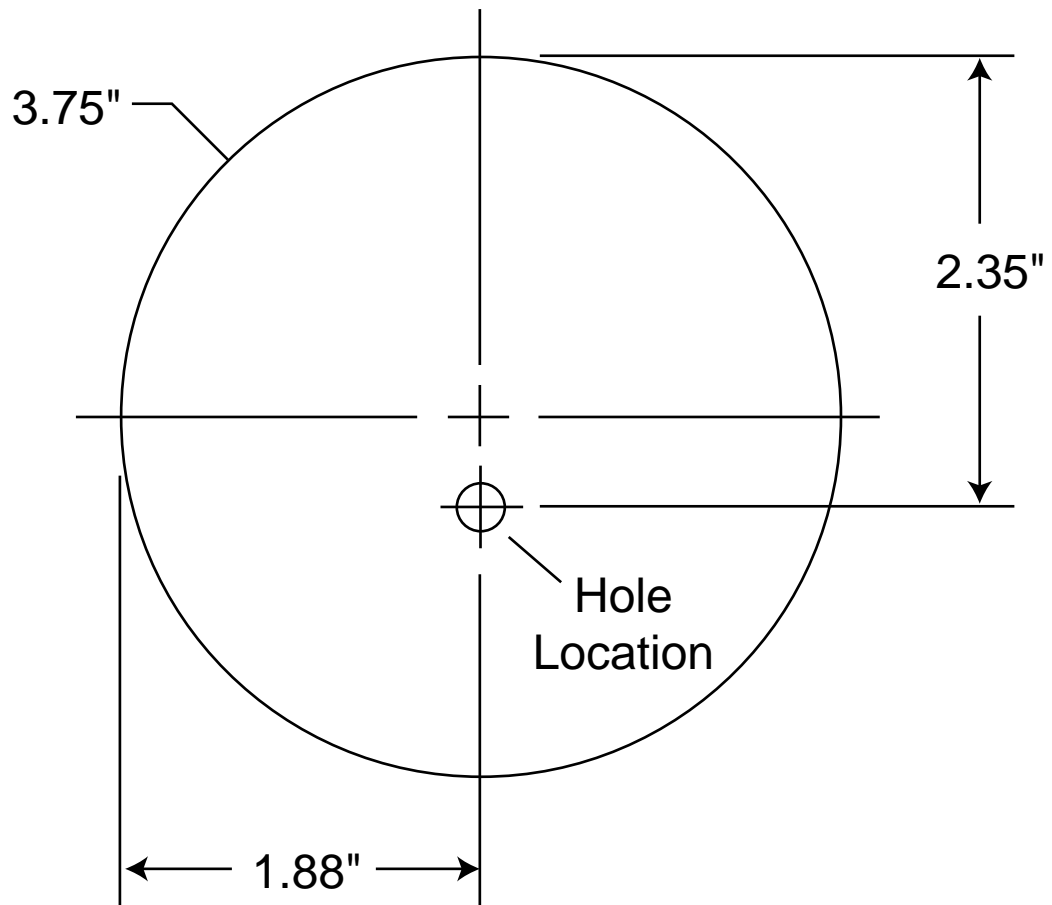
4. A kink or fold in the air line (Figure 21). Reroute as needed.



Figure 22

5. Leak test the inflation valve for leaks at the air line connection or dirt or debris in the valve core (Figure 22).

'99 - '00 Honda Odyssey Template





Product Use Information

Frequently asked questions

Q. Will installing air springs increase the weight ratings of a vehicle?

No. Adding air springs will not change the weight ratings (GAWR, GCWR and/or GVWR) of a vehicle. Exceeding the GVWR is dangerous and voids the Air Lift warranty.

Q. Is it necessary to keep air in the air springs at all time and how much pressure will they need?

The minimum air pressure should be maintained at all times. The minimum air pressure keeps the air spring in shape, ensuring that it will move throughout its travel without rubbing or wearing on itself.

Q. Is it necessary to add a compressor system to the air springs?

No. Air pressure can be adjusted with any type of compressor as long as it can produce sufficient pressure to service the springs. Even a bicycle tire pump can be used, but it's a lot of work.

Q. How long should air springs last?

If the air springs are properly installed and maintained they can last indefinitely.

Q. Will raising the vehicle on a hoist for service work damage the air springs?

No. The vehicle can be lifted on a hoist for short-term service work such as tire rotation or oil changes. However, if the vehicle will be on the hoist for a prolonged period of time, support the axle with jack stands in order to take the tension off of the air springs.

Tuning the air pressure

Pressure determination comes down to three things — level vehicle, ride comfort, and stability.

1. Level vehicle

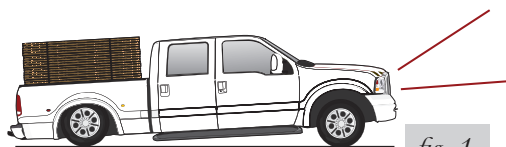
If the vehicle's headlights are shining into the trees or the vehicle is leaning to one side, then it is not level (fig. 1). Raise the air pressure to correct either of these problems and level the vehicle.

2. Ride comfort

If the vehicle has a rough and harsh ride it may be due to either too much pressure or not enough (fig. 2). Try different pressures to determine the best ride comfort.

3. Stability

Stability translates into safety and should be the priority, meaning the driver may need to sacrifice a perfectly level and comfortable ride. Stability issues include roll control, bounce, dive during braking and sponginess (fig. 3). Tuning out these problems usually requires an increase in pressure.



Bad headlight aim



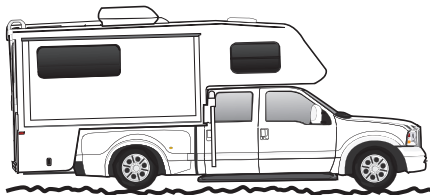
Sway and body roll



Rough ride

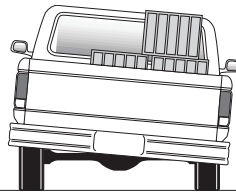
Guidelines for adding air:

1. Start with the vehicle level or slightly above.
2. When in doubt, always add air.
3. For motorhomes, start with 50-100 PSI in the rear because it can be safely assumed that it is heavily loaded.
4. If the front of the vehicle dives while braking, increase the pressure in the front air bags, if equipped.
5. If it is ever suspected that the air bags have bottomed out, increase the pressure (fig. 4).
6. Adjust the pressure up and down to find the best ride.
7. If the vehicle rocks and rolls, adjust the air pressure to reduce movement.
8. It may be necessary to maintain different pressures on each side of the vehicle. Loads such as water, fuel, and appliances will cause the vehicle to be heavier on one side (fig. 5). As much as a 50 PSI difference is not uncommon.

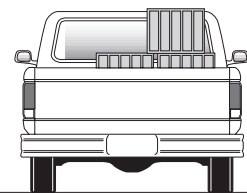


Bottoming out

fig. 4



Unlevel



Level

fig. 5