

LoadLIFTER5000

MN-310
(10807)
ECR 6442

P/N 57131

E-Super Duty Chassis

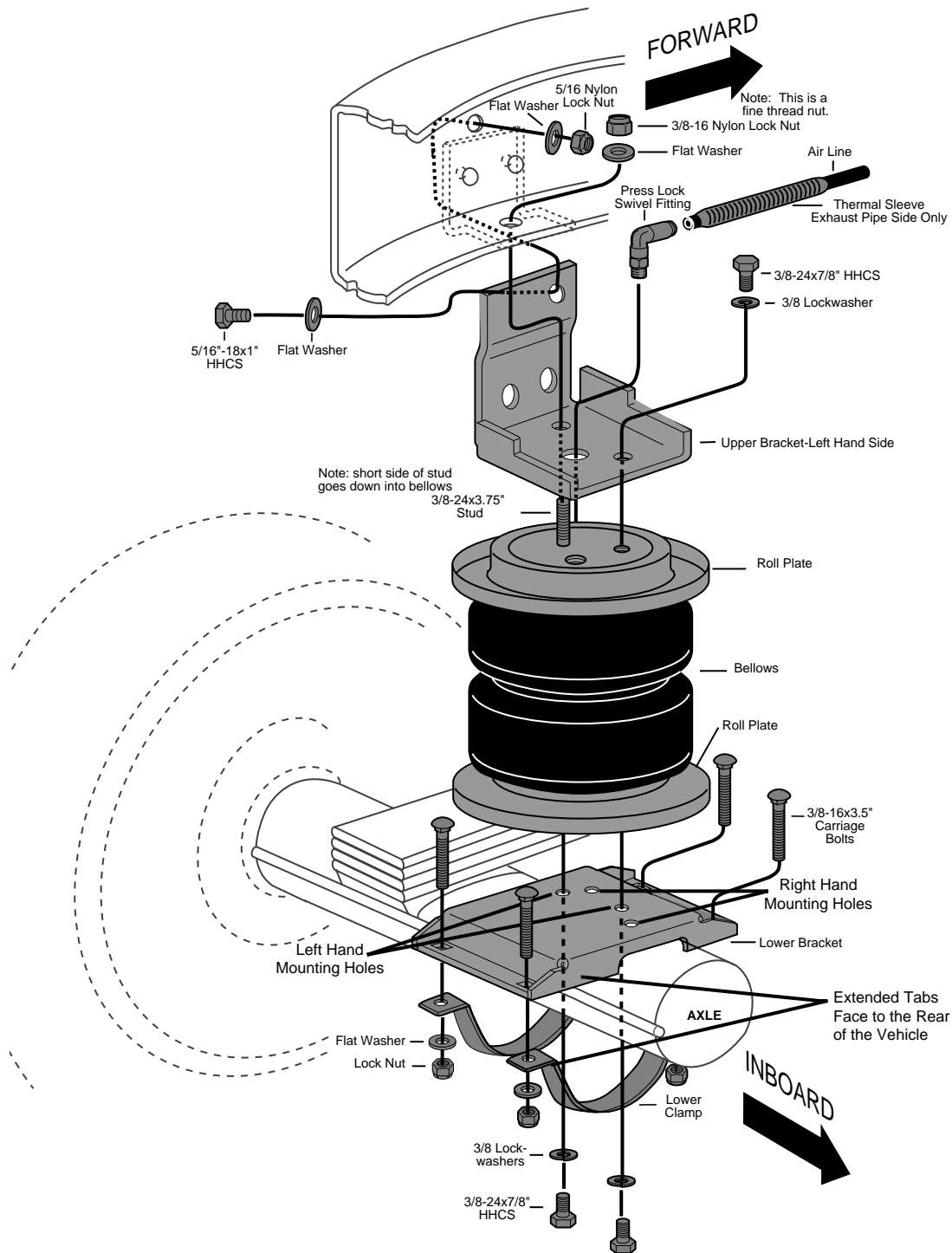


FIGURE 1 LEFT SIDE UNIT

WARNING - DO NOT INFLATE BELLOWS WHEN IT IS UNRESTRICTED OR NOT INSTALLED. BELLOWS MUST BE CONTAINED BY SUSPENSION OR OTHER ADEQUATE STRUCTURE. DO NOT INFLATE BEYOND 100 P.S.I. IMPROPER USE OR OVER INFLATION MAY CAUSE ASSEMBLY TO BURST CAUSING PROPERTY DAMAGE OR SEVERE PERSONAL INJURY.

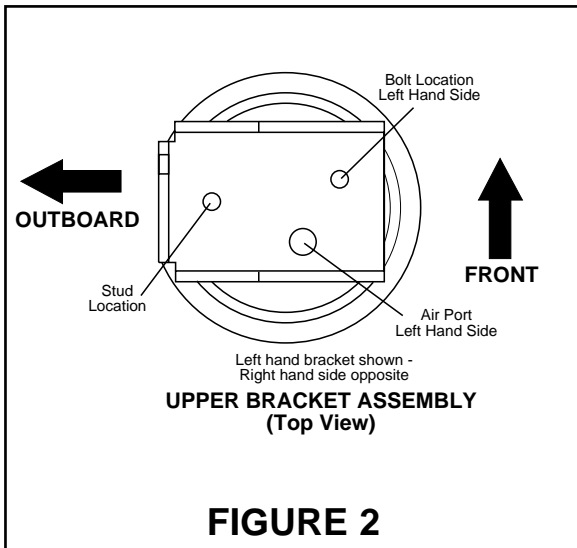


FIGURE 2

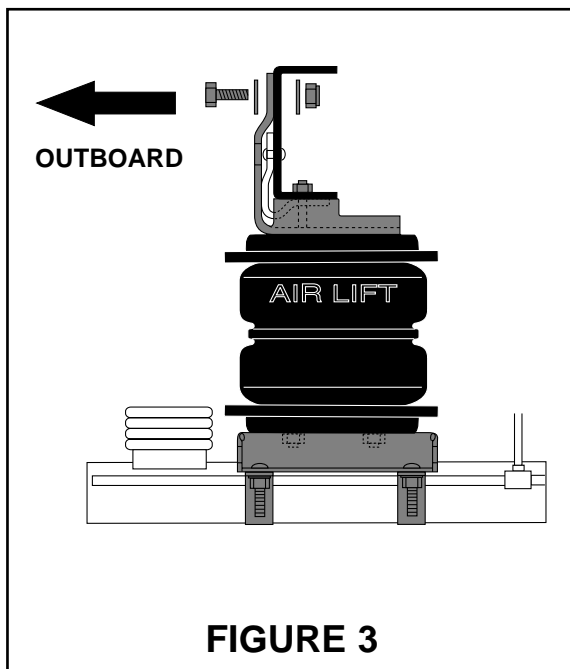
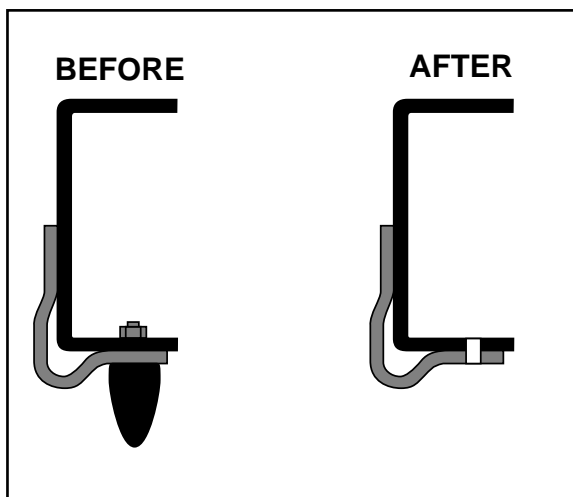


FIGURE 3



NORMAL RIDE HEIGHT: (no load) - This is defined as the distance between the bottom of the bumper and a flat road surface with the vehicle in an “as delivered condition” (without a load, i.e. tool box, camper, etc.). Measurements should be taken before beginning the installation. The distance from the fender well to the center point of the hub should be recorded. All of our kits are designed to be installed and operate at normal ride height.

1. Jack up rear of vehicle or raise on hoist. Place safety jack stands under axle and adjust so that the axle to frame distance is the same as design or normal ride height.
2. Position the bellows with the air port up, to insert air fitting. Insert air fitting into air port and tighten finger tight plus 2 turns. **Use a 7/16” open end wrench being careful to tighten on the metal hex nut only.** Do not over tighten. This fitting is precoated with thread sealant.
3. Assemble upper section of left hand unit (NOTE - Upper brackets are stamped “R” and “L”). Set roll plate on bellows. Slip the upper bracket over the air fitting and line up the mounting holes (Figure 2). Install the 3/8-24x3.75” stud in the outboard tapped hole (use the short threaded end of the stud on the bellows side, refer to Figure 1) and turn in carefully until it bottoms out in the tapped hole. Install the 3/8” lockwashers and 3/8-24x7/8” hex head cap screw (HHCS) a couple of turns to loosely assemble for installation. Assemble right hand unit also.
4. Set roll plate on bottom of bellows. Attach lower bracket to bottom of bellows on both units using the holes as shown (Figure 1). The extended tabs should face rearward. Use the 3/8” lockwashers and 3/8-24x7/8” HHCS torque to 15-20 ft.-lbs. Be sure that lower bracket and upper bracket are parallel to each other as shown in Figure 2.
5. Unbolt and remove both rear rubber axle jounce bumpers and discard. It is not necessary to remove the metal jounce bumper bracket (Figure 4).
6. Set the air spring assembly on the axle inboard of leaf spring (Figure 3). Squeeze the bellows down and align the stud with the original jounce bumper mounting hole. Insert the stud through the hole and fasten with flat washer and 3/8-16 lock nut. Fasten the side of the bracket to the frame rail as shown in figures 1 and 3, using 5/16-18x1” HHCS bolt, flat washers and 5/16” lock nut. Torque all three fasteners to 15 ft. lbs.

NOTE: On some models the hole may have a plastic stud for a wiring harness hanger protruding through it. Push the plastic stud back through the frame and use the existing hole to mount the upper bracket to the side of the frame rail.

7. Position the lower bracket so that it sits square on the axle. Install all four of the 3/8”-16x3.5” carriage bolts through the outer holes of the lower bracket. Slide the axle straps up onto the carriage bolts. The extended end of the strap will face the rear; this will provide clearance for the carriage bolt to the brake line. **Important** - Brake line sits under the bracket between the bolts and the axle, be careful not to pinch the brake line. Hold assembly loosely in place using lower straps, flat washers and lock nuts.

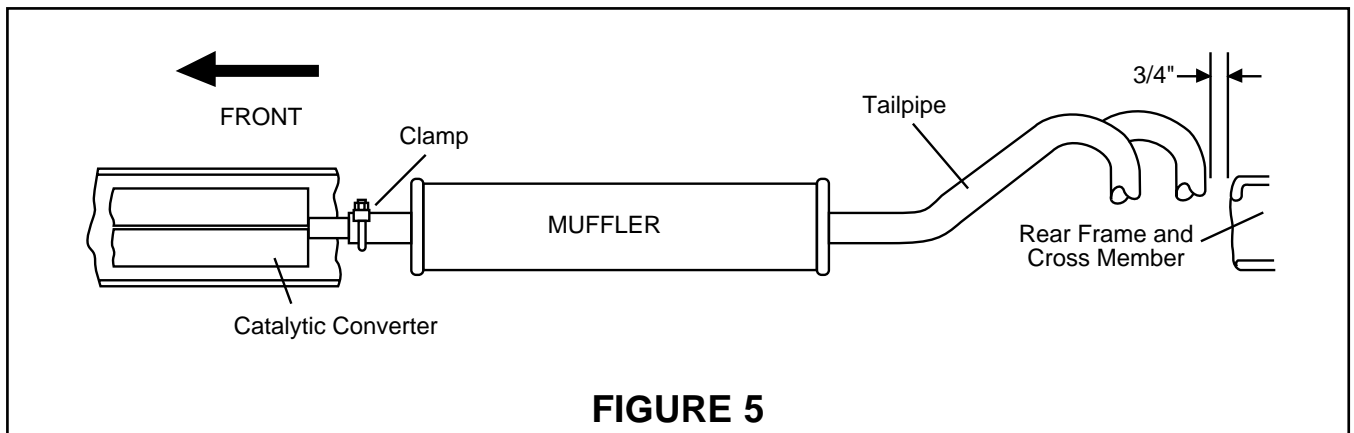


FIGURE 5

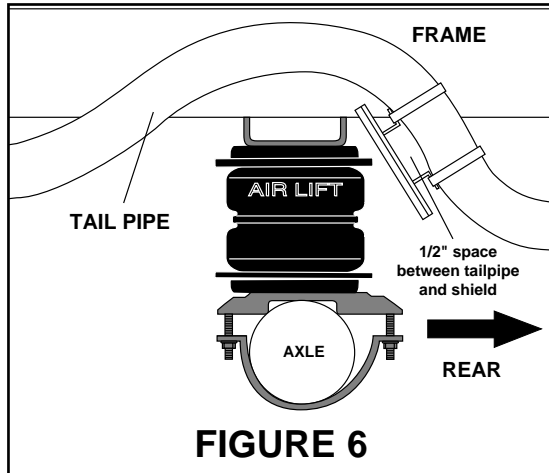


FIGURE 6

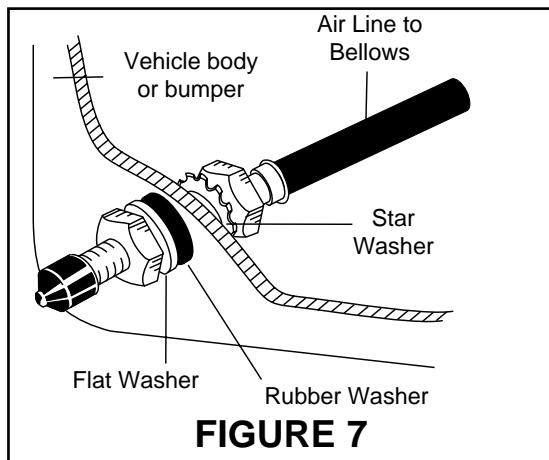


FIGURE 7

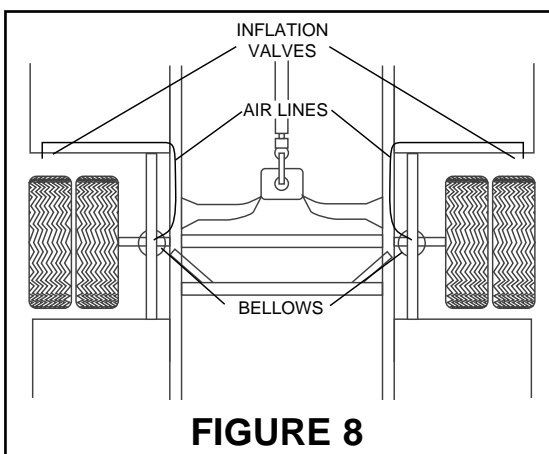


FIGURE 8

8. Adjust the lower bracket assembly on the axle so that the bellows is square. While holding the bracket, tighten all four locknuts securely. Be careful not to bend the straps to the point that they come in contact with the brake line.

9. Repeat procedure 6, 7 and 8 for other side.

10. Installation of this kit requires an exhaust heat shield (Figure 6). The shield is attached to the exhaust pipe, with the flanges bent for component clearance. **Bend tabs to provide 1/2" dead air space between exhaust pipes and heat shield and maximum clearance with bellows.**

NOTE: A slight adjustment MAY be required to gain enough clearance to install the heat shield (Figure 5). Loosen the exhaust clamp between the muffler and the catalytic converter. Push the muffler and tailpipe to the rear of the vehicle, retain a minimum of 3/4" between tail pipe and frame crossmember and retighten clamp.

11. Proceed with air line installation instructions.

AIR LINE INSTALLATION

A. Select locations on the vehicle for the air inflation valves (Figure 8). The location can be on the bumper or on the body of the vehicle, but be sure that it is protected so that the valve will not be damaged and will still be accessible for the air chuck. Use a standard tube cutter, a razor blade, or very sharp knife to cut the airline assembly into two equal parts. A clean square cut will ensure against leaks. Drill a 5/16" hole and install the air inflation valve, as shown in Figure 7. Install inflation pressure decal near inflation valve.

B. Run the air line from the inflation valve to the bellows, routing it so that it will be protected from the direct heat from the muffler or tailpipe and kept away from sharp edges. **Slide the thermal sleeve protector onto the air line on the exhaust pipe side.** The air line should not be bent or curved sharply. Cut off excess air line. Push cut end of air line into the air fitting as far as it will go. This is a self locking fitting on the air line. You will hear or feel a definite "click." Secure the air line in place with the nylon ties provided (Figure 1).

C. Inflate the bellows and check the fittings, bellows, all connections, and valve cores for air leaks with a solution of dish soap and water.

D. Raise vehicle and remove safety jack stands. Lower vehicle to ground.

- E. This now completes the installation. Before proceeding, check once again to be sure you have proper clearance around the bellows. With a load on your vehicle and the air springs inflated, you must have clearance all around the bellows at the maximum diameter (7.0").
- F. Lower vehicle to the ground. Inflate the air springs until Normal Ride Height measurement is restored. Regardless of load, the air pressure should always be adjusted so that the Normal Ride Height is maintained at all times.

A 5-7 psi loss after initial installation is normal. If pressure has dropped more than 7 lbs. re-test for leaks with soapy water solution.

TO PREVENT POSSIBLE DAMAGE, MAINTAIN A MINIMUM OF 20 P.S.I. IN THE BELLOWS AT ALL TIMES.

**FAILURE TO MAINTAIN CORRECT MINIMUM PRESSURE (OR PRESSURE PROPORTIONAL TO THE LOAD),
BOTTOMING OUT, OVER-EXTENSION, OR RUBBING AGAINST ANOTHER COMPONENT WILL VOID THE
WARRANTY.**

Product Use

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 times 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. 13). 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. 14). 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. 15). Tuning out these problems usually requires an increase in pressure.



Bad headlight aim

fig. 13



Rough ride

fig. 14



fig. 15

Sway and body roll

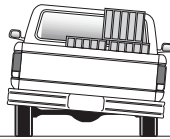
GUIDELINES FOR ADDING AIR

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. 16).
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. 17). As much as a 50 PSI difference is not uncommon.

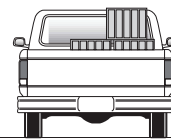


Bottoming out

fig. 16



Unlevel



Level

fig. 17