

After last month's installation of the complete air ride system on our 1964 convertible, we have had many questions on how to install the same system on a car with rear leaf springs. The front is the same from 1955 to 1964. The rear system is unique to the '55-'57 cars.

We are going to install this system on our display frame that travels around the country.

With the air ride system the car can be raised up about 2" above stock height or slammed to the ground with this kit (see photo #1).

Our display frame has the coil over shock system, (see photo #2), so a coil spring compressor will not be needed, but if your car has coil springs always use a compressor.

First, disconnect the outer tie rod end from the steering arm using a tie rod splitter. We are going to leave the lower ball joint attached to the spindle and drop the lower a-arm down to remove the coil spring. Also disconnect the flexible brake hose from the frame mount. We removed the caliper assembly for photo purposes only (see photo #3).

Our display frame is equipped with **part #21-79** 1/2" heavy duty sway bar. Disconnect the sway bar from the lower a-arm and using a coil spring compressor, compress the spring. Using a ball joint splitter disconnect the upper ball joint from the spindle and let the lower a-arm drop down to remove the coil spring (see photo #4).

Once the spring has been removed there is a small amount of trimming to be done in the coil spring pocket area to clear the large diameter air bag. The hole where the spring sits up inside the frame is a D-shape and needs to be cut out to a round hole. This can be done with a grinder or a torch (see photo #5).

The air bag sits on top of a plate that is bolted to the lower a-arm. The air bag bolts to the plate with a 3/8" x 3/4" bolt and flat washer (see photo #6).



**Time  
 Frame:**  
 6 hrs.



**Tools Needed:**

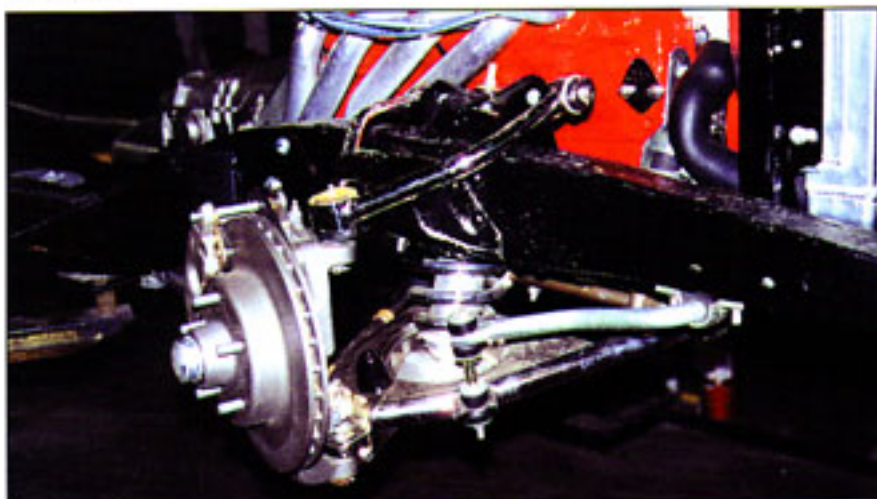
- 1/2" wrench
- 3/4" wrench
- 1 1/16" wrench
- 1" hole saw
- Coil spring compressor
- Drill with 1/16" bit
- 3/16" socket w/ratchet
- welder
- Ball joint splitter

**Parts We Talk About:**

- | <b>Part #</b> | <b>Description</b>  |
|---------------|---|
| <b>21-400</b> | 55-57 Air Ride- mega kit<br><i>Air Ride mega kit includes: air tank, compressor, four air bags, four shocks, all plastic feed lines, an eight solenoid system (so that each corner can be adjusted seperately), wiring and mounting hardware.</i> |
| <b>21-300</b> | 55-64 Front air ride components<br><i>Includes: front air springs, brackets and shocks</i>  |
| <b>21-301</b> | 55-57 Rear air ride components<br><i>Includes: front air springs, brackets and shocks</i>   |
| <b>21-302</b> | 2 wheel compressor system<br><i>Includes: 2 gal. tank, air compressor, gauge panel, fittings, and air lines</i>   |
| <b>21-303</b> | 4 wheel compressor system<br><i>Includes: 2 gal. tank, air compressor, gauge panel, fittings, and air lines</i>   |
| <b>21-304</b> | 4 wheel compressor system<br>w/2 way ride control<br><i>Includes: compressor, 2 gallon tank, dual needle gauge, rocker switches, RidePro air valve assembly, wiring harness, lines and fitting</i>  |
| <b>21-305</b> | 4 wheel compressor system<br>w/4 way ride control<br><i>Includes: compressor, 2 gallon tank, 2 dual needle gauge, rocker switches, 2 RidePro air valve assembly, wiring harness, lines and fitting</i>  |
| <b>21-306</b> | 317 Compressor upgrade, larger compressor, increase stroke, 150 psi   |



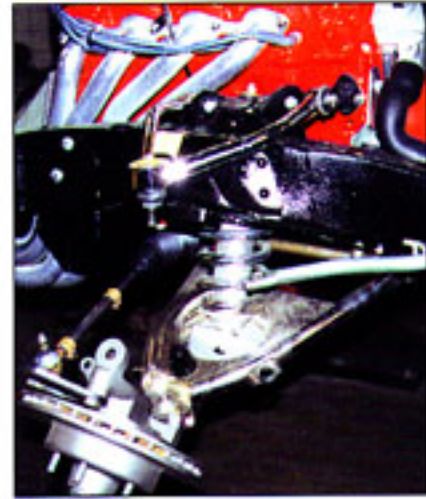
**Photo #1**



**Photo #2**



**Photo #3**



**Photo #4**

# Air Ride Suspension System Installation

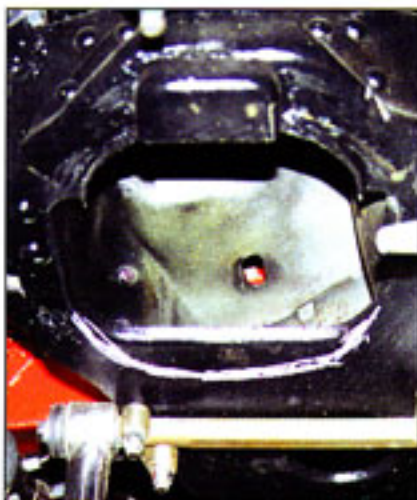


Photo #5



Photo #6

The top mount for the air bag is cut at an angle to fit into the coil spring pocket. The upper mount has a  $\frac{7}{16}$ " threaded rod will screw down into the nut. The upper mount is held to the air bag with two  $\frac{1}{2}$ " lock nuts and flat washers. Install the  $\frac{1}{2}$ " pipe to  $\frac{1}{4}$ " air line fitting and air line at this time (see photo #7).

We have changed back to the stock lower a-arm to accommodate the new lower shock mount. To keep the lower tubular a-arm you will need to fabricate a bracket and weld it to the lower a-arm. The lower plate is held to the lower a-arm by the bolt from the lower a-arm snubber (see photo #8).

Now raise up the lower a-arm and feed the  $\frac{7}{16}$ " threader rod through the stock hole where the shock once mounted. At the same time feed the  $\frac{1}{2}$ " air line up through the frame and have it exit through the upper a-arm perch. Make sure there are no sharp edges that would rub on the air line. Now attach the upper ball joint to the spindle. At this time make sure the air bag is not rubbing up against ANYTHING (see photo #9).

The front shock will now mount to the rear of the a-arm. The kit comes with a new upper and lower mounting bracket. The lower one bolts to the a-arm. You must drill a  $\frac{1}{8}$ " hole. The upper welds to the frame. The upper bracket fits where the brake hose tab was located, so we relocated the tab just behind the new upper shock mount (see photo #10).

The rear air bag bracket fits between the rear axle perch and the leaf springs. Remove the two u-bolts and lower shock plate (see photo #11).

Our frame has the 5-leaf leaf springs. To make the air ride system work, you need to remove all the leafs except for two. Now put the back on the center bolt and tighten, cutting off any excess threads (see photo #12).

The rear air bag bolts to the bottom bracket with one  $\frac{1}{2}$ " x  $\frac{1}{4}$ " bolt



Photo #7

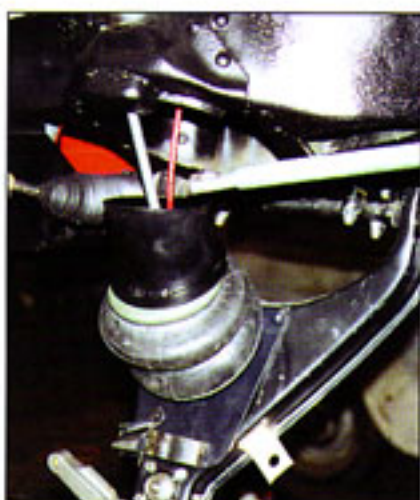


Photo #8

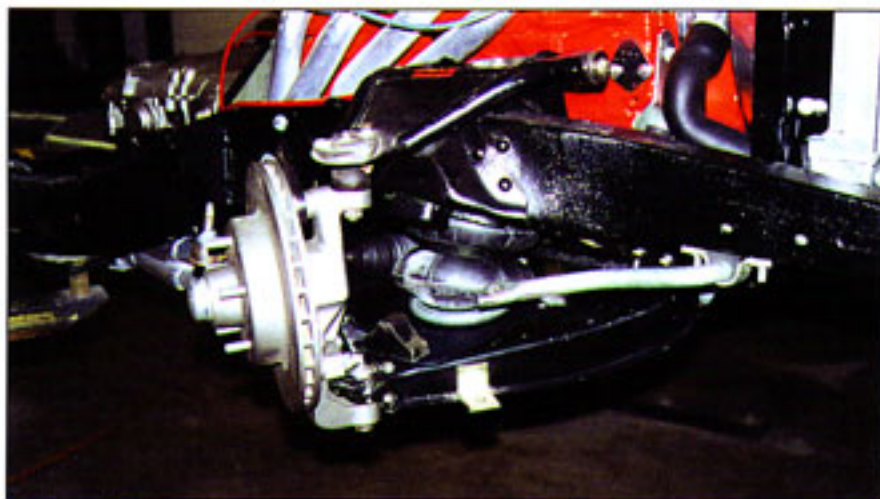


Photo #9

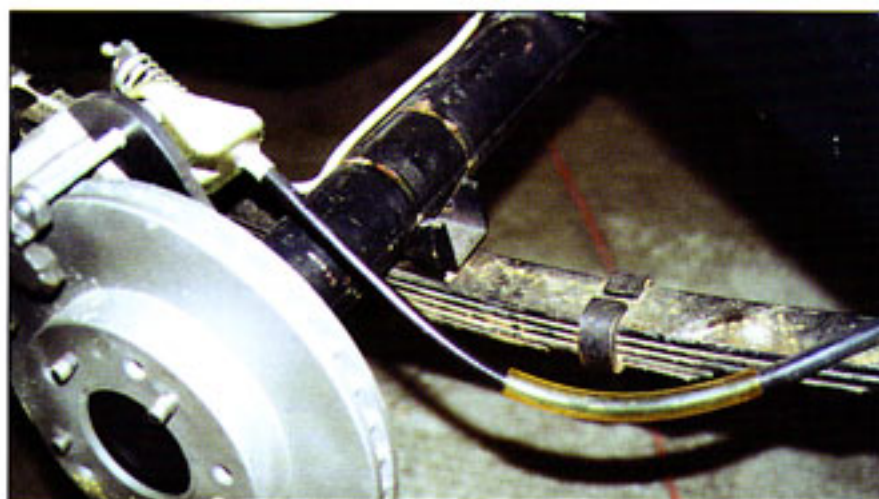


Photo #11



Photo #10

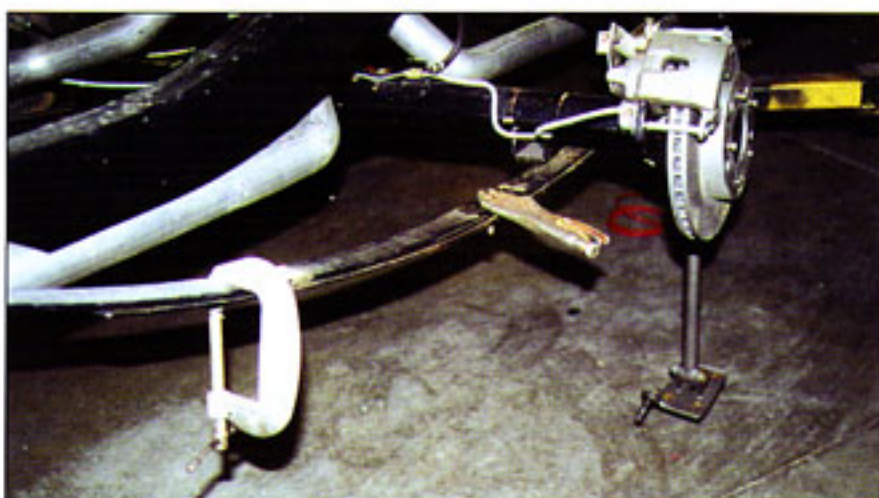


Photo #12

# Air Ride Suspension System Installation

and flat washer and the upper bracket is held to the air bag with a large nut. The upper bracket can be used as an under the frame rail bracket for the car like ours with the leaf spring parallel with the frame rails on an out board bracket when the leaf springs are in the stock location. For the rear air bag, use the 1/8" pipe to 1/4" air line 90° fitting (see photo #13).

The lower bracket is trapped between the axle perch and the leaf springs. The center bolt will reach through the bracket and center up the rear end (see photos #14a & #14b).

The upper bracket bolts to the frame, you can weld it if you prefer. Make sure when you mount it to the frame the brass air line fitting is not touching the frame (see photo #15).

The kit comes with new rear shocks and upper mounts. The upper mount is designed to bolt to the inside of the frame rail. Our frame has the upper shock cross member so we bolted the new upper shock mount to it (see photos #16a & #16b).

The compressor and air tank are usually mounted in the trunk, and the gauge panel with the two rocker switches is usually mounted off the dash. We had to improvise on our display frame. Install the tee fitting into the compressor on the exhaust side and then the pressure switch. The pressure will cut the compressor off at 120 psi. The black wire from the compressor goes to a good ground and the red wire goes to one side of the pressure switch. From the tee, run a 1/4" line to one side of the air tank (see photo #17).

Out of the other side of the air tank, run a 1/4" line to the supply side of the solenoid block. The solenoid block has two supply holes. One will need to be plugged with the 1/4" pipe plug supplied (see photo #18).

This system is set up to raise the front and rear separately. The kit comes with two 1/4" tubing tees to tie the left and right sides together. Make sure when running the 1/4" tubing it is away from any sharp edges or hot exhaust (see photos #19a & #19b).



Photo #16a



Photo #16b



Photo #17



Photo #18



Photo #13



Photo #14a

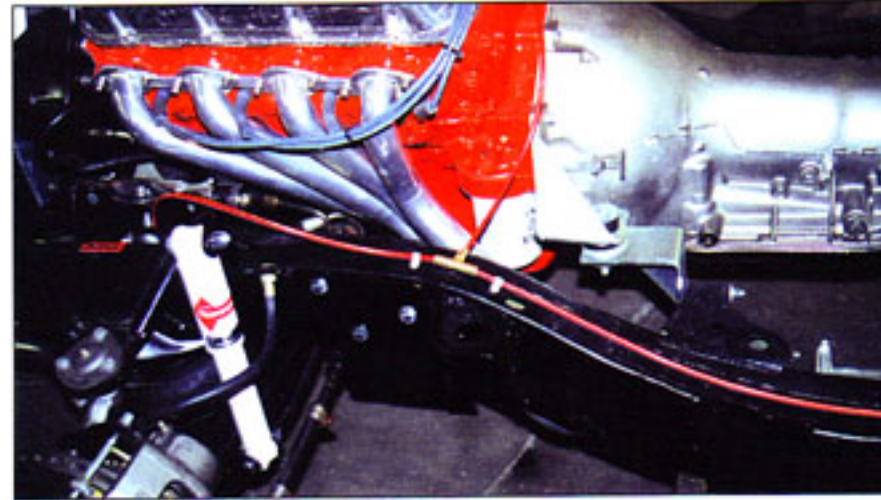


Photo #19a

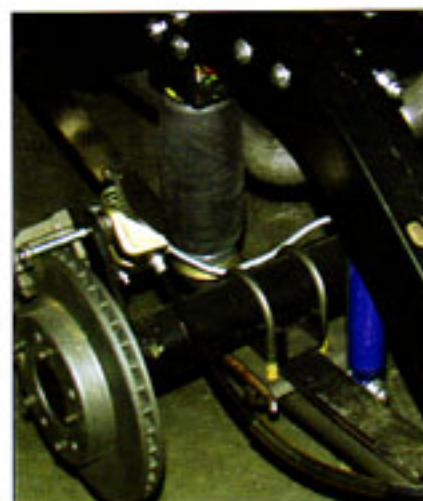


Photo #14b

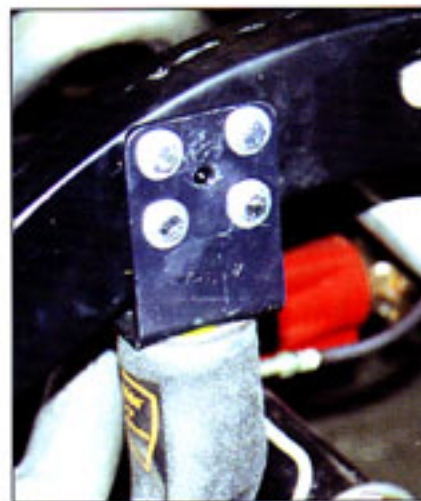


Photo #15

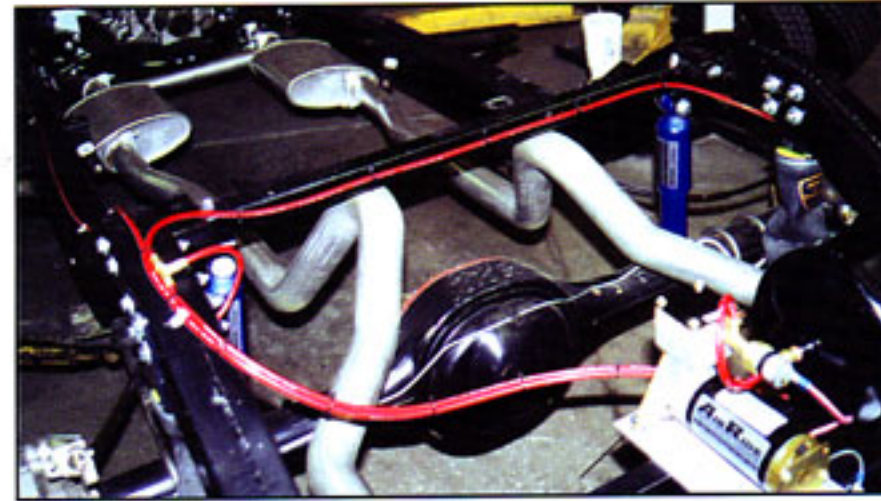


Photo #19b

# Air Ride Suspension System Installation

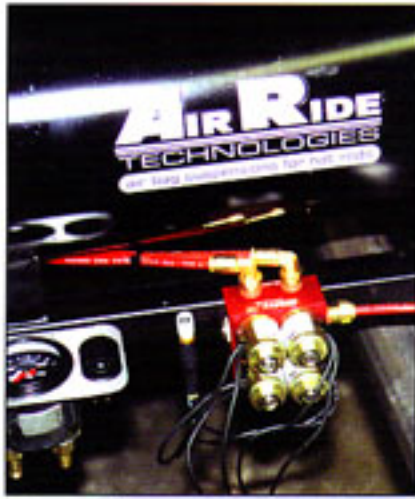


Photo #20

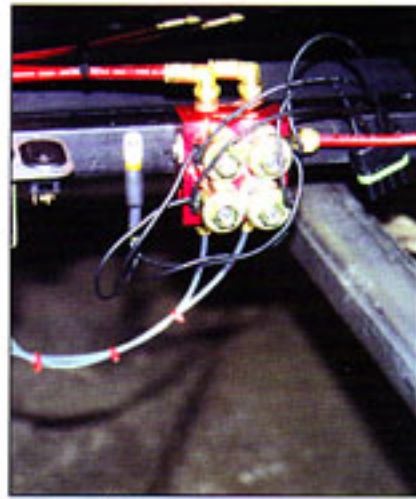
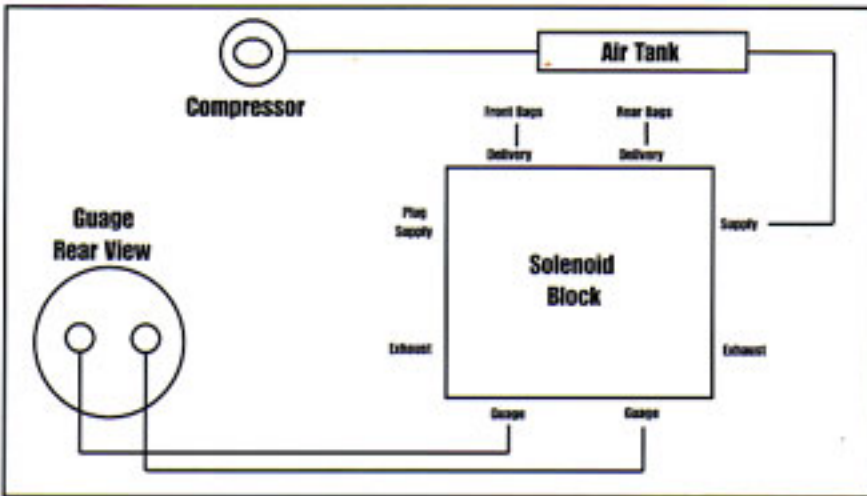


Photo #21



Diagram

The  $\frac{1}{8}$ " air lines from the front and rear attach to the solenoid block points marked DELIVERY. The line from the front attaches to the left hand port and the rear attaches to the right hand port (see photo #20).

There are two  $\frac{1}{8}$ " pipe ports marked GAUGES. These feed the gauge. The left hand one hooks to the back of the gauge on the left hand side and the right hand one hooks to the right side (see photo #21). There is a ground wire from the solenoid block that must go to a good ground (see diagram).

The kit comes with a 10' power cable that connects the rocker switches to the solenoid block. We shortened it up for our display frame. The four wire jack with the green and black wire attaches to the left hand rocker switch and the jack with the white and red wires attach to the right hand rocker switch. The harness has a gray wire for the light in the gauge. This would hook to the headlight switch. There is a red wire that hooks to a 12-volt power source when the key is on (see photo #22).

From the other side of the pressure switch run no less than a 12-gauge wire directly to the positive side of the battery. Make sure to use the in-line fuse with the 20 amp fuse supplied with the kit. The system is now complete. When the compressor is hooked up to a 12-volt it will run about 10 to 12 minutes to fill up the air tank. With the key on, push the rocker switches to the up position the car will raise up and the compressor will kick back on. Now your ready for the test ride (see photo #23).

You can change the ride height about 4" front and rear. It's not as noticeable in the rear without a body on the frame. I got a few helpers to weigh down the front of the frame, but they were a little on the light side (see photos #24a & #24b).

Good luck! 

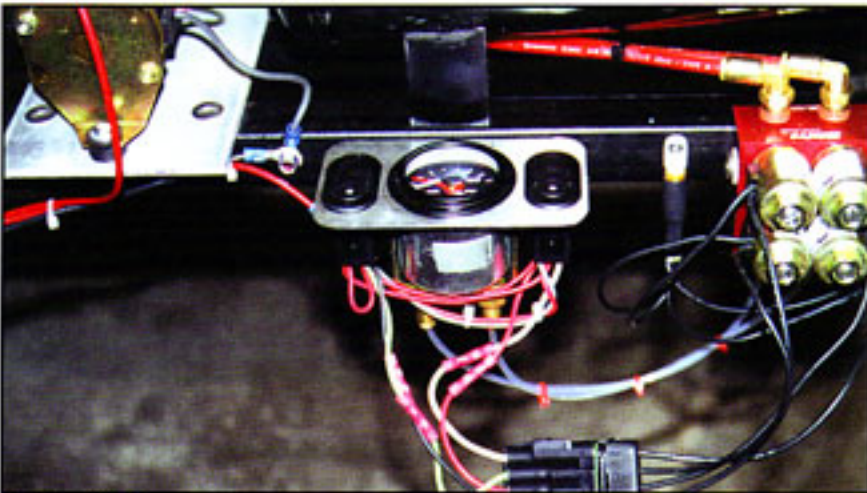


Photo #22



Photo #24a

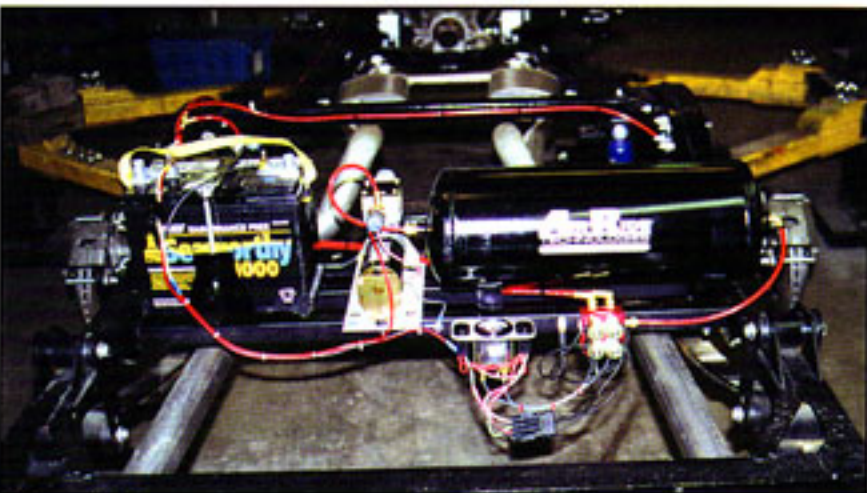


Photo #23



Photo #24b