

# LOAD CONTROLLER I

ON-BOARD COMPRESSOR CONTROL SYSTEM

P/N 25802 (Four Point Leveling Option)



MN-202  
(08104)  
ECN3471

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*Please read these instructions completely before proceeding with the installation.*

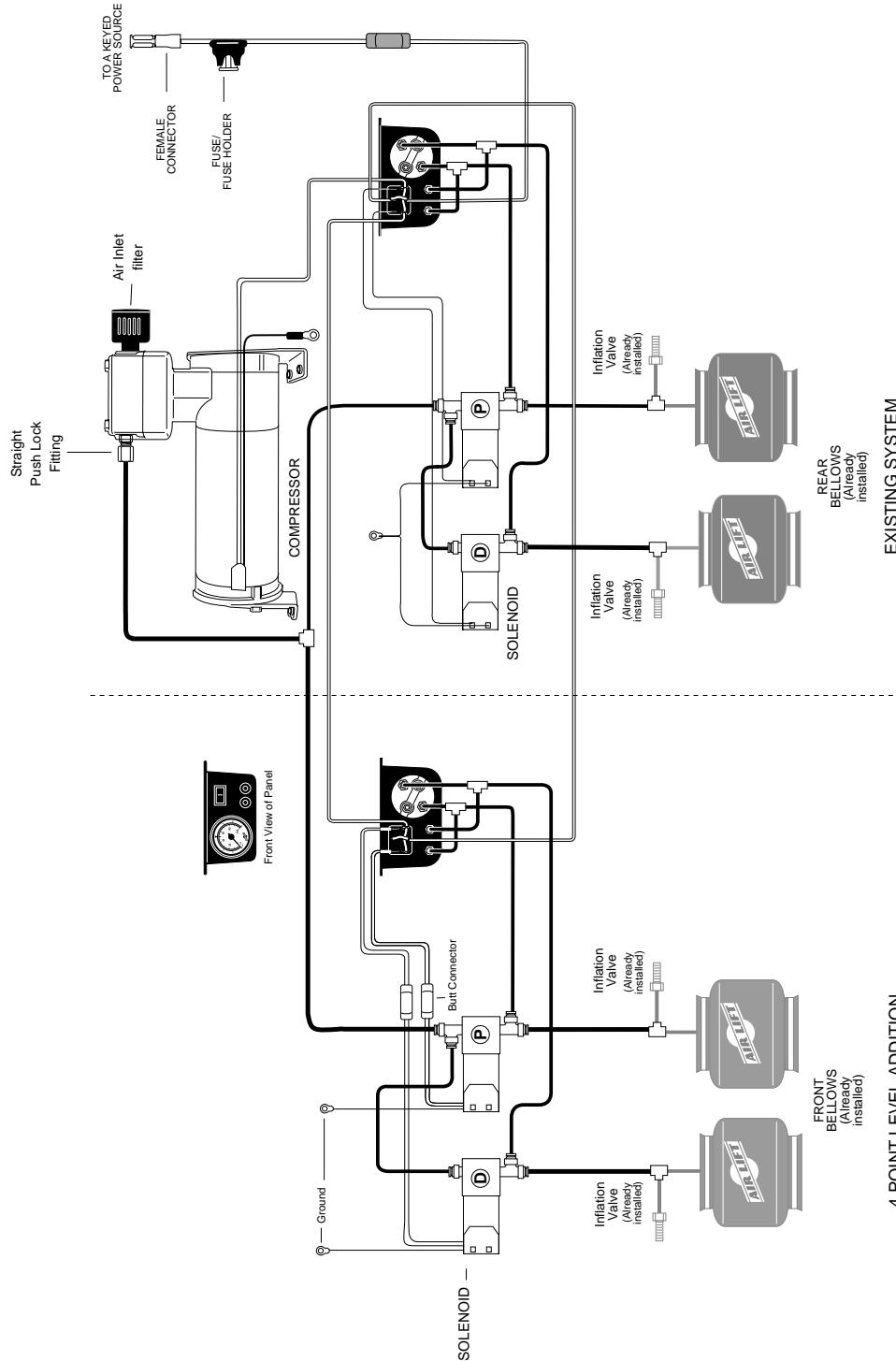
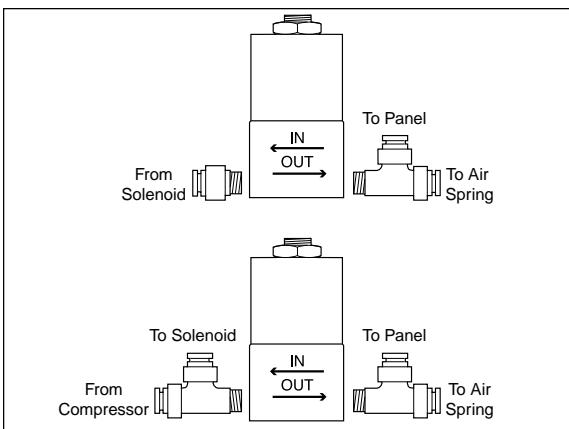


Figure 1



**Figure 2**

## I. MOUNTING THE GAUGE PANEL

**NOTE:** All preassembled gauge panels have been 100% leak and function tested. Do not attempt to tighten, loosen or adjust any fittings or connections. This will likely cause a leak or malfunction and void the warranty.

1. Select a convenient, sturdy mounting location for the gauge panel, usually next to the existing gauge panel (Figure 1).
2. Using the gauge panel mounting bracket as a template, mark the mounting screw hole locations. Center punch and drill two  $\frac{1}{8}$ " diameter holes.
3. Position the gauge panel to the mounting surface and secure with 2 self-tapping screws.

## II. MOUNTING THE SOLENOID

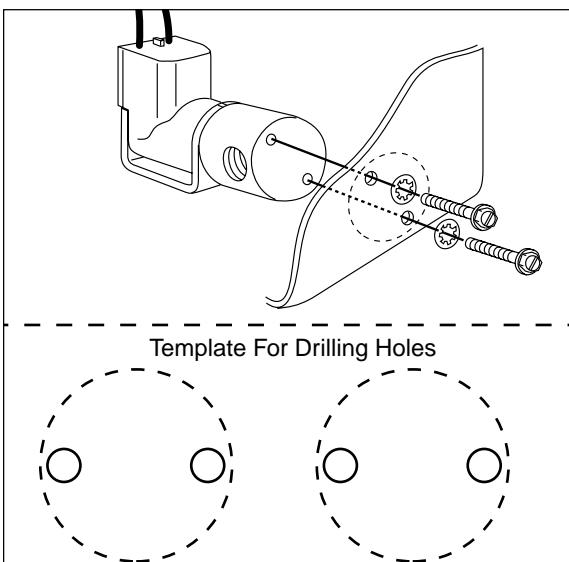
1. Install the fittings to the solenoids as shown in Figure 2. One port requires the use of  $\frac{1}{8}$ " N.P.T. straight fitting, while all the other ports take male run tees (Figure 2).
2. Select a convenient mounting location for the solenoid, which provides protection from the elements. Using the template provided in Figure 3, center punch the holes, remove the template, and drill two  $\frac{3}{16}$ " holes. Use the supplied hardware for solenoid mounting (Figure 3).

## III. WIRING THE ELECTRICAL CONNECTIONS

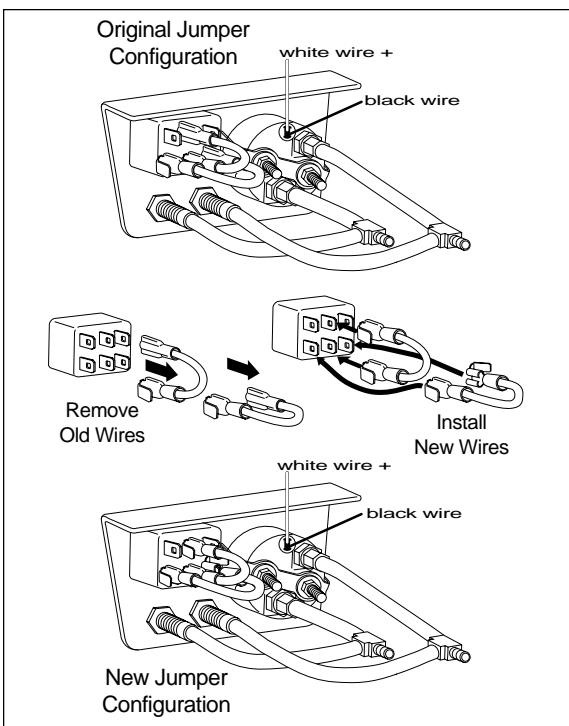
1. Two new jumper wires are provided with this kit to replace the ones on the existing gauge panel. Remove the leads from the compressor and from the power source, noting which terminal on the gauge panel each lead is connected to. Remove the old jumper wires and install the new ones (Figure 4). Connect the leads from the power source and the compressor.
2. Determine the amount of wire needed to connect the two gauge panels. Cut and strip the wire, attaching female blade connectors on both ends. Install one end on the male blade connector attached to the top center terminal on the original gauge panel, and install the other end on the male blade connector attached to the bottom center terminal on the new gauge panel (Figure 5).
3. Determine the length of the second wire need to connect the 2 panels. Strip both ends and attach female blade connectors, in this case installing them on the male blade connectors on the lower left terminal of the original gauge panel and the lower right terminal of the new gauge panel (Figure 5).
4. Route the small red power wire for the illuminated gauge to an accessory power source. Attach the small black wire to an adequate ground.

## IV. WIRING THE SOLENOIDS

1. Determine the left and the right solenoids. One wire from each needs to be grounded and one routed to the toggle switch on the gauge panel.
2. Determine a good ground and cut one wire from each solenoid to reach the ground area. Use one of the self tapping screws to ground the ring terminal.
3. Measure the length of wire necessary to route from solenoid to gauge panel. If it exceeds 24", use a butt connector and additional wire. Attach a female blade connector to each wire and connect the left one to terminal 4 on the toggle switch and the right one to terminal 6 (Figure 6).



**Figure 3**



**Figure 4**

## V. CONNECTING THE AIR LINES

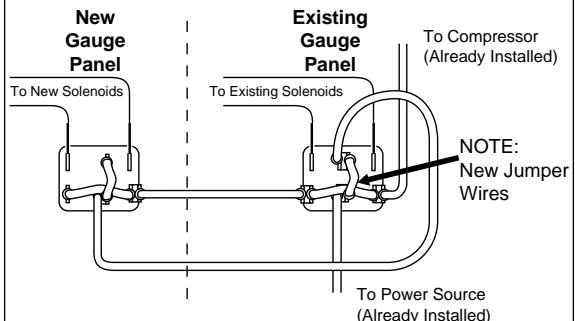
1. Remove the air pressure from all air cylinders. Take the core out or use a tire gauge to bleed off the air pressure.
2. Note: Keep air line away from heat (exhaust system, etc.) and moving chassis components. Secure air line to frame with nylon tie straps provided.
3. Use a standard tube cutter, a razor blade, or very sharp knife to cut the air line already installed between each air cylinder and inflation valve. A clean square cut will ensure against leaks. Install a tee (Figure 8). Follow this procedure for air line leading to the other air spring and inflation valve.
4. Measure the distance from the left hand tee to the driver's left side solenoid. Cut the air line to the proper length and install on last leg of tee previously installed between the air spring and the inflation valve.
5. Route the left hand air spring air line along the frame and secure with nylon tie straps. Push the air line into one leg of the tee on the left solenoid (Figure 2 & 8).
6. Measure distance between left hand solenoid and control panel. Cut sufficient air line and attach one end into last leg of tee on left solenoid and route air line to left hand gauge and control panel (Figure 1 & 2).
7. Repeat steps for right hand side of the vehicle.
8. Select a point in the air line between the compressor and the original solenoids, at which to install a tee. This will provide air for the new set of solenoids (Figure 7).
9. Cut the air line and install a tee (Figure 8).
10. Measure distance between the new solenoids and the tee. Cut a length of air line and install one end on the last leg of the tee.
11. Route air line to tee fitting installed in one of the ports in the solenoids. Attach air line as shown in Figure 8.
12. Use sufficient air line to connect the to both solenoids. Caution should be used not to kink air line. Attach air line as shown in Figure 8.
13. Turn on ignition switch. Push toggle switch to the left and watch pressure increase on the left air gauge. Inflate to 100 p.s.i. Push switch to the right and inflate right side to 100 p.s.i. Inspect each connection with a soap and water solution. If a leak is found in the fittings, reduce air pressure to zero and tighten threaded connections or remove air line, cut off one inch and reinstall.

## VI. USING THE LEVEL INFLATION CONTROL

Your motorhome is equipped with front and rear air springs. The following procedure is a guide to assist in leveling the motorhome to provide the best possible ride and handling.

1. Fill the air springs to 100 p.s.i. maximum. The pressure can be increased from the dash control or the inflation valves located just ahead of the rear wheels.
2. Position the motor home in a level spot and reduce the pressure on the high side until the vehicle is square side to side. This will compensate for the extra load created by holding tanks, generators and other weight placement.
3. Both units can now be reduced equally to level the motor home from front to rear. Generally, the vehicle will ride best when the rear springs are slightly arched.

**Gauge Panel Relay Switch Diagram**



**Figure 5**

To Driver Solenoid

To Passenger Solenoid

To Compressor

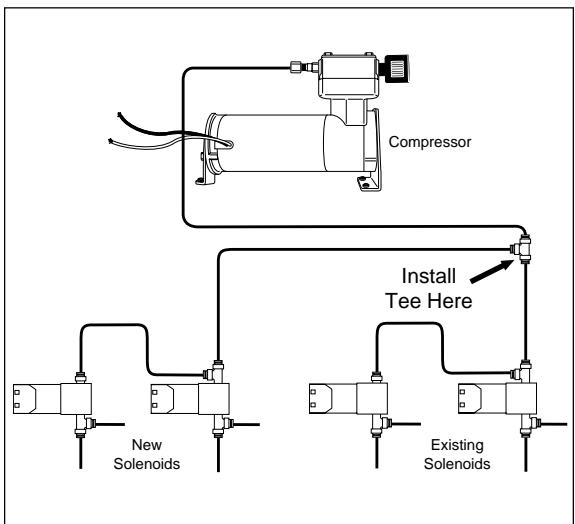
To Fuse and  
Accessory Connection  
in Fuse Panel

To Passenger  
Solenoid

To Driver  
Solenoid

NOTE: Shaded wires are factory-installed jumper wires, and should not be altered in any way

**Figure 6**



**Figure 7**

- Start with a higher pressure and decrease in five pound increments to determine the best ride and handling for your particular vehicle.
- Increases in pressure can be made to compensate for additional load and trailers, etc. Higher pressures can be used when the vehicle is in storage to relieve the leaf springs.

## VII. OPERATING FROM THE CAB

The air springs should be inflated to the specified air pressure as discussed in the air spring inflation procedure.

Whenever load and weight distribution change, simply adjust the pressure in the air springs to maintain a level vehicle. Through use of the level control system the air springs can be used to compensate for an uneven campsite and uneven load distribution. The air pressure is manually controlled individually by the control panel located on the dash.

- To inflate the air springs and raise that side of the motor home, depress the toggle switch on the control panel. The compressor will turn on automatically to increase the pressure as indicated on the gauge. Once the desired pressure is reached release the button and the compressor will shut-off (Figure 9).
- To deflate the pressure and lower that side of the motor home, depress the down button to deflate to desire pressure (Figure 9).

## VIII. TROUBLESHOOTING

Check the inflation pressure weekly, air spring bellows will permeate (loss of pressure through the rubber wall) at the approximate rate of 3-4 p.s.i. per week. Leakage at a higher rate indicates a leak.

To find a leak:

- Inflate the system to 100 p.s.i.
- Spray all fittings with a solution of  $\frac{1}{5}$  dish soap to  $\frac{4}{5}$  water.
  - Check inflation valve: valve core and air line connections. If leak is found in the valve core, tighten. It may be replaced with standard tire valve core. Fittings sometime only need tightening.
  - Check elbow fitting where threaded into bellows (all threaded connections must have pipe sealant applied) and air line connection. If a leak is found where elbow is threaded into bellows, remove the fitting and clean thoroughly and apply fresh liberal coat of pipe sealant. If a leak is found in the barbed fittings, reduce air pressure to zero and tighten threaded connections or remove air line, cut off one inch, and reinstall.
- Spray bellows to determine if leak exists. The bellows are not repairable and must be replaced if a leak is found in them.
- If leak still cannot be found deflate and remove entire unit. Inflate to 15 p.s.i. only and submerge in water.
- If leakage is suspected in the control panel, inflate the system to 100 p.s.i. and follow steps above. The fittings at the tee and back of the control panel should also be checked with soapy solution. Most leakage can be cured by disassembly, inspection and reassembly of fittings.
- If compressor fails to function, check 20 amp fuse and ground connection. Repair and replace as necessary.
- If electric motor runs, but compressor doesn't function check to make sure solenoid valves are opening correctly.

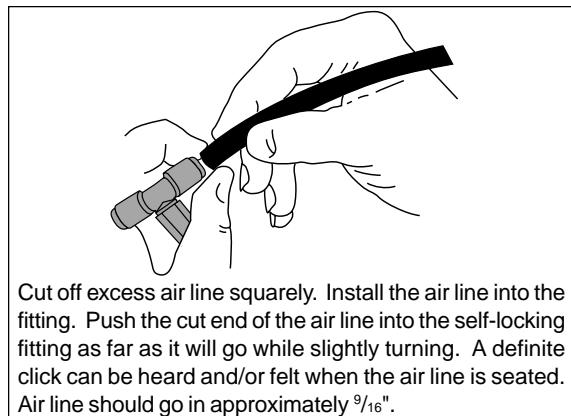


Figure 8

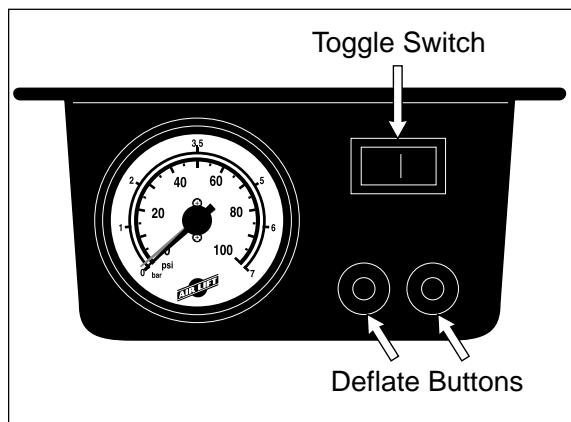


Figure 9



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