



Equalizer Systems  
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## Troubleshooting Guide- Air Bag Inflate/Deflate February 2010

**Symptom:** Chassis suspension system (air bags) does not inflate with an “All Retract” command or the suspension (air bags) does not deflate when an “Auto-Level” command is initiated.

**Summary:** The leveling controller output is used to change the position of the chassis master air dump valve. The controller output signal, inflate or deflate, typically has a two(2) minute duration. Wire colors and locations are dependant on the controller type and detailed in following diagrams

**Important Note:** The Auto-Level controller output is used to change the position of the chassis master air dump valve. This valve, however, is air pilot operated and therefore requires both adequate system air pressure and electrical signal from the controller in order to change position. The controller output signal lasts for two minutes from the time the “All Retract” button is pressed. If the primary chassis air system pressure is below the minimum threshold, air pressure will not be available to the secondary air system to shift the position master air dump valve even if controller signal is present.

**Lack of system air pressure, during the two minute duration of the inflate signal, is the most common cause of air bags not inflating.**

**Therefore, it is recommended that the coach be started prior to retracting the jacks.**

### **Trouble-Shooting:**

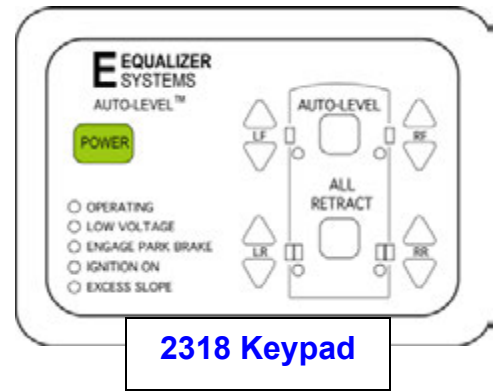
Troubleshooting is dependant upon the type of controller platform and the brand of motorhome (style of wiring harness installed). Please see the following examples for proper diagnosis.

**Note: Perform all troubleshooting with a multi-meter, not a test light!**

## Troubleshooting:

**New Platform Controllers (2319, 2519, 2730, 2755)  
All utilize 2318 Keypad**

## Four Winds International Products



Equalizer Systems Auto-Level controllers interface with the chassis air system through a 4-pin connector that utilizes three (3) wire connections. This connection is a “break out” of the main leveling harness and is located in the pump area and represents the end of the Equalizer Systems supplied components regarding the air suspension.

Verify appropriate signal voltage at the 4-pin harness connector.

- Deflate= +12V on the Gray wire, 0 V present on Purple. (In relation to chassis ground)
- Inflate= +12V on the Purple wire, 0 V present on Gray.

If appropriate signals are present at the four pin connector, the issue is downstream in the chassis air system. If signals are not present at the four pin connector, test for same outputs at the leveling controller. If present, a harness issue exists. If a signal is not present, the controller output has failed and the controller needs to be replaced.

**4-pin connector (located at pump)**

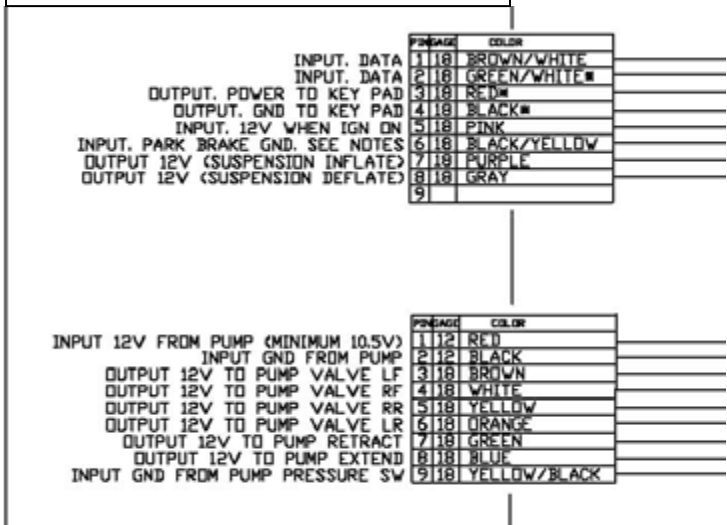
COLOR	GAGE PIN
GRAY	18 1
PURPLE	18 2
BLACK	18 3
	4

GRAY = 12V FOR TWO MINUTES TO DEFLATE AIR SUSPENSION INITIATED BY THE AUTO LEVEL COMMAND.

PURPLE = 12V TO INFLATE AIR SUSPENSION INITIATED BY ALL RETRACT COMMAND.

BLACK = GROUND

### Auto-Level Controller



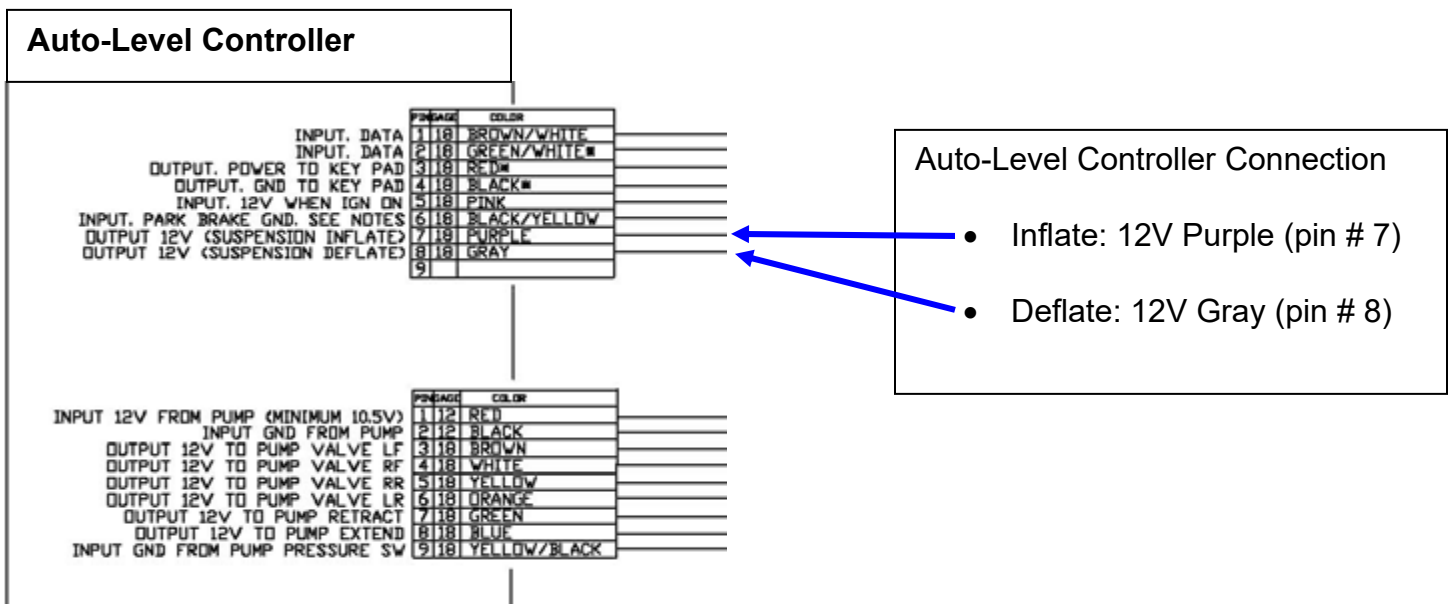
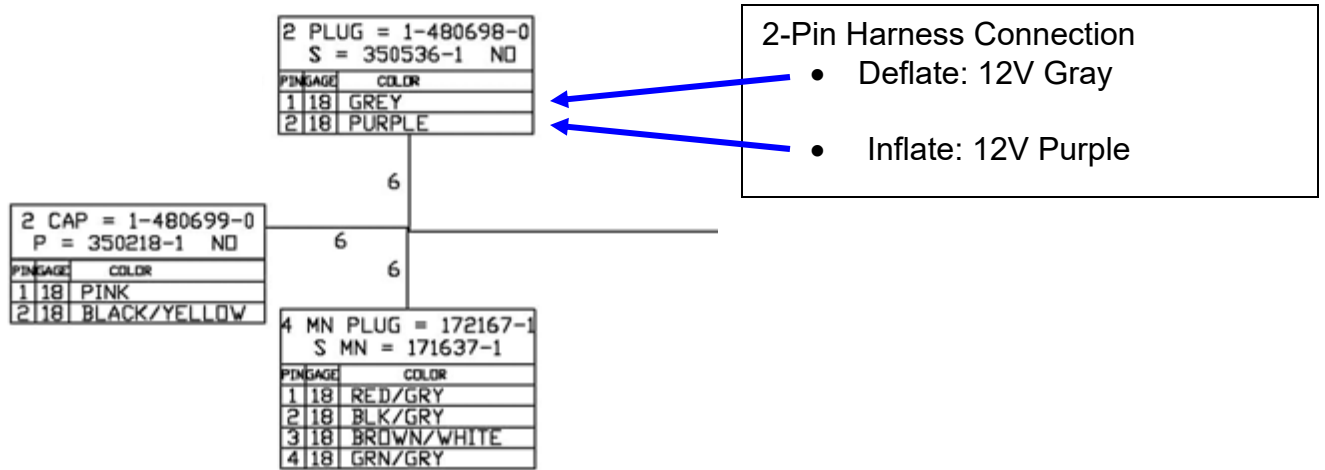
### Auto-Level Controller Connection

- Inflate: 12V Purple (pin # 7)
- Deflate: 12V Gray (pin # 8)

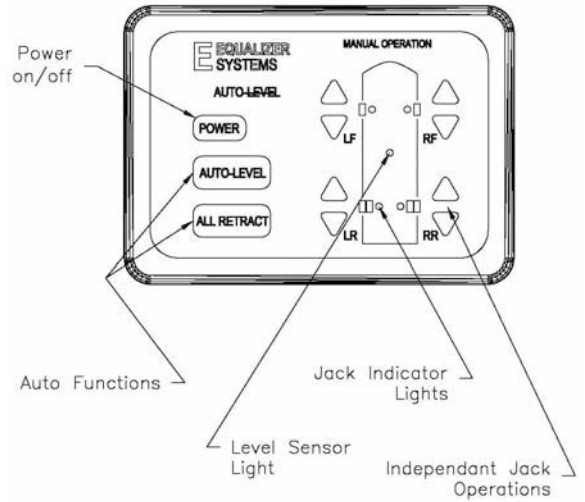
## Forest River/ Travel Supreme/ Entegra Products

Equalizer Systems Auto-Level controllers interface with the chassis air system through a 2-pin connector. This connection is a “break out” of the main leveling harness and is located a short distance from the keypad on the keypad harness extension and represents the end of the Equalizer Systems supplied components regarding the air suspension.

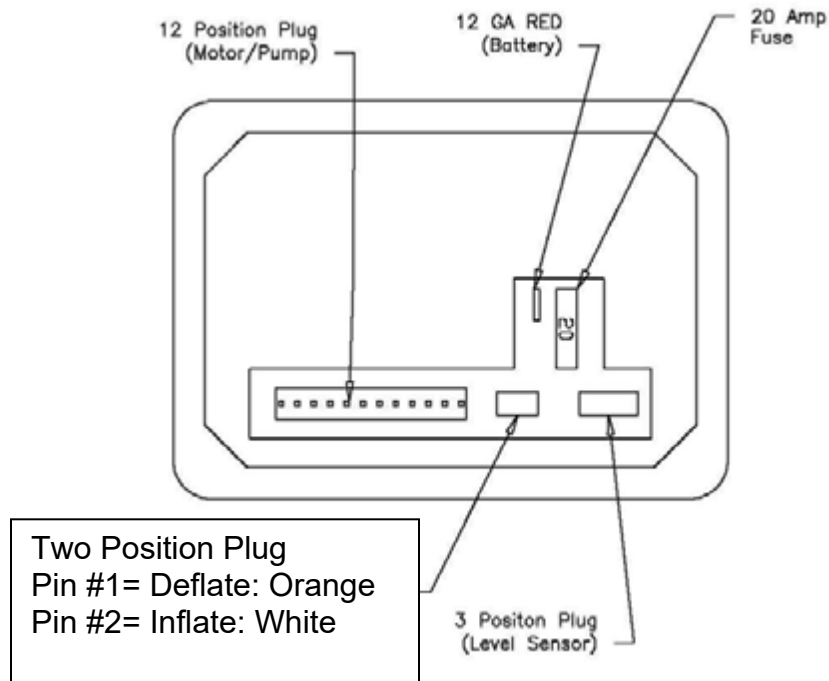
Note: On certain controllers, the signal to inflate/deflate the airbags may be delayed for approximately 20 seconds (TS/ Entegra 2745 controller).



**Troubleshooting:  
Panel Style Controllers (1703, 1934, 2057, 2058)  
and Toggle switch style controller panels**



Equalizer Systems Auto-Level controllers interface with the chassis air system through a 2-pin connector located on the rear of the dash mounted control panel.



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Over the years of running a mobile RV repair service, having a dedicated place to access service manuals for all the different appliances and components found on RVs was something that I always had a desire to create.

I hope this resource makes your RV repairs easier, as it has mine, but please be careful and follow proper safety practices when attempting to repair your own RV.

If in doubt, please consult with a professional RV technician!



DARREN KOEPP - OWNER, MY RV WORKS, INC.

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