



## 2010 43QGP Allegro Bus

8/19/2012

**SIXTY-THIRD** - coach modification – **FINAL TAG AXLE DUMP VALVE CONFIGURATION**. Nineteen months into ownership of this coach and the Tag Axle Dump System is **FINALLY** operating as it should, I cannot say as designed because in my opinion the Powerglide Tag Axle Allegro Bus chassis as it is built has a serious design flaw. It took five trips to Red Bay to correct a serious chassis issue.

1. First trip, the coach was sold stating it had a 15,600# front axle. Checking the components I was able to prove to Tiffin the coach actually had a 14,600# front axle. Tiffin agreed to order the necessary parts to upgrade the front axle.
2. Second trip, installed the necessary front axle components to upgrade the front axle, with new wheel ends and air bags.
3. Third trip, after weighting the coach we found the automatic proportioning valves were not operating to distribute the correct air pressure to the tag axle air bags. The coach was too heavy on the front axle and too heavy on the tag axle. The cure was to replace the automatic proportioning valves with manual proportioning valves, with the operating pressure set to 35 PSI. In order to prove the tag axle air bags were not properly dumping either by automatic command (when backing the coach) nor when the manual switch was depressed an air pressure gauge was installed in the plumbing of each of the tag air bags.
4. Fourth trip, found the tag axle dump valves were not consistently operating to dump the tag axle air bags, they should automatically dump when reversing (backing) or manually dump with a switch when cornering. I explained to Tiffin based on research of the installed valves the OEM dump valves were not designed to operate under 50 PSI. After Tiffin contacted the dump valve manufacturer (Parker Pneumatics) Parker confirmed the valves were not designed to operate under 50 PSI. Our coach requires the manual proportioning valves be set no higher than 35 PSI preferably at 30 PSI to properly balance the coach weight. With 30 PSI in the tag axle air bags the coach weight is 15,000# on the front axle, 20,000# on the drive axle and 4,600# on the tag axle.

Tiffin ordered the correct valves “E5” Low Watt from Parker. When the valves were received by Tiffin two valves were to be shipped to me for my installation. Gary Harris told me the valves would come with everything necessary to install them. The “E5” valves were received without wiring harnesses these “E5” valves have a three pin 15MM connector which is not the same harness as the OEM valves.

The two “E5” valves were installed with jury-rigged connector’s to get the coach weight under control.

5. Fifth trip, after calling Gary Harris about the “E5” wiring connector problem I was told on our next trip to Red Bay Tiffin would correct the wiring. After arriving at Red Bay after spending several days attempting to explain what was needed to Gary Harris the Powerglide Electrical Engineer (Chris) came over to the service center to fix the wiring. Finally I was able to SHOW Chris what the connector problem was. Tiffin did not have the correct connectors and was not capable of understanding what I was communicating to them, until I was able to convince Chris to go to the parts bin and get a new valve. When Chris came back with a new valve he was able to comprehend (SEE) the wiring problem.

Chris called Parker that afternoon and had the correct connectors shipped over-night. The connectors were delivered without the wiring harness to Tiffin. I told Tiffin just give me two connectors I would take care of building the two valve harnesses.

Yesterday the final work was completed on installing the new wiring harnesses now the coach’s weight is properly balanced the tag axle dump system operates the way it should have when the coach left Red Bay the first time.

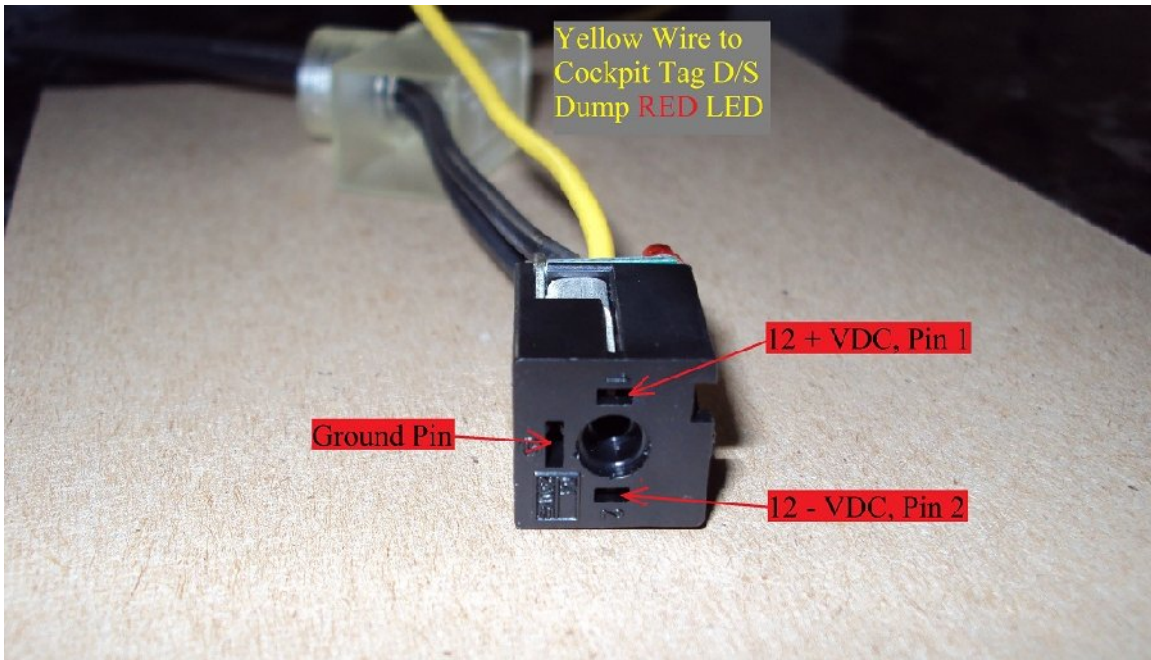
**As stated five trips to Red Bay to correct this issue. The worst part of all of this, as of last month Tiffin has not made ANY Powerglide chassis design changes to the tag axle Allegro Bus.**

For anyone attempting to have their Powerglide coach’s tag axle air system modified to correct this design problem the following parts are necessary.

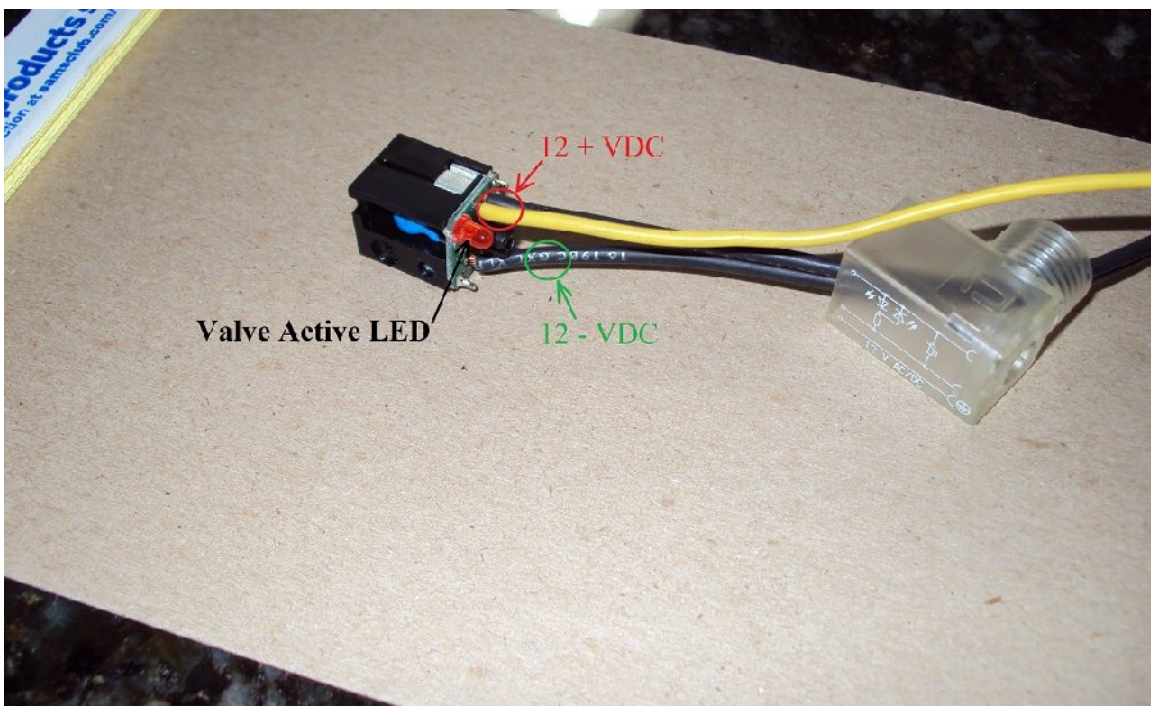
2 - Manual Proportioning Valves, Part Number R119

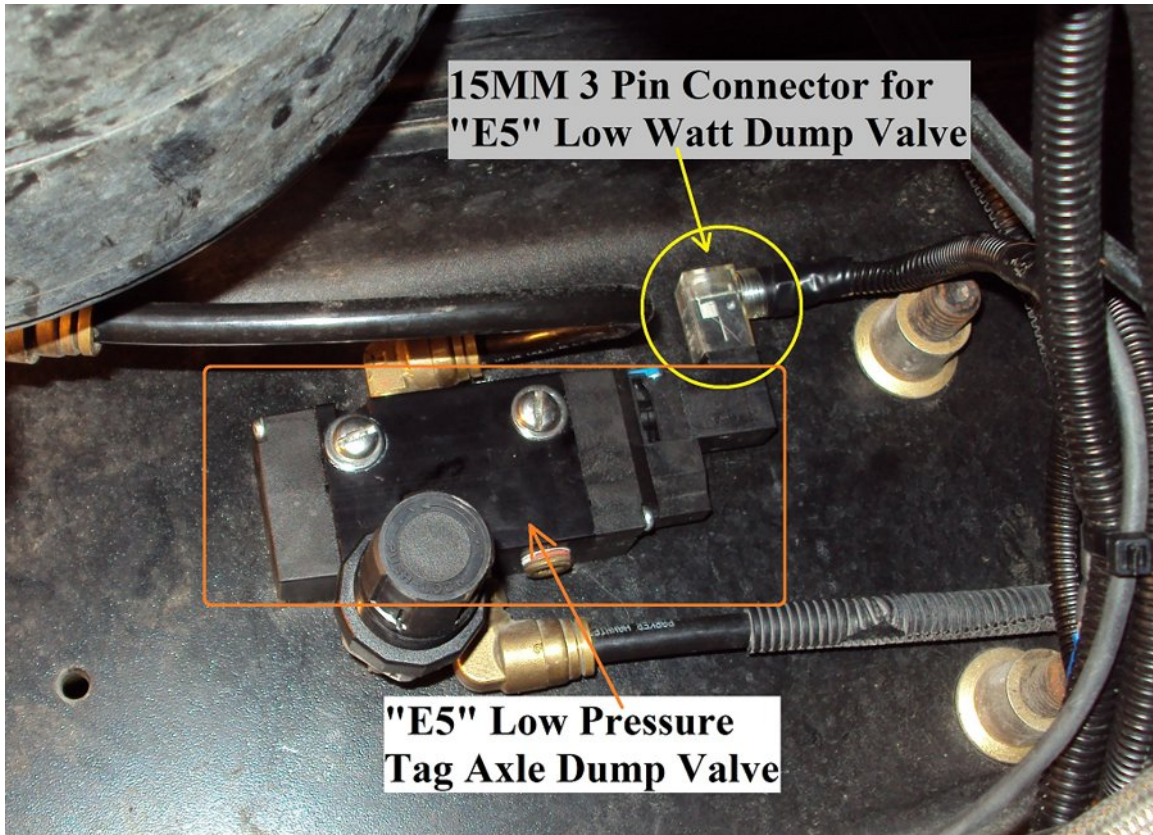
2 - “E5” Low Watt Tag Axle Dump Valves, Part Number B511BD545C

2 – 15MM 3 Pin connectors for the valves.



The above and below photos are of the 15MM 3 Pin connector required to properly connect the new “E5” valves. This passenger side harness has an additional third wire (Yellow) connected to the 12 + VDC connection, Pin 1. The wire is routed to a dash panel in the cockpit where a LED is mounted. This allows visual confirmation of the activity of the tag axle dump valves. When the dash LED is illuminated the dump operation is active. There are two LEDS one wired to each dump valve’s connector.





There is not much else I can add to this modification. I may not be the best at explaining myself as I have found out with Tiffin. If I can show Tiffin a photo of my problem they seem to comprehend the problem faster than me attempting to explain the same problem in words.

For a complete listing of other files relating to this topic, check these files.

“Conversion to Manual Proportioning Valves”.

<http://www.tiffinrvnetwork.com/crusingator/ABmod/MOD-38-0.pdf>

“Low Operating Pressure Control Valves”.

<http://www.tiffinrvnetwork.com/crusingator/ABmod/MOD-59.pdf>

“Tag Axle Air Suspension System”.

<http://www.tiffinrvnetwork.com/crusingator/ABmod/MOD-61.pdf>