

New Gen Cascadia with Cruise Inop and Brake Lights on Due to Double Check Valve Mounted Improperly

Discussion created by Nahum Veach on Jul 25, 2018
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New Gen Cascadia with the brake light problem, last six of vin JL1052 and miles on unit 48,552. This unit came in for cruise control not working. Found on test drive with computer hooked up that when cruise would stop working that brake pedal would show depressed even though it was released. We thought it had a faulty brake light switch because when it would not read correctly the normally closed 3.5 psi switch would read open. We changed the brake light switch and found the normally open side had excessive resistance (switch was faulty). We then found that the normally closed side of the switch would read open when pedal was released and brake lights would be stuck on (with new switch installed). We suspected another faulty switch. We found that when this would happen, that if we unplugged the orange 1/4 application line from outside of the pass thru it would have a small amount of air trapped in it. Once line was unplugged and the pressure was released, brake lights would turn off and the switch would read correctly. So we had to find out what was causing the air to be trapped in the 1/4 application line. First we found that the abs modulator valve at the trailer protection valves was not exhausting when the pedal was released (as compared to multiple other similar trucks). Replaced the abs modulator valve, now it exhausts when pedal is released, but air still trapped in application line, closing the stop lamp switch contacts. We contacted FTL support and started a case looking for advice. Support suggested a foot valve. Before we condemned the foot valve, wanted to prove air was staying in any of the lines off of the foot valve. Found that the green line did not have air on it when "broken", but the red air line did. We found if we bypassed the double check valve for the trailer hand valve by hooking the two 3/8" red air lines together that it would function correctly and the brake lights would not stick on. So we installed new double check valve think that it was sticking. we found it still was having same issue. We found that how the double check valve was mounted that when the brake pedal was released and the air would exhaust from the system the double check valve being mounted vertically it would close and trap a small amount of air in the system. The valve is a Bendix valve so we contacted Bendix tech support and gave them the part number of the valve, and told them what we thought was happening, and suspected the valve is mounted incorrectly. They advised that the part number we gave them it needs to be mounted HORIZONTALLY because it is a non-bias valve (does not have a return or centering spring inside). We mounted the valve horizontal and it fixed the problem.

