

2011+ LML Allison line-pressure controller

Installation instructions

BT DieselWorks – March 2014

1. Disconnect both batteries.
2. Disconnect the 80-pin TCM connector. It may be easier to remove the whole TCM first in order to get better access to the connector.
3. Remove the plastic TCM connector cover and unwrap some of the harness electrical tape.
4. Locate the DARK BLUE wire that goes to Pin 74 on the 80-pin TCM connector.
5. Cut the DARK BLUE wire, but leave enough slack on either end to re-splice in the wires from the line-pressure controller.
6. Route the long gray wire from the line-pressure controller through the firewall and over to the TCM connector. Be sure to route the wire where it will not interfere with any moving parts or come within range of any hot surfaces.
7. Locate the RED wire coming from the line-pressure controller. Connect this RED wire to the “TRANSMISSION SIDE” of the DARK BLUE wire that you cut in step #5. Highly recommend soldering, or butt-splice connectors with heat-shrink tubing. (SEE DIAGRAM FOR DETAILS)
8. Locate the BLACK wire coming from the line-pressure controller. Connect this BLACK wire to the “TCM SIDE” of the DARK BLUE wire that you cut in step #5. Highly recommend soldering, or butt-splice connectors with heat-shrink tubing. (SEE DIAGRAM FOR DETAILS)
9. Be sure the connections and harness are both taped up securely and the wire is routed neatly away from the serpentine belt and cooling fan.
10. Replace the plastic cover on the TCM connector, mount the TCM back in place, and be sure the 80-pin TCM connector is firmly locked back into place.
11. Find a suitable mounting location under the dash for the line-pressure control box and mount it securely. Be sure that none of the wires interfere/get tangled in the steering column, accelerator pedal, or brake pedal linkages. TAKE EXTRA CAUTION AROUND ANY YELLOW WIRES/CONNECTORS, AS THESE ARE AIRBAG SYSTEM RELATED PARTS.
12. Locate a fused IGNITION-HOT power source. You must use a source that is +12v hot when the ignition switch is in RUN and CRANK. (IE, a source that does not momentarily turn ‘off’ when the key is turned to ‘start’)

13. Connect the PINK wire from the line-pressure controller to the fused ignition hot power source. (SEE DIAGRAM FOR DETAILS)
14. Locate a solid clean ground. Connect the BLACK/WHITE-STRIFE wire coming from the line-pressure controller to a solid ground point. (SEE DIAGRAM FOR DETAILS)
15. Disconnect the accelerator pedal connector and locate the DARK BLUE wire going to the accelerator pedal connector Pin #5.
16. Crimp the "T-tap" wire splice onto the DARK BLUE wire in the accelerator pedal harness. (SEE DIAGRAM FOR DETAILS)
17. Connect the DARK BLUE wire coming from the line-pressure controller to the wire-tap. Reconnect the accelerator pedal connector and secure wiring so it does not interfere with pedal movement.
18. Find a suitable mounting location for the line-pressure controller push-button switch and LED status indicator light. You may have to remove the driver side plastic knee panel. Mount the LED and toggle switch securely.
20. The GRAY wire coming from the line-pressure controller module is the switch signal wire. This wire must be hooked up to a standard momentary push-button switch. A "on/off" toggle switch will NOT work. The switch must be a spring-loaded momentary switch. Hook the gray wire to one terminal of the momentary switch. Hook the other terminal of the switch to GROUND. When the gray wire gets grounded momentarily, it signals the line pressure controller to cycle through the two operating modes. DO NOT HOOK THE SWITCH TO +12volts!!
19. Double check all connections, wire routing, and replace any panels that were removed.
20. Reconnect batteries, turn ignition on, and check for proper operation, as described in the **"OPERATION INSTRUCTIONS"** below. **NOTE: If the TCM throws a P0960, P0961, P0962, or P0963 code, double check the connections at the TCM, and double check that you do not have the BLACK and RED wires mixed up/incorrectly swapped where they are spliced into the DARK BLUE wire at the TCM.**

Operation instructions

When the truck is running in factory mode, the LED will be off. Line pressure is factory controlled.

1. When the switch is pushed once, the LED will light up RED and the controller will go to "AUTOMATIC" mode. This will allow the controller to automatically control line pressure based on throttle position. At less than 90% throttle, transmission line pressure is factory controlled by the TCM. Once throttle position goes above 90%, the LED will turn

GREEN, and line pressure controller will automatically immediately force the transmission to maximum line pressure to increase power holding capacity. When throttle position drops below 90%, line pressure will automatically drop back to factory settings/TCM controlled and the LED will turn back to RED. In other words, "RED light = automatic standby" "GREEN light = force max line pressure".

2. If you press the button one more time, the line pressure controller will go to "full time max line pressure", meaning the line pressure will be commanded to full at all times, regardless of throttle position. The LED will turn steady GREEN, indicating max line pressure is active.
3. To return to factory mode with TCM-controlled line pressure, press the button again. The LED will turn off, indicating that the line pressure controller is "off" and in standby.

