SS 3125-FTL XMC 20amp and 5amp High Side Drivers (Digital Output) Load Sensing

NOTE: There is now XMC software that will correct for the body builder optional LED lights being illuminated dimly with key on lights off (note this option ordered through a 353-XXX data code) , so using a resister in parallel with the affected circuit is no longer required.

For the XMC1 (Model Year 2023 vehicles) software package 81Z-008, this is now available to the field via Diagnostic Link update. A customer with an XMC and the 81Z-008 software package can now connect to Diagnostic Link and they will get a message at the top of the screen about an XMC software update being available. Updating the XMC to the newest software fixes the glowing LED issue only.

For the XMC (Model Year 2024 vehicles) software package (81Z-010), this is now available to the field via Diagnostic Link update. A customer with an XMC and the 81Z-010 software package can now connect to Diagnostic Link and they will get a message at the top of the screen about an XMC software update being available. Updating the XMC to the newest software fixes the glowing LED issue only.

Applicable Vehicles

New Cascadia and M2 Plus vehicles with XMC Modules

Symptoms

Customer accessing 20 amp or 5 amp high side drivers (digital outputs) from the expansion module (XMC) can experience unintended functionality (such as LEDs illuminated dimly) when the ignition is on. Depending on how the feature is written for the output driver, customers may also experience unintended functionality with other interlocks such as doors open (wakeup) condition.

Issue

The XMC 20 amp and 5 amp high side drivers, use load sensing on their digital outputs. Customers installing a consumer (such as an LED) that uses very low amperage (typically less than 1 amp) can encounter unintended functionality from the XMC output (example as stated in the symptom LED on very dim).

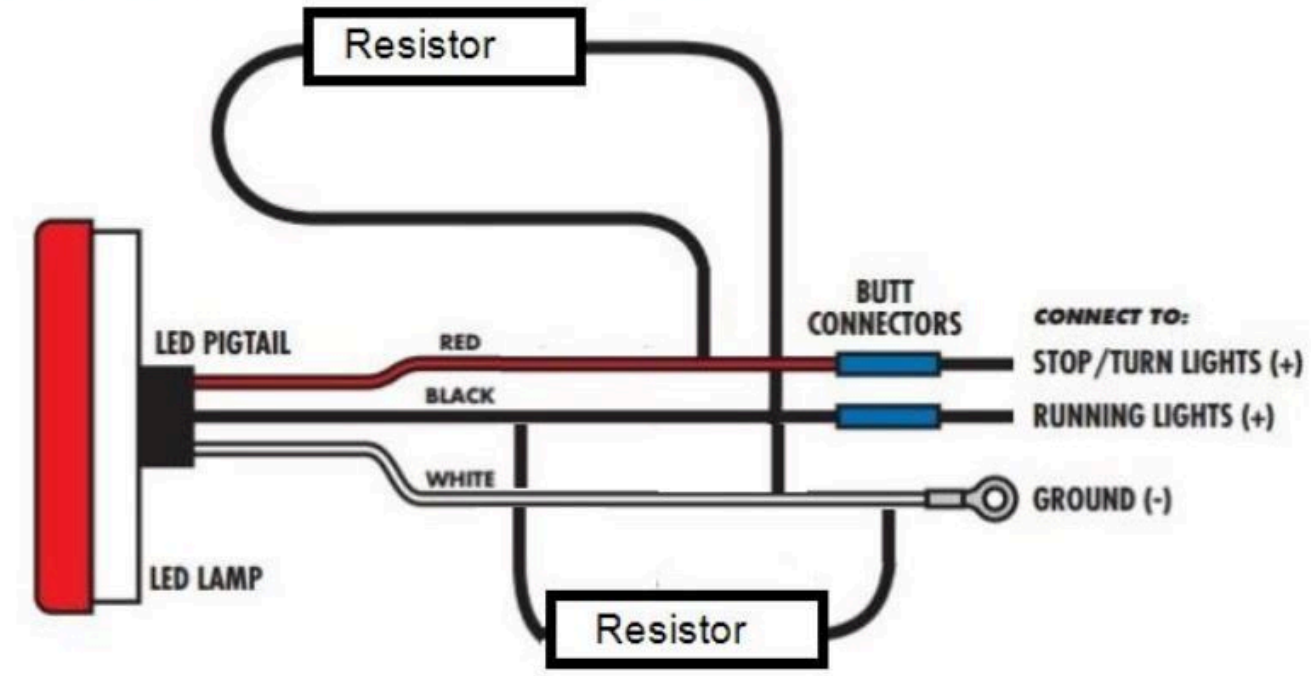
This is due to the Internal diagnostic design of the XMC for load detection (dtc's) with the higher current outputs, during an off condition.

Solution

When encountering an unintended functionality of a 20 amp or 5 amp high side drivers, as a result of a low current consumer being used, resistance can be added to the circuits to eliminate the sensing voltage being observed by the system. The adding of a 3W 100ohm resistor between the power source and the ground, hooked in parallel the consumer will be enough resistance to eliminate the unintended condition. The image below provides an example of how the resistors would be added.

NOTE: Engineering is targeting 2024 XMC to have programing within the module that would allow for the turning off of the load sensing feature (open loads). Currently the programming would only apply to the new XMC modules moving forward and would not be backwards compatible

Example of how the resistors would be installed in Parallel with the lamp



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