Service Bulletin

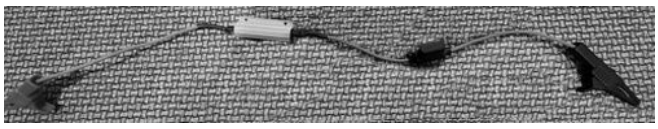
Bulletin No.: 24-NA-229
Date: April, 2025

INFORMATION

Subject: Information on Use of Picoscope and PicoLog for Battery Draw Monitoring/ Intermittent Dead Battery

Brand:	Model:	Model Year:		Build Date:		Engine:	Transmission:
		from	to	from	to		
Buick	Enclave	2020	2025				
	Encore		2022				
	Encore GX		2025				
	Envision						
	Envista	2024					
Cadillac	CT4	2020	2025				
	CT5						
	CT6		2020				
	Escalade Models		2025				
	XT4						
	XT5						
	XT6						
Chevrolet	Blazer	2020	2025				
	Camaro	2020	2024				
	Colorado	2020	2025				
	Corvette	2020	2025				
	Equinox	2020	2025				
	Express	2020	2025				
	Silverado 1500	2020	2021				
	Silverado 1500 LTD (RPO J21, VIN Digit 5 = W/Y)	2022	2022				
	Chevrolet Silverado 1500 - New (RPO J22, VIN Digit 5 = A/D)						
	Silverado 1500	2023	2025				
	Silverado 2500HD/ 3500HD	2020	2025				
	Suburban						
	Tahoe						
	Traverse						
GMC	Acadia	2020	2025				
	Canyon	2020					

Brand:	Model:	Model Year:		Build Date:		Engine:	Transmission:
		from	to	from	to		
	Hummer EV	2022					
	Savanna	2020					
	Sierra 1500	2020	2021				
	Sierra 1500 - Limited (RPO J21, VIN Digit 5 = 8/9)	2022	2022				
	Sierra 1500 - New (RPO J22, VIN Digit 5 = H/U)						
	Sierra 1500	2023					
	Sierra 2500HD/ 3500HD	2020	2025				
	Terrain						
	Yukon Models						

Involved Region or Country	North America
Condition	Some customers may comment on an intermittently dead battery.
Cause	This condition may be caused by wiring shorts, opens, or malfunctioning components that may wake-up the module and intermittently drain the battery. - These types of conditions can be difficult to diagnose, and this procedure allows a technician to leave a computer hooked up to monitor for random draws over longer period of time to isolate these random events.
Correction	Use Picoscope and the PicoLog application to help identify and isolate intermittent draws.  6746220 Attached is diagram that shows how to properly assemble a "shunt resistor" that will be used to monitor current draw using voltage drop across a known resistance of 0.1 Ohms. • 2 Banana plug terminals • 1 Mini Fuse Holder • 1 20A Mini Fuse • 1 Resistor (0.1 Ohm) - Tech will be required to construct a shunt using a resistor. These resistors are widely available from many sources.

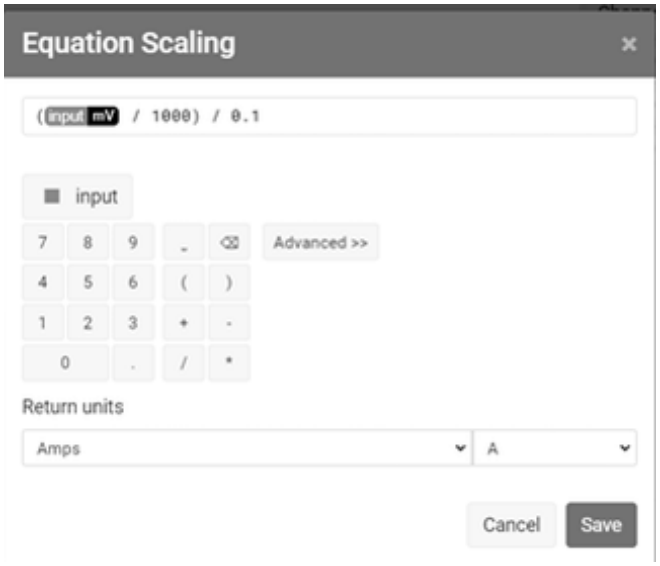
	- The resistor should be a 0.1 Ohm resistor between 50 and 100watt capacity.

Important: Service agents must comply with all International, Federal, State, Provincial, and/or Local laws applicable to the activities it performs under this bulletin, including but not limited to handling, deploying, preparing, classifying, packaging, marking, labeling, and shipping dangerous goods. In the event of a conflict between the procedures set forth in this bulletin and the laws that apply to your dealership, you must follow those applicable laws.

Picoscope Set-Up

Important: For additional information, refer to *https://www.picotech.com/library/knowledge-bases/data-loggers/picolog-6-data-logging-software#:~:text=PicoLog%206%20data%20logging%20software%201%20Real-time%20data,Up%20to%204%20independent%20graph%20axes%20More%20items*.

Channel “A” will be set up to monitor battery voltage.



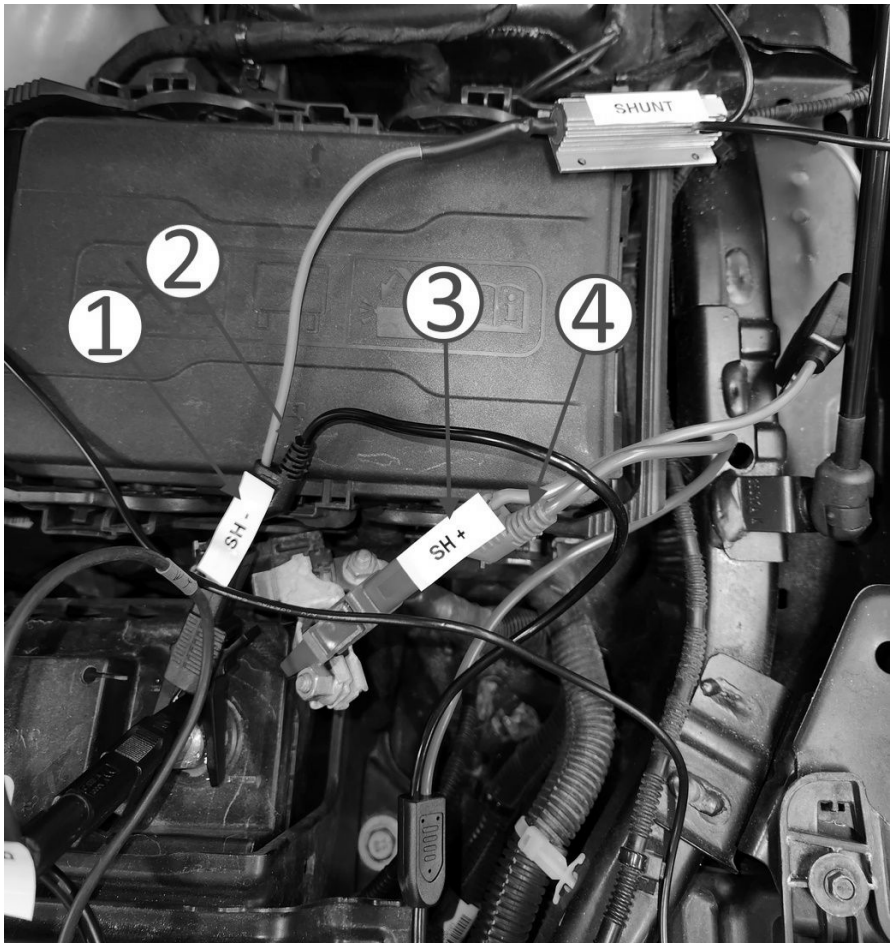
6746195

Channel “B” will be set up using an equation as shown, to measure voltage drop across a known resistance to accurately measure current draw using a shunt resistor.

Channel “C” is an amp clamp that can be moved around the vehicle to narrow down where the current draw is originating from.

Picoscope Connection

Caution: Do not attempt to turn the vehicle “on” or start the vehicle with the shunt in place. The shunt resistor will be damaged, and the fuse will open if the vehicle is turned on with the resistor in place.



6749605

Assemble the shunt resistor as shown in the shunt diagram. Banana plugs will be plugged into banana alligator clips and this shunt resistor will be connected between the battery and the negative lead on the vehicle. The negative lead from channel “B” (2) will be connected to the negative post on the battery (1) which is connected to the shunt resistor. The positive lead, from channel “B” will be connected to the negative cable (4) which is connected to the other end of the shunt resistor (3).

6749737

The amp clamp on channel “C” can be placed on the power wiring for any suspect module or component on the vehicle as the technician sees fit. This will allow us to target suspect circuits. This amp clamp may not provide accurate draw input if the amperage draw is particularly low, *but it will show draw in a suspect circuit,* which will confirm the draw seen at the shunt to target the suspect module, component, or wiring.

Channel “D” can be configured as an additional amp clamp or other device as needed.

6749765

The use of PicoLog software will allow a dedicated computer to monitor current draw on a vehicle for an extended period which allows us to capture draws that occur very infrequently.

Version	2
Modified	Released October 17, 2024 Revised April 10, 2025 - Added the Terrain to Model section.

Keywords: pico, test, testing, drain, parasitic, load.