

In all the papers on this site the author has tried to be very careful to base his results on experimental evidence and to provide copious technical references to support his explanations of sudden unintended acceleration. However, electric vehicles have been difficult to write about because of the lack of information available in this new industry. Therefore, the author admits that he has made some incorrect assumptions in writing papers about these types of vehicles that have resulted in incorrect explanations for sudden acceleration. Nevertheless, he has learned a lot about these vehicles as time has progressed and will continue to search for the true cause of sudden acceleration in these vehicles.

Based on feedback from NHTSA and the comments of some readers of his papers, the author agrees that the following papers on this site provide incorrect explanations for the cause of sudden acceleration in electric vehicles:

1. “Sudden Unintended Acceleration in an All-Electric Vehicle” – 2/27/15
Tesla says this paper is wrong because it states incorrectly that torque is controlled by controlling the motor voltage instead of the motor current. The author agrees with Tesla that torque is controlled by controlling the motor current, but believes that Tesla drew an incorrect conclusion from reading his paper. The author agrees, however, that his description in the paper of how the FOC algorithms work and the need for voltage compensation are not developed in enough detail to prove his proposed cause of sudden acceleration.
2. “Tesla’s Sudden Acceleration Log Data – What it Shows” – 5/1/18
The cause of sudden acceleration described in this paper is incorrect because the author assumed that the two APP sensor outputs were merely offset by a constant voltage. Several readers have pointed out that Tesla’s actual APP sensors are constructed differently, so that one sensor has twice the voltage output of the other sensor. This difference in sensor gains allows the detection of an offset in the ground voltage that the author describes and prevents sudden acceleration from happening by the proposed cause.
3. “Tesla Regen, Brakes, and Sudden Acceleration” – 6/1/20
The cause of sudden acceleration described in this paper is incorrect because the author based his explanation on EDR data that appeared to show that the car was decelerating while the APP sensor output was increasing. It was later found by NHTSA that the accelerometer data in the EDR was incorrect due to a sign change error in the EDR reader software. Therefore, the corrected EDR data showed that the car was actually accelerating while the APP sensor data was increasing. This nullified the author’s explanation that sudden acceleration was caused by the drag torque control function in the brake system and instead indicated that it was caused by the driver stepping on the accelerator pedal. NHTSA says that the incorrect deceleration value in the author’s paper was the result of the author’s error in reading the EDR accelerometer data

incorrectly. But it was really the error of the company that wrote the EDR software. This error in the EDR software has now been fixed.

The first two papers above remain available on this site because they contain material that might be helpful to other researchers. The third paper above no longer appears on this site because the author has chosen to comply with a cease and desist order issued by a company mentioned in the paper.