NATIONAL TRANSPORTATION SAFETY BOARD
Office of Research and Engineering
Materials Laboratory Division
Washington, D.C. 20594

June 1, 2018

FIRE INVESTIGATION FACTUAL REPORT Report No. 18-044

A. ACCIDENT INFORMATION

Place	:	Fort Lauderdale, Florida
Date	:	Tuesday, May 8, 2018
Vehicle	:	2014 Tesla Model S
NTSB No.	:	HWY18FH013
Investigator	:	Sheryl Harley

B. ACCIDENT SUMMARY

About 6:46 p.m. (local time) on Tuesday, May 08, 2018, a 2014 Tesla Model S passenger vehicle occupied by an 18-year old driver and two teenage passengers was traveling southbound in the 1300 block of Seabreeze Boulevard in Fort Lauderdale, Broward County, Florida. At this location, Seabreeze Boulevard is also State Route A1A, comprising two northbound traffic lanes and two southbound traffic lanes. The opposing traffic lanes are divided by a center turn lane and the posted speed limit is 30 mph. In the Tesla's direction of travel, there is a left-hand curve posted with an advisory speed of 25 mph. As the driver negotiated the curve, the vehicle departed from the roadway, mounted the sidewalk and collided with two masonry walls adjacent to a residence on the west side of the roadway. According to witnesses, the vehicle erupted into flames after the impact with the walls. Following the impact, the vehicle traveled back across the travel lanes before coming to rest on the east side of the road, where it remained engulfed in flames. As a result of the crash, the driver and front seat passenger were killed. The unbelted rear seat passenger was ejected from the vehicle. He was taken to an area hospital for treatment of his injuries.

According to police, the fire department initially extinguished the post-crash fire. However, while attempting to load the vehicle onto a flatbed wrecker, the vehicle reignited several times requiring the fire department to remain at the crash scene to extinguish the subsequent fires.

C. DETAILS OF THE EXAMINATION

The Tesla passenger car exhibited deformation and fractured components consistent with a high-speed collision. The deformation and fractured components were concentrated on the passenger side of the vehicle and in particular the forward portion of the passenger side (figures 1- 6). The post-crash fire damage was also concentrated in the

forward passenger side of the vehicle and extended to the driver's side and rear passenger seat. Both wheel rims and brake rotors from the passenger side of the vehicle had separated from the vehicle. Portions of these two rims and rotors were observed among the loose vehicle debris.

The vehicle's battery pack had separated from the rest of the vehicle (figure 7). Without disturbing the debris piled on top of the battery pack it was evident that the collision had liberated some battery modules from the overall battery pack. Each battery module consists of multiple battery cells. One of the separated battery modules exhibited signs of having been involved in a fire (figure 8). Another separated battery module that did not appear to have been exposed to fire was sitting inside a fabric material resembling a baggage compartment liner (figure 9). This material resembling baggage compartment liner did not exhibit fire damage.

Joseph Panagiotou
Fire Protection Engineer

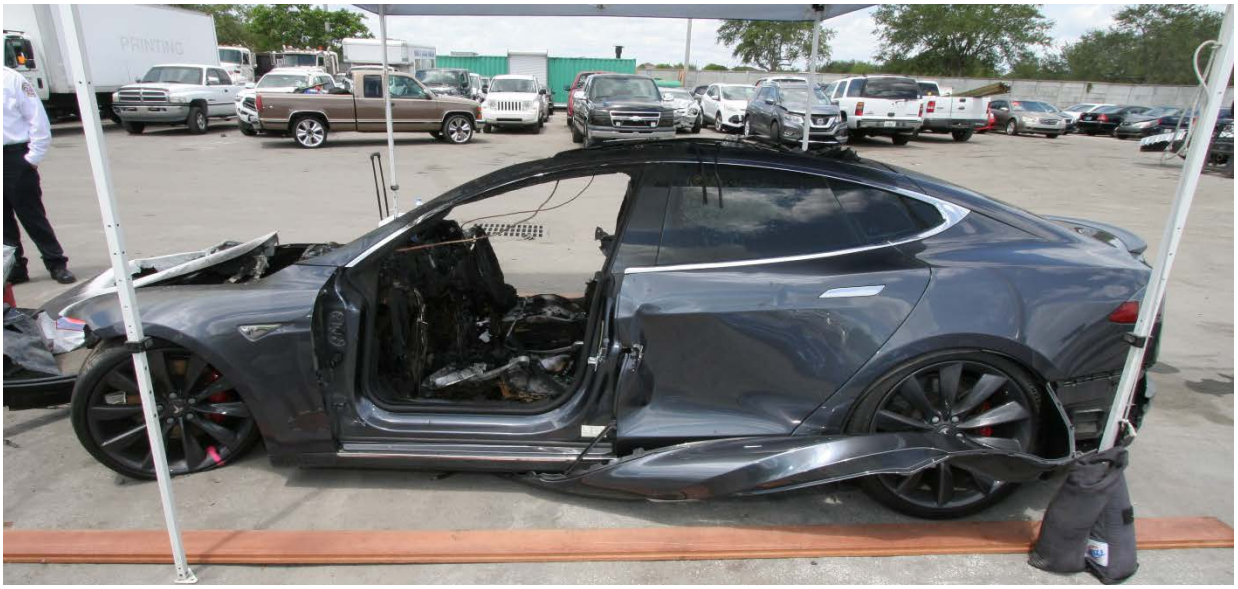

Figure 1: Driver's side of the vehicle

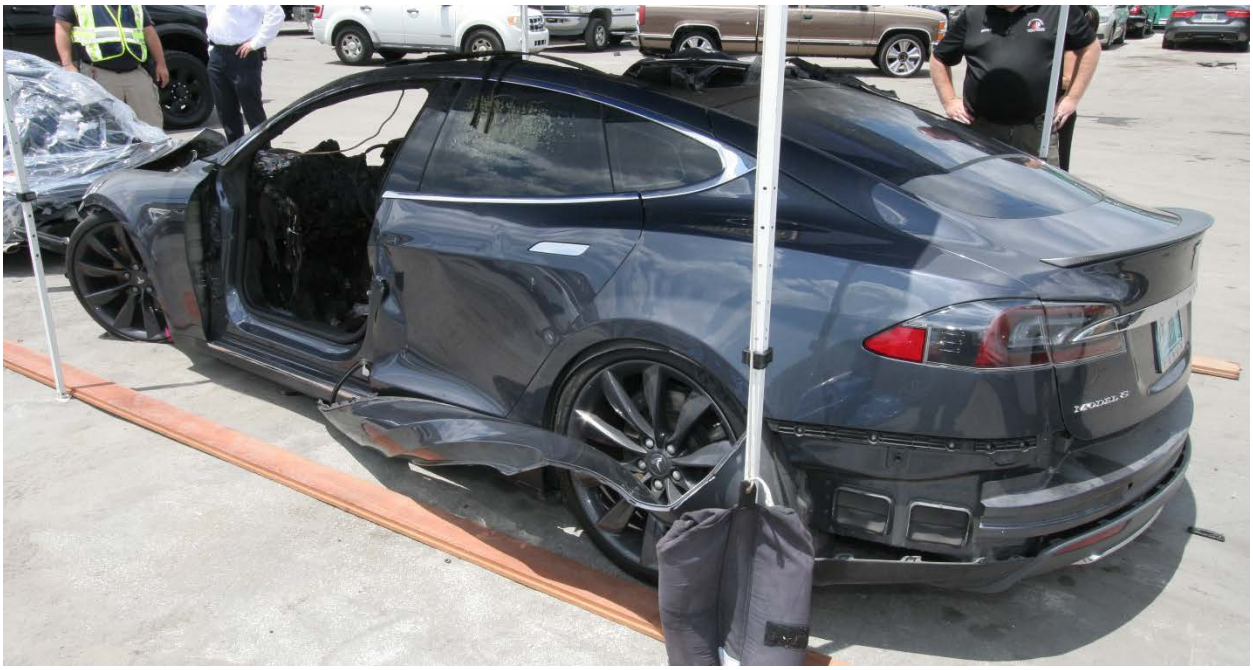

Figure 2: Rear driver's side corner of the vehicle.

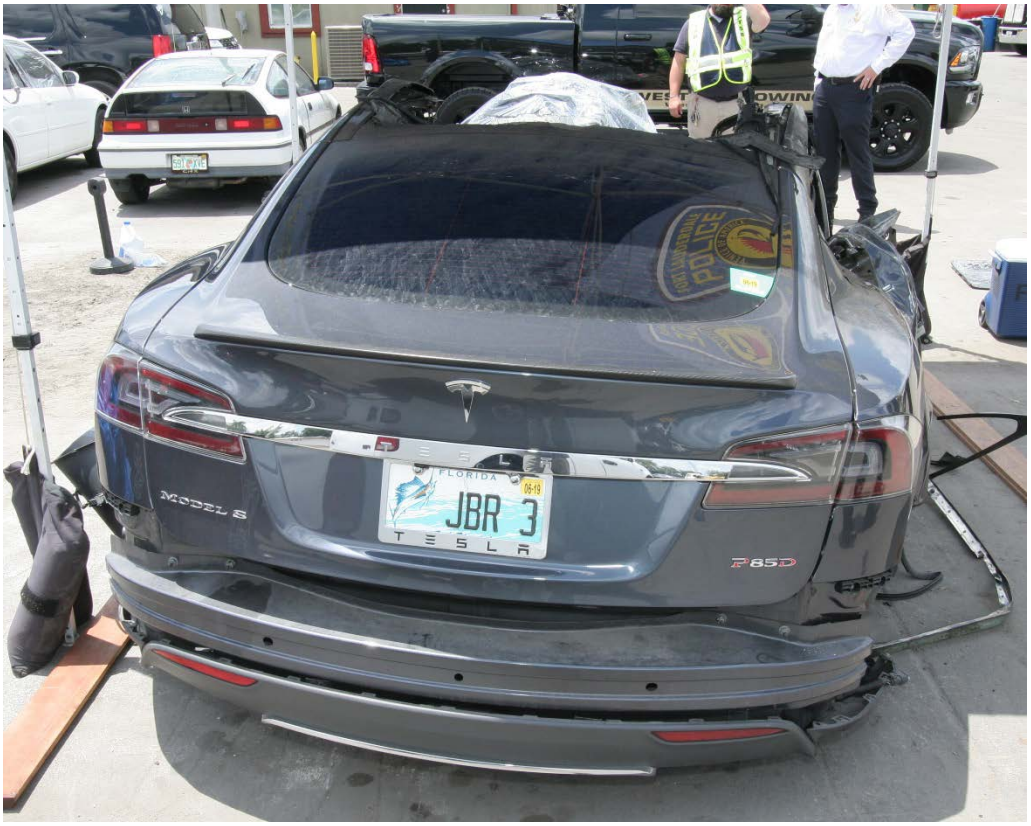

Figure 3: Rear of the vehicle.

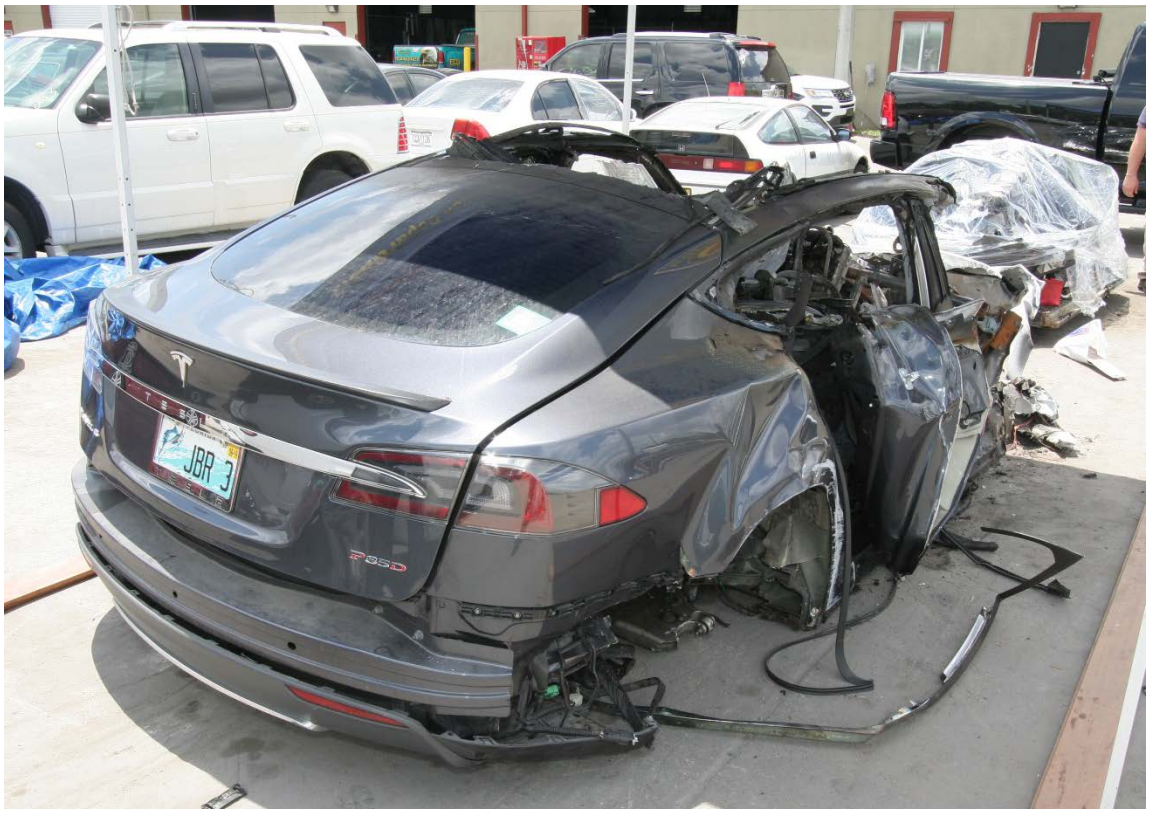

Figure 4: Rear passenger side corner of the vehicle.

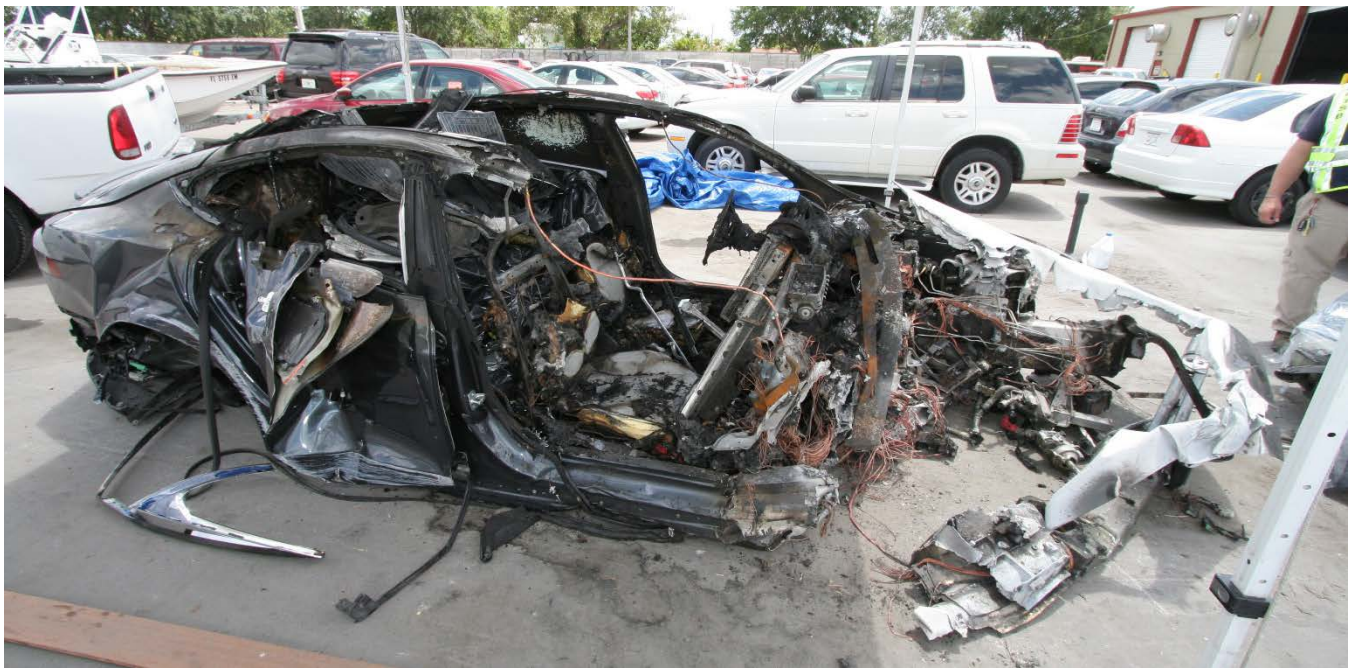

Figure 5: Passenger side of the vehicle.

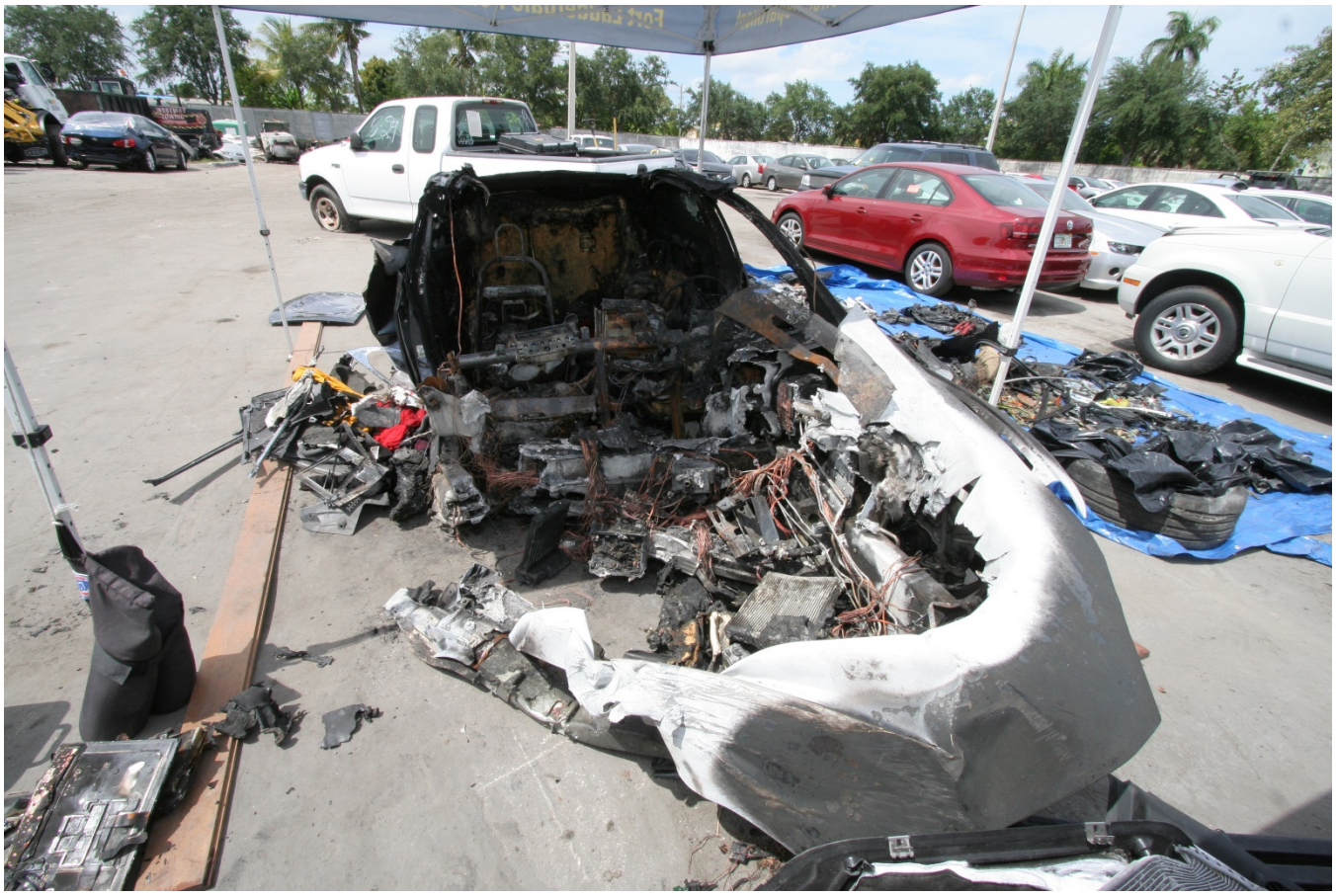

Figure 6: Forward passenger side of the vehicle.

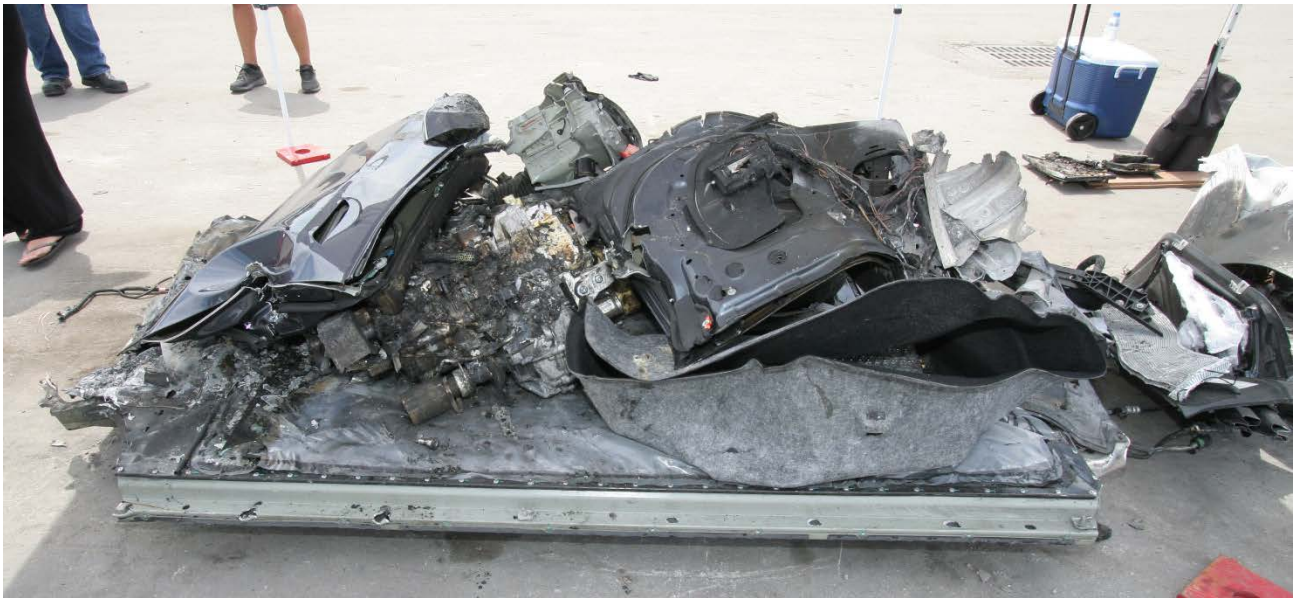

Figure 7: Battery pack with vehicle debris piled on top.

Figure 8: Fire damaged battery module.

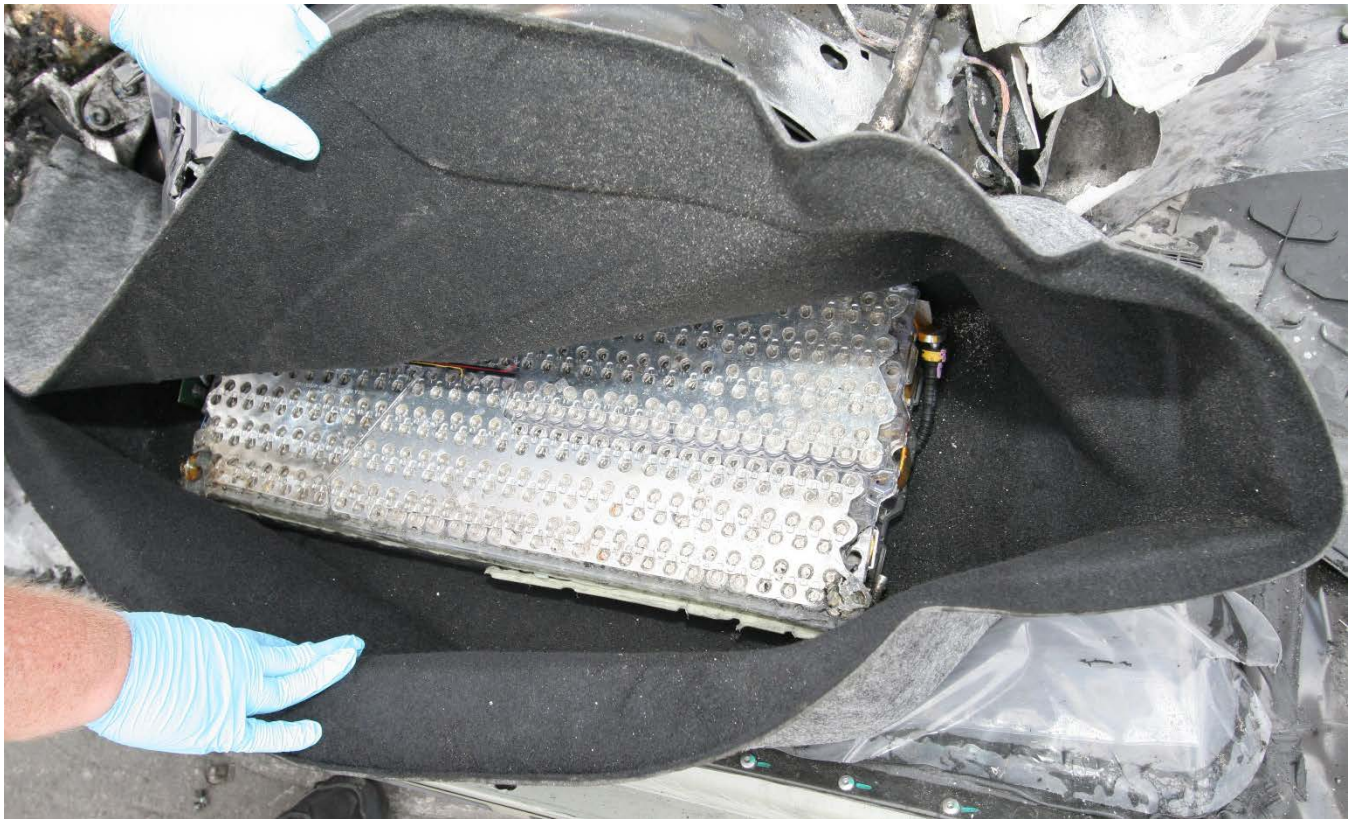

Figure 9: Battery module without fire damage.