

TESLA SAFETY REPORT- v. First Draft Public Wiki Produced for NHTSA and other governmental agencies

Tue, 03 Dec 2013 16:00:00, newstips66, [category: elon-musk, category: energy-dept-slush-fund, category: housing, category: idea-theft, category: lithium-batteries, category: political-bribes, category: senator-insider-trading, category: sony_pictures, category: worldnews]

TESLA SAFETY REPORT- Vers. 1.04B - Public Wiki Produced for NHTSA and other governmental agencies- SEE LATER VERSION 3/14/14

Draft- 1.05 (Document under construction - not final)- First Final Draft Due to NHTSA **1/14/14**. For Public Comment and Review

Please refer all agencies to this document link at:

<http://somo1.com/2013/12/06/tesla-safety-report-vers-1-05-public-wiki-produced-for-nhtsa-and-other-governmental-agencies/>

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- NHTSA Demand Letter
- Additional data
- Video Evidence

(Supplemental material now numbers over 10,000 pages and will be submitted directly to regulators in order to avoid congesting this site)

1. Overview

Regulators asked Tesla to detail the possible consequences of battery pack damage to the Model S and how those problems were addressed in the Model S design. NHTSA also asked Tesla to describe the "limits of that design to prevent damage to the propulsion battery, stalling and fires". While electric cars have been in commercial production since the 1800's, and have been widely released by major automobile manufacturers, only the Tesla vehicles have experienced the fire issues, relative-to-inventory, in this magnitude. The questions and data required by NHTSA, in the letter from NHTSA, contained below, demands disclosure of certain Tesla information which will reveal conflicts in previously provided Tesla data. Reporters and public interest law firms will be using the FOIA process to disclose the responses, required under federal law, in the public interest.

2. Issues.

- Dense packing non-automotive lithium cells
- Self ignition from exposure to air
- Self ignition from exposure to water
- Burning lithium ion, plastics and human skin
- Inability to extinguish lithium ion fires
- Failure to provide disclosures to buyers
- Failure to provide required CO2 fire extinguishers to buyers
- Toxic carcinogenic chemicals released in Tesla Fire- Danger to passengers
- Toxic carcinogenic chemicals released in Tesla Fire- Danger to bystanders
- Brain damage from toxic chemicals released in Tesla Fire- Danger to passengers
- Brain damage from toxic chemicals released in Tesla Fire- Danger to bystanders
- Lung damage from toxic chemicals released in Tesla Fire- Danger to passengers
- Lung damage from toxic chemicals released in Tesla Fire- Danger to bystanders
- Birth defects from toxic chemicals released in Tesla Fire- Danger to passengers
- Birth defects from toxic chemicals released in Tesla Fire- Danger to bystanders
- Home and office conflagration as warned in Tesla's own patents
- BMS (Battery Management System) programming, ie: Vampire issues, etc.
- Danger to factory workers exposed to internal materials in Tesla Lithium ion cells
- Electronic door locks failing. Could passengers be locked inside car in fire?
- Previous seat safety recall
- Miscellaneous owner complaints about technical issues and relation to safety

Additional...

[TESLA_DEFECTS_MULTIPLY](#)

[VAMP3A](#)

VAMP2

VAMP3

IMPACT

Volt_Strucg_492x0_q85_crop-smart

ELECTRO3

ELECTRO

teslador

ELECTROCHEM2

LITHIUM_ION_DANGERS

SOCIO5

BOEING_LITHIUM_ION_EXPLOSION

LITHIUM_ION_BURNS_HOME_DOWN

LITHIUM_ION_EXPLODE2

TESLA_BLAST_CHAMBER

AIRBUS_DROPS_LITHIUM_ION

LITHIUM_ion_FIRE_ELECTRIC_C

fumes

LITHIUMION

teslar2

TESLAR

TESLAR3

3. Safety Tests That Were Never Conducted and Must Now Be Conducted.

The continued failure to engage in these tests, and/or provide the results from these tests, continues to call into question the efficacy and conflicts of interest of the original testing. The batteries used by Tesla were never designed, or created, to be used in automobiles and this short-cut to cost reduction must be mitigated by the relative increase in safety reduction.

- Vehicle with **fully charged batteries** drives into 3", 4", 5", 6", 7" 8" concrete curb at 5MPH, 15MPH, 20MPH, 25MPH, 30MPH, 35MPH, 40MPH, 45MPH, 50MPH, 55MPH, 60MPH, 65MPH, 70MPH, 75MPH and then is allowed to sit, post crash, for up to 3 hours to analyze spontaneous lithium ion combustion.

- Vehicle with **fully charged batteries** drives into 3", 4", 5", 6", 7" 8" metal post embedded in road at 5MPH, 15MPH, 20MPH, 25MPH, 30MPH, 35MPH, 40MPH, 45MPH, 50MPH, 55MPH, 60MPH, 65MPH, 70MPH, 75MPH and then is allowed to sit, post crash, for up to 3 hours to analyze spontaneous lithium ion combustion..

- Vehicle with **fully charged batteries** drives into 3", 4", 5", 6", 7" 8" concrete curb at 5MPH, 15MPH, 20MPH, 25MPH, 30MPH, 35MPH, 40MPH, 45MPH, 50MPH, 55MPH, 60MPH, 65MPH, 70MPH, 75MPH and then is allowed to sit, post crash, for up to 3 hours in simulated rain storm to analyze spontaneous lithium ion combustion..

- Vehicle with **fully charged batteries** drives into 3", 4", 5", 6", 7" 8" concrete curb at 5MPH, 15MPH, 20MPH, 25MPH, 30MPH, 35MPH, 40MPH, 45MPH, 50MPH, 55MPH, 60MPH, 65MPH, 70MPH, 75MPH and then is allowed to sit, post crash, for up to 3 hours after complete immersion in water as in a hurricane or high-water event to analyze spontaneous lithium ion combustion..

- Rolling the vehicle with **fully charged batteries** in a 3 roll crash at 20MPH, 25MPH, 30MPH, 35MPH, 40MPH, 45MPH, 50MPH, 55MPH, 60MPH, 65MPH, 70MPH, 75MPH ending in the vehicle laying on it's roof and counting the number of lithium ion cells that came loose from their mounts risking burning lithium falling on passengers.

- Rolling the vehicle with **fully charged batteries** in a 3 roll crash at 20MPH, 25MPH, 30MPH, 35MPH, 40MPH, 45MPH, 50MPH, 55MPH, 60MPH, 65MPH, 70MPH, 75MPH ending in the vehicle laying on it's roof and counting the number of lithium ion cells that had their housings damaged risking burning lithium falling on passengers.
- Rolling the vehicle with **fully charged batteries** in a 3 roll crash at 20MPH, 25MPH, 30MPH, 35MPH, 40MPH, 45MPH, 50MPH, 55MPH, 60MPH, 65MPH, 70MPH, 75MPH ending in the vehicle laying on it's roof and simulating a full rain storm on the, now exposed, underside of the vehicle for 2 hours to see if lithium ion ignites when wet risking burning lithium falling on passenger and to analyze spontaneous lithium ion combustion.
- Filling the battery compartment, with **fully charged batteries**, with water, draining it and observing for 4 hours to analyze spontaneous lithium ion combustion.
- Pouring 18 Oz. soft drinks into the battery compartment, with **fully charged batteries**, and observing for 4 hours to analyze spontaneous lithium ion combustion.
- Impacting the lower quarter panel of Tesla with **fully charged batteries** on the side of the car, on each side, at the lower center of the passenger door and two feet to either side at 20MPH, 25MPH, 30MPH, 35MPH, 40MPH, 45MPH, 50MPH, 55MPH, 60MPH, 65MPH, 70MPH, 75MPH at 3", 4", 5", 6", 7" 8" so as to penetrate the battery chamber at least 4 inches and then saturating the damaged area with water and waiting four hours to analyze spontaneous lithium ion combustion.
- Forced ignition of lithium ion cells in flipped over (vehicle resting upside down on it's roof) with **fully charged batteries** and timing of penetration of smoke and flames to occupants simulated as contained within.
- Spectrograph analysis and complete full-range chemical read-out of the front metal and plastics of a Tesla on fire with **fully charged batteries** along with the lithium ion batteries. Disclosure of all known harmful chemicals in said smoke.
- Manually cutting 10 (ten) **fully charged** lithium ion Tesla battery cells in half long-ways in open air at average humidity and videotaping the results followed by dropping them in a bucket of water 60 seconds after cutting them. With the large number of lithium ion cells in a Tesla, physics and the law of averages predict that at least 10 cells will be fully ruptured in a high speed accident.

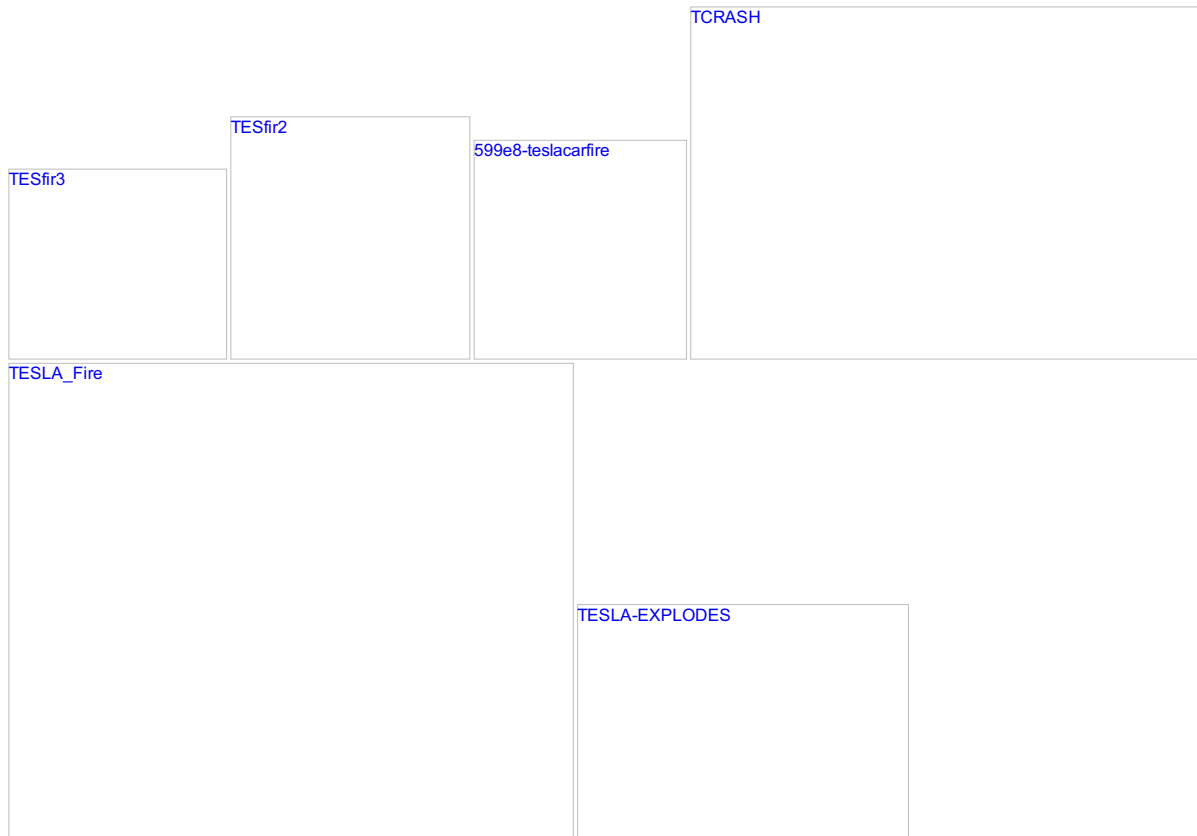
Plus such additional tests to be specified by:

The Center for Auto Safety

Davis College Engineering Department
 Denver College Engineering Department
 General Motors
 Ford Motor Company
 Automobile Dealers Association
 and other public interest safety groups

4. How many fire incidents have there been.

- Factory Fire 1?
- Factory Fire 2?
- Boston Fire?
- Half Moon Bay Fire?
- Tenn. Fire?
- Seattle Fire?
- Mexico Fire?
- Factory Prototype Fires?
- other post crash and testing fires...



smokey

blew

tesfire22

TESFIRE21

TESLAFIRE5

TESfire8

TESLA_FIRE

tesla_Fire_45

TESLA_LIES

LITHIUM_ion_FIRE_ELECTRIC_C

TESLA_BURNS

5. **Contacts to follow-up on investigations**

<http://www.nhtsa.gov/Contact>

With a copy to:

public.affairs@dot.gov

The Center for Auto Safety

Organization that informs consumers about auto safety issues.

www.autosafety.org

1825 Connecticut Ave, NW

Suite 330

Washington, DC 20009-5708

(202) 328-7700 <http://www.autosafety.org/fileacomplaint>

Criminal Investigations:

<https://tips.fbi.gov/>

with a copy to:

askdoj@usdoj.gov

antitrust.complaints@usdoj.gov

<https://wb-gop-oversight.house.gov/>

Chairman Barbara Boxer
Senate Select Committee on Ethics
220 Hart Senate Office Building
Washington, D.C. 20510
Fax: (202) 224-7416

For German Investigations:

Kraftfahrt-Bundesamt (KBA) at:
pressestelle@kba.de

and at this link: http://www.kba.de/cjn_031/nn_540136/EN/Service_en/Contact/Contact_node_en.html?__nnn=true

and by hard-copy mail to:

Kraftfahrt-Bundesamt
Stabsstelle (Office of Interdepartmental functions)
Mr. Thomas Meyer
24932 Flensburg

6. **Are Tesla drivers more likely to get in accidents than mainstream drivers?**

DRUNK

tesla-info-graphic_2400w

Tesla Driver now charged

with homicide of two in crash.

7. Original participant conflicts-of-interest created reduced safety oversight

A certain, specific, group of investors, known to the FBI, The GAO, The SEC and the Senate Ethics Committee, purchased undo influence on the previous Tesla decisions process, in order to acquire "unjust rewards" from the U.S. Treasury. These investors, coincidentally, provided funds to related campaign efforts and, shockingly, they all hold major investments in the very battery system in question.

Because of this, the American consumer has been forced to "accidentally" conduct some of these tests at great personal risk to those consumers. These risks should have been disclosed by Tesla prior to the application for their DOE loan and prior to their first contact with NHTSA. Tesla produced documents show that Tesla was aware of the dangers disclosed herein.

Appendix: Reference Data:

FROM: <http://lithium-ion.weebly.com>

The lurking threat in your car and home
Picture

"over a milion failures of this chemistry and these batteries.."

Go to <http://www.nts.gov/> and demand action:

"LITHIUM ION BATTERIES ARE MADE OVERSEAS BY CHEAP LABOR WHERE OSHA CAN'T WATCH. POOR PEOPLE MAKE LITHIUM ION BATTERIES OFF SHORE WHERE THEY ARE NOT TOLD ABOUT THE TOXIC CANCER, LIVER AND LUNG DISEASES THEY GET FROM THE MANUFACTURING PROCESS. SILICON VALLEY VC'S PUSH LITHIUM ION BECAUSE THEY CAN MAKE A HUGE PROFIT ON THE CHEAP LABOR BUILDING A BATTERY THAT SELF DESTRICTS BUILT BY WORKERS WHO DIE FROM TOXIC POISONING. CHINESE, MALAY, MEXICAN AND OTHER WORKERS, SHOULD FILE CLASS ACTION LAWSUITS AGAINST SILICON VALLEY VC'S WHO PUSH THESE BATTERIES."

TESLA EXPLODE IN FLAMES:

<http://static3.businessinsider.com/image/524c7d5369bedd842edc40a0-482-361/tesla-58.jpg>

<http://www.youtube.com/watch?v=uF18v1lxH0k>

October 2, 2013, 4:27 PM

Tesla Motors Inc. TSLA shares tanked after a video of a Model S on fire circulated on the web, prompting the electric car company to move quickly to douse the flames of bad publicity.

Elizabeth Jarvis-Shean, director of global communications at Tesla, confirmed that the vehicle engulfed in flames was indeed a Tesla but stressed that the driver walked away without injuries.

Tesla Issues Statement On Fiery Car Crash That Caused The Stock To Tank

□Mamta Badkar Oct. 2, 2013, 3:45 PM 13,469 11

tesla
Aj Gill via YouTube

Tesla's stock was down over 7% to a low of \$175.40 today, but pared some of its losses to close down 6.24% at \$180.95.

It appears that shares began to tumble in the last half hour on reports that a Tesla Model S car caught fire on Washington State Route 167.

Some speculated that the video highlights problems with the car's battery. Though others rushed to point out that the battery is located in the back of the car.

"Media finds that "Safety Investigators" (read "SHILLS") are bribed by VC's and lithium holding companies to say "nothing to see here", "lithium batteries are probably ok". Beware of NTSB "consultants" and "investigators" who are being bribed, offered after-politics high pay jobs, called up by bribed congressional staff with "suggestions", given sports tickets, handed stock in certain ventures and other bribes. Many of the "investigators" need to be put under investigation themselves!!!! When you see an investigator talking about how lithium ion is a wonderful thing, investigate them!"

The following are a variety of quotes, from across the web, demonstrating the critical nature of this public safety issue:

"Lithium ion batteries are blowing up, starting fires and, generally, destroying people's homes, cars, electronics and physical health. Boeing was just ordered to stop flying the 787 Dreamliner because it's Lithium ion batteries are catching fire spontaneously."

"A group of silicon valley venture capitalists forced/leveraged the government to buy and pay for these specific batteries, that they have stock in, in order to benefit their profit margins. Other batteries don't have these problems. They knew about this from day one but put greed ahead of safety. There are thousands and thousands of reports of spontaneous lithium ion fires but the VC's who back lithium ion pay to keep this information hushed up. Millions of these batteries have been recalled for fire risk. The VC's tried to push as many as they could before they got caught. Now they are caught. These VC's own stock in lithium mining companies too."

"Here is the Fisker Karma after it got wet and the batteries blew up. These batteries blow up JUST FROM GETTING WET! ALL of these burned up hulks are brand new \$100,000.00+ cars that just blew up and torched everything around them just because they got wet! How bad do you want a Fisker or Tesla now? Fisker's insurance company is balking at paying for this saying: "You knew this would happen".

Picture

These links show vast sets of Fisker electric cars that burst into flames just because they GOT WET:

<http://updates.jalopnik.com/post/34669789863/more-than-a-dozen-fisker-karma-hybrids-caught-fire-and>

<http://green.autoblog.com/2012/08/12/fisker-flambe-second-karma-spontaneously-combusts-w-video/>

<http://www.autoblog.com/2012/11/05/how-sandy-may-have-set-17-plug-in-hybrids-on-fire/>

<http://www.digitaltrends.com/cars/fisker-karma-spontaneously-combusts/>

<http://cbdakota.wordpress.com/2012/11/07/fisker-karmas-catch-fire-following-inundation-by-sandy/>

<http://www.engadget.com/2012/08/12/fisker-karma-hybrid-ev-second-fire/>

<http://www.techfever.net/2012/08/fisker-karma-hybrid-ev-ignites-while-parked/>

<http://evmc2.wordpress.com/2012/11/04/fisker-karma-fire-report/>

<http://fellowshipofminds.wordpress.com/2012/05/12/karma-burns-owners-mansion/>

<http://www.carbuzz.com/news/2012/11/11/Karmas-Ignite-After-Hurricane-Floods-Newark-Port-7711437/>

There are vast sets of other links proving the point.

Picture

TESLA BATTERIES EXPLODE INTO FLAMES ON PUBLIC ROAD

Picture

TESLA BATTERIES EXPLODE INTO FLAMES ON PUBLIC ROAD

Picture

TESLA BATTERIES EXPLODE INTO FLAMES ON PUBLIC ROAD

Look at this: We were just sent a link that our website showed up in this movie:

Here is another link to the movie at: <http://tinypic.com/r/7295hs/6>

Picture

Picture

HERE IS THE BATTERY YOU COULD HAVE BEEN SITTING ON TOP OF IN A TESLA

Picture

THIS IS THE TESLA MAGIC CARPET OF DOOM. THIS WHOLE THING IS FULL OF LITHIUM. YOUR WHOLE FAMILY IS SUPPOSED TO SIT ON TOP OF THIS!!!

TESLA HAS TO TEST THEIR BATTERIES IN a BLAST CHAMBER!!!!!!!:

Picture

IF TESLA SAYS THIS THING IS SO SAFE WHY DO THEY TEST IT IN A STEEL ENCLOSED EXPLOSION ROOM WITH WIRES COMING IN THROUGH BLAST HOLES!!!!???????

"TESLA ELECTRIC CARS HAVE 6800 CHANCES OF "GOING THERMAL".

"TESLA ELECTRIC CAR BATTERIES ARE MORE LIKELY TO BLOW UP." SAYS STANFORD ENGINEER, "USING LITHIUM ION IN AN ELECTRIC CAR DOUBLES THE CHANCES IT WILL EXPLODE OR GO THERMAL BECAUSE AN ELECTRIC CAR PUSHES IT FURTHER THAN ANYTHING ELSE. BOEING HAD MANY SAFETY CIRCUITS AND EVEN THOSE FAILED. THERE IS NO WAY THE TESLA SAFETY CIRCUITS WILL NOT EVENTUALLY FAIL"

"Tesla Electric cars have 6800 lithium ion batteries wedged into a box. This can create a repercussive thermal event that can set the whole car off. The TESLA 18650 batteries can be seen exploding in multiple YOUTUBE videos. It is NOT TRUE that they are "an entirely different battery" they are the same chemical compound that blows up."

"A direct quote from Tesla's patent application, below. Tesla KNEW this was going to happen and never adequately warned anybody. Tesla wrote these words in the federal papers they filed yet they never showed these words to any buyers :

"Thermal runaway is of major concern since a single incident can lead to significant property damage and, in some circumstances, bodily harm or loss of life. When a battery undergoes thermal runaway, it typically emits a large quantity of smoke, jets of flaming liquid electrolyte, and sufficient heat to lead to the combustion and destruction of materials in close proximity to the cell. If the cell undergoing thermal runaway is surrounded by one or more additional cells as is typical in a battery pack, then a single thermal runaway event can quickly lead to the thermal runaway of multiple cells which, in turn, can lead to much more extensive collateral damage. Regardless of whether a single cell or multiple cells are undergoing this phenomenon, if the initial fire is not extinguished immediately, subsequent fires may be caused that dramatically expand the degree of property damage. For example, the thermal runaway of a battery within an unattended laptop will likely result in not only the destruction of the laptop, but also at least partial destruction of its surroundings, e.g., home, office, car, laboratory, etc. If the laptop is on-board an aircraft, for example within the cargo hold or a luggage compartment, the ensuing smoke and fire may lead to an emergency landing or, under more dire conditions, a crash landing. Similarly, the thermal runaway of one or more batteries within the battery pack of a hybrid or electric vehicle may destroy not only the car, but may lead to a car wreck if the car is being driven or the destruction of its surroundings if the car is parked."

"WTF!!!!!!

Tesla's own staff have now admitted that once a lithium ion fire gets started in one of their cars, it is almost impossible to extinguish burning lithium ion material. This is Telsa's own words in THEIR patent filing, (You can look it up online) saying that the risk is monumental. Tesla has 6800 lithium ion batteries, any one of which can "go thermal" and start a chain reaction! If you look at all of the referenced YOUTUBE movies you will see how easy it is to set these things into danger mode."

"Imagine a car crash with a Tesla where these 6800 batteries get slammed all over and then exposed to rain, fire hose water, water on the roads, cooling system liquid.. OMG!! And then if, in that same accident the other car is a gasoline car... getting burned alive sounds "BAD"! Telsa is covering up the problems with its batteries."

"Lithium ion batteries have already crashed a UPS plane and killed people. Look here: <http://washingtontexaminer.com/dreamliner-fires-spark-new-doubts-about-a-green-energy-technology/article/2519353>"

More Lithium Ion Battery disasters: <http://www.forbes.com/sites/petercohan/2013/01/24/is-787s-lithium-ion-battery-hazardous-to-boeings-health/>

"AS A DEMONSTRATION OF HOW DANGEROUS LITHIUM IS, NASA IS GOING TO MAKE IT BURN IN OUTER SPACE:

"If you're along the Eastern Seaboard tonight, it might be worth your while to look at the sky this evening. NASA's Wallops Flight Facility is scheduled to launch a sounding rocket that will release "two red-colored lithium vapor trails in space."

As Space.com reports, those trails might be seen across the Mid-Atlantic and perhaps as far north as Canada and as far south as northern Florida. Space.com explains how these trails will produce a "night sky show:"

"The sounding rocket that will be used to create the two NASA-made glowing cloud trails will be a Terrier-Improved Orion. In this technology test launch, two canisters in the rocket's payload section will contain solid metal lithium rods or chips embedded in a thermite cake. The thermite is ignited and produces heat to vaporize the lithium.

"Once the vapor is released in space, it can be detected and tracked optically. The rocket will eject two streams of lithium which will be illuminated at high altitudes by the sun (which will be below the local horizon at ground level)."

In a statement, mission project manager Libby West said the launch is a test flight for two upcoming missions. It'll give scientists a view of two different methods for creating lithium vapor trails. By the way, NASA says the "lithium combustion process poses no threat to the public during the release in space."

If lithium is so dangerous it will even burn in space, why are we putting it in our airplanes and cars???????

Lithium Ion batteries blow up and burn down commercial building: <http://westhawaii.com/sections/news/nation-world-news/787-battery-blew-%E2%80%99906-lab-test-burned-down-building.html>

"Tesla and Fisker have only sold a few hundred cars, (thank god) because nobody but dicks want these overpriced eliteist toys. A regular car company sells hundreds of thousands of cars per model. Every single Tesla or Fisker sold increases the likelihood of a burn up. Those burn-ups will affect the homes, cars and lives of the people next door who never even bought one."

"Go to <http://www.youtube.com> and type into the search window:

"Lithium ion explosion" or "lithium battery and water" or "lithium ion water" and any related derivation and you will find hundreds of videos about how dangerous these batteries are. There are numerous videos of Tesla's 18650 batteries blowing up."

"This article in the LA Times sheds more light on the horrors of Lithium Ion:
<http://articles.latimes.com/2013/jan/18/business/la-fi-dreamliner-battery-20130119> "

"Lithium Ion batteries "go thermal" in peoples pockets, in your notebook, especially in your Tesla and Fisker car and everywhere else. There are thousands and thousands of articles documenting this and there is a cover-up by the VC's that fund these things to keep this fact out-of-sight.

Making Lithium Ion batteries poisons the workers who make them. It is a dangerous product. Each time the workers, particularly in Asia, realize they are being poisoned by the factory, they jack up the product. Outlaw lithium ion batteries. Demand a recall."

There are PLENTY of other energy storage solutions that do not involve the highly compromised Lithium Ion chemistry!"

"Below are a few samples of HUNDREDS of videos proving that Lithium Ion Batteries JUST BLOW UP. This is why TSA does not want them, or liquid, on planes."
Report: Galaxy S 4 Lithium Explosion Burns Hong Kong Home To The Ground:

By Stephanie Mlot July 30, 2013

A Hong Kong couple have been displaced after an exploding Samsung Galaxy S 4 smartphone burst into flames, burning their house to a crisp.

The man, identified in the original Xianguo.com report only as Mr. Du, claims that his phone, battery, and charger were all legitimate Samsung products, but that's now difficult to confirm since his home and everything in it were destroyed.

According to the translated report, Du sat on the living room sofa playing the game "Love Machine" on his charging GS4 when it suddenly exploded. In the heat of the moment, he threw the device onto the couch, which caught fire. The flames then spread to the curtains and the rest of the house, "out of control," Xianguo said.

Du, his wife, and his dogs managed to escape the house unscathed; neighbors were temporarily evacuated as firefighters fought the flames. Almost all of the couple's furniture and appliances burned to ash, the news site said, adding that their Mercedes parked outside was also damaged.

Whether or not the true cause of an entire house fire was a singular 5-inch smartphone remains to be seen, though a fire department investigation initially resulted in a report of "no suspicious circumstances."

Samsung did not immediately respond to PCMag's request for comment, but told Xianguo that it will "carry out detailed investigations and tests to determine the cause of the incident." Last year, a Galaxy S III owner in Dublin was driving in his car when the device caught fire. Cell phone safety is increasingly becoming an issue in Asia, where two cases of iPhone shock occurred within a week of each other this month. On July 11, a 23-year-old flight attendant with China Southern Airlines was allegedly electrocuted when she took a call on her Apple device while it was charging. She was reportedly using the original charger when she was killed.

Here is what the Lithium Ion Batteries did to their home:

Picture

Boeing 787 Dreamliner woes put spotlight on lithium ion battery risks

BY KEN BENSINGER, Los Angeles Times

Chances are the same kind of battery that twice caught fire in Boeing 787 Dreamliners in recent weeks is in your pocket at this very moment.

Lithium ion batteries, small and powerful, have become the electricity storage device of choice. They are everywhere — in cellular phones, laptops, power tools, even cars. They allow us to talk, email and drill longer than ever possible in the past.

But the incidents that led to the grounding of the 787 fleet worldwide, and the decision by Boeing on Friday to temporarily halt all deliveries of the plane, have highlighted a troubling downside of these energy-dense dynamos: their tendency to occasionally burst into flames.

FOR THE RECORD: Dreamliner batteries: An article in the Jan. 19 Section A on lithium ion battery safety and the grounding of the Boeing 787 incorrectly described a fire in a Chevrolet Volt automobile. The battery did not ignite spontaneously; instead it burned after a crash test damaged the vehicle's cooling system and the test car was left parked with the battery fully charged, eventually causing it to overheat. With investigators now working to determine the cause of the incidents, one on a Dreamliner on a Boston runway, the other forcing an emergency landing of a 787 in western Japan, the larger question of lithium ion safety has snapped into focus.

"Every battery can burn and every battery can be flammable," said Mike Eskra, a Milwaukee-based battery development scientist who also works as a battery fire investigator for insurers. "But lithium ion batteries are more dangerous because they store more energy. It's like a firecracker instead of a stick of dynamite."

The casualty list is long. In recent years, tens of thousands of laptop batteries have been recalled due to the risk of fire or explosion. The 400-pound lithium ion battery on General Motors' cutting-edge electric car, the Chevrolet Volt, burst into flames seemingly spontaneously while parked in 2011. And investigators blamed a cargo hold full of lithium ion batteries for a fire that caused a UPS-operated 747 to crash shortly after takeoff from Dubai in late 2010.

That crash, which killed both pilots, is one of more than 100 incidents recorded by the Federal Aviation Administration linking lithium ion batteries to onboard fires over the last two decades. This month, new rules took effect limiting the transport of lithium ion batteries in aircraft. And the FAA had long prohibited use of the technology in commercial airplanes.

That changed in 2007, when it granted Boeing permission to use the batteries in the 787 under a number of conditions to ensure safety. For Boeing the lithium ion advantage was clear.

Thanks to their chemistry, the rechargeable batteries can store as much energy as a nickel metal hydride pack that's 50% heavier, while charging and discharging faster than other battery types. That's made them attractive for military applications such as the B-2 bomber and also for use on the International Space Station and the Mars Rover.

Lithium ion batteries enabled Boeing to swap out heavy hydraulic systems in the airframe for lightweight electronics and electric motors to operate systems like wing de-icers. That's a key reason the Dreamliner burns 20% less fuel than other wide-body aircraft.

The weight and power savings are exactly what made lithium ion batteries popular in other applications. In excess of 95% of mobile phone batteries worldwide are lithium ion, and without lithium ion, laptops couldn't run anywhere near as long as they do without a recharge.

"They completely dominate the consumer market," said Vishal Sapru, energy and power systems research manager at consulting firm Frost & Sullivan in Mountain View, Calif.. He estimates that global sales of lithium ion batteries reached \$14.7 billion last year, up from \$9.6 billion in 2009, a 53% increase. Sapru expects the market to soar to \$50.7 billion by 2018. "No other battery chemistries are growing at that rate."

But lithium ion also has downsides. The batteries tend to have shorter life spans than older, more proven battery technologies. And although the price is falling, lithium ion is still more expensive than other batteries. Although some carmakers have embraced the technology, others, such as Toyota, have decided against it. Several makers of lithium ion auto batteries for electric vehicles have filed for bankruptcy last year because of weak demand.

Safety experts also have concerns. Because lithium ion batteries can store more energy, and discharge it more quickly, than other batteries, lithium ion cells can get much hotter than other technologies in the event of an overcharge or the external application of a heat source. Larger applications, such as the 63-pound batteries on the 787, incorporate multiple cells and the heat can spread rapidly from cell to cell, a chain reaction called "thermal runaway."

And while other types of batteries use a water-based electrolyte in each cell, lithium ion relies on a highly flammable solvent. When heated up, that solvent tends to vaporize, spraying the burnable gas into the surrounding air. As a result, lithium ion battery fires burn extremely hot, as high as 2,000 degrees Fahrenheit.

Those conditions were blamed for an explosion at a General Motors battery testing lab last April that caused \$5 million in damage and sent one person to the hospital. GM said flammable gas had vented from an experimental lithium ion battery that heated up during extreme testing.

"Lithium ion is very controversial in the safety engineering space," said Brian Barnett, vice president for battery technology at Tiax, a technology firm in Lexington, Mass. He spoke last month at a conference on battery safety in Las Vegas, where more than three-quarters of the presentations focused on lithium ion batteries.

The cause of the fires in the two Dreamliners has still not been determined and neither Boeing nor the Japanese company that made the batteries, GS Yuasa, have publicly commented on likely factors. Boeing subjected the batteries on the plane to thousands of hours of testing and installed numerous safety systems specific to the batteries.

"We have high confidence in the safety of the 787 and stand squarely behind its integrity as the newest addition to our product family," Boeing Chief Executive Jim McNery said Friday.

Barnett and others emphasize that it's not uncommon to see problems in relatively new technologies. But they add that most lithium ion fires are caused by an external problem, such as a bad circuit or a software glitch that leads to overcharging. Another common problem in consumer electronics is the use of low-cost wiring and other components that can overheat and spark or catch fire next to the battery itself.

Eskra, the battery fire investigator, said he's seen fires started by Chinese-made toys that use lithium ion batteries hooked up to chargers designed for nickel cadmium or nickel metal hydride batteries. Manufacturing errors, including allowing tiny metal particles to contaminate cells, can cause dangerous shorts, although they are exceedingly rare.

"Somebody tried to cut corners somewhere," he said, noting that most lithium ion fires are caused by a tiny part that malfunctioned somewhere along the line and are easily resolved. "It's a \$2 fix, but it takes half a million dollars in research to figure out what it is."

Sometimes the problem is more persistent. In 2006, Sony announced a global recall of more than 10 million lithium ion laptop batteries used in a variety of laptop computers after more than a dozen fires, and two years later issued a second recall.

"This is a battery type that is only one of hundreds of possible batteries but this particular type was pushed by a few companies and investors so they could make money off it at the risk of public injury or death..."

Picture

THIS IS AN ACTUAL BOEING BATTERY

"2006 fire under NTSB scrutiny

Carli Brosseau Arizona Daily Star

When a test of a lithium-ion battery charger turned into an inferno at Securaplane Technologies Inc. in 2006, temperatures reached as high as 1,200 degrees and three waves of firefighters failed to save the building. An employee of the Oro Valley company blasted the flaming battery with a fire extinguisher to no effect. Two hours later, the galvanized metal roof collapsed, and the 10,000 square-foot building was a total loss.

It's a fire that federal safety regulators are taking another look at now, since Securaplane provides two key battery components to the Boeing 787 Dreamliner, the start-power and battery-charger units. Records from local Golder Ranch Fire Department, the first of three fire departments to respond to the blaze, describe "an uncontrolled thermal reaction (that) caused the battery to vent and this venting caused the ignition to various items and fixtures throughout the test lab area."

"The electrical technician who was performing a test on the battery when it exploded likened the experience to being near a jet after-burner. Electrolytes from inside the battery were shooting 10 feet into the air, the former Securaplane employee, Michael Leon, said in an interview Friday. "The magnitude of that energy is indescribable."

"The fire stands as a graphic illustration of the power stored within energy-dense lithium-ion batteries and the potential consequences if something goes awry. It also highlights the importance and delicacy of the quality-control measures applied to a novel - and potentially explosive - technology, a technology now allowed, under special conditions, to be used as the main and auxiliary power source of certain aircraft.

The Boeing 787 Dreamliner, the company's newest and most energy-efficient plane, uses two lithium-ion batteries. After two battery-related incidents in the past month, the 80 Dreamliners distributed so far have been grounded."

"Whistleblower: Dreamliner LITHIUM ION Batteries Could Explode

He says he was fired after warning about battery problems

By Christopher Freeburn, InvestorPlace Writer

Boeing's (NYSE:BA) new 787 Dreamliner could end up being a nightmare for the aircraft giant.

A former senior engineering technician at Securaplane Technologies, which makes the charging system for the lithium-ion batteries used in 787 Dreamliners, told CNBC that the batteries are defective and liable to explode if they overheat."

"Lithium-ion batteries are heat intolerant, according to a potential whistleblower familiar with..."

Lithium-ion batteries are heat intolerant, according to a potential whistleblower familiar with their technology. "Too much heat on those things, they will go into a thermal runaway, they will explode." The informant, a former senior engineering technician of Securaplane Technologies, was fired in 2007 for repeated misconduct, but he says it was in retaliation for voicing concerns about the batteries. The NTSB acknowledges that the lithium-ion batteries in Boeing's (BA) Dreamliner experienced a thermal runaway, but insists there's no connection between the incident and the whistleblower's claims. "

"The Japan Transport Safety Board makes a number of interim points. This battery, unlike one that burst into flames in a Japan Airlines 787 earlier in January, did not actually ignite. It experienced a thermal runaway, as a result of a build up of heat, yet the materials affected did not start burning. While the semantics might escape the casual observer the safety investigator said:-

"The battery was destroyed in a process called thermal runaway, in which the heat builds up to the point where it becomes uncontrollable.

"But it is still not known what caused the uncontrollable high temperature".

In simple language, uncontrollable rises in temperature will if uncontrolled most likely result in a fire, including one that can burn through structural composites and alloys, and prove almost uncontrollable by fire fighters, even on the ground.

It took a Boston airport fire brigade detachment 99 minutes to put out the Japan Airlines fire using equipment unavailable if the airliner was hours away from an emergency landing strip in the high arctic or north Pacific, which that particular flight had only recently traversed before the fire broke out after landing.

he Japan air safety investigator said the wire supposed to ground or discharge static electricity build ups in the battery had been severed meaning it had experienced abnormal levels of current.

However as also confirmed by the early stage of the US incident investigation into the Japan Airlines fire, this large lithium-ion battery had not experienced a voltage surge, and had so far as flight data recordings could tell, had been operating normally immediately before the emergency landing.

Expect the news release in Japan to cause more tension between those who want the 787s to fly again pending a full understanding of the causes and cures in these incidents, and independent safety investigators who will recommend to safety regulators like the FAA a continuation of the grounding"

"One aspect that may confuse some people relates to the decision to use this particular type of battery. The danger posed by it has been evident by a lengthy and documented list of disturbing events in recent years. They include many thousands of batteries used in laptops being recalled, because of determined risks of fire or explosion. General Motors were also placed in the battery limelight. In 2011, the 400 pounds Lithium ion battery in their Chevrolet Volt apparently was subject to

spontaneous combustion when it burst into flames, while reportedly in a parked vehicle. In 2010, a UPS-operated Boeing 747 crashed just after take-off from Dubai. Investigators placed the blame on a cargo hold that contained Lithium ion batteries, for a fire that caused the incident."

A number of incidents of cell phones with lithium ion batteries blowing up in peoples pockets, notebook computers blowing up in peoples briefcases and other shocking fires have been deeply documented.

Picture

LITHIUM ION BATERIES BLOWING UP ON THEIR OWN

Picture

FISKERS CARS THAT BLEW UP AND BURST INTO FLAMES JUST BECAUSE THEIR LITHIUM ION BATTERIES GOT WET

"Here is where they make some of these batteries, in forced labor camps: <http://www.thedailybeast.com/newsweek/2013/01/13/china-s-labor-pains.html>. Because, as we all know, chinese prostitutes are the best choice to make the things that keep our airplanes in the air and our cars on the road. The silicon valley venture capital guys front these batteries because they have such cheap labor to give them great profits.. quality control? not so much..."

NHTSA DEMAND LETTER

[Tesla-Information-Request-1](#)

[Tesla-Information-Request-2](#)

[Tesla-Information-Request-3](#)

[Tesla-Information-Request-4](#)

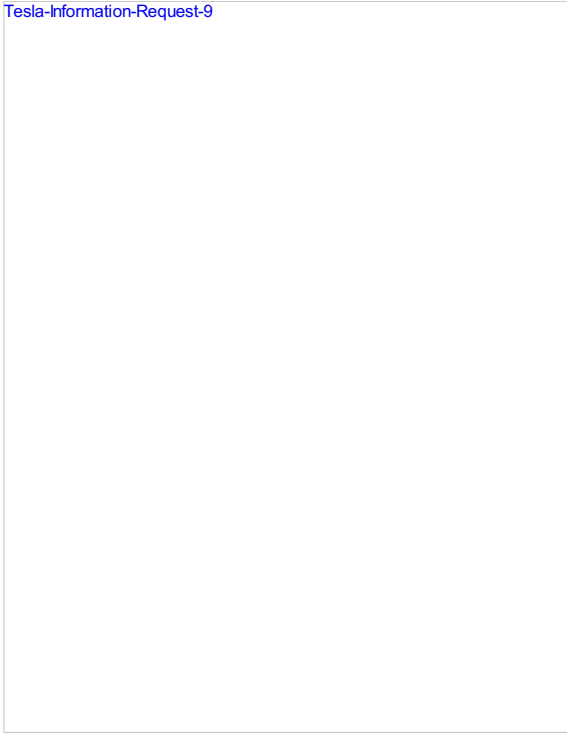
Tesla-Information-Request-5

Tesla-Information-Request-6

Tesla-Information-Request-7

Tesla-Information-Request-8

[Tesla-Information-Request-9](#)

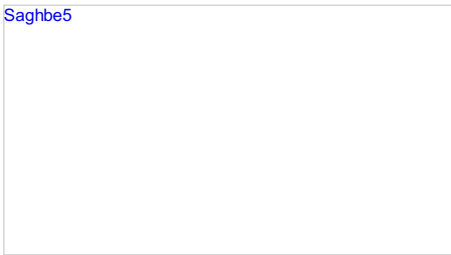


Additional Data:

Video Evidence:

TESLA STRIKING ROAD DEBRIS NEAR FREMONT, CALIFORNIA:

[Saghbe5](#)



LITHIUM ION BATTERY PACK SPONTANEOUS EXPLOSION

<http://www.youtube.com/watch?v=JzWbWBfd91w>

<http://www.youtube.com/watch?v=7jIEjk3Qu4A>
NETWORK TV NEWS REPORTS:

<http://www.youtube.com/watch?v=fnMjRzve1Ng>

http://www.youtube.com/watch?v=kXGzBzeHF_Y

LITHIUM ION DANGER:

<http://www.youtube.com/watch?v=ZrJcWKmIwOc>

BATTERY CELL TEST: Notice that in the following movie, the lithium ion battery like Tesla uses starts exploding just when the insides are exposed to air and ALSO when it gets wet:

<http://www.youtube.com/watch?v=v7abq34mckg>

TESLA ISSUE

<http://www.youtube.com/watch?v=uFUNPpn4080>

TESLA STAFF VIDEO: Here is a video made by Tesla's own employees about their product:

<http://youtu.be/cTqnP0McPcs>

<http://www.youtube.com/watch?v=cTqnP0McPcs>

You can also see it at:

<http://tinypic.com/r/7295hs/6>

WATCH THIS VIDEO OF A TESLA BURNING AND BLOWING UP BECAUSE OF BATTERY SHOCK IN A CRASH.

<http://www.youtube.com/watch?v=RCn1CufaCYc>

<http://youtu.be/RCn1CufaCYc>