

September
2022

Fire Line Newsletter

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From the Desk of "Your Fire Chief"

Many exciting events have taken shape since the last edition of this newsletter had been released. The first major event was the on-boarding and fire recruit academy for our newest member Cade Curtis. Cade comes to us from the Green Bay area and we welcome him into the FDLFR family. We look forward to a long and prosperous career for Cade in Fond du Lac. A special thank you goes out to the agency instructors that assisted Cade through his recruit school training, shaping him into an excellent firefighter paramedic. Also, thanks to Assistant Chief Knowles for the coordination and organization of putting together a great training schedule to make the process smooth and trouble-free.

The next major event that Fond du Lac Fire Rescue celebrated this past month was the swearing-in and pinning ceremony of Firefighter Paramedic Tristan Schill. Tristan had successfully completed his one year probationary status on August 8th. This accomplishment is no easy undertaking, as Tristan was expected to complete a full list of performance check-offs before his one year anniversary had arrived. This is a daunting task and congratulations goes out to Tristan for his excellence in completing this milestone. Tristan's probationary year was capped off with a badge pinning and swearing-in ceremony that was well attended by not only Tristan's family, but also his FDLFR family and friends.

Within Fire Rescue's operations there were also significant milestones reached. The first is the implementation of station/ night tones. This valuable process of alerting only the selected fire apparatus was long overdue and with cooperation

of Dispatch, our new CAD system and USDD, we were able to implement with only a few hiccups. Additionally, in August we gave our budget presentation to the City Council. Within the presentation we provided an overview of what we did over the past year, what we are currently accomplishing and what are our plans for 2023. If you did not get a chance to view the presentation it can be found on the City of Fond du Lac's webpage. Lastly, Fond du Lac Fire Rescue found out in late August that we will be partners with numerous other Fire Rescue agencies throughout the State of Wisconsin by joining Wisconsin Task Force 1 (WI.TF1). This team is a State funded asset that is an all-hazard response team, specializing in structural collapse, wide area search, confined space, rope, trench, and water rescues. This is an excellent opportunity for FDLFR and puts us with elite company within our State.

The last area I wanted to highlight this month is the awesome amount of community involvement our organization has had over this past summer. We have been involved with so many great partners, organizations and stakeholders, attending a diverse amount of community events, that there are just too many to list in this article. I am so proud of the enthusiasm and the involvement our members have had during these events. Every day I am amazed by the great work and dedication all of our members exhibit through service to better this community. Thank you for all that you do on a daily basis!

Until next time...

Be Safe, and with the 9/11 anniversary soon approaching...Never Forget!

Chief Gerritson

...Acting to Save

Types of Calls:	July 2022	July 2021	Year to Date (2022)	Year to Date (2021)
Alarms Involving Fire	16	11	80	68
Fire Mutual Aid Given	0	1	7	11
Fire Mutual Aid Received	0	0	2	5
Other Calls (False Alarms, Service Calls, etc.)	85	95	596	603
Emergency Medical Calls	550	559	3753	3688
Paramedic Intercepts	5	7	50	42
Interfacility Transports	40	50	272	275
TOTALS	651	665	4429	4359
Fire Inspections Completed	181	254	1656	1651
Defects found during Fire Inspections	126	53	783	701





The Code Summary

By: Assistant Chief Garth Schumacher

Assessment and Documentation...

One area that has been the subject of some extra attention has been the documentation of patient care. In some instances we have seen that the report narrative has been vague in the depiction of what has been done for the patient as well as the assessment findings. This can lead to issues in the future if some of these cases are brought to court or if there are questions with insurance or medical control. It is in the best interest of every medical professional be it an EMT Basic up to the Paramedic level to do a thorough assessment of every patient as well as a thorough report narrative.

Some of the toughest patients we face are those that refuse care or are under the influence of alcohol or other impairing substances. In these cases a thorough assessment and documentation are paramount

to make sure we are painting a good picture of what was observed, how we treated the patient, and our overall impression given all the assessment findings. There have been cases where we have assessed a make sure we are painting a good picture of what was observed, how we treated the patient, and our overall impression given all the assessment findings. There have been cases where we have assessed an impaired person that was presenting with all the signs and symptoms of alcohol only to find out from medical control that this patient actually had a serious brain injury. In this case doing everything we can to assess and document all our findings gives us better standing when these serious issues are recognized after further diagnostics. Complacency with these types of incidents will create questions of proper assessment and care for

providers if we do the bare minimum do to our belief that the issue is merely alcohol related.

In the case of a refusal of care or "no carry" we should be extremely thorough in our documentation of these types of calls. People will refuse medical attention for a variety of reasons even when they are extremely ill. It is important to convey in our reports the specifics of the provider's conversation as to the need for transport and the reasons why refusing care may be a detriment to the patient's health. The AMA tab in the report is a good way to cover your bases when you are faced with these calls. Again, a thorough assessment and subsequent documentation is the only thing that will allow you to avoid scrutiny should an unfortunate event occur where a patient deteriorates or calls us back and is now exhibiting a serious medical problem.

I realize that this topic has been a bit repetitive but it is vitally important that we are as thorough as we can be. This not only improves patient outcomes and quick diagnosis, it also protects providers from scrutiny when aspects of care and documentation is brought into question.

We see it all the time when we do after action analysis or "PIA's", questions and improvements are brought to light after all the information is obtained and the reasons are identified. EMS incidents are no different, they get evaluated and scrutinized for improvements. Making sure we are doing everything we can during the call keeps us insulated as much as possible after the call.

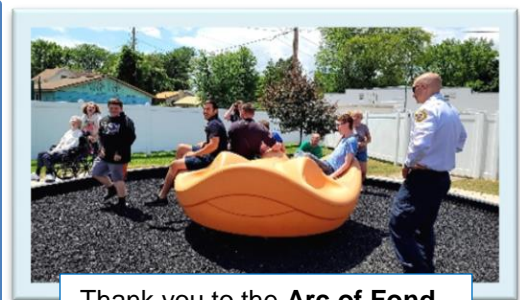
Until next time...stay safe, and take care of each other.

What a great partnership with Grace Evangelical Free Church and Rick's Toybox to provide a small toy to kids that are involved in crisis situations. This toy provides a vital distraction or sense of security during incidents that have a negative impact on our youth in this community. Thanks Grace and [rickstoyboxinc.com!](http://rickstoyboxinc.com/)





The Fond du Lac Fire Rescue family celebrated **Tristan Schill** with a badge pinning ceremony to recognize the successful completion of his Firefighter Paramedic probationary status. Congratulations Tristan on this milestone accomplishment!



Thank you to the **Arc of Fond du Lac** for inviting us to the ice cream social with first responders. It was a beautiful day to enjoy some ice cream and enjoy the company from everyone at the Arc .

Recently the crews joined in on some whiffle ball with the **Boys & Girls Club of Fond du Lac** and the Fond du Lac Police Department. The Fond du Lac Firefighters Local 400 Charitable Fund Inc. also took this time to present the Boys and Girls Club with a donation to the program!! Fun times!



Crews had a grand-slam of a time at the DockSpiders game hanging out with the Littles & Bigs from Big Brothers Big Sisters of Fond du Lac County.

Happy Birthday!

to those born in
August & September

**Joe Maramonte • Jerry Golla
Keith Wendt • Calie Tasch • Phil Seibel
Jim Wamser • Tristan Schill
Gavin Forster • Matt Kissinger**

CONGRATULATIONS!

Lt. Shawn Kneeland – 15 Years

Lt. Paul Wilson – 15 Years

Thank you for your dedication and appreciated service to FDLFR.



Both with a
September 10, 2007 Hire Date



Well-trained people are the best defense against fire.

By: Assistant Chief of Training/Safety
James Knowles III

Electric Vehicle Fires: Where the Waiting Game Wins

With the arrival of electric vehicles (EVs) comes many different products to "solve" the problem of extinguishing a fire in an EV's high-voltage battery. While there may be a few benefits to some of these products, overall, most fail to address the problem associated with a thermal runaway event in a large lithium-ion battery.

Here's what you need to know about thermal runaway, and the tools and tactics that will actually get the job done – or at least help.

"The truth of the matter is there is no simple solution or tool to stop a thermal runaway in an EV's high-voltage battery," writes Durham.

UNDERSTANDING THERMAL RUNAWAY

A high-voltage battery is made up of many cells packed tightly together inside a watertight, fire-resistant box. When a single cell fails, it is essentially a small explosive that produces a tremendous amount of gas and heat (1,200 degrees F) in tenths of a second. The failure is an exothermic chemical reaction that does not require oxygen from the atmosphere to sustain itself. The heat released from each individual cell is transferred to the neighboring cells, which causes them to fail as well.

Once a battery cell fails, it is impossible to extinguish the failed cell as the chemical reaction inside the cell happens far too quickly. The only way to stop a thermal runaway is by directly cooling the cells involved to ensure that the failed cell does not cause the cells around it to also fail.

With that in mind, what tools and firefighters use to stop thermal

runaway and extinguish these fires?

FIREFIGHTING FOAM

Firefighting foams work by creating a blanket to smother a fire. Many types of foam have properties that cool the surrounding area by assisting the water in absorbing heat. Unfortunately, getting the foam to the failed cells is difficult, if not impossible, because the thermal runaway event is happening inside a watertight, fire-resistant box. Additionally, even if it was possible to get the foam inside the box and flood the area with foam, the foam's main purpose is typically to starve a fire's oxygen supply, but a lithium-ion battery cell does not need external oxygen to burn. Consequently, foam is ineffective at stopping a thermal runaway.

CLASS D EXTINGUISHER

Class D extinguishers contain a powder that is designed to extinguish combustible metal fires. While they are called lithium-ion battery cells, the cells do not contain solid lithium metal, making the extinguisher ineffective. There is also no easy way to get the powder from the extinguisher directly to the cells on fire due to the construction of the box and the speed at which the battery cells fail.

PANCAKE NOZZLE

These nozzles are designed specifically to slide under a vehicle and spray cool water at the bottom of the battery box. The water is meant to cool the battery box, ideally stopping the thermal runaway. Unfortunately, extinguishing a fire in the high-voltage battery requires a large, sustained volume of water. The water needs to flow inside the

box, directly cooling the battery cells. These nozzles will likely be ineffective due to the design of the battery structure, and the numerous layers between the underside of the vehicle and the battery cells.

FIRE BLANKET

A fire blanket is traditionally used to smother a fire to starve it of oxygen. And as noted, a lithium-ion does not need oxygen from the atmosphere to burn, so trying to smother the fire will be ineffective. However, these blankets could be used to contain the fire for exposure protection. A word of caution, though: The battery cells give off harmful and flammable gasses (hydrogen, hydrogen fluoride) that could become trapped under the blanket. Removing the blanket could cause an energetic fire event when the gasses are released. Exposure to hydrogen fluoride could cause permanent damage to firefighter's lungs and eyes. Always wear proper PPE when around any fire.

PIERCING NOZZLE

Piercing nozzles are designed to puncture the battery box in an effort to deliver large quantities of water inside the box to cool the battery cells. This solution is dangerous due to the electrocution hazard. There is also a possibility of causing more battery cells to fail by crushing cells or shorting out electrical components inside the box. NFPA and EV manufacturers warn against any attempts at gaining access to the inside of the battery box.

NEVER penetrate high voltage components with tools.

While some of these piercing nozzles are designed to be remotely activated, firefighters will eventually have to remove the

nozzle from the vehicle.

Placement is also a concern, as many battery box structures have cross-car frame rails that are not able to be penetrated. Sealed compartments within the box could also cause a problem for firefighters if the nozzle pierces the wrong compartment and floods an unaffected area. Additionally, the inside of some boxes is filled with polyurethane foam, making it impossible for water to flow through the box.

WHAT WORKS: LET IT BURN

The truth of the matter is there is no simple solution or tool to stop a thermal runaway in an EV's high-voltage battery. Directly cooling the battery cells is the best method, however the manufacturers do not give first responders direct access to the inside of the battery box. Trying to cool the battery cells from the outside will only extend a crew's time on scene.

If the battery box is intact and there are no exposures, the best solution is to simply wait for the battery to burn itself out, then extinguish the remaining class A fire. While this strategy is not ideal – and not one favored by aggressive, proactive and eager firefighters – it's really the best approach. It should only take an hour for the battery to burn itself out. The alternative will be to continually dump water on the vehicle for 6 to 8 hours.

Source: Durham, P. (2022). Electric vehicle fires: where the waiting game wins. FireRescue1. Retrieved from: <https://www.firerescue1.com/electric-vehicles/articles/electric-vehicle-fires-where-the-waiting-game-wins-f934UedqIpVqc1k2/>

Community Risk Reduction & Life Safety

By: Division Chief Jason Roberts



Fond du Lac Fire Rescue is proud to announce the upcoming fire prevention activities beginning in September and continuing through October, which is officially Fire Prevention Month. Fire Prevention Week in the United States begins Sunday, October 9 and runs through Saturday, October 15, 2022. This year is the 100th year celebration of Fire Prevention Month, which is the longest-running public health program. National Fire Protection Association's (NFPA) theme is "Fire Won't Wait. Plan Your Escape".

Fire personnel will be visiting elementary and middle schools in our community spreading fire safety messages and distributing materials. Personnel will also be performing fire inspections of the schools and witnessing a fire drill. Community businesses have provided great financial support for the updated fire education materials that will be distributed to students entering K-7th grade. Videos will be sent to the schools to further interact with students and staff.

The Fond du Lac Community Fire Open House will occur on

Tuesday, October 11, 2022 from 4-7 p.m. at the fire training center located at 750 N. Rolling Meadows Drive. This year, Fond du Lac Fire/Rescue has teamed up with the Town of Fond du Lac and North Fond du Lac Fire to demonstrate the strength in partnerships. Please look for the Community Open House flyer that will be placed within school fire education material, posted on social media, and advertised through other viewing platforms.

There will be a ton of new, previously unexplored activities for all ages. There will also be a coloring contest that can be done prior to the event or the day of the event. Please see the flyer for further information. We hope to see all of you at this great event!



Different homes have different plans.
Know what to do and where to go if there is a fire.
Fire won't wait. Plan your escape at fpw.org.



Diferentes hogares tienen diferentes planes.
Conoce que hacer y donde ir si hay un incendio.
El fuego no espera. Planifica tu escape en fpw.org.

FOND DU LAC'S FIRE PREVENTION WEEK

Tuesday, October 11th 4:00pm-7:00pm

COMMUNITY OPEN HOUSE

Put on in partnership by:



Community Open House held at the
Public Safety Training Center
Located at
750 North Rolling Meadows Drive,
Fond du Lac



Activities for all ages

Hands on Fire Extinguisher Training

Survive Alive House

Live Extrication Demo

Water Rescue Equipment

Fire Behavior Demo

Coloring Contest

VR Goggles

Rural Water Supply

Free take home materials

Food Trucks

Sprinkler Trailer Demo

And other vendors



Any Questions: Please Contact CRR Specialist Calie Tasch at (920) 322-3808 or at ctasch@fdl.wi.gov