FIRE SERVICE WARRIOR

FORGING FIRE SERVICE EXCELLENCE

The Window Takedown

By: Jason Jefferies

The tactic of making a door into a window, or "The Window Takedown," is another one of those rarely used but invaluable tricks to put into your repertoire as a firefighter. While it is not commonly used on your bread-and-butter fires, having knowledge and prior training on the steps to perform a "Window Takedown" will pay off in large dividends in the event circumstances on the fireground warrant its use. When performing the "Window Takedown" we are cutting the sill of the window down to the floorboards, removing the bottom of the window, framing, and siding, thereby creating a large opening with which we can accomplish multiple tasks. The "Window Takedown" is a tactic to use in a residential setting on wood-framed dwellings and on some light commercial buildings. Before we get into the steps to perform this method of forcible entry, let us first discuss what reasons we would employ this tactic. Although there are numerous reasons this tactic can be useful, the two primary factors driving us to choose this method are basement ventilation and victim (civilian or firefighter) removal.

Ventilation of a basement fire can be a nightmare, and as many firefighters know, a fire raging in the basement will test the mettle of those tasked with fighting it. Lt. Aldo Raines stated in the movie *Inglorious Basterds* that, "The only thing worse than fighting in a basement, is fighting in a basement." Any firefighter that has fought a deep-seated working fire in the basement of a building knows the difficulties faced during fire attack and ventilation on fires in below-grade places such as cellars and basements. The nozzle crew takes a severe beating unless ventilation can be accomplished; and the truck crew has a daunting task if assigned to search and vent in a basement or cellar with limited windows, or no windows at all. With limited horizontal openings, we are left with very few options to lift the smoke and heat from a working fire that has taken control of a basement.

Various fire service textbooks claim that the proper method to ventilate a basement fire in a windowless space is to cut a hole in the floor decking from inside the structure, adjacent to a window, and directly above the seat of the fire. Sounds plausible, right? On paper this works fine, but in the real world (where we all live and work) this method is easier said than done. The crew tasked with venting must find the spot above the seat of the fire, hope a window is near that location, then cut a hole in the floor decking with a saw, and all within a very short span of time. Consider these factors: thick smoke tends to choke out gasoline powered saws making them useless, working to make a ventilation opening is tricky in zero visibility even if the saw will work, and trying to find an open spot in the floor with no furniture may be impossible. Once all of this is added into the equation, you begin to see why the book method just does not hold up to the real-world challenges we face. By utilizing the "Window Takedown," we can make an opening just inside the structure, opposite of the attack team's advance, and ventilate the basement. All of this is accomplished from the exterior of the building. We can keep the saw clear of the smoke that chokes out its engine, we can easily pull the furniture away, and we can control any extension through the vent opening.

For victim rescue the fastest way out of the structure is the preferred route to remove them. However, there are times where we must change our tactics to fit the situation. Preferably, the best circumstance is to have the fire controlled by the initial attack line so that we can rapidly move down

the common hallway if smoke conditions allow. However, if we locate a victim in a room that is cut off or threatened by the fire or if the hallway is filled with a heavy volume of smoke, we must isolate ourselves from fire extension (shut the door!) and take the victim out of the window if one is present. For some firefighters, lifting the weight of a lifeless victim above the windowsill may be a nearly impossible and potentially time-consuming task. If the victim is morbidly obese, a crew of firefighters may be unable to lift them despite their efforts. If we can perform the quick task of a "Window Takedown," the victim can be slid out of the bedroom and onto the ground outside.

The Window Take Down

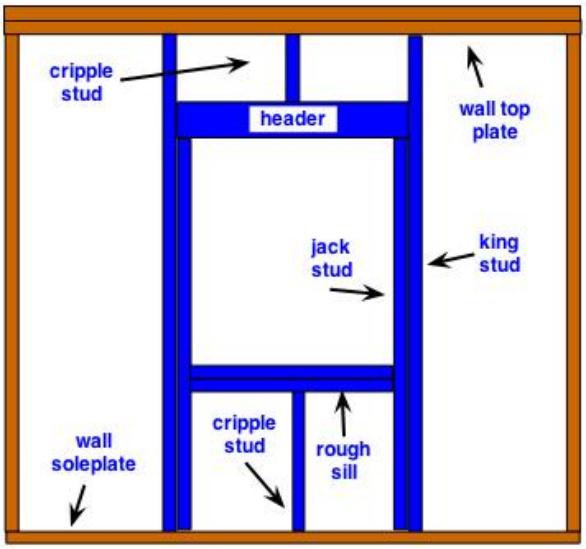
Now that we have identified the two primary applications for this technique, let us delve into the steps required to accomplish a "Window Takedown." We must first size up our window. If there are window bars covering the outside or laminated glass panes set into the sash, the job will take a little bit longer due to the sturdy construction of the window; knowing what tools we need is necessary. For most "Window Takedown" jobs the only tools needed are The Irons, a chainsaw, and a 6' Roof Hook. For window bar removal, a rotary saw with a metal cutting blade will be required if the bars cannot be easily pried off. Knowing the construction of the window will assist us in performing the "Window Takedown." If the window jambs, sashes, and sills are constructed of wood, vinyl, light aluminum, or metal cladding over wood, then they can be cut easily with a chainsaw equipped with a carbide-tipped chain. For windows constructed in a heavy metal frame, the frame must be pried loose from the framing members; however, windows that are set in heavy gauge metal frames are rare in residential structures. If the window is set into a wood framed wall with brick or stone veneer, the area beneath the windowsill is defeated easily by two firefighters each swinging an 8-pound or 10-pound maul.

Pay close attention to the difference in the two pictures, the bricks tell us a lot about the construction of the walls in which they are set. In the photo on the left, all the bricks are oriented the same direction. This is indicative of a brick veneer wall, or a single thickness of brick laid on the exterior and supported by the wood-framed wall on the interior. This wall is easily defeated with a little sweat and elbow grease. The photo on the right tells a completely different story. Every other course of brick is turned edgeways, and this is indicative of a solid-brick load-bearing wall that can be the thickness of 4 to 8 bricks depending on the size of the building. This wall will not be easily defeated in a timely manner, so the "Window Takedown" is not a good choice due to the time it would take to break through the bricks, not to mention the fact that we are breaching a heavy load-bearing wall. In wood-framed walls with exterior siding constructed of wood, vinyl, aluminum, or HardiPlank concrete, the siding material is easily cut with a chainsaw (with a carbide chain), so removal of the exterior siding is not an issue. These windows good candidates for applying the "Window Takedown."

This particular window is a perfect example of a good structure upon which we could perform the "Window Takedown." We begin by taking out the window the same way we would for ventilation. Remove the glass, sashes, and frame (if made of heavy-gauge metal) along with any blinds, curtains, or window shrouds. This should be very quick work with a Halligan Bar and a Roof Hook. Once the window is gone, we move onto cutting out the area beneath the windowsill.

To cut out the windowsill make two kerf cuts with your chainsaw. Ensure the chain is carbide tipped so that any light metal encountered (aluminum window sash, nails, copper wiring, etc) is easily severed. If your saw is equipped with a depth gauge, make certain the depth gauge is moved all the way back giving you plenty of cutting surface with the saw. You will need to be able to cut at least 5 to 6 inches deep depending on the construction. When you factor in ½ inch for the siding, ½ inch for the freeze board or OSB sheathing, 3 ½ inches for the studs, another ½ inch for the interior wall covering and ½ inch for the baseboard, it is easy to see that a depth gauge can hinder the cuts if it is not either removed or set to the deepest position possible. Also important to remember is the best location to cut. We wish to maximize the opening without cutting through any more framing material than we have to. Cutting through multiple framing members will severely slow down the operation; therefore, locating the areas likely to have the least amount of lumber is critical. This is another example where a working knowledge of building construction is very important.

When a window is framed in a load-bearing wall, the king studs support the top plate, and the jack studs support the window header. The king stud and jack studs are also load bearing members, transferring the weight of the wall and what is framed above it down both sides of the window and into the flooring and foundation of the structure. Inadvertently cutting lengthwise through the king and jack studs will be time consuming, and could potentially contribute to a loss of integrity of the exterior wall.



By cutting just inside the window jamb at the bottom corner, we will miss the jack stud most of the time. Once we begin our cut, if the saw bogs down due to heavy resistance, that is indicative that we have started our cut on the jack stud, but it is easy to overcome. If that is the case, move the bar of the saw in towards the center of the window one inch from the previous cut and resume cutting. Cut both sides of the window sill down to the floorboards, making sure to cut through the soleplate at the bottom. Once this is done, take the Roof Hook and pull the material out and away from the structure. If all the cuts are done properly, the sill material should easily yield in one large section.

As you can see in the photo above (left), the cuts in this “Window Takedown” were made missing the jack stud, making the process an easy job. From this point we can move to accomplishing the rescue or removal. As you can see in the photo above (right), we now have created a large area giving us plenty of room to manipulate the victim out of the structure.

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Basement Fires

There is much discussion in fire service circles regarding basement fires, and under the proper circumstances vertical ventilation of a basement fire maybe possible using a takedown technique. This article is not an exhaustive look at basement fires and the suggested technique is merely one option.

If we performed the "Window Takedown" for the purposes of ventilating a basement fire, there are a few more steps to take. It should be noted that ventilating basement fires by cutting holes in the floor is a tactic that may not be seen in many agencies. This is often out of a fear of "doing more damage." We must overcome this aversion and recognize the high risks of a basement fires. Basements are poorly ventilated, poorly accessed, and the roof of the basement (the first floor) typically bears the greatest load. If we plan this operation early, select a good location—like along an exterior wall below a window we can take down—vertically venting basements can be done quickly and safely by following flat-roof procedures. We would cut a hole in the floor to support a RIT operation so we shouldn't be averse to cutting a hole in the floor to prevent a RIT activation.

First, the area must already have been searched and victims removed. Once the "Window Takedown" is complete—to ventilate the basement—we must cut a hole in the floor, just inside the area we opened up. It is important to coordinate this task with fire attack. We must make certain that we are venting opposite of the attack line and not behind it! When beginning the operation, ensure the area is clear of any furniture. Any furniture must be pushed into the room or pulled out to the exterior of the structure. Next, we must deal with the floor covering. If it is carpet, it must be cut out (you do have a sharp knife in your gear, right?), and if it is ceramic tile or marble we must break it out with a sledgehammer or flat-head axe. Laminate flooring, vinyl, or hardwood flooring can be cut by the chainsaw we used for the "Window Takedown." Once the floor is cleared of debris, furniture, and floor covering, we can begin cutting out the floor decking.

Place the bar of the chainsaw as far into the structure as possible and make 3 cuts; 1cut parallel to the outside wall and 2 cuts perpendicular to the first cut, cutting through the floor covering, decking, and sub-flooring. Also important to mention is that intersecting your cuts is critical to ensure that all material is ready to be ripped out when the cuts are complete. Once we begin cutting the flooring parallel to the window, expect to find smoke and possibly flames coming through the kerf. To prevent the saw from choking out in the smoke, you may need to move the saw away from the opening briefly, let it "breathe" in the clean air, then resume cutting. Having a water can or attack line near will help prevent extension into the room above the fire. Important to note is that we should NEVER direct a hose stream in to the ventilation opening with crews operating on the inside. This will defeat the ventilation process, pushing heat and smoke down onto firefighters in the basement.

(Photo courtesy of www.brotherhoodinstructors.com)

Once all three cuts are complete, pry the floor decking up and, if present, use the Roof Hook to punch down any ceiling material attached to the bottom of the floor joists.

(Photo courtesy of www.brotherhoodinstructors.com)

Summary

The “Window Takedown” is a task that can pay off huge dividends if conditions warrant its use. With that stated, it is a tactic that can be labor intensive, so having an adequate number of personnel to accomplish it is crucial. A crew of well-trained firefighters (4 or 5) should be able to accomplish the takedown in a short amount of time. If it is utilized for victim rescue/removal, coordination through command is important so that all firefighters operating on the scene are aware that the operation is taking place. If we are using this technique to ventilate a basement fire, it must be coordinated with fire attack so that the basement can be ventilated prior to the attack team’s entry into the fire area. The beauty of this task is that it is performed from the exterior of the building, keeping firefighters off a questionable floor. It may not be a tactic used often, but like everything else it must be drilled upon so that all members know their role in the operation, and when it is called for, it can be performed immediately.

About the Author:

Jason Jefferies has been a firefighter for 15 years, is a career firefighter with the Charlotte (NC) Fire Department, and a volunteer/part-time firefighter with the Belmont (NC) Fire Department. Jason holds an Associate’s Degree of Fire Protection Engineering from Gaston College and is an IFSAC Level II Fire Instructor. As an instructor working through the North Carolina Community College System, he specializes in Live Fire Training, Truck Company Skills and Rapid Intervention/Firefighter Survival Skills. Jason is a Contributing Editor for FireServiceWarrior.com