

Gaining Entry on the C Side

BY CLAY MAGEE

EVERY DAY ACROSS AMERICA, TRUCK companies go to fires. Whether it's a small or large town or an urban area, almost everyone has commercial occupancies. And, practically all businesses are concerned for the security of their store or business, as are owners of residential dwellings. All too often, firefighters find themselves coming up against "fortified" doors on the C side and spending precious time trying to figure it out on the fly.

One of the primary jobs of a truck company is to gain entry. Whether you have a truck company in your city or not, the functions still have to be performed. All firefighters should be familiar with forcible entry, and not just basic inward and outward doors. The basics are the building blocks, but the minimum basics aren't enough to open the extra hardware on doors that we encounter all too often. Firefighters must be proficient in basic and advanced irons work as well as in using the saw when trying to gain entry into a building.

During every fire, the rear door gets opened at some point. It might be for egress; it might be to perform a quick search for occupants; it might be for positive-pressure ventilation exhaust; or, in the case of commercial buildings, it might be to locate the fire in the rear storage or office space or check for extension such as in the plenum space above the drop ceiling. It doesn't matter why you get sent to the rear; it does matter that you are prepared.

Often when sizing up a door at the rear of a commercial building, taxpayers, and Type II strip malls, for example, you will find bolt patterns that show the presence of drop bars or barrel bolts. Many times, firefighters seem to shy away from the "challenge" and look for other means of access. Firefighters cannot afford to shy away and not get our job done. When given an assignment, we must possess the know-how to accomplish the task. With a little knowledge and the right tools, forcing these doors can be easy and pose little challenge to the knowledgeable and skilled firefighter.



(1) Notice the carriage bolt pattern, key-in-knob lock with latch guard, and deadbolt. (Photos 1 and 3 courtesy of Rise Above Fire Training, LLC.) (2) One drop bar is present, in the middle of the door. The pull handle is indicative of panic hardware. (Photo by author.) (3) Notice the carriage bolt pattern, which is indicative of barrel bolts at the top and the bottom with a mortise lock.



Drop Bars

Drop bars are extra security owners/occupants have added to protect their buildings, usually during nonbusiness hours. Generally, they are installed on outward-swinging doors with low-security lock options such as panic hardware or key-in-knob locks. However, you will see them with extra locks such as dead bolts. Remember, when sizing up a door, an outward-swinging door is flush to the jamb and hinges are present. Although hinges are often a giveaway, the hinges may not be exposed, as in the case of piano hinges. These doors might also be recessed into a brick or block wall.

Often, drop bars are homemade devices. They come in all shapes and sizes and may be made of wood or steel. They range from the size of broom handles to ½- to one-inch steel rods or flat stock with varying widths. They are mounted to the door, but they can have contact points with the wall, the door frame, or the door stop. The

mounts may be open or closed brackets and are generally held to the door with two to four carriage bolts; ¾-inch carriage bolts seem to be a popular size (photos 1, 2). On some doors, steel plates are mounted between the head of the carriage bolt and the door. This provides extra security and keeps the bolt from being able to be driven into the door. As a side note, heavy-duty barrel bolts can be installed the same way and have the same bolt patterns (photo 3).

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Note that drop bars can be installed on inward-swinging doors as well. Typically, the drop bar mounts will be attached to the frame instead of the door, leaving no sign for the firefighter sizing up the door that a drop bar is present.

Forcing the Door

Always start with "try before you pry" and then transition into "gap, set, force." The drop bar may not be in place or it may bend, break, or pop out of place (photos 4, 5). By starting with gap, set, force, you will either force the door or confirm the presence of the drop bar. Start your gap within six inches above or below the lock; if multiple locks are present, it's best not to work between them because you will be working against both locks at the same time. The typical shape of a drop bar mount is an "L." The location of the carriage bolts is approximately the same height as the bottom leg of the drop bar. Noting the location of the bolts during your size-up can help keep you from starting your gap, set, force on top of the drop bar.



(4) Notice the presence of carriage bolts, indicative of multiple different locking devices such as barrel bolts. (Photos 4-5 courtesy of Rise Above Fire Training, LLC.) (5) The interior view of the door pictured in photo 4. Notice how the exterior size-up does not match what is found on the interior. This is proof positive of why we should always start with gap, set, force.

After confirming the presence of a drop bar, it is time to attack the carriage bolts. You can use a set of irons or a rotary saw.

If you bring the saw with you, use the saw. It is best practice to take a saw to the rear of the building along with the irons and

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(6) The double door. You recognize the primary door by the door lever. Notice the bolt pattern in both doors, which indicates a possible drop bar. When sizing up these bolts, the bar may or may not cross the entire width of the frame. (Photo courtesy of Rise Above Fire Training, LLC.)

at least a six-foot steel hook. The hook has several uses. Use it to extend leverage and maximize mechanical advantage when married to your halligan during your outward force; once you have made a large enough gap, use it to knock the drop bar out of open brackets or to check the ceiling for fire on entry. When going to a commercial building, expect taller ceilings, so it is a good idea to take a longer hook. The longer hook will allow you to reach the height of the commercial ceiling and check the plenum space for fire spread after you gain entry to the rear. If you don't have the saw with you, radio for one, but do not delay attacking the bolts with the irons to make a trip back to the truck.

When attacking the bolts, start on the lock side. If using the saw, I believe in cutting them all. It takes little extra time to do so and will pay off in the long run when finishing the force. If using the irons, attack only the lock side. Most of the time, weakening just the lock side will make a large difference and allow you to continue forcing the door and knocking the drop bar out of the mounts if they are open. A door is approximately $1\frac{3}{4}$ inches thick. By driving the bolts into the back skin of the door, you have now bought a $1\frac{3}{4}$ inch of extra gap when you go to force the door again.

After you have cut or driven the bolts, continue with gap, set, force. Once you obtain a significant gap, if the bar is still in place, attempt to knock the drop bar up and out of the mount by sticking the handle of an ax behind the door and hitting the bottom side of the drop bar to bring it up and out of the mount. You can also use a steel hook.

Double Doors

Sometimes, you will find double doors at the rear of buildings. Double doors may appear even more formidable to the firefighter lacking knowledge, but they really change nothing. It is important to note that double doors typically have a primary and a secondary door. The secondary door typically has extra hardware, possibly at the top and bottom, that locks it into the floor and the top of the door frame.

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The secondary door will also have a lip against which the primary door closes—in essence, simulating the same thing as a door closing against a door stop (photo 6). Owners/occupants will often install a drop bar across the entire width of the double doors. You can still defeat double doors by applying the same tactics listed above. Once you have identified the primary door, start your gap, set, force and treat the secondary door as if it is part of the wall. Once the drop bar is in place, use the same technique. If using the saw, take all the carriage bolts on the primary door, which will make your next force attempt that much easier. If using the irons, start with just the lock side carriage bolts before moving on to the hinge side of the primary door.

If you have used the saw to cut all the brackets loose on the primary door, you should have no problem with the drop bar and mounts pulling away from the door as you force it. If using the irons to drive the carriage bolts, often attacking just the lock side will give you enough flex to use the hook to displace the bar. If taking the lock-side mount does not give you enough flex, move on and attack the hinge-side mount on the primary door. You should not have to attack the carriage bolts on the secondary door.

If the drop bars are in an enclosed mount, you will need to attack all bolts on the primary door, regardless of whether you are using the saw or the irons. You will not be able to hit the bar up and out of the mount, so you must remove the mounts from the door altogether.

Using the Irons

When using the irons, place the pike of the halligan next to the carriage bolt head. Drive the pike into the skin of the door as far as you can (photos 7, 8). Rotate the halligan 360° while prying with it to create a larger hole (photo 9). Then place the adz onto the carriage bolt head. Drive the head into the door as far as you can (photo 10). When placing the pike or the adz against the door, your first few hits may cause the tool to bounce a little from where you placed it. Call for individual hits until the pike or adz has penetrated the skin and then call for your drive.

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(7) Place the pike of the halligan next to the carriage bolt head and drive the pike in. (Photos 7-10 by author.) (8) Drive the pike in as far as you can. (9) Move the halligan in a 360° circle while prying in all directions to enlarge the hole. (10) Place the adz on the carriage bolt head and drive the head in as far as possible.

Using the Rotary Saw

When the bolts are mounted flush to the door, place the rotary saw at a 45° angle and cut into the door, cutting the shaft of the bolt inside the door (photo 11). Another method is to place the blade right behind the head, severing it just behind the skin of the door. Unfortunately, because of the round head of

the carriage bolt, the saw will sometimes slip and run over the bolt head, sliding out of position. If you revert to the saw, you can initially make a purchase next to the carriage bolt head to allow the saw to get a better bite into the threads of the bolt. Striking it with the adz end of the halligan will create a nice gap for the saw blade.

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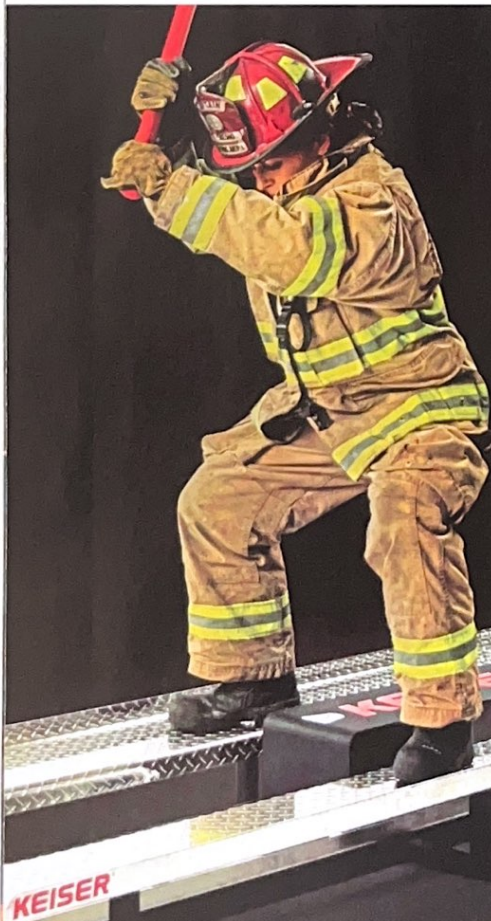
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Sometimes you will find steel plates mounted between the carriage bolt head and the skin of the door. As mentioned earlier, some drop bars are installed this way because it provides extra security by not allowing the carriage bolts to be driven in. When they are present, use the rotary saw to shear off the bolt head. Using the rotary saw, come in at a near 90° angle to the bolt head (photo 12). If these plates are of thicker material, it won't give when hit with the adz of the halligan to create a purchase. After the heads have been sheared, you most likely will need to drive the bolt shafts into the door using the pike of the halligan.

It is important to note that a rotary saw can be set up for inboard or outboard. It is recommended that you keep your saw outboard. This will aid you in forcible entry in several aspects but especially when cutting or shaving carriage bolts during this process. If your saw isn't set up in this manner or doesn't have that feature, practice cutting with the saw in different positions and angles.



(11) Cut inward at a 45° angle to the bolt head, shearing in half the bolt inside the door. (Photos 11-12 by author.) (12) Notice the 1/4-inch steel plates mounted to the door surface. Shear off the heads at a near 90° angle. Notice the blade is set up in an outboard position, which allows the blade to get close to the door surface.



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Other Security Measures

The types and styles of extra security vary in different parts of the country. Drop bars and barrel bolts are common to most all parts of the country, but they are not the only extra security devices you will see. There are many styles of commercial doors that provide extra security. The Fox Police Lock is very common in the Northeast but not so much in the southern part of the country. One style of the Fox

Police Lock is a rim lock that has two horizontal steel bars that throw into the door frame. Another fortified door, a multilock door, has a lock body/keyway near the center of the door; inside the door are four rods that throw an inch into the frame. The rods throw in at the top, bottom, and both sides. One of the newest high-security doors is the Securitech Trident™ Lock. This door provides extra security but still meets code requirements as panic hardware.

The panic hardware is a beefy latch with a pin top and bottom on the lock side. The door also has a static pin on the hinge side that goes into the frame so that attacking the hinge side of the door would still require forcing a "lock." When the user presses the panic hardware, the pins on the lock side of the door retract. The pins also free spin so that gapping the door and attempting to cut them with a rotary saw will not work. There are also many types of other homemade security devices that can involve anything from chain to angle iron. When I perform preincident plans, the ingenuity of store owners never ceases to amaze me.

Security is a major concern across the country. Security issues aren't found just in the urban setting anymore. As times have changed, so has our country. People, whether in a rural town, suburbia, or an urban city, are not only locking their doors but are also applying extra security to them. Knowing how to force drop bars is a skill that all firefighters, especially the truckies, should have, but it's also important to know what other extra security features are present in your area. You should not only know what is common or present but also how to recognize and force them. The back of the building at 0200 hours when heavy smoke is pouring out the front is no time to be figuring it out. Plan ahead and train. ■

CLAY MAGEE is an instructor with Magic City Truck Academy and has been a firefighter/paramedic with Birmingham (AL) Fire and Rescue since 2013 and is assigned to Station 20. He is also a member of Chelsea Fire and Rescue. He began his career with the East Oktibbeha Volunteer Fire Department in 2004 while attending Mississippi State University. He has a B.S. degree in business administration from Mississippi State University, an A.S. degree in fire science from Columbia Southern University, and multiple certifications from the Alabama Fire College. He has been published in *Fire Engineering*. He is an organizer of the Deep South Fire Conference. He has taught H.O.T. classes at the Alabama Fire College, LSU FETI, Metro Atlanta Firefighters Conference, and multiple departments across Alabama.

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