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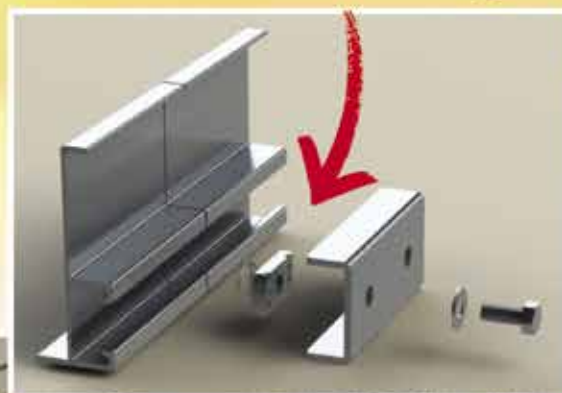
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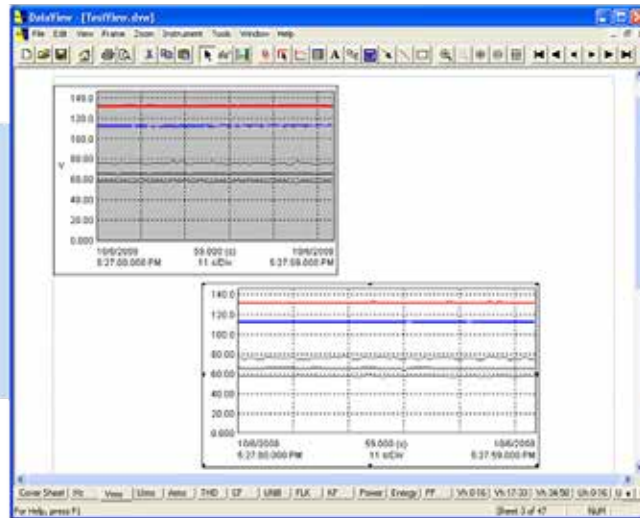
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AEMC Releases Dataview Software Update



Improvements for Data Loggers & Power/Energy Meters

AEMC Instruments has released an update for their Dataview Windows software package. This software is used to configure, view, and download data from many of their data loggers and power/energy meters including the PEL series, Simple Logger II series, DL913/914 Models, L452 logger, and the CL407/607 clamp-on meters.

The changes include:

1. Updates to a number of the instrument drivers to address USB connection issues.
2. For the PEL Series, several enhancements to the status screen and control panel. Numerous bug fixes including issues with display of DC real-time values and online help.

The updated software supports both Windows 10 (32 and 64-bit versions) and Windows 11 Pro. It requires a minimum of 2 GB of RAM on Windows 10, 32-bit, or 4 GB of RAM on Windows 10, 64-bit, or Windows 11. It also needs 5 GB of disk space to install the full version with support for the PEL/Powerpad instruments on Windows 10 or 50 GB of space on Windows 11; only 200 MB is required if not installing the PEL/Powerpad support files.

There are two ways to get the update:

1. Update from within the Dataview program. The easiest way is to start the Dataview software, go to the Help menu, and select "Update." It will download and install the new software.
2. If for some reason this does not work, you can download the new version of the software from the AEMC website at: <https://www.aemc.com/resources/DataviewDirectDownload.cfm>

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The Mandate for Snow Removal in 2024-2025: Do More With Less



Innovations in snow removal equipment is enabling a leading New England company to clear more snow with significantly less equipment, labor, maintenance, and repair

Many snow removal businesses base their decision on acquiring snow plow or pusher attachments on the initial cost, overlooking long-term expenses, improved efficiency, quality of clearing, and the potential to secure additional projects. When considering these factors, the optimal return on investment is achieved through the utilization of adaptable and agile attachments, even if the upfront expenditure is a little higher.

According to Degen Kelly, Director of Operations at Outdoor Pride, a company that generates approximately \$13 million in annual revenue from snow removal services, it is tempting to focus on the lower initial purchase cost or to simply order the same attachments other companies use. This leads many to just “rinse and repeat” for par thinking,” he says.

However, for the greatest overall returns, more attention should be given to the ROI that higher quality attachments provide. These attachments offer more flexible choices that allow a variety of movements in tight spaces, while adding to the value of skid steers, which are specifically designed to be nimble. Unfortunately, many standard snow plows and pushers have limited functionality, and if big and bulky, turn a nimble skid steer or wheel loader into a large, clumsy piece of equipment with limited maneuverability.

Of course, given the harsh environments where snow removal is required, these attachments must not only per-

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form efficiently but also must last over time.

"Once you crunch the numbers, you see how much time [high quality attachments] can save, how much onsite equipment you can eliminate, how much quicker your operators can work, and how much longer the equipment lasts," says Kelly, who earlier in his career was responsible for operating snow clearing machinery with a range of attachments from different manufacturers.

"Once you start to think about the ROI with the goal of doing more with less equipment, using a more flexible, quality attachment is a no-brainer," says Kelly.

Effectively Removing New England's Heaviest Snow Loads

Founded in 1988, Manchester, NH-based Outdoor Pride has become one of the largest landscape and snow management providers in New England. Like many landscape contractors, the company offers year-round service that includes snow removal in the winter for large commercial and government-owned properties.

"All the facilities we maintain are zero tolerance, which means that if they ever had to shut down, they could lose a lot of revenue every hour. So, the ability to quickly and safely clear snow from a site is essential. We need our entire fleet of equipment effectively performing every day during snow events," says Kelly.

According to Kelly, the average annual snowfall in New Hampshire amounts to approximately 60 inches. However, as recently as 2020, the state experienced winters with snowfall exceeding a hundred inches. To keep up with the high demand for snow removal services, Outdoor Pride maintains a large fleet of more than 300 machines, ranging from trucks and full-size loaders to skid steers and walkway equipment.

For snow removal, the company has 85 Bobcat skid steers and mini loaders, each equipped with a unique AutoWing attachment from Minnesota-based SnowWolf Plows.

Founded in Minnesota in the 1970s as a family run snow removal and landscaping contract business, SnowWolf transitioned into the role of equipment manufacturer in 1990. Today, the OEM offers a variety of models and sizes of snow plows, pushers, blowers, and other snow removal accessories that are compatible with skid steers, wheel loaders, front-end loaders, tractors, and other machinery.

Among the OEM's offerings is its patented AutoWing QuattroPlows, available in four models and machine operating weights, which are specialized attachments

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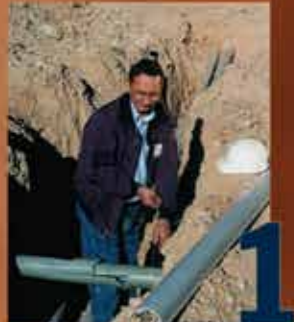
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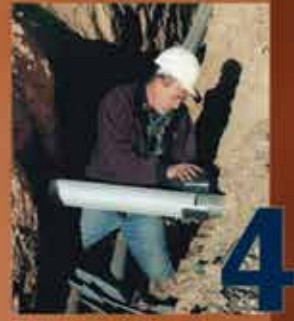
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that allow operators to switch between angle plowing, wide-angle plowing, pushing, and back dragging on the fly.

According to Kelly, Outdoor Pride discovered the QuattroPlow seven years ago, at a time when they were looking for an alternative to the attachments they were using.

"Most of the other options were flimsy, fixed box [snow pushers]. You really didn't have the flexibility to drag or angle. The attachments where backdragging and angling was an option were bulky and limited the ability to easily maneuver the skid steer," says Kelly.

In contrast, a key feature of the AutoWing design is the ability to extend and retract its side wings independently, depending on the width of the road or the amount of snow cleared. This allows operators to efficiently clear wider swaths of snow without manually adjusting the plow's position, increasing productivity and reducing the need for additional passes.

The AutoWing is also unique because it only requires one hydraulic circuit for efficient operation. No additional wiring is necessary and there are no specialized controls. The attachment can be angled left or right with a standard control feature on the joystick. The user-friendly design simplifies operator training.

"[The QuattroPlow] has all the great aspects of a fixed box, along with the ability to easily angle and back drag. It has a very simple setup with just two hydraulic lines," says Kelly.

Outdoor Pride also elected to utilize SnowWolf's ActivEdge, a unique design involving multiple cutting-edge sections with individual adjustability and adaptability. The floating cutting edges allow for more precise snow removal even on varied surfaces and minimizes the need for excessive salt or deicing agents.

"We have seen a benefit from utilizing the [ActivEdge]. Our plow edges are now following the contours of the pavement a lot easier," says Kelly.

The increased efficiency of Outdoor Pride's snow removal equipment has substantially improved its operations. Kelly estimates the amount of time to clear a complex area has been reduced by one-third, which often means an additional machine is not required. Due to its ability to conform to surface contours, the ActivEdge more effectively clears the area, reducing the necessity for additional passes or excessive salt applied post scrape.

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Although decreasing operator time is important to Outdoor Pride, Kelly says there are other ancillary factors that contribute to the ROI. A major factor is the ability of the equipment to withstand the rigors of annual snow clearing.

According to Kelly, some of the accessories on the market, "seem to get banged up a lot easier and require some serious attention to maintenance. With some of the competitors [that we were utilizing at the time], the implement was unusable after just a few years and the repair cost would've been too much," he says, adding that the QuattroPlows the company purchased seven years ago are still in service and other than new edges from time to time have required very little maintenance.



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"The [attachment] is an investment, but from what we have found, it is an investment that gives us results and lasts," says Kelly. "We are experiencing significant ROI in decreased operator time to get through an entire property. We also see it in the longevity of the product."

While the initial cost of equipment like snow plows or pushers can be a significant factor, it is essential to evaluate their long-term benefits, including increased efficiency, better quality of clearing, and the ability to handle more jobs.

By opting for more flexible and nimble attachments, snow removal services can enhance their operational efficiency and effectiveness. When the ROI is carefully analyzed, it becomes evident that the initial higher investment in advanced attachments pays off, making them an indispensable component of modern snow removal strategies.

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Signs up Above:

Assuring Transmission Tower Safety with Highly Visible, Long-Lasting Signage

By Del Williams

Aerial observation tower tags, crossing signs, and transmission tower safety signage are crucial for rapid, safe repair during outages and ongoing maintenance

When a widespread power outage occurs and high-voltage transmission lines require immediate repairs, the electric utility often sends a skilled technician to the location by helicopter to speed the repair process. Helicopters, along with drones, are also utilized for monitoring, inspecting, and maintaining transmission towers and power lines. Linemen often work on transmission lines that are not de-energized, allowing for an uninterrupted power supply.

Of course, working near high voltage lines poses significant electrical hazards. Flying close to high voltage lines, often in challenging weather conditions, increases the risk of a crash. The pilots and crew must adhere to strict safety protocols to avoid accidental contact with live wires. An electrical arc flash can also cause severe burns or other injuries, so workers wear protective clothing and use insulated tools.

“Given the high-risk nature of the operation, there can be no tolerance for inadequate or unreadable safety signage. When a technician is suspended hundreds of feet above ground, or a drone must fly close to the line, having easily readable, visible signage ensures the crew is at the correct location and understands the potential dangers and hazards in the area,” says Daniel O’Connor, General Manager of NY-based Tech Products, Inc., a manufacturer of industrial identification products for 76 years.

According to O’Connor, transmission towers require aerial observation tower/pole identification tags, crossing signs, warning signs, as well as various other crucial tags and markers. To mitigate risk and

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be readily visible for many years despite continual exposure to sun, rain, snow, sleet, wind, and even corrosive elements like acid rain. Unfortunately, traditional painted and laminated identification products frequently fade or delaminate when continually exposed to outdoor weather or punishing conditions. Even supposedly durable products designed for this purpose can become unreadable over ten years or more.

Even operators attempting to view aerial markers through the drone's high-resolution camera may find it difficult without flying closer than needed to the power lines. Operating drones near power lines presents several challenges and dangers, including increasing the risk of arcing. Additionally, strong winds near power lines can destabilize drones, increasing the risk of collisions.

The alternative is more durable signage made of high impact polyolefin plastic like the EVERLAST® brand from Tech Products, a manufacturer of identification products for the electric and gas utilities, telecommunication and cable companies, OEMs and pipeline companies. EVERLAST signs and tags display text or pictograms that are permanently embedded through the entire thickness of the substrate. UV stabilizers and antioxidants are added to provide complete protection and weather resistance in all climates.

For optimal visibility at a distance, polyolefin plastic aerial observation tags come in sizes ranging from 6 inches to 12 inches, the largest in the industry. According to O'Connor, Entergy, a Fortune 500 integrated energy company, has used this type of signage on their transmission towers since 1989.

Polyolefin plastic signage is also used to identify

liability, towers and other restricted areas also need to display warnings of the deadly electrocution and fall hazards to prevent unauthorized access or attempts to climb the structure from the ground.

From the Air

When helicopters or drones are involved, aerial observation tags are vitally important to quickly identify the location of a high-voltage tower from the air. Aerial observation tags are typically made of metal or plastic and installed horizontally or vertically using vandal-proof mounts on posts or stakes. The brightly colored, high contrast numbers and letters typically indicate the line number, section, and tower/pole number.

Because of the importance of identifying the correct tower, aerial surveillance markers must



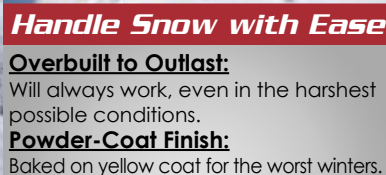
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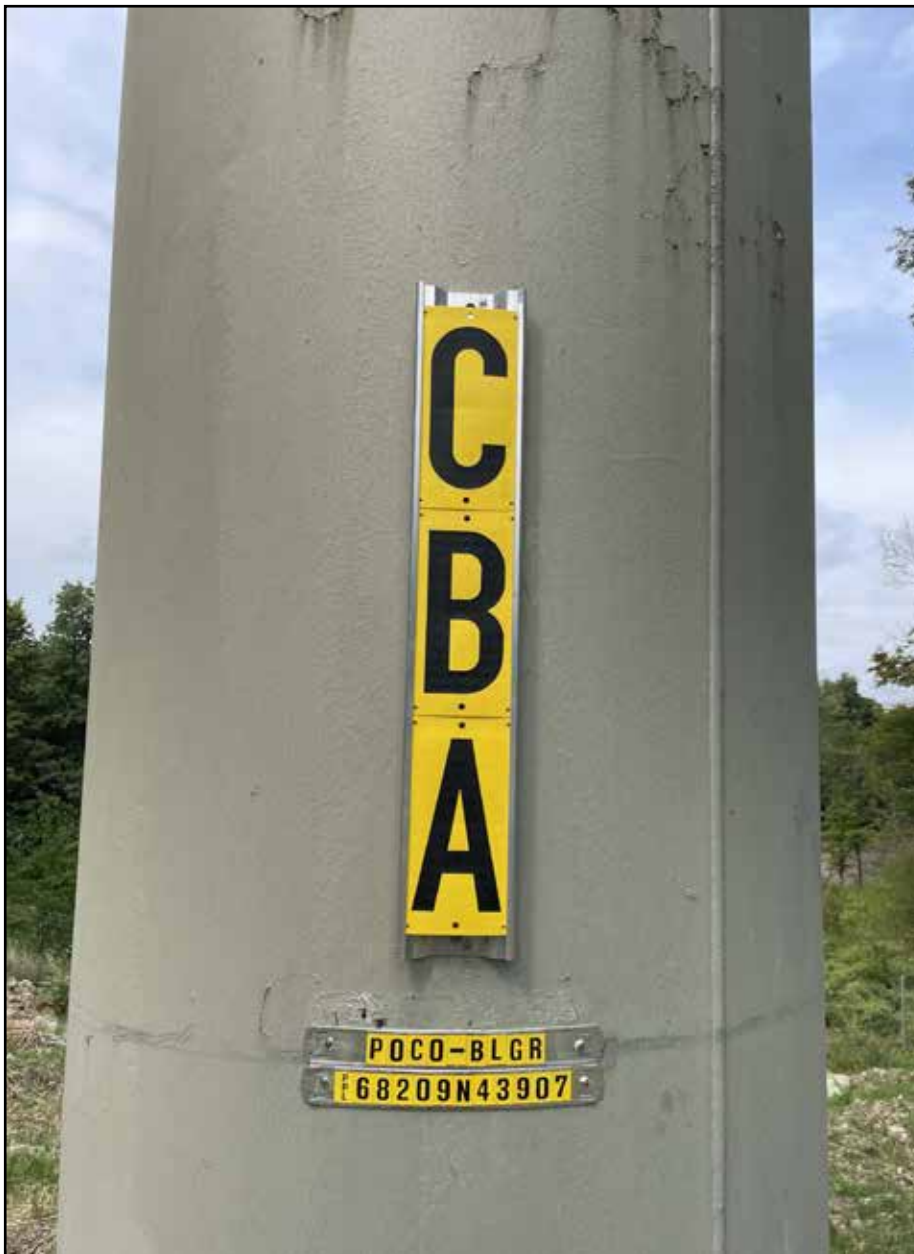


nearby lines or to indicate unexpected changes in the elevation or direction of the line. For the helicopter crew, crossing lines can be very dangerous, particularly in low visibility conditions. To prevent this from happening, signs are posted. Within the industry, it is typical to clearly indicate a power cable crossing with signage marked by an "X" or a change in direction with an arrow.

"When a helicopter crew is flying at high speeds, any power cables in the vicinity or any sudden

directional changes can increase the possibility of a serious accident. Crossing signs mitigate the risk but must be clearly visible in any weather conditions. The embedded characters help to ensure readability decades later," says O'Connor, adding that EVERLAST crossing signs are available in a large 10" x 14" format to promote optimum visibility.

Signage is also necessary to signify specific levels of danger or required precaution with OSHA compliant color codes.



AC transmission lines can carry transmission voltages from 69 kv up to 765 kv, which can be extremely dangerous, and even fatal. As a result, electric utility transmission and distribution identification products such as safety signs, tags, and markers are critical to safe, efficient operation, maintenance, and repair. These brief warnings or instructions, comprised of letters, numbers, and symbols, must effectively convey key information to personnel.

On large, high-voltage transmission towers, phase tags are commonly used to indicate phase polarity on the towers, which is important because connecting the wrong phases can lead to dangerous explosions, serious injury, and extended

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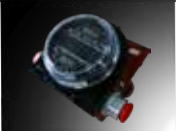
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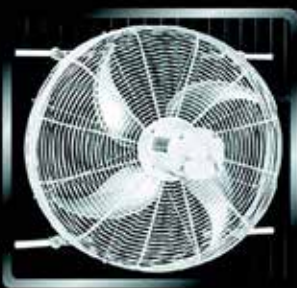
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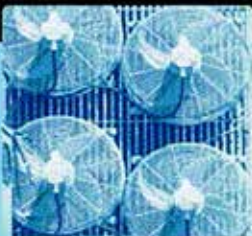
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In addition to towers, smaller, lower-voltage distribution lines deliver power to homes and businesses on smaller poles. Pole identification products, such as tags and markers, are used to track and identify assets, data, and other vital information. Pole tags can also be used to identify the pole's owner, maintenance history, and other valuable data.

"When lasting transmission and distribution markers are required, another alternative is deeply embossed pole markers made of unpainted, embossed aluminum, brass, or stainless steel. The highly defined characters remain legible for the life of the pole," says O'Connor.

When the tags need to be seen with a flashlight, metal reflective pole tags with screen-printed black characters on construction-grade yellow or silver reflective sheeting are a good option.

From the Ground

Unfortunately, there have been numerous recent reports over the years of fatalities and severe injuries from people climbing high-voltage transmission towers for thrill-seeking, protest, vandalism, or theft of metals.

To dissuade this type of behavior and limit any potential liability, safety warnings are posted on poles, towers, fences surrounding substations, and at entry points to restricted areas. The brightly colored signs that warn the public of "Danger!" "High Voltage Overhead," "Electrocution Hazard," or to "Keep Out." International symbols related to electrical hazards as well as safety colors such as red, orange, or yellow are often included.

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“Climbing a transmission tower can be a life-threatening event, risking extreme liability, if warnings and precautions do not comply with OSHA, ANSI, and other regulatory standards,” says O’Connor

To remain ANSI compliant, the signage or tags must not only retain its readability, but the color distinctions must be maintained as well over the long term.

“We always make sure our signs are OSHA/ANSI compliant,” explains O’Connor. “However, it is not just what the sign says, but also its colors. A safety red must stay red for the life of the sign, or it may no longer be considered compliant with OSHA regulations, even if it has been twenty-five years,” says O’Connor.

With the stakes of quickly restoring power to urban areas so high today, utilities need to effectively utilize industry best practice signage, tags, and markers to help their technicians quickly, safely identify and resolve any issues in transmission towers and poles. Those that do so will benefit greatly over the long term in increased uptime and safety while substantially reducing labor, maintenance, and potential liability.

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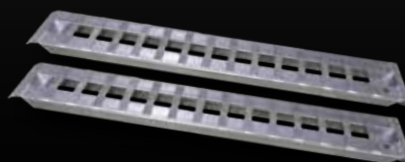


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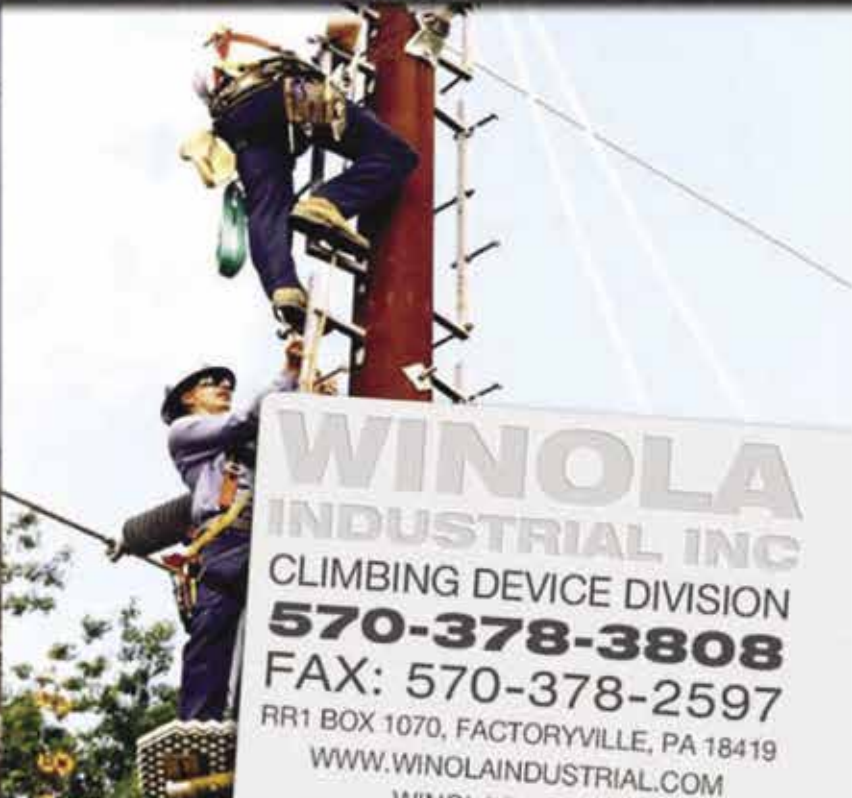


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