



THE Breaker Buzz

Providing Electrical Solutions Worldwide VOL VIII

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2015
Happy
New
Year!



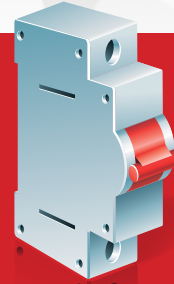
Santa Delivers Early for CBS ArcSafe and CBS Northeast

CHRISTMAS CAME A little early this year to the tune of \$1 million for CBS Northeast and CBS ArcSafe. CBS ArcSafe received a purchase order “present” arriving late December 12 for 42 RRS-1 units from a

leading energy provider customer of CBS Northeast. The order is the first installment of a contract secured after a two-and-a-half-year sales process headed up by CBS Northeast’s Lou Lavorgna.

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GroupCBS.com



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THE VIEW FROM FLIGHT LEVEL 410

By Finley Ledbetter, CEO, Group CBS

How Far I Can See



I WAS ONCE told a 6'3" tall man standing on the flat ocean can see four miles before the curve of the Earth takes effect. I have seen a bit further than that most of my time at Group CBS. I can see the day when Group CBS and all of its affiliates are selling more than \$200 million a year in products and services. I can clearly see when we will have a service shop outside the United States. I can see change and all us older, obsolete tech engineers/sales and mechanics will be replaced. I am, however, reminded of the first circuit breaker. Group CBS sold a GE AK-2-100 33 years ago for exactly what we sold one for this week, which shows the stability in our business, market, and model, and is one of the keys to our long-term success. We have always had a superior product to our competitors, and this has been an advantage at times and a disadvantage in bidding apples to apples at times.

Our fathers and grandfathers made the U.S. a strong industrial power. It is up to us and our children to make the U.S. a SMARTER industrial power.

I can see that our kids will all be impacted by the mess our fathers started, and we have done way too little to solve the ecology of our small planet. I can see our children and their children having to compete on the world's highest stage for oil, water, and food.

I can see we are not through with our world at war, or at least large-scale conflicts will arise as people can't breathe, eat, or drink as they stand on top of the earth often after they have polluted the air, pumped all the water out of the earth, and used the earth to exhaustion growing food.


I can see how at this time in the U.S. we are semi-protected by the great oceans. We have some time to cure the issues or at least prepare before they take us down as well.

I can see we, Group CBS, reuse thousands of tons of surplus electrical a year. That saves energy — coal, oil, gas, and nuclear — to build new equipment. This saves our dependency on offshore material as much of this comes from foreign manufacturers and suppliers.

This saves the atmosphere; let's remember we use coal, gas, and, oil to produce copper and steel — all used in electrical equipment. Our fathers and grandfathers made the U.S. a strong industrial power. It is up to us and our children to make the U.S. a SMARTER industrial power. U.S. GNP is now growing again, so let's do it smart, efficiently, and with an eye to preserving the earth for future generations.

I also can see greater productivity due to less downtime to extend the life of electrical equipment. If we can extend the life of electrical equipment 30 years, we have saved thousands of tons of waste and carbon emissions!

Now how can I see all this? It is simple. I am seeing this because I am hundreds of feet tall, standing on the strong shoulders of the 340+ workers of Group CBS. Without you, I could only see four miles.

Here's to a successful 2015, and let's get ready to do great things again. 

**12 DAYS OF
CHRISTMAS
★ IN TEXAS ★**


**ONE LONE STAR,
TWO COWBOY
BOOTS,
THREE SHOTS
OF TEQUILA,
FOUR BLUE-
BONNETS,
FIVE ARMADILLOS,
SIX JALAPENOS,
SEVEN OIL
WELLS PUMPING,
EIGHT
COWBOY HATS,
NINE YELLOW
ROSES,
TEN BRONCOS
BUCKING,
ELEVEN
FOOTBALLS
FLYING,
TWELVE
PICKUPS
HONKING**

Santa Delivers Early for CBS ArcSafe and CBS Northeast

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“The sales process included multiple meetings with on-site demonstrations that culminated with this contract, which will provide remote racking throughout the customer’s system,” Lavorgna says. “This initial order will be followed by subsequent installments of additional equipment so the customer will be able to reach its goal to be fully compliant by the end of May 2015.”

Preparing a shipment of 42 RRS-1 units during any time of the year takes

a lot of teamwork and effort. With this order’s short lead time of just 12 days and a required shipment deadline of noon December 24, the CBS ArcSafe elves were hard at work as Santa got everything ready to go out the door Christmas Eve. For CBS ArcSafe and CBS Northeast, this year’s 12 days of Christmas brought an uplifting end to 2014 and a bright promise for a new year. Congratulations to all involved! 



New Group CBS Products Win Industry Safety Awards


GROUP CBS, INC. (GROUPCBS.COM) cleaned up at this year's *Occupational Health & Safety* (OH&S) magazine's product of the year contest, winning four awards for new products from CBS ArcSafe, Vacuum Interrupters, and Circuit Breaker Analyzer.

CBS ArcSafe's RSA-161A and RSA-174F remote switching solutions, which allow the operator to operate circuit breakers while outside the arc-flash boundary, both won best products in the Electrical Safety category. Circuit Breaker Analyzer's CBAAnalyzer for Windows 7 won best product in the EHS Software category, while Vacuum Interrupters, Inc.'s MAC-TS4 won for best Safety Monitoring Device.

"Nothing makes you feel better than having hard work validated by the industry you serve," says Finley Ledbetter, CEO and chief scientist of Group CBS. "Group CBS is proud of its electrical testing and safety products, but we're even more proud of the people who design these test and remote racking and switching solutions."

OH&S's Product of the Year contest is designed to recognize outstanding product achievements of health and safety manufacturers whose products improve workplace safety. This year's independent panel of three judges reviewed 60 products in 22 award categories. The winners were recognized during the 2014 National Safety Congress & Expo that took place in San Diego September 15-17 and are featured on the magazine's website at ohsonline.com/pages/product-awards.aspx.

All four of these new products are also finalists in *Plant Engineering* magazine's Product of the Year award in the Maintenance Software, Maintenance Tools, Electrical Safety, Safety, and Electric Motors and Drives categories. Cast your vote today online at www.plantengineering.com/events-and-awards/product-of-the-year/2014/2014-product-of-the-year-finalists.html. Voting continues until January 9th.

Previous awards include CBS ArcSafe's RSA-12A remote switch actuator that won the 2013 OH&S New Product of the Year Award in the Electrical Safety category and Circuit Breaker Analyzer's CBAAnalyzer iOS app for iPhone and iPod Touch that won the 2013 OH&S New Product of the Year Award in the EHS Software category. 



CBS ArcSafe RSA-187A remote switch actuator



CBAAnalyzer for Windows 7

Vacuum Interrupters' Magnetic Atmospheric Condition vacuum interrupter tester (MAC-TS4)



CBS ArcSafe RSA-174F remote switch actuator

What's the Difference Between Remanufactured and Reconditioned?

A CUSTOMER'S GUIDE TO CBS PRODUCT CONDITION

By Paul Grein, EE, Circuit Breaker Sales Co., Inc.

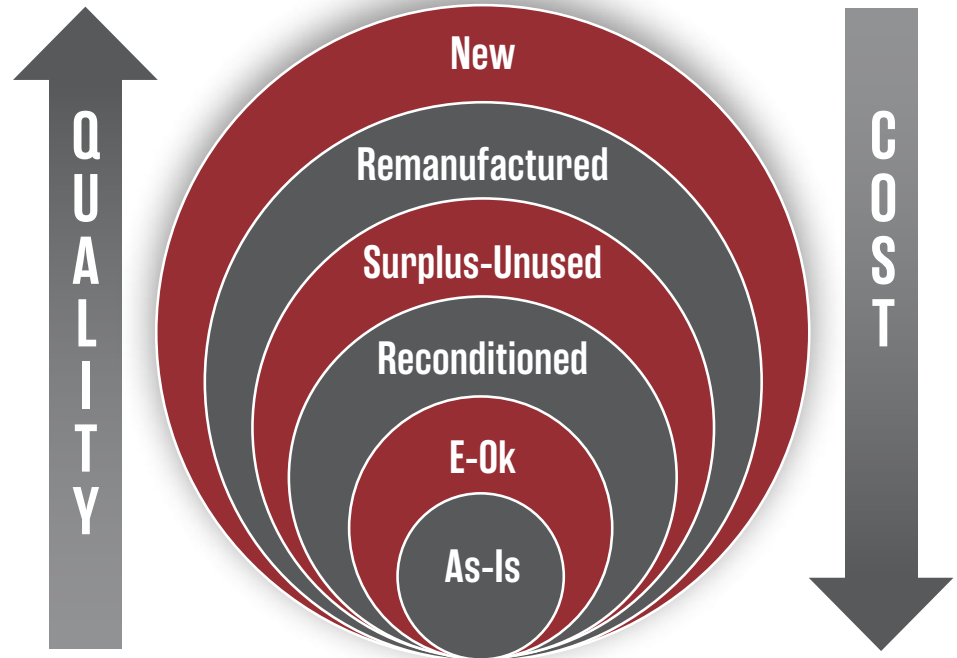
MANY OF OUR customers request clarification between the product conditions that Circuit Breaker Sales (CBS) and our affiliated companies offer. The purpose of this article is to clarify product conditions, in simple terms, with the understanding that all of the product states are governed by ISO-certified specifications, processes, and acceptance criteria.

We offer products in six increasing levels of quality: As-Is; E-Ok; Reconditioned; Surplus-Unused; Remanufactured; and New.

Products sold in **new** condition are what most would expect — they are **new** and are sold through OEM-approved channels. Products sold in **new** condition are sometimes referred to as **factory-new** to emphasize the difference between new and **surplus-unused**.

Remanufactured is a product state reached through a remanufacturing process in order to meet or exceed OEM performance specifications and customer expectations of new products. Customers can expect that **remanufactured** equipment will meet or exceed its original expected life. **Remanufactured** equipment has been disassembled to its most basic components, which are then restored or replaced. Then the equipment is reassembled, adjusted, and tested. In terms of an automobile, remanufacturing restores the odometer to zero. Some customers refer to **remanufactured** equipment as **refurbished**.

Products sold in **surplus-unused** condition are products that have never been used but cannot be sold as new for several possible reasons. **Surplus-**



unused products are commonly utility/industry spares that were never placed into service or OEM inventory that was never sold. Products sold in **surplus-unused** condition are sometimes referred to as **surplus, unused, new-surplus**, etc. (or several combinations of those three words).

The majority of products sold by CBS are in a **reconditioned** state. **Reconditioned** products are similar to **remanufactured** with one major difference. **Reconditioned** products are *partially* disassembled to ensure that there are no mechanical/electrical issues and also allow them to be properly cleaned and lubricated. The equipment is then restored *as needed* to ensure the product is free of defects that could affect its primary function. **Remanufactured** products are *completely* disassembled

and restored regardless of their existing condition. Cosmetic imperfections that do not affect operation may be present in **reconditioned** products. Reconditioning ensures that the product will perform as expected over the remainder of its expected life. Referring again to the car analogy, reconditioned equipment is similar to a certified used car.

Products in **electrically-ok** (or **e-ok**) condition have been cleaned and tested to ensure they will function as expected, including performance of the electrical insulation system, but are not warranted by CBS. Generally, products sold in **e-ok** condition are limited to (1) field-service companies and competitors that will use it for parts or to recondition themselves, and (2) end users that have had an emergency and need a temporary spare immediately. Products sold in **e-ok** con-

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Regular Inspections, Maintenance Can Save Insulators

THREE EVENTS AT SUBSTATIONS ILLUSTRATE WHAT HAPPENS WHEN MAINTENANCE IS NEGLECTED

By Tim Conley, Senior Technical Advisor, Western Electrical Services, Inc.

WE HEAR ALL THE time that a company's priorities are "production, production, production." Then they remember safety is involved in there somewhere. Maintenance is often an afterthought, budgetary-restricted item, or mal-performed, amongst a number of other reasons. How about "run it 'til it dies?"

This article will try to impress on you the need to perform regular inspections, maintenance, and correct deficiencies identified during maintenance inspections by describing three separate maintenance events that happened over the last five years. This article focuses primarily on Glastic/fiber-reinforced injection-molded insulators.

Can You Use Indoor Insulators Outdoors?

A hospital in western Washington state had an outdoor 15-kV substation with severe partial discharge (PD) when Western Electrical Services (WES) was contacted for assistance. PD test equipment confirmed severe levels of PD occurring. Quickly, an outage was arranged for repairs. This substation had been neglected for many years — so much so that the control power transformers had failed, eliminating power to the substation's space heaters. Vents were rotted out and the majority of the red Glastic insulators were breaking down with tracking. The misleading issue that came up was that the red insulators were stamped with "indoor use only." WES serviced the substation by replacing failed potential (voltage) transformers and control power transformers; replacing all insulators with 15-kV porcelain insulators, space heaters, and controls; and replacing air-switch phase barriers as necessary.

Were "indoor use only" insulators appropriate for a NEMA 3R outdoor substation? At

first we all concluded no, that they should not have been used in this application. In reality, molded-plastic insulators are acceptable, but this reflects the absolute need for regular maintenance.

Tracking Leads to Problems

When a southern Oregon lumber mill was servicing its indoor 15-kV substation, the company contacted WES to evaluate the condition of the insulators inside of it. The sawmill's

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15-kV rated 6" Glastic insulator bushings with flashover damage resulting from a lack of switchgear inspection and regular maintenance. The center insulator is provided as a reference for what it should look like.



The associated bus joint boot shows the flashover damage.

Embrace the Unknown and Thrive

By John Benson, Circuit Breaker Sales Northeast



John Benson

WHEN I LEARNED that Group CBS was acquiring the company I worked for, worry set in. Did I have the know-how required for them to keep me as an employee? What

would happen with my coworkers — people I have bonded with over the years? What about the fate of my boss, who also was my problem solver and mentor? The thought of losing him frightened me and my well-being.


It turns out, however, that the old adage is true: when one door closes, another opens. Working for Circuit Breaker Sales Northeast not only has helped me to conquer the fear of the unknown but meet new challenges head-on — all while forming a new family in the process.

With the start of CBS Northeast, I have been put on the frontlines of emerging force. With this change I have gained back my confidence that the sale of a business may erode; it also has been a stress relief. Now I am busier than ever learning and adapting to this fast-paced business, and honestly, I love it. Learning about and understanding new equipment such as the MAC tester and ArcSafe remote racking, and being able to work with the engineers of this equipment. Offering my thoughts

and actually receiving positive feedback to make our group and equipment the best in the market. Going out into the field and demonstrating this equipment, getting the word out, and making possible sales, as well as generating more work as a whole.

I have traveled and done more in six months than I could have ever imagined. The lesson here: If you have the drive and are willing to put in the effort, you can be anywhere you want in this company. You don't have to stay stationary or idle.

My prior company, DES, was compared to a family. Everyone was willing to help and work together to get the job done. I asked myself, "Will I experience the same thing with CBS Northeast?" The answer is most definitely yes, down to Finley Ledbetter himself, who will go out of his way to lend me a hand and swiftly respond to questions and concerns that I have. Best of all, he's not afraid to roll up his sleeves and work beside me. He's the type of man to ask you, "Do you need anything? Is everything all right?" as soon as he walks into the building. Finley is truly concerned and will do anything in his power to make your job better and/or easier.


As time goes on, I can only imagine things will get better than they are. As for the unknown, embrace it rather than fear it. Be confident in who you are and what you can do, because the sky is the limit. 

What's the Difference Between Remanufactured and Reconditioned?

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.....
dition are sometimes referred to as "cleaned and tested."

The **as-is** product state is another clear product condition. Products sold **as-is** are neither tested nor inspected in any way and may be damaged or have missing parts. Similar to **e-ok**, **as-is** products are typically sold to field-service companies and competitors that use them for spare parts. Some customers will request an **as-is** product that is also "**mechanically-ok**," requesting that the product be inspected to ensure it is undamaged and complete.

In addition to the six standard conditions CBS offers, we also meet customer-provided specifications. It is important to understand product condition to ensure the product ordered meets your expectations and requirements. Hopefully these brief explanations have helped clarify product condition. If you have questions or would like a copy of our detailed product specifications, contact your CBS sales representative for assistance. 



Vacuum Interrupter Testing with MAC-TS4



Introduction video to the world's first portable magnetron testing system for vacuum interrupters.

vacuuminterruptertesting.com/videos/vacuum-interrupter-testing-with-MAC-TS4.mp4

Why an American National Standard Matters to Remanufacturing

By Paul Grein, EE, Circuit Breaker Sales Co., Inc.



Paul Grein, EE

REMANUFACTURING IS A comprehensive and rigorous industrial process by which a previously sold, worn, or non-functional product or component is returned to a “like-

new” or “better-than-new” condition and warranted in performance level and quality. Remanufacturing is a rapidly growing global, high-tech industry that includes a wide variety of business sectors. The U.S. is the world’s largest producer, consumer, and exporter of remanufactured products.

However, remanufacturing is not well understood by the public, government organizations, or across the manufacturing community worldwide. To many people, remanufactured products are viewed as lower quality or “used.” In addition, many of our customers have expressed concerns about safety and performance, and they confuse remanufacturing with other processes such as recycling, repairing, and reconditioning.

Circuit Breaker Sales is a charter member of the Remanufacturing Industries Council (RIC), a strategic alliance of businesses and academic institutions that work across industry sectors to support the entire remanufacturing industry. The RIC is working to increase awareness and grow the reputation of the benefits of remanufacturing in all segments of the community.

Purpose of the American National Standard (ANSI Standard)

In a study commissioned by the Office of the U.S. Trade Representative, the U.S. International Trade Commission iden-

tified two major impediments to growth for the remanufacturing industry: (i) the lack of a commonly accepted definition of remanufacturing, and (ii) the absence of standards for the remanufacturing process. RIC’s standards activities are designed to address these deficiencies and promote the understanding and credibility of the remanufacturing industry.

Remanufacturing is a rapidly growing global, high-tech industry that includes a wide variety of business sectors.

This standard is being developed to accomplish the following:

- Define and provide a benchmark for the process of remanufacturing
- Promote continual improvement in the remanufacturing process and ensure that the products provided to customers by members of the remanufacturing industry are dependable and of a consistent high quality
- Enhance the understanding and grow the credibility of the remanufacturing industry
- Establish specifications that will characterize the remanufacturing process and differentiate it from other processes
- Serve as a baseline for additional standards for specific remanufactured products and product groups to be developed in the future
- Provide a basis for developing international standards (e.g., ISO), working with EU- and Asia-based organizations to reach a global consensus on remanufacturing

What Will an ANSI Standard for Remanufacturing Include?

- Definitions and terminology to distinguish between related processes
- Criteria/specifications — the essential steps for qualifying as remanufacturing
- May include a mark/label (indicating a manufacturer’s declaration that the product meets the specifications of the standard for remanufacturing) — to be decided

Process for Developing an ANSI Standard for Remanufacturing

- RIC is an American National Standards Institute (ANSI) Accredited Standards developer
- RIC is developing a draft standard for the process of remanufacturing using ANSI-approved procedures to ensure the process is balanced and inclusive
- RIC is creating a database of “stakeholders,” all of whom will be contacted and offered the opportunity to review and comment on the draft standard
- All stakeholders can apply to be on the Consensus Body — the group that votes on when the draft standard is ready to submit to ANSI, but the size of group will be limited and membership will be balanced across the remanufacturing industry sectors
- When the Consensus Body votes to approve the draft standard, it will be submitted to ANSI for approval as an American National Standard

If you are interested in becoming a member, learning more, or participating in development of the standard, please contact Paul Grein at 940-665-6027 x2031 or pgrein@groupcbs.com, or visit www.remancouncil.org.

Excessive Lubrication: When Too Much of a Good Thing Is Bad

By Tim Conley, Senior Technical Advisor, Western Electrical Services, Inc.


WHEN WESTERN ELECTRICAL SERVICES (WES) recently had to investigate why a saw-mill customer's ArcSafe remote racking system was having difficulty racking a specific breaker correctly, they found that the mill's practices of lubricating moving surfaces made them their own worst enemy.

The switchboard's racking mechanism was so heavily lubricated that the dried grease had acted as glue, causing severe tracking on the insulators. After resolving the customer's problem, WES put together a training summary for its technicians to address this issue, along with issues involving the use of low-pressure air on arc chutes and to clean circuit breakers. The training included information on:

- The ill effects of excessive lubricant usage. As technicians we need to be mindful of the environment in which the customer's equipment is located and weigh carefully the amount of



lubricants to be used. Greases should not be applied to the main and arcing contact faces as you are applying petroleum-based products to a surface that potentially sees an arc.

- Most early arc chutes were made of asbestos. Exposure to asbestos causes lung diseases and using low-pressure air will dislodge non-friable asbestos from an arc chute, causing it to become airborne. Not a good thing!
- Friable asbestos-containing material (ACM) is any material that contains more than 1% asbestos by weight or area, depending on whether it is a bulk or sheet material and can be crumbled, pulverized, or reduced to powder by only the pressure of a human hand. Non-friable ACM is any material that contains more than 1% asbestos but cannot be pulverized under hand pressure.
- It is also not a good thing to use air to blow out circuit breakers as you drive debris into moving-, sliding-, and bearing-type surfaces. You could introduce debris in motors or switches, which creates a respiratory hazard and puts dirt onto other items that are cleaned. 

For more information on these topics from WES, please contact Tim Conley at tconley@westernelectricalservices.com.

Excessive dried lubricant and dirt on these GE MagneBlast racking roller guides inhibited the operation of the mechanism.

GCBS COMMUNITY

WWII History Alive Weekend in Gainesville



The Camp Howze Military Vehicle Preservation Association (MVPA) of Gainesville, Texas, is a group dedicated to restoring and preserving World War II motor vehicles such as tanks, jeeps, and weapon carriers. This past September, Circuit Breaker Sales was a sponsor of the MVPA's History Alive weekend that included a Friday night dinner and dance followed on Saturday with a reenactment of the Battle of Crucifix Hill in Germany between the allied forces and Germany.

The dinner and dance was hosted at the CBS hangar and the reenactment event took place at Camp Howze, a World War II army camp located north of Gainesville. The event's theme and goal was to provide a glimpse of what life was like for the World War II soldier.

The hangar dinner was attended by 300 attendees and featured the Gainesville Swing Orchestra playing WWII music and entertainment by Lynn "Win" Roberts, a Bob Hope impersonator from Arizona who performed an hour of Hope's material, including singing and a comedy routine.

A great time was had by all! The MVPA group would like to thank Finley Ledbetter, Bill Schofield, and Ray Kinney for their sponsorship and use of the hangar for the event and extends a special thank you to James Damron, who prepared the hangar.

Regular Inspections, Maintenance Can Save Regulators

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crew was servicing the switchgear when they discovered severe tracking on the insulators. In this situation, the switchgear was in a heated room, but the environment was still damp and the interior of the switchgear was not heated. What's more, the sawmill's crew had a practice of using Simoniz car wax to clean and polish the insulators. (Yes, car wax!) Needless to say, the gooey goop on the Glastic insulators added to absorption of water, aiding in the development of tracking.

When regular maintenance is being performed, it still must be done using approved practices and materials.

To correct the severe condition of the substation, WES replaced all red Glastic insulators with porcelain insulators, as well as installed space heaters with thermostat controls. This scenario illustrates that when regular maintenance is being performed, it still must be done using approved practices and materials.

Rotted Vents

A major U.S. naval installation recently lost power due to insulator failure faulting to ground and arc flash. Again, it was a NEMA 3R outdoor substation, not regularly maintained for many years, with red Glastic molded 15-kV insulators installed. Interior space heaters were not operating and vents were rotted out. The lack of regular maintenance struck again, whether due to budgetary constraints or the outage always being too difficult to obtain because of the facility's operational constraints.

WES performed repairs to allow power restoration. The naval installation had already ordered new switchgear at the time of the failure. We hope they maintain this next batch of gear better! 



Left bus joint boot shows flashover damage from lack of regular maintenance.



Another view of Glastic insulator bushings with flashover damage.

People, Not Equipment, Drive CBS ArcSafe Racing Team to Victory

TOMMY PHILLIPS, LEGENDARY National Hot Rod Association (NHRA) Sportsman drag racer and head of the CBS ArcSafe/K&N Engineering team, has used a familiar management philosophy to drive his team to the most winning record of any Division 4 champion. Like CBS ArcSafe and parent organization Group CBS, Phillips believes in putting the best people in place and riding their work to victory.


"I am a firm believer in having excellent people and superb equipment from the start," Mr. Phillips said, shortly after a double victory in both Super Comp Dragster and Super Gas categories to kick off the 2014 race season in Tulsa this year. "I have all of that, so I figure if we mix in a lot of hard work, it's difficult to keep us down long. I want to give a special thanks to Jay Thornburg for going along with all of my ideas and theories that usually translate into lots of hours of work! In addition I must recognize Ashley McWhorter and the entire group at CBS ArcSafe [along with our other sponsors]. We're really fortunate to be involved with unbelievably supportive marketing partners."

CBS ArcSafe and the family of employees at Group CBS aren't the only ones keeping an eye on Tommy and lead driver Riley Ledbetter as they tear up tracks across the western U.S. "I've been going to NHRA races for 20 years," said Max Wentworth, E&I specialist at chemical supplier Ashland Inc. "After we bought some replacement breakers and electrical equipment from Circuit Breaker Sales & Repair [CBS&R, Houston], I started paying attention to Phillips and the CBS ArcSafe team as he became the most winning Super Comp Division 4 driver at the Sportsman level in the country."

With three nephews in NHRA Division 5, Mr. Wentworth said NHRA racing is in his family's makeup, just as it is with the Ledbetters and Group CBS. "Dad was drag racing when we were all kids," remembers Mrs. Ashley Ledbetter McWhorter, CBS ArcSafe president. "He helped Tommy get started early in his career and as time has gone on, Tommy has repaid the favor by mentoring Riley. Our whole family loves being a part

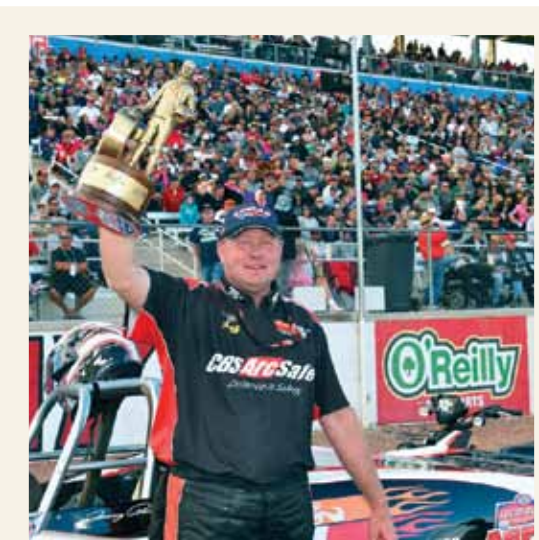
of the NHRA, and a lot of our customers get a big thrill out of it too."

Lee Heine, CBS&R's vice president of sales and marketing, has met a number of Mr. Wentworth's Ashland colleagues during their pilgrimages to Dallas and Houston, where Tommy and Riley regularly rip up the competition. "It's something special to go to the track and see the CBS ArcSafe trailer out in front from the grandstands," said Mr. Heine. "Our customers really get into it. When we had the racing team at our open house last year, all the customers really got a thrill being able to get up close with the cars, trailers, and equipment. It generated a lot of excitement at the event."

If you haven't had a chance to see Tommy Phillips' team in action, don't worry. Their first divisional event will take place in Houston on March 6th followed by the national event in San Antonio March 13th. Want to get even closer? Don't be shy about contacting CBS ArcSafe to reach team management about getting the CBS ArcSafe/K&N Engineering squad at your next event. 



Jay Thornburg (front) and Tommy Phillips work on the car



Above: Tommy Phillips

Below: Riley Ledbetter



Western Electrical Services Expands West

By Craig Archer, President, Western Electrical Services, Inc.

WESTERN ELECTRICAL SERVICES, INC. (WES) has made great progress in our growth efforts in the Western United States. To support these efforts, we've brought on board six new employees with many talents. Please help us welcome our newest sales and service technicians, as we believe they will be a great addition to our Western region team.

- Great progress is taking place in Denver and the Intermountain region with the addition of outside sales support Justin Sandlin in late 2013. If things continue to go well, we hope to have a physical facility there in the next year to benefit local customers with field and shop support.
- Valerio Zamolo, our new field-service technician from Brazil, comes to us with several years' experience in the engineering and testing industry, along with a recently minted BSEE to help us support the Engineering Division and our entire Field Service operation.

- Craig Bradley recently accepted a field-service test technician offer in our Seattle office. Craig comes to us by way of Denver. He has past experience in the testing industry and wanted to get back into it.
- Pat Bornhoeft was brought on in Phoenix as outside sales and customer service rep earlier this year to help grow the Southwest market and better serve our existing customers. Pat comes to us from Basler and brings with him

an engineering and economics background.

- Mike Kelly joins us from a stint as Southern California sales for Circuit Breaker Sales. He previously worked at General Electric and Southern California Edison. Mike brings many years of equipment sales and service experience and has a real desire to bring WES solutions to the Southern California market.
- Torry Sylvester joins the Phoenix breaker shop as a breaker mechanic. Although he has never worked on breakers before, he shows the kind of detail and mechanical ability we need to continue providing quality breaker services. 



Justin Sandlin



Valerio Zamolo



Craig Bradley



Pat Bornhoeft



Mike Kelly



Torry Sylvester

GCBS COMMUNITY

Smiles Don't Come Easy

Remote racking training from CBS ArcSafe elicited smiles all around at customer Oxy Vinyls' facility in Deer Park, Texas. Participating electricians were involved in setting up and operating the RRS-1.





We sat down with Glen Dangelmayr at Circuit Breaker Sales Co., Inc. to find out more about him and his life both in and away from the shop.

By Teresa Sprouse, Sales Associate/Office Manager

WHAT IS YOUR TITLE?

Floating Shop Technician (It depends on the day)

WHERE IS YOUR HOMETOWN?

Muenster, Texas

HOW LONG HAVE YOU BEEN WITH CIRCUIT BREAKER SALES?

I've been with Circuit Breaker Sales since June 1, 2000.



**Glen Dangelmayr,
Shop Technician**

TELL US ABOUT YOUR FAMILY.

I'm married to DeeDee and we have two sons – Cole and Clay.

WHAT DO YOU DO WHEN YOU ARE NOT WORKING?

Ranching, the kids, and my wife keep me busy when I'm not working. (Not always in that order.)

WHAT IS YOUR LEAST FAVORITE PIECE OF ELECTRICAL DISTRIBUTION EQUIPMENT AND WHY?

My least favorite piece would probably be the newer plastic electronic stuff that is poorly made from the factory. They are designed to be a throwaway item and not repaired.

WHAT IS YOUR FAVORITE PIECE OF ELECTRICAL DISTRIBUTION EQUIPMENT AND WHY?

Most anything medium voltage but especially the PowerVac breakers. I like medium-voltage breakers because they can be a little more challenging and complex to remanufacture and test. Also, I like the PowerVac breakers for their versatility and reliability.

WHAT DO YOU THINK YOU BRING TO GROUP CBS THAT MAKES YOU UNIQUE IN THIS BUSINESS?

I am flexible and have a diverse knowledge of the equipment, whether it is low- or medium-voltage air circuit breakers, switch-gear, or parts.

GCBS COMMUNITY

Wild Goose Chase

Employees of CBS ArcSafe, Vacuum Interrupters Inc., Circuit Breaker Analyzer, and Circuit Breaker Sales NE Inc. recently spent a day sharpening their team-building skills with roaring success. The teams spent the day completing a variety of creative and unusual challenges!



The team of Randy Cavness, Brad Morrell, Callan Waddle, Tim Kelly, Greg Davis, and Andrew Farris was tasked to photograph each member reading a different New York Times bestselling novel.



The winning team, comprising Colin Pair, Mark Standridge, Lauren Aslinger, Morris Wallace, and Tele Folorunso, successfully photographed themselves sleeping on a department store mattress.



Julia Neves and Alan Crawford — with the help Travis Herr's dog, Frank — made a Nagi Noda critter from human hair using a bald man with a live mammal on his head.

Group CBS then...

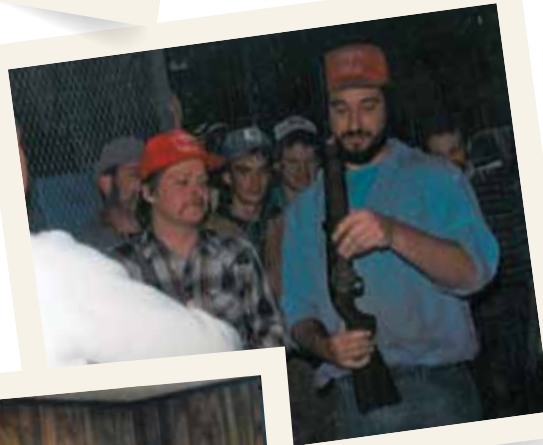


And the winner is!!!



Christmas 1991. Teresa's having a great time!

Past winner of the Christmas gun has a few envious admirers!



Finley and Ashley sharing a meal from Christmas past



Ray Kinney (left) has the holiday spirit!



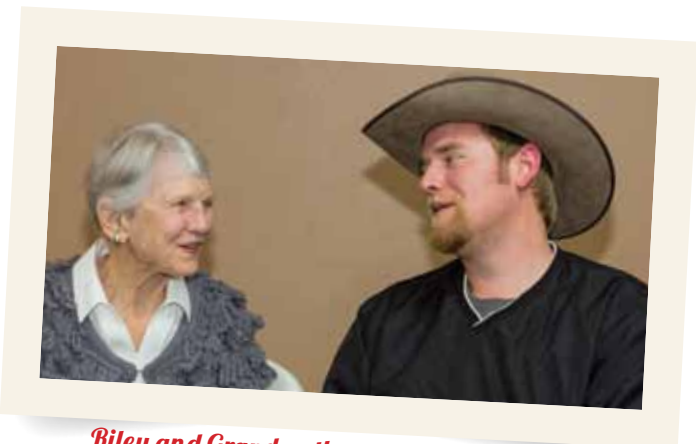
Finley looks on as Riley steals the spotlight!

and now...



Finley admires this year's gun giveaway

Drum roll please, this year's gun winner is James Damron!



Riley and Grandmother spend some quality Christmas time together



Ray Kinney's dance number was a big hit!



John Namnoum (right) enjoys Christmas in Connecticut at CBSNE's annual party



New England-style pizza at CBSNE's Christmas party

Advanced Motor Controls

AdvancedMotorControls.com
Irving, Texas — Ph: 972-579-1460

Advanced Motor Controls is a certified UL508A industrial control panel builder, designing and manufacturing custom control panels. Also provides new and professionally remanufactured MCC buckets, motor control centers, and component parts.

Astro Controls, Inc.

AstroControls.com
Irving, Texas — Ph: 800-289-2757

Sales and service for all types of industrial molded case circuit breakers, insulated case circuit breakers, and motor controls.

CBS ArcSafe, Inc.

CBSArcSafe.com
Denton, Texas — Ph: 877-4-SAFETY

Remote racking systems, remote switch actuators, and handheld motorized racking tools for low- and medium-voltage switchgear.

CBS Nuclear Services, Inc.

CBSNuclear.com
Matthews, N.C. — Ph: 704-882-1875

Specializes in shop and on-site field servicing of Class 1E safety-related low- and medium-voltage switchgear and circuit breakers. Also services industrial and non-nuclear-related circuit breakers and related switchgear and substations.

CBS Power Products, Inc.

CBSPowerProducts.com
Dallas, Texas — Ph: 940-665-4444

New alternative utility and industrial power products: transformers, switchgear, and other power apparatus.

Circuit Breaker Analyzer, Inc.

CBAAnalyzer.com
Addison, Texas — Ph: 972-290-0074

Providing new circuit breaker testing methods that utilize vibration analysis combined with internet data transfer and sophisticated condition-based analysis to determine the condition of all types of circuit breakers.

Circuit Breaker Sales Co., Inc.

CircuitBreaker.com
Gainesville, Texas — Ph: 800-232-5809

World's largest inventory of low- and medium-voltage circuit breakers. Millions of parts in stock. Complete service, remanufacture, upgrade, and life-extension services. Match existing switchgear lineup. Also offers CBS MagVac, a line of magnetic latching medium-voltage breakers that eliminates moving parts with a magnetic latching linear actuator.

Circuit Breaker Sales & Repair, Inc.

CBSalesAndRepair.com
Houston, Texas — Ph: 281-479-4555

Servicing the Gulf Coast with shop or field service, repair, upgrade, or replacement of power system apparatus.

Circuit Breaker Sales & Service, Inc.

CBS-Florida.com
Lakeland, Fla. — Ph: 863-646-5099

One-stop service for circuit breakers, switchgear, transformers, protective relays, loadbreak switches, motor controls, unit substations, renewal parts, and repair, upgrade, life extension, and maintenance services.

Circuit Breaker Sales NE Inc.

CircuitBreakerSalesNE.com
Seymour, Conn. — Ph: 203-888-7500

A leader in providing power distribution products and services, specializing in life-extension services and offering an expansive inventory of new, surplus, and reconditioned circuit breakers, switchgear, motor controls, transformers, and other power apparatus.

Circuit Breaker Store, Inc.

CircuitBreakerStore.com
Denton, Texas — Ph: 855-227-8673

Your online source for all Group CBS products, a powerful solutions provider with a specialty vendor network that can supply factory new, surplus new, and reconditioned circuit breakers, electrical distribution, control equipment, parts, and remote racking equipment.

Group CBS, Inc.

GroupCBS.com
Addison, Texas — 972-250-2500

Sentinel Power Services, Inc.

SentinelPowerServices.com
Tulsa, Okla. — Ph: 800-831-9550

Sentinel Power Services is an electrical power service company servicing the Central U.S with electrical engineering studies; on-site electrical testing, preventive maintenance, and repair services; and repairing, building, and installing electrical power systems.

Solid State Exchange & Repair, Inc.

SolidStateRepair.com
Denton, Texas — Ph: 877-874-7349

Quality, reliable, on-time service and support for all brands and types of solid state power electronics, including circuit breaker trip devices, protective relays, motor overload relays, and rating plugs.

Transformer Sales Co.

TransformerSales.com
Gainesville, Texas — Ph: 940-665-4484

Offers a complete line of new, surplus, and reconditioned dry-type, cast-coil, and liquid-filled power transformers from 1000 to 5000 kVA with primary voltages from 2400V to 34.5kV.

Vacuum Interrupters, Inc.

VacuumInterruptersInc.com
Carrollton, Texas — Ph: 214-442-5877

Provides replacement vacuum interrupters (vacuum bottle interrupters) for virtually any manufacturer's medium-voltage circuit breaker or contactor. Offers the MAC-TS4 test set to determine the condition of vacuum interrupters in the shop or field.

Western Electrical Services, Inc.

WesternElectricalServices.com
Phoenix, Ariz. — Ph: 888-395-2021

Serving the Southwest with superior quality on-site electrical testing, maintenance, and repair services as well as rebuild, upgrade, and life extension services for switchgear, circuit breakers, and motor controls.

Western Electrical Services, Inc.

WesternElectricalServices.com
Salt Lake City, Utah — Ph: 888-395-2021

The only full-service electrical testing and maintenance company in the Intermountain region.

Western Electrical Services, Inc.

WesternElectricalServices.com
Sumner, Wash. — Ph: 888-395-2021

The Northwest leader in electrical testing, maintenance, and power switchgear services providing on-site electrical testing and maintenance, electrical engineering studies, and sales, repair, upgrade, and life extension services of circuit breakers, switchgear, motor controls, and transformers. Also custom manufacturing of engineered and reverse-engineered parts.

Western Electrical Services, Inc.

WesternElectricalServices.com
Vancouver, Wash. — Ph: 888-395-2021

Utility-class service provider to the Northwest T&D market.

TRADE SHOW CALENDAR

Visit with Group CBS companies at the following trade shows and exhibits:

NAES Safety

SAN ANTONIO, TX
January 26-28, 2015

IEEE IAS Electrical Safety Workshop

LOUISVILLE, KY
January 27-30, 2015

Middle East Electricity

DUBAI, UAE
March 2-4, 2015

NETA PowerTest

NASHVILLE, TN
March 2-6, 2015

CEATI Spring Industry Conference

INDIAN WELLS, CA
March 10-11, 2015

South Central Joint Mine Health & Safety Conference

GRAPEVINE, TX
April 7-9, 2015

PEARL 18th Annual Electrical Safety, Reliability and Sustainability Conference & Exhibition

CLEVELAND, OH
April 24-27, 2015