THE EXCHANGE

AN ELECTRICAL REBUILDER'S ASSOCIATION PUBLICATION

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Rebuilders "Exchange" Ideas for 30 Years

BY BETSY GRUENINGER



This issue marks the 30th anniversary of The Exchange newspaper! For three decades, this publication has been keeping its readers in touch with the rebuilding news of the day, presenting technical articles and introducing new products.



ERE Founder Ralph Albares

We dug deep into our archives and found the first issue of the Electrical Rebuilder's Exchange, the original name of this newspaper. It is nostalgic (and sometimes surprising) to read the articles and peruse the advertisements from 1983. Some of the original advertisers are still advertising in this current edition of The Exchange, and we thank them for their loyal support. Early editions contained uplifting quotations and "Words to Live By" inserted throughout the paper. The founder, Ralph Albares, always meant for this newspaper to be a mixture of the "personal" and the "professional".

We scanned that first issue and put it on the ERA website for anyone who would like to read it. One prophetic article is entitled "The Rebuilder of Today … Will He Be the Rebuilder of Tomorrow?" I'm sure you will enjoy reading it! You can access the entire issue at this link: www.electricalrebuilders.org/eren/public/v1n1.pdf


Electrical Rebuilders
EXCHANGE
August, 1983
Our Name Tells You What We Plan to Do
APRA To Hold Convention in Hartford October 9-12
APRA "Super Sunday" to Feature Cores
An ALTERNATOR is an ALTERNATOR is an ALTERNATOR...

Our first issue—August 1983

So many things have come and gone during the last thirty years. Automotive technology has advanced exponentially. (Who would have ever thought 30 years ago that car parts would "talk" with one another?) Today, methods of communication have become so numerous that you can share just about anything with just about anyone almost instantly. Yet, there is still a need and a desire for the printed page. Because electrical rebuilders still have to keep up with the changes in automotive electrical systems, The Exchange newspaper continues to be a useful method of sharing information with its rebuilder-readers.

ERA

Still Opining After All These Years!

BY ROB BUKSAR



There are few of us who are able to see, during our lifetime, the impact of what we have started and the effects it's had on others. That distinction has been reserved for only a few, and in most cases, their contributions have been world-changing. Yet, each one of us, to some degree or another, has an impact on someone or something during a lifetime.

Ralph Albares founded the Electrical Rebuilder's Exchange newspaper 30 years ago. I never had the opportunity to know or chat with Ralph concerning his motivation for doing so, and at this stage of the game, it doesn't make a difference. Yet, through thick and thin, The Exchange has survived the test of time. It has had, and continues to have,

(See OPINING, pg. 13)



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Following A Star Back To Georgia

BY THE EXCHANGE STAFF



The Star Crew—back row: Dennis McDuffie, Phillip Hulsey, Mike Tench, Polo Zavala— front row: Dustin Dodd, Dee Kimbrell, Nina Hulsey, Josh Dodd, Jon Newey

It came to him in 1977, when the alternator on his '72 Pinto quit working in New York, over 1,300 miles from his home and family in Tulsa, OK. It was an epiphany that resulted in a career change for Phillip Hulsey and the beginning of Star Auto Electric in Cornelia, GA.

Hulsey had been earning a living building power lines, working for various contractors all around the U.S.. The demanding job payed well but required extensive travel and time on the road. He had driven all that way to New York, following a job opening. After he'd been there about a month, his alternator failed.

"I found a rebuilt alternator for $39.95 at a parts store and replaced it myself," Hulsey recalled. "As it happened, a few weeks before that, I had to replace the alternator on my wife's Ford back home. I'd bought that rebuilt alternator from Okie Auto Parts in Tulsa for $22.95. Now I didn't know much about alternators back then, but the difference between the two prices was enlightening. I remember thinking to myself that there must be a lot more money in rebuilding alternators

(See STAR, pg. 14)

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THE EXCHANGE

AN ELECTRICAL REBUILDER'S ASSOCIATION PUBLICATION

Serving the automotive electrical aftermarket

SINCE • 1983

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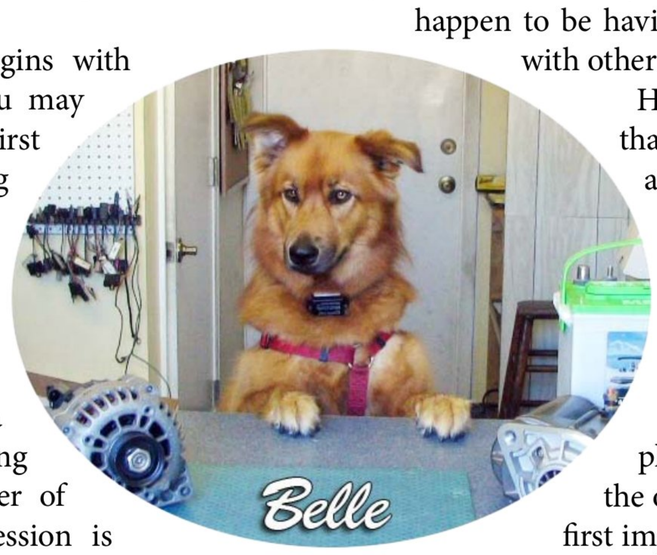
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Customer Service
Part one: First impressions are important

BY BOB THOMAS

Customer service is one of those terms that has different meanings for different people. Many business owners believe that they understand or even excel at it. Nearly every business claims to have excellent customer service, but do they really?

As the name implies, it's all about service to the customer. In case you missed the point I made in previous columns about the perception of quality—your customer service is actually what your customers perceive it to be. It is not what you think. It is what your customers think. Their belief will be influenced by everything they see and hear during the entire time that they are at your business or talking to you on the phone. It's what a customer believes.



Customer service begins with their first impression. You may have heard the saying, "First impressions are lasting impressions." Well, that is more than just a colloquialism. When I say first impression, I'm not talking about the entire first encounter with a customer. What I'm referring to takes place in a matter of seconds. That first impression is created subconsciously, meaning that your customer does not rationalize or think about it. The brain forms first impressions automatically without any conscious effort. Although you are not aware of it, your brain is constantly assessing everyone you meet and every place you visit. Then, within seconds, that first impression is formed. It's the gut feeling you experience when you enter a strange place or encounter someone you've never met before. Research shows that our first impressions of other people can be uncannily accurate. That accuracy, over time, re-enforces our instincts to weigh in heavily on our decision making.

The point I'm trying to make is that when someone calls on the phone or walks through your door for the first time, they will form a first impression of you and your business in a matter of seconds. And although they may not be aware of it, that impression will influence all decisions relative to your business. It's a PR opportunity that many businesses miss, because it happens so fast. If you blow it, you may never recover with that customer, or if you do, it will require spending a lot more time regaining what you lost. So how do you keep from "blowing it"?

The first impression relies heavily on sight. What customers can see when they open your door is important. Adequate lighting, clean counter, neat employee, immaculate products on display—are all pretty much common sense things. Believe it or not, the expression on your face when the customer enters is probably more important than all of the above. Why do you think Walmart has a smiling employee to greet you at the front door in every store? Acknowledge each customer, look into their eyes and smile as they walk in. That visual image is a lot more important than anything else. (Sometimes this may be difficult, especially if you happen to be having a bad day and are busy with other things.)

Hearing also plays a part in that first impression. Verbally address each customer with a greeting. Acknowledge their presence, even if you're busy with something else. Welcome them to your business, and offer your help. When the phone rings, the person on the other end is going to form a first impression, too. Answer every call with that first impression in mind.

In closing, I'd like to share something I discovered by accident that has helped me. In 2004, we found an abandoned mixed breed puppy in a roadside drain. Once home, she chewed up everything in sight, and we had no choice but to take her to work with us as we tried to find her a good home. After a few months, the good home ended up being ours, but in the process of bringing her to work, we discovered how much everyone liked seeing her. Many customers dropped by just to see the dog and brought friends and relatives with them. Granted, everyone does not love dogs, but a surprisingly large percentage do. Belle is nine years old now. When the door opens, she still goes to the front counter to greet the customer, usually before I can get there. Some regulars drop by whenever they are in the area, not to see me, but to see Belle. She is, without a doubt, one of the most positive first impressions you could ever ask for.

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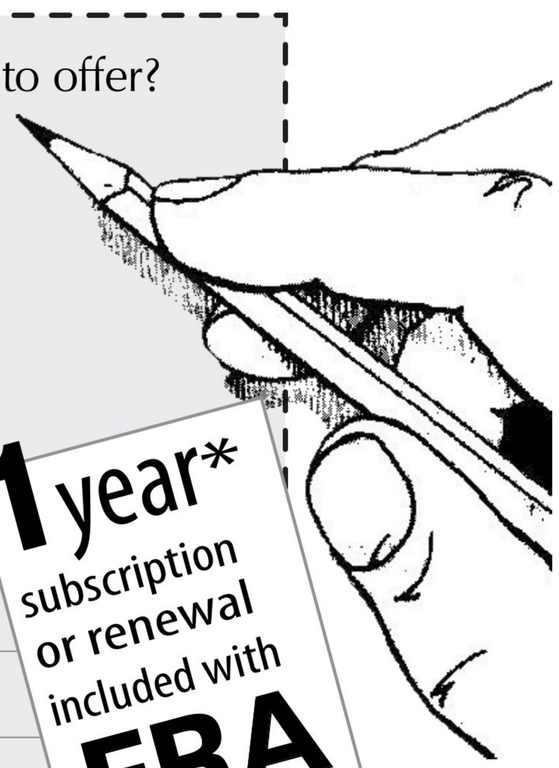
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Foxon Alternator &
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"Being an ERA member gives my business instant credibility! The membership fee is very little when you realize how much information is available to you. The information from the technical library, as well as the knowledge provided through the forums, is extremely helpful, and I find I am constantly gaining new knowledge. This new knowledge, coupled with the resources available through the ERA, provides me with the confidence to complete any job that comes through the door. The ERA is the most important tool in my shop."

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From The President's Desk
It's Something Special

COLUMN BY HANK HENKE



It doesn't seem like it's been 30 years since I saw my first copy of the Electrical Rebuilder's Exchange, but I guess it has been. I was working for Phelps Truck and Industrial Supply in their rebuilding shop when it just showed up in the mail one day. After looking it over, I realized there was something special about this newspaper. I immediately saw the value of the new publication and made sure Phelps became an early subscriber. I always made the paper available to all of the Phelps employees. I encouraged them to read the articles, because I knew it would make them better at their jobs, and in the end, it would improve the quality of their work.

When I left Phelps and opened my own business in 1990, I subscribed to The Exchange again, this time for myself. There was never any doubt about it being worth every penny of the subscription cost. Even after 30 years, I still look forward to opening what I believe is the best publication in the industry. Nothing else comes close in providing electrical rebuilding news, technical information and advertisements for all of the parts, services and supplies we need and use everyday.

Now I share my copy of The Exchange with my grandson, Trevor, who works for me part time. In fact, if Trevor happens to get his hands on the mail before I do, I may not get to see the paper for a few days.

We all owe a lot to Ralph Albares. He saw a need for better communication in our industry, and he had a vision of what would fill that need. Then, with the help of a few early advertisers, he made it happen. Sadly, Ralph is no longer with us. But thankfully, Polly was there to pick up the torch when Ralph passed away. She continued the newspaper and the small trade shows that Ralph had started. It was not an easy road at times, but she made it happen. Polly continued to improve the newspaper along the way. Just when everyone thought how great a publication it was, she managed to make it better. Now she has passed the torch to the ERA.

As the current ERA president, I wish I could take some credit for this issue you are reading right now, but it's in the capable hands of two very experienced electrical rebuilders, both charter ERA members—one who happens to have a background in journalism and the other who has proven to be very savvy in newspaper production as well as being a computer guru and Internet wizard. I'm confident that this newspaper will continue to be something special for our industry.

Hank Henke, ERA president, is owner of United Starter & Alternator, Lowell, Ind.

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ERA Recognizes Longtime Members

It's only through the loyal support of our membership that the ERA can thrive and continue with its missions of education and of promoting the rebuilding industry. Many of our current members have been with us from the beginning, over 10 years ago!

In April, 2013 the ERA Board of Directors voted to publicly recognize the 90 companies that have maintained continuous membership for 10 or more years. We have created a membership "Honor Roll" page on the ERA website.

To view the Honor Roll, go to the ERA home page at www.electricalrebuilders.org and select Association Info/Honor Roll from the left-side menu.

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Plain Talk
Day of the Locusts— Will We be Eaten Alive?

COLUMN BY ROB BUKSAR



It's been more than a few years, but it seems like yesterday that many were hailing NAFTA (North American Free Trade Agreement) and the trade agreements with China as if they were the crowning achievements of the 21st century!

I can remember Bill Clinton on his soap box, boasting of all the new opportunities and jobs these deals were going to create. This was going to expand trade and open new markets that formerly the U.S. was unable to breach.

Initially, I suppose that a few of our products which were produced domestically found their way over into new foreign markets … items like soft drinks, cigarettes, high tech products and pharmaceuticals. Of course, we have always been the world's largest weapons dealer. We still are, and that's nothing new!

Nevertheless, have you ever heard that saying, "Give an inch, and they will take a mile"? That is pretty much what has happened to our businesses, jobs, opportunities and the overall economy.

Once the "trade door" was cracked open, the U.S. government endorsed and sponsored international business development. In other words, if you had a large enough factory and you wanted to move it to some other country, our government would help.

Uncle Sam would help cut any red tape, assist with language barriers and even help with low-interest loans and funds via the International Monetary Fund. By the way, the U.S. is the largest contributor to the IMF!

Let's leap forward on the timeline to spare you some boring details. Major U.S. corporations are now making more money than ever. Of course, how much they're contributing to the overall best interest of the nation is really debatable. Even the few companies that did do some exporting at first, have now relocated their factories to foreign countries. Actually, it does make sense to manufacture as close to your customer as possible. But what's that do for us at home if they vacate the U.S.?

Well, if you're in the inner circle of a major corporation, this means that you will soon be able to afford that vacation retreat in the Hamptons. Middle management sees the future and is experiencing waves of paranoia, wondering if they will have a job next month. As for the line-workers or the guys on the shipping docks, their jobs have vanished.

This is as good a time as any to throw this into the mix. The city of Detroit, formerly Motor City, Motown, etc., has recently filed for bankruptcy. They are stone-broke!

I have already read numerous articles trying to explain why Detroit went broke. Some say it's the labor unions. Others say it's 50 years of being run by Democrats. Another author claims that, per resident, Detroit has twice the number of city workers on the payroll as any other major American city. There's probably a lot of truth to all of the above, and whichever side you want to take, of course, there is one aspect to the story which is incontestable. Regardless of whose side you're on, the money is gone. The big business that formerly employed Detroit with good-paying middle-class jobs, left. Almost 50,000 automotive-related jobs vanished shortly after NAFTA was signed. Many were soon to follow. Detroit's population went from approximately 2.5 million down to 700,000 with little, if any, future for those who wouldn't or couldn't leave. One of the greatest cities on the planet has been reduced to a big expensive ghetto without enough tax base to support it.

Are the companies that vacated Detroit and moved out of the U.S. still in business? Most of them are, and they are doing better than ever. Of course, that's not all that difficult when you don't have to contribute, share or give anything back like they used to. Just bring your overseas-produced product into the U.S., put it on the shelf for an ignorant and unsuspecting American public to purchase and convince them of what a great deal they're getting.

Take, take, take and give nothing back in return. There's no real contribution to the country whatsoever, aside from a stock symbol on the ticker tape.

My shop is located in Gary, Indiana. We were formerly referred to as the Steel City. At one time, the lion's share of the planet's steel was produced somewhere in or around Gary. Just as Detroit was at one time, Gary was a city with unlimited opportunities. The streets were "paved with gold", due to the business opportunities and jobs just waiting for anyone to pick up the challenge. That's all gone now, too. Like Detroit, everyone here points the finger at everyone else, trying to assign blame. Again, the money's gone. It left with the companies that produced all of this revenue and then relocated to another country.

Do I think that you or I or this article is going to make much of a difference to this current state of affairs? Oh, I'd say the chances of that are slim to none.

My only hope and purpose is to maybe wake up a few folks who, for whatever reason, have been living in ether. In my lifetime, I have never been surrounded by so many who knew so little about what's going on around them.

We are presently going down the drain as a nation. It's not that folks are indifferent and don't care. Most folks are clueless, especially the younger ones. Moreover, if a business is still doing OK, or a husband and wife still

(See Locusts, pg. 9)

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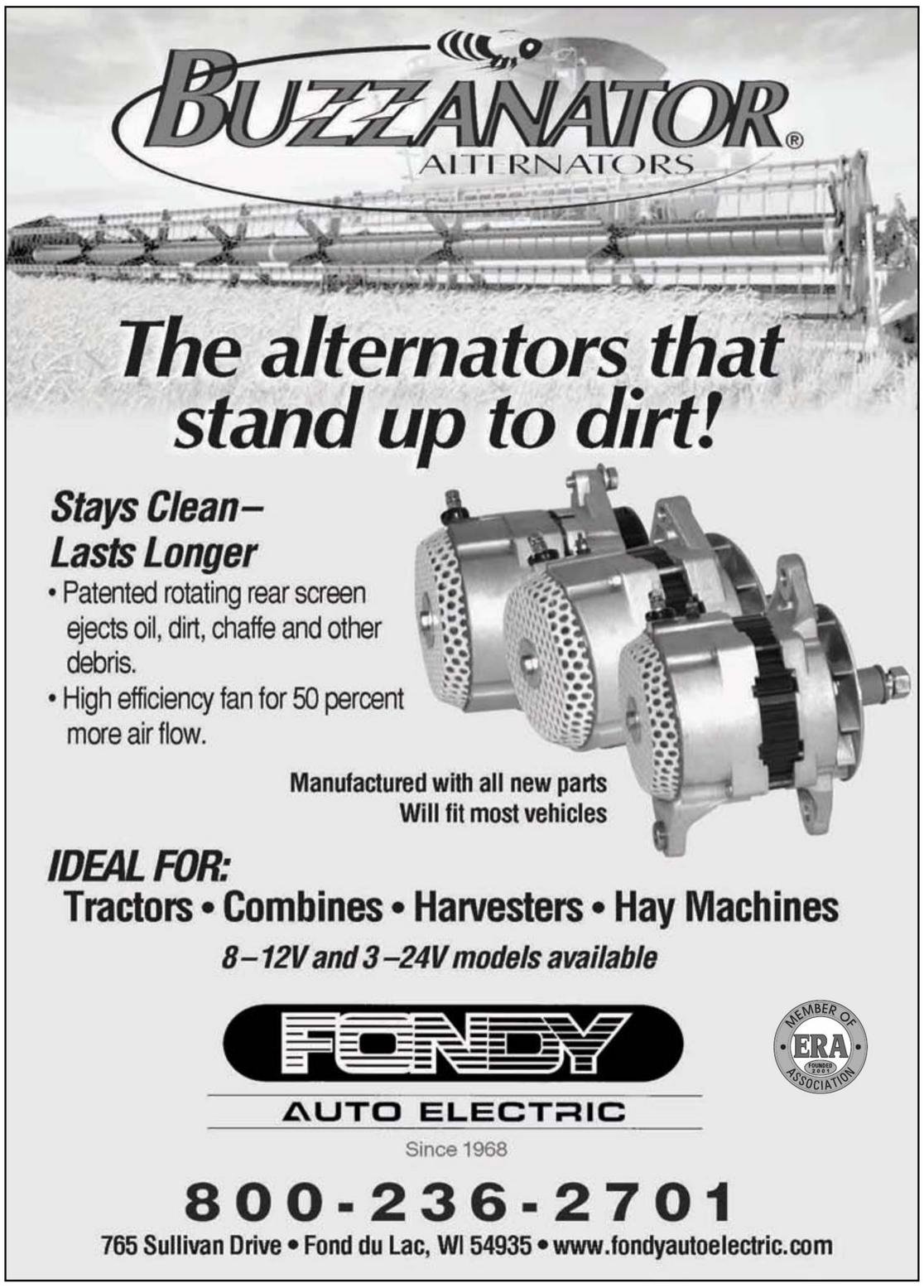
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View From The North

BY BILL SKILLINGS

Robert and Mercedes Diamond pulled off the best kept secret in Canadian rebuilding history over the holiday weekend of Canada Day on July 1st. They announced to their customers that their Boston-Canada warehouse in North York, Ontario would be closed for inventory on June 27th and 28th. But in reality, they were executing a well-planned move from their 3,500 square-foot Boston-Canada location to a larger facility just a few blocks away. When they re-opened on July 2nd, it was under a new name, Arrowhead-Canada. Their new 12,000 square-foot building has a high ceiling to accommodate pallet racks, giving them the ability to warehouse four times the inventory.

This new location and partnership will allow the Diamonds to use their expertise to grow their Canadian business using Arrowhead's broad product lines. Canadian rebuilders received the news in their morning mail that was timed to arrive the same day the new facility opened. "When Robert needed to make a trip to our new location, the common excuse given was that he was doing a coffee run," Mercedes revealed. "Boy, our customers must have been thinking he was drinking a lot of coffee!" They followed up the move with an Open House on Sunday August 18th.

ERA



Kelly Katz, Mercedes Diamond, Robert Diamond and Susan Mauer standing in front of Arrowhead Canada in North York, Ontario.

Newton's Electric Hosts Open House

BY HARALD KOBER

Newton's Electric in Brampton, Ontario opened its doors to all interested electrical rebuilders on Saturday, April 27th for an OEM Open House. Over 30 rebuilders attended the event to absorb information and to network with other rebuilders. Representatives of Denso, Bosch and Letrika participated.

The seminars included the latest information on OE unit lines, and all of the representatives answered questions for attendees. ERA Canadian Vice-Presidents Harald Kober, Roko Service and Bill Skillings, Eastwood Auto Electric, combined for a presentation on the benefits and advantages of being a member of the Electrical Rebuilder's Association. The Open House offered a tour of the Newton's Electric facility including visiting work stations for rebuilding DC and AC lift truck traction motors. They also gave a demonstration on bench testing the latest design of AC traction motors, using their new test stand, custom built for this type of motor.

Owner Doug Newton and his family hosted a dinner on Friday evening and a buffet lunch on Saturday.

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ERA Canadian Vice-President Harald Kober addresses the crowd as ERA Canadian Vice-President Bill Skillings looks on.



Rebuilders learning straight from the OE source.



The event was held inside Newton's Electric facility.

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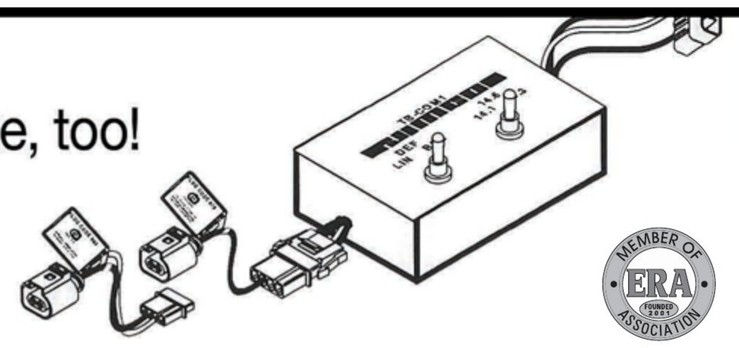


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Communication Builds Customer Bond

BY JIM THOMAS



Good communication with your customer is a must to keep a smooth working relationship of trust. We found that an ongoing starter problem was causing complaints from a large customer. The following letter shows how communicating with that customer resolved the problem and strengthened our relationship.

To the right is the letter we sent to one of our large Dairy customers who was complaining that our rebuilt units were not holding up and wondered why. After sending this letter, we helped the customer do a better job of identifying which piece of equipment various units came off of, and then we helped them pinpoint solutions for the equipment that was damaging our rebuilt units. Once the piece of equipment had been identified, we then worked with their mechanics to solve the issues and found some of the problems to be related to the operators using starting fluid without the knowledge of the mechanics or the owner. These efforts have made a stronger bond with this customer and have also allowed us to use his recommendations to go to other dairies in our operating area. I believe this type of interaction is critical for rebuilders to continue to do business today.

ERA

LETTER FROM SMITH AUTO ELECTRIC TO A CUSTOMER

RE: INSPECTION OF STARTERS AND ALTERNATORS FROM YOUR DAIRY

For the last 2 years we have been rebuilding the large Delco 12v and 24v starters brought to us from your Dairy. The condition of these starters has been poor to extremely bad. A recent example is a 24v Delco starter that came in with the armature shaft snapped in half.

In our experience there are only a couple of scenarios that can create this type of catastrophic failure—using starting fluid on the engine is one—re-engaging the starter after the engine is running is another, and finally—low voltage that causes the solenoid contacts to "weld" together, thus causing the starter to stay engaged and be subjected to extreme centrifugal forces that cause the starter to "blow-up". Almost all of the 24v starters showed this type of extreme service. The 12v starters showed less trauma, but they had some low-voltage issues, as well as signs of extended cranking, as in cold engines that were not using any block heaters or oil pan heaters.

My main concern, since we don't supply your batteries, is what brand of batteries are being used, and are they properly sized with adequate CCAs to handle your needs in the extreme hot weather and the typical cold weather that we get here in our region. Because of our battery expertise, we know that CCA ratings can be fudged, and that always shows up in other electrical components taking a beating.

In many of the 12v applications, the trucks can and do use a primary solenoid or relay to "fire" the big solenoid on the starters. If these are not up to the job, then the big solenoid on the 12v starters get a low-voltage issue, also.

Finally, the alternators seem to have various issues with dirt and other particles inside the units, creating many of the problems. On this note, most people don't know that all alternators exhaust air out the front of the alternator, so the fresh air entering the back through the rectifier optimizes cooling. If they are being blown out with air, as they should be, the air nozzle needs to be inserted in the front fan area and not in the back of the alternator.

One of the unknown and unseen items that affects the ability of an alternator to do its job, is the pulley. We never see your pulleys, and I am sure that they are just being used and reused. This is a major source of slippage that can cause an alternator of any voltage to not be able to perform up to its capabilities. We have seen worn out serpentine pulleys and belt tensioners creating major issues for charging systems and alternators. These problems are easy to spot. With regular "v" belts, look for the belt riding lower than the edge of the pulley and a very shiny pulley groove surface. With serpentine belts, look for worn out grooves on the pulley and, again, a very shiny surface.

Hopefully these tips will help identify some issues that can be corrected and make our products last longer for you, our customer.

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17086N
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Fits: John Deere
tractors, loaders

■ **BBB Industries acquires assets of caliper company QBR Brake, Inc.**

Mobile, Alabama and Stockton, California: BBB Industries and QBR Brake jointly announced today that BBB Industries, LLC has acquired substantially all of the assets of QBR Brake, Inc. of Stockton, CA. QBR is a leading remanufacturer and supplier of semi-loaded disc brake calipers and accessories to the automotive aftermarket in North America.

The transaction transfers all of QBR's production and operation assets, intellectual property, inventory and brands to BBB. "We are pleased to announce the acquisition of the assets of QBR Brake and are excited about the opportunity to add brake products to our growing portfolio of aftermarket service and repair parts," expressed Joseph Felicelli, CEO of BBB Industries, at the conclusion of the transaction.

"Our power steering product line has provided the company with growth opportunities as our customers recognized that BBB's product quality and service is also ingrained in our power steering product offering," commented Trey Smart, BBB's Executive Vice President of Sales and Business Development.

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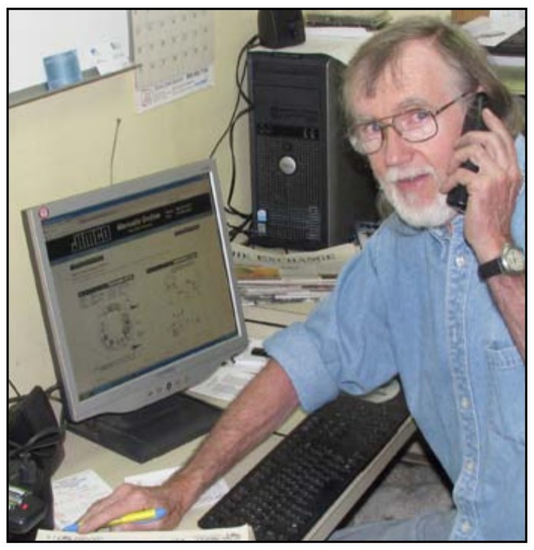
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Help Is On The Line

BY BETSY GRUENINGER



Bob takes a call from an ERA member

Every rebuilder has found himself temporarily stumped by a job at one time or another, whether they are willing to admit it or not. Given enough time and perseverance, the problem is usually solved. But occasionally, time is of the essence, and perseverance is in short supply. The ERA has answers to many common rebuilding problems on their website, along with members who are eager to help one another with any problem or question they post on the Forums.

But some rebuilders do not have Internet access at their shop, or even if they do, they may have trouble finding the answers they need online. In 2008, Mike Schroeder, then chairman of the ERA's technical committee, suggested a "help line" for members who needed technical help but were unable to use the association's website. At the time, that was nearly a quarter of the membership. The idea was embraced by everyone on the association's board, and the hunt was on to find someone with enough knowledge and experience to answer the help-line phone. But there lay the challenge. After several industry veterans turned the job down, Bob Thomas, owner of B&H Electric in Orange Park, FL, offered "to give it a try."

"I told them I would try it for a year," Thomas recalled. "Frankly, I was not sure I knew enough to help everyone. We had the help line up and running by the first of July, and the ERA sent every member a letter announcing the service. That first month we received 11 calls. Since then, the help line has received over 4,400 more. On one day this past June, 19 calls came in, a record for one day!"

"Sometimes I just get lucky," Thomas said. "Someone will ask me a question about the same unit I've had trouble with. I may even know the answer before they finish asking it, because I've made the same mistake myself. It makes me look smart, but really, I've just been down the same road they're on. I don't believe I could do this without all the resources I have available to me," Thomas insisted. "Being in a working shop with units, cores and parts in stock often provides the ability to actually hold the same parts in my hand that they are having a problem with. The wiring diagrams I've accumulated over 30 years really come in handy, too, especially those older vehicles no longer covered by Mitchell or ALLDATA. I use all of the resources on the ERA website," Thomas explained, "especially the JIMCO diagrams that have detailed line drawings of the insides of alternators and system diagrams showing how each unit works on the vehicle. Supplier websites can be helpful, too, when we are trying to get to the bottom of a rebuilding problem."

Thomas added, "When I'm asked a question about something I'm unfamiliar with, I call in the re-enforcements—other members of the ERA technical committee. Ken Plourde, Hank Henke, Gene Kaiser, Howie Gore and Mike Schroeder have all helped callers for me when I needed help myself. When that happens, I'm just a coordinator, getting the caller into contact with a real expert on what they happen to be working on. Ken Plourde has been kind enough to answer the line for me one week every year while I'm on vacation."

"There are times when I do get overwhelmed and very busy," Thomas confessed, "juggling calls from the help line with calls from my own customers, while trying to finish up an alternator or starter that another customer is waiting on. Some problems take more than one call to solve. I spend as much time as it takes to resolve a problem."

Here is what some of the ERA members who have used the Technical Help Line have to say about it:

John from Precise Rebuilders: "It's important to have somebody to go to ... someone with a collective experience over the years who can answer questions. Just recently, Bob was able to walk me through a starting issue with a 2006 Kia ... and the problem was resolved!"

Amos from Weavers Starter and Alternator: "I called Bob when I was having trouble locating an alternator part. None of my regular suppliers had it, but Bob was able to help me find what I was looking for!"

Patrick from Irwin Auto Electric: "I really appreciate the Help Line! When I have a starter problem, Bob usually points me in the right direction! If he doesn't know the answer, he puts me in touch with someone else who might."

Dwain from Precision Parts Rebuilders: "That Tech Line is a lot of help! If I run into something I've never seen before, I can call the Help Line. When I was working on some antique generators, I called Bob. He said he knew somebody who would probably know about them ... and he did! He gave me the number of someone in Arizona who was able to help me."

One thing that the users of the Help-Line agree on is: Bob Thomas is the right man for the job!

"I enjoy this part time job," Thomas admitted, "and I've probably learned a lot more from the experience of doing it than anyone could ever realize."

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LOCUSTS

(Continued from page 4)

have good-paying jobs, sadly, those folks have a deer-in-the-headlights look if you bring anything like this to their attention.

I've been told on more than a few occasions that ignorance is bliss. Also, if the problems do not presently affect you, why concern yourself with them? Do we have to be wrecked, ruined or destroyed before we decide to get interested? My question to you is: At what point should we become concerned and then find a way to become personally proactive about fixing this?

A good place to start is to identify political candidates in your district who will support and vote for pro-American positions. I'm not sure that anyone who puts the global economy's concerns in front of our own is the right person for the job. Our global partners (ha-ha) are very concerned about their own self-interests, as they should be, and not ours. Their only interest is to commandeer more of our markets, businesses, jobs and money for their own countries. They are interested only in winning at our expense and are not willing to give up anything. As long as we're OK with allowing them to drain the economic life out of us, they will continue to just take. Why not? We never say no!

In the last 10 years, American businesses have been dropping like flies. Take a moment, and think of all of the domestic manufacturers, suppliers and rebuilders who no longer exist. Yet, there is next to no shortage of products of any kind in the marketplace. The production capacity has been maintained by off-shore concerns, almost always under an American corporate umbrella. This isn't all that dissimilar to a plague of locusts moving in, devouring an entire crop, and then moving on to the next, until there is nothing left. The chances of retrieving most of the businesses that we've lost is about as realistic as convincing the locusts to give back the crops they've eaten. Furthermore, I really doubt if the locusts are concerned as to whether or not we starve to death. The 64-thousand-dollar question is: Are the companies that are relocating our economy concerned with the overall economic health of the nation? More importantly, will we ever be capable of prospering again? Are these greedy companies as primitive and unconcerned as the locusts? Will they just keep devouring until it's all gone?

None of this is warm and fuzzy stuff. Yet, you all know that the first step in problem-solving is to recognize that there is a problem. In order to recognize the problem, we all have to look a little beyond our own personal circumstances and become aware of what surrounds us, before it eats us alive!

God bless America and may God preserve our little industry.

Rob Buksar is owner of Hoosier Electric Co., Gary, Ind.

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POWER WHEN YOU NEED IT

Removing Rusted Pole Shoe Screws

BY BOB THOMAS

Nobody enjoys working with rusted fasteners. However, in the rebuilding world, it is just another fact of life. Removing badly rusted pole shoe screws probably tops your list of least liked jobs. While penetrating lubricants and heat may help, they are often not enough to make the job any easier. Before we mention our favorite techniques, let's have a closer look at why that screw is so tightly lodged to begin with.

Screw threads, in order to be practical, are made to be loose fitting. That means that there must be a small gap in the threads between the bolt and the nut, or in this case, the pole shoe. That gap is what makes it so easy to turn a new screw into a new pole shoe by hand. But it also plays a part in the difficulty of removing the screw after years of exposure. That gap actually holds quite a bit of air. Over time, the oxygen in the air in that gap reacts with the iron in the steel threads to form hydrated ferric oxide, or what we all call rust.

Rusting is an electrochemical process that begins with the transfer of electrons from the iron atoms to the oxygen atoms. Without going into a lot of detail, the presence of water, particularly if it is mixed with salts of any kind, accelerates this process. The water acts as an electrolyte, which aids in the exchange of electrons. The salts simply increase the strength of the electrolyte and speed up the process.

What you end up with is rust, which basically fills up that little bit of space between the threads. The oxidation process continues even after the gap is completely filled. Given the right circumstances, extreme pressure between the iron oxide and the threads will result. In some cases, like the ones that cause us the most grief, the rust is so tightly packed into the threads, that no amount of force you apply can turn the screw. And, to make it even harder, the rust is bonded to the iron molecules that are not rusted.

Several methods of loosening rusted-in pole shoe screws are used with varying degrees of success.



Figure 1—Chemical rust busters

Chemicals: Many different chemicals or penetrating fluids are available in spray cans. They are supposed to dissolve rust away, soften rust, penetrate rust with a thin lubricant, or in some cases, all three. They are fairly effective if the rust has not become totally impacted in the threads and remains somewhat porous. We suggest that you try several different product brands and find one that works best for you. Here we have shown just a few choices (*see Figure 1*).

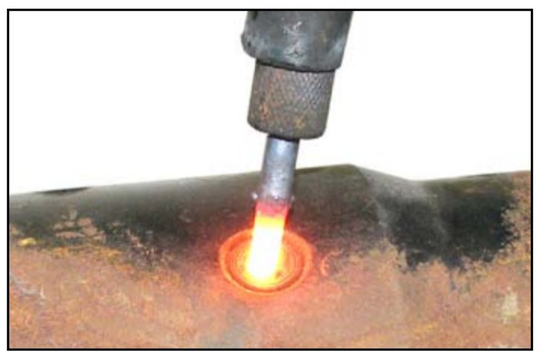


Figure 2—Heating with carbon rod.

Heat: Heating the screw to a high temperature causes it to expand and apply pressure to the rust, thus compacting it even further. But once the screw cools, it contracts, and it may create enough of a gap to remove the screw, or at least get some of the penetrating fluid into the threads. One way to heat the screw is to use a carbon-rod soldering tool, like the Ace Hot Spot or its equivalent. (*see Figure 2*) The carbon rod will transfer a lot of heat directly to the screw very quickly. This way, you can heat and expand the screw before the heat transfers to the pole shoe or the field case, which could damage the coils and prevent you from salvaging them. It may take several heating and cooling cycles to gain full advantage of this technique. You can cool the screw with a penetrating lubricant between the heat cycles, but remember that many of these fluids are extremely flammable and will flash if exposed to a red hot carbon rod.

A torch may be used to heat the screw if you do not plan to salvage the field coils. However, keep in mind that you are trying to heat the screw up rapidly before the heat has time to transfer to the pole shoe. A torch works best if you put the tip of the flame on the screw head and keep the flame off of the field case.



Figure 3—A typical screw and case

Impact Driver: There are times when none of the previous methods are enough to break the screw loose. Many of you already know that another method to loosen that rusted screw is to mechanically shock it. Most pole shoe screws are countersunk. (*see Figure 3*) This means that the head of the screw has a beveled edge that mates to a beveled recess in the top of the bolt hole in the field case. If you strike the head of the screw hard enough, driving it down into the case, the shock will slightly reform the screw, moving the beveled edge closer to the top and lengthening the shank by the same amount. This relieves some of the pressure working against removal, because the pole shoe is actually moved slightly away from the case. In addition, the shock travels down the length of the screw and into the threads themselves.

A hand impact driver is designed to do just that, while also applying a



Figure 4—Using hand impact driver

twisting force to the head of the screw at the same time. (*see Figure 4*) However, the downside of the hand impact driver is that the force of the blow must pass through a bit, which, even in the best of fits in the screw head, cannot transfer all of the force.

For maximum effect, you actually need three tools: a hand impact driver,



Figure 5—Tool made from armature shaft



Figure 6—The tool is slightly smaller than the screw head.

a really big hammer and a hardened steel rod almost as large in diameter as the head of the screw you are trying to loosen. (see *Figures 5 and 6*) We have found that a dead blow ball peen hammer and a piece of armature shaft make a good team to create a little space in the rust-impacted screw threads.

The head of a dead blow hammer is filled with lead shot or sand, both of which absorb the impact of the strike to reduce rebounding and concentrate all of the impact energy of the blow at one focal point. The hardened steel hammer head and shaft are both harder than the screw and ensure that all of the energy is transferred directly onto the screw's head. The hammer in our photo is a 32 oz. Snap-On model HDDB-32. Snap-On and other tool suppliers offer this type of hammer in a variety of sizes, both smaller and larger. We found that this size is just right for an average-sized adult. The armature shaft in the photo



was cut from a Prestolite armature shaft, but a Lester armature #2003 Ford shaft would work just as well. You want the shaft to be long enough to be held safely but not too long to control, if the hammer strike were to be slightly off.

Delivering an accurate blow with this large of a hammer takes practice. Don't start out by swinging the hammer as hard as you can. Accuracy is more important than hammer speed. The science behind using a hammer is the same as that of swinging a golf club, a baseball bat, or arms and legs in martial arts. You have to relax at the point of impact to let all of the energy flow from the hammer to the shaft. In this case, the shaft must be held tightly against the screw head at the same time. In addition, for this technique to work, the shaft must be held in alignment with the screw, square to the field case, and the hammer must strike the shaft square, too. In most cases, two or three good hits will relieve enough pressure to remove the screw using a hand impact driver.

It's worth mentioning here that all hand impact drivers are not created equal. While they do all incorporate the same principle, internal designs will cause some of them to behave differently. Most hand impact drivers have to be held tightly in a twisted position when you strike them—meaning, that you are applying pressure against the screw head in the direction you want to turn it, when you hit the driver. Unfortunately, the Snap-On impact driver will actually break the bit almost every time if it is used that way. It must be held loosely in your hand when you strike it. It actually works better this way, and you will never break a bit if you hold it loosely.

A Word of Caution: Swinging a 32-ounce hammer to hit the end of a steel shaft you are holding with your hand, will always involve risk! Missing the shaft and hitting your hand can cause serious injury. If you happen to strike the corner of the shaft, and it gets away from you, the shaft could fly out of your hand at a high speed and end up anywhere in the room, causing a serious injury to you or anyone nearby. Do not try this technique unless you are confident that you can hold onto the shaft and strike a square blow. Always wear a face shield or safety glasses when using a hand impact driver. After repeated blows, even the best impact driver will shed small dangerous slivers of steel.

Pole Shoe Fixtures: There are many specialty tools and fixtures for removing pole shoe screws. Some tools have been around for nearly a century. They all work basically the same way, by holding the field case, allowing the user to position the bit tightly into the screw head's slot and either by hand or by pneumatics, turn the screw. The most common problem with this type of tool is that it is usually so well made, that the bit ends up being the weak link. If you set the bit tightly into the screw head and just turn the handle, a stubborn screw will break the bit almost every time. The secret to making bits last with this type of tool is to shock the screw before turning the handle. This can be done as described earlier, prior to putting the case into the fixture. Or, once the case is in the fixture, the screw can be shocked by striking the field case close to the screw, after you have tightened the bit into the screw head. To avoid disfiguring the field case, you should use a brass hammer when you strike the case.

Drill Them Out: Some rebuilders may elect to simply drill rusted screws out, especially when dealing with large quantities of common field cases. If you use the right size drill bit, and you have new screws, this can be an efficient way to handle the problem. Once the screw head has been removed, the pole shoe will fall out of the field case, leaving enough shank to remove the rest of the screw from the pole shoe using pliers or Vise-Grips.

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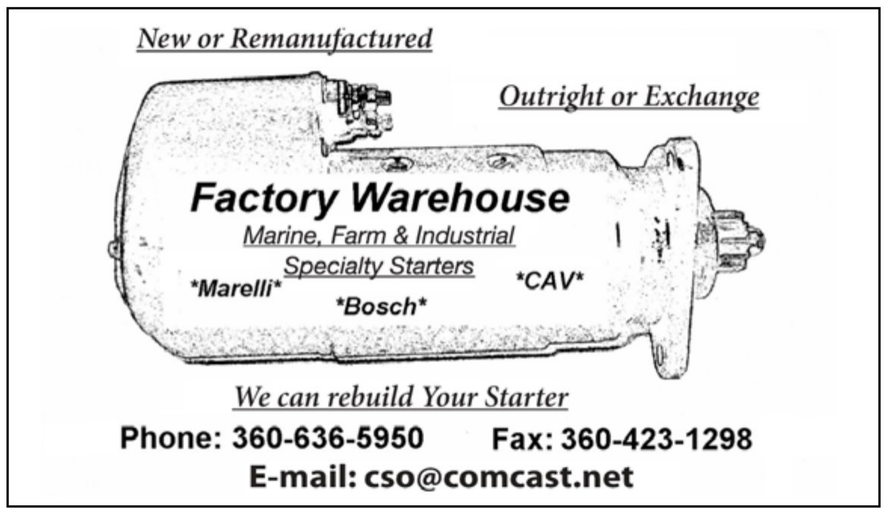
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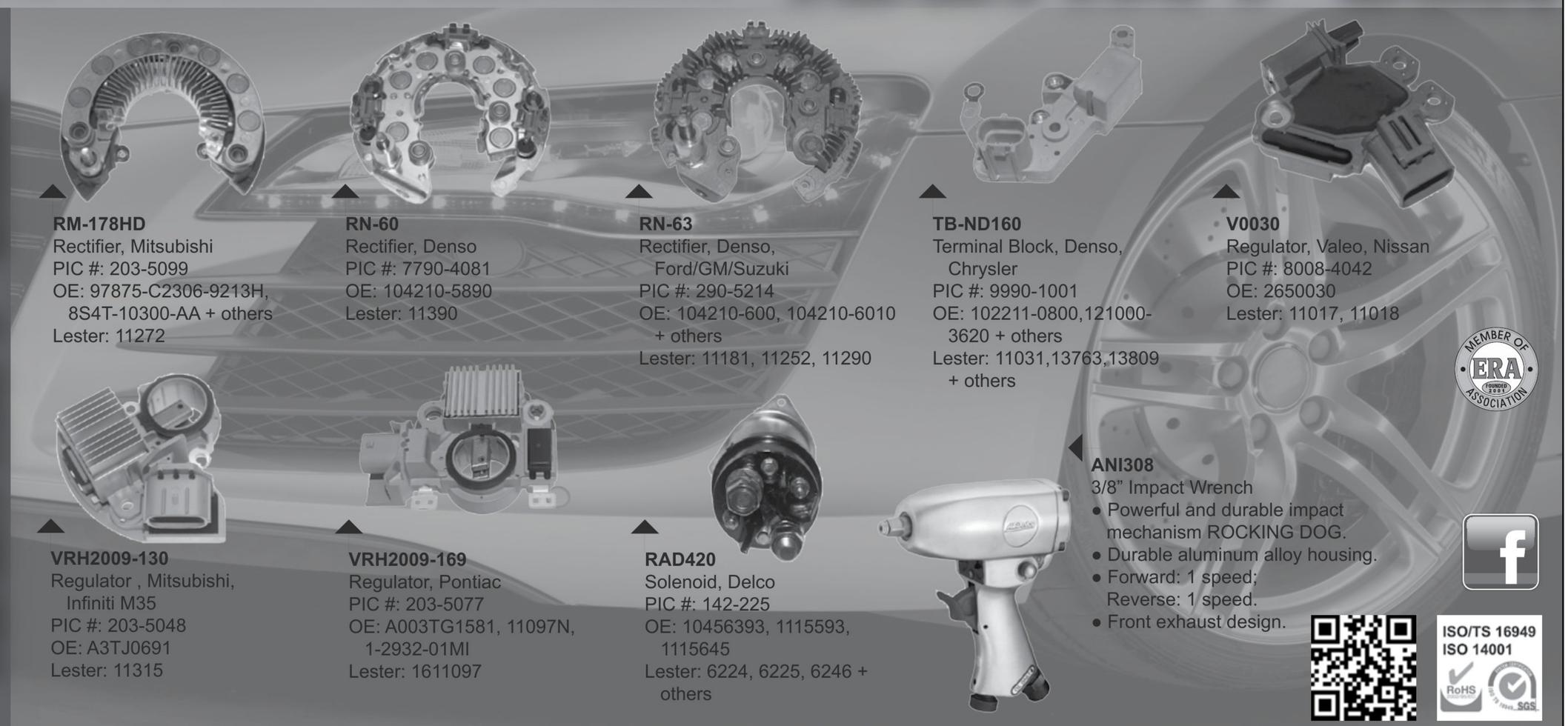
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OPINING

(Continued from page 1)

an impact on all of us in our industry.

Ralph passed the baton on to his step-daughter, Polly, with whom most of us are acquainted. It was during Polly's tenure in the mid-90s at a trade show, where I became intimately involved with The Exchange.

I was chatting with a small group of rebuilders in front of Polly's booth. I was offering my opinion on the current condition and direction of the industry and why I thought it was all occurring. Once everyone became fatigued with listening to me, which didn't take long, the group broke up, leaving me standing alone in front of Polly's booth. I was soon to find out that Polly had been listening intently to all of the dialog that was happening in our group. I was within moments of moving on, when the next thing I knew, Polly was grabbing my arm and asking if I'd be willing to sit down and talk with her for a minute or two.

Polly maneuvered me inside her booth where I immediately sat down and began forming a relationship that continues to this very day. She apologized for doing it, yet she was very forthright about eavesdropping on the group's earlier conversations. She told me that she was taken aback by my comments concerning the state of the industry. She also asked if I had ever considered writing and contributing my thinking in article form to the paper. My answer was quick and easy, "Heck no, never even considered it!" A few months later and after a number of encouraging phone calls on Polly's part, I took a stab at writing my first article for The Exchange.

My first attempt at writing was titled, "What Happened and What To Do Next". It was pretty much what Polly overheard at the trade show but written in my awkward form. Truth of the matter is, I never expected anyone to even read it.

What happened a couple of weeks after the paper hit the street was truly remarkable. Over the next 5 weeks, between phone calls, faxes and notes, the article received over 300 responses. Keep in mind, I had no experience with any of this whatsoever, so I really wasn't sure how to appraise what all was happening.

I asked Polly, "Over the years, how much response did other articles receive?" She was quick to respond, "Up until now, there has never been any response, and in light of all of this, you might consider continuing your efforts." Well, as anybody reading this knows, I did continue. It's been 17 or 18 years, and I still bloviate on. Believe it or not, I still get quite a bit of feedback. Nothing like the first time, but I think time, chance, and circumstance motivated that one.

Writing for The Exchange continues to be an additional chore, but one I really look forward to—an absolute labor of love! The opportunity to work jointly with quality folks like Polly Shea and Traci Matt has been nothing short of educational and very exciting. Now that the baton has been passed again to the ERA, this, in itself, presents a new learning curve ... different objectives and new challenges. Yet, at this juncture, what makes this a ton of fun is again to be blessed with the opportunity to work with folks the likes of Wes Grueninger and Bob Thomas. If you haven't had the opportunity to meet these guys, make the effort with a fax, an email or a call, and introduce yourself. Just say hello. The industry couldn't have better friends, and it's in your best interest to build a bridge or two if you haven't already done so.

I hope and pray that the paper continues to prosper, as well as our industry and the folks who still participate. It's really all we have where we can come together, realize that we're not alone and get involved in something larger than ourselves.

Also, just to dispel some untrue rumors ... all those who contribute articles to The Exchange do it willingly without any compensation. I know many of the contributors, and they are some really giving folks. They are as interested in your success and survival as they are their own! They continue to be more than willing to share their knowledge and experience for everyone's edification.

Hip-hip-hooray for the ERA and the paper which now represents it! God Bless America and the fine folks in our little industry. The next 30 years should prove to be interesting!

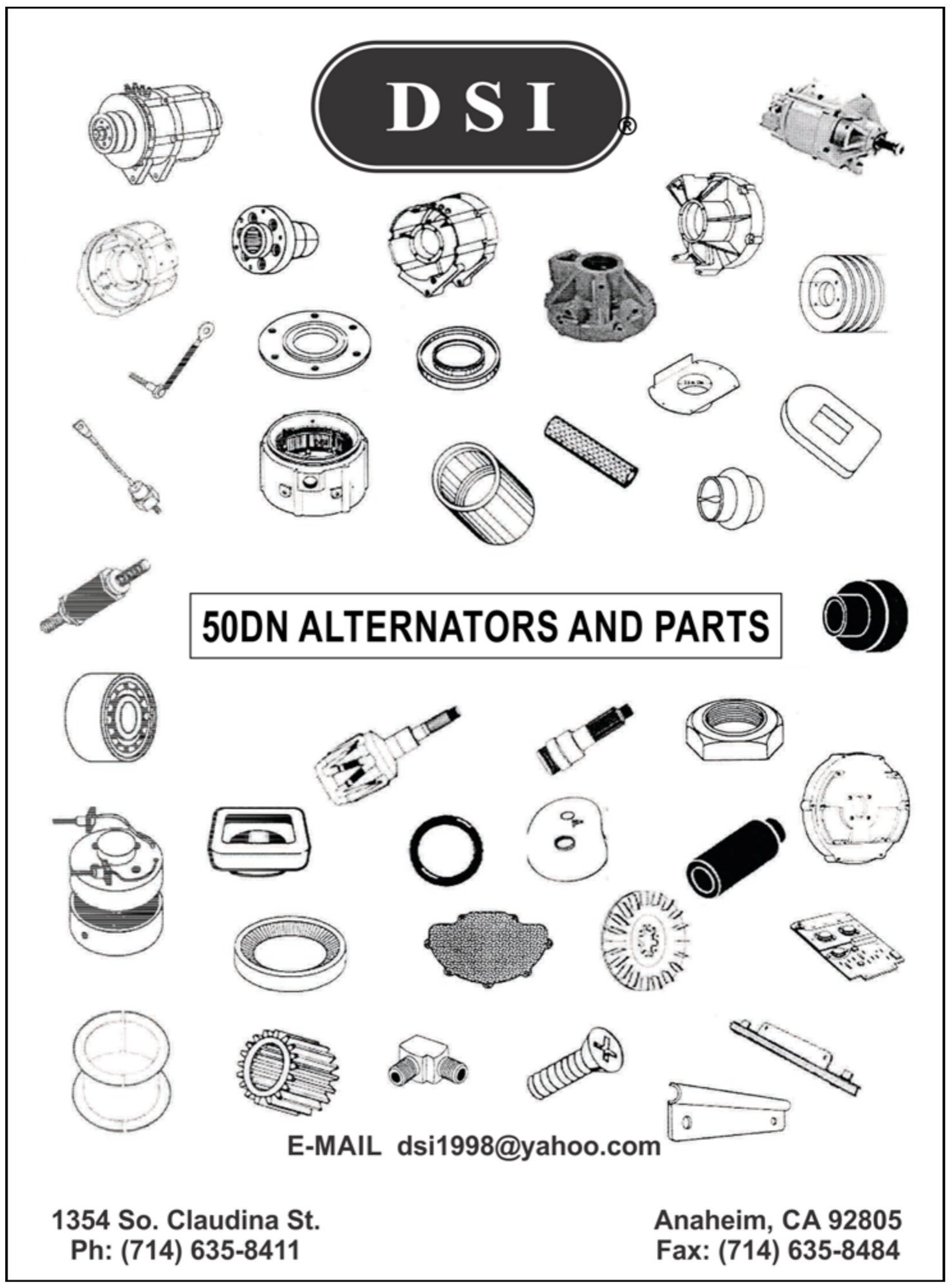
E R A

Ex-President Extols Exchange

I have been a member of the ERA for over ten years. Early on, I could see the value of belonging to a group of like-minded people, but the main problem at that time was being able to communicate with each other. The Electrical Rebuilder's Exchange newspaper was the vehicle of that much needed communication (and still is today.) I, like many, awaited the first of the month for the newspaper to arrive so that I could read every well-written article and look at every ad—to enhance my knowledge and to be more aware of what was available in our very specific industry. For many of us in rural locations, The Exchange was truly a lifeline to the rest of the world. It helped to shape our knowledge base and our attitudes about how we should be operating our businesses. Then, when I became President of the ERA, it was my turn to write a monthly article about the things that I had learned and had put into practice in my own business—things that really worked! (I still get the urge to share from time to time.) As my business has continued to grow, I can reflect on lessons well learned from reading and sharing with the members and leaders our great industry called "Rebuilding". It has been my pleasure to get to know Polly and Traci, the former owner and the staff writer of The Exchange. Now, to know that the paper is in the very capable hands of Bob and Wes is very exciting for the future.

Thanks! Jim Thomas

E R A



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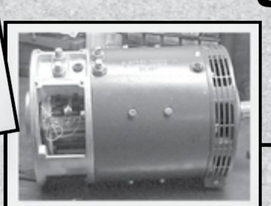
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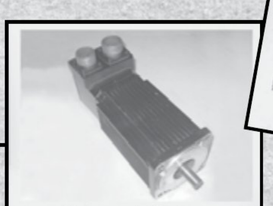
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STAR

(Continued from page 1)

than I thought."

Hulsey yearned to return to his hometown in Georgia, so his children could spend time with their grandparents. But he knew there was not much work there to support a family. He couldn't return without a job. "There I was, at a really low point, not knowing where I'd be working next, but what I kept thinking about was that price difference between those two alternators. At that instant it hit me. That's when I decided to open a rebuilding shop back in Georgia, even though I didn't know a single thing about rebuilding an alternator. It was a sudden decision that I can't accurately describe, other than to say it was an epiphany."

He called his wife from a pay phone and told her to put their house up for sale. They were going to move back to Georgia to open a business rebuilding alternators and starters. "Some people I knew thought I was crazy," Hulsey recalled.

Once back in Tulsa, Hulsey contacted the owner of Okie Auto Parts seeking a temporary job until the house sold. "They had a small rebuilding shop in the back of the parts store. I knew I better learn as much as I could as fast as I could," Hulsey said. "But the owner told me he didn't need any help and couldn't afford it even if he did. So I told him I'd work for free, just to learn enough to get myself started. I knew he wouldn't turn that offer down. He started me out by sweeping the floors, which I gladly did. A few days later I tore down cores. He showed me how to tell different units apart, how to buy cores and how to test parts. I know this sounds funny now, but at the time there seemed to be so many different units, I wondered how I'd ever keep them all straight." After six weeks of work training, the house sold, and the Hulsey family moved to Cornelia, a small town in the Appalachian mountains northeast of Atlanta.

He worked out of a garage to begin with. "I bought my first parts from Ace Electric and made a commitment to myself to give it two years," Hulsey said. "I remember the total revenue the first month was just $28. I worked six days a week. It was a steep learning curve. A rebuilder in Gainesville, who has since passed away, helped me a lot. I found books on automotive electrical systems that I read. I read everything I could find related to electrical rebuilding. I joined the APRA in 1979. That led me to other rebuilders, and many of them helped me along the way, too. After two years in the garage, I had grown the business enough to move into a rented 2,500 square-foot shop.

"In 1987, I found 18 acres of land for sale that I believed would make a good location, not far from where we were at the time. But I knew I didn't need all that acreage and couldn't afford it anyway. Then I found a friend who wanted to go in half with me on the property. His wife worked at the bank and handled the paperwork. All the pieces just fell together. I put up a 50' x 100' building with service bays and a pit for changing starters. We even sold off part of the property. That nearly paid off the loan."

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An addition with a high ceiling was added when he expanded into electrical wiring repair. "This allowed us to get trucks into the building," he added.

Hulsey branched into general auto repair in 2010, during the economic downturn. His key employee in that move was a young man who had previously worked for him part-time while attending North Georgia Technical College in their automotive program. "Jon Newey was a very good employee," Hulsey explained. "He worked and studied hard. His goal was to become a certified master technician."

When he graduated, he left to work at a local general automotive repair shop, where he did earn his master tech certification. That repair shop became a new Star Electric customer as a result.

But the economic downturn affected all automotive businesses, and Hulsey's former employee could see his job was falling into jeopardy. "We had kept in touch," Hulsey said. "He knew I'd been thinking about expanding into general repair. So he returned to work with me and now runs that portion of the business."

Hulsey believes the changes in technology are not just a challenge. "They are an opportunity," he said. "If you only look at change as a negative, then that's the way it will impact your business. The downturn has put a lot of people out of work here, even in our small community. More people are asking us to just repair their starter or alternator. We do more repairs now than in the past. That's a service the auto parts stores can't provide."

When asked about advertising, Hulsey said he gives out calendars every year. He believes that most of his calendars end up on a wall somewhere and advertise his business for 12 months. They are always automotive related and uniquely different. Each one is actually a calendar from a year in the past, but it's a year when the dates match the current year. Each month has a photo of a different car from that year, typically 56 years into the past. "I gave one to a couple from Louisiana who broke down while traveling through," Hulsey said. "They didn't notice the year on the calendar was 1953 until they got home. They called me the following week to ask if I would please send them four more calendars, so they could give one to each of their children. It happened to be the exact year they were married."

In 2010 Hulsey began to promote his business on the Internet with a website. It's designed specifically to help guide potential customers to his business. The website, www.starautoelectricga.com, explains what services are available and shows detailed photos of the inventory, service areas, and his employees working. He recognized that most people today search online when looking for a local business service.

"I have a lot of signs around the shop that I've made myself," Hulsey said. "Some are for customers, some are for employees and some are for anyone who wants to read them. One of my favorites reads this way: "Many persons go to sleep at night pondering two questions. What will happen to their immortal soul, and the other is, will the car start."



Jon Newey and Phillip Hulsey diagnose a charging system

Hulsey is a charter member of the ERA and credited the association for some of his success. "I joined the ERA as soon as I heard about it. There is no way to explain the value of being a part of the ERA. The members are all willing to help one another, sharing their information and knowledge.

"I feel like I have been blessed," Hulsey stated. "Not only has this business supported me and my family, but we have grown to ten employees now, and this business supports all of them and their families, too."

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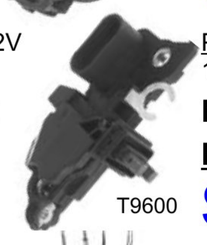
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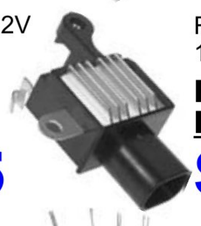
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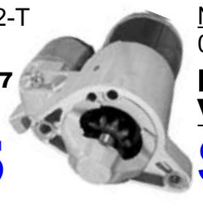
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