At Your Service
NEIEP At 40

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New NEIEP Online Course Available!

The Limited Use/Limited Access Applications Course is made up of two units:

Unit 1: Residential and LULA Elevators
Unit 2: LULA Platform and Chair Lift

Not long ago people with less than perfect mobility were forced to consider moving their residence to a single story home as stairs became increasingly more difficult to manage. Owners of public buildings have also been required by recently adopted code to install elevators to provide access to areas by persons with disabilities. Home elevators, chair lifts, and platform lifts can provide the elderly and persons with physical impairments the option of staying in their multi-story homes by providing safe and easy access to other levels of their homes.

What was once considered a luxury is now becoming a more affordable and accessible option for mobility in the home. This change has inevitably driven up the demand for a qualified workforce to fill the need for professional and safe installation of these units. In the past, IUEC signatory companies did not pursue this type of work as they had for commercial business. The increasing need has created a new interest among elevator manufacturers to participate in this active market.

With these two units—Residential and LULA Elevators and LULA Platform and Chair Lifts—NEIEP aims to provide an easy transition for well-trained IUEC members into this burgeoning area of the industry. Online versions of these courses are now available through the NEIEP website at www.neiep.org. Both units can be found on the Online Training page. Simply click the Online Training link after logging in, or, click on the Student Gateway link in the left navigation panel then click on the available Online Training link. Please contact the NEIEP office with any questions or comments.

Visit www.neiep.org today to experience Online Training!
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It is with great pleasure that the NEIEP staff presents to you a new issue of LIFT Magazine. Since the inception of LIFT in 2004, much positive feedback has been given on the enjoyable, educational value that it provides. Previous LIFT issues have included educational articles that relate to door operators and leveling devices, and future issues will be developed on a variety of topics that pertain to the Elevator Constructors trade.

The current issue of LIFT has been developed to describe the daily job experiences of those who work in the service sector of our trade. These articles were written by field employees from various parts of the country who have different levels of experience as well as differing geographical obstacles to deal with. The goal of this issue is two-fold: for those who do not work in the service field these articles will provide a perspective on things that are encountered while performing a day’s work. For those who do work in the service field an appreciation can be received of the obstacles that are presented performing a similar job in a different geographic location.

As with all LIFT issues it is our objective to encourage a continuous learning process. LIFT magazine provides a platform to deliver a topic that may stimulate the desire to further educate oneself on a particular issue. In speaking with service mechanics throughout the industry a recurring theme that seems to apply to all is that “there never seems to be enough time in the day.” In the quest to help with this area, NEIEP has developed a time management course that can be accessed via the NEIEP website in the online training section. This course is a generic webcast that deals with prioritizing and organizing one’s time to enable the completion of goals and tasks. This self-enrichment course is applicable not only to your job as an Elevator Constructor, but also to your everyday life as well.

In closing, I am happy to inform you that this issue of LIFT coincides with the 40th Anniversary of the creation of the NEIEP. A wise old elevator mechanic once told me that 40 is the old age of youth but is also the youth of old age. Many clichés come to mind on topics of age, such as the older you get, the wiser you get. Hopefully you will agree that NEIEP provides the youthful vitality to continuously improve with wisdom and maturity to understand the changing requirements of our students.

Most Sincerely,

James J. Higgins Jr
Director NEIEP
Elevator Technicians are True Craftsmen
Anyone who is into genealogy knows that some of the most common family names come from the history of organized craftsmen dating back to medieval times. Think of names like Schmidt or Smith (blacksmith), Muller or Miller, Zimmer or Carpenter, Wagner, Fisher, Schuhmacher or Shoemaker, Taylor and Metzger (butcher). What we do truly says a lot about who we are and the fact is that many of our surnames tell exactly what our ancestors once did for a living. I recently came across an article in the Business section of my local newspaper which pointed to elevator technicians as having one of the highest-paid jobs among those considered a “craft.” This made me think about the identity of the elevator man within the contemporary workforce. Today, elevator technicians earn the “big bucks” because they offer a quality product backed up by top-notch service which customers can rely on every day. They are true “craftsmen” in every sense of the word and taking a quick look at the history of this term gives us some perspective.

GO MEDIEVAL TO OFFER TOP-RATE SERVICE
STRONG SERVICE HAS BEEN A KEY TO SUCCESS FOR CRAFTSMEN FOR CENTURIES

By: Fred Yaniga Jr., Ph.D.
Butler University
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A medieval carpenter plies his trade.

One Model of Historic Labor Organization:
Guilds and Craft Associations
Historians study the past in order to explain contemporary events and offer insight into what might come in the future. Looking back at the development of industry throughout the centuries we find important models which both offer important lessons and those which serve as signposts we cannot afford to ignore.

One important model from the past is that of medieval craft associations and guilds from Europe. These associations and guilds began to flourish nearly 1000 years ago when towns and villages were growing and when early industries were just being organized. They quickly grew in economic, political and social influence. The reasons for the success of these guilds deserve our attention and many of those fundamental lessons can still be applied within our labor situation today.
Historian Steven Epstein defines the medieval guild as an association of employers who banded together to foster their own self-interest. Even in medieval Europe competition was a simple fact of life and economic survival meant pooling resources and protecting common interests. To avoid strife among craftsmen within one town and to ward off competitors from outside, associations quickly sprang up. The IUEC motto “In Union there is Strength” was already relevant in medieval times. Now, urbanization brought with it a tremendous rise in the need for skilled craftsmen and their products. But nonetheless, the guilds’ goals of self-interest were secured only by offering consumers top-notch service along with high quality products. This fact was quickly realized and closely knit organization of the guilds insisted that these goals be kept central to the business of each member. The badge of guild membership was not to hide behind but was seen as a responsibility to improve the trade as a whole. Failure by one member to maintain the highest standards in product quality and service jeopardized the standing of the entire guild and quickly led to the exclusion of that member.

The guilds served to protect trade secrets and hone the professional skills of each of their members. Further, they ensured continued success by overseeing product quality by overtaking all educational and training programs. Apprenticeships among skilled craftsmen became standardized and thoroughly organized so that any guild member could be certain of the abilities and skills of any apprentice completing the formal education process.

Aside from these professional standards early guilds provided for many of the social needs of their members as well. It was no rarity for guilds to support members’ widows, make charitable contributions to the poor, sponsor church and civic events, and instill a series of penalties and fees for members who disobeyed guild or civil regulations. Sometimes guilds were even responsible for policing city streets or constructing and maintaining public buildings. These associations were true confraternities and whatever was needed to protect and strengthen the position of the guild was seen as an area of important investment.

**Even the Pope Agrees**

Pope Leo XIII (1878-1903), known as the working man’s Pope, noted the importance of these early guilds at the turn of the 20th century: "History attests what excellent results were brought about by the artificers’ guilds of olden times. They were the means of affording not only many advantages to the workmen, but in no small degree of promoting the advancement of art, as numerous monuments remain to bear witness. Such unions should be suited to the requirements of this our age - an age of wider education, of different habits, and of far more numerous requirements in daily life."

These words of a Pope more than 100 years ago begin to point in the direction we are heading in our current times. The requirements of our age today include an ever wider array of activities and needs, but the fact that trade associations and labor
unions are necessary to secure both advantages for working men and women as well as safeguards for consumers is perhaps more true today than ever before.

**Internal and External Regulation**
The level of labor organization in medieval guilds encouraged master craftsmen to deal fairly with one another and with their employees while cooperating to offer customers quality in both product and service. This basic approach was so successful that thanks to their reputation alone guild members became the preferred providers of quality craftsmanship. In some places guilds began to monopolize markets and rivaled the nobility and the established merchants in power. Of course, this success drew critical attention and intense scrutiny if not outright disdain. What followed was a system of external government rules meant to regulate more closely the guilds and allow for fair competition between competing market participants. Of course, this real nature of many regulations was to break the grip the guilds had on their particular industries. But frequently it was the guilds themselves who, because of their organized structures, were best able to integrate these external regulatory systems and therefore many outlived the very systems meant to foil them.

Of course, the strict internal organization of the associations guaranteed a high degree of quality within the craft and therefore master craftsmen, their apprentices, as well as their trained journeymen were well accustomed to conforming to and fulfilling strict regulations. In many ways the associations of the IUEC have much in common with the principles of the medieval guilds and craft associations. Mechanics and apprentices are expected to uphold high standards of quality and their abilities are continually tested and honed. External industrial standards such as ANSI and ISO codes supplement internal quality practices, all of which are consolidated, reviewed and updated within a tightly organized continuing education program. And like the guilds of old, each individual worker plays an important role in the health of the whole organization.

**Service is Key**
In the very first issue of LIFT (No. 1, Summer 2004) Rick White wrote about the importance of customer expectations and NEIEP’s safety, productivity and customer relations training curriculum. He rightly states that apprentices and mechanics are often the front-door of their companies and that each employee has the duty to
deliver excellence in service. NEIEP’s training curriculum highlights the importance of these factors by putting them front and center as keys to keeping customers happy in chapters 1.1 (Safety) and 1.3 (Customer Relations). Productivity is the bottom line whose numbers are in the black only when all other elements have come together effectively.

Medieval guilds and craft associations also had to focus on the details in order to guarantee the survival of their craft and the livelihoods of their workers. With competition growing and new technologies being introduced to the marketplace with increasing frequency, these associations had to find ways to adapt and survive. Many associations survived for hundreds of years by providing a high degree of service, cultivating the trust and loyalty of their customers and always maintaining the highest degree of skill and craftsmanship. Membership was seen as both a privilege and an honor. Guilds even survived the 14th century bubonic plague, which killed nearly 25% of the population in Europe, a testimony to their strength and resilience.

Yesterday and Today
Nonetheless, as the industrial age approached and as the system of hourly wage labor became more prominent, many guilds had difficulty keeping up with the times.

Technology was changing more and more rapidly, and the tightly-knit groups of artisans and craftsmen were being pulled apart into more and more specialized professions. Many associations were unable to adapt to these changes. And as a result of the technical developments of large-scale industrial progress, many workers soon found that small to mid-size workshops run by master craftsmen were being overtaken by large-scale factories which no individual craftsman could afford. Corporations began to step in where guilds and craft associations once dominated.

But despite the ultimate downfall of the European guilds, many of the elements which made them strong in their heyday can be lessons for us today. Like the guilds, we face growing pressure from outside competition and must do everything we can to match our customers’ expectations while maintaining a high level of productivity and quality. Our apprenticeship and continuing education programs must be the best available so that our craftsmen have the tools they need to produce the highest-quality product available. Our internal organization must be strong in order to incorporate both internal and external regulations smoothly and each member of the confraternity must honor their individual obligation to providing top-rate service to each and every customer. By doing this we can stand on the broad shoulders of our ancestors from the guilds and associations of medieval Europe and look over the bright horizon of our craft in the future.

Fred Yaniga Jr. teaches German at Butler University in Indianapolis.
A Week in the Life of a Service Tech

By: Oliver Overtravel, Elevator Technician Extraordinaire

Monday
Mondays are not my favorite day of the week. This one was already starting off with indication that it would not be an exception. The streets were drying off from a Sunday evening thunderstorm and some of the traffic lights were out causing commuting problems as I approached my first stop. Power failures throughout the night usually caused equipment problems even on jobs where things normally run smoothly.

My largest job, and the one that I focused on closely, was the hospital. As I entered the parking garage things looked pretty much normal. The three garage cars were running fine and that was a relief. As I moved toward the main lobby I could see some of the service cars were shutting traffic without incident. Before checking in I glanced at the lobby panels of the two main groups of passenger elevators to see if everything was moving. I could account for five out of the six in the main group and three out of four in the employee bank running and decided to investigate the two stalled cars. While waiting for a car in the main group to take me to the sixth floor where one stalled car was sitting, I used the house phone to call the maintenance department. The department manager answered and it was clear that he had his hands full with other power related equipment shutdowns. He reported that they had placed barricades in front of one stalled car on the tenth floor and turned it off as they had reported. The other cars continued to answer calls at the floor normally when I turned the car back on in the COP, but there was no power on the doors or response when pushing car call buttons. I went to the machine room and could see a drive error light telling of a problem. Before investigating I placed the car on inspection in the controller and went down to close the car doors, placed a small OUT OF SERVICE sign, put the COP switches back to normal, and removed the barricades from the floor. On my way back to the machine room I stopped at the tenth floor to look at the other reported shut-down car. It was sitting level with all switches in the normal position. There was no power on the doors, so I pulled them closed, hung another sign and went for the machine room. It seemed like many of the normal in-service relays and lights were out but the doors were still closed so I placed it on inspection for the time being and returned to the more important car in the main group.

Upon returning to the other machine room some voltage checks indicated that a fast blow 200 amp fuse supplying power to the SCRs in the drive was open. This was probably the effect of losing power in flight or by action of the emergency power transfer switch, or momentarily losing one leg, or anything else that could happen in a power failure. In any case there may be a bad SCR or just a blown fuse. I needed to decide on the best course of action, locate a fuse, and check to see if I could find an SCR or two. I headed back to the other machine room and I was in luck as I soon located both needed items. While there I decided to investigate the car that was shutdown on the
tenth floor in hopes for an easy solution. After resetting errors, a power loss relay began to pulse in and out. Checking through the prints it was clear that a self-holding contact in that circuit was failing and a meter check confirmed that. After clearing that problem and testing the car out-of-service I removed the sign at the floor and called maintenance to inform them that one car was back in service and I was returning to work on the other. They were happy to hear that because the nine o'clock crowd was starting to move around.

With parts in hand, and after having thought out the best way to handle the problem with the blown drive fuse, I returned to the machine room with the car with the blown fuse, and locked-out and tagged its disconnect. The next item was to do some rough and quick in-circuit ohmmeter checks of the drive converter and its input and output components. Nothing showed a dead short but most checks expectedly showed some resistance due to lack of component isolation. Each of the twelve SCRs is clamped into the heatsink and can take hours to individually isolate and test. The in-circuit tests at least told me that there was nothing directly shorted that would with certainty cause a problem, but with full voltage applied things can quickly change. With this small amount of assurance I decided to replace the fuse and try my luck. The fuse is one of six and each is bolted in. As I was removing the open fuse the most obnoxious honking started coming from my communication tool. It's funny how such a sound can instantly change one's mood. One minute you're plugging along happily, moving forward towards a goal, thinking about your next move, and related contingencies and then wham! The customer is the manager of a nice three car apartment building. It says on the link that he can't find his middle car. On a good day he can't find his ankles with both hands so I ask myself should I call him? Nah... I don't think I can come off too well listening about his problem right now. I'll just continue with this so I can plan my next move without thinking about that problem, besides I'm almost done.

Where was I? Oh yeah, check all the connections and look around one more time for anything burnt before unlocking and throwing the switch back in. There are times when standing to one side of the disconnect as you throw it in is foremost on your mind, and this was one of those times for me but it came off without a hitch. I cringed a little bit again as I ran the car on inspection, but feeling lucky I removed power and re-applied it to the controller with normal results. The acid test was running the car in high speed and trying a few emergency stops which also went well. I set up the car to run continuous out of service to let it warm-up and decided to call Henry at the three car job.

Hey Henry how ya doin', I heard you can't find your middle elevator. By the way, how did you even find your way to your car to get to work this morning… No, I better not say that. As it turns out Henry has a move in scheduled at noon and "needs this car ASAP." I hate that expression.

I still had my doubts about the car with the blown fuse and decided not to put it back in service until I could watch it some more. I went down to the floor where it was stopped, removed the sign, took it to the maintenance shop, and told them of the situation. I didn't want to let them know that I was not completely satisfied with the fix so I fabricated a story that I needed a megger to further check it out and was going to get one. They were satisfied with the explanation and glad that at least one car was back on-line and were willing to wait. Besides they still had their hands full with the other three phase equipment
that was down and were familiar with problems caused by power outages.

Henry was waiting for me. It was almost noon. I did my best to express genuine concern. It was an Oscar performance. "Hi Henry, I'm sorry you had a problem, things have been going pretty well lately with your cars, I'll have a quick look and get right back to you." The car was in the overhead just barely on the overtravel. After checking the inside I ran it down and then put it into high speed while out-of-service. It ran normal but may have lost the selector and went into the overhead after the power failure. I ran the car forcing a few terminal slowdowns. On the third try I noticed a flutter in the slowdown relays with an excessive overshoot and re-level. As I was going down to check the cartop Henry was on his way up to the machine room. "Hey Henry I was just coming to see you. The problem appears to be a switch in the hoistway but I've got to check it out and I'll let you know." Sure enough, there was a little play in the front-to-back roller guide on the side of the car with the cam that operated the slowdown switches. That added reduction in clearance and probably caused the switch not to open on a terminal slowdown. I made a quick adjustment and retested terminal slowdown without failures. When done I turned the car over to the movers who were waiting and told Henry I'd be back after lunch to double check on the switch. He grunted and shook his head and I left for lunch.

Dave worked repair and was probably in the area, so I decided to hook up with him for lunch and borrow his megger which was beginning to sound like a better and better idea anyhow. He also suggested checking the roller guide isolation and replacing it if it was mushy which was a great idea as he just so happened to have a couple for me.

Back at Henry's I decided to take the megger upstairs and do a quick check on the three machines while I had it. The movers were done so I left their car out-of-service and disconnected the loop and feedback wires from the controller to protect the controller from the megger's high voltage. The megger was connected from one armature lead to ground. It was up around a meggohm which is good considering how these things hold on to carbon dust. Isolating the generator and motor here wasn't necessary because the whole loop read OK. After getting the sequence down, the other two cars went quick; however, one was down around 500k and would have to go on the list for cleaning and re-testing.

Going back to the original problem on the middle car, I took the cover off the terminal switch and put a meter around its contacts, put the cam of the car to where the switch should have been broken, and observed the meter while shaking the car. The switch remained open, which should prevent further trouble with the terminal slowdown. Changing the roller guide isolation would require help for jockeying the car around and working next to other running cars. It also would have to wait. There was still a car down at the hospital. I noted the pending work and work performed in the logbook, told Henry the story with a promise that I would be back with an Apprentice to help out, had him sign the dotted line, and left the building.

Back at the hospital the lobby panel showed all but the one I didn't trust running so I called maintenance to see if they had anything for me and to let them know I was back. I decided to check the loop circuit of the car I left shut down with the megger while it was off and removed
A1 and A2. While removing the feedback wires to the controller, I also remembered that I needed to disconnect the capacitors in the loop filter choke box to prevent high voltage from the megger from damaging them. The circuit through the armature and filter choke checked well above a meg but better safe than sorry. Last year another car blew a drive fuse and after changing a few of them the mechanic found that A1 was grounding out where it was taken a little too tightly around a fitting in the run. This check was for my own peace of mind and built up my confidence to let it run. Starting it up from cold again was another good test and after running it out of service for a while I decided to put it back in the group and ride it. I went back down to the maintenance shop and saw that the guys were having coffee and I joined them and listened to their stories of the storm-related shutdowns. I walked into the department manager’s office and could see that the pressure was off of him a bit with everything running and I gave him the rundown. He was always a pleasure to talk with because he could understand the situation at the higher technical level and appreciated being kept informed of the types of problems found. I took care of the paperwork and let him know I was going to finish the day keeping an eye on the cars worked on and that I would try to stop back tomorrow. The grass at home was probably up to my knees after the rain and I better think about getting it cut next.

Tuesday
Now, every once in a while you start to feel a little delinquent about getting your PM done. The only way to cure this feeling is to start off first thing in the morning in that direction and stay with it as long as you can. On this fine Tuesday morning my plan was to hit all the grease fittings top to bottom on two twin condo buildings with four cars each. These items were standing out like sore thumbs on the check charts and six months was pushing it. After making my intentions known to Tom, the engineer for both buildings, I began with car one. I removed it from service at the top floor, placed an out of service sign, and proceeded to the machine room. I placed it on inspection in the controller, tagged and locked it, and greased the motor and governor bearings. The governor looked in good shape. A drop of oil on a couple of pivot points and tripping it for good measure should do it.

While heading back across the roof for the pit I was thinking about how many miles I would walk to do eight of these. Opening the bottom landing door I could see a couple of inches of water in the pit. The sump pump switch was stuck but it started when I whacked it with the broom handle. After the water went down I checked the bottom counterweight roller guides and buffers and then greased the governor tension sheave. Walking back across the roof for a ladder to grease the deflector sheave, I was thinking to myself that there had to be a better way to do this.

In the machine room I turned power back on and grabbed the ladder and went back to the car at the top floor and ran it down with the hoistway access switch. After fighting the ladder through the opening and over the crosshead, I finally got everything in position and greased the deflector sheave fittings. Why do things always seem so easy in the planning stage and then so difficult in the operation? I set the car to normal in the car station, left the ladder in the stairwell and went back across the roof to the machine room. I decided to let the boss know that I could use some help over at Henry’s job to replace the roller guide isolation. He said that Dave had a dentist appointment that afternoon and I could borrow Tim, an experienced Apprentice, who was working with him. Things rarely worked out this well. Once back in the machine room I decided to check over the controller while the car was shut down. Dave called and said he would be letting Tim go before lunch so I decided to have Tim meet me for lunch, thanking Dave and wishing him luck at the dentist.

Tim and I hooked up for lunch close by and discussed the plan for completing the lube operation for the remaining three cars in the first building before returning to Henry’s job to replace the roller guide isolation. With some help and thought out planning the operation went very well. We ran through the next car together and I showed Tim the details of some of the items to check in the pit like lubing the close clearance fitting on the governor tension sheave and checking fluid level in the buffers. Swinging a
broom around wasn’t a bad idea either.

I returned to the machine room to turn power on while Tim accessed the car down and I met him to position the ladder to lube the secondary sheave. The next two cars went smoothly and Tim got some practice on his own while I checked over the controllers while the cars were shut down. Helping hands along with a telephone can sure make things go well. We finished the three cars with plenty of time to return to Henry’s building. On arrival we told the office people that we would have the middle car shut down for a short while to replace the isolation and make some adjustments.

With Tim’s help, changing the roller guide isolation and checking the terminal slowdown operation went well, although he was a little nervous as the other cars passed by us while we were on the cartop. I wish we could keep those nervous feelings even after years in the trade; it would automatically keep us on high alert for the regular dangers present on the job. As we were picking up, the boss called and said Dave was going to need another day to recover from the dentist visit and to keep Tim if I could use him. He didn’t need to ask me that twice, and Tim and I made plans to meet in the morning. I’d have to come through town and then some to get to the job in the morning, so that meant an extra early departure from home.

**Wednesday**

A few minor delays with accidents slowed the commute, but I was still able to hook up with Tim in time for a cup of coffee on Wednesday morning, and we talked about finishing up lubrication of the four cars in the second building of yesterday’s job. We talked with the building manager Mr. Collier about the planned operation and assured him that each car would only be shut down for a short while each. He thanked us and mentioned that the eighth floor door on car four was a little noisy and asked that we check it. We took car four up and found the facia had a rattle that we cleared by bending it slightly and refastening it.

Once again things went as planned and with the experience of the previous day we completed the first three cars of the group fairly quickly. On the last car, I waited for Tim to finish up in the pit and come to the machine room to see how machine and governor lubrication was done and also to get some practice going over the controller. While greasing the machine bearing the grease gun went dry and I asked Tim to replace the cartridge. He said that in his three years in the business he had never done that. I gave him some brief instruction, handed him a cartridge and decided to let him fight with it on his own. Ten minutes later he showed it to me and in spite of making quite a mess, it worked fine. I’m sure his next attempt would go better. He then got a little practice lubricating the governor and checking it for proper operation, setting and resetting it by hand. The controller got a quick once-over and we replaced a couple of stationary relay contacts and a relay shunt. This is the type of work that is no longer necessary on most of the newer jobs in town with sealed relays. We finished with lubricating the secondary sheave and put the ladder and tools away.

After recording the maintenance operations in the log book and making sure all the cars were running OK, we talked to Mr. Collier, got a signature and headed off to a rare on-time lunch. I thought about poor Dave who was recuperating at home from his dentist visit, but at the
same time it was great to have Tim to help out with some backlogged maintenance work.

After lunch I decided to perform the annual safety test on two traction cars in a parking garage at a job nearby while I still had Tim available to help. We drove to the top floor and decided to start with car # 1, which had an extra lower level stop. I set up the car to run on inspection and had Tim watch as I moved the car from the machine room to a good height to be able to service the safeties and still get in and out of the pit. Tim started brushing off and lubricating equipment in the safety plank while I looked at buffer oil level. The counterweight buffer was full, way too full to be normal. I jumped on the plunger a few times and sure enough the oil turned a milky color. This was an indication of water in the buffer, and I wasn't surprised judging by the oil level and the water line along the pit wall. The car buffer was up a couple of inches higher and escaped taking on water.

This was one of those times when it's a good thing to have a boss and to let him make the decision. I got the buffer data ready for him and called. As I expected he said to leave it and he would find a replacement. Taking a buffer apart and cleaning it up after water damage wasn't a thing that could be safely done without some preparation and special tools, not to mention more time than we had this day. The return spring inside is under a lot of pressure and parts can fly if it's not disassembled properly. Swapping the buffer and disassembling the old one in the shop may be the best bet.

We checked over the remaining safety and pit equipment, lubed the tension sheave and set up for the inspection speed counterweight buffer test. After the buffer was compressed by landing the weight and breaking traction, Tim watched as it returned in about 30 seconds and I removed the limit jumpers. For the safety test I decided to run the car from the car top and have Tim place the plank safety switch jumper and set the governor in the machine room. The car set level and the machine sheave broke traction as expected. The rails and safeties looked good so we removed jumpers and decided to have something cool to drink and fill out some test forms and new test tags. The second car test went smoothly, so I completed the test form for submission and left the partially completed form for car #1 in the cabinet until the buffer was replaced. After double checking for temporary jumpers and observing the car running out of service, we picked up and left the machine room. This was not a bad day and a half's work that we got done even though we couldn't finalize one test due to the buffer.

The ride home was a long one fighting traffic most of the way back across town. I didn't feel much like thinking about tomorrow; besides, any plans would probably change when I got into the shop in the morning to turn in time reports. I sipped on some cold coffee left in my thermos from this morning, I think.

Thursday

The shop was busy on Thursday morning. Most of the guys were there and were catching up on news in the parking lot. There was talk about construction slowing down and it was anybody's guess as to how the maintenance department would be affected. It seemed logical to place the construction guys as temporary service teams and perform some much needed service and violation work on the routes. Fat chance of that happening. We're told almost weekly that we are already heavy on our mancount and would have to be cutting back. Most of us have been hearing that for years and it has less effect each time. It's hard to believe there could be a cutback with service work continuing to pile up.

Dave was back in force so I wouldn't have Tim working with me again today. The boss said that he had a buffer lined up from a recent tear out for the two car parking garage and would send it out with a team for replacement as soon as one was free. I pulled out my phone to see if there were any lingering messages and discovered that I had forgotten to turn it on. There were two messages from the dispatcher that had come in earlier this morning. The first was from the two car parking garage Tim and I did safety tests on yesterday. They reported that car two was sometimes making a noise. The second was a door not closing on a small two car office building that was on the way.

I could park right by the front door of the office building, so I decided to stop in and check that out first on my way to the garage. No one from the management or mainte-
nance departments were there but some housekeeping person­nel told me they were using the car early in the morning when it stopped. I went to the car and saw the door standing open and checked the door open button and safe­edge. The safe-edge didn't sound right and I could see that something had disturbed the switch and threw it out of adjustment. It could have been anything. For now I'll assume a broom handle fell between the doors and caused it. I needed to get to the parking garage soon, so I made a quick repair to get the car moving and told housekeeping that I would be back in a little while to finish.

“It was the unmistakable sound of the governor rope dragging on the side of the car. It's kinda like being in a tin shack during a hail storm.”

A few minutes down the road I arrived at the parking garage and immediately got on the car and started running it. I couldn't find a problem or hear noise, everything seemed fine. The maintenance department at the building next door reported that the noise frightened a car load of passengers who called them but they didn't hear anything when they checked it out either. I went back to the car and rode it some more when six passengers got on at the top floor. On the way down there was a loud scraping sound that caused the passengers to gasp and put a death grip on the handrail. I told them I'd been looking for a noise and knew what it was and not to worry. It was the unmistakable sound of the governor rope dragging on the side of the car. It's kinda like being in a tin shack during a hail storm. I couldn't help but chuckle a little after they got out and I recalled the looks on their faces. It seems the load of passengers caused just enough extra movement in the car to reduce clearance and contact the rope.

Once in the pit I could see the return side of the governor rope was a little close to the car. I knew the roller guides were OK because I had just looked at them yesterday. The safety actuator arm was in proper position as well as the remaining hardware. It seemed that we must have bent the governor tension sheave bracket while greasing it yesterday. I simply bent the bracket to where the rope was centered between the car and divider beams and rode it some more. An easy fix is nice but I probably should have paid more attention to clearance up the hatch yesterday to avoid this. The most difficult part of the job was explaining to the customer that these things sometimes happen after a test like this. He seemed satisfied and our reputation was intact, but I'm sure glad he wasn't on the car when it happened. He signed the ticket and thanked me for making it out so quickly. That was a good sign.

The two car office building still needed some attention so I grabbed the tools and a drill when I returned there. The noon rush hadn't started yet so I set up to drill and pin the safe-edge switch bracket to prevent a reoccurrence. When the car arrived at the top floor I turned it off, checked the adjustment again, and drilled a hole for a pin in the bracket. The rest of the hardware and cord routing looked fine, so I returned the car to service.

The building maintenance guy was in by now but had no idea of a problem. I filled him in and mentioned the repair and that everything else appears OK. He agreed that the cars had been running well. Sometimes just giving the customer reassurance in a short visit makes them a little more comfortable. Speaking of reassurance I really needed to get back to the hospital to see how things were going after Monday's power failure problems.

Things were running well at the hospital. I spent the rest of the day there and did some much needed cleaning of the car and lobby hoistway door tracks. They tend to get noisy as collected dust compresses between the rollers.
and the track. Lobby door operation is something everyone notices and is time well spent.

**Friday**

On the ride in on Friday I looked back over the week and figured that I had spent less than half of my time on maintenance check chart Items. This was really pretty good because many weeks it seems as if you go backwards in that area so almost anything was better than nothing. Performing bearing lubrication before they get noisy and doing safety tests before certificates expire was a plus. This morning I needed to get to two duplex hydro jobs that had been neglected for a couple of months. Nothing can burn up your time like cleaning up after a pit bucket overflows.

I checked in with Bill the building maintenance man on the first job, and he told me of a couple of signal lamps that were out. I decided to peek in the pits before replacing them just to ease my apprehension. The oil overflow bucket was a few inches from full, so I decided to remove the car station and replace the lobby lamp before I got oil all over my hands. The cover had a stripped screw that would have to wait until I got back to the van and dug up a new one. The down button on the fourth landing was also out and I made my way up there to replace it. This style button was always a pain because the fixture box was small and it was difficult to get the fixture out without brushing the terminals against it and grounding it out. I had covered most of these terminals with tape in the past to prevent that, but I might have guessed not this one and the signal fuse blew as I removed the fixture. This meant that none of the hall calls were working but I could hear the cars running. I couldn't leave the fixture dangling by its wires so I decided to wrap some tape around the terminals, put it back in the wall, and take the steps down to the pump room.

It couldn't have been more than a couple of minutes, but I could already hear people in the halls yelling and pounding on the doors. I knew almost for sure which fuse it was but checked it with a meter to be sure and replaced it. I went over to the bottom landing doors and pressed the button to be sure the cars responded and when the second one came down I took it up to the lobby. Bill the maintenance man was standing there and I think he was happy to see me. I assured him that all was back to normal and that I had caused the unplanned outage. He was satisfied with that and I didn't see a need to explain further, so I returned to four to finish with replacing the lamp.

The only hard part about returning the oil in the pit overflow bucket to the tank was lifting it out of the pit and setting it on the landing without spilling it. I placed a barricade and put down a piece of heavy plastic near the door and entered the pit. The other car was fine but this one leaked about two gallons a month consistently into the bucket and has been on the list for packing replacement for some time. After checking for water and debris in the oil I dumped it back into the tank and decided to check the linestarter contacts while the car was down. After the quick controller check I replaced the bucket, put the car back in service, and took the other car out of service to have a look at its controller. My phone was ringing. It was Henry's job. He couldn't find car # 1. There's really no need to write down what I was thinking this time and I decided to finish checking the second car here before leaving. I made the entries in the log book and wrote up another service request for the leaking packing, noting the two gallon rate per
month. Bill was in his shop and I talked to him about the work performed and got a signature and headed out to see Henry. At least I got in a couple more steps forward in the routine maintenance department.

Henry’s regular maintenance guy had been on vacation and Henry figured he could do the required monthly fire service test himself on this day. I guess he didn’t remember the part about not getting off the car until the doors were completely open when in phase two fire service. You guessed it. He locked himself out and the car was sitting there with its doors closed. From the machine room I was able to return the car to the lobby and reset it to normal operation. He argued that there should be some way of resetting that condition. I knew better than to argue this point with him and just said that maybe someday elevator fire codes would allow that and mentioned that they have been known to make changes. I didn’t want to provoke him by asking for a signature, so I let it ride and explained to him that it was part of the service. Now that made him happy and was worth taking the chewing out I would get for not having him sign.

Dave called and thanked me for returning his apprentice in good condition and we planned to meet nearby for lunch. On the way there I made a stop at the second two-car hydro job I planned for the day and talked over the job with the super. He said that everything was OK but that the car #2 door might be closing a little fast. I told him I’d check it out before lunch and that I would be back after to do some maintenance.

The door seemed normal, it remained open about 7 seconds at each floor and the speed was pretty good. A few passengers rode the car and operation looked fine. Then after a passenger went to the third floor I saw the problem. The door started closing immediately after each stop. It looked as if the contact on the third floor call button that was just pressed had stuck and closed the door immediately as if someone had pressed it and cancelled the door time. This would only take a few minutes to remedy so I decided to get to it before lunch. A buildup of polish around the button was causing it to sometimes stick in and cancel the door time, reversing the door upon opening. I talked to the super and told him what I found and said I’d be back after lunch barring an emergency and left the building.

“The reputation of solid performance by IUEC mechanics was the only thing keeping us ahead of the competition.”

Dave and Tim were already there and had ordered so I sat down with them and did the same. Dave said that Tim didn’t miss him a bit during his two days off and said that he got to do a lot of new things. I told him there was plenty more where that came from and to send him over any time. We talked about the backlog of work we had and if we would ever get caught up and agreed that we were all in the same boat. Dave said that as long as everyone was bailing we’d be able to keep afloat. We also agreed on the importance of satisfying the customer. What was good for them was good for the company and would trickle down to us. The reputation of solid performance by IUEC mechanics was the only thing keeping us ahead of the competition. We reminded Tim of his obligation of holding up his end and continuing to work hard at school and learning as many new things on the job that he could. His career was well underway and at this point he was in control of how well it would go for him. Even Dave and I were taking courses to fulfill the state licensing requirements and will probably sign up for others when these are done. We finished lunch and headed back to our jobs hoping for an afternoon without surprises.

On the way back to the job I thought about how we had a lot of good people at our company like Dave and Tim and I was sure they felt about the same way towards the customers. It’s easy for a customer to detect this concern and in the long run it will make things go better for both of you when there is some understanding on his part. You are, in many cases, the only contact the customer has with the company. To him you are the company and he judges by your actions. ■
For a Mechanic, 
No Day is Just Another Day

By: Terri Stave, Local 9
Minneapolis, MN

It's 2:00 am and my pager goes off. Entrapment. I quickly become alert, throw on my uniform, and hit the freeway.

It's hard to explain to someone outside the elevator industry how it feels to be pulled in several directions during the course of one day, or the frequency of problems you often face and feel pressure to solve as quickly as possible. Your days are at the will of the machines you service and the variety of people who manage them. The variables that exist result in an endless number of outcomes whether working your normal route or being on call, which for me in Minneapolis means about 11 times per year. Not bad, but even being on call doesn't afford any breaks in the different experiences we end up swapping with other elevator mechanics.

An hour drive later and the contact person who said he would meet me at the building is nowhere to be seen. Knowing that someone is waiting for my help makes the time drag. A while later I was surprised to see someone coming out of the building so late at night. I asked him to hold the door and explained that there was someone stuck in the elevator. "I'm doing just fine!" he replied in a surprisingly cheery voice. He explained that he was a vending machine delivery guy, fully prepared with plenty of snacks to pass the time on his lengthy elevator stay. I chatted with him for a while longer until finally the contact person showed up and I could gain access to the machine room and get him out.

Meeting at the entrance, he thanked me with a full grin. "I didn't mind waiting, it was my last delivery of the night." Most people become unnecessarily upset when stuck in an elevator; however, the snack man seemed to have taken pleasure in his stay, which still makes me smile.

One of the many difficult things in service is dealing with old equipment, explaining to the customer that the parts for their elevator are no longer available, and then trying to quickly come up with a solution. A call came in from a customer after receiving complaints from some of the tenants in his building that the elevator wouldn't stop on the 2nd floor in the up direction. She mentioned that I could wait until my next service the following week to check on the problem. This is uncommon. Most customers want their elevators fixed as soon as possible but I could tell that this customer was trying to avoid an additional cost for a trouble call.

The following week I found a bad coil on the U2R relay. This relay style (RBM) is obsolete. I called several guys to find out if anybody had one with no luck. It was like trying to find a kidney for a patient waiting and holding out for the perfect match. The only positive that came from dialing everyone in my phone book was a lead that a modernization crew was pulling out an old controller that might possibly have the same relays. I jumped in my van and headed across town. Talking with the crew I discovered they were unfortunately pulling out a different style than what I was looking for. My patient would have to wait a bit longer.
On the way back to the job I racked my brain trying to remember if I had anything that would work. After parking and digging though all the relays in my van, a P&B relay popped out at me and I began thinking to myself that that this might actually work. In order to make the relay operate, I drilled and tapped new mounting holes. After a few hours of down time the elevator seemed to adjust to its new transplant and was up and running. On the phone with the customer I explained the difficulty in finding an original relay that would work as well as my need to charge them for my time and the part I installed. The customer understood–feeling glad to have the elevator back in service so quickly and having avoided the additional cost for placing a trouble call.

“*I had only been waiting about 5 minutes when he appeared, and from the look on his face he was surprised that a woman was there to work on the elevator.*”

Sometimes you really need a lot of patience with customers. A call came in for a mechanic who was on vacation from the route next to mine. The customer had lost some keys in the pit, but did not want to pay for a trouble call. Since I happened to be close by, I told dispatch I would take care of it. Once I arrived at the building, I called maintenance and let him know I was in the entryway. I had only been waiting about 5 minutes when he appeared, and from the look on his face he was surprised that a woman was there to work on the elevator. We walked over to the north elevator and I scanned the pit. Nothing. It was at this point that the maintenance man said he did not know for sure if they were in fact dropped in the pit. He explained that a tenant had lost her keys somewhere and assumed they were in the elevator pit. I looked back at him, speechless. He thanked me for coming out and taking up my time. “No problem,” I calmly replied knowing that the wasted trip wasn't his fault. “What are you gonna do?”

Every once in a while you see something that really sends a chill down your spine. Dispatch notified me and said the customer reported that the door on the third floor wasn't closing properly. On arrival I spoke with Nancy the receptionist who called the problem in and
she said about the same thing as the dispatcher. Another car took me up to the third floor and as I exited the problem was apparent on the car directly across the hall. The slow-speed door of the two speed arrangement was behind the return, leaving the hoistway exposed for half of the doors' full opening. I approached the opening as a commuter would approach the edge of a subway platform to take a peek down the line. Two feet away from the edge the car whooshed passed me from above. A breeze shot out of the hoistway and I could hear passengers on the car talking, oblivious to what was going on outside the car. The fast-speed door had closed and made up the door lock normally, allowing the elevator to run and answer calls. It was clear that I couldn't leave this spot for fear of someone walking up to the opening and looking in. Fortunately the building phone number was programmed into my phone and I called the receptionist. “Nancy, could you please bring car 2 up to the third floor for me I can't leave here right now and it's kinda important.” When she arrived at the third floor the doors opened (all three of them) and we were facing each other. I could tell she was wondering what was so important since I was just standing there doing nothing. I explained without detail the situation, thanked her and she was on her way. It sure felt good to get this car shut off I thought to myself. After retrieving the lost hardware from the pit and some from my truck the refastening of the relating device that caused the problem went smoothly. I checked other relating devices at busy floors to make sure it wasn't a global type problem.

After the quick check all looked well and I returned to the receptionist for a chat and a signature. “You know Nancy, if you ever feel that there is a problem that could be dangerous just shut the car down and I'll be here shortly.” I didn't want to raise more concern than needed or call unnecessary attention and alarm to the problem. This is not a good story to have circulating around the building.

Are we really prepared for what is going to happen during the day? After a long night of being on call, my telephone starts ringing at 8:00am and I already have 2 calls holding. Something told me it would be the first of many that day. I saw the image of me easing into my day and route with cleaning a few car tops dissolving quickly. On my way to the first call I received yet another call. The first call turned out to be simple, just a door lock to adjust. The second call was one where the only elevator in the building was out of service due to a power outage. It was an old Dover relay control with a fire service overlay. The overlay was installed in the early 90s, so I made some phone calls to find out if we had back up software to reprogram the CPU. Great, I thought, and when will that be in? To my absolute surprise, they told me that it would be delivered the next day. I couldn't believe the luck and only hoped that it would last through the end of the day.

So I was off to the next call where the doors had been knocked off the track. I tried unsuccessfully to get the door back on. It looked as though I'd have to lower the car manually to get the doors back on the track. I remembered seeing several children running around the building and knew it would be safer to have another mechanic come and assist me. While waiting for the other mechanic, call number four comes in. The other mechanic soon showed up and we safely lowered the car and repaired the doors. That fourth call would have to wait until the morning. Thank goodness for some understanding customers.

In between calls a service mechanic has many duties: check and replace parts and adjust for proper functions. There are also many routine tests that must be performed; cleaning and oiling and even sometimes painting a machine room floor. Occasionally there's a pit with water or oil spills that have to be dealt with. In order to “manage your route” all jobs and time must be logged while taking note of scheduled service and tests. All of this has to be accomplished while simultaneously being ready to drop everything to take trouble calls at a moment's notice. So when I sit down to tell another mechanic a story, it's a mutual understanding and knowing there really isn't a typical day. Every tale is different; reinforcing the idea that one day's events are everchanging and continually dependent upon the differing service needs of our customers.
Customer Relations, 
Not an Exact Science

By: Donnie Bacak, ThyssenKrupp Elevator  
Las Vegas, NV

In our industry we are provided all the necessary tools to get the job done right. We provide exceptional training through the NEIEP program as well as additional training through the ongoing education provided by our individual companies. But how are we trained to deal with something that faces each of us on a daily basis, Customer Service?

Below are just a few examples of customer interactions that might be encountered in our industry in just about any city.

Jim, a service manager in Las Vegas, is called to a high-end condo complex that has been having several call backs within the past few months. The frustrated property manager starts venting, “These elevators never work! I am getting complaints every week from my tenants about how bad these elevators are.” “What are you going to do about the constant problems we are having?”

A meeting is set up at a downtown high rise office building in Houston with the route mechanic, the local service manager and branch manager to answer questions about the consultant report that the property manager has received. She’s asking why there are so many deficiencies and why these items have not been corrected in more than two months.

In an extremely busy airport that is already plagued with delays due to weather, a repair crew has the floor plate removed and the controller sitting out on the floor next to the up escalator adjacent to the trams that run between the different terminals. “Are you guys fixing this thing again?” a passenger exclaims. “These escalators are always broke!”

Customer service is not a tangible item that can be defined, taught, or explained. You would have a much easier time explaining how to adjust a valve, defining a transistor, or setting up and adjusting a roller guide. When asked to define Customer Service most people get a puzzled look on their faces. “You can't define it,” they’ll say. Does Customer Service defy definition because it is so warm and fuzzy that it must be experienced rather than quantified? Asked another way, is
Customer Service purely subjective, existing only in the eyes of the beholder, or is it objective, existing independently of the person? Whatever it is, most people will say they know it when they see it or experience it. Customer service, whether good or bad, exists whenever there is customer contact or a "moment of truth." We know it when we go into a department store and get ignored. We feel it when we go to a restaurant and the staff's priority is with each other and not their customers.

First, look at the two words: Customer and Service. When the two come together there are two possible outcomes:

- It can be a meeting that will leave the customer frustrated and angry or
- It can be a comfortable compromise of two or more individuals that leaves the customer satisfied.

Here is one definition:

**Customer Service is any contact, whether active or passive, between a customer and a company that causes a negative or positive perception by a customer.**

The perception will be influenced to be either positive or negative by the customer's expectations of the contact having been met, exceeded, or disappointed. We can see this interaction all the time in our daily lives and in our interaction with the customers in the elevator business.

customer n. 1. One who buys something; especially one who deals regularly at a given establishment.

custom n. 1. The habitual practice of a community or a people; Established usage. 2. Habitual patronage, as a hotel, store, etc. Syn: See habit [L. to become used to].

habit n. & v. An act or practice so frequently repeated as to become relatively fixed in character and almost automatic in performance. -to repeat a certain action frequently.

The single, most obvious thought that flows through the progression of the word customer is the continued thread that customers are frequent, regular or habitual. When you think about it, this is the essence of customer service: building relationships that will cause a frequency of visits. Without frequency, customers are not customers, but merely purchasers or buyers. Good customer service causes repeat business. The objective in our industry whether in service, repair, modernization, or construction, should be that of building relationships. Each of us, no matter what part of the elevator business we are in, builds a kind of relationship with our customers.

Service n. & v. [L. condition of slaves] -n. 1. the occupation or function of serving. 2. The work performed by one that serves. 3. Contribution to the welfare of others.

Servant n. One that performs duties about the person of a master or personal employee.

Serve v. To help persons to food: a) To wait at table b) To set out portions of food and drink. c) To wait on customers. d) To give the service and respect due.

Server n. One who serves food or drink

Wait v. To stay in place in expectation of something or someone.

It is interesting that such a range of feelings and meanings can be drawn from the definitions above. On the one side, the word "service" and its derivatives can bring about strong negative impressions. After all, many of the words can give a sense of hopelessness if one thinks that their job approaches slavery or servitude.

Let's take a look at service differently. There are many positive images that come from "service" as well. Words such as aid, help, benefit and assist all come from
the act of serving and service. Those are good words. Those are honorable words for an honorable mission and honorable profession. But maybe "customer service" should really be flipped around so that it is "service customers." I mean isn't it through service that customers are made and maintained?

As I stated before, each of us forms a relationship with our customers in our own way. In the service department, each route man builds this relationship where he or she knows what their customer expects of them. Who do they contact when arriving at the building, what's important to that particular customer (light bulbs, door operation, can they hear the gong). The maintenance person also knows how important each elevator is to the customer and to the operation of their building. Each little nuance is significant but individual customers may weigh these items with varying levels of priority. Some customers just want to be reassured that their elevators are running in good condition and need to be told this each visit.

With modernization or repair the emphasis might be on organization and cleanliness of the work site. It could also be the amount of noise that is generated during this work and how best to accommodate both the customer and getting the job done. No matter what the job is, the customer's focus is on how much impact this work will be to his or her business.

In construction the same holds true that there is a relationship built between the crew and the contractor or superintendent. For the most part this relationship is established by the elevator company's construction manager or superintendent, but each of us has a certain role in establishing or promoting this partnership. Every one of us has worked on a job that flowed well and the contractor worked with us to the point where when we needed something changed, it took no effort at all. When the job was finished and you looked back on it you wished all jobs went that smoothly. These are the jobs we seem to be most proud of when we are done. I attribute a great deal of this to the attitude and relationships that are built between the installation crew and the contractor.

We know customer service is good between us and the customer when the service routes are adjusted in the office and the building owner says that they don't want a different route man, they like the one they have, when the contractor specifically asks for the same crew they had on the last job. These are examples of good customer service.

How many of you remember when the humble service station used to be the epitome of customer service? Your entire car would be gassed, aired, oiled, and windows wiped without leaving the comfort of your car. No extra charge. I know I am dating myself; you apprentices probably have no concept of this type of service. At the
time, this service didn't seem the least bit exceptional. In fact, it was expected. Today, including these kinds of services for a basic purchase would seem incredible and a waste of money. Today's customer might even ask the question, what's the catch? Indeed, times have changed. How many of you remember when we would perform weekly maintenance instead of monthly or quarterly? How many remember when we used to “rust proof” the rails?

Clichés are phrases that always have truth in them. One of my favorites, "No one welcomes change except a wet baby," exemplifies the process of change that has taken place in customer service within the elevator industry over the years. Even though there have been drastic quality changes in many manufacturing industries, even our own, the service industry has lagged far behind. Most of the major companies talked about it, and even experimented with changing them.

A quote by Samuel Johnson reads: "Such ... is the state of life, that none are happy but by the anticipation of change; the change itself is nothing; when we have made it, the next wish is to change again."

Isn't it kind of ironic that the service industry has, in many instances, the most trouble increasing its level of service? There have been many excuses offered. The reasons for this lag are the inherent problems that service has going against it. First, it is incredibly hard to measure. Because of this, management measures what is objective and easy, and that usually means measuring costs and then cutting costs. It's a vicious cycle. Since costs are very easy to measure; it naturally becomes satisfying to cut them because the results are almost instantaneous. Can you guess what is usually chosen to be cut? You got it, Service.

Why this happens is the second problem with service. It is not instantaneous. When consistent service takes place, whether excellent or horrible, it takes a relatively long time to take effect and produce results. This time delay makes it difficult to measure. Since most companies are still much more short-term oriented than long term (having to realize revenue), service often takes a back seat.

An example of perception and service becoming a self-fulfilling prophecy (and a personal pet peeve of mine) is when a waiter comes to your table in a restaurant and asks "Is everything OK?" Is everything OK? This implies that OK is the standard of service that the restaurant is striving for. Although, I'm sure it isn't, the message being sent out does not make this apparent. I mean the definition of OK is kind of, well, OK. Neither great nor terrible, just mediocre. It would seem that a problem exists when service providers allow OK to be communicated as their standard.

When we interact with our customers, whether in service, modernization, or construction, do they perceive us as just doing OK? Are we providing the level of service that our years of education and advanced training through the NEIEP Program and through ongoing company training provides?

Here is a thought, "Only the mediocre are at their best." You see, people want the return of customer service to the level of the humble service station because it is turning out to be far from humble in retrospect. Keep in mind, in our industry just as in others, there exist intangibles that don't cost a dime but have tremendous impact on customer's perceptions. Each of us should look at our individual jobs, whether it's a service route, a repair or modernization job or a new installation – as though it's our own private business and consider each one as if we are our own customers.

I have many opportunities in my position to travel across the country and see the level of customer service we provide in our industry. What about the customer's point of view; how does the customer perceive us? As I stated before I have seen loyalty taken to the extreme where the customer would not entertain the thought of changing to a different route man, and I've seen many letters from customers touting the professionalism and
hard work that a person or crew exemplifies. On the other hand I have been “the guy” that had to meet the customer and listen to his or her complaints of poor customer service just to be asked what I was going to do about it. Basically what it comes down to is that the customer wants to be heard and wants to know that they are getting what they paid for.

Attitude, caring, attentiveness, a sense of urgency and courtesy can all make a significant improvement in our level of customer service.

I'm always impressed when these basics are covered with zest and attitude. The results are striking. Just the basics: “Yes, ma'am” or “yes, sir.” “I'll find out for you right now.” "Not a problem, no trouble at all.” Most of this attitude is lost on recent generations.

It is the seemingly mundane points which quite often are the most effective and significant points to good customer service. Take a hard look at your own interaction with building owners or general contractors, and remember it is often the correct execution of the commonplace that people most remember. Eye contact coupled with great attitude and a sincere greeting when interacting with customers can make all the difference in the world. Wasn't it your mother who said the two most powerful words were "please" and "thank you"? She was right. Listen to her and make sure you are covering these basic rules.

How would you have addressed each of the three examples portrayed at the beginning of this article with the customers who were dissatisfied with the performance of their equipment? Would you, as part of the repair team have been flippant or rude to the airport customers or could you have said, “I'm sorry for the inconvenience; we understand your frustration”? This could be just enough to let the customer know you empathize with them and ease some of their frustration.

Here is something I read that I thought would lend itself to customer service.

Conventional wisdom isn't always wrong. For example, conventional wisdom also says to "never beat a dead horse," for obvious reasons. When circumstances dictate that you must ride a dead horse, the best tactic is to get off and walk. However, in customer service, we often try other tactics with dead horses, including the following:

- Buy a stronger whip
- Change riders
- Say "This is the way we have always ridden this horse."
- Create a training session to increase our riding ability.
- Compare the state of dead horses in today's environment.
- Harness several dead horses together to increase speed.
- Declare that "No horse is too dead to beat."
- Provide additional funding to increase the horse's performance.
- Purchase a product to make dead horses run faster.
- Declare that dead horses run better, faster and cheaper when dead than alive.
- Form a quality circle to find uses for dead horses.
- Revisit the performance requirements for horses.
- Promote the dead horse into a management position. (I think this one is being done pretty regularly.)

Don't let your customer service be a dead horse.
So what does it take to transform satisfied customers into loyal customers? Our whole industry is based around keeping that loyal customer.

In my experience, loyalty usually develops when customers get involved with the company above the normal transaction. Strangely, this often takes the form of a problem that is solved in an extraordinary way and forces the customer to recognize the individual care. I have seen this more times than not. Others occur when employees form a relationship with the customer by providing individual service that elevates the interaction from impersonal to the personal. The common denominator is that a relationship is formed. Whether caused by a problem or extraordinary service, loyalty occurs because of proactive employees and management, seldom because of day to day tasks, regardless of customer longevity.

What are the characteristics of satisfied and loyal customers?

Satisfied customers will:
- Continue doing business until something better comes along, whether it’s better price or better quality.
- Not form a relationship.
- Not have any personal interaction.
- See business as impersonal, only doing business with a company, not with a person.

Loyal customers:
- Forgives and understands minor problems.
- Are not price sensitive.
- Will help sell the business with word-of-mouth advertising.
- Will not jump at the next "pretty face."

Each customer brings his or her own level of expectations, experience and knowledge in collision (at its worst) or mutual benefit (at its best) with the employee.
each time they come together. And to complicate things even more, each customer service employee brings their own level of experience, ability and desire into the mix.

How much more complicated can something be than dealing with two, continuously changing variables with almost no fixed, stable components? We don't have product manuals or NEIEP modules that can tell us precisely what technique to use for a particular customer. How can you possibly forecast what will happen?

The answer of course, is that you can't.

The result of the imprecision of customer service is the lingering perception that customer service is in such a sad state that when it is executed well, it is extremely noticeable, almost shocking. It is kind of like what Samuel Johnson said when he saw a dog walking on his hind legs "It is not done well; but you are surprised to find it done at all." We need to evolve Customer Service to the point where excellence is not rare, not the exception, but commonplace.

Let's revisit the property manager in Houston with the long consultant list. This might be an instance where she may not be dissatisfied by the condition of the elevators in her building. All she sees is that the consultant has listed items to be corrected and there has been a delay in correcting these deficiencies. The property manager needs assuring that all of the items will be corrected and that while there is a long list, some of these items have and are being corrected during the regular maintenance visits. This could be a great opportunity to build on the relationship by setting up scheduled visits or something as simple as regular calls by the service manager even after the consultant list is completed. The consultant list could also be a great advantage in securing repairs or upgrades to the elevators.

In the case of the condo complex in Las Vegas, maybe all that is needed is for the property manager to vent his or her concerns about the call backs and to be reassured about what actions will be implemented to reduce the number of call backs for their elevators. If the customer has an understanding of what the problem is and what will be done to correct the issue, they may be less apt to be as concerned. Keep in mind that the customer is getting grief from the tenants and without knowing what the answers are they will be less likely to respond to the questions appropriately.

When people say that customer service is not brain surgery, they're right; it's much more difficult.

Finally a short anecdote on listening to what a customer wants coupled with the perception of attitude.

There was a man who decided to become a monk. He joined a very strict group whose members were permitted to say only two words every ten years. After ten years he was called in to say his two words. The monk said: "Food bad." The monks looked at each other, thanked him for his insight and sent him off.

Ten years passed and once again the monk was called in to say his two words. This time he responded: "Bed hard." The monks looked at each other, thanked him and sent him off.

After ten more years, the monk was once again called in to say his two words. This time he said simply: "I quit." The monks said they really weren't surprised; after all, he had a bad attitude for 30 years.

Keep one thing in mind, please. The education and training provided through NEIEP provides all of us with the knowledge to improve and to be outstanding in our industry. We have an excellent opportunity to utilize this information to maintain the high standards and exceptional quality of people that separates us from the rest.
Sometimes Troubleshooting Seems Neverending

By: Tony Hesketh, Local 135
Charlotte, NC

It was explained to me very early on in my maintenance career that customers will make you or break you. An indispensable part of a service mechanic’s job is customer relations and getting along with people. I’ve seen average mechanics with great customer skills that are well-loved by their customers. I’ve also seen mechanics that are technically proficient yet fail to keep customers happy because they could not relate to people. It is an important part of my job to try to see things from my customer’s point of view and act accordingly.

I am employed by Otis Elevator, but in reality, I work for my customer, the Greenville Hospital System. There are about seventy units at the main GHS campus, including two escalators. The job is very demanding and the focus of the work can change at any given moment. My main contact person at the hospital is Gary O’Steen. Gary has worked for the hospital system since 1972. He started as an electrical supervisor and worked his way up to his current position as manager for the engineering department. He is very knowledgeable on how things work and it is never a good idea to try to snow him. Gary is tough but fair and if you are one of his people he is there for you. I answer to him and it seems like he has to answer to everyone else. It’s a tough job and I’m glad I don’t have it. There is approximately 3 million square feet of space here at GHS and Gary is responsible for all of it!

A vital aspect of my job is to keep Gary updated about what is going on with the elevators and escalators on the GHS campus; he in turn has to keep many people in the administration informed, and absolutely must know what is going on whether it’s good or bad. Most of the time things go well and there are no major problems but there are times when things can be incredibly difficult and there is an untold amount of pressure to perform.
The first week of May started out with several problems which I briefed Gary about in our usual Monday morning meeting. Our biggest was a closed loop door operator that was causing difficulties. I told Gary that earlier in the week we had problems with this operator, but thought it was fixed. The overtime call-back mechanic had taken another call on the unit the previous night and was still having problems. He called me in the morning and we met at C-lift to troubleshoot the unit and get it back on line.

The door operator was on C-lift, which is a crucial elevator used by a robot system to distribute material throughout the hospital. The AGV (automated guided vehicle) robots actually call the elevator, get on, and then go to the appropriate floor to discharge their loads. Meals, linen, and trash are among the items that are carried by the AGVs. Their operation is critical to the smooth and efficient operation of the hospital. Gary was already aware of the problem and expressed his desire to have this unit back on line ASAP.

I don’t have a write up on this particular closed loop operator, but I do have an adjusting tool, so I jumped right in and tried to see what was going on. The adjusting tool said there was a problem with the door closed limit. After some investigation we discovered the door travel bumpers had both come loose and one bumper was badly damaged. We tightened and replaced the parts. We put the car back into service and it started right up. The doors looked great. Cool! I love simple fixes and looked forward to telling Gary that everything had been taken care of.

Unfortunately, about an hour later another call on C-lift came in: door trouble. I plugged in the service tool and it appeared that there was a door limit and some sort of encoder problem, same as before. The doors worked intermittently and then faulted out. From looking at my service tool I could tell that the door closed limit was not going high when the doors were closed. I slid the end of a straight screw driver in front of the sensor and nothing happened. I decided that the sensor was bad and took it off. That is when I saw that it had been damaged. I replaced the sensor, reloaded the operator parameters, and put the car back in service. It ran great.

I talked to Gary about the repeated shutdowns on C-lift and he was concerned. So was I. I told him I thought we had a good fix, but only time would tell. Several hours later, after I had gotten home and, of course, gone to bed, another call for C-lift came in: door problems. I was not happy.

Back at C-lift, the adjusting tool told me the problem was still the same. This was beginning to drive me crazy so I resorted to the shotgun solution, the highly technical term for replacing everything (no, not shooting the elevator!). I replaced the door board and the two inductors that serve as the encoder, all from another car. I had an extremely difficult time getting the doors to work, but was finally successful. Short of replacing the door motor, everything had been replaced in the operator. With assistance from another mechanic who was more familiar
Sometimes Troubleshooting Seems Neverending

with this operator, I reloaded the door parameters. Once again the elevator was back in service and the doors looked great. I put in a call to Gary to let him know that the situation was under control.

Two days later another overtime call came in for C-lift: DOOR TROUBLES! This was bad because I had run out of ideas for C-lift. I can’t tell you how many trips up and down the stairs I had made and how much time I had spent staring at this operator and using every trick I knew to troubleshoot this unit. To say I was discouraged just doesn’t quite give the picture of how I felt, plus I knew the meeting with Gary in the morning was going to be great! Just great!

After getting to the job, I checked the operator. It was good and the lift was fully operational. A check-in with the AGV mechanic revealed that the car was defiantly refusing to take orders. So we decided to go up to the machine room. I was pretty sure the problem was not with the elevator, but to try to assist in whatever way I could, I went with the AGV mechanic to the machine room. We determined that this time we had an AGV problem. A printed circuit board in the AGV controller had gone bad and stopped communicating with the elevator. The problem was not mine, but I was still able to help fix it. C-lift is still running fine and my morning meeting with Gary went well. One of the key elements in managing this problem was to keep Gary in the loop. Communication with the customer is crucial in keeping situations from melting down.

Problems with C-lift were small potatoes compared to a few other larger situations impacting the entire hospital campus at this time. Just a few weeks earlier, the entire GHS campus had gone smoke-free. Then, in order to allow more visitor parking, employee parking had been moved from convenient lots close to the hospital to the rear parking deck. This required an extremely long walk and a ride on one of two escalators. Virtually every employee had to ride one of these two escalators to get from the hospital to the walkway to begin the long trek to their vehicle. Unfortunately we were having a lot of
start-up problems with these units. So, much of the time the escalators were shut down.

It is hard to convey how irritated people can become at having to walk up, or even down, 27 steps. It doesn't seem like that many steps, but when people suddenly can't take a smoke break all day and then they have to walk three or four times farther to reach their cars, it becomes a pretty big deal! Gary would show me all the emails he received every time there was a shutdown. Even the president of the hospital began to receive nasty-grams from irate employees. And walking down the hospital hallways became quite the obstacle course for me. People who had never seen fit to talk to me before felt they needed to share their escalator-induced anger with me. Life was not good for me or Gary at this point.

Further complicating matters, work could not be done on the units during regular hours because these units could not be turned off during business hours. Another thing that made things even more difficult was that the contact person for the escalator manufacturer was not a native English speaker. Talking to him about the problems with the units often left me as much in the dark as when the conversation started. It was frustrating because he seemed to know what he was talking about and seemed to be a good escalator man, but often I had no clue as to what he was saying.

Eventually we got the down unit running well, but the up unit was still causing lots of trouble. After talking to my supervisor, Gary, and a few other VIPs, we came up with a plan. The manufacturer suggested replacing the badly stretched handrail drive chain, installing a new Y-delta starting relay, and also replacing the skirt switch, which was working only intermittently. I scheduled all the work for after hours. Gary suggested that we station hospital staff to work with us to direct traffic and keep passengers happy. The work went well and the unit started up just fine. There have been no shutdowns on the unit since we did the work. Gary was very happy with us because we were able to take the pressure off him.

As Gary's maintenance mechanic it is my goal to have no elevator problems hit his desk, and if they do, to remedy them as quickly as possible. No matter how small a problem might initially seem to me, if it is a big deal to the customer it is always a big deal to me. I know light bulbs don't make an elevator run better, but the riding public sure seems to think so and they don't hesitate to tell Gary! Customer service isn't my job title, but it is in the fine print.
The day starts like any other day. I have four calls already and it’s only 8:15 on a rainy Monday morning. Also, there are the typical phone calls from the guys, asking how the weekend was. Well, it was a great weekend and I’m looking forward to the week. As I’m walking into the first call, my phone rings again. I hesitate to answer at first but looking down I see it’s the office. Suddenly I find myself answering the phone, even though I know I shouldn’t. It’s the boss and he wants me to come to the office.

That drive to the office on a Monday morning is like driving to the hangman. A lot goes through your mind on a drive to come in on the carpet. When I arrive my supervisor is at the back door waiting for me. Walking to his office, he puts his hand on my shoulder and says, “I’m giving you the opportunity of a lifetime.” In all the years I have been working on elevators, when anybody hears opportunity of a lifetime, it’s the kiss of death. The next hour or two we discuss this opportunity of a lifetime.

You know that building in town, that when you drive by, you wince and thank God your company doesn’t have it on contract? Well that was the opportunity I had to look forward to. As the blood rushes out of my face, I ask myself, Why me? Why me? I say to my supervisor, “No!” He replies with, “Great! We have a meeting tomorrow at 9:00 am,” as though he never even heard me say no. There’s little left to say as he is the man with the jobs. I spend the rest of the day in shock while wondering which gas station I will be pumping gas at in a month.

Tuesday morning comes and I find myself sitting with my supervisor and two people from the building sitting stiffly under what looked like heavily starched shirts. Just as I think it can’t get any worse, in walks the consultant. For the next two hours Bruce and Chris, the building management team, go over the problem that they had with their last service provider and state that they are not going to let that happen this time. They want good service and they are expecting it from us. After the meeting, I spend the rest of the day with the consult-
ant and my supervisor. Talking to them I begin to think that this actually could be the opportunity of a life time.

A week later I get the report from the consultant. It looks like an inch-thick novel. My supervisor and I meet to look at this report. Along with what we find on our own walk-through, the total report is simply overwhelming. The first subject is safety. We will need to add hitch points for lifelines to get in to the 16 feet deep pits, handrails for the car tops, and guards for the pinch points on the machines, just to name a few. Next comes the motor repairs. Two out of the five high rise gearless machines have their armatures removed due to grounds and have been out of service for about eight weeks. On the low rise side, three out of the four cars need to have their sheaves replaced and commutators turned and undercut. All the cars need door operator and hoistway door repair work. Lastly, the escalators look like they have never seen maintenance. With this list my supervisor and I prioritize the work that needs to be done and put a work schedule together.

At the follow-up meeting, we present the work schedule and timeline for the work to be completed and a maintenance program for all of the equipment. The one conflict in the schedule is the time we want to take the escalator out of service for the badly needed maintenance that has been neglected. The work that I want to do on these escalators is going to take four to six hours per unit. The customer cannot tolerate that kind of service interruption with all the people coming in to the building from the parking garage. A different work schedule has to be put into place. Discussions resume between the customer's consultant, myself, and the sales rep. Our solution is to add one Saturday eight hour shift monthly to the contract for the work that needs to be done on the escalators.

The first thing on the schedule is to get the two high rise cars back up and running. We contact the company that was rewinding the armatures and have them expedite this work. We have one of these cars back in a week. The second one is back a week later. For the first month there are two service teams on the job five days a week making the repairs to the high rise motors and to the hoistway doors and door operators. While that work is being done, I find two traveling cables that need to be replaced. They have been hung incorrectly. The wires are sliding down the air cord and breaking. This isn’t a problem on the cars that are out of service. They will be done before the cars go back into service. The car still in service needs to be taken care of during the weekend so it can be up and running the following Monday. I go to the customer and explain the situation. We come up with a weekend that doesn’t conflict with the building's schedule. The work is completed with no interference to the customer. As planned, the car is up and running that following Monday.
With all five high rise cars running, one of the service teams starts to do the hoistway door work along with other maintenance work on the brakes, controller, governor and pits. The other team moves on to the low rise side. The low rise side has four cars in the group. That team takes the first car out of service and removes the armature and sends it to the machine shop. At this point there are only three cars left running and it would disrupt service if another car were to be taken out of service. I am left to use my three days a week to get the rest of the work done. When the armature is ready and back on the job, we get that car back in service and do the rest of the work that needs to be done. This includes new ropes, travel cables and all the door work before we remove the next car, and so on, until all three cars are repaired.

There are nine escalators in the building. Six of them are in the main part of the building and three out on the skyway. The six in the main part of the building will be worked on Saturdays and the three on the skyway during the week. All the escalators will be disassembled and cleaned, lubricated, and have any worn parts replaced. The first time a member of the management team sees one of them disassembled for this work, he asks if I would have it up and running on Monday. I assure him that it will be and that I have all the parts I need. That Monday morning he stops by to say that he is delighted to see that it is up and running and he can see an improvement in the way it is running and how much quieter it is. I am able to get all of this work done in six months instead of the 12 months that was anticipated, which makes the customer a firm believer in our ability to service their equipment.

Fast forward three years to the present. Two building managers have come and gone. I’m still here three days a week, slugging along. In these past three years a lot of work from me and all the guys that have been in this building has paid off. The customer believes in us—not just me but all of us—as a skilled trade and the company that we work for. That was proven to me when the customer signed a long term contract with my company. This was a job that no one wanted, including me, and now I think it’s one of the best buildings to work in city-wide. It started with a customer that was pissed off and wanted good service—that’s all, good service—and I think we are giving it to them by keeping them informed about what is going on with their elevators and escalators. One of the keys is sitting with them and asking them if there are any problems and then getting right to it. You replace one light bulb and that could be the one thing that makes the customer happy. They are now working with a sales rep to modernize their equipment.

At your service is more than a catchy little phrase. It involves making a commitment to a customer to do the best that we can by working for them and for the companies that we work for. With the turn around I witnessed with my opportunity of a lifetime, I am proud to claim that I’m at your service.
The National Elevator Industry Educational Program is proud to announce their 40th anniversary in successful delivery of educational resources to both apprentices and mechanics in the elevator industry. The pace at NEIEP continues to embody the same level of energy as it did when first established in 1967 and similarly, we foster developments that continue to strengthen our program and delivery.

Taking a moment to reflect on what NEIEP once was and fast forwarding to the present, it is clear that considerable changes have taken place. The enduring ideals and solid foundations established in 1967 have kept this unique educational program grounded and on track as it has grown into the essential program that it is today.

The Foundations Are Set
Afterdevoting a full career to NEIEP, John O’Donnell Sr. retired from his position as Director in the fall of 2000. He carefully oversaw and helped pave the way for what we today know as NEIEP. At the beginning the program had to develop the basic structure of the coursework and started with “experimental” classes. Since then the number of students has grown from 1,600 to the approximately 9,000 that participate in the program today. The creation of a well-developed and comprehensive program involved a great deal of communication and cooperation among the NEIEP office, Trustees, Local Committees, and instructors. In an interview after holding his position for three months, John O’Donnell Sr. recognized that “we need a uniform and systematic method of training everyone who comes into our business; we don’t have it now.” By the time he moved on, NEIEP had advanced far beyond those initial stages of growing pains to become established as a significant trade program.

Change Continues
In 2001, James J. Higgins Jr. began his tenure as Director and John O’Donnell Jr. as Assistant Director. Once again there would be a landmark transformation at NEIEP as 2002 marked the elevator industry’s initiation of its first full joint labor-management apprenticeship program, creating welcome challenges at NEIEP, as the process of becoming an elevator constructor was re-designed. Necessary changes took place from establishing a mandatory, four year academic program to the hiring of Area Coordinators who support the new developments and the recruitment of new constructors across the country.

When change comes to an organization, it usually spreads in all directions. The transition to the use of laptops and projectors as the mode of curriculum delivery in the NEIEP classroom finally arrived, as it turns out, at the inception of full apprenticeship for our program. With the mid 90s bursting with new and increasingly affordable technology NEIEP took advantage of various methods of delivery that became available to make educational material more accessible. Acknowledging that today’s pace and increase in responsibilities create time restrictions beyond anyone’s control, NEIEP has been able to offer more flexibility through online Continuing Education courses, training, informative presentations, and licensing. We will continue to expand our offerings via Computer Based Training as a necessity for some and
At Your Service: NEIEP Celebrates 40 Years

1965
- Early 70s: Harry Tapper Instructor Seminars

1970
- NEIEP established
- 1970 NEIEP News
- 1970s: Work on NEIEP ElectraLab and Mini ElectraLab begins
- 1978: First Educational Program Catalog made available

1975
- 1975 New NEIEP logo
- 1979 Conduit
- Late 70s: Model Hoistway is built
- Late 70s–early 80s: Short Circuit & Super Short Circuit Games developed

1980
- 1980 Glossary of Elevator Terms debuts
- 1982: Mechanic Exam is validated
- 1983: Amos Patterson and Andy DiPaolo begin teaching Train the Trainer Courses
1986-1987 NEIEP Video Production begins


1995 NEIEP Motor Lab created

1997 New 4-Stop Controller Lab provides troubleshooting challenges

1998 GAL Door Operator Lab


2000 Apprenticeship program established

2003 Computer Based Training is made available

2005 Partnership between NEIEP and Ivy Tech and the National Labor College

2006 Hoistway Lab

2007 Hydraulic Packing is first Podcast

2008 First State Licensing renewals become available online

1987 Solid State Labs created

1989-1995 Target Magazine

2000 NEIEP Website

2001 James J. Higgins Jr. is appointed Director and John O’Donnell Jr. is appointed Assistant Director

2002 Lift Magazine

2004 NEIEP Motor Lab created

2005 Partnership between NEIEP and Ivy Tech and the National Labor College

2007 Hydraulic Packing is first Podcast

2008 First State Licensing renewals become available online

1990 Consolidation of Attleboro office with Rochester office in Attleboro Falls, MA

1993 Circuit Tracing Lab developed

2006 Hoistway Lab

2008 First State Licensing renewals become available online

1995 2000 2005
an effective supplement for all NEIEP learners. In line with that nature of accessibility, new “digital” support for students, instructors, and committee members has helped a great deal.

Our written communication has experienced change as well. After several years of administering NEIEP's first newsletter, NEIEP News, The Conduit was delivered as a redesigned quarterly newsletter that touches upon various subjects that are relevant to NEIEP instructors and committee members. In addition, the annual publication of Lift Magazine made its debut in 2004. Following the lead of its precursor journal Target from the early 90s, Lift's contributors vary and range from members of our staff to elevator mechanics and subject matter experts from around the nation. These publications address a variety of targets and a wide audience.

**A College Degree Is Closer Than You Think**

As an approach to strengthen union member education, a partnership began in 2005 between NEIEP and Ivy Tech Community College of Indiana. This agreement reinforced our recurrent theme of lifelong learning. Credits from the apprenticeship program are applied towards the completion of an Associate's Degree. Courses are available online and can be taken from anywhere in the country. An agreement—one between Ivy Tech and the National Labor College in Maryland—makes it even easier for constructors to continue on for a Bachelors degree after earning an Associates of Applied Science in Elevator Construction Technology. The program encourages union members to go forward with their education seamlessly from one college to the next and guarantees the opportunity of an advanced education to IUEC members nationwide.

NEIEP's participation in the National Helmets to Hard Hats Program started in 2003. This program is designed for individuals who have completed their duties in the military. It's a great opportunity for veterans to use the skills that they developed and apply them to a new career.

**Contributions Form a Community of Practice**

Since NEIEP's inception, numerous contributors from across the industry have assisted in the development of NEIEP text, articles, and seminar and workshop support. Even today NEIEP continues to base the development of materials and training aids on input from elevator constructors and industry professionals who understand the core skills needed for their trade and to address new trends in the elevator industry.

Currently, NEIEP effectively provides hands-on training with labs, assorted training aids, text materials, and video. A great deal of time is spent developing and creating new methods of delivery. With newer and more accessible technologies, we hope to make lab training more attainable to students and instructors.

The digitization of NEIEP labs, such as the presently available ElectraLab, is currently in the development crosshairs. We understand that elevator constructors learn best by doing, and in providing digital versions of the NEIEP training aids, students will be able to prove the theories presented in the classroom on their computer. The hands-on side of development has progressed at a respectable pace with the expansion of the hoistway lab—a fully functioning, scale model elevator. It ties into the NEIEP Door Operator Lab to replicate the functionality of a full-scale elevator. This lab is relevant to all four years of the curriculum and takes the student from stacking and aligning rails right through to adjusting a running car.

**The Next 40 Years**

The year of NEIEP's 40th anniversary coincides with the groundbreaking for a new building. This invaluable opportunity will allow us to further our work towards providing apprentices and mechanics alike with a high level of education and continue to aid in our growth and development as a dedicated organization; promoting greater strength and promise in the individual constructor and the elevator industry as a whole as we continue to refine ourselves in a rapidly changing world.
When Sally comes and tells me a mechanic is in trouble, I listen. You see, Sally is our dispatcher, she has done the job for over twenty years, and she is like a Mom to the route mechanics.

Eric was a newly minted route mechanic. His first route assignment contained a mixture of old and new elevators, of various manufacturers, and of traction and hydraulic systems. Eric also had responsibility for 18 escalators. His new route had been created from jobs off of several other routes. Some of the units had not been well maintained and Eric had a lot of deferred maintenance items that he was trying to deal with. His trouble calls were eating him alive. Sally also let me know that Eric was developing an attitude about some of the equipment he had on service and about some of his building managers and engineers.

Eric had worked with me when he was an apprentice and now I was his supervisor. He needed my help whether he knew it or not. But I had to be careful that I did not discourage him or scare him. This was Eric’s first route, and he had worked on it for only a month. He did not have enough experience to see what would happen in the future.

I knew where some of the mechanics met for coffee before work and decided to meet Eric there the next morning. I made a couple of calls to some of my key service mechanics and asked for their help.

The next morning, I met the men at the coffee shop and after some small talk about things in general, I turned to Eric.

“How’re things going on your route, Eric?”

“Things are great.”

“Trouble calls getting to you?”

Eric hesitated and then he opened up. “I am not sure if I can handle this route. I have tons of calls each day, I’ve got lots of foreign equipment, and some of my customers..."
act like they don’t like me. I’m trying my best, but I don’t seem to be getting anywhere.”

“Sounds like you have three different problems,” said Bob. Bob was one of our troubleshooters as well as a NEIEP instructor. His quiet manner and easy going style made it easy to ask for his advice. “Didn’t some of the jobs come from your route, Sam?” Bob asked.

“Yes they did,” answered Sam. He turned to Eric and said, “I found the customers to be pretty good. What’s been happening to you?”

Eric answered. “Let me give you an example. A couple of days ago I had a call at the Shelley Center. I found the problem with the doors and fixed it. I told the engineer that I had fixed the problem with the doors. He kept asking questions about what exactly I found, what I had done, and what parts I had used. I finally told him that I had to go and left. Then I went by the property manager’s office, told him that I had fixed the elevator and then I left. Sally called me yesterday and told me that both the engineer and the property manager were unhappy with me.”

“Eric, have you ever thought that it is your communication skills that are your problem?” asked Larry. Larry is a very experienced mechanic, a member of the Union Executive board, and has been a NEIEP instructor for longer than many of the young mechanics have been in the trade. His quiet manner and seriousness robbed his question of any offense.

“What do you mean, Larry? All three of us speak English. I am sure that they understand my words.”

Larry smiled and took a sip of coffee. “Let me explain by an analogy. Let’s say that you, Eric, are one of the smartest people in the world, and so am I. But you only speak Greek, and I only speak Samoan. If you and I have a conversation, will we understand each other?”

Eric answered “Of course not. But what’s your point?”

Larry continued. “It is pretty obvious in this example that the two of us would not communicate since we don’t speak the same language. But I bet you didn’t realize that there are other forms of communication. We call these personality types or personal communication styles.

“I have found that there are three basic personality styles that we have to deal with. Some people, like that building engineer, are detail-oriented people. These people want to know all the details and will pester you with question after question. You have to have patience with this type of person and answer all of their questions to the best of your ability.

“The second type of person is the social type person, like the property manager. They like to have a conversation, but they like the conversation to show that you care about them personally or about their project. They really do not care how much you know until they know how much you care.

“The third type of person is the bottom line, get to the point type person like you, Eric.”

“What do you mean?” Eric asked.

“Eric, don’t you like to get to the point quickly? Just like now. You are impatient because I have told you a story, and you would like me to get to the point and cut out all of the unnecessary detail.

“To be successful in communicating with people, you must first be able to recognize how they process information, and then match their style of communication.”

Eric jumped in with “What you’re saying is that I have to learn to manipulate people. That can’t be right!”

Larry patiently explained. “Learning to match a person’s communication style is no more manipulative than learning to speak their language. When you give details to the detail person, you are giving them what they want.
and need to process information. When you show a person that you care by talking with them about things that are important to them, you show that you are considerate of their feelings. And if you converse with a to-the-point, bottom-line type person, keep it brief and to the point and they will be happy.”

Sam added, “I always planned to take some extra time with both the building engineer and the property manager. With the engineer, I knew he wanted details and so I would try to give him all of the details possible. When I had calls holding, I would tell him that I was in a rush but that I would get back to him. And I kept my promise.

“With the property manager, I would talk to him about his property and listen for clues about what concerned him the most. I made sure to address his concerns and to let him know that they were important to me.”

Bob continued “Eric, you said something about foreign equipment. What did you mean?”

Eric answered, “You know, controls that we don’t manufacture.”

Bob took a sip of coffee and seemed to gather his thoughts. After a moment, he began. “In the past, when many of us worked for one manufacturer and that manufacturer only maintained their own equipment, foreign equipment meant “not made by us.” But now as companies have merged, and any and all equipment is being sought after for service, the definition of what is foreign, I believe, should be changed. Foreign equipment to me should now be defined as equipment that you are unfamiliar with.

“When I call another mechanic for help, I am careful not to verbally abuse the equipment to him. I am calling him because I believe that he has information about the equipment that I need. What I do not know is if he has a personal feeling about it. He may have started his career working on this type of equipment and may take personal pride in how it operates. If I begin verbally abusing the equipment, he may be insulted by my comments and be less inclined to help out.

“I believe that the day when a mechanic can proudly say that he is a specific company mechanic and does not work on other manufacturers’ ‘junk’ is gone. In today’s market, we must be willing to embrace all manufacturers’ equipment. We may and certainly will have opinions about the quality of certain types of equipment. It is important to remember that although we may have been with one company most of our career, tomorrow we may find ourselves in a different color uniform working on equipment that we were criticizing the day before.

“What you call foreign equipment is simply equipment that you are not familiar with. Once you begin to learn about the equipment, it will not be foreign to you.”

Eric said, “Okay, I think I see your point, but what am I going to do about all of my trouble calls. I seem to be running from one disaster to another.”

I turned to Johnny. “When you came over to us, Johnny, the route you had was in pretty bad shape. Now it’s quiet and you seem to have a handle on things. What is your secret?”
Johnny turned to Eric and said, “you know, Eric, a new route can be an overwhelming experience. You probably do not know where all of the jobs are located, you are not familiar with the buildings, you do not know the building people, and you may be seeing elevator equipment that is new to you. Panic might be your first reaction, but I would not recommend it. Instead of panic and despair, I recommend a measured response.

“First, the jobs did not get in bad shape overnight, and you will not get them into good shape overnight. So you should plan on spending your days working hard and not seeing much in results at first. If you give the route your best each eight hour work day, you will begin to see improvement in a relatively short time.

“You must get organized. Keep a notebook handy to write down details about your jobs as needed. Where are the lock boxes? Who is the manager or engineer? Are there special job or access requirements? Make sure that you have machine room logs and keep them up to date. Make notes in the log of work you do, and make notes in your notebook of things that you see that you need to do.”

I entered the conversation at this point with my own thoughts. “I tried the notebook at first but I found that my notebook became trashed pretty quickly. I started transcribing my notes into a computer document, printing it out and carrying it in my pocket. As I worked my route, I made notes about the jobs and marked off the services done. I used these notes to update my document, and I printed out a new copy each month. My method gave me an up-to-date working document on clean paper at the start of every month and I never worried about losing my notes completely. I also had a quick reference of the buildings that I had seen so that I did not miss any jobs two months in a row”

Johnny continued with “trouble calls are your first source of information as to where you need to be working. When you take a trouble call, do everything that you can to identify the real cause of the call and correct that problem. After you have found and corrected that
problem, look around the system where you are at, identify everything that needs attention, and fix everything that you can fix right then. Take notes of parts you need and future work to be done. You cannot get away from chasing calls if you are not fixing the cause of the calls. But don't worry if you don't fix it the first time. We all would like to fix every call the very first time, and that should always be our goal, but no one is that good. You just have to do your best, learn from your mistakes and keep going.”

I said to Johnny, “What you described seems to be more about putting out fires than about maintenance. Is that all you did to get your calls down?”

Johnny responded “At first, that was all I had time for. When you have three calls left over from the night call person, and two more new calls before lunch, putting out fires was all I seemed to do. But as callbacks begin to slow down, it is time to shift to corrective maintenance.

“Corrective maintenance requires looking for equipment that is not operating as it should be operating. Do you have door operators that have loose or worn parts? Replace the worn parts as necessary and readjust. Order only the parts that you need, and use the parts that you order. Fix leaks, change brushes, re-pack jacks, replace light bulbs, and always be looking for work that may not have been done to a professional standard. During this stage, your callbacks should continue to go down because you are beginning to get to problems before they cause a callback.”

Eric said, “Parts are one of my big problems. I tell the parts guy what I want but I never seem to get my parts in a timely manner. He always wants more information. And he never seems to get them to me quickly enough.”

Before I could even respond, Johnny jumped in. “Eric, before you criticize what someone else is doing, be sure you know what has to be done. If you think that your job is difficult, you should try ordering parts for someone else. When you order something from him, do you give him a part number or manufacturer’s type? How much information do you normally include on the parts request?”

Eric responded. “Parts request? I just call him on the radio and tell him what I need. It is his job to get it. After all, how am I supposed to know what to order?”

Now it was my turn. “Eric, ordering the parts is Kevin’s job. Getting the right parts is a team effort. You are the primary source of parts information for Kevin. You are the elevator expert. If you cannot tell him exactly what you need down to the part number, how do you expect him to get the information? We put the parts books out on the table so that everyone can look up numbers and descriptions.”

Johnny added, “I try to order my parts once a week. I write down all of the information that I can find and I also write down which books and on what page number I found the part. I also try not to make everything urgent. If I do not need the part for a week or two, I say so on the parts request. Kevin knows that if I say it is urgent, I really mean urgent.”

Johnny then said, “Let’s get back to what I do on a route. I do not have much more time because I have to make a scheduled appointment. As you get to the end of the obvious corrective maintenance issues, it is time to clean the jobs up. Your tools at this time are a broom, mop, vacuum cleaner, and a rag. Clean your cars up. And while you clean the cars up, keep you eyes and ears open for problems hidden by the dirt, carbon, grease, and oil. As you find problems, fix them. At this point, you may have time to study your elevator controls in more depth. Do you really understand how calls are registered and cancelled? How exactly does the door operator circuit work? Are there any circuits jumped out? What do they do and why are they jumped?”

Johnny had to leave for his appointment and everyone else got up to leave for their routes. I walked out with Eric and asked, “Did you learn anything?”
Eric answered “I believe that I did. I need to communicate better with my customers by listening to them and learning their communication style. I need to learn as much as possible about the equipment that I have so that it will not be foreign to me. And I have to be patient about seeing results on my route.”

I answered, “That’s about it. Eric, I know you are working hard, and I know you give me eight for eight. I also know that you are making some mistakes. The important thing that I see is that you are learning from your mistakes and you are growing as a mechanic.

“I believe that the best mechanics are always learning, always in school. They study on their own, they seek information from others, and they take advantage of every learning opportunity. They work hard, and when things go wrong, they figure out what went wrong and try not to make the same mistake again.

“My final piece of advice that I have for you involves pointing fingers and casting blame. It is very easy to talk about the quality or lack of quality of work done by others. In most cases, this is done in a disparaging manner. Talking about others behind their backs, blaming them for the condition of the equipment, or expressing disgust for the work done by others may make you feel better for the short term, but it will create a hostile environment for you that can turn very unpleasant. Stay positive, do your work, and keep negative comments out of your conversations.

“Let your pride in your professionalism shine through by never pointing your finger at anyone else for what they have not done. And do not point out what you are doing as a comparison to others. Instead, let the quality of your work speak for itself. A clean, good running job with few callbacks speaks louder about what you have done than anything that you could say about yourself.”

It has been months since I had this conversation with Eric, and a lot has changed in his life. He is the proud father of a healthy baby girl. And he is getting control of his route. His callbacks are still higher than either he or I would like, but his hard work has brought the number down substantially. He has begun to dig out some of the root causes for his elevator problems and he is getting the route cleaned up. And now he can see that hard work and consistent effort does make a difference.

Sally just came to let me know that Juan, a newly minted route mechanic is having some problems. I wonder if my senior service men have time for another cup of coffee.”
Monday 6:18 a.m. and the alarm clock radio goes off in the middle of a traffic update for the freeway that our hero Scoop prefers to take into town. It’s sounding like a great commute! Excited about this he jumps out of bed, knowing full well that by the time he actually reaches the freeway it will be an entirely different commute. Scoop, like most of the other service techs in this town, lives in the suburbs and usually has about a 45 minute ride to get to downtown.

Arriving at the usual coffee shop stop, he grabs his safety manual and state codes checklist manual. As safety is taken very seriously, every week starts with a safety meeting. This week’s topic is “Struck BY or Against” since The Center to Protect Worker’s Rights (www.cpwr.com) has just revised its Death and Injuries Involving Elevator or Escalators report. It is stated that, between 1992 and 2003, caught in/between and struck by accidents accounted for 36% of work-related deaths (2nd only to falls at 49%) in our direct line of work!

Also covered at the meeting are codes, periodic inspections, and test procedures to verify compliance with the requirements, and an effort to ensure all the techs are on the same page with how to do our work professionally. This week we’re covering code A17.1 8.11.2.1 ITEM 1.18, Restricted Opening of Car or Hoistway Doors. As always, favorite anti-egress and other war stories, although very interesting and educational, take over the intended meeting’s purpose (boy, do elevator techs love to relive their stories!). Scoop decides that it’s gotten out of hand, and more importantly he has a car shut down from the weekend’s calls. He gets up, leading by example once again, and says, “Guys, it’s time to go to work!” A lot has changed in the service arena over the last 30
years, but one thing remains the same: A service man’s reputation sticks with him for a very long time, so safeguard and protect it.

Scoop arrives at the Triple Tree Convention Center Hotel and checks in with Max, the chief engineer, to let him know he is on site and will have his elevator back on line as soon as possible. Max thanks him and tells him he appreciates it because it is a packed house; 100% of the rooms are booked in this high rise hotel. He also asks if the digital position indicator in car #7 could be fixed. The guests,” he says, “are complaining.” And when he is done, if they could get together to schedule the smoke detector tests for sometime this week. Scoop nods and replies, “sure we’ll talk,” then grabs his tools and starts out the door. He decides to take #7 (one of three glass car groups) to check out the PI on the way up to the machine room—it’s blank—he’ll have to come back.

Arriving in the machine room of elevator numbers 9 through 11, Scoop sees that the company lock and tag out on #9’s disconnect was left on by the weekend service call but decides to leave it on because he has a hunch as to what the problem might be. According to Joe, the weekend tech’s descriptions, the car has leveling issues from both directions at most floors. Joe had worked on it for over two hours and getting nowhere he was quite relieved when his pager went off with an occupied car call nearly 40 miles away—giving him a good excuse with the hotel to shut it off for the night.

Joe, who turned out just last fall, knows his limitations with the Ward Leonard type of elevator control. Scoop knew Joe might have been a bit off in his troubleshooting theory when he said that he had changed some motor brushes with no noticeable improvement in the ride. He hoped that was the only thing Joe had touched the night before when his pager went off with an occupied car call nearly 40 miles away—giving him a good excuse with the hotel to shut it off for the night.

Realizing that the fix won’t take long, he calls Tony, the parts man, with a request for a new armature plus some emergency light batteries he needs for another job. Scoop understands that the only way to make it anymore in today’s service department is to be very organized. Organization is essential in his service vehicle, his paper work, his parts ordering, and most of all his time management. Without this, even good experienced troubleshooters/route men can run the risk of failure. With the advent of paperless time machines and skinny inventory/next day air mentality, parts ordering is the most neglected issue servicemen now face.

Since the car is still locked out, Scoop decides this is a good time to do some selector maintenance along with some general cleaning/oiling around the governor. After that he turns his attention to the starter contacts and motor-generator brushes. Scoop slowly turns black with carbon dust and figures he might as well make a day of it here. Unlocking the disconnect and turning on the controller with the doors disabled, he gives the elevator a few calls and approves of the way it runs from up in the machine room. One item Scoop always checks after working on an MG system is the loop circuit voltage—after a run—to make sure it will suicide correctly. Calling the car to the top floor and enabling the doors, he realizes it’s only 10:40. “There is time,” he thinks to himself and grabs the mop bucket to head down to ride and check for floor accuracy. Satisfied with how the car is running he opens it back up to the public. While filling up his bucket his pager goes off and at the same time the speaker on his phone calls out to him, “Scoop, do you have a copy?” Ignoring the direct-connect, he reads his pager for the info. Rats, it’s a call at a “show” job. Four people stuck in #5 at One Financial Center just four blocks away. He needs to make a quick decision.

The office calls out again, “Scoop, are you out there?” He considers the positives and the negatives of this
peculiar situation which are: 1) These people are tough to please even on a good day and an entrapment only worsens this, 2) It's not on his route; parking will be next to impossible!, 3) This building has tall doors with no access holes, and 4) He has a full route with plenty of work on his own plate. On the plus side: 1) He likes to be a team player, and 2) He also likes the equipment and the route mechanic who regularly maintains these lifts so he confirms the call, takes his hot soapy mop bucket back upstairs, thinking that with a lot of luck perhaps he’ll get back today.

Time is of the essence for Scoop now because at this class “A” building there exist that sort of tight-tie-with-little-sense-of-humor type of people. It’s the kind of complex where service techs have to get off two floors short of the top floors, then use the stairs to gain access to the machine room. To make matters worse there is a 15 minute response time with this facility that the sales department has agreed to, as opposed to a regular hour wait that most others buildings would experience. Knowing that he looks as though he just came out of a pig pen due to the carbon dust, Scoop stops at the restroom before heading into the One Fi complex where he will surely be met by security guards and building maintenance personnel.

After the clean up and short drive plus parking at the loading dock, he makes it in just less than 14 minutes. That, along with forgoing the usual checking out of building keys/badges and surrendering of his driver’s license, gets him to where the car has stopped six feet above the lobby floor, which is filled with people including several security personnel who have wedged a stick into the hoistway door, as Scoop soon finds out, to get air to the passengers. Scoop uses the intercom system at the lobby station and makes contact with the passengers letting them know he is on site and will have to go up to the machine room to run the elevator to floor level. But before he heads up to the machine room he puts a call in for Dave, a team leader/troubleshooter, for back up because he knows this could get ugly if he cannot move the car quickly! Upon reaching the machine room, complete with building personnel, Scoop reviews the laptop diagnosis which unfortunately shows a critical drive fault, a bad U phase IGBT. Right now he wishes he were back mopping his own machine room and fixing his P.I. Scoop studies the different screens, buying some time to formulate a game plan and to consider the options left to him at this point: 1) Sometimes with this fault you can run or limp into a floor on inspection mode from the machine room if your Amptrap fuses are still good, 2) Wait for Dave and pick the brake and drift the car into floor level, or 3) Wait for Dave and run the car next to his on car top inspection, drop a ladder into the cab and bring them up through the hatch access.

After only 30 seconds the building people are tapping his shoulder and asking, “What’s up?” Calmly he picks up his Fluke and checks his fuses and explains he is troubleshooting the situation. Apparently that’s not good enough as the building people are already demanding he do something right now or they are going to call the fire department! He smiles and agrees with their idea, which really blows them away. Unfortunately, the fuses are open. He gets up and moves to a corner of the machine room and calls Dave for his ETA. Dave says probably
The Service Adventures of Scoop the Technician

about fifteen minutes and as Scoop's stomach rumbles he checks his watch and sees that it's still 45 minutes to noon. Not too bad; people should be out of the elevator, problem diagnosed and off for lunch.

Scoop figures he can kill about fifteen minutes if he "organizes" security and engineering for the "great drift." This appears to be the safest and quickest method of the choices considered. Three of these shoulder huggers can be stationed in the hall above, below, and at the floor where the elevator is. The most capable engineer will stay with Scoop to help him pick the brake. New equipment is so much cleaner (no brushes!) but unfortunately one can't simply push in a relay to pick the brake any more. Fancy boards have taken the place of simple relays to "feather" the brake on and off and at different rates to accommodate for varying loads and releveling. These machines are large gearless units and take two men with four-foot crow bars on each side to even start the process.

Scoop decides to station the last guy at the front door to give Dave a quick escort to the Machine Room. The fire department has arrived now. They quickly agree to Scoop's plan as it is much safer and quicker than removing occupants through an escape hatch. It was looking as though the presence of the fire department might turn out to be an asset. Since they all carry radios, communication can be faster without the need to trade phone numbers. With everything in place Scoop heads back to the Machine Room to Lock Out Tag Out the elevator. After a quick check on the 3-phase power with the Fluke (safety first), Dave walks through the front door just like clock work. Some days couldn't get any better. Scoop calls Dave directly on speaker phone and sends him to the second floor where Dave can call out the distance to the floor. The next 20 minutes go smoothly and everybody is out. Dave heads to the machine room and confirms the blown IGBT. Just enough time left to let everyone know that the parts are at the shop and need to be picked up.

Scoop knows that the rest of the day is now set in stone. It's about an hour's drive to and from the shop and about two hours to tear the drive apart and install the new IGBT. That leaves one short hour left to verify proper operation and turn car back over to normal operation. All this assuming that no other problems are encountered along the way.

Dave and Scoop decide to meet up with a couple of other veteran elevator techs for lunch. On the way he calls Max to let him know that he will return tomorrow to fix the P.I. and discuss smoke detector testing. Now ordering lunch Scoop realizes he missed a mid-morning coffee break so he decides to order coffee with his lunch. Besides, this should impress the old timers; "leave room for cream and sugar please." Dave and the others smirk. Scoop's pretty good with elevators but everybody knows to be a real elevator man, you have to drink your coffee black.

The rest of the week continues fairly normal for Scoop; just the balancing act between callbacks and trying to service his overloaded route. Most of the routes are loaded with 36-40 hours per week, which allows no time or wiggle room for an unexpected callback, a personal day, or even a dentist appointment. Regular life cannot get in the way for service techs in today's environment of low bid jobs with high levels of expectations from our customers. Remembering that our sales force and supervisors...
keep this kind of competition in mind, it can sometimes be frustrating to those of us who then have to apply, whatever agreements they’ve made, to our jobs. However, the elevators and elevator techs ultimately determine the actual time spent on the “front lines”—representing the company, customers, the state, and the trade. So where am I going with all this? Let’s pick up the story where Scoop gets a call from the Boss.

After an inner debate whether or not to answer his phone, Scoop checks the resulting voice mail message from his boss. He wants Scoop to meet him at the One Financial Building with regards to the occupied car call he had taken this last Monday. He’s hoping that he can skip or miss this meeting but alas, the pager goes off: “Call the office.” He’s trapped now, and calls in to get the details of this upcoming afternoon meeting.

Scoop is pleased to learn that both the regular mechanic, Mike, a 30-year, seasoned veteran, and Dave, the troubleshooter, will also be there. All three meet for lunch and decide that Mike will do most of the talking as he knows the equipment and the players. This is Scoop’s first big time meeting and he is enjoying the entire experience, especially the part where his supervisor, branch manager, and salesman are all nervous.

The meeting starts at exactly 1:00 sharp in the 20th floor conference room where there’s a beautiful view of the city. Scoop often sees this view from the roof tops when he stops to take time and “smell the roses.” The board room has a very expensive fancy inlaid wood conference table lined on either side with high back leather seats where Scoop could imagine the battle lines being set up. They had actually made up place cards directing everyone where to sit. Scoop’s even included his full name and title as well his company’s name. He wonders whether it would be silly to ask if he could keep it after the meeting was over.

The property manager starts the meeting by introducing the players. First and probably the most important is the top floor tenant’s representative, well dressed but no smile. Next she introduces the building owner’s representative, extremely well dressed and manicured but obviously bored to be there. After them is the elevator consultant who Scoop and the rest from the company side already know, the building’s chief engineer and finally herself, Lysa, who blinked constantly for the remainder of the meeting. The blinking was distracting enough that Scoop had a difficult time concentrating on the conversation. His attention refocuses as his super introduces the members of his team: his Branch Manager, then Mike which he points out has 30 years of experience, followed by Dave who has 27 years experience, then Scoop with his 7 years.

Lysa blinks, smiles, then explains why she has called this meeting. “Some of the tenants are afraid of the #5 elevator and won’t ride it anymore. There have been a lot of calls at her facility and this last entrapment was unacceptable. That is why she has called in her “expert” consultant.

Mike took over, and Scoop enjoyed watching as a true expert went on to clearly explain in layman’s terms with just the right amount of technical information and spin to make everyone at the meeting feel comfortable about the amount and level of quality service their elevators are receiving.
The Importance of Being Maintenance

By: Thomas “Buzz” Gibbons, Local 17 retired
Cleveland, Ohio

Buzz Gibbons recently retired from Otis Elevator and as recording secretary of Local 17 Cleveland, Ohio. He was the standby mechanic for many years prior to his retirement at the 64 floor Key Center, Cleveland, Ohio.

Benjamin Franklin, a great inventor, publisher, and one of our nations’ founding fathers, had a way with words which is a very valuable talent for a publisher. Many of the most memorable sayings that are attributed to him today were first put forth under the name of one of the many characters his inventive mind created to help sell his newspapers and almanac. It was one such character, Poor Richard, who was said to have stated that, “An ounce of prevention is worth a pound of cure.” As a child I recall hearing this saying used to illustrate that taking care of your health was easiest before you became ill. Probably because of the way it was introduced to me, I had come to associate this saying with medicine. As time passed, however, it became obvious to me that the true genius of Ben Franklin was not that he could come up with these witty sayings, but the way in which they could be applied to numerous fields of endeavor. Whether you are a barber a baker a candlestick maker or an Elevator Constructor the relevance of this saying is inescapable.

Our use of electricity and electronics have come a long way since the stormy night that Franklin flew his kite in an attempt to harness the power of the storm but the usefulness of his words haven’t changed at all. In fact, today his words take on far greater significance as the complexity and costs of all manners of machines and devices have become so much greater.

It is with these thoughts in mind that we need to consider how relevant a comprehensive program of preventive maintenance is to an elevator installation. With the costs of the installation of a vertical transportation system being what it is in today’s world the need to properly maintain the equipment, once it is in place, is of paramount importance to the financial as well as the mechanical well being of a modern building. In fact no other facet of our industry provides a building owner with the promise of benefits as complete as a comprehensive maintenance program.

Over thirty years ago, when I was starting out in the business, there were a good number of maintenance contracts that called for a full time mechanic on the job with a helper. I was fortunate to have worked at a few of these buildings. I say fortunate because it was at these high profile jobsites that companies usually placed some of their best mechanics and it was these same standby mechanics, also called resident or full time mechanics, that did the lion’s share of the training of today’s maintenance mechanics. Over the years as fewer customers requested on site mechanics, and fewer still requested a helper, the available time and opportunity for the training of maintenance helpers began to decline. Due to this fact helpers began to get a rather narrow view of what
maintenance work was all about and few professed a desire to leave construction or service/mod for a career in maintenance.

Nearly five years ago the Union Elevator Industry began work under a new Standard Agreement. The agreement of 2002 saw the beginning of a new apprenticeship program that mandated each apprentice work in all three departments of our craft during the course of their apprenticeship. Nothing could have pleased me more, as a maintenance mechanic, than to see this recognition of the importance of training our new members in all facets of elevator work. Naturally the implementation of an apprenticeship program takes time and many apprentices today continue to be dismissive of a career in maintenance due to their lack of understanding of the department caused by their limited exposure to it.

While the duties of maintenance are as numerous and technically challenging as those in construction and service/mod those duties are most often, incorrectly, condensed into a few items – cleaning, oiling, and greasing. Three words that have been used to sum up a route mechanic’s responsibilities often spoken with a sour looking face or the sound of impending doom in the voice. In fact many years ago there was a joke about maintenance duties. It went like this. Everything you need to know about maintenance duties. It went like this. Everything you need to know about maintenance work you can find on a shampoo bottle – lather, rinse, repeat. Humorous, perhaps but it is also very incomplete.

In reality maintenance work can be broken down into three major areas; the routine inspection, of which cleaning, oiling, and greasing (COG) is but a part, procedures, and troubleshooting. In order to gain a better understanding of maintenance work we must look at each of these areas.

Routine Inspection
While less dramatic than hoisting machines on construction and pulling generator armatures in service, the routine inspection is no less important and is, in fact, the eyes and ears of the body of work we call maintenance. It is the manner in which a mechanic first learns all of the idiosyncrasies of an elevator installation. What are the normal operating temperatures of bearings and brake coils, what is the tenor of a machine as it comes up to speed, the normal sounds the cars make as they traverse the hoistway and the syncopation of relays as they mark out the sequence of operation? All of these items and many more are observed and mentally catalogued during the routine inspection process. How many of us have found components in need of repair while cleaning them? You wash down an old machine and find a crack in the driver or a brake coil overheating as the insulation begins to break down. Perhaps it’s a crack in a door hanger or maybe just a loose bolt somewhere, all of these things become apparent under the close inspection of cleaning. So you see the much maligned COG process is far more important than one would think. In fact the acronym COG used here to describe this work is quite appropriate as a cog is a tooth on a gear as COG is one part of a comprehensive routine inspection.
The Importance of Being Maintenance

An important part of a routine inspection is talking to the customer and riding the elevator to check for any abnormal conditions. It was on one such routine inspection at a building that had just recently been turned over from construction that my inspection stopped being routine. I had another mechanic with me and was showing off the new job on my route, when about ten feet from the lobby the car came to an abrupt stop. We were trapped! First we tried our keys, we put the car on and off inspection in hopes of resetting the problem that caused us to stop. No joy. We were then relegated to using the same tried and true method entrapped passengers have often used, we rang the alarm bell. It wasn't long before we communicated our predicament to people in the lobby. A short while later my pager went off. We had failed to tell the folks in the lobby that it was the elevator men who were trapped in the elevator. Within a few minutes after correcting my mistake, and much to our surprise, the other mechanic's pager went off. They were trying to send him on this call to rescue me. It took some time but another mechanic was finally sent to the rescue. Once he had extracted the promise that we were buying the beers, at the end of the day, he quickly freed us from our predicament. Why were we stuck? It seems the newly installed travel cord had begun to track a bit closer to the front of the hatch than the location it was in when it was first hung and it had pushed the pit access stop switch in, stopping the car in its' tracks just above the lobby. After adjusting the traveler we put the car back into service and ordered collars for the stop switches, just in case. By then it was time to buy those beers.

Another routine inspection that turned out differently than intended was on a job I had never been to before. I was filling in for a vacationing mechanic and was a new mechanic trying to do a good job as the fill-in guy. I had just checked the machine room and car top and headed down to check the pit. The first thing I noticed was that the pit light wasn’t working so I wanted to fix that right away. Since the pit was only about three feet deep I hopped down from the landing to check the light fixture. The next thing I know I was splashing into a foot of ice cold water. I then realized that what I thought was a smooth pit floor was actually water, covered by a film of carbon in this old rubber plant. I learned a valuable lesson that day, look before you leap. I also learned to keep a few pennies in my pocket and any time a pit floor looks a little too smooth, I throw a penny in and see if it is followed by a splash.

Here is an example of how a routine inspection can turn into much more. With the elevators at a local community college that was recently added to my route clearly marked, “Handicapped Use Only,” I wasn’t a bit surprised to see a man in a wheelchair waiting for a ride upstairs, but what happened next did surprise me a bit. When the elevator arrived the first person that entered pushed the button for their floor and the doors immediately began to close; unfortunately, the man in the wheelchair was still in between the doors. This necessitated the chair bound man’s release of his chair’s drive wheels so that he could push the safety edge and reverse the car’s center opening doors. Once the car doors reversed he completed his entry into the elevator and away he went. He gave every appearance of a man who had performed this ritual before and this caused me to think of an earlier conversation. Perhaps, I thought, this is what the Maintenance Director was talking about when he told me that he had received complaints about elevator doors closing too fast. When he first told me of this complaint I checked the door times of all of the cars, but hadn’t seen this situation. That was on my first inspection here the previous...
month, so I wanted to get to the bottom of this problem ASAP.

The hold open time for car stops was five seconds and for hall stops eight seconds, this was more than the amount required by code but just about right considering the use of this particular elevator. Since this was a “foreign” unit, one manufactured and installed by another company, I didn’t have a perfect set of diagrams but I soon discovered there was a second contact in each of the car buttons that cancelled door time as soon as the button was pushed for any floor. This had now become a problem because at some point the light rays on this car had been removed and without the light ray the doors began to close as soon as the car call button was pushed, just like they did on the guy in the wheelchair. My survey complete I was now ready to talk with the Maintenance Director regarding his concerns about the doors closing, as he had said, too fast. First we needed to be on the same page with regard to exactly what it was we were speaking about. We went to the elevator in question, were the doors closing too fast or too soon? The speed, he agreed, was good so perhaps the complaint was that they closed too soon. I showed him the difference between car and hall stop times and he felt they were more than adequate, why then was he getting complaints about the doors. I then showed him the operation of the cancel door time circuit and how it could be the cause of the complaints he was receiving. I then explained how, in conjunction with a light ray, it could be a very useful circuit to cancel out some of the long door hold open times that we needed on these handicap cars. A decision had to be made, would we simply disconnect the circuit, and live with the long hold open times, or replace the old and now incomplete safe edge/light ray combo with a new light ray curtain that wouldn’t require a crutch, a cane or a hand to reverse the doors and as a bonus would also speed up service. He told me to make arrangements to have a new curtain installed and thanked me for getting to the bottom of this problem.

What had begun as a routine inspection not only addressed the customers concerns but increased his confidence in his mechanic, it also improved the operation
of the elevator for the disabled and the elevator company was able to sell a new door protection device. A fine ending to another hardly routine inspection.

**Procedures**

If the eyes and ears of maintenance is the routine inspection then the heart of a comprehensive program would be the procedures that are performed to keep elevators in top condition. The servicing of controllers, machines and selectors as well as the refurbishing of door system parts and the adjusting of all of these components are just the start. Every area is systematically gone over to ensure the reliable operation of the elevator system for years to come. That is why our customers are able to delay the modernization of their elevators, often for many decades.

Sometimes you can even have some fun with procedures; it might even be with your supervisor like it was with me one day. I had recently taken over a building from a mechanic that had retired. While discussing the work I planned to do at this building, with my supervisor, I mentioned that I had begun major door maintenance work. He told me that, according to the records of the job, the work had been done shortly after our new maintenance program was instituted. It would not need to be done again so soon and perhaps all this job needed was a minor door procedure. I suggested to him that there could have been some confusion regarding the closeout numbers of the new system and perhaps a minor was done but was closed out under the number used for the major work, which includes scrubbing down the fascia. I told him I had assumed the little circles of dried coffee on the fascia were left there when the fascia was stacked prior to being installed by our constructors, when the guys were having coffee and that the major work had probably not been done as he thought. I then explained that he could be right, but only if the laws of gravity had been suspended after the last major work had been done. We both got a good laugh out of it and he approved the major routine.

**Troubleshooting**

The mind of maintenance certainly would be troubleshooting. Here is where all of the years of training are brought to bear to solve a problem that, in some cases, can occur so intermittently as to be terribly difficult to find. There is no better way to learn to troubleshoot these complex systems we work on than to be taught, as an apprentice, by an experienced mechanic. That is why it has always been so important that our apprentices spend time under the tutelage of experienced maintenance mechanics.

In situations where passengers are trapped in an elevator safe work practices and the wealth of experience learned through years of training all come together, in a perfect storm of knowledge, to facilitate the rescue of passengers, the repair of the elevator and its’ return to service. Every mechanic has his own way to approach an entrapment call. It has always been my habit, whenever possible, to go directly to the floor closest to where the passengers are trapped and talk to them. Ordinarily, after assuring them that nobody has ever run out of air in a stuck elevator, I head to the machine room.

Sometimes it isn’t as easy as was the case one night, when I got a call to go to a nearby hospital. There were people stuck and, of course, rush service was requested. Owing solely to my living relatively near the hospital their request was granted and I arrived at the hospital within the time I had promised. Entering the front door I looked down the hallway where I could see one of the security guards stationed in front of the shut down elevator. Light was shining from the elevator doorway and I was pleased to see that, assuming the light meant the passengers had been released and the guard was merely
keeping an eye on the opening until I got there. As I
approached the elevator I could see that it was a bit less
than three feet above the landing and the toe guard still
covered the opening completely. The security guard
seemed distracted by something inside the elevator, but
I didn't give it a second thought until a moment later
when I joined him at the opening. There, inside of the
elevator cab, was a family of four, huddled together, sit-
ing on the floor at the rear of the cab where security
had instructed them to stay.

Before I opened my big mouth I reminded myself that
many buildings have their own procedures regarding
trapped passengers and since my opinion was not asked
for, I should probably keep it to myself.

I then merely said, “I'm from the elevator company,
what's up?” He picked right up on my sidelong glance
into the elevator as I asked, “what's up?” and he told me
of the new policy they had directing that no passengers
could be rescued from elevators unless the car was level
with the floor.

I explained that since the toe guard still completely cov-
ered the opening it would be safe to remove the passen-
gers. He didn't buy it. Then he asked me if I was say-
ing that I couldn't make the elevator level at the floor
before taking the passengers off. I wasn't going to get
anywhere with him so I agreed to move the car to the
landing, to let the people off, but first I would need to
close the doors. This is where the whimpering began,
the kids begged me to leave the doors open. As I
explained that just as security had their rules, I had
mine and that a cardinal rule in my business is to never
move a car with the doors and gate jumped out, the
tears began to fall. I thought for sure the tears would
soften security's heart and cause him to reconsider, but
he stood firm, he wasn't going to go against his orders.
I had no choice but to assure the passengers that it
wouldn't be long before I would have the car level then
I closed the door in spite of the children's tears.

In the machine room I found 3-P overload out on the
controller so I pulled the main line and checked the
main running switch contacts for wipe and they were
good. I plugged a relay out to establish a down direc-
tion in the leveling field, put the main line switch back
in and reset 3-P. Instantly the relays came in to bring the
car back to the floor but the machine failed to move. By
the time I checked to see if the brake was off the pulley,
it was, 3-P tripped again. I then put the controller on
inspection, reset 3-P and attempted to move the car off
the board, manually pushing in the relays that would
move the car down, while watching the machine. I
could now see the trouble, as the sheave tried to turn it
heaved over a bit but failed to rotate due to a bad A-
stand bearing. The bearing was seized up – this eleva-
tor wasn't going anywhere! My thoughts immediately
turned to the couple on the car with the teary-eyed kids.
When I got back to the elevator I told security the situ-
ation and he was still worried about taking them off. I
told him not to worry since there is no other way and
sent him off for a ladder. When he came back I opened
the door and told the kids they were getting off the ele-
vator now! Their frowns turned into smiles as security
and I each had one of their arms as we lowered them
down the ladder steps to the floor. It was far easier to close the doors on this elevator this time than it had been the time before with all the tears.

Thankfully not all trapped passengers are so difficult to rescue. Occasionally, upon arrival at the elevator it is level with the floor with a vane behind the roller and the passengers have pulled the car doors open. When this occurs, as you try to peek through the latched hall doors, you can see right into the well lit cab and that the car is level with the floor. This being an Otis installation with 6940A door locks I asked the passengers, a man and his wife, if they could see two black rollers near the top of the hall doors. They said yes and that the rollers were on the right hand door. “If you can reach the rollers,” I told them, “push the roller on the right – to the right.” I immediately heard the latch lift and I opened the center opening doors a half inch and asked them to step away from the doors. I then opened the doors in order to allow the passengers off of the elevator. The moment I opened the doors the lady says to her husband, “Well you’re just a regular f*%#ing mechanical genius aren’t you?” I was shocked, he was mortified, but she was far from through with him. She commenced ripping this guy up one side and down the other as they walked down the hall, about how she, being too short to reach them herself, had told him to try those rollers and he had refused to do so. She then turns on her heels and hollers back to me, “He messed with that silver thing and then wouldn’t touch another thing after that.” Sure enough the spirator had little, if any, tension on it and it was then that I began to understand what had happened. Naturally the shiny spirator was the first thing they noticed once they had pulled the doors open, and when the man “messed” with it, it unraveled with the ferocity of something he had seen only in his nightmares. I am sure that after being “attacked” by that vicious spirator he wasn’t going to touch even one more thing on this elevator, no matter how much and how loudly his wife complained. He was paying the price now, for being cautious then. As you can see, whether on the job doing maintenance work or at lunch listening to an old timers elevator stories, there is much that an apprentice can learn when they are assigned to maintenance.

I am encouraged by the fact that our International officers have shown that they understand the value of our apprentices serving a significant amount of their apprenticeship in the maintenance division of our craft. My hope is that because of this our apprentices will spend more time learning maintenance the right way, from experienced mechanics that can convey to them invaluable lessons learned over years of experience. Otherwise we will continue to see construction and service/mod trained apprentices serving a solo apprenticeship, of sorts, after they become maintenance mechanics and while they learn the importance of being maintenance.
The events of a day in the elevator trade can vary tremendously. A day can start out with no service calls or all hell could brake loose. If we are smart we plan our day as if nothing were going to happen. But as we all know those days are few and far between.

With that said, here is one typical day...

I headed out Monday morning with a mug of coffee from home, got into my truck, and left for work with a plan. I logged into my Linx to see if any calls had come in over the weekend and, sure enough, two calls, both in dorms of the college where I service the elevators. Luckily that’s where I was planning to go and was already on my way. I arrived and checked in with Physical Plant. At the first dorm both elevators were running. I checked the faults and saw it was a door problem on elevator #1 and then decided to make sure that the other dorm elevators were running before routing door locks. All elevators were running. By this time most of the students were waking up and going to class or arriving home from a night on the town in New Orleans. Just then the power went out on the whole campus.

There are thirteen different elevator manufacturers at this college, which means that every elevator is different with some on back up generators while others are not. I immediately started on the ones without back up power. As I got to the first building I opened the first floor hall door and yelled into the hoistway. “Is anyone in the elevator?” I received no answer so I asked one more time, again no answer. I moved on to the next building. Same routine but this time a very scared voice replied, “I’m stuck!” I asked, “do you know what floor you are on?” The scared voice replied, “I think the fourth floor.” I ran up the steps to the fourth floor and cautiously opened the hall door with my key because in most cases the stuck person is wrong. Sure enough, there was no elevator. I looked up and down the hatch. It looked like the car was on six. So I ran up two more flights and opened the door. The car was about two feet below the floor. I asked the passenger if there were other people in the elevator. The scared voice replied that there were three people in the elevator. Just to put a little levity in the situation, I asked if anyone had to go to the bathroom. “No” was the answer I received. “Thank goodness,” I said, “because that is the only thing I can’t help you with!”

I explained to them that I was going to the machine room to try and get them out. When I arrived in the machine room, of course, there was no power. Assessing the situation, I saw that the only way to move the car was to lift the brake. Since that would be impossible to do safely while alone, I put the car on inspection and pulled the main line and locked and tagged the disconnect. After getting a ladder I opened the doors slowly and explained exactly what I was going to do. I climbed...
into the car and helped each person out as safely as possible. After that I checked the rest of the elevators on campus and found no one else stuck. About an hour later the power returned and again I had to check all the elevators and also turned on the one I had shut off.

This story is probably typical of a lot of our days as well as the need to remember that safety is always first. One of my previous bosses told me in the early 1980s that when passengers are stuck in an elevator it is more of an inconvenience than an emergency. I try to explain that to people all the time with occasional success. If I could convince just a few then they might not panic in the event they are stuck in an elevator.

Sometimes we all feel like the candle is burning at both ends but there are some instances where putting in that effort becomes extra rewarding.

One afternoon close to quitting time, as I was checking my elevators to end the day, a call came in that someone had dropped their keys in the pit of the library elevator. This could either be a five minute task or I would not find them at all. Aggravated, because it was the end of the day, I told dispatch I would look for them in the morning. “That’s fine,” they said. Getting ready to put my tools in the storage area they supply for me, I noticed a little girl and her mom in the lobby. The little girl was crying, “What are we going to do, mommy?” I really did not pay much attention to the crying because I have kids of my own and know how sensitive they can be. Going through my time tickets for the day and closing out all my calls I kept thinking about that little girl. I wasn’t sure why, I just did. Nevertheless I go about my business, put my tools up, and prepare my agenda for tomorrow.

When going through the lobby, I see the little girl and her mom still there with sad faces. At that point I just had to know what the problem was so being the inquisitive person that I am, as I passed them, “What seems to be the problem?” slipped out of my mouth. “Nothing,” said the mother, but the little girl didn’t think it was nothing because she blurted out, “I dropped my mommy’s keys in the elevator and now they’re gone.” Trying not to laugh, I told the little girl that they would be easy to get because I am the elevator man and that’s what we do.

So going back to the storage area to get my access key to retrieve the keys, I grab a barricade and my tool to hold open the doors. “What elevator were the keys dropped in?” I asked the mother. “The one on the right,” she said, sounding hopeful. “Alright, I’m going to bring the elevator up two floors and turn it off to get in the pit safely.” I do just that and then put the barricade in front of the first floor doors to get in the pit. I turn the light on, turn the pit switch off and climb down the ladder. I look for the keys for about five minutes, but there are no keys to be seen.

Now, I didn’t want to face that little girl without any keys because I said that it would be easy for me to do. When climbing out of the pit the little girl asked, “Did you find them?” “Not yet,” so I whisper to the mom, “What floor were they dropped from?” “The fourth floor,” she replied. “O.K. I’ll be right back.” I put the pit switch back to run and closed the doors, grabbed the barricade and went to turn the elevator back on.

Under normal circumstances most of us would have given up and gone home, but I couldn’t bare the thought of disappointing that little girl. Now I needed to get on the car top and look on sills and behind headers. I turn the car back on and bring it to four, send the car down to access the top. After looking in all the nooks and crannies—again, no keys anywhere.
Just as I was about to give up the other car ran down next to me, and a small glimmer caught my eye. The keys were riding on top of the other car! Switching cars to retrieve the infamous keys, I was quite anxious to get them back for that little girl's sake. When I arrived on the first floor, there they were waiting nervously. I pulled the keys out of my pocket, and the little girl said, “How did you do that?” “It’s magic,” I said. “You are a super hero!” cried the young voice. “No not really, this is just what I do.”

Seeing the expression on her face and hearing such gratitude in her voice gave me the best feeling down deep in my heart. It made the effort and getting off work late completely worth it. To this day that same girl and her mom call me the super hero. Just remember guys, it’s the little things in life that make it worth living.

When the unexpected service call happens with an entrapment, what do you do? After a long eight hours on a hot summer day in New Orleans, all I can think about is getting home and taking a shower. But on the way home my cell phone rings and the pager goes off at the same time. This usually means an entrapment. Sure enough it is. Being the back up guy on call, we don't expect a call at 5:30. But the primary had to go out of town on a call. The call comes over for a big Hotel in town - #18 elevator stuck in the blind hatch with passengers. Oh great, I think to myself, having never been on this job before. While driving back downtown all I can think of is I hope they’re out when I arrive. Driving up to the service entrance, I see the security guard waiting for me, frantically waving his arms. “I just called the fire department! Where have you been?” Nerves start to rattle, sweat begins to pour. Keeping my composure, I calmly tell the guard, “Tell them when they arrive that it’s OK – the tech is on site.”

I don't even know where the machine room is. Thinking fast on my feet, I ask the guard to come with me to make sure the door is not locked. On the way we stop by the elevator where I check the PI. It tells me X, which means blind hatch. Great, now what? Trying to think logically, I decide to go to the machine room to check the controller. Upon arrival I thank the guard for opening the door, hoping he would leave. Nobody likes having someone watch over their shoulder while sweating profusely with nervousness. He takes the hint, nods, and says, "No problem," then walks away.

I check the door locks and safety circuit first. Door locks good but safety circuit open. That was really a good thing. Now the car can be moved without worry that someone is trying to exit. I put the car on inspection and then check the safety circuit with my meter. The overspeed switch had been tripped. Alright, this is going to be easy, I think to myself. Sure enough, upon resetting the switch on the governor, the safety circuit becomes good. But a fatal fault was generated on the processor that would not let the elevator run, and I don't have the password.

While calling the route guy on my Nextel in front of the dispatcher, all the LEDs go out. Once I get the password I am able to clear the faults. The elevator ran, and the passengers got out. Now to tackle the problem I created. No dispatcher or hall calls. It seems using the Nextel in front of the controller actually blew a fuse. I found the blown fuse, replaced it, and all the lights came back on. Thank you, God! Wiping off my forehead with a rag I start thinking that I can now go to the customer and get a signature with great confidence. What they don't know they don't really need to know. Just remember when the unexpected happens—and it will—be prepared to wing it!

Just remember that all days are going to be different. Sometimes we have easy days, sometimes not so easy. Be prepared for the worst and more times than not it will be easier than expected. Every now and then you may even become someone's super hero!
When I tell my friends that I’m in the elevator trade, they usually ask, “What’s that?”
“Well,” I tell them, “it’s when a mechanic comes and works on the elevator to keep it running.” (Obviously, there’s more to it, but sometimes you have to keep it simple.) “Elevators need someone to work on them?” is their reaction, and to be honest, it was my reaction as well before I got into the trade. Don’t those moving boxes take care of themselves? What a pleasant surprise it’s been since starting my first day about a year and a half ago.

A good friend of mine chased me down one day in the parking lot of our church and asked how my current job had been going. “Well, just fine I guess. We’re getting into a new house and this job has helped do that,” I replied. My friend continued to press: “We’re putting together a list for the trade I work in and I think you would be a great fit. Whaddya think?” Boy, something new, no idea what it was and no real professional training to help my chances. Hey, what the heck, I’m in!

So the test and interview process came and went and I ended up being number 23 on the list. “No problem,” my friend said. “That’s a good number. Shouldn’t be more than a couple of months.” Patience is definitely a virtue because it took a whole year to get the call. That’s alright because you’re never sure where you’ll land and what company it will be with. When I got the call, it was for the same company my friend worked for and in the repair department, which I understand doesn’t happen too often. It didn’t matter, I was grateful for the chance to get to work and a bit nervous for what I was about to encounter.

The day and night before my first day, I was imagining all the worst things that could happen to a person. Falls, squishes, crushes, loss of limbs – the whole deal. What if my harness doesn’t work properly? What if it does but I
don't put it on correctly and I fall out? What about my wife and kids if something does happen? I was basically scaring myself silly.

During my first week in the elevator trade, I didn't see one elevator. We worked on escalators the entire time. That was fine, I thought, no heights to fall from and fairly easy work with these moveable stairs. Yeah, right. Stood over and on your knees for the day, working on a machine that could make fast work of you if you weren't careful; that week gave me a quick education that things aren't always as they seem in the elevator trade.

The second week finally revealed elevators in all their glory. We worked on five-year full load safety tests. There's an education for a newbie! Governor, what the heck is a governor? And why does it need a pull through? What do you mean when you say it trips? That makes no sense. You're going to do what at full speed? With me in the car with the weights? No? Thank goodness. Well, that's pretty cool then. Can't wait to hear what that sounds like. So you want me to check the pit after to make sure the buffer returned? Roger that, now where's the pit and where should the buffer be? Now ride the car on inspection speed up and down the hoistway to check for noises and make sure that the clearances are okay? I began to wonder if I would ever make it in this trade.

Fortunately, the lingo may sound foreign at first but can be caught onto in quick fashion. I'm a visual person so to describe something is fine, but to see what that something actually is and how it works makes a huge difference. I think that's how a person would have to be in the elevator trade since many of the devices and components that go along with any given installation would not be recognizable to the average person on the street.

My probationary period flew by and soon it was time to start Year 1 in the NEIEP Program. I was looking forward to this since I knew that many light bulbs would come on during the school year. Since I was an apprentice in repair and eventually in service, I got to see traction units that some of the other guys may not have had a chance to see. But I also hadn't seen a whole lot of construction yet so assembly of an elevator from start to finish was new to me. Year 1 proved to be a great education and it established that many mechanics were on the way. Our class was upwards of 24 guys with everyone eager to complete Year 1 and move on to Year 2, bringing us closer to becoming mechanics ourselves.

The classroom experience was great because I knew these were the guys I'd be swapping stories with many years down the road. It was tough to get through some of the four hour nights, but our witty and interesting instructors kept us on our toes and creatively passed on some valuable knowledge about the trade. There was even an uncompleted mini-traction elevator that we got to work on later in the year. Pretty cool stuff to see and look at, especially if someone was into building blocks or model cars, which I think the creator of this lab had to be. It had a miniature version of everything; buffers, terminal switches, governor, safeties—you name it. It was pretty much finished except for the wiring so it was a great opportunity for first year guys to get into some electrical situations, such as reading a meter and wiring up a controller.

I did have a situation occur during my probationary period that definitely made some words from one of the mechanics I worked with ring true. He said, “In this trade, the people who get hurt or killed the most are rookies and soon to be retirees. So be safe.” I was about 5 months into my new job, coming up on moving past being a probie, and we had to do a one year safety test on a pretty old freight car in an office building. And not a freight car that's so big that it could hold forklifts, but one with a hand-controlled lever to move you up and down, with the distance the handle went controlling your speed. This car had no car top inspection, limited lighting, was one car in a bank of three, and the safeties were activated by a pull-out
tiller rope. This prompted the mechanic to get one more helper to have on the car in order to keep tension on the rope, as it was being wound up after setting the safeties. We also had another mechanic in the machine room with him so a total of four guys were on the site.

So, there we were, one helper in the car to control the motion, myself on top of the car to keep tension on the tiller rope, and two mechanics in the machine room to dog the governor and be next to the disconnect. We were ready at about the third stop and the guy in the car got the car moving. The guys in the machine room dogged the governor, and I watched as the tiller rope came out and set the safeties. Well, after the safeties set, I got to see the hoistway cables slowly come down towards me. I told the guy in the car to go ahead and stop. At this point, being so new, I wasn't quite sure what I was looking at. Knowing now what was going on, we should have gotten off the car right away; however, at the time my thoughts were on getting the slack out of the hoistway cables. So wondering what was going on, the mechanic radioed down to find out whether the safeties set since they didn't see the driver spin. I radioed back saying things were fine except that we had some slack rope in the hoistway. After talking later, and realizing that communication broke down, the mechanic thought I was referring to the tiller rope being slack and didn't think it was a problem. Since I was new, I didn't press the issue. So the guy in the car is asking what next while I was holding the tiller rope to keep tension. That's when I saw the passenger car next to us come down and scrape the slack hoistway cable, stopping a floor above us.

Things were happening very fast at that point and in my mind's eye I could see that passenger car take off in the up while catching one of the slack cables, causing some serious damage and kicking me off the top. I certainly wasn't in command, but I told the guy in the car to go ahead and wind up the cable. Well, lets just say the slack cable went away pretty quick. We dropped several feet, the actual distance I'm not quite sure. You're not exactly measuring things when you free fall. The guy in the car, since he was bending over the key to wind up the cable, basically took a punch in the face from a piece of metal. I was hanging onto the tiller rope that had pulled out, at this point for dear life and not for tension's sake. The sudden stop tweaked my knee that instantly started talking to me. I glanced up and, from the noise, I was expecting to see the machine room coming down at us. Thankfully nothing started raining down upon our heads. All of that happened in a matter of seconds. It was amazing how fast everything happened. Not one thing about the situation slowed down enough to allow me to take stock of what was happening.

Needless to say, we were able to gather ourselves off of and out of the car and tried to rehash what had happened. We regrouped with the mechanics and explained everything that we saw and experienced. We basically figured everyone did a little something wrong in the whole scenario for things to go so wrong like that and our supervisor agreed. He was just thankful everyone was okay, as were we. I was thankful that I received a very important lesson and was able to walk away from the situation.

As I said at the beginning, this trade has been surprisingly pleasant. It was an area of work I had no idea about but have learned in the meantime that it is an essential part of keeping the flow of everyday life rolling. The job I had prior to this was a good job but there was a limit to what you could learn. Everyday on the job in the elevator business is a learning experience and I know it will continue to be throughout my career. Guys who have been in the trade 25+ years say they're still learning, and that the day you stop learning is the day you stop being valuable to the trade. I look forward to what's in store, both on the job and in the classroom. And when my friends ask me what exactly it is that I do, I can proudly tell them that I'm in the elevator trade and that I'm learning from the best mechanics around.
THE NATIONAL ELEVATOR INDUSTRY EDUCATIONAL PROGRAM (NEIEP) and IVY TECH COMMUNITY COLLEGE OF INDIANA (IVYTECH) have joined in partnership to enable the delivery of associate of science and associate of applied science degrees to apprentices enrolled in the National Elevator Industry Educational Program of the International Union of Elevator Constructors.

THE INNOVATIVE SYSTEM will allow apprentices enrolled in local Joint Apprenticeship Programs the opportunity to attain an associate degree by enrolling in Internet-delivered general education courses leading to a degree. This program has also been articulated with the National Labor College (NLC) to pave the way for those students wishing to pursue a bachelor’s degree.

IVY TECH COMMUNITY COLLEGE OF INDIANA is a public, statewide, open-access, community-based college.

Since its establishment in 1963, Ivy Tech has fulfilled its dual mission: to enable individuals to develop their fullest potential and to support economic development in Indiana. Ivy Tech is accredited by the North Central Association of Colleges and Schools and has been working with the building trades programs for a number of years. In 1993-94, Ivy Tech developed an associate of applied science degree program that is approved and monitored by the Indiana Commission for Higher Education. THIS IS A WORKING PARTNERSHIP WITH EACH JATC PROVIDING THE TECHNICAL EDUCATION COMPONENT, AND IVY TECH PROVIDING THE GENERAL EDUCATION FOR THE ACADEMIC COURSES OF THE DEGREE. This joining together of education and training expertise provides for the delivery of a uniform associate of applied science degree. Ivy Tech is currently working with building trade apprentices in different trades across the nation.

IT IS OUR GOAL TO PROVIDE EVERY APPRENTICE WITH THE OPPORTUNITY TO EARN A JOURNEYMAN’S CARD AND AN ASSOCIATE OF APPLIED SCIENCE DEGREE DURING THEIR APPRENTICESHIP INDENTURE.

THE NEIEP - IVY TECH AGREEMENT provides NEIEP graduates the opportunity to address the ever-changing needs of the elevator industry workplace in the future. The agreement enables all local NEIEP programs across the country to participate actively in this educational initiative. The program is open to all JATCs within the NEIEP system.

OPERATING PRINCIPLES
• NEIEP partners with Ivy Tech Community College of Indiana for AAS / AS degree program
• NEIEP and Ivy Tech partner with the National Labor College for BA or BTPS program
• Leverages the educational components and the technical program skill development in the traditional apprenticeship programs
• Adds general educational courses to technical core to complete a well-rounded program

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