

VOLUME 4

ISSUE 2

2008

# irby CIRCUIT

AN IRBY CO. PUBLICATION

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# Top 10 NEC Changes for 2008...



## letter from the president

For over 82 years Irby has been providing top quality products and exceptional services to meet the everyday needs of our commercial, industrial, contractor and utility customers. Whether those requirements are the results of storm related emergency power outages or new products needed to meet code changes, Irby has always been there. From one branch that started in Jackson, Mississippi in 1926, to one of the largest electrical distributors in the U.S. and, as a division of Sonepar, the largest electrical distributor in the world, Irby continues to be the source for top-quality, reliable products from the best suppliers and the provider of solutions to meet your changing needs.

In this issue of *Irby Circuit* you will find an article on Irby's High Voltage Testing Lab that offers a wide variety of services including rubber glove testing, tools and services, and the latest in arc flash and flame retardant clothing needs. This article will also provide you with valuable information regarding the HV value model with a three-layered approach to electrical safety and protection.

We bring you the top NEC Changes for 2008 as the feature article for this issue. Learn more about important

emergency response issues with articles that will help you get prepared as we enter into the hurricane season, including emergency disaster preparation and portable power; as well as valuable information related to fire stop products, PVC repair systems, new twist ties and the latest hot/dry wet stick.

I am pleased to share with you the news of our latest acquisition. On July 1, Irby acquired Equity Utility Services Company of Marietta, Georgia. Equity has served the utility market in Georgia for 42 years and is a welcome addition to our Utility group. Through this acquisition, Irby has cemented their place as one of the largest utility distributors in the country and the largest in the South.

As always, I am very interested in what we can do for you, our valued customer. If you have a request on subjects that you would like us to address in future issues or suggestions on what we can do to make the *Irby Circuit* more meaningful and useful to you, please don't hesitate to contact me at [wigton@irby.com](mailto:wigton@irby.com). And, again thanks for your business.

*Mike Wigton*

division of



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### Editorial Staff

Editor  
**Kirk Hughes**

Managing Editors  
**Wendy Walker**  
**Emily Barnes**  
**Melissa Lohrmann**

Graphic Design  
**Kim Townsend Advertising**  
Jackson, Mississippi

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**For Comments or Suggestions  
Contact Stuart C. Irby Co.:**

P. O. Box 1819  
Jackson, MS 39215-1819  
Telephone 601-985-3516  
Fax 601-960-7575  
Toll Free 800-844-1811  
[irbycircuit@irby.com](mailto:irbycircuit@irby.com)



# 3M Firestop

## A Name You Can Trust

3M is proud to be the industry leader in firestopping. Our dedication to stringent testing and code developments help make buildings safer today than they were even 10 years ago. And when that dedication is backed by a brand as powerful as 3M, you get what you would expect – proven reliability and outstanding service.

The construction industry is increasingly moving toward easy-to-use firestop solutions. That's why 3M, in its leadership role, provides cutting-edge and fully-integrated systems. These systems are designed to help you efficiently build safer buildings that protect lives and property.

The majority of 3M's firestopping innovations are tested on-site in the company's own UL and Intertek certified fire-test center. By testing these systems in job-specific conditions, we help you with high-quality, effective firestopping solutions.

Being the fire protection leader goes beyond selling innovative products. 3M partners with you from the start – providing a comprehensive line of products and systems, excellent technical services, and the superior training you need to enhance your firestopping capabilities.

3M's Firestop Risk Management Program is a comprehensive approach to helping you manage the complexities of project firestopping. From helping you define your initial needs to helping manage your firestopping throughout a building's life, we walk you through the decisions and steps required to keep your project on time, in budget and code-compliant.

### 3M Fire Barrier Devices

Fire barrier devices offer an effective one-piece solution for the firestopping of penetrating items through rated walls and floors. During a fire, these devices expand to form a seal, which helps protect against the spread of fire, smoke and toxic gases. 3M offers pass-through options for walls and floors, as well as cast-in place options for poured concrete floors.

### 3M Fire Barrier Packing Material

This light-weight packing material is approved for use in all 3M's UL listed through-penetration firestop systems. The 20' roll is convenient to transport and features quick

and easy hand-tear dispensing. 3M Fire Barrier Packing Material is ideal for use around metallic, nonmetallic, insulated pipe, HVAC and power and communication cable penetrants – a long-awaited alternative to mineral wool, fiberglass or backer rod. The Material PM 4 is approved to use in up to four hour firestop systems.

### 3M Fire Barrier Specialty Products

From wrap strips and restricting collars to 3M Fire Barrier Mortar, these code approved, UL listed products help round out 3M's comprehensive offering of through-penetration firestops. Additionally, 3M offers a residential fire block designed to resist high temperatures and helps prevent smoke passage in non-related residential and combustible construction.

Please contact your local Irby sales representative regarding the 3M Firestop promotion running July 1 – August 31st, 2008.



Article provided by 3M

1980	1981	1982	1990	1994	1997	2003	2004	2006
3M™ Fire Barrier FS-195 Wrap/strip introduced.	3M helps write the first specific test standard for through penetration firestop systems (ASTM E 814).	3M™ Fire Barrier CP25 Caulk, 3M™ Fire Barrier Putty 303 and 3M™ Interam Mat introduced.	3M develops an industry milestone with reformulated, water-based 3M™ Fire Barrier CP25WB Caulk – easier to clean and less environmentally impactful than most solvent based caulks.	3M introduces fire protection wraps for grease, air, fume and plenum ducts. This established 3M as a full service fire protection provider for through penetrations, construction joints and now protective insulative wraps.	3M introduces Firedam Spray for construction joints to meet 3M ASTM 1399 test criteria.	3M launches first firestop sealants to meet new UL Water Leakage Test, W Rating-Class 1 requirements.	3M named #1 brand preferred by installers of firestop products.	3M develops e-Train, a comprehensive on-line firestop program that has become the industry benchmark for training.

From time-tested fire barrier sealants to today's innovative firestop devices and duct wraps, 3M scientists work to develop solutions to firestop virtually anything on a building site. With over 100 products and over 1000 tested approved systems, 3M has the most complete program for all your firestopping needs.

# Summer Promos!

During June, July and August, customers are encouraged to visit a participating location and learn more about the following commercial and contractor promotions.



Visit the Monroe, LA or Shreveport, LA counters during the months of June, July and August for an opportunity to catch one of 25 daily prizes. Then join us for our counter day in September where someone will catch the grand prize fish and claim a brand new bass boat!!



## Catch & Win Counter Days:

Shreveport, LA 9/18  
Monroe, LA 9/19



Visit participating locations during the months of June, July and August and register to win one of 3 grand prizes to be given away during the counter days in September.



Charmglow  
3 Zone with Smoker



Quantum®  
Catalyst PTi-A®  
Reel and  
Extreme® XPS®  
Rod Spinning  
Combo



Multi Function  
Frozen Drink Machine

## Reelin', Grillin' & Chillin' Counter Days:

Tupelo, MS	8/28
Jackson, TN	9/4
Tulsa, OK	9/11
Muskogee, OK	9/12
OK City, OK	9/25
Enid, OK	9/26

Join us in September for counter days – we'll have great food, product demonstrations from our supporting Sponsors and the Irby team will be on hand to assist you with your electrical needs. Remember you must be present to win.

Through a combination of competitive pricing, broad inventory, knowledgeable customer service people, and dedicated product specialists, Irby has the resources required to get you the material and knowledge when you need it, where you need it, and at the right price. Our goal as your business partner is to help you get the job done and be more profitable. Irby is here for you as a trusted partner for all your electrical solutions.

## Sponsors\*



\* Sponsors vary per location



**3X** the Protection  
in **1/3** the Space  
of Equivalent Circuit Breakers

Cooper Bussmann®  
Compact Circuit  
Protector (CCP)

Smaller.  
Simpler.  
Better.

For more information visit us at  
[www.cooperbussmann.com/CCP](http://www.cooperbussmann.com/CCP)



COOPER Bussmann

## Simplify your job with 3M™ Performance Plus Wire Connectors

Just four 3M Performance Plus Wire Connectors handle the work of seven standard connectors making it easier to manage your connector inventory and give you a better chance of having the connector you need on hand to do every job.



T/R+ replaces yellow, tan and red\*

T/Y+ replaces yellow, orange, blue and gray\*

O/B+ replaces orange, blue and gray\*

R/Y+ replaces both red and yellow\*

\*in the majority of field applications

For information contact your  
local Irby sales representative.

**3M**

## SystemOne

from Hubbell



### Hubbell SystemOne Metal Floor Boxes...

The latest addition to the line of SystemOne in-floor applications.

- Cast Iron for On-Grade Applications
- Stamped Steel for Above-Grade Applications
- High-Capacity Multi-Media
- Accepts the Hubbell SystemOne Universal Cover



**HUBBELL** WIRING SYSTEMS  
Wiring Device-Kellems  
Premise Wiring  
[www.hubbell-wiring.com](http://www.hubbell-wiring.com)

## You spoke... We listened

The new Square D® NQ (240V) lighting panelboard was designed with electrical contractor input. Ask an Irby sales representative to include an NQ panelboard in your next order.



### Ready When You Are

- Full range of NQ ready-to-install lighting panels offered from stock
- More field-installable accessory kits available

### Simple to Install

- Semi-assembled NQ ready-to-install kits
- New 54, 72 and 84 circuit interiors that mount in a single enclosure

### Built to Last

- Designed and durability tested to all relevant industry standards (2008 NEC® and UL 67)
- Field tested with electrical contractors

**SQUARE D**  
by Schneider Electric

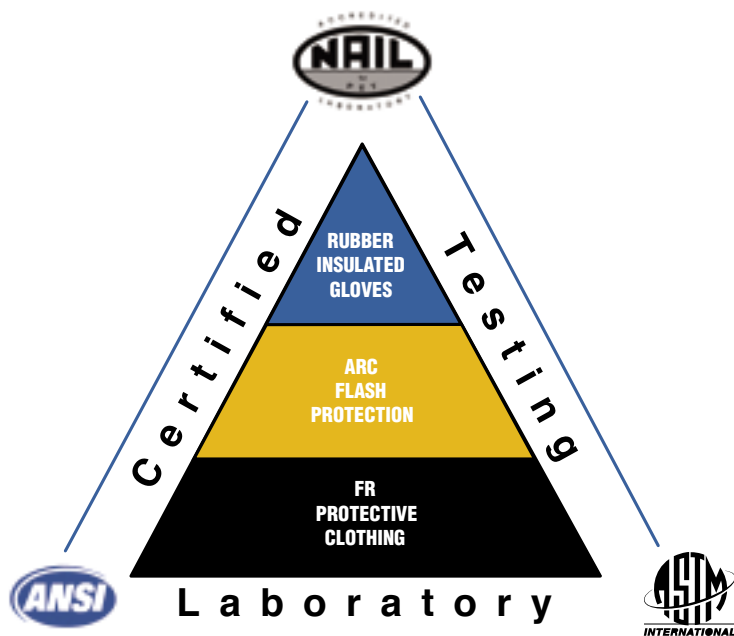
**Schneider**  
Electric

Known as a “testing laboratory” with a strong regional presence in the Midwest, High Voltage Testing and Safety Products (HV) was purchased by Irby in February of 2007. At the time HV was implementing a new strategy to re-position and re-brand itself in the market place. With the acquisition, we were able to implement our new strategy of being a one-stop, complete Personal Protective Equipment (PPE) supplier with the goal of establishing ourselves nationally. Since the purchase we have been working with Irby marketing, sales and branch operations to integrate our products and services to an expanded network of customers and branches.

HV currently has two primary locations — Fargo, North Dakota, which serves as the main warehouse / testing laboratory and Minneapolis, Minnesota which operates as a sales office. In addition to these locations, HV supports and provides all testing services, PPE clothing systems and related products to all the Irby branches nationally.

## High Voltage Value Model

The HV value model is based on a three-layered approach to electrical safety and protection. The three layers are (1) Rubber Insulating Gloves and Equipment (2) Arc Flash Protection (3) Flame Resistant (FR) Clothing. This is shown in the “safety triangle” diagram that was developed based on Maslow’s hierarchy of needs and being “actualized” or in your case “safe” from an electrical discharge of energy. The goal being to communicate that if you are missing any one of the layers, then you are at risk from an electrical shock or arc flash blast. This PPE value model is supported by our NAIL Certified Testing Laboratory where we follow stringent ASTM and ANSI standards. The value model has application across all markets including Utility, Industrial, Contractor and Commercial business segments.



## Standards and Regulations Driving the Industry

Safety requirements and regulatory issues will continue to significantly impact the electrical industry as enforcement and compliance become more stringent. Many of them have been recently updated or are in the process of revisions. These standards affect all electrical workers across all industries and utilities.

## National Fire Protection Association (NFPA) 70E and Arc Flash

NFPA 70E is one of the various documents comprising the National Electric Code published by the National Fire Protection Association. Its intent is to protect workers in every industry around any device capable of generating an arc flash or electrical shock.

- Arc Flash is a sudden release of electrical energy through the air when a high voltage gap exists and there is a breakdown between conductors. An arc flash gives off thermal radiation and bright, intense light that can cause burns. Temperatures have been recorded as high as 35,000 degrees Fahrenheit. An arc flash can be spontaneous or result from inadvertently bridging electrical contacts with a conducting object. Other causes may include dropped tools or the buildup of conductive dust or corrosion.
- High voltage arcs can also produce considerable pressure waves by rapidly heating the air and creating a blast. The pressure burst can hit a worker with great force and send molten metal droplets from melted copper and aluminum electrical components great distances at extremely high velocities.

It is important that you establish an electrically safe work condition before working on a circuit or any energized equipment. To create an electrically safe work condition you should:

- (1) Identify all power sources
- (2) Interrupt the load and disconnect the power
- (3) Visually verify that the disconnect opened the circuit
- (4) Lock-out and tag-out the circuit
- (5) Test for voltage
- (6) Ground all power conductors

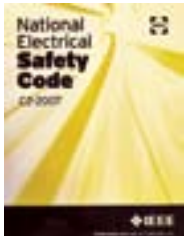
All these steps require the use of appropriate PPE for shock and arc flash protection including voltage rated gloves, Flame Resistant (FR) work clothes, arc-rated face shield, flash suits with hoods and safety glasses.

## National Electric Safety Code (NESC) 2007

The 2007 National Electric Safety Code has given power and communications utilities until January 1, 2009 to determine the potential exposure to energy and electric arcs for employees who work on or near energized electrical lines and equipment. Employees are required to wear clothing or clothing systems with an effective arc rating greater than



the anticipated level of energy. Furthermore, if the potential employee exposure is greater than 2 cal/cm<sup>2</sup> the employer shall require employees to wear clothing or clothing systems with an effective arc rating. In order to comply, utilities must determine the expected levels of potential arc energy for employees performing the work and choose appropriate PPE to match the arc energy requirements.



### New OSHA Ruling regarding PPE

As of May 15, 2008 all employers should be in compliance with the new OSHA rule that all PPE must be provided by the employer at no cost to the employee. The final rule clarifies OSHA's requirements regarding payment for employee-owned PPE and replacement PPE and indicates it must be provided to the employee at NO COST.

### Who is responsible for Safety?

- Employer - responsible for complying with OSHA requirements, the Electrical Safety Program, Safety Policies / Procedures and Safety Training
- Employee - responsible for adhering to the procedures
- Owner - responsible for contractors on their jobsite

### Safety Facts (From WH Salisbury)

- Electrical Safety is the most over-looked employee work hazard
- An estimated 30,000 non-fatal electrical shock accidents occur each year or 3.5 per hour
- 600 people die from electrocution each year
- Electrocution is 4<sup>th</sup> in work related fatalities with the majority of these incidents occurring at 600 volts or less
- Approximately 3,000 reported flash burn incidents are reported annually from an arc flash and ignition of flammable clothing
- 350 deaths related to arc flash or blast occur each year

### How can HV help ensure that I comply with electrical safety standards?

HV offers a complete one-stop safety solution for all your electrical PPE and training needs. Based on our three-layered approach to complete electrical safety coverage, supported by our certified testing service, we can help ensure the safety of your electrical workers.

### HV services include:

#### Testing Services

High Voltage Testing and Safety Products is accredited by North American Independent Laboratories (NAIL) for protective equipment testing and we are capable of testing with voltages from 500 to 100,000 volts. All equipment is tested according to the latest American Society for Testing and Materials (ASTM) and American National Standards Institute (ANSI) standards. We test all types of rubber insulating gloves, sleeves, blankets and line hoses. We can also test all types of tools such as hot sticks, grounding equipment and jumper cables. It is important that you re-test your equipment according to the schedule below.

#### Type of Equipment and When to Test

- **Rubber insulating Gloves** - Before 1st issue and every 6 months at maximum
- **Rubber insulating Sleeves** - Before 1st issue and every 12 months at maximum
- **Rubber insulating Blankets** - Before 1st issue and every 12 months at maximum
- **Rubber insulating Line Hose** - When dirty or insulating value is suspect, usually every 12 months
- **Other Rubber insulating Cover** - When dirty or insulating value is suspect, usually every 12 months

### Arc Flash Suits and Flame Resistant (FR) Daily Wear Clothing

The type of PPE you provide your workers is determined by the type of electrical work you perform, your overall safety program and whether you use sub-contractors for some of the work.

As a general guideline, you should consider the following:

- All under garments should be of natural fibers such as cotton, wool or silk
- Flame Resistant (FR) daily wear shirts and pants are recommended for qualified and un-qualified workers if there is a high or constant level of exposure to energized equipment
- Use Arc Flash suits and hoods for higher levels of safety or if you will be testing, de-energizing or turning equipment back on.

It is critical from a safety standpoint that the appropriate PPE be worn at all times when working on or near energized equipment. All electrical work should be done by qualified personnel and an assessment of the electrical hazard level performed. All PPE should have labeling identifying the cal/cm<sup>2</sup> rating or hazard risk category (HRC) of each item.

### Rubber Insulated Gloves and Equipment

Rubber insulating equipment is your first line of defense from electrical shock. HV carries a complete line of rubber



insulating gloves, sleeves, blankets and line hoses. If something fails during the testing process we can provide a replacement immediately. We can replace a single glove or a pair. Your life depends on your rubber protective equipment. The level of protection that rubber gloves provide depends on their condition. It is the responsibility of the user to maintain their gloves and other insulating equipment in good condition.

### HV \ Irby Tools

Utility contractors and customers can count on HV\Irby Tools and Services to have the products they need to get the job done and the service expertise to keep them working properly. When it comes to tool repair and service, Irby is authorized by the industry's top manufacturers. You can trust Irby to get the job done right the first time.

In addition to tools and repair, Irby offers you product testing, demonstrations and training to keep your tools industry standard certified and to help ensure proper selection and application. Custom designed grounds and jumpers are built to your specifications. They can be built and shipped the same day you place your order! No matter what the task demands, a call to HV\Irby is the fastest and easiest way to get the right tools to get the job done on time.

### NFPA 70E Arc Flash Training

Need help in interpreting the various standards in the industry, providing training to your employees on electrical safety or selecting the proper PPE? HV can coordinate training at your site or our branch. You can also earn CEU training credits!

The course content typically involves the following key areas:

- Electrical Safety Regulations and Standards
- Hazards of Electricity

- The Shockings Facts
- Equipment Arc Flash and Blast Boundaries and Hazards
- Personal Protective Equipment
- Arc Flash Calculations
- Training Recommendations
- Working with Contractors

In addition, a on-site training session may involve a preliminary review of your electrical system, equipment and help with formulating one-line diagrams.

### What should be your next step to get compliant and ensure the safety of your electrical workers?

- Contact your local Irby branch or sales representative to set-up a meeting to review options for Electrical Safety Training and/or selection of Personal Protective Equipment.
- Check your existing equipment, especially focusing on your rubber glove certification dates. If they are out of compliance (date is over 6 months old), remove them from service and send to HV for testing and recertification.
- Request an HV Testing and Safety Products Catalog to become more familiar with our complete products and service offerings.
- Schedule NFPA 70E training for yourself and your employees.
- Order NFPA 70E or NESC 2007 Standards Booklets as a reference or to get up-to-date with the various standard changes.

**For more information or questions call 1-800-742-8054 or your local Irby branch.**

The *tremendous growth* of our company placed *incredible demands* on our safety staff to maintain compliance with PPE testing. High Voltage Testing and Safety Products met with our safety division and *quickly understood* our needs. Better than just understanding, they offered me an *innovative* and extremely *cost efficient* means to both complete the physical testing requirements as well as provide a management system of tracking that ultimately *saves our safety department* thousands of dollars of time during each scheduled change out. Their staff is professional and knows the line of business. I was never approached from a sales point of view, their approach is “*How can we help*”. HV has been one of my most beneficial business relationships I have had a chance to develop.

Michael Patton  
Razz Group, Baton Rouge LA  
Corporate Environmental Health & Safety Director



Better **power**. More choices.



Introducing a new face in the portable power line-up...

Generac Power Systems unveils a new line of portable generators derived from almost 50 years of experience in power generation. From the home to the jobsite, these rugged and reliable generators are available in sizes up to 17,500 Watts.



A reliable standby gets a whole new look...

The best selling brand in automatic standby generators just got better! An updated enclosure and enhanced power performance make this air-cooled standby solution more appealing than ever. Combined with Generac's comprehensive line of commercial generators ranging from 8 kW - 150 kW, there truly is a size solution for any home or business.

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Contact your local Irby location for pricing and availability.

## RT5™ Volumetric Recessed Lighting



## Enhance Your Environment.

**RT5™ Volumetric Recessed Lighting:** the new standard in recessed fluorescent luminaires. RT5 uniformly illuminates the entire volume of space, eliminating harsh shadows, dark spots and the "cave effect" arising from the sharp cutoff of parabolic fixtures. Yet, this new lighting system uses up to 33% less energy than a standard 18-cell, 3-lamp T8 parabolic fixture.

**LITHONIA LIGHTING**

[www.lithonia.com/RT5](http://www.lithonia.com/RT5)

PROTECTING YOUR ADVANTAGE

**Hoffman**  
A PERKINS COMPANY

## THERMAL MANAGEMENT for all ENVIRONMENTS



### T4 Indoor/Outdoor Air Conditioners

- UL/cUL Type 12, 3R and 4
- Broad operating range — -40° F (-40° C) to 131° F (55° C)
- 800 to 20,000 BTU
- Coated condenser coils and housing protect against corrosion
- Head pressure control and compressor heater protect the compressor in low temperature environments

[hoffmanonline.com](http://hoffmanonline.com)

**FLUKE**®

## FREE Fluke Electrical Measurement Safety CD with a T+PRO purchase



**The full-featured Fluke T+PRO Electrical Tester offers all the advantages of a traditional solenoid tester, without the typical hazards.**

- Detect live voltage even with dead batteries
- 600V CAT IV and 1000V CAT III rated
- Complies with NFPA 70E\*

For a limited time you can get a free Fluke Electrical Measurement Safety CD with a purchase of a Fluke T+PRO Electrical Tester. The CD explains the procedures and precautions that help defend against devastating dangers like arc flash and arc blast based on safety guidelines from the NFPA, ANSI, IEC and other safety regulators.

\*When used properly per Article 110.9 Use of Equipment (A) Test Instruments and Equipment.



To receive your free Fluke Electrical Measurement Safety CD, after you purchase your T+PRO, email your name and contact phone number to [irbycircuit@irby.com](mailto:irbycircuit@irby.com) by October 30, 2008.

©2008 Fluke Corporation. Specifications subject to change without notice.

# Carlton® PVC Conduit Repair System

A job that normally takes 20 minutes can now be done in 2 minutes or less.

In order to significantly reduce the time and costs associated with repairing broken conduit a.k.a. "stub-ups" in concrete slabs, Carlton® introduces a new, revolutionary, patented design PVC Conduit Repair System.

The Carlton® PVC Conduit Repair System is a line of couplings, adapters and reamers that allows you to quickly and easily repair broken PVC conduits without having to chip-away and re-pour concrete, while still maintaining the inside diameter of the conduit. Simply cut off the broken conduit; ream the ID of the conduit; and insert a coupling or adapter, it's that easy.

## Features:

- UL and c-UL Listed
- PVC Repair Fittings are listed in accordance with the NEC and Section 352.6
- Nonmetallic couplings, adapters and plugs won't rust or corrode
- Available in sizes 1/2" through 2"
- Patented designed system

## Benefits:

- Saves time and money
- Maintains inside diameter of conduit
- Metallic Reamers for extra strength, durability and longer life
- Quickly and easily repair broken PVC conduits

A job that normally takes 20 minutes, DONE in 2 minutes or less!



## Specifications:

### Couplings

Part No.	Trade Size	Std. Ctn. Qty.
E910D	1/2"	25
E910E	3/4"	25
E910F	1"	15
E910G	1 1/4"	10
E910H	1 1/2"	10
E910J	2"	10

### Male Threaded Adapters

Part No.	Trade Size	Std. Ctn. Qty.
E920D	1/2"	25
E920E	3/4"	25
E920F	1"	15
E920G	1 1/4"	10
E920H	1 1/2"	10
E920J	2"	10

### Reamers

Part No.	Size	Std. Ctn. Qty.
E910REAMD	1/2"	12
E910REAME	3/4"	12
E910REAMF	1"	10
E910REAMG	1 1/4"	10
E910REAMH	1 1/2"	10
E910REAMJ	2"	10
E910REAMKIT	All sizes 1/2", 3/4", 1", 1 1/4", 1 1/2", & 2"	5

### Schedule 40 Plugs

Part No.	Size	Color	Part No.	Size	Color	Part No.	Size	Color	Std. Ctn. Qty.
HL-6XR	1/2"	Red	HL-6XY	1/2"	Blue	HL-6XY	1/2"	Yellow	1 Bag of 50
HL-10R	3/4"	Red	HL-6XB	1/2"	Blue	HL-10Y	3/4"	Yellow	1 Bag of 50
HL-13AR	1"	Red	HL-6XB	1/2"	Blue	HL-13AY	1"	Yellow	1 Bag of 50
HL-16R	1 1/4"	Red	HL-6XB	1/2"	Blue	HL-16Y	1 1/4"	Yellow	1 Bag of 50
HL-18R	1 1/2"	Red	HL-6XB	1/2"	Blue	HL-18Y	1 1/2"	Yellow	1 Bag of 50
HL-21R	2"	Red	HL-6XB	1/2"	Blue	HL-21Y	2"	Yellow	1 Bag of 50

For more information, contact your local Irby sales representative.





# PRODUCT PERFORMANCE GUARANTEE

ALL THE GUARANTEE YOU'LL NEVER NEED.

**SIMpull THHN®**—the original **NoLube®** cable with a Product Performance Guarantee.

We're so confident in SIMpull THHN cable that we back it with an unbeatable guarantee. If you have a performance problem while installing the cable according to our installation and application guidelines, call 1-888-665-8230. We'll replace your cable and cover the direct costs associated with replacement. We're confident because after two years and countless installations, SIMpull THHN cable performs as promised. Visit [southwire.com/guarantee](http://southwire.com/guarantee) to see the complete Product Performance Guarantee.



888-665-8230



© Southwire 2008

## ***Portable Power - Total solutions from Cooper Crouse-Hinds to meet the industry's ever-increasing need for safe and reliable temporary power.***

Virtually all industries today need equipment to provide temporary power, either in the event of an emergency or during standard operations such as maintenance in a factory. Cooper Crouse-Hinds now offers custom solutions as well as traditional out-of-the-box products that effectively meet these needs.

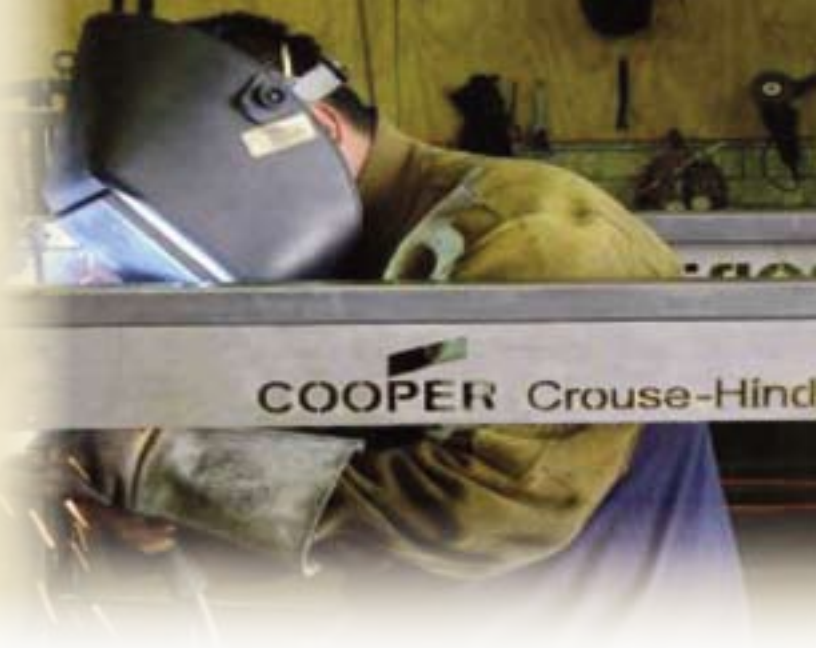
### **The Cooper Crouse-Hinds Advantage**

- New custom turn-key capabilities allow customers to specify and order complete portable power carts and enclosures
- Dedicated staff with a focus on the Oil & Gas, Military, Disaster Relief and Entertainment industries
- Safe, durable and reliable
- Engineering support, including AutoCAD and design specifications make the drawing and quotation process seamless and streamlined
- UL approved assemblies, including suitability for Class 1, Division 1 and 2 applications or IEC applications that would apply to International specifications



Cooper Crouse-Hinds has sales specialists in portable power for support and in assisting and answering questions from distributors, engineering firms and customers. In addition, CCH has a full-time, on staff, Application Electrical engineer devoted solely to Portable Power.

For more information on how Cooper Crouse-Hinds can help with your Portable Power solutions, contact your local Irby sales representative.



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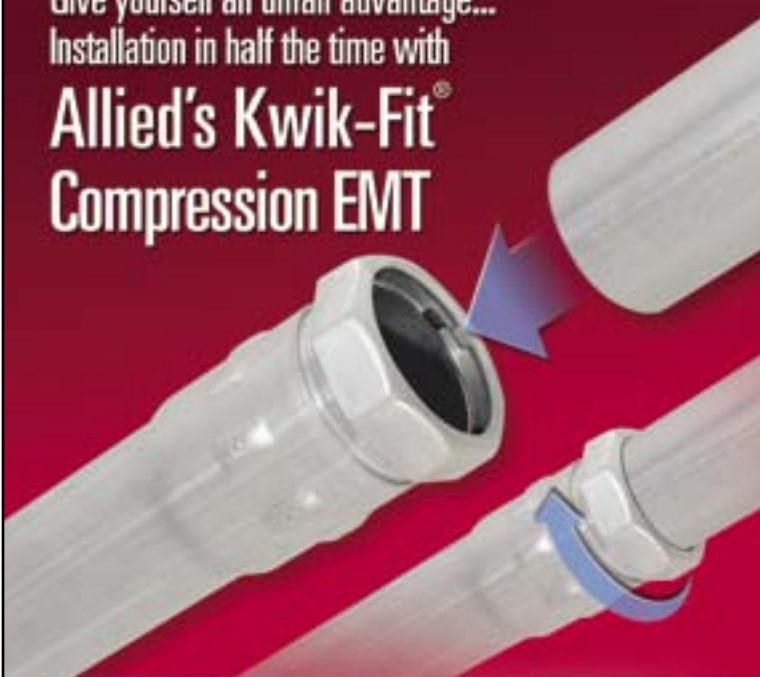
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Professor Gray, of the University of Colorado, forecasted the Atlantic and Gulf Coast 2008 hurricane season to be more active than usual. Conditions in the Atlantic are very favorable for an active hurricane season because of the continued increase of the Atlantic water temperature. The 2008 forecast of named storms is 15 and the number of hurricanes is eight with an estimated 44% chance that a category 3, 4 or 5 will make landfall on the Gulf Coast.

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- Repair sleeves
- Crossarms and braces
- Insulators
- Connectors and clamps
- Protective arresters and switches
- Wire and cable
- Pole line hardware
- Ground rods and grounding wire
- Anchors and rods
- Line construction tools
- Personnel safety devices
- Tie wire
- Staples
- Men Working signs
- Lighting fixtures

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- It enhances a company's image and credibility with employees, customers, suppliers, and the community.
- It may reduce insurance premiums.

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Category	Wind Speed	Storm Surge	Damage Potential
1 (weak)	75-95 mph 65-82 kts 33-42 m/s	4.0-5.0 ft. 1.2-1.5 m	minimal damage to vegetation
2 (moderate)	96-110 mph 83-95 kts 43-49 m/s	6.0-8.0 ft. 1.8-2.4 m	moderate damage to houses
3 (strong)	111-130 mph 96-113 kts 50-58 m/s	9.0-12.0 ft. 2.7-3.7 m	extensive damage to small buildings
4 (very strong)	131-155 mph 114-135 kts 59-69 m/s	13.0-18.0 ft. 3.9-5.5 m	extreme structural damage
5 (devastating)	> 155 mph > 136 kts > 70 m/s	< 18.0 ft. < 5.5 m	catastrophic building failures possible



# Top 10 NEC Changes for 2008

By Mike Holt

## Know What's New

In this latest code cycle, the Code Making Panels (CMPs) sifted through 3,688 change proposals. Some of the resulting changes were minor editorial revisions. Others were more significant, such as new Articles, Sections, Exceptions, and Fine Print Notes.

Why does the NEC undergo revision every three years? After all, electricity doesn't change every three years. For one thing, the NEC must keep up with changes in methods and materials as technology marches forward. Other factors behind those 3,688 proposals include fire data and efforts to make the NEC more user-friendly.

## Code Change Wrap-up

We've highlighted what we consider to be the top 10 code changes for the industry in general, but this cycle produced hundreds of changes. Which ones really apply to the work you do? Use this simple three-step process to find the answer:

1. Review a sampling of typical jobs you did over the past year.
2. Note which NEC requirements apply.
3. Look up those requirements in the 2008 NEC. Compare them to the 2005 requirements.

As you do this, jot down some notes on what you think should be different in the NEC. This will give you the basis for making change proposals of your own for the 2011 NEC. You have about a year left to submit those. But that time will be gone before you know it, so get started now.

## Top 10 2008 NEC Change Rules

### 1. 210.4 Multiwire Branch Circuits

The rule for "Simultaneous Disconnecting Means" requirements for multiwire branch circuits was expanded.

(B) Disconnecting Means. Each multiwire branch circuit shall have a means to simultaneously disconnect all ungrounded conductors at the point where the branch circuit originates. (See Figure 210.2)

**Author's Comment:** Individual single-pole circuit breakers with handle ties identified for the purpose, or a breaker with a common internal trip, can be used for this application [240.15(B)(1)].

**CAUTION:** This rule is intended to prevent people from working on energized circuits they believe are disconnected.

**Analysis:** Multiwire branch circuits can offer unexpected shock hazards when work is being done on them unless all ungrounded conductors from the multiwire branch circuit are disconnected simultaneously. This revised section requires each ungrounded conductor of a multiwire branch circuit to be disconnected simultaneously by common trip 2-pole or 3-pole circuit breakers or single-pole circuit breakers with an identified handle tie.

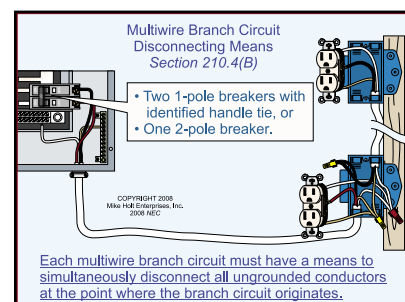


Fig. 210-2

### 2. 210.8 Ground-Fault Circuit-Interrupter Protection for Personnel (GFCI)

Outdoor GFCI-protection requirements for 15A and 20A, 125V receptacles at nondwelling unit occupancies were revised.

(B) Other Than Dwelling Units

(4) Outdoors - All 15A and 20A, 125V receptacles installed outdoors shall be GFCI-protected. (See Figure 210-10)

**Analysis:** The 2005 NEC only required 15A and 20A, 125V "outdoors in public spaces—for the purpose of this section a public space is defined as any space that is for use by, or is accessible to, the public" to have GFCI protection. This change now requires GFCI protection for these types of receptacles installed at all outdoor locations, except as provided by the exceptions for snow-melting and deicing equipment and industrial establishments.

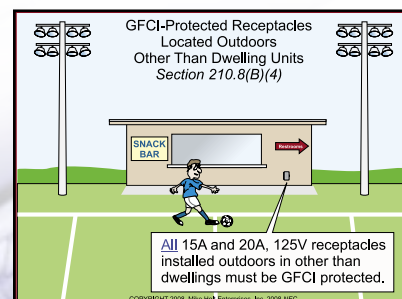


Figure 210-10



### 3. 250.4 General Requirements for Grounding and Bonding

A new Fine Print Note alerts Code users to the advantage of reducing the length of the grounding electrode conductor.

#### (A) Grounded Systems

(1) Electrical System Grounding. Electrical power systems, such as the secondary winding of a transformer are grounded to the earth to limit the voltage caused by lightning, line surges or unintentional contact by higher-voltage lines.

**FPN:** An important consideration for limiting the imposed voltage is the routing of bonding and grounding conductors so that they are not any longer than necessary to complete the connection without disturbing the permanent parts of the installation and so that unnecessary bends and loops are avoided. (See Figure 250-4)

**Author's Comment:** System grounding helps reduce fires in buildings as well as voltage stress on electrical insulation, thereby ensuring longer insulation life for motors, transformers, and other system components.

**Analysis:** This new Fine Print Note is intended to call attention to the instructions contained in Sections 800.100(A)(5), 810.21(E), and 820.100(A)(5) that grounding conductors be run as short as possible and as straight as possible. This provides an effective path to the earth for line surges caused by lightning events.

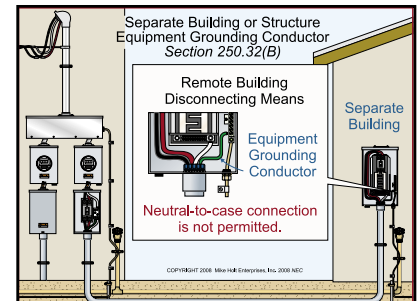


Figure 250-4

### 4. 250.32 Buildings or Structures Supplied by Feeder or Branch Circuit

The rule that permitted the regrounding of the neutral conductor at separate buildings and structures was deleted.

(B) Equipment Grounding Conductor. To quickly clear a ground fault and remove dangerous voltage from metal parts, the building or structure disconnecting means shall be connected to the circuit equipment grounding conductor of a type described in 250.118. Where the supply circuit equipment grounding conductor is of the wire type, it shall be sized to 250.122, based on the rating of the supply circuit overcurrent device rating. (See Figure 250-21)

**Exception:** For existing premises, when an equipment grounding conductor was not run to the building or structure disconnecting means, the building or structure disconnecting means can remain connected to the neutral conductor where there are no continuous metallic paths between buildings and structures, ground-fault protection of equipment isn't installed on the supply side of the circuit, and the neutral conductor is sized no smaller than the larger of:

- (1) The maximum unbalanced neutral load in accordance with 220.61.
- (2) The rating of the circuit overcurrent device, in accordance with 250.122.

**Caution:** To prevent dangerous objectionable neutral current from flowing onto metal parts [250.6(A)], the supply circuit neutral conductor is not permitted to be connected to the remote building or structure disconnecting means [250.142(B)]. (See Figure 250-22)

**Analysis:** In the 2005 NEC, 250.32(B)(2) permitted the neutral conductor to serve as the effective ground-fault current path, this rule was converted into an exception for existing premises. Using the neutral conductor to connect metal objects to the effective ground-fault current path is a dangerous practice, especially if the neutral becomes open.

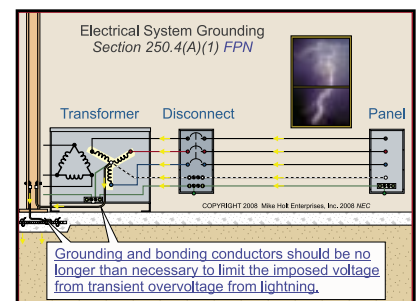


Figure 250-21

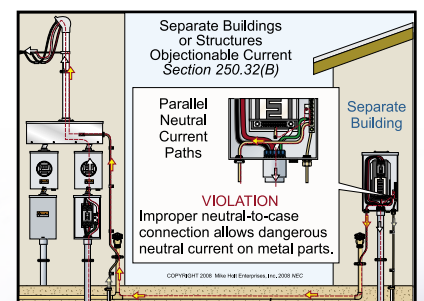


Figure 250-22



## 5. Article 708 – Critical Operations Power Systems

A new article addressing Critical Operations Power Systems was added to the 2008 NEC.

The provisions of this article apply to the installation, operation, monitoring, control, and maintenance of premises wiring intended to supply, distribute, and control electricity to designated critical operations areas in the event of disruption to elements of the normal system.

Critical operations power systems are those systems so classed by municipal, state, federal, or other codes, by any governmental agency having jurisdiction, or by facility engineering documentation establishing the necessity for such a system. These systems include but are not limited to power systems, HVAC, fire alarms, security, communications, and signaling for designated critical operations areas.

Critical Operations Power Systems are generally installed in vital infrastructure facilities that, if destroyed or incapacitated, will disrupt national security, the economy, public health or safety; and where enhanced electrical infrastructure for continuity of operation is deemed necessary by governmental authority.

Threats to facilities that may require transfer of operation to the critical systems include both naturally occurring hazards and human-caused events.

Analysis: Recent terrorist events and natural disasters, such the World Trade Center attack and Hurricane Katrina, highlighted the need to assess the adequacy of the National Electrical Code requirements for electrical infrastructure protection and reliability. This new Article 708 was created by a task group developed in response to Homeland Security activity, specifically how to keep an emergency system operating for days. The task group was formed to review requirements in the NEC and other NFPA codes and standards covering emergency and standby power systems and sources, and signaling systems.

## 6. 250.94 Intersystem Bonding Terminal

A new rule requires an intersystem bonding terminal for communications systems.

An external accessible intersystem bonding terminal for the grounding and bonding of communications systems shall be provided at service equipment and disconnecting means for buildings or structures supplied by a feeder. (See Figure 250-39)

The intersystem bonding terminal shall not interfere with the opening of any equipment enclosure and be one of the following:

- (1) Terminals listed for grounding and bonding attached to a meter socket enclosure.
- (2) Bonding bar connected to the equipment grounding conductor with a minimum 6 AWG copper conductor.
- (3) Bonding bar connected to the grounding electrode conductor with a minimum 6 AWG copper conductor.

**Author's Comment:** According to Article 100, an intersystem bonding terminal is a device that provides a means to connect communications systems grounding and bonding conductors to the building grounding electrode system. See (See Figure 250-39)

Exception: At existing buildings or structures, an external accessible means for bonding communications systems together can be:

- (1) Nonflexible metallic raceway,
- (2) Grounding electrode conductor, or
- (3) Connection approved by the authority having jurisdiction.

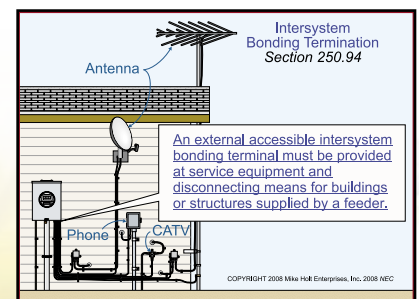


Figure 250-39



**FPN No. 2: Communications systems shall be bonded to the intersystem bonding terminal in accordance with the following:**

- Antennas/Satellite Dishes, 810.15 and 810.21
- CATV, 820.100
- Telephone Circuits, 800.100

**Author's Comment:** All external communications systems must be bonded to the intersystem bonding terminal to minimize the damage to communications systems from induced potential (voltage) differences between the systems from a lightning event.

**Analysis:** This is one of several correlated proposals to improve the requirements related to the intersystem bonding and grounding of communications systems. This provides a more accessible, safer means of bonding all systems, such as power and communications, together.

## 7. 250.52 Grounding Electrodes

The requirements for a concrete-encased electrode now include vertical electrodes as well as what to do when multiple isolated concrete-encased electrodes are present.

(A) Electrodes Permitted for Grounding.

(3) Concrete-Encased Grounding Electrode. A concrete-encased electrode is an electrode that is encased by at least 2 in. of concrete, located horizontally near the bottom or vertically within a concrete foundation or footing that is in direct contact with the earth consisting of one of the following: (See Figure 250–26)

- Twenty feet of one or more bare or zinc galvanized or other electrically conductive coated steel reinforcing bars bonded together by the usual steel tie wires not less than ½ in. in diameter, or
- Twenty feet of bare copper conductor not smaller than 4 AWG

**Author's Comment:** If a moisture/vapor barrier is installed under a concrete footer, then the steel rebar is not considered a concrete-encased electrode.

Where multiple concrete-encased electrodes are present at a building or structure, only one is required to serve as the grounding electrode system. (See Figure 250–27)

**Author's Comments:**

- The grounding electrode conductor to a concrete-encased grounding electrode isn't required to be larger than 4 AWG copper [250.66(B)].
- The concrete-encased grounding electrode is also called an "Ufer Ground," named after Herb Ufer, the person who determined its usefulness as a grounding electrode in the 1960s. This type of grounding electrode generally offers the lowest ground resistance for the cost.

**Analysis:** The requirements for concrete-encased electrodes have been expanded to allow structural steel rebar in vertical foundations to be suitable as a grounding electrode, as long as it meets all of the requirements for horizontal structural steel rebar electrodes. In addition, the 2008 NEC clarified that in a building or structure where multiple isolated concrete-encased electrodes are present, such as for spot footings, only one of these "present" electrodes will be required to be used. The purpose of the NEC [90.1] is the "practical safeguarding of persons and property," and requiring all of the concrete-encased electrodes to be bonded together served no safeguarding purpose.

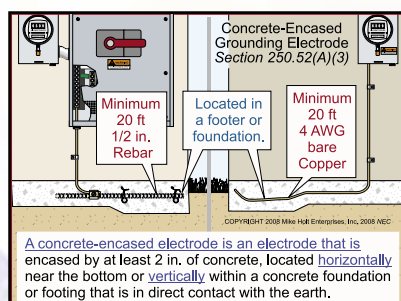


Figure 250-26

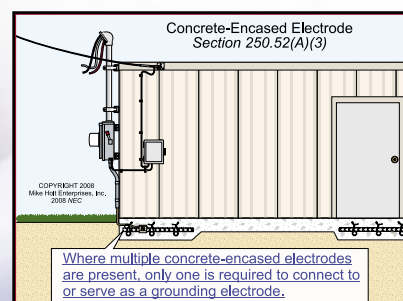


Figure 250-27

## 8. 406.8 Receptacles in Damp or Wet Locations

Receptacles installed in wet locations are now required to be weather resistant.

### (B) Receptacles in Wet Locations.

(1) 15A and 20A Receptacles. All 15A and 20A receptacles installed in a wet location shall be within an enclosure that is weatherproof when an attachment plug is inserted and all nonlocking 15A and 20A, 125V and 250V receptacles in a wet location shall be listed as weather resistant. (See *Figure 406-4*)

Exception: Receptacles subject to routine high-pressure washing spray may have an enclosure that is weatherproof when the attachment plug is removed.

#### Author's Comments:

- Wet locations are those subject to saturation with water, and unprotected locations exposed to weather [Article 100].
- Exposed plastic surface material of weather-resistant receptacles must have UV resistance to ensure deterioration from sunlight does not take place or is minimal. In testing, receptacles are subjected to temperature cycling from very cold to very warm conditions and then additional dielectric testing. The rapid transition from the cold to warm temperature will change the relative humidity and moisture content on the device and the dielectric test ensures that this will not present a breakdown of the insulation properties.

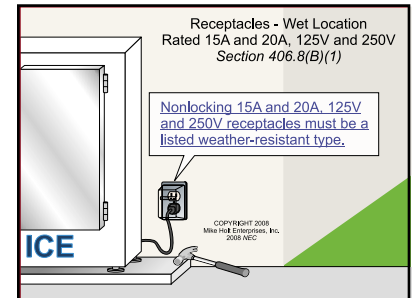


Figure 406-4

Analysis: The change to this subsection was made in response to concerns that receptacles located outdoors are not always protected from detrimental conditions such as low temperatures, exposure to ultraviolet radiation (UV), physical damage, etc., and that weatherproof covers and enclosures do not always provide sufficient protection from the elements. The new exception allows receptacle covers in high-pressure spray washing areas to be of the type that is weatherproof when the attachment plug is removed. When a weatherproof while-in-use cover is used with high-pressure spray cleaning, liquid can spray into the enclosure through the cable openings. This change allows the use of a snap cover that does not have a cable opening in it while closed.

## 9. 406.11 Tamper-Resistant Receptacles in Dwelling Units

Requirements for tamper-resistant receptacles were added to the 2008 NEC.

In dwelling units, all 15A and 20A, 125V receptacles shall be listed as tamper resistant.

Author's Comment: This rule applies to receptacles installed behind appliances, above countertops, and other locations out of the reach of children.

Analysis: This new section requires the use of listed tamper-resistant receptacles for all 15A and 20A, 125V receptacles installed in dwelling units.

## 10. 310.15 Ampacities for Conductors Rated 0–2,000 Volts

A new subsection adds ambient temperature adjustments for conduits installed on rooftops.

### (B) Tables

#### (2) Adjustment Factors

(C) Raceways Exposed to Sunlight on Rooftops. The ambient temperature adjustment contained in Table 310.15(B)(2)(c) is added to the outdoor ambient temperature for conductors or cables that are installed in raceways exposed to direct sunlight on or above rooftops when applying ampacity adjustment correction factors contained in Table 310.16.

**FPN No. 1: See ASHRAE Handbook–Fundamentals ([www.ashrae.org](http://www.ashrae.org)) for the average ambient temperatures in various locations.**

Table 310.15(B)(2)(c) Ambient Temperature Adjustments for Raceways Exposed to Sunlight On or Above Rooftops		
Distance Above Roof to Bottom of Conduit	Temperature Added	
	C	F
0 – ½ in.	33	60
Above ½ in. to 3½ in.	22	40
Above 3½ in. to 12 in.	17	30
Above 12 in. to 36 in.	14	25

(Figure 310–5)

**FPN No. 2: The temperature adders in Table 310.15(B)(2)(c) are based on the results of averaging the ambient temperatures.**

**Analysis:** This new subsection requires the ambient temperature used for ampacity correction to be adjusted where conductors or cables are installed in conduit on or above a rooftop and the conduit is exposed to direct sunlight. The reasoning behind this change is that the air inside conduits in direct sunlight is significantly hotter than the surrounding air, and appropriate ampacity corrections must be made in order to comply with 310.10.

For example, a conduit with three 6 THHN conductors with direct sunlight exposure that is 3/4 in. above the roof will require 40°F to be added to the correction factors at the bottom of Table 310.16. Assuming an ambient temperature of 105°F, the temperature to use for conductor correction will be 145°F (105°F + 40°F), the 6 THHN conductor ampacity after correction will be 43.50A (75A x 0.58). (See Figure 310–5)

**Author's Comment:** When adjusting conductor ampacity, use the conductor ampacity as listed in Table 310.16 based on the conductor's insulation rating. In this case, it's 75A at 90°F. Conductor ampacity adjustment is not based on the temperature terminal rating as per 110.14(C).



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For compliance with industry standards, this tester features wet and dry modes selected by a toggle switch. A portable and self-contained unit, the tester is convenient for spot checks at field jobsites or periodic diagnostics in the workshop. It can test up to a 3-inch-diameter of any brand fiber-glass-reinforced-plastic (FRP) live-line tool.

### Numeric Readout from Analog Meter

In a form one person can carry and operate, the tester actually performs the equivalent of full-scale test setups for both Wet (75kV per foot) and Dry (100kV per foot). In either case, the meter displays the increase in leakage current due to placing the meter on a hot stick. This value may be compared to the level allowable by the individual utility. This quantitative test result immediately indicates the stick's true leakage condition, inside and out. It detects leakage currents due to surface and internal contamination, independent of stray currents because the tester is "zeroed" while empty before each use.

### Wet/Dry Switch Upgrade Available for Old Models

If you own a previous Chance LS-80 or LS-81 Tester with a Pass/Fail meter, the Wet/Dry selector-switch circuitry can be factory retrofit. Simply contact the Chance Tool Repair Center by phone (573-682-8748) or facsimile (573-682-8647). A repair-service specialist will assign a Reference Number, give you a cost estimate within 48 hours and usually complete the job in one to two weeks.

### Operating Ease, free Videotape Offer

Simple to operate, the tester comes with a Check Bar to verify the unit is functional before each use. Besides a fully illustrated Owners Manual, which must be read and understood before operating the tester, a seven-minute videotape is included with each unit.



*For wet or dry testing, unit simply takes overlapping readings along the full length of any hot stick up to 3-inch-diameter.*



*Before each use, set the meter needle to zero with nothing in the Tester and self-test the Tester with the Check Bar included.*

# CHANCE®

***Now with switchable modes for easy compliance with industry test specs***

# Combination



## *More than sixty-five years of safety driven innovation and service are incorporated into Chance Telescopic Tools.*

Chance Tools are dependable and rugged. They are designed to meet the rigorous electrical and mechanical demands of daily use by crews. Chance foam-core fiberglass poles are tested to the equivalent of 100kV per foot before they go into a hot-line tool. With Chance, you have the toughest, longest lasting, most dependable hot-line tools in the industry.

Chance telescopic tool design includes features that make field use simple and trouble free. Our button locking system doesn't pinch fingers or damage gloves. Air cushioning action protects fiberglass sections when they are retracted and our glossy surface is easily restored to its original luster after cleaning. Chance tool features provide years of reliable service.

### Sticks For Small Vehicles

When storage space is extremely tight, a 25' Telescoping Tool is available that compacts down to 4'.

### Telescoping Tool Repair Kits

**BUTTON & SPRING KITS** — With normal care and maintenance, Chance Telescoping Tools have long service lives, but when repairs are necessary, complete kits are available containing all of the buttons and springs needed to repair particular length sticks. Refer to the cross reference below for the individual kit part numbers.

Standard Duty Tool Cat. No.	Heavy Duty Tool Cat. No.	Button & Spring Kit No.
C403-1023		T403-1245
C403-1017	C403-1597	T403-1246
C403-1018	C403-1598	T403-1247
C403-1019	C403-1599	T403-1248
C403-1020	C403-1600	T403-1249
C403-1021	C403-1601	T403-1250
C403-1022	C403-1602	T403-1251
T403-2205		T403-1248
C403-1739		T403-1251



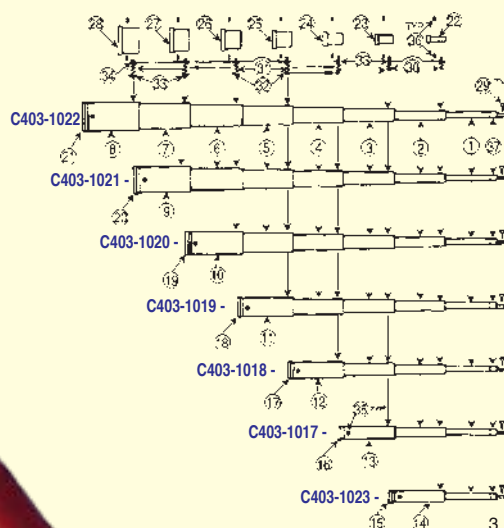
### Replacement Parts List for Standard Duty Telescoping Disconnect Tool

(If only a single part is required, the correct part number can be ordered, referring to the below drawing and table.)

	Description	Part No.	
1	Pole & Ferrule	E403-2742P	11/16" Outside Diameter
2	Tube	P403-0987P	11/4" Outside Diameter
3	Tube	P403-0988P	11/2" Outside Diameter
4	Tube	P403-0989P	111/16" Outside Diameter
5	Tube	P403-0990P	17/8" Outside Diameter
6	Tube	P403-0991P	21/16" Outside Diameter
7	Tube	P403-0992P	21/4" Outside Diameter
8	Base Tube	P403-0999P	21/2" Outside Diameter
9	Base Tube	P403-0998P	21/4" Outside Diameter
10	Base Tube	P403-0997P	21/16" Outside Diameter
11	Base Tube	P403-0996P	17/8" Outside Diameter
12	Base Tube	P403-0995P	111/16" Outside Diameter
13	Base Tube	P403-0994P	11/2" Outside Diameter
14	Base Tube	P403-0993P	11/4" Outside Diameter
15	Bottom Cap	P403-1014P	
16	Bottom Cap	P403-1013P	
17	Bottom Cap	P403-1012P	
18	Bottom Cap	P403-1011P	
19	Bottom Cap	P403-1010P	
20	Bottom Cap	P403-1009P	
21	Bottom Cap	P403-1008P	
22	Plug	P403-1007P	
23	Plug	P403-1006P	
24	Plug	P403-1005P	
25	Plug	P403-1004P	
26	Plug	P403-1003P	
27	Plug	P403-1002P	



28	Plug	P403-1001P
29	Thumbscrew	P403-0467P
30	Spring	P403-2351P
31	Spring	P403-2352P
32	Retainer	P403-1977P
33	Button	P403-3001P
34	Button	P403-3002P
35	Mach. Screw	P001-0309P
36	Drive Lock Pin	P001-0419P
37	Universal Fitting	P403-2514P





***Thomas & Betts***

# Catamount® Twist Tail®

## The highly anticipated cable tie is here!

This innovative new product will help differentiate Thomas & Betts from the large number of general purpose cable tie manufacturers worldwide. Twist Tail® is a perfect complement to Ty-Rap®. This product is ideal for the general application user who wants a simple cable tie that installs quickly.

The new "twist-off" tail means no tools and no sharp edges. This allows the tail to be easily removed by bending the tail back and forth and easily twisting off the tail after the cable tie is installed. This valuable, time saving feature allows you to use the "tool-less" approach to cable ties, as well as work with limited space where you cannot fit a cut-off tool.

TwistTail makes tail removal easy with its unique, patent-pending design but still provides a full 50 lbs. minimum loop tensile strength — perfect for any general-purpose cable tie application.

The Twist Tail® is available in 7", 11" and 14" lengths to give you a wide variety of bundling options. It is also available in white to differentiate from standard cable ties or in UV-resistant black for outdoor applications. Twist Tail® is UL recognized.

When strength, aesthetics, reliability and performance are required, knowledgeable professionals turn to the original and the best source for cable ties and accessories — Thomas & Betts.



# Work Smarter With Innovative Solutions From Thomas & Betts.



Thomas & Betts brands have built a reputation for reliability and innovation. From floor boxes, pre-fab components and strut fasteners to connectors, wiring duct and cable ties, we design our products for faster, easier installation to help lower your install time and cost. And our nationwide network of more than 6,000 distributor partners makes our innovative solutions easy for you to find! For more information contact your local Irby sales representative.

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## Thomas & Betts

A collage featuring the irby CIRCUIT magazine covers and a computer keyboard with a 'Subscribe' button.

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# New Products



**Thomas & Betts**

## Steel City® 68R Recessed Covers

Aesthetic Recessed Service Made Affordable!

Plug in power and communication cords, and then close the lid to hide unsightly plugs and receptacles below the floor!

- Unique cover provides aesthetic recessed service with cost-effective box options for concrete, wood sub-floor and raised floor applications
- Patented lid can be rotated to expose a small opening for cords, enabling the lid to close flush with the floor while in use
- Cover accepts one duplex or GFCI receptacle – no special device plates required (receptacle purchased separately)
- Cover accepts up to two communications jacks – includes one 2-port keystone data plate and one blank data plate for custom cut-outs or power-only applications (communications jacks purchased separately)
- Nonmetallic covers are available in black, gray, beige and brown. Black covers are available with an optional brass or aluminum flange.



**3M**

## 3M Fire Production Products

- The complete line of 3M fire protection products helps prevent fire, smoke, toxic fumes and moisture from passing through penetrations in fire-rated walls and floors.
- The easy-to-install products are suitable for a wide variety of firestop applications, including plastic pipes, metal pipes, HVAC ductwork, cables, construction gaps, grease ducts, wall tops and control joints.

**GENERAC®**  
POWER SYSTEMS, INC.



## Portable Generators from Generac Power Systems

- From the smallest needs to the largest with sizes from 1,800 to 17,500 Watts\*
- Easy to use in a variety of applications from camping to emergency home backup
- Quality engineering and design
- Durable construction for rugged reliability
- Long life engines for years of dependable performance

*\*Full product line available in 2009*

**Hoffman®**



## POLYPRO® Type 4X Polyester Enclosures

- POLYPRO® features versatile; non-glass filled polyester to safely house electronic controls indoors and out
- A cost-effective alternative to aluminum and stainless steel, corrosion-fighting polyester is also lightweight and easy to modify
- POLYPRO® is flame resistant and provides ultraviolet protection while maintaining a high environmental seal



## ES8

- High performance louver
- 2-lamp profile - 44% savings compared to 3-lamp T8
- Full balanced illumination of the space



**max punch**



An advanced knockout tool used with a cordless drill to draw punch dies together for quick accurate knockouts.

No hydraulics, no ratcheting, no mess.

Compatible with your current punch dies.

2 inch knockout in 4 seconds.

4 inch knockout in 6 seconds.

MP-01CS

- Max Punch
- ½ inch – 4 inch die set
- Step drill bit and Maxis Marksman

MP-01SD

- Max Punch
- ½ inch – 2 inch die set
- Step drill bit and Maxis Marksman

MP-01

- Max Punch only



**KLEIN TOOLS**  
For Professionals... Since 1857®



## Magnetic Screwdriver with 32-Piece Tamperproof Bit Set

- Cushion-grip handle for greater torque and comfort
- Sturdy bit and screw holding magnet allows for screws to fit securely in place for easy use
- Includes complete tamperproof bit set in block
- TORX® is a registered trademark of Acument Intellectual Properties, LLC
- TORQ-SET® and Tri-Wing® are registered trademarks of Phillips Screw Co.

Assembled in USA of US and imported components.



**Wiring Device-Kellems**



- Hubbell offers TR code compliant devices for residential and commercial applications
- Available in decorator, standard and GFCI styles
- Spring-loaded shutters allow plugs to enter but keep single pronged items like keys, pins and screwdrivers out



**COOPER** Wiring Devices

## Commercial Grade Decorator Combination Devices

- 15A 120/277V/AC rating is ideal for incandescent or fluorescent lighting fixtures typical in commercial applications
- Thermoplastic rocker, top and back body are virtually unbreakable for durable performance
- Available in Almond, Light Almond, Ivory and White
- Back wire clamps on side terminals provide for easy installation of #12 and #14 gauge wire
- Automatic grounding system on all devices



# New Products



## Allied's Kwik-Fit® Compression EMT

- Reduce installation time by 50%
- Eliminates the need to purchase, store, or install separate couplings
- E-Z Pull® interior finish provides a smooth raceway for fast wire-pulling
- Strength combined with ductility for easy bending
- Hot-galvanized steel for durability



## Capri One BY CAPRI LIGHTING

Capri One is a modular downlight system designed for speed and flexibility. There are three components to the Capri One system.

### Metal frames

- Can be ordered for 4", 6", 8" or 10" apertures, with remodel and sloped ceiling options available.

### Wide variety of electrical systems

- The electrical systems are designed around either incandescent, compact fluorescent, or HID lamp sources of all wattages.

### Broad selection of Capri One trims

- Trims can be ordered with lenses or baffles, and many are listed for use in wet location areas.



## Laredo LCC Series

(LED version shown)

- The compact Laredo is designed for entrance and single story perimeter lighting
- 6-12 foot applications
- Available in energy-saving Pulse Start, CFL, HPS and LED
- Full cut off, StarView compliant
- Neighbor friendly, CSA certified to UL 1598 for use in wet locations



SEE THE WORLD IN A NEW LIGHT



## Sylvania Quicktronic High Efficiency T8 Universal Voltage Ballast

- Standard QHE ballasts offered in low ballast factor, normal ballast factor, and high ballast factor models
- UL Type CC (commercial cabinet) rated units in low ballast factor and normal ballast factor models
- Features LSC (lamp striation control) to minimize striations in T8 energy saving lamps

# UPCOMING

## Industry & Trade Show Events

### Attend Automation Fair and learn how to:

- Improve your product's time-to-market
- Increase your company's profitability
- Develop asset management and optimization strategies
- Manage manufacturing business risk

Irby will host the Automation Fair 2008, at the famed Gaylord Opryland Complex in Nashville, Tennessee on November 19-20.

Make your plans now! If you're interested in attending the 2008 Rockwell Automation Fair, contact your local Irby sales representative for more information.



November 19-20, 2008  
Nashville, Tennessee USA  
Gaylord Opryland Complex

**EC&M** CODE CHANGE  
CONFERENCES

### The 2008 NEC is Here!

**LEARN ABOUT THE CHANGES IN THIS NEW CODE CYCLE BY ATTENDING THE PREMIER SOURCE OF NEC INFORMATION AND TRAINING: EC&M SEMINARS' 2008 NEC CODE CHANGE CONFERENCES.**

In two informative and interest-filled days, you'll learn about major NEC changes that will impact your work, whether you're an electrician, contractor, engineer, designer, or plant/facility maintenance person.

Learn from Mike Holt, nationally recognized NEC authority and trainer.

**View and discuss new products and technologies with Exhibitor/Sponsors:**

- Many electrical product manufacturers will be exhibiting their products at each breakfast, lunch, and session break.
- Technical discussions will be held at each exhibition booth.
- Hand out material will be distributed by each exhibitor

Two conferences are scheduled for 2008:

**PORTLAND, OR: September 4 - 5, 2008**

**SAN ANTONIO, TX: September 8 - 9, 2008**



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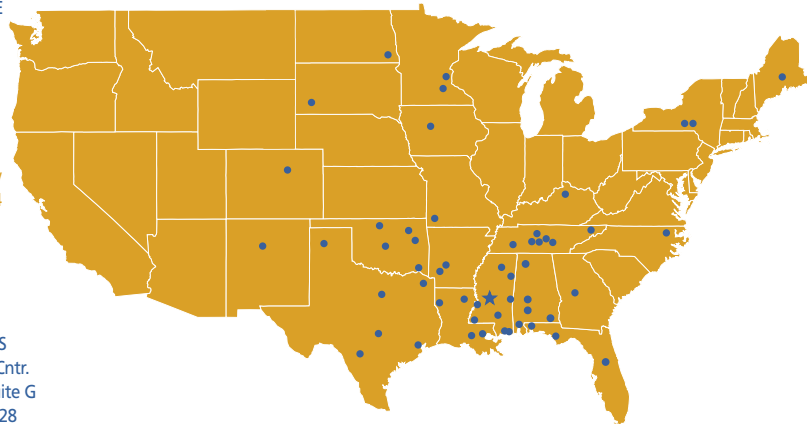
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