

Take 5 for Safety

Electrical Safety for Non-Electrical Workers
Picture of the Week

Collider-Accelerator Department
5-21-2013



Overview

- Just because you aren't an electrician or electrical worker does not mean that you are exempt from electrical hazards
- Painters, tree trimmers, industrial machine installers, and others have all been killed from electricity
- This electrical safety topic is designed to increase awareness among workers who are not considered electrical workers because the hazards are potentially higher for them

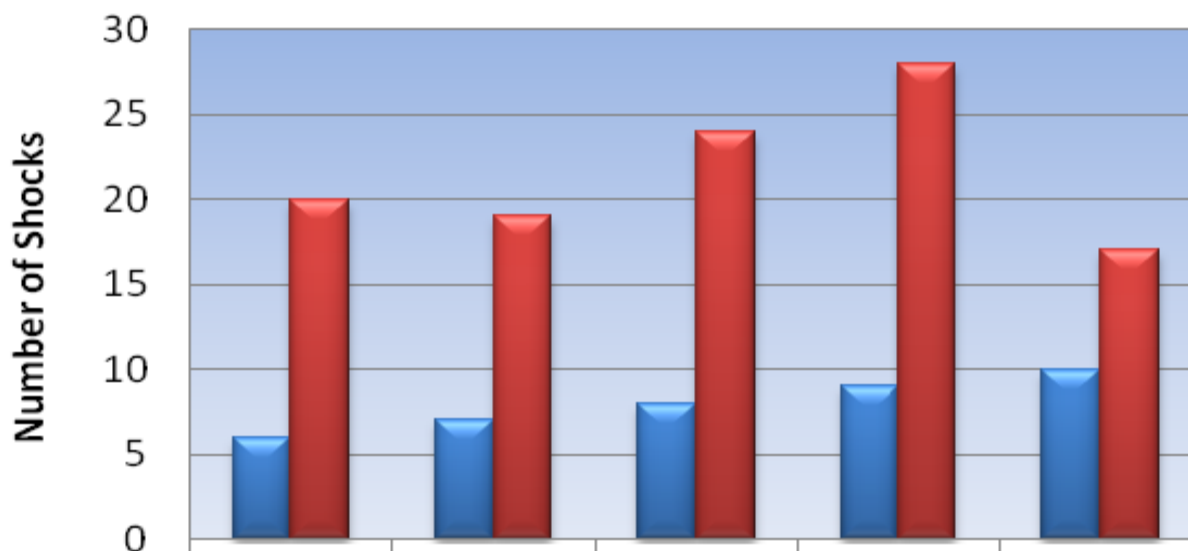
Fatalities, 2003- 2010, Over 65% of Workers In The Selected Occupational Group Who Died Were NOT Electrical Workers

Occupational Groups Selected Occupations		Total
Construction Trades Workers		642
• Electricians	• 300	
• Construction Laborers	• 146	
• Roofers	• 43	
• Painters, construction and maintenance	• 39	
• Carpenters	• 32	
Installation, Maintenance, and Repair Occupations		366
• Electrical Power-Line installers and repairers	• 132	
• Industrial Machinery Installation, Repair, and Maintenance Workers	• 71	
• Heating, Air Conditioning, and Refrigeration Mechanics and Installers	• 55	
• Telecommunications Line Installers and Repairers	• 24	
Grounds Maintenance Workers		113
• Tree Trimmers and Pruners	• 79	
• Landscaping and Groundskeeping Workers	• 29	
Transportation and Material Moving Occupations		108
• Drivers/Sales Workers and Truck Drivers	• 50	
• Material Moving Workers	• 44	
Other Management Occupations		76
Agricultural Workers		43
Subtotal	1044	1348
Percent of Electrical Workers	44%	34%

Source:
Electrical
Safety
Foundation
International

DOE Shock Statistics

Electrical Shocks by Worker Type



	2008	2009	2010	2011	2012
■ Electrical Workers	6	7	8	9	10
■ Non-Electrical Workers	20	19	24	28	17

Causes of Shocks

- Faulty Equipment
- Attention to Task
 - Overhead power lines
 - Plugging and unplugging equipment
 - Situational Awareness
- Inadequate procedures
- Lack of training/qualification for assigned task
- Scope creep
- Inadequate Planning
- Inadequate/untested PPE
- Lack of preventive maintenance

Some Lessons Learned

- Look before you leap
 - Is the equipment listed by a Nationally Recognized Testing Lab such as UL, or otherwise approved?
 - Are there hidden hazards that your work may inadvertently access during your activity?
 - Routine activities – plugging and unplugging equipment, picking up electrical devices, etc. require that you pay attention to what you are doing



Some Lessons Learned

- Use a GFCI for additional protection, especially when working outdoors or in damp/wet locations
 - Many DOE sites require a GFCI be used with portable power tools
 - The Consumer Product Safety Commission believes that GFCI receptacles are responsible for saving thousands of lives since they became required in residential and commercial buildings
 - GFCI receptacles limit the potential current to a safe value – if you get shocked, you still need to report it, but you won't be seriously injured
 - Garages are another place you should always use a GFCI
 - TEST your GFCI's monthly for operability. While many have fail-safe circuits *now*, many GFCI receptacles have been in use for 15 or 20 years, and may not function as designed



Summary

- Remember – just because you aren't an electrician or an electrical worker, electricity can still find – and kill – you or a coworker
 - Maintain a healthy respect for the electrical equipment you use
 - Pay attention to seemingly low-risk, routine activities
 - People are shocked, sometimes severely, when plugging and unplugging equipment from wall outlets and power strips
 - Maintain your electrical equipment
 - Test your GFCI receptacles
 - Look at your power tool cords for signs of wear before each use

SEEING WORKERS IN THIS PPE MEANS.....



Do Not Disturb!!!
Thank You From
Your Electricians.