Ergonomic Project – 2006
Ladder Work

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John Stepko and Safety Harness
Climbing Ladder – 3 Point Contact
Working On Ladders
Installing Conduit Clamps
Overhead Conduit Work
Finding the Sweet Spot
Getting to the Top, 3-Point Contact
Getting to Conduit Not So Easy
Awkward Twists Very Common
On A Ladder and the Big Reach
Reaching & Awkward Connections
Awkward Twisting on Ladders
Twisting While Knee Flexed A Risk Factor for Knee Injuries
Traditional Ladder Posture
Moving Ladders To Chase Work
Very Common
Positioning Ladder, Tracing Electrical Circuits
Moving Ladder & Gathering Material
Looking for Moving Hazards
Installing Conduit in Ceilings
Tight Work Space in Ceiling
Climbing 10 Foot Ladders
Very Common
Ascending Ladder, 3 Point Contact
Climbing Ladders A Repetitive Task
Almost There, A Few Rungs More
Installing Conduit Clamps
Getting Ready to Hook-up
Safety Harness & Ladder Work
Hooked Up and Looking Up
Overhead Work and Conduit
Installing Conduit in Ceiling
Mobile Work Station - Ladders
John Stepko Demonstrates Why Ladder Safety Is Important
Making Connections Overhead
John Stepko Demonstrates Familiar Posture
Looking Overhead / Neck Extended Is Very Common
John Stepko Explains How To Install Conduit
Electricians Spend A Lot of Time on Top of Ladders
Exercising Caution When Dismounting
Climbing Ladders Stressful On Knees & Back
Handling Materials & Tools While Installing Clips
John Stepko Demonstrates Why Safety Harnesses Are Important
A Classic Ceiling Pose – Always Looking Up!
Connecting Conduit A Regular Task!
Measure Twice, Cut Once
Finding the Strut To Mount Clip
If it Doesn’t Fit, Tap It
Safety Harnesses Can Prevent Serious Injury
Electricians At Great Risk of Falling off Ladders
The Job Is Rewarding - Thanks for Asking
Shuffling Ladders Around Can Cause Injury
Electricians Carry and Work Off Ladders
A Typical Ladder Carrying Posture
Another Reason Electricians At Risk of Back and Other Injuries!
Shuffling Off To Another Job
A Classic Ladder Carrying Posture
Erecting Ladder To Access Ceiling
Aligning the Ladder
Time to Get to Work
Finding Access in T-Bar Ceiling
Here We Go Again
The Ergonomist Watching A Master at Work
3-point Contact
Mounting the 10 Foot Giant
Moving Ceiling Tiles to Access Work Area
Finding Location of New Pipe Run
Electrician’s Job Complicated by Other Mechanical Structures
Ergonomist Eager To Learn What Electricians Do
Ergonomist Discovering How Awkward Our Job Can Be
Drilling off Ladders Regular Part of the Job
Getting Power Cord & Drill
Setting Up For Awkward Drilling Job
Setup Very Important to Minimize Trips Up/Down the Ladder
It’s Looking Good
But Why All the Photo’s?
Demonstrating the Depth of Concrete
John Explains Why Job is Difficult in Cluttered Ceilings
Testing the Drill
Working In Ceilings Sometimes Tight
John Demonstrates How Tight Ceilings Are Awkward to Work In
Finding the Connection
Pipe Is Just Where Sal Left It
Drilling in Ceilings a Common Task
Working Around Obstacles
Reaching Up & Over While Pushing a Drill, A High Risk Activity for Injury
WSIB Can Now Better Understand How Electricians Get Injured
Awkward Reach with Force, A High Risk Factor for Injury
Tremendous Force on Shoulders and Arms
Working Outside the Safe Ergonomic Working Zone
Some Employer Reps Claim Electricians Perform Little Overhead Work
Working on Ladders, Arms Overhead, Pushing a Drill, in Awkward Positions
Finishing the Job
Closing the Ceiling Tile
The Demonstration is Almost Over
John Shows Jennifer his Drill
Ergo Weighing John’s Equipment
Demonstrating the Drill & Cord Weight
How to Set-up
Demonstrating Drilling Technique
Through Demonstration and Observation
We’re Learning What you Do!
Proper Drilling Posture, If You’re Lucky
Proper Drilling Posture Taught At School
Unfortunately School and Work are Sometimes Two Different Things
30 Years of Experience on Display
Thanks John!