



# **ENMAX LINEMAN RODEO & SAFETY EXPO**

**July 16, 2016**

**CALGARY, ALBERTA**

## Competition Events

There will be four Journeyman Power Line Technician events and four Apprentice events.

### Journeyman Powerline Technician Events:

- Hurt Man Rescue
- Pole Climb Relay
- Jumper Change Out
- Transformer Change

### Apprentice Events:

- Hurt Man Rescue
- Pole Climb Relay
- Cutout Change
- Cat Rescue

### General

- The Rodeo provides a framework to move several positive initiatives forward including: reinforce operational and safety practices; promote safety, quality and proficiency; SHOWCASE OUR TRADE.
- The events cater primarily to line services employees.
- The Journeyman Team consists of three Power Line Technicians.
- Apprentice Team consists of one Apprentice competing on his own. A Groundman will assist on required events.
- Scoring criteria shall be weighted in this order of importance: Safety, Work Practice, Neatness/Ability, Equipment Handling, and the timely completion of the event.
- Competitors will be charged demerits for infractions.
- In the event of a tie, refer to "Tie Breaking Process".
- The Journeyman Team and Apprentice winners will be announced and the awards will be presented at the Beer Gardens on Saturday night.
- Competitors will continue to be judged after time stops until they have reached the ground for the following events: Hurt Man Rescue & Cat Rescue.
- Proper PPE is mandatory at all times (CSA approved glasses, boots & hard hat).
- **\*\*\*Wrists must be covered at all times, gauntlet gloves are recommended\*\*\***

## **Judges Panel**

The Judges Panel will be comprised of ENMAX staff, safety personnel and external experts.

## **Judges and Event Judging Guidelines**

Judges are to register Friday afternoon. At 2:00 p.m., the Judge's packages and schedules will be distributed. As well, the Judges will meet in groups to go over all the rules for the event to ensure a consistent approach is taken in the scoring of each Journeyman Team/Apprentice.

## **Schedule and Score Sheet Procedure**

### **Schedule**

- The event descriptions can be found in this handout.
- Each Journeyman Team and Apprentice will also have a schedule in their registration handout.
- Journeyman Teams will be randomly scheduled for each of the four different events and Apprentices for each of their four different events, with the final combined schedule used to balance event participation.
- The schedule will have a place for the event Judge to sign (beside each event) to show that the Journeyman Team or Apprentice has completed that event and in the correct order.
- The schedule will have a place for a Master Judge to sign beside an event to allow a Team/Apprentice to do an event out of sequence in the case of backlogs.
- Team/Apprentice names will be filled in on each event judging sheet by the Judge at that event.

### **Scoring**

Each Team/Apprentice will have 0 demerits at the beginning of each event. Demerits will be added during the event for infractions. A more detailed list of the demerits can be found with the event descriptions.

Each event must be completed, verified and signed off by a Judge prior to the Team/Apprentice leaving the event. A Team/Apprentice has the right to contest the Judge's scoring. If the Team/Apprentice disagrees with the event Judges, the Master Judge will make the decision on whether or not the demerits are valid. If the Master Judge rules in the Team/Apprentice's favor, the additional demerits will be deducted from the original score. If the original score stands, the Team/Apprentice will be penalized and incur an additional two (2) demerits. Disputed scoring must take place immediately after the event is completed. There will be no reviews of scoring after the competitors have signed off and left the event site.

The overall winning Team/Apprentice will be the one with the lowest total demerits after completing all four Journeyman Team or four Apprentice events. The Master Judge will review and verify scores and determine the final score for each Team/Apprentice after all competition is complete.

## **Tie Breaking Process**

- If teams are tied in the Journeyman category, the team with the best/least accumulated time taken to complete all of the events will be declared the winner.
- If still tied in the Journeyman category, the team with the fewest demerits in the Hurt Man Rescue event will be declared the winner.
- If tied in the Apprentice category, the Apprentice with the best/least accumulated time it took to complete all of the events will be declared the winner.
- If still tied in the Apprentice category, the Apprentice with the fewest demerits in the Hurt Man Rescue event will be declared the winner.
- If still tied in either the Journeyman or Apprentice events, a coin toss will be used. The Team/Apprentice with the oldest average age of that day will pick heads or tails when the coin is in the air.

## Infractions

Completing these events in a safe manner is the most important element for each event. If any competitor arrives at the events with noticeable impairment, the competitor (or the entire team, if competitor is a Journeyman) will be disqualified from the events.

These conditions, along with the need to complete the events in a timely manner, pose an interesting challenge in which competitors must still put safety and quality first while finishing each event as quickly as possible.

Each event starts with 0 demerits. All safety rules are to be observed during events. See below for a detailed list of the demerits:

**\*\*\*These demerits will be applied towards ALL events\*\*\***

### **2 Demerits**

Including, but not limited to, the following:

- Loose hard hat/wearing hard hat backwards
- Not wearing safety glasses/approved footwear
- Improper cover up
- Dropping tools/material with verbal warning
- Cut-outs, burn-outs, or slips
- Hot-dogging - defined as a lineman being "out of control". Examples: Both gaffs out of the pole at the same time, drop steps, excessive uncontrolled speed. Maintain one gaff in the pole at all times.
- Misuse of tools
- Misuse of line guards or rubber goods
- Groundman must wear work gloves
- Twisted hand line operation
- Poor housekeeping
- Over-exertion or over-extension
- Groundman not communicating when entering or leaving work area (in the hole) - 2 demerits per infraction
- Hanging tools on phase conductors, neutrals, belt hooks, crossarms or safety straps
- Slipping
- Failing to follow safety standard
- Improper sequence of part installation

### **5 Demerits**

Including, but not limited to, the following:

- Dropping tools/materials without verbal warning
- Long-sleeved shirts are required. If shirt has buttons on the sleeves, they must be buttoned. Sleeves can't be pushed up or rolled up.
- Hand line not attached to pole properly. It must be installed around the pole and hooked into the "becky".

### **10 Demerits**

Including, but not limited to, the following:

- Not using hand line for sending material up and down the pole
- Second man starts climbing before first man has completed his ascent and is buckled off; conversely, last man starts descent before first man down is off pole
- Failing to use proper fall arrest practices, as per your company's safety procedures.
- No safe work plan for event. A safety tailboard/discussion shall take place before event starts. A Judge must hear it.
- Not completing event in assigned time.

### **(25 Demerits)**

- Event specific

### **Total Disqualification from Competition**

Including, but not limited to, the following:

- Unprofessional or unsportsmanlike behavior.
- Sabotage or tampering with materials, tools or equipment on the Rodeo grounds.
- Unapproved use of alternates during the events. See Master Judge for approved use of alternates during competition.

## Tools

- Each competitor needs to bring their own climbers, body belt, hard hat, safety glasses, long-sleeved shirt, coveralls, hand tools, and hand lines.
- No modifications from manufacturer's design are allowed to tools and/or equipment.
- The hand line (or pulley line) must have a sheave in it.
- In all events, the last person who comes down the pole must be the one to lower the hand line.

## Tool Inspection

Tool inspections may be done prior to the competition to check for safe condition and alterations of tools, such as:

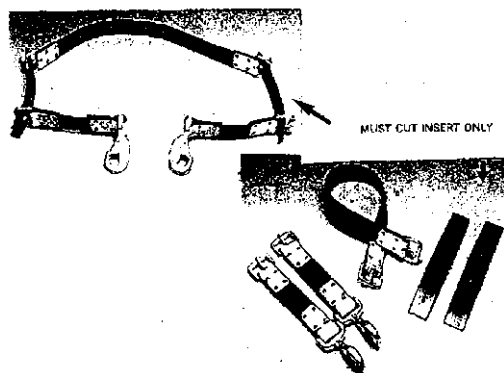
- Tape on straps
- Tapered cuts on straps
- Buckles filed
- Fingers cut out of gloves - rubber gloves will be inspected by Judge prior to required event
- Elongated holes in straps and belts
- Improper gaff length
- Attempts to use insufficient or altered tools - 5 demerits
- The demerits will be added to the event that the Team/Apprentice is competing in at the time the altered tool is discovered

## Journeyman Team Events

### Hurt Man Rescue

#### General

- Total Maximum Time: 4 Minutes per Team
- The hurt man rescue will be performed as a team.
- A safety tailboard/discussion is not required for this event.
- Time starts at the Judge's signal.
- The Journeyman's belt and hooks will be at the designated area.
- Looking at the pole from the crossarm side, the **Ox Block** ([www.buckinghammfg.com](http://www.buckinghammfg.com)) hand line will be hanging on the right side and considered energized. The mannequin hangs in the center of the pole on the crossarm side, with both ends of the safety straps through the bottom transformer bracket. A shotgun stick will be locked in the ring of the Hot Line Clamp and the fuse barrel will be closed indicating the transformer is still energized.
- Any contact with the handline from an exposed body part (no rubber gloves) will result in demerits until the fuse barrel is opened and high side riser removed.
- One Groundman will simulate calling for emergency help using a pre-written script. Once this is completed, he may assist in the rescue.
- The other Groundman will extend the long stick and open the fuse barrel.(Rubber gloves not necessary)
- The climbing Journeyman cannot come in contact with the pole until the fuse barrel is opened.
- The climbing Journeyman will ascend the pole once the fuse barrel has been opened and the handline is held clear by a groundman wearing rubber gloves. He will then lift the high side jumper while wearing his rubber gloves.
- The handline will NOT be considered energized after the fuse barrel has been opened and the high side riser removed.
- The mannequin shall be tied under the arms with three half hitches or a bowline.
- **You must cut the insert.**





- The mannequin should be lowered to the ground smoothly with the assistance of the Groundmen if necessary.
- Time is over when the mannequin is on the ground and the rope is slack. Competitors must use the hand line provided.
- All demerits are added together.
- Competitor remains on the pole to rehang the mannequin and judging will continue until competitor is on the ground.
- A bucket truck will be used to assist in hanging the hurt man mannequin for the next competitor.

**2 Demerits:**

- See general infractions.

**5 Demerits:**

- See general infractions.
- Mannequin hitting the ground with force
- Knot tied too loose (3 inch pvc pipe will be used to gauge).

**10 Demerits:**

- See general infractions.
- Failure to follow standard safety guidelines or procedures.
- Exceeding the maximum time of 4 minutes per team to complete the event.
- Not cutting belt in correct location (insert).
- Incorrect knot used.
- Coming in contact with handline on exposed body part.

**25 Demerits**

- Dropping mannequin.
- Contacting energized conductor.

## **Pole Climb Relay**

### **General**

Total Maximum Time: 2 Minutes and 30 Seconds per competitor

All three competitors on the Journeyman Team are to complete the event.

A safety tailboard/discussion shall take place before event starts and a Judge must hear it.

### **The following steps apply:**

- Time starts at the Judge's signal with the competitor standing with hand on pole, all of their gear on and the egg in the basket hanging from the competitor's mouth.
- When the Judge says "go", the competitor climbs the pole.
- The competitor climbs to the crossarm, removes existing basket from the "J" hook, yells head ache and drops the basket into the target zone. He then hangs his basket on to the "J" hook, removes the egg from the basket and puts it into his mouth.
- The competitor now climbs down the pole.
- Once he reaches the ground the time stops.
- He then shows the egg to the judge for inspection of cracks.
- These steps are now repeated by the second/third competitor.
- Once the third competitor has finished all three times will be added together for a total team score.

### **2 Demerits:**

- See general infractions.
- Missing the target zone with the basket.

### **5 Demerits:**

- See general infractions.
- Dropping Basket.

### **10 Demerits:**

- If egg is cracked or broken. This penalty is for each egg that is broken or cracked (and may be up to 30 demerits)
- Exceeding the maximum time of 2 minutes and 30 seconds per competitor to complete the event.

## **Jumper Change Out**

### **General**

Mean Time: 15 Minutes

Total Maximum Time: 20 Minutes

This event consists of changing out a jumper and ampact connections on an outside phase of a three-phase double Dead-end structure.

A safety tailboard/discussion shall take place before event starts and a Judge must hear it. There will be two climbers and one Groundman.

Basic rules are all material and equipment will be raised and lowered using a hand line, only one person climbing at a time.

The Team will receive a guarantee of isolation from the event Judge prior to the event starting.

### **The following steps apply:**

- The competitors may have their gear on before time starts.
- The time starts at the Judge's signal with the two climbers standing an arm's length from the pole.
- Only one lineman can climb at a time.
- The hand line will be attached to the structure when equipment or material is being raised or lowered.
- Lineman will install an EP band and continuity jumper across Dead end on phase being worked on.
- Lineman will remove ampacts with take off clip, untie conductor from insulator and send all material to the ground on the hand line.
- Lineman will attach new jumper to insulator with tie provided, install new ampacts to connect jumper. Material is sent down on hand line.
- Lineman will remove continuity jumper and EP band and send to ground on hand line.
- When the task has been completed the lineman will descend from the work location.
- Lineman will climb down to the ground one at a time.
- The Judge calls time when the first foot of the last lineman touches the ground.

**Materials supplied:**

- New conductor ties
- Ampact shells and wedge connectors
- Extra Ampact guns will be available. Competitors are encouraged to supply their own.

**2 Demerits:**

- See general infractions.
- Exceeding mean time of 15 minutes.

**5 Demerits:**

- See general infractions.

**10 Demerits:**

- See general infractions.
- Exceeding the maximum time of 20 minutes to complete the event.

## **Transformer Change**

### **General**

Mean Time: 20 Minutes

Total Maximum Time: 30 Minutes

This event consists of replacing a transformer on a three-phase installation. New transformer is ready for installation and tools/equipment are laid out.

A safety tailboard/discussion shall take place before event starts. A Judge must hear it.

### **The following steps apply:**

- All equipment should be checked before the event starts to ensure no tangles in the rope blocks.
- Lineman may have their gear on before time starts.
- Time starts when Team's person in charge signals they are ready.
- Only one lineman can climb at a time.
- The hand line will be attached to the structure when equipment or material is being raised or lowered.
- The cut-out barrel is to be lowered to the ground for re-fusing.
- The jumper from the phase to the top of the cut-out is to be disconnected from the phase during the transformer change-out.
- Transformer secondary and neutral leads will be disconnected at the transformer connections. Crew must guard against back-feed by using Class 2 rubber gloves to remove secondary leads from transformer and tape exposed conductor.
- Transformer is to be lowered and new transformer raised using rope blocks and a transformer gin. Watch for crew communication and smooth controlled lift.
- Competitor must check nameplate on transformer.
- Crew to correctly connect primary and complete voltage check using Class 2 rubber gloves.
- Once voltage check has been completed the cut-out door must be opened and primary riser removed from the phase before secondary is connected.
- Crew completes secondary connections, reconnects primary riser to phase and closes cut-out door.
- Time stops when both Lineman are on the ground.

**Materials supplied:**

- Transformer gin
- Rope blocks
- Fuses
- Grip-all stick (shotgun)
- Replacement transformer
- Volt meter
- Tool bucket (nose bag)
- P2 switch stick

**2 Demerits:**

- See general infractions.
- Exceeding mean time of 20 minutes.

**5 Demerits:**

- See general infractions.
- Not using appropriate gloves to remove tape or ground secondary leads from transformer.
- Transformer gin too high. (Limits of Approach)

**10 Demerits:**

- See general infractions.
- Exceeding the maximum time of 30 minutes to complete the event.
- Failing to check nameplate.
- Failing to perform voltage checks.
- Failing to remove primary riser before connecting secondary leads.

**(25 Demerits):**

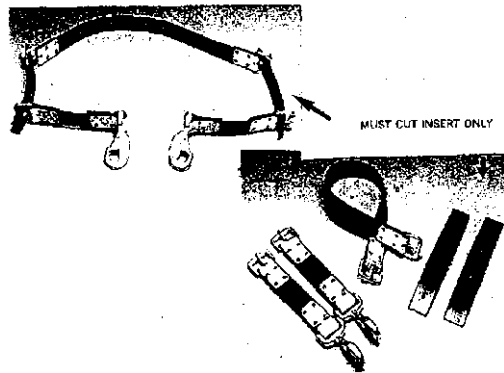
- Touching energized primary phase

## Apprentice Events

### Hurt Man Rescue

#### General

- Total Maximum Time: 4 Minutes
- A safety tailboard/discussion is not required for this event.
- Time starts at the Judge's signal with the Apprentice standing at an arm's length from the pole.
- The Apprentice's belt and hooks will be laying on the ground beside him at an arm's length from the pole.
- Looking at the pole from the crossarm side, the **Ox Block** ([www.buckinghammfg.com](http://www.buckinghammfg.com)) hand line will be hanging on the right side. The mannequin hangs in the center of the pole on the crossarm side, with both ends of the safety straps through the braces.
- The mannequin shall be tied under the arms with three half hitches or a bowline.
- **You must cut the insert.**



- The mannequin should be lowered smoothly to the ground.
- Time is over when the mannequin is on the ground and the rope is slack. Competitors must use the hand line provided.
- All demerits are added together.
- Competitor remains on the pole to rehang the mannequin and judging will continue until competitor is on the ground.
- A bucket truck will be used to assist in hanging the hurt man mannequin for the next competitor.

**2 Demerits:**

- See general infractions.

**5 Demerits:**

- See general infractions.
- Mannequin hitting the ground with force.
- Knot tied too loose (3 inch pvc pipe will be used to gauge).

**10 Demerits:**

- See general infractions.
- Failure to follow standard safety guidelines or procedures.
- Exceeding the maximum time of 4 minutes to complete the event.
- Not cutting belt in correct location (insert).
- Incorrect knot used.

**25 Demerits**

- Dropping mannequin.
- Contacting energized conductor.



## **Pole Climb Relay**

### **General**

Total Maximum Time: 2 Minutes and 30 Seconds

A safety tailboard/discussion shall take place before event starts and a Judge must hear it.

### **The following steps apply:**

- Time starts at the Judge's signal with the competitor standing with hand on pole, all of their gear on and the egg in basket hanging from the competitor's mouth.
- When the Judge says "go", the competitor climbs the pole.
- The competitor climbs to the crossarm, removes existing basket from the "J" hook, yells head ache and drops the basket into the target zone. He then hangs his basket on to the "J" hook, removes the egg from the basket and puts it into his mouth.
- The competitor now climbs down the pole.
- Once he reaches the ground the time stops.
- He then shows the egg to the judge for inspection of cracks.

### **2 Demerits:**

- See general infractions.
- Missing the target zone with the basket.

### **5 Demerits:**

- See general infractions.
- Dropping Bucket.

### **10 Demerits:**

- If egg is cracked or broken.
- Exceeding the maximum time of 2 minutes and 30 seconds to complete the event.

## **Cutout Change**

### **General**

Mean Time: 15 Minutes

Total Maximum Time: 20 Minutes

This event consists of replacing a defective cutout. Tools and equipment are laid out.

A safety tailboard/discussion shall take place before event starts. A Judge must hear it.

### **The following steps apply**

- The Apprentice may have their gear on before time starts.
- Time starts when the Judge says go.
- The Apprentice will extend the long stick and open the fuse barrel (rubber gloves not necessary).
- The Apprentice proceeds to climb the pole and remove the primary riser (using rubber gloves and grip all stick).
- The hand line will be attached to the structure when equipment or material is being raised or lowered.
- The Apprentice will then replace the cutout, leave the barrel open and install the primary riser.
- The Apprentice then climbs down and with the long stick closes the fuse barrel.
- Time stops when the long stick has been completely retracted.

### **Materials supplied:**

- Extendable long stick
- Grip-all stick
- Cutout

#### **2 Demerits:**

- See general infractions.
- Exceeding mean time of 15 minutes

#### **5 Demerits:**

- See general infractions.
- Not informing the Judges that he is going to make the cut-out alive.

#### **10 Demerits:**

- Exceeding the maximum time of 20 minutes to complete the event.

## **Cat Rescue**

### **General**

Mean Time: 10 Minutes

Total Maximum Time: 15 Minutes

This event is designed to test an Apprentices ability to properly isolate an energized transformer so that they can safely remove a trapped cat from the transformer. There will be a Groundman assigned to the Apprentice.

A safety tailboard/discussion shall take place before event starts. A Judge must hear it.

### **The following steps apply:**

- Time starts at the judge's signal with the Apprentice standing at an arm's length from the pole, with climbing gear on.
- The Apprentice will climb the pole and isolate the transformer by opening the cut-out and removing the primary riser with rubber gloves. Secondary leads will be removed and taped.
- The Apprentice will then climb to the top of the transformer, remove the cat and lower him to the ground in a nose bag.
- Once the cat has been removed, the transformer is re-energized using proper procedure.
- The Judge calls time when the transformer has been energized.
- The Apprentice will return the cat to the top of the transformer, attach it with a velcro strap and then descend down the pole. Judging will continue until Apprentice is on the ground.

### **Materials supplied:**

- Nose bag
- P2 hot stick
- Grip-all stick (shot gun)

### **2 Demerits:**

- See general infractions.
- Exceeding mean time of 10 minutes.

### **5 Demerits:**

- See general infractions.
- Improper transformer connection/dis-connection sequence.

### **10 Demerits:**

- See general infractions.
- Exceeding the maximum time of 15 minutes to complete the event.