



Best Practices Identified at the
UAA St. Louis Safety Summit
February 5th & 6th, 2020

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Gear Inspection

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Gear Inspection

-CHALLENGES-

- Rope inspections need to include assessments of cuts, wear, heat marks, contaminations, shape, diameter, length, compatibility, age and history.
- Rope can often have misuse and abuse not known to the user or inspector. Ask about the history when inspecting.
- Rope inspectors must be able to identify rope construction and type.
- Rope users must understand rope strength - MBS, Max Breaking Strength versus. WLL (Safe)Working Load Limit and the Rope Bend Ratio.
- What to know about equipment during an inspection - Identification/type, manufacturing date, purchase date and date of Issuance.
- Rope users must understand proper rope storage.



Gear Inspection

-CHALLENGES-

- Rope users must understand cycles to failure and when equipment should be removed from service. Implement red tag processes.
- Rope washing not common practice within the industry.
- Lack of good peer checking during equipment inspection.
- Rope that is taken out of service or rerated to a lower use needs to have a process that all crews can identify to prevent misidentification of a tool no longer able to perform as it was designed to.
- Production time pressures restricting the ability to perform quality inspections.



Gear Inspection

-CHALLENGES-

- Industry continues to introduce new equipment which needs training to properly inspect. Peer review inspections.
- Ensuring equipment is purchased at reputable sources where recall notices and continued user support will be a priority.
- Difficulty in getting replacement rope due to costs, GF span of control (stretched with too many tasks), lack of management understanding, lack of communication, procrastination, replacement not readily available and unwelcomed costs incurred.
- 3N1 Oil / Duck oil for DMM Carabiner maintenance.
- Must look for tri-loading on carabiners and the risks associated with bad orientation or side-loading.



Gear Inspection

-SOLUTIONS-

- Management must be empowered to replace immediately life support equipment / rope taken out of service. Operational management need to be educated on when rope has reached the end of its life.
- Process needed to document the date-of-issuance and user of new equipment. This could be by either the truck or the individual.
- Process needed to document how repurposed equipment is used for other non-critical tasks. A standard process that all could identify it.



Gear Inspection

-SOLUTIONS-

- If a rope performed a task well outside of the working load limit to save a life support fall, it should be removed from life support service.
- Perform equipment inspection in a peer to peer setting. Equipment inspector should be asking questions of owner/user about history and intended use regarding every item.
- Web sources for industry community group forums and information sharing: Arbtalk, Dripline, Tree Buzz & Arboristsite.
- Review rope and equipment inspection knowledge from the resource slide to better perform quality safety inspections.



Gear Inspection

-RESOURCES-

Petzl

<https://www.petzl.com/US/en/Professional#.WL64q28rKpo>

(In the far-right side of the site type into the search field your piece of equipment, select the item that comes up, scroll to the bottom of the product details and all of the downloadable details on proper inspection and care is available.)

DMM Carabiner Inspection Guide

<http://dmmprofessional.com/documents/inspection-maintenance-auto-lock-carabiner-gate-mechanisms.pdf>



Gear Inspection

-RESOURCES-

Samson Rope Company

Rope inspection video

<http://www.samsonrope.com/pages/videos.aspx>

Rope Manual covering all aspects

[http://www.samsonrope.com/Documents/Rope Users Manual WEB.pdf](http://www.samsonrope.com/Documents/Rope%20Users%20Manual%20WEB.pdf)

“Samson” by Samson Rope - Rope Inspection Application on the Apps Store Site

Buckingham Manufacturing

<http://www.buckinghammfg.com/learning-center/instructions-warnings/>

(Click on the lower right drop down titled: Inspections/Checklists)



Live Line

- Step potential can vary significantly depending on conditions. Wet conditions/saturated soil can extend out as much as 100'.
- Conductors are not insulated. Always consider energized unless de-energized and grounded.
- Electricity is unpredictable. It can take many paths to ground.
- Conductive objects contacting conductor will be energized (i.e.- truck/chipper, fences, playground equipment, etc.) When accessing gated areas use non-conductive tool to open gate.



Live Line

- New OSHA standard requires information transfer by utility, but also required by contractor. unsafe conditions/hazards must be made known.
- MAD distances calculated radial. Must be fully extended with conductive tool and still maintain published MAD.
- Insulating devices can create a false sense of security.
- Pruners are considered “non-conductive” but only batch tested. Must be maintained clean and dry. Exercise caution.
- Make sure spotters can be heard. Use whistle, radio, etc.



Live Line

- Required training
 - Direct/Indirect
 - Phase to phase
 - Phase to ground
 - Body is conductive
- Don't assume the system works.
 - Back feed. Assume generator is not connected properly.



Live Line

New ANSI Z-133 standard allows for:

- Non Qualified personnel: MAD starts at 10'
- Incidental Line Clearance: Must be trained. Not working for utility. Extended MAD but less than non-qualified. Examples are residential, private work, DOT.
- Qualified Line Clearance: Must be working for utility. Standard distances.
- Cranes must maintain 20' from energized conductor.
- Is it SAFE? If not... SPEAK UP!



Work Force Retention

Where Work Force came from

- Other Vegetation Industries
- Trades
- Farming & Agriculture
- Factory
- Delivery Service
- No Significant Work History

Conference Experience

1,306 years



Work Force Retention

Reasons for Leaving

- Too hard of work/Too physical
- Better Job
 - Money
 - Different field
- Lack of advancement
- Travel or distance from home
- Cannot meet minimum requirements of job
 - CDL
- Management Issues/Employee Culture
- Termination



Work Force Retention

Hiring and Recruiting

- Unskilled recruits
- Attitude
- References/Referrals
 - Illinois Hiring Hall
- Career vs Job



Work Force Retention

Retention Strategies

- Positive Reinforcement
- Team Building
- Investment
- Dedicated time to training
- Communicate to the employee
 - Speak their language
 - Cater to the work force



Chipper Safety

Maintenance

- Sharpen Knives/Anvils
- Change blade bolts every 5th blade change
 1. Don't over torque bolts, they can crack
- Grease bottom pintle hitch
- Cross Safety chains, don't twist as it weakens the chain
- Hydraulic oil- Keep 7/8 full. (expands when hot and will overflow)
- Electric brake switch comes from chipper battery



Chipper Safety

Clogged Chipper Troubleshooting

- Clutch Adjustment
- RPM 1250-1300 disk 1000-1050 drum
- Adjust Drive Belt (can affect the auto feed feature)
- Sharp Knives
- Drum- Airflow
- Sharp Anvil
 - Check Anvil on 3rd Knife Change



DOT / Traffic Safety

Ensure **training** requirements are met and understood

- Train beyond minimum requirements
- Work Zone Technician
- Advanced Work Zone (Work Zone Specialist) – 4 year expiration
- Flagger Training – 4 year expiration
- OSHA 10 Hour, company safety policies, equipment manuals

Proper **planning** should be done prior to work shift

- Daily morning meetings to assign work
- Development of Traffic Control Plans for daily operations
- Ensuring appropriate traffic control devices are available
- Use devices that are in good quality condition



DOT / Traffic Safety

Ensure **flagging** operations are set up properly

- Appropriate warning signs are in place
- Recommend utilizing the “3 cone” method
- Stand away from other distractions and have an escape route

Be constantly aware of potential **distracted drivers**

- Provide adequate sight distance and advanced warning for drivers
- Consider additional attention grabbers – rumble strips, flagger cones

Utilize appropriate **load securement** methods

- Ensure employees are trained on regulations
- Provide proper securement devices (chains, nylon straps, etc.)



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