

Class Descriptions

48th RMLA Conference — May 6-9, 2019

CPTSB Colorado Passenger Tramway Safety Board Meeting

Board • CPTSB

Wednesday - May 8, 2019 • 10:30 a.m. • County/Elections Rm

This is an official meeting of the CPTSB.

The agenda for this meeting will depend on rule making, disciplinary actions and any other official business that may come before the board. Visit the CPTSB Webpage for additional information.

E-1 Introduction to Basic Electricity

Mike Taylor • Keystone Resort

This course will cover the basics of electricity and will expand upon various electrical components typically found on ski lifts. Bring a calculator.

E-10 Grounding and Lightning Protection for Ski Lift Operations

Joe Lanzoni • Lightning Eliminators & Consultants, Inc.

Wednesday - May 8, 2019 • 10:30 a.m. •

Lightning can interrupt normal lift operations and damage related lift equipment. This presentation will explain how lightning forms and how electrical surges are created. It will also cover various lighting and surge protection equipment and techniques. And because grounding is an inherent part of lightning protection, and grounding is difficult in rocky locations, it will also cover grounding principles, techniques and test methods.

E-11 Low Voltage Control Circuits

3-Hour Class

Bruce Wyman • S-K-I Electric

We will start with the symbols of the different electrical components and start to add the lines (wires) that connect them together forming series and parallel circuits resulting in a circuit diagram. The inter action of external control devices actuating the relays contained in the above circuits combine to control the electrical functions of the lift. As more components are added the basic circuits will come to light. The protocols for the layout of circuit diagrams will be explained and how to start to trace a circuit through a drawing.

E-13 Rope Position Detection (RPD) - Doppelmayr Systems

Mike Taylor • Keystone Resort

This class will explain how proximity switches produced by Efector are utilized for haul rope location by Doppelmayr. The two methods of deropement detection (Matrix and Individual tower) will be explained along with the troubleshooting of each system. There will be a demo of the Efector switch showing the function of the sensor.

E-16 CPS's - Troubling Shooting Tower Faults

Sam Tryczak • Snowmass Ski Area

This session will address Poma style C.P.S. faults including:

- Introduction to Trouble shooting
- 3-wire switches - 4-wire old style switches;
- 4-wire new style switches - 5-wire newest switches.

E-18 Basic Networking and Communications

Matt Smolskis • TMMI

Panel with Ryan Henrichs

Industrial Networking and Communication Basics, Cabling and connectors, Layer I And II Sstches, Industrial protocols and Cyber Security.

E-22 Experiments in DC-SCR Drive tuning

Jamie Bunch • SCJ Alliance

The presentation will discuss recent experience with DC drive adjustments and tuning. A number of lifts have indications of dynamic behavior with speed changes. Depending on the adjustment of drive parameters, the dynamic action can be made worse or improved. There are various methods of adjusting the drive parameters. The presentation will discuss the application of the Zeigler-Nichols method and some experiences with various procedures.

E-23 Lightning/Surge Protection & The Coordination of Technologies

William Purcell • MeterTreater, Inc.

Wednesday - May 8, 2019 • 1:15 p.m. •

This presentation is geared towards electrical lift maintenance personnel and reviews the applications of Surge Protection as it relates to issues associated with operating electrical systems in real world environments. Material covered will provide insight on what to protect, how to select the technology/protector and where to interface/install with specific emphasis on application coordination. Discussions will include lift operating systems, drives, proximity (PROX) switches, weather instrumentation, security systems (access control, video & alarm), plus computers and communications networks. Grounding and bonding principles will be reviewed due to their critical relationship to system performance and personnel safety.

E-3 Troubleshooting Comm-Lines and Mechanical Deropement Switches

Mike Taylor • Keystone Resort

This course utilizes a mock Comm-Line to demonstrate what type of faults can occur and how a digital multi-meter can be used to diagnose electrical problems. Prerequisite for this course is E-1 (Introduction to Basic Electricity) if one is not familiar with electrical power flow

E-5 Using Vibration Analysis and Infrared Thermography to Monitor Machinery Health

Tim Williams • Vail Resorts, Inc.

This course will look at the benefits of Vibration Analysis and Infrared Thermography as technologies to include in a comprehensive preventive maintenance program. We will cover the basics of vibration analysis, the frequency spectrum and time waveforms, and the signatures of general faults such as misalignment, unbalance, gear mesh, bearing defects, and electric motor problems. We will also look at how Infrared technology can be used to diagnose electrical issues and prolong machinery life.

E-8 AC Motor Principles & Best Maintenance Practices

Jonathan Schmucker • Integrated Power Services

• 10:30 a.m. •

Primary issues that will be covered are basic electric motor maintenance and A/C motor fundamentals. Intended audience would be maintenance personnel and reliability engineers. Takeaways from the class would include history of A/C power, best maintenance practices, and A/C motor fundamentals.

E-9 Fuseology: Overview, Application, and Selection

Bruce Dube • Intermountain Fuse Supply

What is a fuse? Why fuse? Types of Fuses? Fast or slow? Current Limiting? How do I size a fuse for a particular application? These questions and many more will be answered during the presentation. A short open book quiz including fuse and sizing problems will follow the presentation.

Class size will be limited to 25 students. "First come, first served"

G-1 Lift Maintenance Guide

Michael Weiss • National Ski Areas Association

The LMRG this is a combined effort led by NSAA utilizing experts within the industry to develop a guide for areas to use to help identify and develop individuals in Lift Maintenance. The resource guide is currently 18 chapters and about 100 pages long and covers all facets of lift maintenance from rigging, brakes, safety, Low voltage, Motors, drives etc. and is broken out into level I, II, and III knowledge levels (not certification, but knowledge/understanding levels). It is a guide and was initiated at the request of the NSAA Exec Board. The guide is nearly the end of it's 3rd round of edits and will be discussed and commented on this winter, then a final round of edits in spring and summer with a completion and release time frame of fall 2019.

G-10 The Growing Value of Chairlift Video Surveillance

Dave Byrd • National Ski Areas Association

This session will dive into specific operational considerations when adopting and using video surveillance with chairlift operations at loading or unloading areas. We will discuss the infrastructure considerations, the costs, the training benefits, and ROI on investment—particularly with guest complaints or injuries. The use of surveillance is growing at ski areas across the country, not just with lift operations, but summer activities as well (zip lines, coasters, etc). We will highlight examples of video surveillance from across the country to underscore the impact it can have with operations, training, and litigation, and discuss new tax law benefits that make video surveillance even more inexpensive.

G-16 OSHA Deep Dive: Analyzing 3 Unique Employee Lift Safety Injuries

Dave Byrd • National Ski Areas Association

• 1:15 p.m. •

Last season, ski areas experienced a number of employee injuries and resulting OSHA inspections. This will session will take a deep dive into three unusual lift-related incidents involving ski area employees—all significant injuries or fatalities—and analyzing the facts behind each incident, and how these ski areas and OSHA individually responded. The issues of employee misconduct, resort policies and procedures, OSHA compliance standards, drugs, even the media responses will be addressed—and how the resorts prepared for OSHA investigations—will provide a great exploration of what can happen with serious employee injuries, their prevention, appropriate workplace safety procedures, and the best approaches to minimizing serious OSHA fines and citations—not to mention future employee injuries.

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G-2 Knots - Slings - and Other Things

Greg Baldacci • Park City Mountain Resort

With Greg Baldacci - Park City

"Knot" is a term used to loosely describe any one of many ways to attach (cordage, rope, webbing) to an object. You only need to know about five basic knots that will hold the load and then come undone easily (without using a knife). We will also do an end splice and a back splice on a rope, a "Flemish" eye in a wire rope and build some other interesting slings.

G-23 Drive Machinery Components – Design Characteristics, Failure Modes, Maintenance

Gary Mayo • Doppelmayer USA, Inc.

This class discusses couplings, solid and U-joint drive shafts, backstops, bearings, belt drives and other rotating drive machinery. It covers the functions of various types, why the designer chooses one over another, their failure modes, maintenance requirements, alignment specifications and repair or replacement procedures. Bring your questions or examples of what you have experienced and we will discuss trouble shooting possibilities.

G-24 Using Metrics to improve Maintenance and Staff Engagement

Bob Ackland • Steep Management

Audience should be those with supervisory responsibility. Attendees will understand how they can deepen the engagement of their staff to take ownership of their work. The value of metrics will be discussed as tool to engage in a positive way with their staff to enhance retention probabilities and to increase the overall productivity of the maintenance department.

G-25 Maintenance in the Ski Area - the real relationships and dependencies within the ski area

Bob Ackland • Steep Management

Audience should be those with supervisory responsibility. Attendees for Maintenance in the Ski Area will get a sense of relationships and dependency with and on others in the ski area for success and see the relationship of maintenance with the outside factors that impact their work as well as factors that impact the total performance of the ski area. The class will develop the relationships of a maintenance task/ position up through the workings of the ski area. This will be done using functional relationship mapping to visually connect the dots.

G-26 A Review of the Recent Dynamic Events

Larry Smith • Colorado Passenger Tramway Safety Board

This presentation will go into depth regarding recent investigations into observed dynamic responses in lifts. The presentation will include a review of the current work of CPTSB Subcommittees addressing multiple areas regarding dynamic events.

G-6 Fixed Grip Migration, Jaw and Rope Marks – The Good, the Bad and the Ugly

Planetary Gearbox Concepts

Gary Mayo • Doppelmayer USA, Inc.

Migration of fixed grips is a source of concern for lift operators. What causes the grips to migrate and where does it occur? What about the safety factor of 3 to slippage? Why is the amount of migration different on various installations? How much migration is too much? What if the grips don't migrate at all? What damage can be done to the wire rope by migrating grips or lack of migration? What can I learn from the marks the rope leaves in the grip jaws? Should I be concerned about those marks? This class addresses all of these questions along with some interesting examples of good, bad and ugly migration. Come with questions to ask and discuss.

We will discuss the following:

- Types of CAT planetary drives - How to identify. important differences for maintenance;
- Failure modes - What has happened to others, what have you experienced::
- Accessibility without removing the rope - Safety precautions:
- What to inspect and how;
- Other failure prevention measures.

G-7 Basic Math and Physics for Lift Mechanics 101

Chuck Peterson • Tramway Engineering

The course will focus on the basics of how numbers and the combination of units of length, mass and time form the foundation of all mathematics for lift mechanic. The course will introduce simple Newtonian physics for the understanding of forces on lifts.

G-9 Advanced Ski Lift Math and Physics

Michael Lane • National Ski Areas Association

no calculator needed – over view and design understanding. The class contains a brief refresher on simple lift calculations such as capacity, speed, intervals, then moves to understand why certain Lift configurations are more costly, then expanding to what actually happens in the design process. The 201 and 301 Class for Lift Math.- an overview w/ enough detail to get you thinking.

General Session Little Shop

Michael Lane • National Ski Areas Association

Wednesday - May 8, 2019 • 9:00 a.m. • Gunnison River Ballroom

Mike will lead this session, with help from insurance, authorities, and maintenance personnel. The year in review! What went "right and wrong," trends and tips that have been noticed concerning ropeways, and the people who maintain and operate them.

Keynote How One Child's Loss Lead to Paradigm Shift in Chairlift Operations

Dave Byrd • National Ski Areas Association

Tuesday - May 7, 2019 • 8:30 a.m. • Gunnison River Ballroom

When 7-year old John Henderson died after a fall from a chairlift at Sugar Bowl Resort near Lake Tahoe in 2011, he became the first and only child fatality resulting from a fall from a chairlift in the United States. But his loss was not in vain his parents, Dr. Mark Henderson and Dr. Helen Chew worked proactively with Sugar Bowl to help the resort re-think and overhaul the resort's chairlift loading procedures, ushering in to the industry some of the most thoughtful and comprehensive practices and procedures to improve guest safety on lifts. The family's willingness to share their story and their heartache underscores their sincere commitment to improving chairlift safety for everyone, and emphasizes how Sugar Bowl turned this tragedy into a progressive chairlift safety program. We'll address this incident, unique issues with children and lifts, and how Sugar Bowl took responsible steps that became a model for other resorts to emulate.

M-1 Introduction to Wire Rope and Inspections

RJ Knight • Knight Equipment Co.

Panel with Justin Knight

Terminology, constructions, use;

How wire rope is made;

Basic inspection. What to look for during you weekly and monthly inspections.

ANSI B77 Requirements.

M-10 Old School Cardan Shaft Alignment

3-Hour Class

Brian Reihe • Vail Mountain

Panel with Ryan Portz, Vail Resorts Lift Mechanic.

This class is by Mechanics for Mechanics, This is a hands-on open discussion class, taught with an alignment simulator, Topics include: Cardan shaft overview, universal joint terms and operation, soft foot types and correction methods. Types and causes of misalignment in Cardan shafts, alignment methods for Cardan shafts, alignment preparation. Moving the machine to correct alignment, simple alignment techniques, and Cardan shaft operating angles and velocities.

Limited to 18 participants, sign up during check-in.

M-11 Fastener Basics

Dane Janek • Fastenal

The class discuss the basics of Fasteners: How they are made, how to correctly identify and measure, why fasteners fail, and how to properly use.

M-12 Hydraulic Safety Training

Rodman Flint • Enerpac

A Safety Seminar is a 1-1/2-hour semi-hands-on high-pressure hydraulic safety training class designed to bring awareness to common safety hazards of both reportable/non-reportable (OSHA & MSHA) conditions and product seen in the high force tools industry. The seminar discusses safety concerns when using 10,000psi equipment. Class participation is required in identifying and determining common misuse and proper set up. We also conduct a brief question & answer session at the end providing feedback to participants on current issues they may be experiencing. Maintenance, welding, electrical, metal working personnel will use our products. No tools are required to attend.

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M-13 Gearbox Fundamentals, Inspection & Repair

Dereck Yatzook • Artec Machine Systems

• •
Gearbox Fundamentals & Applications, Modes of Failures and preventative maintenance tips, gearbox inspection techniques, repair procedures.

M-14 Belt Drive Optimization and Maintenance

Ben Huntoon • Gates Corporation

• •
Maximize the performance and life of belt drives. Learn about the different types of belts and their application. Learn the best ways to inspect, install, and maintain belt drives. This training is for anyone that works on belt drives.

M-15 Introduction to Brakes - 101

Michael Lane • National Ski Areas Association

• •
This class will look at the different types of brakes, their physical characteristics, components, and what the B77.1 standard requires and why. The session then applies the different brake types used on ropeways and attempts to give an overview to help you understand their operation, problems, rotation inertia (energy), brake curves as encyclopedias and a few misnomers as well.

M-19 Bearings Hands-on Workshops in Failure Analysis & Part Identification - From the Manufacturer

Michael Wernke • Schaeffler Group - FAG, INA, Barden

• •
Michael Wernke, Jacob Shafter, Shawn Dunn, Description: Have you been wondering why that one bearing keeps failing or just doesn't last as long as the rest? Nomenclature got you down? What in the world is this bearing? This interactive, hands-on focused class is designed to help you understand and identify bearing parts, part numbers and manufacture nomenclature. Even when there isn't a visible part number! We will also cover the fundamentals of long bearing life, failure identification and analysis. Class will consist of short instructional presentations with the majority of your time spent working with actual bearings and real world failure examples. Bring your bearing questions, problems and examples (bearings, pictures, stories) to class to include in the discussion.

M-2 The Fundamentals of Fasteners

Jason Bourque • Bolt Depot

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*Panel with Jason Bourque and Paige Mathewson
This is an introduction to identifying and sizing fasteners. Student will learn how to distinguish fasteners by type and materials and learn how to size them. They will learn to recognize the difference between US and Metric fasteners.*

M-20 Concerned About Aging Lifts and Other Mechanical Equipment?

Neville Sachs, PE, PLLC • Neville W. Sachs, P.E. PLLC

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Many of our ski lifts are over thirty years old and much of our other machinery is aging. This presentation reviews the common causes of mechanical deterioration, including corrosion, what we can do to prevent further degradation, and some steps we can take to improve their mechanical reliability. There will be comments on the effect of corrosion and also data on the safety and planning benefits of predictive maintenance. Level II

M-21 Failure Analysis of Ski Area Mechanical Equipment With Emphasis on Shafts and Fasteners

1 1/2 hr class

Neville Sachs, PE, PLLC • Neville W. Sachs, P.E. PLLC

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After a brief review of the difference between physical, human, and latent roots (causes) of failures, the class goes into detail about how to diagnose the physical causes and includes a number of hands on examples. Much of the class is a review of a selection of ski area failures and how their diagnosis can lead to preventing additional equipment problems. Attendees are encouraged to bring failed parts to the class for hands-on analysis

M-22 Ski Area Lubrication - Where we've been and where should we be going.

Neville Sachs, PE, PLLC • Neville W. Sachs, P.E. PLLC

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A rThe class will show how lubrication works, starting with base oils and additives. then describe the lubrication of different types of bearings and sliding surfaces and the effect of contamination. After reviewing those basics, it will cover the changes in lubricants including the various synthetic oils and the grease thickeners. The last portion of the program will discuss setting up a lubrication program with suggested relubrication periods and storage practices.

M-25 Leveraging Technology for improved ski lift safety and reliability.

Mark Kyle • Park City Mountain Restort

In this workshop, we will look at how affordable existing and emerging technologies can be applied to Ski Lift Maintenance for significant improvements in crew collaboration, planning, work order management, compliance documentation, and inventory management. Learn how to create an inexpensive work order system - customized to your specific resort and way of working - that easily integrates into existing digital tools.

M-26 Splice Rigging Calculations, Know your load!

3-Hour Class

Logan Still • Vail Mountain

• •
We look at how to calculate the tension on a haul rope at he location where you plan to install the rigging for a splice or project. Both hydraulic and counterweight systems will be reviewed and how to determine the initial tension in the rope plus the additional vertical component/calculated rope weight and chairs for the location along the lift line. We will also go through reeving configurations and load calculations for the mechanical advantage they provide. At the end you should be able to calculate the load at every poart of your rig.

Please bring your cell phone with a calculator

M-27 Manual Hoists and Cranes - "What's the Deal?"

Ken Gubanich • Denver Wire Rope

• •
We will demonstrate how we inspect, repair & rebuild lever chain hoists. We will actually be taking a lever hoist apart inspect the parts, replace as necessary & re-assemble.

M-4 Lift system upgrades

Clyde Wiessner •

Wednesday - May 8, 2019 • •

I will lead a group discussion on the importance of lift system upgrades on how to justify the need and plan for the implementation of the upgrades. This plan can support the departments and companys customer satisfaction results

M-9 Old School Machinery Alignment

3-Hour Class

Brian Reihe • Vail Mountain

• •
Panel with Joe Klosterman Beaver Creek Lift Maintenance.

This class is by Mechanics for Mechanics, this is a hands-on open discussion class, and will be using an alignment simulator for instruction. Topics include; Types and causes of misalignment, alignment methods, Alignment preparation, soft foot. Moving the machine, simple alignment techniques, precision alignment. Please bring your phone with a calculator. Limited to 18 participants. Sign up during check in.

OP-1 ANSI B.77-2017; Using the Updated Standard

Paul Rauschke • The Ursus Group

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We will focus on the 2017 B77.1 standard as it applies to the operational responsibilities of your supervisors, operators and attendants. You and your staff need to navigate,comprehend and apply the fundamental language of the 2017 standard for operations and record keeping. Alignment of the language of your ski areas documents incl. titles, job descriptions and responsibilities will be addressed. Participants are encouraged to submit "blind" copies of their documentation for use in class

OP-10 Lift Operations Roundtable

Jeff Marzka • Park City Mountain Resort

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Wrap up the first day of the RMLA Conference by attending this class ! This session will serve as a sounding board for Lift Operations Supervisors and Managers to get answers to those troubling questions that have arisen over the past season. Bring your questions and problems and we can discuss potential solutions that other areas have tried. Have an idea for a class that you would like to see at a future Conference? This is a great opportunity to present your idea and get input from others in the Industry. Everyone is encouraged to attend! This session will be followed by an informal meet & greet in the Whitewater Room and Convention Center Lobby.

OP-11 Ramp design and operator ownership of the lift system

Clyde Wiessner •

• •
I will lead a group discussion on the importance of ramp design to the operation as related to guest experience and how lift operators that take ownership of the lift systems can support the departments guest satifaction goal

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OP-12 Employment Law

Jessica Caskey • Taos Ski Valley, Inc.

You don't have to be a lawyer to know how to stay out of court. Join me for *Employment Law Basics* and learn the "what not to dos" of being a manager!

OP-13 Leadership for Lift Operations

Roxanne Hoover • Granby Ranch

Explore your role as a leader by transforming from manager to coach. In this session you will learn more your leadership style, understanding key leadership skills and functions, and discovering skills and characteristics of an effective coach as a leader.

OP-2 Summer Operations Round Table

Kyle Gornell • Steamboat Ski & Resort Corporation

A round table discussion about summer operations. This class will be a discussion about the challenges of summer.

OP-3 Guest Services: Training and Techniques

Kyle Gornell • Steamboat Ski & Resort Corporation

This class will be a hands-on approach of different techniques to train employees on how to provide excellent guest service. The class will participate as a group to go over training techniques, exercises, and activities.

OP-5 Employee Wellness and Its Effects on Performance and Retention

Darren Northwood • Park City Mountain Resort

Tips and tools to make you the most popular manager at the mountain

OP-7 OSHA and how it relates to the workplace.

Ashley Ryland • Taos Ski Valley, Inc.

Be an OSHA Champion. Make OSHA less daunting with our 2018 updates, tips for surviving an inspection and great ideas for setting your teams up for success!

SF-1 Safety Fundamentals

Anthony Rice • Fastenal Company

The fundamentals of safety will be discussed

SF-2 Optimizing Your Employee Safety Culture to Improve Performance and Guest Satisfaction

Greg Weatherby • HPI Safety Systems, LLC.

As resort recreational opportunities expand into year-round operations, employee and guest safety is quickly becoming a key factor in the bottom line of our industry. A strong safety culture makes a critical contribution to how a resort is perceived by both workers and those who choose to spend their time and money with us. This session is designed to acquaint attendees with what a successful safety culture looks like, how to achieve it, and how to measure the maturity of your own program. Join us for this highly interactive session and leave with tools that you can use immediately to improve your bottom line.

SF-3 New Innovations in Fall Protection: How to rescue a worker, OSHA Ladder safety Standard and Inspector Course (3.0 hrs)

Matt Schmidt • Shur Sales & Marketing, Inc.

This is an advanced fall protection class w/ focus on how to rescue a worker along with an equipment inspector class.

SF-4 Leadership in Safety

Darren Northwood • Park City Mountain Resort

This discussion will include leadership lessons, mitigating risks, overcoming obstacles, and improving on wins and opportunities.

Part - 1 will focus on creating a safety culture. This starts with self-awareness and how to set the tone for your team. Then we will discuss how to analyze your team and find the areas where change and influence can occur.

Part - 2 will be a leadership discussion with safety being the focus. It will break down how to strategically assess risks and mitigate them, how your team's focus can lead to complacency, and how to manage safety policies effectively. It will end with a discussion on evaluating performance, and utilizing that data to make improvements.

SP-L Leitner-Poma Control Systems and Schematics, and Trouble Shooting

Andy Barber • Leitner-Poma of America

SF-6 3hr - Basic Avalanche Safety for Lift Maintenance Personnel

Halsted Morris • American Avalanche Association

This classroom avalanche course is for both veteran and new ski area personnel that are exposed to avalanche dangers. The course will cover, how and why avalanches happen, what you can do to recognize the clues and signs that the avalanche hazard is increasing, what to do to avoid being caught in one, and what to do if you or a colleague is caught in an avalanche. All of this information applies to both on the job and recreating activities where ever you may be skiing or boarding. Getting basic avalanche education is the key to not becoming a victim.

SF-8 Conveyor Round Table

Scotty Uren • Arapaho Basin

Scott Uren, Cindy Olson, Dave Kelley, Conor Rowen
Conveyors are a critical tool for our business. It is also a tool that doesn't always garner the respect it deserves. This round table will allow us to discuss the issues that affect both operations and maintenance teams in regards to how we operate and maintain conveyors. This is a closed session, only ski industry personnel and vendors are welcome.

SP-1 Crosby Factory Training Course End User Training

Paul Skladzien • Crosby

Monday - May 6, 2019 • •

See Outline for class.

SP-3 Advanced Welding Class

Ashley Johnson • Breckenridge Ski Resort

• 10:30 a.m. •

(1) A round table type of discussion could be beneficial to all. Lots of different experiences to learn from I'm sure.

(2) Tips and tricks for out of position welding.

(3) Crack repair techniques and procedures. Repairing cracks properly-a poorly executed "repair" can cause further damage and cracking.

(4) Open root full penetration welding. Most structural welders have only been taught and tested on weld joints using a backing plate behind the root pass.

(5) Understanding engineered repair weld procedures and AWS code. We have to follow the procedures for liability reasons but also need to make good, permanent repairs. I really need to talk with a lift engineer (or lawyer?) about this. Many weld procedures are pretty generic and do not allow for the best results (in my opinion).

(6) General welding info and education that may have been missed or forgotten. Lift mechanics do not weld every day. This means all of the little details are that much more important.

SP-4 Mental Health First Aid Certification Course

Tom Gangel • Mind Springs Health

Monday - May 6, 2019 • 8:30 a.m. •

YOU WANT TO HELP - LEARN HOW.

One in four Americans has suffered from a mental health problem. That's a staggering statistic. To put it in perspective, that's more people than effected by heart disease, lung disease and cancer combined. But there is hope. And it is you. Through our certification course, you'll become a mental health first aider. We'll teach you how to respond to someone with a mental health challenge. Challenges that include depression, suicide, substance abuse, eating disorders and panic attacks to name few. You'll learn the signs, evidence-based actions and how to connect those in crisis to support systems that can help them recover. It's like CPR. But for mental health.

- Lunch will be provided

SP-D Ropeway Control Systems - DC Signals and Circuits

Shawn Marquardt, P.E. • Doppelmayr USA, Inc.

Monday - May 6, 2019 • 8:30 a.m. • Kannah Creek

This course is intended for the lift mechanic who would like a better understanding of the theory behind 24Vdc electrical control systems and how to troubleshoot them. The day will be split into two sessions. Morning coursework will include an introduction to basic DC electrical theory and safety, a review of multimeter functions and their usage in troubleshooting, and an in-depth look at common electrical components and their operation in control systems including buttons and switches, relays and contactors, and the use of digital input and output signals. The reading and understanding of Doppelmayr electrical schematics will also be a focus using examples from recent installations but specific questions pertaining to older equipment (including CTEC and Garaventa CTEC installations) can be addressed as time allows. The afternoon will be devoted to hands-on experimentation during which participants will progress through supplied workbooks to wire and troubleshoot their own circuits. Lunch will be provided.

Monday - May 6, 2019 • 8:30 a.m. • Leitner Poma Factory

Recognizing electrical schematic symbols, following circuits using cross references. Relay, switch, and push button logic. Understanding processes from different control

circuits. Identifying severity of fault situations, where to start, staying on the path, and what to do when you find the problem. Understanding fault codes, annunciator texts, matching fault code with electrical schematics and troubleshooting based on fault codes.
- Lunch will be provided.

SV-1 Small Ski Area Roundtable

Andy Birch • Ski Granby Ranch



This class is designed as a outlet for small ski areas to bring forth problems or issues that affect smaller ski areas in the realm of Operations.

SV-10 Managing Emotions in the Workplace

Jessica Caskey • Taos Ski Valley, Inc.



We're all human...so why don't we act like it in the workplace? Learn how to bring your whole self to work and navigate the rough waters of emotions.

SV-11 Communicate - It's the most important thing you will do all day.

Roxanne Hoover • Granby Ranch



This session will explore the importance of communication for accountability, motivation, and engagement as well as effective communication skills for navigating difficult conversations

SV-7 Recent Lift-Related Litigation & the Risk Management Take-Aways

David Byrd • MountainGuard Insurance



Claims and lawsuits related to chairlift operations and guest injuries are common and can often be challenging to defend—eating into your insurance deductible . With an emphasis on smart prevention instead of post-incident reactions, this session will analyze some recent chairlift related claims from around the industry in the U.S. and Canada, and will examine some of the alleged errors and negligence. More importantly, understanding these incidents will help ski areas learn to adopt better practices and policies to implement, better training, and improve their overall lift operations—as well as the importance of cross-training within and between other resort departments like ski school, race teams and special events, and mountain operations.

SV-8 Mental Health in the Workplace - 101

Ashley Ryland • Taos Ski Valley, Inc.



Mental Health may seem like a complicated subject but it doesn't have to be! Let's break it down and teach you tips and tools you can take back to your teams to be able to recognize and support those going through difficult times

SV-9 Courageous Conversations

Jessica Caskey • Taos Ski Valley, Inc.



Depending on your role in a situation, you may need to muster up the courage to do the speaking, or you may need to humble yourself to do the listening. As Winston Churchill said "Courage is what it takes to stand up and speak; courage is also what it takes to sit down and listen." - let's work on both, together!