

ARRC Safety Operating Manual

INTRODUCTION

This manual provides basic mandatory rules to protect your health and safety. The rules and procedures in this manual cannot cover every possible work situation and are a supplement to GCOR, MOM, ARRC Time Table, ARRC Written Operating Practices, Safety Programs and Safety Policies. All rules, referenced ARRC written policies, programs and operating practices are enforceable.

This 2013 ARRC Safety Operating Manual includes the most current information available. Changes may be made to this document on an as needed basis. When changes are made to this manual a bulletin will be issued for insertion into this manual. Supervisors will furnish the bulletins to employees and it is the responsibility of the employee to ensure manuals are kept up to date.

Any change to a safety rule must be approved by the ARRC Rules Committee. The Rule Committee will consist of; The Director of Safety, Manger of Safety, Road Foreman of Engines, Manager of Car Operations, Superintendent of Maintenance, Director of Safety, Rules and Operating Practices, and Manager or On-Track Operating Practices.

Requests for rule changes or modifications will be submitted via the Rule Review Process. All rule change petitions concerning the ARRC rulebook will be assigned to the ARRC Rules Committee for review. Requests for change may be mailed or faxed (265-2413) to the ARRC Safety Department.

Effective Date - February 1, 2014

ARRC Safety Operating Manual

PILLARS OF THE ARRC SAFETY PROGRAM

All employees must ensure that they and their coworkers follow all safety practices and procedures, and that the proper tools and equipment are utilized.

No job is so important, no service so urgent, that we cannot take the time to perform our work safely.

All employees must communicate and work cooperatively to prevent personal injuries and property damage.

All employees are expected to take personal responsibility to work safely and follow all safety practices and procedures that are established for the protection of themselves, their fellow employees, passengers, customers and the public.

All incidents of injury, illness, or property damage must be reported to management immediately so that they may be fully investigated and corrective action can be taken to prevent similar occurrences.

All employees are required to correct or protect and report any unsafe condition that could affect the well-being of the employee, a co-worker, passenger, customer, the public or that could damage railroad property.

You are the only person who can guarantee that you will perform your work safely. Safety is the backbone to the ARRC business model and must be fully ingrained into our working culture. When on duty:

- Protect yourself, fellow employees, the public and property.
- Correct or protect any dangerous conditions or unsafe practices and report them to your supervisor.
- If in doubt about the meaning of any rule or instruction, contact your supervisor for an explanation.
- A job safety briefing must be conducted before beginning any work which could pose a risk to the wellbeing of any employee, customer, property or the public. The job briefing is complete only when each employee or contractor understands all procedures and instructions.

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SAFETY RULES

S43.0 General Safety Rules - Applicability

This section is applicable to employees not governed by GCOR or MOM rule. Where employees are governed by GCOR or MOM rules, but GCOR and/or MOM are silent regarding a matter covered by these rules, these rules shall apply. ARRC Safety Policy, Procedures and Programs apply to ALL employees regardless of the department for which they work.

S43.1 General Safety

Safety is the most important element in performing duties. Obeying the rules is essential to job safety and continued employment.

S43.1.1 Job Safety Briefings

Conducting a job safety briefing:

- ARRC employees (and contractors, where applicable) must participate in a job safety briefing at the beginning of each work shift.
 - If conditions or work plans change during that work shift, a job safety briefing to address those changes must be conducted.
 - If a new member enters the workgroup after the job safety briefing has been held, the new member shall receive a safety briefing from the workgroup supervisor.
- The job safety briefing shall include, but not limited to, the following:
 - The task(s) to be performed during the work shift
 - Personnel, tools and equipment to accomplish the task
 - Areas of responsibility
 - Hazardous conditions
 - Safety precautions
 - Site communication
 - Contingency plans, if applicable

The job safety briefing is complete only when each employee or contractor understands all procedures and instructions.

Office and administrative employees shall participate, at a minimum, in a weekly job safety briefing to be provided by department supervision. The briefing shall consist of job safety topics associated with the employees' job duties, job environment or other relevant safety topics.

All ARRC employees shall have access to and read the weekly published Rules of the Week. These rules shall be made available via hard copy for those employees without access to the ARRC employee portal.

S43.1.2 Maintaining a Safe Course

In case of doubt or uncertainty, employees must take the safe course.

S43.1.3 Alert and Attentive

Employees must be careful to prevent injuring themselves or others. They must be alert and attentive when performing their duties and plan their work to avoid injury.

S43.1.4 Safe Behavior

All employees shall adhere to written or verbal operating instructions and standard operating procedures while performing their duties. Deviation from these instructions places employees at risk and shall not be tolerated.

Horseplay shall not be tolerated in any area where employees are conducting official ARRC business. Horseplay includes but is not limited to fighting, quarrelling, playing practical jokes, wrestling or hazing.

S43.1.5 Condition of Equipment and Tools

Employees shall inspect the condition of all hand/power tools, and powered equipment prior to their use. If any tools or powered equipment are found to be defective or unserviceable they shall be removed from service and tagged to prevent their use. Supervisors shall be informed the same day the tool(s) are removed from service and shall ensure the tools are repaired or replaced accordingly. Specific tool or equipment serviceability criteria will be maintained by the owning department.

At no time shall any employee remove or tamper with an installed safety system or device, except when performing required maintenance.

Tools shall only be used for the purpose of which they were designed.

S43.1.6 Housekeeping

- All walkways shall be kept free of debris, equipment, tools, boxes or anything that could pose a tripping hazard or impede traffic.
- Standing or spilt water, oils, greases and any other liquid slip-hazards shall be cleaned immediately. Caution signs shall be used for slippery areas.
- If power or pneumatic cords, hoses, or cables must be laid across a walkway they must be covered if at all possible to avoid tripping hazards. If the cords cannot be covered, a warning sign or device must be used as a warning to others.
- Emergency exits shall not be blocked at any time.
- Emergency Eyewashes, AED's, and First Aid Kits shall be maintained in a clean state and accessible at all times.
- Boxes shall not be stacked within 18 inches of any ceiling in an ARRC facility.
- Stairwells will not be used for temporary or permanent storage.
- Materials will be stacked in a manner ensuring they will not tip or fall.
- Facility entryways will be kept free of debris or standing water.
- Workstations shall be maintained in a state that does not pose a hazard to any other ARRC personnel.
- Do not store any material in an electrical panel.
- All electrical panels must have 36 inches of clearance in front of the panel.
- Isle ways between storage shelving shall be maintained at a width of 28 inches or greater.
- Overhead storage of materials on non-load rated ceilings or unguarded (railings and toeboards) elevated floors/landings is forbidden.
- Floor openings of greater than 1 inch shall be guarded until the gap is repaired.
- All industrial shelving will have the manufacturer's load rating stenciled on the cross beams.
- Consuming food and drink is restricted to lunch/break rooms in ARRC industrial shop facilities. No food or drink shall be consumed where hazardous materials are used.

S43.1.7 Contractors and Visitors

All contractors and visitors must be informed of any hazards associated with the area they are working in or visiting. This initial safety orientation will be provided by the hosting department.

While on property contractors and visitors must:

- Comply with applicable ARRC rules and policies, and with local, state, and federal laws and regulations.
- Check in or sign in upon arrival at ARRC property, as appropriate to the location.

- Conduct site- and task-specific job safety briefings with any ARRC employees prior to entering the work area.
- Meet or exceed minimum personal protective equipment as required by AKOSH and OSHA.
- Wear additional task-specific personal protective equipment as required by contractor's own safety plan or procedures.
- Protect against and/or report unsafe acts and conditions to ARRC immediately.
- Meet or exceed all requirements of the Roadway Worker Protection standard, if working on or about the tracks.

S44.0 Authorized and Trained

ARRC employees shall perform job tasks only when authorized and trained to perform them.

S45.0 Aerial Baskets and Lifts

S45.1 General

When working from scissor lifts and boom-mounted baskets or buckets:

- Only qualified and authorized employees shall operate equipment.
- Conduct required daily inspection of equipment.
- Ensure equipment has an annual inspection certificate.
- Check pathway and overhead for obstructions before operations.
- Always stand firmly on the floor and do not sit or climb on the edge of the platform or use planks, ladders or other objects to increase reach.
- Do not exceed the manufacturer's rated safe load.
- Do not modify the equipment without prior written approval from the manufacturer.
- Do not move an occupied aerial lift device unless equipment is designed to be moved while occupied.
- Protect work zones; within the boom radius or below the platform or scissors lift with one or a combination of the following: cones, barrier tape, watchman or equivalent.
- Scissor lifts require fall protection when the gate is opened.
- Man lift occupants must wear fall protection at all times.
- Attach safety harnesses only to anchor points that meet Fall Protection requirements.

S45.2 Working On or Near Power Lines

When a qualified person is working in the vicinity of overhead lines, whether in an elevated position or on the ground, the person may not approach or take any conductive object without an approved insulating handle closer to exposed energized parts than shown in [Table S-5](#) unless:

- The person is insulated from the energized part (gloves, with sleeves if necessary, rated for the voltage involved are considered to be insulation of the person from the energized part on which work is performed), or
- The energized part is insulated both from all other conductive objects at a different potential and from the person, or
- The person is insulated from all conductive objects at a potential different from that other energized part.

Table S-5 Approach distances for qualified employees—alternating current

Voltage range (phase to phase)	Minimum approach distance
300V and less	Avoid contact
Over 300V, not over 750.V	1 ft. 0 in. (30.5 cm)
Over 750V, not over 2kV	1 ft. 6 in. (46 cm)
Over 2kV, not over 15kV	2 ft. 0 in. (61 cm)
Over 15kV, not over 37kV	3 ft. 0 in. (91 cm)
Over 37kV, not over 87.5kV	3 ft. 6 in. (107 cm)
Over 87.5kV, not over 121kV	4 ft. 0 in. (122 cm)
Over 121kV, not over 140 kV	4 ft. 6 in. (137 cm)

S45.3 Vehicular and Mechanical Equipment near Energized Lines

Any vehicle or mechanical equipment capable of having parts of its structure elevated near energized overhead lines shall be operated so that a clearance of 10 ft. (305 cm) is maintained. If the voltage is higher than 50kV, the clearance shall be increased 4 in. (10 cm) for every 10kV over that voltage. However, under any of the following conditions, the clearance may be reduced:

- If the vehicle is in transit with its structure lowered, the clearance may be reduced to 4 ft. (122 cm). If the voltage is higher than 50kV, the clearance shall be increased 4 in. (10 cm) for every 10kV over that voltage.
- If insulating barriers are installed to prevent contact with the lines, and the barriers are rated for the voltage on the line being guarded and are not a part of or an attachment to the vehicle or in a raised structure, the clearance may be reduced to a distance within the designed working dimensions of the insulation barrier.
- If the equipment is an aerial lift-insulated for the voltage involved, and the work is performed by a qualified person, the clearance (between the uninsulated portion of the aerial lift and the power line) may be reduced to the distance given in Table S-5.

If any vehicle or mechanical equipment capable of having parts of its structure elevated near energized overhead lines is intentionally grounded, employees working on the ground near the point of grounding may not stand at the grounding location whenever there is a possibility of overhead line contact. Additional precautions, such as the use of barricades or insulation, shall be taken to protect employees from hazardous ground potentials, depending on earth resistivity and fault currents, which can develop within the first few feet or more outward from the grounding point.

S45.4 Employee Proximity to Vehicle or Equipment near Energized Lines

Employees standing on the ground may not contact the vehicle or mechanical equipment or any of its attachments, unless:

- The employee is using protective equipment rated for the voltage; or
- The equipment is located so that no uninsulated part of its structure (the portion of the structure that provides conductive path to employees on the ground) can come closer to the line than permitted in Table S-5.

S46.0 Air Hoses and Angle Cocks

S46.1 General

When required, establish proper RED ZONE (see Rule 65.3 for RED ZONE) or BLUE SIGNAL PROTECTION for your task prior to coupling/uncoupling air hoses by hand or opening/closing angle cocks.

S46.2 Air Hoses

S46.2.1 Coupling Air Hoses

Communicate with your crew members to ensure a complete understanding of the work being performed. If yard air or an air supply hose is coupled to cars, disconnect air supply before coupling to cars. Treat all air hoses and angle cocks as if they are under pressure.

To couple the air hoses:

- Make sure equipment is stopped and slack has adjusted.
- Ensure good footing when going between equipment.
- Assume a balanced stance that will enable you to quickly step out from between equipment in the event of an unexpected movement.
- If possible, keep one foot outside the rail.
- Before coupling air hose, inspect the hose coupling to ensure they are free of dirt, snow and ice and that the gaskets are in place and not damaged.
- Firmly grasp the air hose nearest you directly behind the gladhand and bend it upward.
- Grasp the farthest hose, pull toward the bent hose and inspect the gasket.
- Match the gladhands into opposite contoured slots and push them downward.
- Make certain that the gladhands are seated before applying air.
- Do not kick or strike at air hoses to stop a leak.
- Do not make any adjustments to air hoses without first closing both angle cocks.

Passenger Car Exception:

- Always reduce Brake Pipe pressure to zero (0) psi before coupling hoses and opening angle cocks on passenger equipment.

S46.2.2 Uncoupling Air Hoses

When practicable, separate equipment to allow hoses to part.

When it becomes necessary to uncouple air hoses by hand;

- Close both angle cocks.
- Crouch down and firmly grasp each gladhand near the coupling.
- Turn your head slightly away from the coupling to protect your eyes.
- While bracing your hands/arms against your leg, pull upwards on the gladhands slowly, allowing air to escape, until they separate from the other.

S46.3 Angle Cocks

S46.3.1 General

At no time shall an employee open or close an angle cock by reaching across or placing any part of their body on or over a draw bar.

OPENING ANGLE COCKS WHEN AIR HOSES ARE NOT COUPLED OR VENTING BRAKE PIPE AIR

When it becomes necessary to open an angle cock and it is unknown if air pressure is present or to vent brake pipe air on a car manually, use the following procedure:

- TREAT ALL ANGLE COCKS AND AIR HOSES AS IF THEY ARE UNDER PRESSURE
- Keeping one foot outside of the rail, face the equipment and grasp the air hose with your left hand behind the gladhand.
- Hold the hose firmly against the outside of your leg.
- Point the gladhand (exhaust) away from you.
- Turn your head slightly away from the hose.
- Slowly open the angle cock with your right hand.

S46.3.2 Opening Angle Cocks

When opening angle cocks, unless other safe guards are provided, communicate with your crew members to understand the work to be performed.

- When opening angle cocks keep one foot outside of the rail and place your left leg against the air hose.
- Lift up on the handle and slowly turn to the open position. To protect yourself while opening the angle cock, turn your head slightly away from the coupling.
- Do not use excessive force.
- Listen for escaping air, which indicates a faulty coupling which may come apart under pressure.

- Never kick or strike at air hose(s) to stop a leak
- If an air leak is discovered, close BOTH angle cocks and ensure pressure in the hoses is fully depleted before attempting adjustment or repair.
- Make sure the angle cock is in the fully open position and handle is in the locking slot or against the stopping lugs.
- *NEVER leave an angle cock in the partially open or partially closed position.*

Passenger Car Exceptions:

- Reduce Brake Pipe pressure to zero (0) psi before coupling hoses and opening angle cocks on passenger equipment.
- When opening angle cocks on passenger equipment keeping one leg outside the rail is not required.

46.3.3 Closing Angle Cocks

When coupling air hoses or opening angle cocks, unless other safe guards are provided, communicate with your crew members to understand the work to be performed and provide RED ZONE PROTECTION.

- When closing angle cocks keep one foot outside of the rail.
- Lift up on the handle and turn to the closed position.
- Do not use excessive force.
- Make sure angle cock is in the fully closed position and handle is in the locking slot or against the stopping lugs.
- Never leave an angle cock in the partially closed or partially open position.

Passenger Car Exceptions:

- When closing angle cocks on passenger equipment keeping one leg outside the rail is not required.

46.3.4 Stopping Movement

Open the angle cock on the trailing end of a moving car or engine to stop movement only in an emergency.

S47.0 Avoiding Passing Equipment

S47.1 General

- When between or near tracks, watch for trains, cars, locomotives, and other moving equipment. Expect equipment to move at any time, on any track, in either direction.
- When it becomes evident that equipment will be passing, move to a safe location and warn others of the equipment's movement.

- Do not rely on others to warn you of approaching trains, engines, or other equipment unless employees have been specifically assigned to provide warning.
- When trains or equipment are approaching or passing in either direction:
 - Keep at least 25 feet from all tracks, if possible. Do not stand on adjacent track when trains are passing.
 - Exceptions:
 - During low speed terminal/barge operations
 - While on passenger platforms
 - Keep far enough from the track to prevent being struck by protruding or falling objects.
- After equipment has been signaled to stop, keep clear of the track until the equipment has stopped and slack adjusted.

S48.0 Batteries

S48.1 General

- Always wear safety glasses when working with industrial batteries.
- Discharged batteries release hydrogen gas which is very flammable.
- When removing a battery, disconnect the negative terminal first.
- Never leave metallic tools on the battery terminals.
- When working with or near a battery, do not smoke, use open flames, or create a spark.
- Keep battery and area free of metal or debris.
- Dispose of batteries properly. Disposal questions can be answered by the ARRC Environmental Department.

S48.2 Charging Batteries

- Only charge a battery with an approved charging system.
- Attach the battery charger's cables to the battery before plugging the charger into your 120 volt outlet.
- Do not attempt to charge a frozen or damaged battery.
- Follow all manufacturer's directions and precautions for charging.

S48.3 Jumping Vehicle Batteries

- Always hook up the jumper cables to the car with the dead battery first to avoid creating an electrical spark (arc). Failure to follow this could result in the discharged battery exploding causing injury, death or disfigurement.
- Always turn off all ARRC company vehicle two-way radios.
- Follow manufacturer specific directions in the vehicle owner's manual.

S48.4 Maintaining Batteries

- When adding distilled water to batteries, wear acid resistant gloves, face shield and apron.
- Ensure you are within 10ft of a 15 minute or continuous-flow eye wash station
 - If using a portable bottle you must be within 100ft of a 15 minute or continuous-flow eye wash station.
- Never overfill a battery.
- If battery overflows, follow shop spill clean-up procedures.
- Follow all manufacturer instructions.

S49.0 Blocking and Jacking

S49.1 General

When using jacks without a locking mechanism, blocks or jack stands must be used to support equipment.

- Confirm that:
 - Jack is properly marked and of sufficient capacity for the weight to be lifted.
 - Jack is properly positioned for the lift.
 - Blocking or jack stand is free of defects.
 - Blocking or jack stand is sized and positioned properly for the job.
- Clear surface of any materials that could shift and cause the jack, block or stand to move
- Choose a flat surface for jacking operations
- Do not jack metal against metal unless using track jacks to raise, spot, surface, or line track.
 - This does not apply to light duty vehicles. Follow all manufacturers' instructions.
- Do not go under, in, or work on equipment not properly supported or in the process of being raised or lowered.
- Before lifting any piece of equipment from one end, block the opposite end wheels.
- Ensure area under elevated equipment is free of obstructions prior to lowering.
- Conduct and document required jack inspections as per manufacturer's specifications.

S50.0 Chocks and Skids (Rail Equipment)

S50.1 General

When applying or removing a wheel chock or wheel skid, work only from the side of the equipment. Keep fingers and hands clear of the wheel tread and top of the rail. Only use devices specifically designed to be utilized as a wheel chock or skid. When applying a chock to secure a car or locomotive, use only approved chocking device or a wooden chock that is in suitable condition and does not exceed 24 inches in length. Do not use a spike, bolt, angle bar or tie plate as a chock.

S50.2 Applying a chock

- Do not apply chock until the movement has stopped and the slack has adjusted.
- Wedge the chock between the rail and the wheel to prevent the wheel from moving in the undesired direction.

S50.3 Removing a chock

- If necessary, signal the employee at the controls of the engine or equipment to move the car, locomotive or equipment off the chock.
- After the equipment stops, remove the chock and place it where it will not present a tripping hazard.

S50.4 Wheel skids

- Use wheel skids in place of chocks when required by local instructions or SOPs.
 - A skid may always be used in place of a chock but a chock may not be used where a skid is required.
- Place the skid on the ball of the rail and slide it into place wedging it between the rail and wheel.
- Ensure that there is no gap or exposed rail between the point of the skid and the wheel
- Wheel skids are designed to work safely on all tracks, even where wood, gravel, or asphalt are level with the ball of the rail.
- After applying a skid, display a “wheel skid in use” sign on the rail ahead of the secured car(s).
- When not in use, ensure skids and signs are stored in designated locations.
- Do not use wheel skids to secure locomotives.

S51.0 Crossing Over/Through Railcars or Locomotives

S51.1 Moving Equipment

- Do not cross through, crawl under, sit under, or lie under moving cars, unless required in performance of your duties and proper protection has been provided.
- Do not cross from side to side or between coupled railcars except for locomotives and passenger equipment.
 - Crossing between coupled locomotives is forbidden at speeds greater than 40 MPH.

S51.2 Standing Equipment

Do not cross through a standing train or cut of cars, unless required in performance of your duties. When crossing through, unless other safe guards are provided, communicate with your crew members to understand the work to be performed and provide RED ZONE PROTECTION. If you must cross through standing equipment:

- Avoid carrying items, including tools, grips, and material. You may carry a trainman's lantern.
- If possible, cross over on cars whose ends have handholds and a crossover platform.

Exceptions:

- You may cross through a standing train on a flat car not equipped with crossover platforms or chest high hand holds *only if*:
 - Crossing is absolutely necessary, and you are certain the equipment will not move.
 - When no car with a handhold and platform for crossing is within sight distance, you may, if safe to do so, cross over using end of car structure bracing to maintain three point contact. If no structural bracing is available, DO NOT CROSS THROUGH.
- Be prepared for the equipment to move. Maintain three-point contact at all times (two feet and one hand *or* two hands and one foot).
- Do not place hands, feet or other parts of body onto the coupler, striker casting, sliding center sill, coupler shank, angle cock, train line, or uncoupling lever.
- Cross underneath standing cars or trains only if you are making repairs and when proper safeguards or protection have been provided. When required to cross under cars, cross under the car as close to the middle as possible.
- Stepping from or to a car without a platform is prohibited.
- Stepping from one car platform to another is permitted only if it can be done safely and the proper protection against movement has been provided.
- Except when crossing from locomotive to locomotive or between passenger equipment, employees shall not climb over couplers or underneath standing cars.
- Do not lean against standing equipment.

S52.0 Coupling and Uncoupling Rail Equipment

S52.1 General

- Do not attempt to couple a car or engine to another piece of equipment, unless the couplers are in line with each other and at least one knuckle is open.
- Prior to coupling, ensure equipment is secured to prevent movement.
- To adjust a mismatched coupler or to open a knuckle follow this procedure:

- Stop the movement.
- Allow a safe distance, not less than 50 feet, for working room between equipment.
- Establish RED ZONE protection.
- Wait for movement to stop and slack to adjust. Be alert for unexpected movement from liquids sloshing in tank cars.
- Check for other movements on the same track on which you are working.
- Be aware of what is going on in your area. If you detect any movement of equipment, step clear immediately.
- Make the necessary adjustments as follows:
 - Check for good footing and hand holds.
 - Keep fingers and hands out of pinch points.
 - Check to make sure the knuckle is secured by a knuckle pin.
 - Feet and legs must be kept clear of area directly beneath the knuckle.
 - Use good body mechanics when manually adjusting couplers.
 - Do not lift the full weight of the coupler.
 - Do not kick the coupler or use your foot to make adjustments.
 - Obtain help if you cannot make the adjustments without strain or exertion. Do not overexert and NEVER APPLY EXCESSIVE FORCE.
 - Step clear of equipment watching for movements on adjacent tracks.
 - After coupling equipment, stretch the coupling by moving the locomotive in the opposite direction a sufficient distance to ensure all couplings are made.

S52.2 Knuckles

S52.2.1 Opening Knuckles

Open a knuckle using the following steps:

- Check for good footing and handholds.
- Do not place your leg or foot where the knuckle might fall on it. Do not stand in front of the coupler to adjust or open the knuckle.
- Check for broken or missing knuckle pins to prevent the knuckle from falling to the ground when it is opened. If you remove the knuckle pin, replace it or provide a safeguard to prevent injury to others.
- Lift the uncoupling lever the full length of travel in one non-stop motion to open knuckle.
- If the knuckle fails to open follow these steps:
 - Establish RED ZONE PROTECTION.
 - Stand to one side, rather than in front of coupler with one foot outside the rail.
 - Verify that the knuckle pin is in place. If the knuckle pin is missing the knuckle will fall out when opened.
 - Keep foot and leg from underneath coupler and knuckle.
 - Lift the uncoupling lever with left hand.
 - Face equipment and pull the knuckle to the fully open position with your right hand, keeping clear of pinch points.

S52.2.2 Replacing Knuckles

- Ensure equipment will not move and allow a safe distance of not less than 50 feet between equipment.
- Establish RED ZONE PROTECTION.
- Remove the pin and place it within easy reach.
- Keep feet clear of the area under the coupler.
- Lift the uncoupling lever with one continuous motion allowing knuckle thrower to eject knuckle.
- If the knuckle is not ejected, remove the knuckle or any remaining knuckle fragments from the coupler. Always use good body mechanics for any lifts.
- Place the knuckle or fragments in a safe location to prevent a tripping or train operation hazard.
- Hold the uncoupling lever up, blocking if necessary.
- Move the knuckle thrower back into the coupler recess as far as it will go.
- Ensure the knuckle to be replaced is of the same type (E, F or H).
- Carefully lift the knuckle watching for pinch-points and place it into the coupler pocket.
- Carefully insert the knuckle pin into the knuckle pin hole.
- Close knuckle, check to see that it locks properly.
- Open knuckle checking for proper operation and that it does not bind or foul.

S52.3 Uncoupling Levers

S52.3.1 Operating Uncoupling Lever on a Rail Car

- Face the direction of movement.
- Use your hand nearest the equipment to operate the lever.
- Watch for pinch points or other hazards.
- Place your hand on the portion of the uncoupling lever designed as the handle.
- Use constant, steady pressure when operating the uncoupling lever. Do not jerk.
- Do not use feet to operate uncoupling lever.

S52.3.2 Operating Uncoupling Lever on a Locomotive

- If operating from the ground, face the locomotive and use the lower and/or upper portion of the uncoupling lever.
- From the locomotive step, use the upper portion of the uncoupling lever.
- Place your hand on the portion of the uncoupling lever designed as the handle.
- Watch for pinch points or other hazards.
- Use constant, steady pressure when operating the uncoupling lever. Do not jerk.
- Do not use feet to operate uncoupling lever.

S52.4 Adjusting Lift Pin (Lock Block)

Do not insert your fingers through the hole at the bottom of the coupler to assist in raising the lock block to open the knuckle. Always use the uncoupling lever designed for this purpose.

S53.0 Compressed Air

S53.1 General

- At no time shall any employee point at or discharge any type of compressed air equipment on themselves or others.
- Direct airflow away from clothing, body, and open containers.
- Air nozzles shall meet OSHA requirements.
- Verify all fittings are secure prior to use.

S54.0 Compressed Gas Cylinders

S54.1 General

- When moving cylinders by crane, derrick, or hoist, use only approved slings, securing devices, and racks.
- All gas cylinders shall be upright and secured against movement when used, stored, or transported.
 - Gas cylinders may also be stored horizontally if they are in an approved horizontal storage cage.
- Store backup cylinders in cool, well-ventilated building or other locations that are protected from direct sunlight and buildups of snow and ice.
- When storing, separate oxygen cylinders from acetylene cylinders by either:
 - A distance of at least 20 feet or,
 - A barrier of noncombustible material at least 5 feet high with a fire resistance rating of at least 1/2 hour.
- Prior to transporting cylinders on the highway: Remove gauges and regulator and attach the valve cap, attach approved clamshell type caps, or enclose cylinders in cabinets.
- Keep a leaking cylinder away from sources of ignition. Tag and mark the cylinder to indicate the defect so that the supplier can correct the problem and no other employee uses the product.
- Keep cylinders away from sparks, hot slag, open flames, and other possible sources of excessive heat.
- Do not discharge any cylinder in the direction of yourself or others.
- Do not substitute oxygen for compressed air source.
- Cylinder valves must be closed when not in use.

S55.0 Confined Space Program

S55.1 General

This section applies to all ARRC employees whose job requires entry into a confined space.

- All employees shall follow the ARRC confined space program elements.
- Prior to entering a confined space the supervisor shall validate the type of confined space by referring to the ARRC confined space inventories.
 - If the confined space in question has not been evaluated and classified the supervisor shall contact the ARRC Environmental and Safety Departments for classification prior to entry.
- Any employee entering any confined space must have a reliable form of communication such as a radio.
- Confined spaces are classified and/or reclassified based on normal working conditions. If an unusual situation arises in a non-permit required confined space and the conditions change to something other than "normal" working conditions, the confined space may not be entered. For example, if there is any type of hazmat release into a non-permit confined space that space is not to be entered until cleared by the Environmental and Safety Departments.

S55.2 Non-Permit Confined Space

- When entering a non-permit required confined space employees shall notify either a fellow employee or their supervisor prior to entering. The entering employee will give the expected duration of time they will be in the confined space and the work being performed.
- Upon exiting the confined space the entrant will inform a fellow employee or supervisor that operations are complete.

S55.3 Permit Confined Space

- For permit required confined space entries, supervisors shall fill out a confined space entry permit and have it approved by the ARRC Environmental Department prior to entry.
- Only trained and authorized personnel shall enter a confined space.
- All safety precautions listed on the confined space entry permit will be followed.
- If a rescue system is employed for a confined space entry all employees shall be trained and authorized to operate the system.
- All aspects of the ARRC written Confined Space Program apply.

S56.0 COFC/TOFC Operations

S56.1 General

- Do not enter the Anchorage or Fairbanks TOFC yard during active operations until the TOFC or the yard office has been contacted and you are cleared to enter.
- Vehicle headlights shall be on while driving through area.
- Communicate with the operator prior to entering their immediate work area. Do not enter work area until permission is received from the operator.
- Maintain radio contact when driving through area.
- Stay clear of the swing radius for the van loader's lifting arms.
- Do not go under a hoisted trailer, container, or suspended load.



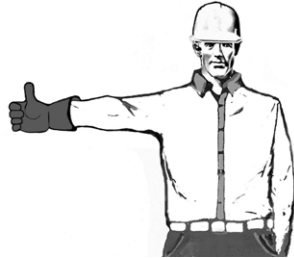

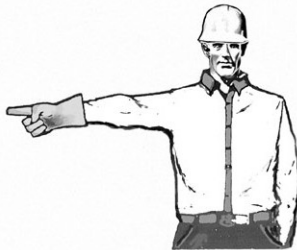
S57.0 Cranes, Derricks and Hoists






S57.1 General





All crane operation rules listed in 29 CFR 1926.144, Cranes and Derricks shall be followed.

- Only qualified and trained personnel may operate cranes.
- Comply with manufacturer instructions while operating cranes.
- Signals can only be given by qualified signal person.
- A designated competent person must inspect the crane and all crane controls before use.
- Be sure the crane is on a firm/stable surface and level.
- During assembly/disassembly do not unlock or remove pins unless sections are blocked and secure (stable).
- Fully extend outriggers and barricade accessible areas inside the crane's swing radius.
- Watch for overhead electric power lines and maintain at least a 20-foot safe working clearance from the lines.
- Inspect all rigging prior to use; do not wrap hoist lines around the load.
- Be sure to use the correct load chart for the crane's current configuration and setup, the load weight and lift path.
- Do not exceed the load chart capacity while making lifts.
- Raise load a few inches, hold, verify capacity/balance, and test brake system before delivering load.
- Do not move loads over workers.
- Prior to lifting an AC locomotive for truck removal, ensure the AC electrical system is neutralized by a qualified employee. Warning: Failure to comply could lead to electrocution.

S57.2 Hand and Voice Signals

Corresponding Hand Signal	Function	Initiate Function	Terminate Function
	HOIST	“Hoist” “Hoist up” “Hoist load” “Hoist hook”	“Hoist stop”
	LOWER	“Lower” “Lower down” “Lower load” “Lower hook”	“Lower stop”
	BOOM UP	“Boom up”	“Boom stop”
	BOOM DOWN	“Boom down”	“Boom stop”
	SWING	“Swing right” “Swing left”	“Swing stop”

	<p>TRAVEL (Overhead and Tower Cranes)</p>	<p>“Travel forward” “Travel reverse”</p>	<p>“Travel stop”</p>
	<p>DOG EVERYTHING</p>	<p>“Dog everything”</p>	<p>N/A</p>
	<p>USE MAIN HOIST (Mobile Crane ONLY)</p>	<p>“Use main hoist” “Use main drum”</p>	<p>N/A</p>
	<p>USE WHIPLINE (AUXILIARY HOIST) (Mobile Crane ONLY)</p>	<p>“Use whipline” “Use auxiliary hoist” “Use auxiliary drum”</p>	<p>N/A</p>
	<p>TRAVEL (BOTH TRACKS) (Mobile Crawler Cranes ONLY)</p>	<p>“Travel both tracks forward” “Travel both tracks reverse”</p>	<p>“Travel stop”</p>

	<p>TRAVEL (ONE TRACK) (Mobile Crawler Cranes ONLY)</p>	<p>“Travel left track forward” “Travel left track reverse” “Travel right track forward” “Travel right track reverse”</p>	<p>“Travel stop”</p>
	<p>TELESCOPE OUT (Mobile Telescopic Boom Cranes ONLY)</p>	<p>“Telescope out”</p>	<p>“Telescope stop”</p>
	<p>TELESCOPE IN (Mobile Telescopic Boom Cranes ONLY)</p>	<p>“Telescope in”</p>	<p>“Telescope stop”</p>
	<p>TROLLEY TRAVEL (Tower and Overhead Cranes)</p>	<p>“Trolley in” “Trolley out”</p>	<p>“Trolley stop”</p>

S58.0 Derails

S58.1 General

Ensure you are protected, the track is safe to occupy and that no movement is being made on the track while applying or removing the derail.

S58.2 Switch Stand Derails

To operate a derail attached to a switch stand, comply with the instructions for the operation of that type of switch stand.

S58.3 Lift-Off Type Derail

- Keep your feet away from the place where the derail will be placed when it is removed.
- Lift the derail by using proper body mechanics.
- Lower the derail to the opposite position, keeping hand from underneath and away from any pinch points.
- Maintain a handhold until the derail is properly placed in the ON or OFF position.

S58.4 Portable Derail

- Portable derails, when not in use, must be stored in a locked building or vehicle or secured and locked to a fixed object to prevent unauthorized use.
- When placing the derail make certain the device is oriented to derail away from controlled track.
- Place derail on rail furthest from main track.
- Never place a portable derail on any main track or a siding in CTC.
- Advise dispatcher of location of all portable derails located on controlled siding tracks in TWC.
- Ensure derail is properly installed to prevent slippage upon impact.
- Derails must be secured with a lock while in use.
- Installed portable derails must be protected by one or more of the following methods:
 - “Attend to Derail” sign attached to the switch stands entering the protected track and “Derail” flag affixed to the derail.
 - A red flag placed between the rails in advance of the derail.

S59.0 Electrical Safety, Lock Out Tag Out

S59.1 General

- Only authorized and trained individuals may work on electrical circuits and associated systems.
- Follow lock out/tag out procedures under the following conditions:
 - Any energized equipment or power lines must be locked or tagged out prior to inspection or repair.
 - Installing, constructing, or dismantling equipment.
 - Repairing, troubleshooting, or maintaining machinery or equipment.
- Treat all wires, conductors, and other electrical equipment as if they are energized.
- Only OSHA approved tags may be used.
- Remove all jewelry before working on any electrical equipment.
- Use ground fault circuit interrupters (GFCI) on electrical circuits, when working in damp areas or outdoors.
- Inspect all extension and power cords prior to use for frays, wear and defects.
- At no time shall the ground plug be removed from a power cord.
- Use non-conductive ladder when working near electrical hazards.
- Report and stay clear of broken or sagging power or communication lines.
- All aspects of the ARRC written Lock Out Tag Out program shall be followed.

S60.0 Fall Protection

S60.1 General

Three Fall Protection standards apply to various areas of the ARRC. This section will be addressed based on the Fall Protection standards based on; OSHA General Industry, OSHA Construction, and FRA Bridgework Requirements. All aspects of the ARRC written Fall Protection program will be followed.

S60.2 OSHA General Industry Fall Protection

This section applies to all general industry shop areas and applies to any ARRC employee who performs operations in those areas.

- Only trained and qualified individuals may use fall protection equipment.
- Wear fall protection when working 4 feet or more above the ground, water, or next safe level when guard rails are not available.
- Inspect full body harness, belt, and attachments prior to each use and periodically as mandated by manufacturers.

- Review post-fall rescue procedures prior to each job that requires the use of fall protection equipment.
- All components of the fall protection system must meet current OSHA requirements.

S60.3 OSHA Construction Fall Protection

This section applies to all construction activities and to all ARRC employees who perform operations in a construction capacity. The requirements in 29 CFR 1926 subpart M shall be followed.

- Wear fall protection when working 6 feet or more above the ground, water, or next safe level.
- Only trained and qualified individuals may use fall protection equipment.
- Inspect full body harness, belt, and attachments prior to each use and periodically as mandated by manufacturers.
- Review post-fall rescue procedures prior to each job that requires the use of fall protection equipment.
- All components of the fall protection system must meet current OSHA requirements.
- Fall protection must be worn when assembling, disassembling, or performing maintenance on any cranes or heavy equipment at a height of 15ft or greater.

S60.4 FRA Bridgework Fall Protection

This section applies to ARRC employees while performing Bridgework. All employees will abide by the standards set forth in 49 CFR Part 214 Subpart B

- Only trained and qualified individuals may use fall protection equipment.
- When bridge workers work twelve feet or more above the ground or water surface, they shall be provided and shall use a personal fall arrest system.
- Inspect full body harness, belt, and attachments prior to each use and periodically as mandated by manufacturers.
- Review post-fall rescue procedures prior to each job that requires the use of fall protection equipment.
- All components of the fall protection system must meet current FRA requirements.
- Use fall protection if your work can cause you to step across the outside rail of an unguarded bridge deck.

Exceptions: Note the field site supervisor shall make the final determination as to which exceptions apply at the job site.

- This section shall not apply if the installation of the fall arrest system poses a greater risk than the work to be performed.
- Bridge workers engaged in inspection of railroad bridges.

- Fully qualified and trained in climbing techniques and inspection of the type of bridge they are inspecting.
- Engaged solely in moving on or about the bridge or observing, measuring and recording the dimensions and condition of the bridge and its components.
- Working on a railroad bridge equipped with walkways and railings of sufficient height, width, and strength to prevent a fall.
- All other exceptions as listed in 49 CFR Part 214 Subpart B.

S61.0 Fire Prevention

S61.1 General

- Store flammable and combustible material away from ignition sources and in controlled areas.
- Flammable lockers shall be shut and secured when not in use.
- Make sure that fire exits and extinguishers are not blocked, locked, or otherwise rendered inaccessible.
- Boxes shall not be stored within 18 inches of any overhead sprinkler system.
- Periodically inspect fire extinguishers to make sure inspection tags are current.
- If any fire extinguisher is found to be expired or the gauge arrow is not in the green/charged section of the dial, the unit is to be tagged and department supervision notified to replace the unit.
- Do not attempt to fight a fire. Notify fellow employees, safely evacuate the facility and contact emergency services.

S62.0 Forklifts

S62.1 General

- Operate fork lift truck only if you are certified.
- Hearing protection shall be worn while operating a forklift.
- Always wear the seat belt when operating the forklift.
- Regulate speed to ensure safe operations.
- Lower forks when going through low overhead clearance areas.
- Operate fork lift truck with load on the uphill side of slope when possible.
- Ground forks and apply parking brake prior to dismounting fork lift.
- Turn off and disconnect propane cylinders (if equipped) at the end of each shift
- Sound horn to protect movement, when:
 - Approaching people standing or walking.
 - Turning a corner.
 - Backing up.
 - Approaching doors, driveways, or congested places.
- If your vision is obstructed, protect the movement by:
 - Facing the direction of movement, or

- Assigning a co-worker to precede movement or provide protection.
- Never exceed the rated capacity of the forklift.
- Verify that rated capacity of transfer plates, station trucks, gang planks, and skids are adequate for load to be carried.
- Secure transfer plates, gang planks, and skids, before use.
- Remove nails, cleats, or other fasteners before removing transfer plates, gangplanks, or skids. Properly store or dispose of fasteners.
- Do not load or unload a tractor trailer while tractor is being coupled or uncoupled.
- Trailers must be secured with wheel chocks or other approved securing mechanism prior to loading or unloading with a forklift.
- When loading or unloading standalone trailers with a forklift ensure there is a jack stand properly positioned under the front of the trailer.
- When operating a forklift with a spotter;
 - Maintain constant contact.
 - Cease operations if contact with operator or spotter is lost.

S63.0 Fueling Equipment and Containers (Non-Locomotive)

S63.1 General

- Do not fuel equipment while engine is running.
- Keep sparks, flames, or other ignition sources away from equipment being fueled.
- Do not use radio or cell phones while fueling.
- Do not leave fueling hose unattended while fueling.
- Only use OSHA approved gas container/safety can.
- When filling gas cans, place cans on ground to prevent static electricity explosion.
- If fueling station is equipped with grounding cables, attach grounding cables to can.

S64.0 Fusees

S64.1 General

Fusees must be properly stored in the designated rack or container when they are not in use. Fusees may not be stored in a flammable locker with other flammable hazardous materials.

CAUTION: WHEN IGNITING A FUSEE, BE ON GUARD AGAINST HOT SPARKS AND MOLTEN MATERIAL.

S64.2 Lighting a Fusee

- Hold fusee near the base
- Pull the tape over the top to expose the scratch surface on the end of the cap
- Twist the cap away from the head of the fusee.

- Hold the cap stationary, turn your face away, and rub the igniter on the head of the fusee lightly against the scratch surface of the cap in a motion away from the body.
- If the fusee does not light, pause momentarily before attempting to light it again. While pausing, keep the fusee pointed away from your face and body to avoid possible injury from a sudden flare-up of the fusee.
- If you must drop an ignited fusee from a moving train or other equipment, hold the fusee at arm's length from the body for at least five, but not more than 10 seconds, after igniting. This time allows the igniter to burn down inside the fusee. If dropped too soon or late, the igniters may be extinguished and the fusee will not remain lit.
- If a burning fusee must be held for more than 5 seconds, extra precautions must be taken to prevent molten material from falling onto clothing or the body. The fusee should be purged of molten material frequently by a quick shake of the burning fusee in a downward motion near the ground.
- When a fusee is used to give hand signals, point the burning end down and away from yourself and others. Never hold a fusee near the flame. Avoid breathing the smoke produced by the burning fuse, and do not look directly at the flame. The signals should be given with even motions to avoid disturbing the burning layer of the flame's composition.

S64.3 Extinguishing Fusees

To extinguish the fusee before it burns out, use one of the following methods:

- Gently strike the burning end over the edge of a rail or other heavy metal object. Several strikes may be needed to separate the burning compound from the rest of the fusee.
- Bury the burning end in sand or dirt.

S64.4 Placing Fusees

Do not place a fusee where the flame or molten material may spread to and ignite:

- Platform
- Bridges
- Building
- Combustible materials or road crossings
- Grass, brush or trees along the right-of-way

S65.0 Going Between Rail Cars and Engines

S65.1 General

Employees must not or knowingly allow others to stand on track near closely approaching equipment, or step between coupled moving locomotives, cars or equipment for any reason. Do not step between or immediately in front of standing locomotives, cars or equipment unless

necessary in the performance of your duties, and then only after receiving proper protection against the equipment being coupled into or moved.

S65.2 Walking Around or Going Between Standing Equipment

When walking around the end of a standing car, locomotive or other equipment, employees must allow at least 25 feet of clearance between themselves and the nearest equipment and must expect sudden movement by cushion under frame draft gear.

Do not or knowingly allow others to go between or in front of a moving locomotive, car or equipment to adjust knuckles, couplers, coupling devices, or to manipulate other appliances for any other reason.

When it is necessary to separate equipment to make adjustments the following applies:

- Separate the equipment at least 50 feet.
- Stop the movement and allow the slack to adjust.
- Provide RED ZONE PROTECTION.
- If necessary, apply sufficient hand brakes on the portion not coupled to locomotive to prevent movement on tracks where cars are likely to roll together.
- When adjusting couplers or knuckles, you must stand to one side with feet clear to avoid being struck by a falling knuckle.

S65.3 Red Zone Protection

S65.3.1 General

Definition of Red Zone: Going between or working on the end of rail equipment when an employee places all or part of their body where it could be struck by rail equipment if the equipment were to move. Examples include but are not limited to:

- Coupling air and electrical connections.
- Opening/closing angle cocks.
- Applying or releasing handbrakes.
- Inspecting or repairing equipment.
- Installing, removing, arming or changing batteries on a marker or EOT.
- Adjusting couplers.
- Opening knuckles.
- Performing other duties as required.

“RED ZONE PROTECTION” must not be used as substitute protection when other forms of protection / signals are required to be displayed. (Blue Flag, Red Flag).

If a locomotive is attended and coupled to standing equipment or is on the same track in a position to couple to the equipment, employee must communicate with the Engineer and establish “RED ZONE PROTECTION” before fouling the equipment for the purpose of inspecting, making adjustments, repairs or operating appliances.

S65.3.2 Requesting Red Zone Protection

The employee must take the following precautions before entering the Red Zone:

By Radio or in Person:

Verbally request “RED ZONE” from the Engineer. To communicate that protection is required or that protection has been provided, positive identification must be established between the Engineer and each employee who requests protection. When using the radio to request or grant “RED ZONE PROTECTION,” each employee must designate their occupation and locomotive number and track(s) to be used.

After establishing RED ZONE PROTECTION and before going in between or working on the end of equipment, requesting employee must;

- Wait for movement to STOP and slack to adjust.
- Ensure all crew members have a clear understanding of the work to be performed.

Day Signal by Hand:

Start with arms at the side of body swinging them up, out and in, with hands meeting in the center of the body between knee and waist height.

By Lantern Signal:

The prescribed lantern signal will indicate the “RED ZONE PROTECTION,” is requested.

Lantern Signals:

- Give STOP signal.
- Starting from the opposite side of equipment, move lantern parallel to the ground, half way across the body.

S65.3.3 Confirming Red Zone Protection

- When “RED ZONE is requested, the Engineer must take the following actions.
 - Fully apply the independent brake. If train line air is coupled to equipment and conditions require, make an automatic brake pipe reduction to sufficiently secure the equipment from movement.
 - Move the reverser lever to the neutral position

- NOTE: When necessary to foul equipment to determine air pressure for the performance of air brake test and inspections and to perform emergency air brake repairs that require the train brakes to be released, a brake pipe reduction will not be required. Employees must allow slack to adjust before fouling equipment.
- The Engineer must acknowledge to each requesting employee the “RED ZONE” is established by transmitting via radio “SET AND CENTERED,” or by sounding one long whistle signal or other agreed upon signal if using hand signals.
- The Engineer must maintain “RED ZONE PROTECTION” until notified by each requesting employee that the protection is no longer required.
- If the Engineer who is providing “RED ZONE PROTECTION” must leave the operating compartment of the locomotive, prior to leaving, the Engineer must contact each employee in the red zone and require they position themselves in the clear of the equipment.

S65.3.4 Releasing Red Zone Protection

- Brakes must remain applied with the reverser centered until the crew member requesting protection gives a radio or hand signal to move or announces by radio, “IN THE CLEAR”.
- If more than one employee has “RED ZONE PROTECTION” brakes must remain applied with the reverser centered until all crew members have announced by radio “IN THE CLEAR”.
- When stepping from between rail equipment, be alert for movement on adjacent tracks or vehicles moving on the toe path or roadways.
- Engineer acknowledgement for prescribed hand signal “RED ZONE PROTECTION,” will be one long blast of horn or other agreed upon signal. ALSO SEE GCOR (5.8.2(4)).

S66.0 Getting On and Off Equipment

S66.1 Standing Equipment

- Do not get on or off in an area that is unsafe.
- Select the ground area to get on or off equipment that is free of obstructions such as derail, switch stands, platforms, light poles, or other close clearances that could catch clothing or cause a slip, trip or fall.
- Establish good footing before getting on and while getting off equipment.
- When practicable get on or off equipment on the side away from adjacent track, roadway or close clearances. If possible, get on or off on the same side as the operator or engineer.
- Do not use hand holds, ladders, grab irons, sill steps or crossover platforms that are loose, missing, bent, or could cause injury. Warn other employees and report the defect to proper supervisor.
- Ensure hand holds, ladders, grab irons, sill steps or crossover platforms are free of grease, oil, ice, packed snow or mud prior to using.

- Always face the equipment and use the proper ladders, steps, stirrups, and hand holds when getting on or off equipment.
- Never mount or dismount on the uncoupling lever or end ladder of rail cars or engines.
- Maintain three points of contact, (two hands and one foot or two feet and one hand) until stable footing is established.
- Never jump or swing off equipment.
- When climbing up or down the ladder place the ball of your foot on the ladder rung.
- Do not get on or off when carrying grips, luggage, tools, repair parts or any other item that prevents full use of both hands (this does not apply to a trainmen's lantern). This also applies to any item that, although carried with a single shoulder strap, could shift while getting on or off.

S66.2 Moving Equipment

S66.2.1 General

Employees must not get on and off moving equipment except in the case of an emergency. An emergency is defined as imminent danger to life or limb. Equipment or property damage is not considered an emergency.

Any other exceptions to this rule will be listed in the Timetable Special Instructions, General Orders, Track Bulletins or Shop Special Instructions.

S66.2.2 Getting On Moving Equipment

When it is necessary and/or authorized to get on moving equipment:

- Face the equipment as it approaches and make sure:
 - The speed is no faster than "walking speed".
 - Stirrups, hand holds, or hand rails are not bent, loose, missing and free of hazards.
 - Mount in an area that will provide firm footing and where there are no switch stands, close clearances, signals or other items that could prevent you from getting on safely.
- Always mount equipment from the side, using the sill step and side ladder. Do not mount equipment unless equipped with a sill step and side ladder.
- Do not use the uncoupling lever as a step.
- Get on an approaching locomotive or box type car as follows:
 - If possible, inform the engineer or operator of your intentions to get on moving equipment.
 - Firmly grasp the handrail or ladder rung.
 - Place your trailing foot on the trailing side of the step or stirrup.
 - Let the movement lift you off the ground and then place your leading foot on the step or stirrup.
 - To get on moving coupled equipment, board the leading or approaching end of the car or locomotive if possible.

S66.2.3 Getting off Moving Equipment

When it is necessary and/or authorized to get off moving equipment:

- If possible inform the engineer of your intentions to get off moving equipment.
- Do not get off moving equipment if the speed is faster than walking speed or in excess of 4 mph.
- Face the direction the equipment is moving.
- Get off with the trailing foot first to direct you away from the equipment.
- Maintain three point contact until good footing is established.
- Dismount in an area that will provide firm footing and does not have any switch stands, close clearances, signals or other items that could prevent you from getting off safely.
- When getting off a caboose, walk down the steps, turn at the bottom step and face the car, then get off.
- Do not jump to the ground from a rail car or an engine ladder, step platform or deck.

S67.0 Hazard Communication (HAZCOM) and Working with Hazardous Materials (HAZMAT)






S67.1 General

- This applies to the use of, not the shipment of HAZMAT. All ARRC employees are required to follow the standards set forth in the ARRC Written HAZCOM program.
- At no time will an ARRC employee use or handle a HAZMAT unless they have been properly trained and fully understand the hazards involved with using or handling the HAZMAT.
- Appropriate PPE shall be provided by the supervisor to the employee prior to using any HAZMAT requiring the use of PPE.
- Safety Data Sheets shall be made available for all HAZMAT via the ARRC Safetec website <http://www.akrr.msds.com> or by calling 1-800-704-9215.
- When handling, working with, or storing hazardous materials such as acids, caustics, fuels, and solvents, know and comply with the Safety Data Sheet (SDS) container label and storage instructions.
- Only follow manufacturer's directions when mixing any cleaning agents or chemicals.
- Know location of spill clean-up or containment materials.
- Contact ARRC Environmental Department for proper disposal of any hazardous materials.
- Handle hazardous material in well-ventilated areas.
- All secondary containers shall be labeled with the proper manufacturer's hazard warnings. A secondary container is defined as a temporary container used to carry, use or dispense a product transferred from the original manufacturer's container.

- Employees will also be familiar with the SDS pictograms as shown below:

GHS PICTOGRAMS & HAZARDS

As of June 1, 2015, the Hazard Communication Standard (HCS) will require pictograms on labels to alert users of the chemical hazards to which they may be exposed. Below are the modified Hazard Communication Standard (HCS) labels to conform with the United Nations' Globally Harmonized System of Classification and Labeling of Chemicals (GHS). Each pictogram consists of a symbol on a white background framed within a red border and represents a distinct hazard(s). The pictogram on the label is determined by the chemical hazard classification.

<p>CORROSION</p>  <ul style="list-style-type: none"> • Skin Corrosion/Irritation • Eye Damage • Corrosive to Metals 	<p>EXCLAMATION MARK</p>  <ul style="list-style-type: none"> • Irritant (Skin and Eye) • Skin Sensitizer • Acute Toxicity (Oral) • Acute Toxicity (Dermal) • Acute Toxicity (Inhalation) • Hazardous for Ocean Layer (Non-Mandatory) 	<p>EXPLODING BOMB</p>  <ul style="list-style-type: none"> • Explosives • Self-Reactive • Organic Peroxides
<p>SKULL & CROSSBONES</p>  <ul style="list-style-type: none"> • Acute Toxicity (Oral or Dermal) 	<p>FLAME</p>  <ul style="list-style-type: none"> • Flammable • Pyrophoric • Self-Heating • Highly Flammable Gas • Self-Heating • Organic Peroxides 	<p>GAS CYLINDER</p>  <ul style="list-style-type: none"> • Gases Under Pressure
<p>ENVIRONMENT (Non-Mandatory)</p>  <ul style="list-style-type: none"> • Aquatic Toxicity 	<p>HEALTH HAZARD</p>  <ul style="list-style-type: none"> • Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Neurotoxicity 	<p>FLAME OVER CIRCLE</p>  <ul style="list-style-type: none"> • Oxidizer



S68.0 Hand Brakes

S68.1 General

- When operating hand brakes, keep the wheel or lever as close to the body as safely possible while maintaining firm grip (three-point contact), erect posture, and balance.
- Minimize twisting and side-to-side bending.
- Use smooth movements, do not jerk.
- Position hands and feet to ensure good balance and to take advantage of leg strength.
- Always apply a hand brake fully but do not overexert and **NEVER APPLY EXCESSIVE FORCE.**
- Do not use any part of the hand brake as a hand hold.

S68.2 Vertical Wheel

Unless an approved telescopic brake stick is used mount the side ladder, climb to the level of the hand brake and move on the same level to end ladder. Moving from the side ladder to the end ladder and brake platform is the critical point of your maneuvering. Be especially alert and retain firm handhold on the top grab irons. Do not use the brake wheel as a hand hold since the brake wheel can move.

- When operating a vertical wheel hand brake, use the following procedure:
 - Observe type and condition of the hand brake, including brake wheel or lever and chain before attempting to operate.
 - Place right foot on brake platform.
 - Place left foot on the far end of ladder rung, firmly against the side rail.
 - If equipped with a full platform both feet may be stationed on the platform.
 - Hold firmly to grab iron, ladder rung or handhold with left hand.
- To apply hand brake:
 - Place the release lever (if so equipped) in the ON position by reaching with your right hand behind brake wheel, **NOT THROUGH WHEEL SPOKES.**
 - Maintaining three point contact, standing on the left side of the brake, with right hand grasping only the outer rim by placing thumb on the outside of the wheel. Rotate the brake wheel clockwise until the slack is taken out, then give short pulls by using the legs and proper body mechanics until the necessary breaking force is obtained.
 - Do not over tighten or overexert yourself when applying hand brake.
 - Never use both hands to operate this type of brake wheel.
 - **DO NOT USE YOUR FOOT IN ANY BRAKE WHEEL.**
 - **DO NOT APPLY END MOUNTED WHEEL TYPE HAND BRAKE FROM THE GROUND.**

- To release hand brake with a release lever:
 - Assume the same firm stance you would when applying a hand brake.
 - Use only your right hand on the release lever (if equipped).
 - Be sure to keep your hand, elbow, arm, leg and clothing clear of the brake wheel, as some types of hand brake wheels will spin when the release lever is tripped to the OFF position. Keep feet clear of bell crank, chain and other hand brake parts.
 - Do not release a hand brake mounted on the end of a car while standing on the ground, unless the hand brake is equipped with a vertical release lever and you can reach the lever from the side of the car.
 - Visually scan the hand brake looking at the bell crank, slack in chain and painted markings if equipped to determine that the hand brake is fully released.

- When releasing a hand brake NOT equipped with a release lever:
 - Assume the same stance you would when applying a hand brake.
 - Grasp the rim of the wheel at about the one o'clock position with the right hand, keeping hand on the outside of the rim. Do not overexert and NEVER APPLY EXCESSIVE FORCE.
 - Turn wheel counter clock wise until brake is completely released.

- Locomotive
 - When operating wheel-type hand brake on locomotive, both feet must be securely positioned to prevent slipping. Take up slack using one or two hands on outer rim of the brake wheel. When applying final pressure, stand upright and face the brake wheel and operate until applied using two hands.
 - Do not use finger(s) in spoke opening to take up slack or apply hand brake.
 - Do not overexert and NEVER APPLY EXCESSIVE FORCE.

S68.3 Horizontal Hand Brakes

The horizontal wheel (staff) hand brake is designed to be operated with the use of both hands. Some of these brakes have a drop-shaft movement that permits the brake wheel to be dropped flush with the car floor. The brake wheel and shaft must be in the fully raised position to be operated.

When operating this type of hand brake, use the following procedure:

- Observe type and condition of the hand brake, including brake wheel, and chain before attempting to operate.
- Using three point contact, mount the car using the sill step on the side of the car and position yourself on the car to operate the hand brake.
- Place feet securely on the car and assume a stable position.
- If wheel and staff are in the lowered position, using both hands lift the brake wheel, raising it until the shaft support moves into place (under end of shaft) locking the hand

brake wheel shaft in the raised position. (Be alert in the event the wheel and shaft come out of the shaft support when raised).

To Apply:

- Observe type and condition of the hand brake, including brake wheel, shaft, pawl, pawl weight or chains before attempting to operate.
- Observe whether the hand brake has a pawl, pawl weight or is the non-spin type.
- Grasp brake wheel rim with both hands, keeping thumbs on outside and turn wheel clockwise to apply. Do not overexert and NEVER APPLY EXCESSIVE FORCE.
- If the hand brake is a pawl weight type ensure that the pawl weight is in the APPLY (ON) position, causing the pawl to engage the ratchet. If the hand brake has a foot-operated pawl, use foot to engage pawl (ON position) into ratchet when necessary braking power is reached.
- DO NOT use a brake club, pick / maul handle, bar, pipe or any other material to apply or assist in releasing brake.
- After applying brake, remove both hands from the wheel simultaneously in the event the ratchet does not engage properly and the wheel spins.

To Release:

- Assume the same safe operating position with both feet securely on the car.
- Inspect brake wheel for defects such as metal gouges, slivers or shards that could cut hands when brake is released. Inspect for bent brake wheel or shaft.
- Using both hands, grasp the brake wheel rim, keeping thumbs on outside. Turn brake wheel clockwise sufficiently to remove tension from pawl. Do not overexert, and never apply excessive force.
- Disengage pawl with foot while simultaneously releasing your grip on hand brake wheel. The wheel will spin counterclockwise, so keep your hands, body and clothing clear. If brake staff is not equipped with a pawl turn brake counterclockwise until brake is fully released.
- If brake is difficult to release, obtain help. Perform job briefing for understanding as to which employee will release brake after tension is removed from pawl. Releasing employee will release brake only after other employee has positioned themselves to avoid being struck by the brake wheel when the brake is released.

To Lower Hand Brake Wheel Staff:

- Lift the hand brake wheel shaft enough to take the weight of the shaft off the shaft support.
- While holding the hand brake wheel shaft in this position with one hand, move the shaft support from under the end of the shaft with the other hand. Ensure that the shaft support is disengaged at the bottom end of the shaft.
- Slowly lower the hand brake wheel shaft, being careful to avoid pinch points when releasing shaft support and lowering wheel and shaft.

S68.4 Lever/Ratchet Hand Brakes

Inspect the lever stop on the hand brake housing before attempting to apply or release the hand brake. If the lever stop is missing, do not operate brake; report defect and tag out of service.

Application and Release:

- Position your body to avoid being struck by the handle.
- Establish and maintain secure footing and a firm grip.
- Place release lever or pawl weight in ON position before applying the hand brake.
- Using good body mechanics, apply the brake with vertical pumping action of the brake lever. Do not overexert and NEVER APPLY EXCESSIVE FORCE.
- When operating release lever on ratchet-type hand brakes, hands or fingers must not be placed between release lever and hand brake housing.
- Avoid being struck by chain, chain counter weight or brake handle.

Locomotives:

- Support upper body by grasping hand rail or grab iron, if available, or place your hand against the flat surface while operating brake lever with the other hand.
- Use leg muscles to assist in applying final pressure while using short pulls and keeping upper body as erect as possible.
- Only use one hand to apply lever type hand brake on a locomotive. Do not overexert and NEVER APPLY EXCESSIVE FORCE.

S68.5 Brake Stick

S68.5.1 General

When provided, telescoping brake sticks are to be used on vertical-wheel end-mounted hand brakes only. Except when making adjustments to length; brake stick must be locked into position at all times. When transporting brake sticks, length must be reduced to minimum and must not be held or hung on moving equipment at a location where employees are riding. Do not push on a hand brake wheel with a brake stick.

- Use only approved Brake Sticks.
- Prior to each use, the Brake Stick must be inspected to determine:
 - Extension shaft is not noticeably bent.
 - Extension shaft locking grooves have no visible cracks.
 - Extension shaft is held firm at each of the locking grooves by the locking mechanism.
 - Head/extension rod attachment's head is not loose or the extension shaft has no observable cracks.

- The use of modified, damaged or field repaired Brake Sticks is prohibited. Damaged Brake Sticks must be tagged and not used.
- The Brake Stick may be used to operate high or low, vertically mounted hand brakes. It may also be used to open knuckles and to operate the EOT arming button.
- The Brake Stick hook should be inserted in the brake wheel from the outside.
- The Brake Stick must always be in the LOCKED position except when adjusting length. When transporting the Brake Stick, it must be in the collapsed and locked position.
- The Brake Stick must not be stored in an area where it may be an obstruction or may present a tripping hazard. These areas include buildings and equipment walkways, steps, seats or in the passenger compartment of vehicles.
- When on equipment, do not hang the Brake Stick on an occupied side ladder or where the Brake Stick extends below the side of the car.
- Do not use the Brake Stick to operate hand brakes on moving equipment.
- Do not place the Brake Stick on or remove it from moving equipment.
- Do not use the Brake Stick to operate bent or broken brake wheels.
- Do not use the Brake Stick to operate quick release levers.
- Always pass the Brake Stick through equipment. Do not climb, cross, mount or dismount equipment while carrying the Brake Stick.

S68.5.2 Operation of the Brake Stick

Unlock the second stage of the Brake Stick and adjust length (take maximum advantage of available length in order to remain outside the track gauge and away from equipment). Re-lock second stage.

- Position yourself parallel to the brake wheel to be operated and outside gauge of track and protect against unexpected movement. Determine the type of hand brake to be operated and be alert to quick release, spin types.
 - Turn your body so that your shoulders are perpendicular to the rail.
 - Place feet shoulder width apart and always maintain good balance.
 - Grip the lower section of the Brake Stick with both hands. Your hands should be about 12" apart and the bottom hand about 2-3" from the end of the handle.
 - Avoid positions where you could strike against other objects while operating a hand brake. When pulling on the Brake Stick, position yourself so that the handle travels to the side of your body and not into your body.
 - Do not use Brake Stick while equipment is moving on adjacent track.
 - Never walk backwards when using a Brake Stick.

S68.6 Applying Hand Brake

- Brake Side of Car - Hook the wheel in the 3 O'CLOCK to 6 O'CLOCK section.
- Opposite Side of Car – Hook the wheel in the 12 O'CLOCK to 3 O'CLOCK section.
- If there is no tension, spin the wheel until tension is on the brake chain. This can be done continuously or with short strokes allowing the Brake Stick to disengage the wheel with each stroke.

- When tension is on the brake chain, apply final braking effort using only short quarter turn pulls. Refrain from hammering or making sudden jerking motions. Do not overexert and NEVER APPLY EXCESSIVE FORCE.

S68.7 Releasing Hand Brake

- Brake Side of Car - Hook the wheel in the 9 O’CLOCK or 10 O’CLOCK section.
- Opposite Side of Car – Hook the wheel in the 7 O’CLOCK or 8 O’CLOCK section.
- Use a short, firm pull to release the brake. Refrain from hammering or making sudden jerking motions.
- When there is no tension on the brake chain, spin the wheel using continuous revolutions or short strokes allowing the Brake Stick to disengage the wheel and release the brake. Do not overexert and NEVER APPLY EXCESSIVE FORCE.

S69.0 Hand Tools

S69.1 General

- Hand tools shall only be used for their intended purpose.
- Struck tools must have all required chip guards intact.
- All tools must be inspected.
- Any hand tool that is found to be broken or otherwise unserviceable shall be tagged and taken out of service.
- Do not sit, stand on, or straddle bars, levers, or wrenches.
- Position your body to maintain balance in case a tool slips.
- Use only knives with fixed or locking blades that do not exceed three inches in blade length.
- Box cutters and knives shall not be left in the open position when not in use.
- Properly store all cutting tools so they do not create a hazard.
- Do not use extensions unless approved by original tool manufacturer.
- Make sure tools or materials are not left foul of track, in walk ways or on equipment.
- Pull wrenches toward your body.
- When carrying pointed tool, position point away from self and others.
- When cutting bands, position self out of the likely path of bands and falling material.

S70.0 Infectious Materials

S70.1 General

ARRC employees should not come in contact with infectious materials during the course of their routine duties.

S70.2 Clean-up Operations

- All clean-up operations involving infectious materials will be done by contract cleaning and janitorial services. ARRC employees are not to clean or handle any types of infectious materials.
 - Anchorage, Service Master cleaning (907) 522-3020
 - Anchorage, ServPro cleaning (907) 688-3001
 - Fairbanks, Service Master cleaning (907) 479-2339

S71.0 Incidents, Injuries, and Emergencies

S71.1 General Information

This section will cover general procedures for reacting to and reporting various types of injuries, illnesses, emergencies or incidents.

All manner of incidents that could require some type of emergency action cannot be incorporated in this document. All employees shall be familiar with their departments Emergency Action Plan (EAP) for the fixed facility they operate out of. Incidents requiring specific emergency actions are listed in the EAP and must be adhered to by all ARRC employees.

Employees will be familiar with the ARRC Passenger Train Emergency Preparedness Plan (PTEPP) and the Oil Spill Contingency Plan (C-PLAN) procedures for incidents which may occur while on track.

The employee on whom the responsibility most naturally falls must assume authority until the proper supervisor arrives.

S71.2 First Aid Kits

All fixed facilities, mobile worksites, and ARRC vehicles shall have a first aid kit that is fully stocked. Employees must familiarize themselves with the kit locations.

S71.3 Care For Injured

If an injury occurs, ARRC employees shall contact emergency services, if required, to render aid and provide transport to a medical facility. If an ARRC employee renders aid it will solely be on a voluntary basis and done in the spirit of a Good Samaritan.

S71.4 Emergency Sites

- Do not approach a derailment or an emergency site until the Employee-in-Charge or On Scene Commander has determined that it is safe to do so.
- When arriving at emergency site, receive a job briefing as directed by the on-site Employee-In-Charge or On Scene Commander.
- Only move injured persons if doing so will protect them from further harm and you can reach them without placing yourself or others at risk.
- Follow all notification procedures as outlined in location-specific Emergency Response and or Action Plans.
- When hazardous materials are present, follow all procedures outlined in the Emergency Response Plans or Oil Discharge Contingency Plan.
- Use extreme caution when walking near or around damaged equipment, structures, re-railing equipment, track, or walkways, and avoid debris and other material that could cause tripping or slipping.
- Look for and avoid power lines, fiber optic cables, and underground utilities.
- Keep clear of all derailed equipment and wreckage-clearing equipment except in the performance of duties as instructed by Employee-in-Charge or On Scene Commander.
- Do not climb on or be about equipment that has derailed except in the performance of duties as instructed by Employee-in-Charge or Scene Commander.

S71.5 Reporting Procedures

All cases of personal injury, illness, or incident while on duty or on company property, must be immediately reported to the proper manager and the prescribed form(s) completed.

A personal injury that occurs while off duty that may, in any way, affect employee performance of duties must be reported to the proper manager prior to the start of shift.

S71.6 Witnesses

In the cases of personal injury, loss of life, or damage to property, the supervisor must immediately secure the names, addresses, and occupations of all persons involved, including all persons at the scene when the accident occurred and those that arrived soon after. The supervisor must secure the names regardless of whether these persons admit knowing anything about the accident.

When necessary, other employees can assist in obtaining this information, which must be included in reports covering the incident.

Where signaling devices are provided or a flagman is on duty, the ARRC police or the supervisor and assisting employees must try to determine who, among the witnesses, can testify whether the signaling devices were functioning properly or if the flagman was performing his duties properly.

When possible, obtain the names of witnesses who can testify about the bell and whistle signals.

S71.7 Injury/Incident Investigation and Reporting

In accordance with the ARRC Internal Control Plan (Policy 63-2: Railroad Accident & Injury Reporting)

- Supervisors shall investigate any work related employee injury, illness or incident as prescribed by the current Safety Department investigation protocols. These protocols will vary upon the nature of the incident.
- At no time shall supervisors delay or inhibit an employee from seeking or receiving medical attention in order to accomplish an investigation.
- Supervisors shall complete all reporting to the Safety Department and ARRC Risk Manager with-in the prescribed time frames for incident reporting.
- When a railroad incident involves non ARRC personnel or equipment, do not take photos or make any changes to the scene. The ARRC Police and Security Department will have full investigation authority over any such incidents.

S71.8 Equipment and Site Inspection

If an incident results in personal injury or death to an ARRC employee, all tools, machinery, and other equipment involved, including the accident site, must be inspected promptly by the supervisor, another person in charge of the work, or other competent inspectors.

The inspector promptly forwards to his or her manager a report of the inspection. The report must include the condition of the site and equipment as well as the names of those making the inspection. If requested by the Safety Department, Risk Manager or Special Agent, the equipment inspected must be marked for identification and placed in custody of the responsible manager or employee.

When engines, cars, or other equipment are involved in an accident that results in personal injury or death or damaged property, the equipment must be inspected by a competent person before it leaves the accident site.

A Mechanical Department employee must further inspect the equipment at the first terminal. This employee must promptly report inspection results to the proper manager.

S71.9 Statements

Employees will provide written statements and input as requested by their Supervisor, the Safety Department, Special Agents or Risk Manager.

Except when authorized by the proper manager:

- Information concerning accidents or personal injuries that occur to persons other than employees may be given only to an authorized representative of the railroad or an officer of the law.
- Information about the facts concerning the injury or death of an employee may be given only to the injured employee, an immediate relative of the injured or deceased employee, an authorized representative of the railroad, or an officer of the law.
- Information in the files or in other privileged or confidential reports of the railroad concerning accidents or personal injuries may be given only to an authorized representative of the railroad.

S71.10 Furnishing Information

Employees must not withhold, falsify or fail to give all the facts to those authorized to receive information regarding unusual events, accidents, personal injuries, or rule violations.

S72.0 Loading and Unloading Rail Cars

S72.1 General

Follow these precautions when loading or unloading material from cars:

- Apply required protection prior to accessing equipment. Stop movement if you lose sight or contact with ground person or spotter.
- Confirm with operator that all movement is stopped and will not resume before going between equipment, rail car or lading.
- Do not jump off rail cars, loading docks or platforms.
- Expect falling materials and stand clear when opening door.
- Keep your fingers clear of the edge or jamb of the door, casting, or rail where the door travels.
- Do not climb in or out through the bottom of a hopper car.
- If you must shake or bump a rail car to loosen material, first make sure that no one is on or in the rail car.
- When unloading material from the hopper bottom or from a side-dump car, do not stand on the load.
- When loading or unloading flatcars, place or remove load evenly.
- Only use authorized lifting equipment to load or unload rail cars.

- If manual lifting is required to load or unload materials from a rail car use proper body mechanics and two man lifts when possible.
- When possible use ramps when manually loading or unloading.
- Stop equipment operation if you lose sight or contact with ground person.

S73.0 Loading and Unloading Trucks and Equipment

S73.1 General

- When loading or unloading from a truck or other equipment set the parking brake or chock the wheels.
- Confirm with operator that all movement is stopped and will not resume before going between equipment.
- Do not jump from trucks, platforms, or equipment.
- Only use authorized lifting equipment to load or unload.
- If manual lifting is required, use proper body mechanics and two man lifts when possible.
- When possible use ramps or lifts when manually loading or unloading.
- Expect falling materials and stand clear when opening doors or gates.
- All cargo gates, lift gates and doors must be properly positioned and secured after loading/unloading operations.
- All loads must be properly secured.
- Stop equipment operation if you lose sight or contact with ground person.

S74.0 Ladders, Platforms and Scaffolds

S74.1 General

- Barricade or guard ladders, platforms, and scaffolds to prevent intrusion by people or equipment.
- Monitor emergency exits obstructed during maintenance or construction to facilitate emergency evacuation and protect co-workers on ladders.
- Use non-conductive ladder or scaffold when working near an energized electrical circuit.
- Face ladder while ascending or descending.
- Do not climb with tool(s) in hands. Carry tool(s) in a tool belt or raise and lower tool(s) with a hand line.
- Only climb to the second rung from the top of a step ladder or the third rung from the top on a straight ladder.
- Fully open and lock step ladders when in use.
- Never climb a ladder on which someone else is standing unless specifically engineered by manufacturer.
- Set straight/extension ladder on stable surface and at a safe angle of one foot away from wall for every four feet of height.

- Extend ladder at least three feet above the surface you are stepping onto.
- Secure ladders at heights above 6ft.
- When reaching from a ladder your waist (belt line) must stay within width of the rungs.
- Ladders with rounded feet will not be used.
- Extension ladders will not be separated at any time during use or storage.
- Never exceed the ladder or scaffold capacity.
- All manufacturer's directions and specifications will be followed when erecting or working on scaffolding or platforms.
- Use fall protection as needed or required when working on platforms or scaffolding with unprotected edges.
- Do not work, walk, or stand in areas where people are working overhead.

S75.0 Overhead Doors

S75.1 General

Overhead doors shall be fully opened prior to entering or exiting any ARRC facility with any vehicles, equipment, locomotives, rail cars, rail coaches or employee foot traffic.

An employee shall conduct an inspection to identify close clearance issues prior to entering or exiting a facility.

Doors shall either be fully open or fully closed at all times.

- Exception: Doors may be partially opened for authorized purposes if the door is equipped with a manufacturers locking or support mechanism to keep it in place.

At no time will employees ride on the side of a vehicle, car, engine or other equipment when moving through overhead doorways.

S76.0 Personal Protective Equipment (PPE)

S76.1 General

All ARRC employees may only wear personal protective equipment (PPE) approved by the ARRC. Provisions of this chapter also apply to all ARRC visitors. The use of certain types of PPE may not be required in offices, on passenger-carrying rail cars by non-crew members, or areas specifically exempted from PPE requirements.

All PPE shall be maintained properly and shall be in serviceable condition. If an employee's PPE is found to be unserviceable that employee will not be allowed to work until suitable PPE has been issued by the ARRC or purchased by the employee if required.

PPE is required to be worn when on company property.

Geographic Exceptions

PPE is not required :

- In an office environment.
- While in a vehicle.
- In areas designated by posting or similar notice or by a designated supervisor.
- Initially reporting to or going home from the workplace.

Some operations may require the use of specialized PPE not addressed in this manual. Department SOP's and Job Safety Analysis (JSA's) will be used to outline any specialized PPE requirements for specific tasks.

S76.2 Clothing

This section applies to all ARRC employees regardless of their work assignments.

- Shirts must be at least waist length and have sleeves.
- Employees may not wear shorts at any time while on duty.
- Dresses, skirts, or ties shall not be worn in industrial or track areas where they could pose a hazard to the employee.
- Choose and wear clothing that minimizes interference with vision, hearing, or use of hands and feet.
- Footwear approved by your department must be worn at all times.
- Sneakers or open toed shoes shall not be worn in any area requiring the wear of safety toed footwear.
- "Flip Flops" shall not be worn in any work center.
- Do not wear jewelry, wrist watches, finger rings, long chains, key rings, or suspended jewelry when they present a hazard around machinery or electrical lines and equipment.
- Hair must be secured and out of the way if it could become entangled in machinery or obscure your vision.

S76.3 High Visibility

All ARRC personnel working in areas other than office environments are required to wear a high-visibility work vest or better. If ARRC office personnel visit any area requiring the use of high-visibility PPE they are required to wear a high-visibility vest.

Minimum requirements for ARRC employees who *do not* perform maintenance or construction duties adjacent to a highway, high-visibility apparel must meet or exceed the following:

- ANSI/ISEA 107-2010
- Class 2
- Level 2

Minimum requirements for ARRC employees who do perform maintenance or construction duties adjacent to a highway, high-visibility apparel must meet or exceed the following:

- ANSI/ISEA 107-2010
- Class 3
- Level 2

ARRC will only allow background material colors of fluorescent orange, yellow-green, or a combination of the two colors while conducting ARRC business. While the ANSI/ISEA standards allow for fluorescent RED or BLUE background material, ARRC DOES NOT allow these colors. Maintenance of Way personnel are required to wear High Visibility fluorescent orange only.

Exceptions will be made for Passenger/Guest Services personnel while loading and unloading passengers on platforms.

Special Agents are also exempt from wearing high visibility garments except in situations such as, conducting traffic control, accident investigations, etc. During those activities, Special Agents are allowed to wear ANSI/ISEA 207-2006 vests.

High-visibility gear shall always be the outermost layer of clothing.

Employees shall clean or replace their high-visibility vests when the vest becomes torn, soiled or otherwise unserviceable or is no longer effective in reflecting light sources.

S76.4 Safety Glasses

Employees shall only wear ARRC issued safety glasses. This applies to all employees except those who work in office environments where risk of eye injury is minimal. If an office employee enters an area requiring the use of safety glasses they shall wear the proper safety glasses.

Exceptions:

- Safety glasses are not required in a locomotive cab.
- Safety glasses are not required in vehicles.
- Safety glasses are not required at any ARRC depot platform as long as the employee is not engaged in an activity which would warrant their use.

All safety eyewear must meet American National Standards Institute (ANSI) Z87.1 standards and include permanently-mounted side shields or fully integrated solid sides.

Employees shall clean or replace safety eyewear when it becomes scratched, soiled or otherwise unserviceable or no longer provides a clear sight path.

Employees working in low light conditions shall wear clear safety glasses.

Train and enginemen, electricians, or any employees working with multi-colored wires are only authorized to wear grey tinted or clear safety glasses.

Train and Enginemen who wear contact lenses must have good tolerance to the lenses and must have a pair of corrective glasses available while on duty.

S76.5 Safety Footwear

This applies to all employees except those who work in office environments where risk of injury is minimal. If an office employee enters an area requiring the use of safety footwear they shall wear the proper safety footwear.

Boots must lace up, have minimum defined heel of 3/8 inch and must meet American Society of Testing Material (ASTM) F2413-05 standards.

Thermite or Boutet welders may wear welder's boots that meet the above criteria with the exception of "Lace-up"

Boots shall be intact and in good serviceable condition at all times and at a minimum, meet the following requirements;

- Intact shoe laces
- Be properly laced and tied while on duty and on ARRC property.
- Have a visible and functional tread on sole.

Waterproof Boots

Waterproof boots equipped with safety toes will be allowed for use on the Alaska Railroad. Their use is strictly limited to environmental conditions that merit their use. ARRC will not purchase these types of boots. Employees shall obtain permission from their supervisor at the start of each shift if they wish to wear waterproof boots.

Vapor Barrier Boots

Vapor barrier boots (bunny boots) may be worn when working outdoors in winter conditions. Their use is strictly limited to environmental conditions that merit their use. ARRC will not purchase these types of boots. Employees shall obtain permission from their supervisor at the start of each shift if they wish to wear vapor barrier boots.

S76.6 Safety Headwear

Safety headwear shall be worn in all areas where an overhead hazard exists, where signage requires its use, or when a supervisor mandates its use.

Only ARRC issued hard hats meeting the ANSI Z89.1 standards for a Type 1 Class E shall be worn.

All manufactures guidelines for inspection and replacement shall be followed. For example:

- MSA suspension systems must be replaced every 12 months
- MSA and Bullard hard hats have a service life of 5 years after first use

Baseball style hats or caps are not permitted to be worn under hard hats.

Only tight fitting welders caps, skull caps, banana caps, cold weather liners or other manufacturer approved liners may be worn under a hard hat.

MSA VGuard and Bullard type 1 hard hats may be worn backwards as long as the internal suspension is reversed.

Personnel and Area Exceptions

Hard hats are not required:

- By Special Agents and security officers while conducting law enforcement duties on railroad property.
- For Passenger Services employees assisting in loading or unloading of passengers on station platforms.
- In train or TOFC yards when no overhead hazard exists.
- For Carmen while conducting inspections in any rail yard.
- For all other ARRC employees while on passenger platforms or terminal areas for the purpose of customer service, visual inspections, training or audits not involving the use of any equipment or activities requiring the use of hard hats.
- For Signal and Telecom employees when performing climbing operations. Employees shall wear Type 1 Class E climbing helmets.
- For Train and Enginemen *except* when:
 - Performing gravel train service (see current SOP).
 - Performing work service with Maintenance of Way.
 - At derailments, washouts, or any other track repair/preservation operations.
 - Working, inspecting, or walking through any industrial or shop area, with active operations requiring the use of a hard hat.
 - Directed by supervisor.

S76.7 Hearing Protection

All ARRC employees shall adhere to the hearing protection requirements outlined in ARRC policy 63-7.

All ARRC employees are required to wear hearing protection (plugs or muffs) under the following circumstances:

- When entering designated hearing protection areas/operations including but not limited to:
 - In any area, or engaged in any activities identified by signs or instructions as requiring hearing protection.
 - Using or working next to tools, or operating equipment identified by signs or instructions as requiring hearing protection.
 - Using air lances or nozzles to blow compressed air.
 - Operating gasoline or diesel powered fork trucks, utility tractors or cranes.
 - In grit blast, sand blast or load test areas during operations.
 - Riding on the steps, platform or in the cab of an operating locomotive.
 - Hearing protection is not required in any locomotive cab when the diesel engine is idling.
 - Hearing protection is not required when riding in the cab of an SD-70 MAC with the windows closed.
 - Riding on the outside or top of any rolling stock
 - Working on or within 10 feet of hydraulic, pneumatic or combustion powered track maintenance equipment.
 - Operating or working within 10 feet of operating hydraulic, pneumatic or combustion powered hand tools.
 - Working within 10 feet of an operating compressor or air arc welding/cutting equipment during operation.
 - Working within 20 feet of steel shearing, punching or hammering operations.
 - Working on or within 20 feet of an operating derrick or locomotive crane.
 - Working within 150 feet of jet snow blowers or pile drivers. Dual Protection (ear plugs and ear muffs) is required for operators of this equipment.
 - On a firing range when weapons are being discharged. Dual Protection (ear plugs and ear muffs) is required for weapons firing.
 - Avalanche control (ground). Dual Protection (ear plugs and ear muffs) is required for operators of this equipment.
 - Working in areas or with equipment either listed above or not listed above, where by the employee is exposed to noise levels which would require a person to raise their voice in order to be understood by another at a distance of 3 feet or less.
 - As directed by management/supervision.

S76.8 Respiratory Protection

All ARRC employees whose job tasks require the use of or voluntarily wear respiratory protection, as a part of their job function, shall follow the standards as outlined in ARRC Policy 63-134.

At no time shall any ARRC employee wear a respirator without being fully qualified to do so as outlined in ARRC Policy 63-134. Refer to the ARRC policy for all safety requirements and usage charts.

S76.9 PPE Charts

The following charts are to be used in conjunction with the basic PPE requirements described in this section. The charts contain General PPE requirements, including hearing, eye, face, hand, foot, basic welding protection, disposable overalls, and aprons.

These charts cannot possibly cover every task accomplished here at the ARRC. Department's individual SOP's or JSA's shall be used as the primary rules for PPE requirement. Use these charts if no SOP or other written direction exists.

General PPE Requirements CHART A M = Mandatory Equipment X = Use as required Safety Glasses or Goggles meeting the ANSI Z87.1 standard are the minimum eye protection required for all tasks	Hearing Protection	Protective Handwear	*Respiratory Protection See Attached ARRC Policy for chart	Disposable Overalls	Apron (R-Rubberized O-Other Material)	Eye Protection	Face Protection Plastic Face Shield (P) Wire Mesh (W)	Personal Flotation Device (PFD) or Harness/Lanyard	Fall Protection Harness/Lanyard	Welding Protective Equipment See also Welding Shade Equipment Chart		
										Welder's Jacket or Sleeves	Welder's Leathers	Spats/ Leggings/ Chaps
Abrasive grinding (frog grinding, wear plate, etc.)	M	M	X		M-O	M	PX			X		
Acids, caustics, or other chemical solutions		X	X	X	X-R	M	PX					
Banding materials		M				M	PX or WX					
Batteries: servicing storage batteries		M			X-R	M	PX					

General PPE Requirements CHART A M = Mandatory Equipment X = Use as required Safety Glasses or Goggles meeting the ANSI Z87.1 standard are the minimum eye protection required for all tasks	Hearing Protection	Protective Handwear	*Respiratory Protection See Attached ARRC Policy for chart	Disposable Overalls	Apron (R-Rubberized O-Other Material)	Eye Protection	Face Protection Plastic Face Shield (P) Wire Mesh (W)	Personal Flotation Device (PFD) or Harness/Lanyard	Fall Protection Harness/Lanyard	Welding Protective Equipment <i>See also Welding Shade Equipment Chart</i>		
										Welder's Jacket or Sleeves	Welder's Leathers	Spats/ Leggings/ Chaps
Bench grinder	M	X	X		X-O	M	PX					
Blowing, ice chipping or cleaning with compressed air, steam, or water pressure washer	M	M	X	X	X-O or R	M	PX or WX					
Boring, reaming, or drilling	X	X				M	PX					
Breaking frozen material (ice, ground, gravel, cinders, ballast, etc.)	X	M	X			M	PX					
Breaking or cutting concrete, stone, or asphalt	X	M	X			M	PX or WX					
Bridge work over water more than 4 feet deep						M		M				
Bridge work over 12 feet above ground						M		M				
Buffing and polishing with a wire wheel		M	X			M						
Carbon-arc cutting and gouging	M	M	X			M				X	X	X
Chain saw	M	M				M	WX					M
Cleaning agents: spraying/general use of		X	X	X	X-R	M						
Climbing poles and rail/work equipment		M				M						
Cut-off disks, chop saws, or other tools with carbide bits	M	X	X			M	PX					

General PPE Requirements CHART A M = Mandatory Equipment X = Use as required Safety Glasses or Goggles meeting the ANSI Z87.1 standard are the minimum eye protection required for all tasks	Hearing Protection	Protective Handwear	*Respiratory Protection See Attached ARRC Policy for chart	Disposable Overalls	Apron (R-Rubberized O-Other Material)	Eye Protection	Face Protection Plastic Face Shield (P) Wire Mesh (W)	Personal Flotation Device (PFD) or Harness/Lanyard	Fall Protection Harness/Lanyard	Welding Protective Equipment <i>See also Welding Shade Equipment Chart</i>		
										Welder's Jacket or Sleeves	Welder's Leathers	Spats/ Leggings/ Chaps
Cutting rivets, bolts, or cotter keys; splitting nuts	M	M				M	PX					
Deck/slip work						M		M	X			
Dusty conditions		X	X			M						
Electrical hazard		X				M						
Electrical welding	X	M	X			M				X	X	
Gas welding, cutting, or heating	X	M	X			M				X	X	
Gators, rangers, four-wheelers	X	M				M						
Hammer-punch	M	X				M						
Hand tools	X	X				M	PX					
Lifting and carrying		X				M						
Machining steel, iron, or other metals	M	M	X			M	PX					
Manlifts/Powered Platforms over 6 feet above ground						M			M			
MIG/TIG welding	X	M	X			M				X	X	
Molten metal: handling or pouring		M	X		M-O	M				X	X	
Painting/spray painting		X	X	X	X-R	M	PX					
Pneumatic tools	M	X				M	PX					
Powder-actuated tools	M	M				M	PX					
Sand blasting (abrasive blasting)	M					M	PX					
Scaling, scraping, or removing welding flux	X	M	X			M	PX					

General PPE Requirements CHART A M = Mandatory Equipment X = Use as required Safety Glasses or Goggles meeting the ANSI Z87.1 standard are the minimum eye protection required for all tasks	Hearing Protection	Protective Handwear	*Respiratory Protection See Attached ARRC Policy for chart	Disposable Overalls	Apron (R-Rubberized O-Other Material)	Eye Protection	Face Protection Plastic Face Shield (P) Wire Mesh (W)	Personal Flotation Device (PFD) or Harness/Lanyard	Fall Protection Harness/Lanyard	Welding Protective Equipment <i>See also Welding Shade Equipment Chart</i>		
									Welder's Jacket or Sleeves	Welder's Leathers	Spats/ Leggings/ Chaps	
Steam cleaning	X	M	X	X	X-R	M						
Striking hardened tools	X	M				M	PX					
Washing locomotives or equipment		M		X	X-R	M	PX					
Woodworking machines	X	X				M						
Work with unprotected sides/edges more than 6 feet above the ground when working in the field under the construction standard.						M			M			
Work with unprotected sides/edges more than 4 feet above the ground when working the general shop areas under the general industry standard						M			M			
Work near swift current						M		M				

Employees shall use appropriate hand protection when hands are exposed to hazards such as skin absorptions or harmful substances, lacerations, abrasions, punctures, and chemical or thermal burns.

Work Glove Chart M = Mandatory equipment X = Use as required	Mechanics Gloves	Leather or Leather Palm	Rubber/ Chemical Resistant	Welding
Abrasive grinding (frog grinding and wear plate)		M		X
Acids, caustics, or other chemical solutions			M	
Banding materials	M	X		X
Batteries: servicing storage batteries			M	
Bench grinder –if gloves used keep from moving parts	X	X		X
Blowing and cleaning with compressed air, steam, or water pressure washer		M		X
Boring, reaming, drilling	X	X		
Breaking frozen material (ice, ground, gravel, cinders, ballast, etc.) with hand tools		M	X	X
Breaking or cutting concrete, stone, or asphalt		M		X
Buffing and polishing with a wire wheel	X	X		X
Carbon-arc cutting and gouging				M
Chain saw		M		X
Cleaning agents: spraying/general use of			M	
Climbing poles and rail/work equipment	X	X		
Cut-off disks, saws, or other tools with carbide bits	X	X		
Cutting rivets, bolts, or cotter keys, splitting nuts	X	X		
Dusty conditions	X	X		
Electrical hazard			X	
Electrical welding				M
Gas welding, cutting, or heating				M
Gators, Rangers, or four wheelers	X	X		
Hammer-punch	X	X		
Hand tools	X	X		
Lifting and carrying	X	X		

Work Glove Chart M = Mandatory equipment X = Use as required	Mechanics Gloves	Leather or Leather Palm	Rubber/ Chemical Resistant	Welding
Machining steel, iron, or other metals	X	X		
MIG/TIG welding				M
Painting/spray painting	X	X	X	
Plasma arc cutting				M
Pneumatic tools	X	X		X
Powder-actuated tools	M	X		
Sand blasting (abrasive blasting)	X	X		X
Scaling, scraping, or removing welding flux	X	X		X
Steam cleaning		X	M	
Striking or striking with hardened tools and fastenings	M	X		
Washing locomotives and equipment			M	
Woodworking machines	X	X		
When working outside locomotive cab	X	X		

Welding Shade Chart	Lens selection guide for filter shades that must be used when welding and cutting.								
M = Minimum Mandatory shading	Shade Number								
	2	3 or 4	4 or 5	5 or 6	6 or 8	10	11	12	14
Carbon-arc cutting & gouging (air arcing)						M			
Carbon-arc welding									M
Gas shielded-arc welding (ferrous): 1/16", 3/32", 1/8", 5/32" electrodes								M	
Gas shielded-arc welding (non-ferrous): 1/16", 3/32", 1/8", 5/32" electrodes							M		
Gas welding: up to 1/8"		M							
Gas welding: 1/8" to 1/2"			M						
Gas welding: 1/2" and over				M					
MIG welding							M		
Oxygen heating and cutting: up to 1"		M							
Oxygen heating and cutting: 1" to 6"			M						
Oxygen heating and cutting: 6" and over				M					
Plasma-arc cutting: less than 400 amps					M				
Plasma-arc cutting: greater than 400 amps									M
Shielded metal-arc welding:									M
60 to 160 AMPs					M				
160 to 250 AMPs						M			
250 to 500 AMPs							M		
Soldering	M								
TIG welding: less than 50A						M			
TIG welding 50-150A								M	
Torch brazing		M							

S77.0 Physical Exertion, Lifting and Carrying

S77.1 General

Before conducting operations which require physical exertion all ARRC employees should warm-up and stretch out their major muscle groups.

Safe lifting practices are the key to preventing strains and sprains. All ARRC employees must use safe lifting procedures and good body mechanics when attempting any manual lifts. All ARRC employees are required to follow ARRC written Ergonomics Program. Some key points to remember when lifting and carrying an object are:

- When possible use mechanical lifting devices to lift and move the load.
 - Only use mechanical lifting devices that you are trained and authorized to use.
- If the load you are going to attempt to lift is awkward or too heavy to safely move yourself, always seek the assistance of a fellow employee or break the load in manageable pieces.
- Before lifting, make sure you have good footing.
- Do not lift or carry beyond your physical capabilities.
- Avoid jerking and twisting.
- Do not lift while bending over at the waist.
- Make sure your hands or gloves are free of grease and moisture.
- Watch for slipping or tripping hazards. Remove them when possible.
- Plan your route and maintain clear vision to minimize hazards.

S77.2 Lifting Procedure

Follow this procedure to lift safely:

- Place your hands and feet where they will not interfere with the material being lifted.
- Place feet shoulder width apart with one foot slightly behind you to maintain your balance when lifting.
- Bend your knees and keep your back straight.
- Take a firm grip on the object and straighten your legs slowly.
- Keep the object as close to your body and as near your center of balance as possible.

S77.3 Two Person Lifting Procedure

When lifting with two or more persons:

- Choose one member of the team to give directions.
- Place workers according to size, strength, and experience.
- Have a clear understanding of all movements, including lifting, walking, and lowering.

- Lift or make other movements only when instructed.
- Avoid walking backwards, except when absolutely necessary.

S78.0 Power Tools and Machinery Operation

S78.1 General

- Only use power tools for their intended purpose.
- Do not operate power tools or machinery unless you are authorized and trained.
- Inspect all power equipment prior to use.
- Defective power tools shall not be used and will be tagged and turned in for repair.
- Cut, frayed or damaged power cords will not be used.
- Grounding prongs shall never be removed from a power cord.
- Adapters shall not be used to convert three pronged power cords to two pronged power cords.
- Use brush, vacuum, or similar tools to remove metal chips and shavings from machinery.
- All safeguards must be in good working condition and may not be removed.
- Make sure other workers are clear of machine or power tools before starting work.
- Make sure tools have stopped rotating before setting them down.
- Hold tools firmly when in use.
- Fuel gasoline-powered equipment away from ignition sources.
- Do not add fuel to a hot engine.
- Store fuel containers away from ignition sources.
- Protect against exposed mufflers on gas powered tools.
- All non-portable power tools must be bolted to the floor i.e. grinders, band saws, lathes, etc.
- Proper machine guarding shall be used at all times.
 - Permanently mounted guarding shall only be removed for maintenance
 - Portable magnetic mounted machine guards shall be used for non-portable machinery without manufactures machine guarding.

S78.2 Specialty Power Tools and Machinery Operation

This section does not cover every type of power tools used at the ARRC. When using any specialty power tool follow all manufacturer's instructions, SOPs or JSA's.

Chain Saw

- Wear all required PPE.
- Follow the manufacturer's instructions and training.
- Perform a job briefing that includes identification of an escape route before starting chain saw.
- Place chainsaw on firm surface when starting.
- Grip chainsaw firmly using both hands when cutting.

- Establish firm footing while operating chain saw.
- Do not cut with chain saw above your head.
- When cutting small brush, prevent it from being drawn into the saw's sprocket.

Drill Press

- Mechanically secure material to prevent movement.
- Do not clamp material while machine is in operation.
- Never leave the key in the chuck.
- For keyless chucks ensure unit is secured and locked in place.

Grinding/Wire Wheels

- Perform a ring test prior to use.
- Do not use grinding wheel that is cracked or chipped.
- Follow manufactures specifications for dressing the wheel.
- Do not grind on the side of an abrasive wheel.
- Keep grinding wheels and abrasive saw blades dressed.
- Adjust the tool rest to within 1/8 inch of grinding wheel and adjustable tongue guard is within 1/4 inch of the grinding wheel.
- Use grinding wheel only on materials for which the wheel is designed.
- Aprons and face protection shall be worn during wire wheel and grinding operations.

Table Saws

- Use a push stick when necessary to feed wood through power saw blades.
- Never use with guards removed or forced open.

Hydraulic and Pneumatic Tools

- Release pressure from hose before connecting or disconnecting.
- Do not use hoses on hydraulic or pneumatic tools for hoisting or lowering.
- Use safety clips or retainers to secure attachments on pneumatic tools.
- If pneumatic tool is equipped with "Chicago" fittings they must be wired together.

Powder-Activated Tools

- Operate powder-activated tools only if you are trained and authorized to do so.
- Never leave a loaded tool unattended.
- Handle a powder-activated tool as if it were loaded.
- Fire powder-activated tool so that you and others are protected from its discharge.

Power Press

- Stay clear of pinch points.
- Keep away from line of fire.
- Use available guarding to prevent being struck by projectiles.

Rail Saw

- Keep abrasive saw blades free of water, oil, and grease.
- Stay clear of the path of debris projected from the saw.

- Ensure flammable materials are kept away from immediate area.
- Establish a fire watch as needed.

Stanray Wheel Truing Machine

- Never leave the Stanray Wheel Truing Machine unattended with the slide rails retracted.
- Do not spot a specific wheel location of the equipment on to the Wheel Truing Machine unless a qualified operator is present to direct the movement.
- Prior to directing movements into the Wheel Truing Track, mechanical department personnel are responsible for ensuring the slide rails are in the correct position and the movement can be made safely.

Wheel Truing Machine



S79.0 Riding On Equipment

S79.1 General

At no time will employees ride on mechanized non-rail equipment unless the equipment is specifically designed and equipped to carry additional passengers aside from the operator.

S79.2 Railcars and Locomotives

- Do not ride between cars.
- Always face the direction of movement.
- Be prepared at all times for unexpected movements.
- Keep secure hand holds and footing at all times.
- Before riding equipment notify the engineer. Then proceed only after the engineer has acknowledged that you are going to ride.
- Carry your lantern with its bail in the palm of the hand and not in the crook of the arm. This will allow visually scanning the equipment before mounting, provide visibility in the direction being traveled and still leave hands free for firm grip.

Do not ride or knowingly allow others to ride:

- On the end ladder or crossover platform, inside the gauge of a rail of any car.
- On coupler, cut lever or cushion under frame device.
- The end platform on the leading-end of cars being shoved, nor on the end platform between coupled cars, unless car is equipped with a riding platform that has a safety rail positioned between you and the end of the equipment.
- On a flat car loaded with lumber, pipe or other materials susceptible to shifting upon slight impact. Do not ride between the end of the adjacent car and the load, or any location where you may be struck or pinned by moving lading or equipment.
- On the outside on the roof of a car, locomotive or other equipment.
- When practical, do not ride on the bottom step when going over road crossings at grade.
- On the ladder providing access to top of a tank car.
- Inside, or on top of equipment such as hopper and gondola cars.
 - Exception: Covered hoppers with solid floors outside the gauge of the rail.
- Do not ride equipment to a coupling.
 - Exceptions:
 - On locomotives.
 - Car movers.
 - Inside passenger cars.

S79.3 Maintaining a Safe Clearance

- When extending a part of your body beyond the outside of standing or moving equipment, keep a careful lookout in both directions for trains, locomotives, and cars or other obstructions fouling the track .
- Do not ride or knowingly allow others to ride on the side of locomotives or equipment through doorways or gates.
- Do not ride or knowingly allow others to ride on the side of equipment next to loading docks, ramps, platforms or inside buildings.

S79.4 Riding Caboose/Transport Car/Passenger Car

- Be careful to avoid being injured by coupling, slack action, sudden stop or other unexpected movement.
- When riding on rear platforms or steps maintain three point contact.
- Stay seated if possible. If you must move around, brace yourself and maintain a firm hand hold.
- Side and trap doors of vestibules must be kept closed while the train is moving, except when attended by a crew member. When vestibules are in use at stations, open them only on the side where passengers are received or discharged.
- An end gate must be placed at the rear of the last car in a passenger train if the car end is a vestibule. If the car end is not a vestibule, a chain or crossbar must be used.

- Trainmen must know that end gates or chains are in the proper position at the end of each car when disconnecting equipment and during switching operations.

S79.5 Riding on a Moving Passenger Train

On a moving passenger train, assume and maintain a position with firm footing at all times, especially under the following conditions:

- When you feel, hear or have been advised of an air brake application.
- During an emergency brake application.
- Going through crossovers.
- Entering or leaving a station.
- While moving on a curve.
- Using one hand for balance (keep one hand free).
- During switching or coupling operations in the yards, terminals or along the road when the train is subject to having cars or engines added, removed or switched.

S79.6 Riding In or On Flat Cars or Intermodal Cars

Do not ride or knowingly allow others to ride the side of any flat car or any type of intermodal equipment unless equipped with either two vertically mounted handholds, or horizontal grab irons that are part of a riding ladder and of sufficient height to provide balance.

If necessary to ride flat cars not so equipped:

- Before the movement starts take a safe position near the center of the car. Either sit or kneel as near as possible to the center of the car or the empty space.
- Face the direction of movement.
- Be prepared for slack action or unexpected movement.
- Maintain a kneeling or sitting position until the equipment stops and the slack has adjusted. Do not stand or walk on a moving flat car.
- Do not walk or ride between trailers or containers loaded on flat cars.
- Do not place your hands or other parts of your body where trailers or bridge plates could move and cause injury when riding loaded TOFC/COFC flat cars.
- Do not stand, sit, kneel or ride on the corner of a flat car or use a container or any part of the load as a handhold.
- Do not ride fouling any portion of a trailer hitch.
- When riding a bulkhead flat car or center beam flat car, do not place any part of your body between lading and bulkhead. It is permissible to ride the deck of an empty bulkhead or empty center beam flat car. When doing so, position yourself on the deck behind the bulkhead in direction of movement. Maintain a three-point contact with a firm grip on the side grab iron and face the direction of movement.

S79.7 Riding On Tank Cars

When necessary to ride on the crossover platform of a tank car, employees must ride on the outer portion of the crossover platform, positioned outside the gauge of the rail.

- Face the direction of movement.
- Ride with both feet on the end platform outside the gauge of the rail; or
- Ride with one foot in the stirrup and one foot on the horizontal grab iron; or
- Ride with one foot in the stirrup and one foot on the end platform.
- Do not ride or knowingly allow others to ride on any part of the coupler apparatus, center sill, side sill, end sill or framework.
- Do not ride any ladder intended for the man way.

S80.0 Rail Car Doors

S80.1 General

- Visually inspect door, door track, and supporting hardware before opening or closing doors.
- Make sure:
 - Plug doors have top center upper crank arm before operating.
 - All door track and track rollers are intact.
 - Interior load dividers are equipped with safety cables on top camlock operating mechanism.
 - Hangers in top of sliding door are in place.
- Do not remove or replace doors while car is on jack stands.
- Plan escape route in advance of door operation or movement of car.
- If necessary, use a bar to inch door along track when opening or closing a door.
- Pull doors open or closed in order to keep clear of door should it fall.
- The inside divider doors must be in a locked position prior to movement.

S81.0 Rigging

S81.1 General

- Employees shall be certified in the rigging standard specific to their duties.
- Refer to the most current version of the Riggers Handbook for safety requirements, load calculations, and inspection criteria.
- Use only chains, slings, and hardware that are tagged and currently certified to meet OSHA requirements for the lift.
- Do not exceed rated lifting capacities.
- The main lifting hook must have a working safety latch for overhead lifting.
- Do not use load securing devices for overhead lifting.

S82.0 Smoking

Employees may only smoke in designated areas. Employees may not smoke (including cigarettes, cigars and electronic cigarettes) in any ARRC facility, or in the cab of any vehicle, equipment, or locomotive.

S83.0 Switches

S83.1 General

Each switch and derail has different operating characteristics. Be familiar with the procedures for properly operating each type of switch or derail. Always remember that the ease with which a switch operates will change depending on weather, temperature, maintenance, and other operating conditions. Switches require regular maintenance to ensure that they properly function. A properly functioning switch is an important component of the safe operation of switches. Stop the car, locomotive or on-track equipment not less than 15 feet from a facing point switch to be operated. This will assist in keeping the stock rail and points at the same level. When stock rail and points are uneven, it causes resistance in switch operation. Before operating a switch:

- Look in both directions and watch for moving equipment on adjacent tracks.
- Visually inspect the switch to make sure it is not damaged, locked, spiked or tagged.
- Verify switch points and rods are not fouled by ballast, snow, ice, or other material that may interfere with the normal movement of the switch points.
- Do not use your hand or foot to remove foreign material between the switch points and stock rail. If necessary to remove foreign material, use a broom, proper tool, stick or similar object.
- Take a firm stance and be alert for conditions which may cause a loss of footing.
- When operating a switch, face the switch squarely and keep your body, hands and feet clear to prevent being caught or struck by the switch handle or ball.
- Do not strain your body and risk physical injury on a switch or derail that is hard to throw. NEVER APPLY EXCESSIVE FORCE.
- Do not use extensions or “cheaters”.
- Follow current “hard to throw” switch program guidelines.

S83.1 Operating Lever Action Switches

- These instructions apply to all lever action switches regardless of the type of handle they are equipped with including low handle, 45-degree, and bow-handle type levers.
- Check for conditions that may cause loss of footing as the handle is moved.
- If equipped, release the foot latch only with your foot.

- Be alert for a switch under compression that could cause the handle to “pop-up” when released from the latch or keeper. Keep your body clear of the switch handle’s path of movement.
- Use proper body mechanics.
- Inspect switch to ensure switch is properly aligned and points fit properly.

Switch Operation:

- Place hand(s) at the end of the switch handle.
- Slowly lift the handle, keeping your back straight and use your leg muscles.
- Adjust your body position to keep the handle between your shoulders.
- As the switch handle is moved, reposition your feet as needed to avoid a twisted or awkward body position.
- If resistance is sensed at any time when using one hand, use two hands to complete the switch movement.

Place the lever handle to the latched position as follows:

- Use slow even pressure.
- Do not jerk or use unnecessary force.
- Keep hands and legs firmly braced and clear of the operating lever.
- One foot may be used to finish the last few inches of movement on a low handle switch. One foot must remain on the ground for balance when using this method.

Make sure the switch handle is latched and the switch points fit properly.

- Replace hook or lock if equipped.
- Ensure that you have lined the switch for the desired position.

S83.2 Operating High Stand Switch

- Establish a firm stance and check for conditions that could interfere with footing.
- Stay clear of the path of travel of the switch handle. It may be under compression and may swing around when released from the keeper slot.
- Use an open palm to lift handle out of the keeper slot. Be alert for a switch under compression that could “pop-up” when released from the latch or keeper. Keep your body clear of the switch handle’s path or movement.
- Anticipate sudden changes in resistance when operating a switch.

Two Handed Method:

- Stand with your shoulders parallel to the switch handle. With an open palm, lift the handle out of the keeper slot being prepared for any sudden movement.
- Keeping your back in proper alignment with your legs slightly bent, slowly PULL the handle through the line of travel.

- Fully seat the handle in the keeper slot when the switch is in the desired position.
- Do not kick or use your feet to set the handle in the keeper slot.
- Make sure that the handle is in place and the switch points fit properly.
- Replace hook or lock if equipped.
- Ensure that you have lined the switch for the desired position

Mast Supported Method:

- With an open palm, lift the handle out of the keeper slot being prepared for any sudden movement.
- After handle is lifted out of the keeper and any tension is released. Place one hand on the mast and the other on the end of the handle.
- Standing parallel to the handle slowly pull the handle through the line of travel.
- As the switch handle is moved, reposition your feet as needed to avoid twisted or awkward body position. Focus on using leg muscles, not back muscles.
- Do not jerk the handle or use unnecessary force. **DO NOT PUSH THE HANDLE.**
- Fully seat the handle in the keeper slot when the switch is in the desired position.
- Do not kick or use your feet to set the handle in the keeper slot.
- Make sure that the handle is in place and the switch points fit properly.
- Replace hook or lock if equipped.
- Ensure that you have lined the switch for the desired position.

S84.0 Traveling or Working Alone in Extreme Weather Conditions

S84.1 General

There are times when ARRC employees may be tasked with projects which require them to work or travel alone in extreme weather conditions. The following section will provide instruction on how to prepare, travel and work alone in these conditions.

S84.2 Planning for and Traveling in Extreme Weather

Follow these precautions when your duties require you to travel or work alone in extreme weather conditions:

- Preplan your route and ensure your supervisor is aware of the route you are taking and estimated time of arrival.
- Research the weather forecast and road conditions for the area you are traveling to.

- Ensure you have the proper clothing/gear for any forecasted or current weather conditions where you will be conducting operations.
- Ensure the ARRC vehicle you are using for travel is in proper working order.
- Use the following check-in procedure to keep in touch with another employee by radio or telephone.
- Contact your supervisor, train dispatcher or another responsible employee. Tell this contact person:
 - Your current location.
 - Your destination.
 - The time when you will check in again.
 - Check in with your contact person at the designated time.
 - *NOTE: If your contact person does not hear from you at the designated time, he or she will use the radio to try to determine your location or will send someone to try to find you.*
- When working in a slide zone where there are avalanche dangers, follow current avalanche procedures as prescribed in the most current Timetable or General Order.
- Do not go out alone to dispatch or retrieve injured wildlife.

S84.3 Emergency Actions for Extreme Winter Weather

Use the following as basic guidelines if you become stuck in extreme weather conditions:

Blizzards

Indoors

- Stay calm and await instructions from the Emergency Response Coordinator (ERC) or the designated official.
- Stay indoors.
- If there is no heat:
 - Close off unneeded rooms or areas.
 - Stuff towels or rags in cracks under doors.
 - Cover windows at night.
- Eat and drink. Food provides the body with energy and heat. Fluids prevent dehydration.
- Wear layers of loose-fitting, light-weight, warm clothing, if available.
- ERC will contact:
 - Train Dispatcher
 - Supervision and department Senior Management

Outdoors

- Find a dry shelter. Cover all exposed parts of the body.
- Contact supervision, ERC, or train dispatcher to inform them of your situation
- If shelter is not available:
 - Prepare a lean-to, wind break, or snow cave for protection from the wind.
 - Build a fire for heat and to attract attention. Place rocks around the fire to absorb and reflect heat.
 - Do not eat snow. It will lower your body temperature. Melt it first.

Stranded in a car or truck

- If you have a radio or cell phone contact your supervisor or train dispatcher to advise them of your situation.
- If an employee is injured and contact 911.
- Stay in the vehicle.
- Run the motor about ten minutes each hour.
- Open the windows a little for fresh air to avoid carbon monoxide poisoning. Make sure the exhaust pipe is not blocked.
- Make yourself visible to rescuers.
- Turn on the dome light at night when running the engine.
- Tie a colored cloth to your antenna or door.
- Raise the hood after the snow stops falling.
- Exercise to keep blood circulating and to keep warm.

S85.0 Trenching and Excavations**S85.1 General**

When trenching and/or excavating:

- Before trenching or excavating, check for buried utilities.
 - Call DIGLINE location service at 811.
 - Contact the ARRC Engineering Department.
 - Contact any applicable local utility department.
- Prior to trenching operations, the site engineer or competent person must make soil stability determination.
- Before you enter a trench or hole deeper than 4 feet, make sure the sides are adequately shored or sloped and emergency exits are available.
- When working in a trench, make sure there are emergency exits every 25 feet.
- Trenches, open pits, manholes and excavations must be protected with barriers and warning signs.
- If working alone, establish a check-in schedule with supervisor or co-worker.
- Stay within confines of trench boxes or shoring when working in trench or excavation.
- Stay clear of open unprotected edges.
- Comply with OSHA Construction Code Excavation Standards.

S86.0 Vehicle Operation

S86.1 General

- Before operating an ARRC owned or leased motor vehicle, the driver and passenger(s) must confirm vehicle is safe to operate, including that it does not exceed its rated capacity.
- Prior to starting an ARRC vehicle a walk around inspection shall be performed.
- Before backing an ARRC owned or leased vehicle in any location:
 - Perform a walk around inspection.
 - Plan your vehicle's path of travel accordingly.
 - Honk 3 times **or** make sure back up alarm is operating.
- When driving with a passenger, have second person guide backing movement from a safe distance behind vehicle.
- When parking, position vehicle to prevent the need for backing out of the parking space.
- Make sure tools, equipment, and baggage are distributed, chocked, tied down, or otherwise secured.
- Employees shall only ride in the designated seating areas.
- Prior to exiting a vehicle the driver must place the vehicle in park, or neutral with parking brake set.
- Seatbelts are required to be worn by driver and all passengers.
Exception:
 - Employees in a vehicle, for the **sole** purpose of performing inspections/repairs of rolling stock, in any yard traveling 5 MPH or less.
- Safety devices shall not be tampered with or removed.

S86.2 All-Terrain Vehicle (ATV), Utility Vehicle (UTV) and Snow Machines

- Employees must be qualified and authorized to operate the equipment.
- Speeds must not exceed posted speed limits or manufacturer recommendations.
- Signals, headlights and brake lights (if equipped) will be fully operational at all times.
- A DOT approved helmet must be worn when operating any ATV or snow machine.
Exception:
 - Employees in a vehicle in any yard traveling 5 MPH or less are not required to wear a DOT helmet.
- Employees may only carry passengers if the ATV or snow machine is designed to carry passengers.
- Seatbelts must be worn when operating a UTV.
Exception:
 - Employees in a vehicle in any yard traveling 5 MPH or less are not required to wear a seat belt.
- Hand signals must be used prior to making a turn when operating a UTV if not equipped with turn signals.

S87.0 Walking Safety

S87.1 General

- All employees must be aware of environmental conditions and must wear the proper footwear in order to increase stability and traction.
- Employees are expected to preplan their walking routes based on current conditions and the task at hand.
- Cross tracks only where crossings are provided for that purpose, unless you must cross at other places to perform your duties.
- Look both ways and cross tracks at a 90-degree right angle to maximize the field of vision within the fouling space.
- Take the shortest possible route across a track.
- Do not or knowingly allow others to stand, sit, walk between the rails, or foul a track except as required to perform your duties and proper protection is provided if required.
- Do not or knowingly allow others to step, walk, or sit on a rail or guard rail, switch, switch machine, frog, or derail.
- Look in all directions for moving equipment. Do not assume that you will be able to hear approaching equipment.
- Expect equipment to move at any time, on any track, in either direction.
- Always remain aware of your surroundings. Do not engage in an activity which will distract your attention.
- Always look in the direction you are walking.
- Avoid walking backwards.
- Avoid running.
- Always be on the alert to avoid slipping and tripping hazards.
- Avoid talking, texting or emailing on a cell phone or radio while walking.
- Do not walk with both hands in pockets.
- Use extra caution while walking on ballast and ballast shoulders, on uneven ground, in icy and snowy conditions, when visibility is restricted or when stepping on crossties.

S88.0 Warning Signs

All ARRC employees will comply with verbal warnings, warning signs, posted instructions, and placards identifying restricted areas, safety and health precautions, or potential hazards.

S89.0 Welding, Brazing and Cutting

S89.1 General

- Before welding/cutting on or about rail cars or other containers, identify and safeguard contents.

- Do not weld, cut, or perform work involving ignition sources directly on containers that may contain explosives, flammable or poisonous solids/vapors unless the container has been properly purged.
- Freight cars may be welded, cut or heated provided the area being worked on is other than the tank itself or as authorized by a supervisor.
- Establish a fire watch as necessary.
- Remove or safeguard any combustible materials in the general vicinity of the welding, cutting or brazing operations.
- Wear all required PPE.
- Direct flames or sparks away from people, equipment, and any flammable material.
- Shield the welding arc light and reflected rays from the view of others by using portable shields or equivalent.
- When arc welding, apply the ground cable to the part being welded, not to another part of the equipment when possible.
- Supply ventilation system to maintain air quality and prevent oxygen deficient atmosphere when necessary or directed by a supervisor.

S89.2 Fire Watch

- A fire watch shall be assigned as needed:
 - Appreciable combustible material, in building construction or contents, is closer than 35 feet to the point of operation.
 - Appreciable combustibles are more than 35 feet away but are easily ignited by sparks.
 - Wall or floor openings within a 35 foot radius expose combustible material in adjacent areas including concealed spaces in walls or floors.
 - Combustible materials are adjacent to the opposite side of metal partitions, walls, ceilings, or roofs and are likely to be ignited by conduction or radiation.
- Safeguard against fire during and after the welding, cutting, or heating operations.
- Must be briefed on the specific fire hazards for that job and location.
- Fire suppression equipment must be on hand, and readily available for use by emergency responders. ARRC employees are required to evacuate personnel and contact emergency services.
- Be maintained for at least a half-hour after completion of welding or cutting operations to detect and notify emergency services of any fires.

S89.3 Electric Welding

- Verify that electrode and ground cables are completely insulated throughout their length.
- Use approved cable connections.
- Use cables with approved splices.
- Shield welding equipment from moisture.

S89.4 Oxy-Acetylene Welding

- Use only approved flint strikers to light welding torch.
- Do not wrap torch hoses around body parts.
- Close cylinder valve when not in use.
- Do not open acetylene valve more than ¼ turn.
- Confirm oxygen/fuel equipment has reverse flow check valves and flash arrestors.

S90.0 Work Zones Around Equipment

S90.1 General

- Work zones are defined as a distance of 25 feet from the equipment or swing radius.
- Do not enter a machine's work area without first communicating with the operator to establish safe work procedures.
- Comply with all posted warning signs.