BUCKINGHAM
BRANCH
RAILROAD

SAFETY RULES

Revision Page

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Switching Operations Fatality Analysis

(SOFA)

The 5 Lifesavers:

1. Any crew member intending to foul track or equipment must notify the locomotive engineer before such action can take place. The locomotive engineer must then apply locomotive or train brakes, have the reverser centered, and then confirm this action with the individual on the ground. Additionally, any crew member who intends to adjust knuckles/drawbars, or apply or remove EOT device, must ensure that the cut of cars to be coupled into is separated by no less than 50 feet. Also, the person on the ground must physically inspect the cut of cars not attached to the locomotive to ensure that they are completely stopped and, if necessary, a sufficient number of hand brakes must be applied to ensure the cut of cars will not move.

2. When two or more train crews are simultaneously performing work in the same yard or industry tracks, extra precautions must be taken:

    - Same track – two or more crews are prohibited from switching into the same track at the same time, without establishing direct communications with all crew members involved.
    - Adjacent Track – protection must be afforded when there is a possibility of movement on adjacent track(s). Each crew will arrange positive protection for an adjacent track(s) through positive communication with the Rail Traffic Controller and/or other crew members.

3. At the beginning of each tour-of-duty, all crew members will meet and discuss safety matters and work to be accomplished. Additional briefings will be held any time work changes are made and when necessary to protect their safety during the performance of service.

4. When using radio communication, locomotive engineers must not begin any shove move without a specified distance from the person controlling the move. Strict compliance with “distance to go” communication must be maintained.

    When controlling train or engine movements, all crew members must communicate by hand signals or radio signals. A combination of hand and radio signals is prohibited. All crew members must confirm when the mode of communication changes.

5. Crew members with less than one year of service must have special attention paid to safety awareness, service qualifications, on-the-job training, physical plant familiarity, and overall ability to perform safely and efficiently. Programs such as peer review, mentoring, and supervisory observation must be utilized to ensure employees are able to perform service in a safe manner.

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Safety Rules
And
Company Programs

Notice

The rules presented in this book:

- Are effective ***October 19, 2015***
- Are effective on properties owned and/or operated by BBRR.
- Govern the activities of all employees.

Employees whose duties are prescribed by these rules must:

- Be conversant with and comply with them.
- Have a copy of this book accessible to them while on duty.

Safety Policy Statement

BBRR is committed to being the safest railroad in the country. By complying with these rules and empowering everyone with the right, the responsibility, and the resources to make safe decisions, we will accomplish our goals. Our ultimate goal is to prevent all personal injuries.

This book contains specific rules governing our work activities. Rules cannot be written to cover everything we do on the job; therefore, we are empowered to make decisions and take action necessary to prevent personal injuries. Where no specific rule applies, we must rely on good judgment, following the safest course available. In addition to these rules, you may need to contact your supervisor for guidance. Do not take any action until you are fully aware of the hazards involved and have a plan to avoid injury.

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General Safety Rules

GS-1. Safety Responsibilities

All employees governed by these rules, must ensure that:

- A copy of the BBRR Safety Rule Book is accessible while on duty.
- Behavior in the workplace is civil and courteous.
- Local, state and federal laws and regulations that relate to job task are observed.
- Work areas and environment are clean, orderly and protected from controllable hazards.

GS-2. Substance Abuse

The illegal possession or use of a drug, narcotic, or other substance that affects alertness, coordination, reaction, response, or safety is prohibited both on and off duty. An employee shall neither report for duty nor perform service while under the influence of nor use while on duty or on BBRR property any drug, medication, prescription medication, or other substance that will in any way adversely affect the employee's alertness, coordination, reaction, response, or safety.

GS-3. Job Briefing

Effective job briefings at the beginning of and throughout our workday make us more aware of our surroundings and better prepared to recognize and avoid potential hazards. Remain alert for anything out of the ordinary that occurs during your shift and report any suspicious activity to your immediate supervisor or Rail Traffic Controller.

A. **When to Conduct a Job Briefing**

Conducting a job briefing:

- Before beginning a work activity.
- When work activity or work conditions change.
- When another person joins the crew.
- When required to handle a hand operated main track switch in non-signaled territory.
- When required to secure unattended train or equipment.

B. Conducting a Job Briefing

When conducting a job briefing:

- Discuss the sequence of job steps.
- Identify, eliminate, contain, or communicate all potential hazards related to the job.
- Inspect tools and equipment before use.
- Identify proper PPE for the job task.
- Ensure understanding of the planned sequence of events.
- Follow up to ensure compliance with safe work practice.

GS-4. Warning other Employees

Warn co-workers of unsafe acts and hazards.

GS-5. Reporting Injuries or Incidents

A. On Duty Injuries
Any employee experiencing an on-duty injury must report the injury to a supervisor at the time of the occurrence prior to leaving the property on the day of the occurrence so that prompt medical treatment may be provided. A Personal Injury Form must be completed by the employee reporting the injury.

(Exception: An employee departing the property to obtain urgent medical attention for a serious injury must report the injury to a supervisor and complete a Personal Injury Form as soon as practicable).

B. Medical Attention
Employees must immediately notify their supervisor of the decision to seek medical attention as a result of any on-duty injury. This requirement is intended to facilitate work coverage and timely regulatory reporting.

C. Off Duty Injuries
Employees who sustain an off-duty injury that will in any way affect performance of their duties must report the injury to their supervisor prior to reporting for duty.

D. Information Concerning Injuries
Employees with knowledge or information concerning an injury or accident to themselves, another or non-employee must report the information to their supervisor at the time of the occurrence so that emergency assistance and proper medical care can be promptly provided.

E. All Incidents
Employees must immediately report to the Rail Traffic Controller or supervisor all incidents involving equipment and any other incident involving loss or damage to BBRR property.

GS-6. Personal Protective Equipment, Clothing, and Jewelry
Obtain, be familiar with, and wear approved and properly fitted personal protective equipment and clothing required for your job classification and/or work environment. Keep the equipment in good working condition and available for immediate use. Do not alter or otherwise tamper with personal protective equipment. (Specific departmental PPE requirements can be found under the Departmental Safety Rules).

A. Complying with Specific Requirements
When you are required to enter an area or facility that has personal protective equipment requirements that are in addition to those contained in this rule, comply with those requirements as well as these.

B. Clothing
Do not wear loose-fitting clothing that could become entangled in equipment or could be a tripping hazard

1. **Shirts**
   Wear a shirt that:
   - Provides protection from sun, insects, abrasions, and/or scratches.
   - Has at least one-quarter length sleeves.
   - Covers the chest, abdomen and back.

2. **Trousers**
   When working outside an office environment, wear trousers that cover your entire lower body and legs. Shorts are prohibited when on-duty.

C. Wearing Jewelry
Do not wear:
- Exposed finger rings outside an office environment when working with your hands or mounting/dismounting equipment.
- Jewelry that could become entangled in equipment.
- Mouth and tongue jewelry.
- Metal objects: including finger rings and/or watchbands when repairing or maintaining electrical equipment.

E. High Visibility Apparel

Wear BBRR approved high visibility apparel within 25 feet of a track.

Except:

- When riding in enclosed equipment or vehicles.
- When working in a shop or locomotive servicing facility designated by blue flag protection.
- Engineering employees working underneath properly secured and protected roadway equipment.
- When working in designated passenger loading/unloading areas.

High visibility apparel must be worn as a top layer of clothing. Employees engaged in cutting, burning or welding outside of a shop environment must wear BBRR approved, flame resistant, high visibility apparel.

GS-7. Operating Tools, Equipment, Doors, and Windows by Hand

When operating tools, equipment, doors and windows by hand:

- Use only tools and equipment you are qualified to use.
- Do not use excessive force.
- Inspect all tools and equipment and related safety devices for unsafe conditions before use, removing from service if defective.
- Use the proper tools for the purpose designed, unauthorized modifications are prohibited.
- Avoid placing any part of your hand or body where it can be pinched.
- Use the door handles or other opening/closing devices where provided.
- Make certain that the sliding door on a freight car is properly tracked before attempting operate it.

GS-8. Slip, Trip and Fall Prevention

Constant awareness and concentration are your best protection against slip, trip, and fall hazards. Local conditions can change at any time and you must remain alert and mindful of your surroundings. Use designated walkways, handholds and railings when available. Always choose routes that afford the safest walking conditions and be in a position to have a clear view of where you are walking. During times of poor weather or other unusual conditions, approved and appropriate personal protective equipment must be used.

GS-9 Avoiding Human Remains, Blood, or other Fluids
After any accident or incident where human remains, blood, or other fluids are observed on company equipment or property:

A. Avoidance and Notification

- Do not attempt to remove or clean this matter; it is not your responsibility.
- Promptly notify your supervisor or Rail Traffic Controller so that appropriate action can be taken to perform any necessary cleaning of equipment as soon as possible.

If you should come in contact with human remains, blood, or other fluids, immediately wash the contact area then report to the nearest medical facility for further examination.

B. Sharps and Needles
Only designated BBRR Medical and Occupational Health employees are authorized to use needles and sharps for occupational purposes. BBRR employees who utilize needles or sharps for medical purposes (i.e.: diabetics) are responsible for the safe disposal of those needles or sharps. BBRR employees who utilize needles or sharps for medical reasons must follow these guidelines for proper disposal:

- Recap your hypodermic syringe or lancet after use.
- Store your new and used syringes or lancets in a hard, closed casing marked with the word “biohazard: and/or labeled with a biohazard label.
- Dispose of the hypodermic syringe or lancet off BBRR property in an appropriate manner.

Syringes or lancets are not to be discarded on BBRR property. All BBRR employees should report inappropriate disposal to their supervisor. If you encounter needles or sharps on BBRR property:

- It is not your responsibility to dispose of these needles or sharps.
- Do not attempt to dispose of, or otherwise handle these needles or sharps.
- Promptly notify the proper authority so that appropriate action can be taken to safely remove any needles or sharps as soon as possible.

GS-10. On or About Tracks

When working on or about tracks:

- Apply the appropriate protection (3-Step, Roadway Worker, Blue Signal, etc.) for your job classification where required.
- Be alert and keep clear of the movement of cars, locomotives, or equipment at any time, in either direction, on any track.
- Do not cross within 25 feet of the end of standing cars, equipment, or locomotives, except when proper protection is provided.
- Stand at least:
  - 30 feet or more from a switch or derail associated with the route of passing equipment, when practical.
  - 10 feet or more from a switch or derail being traversed by equipment during switching operations when practical.
- Stop and look in both directions before making any of the following movements:
  - Fouling or crossing a track
  - Moving from under or between equipment
  - Getting on or off equipment
  - Operating a switch
- You may cross more than one track without stopping at each track if you determine it is safe to do so.
- Except for an Engineering Employee performing repairs, do not step or sit on any part of:
  - A Rail
  - A switch or switch machine
  - A frog
  - A derail
  - An interlocking machine or its connections
  - A defect detector
- Never take shelter under any car, equipment, or locomotive.
- Do not use push poles to move locomotives or cars.

GS-11. Getting On or Off Moving Equipment

Getting on or off moving equipment is permitted under the following conditions:

A. During daylight hours only
B. Movement not exceeding 2 MPH

GS-12. Getting on or Off Equipment

A. Getting on or off equipment

- Before getting on equipment, scan the area of the equipment you will get on to make certain that it is free of hazards.
- Before getting off equipment, stop at the bottom step or ladder rung to observe where you are going to place your feet.
- Dismount equipment in an area that provides solid footing and does not have any object or condition that would cause you to stumble or fall.
- Always face the equipment.
- Maintain three points of contact (two hands and one foot or one hand and two feet).
- Maintain a handhold until your feet are firmly positioned.
- Keep clear of adjacent tracks.
- Make certain to mount or dismount on the off side away from any:
  - Live track
  - Main track
  - Close clearance
  - Hazards that may be present

B. Using Car Ladders

- When it is necessary to use a car's ladder, use the side ladder to the extent possible.
- When using a car's ladder, improve your footing by turning your feet at an angle and place the ball of your foot on the ladder's side rails.

GS-13. Riding Equipment

A. Riding on Equipment

When riding on equipment:

- Face the direction of the movement.
- Be prepared at all times for unexpected movements and slack action.
- Keep secure hand holds and footing at all times.
- Do not ride the side of a car unless equipped with a horizontal grab iron at least 12 inches above the floor of the car, or two vertical grab irons, located in a position that allows an employee to stand upright on the step.
- Do not ride the end of cars being shoved, nor on the end platform between coupled cars, unless the car is equipped with a riding platform that has a safety rail positioned between you and the end of the equipment.
- Ride the side of, not between, cars. It is permissible to ride the trailing end of a cut of cars equipped with an end platform.
- Do not ride on the coupler (drawhead), cut lever, or cushion underframe device. Be aware of where you are and alert to what is going on around you.
- Do not ride on the bottom step when going over highway crossing at grade.
- Stay off locomotive walkways at speeds greater than 15 MPH.
- When practical, move away from the side of equipment that is adjacent to a main track or siding that has equipment on it.
- Ride in seats that are permanently installed and approved by the manufacturer.
- Never place your hands, arms, or legs inside equipment with shiftable loads or near the end gates of a "drop end" gondola.
- On flat cars, hold onto available grab irons and not the bridge plates or container brackets.
- On tank cars, do not ride the middle ladder.

B. Riding in Equipment

When riding in equipment:

- Unless other duties require, remain seated.
- When necessary to move around in equipment, maintain stability and a firm hand hold on available grab irons or on other permanently attached objects and maintain firm, braced footing, with at least three points of contact.
- Wear seat belts when riding in equipment that is equipped with them.

C. Crossing Over

Do not cross over any equipment that is not equipped with sufficient hand holds and locations to place your feet to permit you to maintain three points of contact (two hands and one foot or one foot and two hands).

When crossing over:

- Make certain that the equipment is stationary and secure.
- Secure the appropriate protection, (3-Step, Roadway Worker, Blue Signal, etc.).
- Do not step on:
  - One brake platform to another
  - A cut lever
  - An angle cock
  - A coupler
  - A component of a cushion underframe system
  - A sliding center sill

GS-14. Close Clearances

- When riding on equipment, stop the movement and dismount before reaching a close clearance.
- Always be aware of close clearance locations and include that information in job briefings and work plans.

GS-15. Adjusting a Coupler

When adjusting a coupler secure the appropriate protection (3-Step, Roadway Worker, Blue Signal, etc.):

- Do not use excessive force or kick the coupler.
- If you determine that excessive force would be necessary to move the coupler, use a knuckle-mate device, coupler alignment strap, or get help from another employee.

GS-16 Operating Hand Brakes
When operating a hand brake on standing equipment, secure the appropriate protection (3-Step, Roadway Worker, Blue Signal, etc.).

A. Before Operating a Hand Brake:

- Observe the type and condition of the hand brake, including the brake wheel or lever and chains.
- Do not use any part of a hand brake as a handhold.
- Do not operate, and report the defect to the proper authority immediately, any hand brake that is difficult to operate, defective, damaged or does not function properly.
- Keep your hands, arms, other body parts and clothing clear of moving parts.

B. Operating a Vertical-Wheel Hand Brake:
Unless you are using a brake stick, do not apply a vertical-wheel hand brake mounted on the end of a car while standing on the ground.

When operating a vertical hand brake:

- On locomotives, stand on the walkway and place one hand on the handrail or against a flat surface of the locomotive.
- On cars, hold firmly with left hand to a grab iron, ladder rung or hand hold.
- On cars with brake platforms, place right foot on the brake platform and place left foot on the far end of the ladder rung, firmly braced against its side rail.
- On cars without a brake platform, stand on the sill step.

C. Operating a Ratchet-type Hand Brake
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 the hand brake and report the defect to the proper authority immediately.

When operating a ratchet-type hand brake:

- On locomotives, stand on the walkway and hold on to the walkway railing with one hand.
- On cars, ensure the area where you are standing provides stable footing and face the car.
- On cars, use one hand to operate the hand brake and place your other hand firmly against the car.

D. Operating Horizontal (Staff) Hand Brakes on Moving Cars

- Do not operate a hand brake with a drop-shaft while the car is moving.
- Do not hold tension on a horizontal hand brake by hand while the car is moving.

GS-17. Use of Brake Sticks
Use a company-approved brake stick only on vertical wheel hand brakes, to open a knuckle, to operate retainer valves that are on standing equipment, or remove track skates from the rail and complying with the appropriate protection (3-Step, Roadway Worker, Blue Signal, etc.) when necessary.

GS-18. Operating Track Switches and Derails

A. Switches and Derails that are Difficult to Operate

If you discover a switch or derail that requires an unusually high level of effort to operate:

- Do not operate the switch or derail.
- Report that switch or derail promptly to the proper authority immediately.

B. Taking Necessary Precautions

Always remember that a switch lever may be under tension. Make certain that the lever of a switch does not fly up or swing around and hit you when you release it from its latch or keeper.

Before operating a switch or derail:

- Identify the type of switch or derail to be operated.
- Make certain that the device is not locked (including a switch point lock), spiked, or tagged out of service.
- Make certain that there is nothing in the points of the switch or derail that will interfere with its operation.
- Look in both directions for moving equipment.
- Make certain that no obstruction will interfere with operating the switch.

C. Removing Foreign Material from Switch Points

To remove foreign material from between the points and the stock rail, use a broom, stick, or similar device to remove the object. Do not use your hands or feet to remove foreign material from between switch points.

D. Operating a Switch or Derail

When operating a switch or derail:

- Face the device squarely.
- Keep feet firmly braced.
- Grasp handle with both hands.
- Do not use your feet for any purpose other than to operate the keeper or to apply the final downward pressure to the switch lever to latch it.
- Keep your body, hands, and feet clear of all moving parts.

GS-19. Handling Track Skates

When handling a track skate, comply with the following:

- Before applying or removing a track skate, look in both directions and listen for moving equipment.
- Use good lifting principles and always use the track skate handle.
- Wait until all movement has stopped before attempting to move a track skate.
- If a track skate is difficult to remove, obtain help or report it to the proper authority immediately.
- Place the removed track skate parallel to and against the rail to avoid creating a tripping hazard

GS-20. Handling Air Hoses
Before handling air hoses, secure the appropriate protection (3-Step, Roadway Protection, Blue Signal, etc.) when required.

When working with air hoses:

- Be aware of end platforms, brake steps, and other potential hazards.
- Assume a balanced stance that will enable you to quickly step out from between the equipment in the event of an unexpected movement.
- Keep one foot outside the rail, if possible.
- Make certain that both anglecocks are in the CLOSED position before making any adjustments to the air hoses.
- Do not extend over the top or under the draw head to operate an anglecock.
- Protect your eyes by turning your head away from the glad hands when air hoses are being uncoupled.
- Do not kick or strike an air hose.

GS-21. Handling End-of-Train (EOT) Devices
Before installing, removing, or servicing any EOT on equipment, secure the appropriate protection (3-Step, Roadway Worker, Blue Signal, etc.) when required.

- When you must move an EOT across a train or cut of cars, get another employee to help you. One employee should place the EOT onto the coupler and the other employee should remove the device to the destination side.
- Do not place an EOT where it could be a tripping hazard. Use EOT racks wherever possible.
- Secure hose to the EOT (if hook is available) when walking.

GS-22. Lifting Objects and Handling Material
Use good lifting principles when you are required to lift and object.

Good lifting principles are as follows:

- Assume and maintain a stable, balanced posture.
- Make certain that the load can be grasped securely and controlled during transport.
- Keep the load close to your body.
- Keep your upper body as erect as possible and your lower back bowed in.
- Tighten your abdominal muscles and lift/lower with your legs.
- Lift smoothly, don’t jerk.
- Never use excessive force.
- Do not twist your body while lifting, transporting, or lowering a load.
- When moving heavy or bulky loads:
  - Use a cart or similar device
  - Look for ways to reduce the load
  - Get help

GS-23. Handling Materials
When handling materials:

- Inspect any load before lifting/carrying an object. Look for sharp edges and/or projections that could cause injury or prevent the load from being securely grasped. Make certain that the load is stable and will not shift during lifting, transport, or lowering.
- Ensure that walkways are clear of obstructions and free of slip/trip hazards before lifting or carrying.
- When available, use approved material handling and lifting devices to lift and transport loads.
- Do not carry objects or loads that block your view of the walking surface or the travel route.
- If handling materials with assistance, always have a job briefing.

GS-24. Riding in Motor Vehicles

A. Ensuring the Motor Vehicle is Safe
Before riding in or operating a motor vehicle, to the extent possible, inspect the vehicle's equipment and safety devices for unsafe conditions.

If any of the vehicle's equipment or safety devices are unsafe:

- Do not ride in the vehicle.
- Remove the vehicle from service, if it is under your charge.

B. Using Seat Belts
While in moving motor vehicles that are equipment with seat belts, wear the seat belts in the manner intended. Remove any tool belt or other equipment that could prohibit the proper use of a seatbelt.

Exception: Seat belt usage is not required in a hi-rail equipped vehicle on the rail.

C. Using Approved Seats
While being transported, only ride in seats that are permanently installed and approved by the manufacturer.

GS-25. Inside an Office Environment
In addition to other rules requirements, comply with the following when you are inside an office environment:

- Keep work areas orderly and free of slip, trip, and fall hazards.
- Keep desk drawers, file drawers, and locker doors closed when not in use.
- To maintain balance, do not overload the top drawers of filing cabinets.
- Clean up spills immediately. If the spill cannot be cleaned up right away, secure the area until the spill can be cleaned.
- Use furniture only for its intended purpose.

GS-26. Using Chairs
Never use a chair as a step stool or ladder.

A. Inspecting a Chair
Before sitting in a chair make certain that the chair:

- Is free from obvious defects.
- Is stable and supported by all legs.
- Has at a minimum a seat and seatback firmly attached to the base or frame.

B. Using a Chair
While using a chair:

- When sitting down, lower yourself into the chair in a slow, controlled manner holding the chair in place to prevent it from moving.
- Keep all chair legs or casters on the floor at all times.
- Do not put your feet above the level of the seat.
- Do not lean out beyond the area covered by the legs.
- When exiting a chair, rise in a slow, controlled manner. Use the armrest or seat to push off, if necessary.
- Where appropriate, push the chair under the desk or table so that it does not obstruct walkways or present a tripping hazard.

GS-27. Reporting Highway Crossing Malfunctions
Highway crossing warning devices observed to not be operating properly must be reported to the proper authority as soon as possible. Employees who routinely communicate with the Rail Traffic Controller and possess voice radios should report crossing warning system malfunctions to the Buckingham Branch Control Center (BBCC): 866-244-4529. This number is included on the emergency notification sign that is in place at every road crossing on BBRR. This sign also contains identification information for the crossing that can greatly assist in taking the appropriate action in the event of a malfunction crossing warning device.

GS-28. Use of Personal Electronic and Electrical Devices

Railroad operating employees are prohibited from using personal electronic and electrical devices for any function (such as text messaging, gaming and internet browsing) other than voice communication while on duty.

These devices must be turned off (with any ear pieces removed) and stored:

- While on a moving train.
- When a duty requires operating employee to be on the ground, on or riding rail equipment, or when any other employee is assisting with preparation of the train (brake test).
- When operating on-track equipment that is moving.
- Within BBCC.

Note: Personal cellular phones may be used in cases of emergencies or for communication redundancy if radio or other forms of communications have failed.

Personal cellular phones may be used for minimal personal voice communication purposes:

- When train or locomotive or on-track equipment is stopped.
- When not engaged in any switching operation or riding equipment.
- When employees are in a place of safety not closer than 25 feet from nearest rail.
- When it will not interfere or distract from safety or performance of duties.

A personal electronic or electrical device that enhances an individual's physical ability to perform their duties such as a hearing aid is not prohibited by this rule.

GS-29. Use of Railroad Provided Electronic and Electrical Devices by Railroad Operating Employees.

1. Employees at the Controls of Moving Equipment
An operator at the controls of moving equipment or on-track equipment is prohibited from using railroad provided electronic or electrical devices when:

- At the controls of moving equipment or on-track equipment.
- Engaged in switching operations.
- Riding equipment.
- Another employee is assisting in the preparation or repair of a train or OTE,
- Not in a place of safety within 25 feet of nearest rail.
- It will Interfere or distract from safety or performance of duties.

Note: This does not apply to operator control units while engaged in remote control operations, or railroad radios.

2. Other Railroad Operating Employees
Other railroad operating employees may use railroad provided electronic and electrical devices in the cab of moving train or on-track equipment only for an authorized business purpose, after having a safety briefing and all personnel on crew agree that it is safe to do so.

Railroad provided electronic or electrical devices are not to be used outside the cab of the locomotive or on-track equipment unless the following conditions are met:

- Train or locomotive or on-track equipment is stopped.
- Not engaged in any switching operation or riding equipment.
- Employees are in a place of safety not closer than 25 feet from nearest rail.
- Will not interfere or distract from safety or performance of duties.
- All members of crew have been briefed that operations are suspended.

Note: Railroad provided cellular phones may be used when radio failure occurs.

GS-30. Omitted

GS-31. Lantern Batteries
When transporting or storing lantern batteries, precautions must be taken to prevent the battery terminals from being short- circuited.

- Insulating caps must be utilized over the terminals when the batteries are not in a lantern or other device.
- If insulating caps are not available, battery terminals must be protected to prevent short-circuits.
- Never place a battery in a grip or other means of storage with metal object.

GS-32. Arc Flash and Electrocution Hazard Personal Protective Equipment.
Employees performing electrical repairs must comply with the arc flash label instructions posted on the electric panel. If no instructions are posted, employees must take the following precautions:

A. When working in energized service panels feeding electrical equipment; on or near exposed, energized 120 or 240 volt components or circuits, employees must wear:
1. Hard hat, approved safety glasses with side shields, and safety toe shoes.
2. Rubber insulating gloves, 500V Class 00 minimum rating with leather protectors.

B. Working in or troubleshooting in switch heater panels, panel boards, switchboards, disconnect switches, motor control centers or other panels, within 4 feet of exposed, energized 480V components or circuits, employees must wear:
1. Hard hat, approved safety glasses with side shields, and safety-toed shoes.
2. Category 2 flame resistant coveralls.
3. Arc Flash rated face shield.
4. Rubber insulating gloves, 500V Class 00 minimum rating with leather protectors.
5. Hearing protection (ear inserts).

C. Connecting or disconnecting/inserting or removing/racking-in or racking-out circuit breakers or motor starters within 4 feet of energized 480V equipment, employees must wear:
1. Hard hat, approved safety glasses with side shields, and safety-toed shoes.
2. Category 4 flame resistant coat, leggings, and arc flash hood.
3. Rubber insulating gloves, 500V Class 00 minimum with leather protectors.
4. Hearing protection (ear inserts).

D. Working within 12 feet of high voltage power lines (751V and above), employees must wear:
1. Hard hat, approved safety glasses with side shields, and safety-toed shoes.
2. Category 4 flame resistant coat, leggings, and arc flash hood.
3. Rubber insulated gloves, 17,000V Class 2 minimum with leather protectors.
4. Hearing protection (ear inserts).

GS-33 Operating Motor Vehicles

In addition to following all federal, state, and local laws, employees operating motor vehicles must comply with the following:

A. Company vehicles must be inspected for a properly maintained back up alarm, fire extinguisher, and a first-aid kit if equipped.

B. Employees operating commercial vehicles (CDL required) must complete all required pre-trip inspections.

C. When parking, avoid situations and areas requiring backing movements upon exit:
1. If unable to avoid such situations, vehicles are to be backed into parking spaces.
2. When backing, inspect areas to the rear to verify that no personnel or obstructions are in the path of movement.
3. If two or more people are occupying the motor vehicle, the operator is to designate one person to guide backing movement from a position of safety on the ground.

D. Apply the parking brake to a stationary vehicle if the engine must be left running in order to accomplish its intended task.

E. Use of an electronic device for other than hand-free voice communication is prohibited while operating a motor vehicle.

F. Vehicle passenger compartments must be kept in an orderly condition and free of loose items.

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Engineering Department Safety Rules

ES-1. Personal Protective Equipment

a. Wear BBRR approved head protection provided by the company at all times while on duty, except when working in an office, while riding in a highway motor vehicle, or while in a designated lunch break area. Non-hard hat areas may be designated by local management. (Hard hats are not required to be worn by engineering employees operating work equipment with fully enclosed cabs).
b. Wear BBRR approved safety glasses with side shields at all times while on duty, except when riding in a company vehicle with windows closed, working in an office, while in a lunch area, or while in a locker room.
c. When working in areas where hearing protection may be required, have BBRR approved hearing protection devices available on your person, and wear them where required by posted notice or special instructions.
d. Wear high top (6-ince or more) safety-toe shoes with laces, oil-resistant soles, and a distinct separation between heel and sole when working outside of an office environment.
e. Wear BBRR approved life vest when engaged in construction, inspection, or maintenance of a railroad bridge over or adjacent to water with a depth of four feet or more, or where the danger of drowning exists, except where other approved protection, such as safety nets, safety belts or harnesses, approved walkways, etc., are provided; or when working exclusively between the outside running rails.
f. When life vests are required, ring buoys with at least 90 feet of line must be readily available for rescue operations. The distance between ring buoys must not be greater than 200 feet. Also, at least one lifesaving boat must be crewed if environmental conditions, such as weather, water speed, and/or terrain merit additional protection.
g. Qualified bridge inspectors are not required to wear life vests when conducting inspections that involve climbing structures above or below the bridge deck.
h. Charts identifying additional personal protective equipment required or recommended for specific work activities are located at the end of this section.
i. When wearing a respirator, do not have facial hair where the sealing surface of the respirator comes in contact with your face.

ES-2. Fire Protection and Prevention

a. If fire is discovered, turn on fire alarm immediately.
b. Control or extinguish the fire if you can do so without jeopardizing your safety. Use a fire extinguisher rated for the fire involved.
c. Maintain clear access to all fire-fighting equipment.
d. Maintain contact between metal containers while gasoline or other highly flammable liquids are being poured from one container to another. Use suitable wire connectors or clips where direct contact cannot be maintained.
e. Do not use flammable or combustible liquids to start or accelerate fires.
f. When welding, cutting or heating, appropriate fire protection, such as a fire extinguisher, water, sand, or dirt, must be readily available within 50 feet of the operation. In the event of fire, cylinder valves must be closed immediately.

ES-3. Electrical Hazards

a. Only perform electrical work for which you are qualified.
b. Lock out and/or tag out electrical equipment before making adjustments or repairs.
c. Allow no conductive material to come in contact with live power.
d. Verify with a meter that the circuit is de-energized before starting work.

ES-4. Handling Hazardous Materials

a. Comply with Safety Data Sheet (SDS) instructions when handling any hazardous material.
b. In case of emergency, clear the area and notify the proper authorities.
c. Handle, store, and transport all flammable and combustible liquids in metal, BBRR approved containers.
d. Portable containers must be metal, BBRR approved, and color coded as follows:
    - Red-gasoline.
    - Blue-kerosene
    - Green or yellow-diesel
e. Transport and use compressed gas and oxygen cylinders in a secured, vertical position.
f. Omitted.
g. Cap all oxygen and fuel gas tanks when not in use unless protected by an approved non-rotating valve stem protector.
h. Purge regulators and hoses after use.

ES-5. Ladders, Scaffolds, and Platforms

a. Use approved ladders or scaffolds only. Use non-conductor type ladders and scaffolds near communication, signal, and electrical wires.
b. Secure all ladders, scaffolds, and platforms.
c. Climb no higher than the third rung from the top of a straight ladder or the second step from the top of a stepladder.
d. Never climb a ladder on which someone else is standing.
e. Face the ladder at all times and maintain three points of contact when ascending and descending.
f. When available, use a safety carrier rail with a locking sleeve when climbing a structural, stationary, vertical ladder over ten feet tall.
g. Use a hand line or a lifting device to move tools or materials to a level different from the one on which you are currently working.
h. Do not over-extend your reach.

ES-6. Tools (Hand)

a. Never increase a tool's leverage by applying non-approved extensions.
b. Never weld or make alterations to tools.
c. All track tools to be struck by a hammer are required to have chipping protectors on the struck end.
d. Omitted.
e. Follow applicable Safe Job Procedures.

ES-7. Tools (Power)

a. Shut down or disconnect hydraulic, air, electric, and other mechanical tools from the power source (bled off if necessary) before adjusting, repairing, oiling, or cleaning them.
b. Never use your body to brace or support the object being worked on with power tools.
c. When using an abrasion rail saw, fuel the saw and attach it to the rail before using.
d. Do not fuel power tools when hot. Allow sufficient time for cooling. Also, remove tool from hot material in the work area.

ES-8. Compressed Air

a. Do not use compressed air to remove dirt and/or dust from clothing or body.
b. Bleed pressure off before disconnecting or connecting air couplings, unless the airline is equipped with a quick disconnect.
c. Regulate air pressure not to exceed the PSI rating of the tools and equipment being used.

ES-9. Abrasive Wheels, Blades, and Grinders

a. Keep wheels and blades dry, and inspect them for damage before use.
b. Use a wheel or blade only to grind the material for which it is designed.
c. Before use, make sure that equipment is properly maintained and that RPM's are checked with a tachometer when required.
d. Grind only on the face of the wheel.
e. Never leave a running grinder unattended.
f. Keep loose clothing and gloves away from wire wheels and grinders.

ES-10. Blocks, Tackles, and Winches

a. Attach cable or wire rope clips with U-bolts bearing on the tail or dead end of the wire rope.
b. Do not exceed capacity of the lowest rated component.
c. Do not crisscross cables on level wind winch drums.
d. Wear leather-palmed gloves when handling wire rope.

ES-11. Cranes and Hoisting Equipment

a. Respond to standard signals from the designated person only.
b. Sound a warning signal before moving in any direction or near people.
c. Keep boom and cables away from all obstruction or power lines.
d. Do not use dragging movements, unless you are performing dragline operations.
e. Turn off power before leaving equipment unattended.
f. Lower the load and secure the boom when clearing for a passing train.
g. Do not exceed capacity of the lowest rated component.
h. Do not work under a suspended load or place yourself between a suspended load and an obstruction.
i. Never leave a suspended load unattended.
j. Tag lines must be used when necessary to control loads that are being moved higher than knee level. This does not preclude placing hands on a load for initial or final alignment.

ES-12. Welding, Cutting and Heating Metal

a. When transporting compressed gas cylinders on public highways:
   - If approved non-rotating valve protector is used, close cylinder valve and release pressure from regulators and hoses.
   - If approved non-rotating valve protector is not used, then remove regulators and securely install caps on compressed gas cylinders.
b. Inspect to see that fire protection is available within 50 feet before beginning welding, cutting, or heating metal.
c. Use screens when other people may be affected by the work being performed.
d. Make sure the area in which you are welding is properly ventilated.
   - Use of a utility blower is required when welding or grinding frogs, unless protected by a respirator.
e. Remove electrodes from holders when not in use.
f. When making Thermite welds, keep molten metal from contact with any form of moisture.

ES-13. Deleted (see GS-33)

ES-14. Hi-Rail Vehicles

a. Occupy track only with proper authority.
b. Stop on-track equipment when the operator's attention cannot be directed exclusively to controlling the movement.
c. Perform roll-by inspections when two or more people are occupying the hi-rail. When operating alone, set the hi-rail on track and inspect hi-rail wheels to determine that they are in place.
d. Be aware of the effects of the weather on starting and stopping hi-rail equipment.
e. Operate the hi-rail vehicle within the speed chart provided in Operating Rule 712.17.

ES-15. Mechanized Equipment

Operator Must:

a. Use equipment only to its rated capacity.
b. Inspect to see that the equipment you are operating has a properly maintained back up alarm, top mounted flashing amber light, fire extinguisher and a first aid kit available.
c. Wear seat belt when tramming.
d. Sound a warning and reduce speed when view is restricted.
e. Stop equipment when the operator's attention cannot be directed exclusively to controlling the movement.
f. Transport passengers only in designated, permanently installed seats.
g. Never leave running mechanized equipment unattended.
h. Maintain contact between fuel pipe and tank while fueling.
i. See that lockout/tagout devices are in place before maintaining or repairing equipment.
j. Operate equipment at a safe speed following the speed chart provided in Operating Rule 712.17.

ES-16. Pole Climbing and Line Safety

a. Inspect poles before climbing them.
b. Work on poles only when you are secured by safety straps.
c. Never climb a pole when another person is climbing above or below.
d. Inspect to see that sharpened gaffs are to the correct profile; check to see that the profile is within the proper gauge.
e. Remove gaffs when walking.
f. Climb poles only when trained to do so.
g. Store climbers with gaff guards in place.

ES-17. Getting On and Off, and Riding Equipment and Locomotives

a. Always mount and dismount cars, equipment, and locomotives from the side, using the sill step and side ladder.
b. Never step on the sliding center sill or cushion under frame device of any car. Stay off couplers and their components.
c. Always face the direction of movement when riding.
d. Always face cars, equipment, and locomotives and maintain at least 3 points of contact while mounting or dismounting.
e. When crossing over cars, equipment, keep clear of uncoupling levers and couplers.
f. Cross over cars equipped with an end cross over platform.

ES-18. Coupling and Uncoupling Equipment

a. Use standard signals per Operating Rules.
b. Make sure work area is properly protected.
c. Assure alignment of couplers.
d. Stay in view of operator.
e. Use knuckle mate to align coupler when possible.
f. Be aware of slack action.
g. When possible, keep one foot outside of the rail.

ES-19. Freight Car Doors

a. Before operating, inspect the door for defects and determine whether it is tracking properly.
b. If you must open a plug style door, get assistance from a qualified employee (i.e. mechanical department).

ES-20. Excavations, Pits and Manholes

a. Shore vertical excavations of five or more feet in depth.
b. Call utility locators before you dig.
c. Protect all open holes and trenches with adequate barricades.
d. Do not use open flames to thaw frozen pits or manhole covers.
e. Ensure adequate atmospheric testing and ventilation in confined spaces.

ES-21. Explosives

a. Never use explosives unless you are qualified and licensed.
b. Do not operate radios within 500 feet of blasting area.

ES-22. Fusees

a. Always store fusees in approved metal containers.
b. Read instructions on the side of fusee before using.

ES-23. On or Around and Crossing Tracks

a. Ensure On-Track Worker Protection is in place when working within four feet of the nearest rail of any track.
b. When observing passing trains or equipment always look in the direction from which the train or equipment is coming.
c. BBRR approved high visibility vests will be worn by:
    - Engineering employees working within 15 feet of the traveled portion of any highway or grade crossing, and
    - Engineering employees performing road crossing work at grade.
d. When flagging road crossings:
    - A BBRR approved vest must be worn.
    - Give precise signals to traffic.

ES-24. Switch and Derail Operations

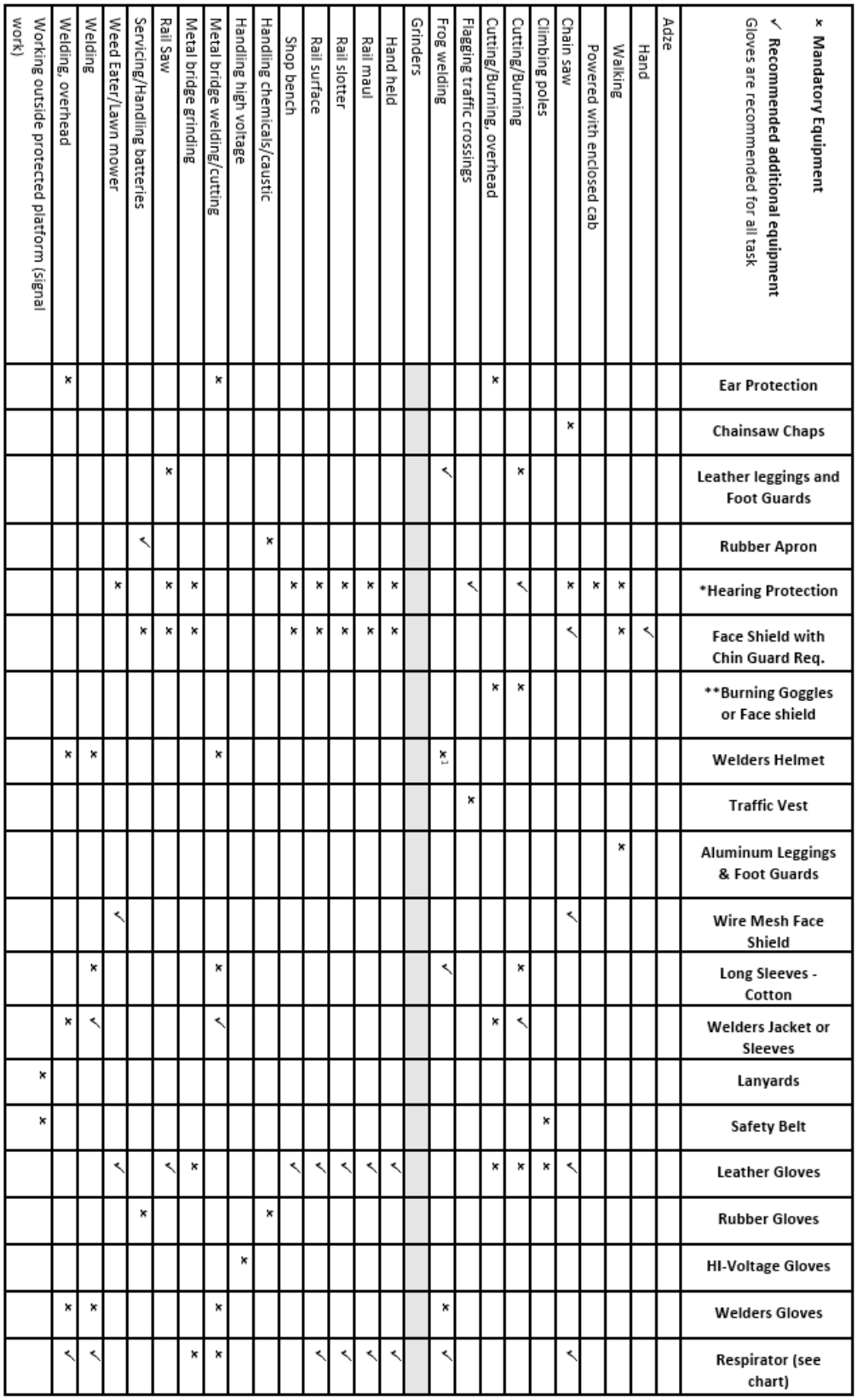
a. Never operate switches or derails without proper authority.
b. Always return derails and mainline switches to “normal” position when you have finished using them.
c. Always inspect switch points for obstacles before attempting to throw the switch and then check the points to make sure they are in the proper position before proceeding.
d. Leave switches and derails as found in non-signaled yard track.

Engineering Personal Protective Equipment (PPE) Chart

× Hearing Protection mandatory at placarded location or subject to manufacturer recommendation

×[1] Hard hat not required for down hand frog work if there is no overhead work in the area.

[1] Tinted face shield and safety glasses may be used as alternative to goggles and clear face shield.



Engineering

WELDING OPERATIONS

Guide for selection of filter shades that should be used when welding and cutting. This selection may be varied to suit the individual's needs.

Note: In gas welding or oxygen cutting where the torch produces a high yellow light, it is desirable to use a filter or lens that absorbs the yellow or sodium line in the visible light of the operation.

× Mandatory equipment
✓ Recommended additional equipment

Shade Number	2	3 or 4	4 or 5	5 or 6	6 or 8	10	11	12	14
Shielded metal-arc welding: 1/16-; 3/32-; 1/8-; 5/32- inch electrodes						×			
Gas-shielded arc welding (nonferrous): 1/16-; 3-32-; 1/8-; 5/32- inch electrodes							×		
Gas-shielded arc welding (ferrous): 1/16-; 3/32-; 1/8- inch electrodes								×	
Shielded metal-arc welding: 3/16-; 7/32-; 1/4- inch electrodes								×	
5/16-; 3/8-; inch electrodes									×
Atomic hydrogen welding						×	×	×	×
Carbon arc welding									×
Soldering	×								×
Torch brazing		×							
Light cutting, up to 1 inch		×							
Medium cutting, 1 inch to 6 inches			×						
Heavy cutting, 6 inches and over				×					
Gas welding									
Light, up to 1/8 inch			×						
Medium, 1/8 inch to 1/2 inch				×					
Heavy, 1/2 inch and over					×				

Engineering Selection of Respirators

× Mandatory equipment or approved equivalent
✓ Recommended additional equipment

Material and/or Operation	Disposable								Replacement filter cartridge				Atmosphere Supplying		
	Dust/Mist (P95 or N95)	Dust/Mist/Fume (P95)	Organic Vapor	Organic Vapor/Acid Gas	Dust/Mist Pre-Filter (P95)	High Efficiency Particulate (HEPA)	Paint Mist Pre-Filter (P95)	Pesticide Pre-Filter (P95)	Organic Vapor	Organic Vapor/Acid Gas	Dust/Mist/ Pre-Filter (P95)	Dust/Fume/Mist Filter (HEPA) (p100 or N100)	Powered Air Purifying Respirator	Supplied Air Welding Helmet	Supplied Air Hood	Supplied Air Abrasive Blasting Helmet
Alkaline Cleaner	✓				✓											
140-66 Solvent/Mineral Spirits, Diesel Fuel			✓						✓							
Abrasive Blasting																×
Spray Painting, except can spray painting															×	
Can Spray Paint (cartridge & pre-filter)			✓				✓		✓							
Painter Helper (cartridge & pre-filter)			×				×		×		×					
Welding/Cutting of Stainless Steel or Galvanized Metal (less than 10 min/day)		×				×						×				
Welding/Cutting of Stainless Steel or Galvanized Metal (more than 10 min/day)														×		
Welding/Cutting Battery Boxes				✓						✓						

Engineering Selection of Respirators (cont.)

	Disposable								Replacement filter cartridge					Atmosphere Supplying		
× Mandatory equipment or approved equivalent ✓ Recommended additional equipment																
Material and/or Operation	**Dust/Mist (P95 or N95)**	**Dust/Mist/Fume (P95)**	**Organic Vapor**	**Organic Vapor/Acid Gas**	**Dust/Mist Pre-Filter (P95)**	**High Efficiency Particulate (HEPA)**	**Paint Mist Pre-Filter (P95)**	**Pesticide Pre-Filter (P95)**	**Organic Vapor**	**Organic Vapor/Acid Gas**	**Dust/Mist/ Pre-Filter (P95)**	**Dust/Fume/Mist Filter (HEPA) (p100 or N100)**	**Powered Air Purifying Respirator**	**Supplied Air Welding Helmet**	**Supplied Air Hood**	**Supplied Air Abrasive Blasting Helmet**
Welding/cutting in confined spaces		×				×						×				
Welding/cutting (painted surfaces)						✓						✓				
Welding/cutting (mild steel)		✓				✓						✓				
Welding/grinding from w/o blower		×				×						×				
Grinding	✓	✓			✓						✓					
Hot work on lead-based paint						×						×				
Working in ballast dust		×				×						×				
Electrical parts cleaning solvents			✓	✓					✓	✓						
Pesticide/herbicide application (cartridge & pre-filter)		✓						✓	✓		✓					
Dust	✓				✓	✓					✓	✓				
Objectionable odor				✓						✓						
Creosote				✓						✓						
Bird droppings (cartridge & pre-filter)			✓	✓	✓				✓	✓	✓	✓				
Brush or roll painting			✓				✓		✓		✓					

Engineering Safety Eyewear Chart

Type of safety eyewear to be worn in addition to safety glasses.
(Proper tinted lenses must be used as required:

Specific operations requiring safety eyewear	Mandatory	Optional	Special equipment, requirements, or remarks
a) Chipping, cutting or caulking metal	Cover type goggles or face shield	Cover type goggles and face shield	
b) Breaking or cutting concrete, stone or asphalt	Face shield	Cover type goggles and face shield	
c) Striking, or striking with, hardened tools and fastenings	Safety Glasses	Cover type goggles and face shield	
d) Cutting rivets, bolts or cotter keys, splitting nuts, etc.	Safety Glasses	Cover type goggles	
e) Using power-activated impact tools	Safety Glasses	Cover type goggles	
f) Using tools powered by explosive charges	Cover type goggles and face shield		
g) Boring, drilling or reaming metal	Safety Glasses	Cover type goggles or face shield	
h) Operating woodworking machines	Face shield	Cover type goggles	Cover type goggles must be used under dusty conditions
i) Operating adzing machines	Face shield	Cover type goggles and face shield	
j) Operating rail drill	Safety Glasses	Cover type goggles or face shield	
k) Operating or dressing grinding wheels, including rail grinders	Face shield	Cover type goggles and face shield	
l) Bench grinders	Face shield	Cover type goggles and face shield	
m) Blowing or cleaning with compressed air	Cover type goggles	Face shield	
n) Steam cleaning	Face shield	Cover type goggles	
o) Sandblasting	Air supplied hood		
p) Spraying paint (gun)	Face shield	Cover type goggles	
q) Spraying or general us of cleaning agents	Face shield	Cover type goggles	
r) Handling acids or other chemical solutions and servicing/charging refrigeration equipment	Face shield	Cover type goggles	
s) Handling or servicing storage batteries	Face shield	Cover type goggles	
t) Power rail saws	Face shield	Cover type goggles	
u) Electric welding	Welding helmet		See welding operation shade chart
v) Gas welding	Welding helmet or tinted face shield		See welding operation shade chart
w) Cutting with a torch	Cover type goggles or tinted face shield Cover type goggles		See welding operation shade chart
x) Working in areas where heavy dust conditions exist			
y) Using cut-off discs, saws or other tools having carbide bits	Face shield	Cover type goggles and face shield	
z) Working under cars or equipment		Cover type goggles or face shield	

Engineering Department Required Use Respirator Chart

Employees who perform the job tasks listed must wear one of the respirators as marked by an **X** or approved equivalent.

Location	Task	Potential Hazards	Respirator Types							
			3M Half Face Respirator with HEPA P100 or N100 cartridges	3M Half Face Respirator with Organic Vapor Cartridges	PAPR (Powered Air Purifying Respirator)	PAPR, Welding Helmet	Supplied Air Welding Helmet	Supplied Air Half Face Respirator	Supplied Air Hood with Collar	Supplied Air Abrasive Blasting Helmet
Multiple Locations	Welding, Frog Without a Blower	Manganese, Hexavalent Chromium	x			x	x			
Multiple Location	Grinding, Frog Without a Blower	Manganese, Hexavalent Chromium PNOC	x			x	x			
Multiple Locations	Manual Dumping of Ballast Rock	Silica	x		x					
Multiple Locations (Bridge Construction or Repair)	Manual Hand Scraping	Lead	x							
Multiple Locations (Bridge Construction or Repair)	Torch Cutting or Burning with Prior Paint Stripping	Lead				x		x		
Multiple Locations (Bridge Construction or Repair)	Torch Cutting or Burning Without Prior Paint Stripping	Lead					x			
Multiple Locations (Bridge Construction or Repair)	Rivet Busting	Lead	x							
Multiple Locations (Bridge Construction or Repair)	Needle Gun Paint Removal	Lead							x	
Multiple Locations	Abrasive Blasting	Lead								x
Multiple Locations	Painting Surface Preparation (Except Abrasive Blasting)	Lead	x							
Multiple Locations	Spray Painting (Except Aerosol Can Spray Painting	Organic Vapors							x	
Multiple Locations	Painter Helper	Organic Vapors		x						
Multiple Locations	Abrasive Blasting	Lead								x
Multiple Locations	Painting Surface Preparation (Except Abrasive Blasting)	Lead	x							
Multiple Locations	Spray Painting (Except Aerosol Can Spray Painting)	Organic Vapors							x	
Multiple Locations	Painter Helper	Organic Vapors		x						

Mechanical Department Safety Rules

MS-1. Personal Protective Equipment

a. Wear head protection provided by the company at all times while on duty, except when working in an office, while riding in a highway motor vehicle, or while in a designated lunch break area. Non-hard hat areas may be designated by local management.
b. Wear approved safety glasses with side shields at all times while on duty, except when riding in a company vehicle with windows closed, working in an office, while in a lunch area, or while in a locker room.
c. When working in areas where hearing protection may be required, have approved hearing protection devices available on your person, and wear them where required by posted notice or special instructions.
d. Wear high top (6-inch or more) safety-toe shoes with laces, oil-resistant soles, and a distinct separation between heel and sole when working outside of an office environment. (Low-cut, approved, steel-toed safety shoes may be worn in shops if approved by the supervisor.)
e. Charts identifying additional personal protective equipment required or recommended for specific work activities are located in the Mechanical Operations subsection.
f. When wearing a respirator, do not have facial hair where the sealing surface of the respirator comes in contact with your face.

MS-2. Compressed Air

a. Do not use compressed air to remove dirt and/or dust from clothing or body.
b. Bleed pressure off before disconnecting or connecting air couplings, unless the air line is equipped with a quick disconnect.
c. Regulate air pressure not to exceed the PSI rating of the tools and equipment being used.

MS-3. Handling Hazardous Materials

a. Comply with Safety Data Sheet (SDS) instructions when handling any hazardous material.
b. In case of emergency, clear the area and notify the proper authorities.
c. Handle, store, and transport all flammable and combustible liquids in metal, BBRR approved containers.
d. Portable containers must be metal, BBRR approved, and color coded as follows:
    - Red-gasoline
    - Blue-kerosene
    - Green or yellow-diesel
e. Transport and use compressed gas and oxygen cylinders in a secured, vertical position.
f. Omitted.
g. Cap all oxygen and fuel gas tanks when not in use unless protected by an approved non-rotating valve stem protector.
h. Always store fusees in approved metal containers.

MS-4. Ladders, Scaffolds, and Platforms

a. Use approved ladders or scaffolds only. Use non-conductor type ladders and scaffolds near communication, signal, and electrical wires.
b. Secure all ladders, scaffolds, and platforms when not in use.
c. Climb no higher than the third rung from the top of a straight ladder or the second step from the top of a stepladder.
d. Never climb a ladder on which someone else is standing.
e. Face the ladder at all times and maintain three point contact when ascending and descending.
f. When available, use a safety carrier rail with a locking sleeve when climbing a structural, stationary, vertical ladder over ten feet tall.

MS-5. Deleted (see GS-33)

MS-6. Hi-Rail Vehicles

a. Occupy track only with proper authority.
b. Stop on-track equipment when the operator's attention cannot be directed exclusively to controlling the movement.
c. Perform roll-by inspections when two or more people are occupying the hi-rail. When operating alone, set the hi-rail on track and inspect hi-rail wheels to determine that they are in place.

MS-7. Mechanized Equipment

Operator must:

a. Use equipment only to its rated capacity.
b. Inspect to see that the equipment you are operating has a properly maintained back up alarm, top mounted flashing amber light, fire extinguisher and a first aid kit available.
c. Wear a seat belt, when equipped.
d. Ride and operate equipment only in the manner in which it was designed.
e. Do not operate equipment in excess of 15 MPH.
f. Sound a warning and reduce speed when view is restricted.
g. Stop equipment when the operator's attention cannot be directed exclusively to controlling the movement.
h. Transport passengers only in designated, permanently installed seats.
i. Never leave a running mechanized equipment unattended.
j. Maintain contact between fuel pipe and tank while fueling.
k. See that lockout/tagout devices are in place before maintaining or repairing equipment.

MS-8 Tools (Hand)

a. Never increase a tool's leverage by applying non-approved extensions.
b. Never weld or make alterations to tools.

MS-9. Tools (Power)

a. Shut down or disconnect hydraulic, air, electric, and other mechanical tools from the power source (bleed off when necessary) before adjusting, repairing, oiling, or cleaning them.
b. Never use your body to brace or support the object being worked on with power tools.

MS-10. Abrasive Wheels, Blades, and Grinders

a. Keep wheels and blades to grind the material for which it is designed.
b. Use a wheel or blade to grind the material for which it is designed.
c. Before use, make sure that equipment is properly maintained and, where required, that RPM's are checked with a tachometer.
d. Grind only on the face of the wheel.
e. Never leave a running grinder unattended.
f. Do not wear gloves when grinding on a pedestal grinder that is equipped with a wheel that is less than 10 inches in diameter.

MS-11. Air Brake Safety

a. Deplete air from the brake system before repairing brake rigging or removing air brake components.
b. Make sure all personnel are clear before applying brake.

MS-12. Welding, Cutting, and Heating Metal

a. When transporting compressed gas cylinders on public highways: if approved non-rotating valve protector is used, close cylinder valve and release pressure from regulators and hoses. If approved non-rotating valve protector is not used, then remove regulators and securely install caps on compressed gas cylinders.
b. Inspect to see that fire protection is available before beginning welding, cutting, or heating metal.
c. Use screens when other people may be affected by the work being performed.
d. Make sure the area in which you are welding is properly ventilated.
e. Remove electrodes from holders when not in use.

MS-13. Spotting Cars within Shop Facilities

a. Activate track alarms before moving on-track equipment if equipped.
b. Make sure all personnel are clear of movement.
c. Chock wheels in both directions before uncoupling from cars.

MS-14. Coupling and Uncoupling Equipment

a. Always use standard signals.
b. Ensure the work area is properly protected.
c. When uncoupling power unit from switcher mate or road slug, shut down power unit to avoid electrical shock.

MS-15. Coupling and Uncoupling Air Hoses

a. Stop movement of all cars, equipment, and locomotives before beginning work.
b. Comply with Blue Signal Protection requirements.
c. Do not lean across coupler to open or close angle cock.
d. Make certain that both angle cocks are in the closed position before making any adjustments to the air hoses.

MS-16. Blocks, Tackles, and Winches

a. Attach cable or wire rope clips with U-bolts bearing on the tail or dead end of the wire rope.
b. Do not exceed capacity of the lowest rated component.
c. Do not crisscross cables on level wind winch drums.
d. Wear leather-palmed gloves when handling wire rope.

MS-17. Cranes and Hoisting Equipment

a. Respond to standard signals from the designated person only.
b. Sound a warning signal before moving in any direction or near people.
c. Keep boom and cables away from all obstructions or power lines.
d. Do not use dragging movements.
e. Turn off power before leaving equipment unattended.
f. Lower the load and secure the boom when clearing for a passing train.
g. Do not exceed capacity of the lowest rated component.
h. Do not work under a suspended load or place yourself between a suspended load and an obstruction.
i. Never leave a suspended load unattended.
j. Tag lines must be used when necessary to control loads that are being moved higher than knee level. This does not preclude placing hands on a load for initial or final alignment.

MS-18. Electrical Hazards

a. Only perform electrical work for which you are qualified.
b. Lock out and/or tag out electrical equipment before making adjustments or repairs.
c. Allow no conductive material to come in contact with live power.
d. Verify with a meter that the circuit is de-energized before starting work.

MS-19. Locomotives

a. Secure locomotives properly before leaving it.
b. Ring bell before making any locomotive movement.
c. Relieve pressure before working on any pressurized systems.
d. Face locomotive at all times when mounting or dismounting.
e. Make sure that locomotive cab doors are in place while load testing or openings are barricaded when attended.

MS-20. Jacking Cars or Lifting Cars

a. Make sure car is properly chocked.
b. Make sure blocking under jack is at least as large as the jack base.
c. Use proper jacks with shims: no metal-to-metal contact.
d. Use two jacks at all times except when using a Portec center of car jack or at derailments.
e. Do not go under jacked cars unless approved jack stands or blocking devices are in place.

MS-21. Freight Car Doors

a. Before operating, inspect the door for defects and determine whether it is tracking properly.
b. When opening a plug-style door, use the approved plug-door opening device.

MS-22. Pole Climbing and Line Safety

a. Inspect poles before climbing them.
b. Work on poles only when you are secured by safety straps.
c. Never climb a pole when another person is climbing above or below.
d. Inspect to see that sharpened gaffs are to the correct profile: check to see that the profile is with the proper gauge.
e. Remove gaffs when walking.
f. Climb poles only when trained to do so.

MS-23. Trans-Load Safety
Communicate directly with loading crew and loader operator before and while working on equipment in an area where loading or unloading is in progress.

MS-24. Confined Spaces, Open Pits and Manholes
a. Protect all open holes and trenches with adequate barricades.
b. Do not use open flames to thaw frozen pits or manhole covers.
c. Ensure adequate atmospheric testing and ventilation in confined spaces.

MS-25. Use of Personal Electronic and Electrical Devices by Mechanical Employees.
Mechanical Employees – any employees engaged in or connected with the movement of car movers, on track equipment (hi-rail), spotters, track-mobiles, forklifts, tractors, and all other mobile equipment including BBRR vehicles.

Personal Electronic or Electrical Device – An electronic or electrical device that was not provided to the mechanical employee by BBRR for business purposes.

Railroad Provided Electronic or Electrical Device - An electronic or electrical device provided to the railroad employee by BBRR for business purposes.

Mechanical employees are prohibited from using personal electronic and electrical devices for any function (such as, but not limited to text messaging, gaming, and internet browsing) other than voice communication while on duty.

These devices must be turned off (with any ear pieces removed) and stored while on or operating locomotives, car movers, spotters, track-mobiles, forklifts, tractors, and all other mobile equipment.

Use of an electronic device for other than hands-free voice communication is prohibited while operating a motor vehicle.

Note: Personal cellular phones may be used in case of emergencies or for communication redundancy if radio or other communication failure.

Personal cellular phones may be used for minimal personal voice communication purposes:

a. When approved by senior local manager.
b. When not engaged in any switching operation or riding equipment.
c. When employees are in a place of safety not close than 25 feet from the nearest rail.
d. When it will not interfere or distract from safety or performance of duties.
e. When engaged in the repair of a locomotive and communication is required from a remote source to affect the repair.

A personal electronic or electrical device that enhances an individual's physical ability to perform their duties such as a hearing aid is not prohibited by this rule.

MS-26. Mechanical Department Fall Protection
Employees are to utilize personal fall protection (PFP) systems where required by departmental instructions and in locations equipped with such devices.

Mechanical PPE Chart

✖ Mandatory Equipment ✓ Recommended additional equipment Back support belt and gloves recommended for all task.	Respirator (see chart)	Ear Protection	Welders jacket or sleeves	Leather Gloves	Hot gloves for high voltage	Appropriate gloves	Spats, leggings	Rubberized apron or smock	Welder helmet assembly	Face shield	Cover type goggles	Burning goggles	Hearing Protection
Blowing & cleaning with compressed air	✓							✓		✖	✖		✖
Boring, reaming, drilling							✖			✖	✓		✖
Breaking, cutting concrete, stone or asphalt						✓	✓			✖	✓		
Electrical hazards					✖								
*Electric welding	✓	✖	✖	✖			✓		✖				
*Gas welding, cutting, heating	✓	✖	✖	✖			✓			✖[1]		✖[2]	✖
Grinding with abrasive wheels, blades							✓			✖	✓		✖
Handling acid, chemical solutions, refrigerants	✖					✖		✓		✖	✓		✖
Handling/servicing storage batteries	✓					✖	✓	✓		✖	✓		
Machining steel, iron, etc.						✖	✓			✖	✓		
Operating wood working machines						✖	✓			✖	✓		✖
Sandblasting	✖					✖							
Spraying/general use of cleaning agents – follow manufacturer's instructions	✓					✓		✓		✖			

✖[1] Tinted face shield required with safety glasses.

✖[2] Clear face shield recommended when worn with welding goggles.

Mechanical

WELDING OPERATIONS

Guide for selection of filter shades that should be used when welding and cutting. This selection may be varied to suit the individual's needs.

Note: In gas welding or oxygen cutting where the torch produces a high yellow light, it is desirable to use a filter or lens that absorbs the yellow or sodium line in the visible light of the operation.

✖ Mandatory equipment

✓ Recommended additional equipment

Shade number	2	3 or 4	4 or 5	5 or 6	6 or 8	10	11	12	14
Shielded metal-arc welding: 1/16-; 3/32-; 1/8-; 5/32- inch electrodes						✖			
Gas-shielded arc welding (nonferrous): 1/16-; 3/32-; 1/8-; 5/32- inch electrodes							✖		
Gas-shielded arc welding (ferrous): 1/16-; 3/32-; 1/8- inch electrodes								✖	
Shielded metal-arc welding: 3/16-; 7/32-; ¼- inch electrodes								✖	
5/16-; 3/8- inch electrodes									✖
Atomic hydrogen welding						✖	✖	✖	✖
Carbon arc welding									✖
Soldering	✖								
Torch brazing		✖							
Light cutting, up to 1 inch		✖							
Medium cutting, 1 inch to 6 inches			✖						
Heavy cutting, 6 inches and over				✖					
Gas welding									
Light, up to 1/8 inch			✖						
Medium, 1/8 inch to 1/2 inch				✖					
Heavy, 1/2 inch and over					✖				

Mechanical Selection of Respirators

	* Mandatory equipment or approved equivalent ✓ Recommended additional equipment **Material and/or Operation**	Alkaline cleaner	140-66 Solvent/mineral spirits, Diesel fuel	Abrasive blasting	Spray painting, except can spray painting	Can spray paint (cartridge & pre-filter)	Painter helper (cartridge & pre-filter)	Welding/cutting of stainless steel or galvanized metal (less than 10 min/day)	Welding/cutting of stainless steel or galvanized metal (more than 10 min/day)	Welding/cutting Battery Boxes
Disposable	Dust/mist (P95 or N95)	✓								
	Dust/mist/fume (P95)							*		
	Organic vapor		✓			✓	*			
	Organic vapor acid gas									✓
	Dust/mist pre-filter (P95)	✓								
	High efficiency particulate (HEPA)							*		
	Paint mist pre-filter (P95)					✓	*			
	Pesticide pre-filter (P95)									
Replaceable filter cartridge	Organic vapor		✓			✓	*			
	Organic vapor/acid gas									✓
	Dust/mist pre-filter (P95)	✓					*			
	Dust/fume/mist filter (HEPA) (P100 or N100)							*		
	Powered air purifying respirator									
Atmosphere supplying	Supplied air welding helmet								*	
	Supplied air hood				*					
	Supplied air abrasive blasting helmet			*						

Mechanical Selection of respirators (cont.)

✖ Mandatory equipment or approved equivalent ✓ Recommended additional equipment	Disposable							Replaceable filter cartridge					Atmosphere supplying		
Material and/or Operation	**Dust/mist (P95 or N95)**	**Dust/mist/fume (P95)**	**Organic vapor**	**Organic vapor acid gas**	**Dust/mist pre-filter (P95)**	**High efficiency particulate (HEPA)**	**Paint mist pre-filter (P95)**	**Pesticide pre-filter (P95)**	**Organic vapor**	**Organic vapor/acid gas**	**Dust/mist pre-filter (P95)**	**Dust/fume/mist filter (HEPA) (P100 or N100)**	**Powered air purifying respirator**	**Supplied air welding helmet**	**Supplied air hood**	**Supplied air abrasive blasting helmet**
Welding/cutting confined spaces		✖				✖						✖				
Welding/cutting (painted surfaces)						✓						✓				
Welding/cutting (mild steel)		✓				✓						✓				
Welding/grinding frog w/o blower		✖				✖						✖				
Grinding	✓	✓			✓						✓					
Hot work on lead-based paint				✓		✖				✓		✖				
Working in ballast dust		✖				✖						✖				
Electrical parts cleaning solvents			✓	✓					✓	✓						
Pesticide/herbicide application (cartridge & pre-filter		✓						✓	✓		✓					
Dust	✓				✓	✓				✓	✓	✓				
Objectionable odor				✓						✓						
Creosote				✓						✓						
Bird droppings (cartridge & pre-filter			✓	✓	✓				✓	✓	✓	✓				
Brush or roll painting			✓				✓		✓		✓					

Mechanical Safety Eyewear Chart

Type of safety eyewear to be worn in addition of safety glasses. (Proper tinted lenses must be used as required)

Specific operations requiring safety eyewear	Mandatory	Optional	Special equipment, requirements, or remarks
a) Chipping, cutting or caulking metal	Cover type goggles or face shield	Cover type goggles and face shield	
b) Breaking or cutting concrete, stone or asphalt	Face shield	Cover type goggles and face shield	
c) Striking, or striking with hardened tools and fastenings	Safety Glasses	Cover type goggles or face shield	
d) Cutting rivets, bolts or cotter keys, splitting nuts, etc.	Safety Glasses	Cover type goggles	
e) Using power-activated impact tools	Safety Glasses	Cover type goggles	
f) Using tools powered by explosive charges	Cover type goggles and face shield		
g) Boring, drilling or reaming metal	Safety Glasses	Cover type goggles or face shield	
h) Operating woodworking machines	Face shield	Cover type goggles	Cover type goggles must be used under dusty conditions
i) Operating adzing machines	Face shield	Cover type goggles and face shield	
j) Operating rail drill	Safety Glasses	Cover type goggles or face shield	
k) Operating or dressing grinding wheels, including rail grinders	Face shield	Cover type goggles and face shield	
l) Bench grinders	Face shield	Cover type goggles and face shield	

Mechanical Safety Eyewear Chart (cont.)

Type of safety eyewear to be worn in addition to safety glasses. (Proper tinted lenses must be used as required)

Specific operations requiring safety eyewear	Mandatory	Optional	Special equipment, requirements, or remarks
a) Blowing or cleaning with compressed air	Cover type goggles	Face shield	
b) Steam Cleaning	Face shield	Cover type goggles	
c) Sandblasting	Air supplied hood		
d) Spraying paint (gun)	Face shield	Cover type goggles	
e) Spraying or general use of cleaning agents	Face shield	Cover type goggles	
f) Handling acids or other chemical solutions and servicing/charging refrigeration equipment	Face shield	Cover type goggles	
g) Handling or servicing storage batteries	Face shield	Cover type goggles	
h) Power rail saw	Face shield	Cover type goggles	
i) Electric welding	Welding helmet		See welding operation shade chart
j) Gas welding	Welding helmet or tinted face shield		See welding operation shade chart
k) Cutting with a torch	Cover type goggles or tinted face shield		See welding operation shade chart
l) Working in areas where heavy dust conditions exist	Cover type goggles		
m) Using cut-off discs, saws or other tools having carbide bits	Face shield	Cover type goggles and face shield	
n) Working under cars or equipment	Face shield	Cover type goggles	

Mechanical Department Required Use Respirator Chart

Employees who perform the job task listed at these locations, must wear one of the respirators as marked by an **X** or approved equivalent.

				Respirator Types					
Location	**Task**	**Shop/Job Position**	**Potential Hazards**	**3M Half Face Respirator with HEPA P100 or N100 Cartridges**	**3M Half Face Respirator with Organic Vapor Cartridges**	**PAPR, Welding Helmet**	**Supplied Air Welding Helmet**	**Supplied Air Abrasive Blasting Helmet**	**Supplied Air Hood with Collar**
Car Department Project line;	Burning on Safety Appliances (Unidrive Fasters, > 25 in one day	Project Line: Carman	Cadmium	✘		✘	✘		
Shop Facilities	Burning on Safety Appliances (Unidrive Fasters, > 25 in one day	Project Line: Carman	Cadmium	✘		✘	✘		
Locomotive Shop	Abrasive Blasting	Paint Shop Carman	Lead, PNOC	✘		✘	✘		
	Painting Surface Preparation (Except Abrasive Blasting)	Paint Shop Carman	Lead, PNOC					✘	
	Spray Painting (Except Aerosol Can Spray Painting)	Paint Shop Carman	Organic Vapors	✘					
	Painter Helper	Paint Shop Carman	Organic Vapors						✘
Shop Facilities	Burning on Safety Appliances (Unidrive Fasters, > 25 in one day)	Project Line: Carman	Cadmium	✘		✘	✘		

Note: Filtering facepiece (dust mask) may not be used for any of the tasks listed above. Voluntary use of filtering facepiece (dust mask) are allowed for personal comfort use for job tasks not included in this chart.

Transportation Department Safety Rules

TS-1. Personal Protective Equipment

A. Wearing safety Glasses

Wear BBRR approved safety glasses and side shields when on or about tracks and equipment that is on the track.

1. Wearing Corrective Lenses

If your duties require observing signal aspects or reading printed information and/or instructions and you have a visual impairment or deficiency that requires corrective lenses, make certain that you wear the corrective lenses while on duty.

You may wear clear contact lenses as corrective lenses when worn with the safety glasses that have side shields.

2. Wearing Tinted Eyewear

Except as provided below, you may wear BBRR approved, tinted eyewear, or eyeglasses with clear corrective lenses together with BBRR approved, tinted, detachable lens covers.

Do not wear tinted eyewear:

1. During the period starting one hour before sunset and continuing until one hour after sunrise.
2. When working in tunnels or in places where there is a similarly low level of light.
3. When the available light would generally be considered inadequate for the performance of the job task.

If you wear approved, tinted, corrective lenses, make certain that you have a second pair of eyewear with clear, corrective lenses available to wear when tinted eyewear is prohibited by conditions 1, 2, or 3 of the previous paragraph.

B. Wearing Hearing Protection

Wear BBRR approved hearing protection when you are:

- Within 100 feet of one or more stationary locomotive operating in a throttle position other that IDLE.
- On an operating locomotive outside the locomotive cab.
- When providing flag protection at a highway crossing at grade.
- In areas where hearing protection is required by special instructions, notice, or posted sign.
- Riding inside the cab of a locomotive operating under load.

Exception:

When all doors and windows are closed, hearing protection is not required inside the cab of the following locomotive models:

- GE CW40-8, CW44-9, CW44AS, CW55AH, ES44AH AND ES44DC
- EMD SD-50-3, SD-60I, SD-70M, SD-70AC, SD-70ACe, and SD-80AC
- NREC 3GS-21B (Genset Switcher)

C. Wearing Shoes

When working outside of an office environment, wear high-top (6-inch or more) shoes that have:

- Laces
- Oil-resistant soles
- A defined heel not more than one inch high.

D. Wearing Hard Hats

Wear a BBRR approved hard hat when you are:

- Actively engaged in a rerailing operation which involves the use of a wrecker or off-track equipment.
- In the immediate vicinity of rail being unloaded.
- In the immediate vicinity of a working pivotal crane.
- In areas where hard hats are required by special instruction, notices, or posted signs.

E. Radio Equipment

Wear a BBRR approved chest-type radio harness or use a lapel microphone and wear a side holster or radio clip when using a portable radio during train service work activities.

TS-2. Occupying Equipment Roofs

Do not occupy the roof of cars, locomotives or any other equipment unless performing service or inspection.

TS-3. Using a Knuckle-Mate Device or Coupler-Alignment Strap

A. Using a knuckle-Mate Device

To use a Knuckle-Mate:

Step	Action
1	Separate the cars by at least 50 feet.
2	Make certain that the knuckle is locked in the closed position.
3	Connect the Knuckle-Mate by placing it over the top of the knuckle, making certain the central pin is securely in the hole of the knuckle (the pin may be adjusted by loosening the top levered nut).
4	Assume a balanced position with both hands on the handle.
5	Adjust the coupler by pulling on the Knuckle-Mate; be prepared for unexpected movement.

B. Using a Coupler Alignment Strap

To use a coupler-alignment strap:

Step	Action
1	Apply a sufficient number of hand brakes to secure the standing cars.
2	Separate the cars by at least 50 feet.
3	Close the knuckles on each car.
4	Move the engine (or cars) towards the standing car and stop movement within three feet of the standing car.
5	Place the ends of the coupler strap around the couplers and stand and align the couplers.
6	Slowly separate the equipment to remove the slack from the strap and align the couplers.
7	Move the equipment close enough to allow the coupler alignment strap to be removed.
8	Remove the coupler adjustment strap.

TS-4. Procedures for Applying Hand Brakes

A. Applying a Vertical-Wheel Hand Brake

When available, a company-approved brake stick must be used to apply a vertical-wheel hand brake.

To apply a vertical-wheel hand brake, comply with GS-16 (B) (Operating a Vertical-Wheel Hand Brake) and the following procedure:

Step	Action
1	Place the release lever or pawl in the ON position.
2	Turn the brake wheel clockwise with your right hand to take up the slack in the brake chain.
3	Place your right hand at about the 7 o'clock position on the rim of the brake wheel and apply lifting pressure toward you in short pulls.
4	Keep your back straight and apply hard pressure by pushing downward with your right leg as you pull upward on the brake wheel with your right hand.

B. Applying Horizontal (Staff) Hand Brakes

When applying a horizontal hand brake, comply with the following:

Step	Action
1	Make certain that the hand brake is locked into the raised position.
2	If so equipped, engage the pawl weight in the ratchet (ON position) with your foot.
3	Place both of your feet securely on the car and assume a stable position
4	Grasp the brake wheel rim with both hands, keeping your thumbs on outside of the brake wheel and turn the brake wheel clockwise as necessary.
5	If the hand brake has foot-operated pawl, use your foot to engage the pawl into the ratchet when necessary braking power is reached.

C. Applying Ratchet-Type Hand Brakes

When applying a ratchet-type hand brake, comply with GS-16 (C) (Operating a Ratchet-Type Handbrake) and the following procedure:

Step	Action
1	Establish and maintain secure footing and a firm grip
2	Make certain that the release lever or pawl weight in ON position before applying the hand brake.
3	Apply the brake with vertical pumping action of the brake lever.

TS-5. Procedures for Releasing Hand Brakes

Do not attempt to release a hand brake mounted on the end of a car while standing on the ground, unless you are using a brake stick or the hand brake is equipped with a vertical release lever and you can safely reach the lever from the side of the car.

When releasing a hand brake, position yourself to avoid being struck by any unexpected movement of the car.

A. Releasing a Vertical Wheel Hand Brake that is Equipped with a Release Lever or Pawl.

Comply with Rule GS-16 (B), (Operating a Vertical-Wheel Hand Brake) and use your right hand to operate the release lever or pawl.

B. Releasing a Vertical Wheel Hand Brake that is not Equipped with a Release Lever or Pawl.

Comply with Rule GS-16 (B), (Operating a Vertical Wheel Hand Brake and:

Step	Action
1	Grasp the rim of the brake wheel with your right hand at about the 1 o'clock position.
2	Turn the brake wheel counterclockwise until the brake is completely released.

C. Releasing a Ratchet-Type Hand Brake

To release a ratchet-type hand brake, trip the release lever or paw.

D. Releasing a Horizontal Hand Brake that is Equipped with a Pawl.

When releasing a horizontal hand brake that is equipped with a pawl, comply with the following:

Step	Action
1	Place both feet securely of the car and assume a stable position.
2	Grasp the brake wheel rim with both hands, keeping your thumbs on outside of the brake wheel and turn the brake wheel clockwise to remove the tension from the pawl.
3	Disengage the pawl with your foot
4	Release your grip on the hand break wheel. The wheel will spin counterclockwise, so keep your hands, body and clothing clear.
5	Lower the hand brake wheel staff, in accordance with Rule TS-5 (F) (Lowering the Staff of a Horizontal Hand Brake).

E. Releasing a Horizontal Hand Brake that is NOT Equipped with a Pawl

When releasing a horizontal hand brake that is not equipped with a pawl, comply with the following:

Step	Action
1	Place both feet securely on the car and assume a stable position.
2	Turn the brake wheel counterclockwise until the brake is fully released.
3	Lower the hand brake wheel staff, in accordance with Rule TS-5 (F) (Lowering the Staff of a Horizontal Hand Brake.

F. Lowering the Staff of a Horizontal Hand Brake

When necessary to lower the staff of a horizontal hand brake, comply with the following:

Step	Action
1	Make certain that the car will not be moved.
2	Position yourself on the ground at the hand brake being alert and prepared for unexpected movement.
3	With one hand, lift the hand brake wheel staff enough to take the weight of the staff off of the staff support.
4	While holding the hand brake wheel staff in this position with one hand, move the staff support from under the end of the staff with the other hand.
5	Use both hands to slowly lower the hand brake wheel staff.

G. Using the Air Brake to Assist in Releasing the Hand Brake

When you are unable to release a hand brake, if practicable, follow this procedure:

Step	Action
1	Charge the car's air brake to the standard pressure for the train being handled or for the service you are in.
2	Place the air brake into an emergency application.
3	Release the hand brake.

TS-6. Procedures for Using a Brake Stick

Use a company-approved brake stick only on vertical wheel hand brakes, to open a knuckle, to operate retainer valves that are on standing equipment, or remove track skates from the rail and complying with the appropriate protection (3-Step, Roadway Worker, Blue Signal, etc.).

When using a brake stick:

- Before using a brake stick on equipment that has an operator-controlled locomotive attached, secure the appropriate protection (3-Step, Roadway Protection, Blue Signal, etc.).
- Adjust the brake stick to the proper length for the task.
- Grip the lower section of the brake stick with both hands. Your hands should be at least one foot apart with the lower hand about two to three inches from the end of the handle.
- Maintain proper balance and pull the brake stick across, never into, your body.
- Do Not:
  - Use brute force.
  - Use a brake stick on bent or defective brake wheels.
  - Push on the brake stick, unless spinning the brake wheel or lifting a quick release lever.
  - Transport or store a brake stick in any place where it could present a tripping hazard.
  - Hang a brake stick on an occupied ladder of a car.
  - Mount, dismount, or ride equipment while carrying a brake stick.

A. Positioning Your Body to use a Brake Stick

When using a brake stick to operate a hand brake, position yourself so that your feet are parallel to the brake wheel and you are facing the end of the car that the hand brake is on.

B. Connecting the Brake Stick to the Brake Wheel

Comply with the following when connecting a brake stick to the brake wheel.

1. **When applying a hand brake**

   If you are located on the:

   - Same side of the car that the hand brake is on, hook the brake stick head into the brake wheel at a point between the three and the six o'clock position, as viewed when facing the brake wheel.
   - Opposite side of the car that the hand brake is on, hook the brake stick head into the brake wheel at a point between the twelve and the two o'clock position, as viewed when facing the brake wheel.

2. **When releasing a hand break**

   If you are located on the:

   - Same side of the car that the hand brake is on, hook the brake stick head into the brake wheel at a point between nine and the ten o'clock position, as viewed when facing the brake wheel.
   - Opposite side of the car that he hand brake is on, hook the brake stick head into the brake wheel at a point between the seven and the eight o'clock position, as viewed when facing the brake wheel.

C. Applying a Hand Brake

When applying a hand brake:

Step	Action
1	Insert the head of the brake stick into the front of the break wheel as indicated in Paragraph B (Connecting the Brake Stick to the Brake Wheel).
2	Turn the wheel until there is tension on the brake chain.
3	Apply the final brake tension by pulling on the brake stick using short, quarter turns.

D. Releasing a Hand Brake

When releasing a hand brake:

Step	Action
1	Insert the head of the brake stick into the front of the brake wheel as indicated in Paragraph B (Connecting the Brake Stick to the Brake Wheel).
2	Pull on the brake stick to loosen the hand brake. If the hand brake does not readily release, use a short, firm hammering action. If the hand brake does not release in this manner, comply with Rule TS-5 (Procedures For Releasing Hand Brakes).
3	When the tension is off of the handbrake, turn the brake wheel until the handbrake is sufficiently released.

TS-7. Procedures for Operating Switches

A. Operating Low Switches Other than a Ramapo, National, or Bow Handle

To operate a low switch other than a Ramapo, National-type, or bow handle switch, comply with the following:

Step	Action
1	Release the latch, if the switch is so equipped.
2	Center your feet with the lever's handle and stand as close as possible to the handle.
3	Grasp the lever's handle with both hands.
4	Lift the lever's handle with slow, even pressure to the straight up position.
5	Reposition your feet so that your body will be over the lever on its downward movement.
6	Push the lever downward to the latched position, using steady pressure.
7	Make certain that switch is latched.
8	Make certain that the switch points are in the proper position.

B. Operating low Ramapo, National, or Bow Handle Switches

To operate a low Ramapo, National, or Bow Handle switch, comply with the following:

Step	Action
1	Remove the switch lock.
2	Remove the latch to the RELEASE position and make certain that the latch remains in the RELEASE position.
3	Firmly grasp the handle with both hands and raise the handle to a vertical position, using a steady, even pull.
4	While maintaining your balance, with both hands still firmly grasping the handle, push the handle down with steady, even pressure.
5	Reposition the latch and replace and lock the switch lock.
6	Make certain that the switch points are in the proper position.

C. Operating High Switch Stand Switches

To operate a high-stand switch, comply with the following:

Step	***Action***
1	Pull the lever with both hands.
2	When switch is in the desired position, place the operating lever in the keeper.
3	Make certain that the switch points are in the proper position.

TS-8. Procedures for Operating Derails

A. Operating Split-Rail Derails

To operate a split-rail derail, comply with the rule for operating the type of switch stand the derail is connected to.

B. Operating Lift-Off Type Derails

To operate a lift-off type derail:

Step	Action
1	Straddle the rail keeping your feet from the place where the derail will rest when it is removed.
2	Grasp the derail. Use the derail's slotted handhold, if so equipped.
3	Lift the derail by using your arm and leg muscles.
4	Lower the derail to the opposite position.
5	Maintain a handhold until the derail is properly seated in either the ON or OFF position.

C. Operating Other Than Lift-Off or Split-Rail Type Derails

To operate a derail other than a lift-off or split-rail type derail, comply with the following:

Step	Action
1	Be well braced with feet firmly placed.
2	Have a firm hand grasp on the operating lever.
3	Move the operating lever by using your leg and arm muscles.

TS-9. Procedures for Coupling Air Hoses

Before handling air hoses, secure the appropriate protection (3-Step, Roadway Protection, Blue Signal, etc.) when required.

A. Coupling Air Hoes

To couple air hoses, comply with the following:

Step	Action
1	Make certain that both glad hands have gaskets and that there are no protective dust caps in the glad hands.
2	Grasp the air hose nearest you firmly behind its glad hand and bend it upward.
3	Grasp the hose farthest away and pull it toward the bent hose.
4	Match the glad hands into opposite contoured slots and push them downward and make certain that the glad hands are seated.

TS-10. Procedures for Uncoupling Air Hoses

Before handling air hoses, secure the appropriate protection (3-Step, Roadway Protection, Blue Signal, etc.) when required.

A. Uncoupling Air Hoses between Equipment

When uncoupling air hoses between equipment, permit the movement of the equipment to uncouple air hoses whenever possible.

When uncoupling air hoses by hand, comply with the following:

Step	Action
1	Close both angle cocks.
2	Use both hands to firmly grasp the air hose closest to you immediately behind the gladhand.
3	While bracing your hands against your leg, raise the air hose until it separates for the other hose.

B. Uncoupling a ground air line from equipment

When uncoupling a ground air line from equipment, comply with the following:

Step	Action
1	Close the angle cock on the equipment that the ground line is coupled to.
2	Close the ground air valve. If the ground air valve is equipped with a bleeder valve, operate it
3	Make certain that the pressure releases from the ground line.
4	Use both hands to grasp the ground air line immediately behind the gladhand.
5	While bracing your hands against your leg, raise the ground air line until it separates from the air hose.

TS-11. Procedure for Applying Air Brakes Using an Angle Cock

To apply the air brakes on a car or cars manually, comply with the following:

Step	Action
1	Grasp the air hose firmly with your left hand behind the gladhand.
2	Hold the hose firmly against the outside of your left leg while aiming the exhaust away from you.
3	Turn your head away from the air hose.
4	- If an emergency application is not desired, slowly open the angle cock. - If an emergency application is desired, quickly open the angle cock.

TS-12. Procedures for the Storage, Lighting, Handling and Extinguishing of Fusees

A. Storing Fusees

Properly store fusees in the designated racks when they are not in use.

B. Lighting a fusee

To light a fusee, comply with the following:

Step	Action
CAUTION: When igniting a fusee, be on guard against hot sparks.	
1	Hold the fusee near its base.
2	Pull the tape over the top to expose the scratch surface on the end of the cap.
3	Twist the cap away from the head of the fusee.
4	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.
5	If the fusee does not light, pause momentarily before attempting to light it. While pausing, keep the fusee pointed away from your face and body to avoid possible injury from sudden flare-up of the fusee.

C. Handling Fusees

When handling fusees, comply with the following:

- Do not
  - Handle a fusee except when required to do so.
  - Look directly at the flame.
  - Hold a fusee near the flame.
  - Breathe the smoke produced by the burning fusee.
- Always point the burning end of the fusee away from yourself and others.
- When a fusee is used to give hand signals, use even, easy motions.
- Before dropping a burning fusee from a moving train, hold the fusee at arm's length for at least five seconds, but not more than 10 seconds.
- If a burning fusee must be held for more than five seconds, take extra precautions to prevent molten ash from falling onto you or your clothing.
- Frequently rid the fusee of molten ash by carefully shaking it in a downward motion near the ground.

D. Extinguishing a Fusee

When extinguishing a fusee, be careful not to allow the burning compound to come in contact with a combustible material.

To extinguish a burning fusee either:

- Gently strike the burning end of the fusee over the edge of a railroad rail or a heavy metal object three or four times to separate the burning compound from the rest of the fusee, or
- Bury the burning end of the fusee in sand or loose dirt.

TS-13. Procedures for Using a Wrench

When using a wrench:

- If it is possible to pull on the wrench's handle to turn the object, position the wrench so that the wrench's jaws are facing you.
- If it is not possible to pull on the wrench's handle to turn the object, position the wrench so that the wrench's jaws are facing away from you and use an open hand to push the wrench's handle.
- Make certain that the wrench has a proper grip on the object to be turned before attempting to apply force.
- Brace yourself securely to maintain your balance should the wrench slip or if the object being turned fails.
- Make certain that you do not strike or pinch your fingers, hands or any part of body against any object as you turn the wrench.

TS-14. Procedure for Adjusting Locomotive Cab Seats

Do not adjust the height of a locomotive cab seat by yourself unless the seat is equipped with a spring-assisted adjustment mechanism.

Use the following two-person procedure for adjusting the height of a locomotive seat that does not have a spring-assisted adjustment mechanism:

Step	Who Does It	Action
1	Both Employees	Conduct a job briefing and decide which employee will do the duties of Employee 1 and Employee 2.
2	Both Employees	Inspect the seat tripod mount for a spring-assisted mechanism and for the presence of a spot weld that would prevent manual adjustment
3	Employee 1	Position yourself to lift the seat.
	Employee 2	Position yourself to remove and insert the seat adjustment pin.
4	Employee 1	Lift the seat slightly.
	Employee 2	Remove the pin from the seat adjustment.
5	Employee 1	Adjust the seat to the desired height.
	Employee 2	Insert the pin into the seat adjustment.

If the seat will not move:

- Using a smooth, moderate lifting effort, do not attempt to adjust it without additional help.
- And it is in a position that will permit safe operation without excessive discomfort; report the locomotive for repair on the Locomotive Work Report.
- And it is in a position that will not permit safe operation without excessive discomfort, resolve the problem before the seat is used.

TS-15. Going Under or Fouling Standing Equipment

"Foul" means to:

- Extend any part of your body between equipment.
- Be within twenty-five (25) feet of the end of equipment, including applying or releasing a hand break.

EXCEPTIONS:

- Engineers performing a calendar day inspection on the locomotive assigned to him/her.
- Trainmen stationed at an EOT to perform an air brake test on his/her train or cars picked-up.
- Employees operating a cut lever or bleed rod.

A. 3-Step Protection

When it becomes necessary to go under or foul standing equipment that has an operator-controlled locomotive attached, use 3-step protection as follows:

1. **Securing 3-Step Protection**

   Before going under or fouling standing equipment coupled to a locomotive, make certain through verbal communication directly with the employee controlling the locomotive that he/she has provided 3-step protection and will remain in control of the locomotive.

   When an employee secures 3-step protection, other members of the crew will be protected, provided an understanding exists between the crewmembers.

2. **Providing 3-Step Protection**

   On conventional equipment

   To provide 3-step protection on conventional equipment, the engineer must:

   1. Place the independent brake in full application position: and, if necessary, make a brake pipe reduction sufficient to hold the equipment.
   2. Place the reverse lever in the center position.
   3. Place the generator in the off position.

3. Removing 3-Step Protection

A) By employee being protected

Do not request the removal of 3-step protection unless you have cleared the equipment and it is safe to do so.

The employee requesting 3-step protection will be responsible for maintaining that protection until all employees are clear of the equipment.

B) By the employee providing the protection

Do not change the position of any of the controls listed in paragraph 2 above unless you are:

- Authorized to do so by the employee who requested 3-step protection.

B. Separating Equipment

Before going between standing equipment, make certain that the equipment is separated by at least fifty (50) feet.

C. Going on, under or between or fouling standing equipment as a utility employee

Establish "Blue Signal Protection" as provided in operating rules when it becomes necessary to go on, under, or between or foul standing equipment when you are working as a utility employee and you are not attached to a crew.

TS-16. Omitted

TS-17. Kicking Cars

This rule does not apply to humping operations.

To kick cars comply with the following:

1. Step clear of the equipment and give the operator of the engine the signal to move the cars.
2. When the slack on the cars is bunched, pull the uncoupling lever. Do not hold to the uncoupling lever at a speed greater than a fast walk. (4 MPH)
3. When the desired speed is attained, give the engineer a stop signal.

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NOTES


WHEN IN DOUBT
BB
TAKE THE SAFE ROUTE