

BNSF Railway Safety Vision

We believe every accident or injury is preventable. Our vision is that BNSF Railway will operate free of accidents and injuries. BNSF Railway will achieve this vision through:

A culture that makes safety our highest priority and provides continuous self-examination as to the effectiveness of our safety process and performance...

A work environment, including the resources and tools, that is safe and accident-free where all known hazards will be eliminated or safe-guarded...

Work practices and training for all employees that make safety essential to the tasks we perform...

An empowered work force, including all employees, that takes responsibility for personal safety, the safety of fellow employees, and the communities in which we serve.

This version contains the following revised or added pages:

July 11, 2006: 61, 62.

December 22, 2006: 93, 94.

February 5, 2007: 7, 7a (Added).

March 19, 2007: 55, 56.

January 1, 2008: 15, 16.

March 6, 2008: 25, 26.

March 26, 2008: 11, 12, 29, 30.

June 5, 2008: 27, 28, 28a (Added), 28b (Added).

December 16, 2008: 41b (Added), 42.

December 11, 2009: 81, 82.

December 23, 2009: 69, 70.

January 15, 2010: 31, 32, 33, 34.

April 22, 2010: 21, 22.

August 26, 2010: 65, 66, 67, 68.

January 14, 2011: 63, 64.

March 1, 2011: 75, 76.

August 1, 2011: 71, 71a (Added/Revised), 77, 78.

September 1, 2011: 79, 80.

January 11, 2012: 41, 41a (Added/Revised).

February 1, 2012: 17, 18.

March 29, 2012: 86a (deleted), 86b (deleted).

April 19, 2012: 39, 39a (deleted), 39b (deleted), 40, 47, 48.

November 1, 2012: 5, 6, 7b (Added/Revised), 8, 71b (Added/Revised), 72, 73, 74.

June 1, 2013: Title Page, 2, 3, 4, 35, 36, 36a (Added/Revised), 36b (Added/Revised), 37, 38.



Maintenance of Way Safety Rules

In Effect at 0001
Central, Mountain and Pacific
Continental Time

Sunday, October 30, 2005

(Including revisions through
June 1, 2013)

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S-1.0 Core Safety Rules

These rules provide a core of safe work practices for BNSF people. The rules apply every day and in every job we do. They will guide and direct us in maintaining a safe work environment.

S-1.1 Job Safety Briefing

Employees must participate in a job safety briefing before beginning work and when work or job conditions change. The briefing includes a discussion of the general work plan, existing or potential hazards, and ways to eliminate or protect against hazards. Outside parties or contractors involved in the work or who are in the work area must also be included in the job safety briefing.

Employees Fouling the Track

Employees must always be alert and expect the movement of trains, engines, cars or other moveable equipment at any time, on any track and in either direction. Before fouling any track, employees have an individual responsibility to determine it is safe to do so. If the track is occupied by rail equipment, employees must insure appropriate protection has been provided for the task to be performed as indicated in the following rules:

Safety Rule S-13.1.3 - Tracks (Crossing tracks, stepping on rails and fouling tracks)

Safety Rule S-13.1.11 - Installing or Removing Marker

Safety Rule S-13.2 - Coupling/Uncoupling Rail Equipment

Safety Rule S-13.3 - Air Hoses and Angle Cocks

Safety Rule S-13.4 - Crossing Over Rail Equipment

Safety Rule S-13.6 - Operating Hand Brakes

Safety Rule S-13.7 - Operating Switches and Derails

MWOR Rule 5.13 - Blue Signal Protection of Workmen

S-1.2 Rights and Responsibilities

We have the right and responsibility to perform our work safely. Our training, skills, work experience, and personal judgment provide the foundation for making safe decisions about work practices.

S-1.2.1 Sufficient Time

Take sufficient time to perform job tasks safely.

S-1.2.2 Authorized and Trained

Perform job tasks only when authorized and trained to perform them.

S-1.2.3 Alert and Attentive

Assure that you are alert and attentive when performing duties.

S-1.2.4 Co-Workers Warned

Warn co-workers of all unsafe practices and/or conditions.

S-1.2.5 Safety Rules, Training Practices, Policies

Comply with all company safety rules, training practices and policies, and Engineering Instructions.

S-1.2.6 Warning Signs

Comply with verbal warnings, warning signs, posted instructions, and placards identifying restricted areas, safety and health precautions, or potential hazards.

Apply an orange Out of Service tag (form #488159042) to equipment that is not to be operated/used until repaired. The employee applying the tag is required to complete the documentation portion of the tag and affix the tag to the affected equipment in a conspicuous location. The employee initiating this action is also responsible for notifying the appropriate supervisor as indicated on the tag.

Following risk assessment and implementation of identified precautionary measures, personnel tasked with conducting service or repairs may operate equipment tagged as out-of-service in order to identify or troubleshoot problems. After the employee completes the service or repair, the employee is required to complete the documentation portion of the tag, sign and forward the tag to the supervisor originally contacted by the employee who applied the tag

The yellow Roadway Maintenance Machine (RMM) Safety tag (Form 14300133) is used in accordance with the requirements of FRA 49CFR, Part 214, Subpart D, Roadway Maintenance Machine Safety. This tag is to be affixed to the vehicle/equipment in a conspicuous location and is used solely to identify a non-complying condition on on-track work equipment or on a hy-rail vehicle. The Machine Operator's Daily Log Book provides complete details, including allowable time frames for the completion of identified problems. The employee initiating this action is responsible for notifying their supervisor, the local roadway equipment mechanic or the local roadway equipment supervisor.

- After the completion of corrective actions, the mechanic tasked with making repairs is required to complete documentation in the Machine Operator's Daily Log. The *RMM Safety* tag may then be removed and discarded.
- Place an orange *Out of Service* tag onto on-track work equipment or hy-rail vehicles to supplement the RMM Safety tag when:
 - Identified repairs are not completed within the time frame specified in FRA 49CFR, Part 214, Subpart D.
 - The responding mechanic identifies a condition, not initially identified, that is serious enough to warrant immediate removal from service.

S-1.2.7 Two or More People

Do not perform a task alone that can only be performed safely by two or more people.

S-1.2.8 Reporting

Make reports of incidents immediately to the proper manager.

The conduct of any employee leading to conviction of any felony is prohibited. Any employee convicted of a felony must notify the proper authority of that fact within 48 hours after the employee receives notice of the conviction.

S-1.2.9 Horseplay

Conduct yourself in a way that supports a safe work environment—free of horseplay, practical jokes, and harassment.

S-1.2.11 Medical Conditions

All employees are responsible to ensure their personal medical condition does not interfere with their ability to safely perform their duties.

Employees with medical conditions (such as uncontrolled diabetes, high blood pressure, sleep disorders including apnea, visual impairment, hearing impairment, etc.) that may adversely affect their ability to work safely must inform their medical practitioner of their job duties.

The medical provider must determine that any prescribed treatment including medication will not impair the employee from safely performing their job duties. The employee must notify their physician/medical provider if prescribed treatment and/or medication is affecting their ability to safely perform their job duties.

S-1.3 Personal Protective Equipment and Clothing**S-1.3.1 Requirements**

Be familiar with and wear personal protective equipment and clothing as required by your job. Any changes made in the recommended use or design of personal protective equipment or clothing must be approved by the manufacturer.

S-1.3.2 Finger Rings

Do not wear finger rings unless you are working in an office or office-like area.

S-1.4 Tools and Equipment**S-1.4.1 Inspection**

Inspect tools and equipment for defects before and during use. Repair or remove from service those that fail inspection. Promptly tag and report to your supervisor or person in charge any defect(s). If necessary, guard the hazard.

S-1.4.2 Use As Intended

Use tools and equipment for the purposes intended.

S-1.4.3 Manufacturer Specifications

Read and follow the manufacturer's specifications when using tools and equipment.

S-1.4.4 Manufacturer Approval

Secure manufacturer approval for any changes made in the recommended use or design before using.

S-1.4.6 Three-Point Contact

Maintain three-point contact when getting on or off vehicles, equipment, and machinery, and when ascending or descending ladders or platforms. Three-point contact consists of both feet and one hand or both hands and one foot.

S-1.4.7 Physical Exertion

Employees must only use BNSF approved stretches when stretching at the beginning of the shift, before physical exertion, after rest breaks, and after a long period of sitting or maintaining the same posture. Employees are to stretch without exceeding personal capabilities, but must participate to the extent of their ability or as directed by a physician. Stretches following rest breaks may consist of a subset of the approved stretches.

Always use safe lifting practices when lifting, carrying or performing other tasks that might cause back pain, injury or property damage. Do not use excessive force to accomplish tasks. If one person cannot manually handle a load safely, then use mechanical assistance. Where mechanical assistance is not readily available, request assistance or stop and obtain the mechanical means necessary to complete the task.

S-1.4.8 Passengers

Transport passengers in vehicles equipped to transport passengers.

S-1.4.9 Seat Belts

Wear seat belts while operating or riding in equipment or vehicles that are equipped with them.

S-1.5 Work Environment**S-1.5.1 Housekeeping**

Keep work locations, vehicles, and the inside and outside of buildings clean and orderly at all times.

S-1.5.2 Inspection

Inspect your work locations and vehicles for any conditions that might cause injury, property damage, or interference with service. If you find such a condition, take necessary action to protect against the hazard, or discontinue activities in the area or with the vehicle. Promptly tag (where appropriate) and report any defect or hazard to your supervisor or person in charge.

S-1.5.3 Footing

Be alert to all walkway conditions, and adjust your actions to accommodate weather, time of day, and grade.

Guard against slipping and stumbling hazards by using handholds and railings when available. Except in emergency, running is not permitted in the performance of duty.

S-1.5.4 Confined Spaces

Consider all confined spaces hazardous unless proven otherwise. Only authorized and trained individuals may enter confined spaces.

S-1.5.5 Hazardous Materials

Handle contaminants and hazardous chemicals according to all applicable government regulations and BNSF policies.

S-1.6 Working On or About Tracks**S-1.6.1 Movement of Equipment**

Expect the movement of trains, engines, cars, or other equipment at any time, on any track, and in either direction.

S-2.0 Chemical Safety

S-2.1 Environmental Safety

In compliance with BNSF's environmental protection policy, take measures to prevent:

- Spills of oil or other material.
- Discharge of contaminants to sewers, waterways, or the ground.
- Smoke and gas emissions when operating combustion equipment.

Treat all unidentified material as hazardous until identified. Do not transport unidentified material.

S-2.2 Chemical Spills and Chemical Releases to Air

In the event of a chemical spill or release of a chemical or unknown material to the air, evacuate the area. Report oil or hazardous material spills promptly to the dispatcher and your supervisor. Include in your report:

- Spill location.
- Material and amount of spill.
- Distance to the nearest public waters.
- Other important information.

Do not take any further action unless you are specifically trained to do so, using appropriate protective gear and work practices.

Do not re-enter the affected area until given the "All Clear" by incident response personnel.

S-2.3 Labeling Chemical Containers

At the time you place a chemical in a container, affix to that container a label identifying the chemical and appropriate hazard warnings.

S-2.4 Ventilation for Maintaining Safe Atmospheres

Provide mechanical ventilation to enclosed areas when:

- Applying solvents, paints, and other chemicals.
- Welding, torch cutting, or burning.
- Emissions from combustion engines, stoves, or heaters (especially in enclosed areas) may cause concentration of excessive airborne contaminants.
- Recommended in product instructions or MSDS.

S-2.5 Skin Cleaning

Do not clean any part of your body with gasoline, solvents, or oily rags. Use company-supplied hand creams and soaps for cleaning hands, arms, face, and other parts of the body.

If the skin has been exposed to corrosive agents (acids or bases), use plain water to flush continuously for at least fifteen minutes.

Do not apply ointments, soaps, or creams to chemical or thermal burns.

S-2.6 Containment and Spill Prevention

When dispensing petroleum products or other materials such as soaps and solvents from drums or containers:

- Whenever possible, place drums in a vertical position and use an appropriate pump for dispensing

the product. Place an absorbent mat or dike on top of the dispensing drum or container.

- If drums must be placed in a horizontal position, use self-closing dispensing valves.
- Place the drum or container in a dike or other containment.
- Place containment devices such as drip pans under drums and valves.
- Properly label receiving container.
- When dispensing flammable liquids, ground and bond all containers.
- Gravity flow valves are not recommended for outdoor usage.

S-2.7 Protection from Lead Exposure

Conduct all work involving lead coatings in accordance with BNSF's Lead Protection program.

S-2.8 Protection from Asbestos Exposure

Conduct all work involving asbestos in accordance with BNSF's Asbestos Control program.

S-2.8.1 Repair and Maintenance

When providing any repair or maintenance where Asbestos Containing Materials (ACM) or Potential Asbestos Containing Materials (PACM) will likely be disturbed, or where ACM or PACM will be removed, implement the Asbestos Control program.

S-2.8.2 Training

Before working with ACM or PACM, complete asbestos training. Complete additional asbestos training on an annual basis as long as you continue to work with ACM or PACM.

S-2.9 Protection from Manganese During Frog Repair

Whenever you are air arcing (gouging) on "frogs," you must wear respiratory protection to reduce potential exposure to metal fume, including manganese. Additionally, the Smoke Cannon local exhaust ventilation system must be used.

S-2.10 Protection from Silica-Containing Dust

Whenever you are exposed to visible airborne dust arising from ballast, taconite, or sand, wear approved respiratory protection.

S-2.11 Chemical Approval

Do not bring a chemical product onto BNSF property until the chemical is approved.

S-3.0 Electrical Safety

S-3.1 Requirements

S-3.1.1 General

- Use ground fault circuit interrupters (GFCIs) on electrical circuits when working in damp areas or outdoors.
- Do not use portable metal ladders for electrical work.
- Do not use electrical cords for hoisting or lowering.

S-3.1.2 Authorized Employees

Only authorized and trained employees are permitted to work on electrical apparatus or equipment. Wear a dielectric hard hat when working where you could contact power lines or high-voltage equipment.

S-3.1.3 Warning Signs

Place danger signs near exposed energized circuits.

S-3.1.4 Flashlights

Use only an approved flashlight with a nonmetallic case around electrical equipment.

S-3.1.5 Contacts

Do not use flagsticks or other objects to close or open contacts on engines under electrical load.

S-3.1.6 Lockout/Tagout

Follow approved lockout/tagout procedures:

- Assume all wires, conductors, and other electrical equipment are energized, unless known to be locked out.
- Do not alter safety features of fuses, circuit breakers, or other electrical equipment.
- Do not open secondary circuits of energized current transformers.

S-3.2 Pole Line and Electrical Equipment**S-3.2.1 Authorized Employees**

Only authorized employees are permitted to climb poles and replace electric fuses on pole lines or transformers.

S-3.2.2 Voltage Rated Protective Gloves

When working on energized circuits of 50 volts (AC or DC) or more, wear voltage rated rubber gloves with leather protector gloves of the appropriate length over the rubber gloves. Rubber gloves shall not be worn without leather protectors. Gloves shall be tested by an accredited facility prior to first issue, and every 6 months thereafter. If the insulating equipment has been tested and not issued for service, it may not be placed into service unless it has been tested within the previous 12 months. Defective gloves shall be removed from service immediately.

S-3.2.3 Pole Safe for Climbing

Inspect and determine that the pole and crossarms are safe before climbing, standing, or working on them. If a visual inspection suggests that the pole or crossarms may not be safe to climb, take these additional precautions:

1. Conduct a sound test with a hammer by striking the pole near the ground line and up the pole as high as possible.
2. Test the pole with a pike pole or rope at right angles with the ground line, applying pressure as high up the pole as possible.
3. If tests conducted in (1) and (2) above do not assure the pole is safe to climb, remove 12 or more inches of the dirt around the pole base to check for hidden breaks in the pole.
4. If either of the above tests indicates the pole is unsafe and will not be replaced, reset or stub the pole before climbing it. If you must climb the pole before it can be reset or stubbed, make sure it is adequately guyed with pike poles or ropes or secured with an "A frame" or hydraulic boom.

S-3.2.4 Free of Obstructions for Climbing

Do not attach anything to utility poles that may interfere with climbing. Remove unused equipment from poles.

S-3.2.5 Climber Straps and Belts

When climbing poles, use required climbing and fall protection equipment.

S-3.2.6 Hand Line

Use a hand line to raise and lower tools and equipment from poles.

S-3.2.7 Fall Line

Do not loop the fall line of rope around your body when using block and tackle.

S-3.2.8 Precautions for Workers Below

If you are working on the ground, be alert to avoid being struck by objects that might fall from poles.

S-3.2.9 Stacking Material

Do not stack material within 3 feet of a utility pole.

S-3.3 Charging and Jumping Batteries**S-3.3.1 Precautions for Servicing Batteries**

Follow these precautions when servicing batteries:

- Do not smoke in battery-charging areas.
- Do not allow open flames, sparks, or electric arcs in battery-charging areas or around exposed batteries.
- Make sure charging area is adequately ventilated.
- When charging a battery, keep the vent caps in place to avoid electrolyte spray.
- Leave the battery compartment doors open when charging an engine battery from an external source.
- Wear face shield over splash goggles and other protective equipment as required by the job when filling or charging a battery.
- Do not permit battery electrolytes (acid) to contact eyes, skin, or clothing. Wash battery electrolytes from your eyes or skin with cold water immediately.
- Remove any leads from terminal posts when scrapping batteries.

S-3.3.2 Battery Flushing

Use insulated funnels for flushing batteries.

S-3.3.4 Metallic Objects

Keep tools, metal jewelry (including watches), and other metallic objects away from the top of uncovered batteries.

S-3.3.5 Jumping Batteries

Do not use a welding machine to jump-start a battery.

S-5.0 Fire Prevention, Response, and Hazards**S-5.1 General Requirements**

- Know and understand area emergency plans and special instructions related to fire protection.
- In case of smoke or fire, notify all individuals who may be affected, supervisors, and appropriate emergency responders.

- Keep exit aisles, emergency exits, and fire doors clear. Keep areas around buildings, structures, and equipment free of fire hazards.

S-5.2 Emergency Procedures

Fight a fire only if properly trained and equipped and if your personal judgment dictates you can do so safely.

S-5.2.1 Locomotive Fires

Stop the locomotive as soon as possible, and evacuate the crew if a fire occurs on a locomotive.

S-5.2.2 Right-of-Way Fires

If the fire could spread to a bridge or other structure, stop the train, and fight the fire only if properly trained and equipped and if your personal judgment dictates you can do so safely.

Do not drive through plumes of smoke or chemical vapors unless necessary to escape from a life-threatening situation.

S-5.3 Fire Extinguishers and Protection Devices

S-5.3.1 Defective Fire Extinguishers

Report any out-of-date, discharged, or defective fire extinguishers to proper authority.

S-5.3.2 Access to Fire Extinguishers and Protection Devices

Maintain clear access to fire extinguishers, alarm boxes, and other fire protection devices. Do not park vehicles or place material within 25 feet of fire hydrants.

S-5.3.3 Use of Gasoline/Oil-Burning Devices

Have an approved fire extinguisher readily available where the use of gasoline or an oil-burning device is authorized.

S-5.3.4 Open Flames

Never leave open flames unattended.

S-5.4 Starting Fires

Do not use gasoline, kerosene, or other highly flammable liquids to start or intensify a fire.

S-5.5 Fueling Vehicles, Machinery, and Equipment

While fueling vehicles, machinery, power tools, and other equipment:

- Stop engines (diesel locomotives excluded).
- Do not smoke.
- Avoid open flames.
- Do not leave fueling hose unattended when fueling.

Fuel gasoline-powered tools before use. If refueling is necessary during use, be careful to avoid spills and allow the engine to cool before refueling, since hot engine parts may ignite fuel.

While fueling, make sure the fuel container spout or hose nozzle touches the side of the tank opening to prevent static electricity discharge. Use only approved containers to transport fuel.

S-5.6 Electrical Circuits

If you are not experienced in handling energized electrical circuits, do not attempt to extinguish fires on power line poles or directly connected equipment.

Never use water to extinguish fires on energized power line poles or electric equipment.

S-5.7 Hazardous Material Storage and Dispensing

Store chemicals according to group and segregate each group from one another. Groups are defined as flammables and combustibles, oxidizers, caustics (bases), and acids.

S-5.7.1 Storing Chemicals

When it is not possible to segregate groups of chemicals by storing them in appropriate storage cabinets, separate groups by a minimum of 20 feet.

To separate chemicals for safe storage, store up to 25 gallons of flammables (flash point < 73 degrees F) and up to 120 gallons of flammables or combustibles (flash point 73 degrees F - 200 degrees F) at least 20 feet away from other groups, or separated from other groups with a properly rated fire-resistant partition extending 18 inches above and beyond the flammables.

S-5.7.2 Grounding

Use grounding and bonding when dispensing or transferring flammable liquids.

S-5.8 Use and Handling of Liquefied Petroleum Gas (LPG)

S-5.8.1 Testing

Use only LPG tanks that are tested and stenciled as required by DOT regulations.

S-5.8.2 Avoiding Extreme Heat

Keep units powered by LPG away from extreme heat sources, such as ovens or furnaces.

S-5.8.3 Handling Leaks

Test for leaks with soapy water. Do not use an open flame near the leak.

If a tank containing LPG is leaking, notify your supervisor and stay upwind of the tank. LPG is heavier than air and will collect in low areas, sometimes far away from the leak source.

S-5.8.4 Refueling LPG Tanks

Refuel LPG tanks outdoors:

- At least 50 feet from buildings.
- At least 15 feet from storage tanks at the end farthest from the relief valve.

Change portable tanks outdoors, where possible, and at least 50 feet from any open flame except on outfit cars with kitchen facilities. When placing LPG tanks on motor vehicles, first stop the motor.

S-5.8.5 Closing Valves

At the end of the day's operation, close valves on tanks of LPG-powered equipment to prevent leaks and potential explosions.

S-5.9 Refrigeration Systems

S-5.9.1 Qualified Employees

Only qualified employees may work on refrigeration systems.

S-6.0 Gas Welding, Cutting, Heating, and Arc Welding

S-6.1 Area Protection

Clear all combustible material or rubbish 35 feet away from the area where welding or cutting will be performed. Where relocation is impractical, combustibles shall be protected with flameproof covers or curtains.

S-6.1.1 Protecting Wooden Structures

Use metal or a piece of wet flame-retardant material, or wet down the structure thoroughly when welding or cutting against or near wooden structures.

Use a fireproof covering adequate to protect the floor from sparks or hot metal when welding or cutting in a building with wooden floors.

Do not use wooden horses or boards to support welding or cutting work.

S-6.1.2 Protecting Concrete

Do not lay an object or material to be heated, cut, or welded on concrete.

Use protective material over concrete to prevent slag from falling on concrete when cutting metal with oxy/fuel gas.

S-6.2 Electrical Welding

S-6.2.1 General Requirements

- Do not stand in water or damp places while welding, except when wearing waterproof, insulated footwear.
- Set up a suitable screen marked “Do Not Watch the Arc” at welding sites to shield those not engaged in the welding operation.
- Do not watch the arc if you are working near a welding process, but not welding. If your work does not permit proper screening, wear approved welding goggles or glasses.
- Use a wire brush to remove slag from material being welded. Do not use your hand, even if gloved.

S-6.2.2 Welding Machines

For welding machines:

- Ground the frame or case of a welding machine (excluding engine drive machines) under the conditions and according to the methods prescribed in the National Electric Code for fixed or portable equipment.
- Thoroughly dry and test wet machines before using them.
- Do not change the polarity switch setting on a welding machine while the machine is operating under a welding current load.

S-6.2.3 Welding Ground Connections

When welding ground connections:

- Secure the ground clamp as close as possible to the work before starting electric weld.
- Do not connect the ground cable to any type of piping.
- Do not use chains, wire rope, cranes, hoists, or elevators to carry welding current.
- Do not make a welding ground connection in such a way that welding current will pass through any type of machine bearing.

S-6.2.4 **Welding Cables**

For welding cables:

- Use insulated locking connections when welding cable extensions are required.
- Repair deep cuts or cracks in welding cable casing promptly.
- Keep welding cables dry and free from grease and oil where practical.
- Uncoil and spread out coiled welding cables before use to avoid overheating and damage to the insulation.
- Do not use welding cables with repair splices within 10 feet of the electrode holder.
- Store electric welding cable in a dry, cool location, away from direct sunlight, when not in use. Clean the cable before storing, and coil it loosely with no sharp kinks or bends.

S-6.2.5 **Electrode Holders**

For electrode holders:

- Use only an approved electrode holder with insulated jaws.
- Keep electrode holders clean to prevent arcing.
- Do not cool electrode holders in water.

S-6.2.6 **Electrodes**

For electrodes:

- Remove metal and carbon electrodes from electrode holders when not in use.
- Retract or cut off the wire electrodes in semiautomatic holders, and remove the electrode holder from the power connection lug when not in use.
- Do not tap an electrode or strike an arc against a compressed gas cylinder.
- Dispose of used electrodes properly.

S-6.3 **Fire Fighting Equipment**

Have a fire extinguisher readily available when welding or cutting inside or immediately adjacent to a building.

Have a fire extinguisher, water, sand, or dirt readily available when welding or cutting on track or along the right-of-way.

S-6.4 **Welding or Cutting in Confined Space**

Test all equipment for leaks and adjust regulators before entering a confined space. Purge the accumulated mixture in the hoses by opening the torch valve for about ten seconds.

When performing hot work, comply with the practices and precautions outlined in the BNSF Confined Space Program.

Remove all welding equipment from the confined space if work is interrupted.

S-6.5 **Restrictions for Making Welding Equipment Repairs**

S-6.5.1 **Torches, Regulators, or Other Welding Apparatus**

Do not tamper with or attempt to make field repairs to gas cylinders, welding torches, regulators, or other welding apparatus.

Exception: You may tighten packing gland nuts on leaking torches.

S-6.5.2 Hooks and Chains

Do not weld, cut, or heat:

- Heat-treated hooks.
- or
- Steel alloy chains and associated rings, links and couplings.

S-6.5.3 Flammable Containers

Do not weld, heat, cut or rivet tanks, tank cars, locomotive fuel tanks, barrels, pipes or similar containers that have held gasoline, oil or other flammable or explosive material until the containers have been thoroughly purged.

Exception: When under authorized supervision, repair or modify diesel or lube oil pipelines, storage tanks, dispensing facilities or fuel tanks without purging. Follow prescribed procedures.

S-6.5.4 Protection from Chlorinated Solvents

Do not weld, cut, burn or braze metal cleaned with chlorinated solvents until all surfaces, both inside and out, are clear of the solvent and solvent vapor.

S-6.6 Oxygen and Fuel Gas**S-6.6.1 General Requirements**

- Prior to use, operator must inspect all cylinders, hoses, fittings, regulators and torches.
- Follow proper oxy-fuel gas equipment assembly, leak testing, torch lighting and shut-down procedures as outlined in the Department Safety Processes and/or posted instructions.
- To prevent a possible explosion, do not allow oil or grease to come into contact with oxygen or any equipment through which oxygen passes.
- Do not use oxygen to dust off clothing or work areas.
- Do not allow a jet of oxygen to strike an oily surface or greasy clothes, or to enter a fuel oil or any other storage tank.
- Use a layer of clean sand, a metal plate, or other suitable material to protect oily or greasy floors or the ground from slag.
- Do not allow the operating hose pressure for acetylene to exceed 15 psi.
- Do not pass a lighted torch to another employee.
- Use a wire brush to remove slag from material being welded or cut. Do not use your hand, even if gloved.

S-6.7 Welding Hose and Fittings**S-6.7.1 General Information**

- Date-tag new and employee-assembled hoses when placed in service. Place the date tag at the regulator end of the hose.
- A minimum of 6 inches of hose should be removed from the torch end annually, or more frequently whenever damage or wear indicates that replacement is necessary.
- Do not place a welding hose that is in use over any part of your body.
- Do not use a hose with more than one splice per 50-foot section.
- Select fittings with adequate inside diameter to avoid flow restrictions.

S-6.7.2 Welding Hoses

Use only grade "T," 3/8-inch twin hoses for gas welding, cutting, and heating operations.

Note: Roadway Equipment mechanics may use 1/4-inch oxygen/acetylene hoses.

S-6.7.3 Welding Hose Fittings

For welding hose fittings:

- Use a crimped clamp to permanently attach hose fittings to welding hose. Do not use bolted hose clamps.
- Use only fittings furnished by a qualified supplier in compliance with OSHA regulations.
- Do not use dropped or damaged fittings.
- Each time a fitting is installed, an approved leak detection liquid must be used to test for leaks at fittings.

The following requirements must be met when quick disconnects are used in oxygen-fuel gas processes:

- Purchase only approved, UL-listed quick disconnects.
- Employees must receive training on quick disconnects prior to their use and demonstrate safe use of the equipment.
- Quick disconnect flow rating must meet or exceed the SCFH requirements for the attached equipment.
- Do not install quick disconnect fittings in systems where splices, couplers or additional fittings are used to lengthen or repair damaged hose assemblies.
- Do not use quick disconnects with check valves when a check valve is an integral part of the flash back arrestor (additional check valve will reduce flow rates).
- Flash back arrestor must still be used. Quick disconnects do not replace the need for a flash back arrestor. Do not install the quick disconnect directly to the flash back arrestor.
- Prior to initial use, and before attaching the torch to the assembly (fittings), use a direct reading instrument to verify an adequate flow rate will be reaching the torch.

Exception: Quick disconnects shall not be used in System Engineering welding applications.

S-6.7.4 Welding Hose Fires

If a fire develops in a hose, remove the torch, regulator, and hose from service.

S-6.8 Installing Reverse Flow Check Valves and Flashback Arrestors**S-6.8.1 Portable Systems**

On portable systems, install combination reverse flow check valves/flashback arrestors at the torch on both the fuel gas and oxygen lines.

S-6.8.2 Bulk Fuel or Manifold Fuel Gas Systems

On bulk fuel or manifold fuel gas systems, install pipeline protective device(s) on the fuel gas line that performs the following three functions:

1. Prevents backflow of oxygen into the fuel gas supply.
2. Prevents flashback into the fuel gas supply.
3. Provides pressure relief through the use of a pressure relief valve, rupture disk, or similar device.

Install a pressure relief device on the supply line from the oxygen source. All these devices must precede the service outlets.

Install reverse flow check valves at each station outlet on the fuel gas and oxygen lines. Install combination reverse flow check valves/flashback arrestors at the torch on both the fuel gas and oxygen lines.

By placing unnecessary check valves in the systems, the safety of the employee may be adversely affected due to the restriction in flow rates to the torch. A direct reading in-line instrument should be used to insure adequate flow rate is reaching the torch.

S-6.9 Oxy/Acetylene Torch

For oxy/acetylene torches:

- Use only approved flint strikers to light a welding torch.
- Do not lay a lighted torch down, pass it from one person to another, or hold it when climbing.
- Do not leave a cutting or welding torch in a tank, tank car, fuel compartment, or other similar work location when not in use.
- Do not test the flow of the oxygen or fuel gas by placing the torch tip against your face or body, or by smelling it.

S-7.0 Hand Tools

S-7.1 Hand Tool Inspection

Inspect tools for defects before use. Do not use tools with:

- Cracks.
 - Mushroomed striking surfaces.
 - Burrs.
 - Slivers.
 - Loose/missing wedges.
 - Worn ratchets/teeth.
 - Loose/cracked handles.
- or
- Other defects.

S-7.2 Redressing of Striking or Struck Hand Tools

For redressing of hand tools:

Prior to redressing, visually inspect the tool for the following:

- a. A manufacturer's brand.
- b. A letter "B" to identify grade B steel.

If either brand or letter is not found, discard the tool. Also discard the tool if it is mushroomed, spalled or chipped.

Redressing of grade B tools is allowed. Redressing is allowed on non-grade B steel hand punches and chisels manufactured by Snap-On, Proto, S & K, Ajax, Mayhew and Williams only.

Redress tools frequently to reduce the amount of flow on the struck end of the tool.

Redress tool with a hand file only, unless you are qualified to redress tools with a properly equipped bench grinder. "Qualified" means approved by a certified instructor upon completion of BNSF "Redressing of Hand Tools" course.

S-7.3 Precautions During Use

S-7.3.1 Swinging Tools

Warn others to keep clear when using swinging tools (such as a spike maul, sledge, hook-a-roon, ax, pick, brush hook, hand adze, etc.). Stand so that the point is away from your body if the tool unexpectedly flies to the side.

Before using swinging tools, remove oil, grease, and dirt from hands and handles.

S-7.3.2 Jacks

Use cushioning material of appropriate construction and thickness between jack and equipment to prevent slippage. Do not allow metal-to-metal contact.

Exceptions: Track jacks and roadway equipment jack stands.

S-7.3.3 Tools With Sharp Edges/Blades

- Pocket knives are not to be used to perform work tasks.
- When using hand tools that have sharp edges/blades, direct cutting edges away from the body, including the hands.
- When using hand tools that have sharp edges/blades, wear cut-resistant gloves.
- Where utility knives are determined as the tool of choice for a task, use utility knives that have self-retracting blades.

S-7.4 Pry/Lining Bars

Never straddle, sit, or stand on a claw bar, lining bar, anchor wrench, or similar tool.

S-7.6 File Cleaning and Use

Use files with handles. Clean the file with a brush.

S-7.7 Correct Tool Use

Use tools only for what they are designed to do. If unsure about a tool's correct use, ask your supervisor.

S-7.8 Track Tools

S-7.8.1 Spike Maul

Do not use a spike maul to remove or replace anchors or drive wedges, or for other purposes.

When using a spike maul:

1. Inspect the plate area and brush away any loose material that might fly on impact.
2. Set the spike, holding it between the thumb and forefinger, palm up.
3. Firmly grip the spike maul and establish footing. Keep eyes on the spike head and spike as follows:
 - a. Swing the maul in a smooth arc at an even rhythm.
 - b. Strike with light blows until the spike is firmly set.

S-7.8.2 Claw Bar

When using a claw bar:

1. Place the claw securely under the spike head.
2. Use a spike lifter if you cannot get the claw under the spike head. A claw bar is not a struck tool.
3. Stand beside the claw bar and position your hands to keep them from striking the opposite rail or another object if the spike head breaks or releases suddenly; use firm footing.
4. Work the spike up with short, firm thrusts and watch for throat-cut or loose spikes.
5. Use a piece of wood, spike, or other suitable object under the claw bar heel for additional leverage.
6. Be sure the end of the claw bar is well underneath to prevent slipping when using it to nip ties, tie plates, or rail.

S-7.8.3 Sledge Hammer (Mundy)

When using a sledge hammer (Mundy):

1. To strike a chisel or other approved “hammer struck” tool, make sure the sledge’s swing arc is at a right angle to the person holding the “struck” tool.
2. To remove rail anchors with a sledge, place your foot on the opposite side of the anchor being struck to prevent it from flying out.
3. Do not walk in front of a person applying or removing rail anchors.

When using a sledgehammer (Mundy) to install Pandrol clips:

1. Tighten the tie plate against the base of the rail using a nipping fork. Do not attempt to nip a tie by driving on a Pandrol clip.
2. Stand facing the rail and insert the Pandrol clip into the right-hand side of the plate shoulder (wood ties) or right-handed side of a cast shoulder (steel or concrete ties).
3. Gently tap the clip into position with the sledgehammer so that the clip is firmly set. Pandrol clips do not require excessive force to install, and no attempt should be made to force the clip.
4. If the clip is hard to set or wants to bounce out of the hole, wet the end of the clip with water, stick it into the dirt, and then reinstall it in the hole. The dirt or grit provides extra grip to more easily set the clip.
5. Tap the clip a few times with the sledgehammer to firmly set it. Do not drive the clip tight against the plate or shoulder. The clip is fully installed when the clip toe (flat end of the clip) is positioned opposite the right-hand side of the plate/shoulder when the person installing the clip is looking down.

When using a sledgehammer (Mundy) to remove Pandrol clips:

WARNING: The Pandrol clip is under pressure and when knocked off, will fly if not restrained.

1. Stand facing the rail and restrain the clip with your foot while at the same time lightly hitting the clip with a sledgehammer.
2. Do not walk in front of a person installing or removing Pandrol clips.

S-7.8.4 Track Jack

When using track jacks:

1. Set track jacks outside the rail, if possible.

2. Place the jack base on an even and firm surface so the jack will not overturn under the load.
3. Place the lifting toe fully under the load.
4. Do not strike the track jack with tools to force it under the load. Instead, dig the jack seat deep and wide enough for easy insertion.
5. Use only a lining bar or approved jack handle to operate the track jack as follows:
 - a. Stand beside the bar and pump it in an even rhythm, making sure the ratchet is fully engaged.
 - b. Never straddle, sit, or stand on the bar.
 - c. Keep clear of pinch points.
6. Remove the bar when not operating the track jack.
7. Make sure that all employees, tools, and materials are in the clear before tripping or lowering a track jack supporting a load.
8. Do not set track jacks for tripping until you are ready to release the load.
9. Use track jacks with metal and heated material as follows:
 - a. When using a track jack against metal, insert cushioning material (wood or rubber) between the jack head and the load. The material must be at least 1/2 inch thick, but no more than 1 inch thick. However, use special rubber pads with stationary jacks.
 - b. When placing a track jack directly on a heated area, secure the jack with a chain or other means if you cannot place flameproof material between the ram and the work.
10. Where possible, place track jacks and extensions perpendicular to the material being straightened. Secure jacks where possible to prevent slippage, and stand clear of jacking areas.

Exception: Track jacks used under the rail base are exempt from step 10.

S-7.8.5 Lining Bar

When using a lining bar:

1. To nip ties or line track, place the bar securely in the ballast to prevent the bar from slipping out when force is applied.
2. Apply force smoothly and stand firmly to maintain balance if the bar slips.
3. Use a tie plate or piece of wood as a fulcrum to multiply your force on the tie.
4. Do not carry the lining bar on your shoulder.

S-7.8.6 Wrench

When using a wrench:

1. Select the proper size wrench for the job.
2. Pull on the wrench whenever possible. If necessary to push, do so with an open palm.
3. In close spaces, follow these precautions:
 - a. Position hands to avoid injury if the wrench slips.
 - b. Limit your stroke to about a 45-degree angle on either side of your body when tightening or loosening a track bolt.
 - c. Brace yourself to avoid falling if the wrench slips or the bolt breaks.
 - d. Do not straddle the rail.

S-7.8.7 One-Man Tie Tongs

One-man tie tongs are to be used for the spacing, alignment, sliding or positioning of track ties, which are not fastened to or bound by rail or other material.

Exception: Two personnel, each equipped with a set of one-man tie tongs, may use one-man tie tongs for the spacing, alignment, sliding or positioning of switch ties. This would only be done, however, when mechanical lifting means are not available, or when regarding a specific job, it is determined through risk assessment that the use of one-man tie tongs is the preferred method for the spacing, alignment, sliding or positioning of switch ties.

When inspecting one-man tie tongs:

1. Verify that points are sharp, and arms are tight.
2. Inspect tongs for flaws or cracks in the arms and handles, and for bent or deformed arms, that would allow handles to close and pinch fingers.

When using one-man tie tongs:

1. Never use one-man tie tongs to lift any length of tie completely off the ground.
2. Set tongs firmly, assuring that the tie tong points are embedded securely in the tie.
3. Stagger your footing with one foot behind you for balance while pulling a tie, in order to avoid slipping should the tongs slip.
4. Apply force in a steady manner, without jerking.
5. When maneuvering a tie with an employee at each end, move in a controlled manner, with one person giving commands.

S-7.8.8 Hand Adze

When using a hand adze:

1. Keep the cutting edge sharp.
2. Remove nails, dirt, stones, and other debris from the item to be adzed.
3. Straddle the item, when possible, then work the adz between your legs, maintaining good control to prevent glancing blows.
4. Cut with the grain. Notch and chip out pieces if removing a large amount.
5. Keep the adz free of chips. Be especially careful of knots and other faults in the wood and when cutting cross-grained lumber.
6. Avoid striking nails, spikes, or other metal objects.

S-7.8.9 Track Chisel

When using a track chisel:

1. Surround the track chisel striking surface with a collar made of rubber hose to decrease flying metal fragments.
2. Use a sledge hammer to strike the chisel.

S-7.8.10 Rail Expander (Ratchet Type)

When using a rail expander (ratchet type):

1. Secure bolts through the bolt holes by placing the spacer bar on each rail end and tightening the nuts after spacing the jack heads.
2. Insert a lining bar in the handle socket of the ratchet. Work the ratchet one direction to pull the rails together and the other direction to separate them.

3. Using no more than two people, operate the expander by pulling down on the handle to arm's length until the top latch engages. Follow these precautions:
 - a. Make sure all body parts are clear of the jack handle's swing arc.
 - b. Maintain a braced position to prevent falling.
 - c. Make sure no one is standing on the opposite side of the rail expander in case bolts break and fly out.
4. Raise the handle to its uppermost position, making sure that the bottom latch engages.
5. Repeat step 4 as needed.

S-7.8.11 Rail Expander (Hydraulic)

When using a hydraulic rail expander:

1. Make sure no one is near the stress rods when the hydraulic rail puller-expander is in use.
2. Do not place the puller-expander on the rail until the rail is fully protected.
3. Handle puller-expander components by lifting and walking carefully, using sure footing.
4. Clean wedge teeth before using the puller-expander.
5. Clean rail surfaces in wedge areas. Do not place wedges on a raised rail brand; relocate the casting.
6. Use your hands to turn knurled collars up to the shoulder to assemble hose coupling ends. Do not use a wrench.
7. To assemble the device on the rail:
 - a. Pull the castings or tighten the nuts on the puller rods until snug.
 - b. Place the wedges in the casting slots with the teeth against the rail.
 - c. Make sure the casting is level.
 - d. Tap each wedge equally until each begins to "bite."
 - e. Using one or more blows, drive each wedge into the casting equally.
 - f. Strike wedges that do not grip until the loading starts as shown by the gauge (or the hose motion if the gauge is not working).
 - g. Use shims on top of a small rail to lift and level the casting.
8. After the pressure begins to build:
 - a. Do not strike the equipment.
 - b. Release pressure and reset the device if a wedge fails to grip.
 - c. Have the pump operator clear the area of everyone along the rail in line with the device and within 2 feet of the device.
9. After the required pressure is reached, close all valves and continue working in and around the device, except:
 - a. Keep all body parts away from between the rails the device is holding apart.
 - b. Make sure the area in line with and beyond the ends of the device is clear for at least 20 feet in both directions.
10. Release pressure slowly, keeping everyone clear of the device until the release is complete.
11. When the pressure is off, disengage the casting from the wedges by striking the castings in the opposite direction they were pulled or pushed. Make sure everyone is clear of the strike.

S-7.8.12 Rail Fork or Rail Turner

When using a rail fork or rail turner:

1. Make sure the rail is free to move and is not secured, wedged in, or covered with dirt or ballast before turning it.
2. Take position at the end of the rail to be rolled and warn personnel that rail will be rolled by announcing "Rolling Rail."
3. If equipment, men, tools and material are clear of the rail, then brace yourself, firmly hold onto the end of the tool, tilt the rail, and hold it in position. Apply force steadily and keep clear of the rail in case the tool slips. Do not jerk the rail.
4. A second person pushes the rail off the plates by sliding a lining bar under the rail and lifting. Do not place a tool or bar in the bolt hole to turn the rail. Do not use a track wrench on the web to turn the rail.

S-7.8.13 Anchor Wrench

When using an anchor wrench:

1. Place the wrench on the anchor and snap the anchor in place with a firm downward thrust. Spread feet for good balance.
2. Position hands so they will not strike the opposite rail or another object if the wrench slips off the anchor.

S-7.8.14 Drift Pin

When using a drift pin:

1. Use a sledge hammer to strike the pin.
2. Surround the striking surface with a protective collar or coating.
3. Hit the pin lightly until it is securely in the hole.
4. Before driving a drift pin, make sure no one is in line with the pin in case it flies out.

S-7.8.15 Pandpuller Tool

When using a pandpuller tool to install Pandrol clips:

1. Tighten the tie plate against the base of the rail using a nipping fork. Do not attempt to nip a tie by driving on a Pandrol clip.
2. Stand parallel with the rail, with both hands on the puller handle and with feet apart and braced to prevent a fall should the tool slip.
3. Insert a Pandrol clip into the right-hand side of the plate/shoulder and with the puller hook hooked through the clip loop, position the heel end of the puller against the left-hand side of the plate/shoulder. Then pull on the clip with short, firm pulls on the tool.
4. Do not attempt to force the clip; excessive force is not required for installation. When the person installing the clip is looking down at the rail, the clip is fully installed when the clip toe (flat end of the clip) is positioned opposite the right-hand side of the plate/shoulder.
5. The pandpuller is an installation tool only. Do not try to use it to remove Pandrol clips. A sledgehammer (Mundy) is used to remove Pandrol clips.
6. Do not walk in front of someone applying Pandrol clips.

S-7.8.16 Spike Lifter

Spike lifters must be equipped with:

- A deflector plate at the point-of-operation.
- A rubber chip guard or Rhino liner coating around the striking face.

S-8.0 Intermodal/Automotive Facility Safety

BNSF employees and contract employees where applicable are personally responsible for knowing and complying with the rules and regulations which apply to their own and related job functions; contractor employers are responsible for ensuring the same from their employees. If in doubt as to the meaning or application of any rule or instruction, individuals should request an explanation from their supervisor or manager.

Regional Directors, Hub Managers, Office Personnel, Gate Personnel, Coordinators, and Yard Checkers are subject to the Employee Safety Rules publication. Lift equipment operators, groundmen, hostlers, and maintenance/repair personnel are subject to the Mechanical Safety Rules and Policies publication. TY&E employees and contract switchers are subject to the TY&E Safety Rules. General Code of Operating Rules could apply to any work group, if applicable.

S-8.1 Core Intermodal/Automotive Facility Safety Rules

- Establish proper track protection before performing work.
- Vehicles must not STOP on, PARK on, or FOUL tracks, without proper protection.
- Do not drive or park on lift equipment lanes, under lift equipment, or impede lift equipment movement.
- Obey all posted safety signs, signals, and painted markings.
- All vehicles must turn on headlights and use turn signals.
- Never place any part of your body in a pinch point position (i.e. when removing IBC with container suspended, standing between containers, trailers, chassis, or area where hitch is to collapse), or walk under equipment being lifted.
- Maintain three-point contact when getting on and off equipment.

S-8.2 Track Protection

In addition to BNSF on track protection procedures used for work group protection the intermodal/automotive hub operations manual identifies procedures for BNSF intermodal/automotive employees and contractors. The intermodal/automotive ramp coordinator is responsible for ensuring that protection is provided for ramp personnel performing functions on or in the vicinity of intermodal/automotive tracks, for properly locking out any track(s) to be worked on, and for properly removing track protection, in accordance with the Intermodal/Automotive Hubs Operations Track Protect Section.

S-8.3 Vehicles Within Intermodal Facility

S-8.3.1 Vehicle Requirements

Required safety equipment on yard vehicles must be functioning and used when vehicle is operated on the facility. This includes strobes or oscillating lights, headlights, tail lights, and brake lights, turn indicators, and windshield wipers.

All personnel operating within an intermodal facility must comply with the following chassis deflector policy. Service Partners must not use private vehicles in place of company vehicles. All pick-up trucks, vans, step vans, and other specialized vehicles permanently assigned, or work on the facility daily (i.e. Trailer repair, Tire repair, Lift equipment repair, Crew haulers, Facility maintenance, etc.) must be equipped with chassis deflectors. Other vehicles will not be allowed on the Intermodal property at any time unless the driver of the vehicle is issued a "Facility Authorization Pass" which will identify the authorized vehicle. The "Facility Authorization Pass" must be visible through the front windshield of the vehicle whenever on the facility property. BNSF Hub Management must use careful consideration before an authorization pass is issued, and drivers must be properly trained in the Hub Safety rules. Vehicles can be limited to specific routes within the Hub, particularly when workers must drive a private vehicle to their workplace within the Hub property. Authorized vehicles, which are limited to a specific route within the Hub, cannot be used to drive to any other location within the facility.

S-8.3.2 Vehicle Operations

- Stop for flares and flashing lights at crossings.
- Yield to trains, yard equipment and pedestrians.
- Cross only at designated crossings.
- All unattended vehicles must place standard transmission in low gear or automatic transmission in park, with engine shut off.

S-8.4 Check Point Ingate / Outgate Procedures

All BNSF checkpoints will be designed as outlined below. The driver and inspector must comply with the following procedures:

- 1 Establish an area 35 feet from the inspection lane, and declare this area the safe clearance zone between trucks and inspection lane. A three feet wide area will be painted RED across each lane.
 Exceptions:
 South Seattle, Billings, Dilworth - (No safe zone required not manned)
 St. Paul, Spokane, Portland - (15 feet from the inspection lane)
 San Bernardino - (KISOK out-gate 15 feet from the inspection lane)
 Rancho East & West - (10 feet from the inspection lane)
 Los Angeles main yard, Lot 8, Lot 9, and Lot 11; Bell Lot;
 Commerce Lot - (30 feet from inspection lane)
 Fresno - (25 feet from inspection lane)
- 2 Stop signs will be posted at this area in each check lane and the ground stenciled with the word STOP (painted in WHITE) across the lane. Drivers will be required to turn truck engines off while at the Inspection stop signs or painted stop bars on pavement in the checkpoint lanes. Each facility should add "Turn Engine Off" signs to current stop bars or stop signs, effectively immediately.
- 3 Mounted on the pole below the stop sign will be a white sign with black lettering stating: "WAIT FOR SIGNAL TO MOVE FORWARD".
- 4 Cones with a height of 48 inches will be placed in the middle of each check lane and removed only by the inspector that signals a vehicle to pull forward. When the vehicle is stopped, the inspector will replace the cone back into the middle of the check lane. This procedure is repeated each time an inspection is to be performed.

Inspectors will not enter the inspection lane until the truck engine is turned off for the unit to be inspected, and the truck engine is turned off for the truck at the stop sign or stop bar in the first queuing position behind the inspection lane. The inspector will instruct drivers when they can re-start their tractors and proceed. The cone shall remain in the lane until the inspector removes it.

S-9.0 Ladders, Platforms, Scaffolds, and Aerial Baskets**S-9.1 Inspection**

Before using a ladder, scaffold, platform, or elevated board, inspect it to make sure it is securely placed and capable of supporting a load. Do not use cross-grained or knotty lumber in any part of the device.

Before using ladders, inspect them for:

- Broken, cracked, or missing steps, rungs, or cleats.
- Broken side rails.
- Other defects.

Never use a defective ladder. Tag and mark it for repair or replacement. Do not paint wooden ladders or splice side rails.

S-9.2 Storage

Store ladders (except vehicle-carried ladders) where they will not be exposed to the weather.

S-9.3 Stage Boards

When using stage boards not securely fastened to the supports, do not let them extend more than 6 inches beyond the last support. Use stage boards equipped with end stops or drop pins to keep them in place on the supports.

S-9.4 Safety Feet

Use only portable straight ladders equipped with grippers, cleats, or nonslip safety feet suitable to the surface on which the ladder is placed.

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S-9.5 Ladder and Scaffold Placement

Place a straight ladder so that the distance from the base of the ladder to the vertical plane of the support is approximately 1/4 the ladder length between the supports and ladder base.

When setting ladders or portable scaffolds:

- Extend the ladder side rails at least 3 feet above the surface you will be stepping onto.
- Place the legs on firm footing and secure them against movement.
- Do not lean legs against an unstable object.
- Do not place legs on boxes, barrels, or blocks for additional height.
- Secure the ladder or scaffold in position if it could move.
- Do not use ladders in a horizontal position as runways or scaffolds.
- Secure ladders used near a door, aisle, pathway, or roadway, or have a co-worker guard the ladder base. When using a ladder within the swing of a door, secure the door or have employee guard the ladder base.

S-9.6 Ladders for Electrical Work

Do not use metal ladders or scaffolds while working on energized electrical circuits. Use approved fiberglass or other type of approved nonconductive ladders.

S-9.7 Instructions for Climbing

When climbing:

- Always face ladders or scaffolding.
- Do not stand higher than the manufacturer's specifications dictate.
- Have only one person on a ladder at a time.
- Do not jump or slide from a ladder, scaffold, platform, or other elevated position.
- Do not move laterally from one ladder to another.
- Never overreach or attempt to "walk" a ladder.
- Keep the center of your body within the outside rails of the ladder.

S-9.7.1 Climbing with Tools or Materials

Do not climb ladders with tools or materials in your hands; use a hand line.

Position tools or materials on a scaffold or platform where they will not fall or be knocked off.

S-9.8 Performing Work

Do not work under a ladder.

S-9.9 Extension Ladders

Use only approved extension ladders, and use them as follows:

- Carefully raise them so that the top of the ladder safely overlaps the support by 3 feet minimum.
- Make sure guides and hooks are properly engaged.
- Do not splice short ladders together to make a longer one.

S-9.10 Step Ladders

Follow these instructions when using step ladders:

- Use only a fully open step ladder with spreaders properly set.
- Do not use step ladders taller than 10 feet unless another employee holds and steadies the ladder.

S-9.11 Construction Scaffolding

Use only scaffolds and suspended platforms constructed and maintained according to departmental instructions.

Do not stand on the handrails of any scaffold or platform to gain additional height.

S-9.11.1 Sectional Metal Scaffolds

Erect sectional metal scaffolding according to the manufacturer's instructions and adequately brace. Maintain outriggers in good working condition and protect from damage.

S-9.12 Non-Powered Mobile Scaffolding

When using non-powered mobile scaffolding:

- Do not ride rolling scaffolds.
- Secure or remove all material and equipment from the platform before moving the scaffold.
- Apply caster or wheel brakes at all times when a scaffold is stationary.
- Do not try to move the scaffold without help.
- Watch out for holes in the floor and for overhead obstructions when moving the scaffold.
- Follow the manufacturer's guidelines for adjusting screws.

S-9.13 Aerial Work Platforms

When working from aerial platforms, including scissor lifts and boom-mounted baskets or buckets:

- Check pathway and overhead for obstructions before moving the platform.
- Always stand firmly on the floor and do not sit or climb on the edge of the platform or use planks, ladders or other objects to increase reach.
- Do not exceed the manufacturer's rated safe load.
- Maintain a safe distance from high voltage power sources.
- Do not modify the equipment without prior written approval from the manufacturer.

S-9.13.1 Scissor Lifts

When working from a scissor lift:

- Platform must be equipped with a guardrail and toeboards. Guardrails must be completely installed, in good condition and with gates fastened.
- Never climb or stand on toeboards or guardrails. Never hang outside the guardrails.
- Personnel using fall protection or restraint equipment must attend appropriate training.

When working from elevated platforms or scissor lifts, use only elevated platforms or scissor lifts equipped with a guardrail and toeboards.

S-9.13.2 Boom-Mounted Baskets or Buckets

When working from a boom-mounted basket or bucket:

- A harness equipped with a lanyard that restrains personnel within the platform must be worn to prevent personnel from being ejected out of the platform.
- The lanyard must be secured to an anchor point designed and designated by the manufacturer for this use.
- Do not attach the lanyard to a pole, piece of equipment, or any other structure.
- Do not allow the platform to rest on or against any structure or equipment while working from the platform, unless this practice is permitted based on the manufacturer's operating manual for the unit.
- Do not climb in or out of an elevated basket or bucket, unless it is equipped with a door or a gate and the lift is positioned to provide safe access.
- On equipment designed primarily as personnel carriers, use only equipment with upper and lower platform controls where the lower controls can override the upper controls.
- Personnel using fall arrest or restraint equipment must attend appropriate training.

S-11.0 Material Handling

S-11.1 Material Storage

S-11.1.1 Stacking Materials

Store material neatly, interlocking it where possible to prevent shifting or falling. Do not store heavy materials on top of fragile or crushable materials. Materials should be stored only on shelving or racks with sufficient rated capacity.

S-11.1.2 Overhead Clearance

Maintain a minimum of 18 inches of clearance below sprinkler heads so they can operate effectively in the event of a fire.

S-11.1.3 Storing Combustibles

Keep combustible materials away from a source of ignition.

S-11.1.4 Storage Racks

Secure material storage racks to the floor or a wall where is a height-to-depth ratio greater than 3-to-1. If racks can be fastened together to achieve a 3-to-1 ratio, no securement is required. Inspect pallet racks and shelving on a regular basis.

S-11.2 Hand Trucks

When possible, push a hand truck rather than pulling it. However, if assisting someone, push the hand truck from the rear, not from the side, and stand where you can see ahead clearly.

When pulling a hand truck, do not jerk it to get over an obstruction; pull with a steady force. Do not walk backward while pushing or pulling a hand truck or wagon. Do not ride on hand trucks or wagons.

S-11.3 Pallet Use and Stacking

When stacking loaded pallets:

- Determine how much the material and packaging can support.
- Stack pallets only as high as the material on the bottom of the stack can support.
- Inspect pallets for damage and stability.

The forklift operator must warn others working near the stacking operations.

S-11.4 Loading and Unloading Cars, Trucks and Trailers

When loading and unloading cars, trucks and trailers:

- Chock wheels of cars, trucks, and trailers spotted at doors and platforms before loading or unloading.
- Use truck jacks at the front of trailers, in addition to chocking, where trailers are not attached to tractors.

- Make sure all transfer equipment (gangplanks, transfer plates, etc.) is properly secured before using it.
- Do not place gangplanks, transfer plates, or skids in doorways of cars coupled to a locomotive unless there is protection against movement.
- Do not load and unload a trailer truck while the tractor is being coupled or uncoupled.
- Trucks and trailers secured by an automatic locking bar hooked to the ICC bar do not require chocks.

S-11.5 Sharp Edges

Eliminate sharp or ragged edges and nails on drums, cans, and kegs when using them as shipping containers.

S-11.5.1 Banding Material

Carefully handle banding material and tools as follows:

- Wear cut-resistant or leather gloves to protect your hands from sharp edges of banding.
- Use only band cutters to cut steel bands.
- Place scrap banding in suitable containers for disposal, or move it to a designated area.

S-11.5.2 Sharp Edges/Slivers – Metal

- As a part of risk assessment activities, identify and address any potential contact with sharp metal edges or burrs when working with metal.
- Do not handle sharp metal pieces or slivers with a bare or gloved hand. Use an appropriate tool; e.g., pliers, vice grips.
- Do not slide a bare or gloved hand along rail or metal components during inspection activities.
- After removing slivers from rail, or when handling other metal scraps, be sure to appropriately dispose of the material. Do not leave such materials on the track structure, in right-of-way areas, or in shop areas, where others may be exposed to injury.

S-11.5.3 Sharp Edges/Nails – Wood

- As a part of risk assessment activities, identify and address any potential contact with splinters, rough edges, or nails when working with wood products.
- Do not slide a bare or gloved hand along wood edges during inspection activities.
- Verify that nails are removed or safely bent over on scrap lumber temporarily maintained at job-sites.

S-11.7 Hazardous Material Handling

S-11.7.1 Complying with Regulations

Handle all hazardous materials, wastes and substances as defined by the DOT and EPA, according to federal, state and local regulations and company policy. An authorized employee must supervise the task.

S-11.7.2 Loading or Unloading Tank Cars

When loading or unloading tank cars:

- Make sure cars are protected against movement when loading or unloading material.
- Set hand brake and chock wheels before loading or unloading.
- All tank cars must have a railing around the platforms where workers stand.
- Make sure the outlet valve is shut off.
- If material is flammable, use non-sparking wrenches. Do not smoke or generate sparks or open flames.
- Properly ground tank cars containing gasoline or other flammables.

S-11.7.3 Handling Fluorescent/Neon Tubes

Handle fluorescent or neon tubes carefully. If they break, do not inhale the dust or vapor. Dispose of in accordance with BNSF policy.

S-11.7.4 Disposing of Spray Containers

Carefully store and dispose of pressure spray containers. Do not expose them to excessive heat. Dispose of them per state law.

S-11.8 Forklifts

S-11.8.1 Parking Requirements

Do not park a forklift on a ramp or incline.

When parking a forklift:

- Park the forklift clear of obstructions.
- Set the hand brake.
- Lower the forks.

S-11.8.2 Dismounting Forklift—Attended and Unattended Forklifts

When dismounting forklift and still in attendance of the equipment (within 25 ft. and forklift in sight):

- Bring the forklift to a complete stop.
- Place directional controls in neutral.
- Apply the parking brake, and if equipped with automatic brake, place in Park.
- Lower forks to the ground. (Exception: when task requires elevated load)
- Use three-point contact when climbing from forklift.
- Do not allow yourself or others to be directly in front or behind forklift, unless engine is shut off.

When leaving a forklift unattended:

- Lower forks to the ground.
- Shut off the engine.
- Remove the key (where security is a problem).
- Do not allow the forklift to foul tracks.
- Apply the parking brake, and if equipped with automatic brake, place in Park.

S-11.8.3 Passengers

Passengers are not allowed on forklifts unless the truck is equipped with passenger seat and seat belt.

S-11.8.4 Tool Storage

Do not place tools, material, or other objects on a forklift that may interfere with its operation.

S-11.8.5 Seat Belts

Use seat belts where provided.

S-11.9 Forklift Operation

S-11.9.1 Speed and Movement Restrictions

When operating a forklift:

- Reduce speed and sound the horn when rounding corners or passing by or through doorways or congested areas.
- Watch for and avoid contact with overhead and side obstructions and overhead wires.
- Make sure the way is clear before moving in any direction.

- Bring a forklift to a complete stop before reversing direction.
- Look in both directions before crossing tracks. Where possible, cross diagonally.
- Operate the forklift backwards if the load obstructs your view.

S-11.9.2 Getting On or Off

Do not get on or off a moving forklift. Maintain a three-point contact when getting on and off forklifts.

S-11.9.3 Operation On Ramps

Back a loaded forklift slowly down ramps or inclines.

S-11.9.4 Gates/Doors

Do not use a forklift to open or close doors or gates on buildings.

S-11.9.5 Load Limits

Do not pick up loads that exceed the forklift's marked load capacity. Do not move the machine until the load is secured.

S-11.9.6 Unloaded Fork Position

When moving an unloaded forklift, keep the forks 18 inches or less from the floor or ground to avoid obstructions.

S-11.9.7 Personnel Baskets

When using personnel baskets:

- Use a forklift only as an elevator for employees (for example, to service light fixtures) when it is equipped with an approved work platform that meets OSHA standards.
- Always secure the approved basket to the mast guard when using forklift to lift personnel.
- Ensure that passengers stand only on the floor of the basket.
- Fork lift operator must stay at controls while basket is occupied.

S-11.9.8 Inspections

- Always do a safety inspection of a forklift before operating it the first time.
- Complete safety inspection records as required.
- Promptly report all defects for needed repairs to the proper authority.
- When defects are found, which affect the safe operation of a forklift, the forklift is to be red tagged, the key is to be removed and the defect immediately reported to the proper authority.

S-11.9.9 Fueling a Forklift

- Turn off the engine.
- See Rule S-5.8 for requirements regarding LPG tanks.

S-12.0 Motor Vehicles and Trailers

S-12.1 Operation of Motor Vehicles

S-12.1.1 General Requirements

Every company vehicle driver must:

- Know and obey local, state, and federal laws and regulations for operating vehicles, both on and off company property.
- Comply with all rules and procedures listed in the BNSF Company Vehicle Policy and Procedure Manual for operating company or temporary replacement vehicles.
- Possess and carry a valid current driver's license.
- Complete a vehicle log and inspection form, if applicable.
- Ensure that necessary emergency equipment, tools, and a fire extinguisher are in the vehicle and in good condition.
- Use headlights any time the vehicle is moving.
- Not exceed the manufacturer's specifications for speed.
- Operate the motor vehicle in a careful and safe manner.
- Immediately stop operating company vehicles and notify your supervisor if license or permit is suspended, revoked, or restricted.

Commercial Motor Vehicle (CMV) Restrictions

While driving, the operator of a CMV must not:

- Use a hand-held mobile telephone for voice communication
- Dial or answer a mobile telephone by pressing more than a single button
- Manually enter or read text from an electronic device (e.g. e-mailing, instant messaging, accessing a Web page or perform any electronic text retrieval or entry).

S-12.1.2 Crossing Tracks

When crossing tracks with a motor vehicle or off-track equipment at non-public crossing locations:

- Approach as close to a right angle to the track as practical to allow for optimal viewing of potential approaching movements.
- Stop before crossing the track(s), unless the vehicle or off-track equipment is foul of a previously crossed track.
- Look for trains, engines, rail cars and on-track equipment movements approaching from either direction.
- Yield to trains, engines, rail cars and on-track equipment before proceeding across the track(s).

Exceptions:

- Stop is not required within mechanical servicing or repair buildings protected by Blue Signals when precautions have been taken to prevent on-track equipment movement in the building.
- Stop is not required within intermodal facilities unless designated by traffic signs (e.g., stop signs, roadway stop bars, track lights, track gates).

S-12.2 All Terrain Vehicles (ATVs)

The operation of ATVs by BNSF personnel requires the following:

- ATVs must be modified to limit maximum speed to 15 MPH or less.
- Operators must have completed an ATV Safety Training Course (including checkride), before operating an ATV.
- Employees must wear helmets that meet the DOT Standard 218 “Motorcycle Helmet” when operating ATVs. These DOT helmets are not to be worn as head protection in overhead hazard areas such as under craneways or when people are working above others. In these areas, hard hats are required.

S-12.3 Motorcycle Use

Do not use motorcycles to perform your duties or to deadhead.

S-12.4 Utility Vehicles

Complete a Utility Vehicle Safety Training Course prior to operating a utility vehicle.

When operating a utility vehicle:

- Wear seat belts where provided.
- Ensure that the utility vehicle is modified to limit maximum speed to 15 mph or less.

S-12.5 Seat Belts

Wear seat belts while operating or riding in equipment or vehicles that are equipped with them.

Exception: Seat belts are not required when employees are operating vehicles while performing train inspections or coupling air hoses. When operating the vehicle in travel to and from such work activities, seat belts must be worn.

S-12.6 Passengers

Do not transport unauthorized persons in a company vehicle except in an emergency.

Notify the driver before boarding any vehicle. Never get on or off of a moving vehicle except in an emergency.

S-12.7 Maintenance/Inspections

Drivers assigned to vehicles and trailers, and their managers or foremen, are equally responsible for maintenance, cleanliness, and inspections to ensure that the equipment operates properly and safely and complies with federal motor carrier safety regulations.

Any defects found during inspections that might prevent the vehicle from operating safely must be corrected by a trained person before the vehicle is used. All other defects must be repaired as soon as possible.

S-12.8 Backing

12.8.1 Vehicles

Position the vehicle, when possible, to avoid backup movement.

Before backing, inspect areas to the rear to verify that no personnel or obstructions are in the path of movement.

When backing vehicles, including vans, but other than automobiles and pickup trucks:

- Position someone near the back of the vehicle to guide movement, when available.
- Sound the horn three short blasts in vehicles not equipped with backup alarms.
- Stop if the person guiding the movement disappears from view.

12.8.2 Off-Track Mobile Construction Equipment

Establish a “circle of safety” around off-track equipment operations. The dimensions of this safety zone are communicated during the job safety briefing. Personnel are not to enter the “circle of safety” without first communicating with the equipment operator.

A co-worker is to be designated in job safety briefings to guide backing movements where risk assessment has identified potential overhead or underground hazards.

S-12.9 Parking

When parking vehicles:

- Place standard transmission in low gear with engine shut off.
- Place automatic transmission in Park.
- Remove the ignition key, close the windows, and lock the doors if leaving the parked vehicle unattended.

Exception: You may leave the engine of an unattended vehicle running, in cold weather, if you have a second set of keys.

- If parking on a grade, set the emergency brake and take other precautions to prevent the vehicle from rolling unexpectedly.

S-12.9.1 Fouling Tracks or Roadways

Except when necessary to perform duties, do not park vehicles or trailers where they foul tracks or roadways. If they do foul tracks or roadways, never leave them unattended without the proper protection.

S-12.10 Work Under Vehicles or Trailers

Do not sit or lie underneath vehicles or trailers, except when inspecting or repairing them, and then make sure the:

- Brakes are set.
- Wheels are blocked.
- Engine is stopped.
- Proper support stands are in place.

Do not sit or lie under a raised vehicle or trailer supported only by a jack.

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S-12.11 Transporting Tools and Material

Properly secure tools, equipment, material, and freight. Do not transport hazardous materials, such as gasoline and solvents, in passenger compartments. Transport gasoline or other flammable material in a DOT-approved container. When transporting hazardous materials, follow federal and state placarding and shipping document regulations.

S-12.12 Special Equipment Mounted On Vehicles or Trailers

Only qualified personnel may operate special equipment, such as winches, cranes, and hoists, mounted on vehicles or trailers. When operating vehicles with special equipment:

- Inspect the equipment frequently.
- Do not exceed load limits.
- Make sure outriggers are in place.
- Secure the equipment in the proper position before moving the vehicle.
- Comply with the manufacturer's instructions.

S-12.13 Trailers

S-12.13.1 Required Equipment

Trailers must be equipped with:

- Safety chains (except fifth-wheel or gooseneck trailers).
- Required stop, tail, directional, and clearance lights.
- Electrical connectors that are compatible in size and design with those on the designated towing vehicle.

S-12.13.2 Inspection

Before towing trailers, inspect equipment and material loaded on the trailer, and inspect the following to make sure they are operable:

- Tires.
- Brakes (if equipped).
- Hitches and locking devices.
- Safety chains (if equipped).
- Electrical connections and lights.

If the vehicle and trailer hitch are not compatible in size and design, or if locking devices are defective, do not tow the trailer.

S-12.14 Accidents/Incidents

Promptly report traffic incidents, accidents, and vehicle damage, no matter how minor, to the proper manager.

S-13.0 On or Near Tracks, Locomotives, and Rail Cars

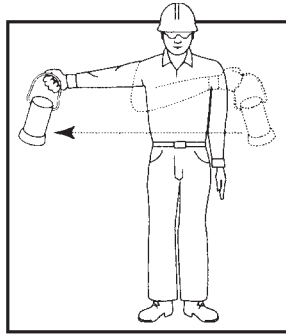
S-13.1 General Requirements

S-13.1.2 Signals

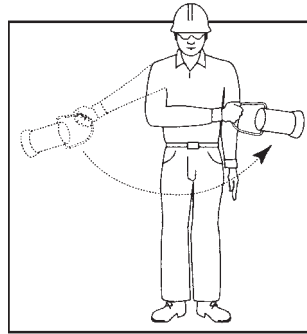
- Do not give the signal to move locomotives, cars, or other equipment until persons and equipment are clear of the movement.
- Keep signaling devices in working order and ready for use.
- Position yourself so that your signal can be clearly seen.
- Stop all movement if you lose visual contact with the person giving the signal, unless radio communication is being used instead of hand signals.
- Regard any break in radio communication as a stop signal.
- Use the appropriate signal for what you are communicating and signal clearly.
- Make sure everyone understands other signals you may use.

Hand, Flag, and Lantern Signals

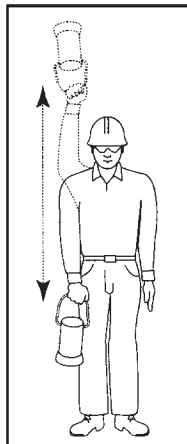
The same signals apply for signals given by hand or flag.



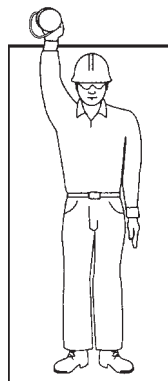
SET AIR BRAKES:
Moved slowly with arm extended horizontally.



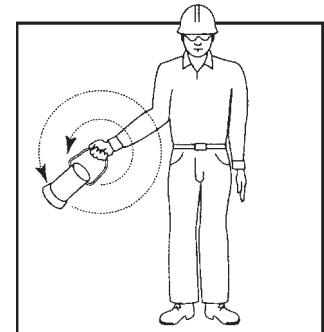
STOP:
Swung horizontally at right angle to the track.



PROCEED:
Raised and lowered vertically.



RELEASE AIR BRAKES:
Held at arm's length above the head.



BACK:
Swung in a circle at right angle to the track.

S-13.1.3 Tracks

A. Crossing Tracks

When crossing tracks:

- Do not cross within 25 feet of the end of standing equipment.
- Do not cross in front of approaching equipment, unless you are sufficiently ahead of the equipment to cross safely.

While within the limits of a designated mechanical facility, when crossing between standing equipment that is not under blue flag protection.

Employee may cross within 25 feet of standing equipment, provided:

1. Speed limits for all equipment on the track is 5 MPH or less, and;
2. Check for movement is made prior to crossing track, and;
3. Distance is sufficient to allow safe passage should there be unexpected movement, and;
4. Designated walkways are used, when available.

B. Stepping On Rails

Step over, not on:

- Rails.
- Frogs.
- Switches.
- Interlocking apparatus.
- Connections.

Watch for conditions that could interfere with footing.

C. Fouling Track

Do not walk between rails or foul the track, except when duties require and proper protection is provided. Use caution during bad weather and when visibility is impaired.

S-13.1.4 Sitting or Standing

Comply with these restrictions for sitting or standing on equipment or structures:

- Do not sit on rails or track structures unless duties require.
- Do not stand, sit, or walk on top of or on the sides of any open top car such as gondola, hopper, ballast, or air dump cars.
- Do not sit on the steps of moving engines or cabooses.
- Do not sit or lie underneath or lean against standing equipment unless duties require, and only when proper safeguards are provided, such as blue signal protection.
- Do not stand or sit on engine or caboose handrails.

S-13.1.5 Riding In or On Moving Equipment

Ride cars or equipment only if necessary and if you have determined that you can do so safely.

A. Determining Whether to Ride

When determining whether cars or equipment should be ridden, consider:

- Alternatives such as repositioning locomotive to pull instead of shove freight cars, vehicle transportation, repositioning of crew members or utilizing other employees to complete the task without having to ride moving equipment.

- Designs and configurations of freight cars and equipment that may make them unsuitable to ride.
- Selecting or repositioning other freight cars to ride.
- Your physical capabilities and limitations.
- The amount of slack in the train or switch cut.
- Applicable operating and safety rules.

When equipment will be ridden:

- Notify the engineer.
- Proceed only after the engineer has acknowledged that you are going to ride.
- Complete any couplings from the ground after the movement is stopped.

If track condition cannot clearly be observed because of debris (e.g. snow, ice, water, grain, mud, etc.) do not ride or knowingly allow others to ride on either side of equipment or engine exterior.

When snow and ice are observed building up on portion of tracks to be used, particularly at road crossings, locomotive(s) must precede movement on that portion of track before cars can be ridden into those tracks.

Close/No Clearance and Close Track Center Restrictions:

Employees must not ride or knowingly allow others to ride the close/no clearance side of equipment at the location where close/no clearance exists, under any of the following conditions:

- Between a structure and a moving car or engine.
- Through gates or doorways (Gates or doors must be secured in the open position).
- Into, out-of or within enclosed buildings. (Employees must precede the movement, if safe to do so, before entering enclosed buildings. Movements must only be made on that employee's signal within a building).
- When it cannot be visually determined that equipment on an adjacent track is in the clear or behind the clearance point.
- On industry tracks at locations where signs may be placed, advising of close/no clearance.
- At locations that have been identified by timetable or special instructions as having a close/no clearance condition.
- At locations that have been identified by timetable or special instructions as having close track centers unless that portion of adjacent track is known to be clear.

B. Riding In or On Any Cars

Comply with these requirements and restrictions for riding in or on moving equipment:

- Do not ride or knowingly allow others to ride on the end platform of other than tank cars as specified in this rule or end ladder of any freight car.
- Ride only if hand holds and stirrup configuration allow for a firm grip and erect and normal body position.
- When riding equipment, maintain a three-point contact with the equipment at all times.
- Do not ride on or knowingly allow others to ride any part of the coupler apparatus, center sill, side sill, end sill, or framework.

- Do not ride inside or knowingly allow others to ride inside a car loaded with lumber, pipe, or other materials susceptible to shifting upon slight impact. When a flat car load of this is involved, do not ride between the end of the adjacent car and the load.
- Protect against slack action. When duties require you to stand or move about, brace yourself and hold on firmly.

When moving from one freight car to another, after stopping, get down and walk to next car and then get on.

C. Riding In or On Flat Cars

When any type of flat car is involved:

- Ride the side of the flat car only if the car is equipped with a hand hold extending at least 18 inches above the deck of the car.
- Ride on the deck of an empty flat car, or on a TOFC/COFC flat car with an empty stanchion or table, only if you can:
 - o Mount the car safely and kneel or sit as near as possible to the center of the car or the empty space.
 - o Face the direction of movement.
 - o Maintain a kneeling or sitting position before the equipment moves and until the equipment stops and the slack has adjusted.
- Do not walk or ride between trailers or containers loaded on flat cars.
- Do not place your hands or other parts of your body where trailers or bridge plates could move and cause injury when riding loaded TOFC/COFC flat cars.

D. Riding On Drop-End Gondolas

On a gondola equipped with drop ends, do not hold on to the end post, or sit or stand near the end door.

E. Riding Tank Cars

When riding any type of tank car:

- Do not ride on any part of the coupler apparatus, center sill, side sill, end sill, or framework
- Do not ride with both feet on the horizontal grab iron
- Do not ride the middle ladder intended for man way access

For trailing moves:

- Ride with both feet in the stirrup; or
- Ride with one foot in the stirrup and one foot on the horizontal grab iron; or
- Ride with one foot in the stirrup and one foot on the end platform.
 - o If car to be ridden is the last car of the trailing move and is a tank car, you may ride the trailing end with both feet on the end platform positioned between outer edge of car and the car's wheel, facing direction of movement.

For shoving moves:

- Ride with both feet in the stirrup; or
- Ride with one foot in the stirrup and one foot on the horizontal grab iron; or
- Ride with one foot in the stirrup and one foot on the end platform.

F. Riding Engines

When necessary to ride engine exterior:

- On platforms or walkways, do not extend any part of the body beyond the exterior edge on either side of the engine (for example, do not lean out to obtain fuel reading, inspect engine, etc.).
- Movement must not exceed 20 MPH.

S-13.1.6 Opening and Closing Doors

Keep the front door of locomotives closed when speeds are greater than 15 mph, except during switching operations. If the door is open, secure it to prevent unexpected closure.

Open and close doors on engines, cabooses, and other equipment by using the appropriate handle. Do not grab the edge of the door.

S-13.1.7 Using Dump Doors

Close dump doors on ballast cars as soon as the load is dumped. If you must move cars to the nearest siding or yard with dump doors open, first verify that the doors and chains will clear the rails and crossings.

S-13.1.8 Poling Cars

Do not use poles, ties, stakes, or other material to shove cars.

S-13.1.9 Chocking Cars

When chocking cars:

1. Wait until movement stops and the slack adjusts before placing the chock.
2. Place the chock while standing to the side of the equipment.
3. Keep fingers and hands clear of the wheel tread, top of the rail, and other pinch points.
4. Use only a sound wooden chock, metal chock, or chock made from plastic or composite material designed for chocking cars. Do not use a track spike.

Do not chock moving rail equipment, except in an emergency, or when the equipment is in a repair facility.

S-13.1.10 Unexpected Movement

To prevent unexpected movement while working inside a Maintenance of Way tool, storage, or equipment car:

1. Set the hand brakes.
2. Chock wheels or secure them.
3. Protect against train or engine movements that may enter the track as required by GCOR Rule 5.4.7 (Display of Red Flag or Red Light).
4. Spike the switch or secure it with an effective locking device.

S-13.2 Coupling/Uncoupling Rail Equipment**S-13.2.1 Standing Clear**

Stand clear during a coupling movement.

S-13.2.2 Operating Uncoupling Lever

When operating the uncoupling lever:

- Use your hand nearest the equipment to operate the lever.
- Face the direction of movement.
- Do not jerk the uncoupling lever.

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- Watch for pinch points.
- Place your hand on the portion of the uncoupling lever designed as the handle.
- Do not run while operating the uncoupling lever.
- Do not use your feet to operate the uncoupling lever.

S-13.2.3 Adjusting Lift Pin (Lock Block)

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

S-13.2.4 Adjusting Mismatched Couplers

Do not adjust the coupler or knuckle of an approaching engine or car.

Do not attempt manual adjustment of couplers unless they move when you apply limited effort. If drawbar does not move with this limited effort, use an approved alignment device.

A. Adjusting Mismatched Couplers Without Using a Device

To adjust a mismatched coupler without using a device, follow this procedure:

1. Stop the movement.
2. Allow at least 50 feet of working room between the equipment and obtain positive confirmation of protection from train movement in all directions.
3. Wait for the movement to stop completely and for the slack to adjust and settle. (Be alert for unexpected movements from liquids sloshing in tank cars.)
4. Check for other equipment movements on the same track.
5. Adjust the coupler as follows:
 - a. Establish good footing and hand holds to avoid stumbling, and keep fingers and hands clear of pinch points. Listen to what is going on around you. If you hear any equipment move, step clear immediately.
 - b. Make sure the knuckle is secured. (Keep your feet clear of the area beneath the knuckle unless the knuckle is secured.)
 - c. Stand to the side of the knuckle and lean against it. Do not lift. Do not adjust the coupler by kicking it with your foot.
6. Step clear of the equipment (without fouling the adjacent track), then signal the employee controlling the engine to proceed with the coupling.

B. Using a Lining Bar, Car Mover Pole, or Pinch Bar

When using other devices, such as a lining bar, car mover pole, or pinch bar to adjust a mismatched coupler, follow this procedure:

1. Allow at least 50 feet of working room between the equipment and obtain positive confirmation of protection from train movement in all directions.
2. Wait for the movement to stop completely and for the slack to adjust and settle. (Do not overlook unexpected movements from liquids sloshing in tank cars.)
3. Check for other equipment movements on the same track.
4. Establish good footing to prevent stumbling.
5. Make sure the knuckle is secured.
6. When the couplers are properly aligned, open at least one knuckle, stand clear of the equipment, and proceed with the coupling.
7. Return the device to its assigned location.

C. Using a Coupler Alignment Strap

When using a coupler alignment strap to adjust a mismatched coupler, follow this procedure:

1. If necessary, apply enough hand brakes to secure the standing cars.
2. Separate the mismatched couplers by at least 50 feet, and obtain positive confirmation of protection from train movement in all directions. Then close both knuckles.
3. Keeping one foot outside the rail, use the alignment strap as follows:
 - a. Inspect the strap for defects or excessive wear.
 - b. Place one end of the strap around the knuckle of the standing car.
 - c. Place the other end of the strap on top of that same coupler.
 - d. Stand clear of the equipment.
4. Move the engine (or cars) toward the standing car, then stop the movement within 3 feet of the standing car.
5. After the movement stops, keep one foot outside the rail, place the other end of the strap around the second knuckle, and stand clear of the equipment.
6. Slowly separate the equipment to remove slack from the strap, then align the couplers. Stop the movement immediately when the alignment is complete to avoid breaking the strap.
7. Stop and get help if you have difficulty attaching or using the alignment strap. Do not attempt manual alignment, even with more than one person. If the drawbar will not move using normal procedures, bad-order the car and notify mechanical personnel.
8. Move the equipment close enough to provide slack in the strap, then stop the movement.
9. Keeping one foot outside the rail, remove the strap as follows:
 - a. Remove the strap from the knuckle.
 - b. Separate the equipment at least 50 feet apart.
 - c. Remove the strap from the other knuckle and open at least one knuckle.
 - d. Stand clear of the equipment and continue coupling.
10. After aligning the drawbar, return the alignment strap to its assigned location and resume normal train movements.

D. Using a Knuckle-Mate

When using a knuckle-mate to adjust a mismatched coupler, follow this procedure:

1. Separate the mismatched couplers by at least 50 feet, and obtain positive confirmation of protection from train movement in all directions. Then close the knuckle of the coupler or couplers that need adjustment.
2. Place the knuckle-mate over the top of the knuckle, with the pin securely in the hole at the top of the knuckle. (Adjust the pin by loosening the top levered nut.)
3. Place both hands on the handle.
4. Pull the handle steadily, avoiding unexpected movements of the coupler that could cause you to be overbalanced and fall.

5. When the couplers are properly aligned:
 - a. Remove the knuckle-mate.
 - b. Open at least one knuckle.
 - c. Stand clear of the equipment and continue coupling.
6. Return the knuckle-mate to its assigned location.

E. Using a Come-Along

1. Separate rolling equipment to at least 50 feet and obtain positive confirmation of protection from train movement in all directions.
2. Close the knuckle on the misaligned drawbar, and check for adequate lubrication by leaning on the coupler. If the coupler does not readily move, proceed with mechanically-assisted alignment.
3. Obtain come-along from storage location and visually inspect the chain and hook for excessive wear or damage. If wear or damage is determined as a result of this inspection, then contact the office responsible for come-alongs in that area for repair or replacement. Release the direction selector to the NEUTRAL position, and pull out enough chain to reach between attach points.
4. Inspect the alignment pin for defects such as worn spots, bent areas, or cracks. Do not use hardened steel pins or eye to reduce potential for injury when a hardened pin fails under load. Use a pin made of non-hardened steel so that it will bend rather than suddenly break if it fails under load. If no defects are found, insert the pin in the knuckle flag hole, and attach the come-along hook as described in the operating instructions provided with the come-along.
5. Secure a load-certified nylon choke to a rigid point of attachment near the corner of the car that is in the direction the drawbar is to be moved. Select this attachment point to provide the best angular advantage for using the come-along. The best attachment point location is at or slightly above the level of the first attachment point. Attach the second come-along hook to the nylon choke.
6. Pull any excess chain through the come-along, and turn the direction selector knob to the desired position for tightening the chain. Using smooth motions, tighten the come-along until the drawbar moves to centerline. Stop if any difficulty is encountered in moving the drawbar with the come-along, or if the alignment pin or attachment point begins to bend. At this point, bad-order the car and notify mechanical personnel to address the problem. Do not attempt manual alignment. Do not extend the come-along handle in any way.
7. Reverse the come-along mechanism to loosen and remove hooks, pins, and nylon choke. Replace these items in the come-along storage and carrying bag, and return the bag to its storage area.
8. Make sure the knuckles remain locked closed when the aligned coupler is joined to the train. Resume normal switching movements.

F. Carry-Lite Drawbar Strap

When available, use the carry-lite drawbar strap to:

- Remove broken assemblies from between the rails.
- Align drawbars so a coupling can be made.
- Replace the “bull chain” as a means of allowing rail cars with broken coupler assemblies to be moved to locations where repairs can be made.

S-13.2.5 Replacing Knuckles

When replacing a coupler knuckle, unless other safeguards are provided, such as blue signal protection, follow this procedure:

1. Separate the equipment by at least 50 feet.
2. Make sure the equipment is stopped and secured.
3. Communicate with the engineer and other crew members to understand the work.
4. Make sure the knuckle pin is in place and open the knuckle while keeping feet clear of the area under the coupler.
5. Remove the pin and set it within easy reach.
6. Remove the knuckle from the coupler.
7. Dispose of the knuckle, holding it as close to the body as possible, where it will not become a tripping hazard.
8. Holding the uncoupling lever up, move the knuckle thrower back into the coupler recess as far as it will go.
9. Obtain the correct knuckle type.
10. Lift the knuckle carefully and place it into the coupler pocket.
11. Insert the knuckle pin into the pin hole, close the knuckle, and make sure it locks properly.

S-13.2.6 Opening Knuckles

When opening knuckles:

1. Do not place your leg or foot where the knuckle might fall on it. Do not stand in front of the cushioned drawbar to adjust or open the knuckle.
2. Check for broken or missing knuckle pins to prevent the knuckle from falling to the ground when it is opened.

If you remove the knuckle pin, replace it or provide a safeguard to prevent injury to others.

S-13.3 Air Hoses and Angle Cocks

Treat all angle cocks and air hoses as if they are under pressure.

S-13.3.1 Connecting Air Hoses

When connecting air hoses, keep one foot outside the rail whenever possible.

S-13.3.2 Opening Angle Cocks

When opening an angle cock:

1. Open the angle cock slowly, keeping legs and feet clear of the air hose coupling.
2. Listen for escaping air, which indicates a faulty coupling that could fly apart.
3. If you hear an air leak, close both angle cocks and make sure there is no pressure in the hoses before adjusting or repairing the leak.
4. Never kick, strike, or jostle pressurized hose couplings.
5. Before opening the angle cock to an uncoupled air hose:
 - a. Grasp the hose at the glad hand clear of the vent port.
 - b. Brace the glad hand firmly against your thigh just above the knee.
 - c. Turn your face away from the glad hand before opening the angle cock.

S-13.3.3 Parting Hoses

To part air brake trainline hose connections or locomotive control connections by hand, close the angle or cutout cocks and grasp the hoses firmly, turning your face away from the coupling.

S-13.3.4 Controlling Movement

Do not open the angle cock on the leading end of a moving car or engine to control or stop movement.

S-13.4 Crossing Over Rail Equipment**S-13.4.1 Crossing Through a Standing Train or Cut of Cars**

- When crossing through a standing train or cut of cars, cross only through cars equipped with crossover platforms and hand holds.
- Be prepared for sudden movement and maintain a firm grip.
- When no car is within sight distance with a continuous hand hold for crossing, you may cross over the ends of intermodal cars with empty stanchions or loaded intermodal cars when no trailer or container extends onto or over the crossover platform. Before crossing over, obtain positive confirmation that the car will not be moved and that the platform is sufficiently wide to allow walking across it in a safe manner.

S-13.4.2 Climbing Through Standing Coupled Cars

When climbing through standing coupled cars:

- Do not step on the coupler or uncoupling lever.
- Do not place hands, feet, or other parts of the body on the sliding sill or between the coupler horn and end sill of the car.

S-13.4.3 Crossing Underneath Couplers or Standing Cars

Cross under couplers or underneath standing cars or trains only if you are making repairs and when proper safeguards, such as blue signal protection, are provided.

S-13.4.4 Climbing Over Couplers or Under Moving Cars

Do not climb over couplers of moving cars or underneath moving cars. When you must cross over moving equipment, use locomotive or caboose steps.

S-13.5 Getting On or Off Equipment

(Includes Maintenance of Way equipment with steps, hand holds, or ladders.)

Do not get on or off moving equipment, except in an emergency to avoid injury.

S-13.5.1 Getting On Moving Equipment

In an emergency, or when it is authorized to get on moving equipment:

1. Face the equipment as it approaches and make sure:
 - a. The speed will allow you to get on the equipment safely.
 - b. Stirrups, hand holds, or handrails are not bent, loose, or missing.
 - c. Switch stands, close clearances, signals, and other items do not prevent you from getting on safely.
2. Always mount equipment from the side, using the sill step and side ladder (where equipped). Do not use the uncoupling lever as a step.

3. Get on an approaching locomotive or box-type car as follows:
 - a. Firmly grasp the handrail or ladder rung.
 - b. Place your trailing foot on the trailing side of the step or stirrup.
 - c. Let the movement lift you off the ground, and then place your leading foot on the step or stirrup.
4. Do not get on a moving tank car. Make sure a conventional flat car or a TOFC/COFC car is stopped before getting on or off it.
5. To get on moving coupled equipment, board the leading or approaching end of the car or locomotive if possible. Get on or off a moving caboose at the rear steps.

S-13.5.2 Getting Off Equipment

A. Standing Equipment

When getting off standing equipment:

- Face the equipment.
- Before getting off, determine that no obstructions or debris are where your feet will land. Be alert for switch stands, close clearances, uneven footing, signals, and other items that could prevent you from getting off safely.
- When getting off a caboose, walk down the steps, turn at the bottom step and face the car, then get off.
- Except in an emergency, do not jump to the ground from rail car and engine ladders, step platforms, or decks.

B. Moving Equipment

In an emergency, or when it is authorized to get off moving equipment:

- Face the direction the equipment is moving.
- Get off with the trailing foot first to direct you away from the equipment.
- When getting off a caboose, walk down the steps, turn at the bottom step and face the car, then get off.
- Avoid jumping to the ground from a rail car or an engine ladder, step platform, or deck.

S-13.5.3 Getting On and Off Full Car Body Locomotives

On locomotives that have a vertical side ladder access to the cab and are equipped with cab doors located on the sides of the cab, use the corner step well cab access to enter and exit the locomotive cab and car body areas in all cases except:

- Emergency exit from the locomotive.
- Entrance and exit from the locomotive while it is located at a service facility that has a raised ramp surface so that no more than one ladder tread must be used when entering or exiting the car or car body of the locomotive.
- Units that are accessible only by ladder.

Where other units are available, do not use a full car body locomotive as the lead locomotive.

S-13.5.4 Using Ladders

When using a ladder to get on and off equipment:

- Use the side ladder, not the end ladder.
- Climb up and down the ladder by turning your feet at an angle and placing the ball of your foot on the ladder rung.

S-13.5.5 Loading and Unloading Luggage

Do not throw or “swing” luggage onto a locomotive from the ground.

Load or unload luggage, grips without straps, ice chests, and other objects onto locomotives and cabooses before you get on or off. In doing so:

- Wait for a co-worker to safely board and get securely positioned on the deck or platform.
- Secure the item to be loaded against shifting or separating.
- Get a firm footing and use proper body mechanics/lifting techniques to pass the item to your co-worker.

Board or detrain carrying grips with shoulder straps by resting the strap on your shoulder and maintaining both three-point contact and your balance.

S-13.5.6 Carrying Lanterns

When practical or when there is a risk that the lantern could catch on objects, hold the lantern handle between the base of your thumb and index finger.

S-13.6 Operating Hand Brakes**S-13.6.1 Hand Brake Categories**

The three categories of hand brakes include:

- Vertical wheel (high- and low-mounted).
- Lever (ratchet).
- Horizontal wheel (staff).

When operating hand brakes, determine:

- Brake location (end- or side-mounted).
- Brake position (high or low, right side or left).
- Method of operation.

S-13.6.2 Hand Brakes On Moving Cars

Except in an emergency, do not operate hand brakes on moving cars.

S-13.6.3 Position to Operate**A. End-Mounted with Brake Steps or Crossover Platform**

If the car has end-mounted brakes and a brake step or crossover platform:

1. Stand on the brake step or crossover platform to operate hand brakes.
2. Apply hand brakes by standing on the left side of the brake with your left foot on the ladder rung and your right foot on the brake platform.
3. Grasp the ladder rung or top handhold with your left hand and operate the brake with your right hand.

B. Side-Mounted

Operate side-mounted hand brakes from the ground if the brake mechanism is within easy reach and you can safely operate it without straining too much and risking injury.

C. End-Mounted Without Brake Steps or Crossover Platform

If the car has end-mounted hand brakes without brake steps or crossover platforms:

- Do not operate the hand brakes from the ground unless proper safeguards are provided, such as blue signal protection.
- To operate the hand brakes, stand on the car or on the ground at the side of the car.

D. Horizontal Wheel or End-Mounted, Inward Facing

Stand on the car to operate horizontal wheel (staff) hand brakes and end-mounted, inward facing hand brakes.

E. Vertical Wheel

Vertical wheel hand brakes may be operated without getting on the railcar if:

1. The car remains stationary.
2. Both feet remain flat on the ground and outside the rail.
3. Elbows are slightly bent during operation.
4. One hand can hold onto the grab iron while the other hand is used to operate the brake wheel.

S-13.6.4 Use of Feet

When operating hand brakes:

- Do not use your feet to operate the hand brake, except to manipulate the pawl on horizontal wheel (staff) brakes.
- Do not place your feet on any movable part of the car, such as the uncoupling lever or sliding sill.

S-13.6.5 Movement from Side to End Ladder

When necessary to move from the side ladder to the end ladder to operate the hand brake, be alert and hold on to the ladder firmly.

S-13.6.6 Vertical Wheel

To apply a vertical wheel brake:

1. Place the release lever or pawl (if so equipped) in the ON position by reaching behind the brake wheel, not through the wheel spokes.
2. Turn the brake wheel clockwise to take up slack in the brake chain.
3. Watch for the brake chain to bunch or slip unexpectedly.
4. After the chain slack has been taken up, apply pressure to the brake wheel by turning it clockwise, using short, steady pulls without jerking.
5. To release hand brakes equipped with a release lever, rotate the lever clockwise to the OFF position, pushing firmly until the brake releases. If the quick release lever does not release the brake, operate the wheel with steady pressure. If the wheel does not easily release the brake, apply air to the car or get help. If the brakes still do not operate, bad-order the car.

With some older hand brakes, the brake wheel will spin when the brake releases. Keep fingers and hands clear.

6. To release hand brakes not equipped with a release lever (gradual release type), grip the wheel rim and turn the wheel counterclockwise until the brake releases.

S-13.6.7 Lever or Ratchet Brake

To operate a lever or ratchet brake:

1. Apply the brake by placing the release lever or pawl in the ON position and pumping the brake lever. (On some styles, the release lever is automatically placed in the ON position when you pump the brake lever.)
2. After the chain slack has been taken up, apply steady pressure on the lever as necessary, but do not jerk it.
3. Operate low-mount lever brakes on standing cars with your left side nearest to the car, where possible. (These brakes are mounted to the frame of the car at or below the deck level.)
4. Before releasing lever brakes, inspect the lever stop on the housing. Do not operate the brake if:
 - a. The stop is excessively worn or missing.
 - or
 - b. The mechanism allows the lever to bypass its normal stop position.

If operated under these circumstances, the brake lever could fly around forcefully when the brake is released.
5. Release the hand brake by rotating the release lever clockwise, pushing firmly until the brake releases.

S-13.6.8 Horizontal Wheel or Staff Brake

To operate the horizontal wheel or staff brake:

1. Make sure the brake wheel and shaft are fully raised and locked. (Some brakes have a drop-shaft movement, allowing the brake wheel to lower to the car floor.)
2. If the wheel and staff are in the lowered position, use both hands and lift the brake wheel until the shaft support moves into place under the end of the shaft and locks the wheel shaft in the raised position.
3. Apply the brake as follows:
 - a. **If the hand brake has a pawl**, engage the pawl in the ratchet with your foot.
 - b. Grasp the brake wheel rim with both hands, keeping your thumbs on the outside of the wheel.
 - c. Turn the wheel clockwise until enough force is applied. Do not jerk the brake wheel, but apply steady pressure, keeping alert in case the chain bunches or slips.
4. Release the brake as follows:
 - a. **If the brake staff has a pawl**, using both hands, turn the brake wheel clockwise enough to release the pawl with your foot.
 - b. Release your grip on the wheel.
 - c. As the brake wheel spins counterclockwise, keep your hands, body, and clothing clear.
 - d. **If the brake staff does not have a pawl**, turn the wheel counterclockwise until the brake releases.
5. If necessary, lower the hand brake wheel shaft as follows:
 - a. Make sure the car will not be moved, and step (on the ground) around the end of the car.

- b. Lift the hand brake shaft with one hand, enough to take the weight of the shaft off the shaft support.
- c. While holding the brake wheel shaft in the above position with one hand, use the other hand to move the shaft support from under the end of the shaft.
- d. Using both hands, slowly lower the brake wheel, being careful to avoid pinch points.

S-13.7 Operating Switches and Derails

Only authorized and trained individuals may operate switches or derails.

S-13.7.1 Checking for Damage and Obstructions

A. General Requirements

Switches have different operating characteristics that could change because of weather, temperature, and maintenance. Before attempting to operate a switch:

1. Stop the car, locomotive, or other on-track equipment at least 50 feet from the switch stand to be lined, when possible.
2. Look in both directions and watch for moving equipment on adjacent tracks.
3. Visually inspect the switch to make sure it is not damaged, locked, or spiked.
4. Verify that switch points are not fouled by ballast, ice, snow, or other material.
5. Remove foreign material from between the switch point and stock rail using a broom, stick, or similar object. Do not use your hand or foot.

When handling a switch or derail, keep hands and feet clear to avoid being struck or caught by the switch lever handle. Do not strain your body and risk physical injury.

B. Defective Switches

Remove from service immediately any switch that is defective, hard to throw, or in need of maintenance, until it can be inspected and repaired.

Label the defective switch as follows:

1. Identify the switch's exact location and problem and report them to the dispatcher or proper authority.
2. Attach an out-of-service tag to the switch.
3. Do not use the switch until it has been inspected, repaired, and the out-of-service tag removed.

S-13.7.2 Operating Ground Throw or "Flop Over" Switch

1. Check for conditions that may cause loss of footing as the handle is moved.
2. Be prepared for the lever to suddenly operate easily or stiffly.
3. If equipped, release the foot latch.
4. Be alert for a switch under compression that could fly up when released from the latch or keeper. Keep your body clear of the switch handles path of movement.
5. Keep your back in proper alignment when operating a switch.

Use either the **One-Handed** or **Two-Handed** methods to operate the switch. If the switch handle becomes difficult to operate at any time, follow procedures for taking the switch out of service.

One-Handed Method

When using the one handed method:

- a. Place one hand on the handle and the other on your thigh for support.
- b. Slowly pull the handle up using your legs as much as possible. Keep the handle between your shoulders.
- c. Continue to use one hand to move the handle over the top of the switch. If resistance is sensed at any time, use two hands to complete the switch movement.

Two-Handed Method

When using the Two-Handed Method:

- a. Place two hands at the end of the switch handle.
 - b. Slowly pull the handle up with your legs, shoulders parallel to the switch handles path of travel or facing the direction of travel. Keep the handle between your shoulders.
 - c. As the switch handle is moved, reposition your feet as needed to avoid a twisted or awkward body position.
6. Shift your position so that your body is over the lever on its downward movement.
 7. Push the lever handle to the latched position as follows:
 - a. Use slow, even pressure.
 - b. Do not jerk or use unnecessary force.
 - c. Keep hands and legs firmly braced and clear of the operating lever.
 - d. One foot may be used to finish the last few inches of handle movement on pavement (submarine) switches and ground throw switches. One foot must remain on the ground for balance when using this method. Avoid using your feet to push the lever arm down during wet, ice, or snow conditions, or if oil, grease, or other such contaminants are present.
 8. Make sure the switch lever handle is latched.

S-13.7.3 Operating High Stand/Low Stand Switch

1. Establish a firm stance and check for conditions that could interfere with footing.
2. Stay clear of the path of travel of the switch handle, it may be under compression and may swing around when released from the keeper slot.
3. Use two-hands to lift the lever handle out of the keeper slot.
4. Be alert for a switch under compression that could fly up when released from the latch or keeper. Keep your body clear of the switch handles path of movement.
5. Be prepared for the switch to suddenly operate easily or stiffly.

Two-Hand Method

When using the two-hand method:

- a. Stand with your shoulders parallel to the switch handle and place both hands near the end of the handle.
- b. Lift up the switch handle, keeping your back in proper alignment and your legs slightly bent.
- c. Slowly pull the handle through the line of travel.

Mast-Support Method

When using the mast-support method:

- a. Place one hand on the mast and the other hand on the end of the handle.
 - b. Stand parallel to the handle and slowly pull the handle through the line of travel.
6. As the switch handle is moved, reposition your feet as needed to avoid a twisted or awkward body position. Focus on using leg muscles, not back muscles.
 7. Do not jerk the handle or use unnecessary force.
 8. Fully seat the handle in the keeper slot when the switch is in the desired position.
 9. The use of your feet in the operation of this type of switch is not allowed.

S-13.7.4 Operating Switch Point Locks

When working with switches equipped with switch point locks (so designated by yellow handles):

1. Know the difference between the two basic types of switch point locks.
2. Remove the padlock from the switch point lock.
3. Use your foot only to depress the pedal, which places both types of lock under spring tension.
4. Snap the switch point lock into locking position by returning the switch to the normal position. Inspect to assure the locking position before putting your hands near the switch point lock to replace the padlock. If the switch point lock fails to snap into locking position, reopen the switch and repeat the process.
5. Do not attempt to pull up the pedal by hand or other means. Contact the train dispatcher and report the switch point lock defective. Tag out the switch.

Repair or correct defective switch point locks only if you are a qualified Maintenance of Way employee.

S-13.7.5 Switch Heaters

When working around burning switch heaters, avoid contact with heaters or switch rails.

S-13.8 Fusees

S-13.8.1 Storing Fusees

Store fusees as follows:

- Store them in approved metal containers in motor vehicles and other designated equipment.
- Store them in flagging kits or racks in engines and cabooses.
- Do not leave them on floors, seats, or walkways.
- Keep them away from high temperatures, open flames, combustibles, and locations where they may become wet.
- Store them, when possible, in a locked compartment not intended for passenger occupancy where unauthorized persons cannot obtain them.
- At fixed facilities, keep fusees in original shipping containers, and store in a flammable storage cabinet meeting NFPA standards. Do not store other flammable or nonflammable material in the same cabinet. Store the minimum amount needed, but no more than a 60-day supply.

S-13.8.2 Disposing of Damaged Fusees

Do not use fusees that have been soaked in water, oil, or otherwise damaged. Dispose of them appropriately.

S-13.8.4 Lighting and Handling a Burning Fusee

To light and handle a burning fusee:

1. Grasp the fusee near its base.
2. Remove the plastic top or pull the tape over the top to expose the scratch surface on the end of the cap.
3. Twist the cap off the fusee head.

When igniting a fusee, turn your face away and expect hot sparks to spray in all directions.

4. Hold the fusee in one hand and the cap with the exposed scratch surface in the other.
5. Strike the igniter button on the fusee against the scratch surface of the cap, while holding the cap still. Strike away from the body.
6. If you will drop the fusee from a moving train:
 - a. After the fusee ignites, continue to hold it at arm's length with the burning end away from your body for at least 5 seconds, but no more than 10 seconds.
 - b. Be careful to prevent the hot, melting slag from falling on you if you hold the fusee for longer than 5 seconds.
 - c. Do not drop the fusee too soon, or the igniter may go out and the fusee will not remain lighted.

S-13.8.5 Placing Fusees

A. Fusees

Do not place a fusee where the fire may spread to:

- Platforms.
- Bridges.
- Buildings.
- Combustible surfaces of road crossings.

Be careful when placing a fusee near trees, brush, or grass along the right-of-way.

S-13.8.6 Giving Signals with Fusees

When giving hand signals with the fusee:

- Point the burning end down and away from yourself and others.
- Never hold the fusee near the flame.
- Avoid breathing the vapors and gases produced by the burning fusee.
- Do not look directly at the flame.

S-13.8.7 Extinguishing Fusees

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

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

Do not touch the burning melting material on the fusee.

S-14.0 On-Track Machines and Vehicles

(Includes motor cars, push cars, and hy-rail vehicles.)

S-14.1 Riding On Machines

Ride on machines only if you are the machine operator or are authorized by the manager in charge.

When riding on an on-track machine:

- Notify the machine operator before boarding.
- Sit where the operator indicates, or if directed to stand, hold on firmly at all times and maintain three points of contact.

- Watch for obstructions, approaching trains, and vehicle traffic at road crossings, giving the right-of-way to all vehicle traffic. Inform the operator of hazards.
- Do not operate on-track equipment when a train is passing on an adjacent track if the equipment will foul the adjacent track.
- Do not work between adjacent tracks while a train is passing.

Do not ride on a flat car loaded with machines while the car is being moved in the train. Operators may ride in a crane cab when duties require.

S-14.1.1 Warning Devices

When operating on-track machines:

1. Sound whistles, horns or other warning devices to alert others of approaching trains.
2. Do not rely on others to warn you of moving equipment, except where designated lookouts are provided.

S-14.1.2 Seat Belts

Wear seatbelts while operating or riding in equipment or vehicles that are equipped with them. Seatbelts may be removed when:

- The field of view is obstructed and it is necessary to stand to obtain a clear view of the surroundings, or
- Employees are operating cranes that require being seated in the upper rotating structure, (e.g. Locomotive Cranes, Truck Cranes, Rail Bound Track Cranes, etc.).

S-14.2 Working On or About Equipment and Machines

Operate equipment only if you are authorized and trained. Operators are responsible for machine safety and machine maintenance.

When working on or about equipment and machines:

- Read and understand the machine’s operating manual before using the equipment.
- Use lockout/tagout procedures.
- Lower all suspended loads and attachments before leaving the machine.
- Do not sit or lie underneath a machine, except when inspecting or repairing it.
- Do not overload equipment.
- Be aware of power lines overhead and underground.
- Secure unattended equipment from movement and theft.

Never place yourself under a raised machine supported only by a jack.

S-14.3 Moving Cars and Work Equipment on Repair or Service Track

- Establish blue signal protection.
- Give proper warning signal before moving.
- Make sure all personnel are clear of movement.
- Refer to local practices for car and work equipment movement.

S-14.5 Hearing Protection

Wear approved hearing protection when operating or working within 20 feet of machines with hearing protection warning labels or decals, and other machines covered in the special instructions.

S-14.7 Push Cars

When working with push cars, buggies, trailers, carts, or other equipment towed by a track machine, ensure that they:

- Have reliable couplers when attached to a track machine.
- Are in a trailing position when traveling, if possible.

When possible, a push car loaded with tools or materials must be placed behind track cars transporting employees.

S-14.8 Operating Track Equipment Indoors

Do not operate track equipment indoors unless exhaust is directly discharged outdoors via ducting.

S-15.0 Oxygen and Fuel Gas

S-15.1 Storing Gas Cylinders

Follow these requirements for storing gas cylinders:

1. Store oxygen, acetylene, and fuel gas cylinders with the valve end up.
2. When oxygen, acetylene, and fuel gas cylinders are not in use or when they are empty, close their valves tightly and put the protective cap in place.
3. Secure gas cylinders to protect them from damage.
4. Store gas cylinders in a well-ventilated area away from elevators, stairs, and gangways.
5. Separate oxygen cylinders from acetylene and other fuel gas cylinders as follows:
 - Separate them by at least 20 feet.
 - or
 - Separate them with a noncombustible barrier at least 5 feet high with a fire resistance rating of at least half an hour.

Exception: This does not apply to cylinders in use or ready for immediate use. Secure these cylinders in suitable racks or cabinets on trucks or in fixed locations.
6. Store oxygen cylinders at least 20 feet away from flammable material, especially oil, grease, paint, or any substance that could cause or intensify a fire. Do not store, use in, or convey oxygen through a paint shop or any paint storehouse.
7. Do not store gas cylinders near heat sources such as furnaces or boilers. In locations with extreme temperatures, screen gas cylinders stored outdoors from the sun.
8. Store empty and full gas cylinders separately. Mark empty cylinders as EMPTY or MT.

S-15.2 Testing for and Handling Leaks

S-15.2.1 Testing for Leaks

When testing for leaks, use soapy water with a nonfat base. Do not use an open flame.

S-15.2.2 Handling Leaks

If a welding gas cylinder is leaking:

1. Remove the cylinder to an open area away from possible ignition sources.
2. Allow the cylinder to drain completely.
3. Close the valve.

4. Tag the cylinder indicating the defect.
5. Return the cylinder to the supplier.

S-15.3 Mixing Gases

Do not mix gases in a cylinder or refill a cylinder.

S-15.4 Handling and Transporting Gas Cylinders

When handling or transporting gas cylinders:

1. Do not handle oxygen cylinders with oily or greasy hands or gloves.
2. Securely chain or clamp gas cylinders with valve ends up.
3. Valve protection caps, where cylinder is designed to accept a cap, shall always be in place, hand-tight, except when cylinders are in use or connected for use.
4. Do not remove or change numbers or marks stamped on gas cylinders.
5. Gas cylinders may be difficult to carry by hand because of their shape, smooth surface, and weight. Gas cylinders may be rolled on their bottom edge but never dragged.
6. Follow these lifting restrictions:
 - a. Do not lift a compressed gas cylinder with an electromagnet.
 - b. Do not lift a gas cylinder by its valve cap.
 - c. When using a crane or derrick to lift a gas cylinder, secure it to the crane hook with a cylinder sling or place it in a cradle or suitable platform.
7. Contact the gas supplier when you are unsure how to properly handle a compressed gas cylinder or its contents.

When transporting compressed gas cylinders in a company vehicle on other than BNSF property:

1. Secure cylinders tightly with a chain, strap or equivalent device, and close cylinder valve.
2. Always secure cylinders in a closed compartment when available. Cylinders must not be placed or transported in a passenger-carrying compartment.

S-15.5 Changing Gas Cylinders

Before changing or disconnecting a gas cylinder, close the cylinder valve and individually drain hoses to remove any gas mixture. Do not open a cylinder valve unless the cylinder is secured.

S-16.0 Power Tools and Machinery

S-16.1 Authorized Employees

Operate power tools and machinery only if you are authorized to do so.

S-16.2 Inspection and Use

Inspect tools and equipment for defects before and during use, repairing or removing from service those that fail inspection. Promptly tag and report to your supervisor or person in charge any defect. If necessary, guard the hazard.

S-16.3 Insulation/Grounding

Frequently inspect the power cord insulation and connections on electric power tools, and maintain them to prevent shorts and faults. Unless the power tool is double-insulated, make sure it has three conductor cords, one of which grounds the tool frame when connected to an adequate ground. Do not remove the grounding prong from the plug.

S-16.4 Power Source

Disconnect the power source before cleaning, repairing, adjusting, or replacing accessories on electric and pneumatic power tools. Where required, follow lockout/tagout procedures.

Exception: Spring-loaded quick-disconnect sockets are exempt.

S-16.5 Storage/Handling of Abrasive Disks and Wheels

Store abrasive disks and wheels in a dry area protected from extreme temperature changes, especially in below-freezing temperatures.

Handle abrasive stones carefully to prevent dropping or bumping them. Always inspect disks prior to use.

S-16.6 Floor Area/Aisles

Keep the floor area around shop machinery free from holes and irregularities. Designate aisles with railings, safety chains, paint, or other markings.

S-16.7 Safety Guards

Do not operate power tools, machinery, or appliances without required safety guards on belts, shafts, gears, and other moving parts.

S-16.9 Pneumatic Tool Use**S-16.9.1 Air Valve**

Close the air valve at the supply source and relieve the line pressure on pneumatic tools that will not be used for a long time.

S-16.9.2 Hose Connections

Make sure air hose connections are secure. Unless the connections are equipped with quick disconnects, do the following before uncoupling them:

- Close the air valve.
- Relieve the line pressure.
- Use whip stops.

Do not use wire in air or hydraulic couplings in place of clip pins. Do not use hoses on hydraulic or pneumatic tools for hoisting or lowering.

S-16.9.3 Spindle Speed

Regularly check pneumatic grinding tools for proper spindle speed, especially if the tools have been dropped.

S-16.10 Set Screws

Use safety set screws in all revolving spindles or shafts unless a collar protects them.

Make sure all set screws or keys are flush or countersunk. Do not use nails or wire to hold the sockets in place.

S-16.11 Laying Tools Down

Stop the motor before laying down pneumatic, electric, or other power tools. Place the tool so it will not start accidentally.

S-16.12 Surfaces

Do not place electric power tools on wet surfaces or in loose dirt.

S-16.13 Falling Tools

If a tool or other object falls to the bed of a machine, stop the machine before removing the tool.

S-16.14 Powder-Actuated Tools

Operate powder-operated tools only if you are authorized and trained.

When using powder-actuated tools:

- Handle powder-actuated tools as you would a firearm.
- Do not leave a loaded tool unattended.

S-16.15 Abrasive Rail Saw Use

When operating an abrasive rail saw:

- Inspect the blade for cracks, chips, or wetness.
- Use the correct blade size with mounting blotters between the flanges and the wheel.
- Keep the blade true and do not force the saw.
- Keep the blade dry and free from grease, oil, fuel, and solvents.
- Have a fire extinguisher immediately available.

S-16.16 Chain Saw Use

Operate a chain saw only if you are authorized to do so.

Inspect the saw before using it to ensure that:

- The handles and guards are in place and tight.
- The controls function properly.
- The muffler is operating properly.
- The cutting chain is properly adjusted.
- The bar is not worn or burnt, especially at the tip.

Before starting the saw:

- Alert others of flying debris.
- Inspect for conditions that could interfere with your footing and safe operation.
- Clear away brush.

When using the saw:

- Do not use the saw to cut directly overhead or far enough away that you cannot safely grip the saw.
- Avoid contact between the saw tip and objects that could cause the saw to kick upward.

S-16.17 Lockout/Tagout of Machinery

When machinery is being repaired, cleaned, or adjusted, ensure that the control switch or power source is locked in the OFF position and tagged. The employee working with the machine must keep the key.

S-16.18 Grinding Machine Use

Use the grinder only for tasks for which it was designed.

S-16.18.1 Inspecting Grinding Wheels

Inspect grinding wheels as follows:

- Inspect each wheel immediately after unpacking it from the shipping container and again just before mounting it on the grinder.
- Ring-test each wheel and inspect it for surface cracks, chips, or other defects, before mounting grinding wheels.
- Make sure protective guards are in place, secured, and properly aligned. Make sure the tool rest and tongue guard adjustment is not more than 1/8 inch from the wheel.
- Make sure the frame is securely mounted with no vibrations, and the wheel face is well-lighted and dressed evenly. The grinder RPM must be plainly labeled and not exceed the RPM rating of the wheel.
- Make sure a competent employee dresses and trues the wheels.

S-16.18.2 Mounting Grinding Wheels

When mounting grinding wheels, make sure:

- The wheel is the appropriate type and size for the machine on which it will be used.
- The wheel fits freely on the spindle and remains free under all grinding conditions.
- The contact surfaces of wheels, blotters, and flanges are flat and free of foreign matter.
- The blotters or flange facings of compressible material cover the entire contact area of the wheel flanges.
- The spindle and nut are tightened enough to drive the wheel and prevent slipping.
- The flanges are equal in size and are the correct diameter for at least 1/3 of the wheel diameter. For cut-off wheels, flanges will be at least 1/4 of the wheel diameter.

S-16.18.3 Operating Grinding Wheels

When operating grinding wheels:

- Run new wheels at full operating speed for at least 1 minute before applying work. (Most defective wheels break when first started.) During this time, do not stand in the direct line of the rotating wheel.
- Operate wheels at the manufacturer's recommended speed.
- Do not drop, bump, roll, or handle grinding wheels carelessly.
- Protect grinding wheels from oil, grease, water, or other liquids, and from freezing temperatures or conditions that cause surface condensation.
- Do not perform grinding operations on the sides of wheels, except on wheels designed for side-face grinding.
- Do not grind nonferrous materials on wheels not specified for that purpose.
- When the wheel is cold, apply grinding force gradually and evenly to prevent thermal shock, which could break the wheel. Avoid forcing it and causing glazing or breakage.

S-16.18.4 Operating Portable Grinders

When operating a portable grinder:

- Be careful to avoid damaging the abrasive wheel.
- Do not leave or lay the portable grinder down while it is running.
- Use a protective shield or screen to protect others from sparks and flying debris.

S-16.19 Wire Brush Wheels

When using wire brush wheels:

- Follow the manufacturer's recommended wheel speed.
- Make sure the hood is adjustable and encloses the wheel as completely as the work allows. The hood should cover the exposed arbor ends. If not, install a smooth-headed nut.
- Do not use wire brush wheels to remove ACM from surfaces, such as gaskets.

S-16.20 Band Saws

When using a band saw:

- Make sure the length of blade exposed is no longer than the thickness of the stock being cut plus 3/8 inch.
- Feed the stock gradually and steadily.
- Make sure the blade is not twisted or crowded.

S-16.21 Other Metal or Woodworking Machines

When using other metal or woodworking machines:

- When installing the machine, place its front end slightly higher than its rear to cause the cutting head to return gently to the starting position when the operator releases it.
- Stand to one side and not directly in back of the material being fed for saws where kickback is possible.
- Use a push block to feed narrow material through a circular or band saw.
- Do not reach over a circular saw.
- Do not operate circular rip saws with missing or broken hoods, spreaders, or kickback devices.
- Provide an adjustable stop to prevent the blade from traveling beyond the point necessary to complete the cut in repetitive operations.
- Do not join short pieces of stock. The length of the pieces joined should be at least four times the width of the bed opening.
- Do not adjust either half of the joiner table horizontally to make the clearance between the edge of the table and the revolving knife more than 1/8 inch.
- Do not lower dead plates on planers while material is in the machine and the machine is running.
- Use hold-downs/push blocks whenever joining stock that is narrower than 3 inches.

S-16.22 Clean Up

S-16.22.1 Removing Chips

Do not use your hands to remove chips or shavings from a drill press or other machine. Use a brush, vacuum equipment, or special tools designed for that purpose.

S-16.22.2 Use of Compressed Air/Gas

1. When cleaning equipment, use an air nozzle that meets OSHA requirements—less than 30 psi with effective chip guarding.
2. Do not use compressed air, oxygen or other pressurized gas to:
 - Clean equipment where lead, silica-containing dust or asbestos may have accumulated.
 - Blow dust or dirt from your body or clothing. Do not place the air nozzle against your body or purposely inhale compressed gas.
 - Clean shop areas.

S-16.23 On/Off Switch

Protect on/off switches to prevent the machine or equipment from being unintentionally energized.

S-16.24 Fouling Machinery

Before fouling the potential reach or turning radius of any part of a machine, a job briefing must be held with the operator.

S-16.25 Hydraulic Tools

- Inspect, maintain, and use hydraulic tools in accordance with manufacturer recommendations.
- Visually inspect hydraulic tools, hoses and connectors prior to daily use. Pull back any protective hose sleeves to help ensure a thorough inspection. Defective equipment is to be conspicuously labeled as defective, and immediately removed from service.
- Comply with lockout/tagout procedures during the inspection, service and maintenance of hydraulic tools.
- Do not handle pressurized hoses with a bare or gloved hand. Use an appropriate tool.
- Do not place pressurized hoses against the body.
- Manage hoses during set-up and use, so as to not create a tripping hazard, or allow hose contact with sharp edges or hot surfaces.

S-17.0 Rigging, Cranes, and Hoists

Observe the manufacturer's instructions for operation and maintenance of cranes. Be familiar with safe hoisting capacities and do not exceed the load chart ratings.

S-17.1 Rigging

When rigging for an overhead lift, make sure that all slings, wire ropes, and other hardware are approved by the manufacturer for overhead lifting. If you are the rigger, you must verify that the Working Load Limit (WLL) of each component involved in a lift is equal to or greater than the stress it will be subjected to during the lift. When determining sling capacity, consider that the stress on a sling varies with the angle of its legs.

Store slings in a clean, dry place. Store synthetic slings away from direct sunlight.

Cable clamps are not recommended for overhead lifting. When such use is necessary, use only new clamps applied and torqued to the proper specifications. Check the cable clamp torque regularly to ensure that vibration does not loosen the clamps.

S-17.1.1 Inspection Requirements

Inspect all new or repaired ropes, slings, and other rigging hardware upon initial receipt, daily before use, and whenever you suspect damage.

S-17.1.2 Identification Tags

All slings must have a durable identification tag that states the following:

All slings:

- Manufacturer's name and Working Load Limit (WLL)

Cable and chain slings:

- Size

Chain slings:

- Serial number, Grade and Reach

S-17.1.3 Rigging a Load

When securing a load:

- Do not wrap the hoist cable around the load.

- Never attach a hoisting equipment hook directly to an object being lifted unless the object has a permanent lifting eye or similar attachment device designed for overhead lifting; use a sling or other certified overhead lifting device.
- Protect the sling or lifting device from chafing or cutting.
- Make sure the load is securely hooked and well-balanced.
- Make sure the load is always properly set in the bowl of the hook. Loading on or toward the point (except in the case of grab hooks or other hooks designed for such loading) overloads the hook and causes the hook to spread and possibly fail.
- When freeing a sling, make sure the load has settled before unhooking the sling. Stand clear to avoid being struck by the sling or load.

S-17.1.4 Chain Slings

Chain slings used for overhead lifting must be constructed of Grade 8 or greater alloy steel.

Never splice or shorten a chain by inserting a bolt between links.

Never load a kinked chain. When applying a load, take up slack slowly and see that every link in the chain seats properly.

Use chain attachments (rings, shackles, couplings, and end links) designed for the chain to which they are fastened.

S-17.1.5 Below-the-Hook Lifting Devices

Use only below-the-hook lifting devices that are certified by a qualified individual or manufacturer. Certified below-the-hook lifting devices will have a permanent nameplate or marking stating the following information:

- Manufacturer’s name
- Serial number
- Lifter weight (if over 100 lbs.)
- Rated load (capacity)

Modify or re-rate below-the-hook lifting devices only with written permission from the manufacturer. Repair below-the-hook lifting devices only if you are qualified or are under the direction of a qualified person.

S-17.2 Cranes and Hoists

S-17.2.1 Requirements

If you are the operator and you are leaving the crane, ensure that the:

- Master clutch is off.
- Machine brakes are set.
- Load is lowered to the ground.

If crane is rail-mounted, set the hand brake and ensure that at least one wheel is chocked or “skated.”

Complete the “Work Equipment Crane Operation” class before operating a movable counterweight crane.

Operators must document monthly inspection of crane, repairing or removing from service those that fail inspection.

A log book, operator’s manual, and service manual must be readily accessible in the cab of cranes at all times.

S-17.2.2 Lifting

When lifting:

- Ensure that a designated employee will direct movement and give signals. This employee must determine that all personnel are in safe positions before hoisting begins.
- The operator must stay at the controls when a load is suspended.
- Return cranes and hoists to neutral and secure positions when not in use.
- When lifting heavy loads, test the brakes when the load is suspended a few inches above the floor or ground.

S-17.2.3 Outriggers

Comply with manufacturer's requirements for deployment of crane outriggers unless a written exception has been issued by the manufacturer to BNSF. Manufacturer's requirements can be found in the operator's manual and/or on the load chart(s) which are required to be on the crane at all times.

S-17.2.4 Fouling Track

Provide adequate protection for a machine, boom, or load before allowing it to foul a track.

S-17.2.5 Power Line Clearance

Maintain mandatory minimum clearances, as shown in the chart, between electrical power lines and any part of a hoisting device or load. If the power line voltage cannot be determined, maintain a minimum of 45 feet clearance.

Power Line	Distance from Power Line
50 KV or below	10 feet
50 KV - 200 KV	15 feet
200 KV - 350 KV	20 feet
350 KV - 500 KV	25 feet
500 KV - 750 KV	35 feet
750 KV - 1000 KV	45 feet

If power line voltage clearance requirements cannot be met, then ensure that a power company official de-energizes and grounds the power lines before any part of the crane or load enters the clear zone, or takes equivalent actions that comply with applicable regulatory requirements.

Clearances for Cranes or Other Equipment in Transit Near Power Lines

Power Line	Distance from Power Line
0.75 KV or below	4 feet
0.75 KV - 50 KV	6 feet
50 KV - 345 KV	10 feet
345 KV - 750 KV	16 feet
750 KV - 1000 KV	20 feet

Whenever possible, perform your work moving away from the power line, not towards it.

Whenever working a crane within one boom length of the mandatory minimum clearance from a power line in any direction—front, back, side, or overhead—position a lookout on the ground to warn you of the approach to the limits. The lookout cannot be the same person (groundman) who is giving signals for the move.

S-17.2.6 Load Clear of Persons

Do not move a load until all persons are clear.

Never move a load over people or occupied equipment. Use a warning device to warn persons in the path of the approaching load.

S-17.3 Passengers

Board a crane only if authorized by the operator. If you are a passenger, ride only in safe areas designated by the operator.

S-17.4 Electric Cranes

When operating an electric crane, do not leave the crane cab or allow anyone on top of the cab without opening the main switch.

S-17.5 Restrictions Near Hoisting Equipment

S-17.5.1 Working Near Equipment

Do not walk, stand, or work under a suspended load. When possible, avoid walking, standing, or working under crane booms, or in close proximity to pile driver leads.

When working with or near lifting operations, keep clear of the swinging boom, counterweight, or cab.

S-17.5.2 Guiding the Load

Use only tag lines, poles or load hooks to guide a load. Use guides or fixtures, where available, for precision placement.

Exceptions:

1. When necessary for precision placement and following risk assessment, gloved hand or hands may be used to guide a load into final position provided that no part of the body is placed between the load and any obstruction that would create a pinch point.
2. Risk assessment may determine that it is preferable from a safety standpoint to have the crane/equipment operator control the load without the use of ground personnel manning taglines or the equivalent. All personnel and equipment would remain in the clear until precision placement.

S-17.5.3 Rail Handling

Before rail is being loaded or unloaded, verify rails on racks are individually tied down. Only the rail being handled should be unsecured.

On boom trucks, verify during risk assessment that hydraulic cylinders or other components of the crane will not strike racks or material on racks during loading or unloading operations.

S-17.6 Crane and Hoisting Signals

Only a designated employee (groundman) will give signals to the hoisting machine operator. Before work begins, the groundman must communicate with the operator to develop an understanding of all signals.

The crane operator must stop the move if a signal is not understood or if visual contact is lost with the groundman. The groundman must continue to give signals until the move is complete.

When two or more hoisting machines are lifting the same load, only one designated employee will direct the movements.

Accept signals for operating hoisting equipment only from the designated groundman, except in an emergency. An emergency stop signal must be accepted from anyone.

S-17.7 Standard Crane Hand Signals

HOIST: With forearm vertical, forefinger pointing up, move hand in small horizontal circle.

LOWER: With arm extended downward, forefinger pointing down, move hand in small horizontal circle.

STOP: Arm extended, palm down, move arm back and forth horizontally.

EMERGENCY STOP: Both arms extended, palms down, move arms back and forth horizontally.

SWING: Arm extended, point with finger in direction of swing of boom.

TRAVEL: Arm extended forward, hand open and slightly raised, make pushing motion in direction of travel.

RAISE BOOM: Arm extended, fingers closed, thumb pointing upward.

LOWER BOOM: Arm extended, fingers closed, thumb pointing downward.

USE MAIN HOIST: Tap fist on head; then use regular signals.

USE WHIPLINE (Auxiliary hoist): Tap elbow with one hand; then use regular signals.

MOVE SLOWLY: Use one hand to give any motion signal and place other hand motionless in front of hand giving the motion signal.

DOG EVERYTHING: Clasp hands in front of body.

RETRACT BOOM (Telescoping Booms): Both fists in front of body with thumbs pointing toward each other.

EXTEND BOOM (Telescoping Booms): Both fists in front of body with thumbs pointing outward.

RAISE BOOM, LOWER LOAD: With arm extended, thumb pointing up, flex fingers in and out as long as load movement is desired.

LOWER BOOM, RAISE LOAD: With arm extended, thumb pointing down, flex fingers in and out as long as load movement is desired.

TRAVEL (One Track): Lock the track on side indicated by raised fist; travel opposite track in direction indicated by circular motion of other fist, rotated vertically in front of body. (For land cranes only.)

TRAVEL (Both Tracks): Use fists in front of body, making a circular motion about each other, indicating direction of travel, forward or backward. (For land cranes only.)

S-17.8 Whistle Signals

S-17.8.1 Moving in Either Direction

If you are the operator of a locomotive crane, pile driver, or another crane operated on the rail, give the following whistle or horn signals before moving ahead or back:

- Two long blasts when moving ahead.
- Three short blasts when moving back.

Exception: Operators of small Maintenance of Way cranes performing repetitive work do not need to give signals, but the operator must be certain the way is clear for safe movement.

S-17.8.2 Approaching Work Areas, Crossings, and Intersections

If you are the operator of a crane that is approaching a work area, crossing, or intersection, be prepared to stop. When the way is clear, sound a warning signal and proceed. When one or more cars are being handled ahead of the crane, station a helper on the leading car to protect the movement unless this creates a safety hazard.

S-17.9 Personnel Hoisting

Material handling cranes must not hoist personnel, except with the authority of the supervisor and only in compliance with the requirements stated in ANSI standard B30-5-1994 "Mobile and Locomotive Cranes."

S-19.0 Thermite Welding

S-19.1 Thermite Welding

For thermite welding:

- Do not assist in the thermite welding process unless you are qualified or under the direct supervision of a qualified thermite welder.
- Stay 8 to 10 feet away from the thermite welding crucible from the time the welding portion in the crucible is ignited until the molten metal has been poured into the sand molds that surround the rails.

Exception: The thermite welder may move within the 8 to 10 feet clear zone to the crucible for the pour after the ignition.

- Watch the pouring of molten metal from the crucible into the sand molds only if you are wearing welding glasses or goggles with filter lenses of minimum shade #3 through #5.
- Do not dump the hot slag from the slag pans on wet soil, in water, or on snow.

S-20.0 Work Environment

S-20.1 Protection for Openings

Keep covers on drop pits, manholes, or similar openings. When necessary to remove the covers, use the proper barricades or guard rails to protect the opening.

Do not step or jump across pits, manholes, or similar openings.

S-20.2 Clearances and Obstructions

S-20.2.1 Overhead and Side Obstructions

Do not contact overhead or side obstructions on or near the right of way.

S-20.2.2 Communication/Signal Wires

Do not touch broken or sagging communication and signal wires, power lines, and guy wires. Repair wires and power lines only if you are qualified to do so. Do not use metal or metal-reinforced tape near wires.

S-20.3 Confined Space

Consider all confined spaces hazardous unless proven otherwise. All employees and subcontractors must have a permit before entering a permit-required confined space.

S-20.4 Machine Operation

Unauthorized persons must not be on hoists, machines, or any shop machinery, or distract employees operating such equipment.

S-20.4.1 Protecting Hoses/Cables

Operate mobile equipment over hoses or electrical cables only if they are properly bridged.

S-20.4.2 Working Surfaces

Keep working surfaces free of coolants, lubricants, petroleum products, or other slippery material when these surfaces are on or around vehicles, machines, or equipment that employees are operating.

S-20.5 Office Environment

S-20.5.1 Office Equipment Arrangement

Arrange office equipment to keep aisles and emergency exits clear.

S-20.5.2 Filing Cabinets and Desks

Arrange contents of filing cabinets to balance the cabinet.

Distribute contents throughout the cabinet rather than in the top drawer; place the heavier materials in the bottom drawer.

Arrange the material neatly and keep the cabinet and desk drawers closed while unattended.

Do not use the top of cabinets for storage.

S-20.5.3 Chairs

Do not scoot across floors or stand on chairs with casters. Keep all chair legs on the floor.

S-20.5.4 Cords

In walking areas, encase the telephone or electrical cords in cord protectors, or properly secure them.

S-20.5.5 Paper Cutters

Use paper cutters and other office equipment carefully, keeping body parts clear. Close and secure the paper cutter blade after use.

S-20.5.6 Reaching Overhead

Use a ladder or step stool to reach overhead objects.

S-20.6 Trenching and Shoring

Any employee working in an excavation must do so under the direct supervision of a competent person. A competent person has successfully completed BNSF-approved training on the technical and regulatory requirements of a competent person.

S-20.7 Tower Inspection Procedure

Before employees work on a tower, the employee in charge must ensure that a visual inspection has been completed.

The employee in charge will send crew members to each of the anchor points. Crew members will then make a visual inspection of the anchor points.

Crew members must check the following items:

- The anchor shaft.
- Turnbuckles.
- Guy wires.
- Gripping devices.

In addition, crew members must hand-check guy wires for the proper amount of sag at each guy level. Crew members will then report all findings to the employee in charge.

The employee in charge will then advise all crew members of and correct any unsafe conditions.

Field work must not begin until all unsafe conditions are corrected.

S-20.8 Removing Hardware from or Adding Hardware to a Tower

When employees are removing hardware from or adding hardware to a radio or microwave tower, an employee in direct contact with the employees working on the tower must be assigned to control access to the area. The employee assigned must ensure that other employees enter the area only when it is safe to do so.

S-20.9 Removing Material from a Tower

Employees must use hand or winch lines to lower material from a tower. Before lowering material, employees should place it in pouches, if possible.

Employees must not drop or throw material from a tower.

S-20.10 Inspecting Fall Protection Equipment and Systems

- Inspect fall protection equipment and systems according to the manufacturers' instructions provided with the equipment, and as reviewed in BNSF training sessions.
- Inspect fall protection equipment and systems before each use. Document the inspections.

S-20.11 Cleaning and Storing Fall Protection Equipment

- Clean fall protection equipment components according to the manufacturers' instructions provided with the equipment, and as reviewed in BNSF training sessions.
- Store fall protection equipment components where they cannot be accessed by unauthorized personnel. Protect them from adverse weather conditions, chemical exposure, and open flames and sparks.

S-20.12 Tools and Equipment

When using tools and equipment, observe the following general guidelines:

- Ensure that winches, winch lines, and other rigging equipment (i.e., hooks, chokers, shackles, come-alongs, etc.) are of an adequate size to lift and handle the loads required.
- Ensure that all extension cords and metal-cased electric power tools have a three-conductor, grounded plug.
- Do not hoist a "live" electrical extension cord; give a signal to energize the line only after the cord has been secured to the tower.
- Secure power tools on the tower with a lanyard or rope, and do not plug them in until they are secure.

Never use a tool's power cord to secure a tool to a tower.

- Keep extra tools and other materials secured in pouches.
 - Note:** Large items should have at least 60 percent of their bulk inside a pouch. When an item is heavier on one side than the other, place it in the pouch with the heavy end down.
- Do not place unsecured items on a tower member.
- Carry tools on a safety belt only if they are necessary to do the job.

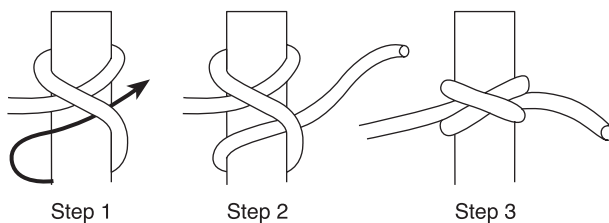
Loading a safety belt with excess tools and equipment is unsafe.

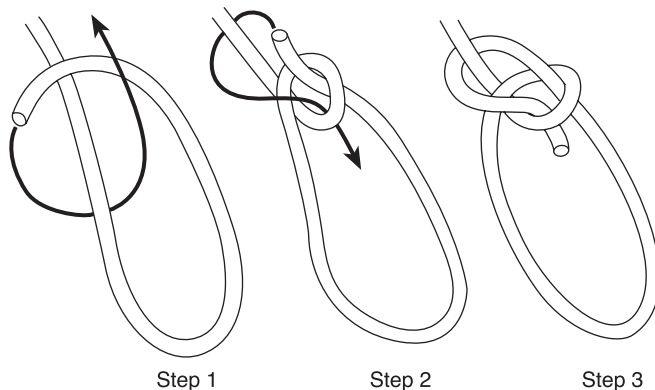
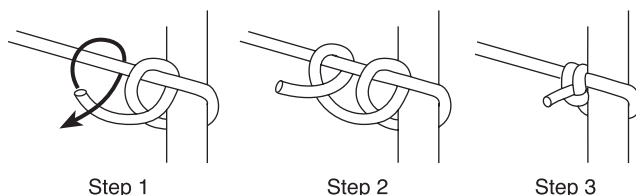
- Use a winch or hand line to hoist tool pouches and large tools.

S-20.13 Knots

The following knots are used in rigging and installation activities. All crew members must know and use these knots.

A. Clove Hitch



B. Bowline**C. Two Half Hitches****S-20.14 Tag Lines**

When performing installations, be at tag lines or secure them at all times.

S-20.15 Outfit Cars**S-20.15.1 Outfit Car Steps**

The employee in charge must ensure that outfit car steps are maintained in a safe condition and are securely fastened to the outfit car.

S-20.15.2 Access

When occupied outfit cars are located less than 25 feet from a main or running track, the employee in charge must ensure:

- Occupants enter and leave the car on the side opposite the track.
- Doors on the main track side of outfit car doors have a bar fastened across.

Note: The bars must be fastened 4 feet above the floor.

- Doors on the main track side of tool cars are closed and locked.

S-21.0 Personal Protective Equipment and Clothing (PPE)**S-21.1 Personal Protective Equipment Requirements**

All BNSF employees, contractors and their agents, visitors, and vendors must wear the following equipment while on BNSF property:

- Hard hats which meet the specifications (ANSI Standard Z89.1, Type I, Class E & G) found in the BNSF Safety and Health Equipment Catalog.
- Safety glasses with permanently mounted side shields and authorized by BNSF. Authorized tints for safety glasses are: Rose #1 and 2 and Grey #1 indoors and Rose #1 and 2 and Grey #1, #2 and #3 outdoors. Eye protection may need to be upgraded depending upon the work to be performed or exposure to that work.
- Safety boots.

- Hearing protection (ear plugs/ear muffs) when entering designated hearing protection areas, while performing designated jobs/ activities, or in situations where the noise requires you to raise your voice during normal conversation at a distance of 3 feet.
- Hand protection when there is a risk of exposure to harmful substances, punctures, severe abrasions, lacerations or cuts, chemical or thermal burns, high voltage, vibration, temperature extremes, or infectious biological agents.
- Enhanced visibility workwear is to be worn in accordance with the below-listed specifications. Enhanced visibility workwear is defined through this rule as an American National Standards Institute (ANSI) Class II or III garment that is orange in color, with retro-reflective striping.
- Acceptable items of enhanced visibility workwear: vest, tee-shirt, jacket, sweatshirt or rainsuit.
 - All items of enhanced visibility work wear must, as a minimum, meet National Fire Prevention Association (NFPA) 701 requirements.
 - Enhanced visibility garments meeting the American Society for Testing and Materials (ASTM) 1506 standard are to be worn as outer garments when performing, or within the established “circle of safety” of hot work operations.
 - Enhanced visibility garments must be specifically rated for electrical work and meet applicable National Fire Prevention Association (NFPA) 70E requirements. Synthetic garments are not to be worn underneath such garments.
 - American National Standards Institute (ANSI) Class III workwear is required to be worn by the flagger when highway flagging at night or when highway flagging operations are performed on roadways where posted speeds are 50 MPH or greater.
- Enhanced visibility workwear must be worn as an outer garment, not partially covered by overalls, etc. Enhanced visibility garments are to be replaced when they become faded or dirty to the point where they no longer function as an enhanced visibility garment.

Exception: When climbing poles or towers fall protection may be worn over enhanced visibility workwear, as needed, to facilitate rescue.
- At least one item of enhanced visibility workwear must be worn when:
 - working in right-of-way areas, including when foul of track
 - working within 50’ of operating mobile construction equipment, including cranes and boom trucks
 - performing highway flagging operations, or otherwise exposed to vehicular traffic while on-duty; e.g. vehicle breakdowns along roadways
 - involved in work train operations
 - at derailment site
 - at intermodal facilities
- The wearing of a “high visibility” hardhat, without the hardhat being supplemented by the wearing of an enhanced visibility garment, does not meet enhanced workwear requirements. “High visibility” hardhats are to be replaced when they become faded or dirty to the point where enhanced visibility is lost.
- For personal hygiene reasons items of personal protective equipment (PPE), excluding fall arrest equipment and items that may be sanitized between users based on manufacturer’s instructions, are not to be shared.
- Personnel working within the “circle of safety” of a tool or equipment operation must wear the same level of PPE as the user/operator, except when the operator is in an enclosed cab with doors and windows closed and not required to wear a hard hat. Personnel outside the cab must wear a hard hat.

Exceptions:

- Personal protective equipment (PPE) is not required to be worn:
 - when performing office tasks in office areas;
 - when inside highway vehicles when windows are completely closed; or
 - when inside passenger-carrying rail cars.

- A hard hat is not required to be worn:
 - by Train, Yard, and Engine (TY&E) employees except when performing work service with Maintenance of Way, at derailments, or as directed by supervisor;
 - when inside roadway equipment with an enclosed cab with doors and windows closed; or
 - when inside highway vehicles or hy-rail vehicles.
- Safety glasses and lenses:
 - Employees must wear safety glasses provided by BNSF unless exempted by contractual agreement.
 - When exempted by contractual agreement, personal safety eyewear must also meet the below-listed requirements.
 - No other tinting other than as prescribed in the BNSF Prescription Safety Glasses Policy (indoors: Grey #1 and Rose #1 and #2) (outdoors: Grey #1, #2 and #3, and Rose #1 and #2) is permitted.
 - Mirror-like lenses, amber “shooter” lenses, or lenses that are intended to correct a color vision deficiency are prohibited.
 - Safety glasses are not required when inside highway vehicles or hy-rail vehicles when windows are completely closed.

Off-the-Job-Use

Employees are encouraged to use BNSF-provided personal protective equipment (PPE) off the job.

Other

Additional personal protective equipment, such as face shields, fall protection, welding jackets, etc., may be required by supervisors and/or as good safety practice warrants. See the PPE Chart for task/exposure-specific personal protective equipment requirements and recommendations.

S-21.1.1 Approved Equipment

BNSF employees must use personal protective equipment approved by the company. Replace and discard any PPE that no longer provides protection. Refer to the PPE Chart for requirements and recommendations.

S-21.2 Personal Protective Clothing Requirements

All BNSF employees, contractors and their agents, visitors, and vendors, working in other than an office environment, must wear long pants and waist-length shirts with sleeves at all times. Clothing must not interfere with vision, hearing, or use of hands and feet.

- Do not wear jewelry, wrist watches, finger rings, long watches or key chains, key rings, or other suspended jewelry when they present a hazard around machinery or electrical lines and equipment.
- Hair must be secured out of the way if it could become entangled in machinery or obscure your vision.

S-21.2.1 Special Protective Clothing

Wear protective clothing when the potential for chemical or physical injury to the body exists.

S-21.2.2 Safety Boots

Safety boots must meet the following criteria:

- Leather or leather-like upper.
- Sturdy non-leather sole that will resist puncture.
- 3/8-inch to 1-inch defined instep.
- Rounded toe.
- Above ankle (5-inch height as measured from inside boot).
- Minimum ASTM F2412-05, ASTM F2413-05—75-pound (100 pounds in Canada) impact and compression class toe.
- Lace-up.

S-21.2.3 Protective Gloves

Appropriate hand protection is required to be worn when actively engaged in work activities, except:

- when performing office activities;
- when operating highway vehicles;
- where manual dexterity is required, and there is no potential for exposure to energized electrical systems, sharp projections, hot surfaces, or corrosive chemicals, or
- when working in close proximity to machinery/equipment, where there is the possibility of gloves becoming entangled in moving parts.

Use the PPE Chart and Work Glove Selection Guide to select the appropriate glove for the task. When selecting chemical-resistant gloves, check with your supervisor.

S-21.2.4 Anti-Slip Winter Footwear

Employees will wear anti slip winter footwear when working in icy and or snowy conditions. Only BNSF approved winter footwear may be worn.

S-21.3 Respirator Selection and Use

Refer to the Respiratory Protection Chart to determine which task requires use of respirators. Your supervisor, safety manager, or the Industrial Hygiene group may specify additional tasks or activities not listed that require the use of respirators. If you have questions about the appropriate respirator selection, contact Industrial Hygiene.

S-21.3.1 Respiratory Protection Program

All BNSF employees who use a respirator must comply with the practices and procedures outlined in the Respiratory Protection program. When you are required to wear a respirator, you must:

- Be trained and fit-tested annually for the specific make and model of the respirator used.
- Be medically qualified annually.
- Not have any facial hair which contacts the sealing surface of the respirator facepiece or potentially interferes with the respirator valve function. Binding, rolling up, or other methods to constrain beards and moustaches are not acceptable means of compliance. These requirements apply when fit testing and whenever a respirator is worn.
- Inspect your respirator prior to use.
- Clean and properly store respirator following use.

Voluntary Respirator Use

When a respirator is not required for an activity, but you wish to voluntarily wear a respirator you must:

Elastomeric Facepiece models—

- Be trained and fit-tested annually for the specific make and model of the respirator used.
- Be medically qualified annually.
- Not have any facial hair which contacts the sealing surface of the respirator facepiece or potentially interferes with the respirator valve function. Binding, rolling up, or other methods to constrain beards and moustaches are not acceptable means of compliance. These requirements apply when fit testing and whenever a respirator is worn.
- Inspect your respirator prior to use.
- Clean and properly store the respirator following use.

Filtering Facepiece models—

For voluntary use of a filtering facepiece respirator, the user must comply with the prohibition on facial hair in the sealing area, and must be provided with Appendix D to the OSHA Respirator Standard (29 CFR, 1910.134). This document is entitled: *Mandatory Information For Employee Using Respirators When Not Required Under the Standard*. This document is available from the BNSF IH Department intranet home page.

S-21.4 Dark Lens Eye Protection

Except when welding or operating a torch, do not wear dark lens goggles or glasses at night or when working inside buildings/shops.

Photogrey or transition lenses are not to be worn by personnel operating mobile equipment from outdoor to indoor locations, or by personnel who perform similar tasks requiring critical activity or fast reaction to visual stimuli.

S-21.5 Hearing Protection

Wear hearing protection if you work in the following areas:

- On a locomotive under load.

Exception: When all doors and windows are closed, hearing protection is not required inside the control compartment of GE locomotives B40-8W, C40-8W, B40-8, C44-9W and EMD locomotives GP60M, SD60M, SD70M, and SD70MAC. Radio headsets must still be worn as required under S-23.22.

- Within 100 feet of humping or retarder operations.
- In a high-noise area required by posted notice or special instructions.
- In an area where continuous noise requires you to raise your voice to be heard at a distance of 3 feet.

Annual hearing conservation training and audiometric testing is mandatory for employees required to wear hearing protection on the job. Regardless of noise exposure, you are encouraged to participate in the hearing conservation program.

S-21.5.1 Use of Hearing Protection During Hot Work

All employees involved in welding, cutting, or heating operations must wear ear plugs or ear muffs.

S-21.5.2 Use of Hearing Protection During Energized Electrical Work

Ear canal inserts are to be worn when performing any inspection or maintenance work on energized electrical systems or equipment.

S-21.30 Personal Protective Equipment and Clothing Chart

PPE Chart X = Required equipment # = May be required based on task and materials	Hearing Protection	See Eye & Face Protection Chart	Protective Handwear (See Work Glove Selection Chart)	Welder's Jacket	Spats, Leggings	Disposable Overalls	Rubberized Apron	Remarks/ Special Requirements
Abrasive blasting	X	X	X		#	#		
Abrasive grinding or cutting (stationary)	X	X						Hearing protection RECOMMENDED.
Abrasive grinding or cutting (portable; MW)	X	X	X	#	#			All employees involved in welding, cutting or heating operations must wear earplugs or ear muffs while performing this task.
Adzing machine	X	X	X					Metal leggings and foot guards required.
Banding materials		X	X					
Blowing and cleaning with compressed air, steam, or water	#	X	X		#	#	#	
Boring, reaming, drilling	#	X	X					
Breaking frozen material (ice, ground, gravel, cinders, ballast, taconite, etc.) with hand tools		X	X					Wear enhanced winter footwear.
Breaking or cutting concrete, stone, or asphalt	X	X	X		#			
Buffing and polishing with a wire wheel using a portable hand tool	#	X	X					Gloves are not to be worn when operating stationary/ pedestal units.
Carbon-arc cutting and gouging	X	X	X	X	X			All employees involved in welding, cutting or heating operations must wear earplugs or ear muffs while performing this task.
Chain saw, chop saw	X	X	X					Chainsaw chaps are required to be worn.
Chipping, cutting, or caulking metal	#	X	X	#	#			All employees involved in welding, cutting or heating operations must wear earplugs or ear muffs while performing this task.
Climbing poles and rail/ work equipment		X	X					Long sleeve shirts or Kevlar sleeves are required to be worn when climbing poles. See fall protection requirements in E.I. 1.4.
Cut-off disks, saws, or other tools with carbide bits	X	X	X	#	#			All employees involved in welding, cutting or heating operations must wear earplugs or ear muffs while performing this task.
Cutting rivets, bolts, or cotter keys, splitting nuts, etc.	X	X	X	#	#			
Driving bucking, sticking, or heating rivets	#	X	X	#	#			All employees involved in welding, cutting or heating operations must wear earplugs or ear muffs while performing this task.
Dusty conditions		#				#		
Electrical hazard	X	X	#					Voltage rated gloves and required workwear of proper classification are to be worn when working with 50 volts and over. Ear canal inserts must be worn.

PPE Chart X = Required equipment # = May be required based on task and materials	Hearing Protection	See Eye & Face Protection Chart	Protective Handwear (See Work Glove Selection Chart)	Welder's Jacket	Spats, Leggings	Disposable Overalls	Rubberized Apron	Remarks/ Special Requirements
Electrical welding	X	X	X	X	#			Kneepads required when kneeling for extended periods of time. All employees involved in welding, cutting or heating operations must wear earplugs or ear muffs while performing this task.
Gas welding, cutting, heating	X	X	X	X	#			Kneepads required when kneeling for extended periods of time. All employees involved in welding, cutting or heating operations must wear earplugs or ear muffs while performing this task.
Hammer (punch)	#	X	X	#				Tool holder must be used. Have cap or Rhino liner on punch head.
Hand tools	#	X	X					
Handling chemicals or refrigerants, or in greasy conditions		X	X				#	
Handling or servicing storage batteries		X	X			#	#	
Intermodal facility - outside of offices	#	X	#					Enhanced visibility workwear must be worn. Checkpoint employees must wear enhanced visibility vests.
Lifting and carrying		X	X					
Machining steel, iron, or other metals	X	X	X		#			
MIG/TIG welding	X	X	X	X	#			All employees involved in welding, cutting or heating operations must wear earplugs or ear muffs while performing this task.
Painting		X	X			X		
Plasma arc cutting	X	X	X	X	X			Kneepads required when kneeling for extended periods of time. All employees involved in welding, cutting or heating operations must wear earplugs or ear muffs while performing this task.
Powder-actuated tools	X	X	X					
Rail Drill	X	X	X					
Rail grinder (MW)	X	X	X	X	X			
Rail saw	X	X	X	X	X			Welder's jacket required
Scaling, scraping, or removing welding flux	X	X	X	X	#			
Snow Blowing	X	X	X					
Spray painting (gun)		X	X			X		
Steam cleaning	#	X	X		#	#	#	
Striking, or striking with, hardened tools and fastenings	#	X	X		#			

PPE Chart X = Required equipment # = May be required based on task and materials	Hearing Protection	See Eye & Face Protection Chart	Protective Handwear (See Work Glove Selection Chart)	Welder's Jacket	Spats, Leggings	Disposable Overalls	Rubberized Apron	Remarks/ Special Requirements
Thawing with propane	#	X	X	X	#			
Thermite welding	#	X	X	X	X			Welder's jacket required. All employees involved in welding, cutting, grinding or heating operations must wear earplugs or ear muffs while performing this task. Packing gloves must be worn when packing a Thermite weld.
Visitors	#	X	#					Wear PPE according to what the person performing the task is wearing.
Woodworking machines	#	X	#		#			
Spraying/general use of cleaning agents; follow manufacturer's instructions.								

S-21.31 Eye and Face Protection Chart (PPE)

Eye and Face Protection Chart			
	<ol style="list-style-type: none"> 1. Type of safety eyewear and facewear to be worn. Properly tinted lenses must be used as required. 2. Maxims are considered as goggles only when worn with straps. 3. Where faceshields are worn only to meet requirements relating to metal to metal striking operations utilizing a 3 lb. or greater hammer, safety glasses may be worn underneath the faceshield, in lieu of impact goggles unless specified otherwise. 4. Polycarbonate faceshields over splash goggles are to be worn when exposed to liquids. 5. No other form of eye protection is required to be worn underneath a full-face respirator, to address impact concerns, when the faceshield has the ANSI Z87 marking. 		
	Basic Requirements	More Severe Exposure	Remarks/Special Requirements
Abrasive blasting (sand blasting)	Supplied air hood		
Abrasive grinding or cutting (portable)	Faceshield over impact goggles		Full length faceshield is required.
Abrasive grinding or cutting (stationary)	Impact goggles	Faceshield over impact goggles	Includes personnel on rear platform of production rail grinder as well as personnel in vehicles trailing production rail grinder where windows are open.
Adzing machines	Faceshield over impact goggles		
Banding materials	Safety glasses		
Blowing or cleaning with compressed air	Impact goggles; or welding helmet over safety glasses	Faceshield over splash or impact goggles, as appropriate	Always direct air away from eyes. See Track Welding manual for requirements when welding frogs.
Bonding, Signal	Faceshield over goggles		
Boring, drilling, or reaming	Safety glasses	Impact goggles	Faceshield over impact goggles when reaming bolt holes.
Breaking frozen ground, gravel, cinders, ballast, taconite, etc., with hand tools	Faceshield over safety glasses or impact goggles		Shorter length faceshields may be used.
Breaking or cutting concrete, stone, or asphalt	Faceshield over impact goggles		Full length faceshield is required.
Buffing and polishing with a wire wheel	Faceshield over impact goggles or welding helmet over safety glasses		
Carbon-arc cutting and gouging	Welding helmet over safety glasses		See Welding Operations Shade Chart
Chain saw, chop saw	Faceshield over impact goggles		Shorter length faceshields may be used.
Chipping, cutting, or caulking metal	Impact goggles	Faceshield over impact goggle required when using a 3 lb. or greater hammer.	Shorter length faceshields may be used.
Climbing poles	Safety glasses		
Cut-off discs, saws, or other tools with carbide bits	Faceshield over impact goggles		

Eye and Face Protection Chart			
	<ol style="list-style-type: none"> 1. Type of safety eyewear and facewear to be worn. Properly tinted lenses must be used as required. 2. Maxims are considered as goggles only when worn with straps. 3. Where faceshields are worn only to meet requirements relating to metal to metal striking operations utilizing a 3 lb. or greater hammer, safety glasses may be worn underneath the faceshield, in lieu of impact goggles unless specified otherwise. 4. Polycarbonate faceshields over splash goggles are to be worn when exposed to liquids. 5. No other form of eye protection is required to be worn underneath a full-face respirator, to address impact concerns, when the faceshield has the ANSI Z87 marking. 		
	Basic Requirements	More Severe Exposure	Remarks/Special Requirements
Cutting rivets, bolts, cotter keys, splitting nuts, etc.	Safety glasses	Impact goggles or faceshield over impact goggles	When working overhead, wear impact goggles and faceshield
Driving, bucking, sticking, or heating rivets	Faceshield over impact goggle		Full length faceshield is required.
Dusty conditions	Impact goggles		
Electrical welding	Welding helmet over safety glasses		See Welding Operations Shade Chart
Electrical hazard	Safety glasses	Arc flash equipment	See E.I. 1.9, Electrical Safety and applicable JSAs.
Gas welding cutting, and heating	Welding goggle; or shaded faceshield over safety glasses	Welding helmet over safety glasses	See Welding Operations Shade Chart
Hammer (punch)	Safety glasses	Impact goggles	Faceshield over safety glasses or goggles required when metal to metal contact using a hammer greater than or equal to 3 lbs.
Hand tools	Safety glasses	Impact goggles	Faceshield over safety glasses or impact goggles required when metal to metal contact when using a hammer greater than or equal to 3 lbs.; inc. spiking, clip application / removal, chisel use, etc.
Handling chemicals or refrigerants, or in greasy conditions	Splash goggles	Faceshield over splash goggles	
Handling or servicing storage batteries	Faceshield over splash goggles		
Intermodal facility	Safety glasses	Dependent upon task being performed.	
Lifting and carrying	Safety glasses		
MIG/TIG welding	Welding helmet over safety glasses		See Welding Operations Shade Chart.
Nordco C/CX Spiker Operator	Lexan guard in place or full length faceshield over safety glasses		
Painting	Safety glasses	Splash goggles or faceshield over splash goggles	
Pick use	Faceshield over safety glasses or impact goggles		Shorter length faceshields may be used.
Plasma arc cutting	Welding helmet over safety glasses		See Welding Operations Shade Chart.
Powder-actuated tools	Impact goggles	Faceshield over impact goggles	
Rail drills	Safety glasses	Impact goggles	
Rail grinder or saw	Faceshield over impact goggles		Full length faceshield is required.
Sandblasting (abrasive blasting)	Supplied air hood		
Scaling, scraping or removing welding flux	Welding helmet over safety glasses	Faceshield or welding helmet over impact goggles	
Snow Blowing	Safety glasses	Impact goggles	
Spray painting (gun)	Splash goggles	Faceshield over splash goggles	
Spraying and general use of chemicals	Splash goggles	Faceshield over splash goggles	
Steam cleaning	Splash goggles	Faceshield over splash goggles	
Striking, or striking with, hardened tools and fastenings	Safety glasses	Impact goggles	Faceshield required over impact goggles or safety glasses when metal to metal contact using a hammer greater than or equal to 3 lbs.; inc. spiking, clip application / removal, chisel use, etc. Shorter length faceshields may be used.
Thawing with propane	Safety glasses	Impact goggles	

Eye and Face Protection Chart			
	1. Type of safety eyewear and facewear to be worn. Properly tinted lenses must be used as required. 2. Maxims are considered as goggles only when worn with straps. 3. Where faceshields are worn only to meet requirements relating to metal to metal striking operations utilizing a 3 lb. or greater hammer, safety glasses may be worn underneath the faceshield, in lieu of impact goggles unless specified otherwise. 4. Polycarbonate faceshields over splash goggles are to be worn when exposed to liquids. 5. No other form of eye protection is required to be worn underneath a full-face respirator, to address impact concerns, when the faceshield has the ANSI Z87 marking.		
	Basic Requirements	More Severe Exposure	Remarks/Special Requirements
Thermite welding	Faceshield over impact goggles		Must use a polycarbonate full length faceshield. See Welding Operations Shade Chart
Visitors exposed to eye hazards	Safety glasses	Impact goggles	Employee in charge may require that additional equipment be worn
Woodworking machines	Safety glasses	Impact goggles	Conditions may result in a need to upgrade to a faceshield over impact goggles.

S-21.32 Work Glove Chart (PPE)

Work Glove Selection Guide											
X = Preferred glove O = Acceptable alternative	Brown Jersey	Canvas	Grip	Leather Palm	Vinyl-Coated Knit-Lined	Leather Glove	Welder's Glove	Welder's Mitten	Chemical Resistant	Heavy Duty Cut Resistant	Remarks/Special Requirements
Abrasive blasting							X				
Abrasive grinding or cutting (portable)				O		O	X	O			Welder's glove required for thermite weld hot grind process
Adzing machines				O		X					
Banding material				X		X				X	
Blowing and cleaning with compressed air				O		O	O	O			
Boring, reaming, drilling (portable)				X		X	O	O			
Breaking or cutting frozen material (ice, ground, gravel, cinders, ballast, taconite, etc.) with hand tools				X	X	X	O	O			
Bridge work			O	O		X				X	Dependent on task being performed.
Buffing and polishing with a wire wheel (pedestal)	No Gloves Required										
Carbon-arc welding and gouging							X	O			
Chain saw, chop saw				X		X					
Chipping, cutting, or caulking metal			O	X		X				O	
Climbing poles				X		X					Electrical rated gloves may be required. See E.I. 1.9.
Cut-off disks, saws, or other tools with carbide bits			X	X		X	X				
Cutting rivets, bolts, or cotter keys, splitting nuts, etc.				X		X					Welder's gloves are required when a cutting torch is used
Driving, bucking, sticking, or heating rivets							X	X			

Work Glove Selection Guide											
X = Preferred glove O = Acceptable alternative	Brown Jersey	Canvas	Grip	Leather Palm	Vinyl-Coated Knit-Lined	Leather Glove	Welder's Glove	Welder's Mitten	Chemical Resistant	Heavy Duty Cut Resistant	Remarks/Special Requirements
Electrical welding							X	X			
Gas welding, cutting, heating							X	X			
Hammer (punch)				X		X				X	
Hand tools (Tool specific requirements: See JSAs)		O	O	O	O	O				O	
Handling chemicals									X		No one glove type would be appropriate for all chemical exposures. Check MSDSs for guidance.
Handling molten metal							X	X			
Handling/servicing storage batteries									X		Wear neoprene or other corrosive resistant gloves.
Lifting and carrying			O	X	O	X	O	O		O	
Machine operators			O	X		X					
Machining			O	X	O	X				O	Gloves are not to be worn when operating some machines. See Manufacturers Instructions or JSAs.
MIG/TIG welding							X	O			
Painting					X				X		
Plasma arc cutting							X	O			
Powder-actuated tools				X		X					
Rail grinder, drill or saws				O		X	X	O			Welder's glove required for thermite weld hot grind process
Scaling, scraping, or removing welding flux							X	O			
Spike Keg Handling										X	
Spraying or general use of cleaning agents									X		
Spray painting (gun)									X		
Steam cleaning									X		
Striking, or striking with, hardened tools and fastenings			O	X		X	X	O		O	Dependent on task to be performed.
Stripping cable										X	Need to direct cutting edge away from body.
Thawing with propane							X	X			
Thermite weld packing					X						
Woodworking tools			X	X		X					Gloves are not to be worn with some woodworking machines. See mfg. instructions or JSAs.

S-21.33 Respiratory Protection Chart (PPE)

Task	Required Respirator (See Key)							Cartridge (As Applicable)	
	APR-HM-FF	APR-HM-EF	APR-FM	PAPR	SAR	SABH	SCBA	P100	MC
Abrasive Blasting						X			
Air arcing on frogs. NOTE: This activity also requires the use of an engineering control - the Smoke Cannon local exhaust ventilation system.	X	X		X				*	
Asbestos: Disturbing or removing any asbestos-containing materials		X						*	
Bolt installation/ removal on lead bridges using pneumatic tools. No torch heating involved		X						*	
Compressed air removal of particulate in locomotive sub-floor areas			X	X				*	
Disturbing, removing or disposing of accumulations of dried bird droppings	X	X						*	
Disturbing, removing or disposing of rodent nests	X	X						*	
Entry into, or work performed in, confined spaces, where the oxygen levels are less than 19.5%, and/or concentrations of airborne contaminants can cause rapid, serious health effects (IDLH conditions)							X		
Entry into, or work performed in, environments which can cause or may be reasonably anticipated to cause rapid, serious health effects (IDLH) environments, such as derailments involving release of hazardous materials							X		
HazMat operations, where uncontrolled, unknown or IDLH atmospheres may exist							X		
Maintenance of way activities when visible dust is produced. Includes, but is not limited to, ballast dumping, scarifying, brooming, etc.	X	X						*	
Operating or riding locomotives in the Cascade, Stampede, Flathead or Moffat tunnels							X-1		
Spray painting using compressor or airless sprayer			X						*
Taconite handling and related maintenance operations when working within Belt Buildings and visible dust is present	X	X						*	
Welding/cutting, torch burning, or rivet busting on structures (lead-based painted surfaces)				X				*	
Welding, cutting, torch work inside enclosed cars/boxcars/ hopper cars, etc. where continuous, forced ventilation is not provided				X				*	

Key

X	Required respirator. If multiple selections are indicated, either type may be used.
X-1	Specially designed SCBA solely used for the Tunnel Emergency Respirator Program ("TERP")
APR-HM-FF	Air purifying respirator, half-mask, filtering facepiece (3M #8233, N100)
APR-HM-EF	Air purifying respirator, half-mask, elastomeric facepiece
APR-FM	Air purifying respirator, full Facepiece
PAPR	Powered air purifying respirator
SAR	Supplied air respirator, all types excluding blast helmet models
SABH	Supplied air blasting helmet
SCBA	Self-contained breathing apparatus
MC	Multi-contaminant cartridge

Contact the BNSF Industrial Hygiene Department for additional information.

Voluntary Use - Where respirators are used for any task not identified within this table, the usage shall be deemed as Voluntary. All requirements applicable to voluntary usage, as identified within BNSF documents, must be followed. For filtering Facepiece models, the user must be provided with a copy of Appendix D to the Occupational Safety and Health Administration (OSHA) standard 29 CFR 1910.134, *Respiratory Protection*. Additionally, the user must not have any facial hair which interferes with the respirator-to-face seal. Where all other types of respirators are used on a voluntary basis (e.g. non-filtering facepiece models), the user must comply with all program requirements, including completing a medical questionnaire, being fit tested, attending training, and not having facial hair which interferes with the respirator seal.

S-22.0 Movement of Trains and Engines

S-22.1 Inspecting Passing Trains

Inspect passing trains. If you detect any of the following conditions, notify crew members on the passing train by any available means:

- Overheated journals.
- Sticking brakes.
- Sliding wheels.
- Wheels not properly positioned on the rail.
- Dragging equipment.
- Insecure contents.
- Signs of smoke or fire.
- Headlights or markers improperly displayed.
- Any other dangerous conditions.

When possible, a crew member on the engine of the train being inspected must notify a crew member on the rear of the train when the train is being inspected by other employees.

S-22.2 Ground Inspections

When a train stops to let another train meet or pass it, trainmen on the head end must inspect the passing train from the ground. If it is safe to do so, a crew member must cross the track and inspect the side of the passing train opposite the stopped train.

S-22.3 Trackside Warning Detectors and Inspections

Crew members must be aware of trackside warning detectors and signals from people inspecting their train. Stop the train immediately for inspection when:

- A crew member receives a stop signal.
 - A trackside warning device indicates a train defect.
- or
- You are notified of a dangerous condition.

Do not proceed until it is safe to do so.

S-25.0 Job Tools

S-25.1 Job Safety Briefing

Who

All individuals involved in a task.

What

A two-way communication tool to ensure that every team member is alert and focused on the job, knows what is to be done, and knows how it will be accomplished. If you see a better way to do the job or are not confident about what you will be doing, talk about it.

Why

To ensure that the job is done right the first time: without injuries or damage, and meeting BNSF standards.

When

At the beginning of the job or at any time during the job as conditions change or new tasks are started.

Where

On the job, at the work site, in the locker room, or wherever the whole crew can get together.

How

The following elements are essential to any job safety briefing:

- Statement of job.
- Assignment of tasks and responsibilities.
- Identification of existing and potential hazards.
- Required tools, equipment, and materials.
- Necessary safeguards and procedures.
- Feedback and questions.

When participating in a job safety briefing, be sure you leave the briefing knowing the answers to these questions:

- What will I be doing?
- What is the plan of attack?
- What are the hazards?
- What safeguards must be used?
- What do I do if a hazard emerges?
- What special conditions should I watch for?
- When should we stop and re-brief?

Make room for special conditions: If the job is complex enough, brief it in portions. What portions work best? What changes in job conditions require a re-briefing?

Follow up: Each person must check frequently to see that the job is proceeding according to the plan as discussed in the job safety briefing and that any hidden hazards are identified and addressed. How do we make sure everyone stays alert?

S-25.2 Stretches**Overview**

Check with your physician before beginning a new exercise program, or if you have had recent joint trouble, muscle problems, or surgery.

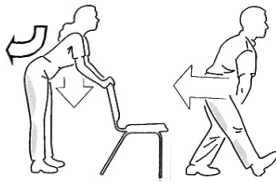
- Don't bounce.
- Keep the stretch mild and comfortable.
- Relax muscles as you stretch.
- BREATHE, don't hold your breath.
- Hold your stretch until tension releases, and then go further into another mild stretch.
- You should NEVER feel pain during or after a stretch.
- Stretch before you work, before any physical exertion and periodically to relieve muscle tension.
- A good rule of thumb is to stretch every 20 to 30 minutes.
- Don't forget to stretch both sides of the body when stretching.

- Tension for the initial stretch should release within 60 seconds. If it doesn't, reduce the intensity of the stretch slightly.

Benefits

- Increases range of motion, reducing risk of injury near joint limits.
- Warms muscles, reduces internal friction, and “resets” discs prior to activity.
- “Pre-fuels” muscles with oxygen before activity.
- Helps muscles relax and reduces soreness after activity.

Back of Leg



Put one foot forward, on heel. Bend back knee slightly. Bend forward at hips with straight back. Support upper body with hands on your bent knee. Arch your back slightly. Gently move your butt straight back to put tension on the back of leg.

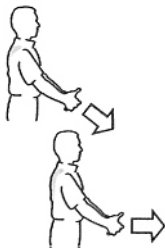
Using chair for support, bend at the hips and keep the three natural curves of your back. Continue to bend forward at the hips until you feel mild tension in the muscles at the back of the leg..

Front of Hip



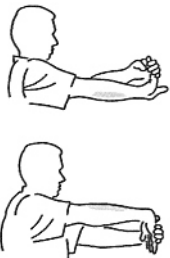
Place one foot forward. Keep your feet parallel to each other. Do not arch your back. Rotate your butt under until you feel mild tension in the front of hip of the straight leg.

Upper Back



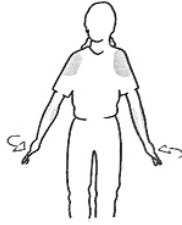
Cup your hands together in front of you. With elbows slightly bent, move your cupped hands down. Move your cupped hands away from your body until you feel mild tension.

Forearm



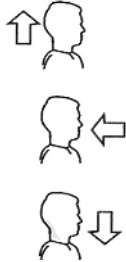
Slowly bend or extend your wrist. You can do this either with or without a gentle pull from the opposite hand. Stretch until you feel mild tension in the forearms.

Shoulder and Arm



Let your arms hang comfortably at your sides. Slowly rotate your hand and arm outward until you feel mild tension. Rotate your arm and hand in the other direction until you feel mild tension. Repeat 5 times.

Back of Neck



Stretch up as tall as you can through your spine. Tuck chin into neck. Lower your chin slightly until a mild stretch is felt. Hold until tension goes away.

Side of Neck



Stand or sit up with “Tall” posture. Tip ear toward shoulder. Hold mild stretch until tension goes away. Keep head tipped and rotate chin down towards shoulder. Hold until tension goes away. Lower chin towards shoulder. Hold until tension goes away.

Chest



Slowly round your shoulders and arms forward and back. Do 5 to 10 times each. Hold mild stretch in either position until stretch releases (up to 60 seconds).

Upper Arm and Lower Back



Stand up tall, stretching rib cage away from hips. Stretch your elbow upwards. Hold your stretch until tension goes away. Bend SLIGHTLY to opposite side, if needed, to increase stretch.

Tips for People Leading Stretches

Tell everyone that we have a new stretching routine to start using. It is based on some of the stretches we have used before and has been updated to cover all the major body areas, using techniques that should be both convenient and effective. When leading group stretches, be sure no one is bouncing or using extreme twisting motions as they stretch. You may want to diplomatically provide some corrective suggestions to people you see who seem to be having trouble understanding or doing any of the stretches.

Remind people that stretching is not a competition to see who can do the most or go the farthest. People have different levels of flexibility, and we need to respect these differences in ourselves, allowing each person to experience benefits at their own pace. It took your whole life to reach the level of flexibility (or inflexibility) you now have, so you should expect benefits to be gradual as you stretch regularly over time.

Remind people to check with their physician if they have particular problems with stretching, and to do only what they feel comfortable doing in the meantime.

S-26.0 Policies

S-26.1 Conflict of Interest

No officers or employees of the company may have personal interests which might conflict or appear to conflict with the interests of the company or its affiliates or which might influence or appear to influence their judgment in performing their duties. The outside activities and affairs of all officers and employees should be conducted so as to avoid loss or embarrassment to the company and its affiliates.

Employees must not engage in another business or occupation that would create a conflict of interest with their employment on the railroad or would interfere with their availability for service or the proper performance of their duties.

This policy is designed to foster a standard of conduct which reflects credit in the eyes of the public on the company, its officers, and its employees, and which protects the reputation and financial well-being of the company. There is no intent to interfere with the personal interests or activities of officers and employees.

S-26.2 Instruction for Care and Inspection of Climbers, Climber Straps and Pads, Positioning Equipment, and Safety Straps

Inspect climbing equipment prior to each use. Immediately tag defective equipment as "Out of Service." Remove from service and discard the equipment, or return it to the manufacturer for repair/recertification. Maintain climbing equipment in accordance with manufacturer's recommendations.

S-26.3 Medical Examinations

The Medical Department will determine when medical examinations are necessary, the content of such examinations, and requirements for participation as the needs arise. Employees subject to these examinations must follow any and all requirements as issued.

S-26.4 Sexual Harassment

Employees on duty or on railroad property must not sexually harass others. Sexual harassment includes unwelcome sexual advances, requests for sexual favors, or other verbal or physical sexual conduct given under the following conditions:

1. An individual must submit to the conduct as a term or condition of employment.
 2. If an individual submits to or rejects the conduct, that action is used to influence decisions affecting the individual's employment.
- or
3. The conduct interferes with an individual's work performance or creates an intimidating, hostile, or offensive work environment.

Employees who feel they have been sexually harassed must contact their manager, local Employee Relations, or Corporate Employee Relations.

S-26.5 Signal Power Lines of Fewer Than 600 Volts

When work is to be performed on signal power lines of fewer than 600 volts, power lines will be de-energized and circuit breaker or sectionalizing switch secured in the OFF position. Lockout/Tagout (LOTO) will be attached to indicate to other employees that power is off because of work being performed on the line. Power will not be restored except by the person who de-energized the line. The work area is to be identified by an authorized person in charge of work to determine that all power feeds in the affected area are de-energized. If the person in charge is uncertain as to the limits of power feeds, the limits should be determined by referring to the Signal Circuit Plans.

After the power line is de-energized, it will be tested by taking a volt reading using a suitable meter before allowing work to proceed. The meter should not be held. When attaching the meter to the power line, connect one lead at a time. When performing this test, the employees must take due caution to prevent contact with the meter and leads. On power lines of 50 volts or more, electrical protective rubber gloves will be used.

S-26.6 Smoking

It is BNSF's policy to completely prohibit smoking on all enclosed properties by employees, customers, vendors, and guests. Outdoor smoking should not interfere with nonsmokers' rights to clean air as they enter and leave buildings.

"Smoking" will mean inhaling, exhaling, carrying, or burning any lighted pipe, cigar, cigarette, or other item which emits smoke.

"Enclosed property" will mean all BNSF-owned or leased office space or buildings, shops, automobiles, rail or work equipment vehicles, locomotives, cabooses, and all other railroad rolling stock.

"Employee" will mean all exempt and scheduled employees and other persons working for BNSF as consultants, private contractors, temporary employees, or in similar capacities.

S-26.7 Telecommunication Usage

Objective

The objective of this policy statement is to provide guidance in the efficient and effective use of BNSF telecommunications systems.

Scope

This policy applies to all users of BNSF telecommunications, including, but not limited to, the BNSF network, cellular phones, 800 service, telephone calling cards, and facsimile transmissions. Contractors are considered "users" within the context of this document.

Policy

General

In order to meet the needs of our customers and minimize expense to the company, use of telecommunications services should be restricted to business communications. Personal use should be limited to necessary and urgent matters.

Telecommunications must arrange for all telephone, pager, and cellular services and equipment at all BNSF locations, as well as designate the desired providers of such services and equipment.

It is each user's responsibility to become familiar with the various features of the BNSF telephone system, and acquire the necessary skills to obtain maximum benefit from the telephone features in the execution of their jobs. It is also the responsibility of each user to utilize the most cost-effective service available. Telecommunications must make appropriate training and documentation available to the user community to facilitate the efficient and cost-effective use of the system features.

It is the responsibility of each department to establish usage expectations and guidelines within their respective departments, as well as to monitor compliance with the guidelines. This should include monthly self-assessment within the department by evaluating reports provided by telecommunications and/or service vendors.

Telecommunications must provide department heads with summary reports and access to detailed information to assist them in governing the utilization of services.

Each user is responsible for the reimbursement of charges associated with the personal use of company telecommunications facilities. The method of reimbursement must be addressed in instructions accompanying detailed statements of charges.

It is the responsibility of each department to monitor compliance with the reimbursement provisions of this policy.

Each user is responsible for the security of the telecommunications equipment, calling cards, and passwords provided for their use. The loss of any such item should be reported to Telecommunications immediately.

Misuse of BNSF's telecommunications system or services may result, without limitation, in termination of employment, suspension, or other disciplinary action.

Public Telephone Network and Long Distance Service

The BNSF telephone network must be used whenever possible for intra-company communications. The public telephone network should be used only when a desired location is not accessible through the BNSF network.

Calls placed through the public network are to be dialed direct. Operator assistance must be avoided whenever possible.

Directory Assistance should be used only when a listing is not available from a published directory or such a directory is not available.

Calls to "pay-per-call services" (1-900, 976-, etc.) and 1-800 calls that are charged back must not be made.

800 Service

Calls to BNSF's various 800 numbers, while provided at no cost to the calling party, are paid for by the BNSF. Therefore, 800 numbers must not be used when calls can be placed using the BNSF network. Furthermore, local telephone numbers should be used rather than 800 numbers whenever possible.

Users provided with 800 numbers to access the BNSF network should use this service only from locations where local access to the network is not available.

Cellular Phones

All cellular phones provided by BNSF must be obtained through Telecommunications, subsequent to written department head approval. Any transfer or reassignment of company-provided cellular equipment must be handled through Telecommunications.

Each user must review the detailed statement of charges for cellular service on a monthly basis, and take action to report billing errors, unauthorized usage, and further seek to reduce service costs by optimizing use, considering business needs.

Telephone Calling Cards

Telecommunications will issue telephone calling cards to employees, subsequent to written department head approval.

Each user must review the detailed statement of calling card charges on a monthly basis and take action to report billing errors and unauthorized use to Telecommunications.

Facsimile Machines

Facsimile transmissions will utilize the BNSF network whenever possible. Programmable facsimile machines must be programmed with BNSF network numbers to maximize the economy of the network.

Telephones associated with facsimile machines must be used only for fax-related purposes.

Modems

Modems will utilize the BNSF network whenever possible. Modem communication software must be programmed with BNSF network numbers to maximize the economy of the network.

Telephones associated with modems must be used only for data communications-related purposes.

Foreign Equipment

Devices not provided by Telecommunications must not be connected to any network location without first consulting with Telecommunications.

Voice Messaging (Phone Mail)

A separate policy governing the use of the Phone Mail system is available from Telecommunications.

The Phone Mail system must not be used for business purposes not directly related to BNSF.

Each user is responsible for maintaining Phone Mail security by utilizing a unique and confidential password. Users must not attempt to gain access to mailboxes for which they are not authorized.

Pagers

All pagers provided by BNSF must be obtained through Telecommunications, subsequent to written department head approval. Any transfer or reassignment of company-provided pagers must be handled through Telecommunications.

Audio and Video Teleconferencing

Audio and Video Teleconferencing are available and may be used as an alternative to travel. The use of these services must be arranged for by Telecommunications.

S-26.8 Complete and Accurate Reporting of All Accidents, Incidents, Injuries, and Occupational Illnesses Arising from the Operation of the Railroad

The BNSF Railway is committed to complete and accurate reporting of all accidents, incidents, injuries, and occupational illnesses arising from the operation of our railroad. Harassment or intimidation of any person that is calculated to discourage or prevent such person from receiving proper medical treatment or from reporting an accident, incident, injury, or illness has not and will not be permitted or tolerated.

The BNSF requires all employees to take a responsible, safe approach to their duties in safeguarding the public and corporate trust. Steps taken to enhance a sense of personal responsibility for safe work practices, including training, coaching, and counseling employees found to have engaged in unsafe work practices or rules violations, is not a violation of this Internal Control Policy (ICP).

Further, holding employees accountable, through a reasonable discipline program, for rules violations reinforces the serious nature of their actions. This good faith assessment of discipline, in compliance with the BNSF “Policy for Employee Performance Accountability,” does not violate this ICP. The BNSF Labor Relations Team should be contacted if any doubt exists about the application of the BNSF “Policy for Employee Performance Accountability.”

BNSF Safety Rules require timely reporting of all injuries and incidents. Every employee has an absolute right and obligation to report injuries and incidents to the appropriate BNSF authority. At no time shall any employee be subjected to harassment or intimidation to discourage or prevent such person from receiving proper medical treatment or from reporting an accident, incident, injury or illness. Reporting determinations are the sole purview of the BNSF Director of Reporting and Analysis.

Any employee who feels he or she has been the subject of harassment or intimidation in violation of the Corporate reporting policies is encouraged to use the BNSF Internal Complaint Resolution Procedure without fear of harassment or reprisal. Employees who report violations of this policy will not be subject to harassment or reprisal for making the report.

Officers of the company hold a position of trust with respect to the execution of their duty to appropriately apply all company policies. Violation of that trust will be viewed as a serious breach of trust and, if such allegations are sustained through the Resolution Procedure, will constitute cause for significant penalty and possible dismissal.

S-26.9 Equal Employment Opportunity Policy and Program

BNSF’s commitment to Equal Employment Opportunity and Affirmative Action is shaped by our philosophy to treat individuals with respect and dignity; maintain an atmosphere free from harassment in which every person can contribute to the maximum of his or her potential; and foster an Equal Employment Opportunity work environment. Our Affirmative Action Programs protect all groups, including Minority and Female Business Enterprises, specified by such orders and regulations and are based on applicable laws, regulations and Executive Orders prohibiting employment discrimination.

All employment decisions and personnel actions including those related to hiring, compensation, benefits, promotions, transfers, layoffs, recall from layoffs, termination’s, company-sponsored training, education, tuition assistance, and social and recreational programs shall be administered in accordance with the principle of equal employment opportunity and made solely on the basis of job-related criteria without regard to race, color, religion, sex, age, national origin, sexual preference, disability, or veteran status.

I cannot stress enough how we all must actively participate in implementing our Affirmative Action Policy and Program. All job applicants and employees need and desire an equal opportunity to demonstrate their qualifications for employment or advancement. At BNSF, qualified minorities and females will be afforded these opportunities whenever they exist.

If there is ever any indication of non-support of this policy or failure to implement our Affirmative Action Policies, appropriate management personnel will personally intervene and initiate measures to correct any procedure or decision that is not in compliance with the purpose and spirit of this Equal Employment Opportunity Policy and Program.

The Senior Vice President, Employee Relations, is designated as the Corporate EEO Compliance Executive. It is the responsibility of each Division Superintendent and Departmental Vice President (or equivalent) to see that all aspects of our Affirmative Action Programs are implemented within their respective divisions and departments throughout BNSF.

S-26.10 Vietnam Era Veterans and Disabled Veterans Policy

BNSF’s commitment to Equal Employment Opportunity and Affirmative Action is shaped by our philosophy to treat individuals with respect and dignity; maintain an atmosphere free from harassment in which every person can contribute to the maximum of his or her potential; and foster an Equal Employment Opportunity work environment. Our Affirmative Action Programs are based on applicable laws, regulations, and Executive Orders prohibiting employment discrimination. One facet of our

Affirmative Action Program focuses on our concern and commitment for the qualified Vietnam Era veteran or disabled veteran employee or applicant.

All employment decisions and personnel actions including those related to hiring, compensation, benefits, promotions, transfers, layoffs, recall from layoffs, termination's, company-sponsored training, education, tuition assistance, and social and recreational programs shall be administered in accordance with the principle of equal employment opportunity and made solely on the basis of job-related criteria without regard to status as a Vietnam Era veteran or disabled veteran.

I cannot stress enough that we all must actively participate and work to implement our Affirmative Action Policy and Program. All executives, managers and supervisors should understand that we look to them for leadership and responsibility in adhering to our Equal Employment Opportunity objectives. All individuals need and desire an equal opportunity to demonstrate their qualifications for employment and advancement. At BNSF, qualified Vietnam Era veterans and disabled veterans will be afforded these opportunities whenever they exist. Reasonable accommodations will be made when they do not create an undue hardship on our operations.

If there is ever any indication of non-support of this policy or failure to implement our Affirmative Action Policies, appropriate management personnel will personally intervene and initiate measures to correct any procedure or decision that is not in compliance with the purpose and spirit of the Equal Employment Opportunity Policy and Program.

The Senior Vice President, Employee Relations, is designated as the Corporate EEO Compliance Executive. It is the responsibility of each Division Superintendent and Department Vice President (or equivalent) to see that all aspects of our Affirmative Action Programs are implemented within their respective divisions and departments throughout BNSF.

S-26.11 Qualified Disabled Individuals Policy

BNSF's commitment to Equal Employment Opportunity and Affirmative Action is shaped by our philosophy to treat individuals with respect and dignity; maintain an atmosphere free from harassment in which every person can contribute to the maximum of his or her potential; and foster an Equal Employment Opportunity work environment. Our Affirmative Action Programs are based on applicable laws, regulations, and Executive Orders prohibiting employment discrimination. One facet of our Affirmative Action Program focuses on our concern and commitment for the qualified disabled employee or applicant.

All employment decisions and Human Resources actions including those related to hiring, compensation, benefits, promotions, transfers, layoffs, recall from layoffs, termination's, company-sponsored training, education, tuition assistance, and social and recreational programs shall be administered in accordance with the principle of equal employment opportunity and made solely on the basis of job-related criteria without regard to disability status.

I cannot stress enough that we all must actively participate and work to implement our Affirmative Action Policy and Program. All executives, managers and supervisors should understand that we look to them for leadership and responsibility in adhering to our Equal Employment Opportunity objectives. All individuals need and desire an equal opportunity to demonstrate their qualifications for employment and advancement. At BNSF, qualified disabled individuals will be afforded these opportunities whenever they exist. Reasonable accommodations will be made when they do not create an undue hardship on our operations.

If there is ever any indication of non-support of this policy or failure to implement our Affirmative Action Policies, appropriate management personnel will personally intervene and initiate measures to correct any procedure or decision that is not in compliance with the purpose and spirit of this Equal Employment Opportunity Policy and Program.

The Senior Vice President, Employee Relations, is designated as the Corporate EEO Compliance Executive. It is the responsibility of each Division Superintendent and Departmental Vice President (or equivalent) to see that all aspects of our Affirmative Action Programs are implemented within their respective divisions and departments throughout BNSF.

S-27.0 Programs

To learn more about when and where you can get involved in these programs, contact your supervisor or safety manager.

S-27.1 Asbestos Control

The Asbestos Control program works to provide the safe handling and eventual elimination of asbestos-containing material (ACM) at BNSF. Its elements include the identification and labeling of existing ACM, training, error-monitoring, use of specific work practices, use of the necessary equipment and materials, material substitutions using less hazardous materials, and the use of experienced ACM removal contractors.

S-27.2 Back Conservation

The Back Conservation program fosters a healthy lifestyle for BNSF people around the clock. The program's training component promotes an understanding of how the back works and of how nutrition, rest, activity, and conditioning contribute to a pain-free back. The program's quality-improvement component continually seeks, studies, and acts upon recommendations for modifications of work practices and equipment.

S-27.3 Bloodborne Pathogens Exposure Control

The Bloodborne Pathogens Exposure Control program provides information, training, equipment, safe work practices, and immunizations necessary to minimize exposure and subsequent ill effects. The intended audience is BNSF people who, by the nature of their jobs, have reasonable potential of skin, mucous membrane, or parenteral contact with blood or other potentially infectious materials.

S-27.4 Confined Space

BNSF's Confined Space program guides BNSF people who are involved in confined space activities. Confined spaces include, but are not limited to, sewers, tanks, underground utility vaults, covered hopper cars, and some pits and excavations. The program's safe work practices and training include criteria for identifying and classifying confined spaces, the hazards of confined space work, the precautions to be taken when entering or occupying a confined space, and the maintenance and use of the instruments and equipment used to safely perform confined space work. Employees who perform confined space-related activities must maintain current status in Confined Space training.

S-27.5 Electrical Safety

The Electrical Safety program was developed for BNSF people who work with or around electrical-powered equipment or energized systems, but who are not electricians. Program content includes the fundamentals of electricity and how it affects the human body, hazardous locations, methods for preventing electrical shock, electrical safety issues specific to various facilities, and emergency procedures in case of electrical shock.

S-27.6 Exposure Assessment

Periodic employee exposure assessments are conducted by Industrial Hygiene to evaluate employees' exposures to chemical, physical, or biological agents. These assessments are performed to determine if new materials or a change in tools or work practices increases health or safety risks. These assessments also keep employees informed about and alert to safety and health in their work environment.

S-27.7 Fall Protection

The Fall Protection program is designed to minimize the fall hazards related to work activities on bridges, buildings, towers, poles, sand towers, and other structures; work on the tops of cars and locomotives; work in manholes and utility vaults; and work areas where there are wall, roof or floor openings, pits, or trenches.

Training programs teach affected employees about manufacturers' recommendations relating to the proper inspection, maintenance, and use of passive protective devices and fall protection equipment, applicable FRA and OSHA regulatory requirements, and BNSF requirements.

S-27.8 Forklift Safety

The Forklift Safety program stresses safety in the performance of material-handling duties, and it introduces new employees to the history and operations of material-handling equipment. The training illustrates safe operational practices as well as some of the special techniques required to maneuver and operate in a warehouse or similar environment. Special effort is made to make operators aware of the extra alertness required when operating material-handling equipment around personnel on foot and to avoid collisions with other material-handling equipment and other hazards that might be encountered.

S-27.9 Hazard Communication

The Hazard Communication program teaches BNSF people to recognize chemical hazards found at work and at home, to know the labeling requirements for containers holding chemicals and the precautionary measures they can take to avoid injury and illness. Employees also learn how to obtain and read a Material Safety Data Sheet (MSDS) which details health and safety information on chemical substances. The program includes formal training, a written policy, access to MSDS in the workplace, and container labeling.

S-27.10 Hazardous Materials Training

In accordance with Subpart H, Part 172 of Title 49, Code of Federal Regulations, hazardous materials employees must receive appropriate training every two years. Hazardous materials employees are those employees who have job functions that can either affect or be affected by the transportation of hazardous materials. Those employees who are affected by the transportation of hazardous materials must receive awareness and safety training. Those employees who handle and transport hazardous materials must receive function-specific training in addition to awareness and safety training. Hazardous materials employees employed on or before July 2, 1993, must have received training prior to October 1, 1993. Those employed after July 2, 1993, must receive the training within 90 days after employment.

S-27.11 Hearing Conservation

The Hearing Conservation program focuses on the prevention of hearing loss that could be caused by noise both on and off the job. This program has four parts: identification and assessment of on-the-job noise exposure, educational sessions on the causes of hearing loss and precautionary measures, annual audiometric evaluations, and implementation of noise control and hearing protection measures.

S-27.12 Lead Protection

The Lead Protection program provides procedures for working safely with lead-containing materials encountered when performing tasks such as welding, torch-burning, or rivet-busting on steel structures coated with lead-based paints. The program relies on employee exposure assessment to identify tasks and workers subject to lead protection requirements. The program includes annual training, protective equipment, medical surveillance, and modified work practices.

S-27.13 Lockout/Tagout (LOTO)

The LOTO program was developed to protect BNSF people from possible injury caused by sudden movement, startup, or release of energy in equipment, machinery, or systems during servicing, maintenance, or calibration. The program features BNSF's LOTO practice, which defines requirements and helps participants develop their sight-specific Hazardous Energy Control Plan (HECP). Contact your supervisor or Safety Manager to obtain a copy of your local HECP.

S-27.14 Policy for Employee Performance Accountability

The Policy for Employee Performance Accountability replaces the Progressive Discipline Policy, Progressive Intervention, and other current discipline programs. The Policy's goal is to eliminate all rule violations through coaching, counseling, and training. The policy applies to all operating and non-operating scheduled employees, as well as those employees in Accounting, Customer Service and Support, and Information Services.

Under this policy, most rule violations will be addressed according to standard practices that reflect the employee's work record and the nature of the rule violation. Employees may be able to "work off" a portion of a suspension through training. Strict limits are placed on the amount of discipline that may be issued at each level. Supervisors must consult with the Manager of Discipline before issuing any substantial discipline. Dismissal cases are subject to review by a board of senior management representatives. Employee feedback about the Policy for Employee Performance Accountability is welcomed.

S-27.15 Respiratory Protection

The Respiratory Protection program was developed for BNSF people to prevent inhalation of airborne contaminants which could cause irritation, respiratory problems, or other illness. The program offers a selection of respiratory protection devices and provides training on the each device's proper use, limitations, and maintenance. Fit testing is provided for all devices to verify adequate seals for particular devices. Individuals required to wear respiratory protection are also evaluated medically to verify their physical fitness to use a respirator.

S-27.17 Temperature Extremes

BNSF's Heat Stress Prevention program is an awareness program that outlines the signs, symptoms, and prevention methods of heat-related illnesses, such as heat stroke, heat exhaustion, heat cramps, heat fainting.

S-40.0 Glossary

As used in this book, the following definitions apply.

Accident: An unplanned and sometimes injury-causing or damaging event which interrupts the normal progress of an activity.

Air brake hose: The flexible connection between the brake pipes of cars or locomotives.

Angle cock: A two-position valve located at both ends of the brake pipe on locomotives, passenger and freight cars. When open, it allows the passage of air.

Approved: 1. Sanctioned, endorsed, accredited, certified, or accepted as satisfactory by a duly constituted and nationally recognized authority or agency. 2. Acceptable according to BNSF policy.

Arc gate: Device that controls the flow of taconite onto the shuttle conveyor.

Asbestos-Containing Material (ACM): Any material that contains asbestos.

Authorized: A person who is approved or assigned by BNSF to perform a specific type of duty or duties or to be at a specific location(s) at the job site.

Bad order: Equipment that is in need of repair.

Banding: Strap or straps used to secure material.

Capacity: The allowable load limit for any lifting or storing device as determined by the manufacturer, regulation, or both.

Carboy: A bottle or rectangular container of about 5- to 15-gallon capacity for liquids. Carboys are made of glass, plastic, or metal, and are cushioned in a special container.

Center sill: The center longitudinal part of the underframe of a car which forms the backbone of the underframe and transmits most of the buffing shocks from one end of the car to the other.

Certified: Has met the requirements of federal, state, or local laws, or of company-approved programs, and has been granted a certificate.

Chock: A device placed on the rail to prevent movement of stationary rolling equipment.

Compliance: The act of obeying the rule or the law.

Conductive material: Material that carries an electric current, including but not limited to copper and other metals and water.

Conveyor belt: The moving rubber belt that transports taconite through the Taconite Facility.

Coupler: An appliance for connecting cars or locomotives.

Coupler webbing: The side pocket on a coupler that the end of train device mounts into.

Crossover stile: A fixed platform that workers use to cross over conveyor belt.

Cushioned underframe: The framework of a railway car which is designed to prevent the shocks and impact stresses from damaging the car structure or its lading.

Derail: A track safety device designed to guide a car off the rails at a selected spot as a means of protection against collisions or other accidents; commonly used on spurs or sidings to prevent cars from fouling the main track.

Designated: A person who is approved or assigned by BNSF to perform a specific type of duty or duties or to be at a specific location(s) at the jobsite (same meaning as “authorized”).

Drift pin: A tapered steel pin, 12” to 18” in length, used by MW to align bolt holes at rail joints. Drift pins are available in many sizes for various other applications.

Dust collector: A bag house system for controlling emissions.

End-of-Train Telemetry Device (ETD): A system of components that determines the rear car brake pipe pressure and transmits that information to the display on the head-of-train telemetry device (HTD).

Enhanced-visibility workwear: Personal protective clothing that is either accented with or constructed entirely in reflective lime green, yellow, or orange material.

Environment: The water, air, land, and all plants, humans, and animals living therein, and the interrelationships which exist among them.

Fall protection: Safety equipment designed to prevent falls and minimize injury in the case of falls.

Frog: A track structure used at the intersection of two running rails to provide support for wheels and passageways for their flanges, thus permitting wheels on either rail to cross to the other.

Fusee: A red flare used for flagging purposes.

Gai-tronics: The Taconite Facility intercom system.

Grates: The area in the Index where taconite cars are unloaded.

Gravity switch move: A switching maneuver whereby gravity causes a stationary car to roll when the hand brake is released rather than being propelled by an engine.

Hand brake: An assortment of levers, chains, rods, and gears. When applied manually by wheel or lever, the hand brake forces the brake shoes against the braking surfaces (wheel tread or disc) to control car or locomotive movement.

Hand truck: A small, rectangular barrow with a pair of handles at one end, a pair of small, heavy wheels at the other, and a projecting edge to slide under a load.

Hazardous material: A substance or material which is capable of posing an unreasonable risk to health, safety, and the environment.

Impact goggles: Safety eyewear that meets ANSI Z87.1 specifications.

Improvised: Created out of the conditions or materials at hand.

Incident: An undesired event that, under slightly different circumstances, could have resulted in personal harm or property damage. Any undesired loss of resources. Sometimes referred to as a “near miss,” such as when a collision is avoided.

Inspect: To examine officially in a critical, detailed manner.

Intoxicants: Mind-altering chemicals including alcohol and drugs. Can also include some prescription and over-the-counter (OTC) medications.

Job safety briefing: A communication tool used by professionals to make sure that everyone involved in a task knows what is to be done, how the task is to be accomplished, and how to mentally prepare to accomplish it. Job safety briefings must be conducted before beginning work activities and whenever there is a change in conditions or work activity.

Knuckle: The pivoting casting that fits into the head of a coupler to engage a mating coupler.

Leading foot: When riding on the side of moving equipment, the foot on same side as direction of movement.

Lockout/Tagout (LOTO): Procedures that involve tagging and locking systems so that no one can inadvertently activate the circuit, system, or equipment that is temporarily out of service.

Marker: See End-of-Train Telemetry Device.

Material Safety Data Sheet (MSDS): A form, provided by the manufacturer or supplier, describing the chemical and physical hazards of a substance.

Motor vehicle: A motor-driven conveyance primarily designed for operation other than on rail. Some motor vehicles, such as hy-rails, are also equipped to operate on rail.

M/X equipment: Bucketwheels and transfer conveyors.

Operator: The person who “runs” and so must maintain control of mechanized equipment or a motor vehicle.

Pawl: A pivoted tongue or sliding bolt on one part of a machine that is adapted to fall into notches or interdental spaces on another part so as to permit motion in only one direction.

Personal Protective Equipment (PPE): Any material or device worn to protect a person from exposure to or contact with any harmful substance or force.

Positioner: A machine used to position cars over the grates in the Index (at the Taconite facility).

Potential Asbestos-Containing Material (PACM): A material not yet tested for asbestos content, but, on visual inspection, similar to materials known to contain asbestos. Contact Industrial Hygiene for guidance on testing PACM.

proper authority: 1. Those individuals who are qualified by virtue of their expertise or their position of leadership to approve, certify, or sanction. 2. Having secured approval for acting in a particular manner.

Qualified: A person who, by possession of a recognized degree, certificate, or professional standing, or who by knowledge, training, and experience, has successfully demonstrated his/her ability to perform the task or solve or resolve problems relating to the subject matter, the work, or the project.

Rail expander: Hydraulic- or ratchet-type tool used to pull rails together or to separate them.

Rail fork: A long-handled tool with three jaws at one end used for rolling a rail.

Reclaiming: Picking up taconite from a stockpile and placing it on the conveyor belt.

Rope stop: A protection system that runs the length of the conveyor system. When pulled, it shuts down the conveyor belt.

Shuttle: The movable conveyor belt located on the shiploader.

Skate: A metal skid placed on the rail to stop the movement of rolling equipment.

Sledge hammer (Mundy): A long-handled hammer with a double-faced head used to strike other tools such as a track chisel and a rail drift pin and to install or remove rail anchors.

Three-point contact: Bodily contact consisting of two hands and one foot or two feet and one hand.

Tie and timber tongs: Steel tongs designed for use handling rail ties and crossing timbers.

Tie plate: Metal plate installed between the rail and cross tie to distribute the weight over a greater area of the tie.

Torpedo: Explosive device placed on the rail.

Trained: Has participated in learning event(s) appropriate to the topic. Learning events include, but are not limited to, one-on-one coaching on the job, job safety briefings, tool box or marathon meetings, and formal programs.

Trailing foot: When riding on the side of moving equipment, the foot on the opposite side from the direction of movement.

Transport: The movement of goods and materials in commerce.

Unauthorized modification: Improper use of tools and/or equipment for the job task. Unauthorized modifications include actual physical alteration of tools or equipment and use of tools or equipment for other than their intended purpose.

Universal hose and pipe coupling: A fitting which permits quick connecting and disconnecting of hose-to-hose, hose-to-pipe, and hose-to-tool.

Unsafe condition: Any physical state which results in a reduction in the degree of safety normally present in an activity.

Witness: An individual who has, from personal observation, knowledge of an event.

Work environment: The physical location, equipment, materials processed or used, and the kinds of operations performed in the course of an individual's work, whether on or off the company's premises.

RESPIRATOR SAFETY

FOR YOUR PROTECTION,
MAKE IT A CLOSE SHAVE

RESPIRATOR READY



SAFETY HAZARD



You must not have facial hair that interferes with the seal between the respirator and the face (applies during fit testing and whenever the respirator is worn).

OSHA Respiratory Protection Standard 1910.134, Appendix D

(Appendix 15 in the BNSF Respiratory Protection Program)

Regulations (Standard - 29 CFR)

(Mandatory) Information for Employees Using Respirators When Not Required Under Standard - 1910.134 App D

Regulations (Standards - 29 CFR) - Table of Contents

- Part Number: 1910
- Part Title: Occupational Safety and Health Standards
- Subpart: I
- Subpart Title: Personal Protective Equipment
- Standard Number: 1910.134 App D
- Title: (Mandatory) Information for Employees Using Respirators When not required Under Standard

Appendix D to Sec. 1910.134 (Mandatory) Information for Employees Using Respirators When Not Required Under Standard

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limits, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.
2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

[63 FR 1152, Jan 8, 1998; 63 FR 20098, April 23, 1998]

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