



MECHANICAL

SAFETY RULES

&

PROCEDURES

**For Adoption by all North American
Subsidiaries of Genesee & Wyoming Inc.**

Effective September 2018
Revised 8/15/2019

RECEIPT

(Date)

NAME _____
(Please Print)

EMPLOYEE NUMBER _____

I have received a copy of the Mechanical Safety Rules and Procedures.

I understand that I am required to have a thorough knowledge of and obey these rules while on duty or on company property.

Conditions may arise which are not covered by a rule or instruction. Common sense and good judgment must be applied to supplement these rules but deviations from the rules are not permitted.

Signature of Employee

Issued by

Safety Policy Statement

Zero.

That's our goal for all of our employees around the world: to have zero safety incidents or accidents. As a company, our first priority is our people, so your wellbeing is paramount to us.

Rules and regulations are a key component to helping us reach our safety goal. The policies outlined in the following pages, while involved, ensure our collective best interest. They are imperative to our health and wellness.

Nevertheless, we know that rules alone can't anticipate every real-world happening that could lead to a life-changing event. Therefore, we believe the best way to keep you safe is to give **you** the tools you need to do so. Through trainings and company-wide programs, we want to provide you with the information you need to do your job safely and effectively. We trust you to act in the best interest of both yourself and your co-workers. And if you ever have feedback about how we can improve our safety measures, please speak up—we want to hear from you.

Please remember that our commitment to safety protects not only ourselves, but also our peers, our families and our communities. Our core purpose is to be the safest and most respected rail service provider in the world, and we know we can be that with your help. Thank you for respecting and following the rules of the railroad.

David A. Brown
Chief Operating Officer

Ken Glover
Senior Vice President of Safety, Compliance & Environmental

March 26, 2018

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TERMS AND DEFINITIONS

TERM	DEFINITION
Attended	When the operator or person responsible for on or off-track equipment is close enough to the equipment to take safe and effective action to control its movement.
Blue Signal Protection	A blue flag by day and blue light at night or when visibility is poor, displayed at the track clearance point if practical, with track switches and derails secured in protecting position, with special locks or approved blocking devices. A blue flag or blue light indicates that repairmen are on, in, or between on-track equipment and it must not be started or moved. A blue flag or blue light is required when tank cars are being loaded or unloaded.
Braced Position	A standing position with feet set apart to resist movement, using a handhold if possible.
Clear of Tracks	At least four feet outside the rail of all tracks, and not between main tracks.
Close Clearance	Any obstruction (structure, object or condition) adjacent to, overhead or converging with a track that will not permit the normal and clear passage of train movements on the track, including anyone riding on such movements. There are two basic types of close clearances: permanent structures and temporary or unexpected obstructions.
Competent Person	One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
Confined Space	Any space that has limited openings for entry or

exit, unfavorable natural ventilation that could contain or produce dangerous air contaminants, or a deficiency of oxygen and is not intended for continuous occupancy.

Cylinder

A pressure vessel for the storage of gases.

Derail

A track safety device placed on a rail, to guide rail equipment off the rails at a selected spot as a means of protection against collisions or other accidents. A derail can be permanent or temporary.

Dusts

Created when solid material breaks down and gives off the particles that float in the air before settling by gravity. Dusts are produced by operations such as grinding, crushing, drilling, blasting, sanding, and milling.

Engine

A machine that produces power through internal combustion.

Equipment

Any apparatus that moves on the track, highway, or elsewhere.

Exclusive Use of Track

The use of a designated track from which trains and on-track equipment are excluded between specified points and that is protected in accordance with the operating rules, special instructions or blue signal protection.

Firm Footing

A stance with feet flat and firmly on the ground, equipment, or other level place. For firm footing on a stirrup or rung, place your heels against the outside edge, when space permits; otherwise, turn your foot slightly sideways.

Fumes

Created when solids or liquids vaporize under high heat. The metal vapor cools and condenses into an extremely small particle. Fumes can come from operations such as welding, smelting and pouring of molten metals.

Gases

Substances that are similar to air in their ability to diffuse or spread freely throughout a container or area. Examples include oxygen, carbon monoxide and acetylene.

Handhold

A firm grip with both hands, when possible, on a handrail or other stationary support.

Hoisting Equipment	Any kind of apparatus (crane) that exerts a force for lifting or lowering, whether fixed or mobile, driven manually or by power.
Immediate Supervisor	A person in charge of the work being performed.
Look in Both Directions	Turn the head and look in each direction before reaching any track, before moving your body beyond the side, end, or from under equipment, or when in any other situation demanding alertness for moving equipment or vehicle hazard.
Personal Protective Equipment (PPE)	Devices tested and approved for a specific purpose and designed to safeguard an individual against hazards.
Qualified	An employee who has been trained, tested and has demonstrated to representatives of his or her department the ability at a task during a designated period.
Railroad Track	The area between the rails and extending to four feet outside of each rail.
Rail Equipment	Any apparatus that moves on the track.
Safety Appliances	Stationary handholds, ladder rungs, crossover platforms are some examples. These features are designed for safety.
“3 Step” Protection	A procedure followed by train and engine employees used to protect employees prior to fouling equipment. When protection is requested, the Engineer must take three actions: <ol style="list-style-type: none"> 1. Apply the train or engine brakes. 2. Place the reverser lever in neutral position. 3. Open the generator field switch.
“3 Points of Contact”	Contacting equipment with feet placed firmly and using firm handgrips. (Two hands & one foot or one hand & two feet)
Vehicle	Self-propelled equipment designed for highway use.

Red Warning Tag

“DO NOT OPERATE” warning tag

(Front)

DANGER

OUT OF SERVICE

EQUIPMENT/APPARATUS _____

REASON _____

NAME _____

TIME _____ **DATE** _____

(Back)

DO NOT OPERATE - RED WARNING TAG

- ✓ **NOTIFY OTHERS**
- ✓ **REVIEW PROCEDURE**
- ✓ **IDENTIFY ENERGY SOURCES**
 - ELECTRICAL**
 - HYDRAULIC**
 - PNEUMATIC**
 - GRAVITY OR SPRING**
- ✓ **NEUTRALIZE ALL ENERGY**
- ✓ **LOCK OUT POWER**

GENERAL RULES

1. If an employee notices any unsafe act or condition at any time while on G&W property and/or on another property served by G&W, while either on or off duty it is the employee's responsibility to take whatever immediate action is necessary to prevent loss or injury resulting from such condition. Then immediately report the unsafe act or condition to a company supervisor. Warn all other persons in the immediate area of the condition to avoid their contact with the unsafe condition.
2. Good housekeeping is essential to safety, therefore, ALL EMPLOYEES are responsible to keep work areas orderly and clean.
3. Promptly remove all refuse to the designated location or receptacle. Hazardous materials must be handled and disposed of in accordance with G&W Environmental Policies and Guidelines and applicable laws.
4. Keep clear of any area contaminated with hazardous material. Only qualified and trained personnel are to enter such an area after an emergency situation has ended. Wear the appropriate protective clothing and respirator as designated by your immediate supervisor. If you have come into contact with hazardous substances, you must wash before eating, drinking, or smoking. Report any contact with hazardous materials to your immediate supervisor.
5. If practical, keep at least 50 feet from passing trains or equipment to avoid protruding, dragging or falling objects.
6. Inspect passing trains and if dangerous conditions are detected, use any available means to advise the crew members on the passing train to stop.
7. Attempt no work that will interfere with the safe passage of trains.
8. Employees must not use tools, machinery or appliances that are improperly assembled, defective or improvised and must not use them for other than their intended purpose. It is your personal responsibility to examine any tool, equipment or other item for defects before using it. Report any defect to your immediate supervisor.
9. When using any tool or item you must;
 - (a) Position your feet firmly.
 - (b) Maintain a braced position and do not overreach.
 - (c) Keep your hands and other body parts clear of all pinch points.
 - (d) Do not fully disconnect any item, parts or other components unless their weight is secured by means of a lifting device, cable, chain or other means to hold them in place until prepared to completely remove them.

- 10.** Protect the point of a pencil, screwdriver, or other pointed tool when it is in or about your clothing.
- 11.** When handling sliding, folding or hinged devices use handles or knobs if provided keeping clear of all pinch points. Properly secure the device before placing any portion of your body into an opening.
- 12.** Do not open more than one filing cabinet or tool cabinet drawer at a time. Immediately close devices and drawers carefully upon completion of the task.
- 13.** You must not perform any act that defeats the purpose of a safety device. Examples include but are not limited to such items as an electrical fuse, circuit breakers, pressure valve or the removal of guards and protective coverings.
- 14.** Before operating a control lever, push button, switch or other control device, confirm that all persons who might be affected are in the clear.
- 15.** Keep clear of and do not face any welding, cutting, heating, or grinding operation without appropriate eye protection, hearing protection, face shield and proper clothing.
- 16.** Keep clear of any suspended load. Stand clear while tension is applied through either a pull or a lift to a cable, chain, or other tackle. Use a tag line to control movement.
- 17.** You must not operate or ride on any type of equipment without proper authorization except as necessary in the performance of your duties. Ride only in passenger designated areas of the equipment.
- 18.** Do not start or attempt to intensify a fire in a stove, furnace or other source of open flame by using grease, flammable liquid or any material saturated with a flammable liquid. The only exception is a fuel burning stove designed to be started by an open flame.
- 19.** Flammable gases, liquids or solids must not be stored near a pilot light, open flame or other source of open heat.
- 20.** Never use gasoline or any other flammable liquid for cleaning. Immediately remove and properly dispose of gloves or clothing that becomes saturated with a combustible substance keeping a safe distance from any source of heat or open flame.
- 21.** Water must not be used to extinguish a fire on or near electrical equipment, circuits or apparatus. Only use the proper fire-extinguishing agent designated for that type of fire when fighting fires.
- 22.** You must use safety belts or harnesses where applicable or required.
- 23.** Do not jump from platform or other elevated location. If necessary to

descend without a ladder or steps, you must:

- (a) Observe the ground or floor condition and avoid holes, slippery spots or obstructions; then,
- (b) Assume a sitting position with your legs hanging over the edge to decrease the distance to the ground while maintaining a handhold on a suitable object, if available; and,
- (c) Slowly descend in a manner that both feet contact the ground at the same time.

- 24.** Do not throw or intentionally drop any item.
- 25.** To avoid electrocution, keep at least twelve feet away from a dangling wire or any object that may be in contact with an electrical current. Keep others away until qualified personnel are notified and take charge.
- 26.** Never eat, drink or store food or beverages in any area exposed to toxic material.
- 27.** Do not use drinking water containers for any other purpose. All containers should be used as intended.

EMPLOYEE RESPONSIBILITIES

4000. You must use care to prevent injury to yourself and others. You must be alert and attentive at all times when performing your duties and plan your work to avoid injury.

4001. For any injury, you must immediately:

Obtain first aid or medical attention if necessary.

Inform your immediate supervisor. When the person in charge is not close at hand, inform that person at the earliest opportunity but not later than quitting time on the day of the occurrence.

Immediate supervisors shall:

- (a) Be responsible for the safety, instruction and performance of all the employees under their jurisdiction and inform supervision of all injuries and accidents.
- (b) Conduct a Genesee & Wyoming “Job Briefing”.
- (c) Make definite work assignments.
- (d) Personally and continuously supervise work involving unusual hazards and discuss the specific procedures to protect against them.
- (e) Promptly advise their supervisors of any employee who resists correction or does not improve his/her unsafe work practices.

- 4002.** Know the location of first aid kits, lifesaving and firefighting equipment and use that equipment only for the purpose intended.
- 4003.** You must protect your own safety. You must not rely on the watchfulness of others when you have the ability to protect yourself.

CONDUCT

- 4004.** Employees reporting for duty, on duty, on company property or property served by any G&W region are prohibited from being under the influence of alcoholic beverages or intoxicants. Employees on company property or property served by any G&W region are prohibited from having in their possession any alcoholic beverages or intoxicants for use, distribution or sale. Employees reporting for duty, on duty or on company property or property served by any G&W region are prohibited from being under the influence of any drug, medication, or other substance that will in any way adversely affect the employee's alertness, coordination, reaction, response or safety. Employees on company property or property served by any G&W region are prohibited from having in their possession any drug, drug related paraphernalia, medication or other substance for use, distribution or sale. Employees will be required to submit to appropriate medical tests to ensure compliance with this rule. Any employee violating this rule must be removed from service immediately and a prompt report made to the appropriate officer. Employees removed from service must be furnished safe transportation away from company property or property served by any G&W region.
- 4005.** It is essential to safety that you give your undivided attention to your work; therefore, you must not:
- (a) Sleep or assume the attitude of sleep.
 - (b) Read books, magazines or newspapers other than job related material
 - (c) Use unauthorized audio or video devices.
 - (d) Engage in any activity which is not directly associated with your duties.
 - (e) Use personal cell phones or similar electronic devices unless authorized to do so.
- 4006.** Smoking or the use open flames is prohibited:
- (a) Where explosives, flammables or acids are either stored or handled.
 - (b) In other unauthorized areas.
 - (c) In all G&W offices
 - (d) In or while occupying any company vehicles

4007. Scuffling, practical jokes or horseplay while on duty or on company property is prohibited.

4008. Use or possession of firearms or other weapons is prohibited while on duty or on company property.

ATTIRE

4009. You must be suitably dressed to perform your duties safely and in a manner that will not interfere with vision, hearing or the free use of your hands and feet. You must wear the proper uniform where required.

- (a) Waist length shirts with sleeves must be worn. Short sleeve shirts may be worn if not performing work requiring full arm protection.
- (b) Trousers that cover your legs must be worn.
- (c) Clothing should be sufficient to protect against wind chill. The chart below shows those conditions that require additional protection.

Cooling Power of Wind on Exposed Flesh Expressed as Equivalent Temperatures (Under calm conditions)*												
Estimated Wind Speed (In Miles per Hour)	Actual Temperature Reading (Fahrenheit)											
	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
	Estimated Chill Temperature (Fahrenheit)											
Calm	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
5	48	37	27	16	6	-5	-15	-26	-36	-47	-57	-68
10	40	28	16	4	-9	-24	-33	-46	-58	-70	-83	-95
15	36	22	9	-5	-18	-32	-45	-58	-72	-85	-99	-112
20	32	18	4	-10	-25	-39	-53	-67	-82	-96	-110	-121
25	30	16	0	-15	-29	-44	-59	-74	-88	-104	-118	-133
30	28	13	-2	-18	-33	-48	-63	-79	-94	-109	-125	-140
35	27	11	-4	-20	-35	-51	-67	-82	-98	-113	-129	-145
40	26	10	-6	-21	-37	-53	-69	-85	-100	-116	-132	-148
(Wind speeds greater than 40 mph have little additional effect.)	LITTLE DANGER In less than an hour with dry skin. Maximum danger of false sense of security				INCREASING DANGER Danger from freezing of exposed flesh within one minute				GREAT DANGER Flesh may freeze within 30 seconds			
	Trenchfoot and immersion foot may occur at any point on this chart											
*Developed by the U.S. Army Research Institute of Environmental Medicines, Natic, MA.												

4010. You must not wear, loose fitting, torn or ragged clothing or finger rings outside an office environment, jewelry or accessories that could become entangled in equipment, mouth and tongue jewelry or metal objects: including finger rings and /or watchbands when repairing or maintaining electrical equipment.

4011. You must wear safety-toe footwear of sturdy construction preferably at least six inches high unless in an office environment. ANSI class 75-toe protection, (CSA class 1, Green triangle – Canada) is the minimum standard for footwear. Footwear must be completely secured by provided fastening devices and have a definite heel.

Footwear used in other than an office environment must:

- (a) Cover the entire foot and preferably of leather construction
- (b) Have flexible non-slip soles in good condition without elevated toes. Puncture-proof soles or inserts are recommended
- (c) Be free of metal plate or cleat on the sole or heel.
- (d) Have definite heel not over one and one-half inches high.

Employees working exclusively in offices must wear footwear that covers the toes and heels at a minimum.

4012. Do not wear head or facial hairstyles that obscure vision, that could interfere with the proper fit of personal protective equipment your job may require you to wear or that may contact machinery or electrical equipment.

4013. Whenever possible, wear suitable gloves to give ample hand and arm protection. Do not wear gloves when you are operating machinery, machine tools or close to moving machinery if there is a possibility of the gloves becoming caught and your hand being drawn into moving parts.

WALKING

4014. You must walk, not run, keeping your hands out of pockets in case you should slip or fall. Do not jump across excavations, holes or open pits. Walk around them.

4015. Be alert for tripping and slipping hazards. Keep all walkways free of any obstruction and clear of tripping or slipping hazards.

4016. Use extra caution when surfaces become slippery due to ice, oil, water, etc. Clean and scatter salt, sand or other suitable absorbent material on slippery walking surfaces when necessary to improve traction for the safety of those walking through the area. If cleaning is not practical, wear anti-slip footwear, take smaller steps and turn your feet outward to stabilize your footing and help to prevent falling.

4017. When walking through a hall, passageway or on stairways, follow these safety measures:

- (a) Keep to the right.
- (b) Use handrail whenever provided.
- (c) Use each step of a stairway.
- (d) Exercise caution when going around a corner to prevent a collision

with a vehicle or person.

(e) Give way to persons with a heavy load.

(f) Use care when passing doors that open directly into the passageway.

4018. Track structures are usually rounded or slippery, and walking on them can lead to injury. Walking, stepping, standing or sitting on rail, frog, switch, guard-rail, interlocking apparatus or connection is prohibited. Sitting on any part of the track structure is prohibited.

4019. Walk carefully, especially when conditions obscure your vision. Avoid carrying long material through steam or smoke.

4020. Expect equipment to move on any track, in any direction, at any time. Look in both directions before making any of the following movements:

(a) Fouling or crossing track.

(b) Crossing between or around the end of equipment.

(c) Moving from under or between equipment.

(d) Getting on or off standing equipment.

(e) Operating a switch.

4021. Crossing Tracks Safely

(a) When crossing tracks, take the shortest and safest route after looking both ways. If more than one track is to be crossed, stop and look in both directions before crossing each track.

(b) Do not cross tracks closer than 25 feet from standing equipment. The only exception to this rule allowing persons to walk closer than 25 feet is when equipment is under blue signal protection.

(c) Cross in front of moving train or equipment **only** if it is a sufficient distance away to permit reaching the opposite side in a safe manner.

4022. Always look in the direction you are walking. If you have to look elsewhere, stop.

4023. Use designated routes while going to or from work or while moving from one point to another while on duty.

4024. While walking or working on or near equipment have sufficient light to permit moving about and performing work safely. Use a carman's lantern, regular flashlight or portable lights whenever necessary so that you can clearly see what you are working on.

4025. Never step on a rail, railhead, any part of a rail or place feet or hands between parts of a switch or switch points except in the performance of normal maintenance of the switch equipment by qualified personnel.

Mechanical PPE Chart Additional PPE Above and Beyond Basic PPE Requirements

Basic PPE include approved safety glasses with fixed side shields, steel toe safety boots, and hard hat. If safety goggles are required, they can be worn in place of safety glasses when worn with a face shield. High visibility apparel is not required when working inside a shop or office environment. Kneepads are required when kneeling for extended periods.	Hearing Protection	Hand Protection	Eye and Face Protection	Respiratory Protection (refer to respirator selection guide)	Coverall	Apron	Jacket	Welding and Other Hot Work	Remarks / Special Requirements
								Spats/Leggings/Chaps	
Abrasive Blasting Contained in an Approved Blast Cabinet/Booth	R	R							The use of an enclosed blast cabinet is approved; the required hand protection is integrated into the device.
Abrasive Blasting Not Contained in an Approved Blast Cabinet/Booth	R	R	R A B	R AB	R				The need for an EPA Clean Air Act Permit must be assessed for each unique location where abrasive blasting will occur.
Abrasive Grinding/Cutting or Buffing or Polishing with a Wire Wheel (Portable)	R	R	R F	X				X L/F R	Overhead work requires earflaps, hoods, or other protection to prevent material from entering the ear.
Abrasive Grinding/Cutting or Buffing or Polishing with a Wire Wheel (Stationary)	R	X	R F	X					Gloves are required if using over a 10 ½" diameter wheel.
Banding Materials		R	R F						Safety Rule 4045
Batteries: Servicing		R C	R F			X			Safety Rule 4044
Blowing and/or Cleaning with Compressed Air or Water	R	R	R F						
Boring, Reaming, Drilling	R	R	X						Overhead work requires face shield, as well as earflaps, hoods, or other protection to prevent material from entering the ear.
Brakes, Shears, Punches	R	R							
Breaking Frozen Material (Ice, Ground, Ballast, etc.), Stone, or Asphalt with Hand Tools	R	R	X						
Carbon Arc Cutting and/or Gouging or Stainless Steel Hot Work	R	R W	R W	R			R L	X L/F R	Overhead work requires earflaps, hoods, or other protection to prevent material from entering the ear.
Chain Saw	R	R	R F					R	
Chemical Handling		R C	X	X	X C	X E			Refer to product Safety Data Sheet (SDS) for specific personal protective equipment requirements
Chop Saw	R	R	R F						
Cleaning - Chemical (Corrosive, Solvent, etc.)	R	R C	R F	X	R C				
Cleaning - Steam	R	R	R F						

Continued on next page

Mechanical PPE Chart Continued	Hearing Protection	Hand Protection	Eye and Face Protection	Respiratory Protection (refer to respirator selection guide)	Coverall	Apron	Welding and Other Hot Work		Remarks / Special Requirements
							Jacket	Spats/Leggings/Chaps	
Electrical Hazard		R							If voltage is 50-600 volts, low voltage gloves are required. If voltage is over 600 volts, lineman gloves are required.
Electrical Welding (MIG/TIG)	R	R W	R W	X			R L/ F R	X L/F R	Overhead work requires earflaps, hoods, or other protection to prevent material from entering the ear.
Fueling Locomotives	X	R C	R F		X C	X E			Safety Rule 4045 / Safety Rule 4292
Gas Cutting and/or Heating (OxyFuel - e.g. Oxygen/Acetylene)	R	R W	R T F	X			R L/ F R	X L/F R	Overhead work requires earflaps, hoods, or other protection to prevent material from entering the ear.
Gas Welding (Torch Brazing)	R	R W	R T F	X			R L/ F R	X L/F R	
Hand Tools - Non-Powered	X	R							
Hydraulic Tools	X	R							
Intermodal Facility: Working in Non-Office Areas and/or Working Outside a Shop	X	X							High visibility apparel must be worn.
Lathes, Presses	R	X	R F						Proper gloves must be worn if employee is within four (4) feet of wheel lathe while in operation
Mule Operation (All Terrain Vehicles and Four Wheelers)	R	R							Operating ATVs and 4 wheelers without helmets is strictly limited to operating speeds less than 10 MPH. Safety Rule 4323
Overhead or Out of Position Hot Work (i.e. Welding, Cutting, etc.)	R	R W	R W	X			R L	X L/F R	Overhead or out of position hot work tasks require the use of a leather jacket.
Painting - Rattle Can		R		X					
Painting - Spray Painting of Rolling Stock, Buildings, etc.		R C	R	R	X				The need for an EPA Clean Air Act Permit must be assessed for each unique location where abrasive blasting will occur.
Pneumatic Tools	R	R							
Sanding Locomotives	R	R		X					Safety Rule 4292
Sanding Surfaces with Applied Paint Coatings	R	R	R G	R					
Sanding Surfaces without Applied Paint Coatings	R	R	R G						

Continued on next page

Mechanical PPE Chart Continued	Hearing Protection	Hand Protection	Eye and Face Protection	Respiratory Protection (refer to respirator selection guide)	Coverall	Apron	Jacket	Spats/Leggings/Chaps	Welding and Other Hot Work	Remarks / Special Requirements
Snow Mobile Operation										See local safety operating procedures
Striking with Hardened Tools	R	R	X							Face shield must be worn if using hammer that weighs more than 32 ounces
Sweeping / Housekeeping		R								
Washing Locomotives (Pressurized Spray Equipment)	R	R	R F		X					
Wheel Truing	R	R K	R F							Proper gloves must be worn if employee is within four (4) feet of wheel lathe while in operation
When Working Under Equipment	R	X	X							F or G may be required if rust and scale are present
Wood Working and/or Wood Working Equipment	R	R	R F							

Legend:

R = Required personal protective equipment
X = May be required based on task and materials (ask your supervisor for assistance in identifying the appropriate protective equipment)

Hand Protection

C = chemical resistant (e.g. nitrile, pvc, butyl rubber)
W = welding glove
K = Kevlar

Coverall

C = chemical resistant (e.g. DuPont Tychem SL)

Apron

E = elastomeric (rubber or rubber like)

Eye and Face Protection

F = face shield
TF = tinted face shield
W = welding helmet
AB = type
CE = supplied air abrasive blast helmet
G = goggle

Welding Protection

L = leather
FR = flame resistant (material is inherently non-flammable) or flame retardant (fabric is treated to be slow burning or self-extinguishing)

The requirements and recommendations are based on American National Standards Institute (ANSI), American Society of the International Association for Testing and Materials (ASTM), and American Welding Society (AWS) standards and guidelines.

USING PROTECTIVE EQUIPMENT

PERSONAL PROTECTIVE EQUIPMENT (PPE)

- 4026.** In some instances, totally eliminating hazardous material exposures is impractical. In these cases protective equipment is the only recourse to provide a safe and healthy environment for employees. Therefore, upon entering an area or facility you will comply with all applicable rules requiring the wearing of personal protective equipment.
- 4027.** Upon receiving personal protective equipment you will be responsible for:
- (a) The care and maintenance of the equipment;
 - (b) The inspection of the equipment prior to use;
 - (c) Having the equipment available for immediate use;
 - (d) Wearing the equipment in a manner that provides the intended protection. Making any alteration or modification to equipment is prohibited. If equipment is defective it must not be used. Defective equipment is to be reported to your immediate supervisor for replacement.
- 4028.** All non-employees entering upon railroad property must comply with and obey safety rules governing employees in areas where protective equipment is required. This rule applies to all persons without exception.
- 4029.** Wear an approved hard hat when engaged in servicing, repairing and inspecting locomotives and freight cars. Hard hats must be worn when in shop and servicing areas or at locations required by your immediate supervisor.
- 4030.** Wear approved gloves (rubber, plastic coated or otherwise protective) as well as proper protective clothing when you are involved in any of the following activities:
- (a) When handling or working on a wet cell battery.
 - (b) When handling, pouring or using acids, chemicals, toxic materials, solvents, caustic materials or other irritants.
 - (c) When working on electric circuit apparatus or equipment energized at 115 or more volts.
 - (d) When welding or burning.
 - (e) When handling steel banding materials
- 4031.** Remove glass from a frame with gloved hands and utilize the tool designed for the purpose. Deposit broken glass in a designated receptacle or location.

- 4032.** All employees are required to wear approved safety glasses with side shields while on duty or on company property or when otherwise required by the supervisor.
- 4033.** Wear a Company provided and approved safety reflective vest whenever your work requires you to be outside of a shop building or office. Any time you are moving about, walking in a yard, a remote company site, customer siding or facility, driveway, along a track or servicing equipment always wear the proper reflective safety vest.
- 4034.** Employees are not required to wear a reflective safety vest while working inside a shop however it is recommended.
- 4035.** Wearing a reflective safety vest each day at work may cause the fabric to soil and become saturated with grease, oil or dirt. Maintain your vest in good condition and keep it reasonably clean at all times to prevent the possibility of the material becoming a fire risk.
- 4036.** Employees engaged in welding, heating and cutting duties are cautioned to be extra vigilant of fire risks when using reflective safety vests. Consult with your supervisor before performing these tasks while wearing a vest as it may become a safety concern if saturated with oil, grease or other flammables.
- 4037.** Keep your Personal Protective Equipment clean and in good condition. Do not alter the PPE equipment from its original intended design or purpose as alterations could compromise the safety effects of the equipment.
- 4038.** If your PPE equipment has become dirty, torn, damaged or in any way compromised by use or wear ask your supervisor for a replacement item and discontinue the use of the old item.
- 4039.** You may wear goggles with colored lenses only for specific work when and as required by these rules or your supervisor.
- 4040.** Take the following precautions Near Welding and Cutting Operations:
- (a) Use an Approved Helmet or Hand Shield equipped with prescribed protective lenses when you are electric welding, cutting, watching, air arcing or supervising such operations.
 - (b) Use Prescribed Screens in good condition and properly placed to protect others from harmful rays when you are electric welding, air arcing or cutting. When the location makes it impractical to use a prescribed screen to protect others keep others a safe distance from the operation and advise them not to look at it or face it. NOTE: The use of a face shield does not substitute for the use of primary eye protection.

Use of Approved Personal Respirators (APR)

4041. Prior to wearing respiratory protection, you must first be medically qualified to wear a respirator(s). Once medically cleared, you must be trained to wear the respirator(s) and fit-tested on those respirators requiring a fit-testing procedure. Wear an approved respirator in accordance with the G&W Respirator Selection Guide as follows:

Task Description	Recommended Respirator	Filter or Cartridge
Grinding, buffing, chipping, scaling more than 30 minutes of actual abrasion activity	Filtering face-pieces Or Half-face tight-fitting APR	N-95
Welding, cutting, heating, torching more than 30 minutes of actual hot-work activity	Half-face tight-fitting APR or Hood-type PAPR	P-100
Ballast dumping	Half-face tight-fitting APR	N-95
In proximity of a working ballast regulator	Half-face tight-fitting APR	N-95
Working where ballast is disturbed	Filtering face-piece	N-95
Sanding locomotives for more than 1 hour per day of actual sand dispensing	Filtering face-piece	N-95
Unloading ballast in confined areas, tunnels or under atmospheric conditions when resultant dust does not disperse rapidly	Filtering face-piece	N-95
Painting locomotives, cars and work equipment	Full-face tight-fitting APR, or Hood-type supplied air respirator	Multi-contaminant sorbent cartridge with paint/mist pre-filters (if using supplied air hood, ensure that compressor is approved for breathing air use)
Working with fuels, organic solvents, rattle-can spray paints, etc. *excludes refueling equipment	Half-face tight-fitting APR	Organic vapor cartridge, or Multi-contaminant sorbent cartridge
Heavy visible dust	Filtering face piece	N-95
Wood dust, fiberglass, drywall dust and other non-asbestos dusts and fibers	Filtering face piece	N-95
Air arcing or plasma cutting	Half-face tight-fitting APR, or Welding helmet PAPR	P-100
Soldering for greater than 30 minutes	Filtering face piece	N-95
Transloading bulk commodities - sand**, coal***	Filtering face-piece respirator or Half-face tight-fitting respirator	N-95

Definition of APR: Approved Personal Respirator

Fuel, solvents, etc.* - Activities using these products typically are in nuisance or nauseating air concentration levels not requiring respiratory protection. Examples include: fueling locomotives, marking ties, using a parts washer, etc.

Trans loading sand** - The following locations have been assessed for employee exposure to respirable crystalline silica quartz:

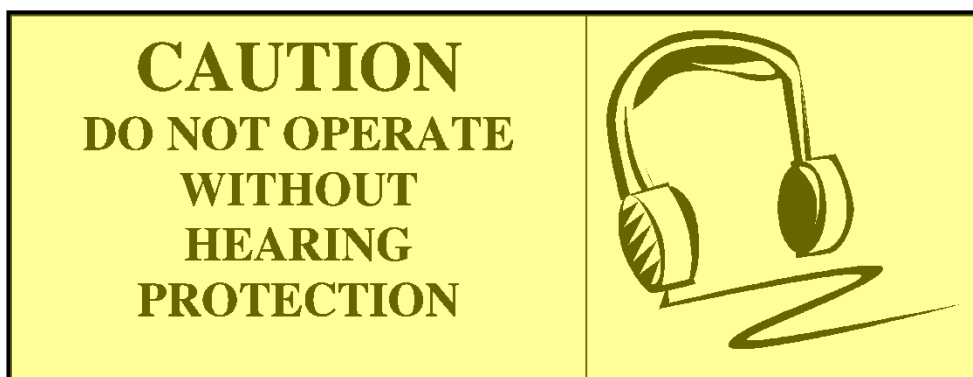
- Wellsboro, PA, Trans loading Facility: respiratory protection required
- New Town, ND, Unimin Trans loading Facility: respiratory protection not required

Trans loading coal*** - The following locations have been assessed for employee exposure to respirable crystalline silica quartz:

Homer City, PA, Power Plant Trans loading Facility: respiratory protection not required

- 4042.** Enter a confined space where gas or vapors may be present only when qualified and then only when assisted by another employee and after it has been well ventilated. Such spaces include oil storage areas, chemical storage, storage vats, tanks, manholes, drop table pits or other areas as determined by your immediate supervisor.
- 4043.** Take the following precautions when entering confined space areas:
- (a) If necessary, wear approved protective clothing and/or the type of respirator indicated by the chemical or other product for which the vat or tank is or was used.
 - (b) Have a safety line attached to yourself with an attendant outside the vat or tank holding the other end of the line. The attendant must be wearing the same protective equipment as you. **NOTE:** It is not always possible to see or smell gases. Watch for dizziness, headache or rapid beating of your heart as a warning of the presence of gases. Leave the area immediately upon feeling any of these symptoms and go to fresh air. Report the problem to your supervisor as soon as practical.
- 4044.** When handling acid, caustic materials, toxic materials, chemicals, solvents or similar hazardous products have all parts of your body covered.
- (a) Wear personal protective equipment as prescribed by the label on the safety data sheet for that substance.
 - (b) Do not rub any part of your body with your hands or PPE equipment that may have become contaminated while handling or exposed to the chemical or substance.

- 4045.** Wear an approved face shield if you are involved in any of the following activities or when:
- (a) Applying, removing or handling steel banding.
 - (b) Handling or working with acid, chemicals, or other hazardous substances or materials.
 - (c) Refueling locomotives or similar equipment
 - (d) Operating a power-operated metal wire cleaning brush and grinder.
 - (e) Operating a power sander.
 - (f) Operating a power wood saw.
 - (g) Washing equipment used to clean locomotives or other equipment using pressurized fluids and/or spray solvents/chemicals.
 - (h) Performing an operation requiring face protection or finding yourself in a situation requiring face protection. Your immediate supervisor will instruct you in specific instances but be alert for situations that might come up spontaneously. **NOTE:** When using a face shield you are also required to wear your primary eye protection.
- 4046.** When instructed by your supervisor, use foot protectors or metatarsal guards with your footwear to protect the metatarsal bones of your feet. The metatarsals form the framework for two arches in your feet, one in the center of each foot and one under the ball of each foot. Wear approved hearing protection when operating or working close to any equipment or machinery marked with a warning label or at locations posted as requiring its use.



- 4047.** Protect your vision by wearing appropriate safety eyewear that is clean and properly fitted while on duty or on company property. Safety glasses shall have side shields. Safety glasses will be worn at all times except they will be optional in offices. If you are blind or legally blind in one eye you must wear eye protection at all times while on duty. If you require corrective

lenses you must wear either prescription safety glasses or cover-all type goggles over your personal prescription glasses.

USING TOOLS AND EQUIPMENT

JACKS, HAND TOOLS AND TACKLE

- 4048.** Always use the proper tool for the task. Never take short cuts or use improperly size or modified tools which may compromise its original strength, size or integrity. Inspect tools, tackle, straps, ropes, jacks or other items before using them and do so as often as necessary. If found to be defective, do not use them. Separate defective items from serviceable items and mark them “DEFECTIVE-DO NOT USE”. Do not repair straps or belts.
- 4049.** Stay clear of swinging tool such as sledges, malls, hammers, etc., and the items being driven. Before swinging any tool inform persons nearby of your intention and make sure that they are in the clear.
- 4050.** ONLY sledge hammers manufactured of ALLOY GRADE “B” steel and stamped with markings such as either “Special Alloy” or “Alloy Grade B” steel stamped on the head are approved for use. These alloy sledges are made of a special steel designed not to splinter or split off chips of the mall head during use which can cause injury.
- 4051.** Hold or strike a tool only when the holder is not directly in front of the striker.
- 4052.** Chisels of all types are required to have a “chisel holder” guard handle of some type to guard against striking and injuring the hand that holds the tool as it is being struck. Recommended chisel holders may be plastic, slip-over handles added on to a chisel shank or purchase chisels that come with the plastic guard holder handles already mounted on them.
- 4053.** Use a “soft” hammer or hardwood cushion when striking a tempered or case hardened object. Do not strike hardened tools on other hardened tools or on hardened steel.
- 4054.** Never use a file without a handle. Never use a file as a wedge or a pry to be struck with another tool or other item.
- 4055.** When using and carrying a sharp or pointed tool turn the edge or point of the tool downward and away from your body, if practical. Disassemble or protect all pointed or sharp tools when transporting them on a train, equipment or vehicle. Place the point or edge down when not in use.
- 4056.** When moving a rail car keep the handle of the hand operated car mover device or bar slightly outside of the rail.

- 4057.** When cutting a bolt, rivet head, nut or similar item with an impact tool use a broom, bagging or other suitable material to cover the area if possible so as to prevent the cut off item from flying.
- 4058.** To use a bar or lever follow these steps:
- (a) Place it securely under or against the object. If necessary use a suitable block (perhaps wood) under the bar, lever or raised object.
 - (b) When using a bar, take a braced position with firm footing. Do not sit on, stand on or straddle the bar or lever. Make sure that all parts of your body are positioned so that they will not be caught between the bar or lever and any other object.
 - (c) Grip the bar or lever securely and move it slowly and steadily.
 - (d) Watch the base and contact points as you move the bar or lever and make necessary adjustments as you apply force to avoid slipping off the object.
- 4059.** When using a wrench follow this procedure:
- (a) Select the proper size and type of wrench to fit the object tightly. Never use a shim to make the wrench fit better around an object.
 - (b) If the wrench is an adjustable type place it so that the turn will be in the same direction as the open end of the jaws.
 - (c) Do not lengthen any wrench, bar or other handle or tool with a “cheater pipe” or similar homemade device to increase leverage.
 - (d) Take a braced position to avoid losing your balance if the wrench disengages or if the bolt or nut fails or suddenly loosens.
 - (e) Do not immediately apply full force. Rather, make sure the wrench has a proper grip, and make sure the stroke of the wrench will not harm you. Then gradually increase the force, pulling the wrench toward you if possible.
 - (f) Never push a wrench, always pull on a wrench while observing where your hands/fingers are positioned so as to keep them clear of possible obstructions should the tool, bolt or nut fail while under force.
- 4060.** When operating a jack follow this procedure:
- (a) Set the jack securely on its base with solid contact at top and bottom. Use suitable blocking under the jack when the foundation is insecure. Where necessary to protect the jack from vibration (for example, from passing equipment), the blocking should CANT (or tilt) slightly inward and evenly on both sides.
 - (b) Avoid jacking on asphalt surfaces due to the unstable tendencies of

asphalt surfaces giving way. If jacking must be done on asphalt, always block under the jack base with wood or steel that is twice the width and length covered by the jack base to form a more stable base.

On a jack air supply hose with quick disconnect fittings, a safety chain should be applied to the end of the hose connected to the jack and secured to the jack to prevent whipping if the hose accidentally disconnects.

- (c) Use sound wood or cushion material designed for this purpose at least ¼ inch thick and larger than the jack head but NOT more than 1 inch thick when jacking with the head against or between metal surfaces.
- (d) Never use more than one wood block between the jack head and the load. To raise the jack, use sound wood blocks under the jack, stacked in a way that they will not slip.
- (e) Hydraulic Jacks: Use only the handle designed for the jack being used. Make sure the handle is fully inserted in the socket and remove the handle when jack is not being used.
- (f) Use only a jack with sufficient lifting capacity required for the job. If you are in doubt about the lifting capacity consult your immediate supervisor.
- (g) When using a ratchet jack, stand at the side of the handle in a braced position. Move the handle slowly and uniformly making sure that latches are fully engaged and that your head is clear of the handle when releasing pressure on it.
- (h) When not in use, lower the head of the ratchet jack and lay the jack on its side where it will not fall over or create a tripping hazard. When a jack is in the tool room it may be left standing with the head lowered in the space assigned where it can be secured in storage.
- (i) Keep your hands clear of the top, screw, rack, latch, socket or other moving parts of a jack.
- (j) On jacks equipped with control panels the panels should be stored in the proper cabinet. To prevent damage to the control panels, make sure the cabinets are free of all other materials.

4061. Before jacking up the end of a car, locomotive, hoisting equipment, motor, truck or other such equipment block both sides of both wheels on the opposite on the end of where you are placing the jack.

4062. When jacking outdoors, on potentially unstable surfaces or surfaces other than concrete shop floors always stabilize the jack with a wide base under it. Then position the jack under the load, jack load up partially to set the

base and check for base stability before jacking further. If the load or jack appears tilted or unstable, stop immediately and reposition the base and jacks to a more stable location. Do not continue to raise a load with jacks when the load appears to be leaning.

- 4063.** Never go under raised equipment unless the equipment is supported by approved stationary screw jacks, trestles, jack stands or other approved devices.
- 4064.** Before pulling on a rope, wire, cable, chain or other such tackle have firm footing, assume a braced position and secure the free end if possible. Move clear in the event of adverse action.
- 4065.** Secure wire, chain or stranded cable before cutting it to prevent the ends from flying or recoiling.
- 4066.** Never use your finger to determine if a hole is in proper alignment for the insertion of a rivet, bolt, pin or other object. Use a drift pin or other suitable item to align the holes. It is prohibited to make welding repairs to sledge hammers, hand hammers, chisels, wedges or any other tool or device, especially those that are struck with force when used.

POWER TOOLS, EQUIPMENT AND MACHINERY

- 4067.** To operate self-propelled equipment or machinery, hoisting equipment, highway vehicle, cartridge powered tool or other power operated equipment, machinery, elevator, specialized tools, cutting or welding equipment or pressure line, you **MUST** be:
 - (a) Authorized to operate the equipment.
 - (b) Seated or standing at the intended place to operate any self-propelled equipment, machinery, or tools.
- 4068.** Employees must be qualified to operate equipment, power tools and machinery. Unqualified persons are not authorized to operate such equipment. Inspect equipment or tools at the beginning of each tour of duty. Equipment must not be operated if it is in unsafe condition. Tag bad order equipment out of use and notify supervisor.
- 4069.** Make sure that the guard is secured in protecting position and properly adjusted whenever you operate machinery, equipment or an appliance. The only exception to this rule is when an immediate supervisor has authorized the removal of a guard for work, repair or testing. In such a case, replace the guard immediately after the work, repair, or test is completed.

- 4070.** Warn fellow employees and see that they are in a safe position before coupling equipment, operating equipment or moving any of the following: locomotive, self-propelled equipment, machinery, hoisting equipment, transfer table, turntable, vehicle or any other power operated equipment, machinery or tool.
- 4071.** Sound the appropriate warning devices when you are moving equipment on shop tracks.
- 4072.** Make sure that motorized tools, machines or equipment are turned off before you clean, oil, or adjust them. Any switch, valve or control protected with a private lock and/or warning tag must not be operated. A private lock and/or warning tag may be removed only by the person who placed it there and only after making sure that it is safe to do so.
- 4073.** Be sure that the power supply control or switch is in the “OFF” position, and if practical, secure it with a special lock and place a DO NOT OPERATE warning tag on the control of a switch before doing any of the following:
- (a) Repairing, dismantling or assembling power operated equipment, machine, elevator or other similar equipment.
 - (b) Changing blades or dies on a shear, punch, forging machine, bolt threader or wood working machine.
 - (c) Performing any other work or when positioned so that any machine movement could catch any part of your body. Any equipment, machine, elevator or part of an elevator that is likely to move must be secured with a securing feature or blocking. Your immediate supervisor will determine if this is necessary.
- 4074.** When you are using a Rabbit/Capstan rope or cable to move equipment do not apply it to the equipment before movement time. Between moves do not leave the rope or cable across a highway crossing or walkway.
- 4075.** When using a chain saw follow the procedures below:
- (a) Follow manufacturer’s instructions for operation and adjustment.
 - (b) Wear primary eye protection, leg chaps, a face shield and hearing protection.
 - (c) Inspect the saw before use to assure that all handles and guards (including kickback guard) are in place and tight, that all controls function properly and the muffler is in good condition.
 - (d) Fuel the saw only when the engine is not running. Do so in safe areas away from possible sources of fire.
 - (e) Before you start the saw check the area where you are going to be cutting. Clear away brush that might interfere with cutting.

- (f) Start the saw following manufacturer's instructions at least 10 feet away from fueling area. Make sure the saw is firmly supported on the ground or on a stable object. Do not use your body as support.
- (g) Be certain you have secure footing before you start to cut.
- (h) Hold the saw with both hands during operation. Be alert for nails or other obstructions in the wood while you are cutting so as not to cut into them.
- (i) Do not use the saw to cut directly overhead or at a distance that would require you to sacrifice a safe grip on the saw.
- (j) Shut off the saw when carrying it. Carry it by the top section of the handle with the cutter bar to the rear.
- (k) Apply a plastic slid-over chain guard cover over the cutting bar when saw is not in use.

4076. All set screws in revolving spindles or shafts must be flush, countersunk or protected by a collar.

4077. Keep your hands and all parts of your body and clothing clear of moving belts, machinery, equipment or pinch points. Do not stand, climb on or get between a guardrail and operating machinery.

4078. Before performing any machine work on material make sure it is secured in the desired position.

4079. When using grinders observe the following procedures:

- (a) Face Shield and Primary Eye Protection are both required to operate grinders.
- (b) Grind only on the grinding face of an emery wheel.
- (c) Place the tool rest as near the center of the wheel as the design permits, over the entire width of the wheel. The tool rest must never be more than 1/8" away from the wheel.
- (d) Never use a portable grinder without a wheel guard.
- (e) If you are using a portable grinder avoid rough usage that could result in a damaged wheel that could fly apart or explode when the grinder is turned on.
- (f) When using a portable grinder first turn the switch or trigger to the "on" position then place the wheel against the material or object to be ground. When the work is completed or it is necessary to remove the wheel from the material or object, first turn the switch or trigger to the "off" position. Trigger locks are prohibited on all portable grinders.
- (g) Inspect an abrasive wheel before using. Wheel must be in good condition, undamaged with its electrical equipment and power cord to

power it in good condition.

- (h) Never repair a grinder yourself. Only authorized repairmen may make such repairs.
- (i) Make sure grinding wheel being used is matched to the RPM requirements of the grinder and to the type of metal be ground.
- (j) Consider proximity of grinding operation to other employees and combustible materials. Have a fire extinguisher immediately available for use.
- (k) Always shut off and disconnect the power source of a grinder before attempting to change the grinder wheel or otherwise work on the grinder.

4080. Whenever you are not using them keep tools and materials clear of the moving parts of power operated equipment or machinery.

4081. To remove chips, cuttings or scales from tools such as drills, use a brush or broom. To remove heavy shavings or borings use a steel hook or a fork. Do not remove such debris with your hands and never attempt to remove such debris while the machine is operating.

4082. Metal cuttings resulting from the use of locomotive wheel truing shoes/cutters must be picked up from the ground safely using appropriate means. If possible, it is recommended that a magnetic pick up bar be wheeled over the chips which will magnetically draw the chips to the bar for disposal without the need to touch them by hand. A crane with a magnet may also be used. If necessary to use your hands to pick up these types of cuttings always wear thick, armored protective gloves (even gloves containing Kevlar) when possible or at the very least standard thick leather welder gloves to eliminate cutting hands and fingers with sharp metal pieces. Dispose of all chips immediately and place them in the scrap metal container designed for that purpose.

4083. To place a block, tool or other material on an anvil use tongs, a hoist or other device designed for that purpose. Never use your hands.

4084. When using “wheel truing shoes” or “wheel cutting shoes with inserts” to re-profile a defective wheel or flange use extreme caution when applying device to the locomotive as these tools are heavy and awkward to position in place. Avoid placing fingers in pinch points.

4085. Once the wheel truing device is applied set the air brake at a minimum pressure and test the cutting effects of the tool slowly as you first move.

4086. Always have another employee on the ground walking beside the locomotive as the operating employee moves the locomotive under a very slow speed and controlled movement.

- 4087.** Perform wheel truing with these devices outside in an open area where metal chips may fall freely without causing potential harm to employees around the area. Never wheel true in a shop building.
- 4088.** When using a power rip saw follow this procedure:
- (a) Be sure the saw is equipped with a spreader and/or kickback guard in proper position.
 - (b) To prevent being struck in the event of a kickback stand to the side of the material being sawed.
 - (c) Use a forked push stick of sufficient length to feed the back end of the material into the saw blade for cutting. Never use your hand.
 - (d) Remove loose or scrap pieces of material from the saw or table as soon as each cut is completed using a suitable stick. Never use your hands to do this.
- 4089.** When starting a gasoline engine that is not equipped with an electric starter follow the manufacturer's instructions on starting.
- 4090.** When operating bar shears use tongs to hold material that is too short to be held down by the guard. Never use your fingers or hands.
- 4091.** Before working a high pressure line or apparatus take the following precautions:
- (a) Close the control valve.
 - (b) Place a "**DO NOT OPERATE**" warning tag on the valve and lock it.
 - (c) Release the remaining pressure.
- 4092.** When operating a turntable latch lever, take the following precautions :
- (a) Have a secure handhold.
 - (b) Have a firm footing.
 - (c) Ensure your body is well braced.
 - (d) Apply pressure gradually.
- 4093.** When using pneumatic tools, hydraulic tools, electric tools or other similar equipment take these precautions:
- (a) Make sure that the control switch or valve at the source is in the "OFF" position before you connect or disconnect the tool. You are not required to follow this procedure if the supply hose is equipped to connect or disconnect under pressure.
 - (b) Before laying a tool down with the pressure on remove the plunger

chisel or other attachment from the tool. You are not required to follow this procedure if the tool is equipped with new style pneumatic hammer safety clip and coil spring retainer.

- (c) When you are holding a pneumatic hammer but not using it place your thumb or finger under the trigger. Never point the hammer toward another person. Lay down an electric or pneumatic drill, reamer or other such tool only when it is not in operation. To prevent its being accidentally started make sure the trigger valve or switch is shielded.
- (d) Always firmly hold a reamer, drill, tap or nut. Be prepared for a jerk if they happen to stick or jam.
- (e) If you must leave a drill, reamer, tap or other such tool unattended shut off the power supply. Then remove the power cord from the socket or disconnect it from the motor.
- (f) When turning air into the hose of a pneumatic tool the control valve of the tool's throttle must be in the closed position.
- (g) Do not take hold of an auger, drill bit, reamer or other such attachment of a tool being used in an attempt to lift, handle or help control that tool.
- (h) You must wear hearing protection whenever you are operating pneumatic tools or air jacks.

4094. Never use a conveyor, grain elevator, chute or other such machine as a step, walkway or as a means of personal transportation.

OPERATING A FORK LIFT, HY-REACH OR SIMILAR MACHINE

4095. When operating a fork lift truck follow this procedure:

- (a) Operate a fork lift only if you are properly training and/or qualified to do so.
- (b) Test the brakes, lights, horn, seat belts, steering and backup warning device before operating the machine. Wear seat belts at all times. Do not operate if these items are defective, missing or not working.
- (c) All forklifts must be equipped with a roll bar or operator protection cage above operator.
- (d) It is recommended that all forklifts be equipped with a front windshield preferably made of a poly carbonate or other damage resistance material.
- (e) Space the forks so as to completely support the objects being handled.

Secure the load to the forks, if necessary.

- (f) Observe the ground or floor conditions and regulate the height of the forks so as to maintain a distance of at least 6 inches between the fork and the ground or floor below it.
- (g) If you must leave the forklift unattended place the forks on the ground or floor, shut the machine off and secure it properly.
- (h) Sound forklift horn at corners, doors and passageways and proceed slowly.
- (i) It is not recommended to stand on or ride on the forks of a forklift.
- (j) If such operation is required, do so only with supervisor's authorization and through the use of a safe, sturdy platform with hand railings designed for that purpose. Always secure the platform to the fork lift with a chain, cable or other suitable means.
- (k) Always keep hands, feet, clothing, tools or other objects from coming into contact with forklift cables, guide channels, rollers, lifting frame or any other part of the mechanism where pinch points may occur causing injury.
- (l) A forklift which uses fuel such as propane or other gases should have the gas shut-off turned to the off position once the engine is stopped and the work is completed.
- (m) Refrain from operating a forklift or any other internal combustion engine-powered apparatus including off-road or highway vehicles in an enclosed space where there is not proper ventilation as carbon monoxide gases may pose a hazard to personnel in the area. If circumstances require operating such equipment in enclosed spaces ensure exhaust fans are turned on, if available, or provide an adequate means of ventilation by opening a sufficient number of doors or windows for fresh air flow.
- (n) All fork lifts must be equipped with a serviceable, fully charged fire extinguisher properly secured in a fixture aboard the forklift.

USING HIGH PRESSURE SPRAY EQUIPMENT

- 4096.** When using high pressure spray equipment take the following precautions:
- (a) Never point the spray gun at anyone or any part of your body.
 - (b) Never put your hand or fingers over or near the spray tip.
 - (c) Never try to stop leaks or deflect them with your hand or body.
 - (d) Never try to repair a high pressure spray hose yourself. Replace the

defective hose or take it to a qualified and authorized dealer/distributor for repair.

- (e) Always have the tip guard in place when spraying.
- (f) Before cleaning or servicing always disconnect the power source and carefully relieve pressure by triggering the spray gun. Open any drain or bleeder valve and leave it open during servicing. Before each use check the hoses for worn or damaged condition and tighten all fluid connections securely. Replace any damaged hose or fittings and never use tape or any similar device to mend the high pressure hose.
- (g) To avoid static electricity sparks from high velocity fluid flow always be sure that all equipment and objects being sprayed are properly grounded. Sparks can cause a fire or explosion.
- (h) Follow manufacturer's recommended practices for use of the machine.
- (i) Always use a Face Shield, Primary Eye Protection and suitable vinyl coated, water-proof gloves when operating high pressure spray equipment.

HOISTING EQUIPMENT

- 4097.** Prior to use inspect the hoisting equipment, including chains, cables, sheaves, nylon straps, hooks or other attachments and safety devices. To inspect the boom, hoist, or other cable unwind as much of the cable as possible from the drum. Inspect all ropes, chains, hooks, and slings before using them.
- 4098.** Nylon straps or slings must be free of cuts, tears or fraying and must not be excessively oil-soaked or contaminated with petroleum or similar products that would compromise their integrity.
- 4099.** Use only nylon or sling straps that are certified for the weights you are attempting to lift. Never exceed the maximum lift capacity or lift more than the manufacturer certifies as safe load weights for any strap or sling.
- 4100.** Slings or nylon straps may not be repaired by the railroad. Only authorized repair shops or the original manufacturer may repair such items. Any damaged sling or strap not deemed repairable should be discarded and no longer used for any purpose.
- 4101.** If you have doubt about the integrity of any slings, straps, chains or other lifting device, it is recommended that you consult with your supervisor and possibly have the items inspected and certified by an authorized dealer/distributor to be certain it can be safely used.
- 4102.** All hoisting equipment including chains, cables, slings, nylon straps or similar devices must be properly stowed when not in use and hung up off the floor.

- 4103.** Use extreme care when handling these hoisting devices, especially by hand, to avoid pinching hands and fingers when mounting, dismounting or stowing them.
- 4104.** Cranes are to be inspected annually by an OSHA certified crane inspection company and valid inspection certificate kept on file in the main office of the facility. Before lifting with a mobile crane check the hitch and test the cable drum brakes. Carefully take the slack out of the load line to ensure that the hitch is secure and centered. Raise the load a few inches then test the drum brakes and ensure that the outriggers provide support. If the drum brake does not function properly slowly lower the load and do not use the hoist until the brake is repaired. Note any defects and report them to your immediate supervisor.
- 4105.** Never operate any equipment that does not function as intended or that is unsafe. Tag out with a “DEFECTIVE-Do Not Use” defect card any equipment that is not safe and not suitable for use until it is properly repaired.
- 4106.** When hoisting material or machinery attach chains, cables or tongs above the center of gravity of the load to prevent its tilting or falling over when lift is made. If possible, lift straight up to prevent the load from dragging, swinging or catching another object.
- 4107.** Never attempt to pull objects into or under the lifting area of a crane by hooking the crane cable or chain onto the object from an extreme angle. Lifting or pulling at a severe angle may cause the cables to bind or climb out of their pulley guide ways which may damage or fray the cables.
- 4108.** Use a tag line or non-conductive hand line securely attached to the load to assist in controlling a load as it is lifted or lowered. See that all persons are in a safe position then hoist slowly until the load line is vertical and the load is under complete control.
- 4109.** If you are working as the person hooking the crane to the load or if you are the operator and working alone follow this procedure:
- (a) Do not attach the hoist hook directly to the object to be lifted or moved. Use an approved chain, cable or other lifting accessory between hook and the load.
 - (b) Carefully inspect all lifting devices, slings, chains, cables or other devices for defects before attaching them to the load or before lifting.
 - (c) Make sure that the sling or accessory is of proper size, capacity and design for the load being lifted. When in doubt, consult the manufacturer’s book as well as your immediate supervisor.

- (d) Be sure that the hitch is made to the balance point of the load before lifting. Make certain to prevent the load from tipping when hoisting it.
- (e) Be sure that the hitch is secure before giving the signal to hoist the load.
- (f) Attach a tag line to the load to help control it once raised.

4110. When hoisting a load the operator must first hoist it just clear of the ground and stop. Then the person hooking the load to the crane must make sure of the following:

(a) The chain, cable, strap, sling or hoisting accessory is even and not twisted.












(b) The load lifts straight up and rides level without tipping to one side.

NOTE: If the load does not look secure or does not seem to be riding level then lower the load and take off all stress on the hoisting cables and sling before going back in to look at the cable positioning and securement.








4111. When lifting sheet steel, bars, pipes, rods or other such items with a double hook-up sling use a spreader bar between the chains or cables. The spreader bar will keep the chains or cables from shifting and prohibit undue angular stress at the ends of the load and cables.

4112. Use standard hand signals to govern movements of hoisting equipment.

Standard hand signals to govern movements of hoisting equipment

 <p>Stop (A)</p> <p>Extend one arm and hold palm of hand vertical.</p>	 <p>Stop (B)</p> <p>Arm extended palm down, fist clenched, move hand right and left</p>	 <p>Hoist</p> <p>With forearm vertical, forefinger pointing up, move hand in small horizontal circles.</p>	 <p>Lower</p> <p>With arm extended downwards, forefinger pointing down, move arm in horizontal circles.</p>
 <p>Move Slowly</p> <p>Use one hand to give any motion signal and place other hand motionless in front of hand giving the motion signal.</p>	 <p>Raise Boom</p> <p>Arm extended, fingers closed, thumb pointing upwards.</p>	 <p>Lower Boom</p> <p>Arm extended, fingers closed, thumb pointing downwards.</p>	 <p>Hold Everything</p> <p>Clasp hands in front of body.</p>
			<p>SAFETY MUST HAVE PRIORITY</p>

<p>Raise Boom Lower Load</p> <p>Right arm extended, thumb pointing upward, left arm extended downward swinging in horizontal circles.</p>	<p>Lower Boom Raise Load</p> <p>Right arm extended, thumb pointing downward and left forearm and forefinger vertical, left hand in small horizontal circles.</p>	<p>Slew (Swing)</p> <p>Arm extended, point with finger in direction of boom swing. (For overhead gantry crane move in direction indicated.)</p>	
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 <p>Use Auxiliary Hoist</p> <p>Tap elbow with one hand, then use regular signals.</p>	 <p>Travel Machine (Point Direction) (Crawler Cranes Only)</p> <p>Arms bent at elbow, fists clenched, rotate both forearms around each other.</p>	 <p>Travel One Track (Crawler Cranes Only)</p> <p>Lock the track on one side indicated by raised fist. Travel opposite track in direction indicated by circular motion of other fist rotated vertically in front of body.</p>	
 <p>Use Main Hoist</p> <p>Tap fist on head, then use regular signals.</p>	 <p>Extend Boom or Trolley Out</p> <p>(Telescoping booms)</p> <p>Both fists in front of body with thumbs pointing outwards.</p>	 <p>Retract Boom or Trolley In</p> <p>(Telescoping booms)</p> <p>Both fists in front of body with thumbs pointing towards each other.</p>	 <p>Finished With Crane</p> <p>Place arms above head and cross hands.</p>

- 4113.** Before starting a hoisting operation one person shall be designated to give all signals to the crane operator. All other people involved in the operation must be notified who that person is.
- 4114.** Give signals for operation of hoisting equipment only when you are qualified and designated to do so.
- 4115.** Do not let unused cables or slings of a hook up rig drift lose or dangle free when moving the crane or lifting with the other cables or slings that are in

use. Tie back any unused cables so they do not interfere with the ones being used to lift.

- 4116.** If an empty chain, strap, cable or sling is hanging from the hoisting equipment place the end of the loose sling into the ring attachment or the block hook before moving the hoisting equipment. Do not operate hoisting equipment if the load is rotating or swaying. Do not cause any uneven or fast movement by swinging the boom or raising or lowering the load quickly.
- 4117.** Never leave the controls of hoisting equipment unattended unless the work is completed, the crane is properly stopped and the load, bucket, magnet or other heavy attachment is left in a stable position on the ground or in a railcar.
- 4118.** The hoisting equipment operator must use an audible indicator such as a bell, siren, whistle or horn to warn persons of an approaching load lifted by hoisting equipment.
- 4119.** A load must not be carried over persons unless the following conditions are met:
 - (a) The equipment and any associated attachments are designed for such hoisting, **AND**
 - (b) The Manager, Supervisor or other Officer in charge has approved of such hoisting activities.
- 4120.** Stay clear of the crane's swing of the boom, the cab, the load, the bucket, counterweights, magnet or any other moving part of the crane while in operation.
- 4121.** When hoisting equipment is moving or pushing other equipment within shop yard limits an employee must precede the movement to warn others of its approach. He must walk clear of the track on which the equipment is moving and stay in plain view of the hoisting equipment operator. The hoisting equipment operator must stop the equipment the instant he does not have a clear view of the employee preceding the movement and before coming into contact with other equipment or obstructions.
- 4122.** When two cranes or derricks are lifting the same load, one qualified person must be designated to direct the movements of both.
- 4123.** Keep personal belongings, tools, oil cans and other objects clear of all hoisting equipment.
- 4124.** Before working on or repairing any part of overhead or gantry hoisting equipment take the following precautions:
 - (a) Notify all operators and all other employees involved of your

intentions.

(b) Place rail stops in protecting position on crane runway rails.

(c) Completely de-energize the power source to the hoisting equipment.

(d) Ensure that all controls and power switches of the equipment have been properly locked out and tagged out plus apply DO NOT OPERATE tags.

4125. Never ride on or hang from cables, tongs, slings, hook, down-haul weight, the load or any other part of the hoisting equipment.

4126. Never place any part of your body between objects or obstructions and the load being handled.

4127. Before you place any part of your body in or near a potential pinch point of hoisting equipment make sure the machine has been protected against unauthorized movement.

4128. When freeing a sling or hook observe the arrangement of the load and be sure it has settled before unhooking it. Position yourself to prevent being caught by the sling, hook or any part of the load. If you are working above ground level position yourself to prevent falling. When necessary to guide a suspended load into position push it instead of pulling it. Be sure to keep your hands and feet from under the load and maintain your balance at all times.

4129. To repair, splice, or shorten a chain use the approved chain repair method. Do not use a bolt, wire, nail, or other such object in the repair link. Do not tie a knot or twist a chain or cable. No repairs to lifting cables are permitted by Mechanical Department employees. If a cable is damaged it may only be taken to an authorized and/or certified cable repair shop for evaluation and possible repair. If the cable is deemed not repairable it must be scrapped.

4130. Do not stop or suspend a load over a gas cutting welding outfit or over any compressed gas cylinders. Best Practice: Do not move any loads over compressed gas cylinders if it is possible to go around them.

4131. The immediate supervisor must take specific steps when wrecking is to be done at a derailment and it is determined that a rail or similar object is unsecured, bent, “tight” under tension, in tension or in a position such that it is likely to move in any direction when it is pulled out, moved or cut off.

4132. The steps the supervisor must take are the following:

(a) Require all persons to be clear of the possible swing or sweep area.

(b) Have the rail or other object secured with a chain, cable, blocks or other means as may be necessary while it is being freed or while other derailed equipment is being handled or moved off the object.

(c) In order to gradually release the tension of a rail under pressure instruct

the acetylene torch operator to take a position behind the rail's potential direction of movement. Cut off pieces starting a sufficient distance from the danger area and work towards the tensioned area until the tension is depleted.

- 4133. When positioning and operating equipment maintain a minimum clearance of 12 feet from any overhead wire. Do not operate booms for lifting or wrecking under or within 12 feet of a wire that is energized.
- 4134. Never place hands, fingers, gloves, clothing or other objects on or near cables, sheaves, pulleys or other moving parts of a crane except when properly stopped, locked out and taken out of service for repair or maintenance and then only through the use of a **“DO NOT OPERATE Lock Out/Tag Out TAG”** sign.

HANDLING MATERIALS MANUALLY

- 4135. Before you leave material or a part of equipment or machinery that is being applied or removed make certain it is adequately secured against falling or undesired movements.
- 4136. Keep your hands, feet and all other parts of your body in position where heavy objects cannot fall onto them or shift against them. Take special care around such objects as gangplanks, transfer plates, bridges, skids and trestles. Plan your movement so that no part of your body will get caught between material you are handling and other objects.
- 4137. When moving material on wheels or rollers take the following precautions:
 - (a) Check to make sure of adequate clearance along the path before moving.
 - (b) Maintain control by keeping the load stable.
 - (c) Keep feet and hands clear of wheels or rollers.
 - (d) Use a suitable means to turn wheels or rollers, do not use your fingers.
- 4138. Before you use a skid, transfer plate, gangplank or similar platform make sure it is strong enough to hold the intended weight. Do not walk on or between skids. Secure the ramp or platform to a stationary object, if possible.
- 4139. When lifting objects manually by hand follow these precautions:
 - (a) Clear the path of obstructions and tripping hazards.
 - (b) Check the object being lifted for grease, oil, sharp edges or protruding objects. Grip the object firmly with the palms of your hands at the most suitable point.
 - (c) Carefully and slowly raise the load to test the weight. Lift only within

the limits of your physical capability. If necessary, get help or make additional trips.

(d) Have firm footing with one foot alongside the object and the other foot behind it, about shoulder width apart.

(e) Bend your knees and keep your back straight. Tuck in your chin to help keep your back straight. Lift slowly and steadily using your legs and knees until you have control of the load.

(f) Keep your arms and elbows close to your body. Draw the object close and lift by slowly pushing up with your legs avoiding sudden movements. Never jerk the load up or twist your back to turn. Turn your whole body under firm footing as you move.

(g) If there is a feeling that you are losing your handhold or that a tool is losing its contact or grip, tell the person giving commands and lower the object to rest as soon as possible.

(h) If the object gets out of control immediately move clear until it comes to rest. To the extent possible, warn others from coming into contact with the out of control object.

4140. When two or more persons handle material, follow this procedure:

(a) Designate one person to give all commands. Lift or move only on command.

(b) The person designated to give commands must fully inform those assisting what is to be done and what the words of command will be. The commands shall be given clearly in a loud and distinct manner.

(c) Persons assigned to lift an object should be placed according to size, strength, and experience.

4141. Pile and stow material safely in an orderly manner interlocking it where practical. Avoid making high narrow piles. Remove material from the top instead of the side of a pile and avoid dislodging other pieces.

4142. Never overload wagons, trucks, trailers or other similar equipment. Evenly load material so as to balance it on the equipment.

4143. When loading or hauling material on trucks, trailers, or wagons, take these precautions:

(a) Inspect the equipment for any defects.

(b) Secure the material if necessary.

(c) Block all round material.

(d) Place a red flag on the end of material extending beyond the end of any equipment before moving it.

- 4144.** When moving hand trucks, trailers, wagons, or carts, face the direction of movement. Watch out for persons and objects and be prepared to stop. Be especially careful at corners, doors, and passageways where sight lines are restricted.
- 4145.** When loading a wagon or trailer begin by loading the center then load towards the sides or ends. When unloading a wagon or trailer, remove the center portion of the load last.
- 4146.** Use only an approved wheel set lifting device to lift mounted railroad wheels.
- 4147.** Do not attempt to stop a moving wheel set by standing in front of it. If the wheel set must be stopped do it from behind by grabbing the axle.
- 4148.** Secure wheel sets by blocking them before leaving them.
- 4149.** Do not walk in front of moving wheel sets.
- 4150.** If wheel sets being rolled get out of control, immediately move clear, warn others, and wait until it comes to rest.
- 4151.** Long pipes, lumber or other such items must be carried by two people, one near each end, under the following conditions:
- (a) It is not certain that the object can be carried safely by one person without endangering others.
 - (b) The path of transport will go in or out of a doorway or pass by it.
 - (c) The path of transport will round a corner.
 - (d) The object will be carried in a congested place.
 - (e) Or at any other time as deemed necessary.
- 4152.** When trucks, skids and scales are not in use secure them in a safe condition.
- 4153.** Remove all protruding nails, staples, wires, loose bands or other such items from kegs, boxes or other containers and their covers as soon as they are opened. Fold and flatten any loose hoop or band and put it with the scrap.
- 4154.** Promptly remove nails, screws, hooks or loose bands from lumber or other material to be reclaimed. On material that is not to be reclaimed bend flat any such items sticking out from the material.
- 4155.** Leave equipment, tools, materials, scraps and other items clear of pathways where they will not fall or be knocked down. If there is a danger that such items might fall down they must be adequately secured.

PROTECTION

PROTECTION AGAINST MOVING TRAIN, SELF-PROPELLED EQUIPMENT, MACHINERY OR VEHICLE HAZARDS

- 4156.** You must not stand, walk on, or foul tracks, driving lanes, highways, or self-propelled equipment or machinery except when necessary in the performance of your duty.
- 4157.** Look in both directions for approaching trains, self-propelled equipment, machinery or vehicles before performing any of the following acts near tracks, driving lanes or highways when:
- (a) Going in between or stepping from between standing equipment.
 - (b) Stepping on or crossing tracks, driving lanes, or highways. Walk straight across or around whenever possible to do so.
 - (c) Moving in any of the following circumstances when near a train, self-propelled equipment, machinery, or vehicle:
 - (1) Getting on or off.
 - (2) Leaning beyond the line of equipment.
 - (3) Going under or coming out from under.
 - (d) Driving, pushing or pulling a cart or trailer across tracks, driving lanes, or highways.
 - (e) Performing any other operation where a hazard may exist from a moving train, machinery, equipment or vehicle.
- 4158.** When your duties require you to walk on or work on the track take these precautions:
- (a) Walk against the flow of traffic when practical.
 - (b) Always keep a sufficient lookout in both directions for any train or on-track equipment that is approaching on any track.
 - (c) If any train or equipment approaches, keep as far as practical from passing equipment. Look out for lading or tie-down material that might be

hanging, shifting or dragging from equipment in a manner that obstructs the walkways or could strike individuals.

- 4159.** Do not lean against a train, self-propelled equipment, machinery, vehicle or other wheeled equipment that might move.
- 4160.** Before going under or fouling a car that is not in a draft or a train, take the following precautions:
 - (a) Contact the person controlling the track.
 - (b) Ensure you have blue flag protection and comply with all blue signal rules.
 - (c) Set the hand brake and double check that it is applied and will hold.
 - (d) Chock both sides of at least one wheel.
- 4161.** Get on or off equipment that moves on wheels only when it is stopped. Use the side away from the “live” track whenever possible.
- 4162.** Keep ladders, scaffolds, skids, trucks, trailers and other material a safe distance from a track or the edge of a platform unless protection is provided to foul the clearances of that area by your immediate supervisor.
- 4163.** When a vehicle is stopped and the qualified employee is not at the controls protect it against movement by taking the following action:
 - (a) Stop the engine or motor and remove the ignition key.
 - (b) Leave the vehicle in gear. Automatic transmissions should be placed in park.
 - (c) Set the parking brake to hold the machine against undesired movement.
 - (d) If you are not on Company property and you must leave the vehicle unattended secure it against movement and lock it.
- 4164.** Observe the load on a car and keep your hand, foot or other part of your body clear of the top of the car as well as lading that is likely to shift toward the side or the end of the car.
- 4165.** If your duties require you to cross over between standing equipment you must first get permission, ensure it is safe to cross and then verify the permission to cross before moving into the danger zone. Once you have crossed over or between release the track back to the person in charge of the track or train being crossed.
- 4166.** When it is necessary to cross over standing equipment on other than Blue Signal protected track you must do the following:
 - (a) Contact the person who controls the track being crossed to get verbal permission to do so.
 - (b) If there is a locomotive attached to the car being crossed get “Three Step” protection from the engineer. Three Step includes:

- (1) Locomotive brakes set
- (2) Reverser in neutral
- (3) Generator field switch off
- (4) Agreement from the engineer that he/she will not move the equipment.

(c) Once permission is given or Three Step has been afforded then and only then are you permitted to cross over standing equipment.

(d) You may only cross over equipment that has the proper safety appliances to do so such as a cross over platform and handrail. At no time is it permissible to step on cutting levers, coupler shanks, knuckles, shafts or bodies other than a cross over platform designed for that purpose.

(e) When crossing over equipment your hands must be free of all objects that can interfere with your ability to grip the hand rails. Always maintain three points of contact with the equipment as you cross over.

(f) It is never permissible to cross over standing equipment with material, tools or any other object that cannot be carried on your person. This is considered fouling equipment and requires blue flag protection.

Mechanical RED Zone when working around equipment

- a. A 25' (Twenty Five Feet) "RED ZONE" perimeter must be established from the centerline of operating cranes, boom trucks, backhoes, tele handlers and other material handling equipment. The purpose of establishing a Red Zone is to ensure the safety of people working near and around this type of equipment.
- b. Mechanical Employees or their contractors whose duties require entering the RED ZONE may do so provided that a detailed job briefing is conducted between the Machine Operator and worker(s) involved. In addition to the sequence of work tasks to be performed and any special considerations to be discussed, the following must be included in the job briefing: The Mechanical Employee(s) or their contractors, while within the RED ZONE, must remain in view of the machine operator at all times. If at any time the machine operator's view is obstructed, the machine operator will stop operations until view of the worker(s) is re-established. Unless the machine is specifically needed for the task to be accomplished, the operator's hands and feet must be off the machine's controls while the workers are within the red zone.

NOTE: This rule does not pertain to derailment contractors who provide very specialized services to the railroad and whose employees have been specially trained to perform those services.

BLUE FLAG PROTECTION FOR WORKMEN

Supervisors in charge of workmen affected by blue flag protection will require that employees affected by these instructions read and understand them. The employee's signature indicating their understanding of these rules must be recorded and will be made a part of the employee's personal record.

DEFINITIONS

TERM MEANING

Effective Locking Device

A switch padlock that is vandal and tamper resistant and can be unlocked only by the class, group or craft of employees that applied it. Mechanical Department Locks for use on switches or derailleurs for Blue Signal protection are to be colored BLUE.

Rolling Equipment

Locomotives, railroad cars or one or more locomotives coupled to one or more cars.

Blue Signal

A clearly distinguishable blue flag by day or a blue light for hours of darkness.

Blocking Device

A lock, lever, plug, ring or other method of control that restricts the operation of a switch or signal.

4167. Blue signals must be displayed by each craft or group of workmen working on, under, or between equipment. These signals may be removed only by the same craft or group that originally applied them.

4168. Only the class or craft of employee applying an effective locking device may unlock or lock it.

4169. Specific locations where Blue Flag Protection is used:

(A) Car Shop Repair Track Area

“Car shop repair track area” means one or more tracks within an area in which Mechanical Department Personnel have the exclusive control of the testing, servicing, repair, inspection or rebuilding of railroad rolling equipment. This area includes heavy repair tracks within the area that are located with buildings as well as tracks within buildings where repairing, erecting or rebuilding of rolling equipment occurs.

(a) Providing Blue Flag Protection

In order to go on, under or between rolling equipment in a shop area use at least one of the following precautions:

- (1) Make sure that the manually operated switch or switches providing entrance to servicing area or repair tracks has been lined for movement to another track and secured by an effective locking device. Also make sure that a blue signal has been placed at each clearance point at both ends of the equipment if run through track. If derails are available it is recommended but not required that you also use them in connection with the locked switches, **OR**
- (2) Make sure that a derail has been applied in derailing position on the track or tracks to be protected. This derail must be locked with an effective locking device. A blue signal must be displayed at each derail. When properly positioned, the derail must be at least 150 feet from the end of the rolling equipment to be protected. If the speed within this area is restricted to 5 m.p.h. maximum, this distance may be reduced to 50 feet from the end of equipment.
- (3) A car mover may be used to reposition rolling equipment within a specific Blue Signal area after workmen on the affected track have been notified of the movement. This car mover must be operated by an authorized employee under the direction of the person in charge of the workmen in that area. The workmen on the affected track must be notified verbally, through physical contact or through the use of an effective audible alarm system. All workman must be clear of and not fouling equipment when such a movement is made.

(B) Locomotive Repair or Servicing Track Areas.

“Locomotive servicing track area” is defined as one or more tracks within an area in which Mechanical Department personnel has the exclusive control of the servicing, repair, inspection or rebuilding of locomotives. This area includes tracks known as the refueling or service tracks, all shop tracks, all engine house tracks and tracks inside of buildings where maintenance, repair and/or major overhaul of locomotives occurs.

(a) Providing Blue Flag Protection

To go on, under or between rolling equipment in the Locomotive Servicing Track area use at least one of the following precautions:

- (1) Make sure that the manually operated switch or switches providing entrance to servicing area or repair tracks has been lined for movement to another track and secured by an effective locking device. Also make sure that a blue signal has been placed at each clearance point at both ends of the equipment if run through track. IF derails are available it is recommended that you use them in conjunction with the locked switches, **OR**
- (2) Make sure that a derail has been applied in derailing position on the track or tracks to be protected. This derail must be locked with an effective locking device. A blue signal must be displayed at each derail. When properly positioned, the derail must be at least 150 feet from the end of the rolling equipment to be protected. If the speed within this area is restricted to not more than 5 m.p.h. this distance may be reduced to 50 feet from the end of equipment.

(C) Moving Locomotives into or out of a Blue Signal area

- (a) A locomotive may enter the designated Blue Signal area after:
 - (1) the blue signal protection is removed from the entrance switch or derail and;
 - (2) all personnel are advised of movements and are cleared of fouling the equipment on that track or in that immediate area and;
 - (3) the locomotive is stopped short of coupling to another locomotive, a person with the movement walks around the unit to be coupled to in order to confirm all persons and obstructions are clear. Then and only then proceed slowly to couple if that area is clear.

4170. A blue signal must be attached to the controlling locomotive at a location where it is readily visible to the engineman or operator at the controls of that locomotive.

4171. Within a protected locomotive shop or servicing track area blue signals must be attached to the controlling locomotive. This includes the controlling unit of a “multiple unit consist” wherever workmen are on, under or between the locomotive(s).

4172. In order to move a locomotive that is not blue flagged within the area without removing blue signals displayed at the entrance switches or derailer to the area provided, the following conditions must be met:

- (1) All workmen on the track must first be notified of the movement and cleared from fouling the equipment. Such notification may be either verbal, through physical contact or through the use of an

effective audible alarm system. Stop short of coupling and confirm all persons and obstructions are in the clear.

- (2) The locomotive must not impact, couple to or uncouple from a locomotive on which a blue signal is displayed.
- (3) The locomotive must be operated by an authorized employee under the direction of the person in charge of the workmen.

4173. Before a locomotive may depart the designated area the blue signal protection must be removed from the controlling locomotive and from the departure switch or derail.

4174. Blue signal protection removed for the movement of locomotives must be restored immediately after movement has been completed. Then and only then can the workmen go back to work on the track.

(a) Alternative Methods of Protection

In order to go on, under or between rolling equipment use at least one of the following precautions:

- (1) Make sure that the manually operated switch or switches providing entrance to servicing area or repair tracks has been lined for movement to another track and secured by an effective locking device. Also make sure that a blue signal has been placed at each clearance point at both ends of the equipment if run through track. IF derails are available it is recommended that you use them in conjunction with the locked switches, **OR**
- (2) Make sure that a derail has been applied in derailing position on the track or tracks to be protected. This derail must be locked with an effective locking device. A blue signal must be displayed at each derail. When properly positioned, the derail must be at least 150 feet from the end of the rolling equipment to be protected. If the speed within this area is restricted to not more than 5 m.p.h. this distance may be reduced to 50 feet from the end of equipment.

4175. Rolling Equipment Attached to a Locomotive

When workmen are working on, under or between rolling equipment coupled to a locomotive a blue signal must be attached to the controlling locomotive at a location where it is readily visible to the engineman or operator at the controls of the locomotive.

4176. Track Divided into Separate Work Areas

- (a) A track may be divided into separate work areas by applying a derail in

derailing position secured by an effective locking device 150 feet from each end of the rolling equipment to be protected. A blue signal must be displayed at each derail. If the speed within this area is restricted to 5 m.p.h. maximum, this distance may be reduced to 50 feet from the end of equipment.

4177. Emergency Repair Work

(a) When emergency repair work is to be done on, under or between a locomotive or one or more cars coupled to a locomotive, the engineman or operator must be notified specifically as to the nature of the work to be performed. Before the work may be performed the engineer must provide “3 Step” protection as follows:

- (1) Set the locomotive brakes to hold.
- (2) Put the reverse lever in neutral.
- (3) Put the generator field switch in the OFF position.

(4) Confirm the information provided for 3 Step protection from the engineman or operator to assure that he will not move the equipment, locomotive, cars or train.

(b) Discontinuing Protection

Only the immediate supervisor or the qualified employee who provided the protection may discontinue the protection provided or give the signal to move. To do so, that person must first make certain that all employees involved in that area have been informed and are in the clear.

(c) Car Equipped with Roller Bearings not in a draft of cars or Train

Before going under or fouling a car equipped with roller bearings that is not in a draft of cars or a train take two precautions:

- (1) Set the hand brake.
- (2) Chock both sides of a least one wheel.

4178. Stub End of Track

A blue signal must be placed on the stub end of a track or on the end of the equipment on the stub end of a track only if:

- (1) The equipment on that track is an operable multiple unit or
- (2) There is an operable locomotive on the stub end

4179. Remotely Controlled Switches

Before workmen may work on, under or between any rolling equipment where the switch leading to that track is remotely controlled the following actions must be taken:

- (1) The person in charge of the workmen has notified the operator of the remotely controlled switches with the particulars of the work to be performed.
- (2) The switch operator has applied a blocking/locking device to the lever, button, or other device controlling the switch.
- (3) The operator has informed the person in charge of the workmen that each remotely controlled switch providing access to the track has been lined against movement to that track.
- (4) The operator may not remove the blocking device unless he has been informed by the person in charge of the protection for the workmen that it is safe to do so.

4180. Track Protected with Special Stationary Electric Blue Signals and/or Derails: Track Covered by Timetable or Other Instructions.

The following rules apply to any track protected with special stationary electric blue signals, and/or derails covered by timetable or other instructions:

- (1) Each employee involved must be provided with a copy of the timetable or other instructions and must be qualified and approved on the operation and use of the protection as specified in the timetable.
- (2) On a Main Track, when workmen are on, under, or between rolling equipment on a main track take the following precautions:
- (3) Make sure that a blue signal is displayed at each end of the rolling equipment, **AND**
- (4) If the rolling equipment to be protected includes one or more locomotives make sure that a blue signal is attached to the controlling locomotive at a location where it is readily visible to the engineman or operator at the controls of the locomotive.
- (5) Emergency Repair Work

4181. When emergency repair work is to be done on, under, or between a locomotive or one or more cars coupled to a locomotive, the engine man or operator must be notified specifically as to the nature of the work to be performed. For definition of what is considered to be Emergency Repair Work consult with your supervisor. Before the work may be performed, the engineer must provide “3 step” protection as follows:

- (1) Set the locomotive brakes to hold.

- (2) Put the reverse lever in neutral.
 - (3) Put the generator field switch in the OFF position, if applicable.
 - (4) Acknowledges the information with advice that he will not move the locomotive, draft, or train.
- (a) Discontinuing Protection - Only the immediate supervisor or the qualified employee who provided the protection may discontinue it or give the signal to move. To do so, he must first make sure that all employees involved have been informed and are in the clear.

4182. Blue Flag protection is not required when performing the following:

You do not have to provide protection as long as you stay clear of equipment when doing any of the following work:

- (1) Cleaning the interior of office cars without the use of ladders.
- (2) Washing the exterior of office cars either manually or mechanically.
- (3) Evacuating and recharging passenger car soil holding tanks.
- (4) Watering equipment by attaching a hose to an outlet on the equipment exterior
- (5) Supplying locomotives with ice, water, fuses, stationery and paper toweling, tools, sanitary supplies or flagging equipment.
- (6) Making a visual inspection from a position on the ground alongside or inside caboose, locomotive or passenger car and not fouling the equipment with any part of your body.
- (7) Pulling the release rod to drain the air line on equipment.
- (8) Operating the retainer valve handle or performing other adjustments with an extension pole.
- (9) Oiling (lubricating) friction bearing journals.
- (10) Testing the End of Train device light by use of a brake stick or similar tool.
- (11) Performing any other operation that permits staying in the clear so as not to foul the equipment.

WORKING WITH FLAMMABLES, EXPLOSIVES, ACIDS AND FUMES

4183. Clean your hands, machinery or equipment only with a cleaner that is approved that is intended for that purpose.

- 4184.** Dispose of flammables, paper, rags, waste or material saturated or coated with a flammable substance in the manner designated by your immediate supervisor. Do not throw items from a window or a train. Do not place contaminated items in your pocket, refuse container, locker or other confined space. Never place them near a stove, furnace, switchboard, electric wiring, radiator or other source of heat.
- 4185.** Use only OSHA approved safety cans to store gasoline or other flammables or potentially explosive liquids. If flammable liquids are transported in a company vehicle, a Hazardous Materials Shipping document (HM 10) must be filled out and kept in the vehicle until the material is removed from the vehicle. Do not transport these materials in the passenger compartment or trunk of a motor vehicle. Reference GW Environmental Policy GWE 231 for additional information. Store flammables and potentially explosive liquids in an approved flame-proof cabinet designed for that purpose.
- 4186.** Do not smoke or use any open flame in the following locations:
- (a) In a posted or otherwise restricted area.
 - (b) In company offices, vehicles, buildings or in a confined space.
 - (c) In any place where explosives, flammables, gases, chemicals, storage batteries, fumes or other such items are present or are being handled.
- 4187.** To transfer gasoline or other flammables from a container or to fill fuel supply tanks use the appropriate precautions as shown below:
- (a) Move the equipment and container outside the building, if practical. Provide adequate ventilation such as opening the windows before pouring and keep them open until the area is free of fumes.
 - (b) Turn the equipment or vehicle ignition off and be sure that the engine is stopped.
 - (c) Use only an approved fuel pump or fuel safety can to carry or transfer flammable liquids.
 - (d) Maintain metal contact between the flammable container, nozzle, pipes, flexible hose or other attachment to which you are transferring.
 - (e) If you cannot maintain metal contact with the container to which you are transferring liquids you must properly ground the container.
 - (f) When filling a tank leave a one-inch air space at the top to prevent overflowing and allow for expansion. Control the flow and handling of the flammable substance to prevent spillage or fire hazard.
 - (g) The filling of a portable gasoline container in the bed of a truck equipped with bed liners is prohibited. Only fuel a portable container with them resting on the ground or floor and never while in a vehicle.

(h) It is prohibited to use a cell phone while refueling equipment, fuel containers and/or vehicles.

- 4188.** When you are transferring flammable liquids from one container to another guard against sparks resulting from static electricity. Do not use compressed air to force flammable liquids from a container. Use only those pumps that are approved and designed for that purpose. Both containers must be properly grounded prior to transferring flammable liquid.
- 4189.** Once you begin to refuel a vehicle do not re-enter the vehicle again until fueling has been completed. Re-entering the vehicle while refueling can lead to the creation of static electricity as clothing comes into contact with the vehicle interior and static-laden seat materials. Returning to the refueling area from inside the vehicle could create a static spark from your clothing that could potentially cause an explosion.
- 4190.** Before removing the filling plug on a torch, lantern, furnace, gasoline engine or other such device make sure the device is shut down and not overheated. Replace the fill cap immediately after filling. Before lighting or starting the device make sure that the fill plug is tight, properly in position and there are no fuel leaks. If you spill fuel on the tank immediately wipe off the excess fuel before you leave or attempt to start the equipment.
- 4191.** Never use gasoline, alcohol, solvents or any other flammable liquid (such as lighter fluid) as fuel in a stove, firebox, furnace or other source of heat. Only if the apparatus is designed to use these flammables as the primary fuel may you use them.
- 4192.** Before using a source of heat to repair or dismantle any tank that has contained a flammable take the following precautions:
- (a) Wash and flush the tank thoroughly.
 - (b) Open all access vents, caps, plugs or access plates to ventilate fumes.
 - (c) Use steam or dry ice to remove all traces of liquid and fumes.
 - (d) Fill the tank with water, if possible. Then drain it before working.
 - (e) Wait until the repairs are completed and the tank has cooled before you replace filling caps, plugs, access vents and plates.
- 4193.** When you are lighting an oil or gas forge, furnace, or heater stand to the side of the door or opening to protect yourself in case of flashback.
- 4194.** When you are extinguishing or shutting down furnaces, forges, or other such equipment shut off the fuel supply before you turn off the air.
- 4195.** Before you enter or use a torch, lantern, cutting torch or other open flame inside a coal or charcoal bin, a bunker or any other closed space or inside of

enclosed equipment with residue from similar commodities spray it with water to eliminate dust. Spray the entire area thoroughly and wait until any dust is settled before you begin work. Make sure the area is well ventilated.

- 4196.** When you are working with molten metal follow these rules to avoid dangerous flare-ups:
- (a) Do not allow any liquids to enter the molten metal.
 - (b) Do not place wet or damp tools or other objects in an area where it may fall in the molten.
 - (c) To avoid dangerous splashes add additional feed stock or any other substance to the melting pot slowly and carefully.
- 4197.** Whenever you are working with molten metal wear welding/burning clothes (preferably leathers) and leather welding gloves as well as a safety glasses and full-face shield.
- 4198.** Lighting and the Use of Fusees
- (a) To light a fuse, removed the cap and expose the starter end then press the abrasive starter end of the cap against the ignition starter button on top of the fusee. Always pull the cap toward you and push the fusee away so that any unexpected sparks or burning materials will not come in contact with you.
 - (b) After lighting a fuse hold the end downward and far enough away to prevent fire or sulfur dropping onto any part of your body or clothing. When using the lit fusee keep it at arm's length and below shoulder level. Move it slowly as you signal with it and never place it on a wooden or flammable surface.
 - (c) To extinguish a fusee carefully tap the lit end over some non-flammable object low to the ground until the lit end falls off.
 - (d) Make sure this lit end does not fall onto weeds, grass or other flammable materials.
- 4199.** Use fuses only as they are intended to be used. Store them in proper containers including while in a locomotive cab. Use only an approved container to transport them.
- 4200.** Loosen or remove the cap from a hot radiator only when you are sure that the radiator has cooled sufficiently to prevent steam or hot liquid gushing out. Cover the cap with heavy cloth, glove, or burlap. Loosen the cap only enough to relieve pressure initially.

WORKING WITH ELECTRICAL APPARATUS

- 4201.** Work on or about electrical circuit, apparatus or equipment only if you are qualified and you know its operating voltage and service handled. Follow the lockout/tag out procedure.
- 4202.** Use any device, appliance or tool only if it is designed for use in the maintenance and operation of an electrical circuit. Wire, wet rope, steel tape line or linen tape line containing metallic reinforcement must not be used around energized wire, apparatus or equipment. Never use a metal ladder to work in the area of high voltage equipment.
- 4203.** Do not depend entirely upon insulation, weather proofing or covering on wire, electrical components or equipment for protection against shock.
- 4204.** Before making a dielectric or load test take the following precautions:
- (a) See that the test ground lead is solidly grounded.
 - (b) Surround the unit, locomotive or other equipment with rope or tape that is at least 3 feet from the equipment and place caution signs at the equipment, OR
Make the test in an area that is marked with yellow painted lines and marked with permanent warning signs that equipment is under test.
 - (c) See that all persons not engaged in making the test are in the clear.
 - (d) Alert all persons in the vicinity of the roped off test area or a permanently marked area that a test is in progress.
 - (e) Wear hearing protection when noise levels are above 85 decibels or where posted as a requirement.
- 4205.** Define the limits of clearance protection for safely working on any electrical apparatus by establishing a perimeter barricade, warning tape or roped off area.
- 4206.** When necessary to work on electrical, hydraulic or other circuit supplying energy to equipment or other device, observe the following:
- (a) Notify the operator of the device that the power circuit is to be de-energized.
 - (b) De-energize the circuit then attach a warning tag to each switch and lock each switch with a private lock.
 - (c) The warning tag may be removed or the switch may be operated only by the employee who applied the tag. If the same employee is not available to work on that particular circuit his supervisor may arrange for the

removal of the warning tag for the purpose of putting other employees on the job. These employees shall place their warning tags as outlined.

- (d) If necessary to keep the circuit de-energized for a period of time longer than the hours of duty of the person who applied the original warning tag, the person who relieves him shall apply his own warning tag as soon as the original tag is removed.
- (e) If the person who applied the warning tag is not relieved by another employee the warning tag shall remain on the switch until his next tour of duty.
- (f) When work on the circuit is completed both workmen and operator shall satisfy themselves that the machinery is in proper shape for operation. Warning tags shall then be removed and switches and circuits re-energized.

4207. To extinguish a fire near an energized electrical circuit, equipment or apparatus follow this procedure.

- (a) Keep in the clear until you are sure that circuits have been de-energized and grounded.
- (b) Use sand or other extinguishing means or an approved extinguisher designated specifically for electrical fires. Use the extinguisher according to applicable instructions.
- (c) Never direct fire hose water stream close to energized circuits, equipment or apparatus.
- (d) Keep clear of an area in which wire, cable, equipment, apparatus or other items are likely to fall.
- (e) Whenever using chemical or other fume-producing firefighting means always attempt to provide ample fresh air circulation. Keep clear of any confined place where fumes may collect.

4208. Enter a substation to a power plant only when you are authorized and performing your duty.

4209. To avoid electric shock from arcing do not stand with your hands behind your back when your back is toward a generator or switchboard.

4210. When entering a power plant or any area with dangerous voltages always remove any metal objects including tools from your clothing and pockets. Protruding objects could possibly come into contact with dangerous voltage and cause electrical shock or injury.

4211. Do not use any other device in place of the proper electrical fuse that is intended for that specific machine or device.

- 4212.** Never place personal items such as clothing, lunch, tool or clothes hangers in or near any electrical apparatus, electrical panels or boxes.
- 4213.** When operating an open-type switch or circuit breaker keep your face turned away from it and stand at arm's length. This procedure is to protect you from a potential arc or flash as the contact is broken. Eye protection is always required.
- 4214.** Keep all doors and covers of electrical apparatus in place and secured except when necessary to open them for inspection or repair. If doors are missing shut off the electricity to the box or apparatus and tag it out of service until the doors are replaced.
- 4215.** When you are not using extension electric cords hang them up. Arrange them neatly in a coil so they will not be a tripping hazard. When extension cords are in use and extended across a walkway cover the cord with a ramp, carpet or tape it to the floor to eliminate tripping hazards.
- 4216.** Similar to sub-station areas, never enter into or work in any locomotive or confined area where electrical apparatus is energized while carrying metal objects or electricity-conductive tools or other objects on your person such as in your pockets that may come in contact with electrical circuits resulting in possible electrocution. Define the limits of clearance protection for safely working on any electrical apparatus by establishing a perimeter barricade, warning tape or roped off area.

PERFORMING SPECIFIC TASKS

GAS CUTTING AND WELDING

- 4217.** Weld or cut only if you are qualified. When engaged in burning and welding proper Personal Protective Equipment such as burning/welding jacket, welding pants, proper eye protection and welding gloves must be worn.
- 4218.** Inspect all hoses and couplings before you use them. If they are defective do not use them, get them replaced.
- 4219.** When you are cutting or welding keep your gas hoses in a safe position at all times. Position them so that sparks or molten metal cannot fall on them and so that equipment or vehicles will not run over them.
- 4220.** Pressurized cylinders must be secured by a cradle or on a platform designed for hoisting before you lift or transport them with hoisting equipment. You must apply the protective cap before lifting or transporting cylinders.

- 4221.** Use only an approved flint lighter to ignite an acetylene torch gas mixture. Keep a lighted torch within your own sight at all times.
- 4222.** Make sure all gas cylinders are properly shut off and secured when they are not in use. At the end of each work shift ensure that the tank valves are shut off and the hose lines are purged of remaining gas pressure. On trucks equipped to transport gas cylinders breakdown all burning rigs and relieve the pressures in the hose lines.
- 4223.** Before making a cut with a torch be certain that there is no person on the other side. Make sure that there are no other conditions that could prove dangerous to the operators or others around you as you perform cutting work.
- 4224.** When possible, before you cut, weld or heat a container, cored casting, pipe, plugged holes or other such tasks make sure the material is properly vented or drilled so that gas, steam or hot air will escape without the risk of hot metal blow-back.
- 4225.** Before you operate a torch on or near a closed receptacle make sure that no gas or flames will be generated by oil, grease or other combustibles contained within the receptacle. Close the torch valve before laying it down, climbing or passing it to another person. Never leave a lit torch unattended.
- 4226.** Do not use a torch to light a fire, other torch, cigarette or any other item as a source of ignition.
- 4227.** Keep gas cutting and welding tank outfits clear of any suspended load handled by hoisting equipment.
- 4228.** Upon completing an operation or before moving portable welding or cutting outfits take the following action:
 - (a) Shut off all gas cylinder valves.
 - (b) Open torch valves alternately to relieve pressure on gauges.
 - (c) Release regulator valve adjustment screws by backing them out to reduce line pressure, bleed off and then close torch valves.
- 4229.** It is prohibited to operate highway vehicles on public highways with regulators attached to gas cylinders unless the vehicle utility box is enclosed and designed for that purpose with proper securement for the gas tanks. Otherwise, all gas outfits must be broken down and properly stored upright with safety caps applied.
- 4230.** If you are engaged in acetylene or electric welding and/or acetylene burning you must use prescribed ear protection or lamb's wool to prevent burns to your inner ear. This rule applies equally to any employee exposed to flying sparks.

WARNING: Do not wear clothing made of flammable synthetic material (polyester, nylon, etc.) while burning. These materials can easily catch fire and severely burn you. Only approved welding/burning clothes are permitted to be worn during burning or welding.

- 4231.** Never use the torch body of the oxygen-acetylene torch to pull or unreel the hose.
- 4232.** Always ensure that both air and gas hoses are fitted with a proper and approved “Flash Back” anti-flame, back flow preventer device before using the equipment.
- 4233.** All employees engaged in gas or electric cutting, welding or heating operations must wear prescribed cutting or welding goggles. You must also wear prescribed goggles if you are observing such work. Full welding helmet is required for electric welding or cutting operation. Full face shield is required for all burning and gas cutting or welding operation.
- 4234.** Reaming, drilling out or otherwise altering burning tips to enlarge the holes is prohibited.
- 4235.** Never hang or store an oxygen/acetylene torch by the operating valves or lever. Never lay an oxygen/acetylene torch across a box or other container. Never hang a torch inside a box or other container.
- 4236.** Keep oil, grease or any fuel source away from cylinders or associated equipment. Do not handle the valve on an oxygen or acetylene cylinder with oily hands or gloves.
- 4237.** Be careful when handling coiled MIG welding wire. The sharp edges of the inner back-up metal core and banding material can cut you.
- 4238.** Do not leave electrodes in welding tongs when you are not actively welding.
- 4239.** Never use the electrodes in welding tongs when you are not actively welding.
- 4240.** Never use compressed gases to cool yourself or others.
- 4241.** Never use compressed gases to blow off or clean off your skin or clothing.
- 4242.** Never burn, cut, heat or weld when a butane, “ZIPPO” or other type of cigarette lighter is in your pocket or clothing. A defective, leaking or overfilled lighter may ignite from sparks causing an explosion or burns.
- 4243.** It is prohibited to use an acetylene or other similar type cutting torch to cut up metal oil drums, cans, barrels or other such objects which may have contained flammable materials in them. It is prohibited to cut the ends out of drums. Use a hand or pneumatic chisel to remove ends or crush drums to dispose of them.

MANHOLE, TRANSFER TABLE, TURNTABLE PIT, OR OTHER EXCAVATION

- 4244.** Before you enter a turntable or transfer pit containing machinery lock the table controller and place a “DO NOT OPERATE” warning tag on it. If you are conducting an operational test and are constantly supervised you do not have to lock and tag the table controller.
- 4245.** Properly protect all pits, excavations, manholes, turntables and inspection pits against accidental falls by fellow employees or other persons likely to walk into the area.
- 4246.** If a suitable walk is not available across an open pit, manhole or other excavation walk around it. Do not step over it or jump across it.
- 4247.** Keep a safe distance from the edge of a pit or trench unless constructing, inspecting, maintaining or otherwise using the pit. A qualified person will inspect daily the excavation, adjacent areas and protective systems of the site where the pit is located. Keep equipment far enough from the edge of an excavation to avoid imposing strain on the trench walls from vibration.

LADDER, SCAFFOLD, TRESTLE, AND WORKING AT AN ELEVATED PLACE

- 4248.** Make a daily inspection of ladders including the following items: ropes, hooks, fastenings, braces and other parts. You should also inspect daily all scaffolds including the following parts: platform planks, hand rails, toe boards, fastenings and other parts. If you find a defective ladder remove it from service immediately so that it can be properly repaired or separated from serviceable equipment. Defective scaffolding must be repaired before using or discarded permanently if not repairable.
- 4249.** Keep from under overhead work unless the nature of your work requires it. If you must pass under overhead work notify workmen above and see that they are taking precautions to prevent falling objects. You must wear a hardhat and safety glasses at all times when in such a situation.
- 4250.** When it is necessary to work, walk or stand above employees already engaged in work on a lower level, notify those underneath of your intentions.
- 4251.** If the nature of work on the lower level, mechanical equipment, or vehicular traffic requires, barricade or rope off a sufficient area for

protection to prevent objects falling to the lower level. Such areas include manholes, transfer tables, inspection pits or any other area that can be perceived as a hole or pit. If necessary, illuminate the protection and/or station an employee to protect others from the danger.

- 4252.** Never throw tools or materials to an employee at an elevated place. Do not drop tools or materials from an elevated place unless you know it is safe to do so. Give adequate warning to people in the area and make sure they are in the clear.
- 4253.** If you are going to use some kind of support for climbing, reaching or even sitting, inspect it first and make sure it is in good condition. Do not use an improvised or unstable support which includes the following:
- (a) Weak cross arm, platform or pole step.
 - (b) Equipment, machinery, lockers, boxes, swivel chairs, barrels, brackets, braces or conductor wire.
 - (c) Ladder placed on a box, block or any other unstable object or surface to make it reach.
 - (d) Chair or stool.
- 4254.** Place your feet firmly and have secure handholds with three points of continuous contact when engaged in any of the following:
- (a) Getting on or off equipment.
 - (b) Going up or down ladders or steps.
 - (c) Crossing over between equipment while on it.
 - (d) Riding on equipment unless you are properly seated.
 - (e) Operating a hand brake.
 - (f) Operating a cutting lever.
 - (g) Uncoupling equipment, when practicable.
 - (h) Coupling or uncoupling an air hose or any other pressurized hose or connector.
 - (i) In any other operation or situation on the ground, equipment or at an elevated location or elsewhere when necessary to maintain stability.
- 4255.** When getting on or off standing equipment take the following precautions:
- (a) Look for obstructions, openings or any other such hazard and avoid the hazard.
 - (b) Use only the handhold, ladder, step, stirrup or other part designed and provided for that purpose.
 - (c) Face the equipment unless you are on a passenger car. This exception applies only when you are at a platform location.
 - (d) Keep your body as close as possible to the equipment.

- (e) Always use the side of equipment away from the main or live track, if practicable.
 - (f) Place the heel of your shoe against the outside edge of the rung or stirrup, if possible. Otherwise, use the ball of your foot turned slightly sideways.
- 4256.** When working at elevated places observe all objects in the immediate area and take a position to prevent being struck by a falling object. Look before making a step in any direction. Stay clear of slipping, tripping or stumbling hazards.
- 4257.** Work on a roof, platform or other elevated part of a structure only after it has been inspected and found to provide adequate support.
- 4258.** When you are working at heights from 4 feet, fall protection is required.
- 4259.** Use only acceptable material for handrails, platforms and scaffolds. Do not use weak, cross-grained, knotty or other unsafe wood or similar materials.
- 4260.** When using a scaffold or platform or “A” ladder scaffold which the immediate supervisor may authorize, only use it under the following conditions:
- (a) It is on secure footing and secured to prevent moving or tilting.
 - (b) The cross platform floorboards are sturdy and are not less than 2 inches thick and are equipped with end stops or otherwise secured against undesired movement with regard to the platform supports.
 - (c) The cross platform floorboards are 16 or more inches wide, unless the space available does not permit that width. In this case the immediate supervisor may authorize the use of a 12-inch plank.
 - (d) There is a space of less than ½ inch between the floorboards or between the floorboards and the toe boards.
 - (e) The scaffold has handrails 36 to 42 inches high and toe boards not less than 6 inches high attached to it.
 - (f) The “A” ladder arrangement has handrails attached to it.
 - (g) The working height does not exceed four times the smaller base dimension; otherwise the tower must have guys, braces or outriggers.
- 4261.** Apply only transparent wood preservative to a wood ladder for surface protection. Never paint a ladder with any opaque or colored paints that may hide defects.
- 4262.** When using a ladder coming out of, from or to any elevated part of a train, self-propelled or other equipment, machinery, vehicle, scaffold, platform or any other elevated place, keep your body facing the ladder.
- 4263.** Do not attempt to use a ladder occupied by another person.

When you are going up or down by a ladder observe the applicable portions of the following rules:

- (a) Portable Straight Ladders - Set a portable straight ladder so that the distance between the base and the object against which it is leaned is about $\frac{1}{4}$ the length of the ladder from the base to the point at which the ladder top rests. If spacing is impossible, secure the ladder by tying it off.
- (b) Placing Legs on Firm Base - Make sure that a ladder has all legs on a firm base. If they are not, secure the ladder by tying it off.
- (c) Straight Ladder with Spikes or Non-skid Bases - Use a straight ladder equipped with spikes or non-skid bases suitable for the surface on which it is to be used. Otherwise securely lash it at the top or assign an employee at the base of the ladder to hold it. When necessary to prevent the top of the ladder from moving sideways tightly snub the top of each side rail at about a 30-degree angle to a suitable point of securement.

NOTE - NO TYPE OF LADDER BASE CAN BE DEPENDED UPON UNDER ALL CONDITIONS. SECURELY LASHING A LADDER IS PREFERABLE TO ASSIGNING A MAN TO HOLD IT.

- (d) Placing the Top of the Ladder - Place the top of the ladder against a stable non-slip support. Attach a board across the top of the ladder before leaning it against a window frame.
- (e) Raising And Lowering Top Portion of Extension Ladder - Raise or lower the top portion of an extension ladder only with an approved rope and other necessary attachments. Make sure that your hand and all body parts are clear of the downward movement of the top section of the extension ladder. Lower the ladder section carefully and slowly while keeping hands clear.
- (f) Extension Ladder Attachments - Inspect hooks, rope ties and other extension ladder attachments before using of the ladder.
- (g) Step Ladders - Fully open a stepladder and set the spreaders to hold.
- (h) Using Ladders Near People, Equipment, Machinery or Vehicles - Assign an employee to guard or erect an appropriate barrier to protect a ladder before using it at a location where a person, equipment, machinery or vehicle is likely to accidentally come into contact with it.
- (i) Using Ladders Near Doors - Lock or secure doors in a closed position if it is necessary to use a ladder within the swing of the door.
- (j) Objects that Restrict Safe Movement - Do not carry objects or items that interfere with safe movement in your arms, hands or otherwise. Use a hand line to raise or lower tools, materials or other items up to or

down from an elevated place.

- (k) Facing the Ladder – always face the ladder when mounting or dismounting it.
- (l) Body Position - Keep your body as close to the ladder as possible.
- (m) Secure Handhold - Have a secure handhold with at least one hand unless you are using a harness or safety body belt and have firm footing.
- (n) Foot Position - Keep your heel against the ladder rung or stirrup, if possible. If the distance between the rung and the object onto which the permanent ladder is secured does not permit this positioning turn your foot slightly sideways and use the ball of your foot.
- (o) Portion of Straight Ladder Above Supporting Object - Before you place your weight on the portion of a straight ladder extending above the object against which it is supported make sure the base of the ladder is secured to prevent its kicking out.
- (p) Top Steps and Rungs - Do not use either of the 2 top rungs of a portable straight ladder. Do not use the top step or platform of a step or “A” ladder unless the platform is specifically designed for that purpose.
- (q) Getting Off a Ladder- When you are getting off a ladder, step or stirrup, observe the ground, floor or pavement condition. Avoid obstructions, holes, slipping hazards and any other hazards.
- (r) Maintaining Secure Handhold While Getting Off - Maintain a secure handhold when dismounting a ladder until your feet are firmly placed on the ground, floor or pavement. Do not jump from the ladder or slide part way down.
- (s) Moving Portable Ladders - Move a portable ladder only while you are positioned in a firm stance and standing on the ground, floor or other stable location.

4264. Before you reach out more than an arm’s length from the edge of a scaffold or platform make sure you are maintaining a handhold with one hand and wearing a safety belt and body belt.

Reach out only one arm’s length from the side of a ladder. If the ladder is a straight ladder lashed at the top and you are using a safety belt adjusted to not more than 2 feet slack, you may reach out more than one arm’s length.

FALL PROTECTION

4265. Certain work requires an authorized fall protection body harness and lanyard in an untwisted position with the D-ring positioned away from the body. The lifelines (safety strap, lanyard, and cable) must be adjusted to

allow only the slack necessary for the performance of your work. Specific calculations need to be made to ensure that all of the fall distances have been accounted for prior to performing the work. These factors may include employee height, distance above the next lower level, length of lanyard, length of lanyard deployment, etc..

4266. The use of a fall protection harness is required in the following situations:

- (a) Working outside an elevated window.
- (b) Working on a steep pitched roof.
- (c) While on or in a drop-bottom car being unloaded.
- (d) In dangerous positions on a bridge, building or other structure.
- (e) Working in a coal bunker, storage tank or other similar enclosure.
- (f) When working on the roof of a locomotive or freight car.
- (g) In any other operation or situation involving an unprotected falling hazard. (The immediate supervisor will determine the necessity to use safety harness and lanyards.)

When you are working at heights above 4 feet a fall protection body harness is required.

WORKING AROUND TRACKS AND EQUIPMENT ON OR NEAR TRAINS, SELF-PROPELLED EQUIPMENT, MACHINERY OR HIGHWAY VEHICLES

4267. Employees are prohibited from operating or riding on locomotives, cars, motor or hand push trucks or any type equipment except as necessary in the performance of their duties or with proper authority.

4268. When you are working or moving under equipment, material racks or other low facilities check the available clearance. Move carefully so that you will not come into contact with any undesired object.

4269. When moving a locomotive in engine house territory display a white light or dimmed headlight on both ends of the locomotive. Always ring the crossing bell as you move the locomotive when in or near areas where workman or other individuals may be present.

4270. Before moving a locomotive in engine house territory take the following precautions:

- (a) Make certain the operator is qualified to move the locomotive.
- (b) Determine that the air brakes are cut in at both trucks. Test the brakes and make sure they will stop the locomotive.

- (c) Sound the bell and horn.
 - (d) Make sure employees and/or obstructions are clear of the move.
 - (e) Be certain there is no blue signal protection applied to the equipment being moved.
 - (f) The handbrake has been released.
- 4271.** While operating a locomotive or other self-propelled equipment take the following precautions:
- (a) Keep a constant lookout in the direction in which you are moving.
 - (b) When you are approaching a point at which the view is obstructed or where an employee may be working sound a warning with the bell and/or horn or other approved device.
 - (c) Stop short of any person or obstruction.
 - (d) Never go faster than posted speed limits.
- 4272.** Before moving a locomotive or car on or off a turntable or transfer table take the following action:
- (a) Gets a signal from the authorized employee guiding the movement.
 - (b) Make sure that the tracks are properly aligned and that the rails are secured if equipped with a securing or alignment locking device.
- 4273.** Before leaving an “OPERATIVE” locomotive unattended take the following precautions:
- (a) Put the throttle in “IDLE” or “OFF” position.
 - (b) Apply the air brakes and hand brakes.
 - (c) Remove the reverse lever if the equipment design permits.
 - (d) On a diesel locomotive open the generator field control switch.
 - (e) Move the isolation switch to isolated position.
 - (f) Lock all cab doors and side windows to properly secure the locomotive against unauthorized entry per FRA Equipment Securement regulations.
 - (g) Take any other precaution required by the rules set by local supervision.
- 4274.** Notify all employees in the immediate area and be sure that they are in the clear before operating any of the following locomotive devices:
- (a) Air brake or the air horn if employees are positioned where the sound may startle them or be close to their position.
 - (b) Air compressor or the air compressor overpressure safety relief valve.
 - (c) Draining the cooling system water
 - (d) Manually draining the condensate from an air reservoir.
 - (e) Opening any engine cylinder test cocks or compression relief valves.
 - (f) Performing a self-load test of horsepower, if so equipped.

- (g) A locomotive cooling or dynamic brake fan or radiator shutter.
- (h) Any other similar apparatus, devices or systems which may cause a danger risk to those near the equipment.

4275. Before starting to remove an airbox or crankcase cover you must stop the engine and lock out all starting devices.

4276. Before rotating a diesel engine for test purposes take the following actions:

- (a) Place the fuel pump switch in the “OFF” position.
- (b) Hold the layshaft in the “No Fuel” position.
- (c) Pull governor button out to avoid starting the engine.
- (d) Open all cylinder test valves.

Before starting a diesel engine take the following actions:

- (a) Make sure that the crankcase and air box covers are securely in place.
- (b) Close the cylinder test valves.
- (c) Make sure that all controls, valves and other devices are in their proper position.
- (d) Verify that all engine flywheel-turning devices (bar over jacks) have been removed and that the flywheel guards have been properly replaced.
- (e) Ensure that all persons are clear of moving parts, accessories, cylinder test valves and pinch points.

4277. When removing floor panels in a locomotive cab to access the lower portion of the air brake system or electrical cabinet always place the removed floor panel in a position where it is properly secured against falling over and causing injury.

4278. Immediately upon removing a cab floor panel apply a DANGER – FLOOR OUT sign or flag to warn anyone who may enter the cab that the floor is open and there is a danger to fall into the open floor hole.

4279. Place DANGER sign or FLOOR OUT warning flag in the center of the doorway at both cab door entrances so that no one may pass them without noticing them as they attempt to enter the cab.

4280. Never leave a floor panel out of a cab floor unattended if the signs or flags are not in place to warn persons who might enter the cab.

4281. Before removing a floor panel conduct a job briefing with all employees on or near the locomotive with the floor panels removed to ensure everyone is aware of the potential dangers.

4282. Locomotive high voltage cabinets should be opened only by a qualified employee for repairs or for test purposes. Otherwise these cabinets must be

kept closed. If it is necessary to open a high voltage cabinet take the following precautions if the locomotive must be tested running:

- (a) Put the throttle in “IDLE” position.
- (b) Put the reverse handle in the “NEUTRAL” position and remove it.
- (c) Move the Generator Field Switch to the “OFF”.
- (d) Place the isolation switch in “ISOLATE or “START” position.

4283. Before checking a traction motor or any other device under a locomotive while the engine is running take the following precautions:

- (a) Apply the air and hand brakes.
- (b) Open the generator field switch placing it in off position.
- (c) Put the isolation switch in the start position.
- (d) Remove the reverse lever.
- (e) Install proper blue flag protection or blue light.
- (f) Tag the locomotive with a DO NOT MOVE tag.
- (g) Before an employee enters underneath a running locomotive to check a traction motor or any other system device always have a separate qualified employee stand nearby and vigilant of others to protect the employee underneath against possible unauthorized movements or dangers.

4284. After a valve on a locomotive has been operated for inspection and/or test purpose immediately restore it to “Normal” position.

4285. When you are wiping oil from a bayonet-type oil gauge dip stick protect your fingers with a folded cloth or a paper towel. Never use your fingers to wipe oil from any dipstick used to gauge oil levels. Use extra protection when you are checking levels and the oil is hot.

4286. Keep your fingers and other parts of your body clear of the discharge end of nozzles, injector pumps, air system blow-down devices, cooling system drains and high pressure lines.

4287. IMPORTANT: In the event a locomotive diesel engine crankcase explosion has occurred and the crankcase over protection system has activated do not open any air box or crankcase covers for at least 30 minutes. Allow the hot engine to properly cool down. Opening a hot crankcase prematurely may introduce oxygen into an otherwise smoldering crankcase resulting in a sudden and severe explosion of hot gases. When in doubt contact a mechanical department supervisor for guidance.

4288. Before operating a locomotive on which work has been performed make a thorough inspection of it to determine it is safe to start or operate. Make sure that all tools, materials, cords, hoses and other items are clear of the

following:

- (a) Electrical apparatus and rotating equipment.
- (b) Moving parts.
- (c) Overhead areas.
- (d) Walkways, ladders, platforms, bay windows and steps.
- (e) Other areas or devices where the items might create a hazard.

4289. When you are getting on or off a locomotive or working inside or under it, first check the overhead and side clearance. Then move slowly so that you will not strike your head or other parts of your body as you enter or exit the space.

4290. Do not use as a foot rest any of the following: pipes, valves, instrument panel, glass surfaces or other similar parts of the locomotive.

4291. Before working on locomotive brake rigging or adjusting piston travel take the following actions:

(a). Always use wheel chocks to secure rail equipment before releasing hand brake to perform adjustments or repairs. Employees must not attempt to apply brake shoes or perform any other air brake work where a possible air brake application may result in injury. Air brakes must be cut out and the air supply reservoirs must be completely emptied of all trapped air before attempting repairs.

(b). In the case of a locomotive equipped with a 3-way truck air brake cutout cock, always close the cut out cock to the brake cylinders on the individual truck being serviced. Locomotives should not have both trucks cut out at the same time or air drained from the main reservoirs while being serviced unless in a controlled shop environment with the unit properly secured and chocked.

(c). When testing the brakes of rail equipment employees must use caution to ensure everyone is in the clear before applying air to the brake system.

(d) Tools of appropriate length and size should be used when adjusting piston travel and/or checking slack adjuster operation. Employees must protect their hands and fingers when performing repairs to air brake systems. **Never use your fingers to align holes on any part of the air brake system.**

4292. When fueling, watering, sanding or otherwise servicing locomotives use this procedure:

(a) Put the throttle in the “IDLE” or “OFF” position.

- (b) Put the reverse lever in “NEUTRAL” and remove it if possible.
 - (c) Isolate the controlling locomotive and place the generator field switch in the “OFF” position.
 - (d) Apply the air brakes.
 - (e) Take a position clear of servicing facilities and of associated locomotive parts.
 - (f) When you are removing or replacing a servicing device or opening or closing lids or fasteners, keep your hand, foot and other body parts clear of pinch points.
 - (g) When the servicing is completed make sure that all servicing devices are removed from the locomotive. Secure them clear of the track not to foul.
 - (h) Close and secure all locomotive servicing lids or fasteners.
 - (i) Observe blue flag rules.
 - (j) Wear full-face shield, primary eye protection, PVC gloves when fueling. Wear a respirator when sanding locomotives for more than one hour per day in cumulative time. Wear primary eye protection when watering.
 - (k) Do not leave any fuel or water servicing nozzle unattended.
- 4293.** Make sure that the crosswalk safety bar or chain is in protective position on both ends of all units except those coupled together in Multiple Unit service.

WORKING ON OR NEAR FREIGHT CARS

- 4294.** When necessary to be on or about the end of a drop end gondola car take the following precautions:
- (a) Make sure that the lower end gate is stable. If it is not stable stay clear of it.
 - (b) Make sure that any raised end gate is secured on both sides of the car. Stay clear of the swing of the end gate. Do not climb over it.
 - (c) Do not ride astride a raised end gate. Do not use the latch or hinge jam as a handhold.
 - (d) To open the end gate stand outside and take hold of the grab iron before unlatching and pushing the end gate down.
 - (e) To close the end gate use any available designed and approved device for that purpose.
 - (f) Keep clear of all pinch points.

- 4295.** Always look for freight car Bad Order Tags, read them, and avoid the defects they point out.
- 4296.** When opening or closing a hopper car drop bottom door use the following procedure:
- (a) Before opening the door make sure that no person is on top of the load or under the car. Make sure that all persons are clear of the door on the opposite side of the car.
 - (b) Use only a ratchet wrench or self-adjusting car wrench to open door mechanism.
 - (c) Do not use the wrench to hold the door winding mechanism while releasing the pawl from the ratchet.
 - (d) Knock the lock pawl free from the ratchet. If necessary, unwind it with the ratchet or self-adjusting wrench. Never release the pawl with your fingers.
- 4297.** When closing a drop bottom door equipped with a Wine type lock, use the following procedure:
- (a) Keep your hands and fingers clear of the jam or door frame.
 - (b) Make sure that any workmen on the other side of the car are clear of the door.
 - (c) To keep from losing your balance, grasp the flange or angle on the side of the car.
 - (d) Place your foot on the push or locking casting of the door where it is corrugated for this purpose.
 - (e) Swing the door with your foot until the door is engaged in the first notch of the lock.
 - (f) Use the bar in the socket provided to engage the door latch in the second notch or closed position.
- 4298.** To open or close a roller or plug side door of a box car, use the following procedure:
- (a) Make a detailed visual inspection to determine if there are any missing or defective parts that would keep you from operating the door safely.
 - (b) Inspect plug doors with bottom rollers off-track to insure that the top rollers and safety arms are properly engaged on the track without damage.
 - (c) If you find any door in a condition that is deemed unsafe to attempt a field repair, bad order it to a safe facility properly equipped for repairing it.
 - (d) Before moving a car with a door that is inoperative or off-track, immobilize that door by blocking or other acceptable means. Move it to

a designated facility for repairs or attention.

NOTE: Do not use a come-along unless you can make a straight pull without binding the door by using a length of chain.

- 4299.** When you are working on the end or side of a hopper, gondola or car not equipped with running boards use an approved scaffold, plank or trestle. Do not walk, stand or sit on the top of the side or end. Never use the car end to cross over between equipment.
- 4300.** Until you are certain that the tension of draft gear or cushion unit is completely released, keep clear of the front and back of the gear unit.
- 4301.** Warn others to keep clear of any moving part. Protect the area with barriers, if necessary.
- 4302.** When placing a car or locomotive body on a truck bolster center pin use long handled tongs or other approved means to guide the center pin. Never use your hand to guide a center pin.
- 4303.** When blocking moving equipment use only a chock block that is equipped with a handle. Hold the block by the handle with your hand in the clear. Keep all body parts clear of the equipment being blocked.
- 4304.** To open a knuckle on standing equipment use the following procedure:
 - (a) Stand clear at the side of the equipment.
 - (b) Check for a knuckle pin in the knuckle. If the pin is missing be extra alert in your procedure: when the knuckle falls to the ground it may bounce toward you and strike you.
 - (c) In a braced position face the end of the equipment.
 - (d) Grip the extreme end of the cutting lever handle at arm's length.
 - (e) Slowly lift the cutting lever handle a short distance until the anti-creep slack is taken up (you will hear a click).
 - (f) Quickly and without a jerk continue lifting the cutting lever handle until the knuckle is open.
 - (g) Exert only the amount of pressure that will permit maintaining a secure handhold and firm footing.
 - (h) When on the ground use only one hand while maintaining a secure handhold with the other, if possible.
 - (i) Operating a cutting lever on moving equipment is prohibited.
- 4305.** Do not use your finger to adjust the lock pin or lift assembly at the bottom of a coupler. Use only the proper tools for the task.

OPERATING HAND BRAKES

- 4306.** Employees are prohibited from operating handbrakes on moving equipment. Before operating any handbrake, follow the procedure below:
- (a) Determine the type of brake and know its operation.
 - (b) Inspect the brake for any defects. If you find a defect report it to your supervisor. **Never** attempt to apply a defective handbrake.
 - (c) After using the handbrake check to verify that it has either applied or released properly.
 - (d) Handbrakes must be operated from the brake platform if the car or locomotive is equipped with a safe, usable brake platform.
 - (e) Brake clubs may not be used to apply or release hand brakes or for any other purpose.
- 4307.** Brake sticks designed specifically for applying and releasing hand brakes may be used to apply/release wheel-type hand brakes on all equipment. Consult with your Regional Director of Safety to determine if Brake Sticks are mandatory or optional on your operating region or railroad.
- 4308.** To apply or release a vertical wheel handbrake, use the following procedure:
- (a) Get in the proper position; face the brake platform and place your right heel against the edge of the brake platform. Place your left heel against the end ladder rung closest to the level and below the brake platform.
 - (b) With your left hand grip the handhold that provides you with best balance. Use your right hand to apply or release the brake.
 - (c) To apply the brake, grip the wheel rim on the pull side of a spoke. **Never** put your hand in the spokes. Turn the wheel clockwise to apply the brake. Use the on/off lever if there is one.
 - (d) Keep your clothing and body clear of the wheel while you are releasing the brake. To release the brake, grasp the rim at the top with your right hand at arm's length, while leaning your body slightly to the left. Maintain your balanced position at all times. If there is a release lever, use it to release the brake. If the handbrakes were applied after airbrakes were applied in emergency, you may have to apply the airbrakes in emergency again to release the brake. This is not necessary if the handbrake is equipped with a separate release lever.
- 4309.** Before moving from the end of the car to the side of it, **always** look around the end of the car in both directions. Look out for passing equipment or lading.

4310. To apply or release a horizontal wheel and shaft handbrake, use the following procedure:

(a) Grip the brake wheel firmly with both hands and feet spread for balance. To maintain your balance, move the wheel a maximum of a quarter turn at a time. Apply the brake by turning it clockwise. Release the brake by turning it counterclockwise.

(b) To maintain a balanced body position while using a horizontal wheel brake with exposed pawl and ratchet, apply or release the brake only a few notches at a time. Since the brake wheel spins, keep your clothing and body clear of the brake wheel when applying and releasing the brake.

(c) If the handbrakes were applied after airbrakes were applied in emergency, you may have to apply the airbrakes in emergency again to release the brake. You will not have to apply the airbrakes in emergency if the handbrakes are equipped with a separate release lever.

(d) Before moving from the end of the car to the side of it, always look around the end of the car in both directions. Look out for passing equipment or lading.

4311. To apply or release a pump handle handbrake, use the following procedure:

(a) Before operating the hand brake make sure that the handle stop is not defective or missing.

(b) To operate the brake from the equipment, use the brake platform and a handhold. Operate the pump handle with one hand only, keeping the other hand on the handhold for balance. If you **must** operate the brake from the ground stand clear of the swinging radius of the handle. Operate the handle with one hand only, using the other hand to maintain balance.

(c) Put the on/off lever in the appropriate position before using the handle. Some brakes require that you put the on/off lever in “off” and then move the brake handle, first up to release the tension then down to release the brake.

(d) Before moving from the end of the locomotive or car to the side of it, **always** look around the end of the equipment in both directions. Look out for passing equipment or lading.

WORKING WITH PRESSURE AND AIR LINES

- 4312.** When necessary to uncouple air hoses by hand use the following procedure:
- (a) Assure 3-Point or Blue Signal protection is applied before fouling the equipment.
 - (b) Enter the track gauge and close both angle cocks. Immediately move one foot out of the track gauge and straddle the rail.
 - (c) Bend at the knees keeping your back straight. Securely grip each hose near the glad hands. Do not grasp the glad hands.
 - (d) Slowly raise the hose joint to allow it to leak air pressure until all pressure is depleted then continue raising the joint until it separates. Turn your head away as the air exhausts to avoid flying particles.
 - (e) Return the hoses to lowermost position instead of allowing them to drop.
 - (f) Cancel 3-point protection only after you are in the clear. Once canceled, protection must again be established before fouling equipment.
- 4313.** When coupling air hoses use the following procedure:
- (a) Assure 3-point or Blue Signal protection is applied before fouling equipment.
 - (b) Close the angle cock if the hoses are under pressure.
 - (c) Place one foot inside the gauge of the track.
 - (d) Bend at the knees keeping your back straight and examine the hose gaskets. Replace all missing or defective hose gaskets before coupling.
 - (e) Securely grip one hose above the glad hand. Bend it upward and hold it with one hand.
 - (f) Grasp the other hose above the glad hand and bend it to match the angle of the other glad hand.
 - (g) Firmly move both hoses downward to interlock them in the lowermost position.
 - (h) If it is necessary to open the angle cocks place both feet inside the track gauge only long enough to open the opposite angle cock. Step completely out of the track gauge as soon as possible.
 - (i) Cancel 3-point protection only after you are in the clear. Once canceled, protection must again be established before fouling equipment.
- 4314.** Before releasing brake pipe pressure with an angle cock hold the hose firmly at the coupling to prevent it flying around. Turn your head away from the hose as air escapes to avoid flying particles.
- 4315.** Before you operate a valve or make adjustments or repairs on the outside of equipment make sure the equipment is stopped and properly secured. Follow lockout/tag out procedures.

OPERATING SELF-PROPELLED EQUIPMENT

- 4316.** When operating self-propelled equipment take the following precautions:
- (a) Test the brakes immediately after starting the equipment.
 - (b) Maintain a constant lookout for an obstruction or other unsafe condition in the direction in which you are moving. If you cannot see make arrangements with others that will assure a constant lookout in the direction in which you are moving.
 - (c) Reduce speed and give a warning if a person or obstruction is close to the equipment and be prepared to stop short of the obstruction.
 - (d) Keep the clutch engaged while descending a steep grade using a reduced gear to control the speed of the equipment.
 - (e) Properly secure movable work parts or fixtures of the machine in the “up” or “clear” position before traveling in any direction.
 - (f) If safety belts are supplied the operator must wear them.
 - (g) Test the horn and lights of the machine to ensure they function properly. Use lights at all times when moving self-propelled equipment.
 - (h) Mobile cranes, fork lifts and similar types of mobile equipment should be equipped with audible back up alarms to indicate and warn of backing movements.
 - (i) When finished using self-propelled equipment shut it off and secure the equipment with the emergency brake to guard against undesired movement.
- 4317.** Before you couple or uncouple tractors, trucks, trailers or other equipment make sure they are completely stopped. Keep your hands clear of rings, hooks, levers, handles, catches and other pinch points.
- 4318.** Do not push four-wheel trucks or trailers out of the way with your foot. Pull them out of the way by hand and control their movement at all times.
- 4319.** Before you reverse the power of a tractor, truck or other power operated equipment wait until it has come to a complete stop. Make sure the route is clear of any obstructions before backing it up.
- 4320.** Before you place battery charging plugs in a receptacle of an electric truck make sure the controllers of the truck or tractor are in the “OFF” position.
- 4321.** When operating self-propelled equipment or other equipment or vehicle keep your body, arms, hands, legs and feet in safe positions. Do not let them dangle below or extend beyond the side or end of any of the following:

- (a) Foot platforms
 - (b) Steering lever
 - (c) Doors or other parts of the equipment.
- 4322.** If you are helping on a shop truck or tractor and it is necessary to walk to another location always walk behind the machine. Make sure the operator knows where you are at all times.
- 4323.** The following rules will govern the use of All-Terrain vehicles, 4 wheelers and snowmobiles:
- (a) Wear helmets and goggles designed for such use while operating snowmobiles.
 - (b) Operating ATVs and 4 wheelers without helmets is strictly limited to operating speeds not greater than 5 MPH.
 - (c) Do not foul tracks with any of these machines without proper authorization.
 - (d) Be alert for wires, poles, culverts, cables, guy wires and other obstacles. Do not travel over frozen bodies of water.
 - (e) Before starting the machine test the brakes and throttle to ensure they are not stuck or frozen.
 - (f) Both the operator and passenger must be seated at all times. Passengers must maintain a firm grip to hold on during movement.
 - (g) When in operation the headlights and tail lights must be displayed.
 - (h) DO NOT speed or overdrive the effectiveness of the brakes. Periodically test braking distances at various speeds according to the snow and ice conditions.
 - (i) Give other traffic the right-of-way at all intersections and road crossings.
 - (j) When extended or long trips are made during severe weather two machines MUST travel together.

WHEN OPERATING VEHICLES

- 4324.** When you park or leave a vehicle, self-propelled equipment or a similar machine unattended take the following precautions:
- (a) Consider all parking alternatives to avoid backing up if possible. Always park to allow a pull-through exit if feasible to do so.
 - (b) Do not foul tracks, walkways, doorways, elevators or passageways.
 - (c) Be sure to stop the engine or motor and fully apply the brakes. If practical, remove the key or operating handle and secure the steering handle in the vertical position.
 - (d) Once stopped and prior to removing seat belts, ensure vehicle is in PARK and engine is turned off.

(e) When you are on a slope, set the brakes and chock the wheels.

(f) When Backing up is the only alternative:

1. Make sure no obstruction are behind the vehicle to prevent safet movement. If the vehicle is not equipped with a backup warning device and there is more than one occupant, designate another person to stand near the rear of the vehicle and guide you as you back up. If there are no other occupants, sound the horn once. Back up only the necessary distance.

2. When dropping a passenger off, stop the vehicle, place the vehicle in PARK and only then allow the passenger to remove their seatbelt and exit the vehicle. Conversely, when picking up a passenger, stop vehicle, place in PARK, allow passenger to enter the vehicle, apply seatbelt and close door before moving the vehicle again.

4325. Drivers of motor vehicles must obey local, state and/or federal motor vehicle codes. Operators and passengers of company owned, rented or personal vehicles used for company service are required to wear their seat belts at all times while the vehicle is in operation.

4326. The driver of a highway vehicle must not transport employees in a separate riding compartment. Riders must not crowd the driver's seat and must remain seated with seat belts applied. Where practical, they should maintain a handhold.

4327. Items being transported within the vehicle must be adequately secured against undesired movements.

4328. No one is allowed to ride in the cargo compartments of any vehicle.

4329. When on a highway get in or out of vehicles from the side away from traffic whenever practical. Before exiting a vehicle, always look to make sure it is safe to step out of the vehicle.

4330. When chains or non-skid devices are used apply them to both sides of the vehicle. Apply them only to the outside wheel of dual wheels.

4331. A vehicle driver must slow down and determine that it is safe to cross railroad tracks even though the position of crossing gates or signal may indicate that it is safe to cross.

NOTE: Drivers of fuel trucks must come to a complete stop at all crossings. Once they have determined that it is safe to cross, they may do so. They should never shift gears while crossing over the crossing.

4332. When a vehicle is stopped and a qualified employee is not at the controls, protect it against movement by taking the following action:

- (a) Stop the engine or motor and remove the ignition key.
- (b) Leave the vehicle in gear. (Automatic transmissions should be placed into park.)
- (c) Set the parking brake to hold.
- (d) If you must leave the vehicle unattended, lock it.
- (e) If you are on a slope, chock the wheels.

4333. Only authorized employees may operate or ride in company owned or leased vehicles. Privately owned vehicles may not be used while on duty without proper authority from the supervisor.

4334. The use of motorcycles while on duty is prohibited.

4335. The vehicle driver is responsible for the safe and proper operation of the vehicle in his charge and the safety of the occupants. Except in unusual circumstances, it is the driver's responsibility to pay all fines, penalties or charges that may be assessed for failure to comply with regulations.

NOTE: To operate vehicles, employees must be properly licensed and, if applicable, certified. CDL drivers must not violate hours of service regulations unless an emergency has been declared.

4336. Employees are prohibited from transporting gasoline or flammables in the trunk of an automobile except in cases of extreme emergency and then only in approved containers.

4337. Drivers of vehicles must never use a cellular telephone or similar tablet device to text message or email while the vehicle is in motion.

4338. When jacking up a vehicle you must take the following precautions:

- (a) Do not occupy a vehicle supported by a jack.
- (b) Block the wheels to prevent movement.
- (c) Do not place yourself under a vehicle supported by a jack unless it is blocked to support the vehicle in the event of jack failure.

4339. When driving at night take the following precautions:

- (a) Slow down due to reduced visibility.
- (b) Do not overdrive your headlights. Be able to stop within the distance illuminated by your headlights.
- (c) Do not use your parking lights while your vehicle is in motion. Parking lights are for parked vehicles only.
- (d) When stopped along any highway, road or thoroughfare use 4-way flashers to call attention to your stopped vehicle.

4340. When driving in adverse weather take the following precautions:

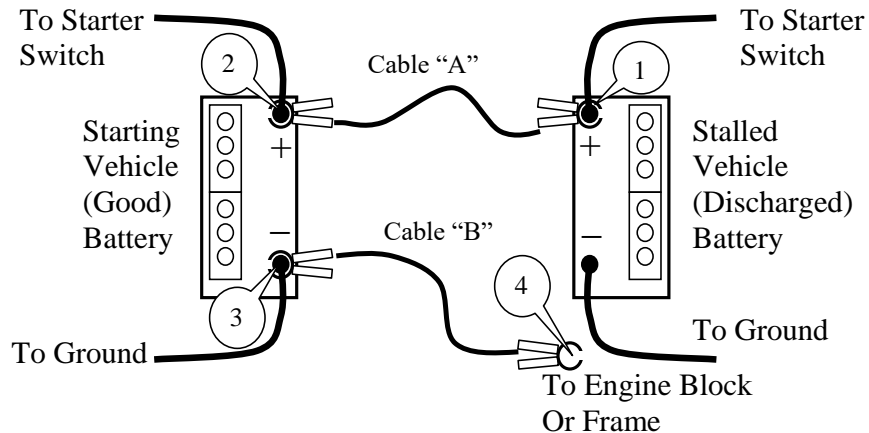
- (a) Clean your windshield and windows. Remove ice, snow and frost from

windows while ensuring your wipers and defroster are in good working condition.

- (b) Adjust your speed according to the driving conditions. Slow down on wet, snowy or icy roads.
 - (c) Get the feel of the road. Test your brakes periodically.
 - (d) Gently pump your brakes when slowing or stopping. Sudden stops may throw your vehicle into a skid. Note: ABS brakes should not to be pumped.
- 4341.** Follow at a safe trailing distance from the vehicle in front of you. Be prepared for the vehicle ahead of you to stop unexpectedly.
- 4342.** Take the following action in the event of these circumstances:
- (a) Wet Brakes - Step lightly on the brake as you drive. The heat from this friction will dry them out.
 - (b) Steep Hills - Use your brakes off and on to control your speed on the down slope. Use a lower gear to control your speed.
 - (c) Breakdown - Get completely off the traveled portion of the road. Use four-way flashers and set out flagging protection if available.
- 4343.** Occupants of a disabled vehicle should safely exit vehicle to the side of the road away from traffic and remain 50 feet or more from the vehicle, if practical, except in extreme cold when warmth from the vehicle may be required to prevent exposure.
- 4344.** Employees are to use roadside assistance for jumpstarting vehicles where practicable. When jumpstarting vehicles:
- (a) Do not smoke. Always wear protective safety eyewear. Use caution to avoid danger of chemical burns or battery explosion when jump starting a vehicle.
 - (b) Begin with ignition switch in the “OFF” position, parking brake engaged, and vehicle in neutral or park.
 - (c) Do not stand in front of or behind the vehicle being jump started.
 - (d) Remove all acid filler caps if not already vented and cover openings with a rag prior to attaching booster cables to prevent battery explosion. Properly dispose of rags after unit starts.
 - (e) Make sure the battery electrolyte is at the proper level. Do Not jump start a vehicle if its battery fluid is frozen.
 - (f) Make sure that both vehicle electrical systems are the same voltage and polarity.
 - (g) Attach the cables in order as shown below:
 1. Clamp one end of cable “A” to Positive (+) terminal of discharged

battery that is wired to starter or solenoid. Do not allow cable clamps to touch any metal other than desired battery terminals.

2. Connect other end of cable “A” to Positive (+) terminal of good battery.
3. Connect one end of “B” to the Negative (-) terminal of the good battery.
4. Make the final cable “B” connection to engine block (not to the negative post) away from the discharged battery, carburetor, fuel line, any tubing or moving parts.



- (h) Stand back from both vehicles. Start the vehicle with the good battery first and then start the disabled vehicle. Do not lean over battery while ignition switch is being turned on.
- (i) Remove cables in reverse order of connections beginning by first removing cable “B” from engine block or metallic ground.

OPERATING SWITCHES

4345. To operate a low switch stand or certain derrails equipped with straight or weighted-type switch lever, observe the following guidelines.

- (a) Warn all persons to clear moving parts and look to be sure that the switch stand, connecting rods, and open point space are free of obstruction.
- (b) Make all movements with firm footing, secure handhold, and a braced position. Lift or push the lever steadily.
- (c) Face the switch stand and place your feet clear of the lever with the switch ball centered to your body.
- (d) Keep your hand clear of switch target and keeper latch pinch points.
- (e) Grip the end of the lever or ball while it is still latched (if equipped with a keeper) and push down to determine the degree of tension.

NOTE: For switches with excessive tension stand upright and use your foot closest to the stand to release the keeper while staying clear of lever movement. Once the lever has stopped moving, reposition yourself to continue operating the switch.

- (f) If tension feels to be within the normal range continue to maintain a secure handhold and use the foot closest to the stand to release the keeper latch, if equipped with one.
- (g) Raise the lever several inches and replace your foot firmly on the ground.
- (h) Lift the lever up to the vertical position using both hands, if necessary. Continually reposition yourself to keep the center of your body in line with the switch ball.
- (i) Once the lever is vertical, begin a downward push towards the latch while repositioning your feet as the lever moves. Keep your feet clear of the ball as you push the lever down. Make sure that the keeper latches on the lever.
- (j) Check to be sure that the diverting switch point fits up properly to the stock rail before authorizing movement over it. If there is a derail be sure that it is in proper position.

NOTE: While operating the switch, bend knees and hold your back straight. If for some reason you cannot follow the above steps, take precautions to operate the switch without incident. Report any defect to your immediate supervisor.

4346. On certain switches, derails and other similar devices equipped with a high stand the operating lever hinges downward. This lever is parallel to a slot in the stand and is secured in that slot. The lever is raised to a horizontal position to operate. When operating such a lever use the following procedure:

- (a) Warn all persons to clear moving parts. Be sure that the switch stand, connecting rods and open point space are free of obstruction.
- (b) Make all movements with firm footing, secure handholds as close as possible to the end of the operating lever and from a braced position. Move the lever slowly and steadily.
- (c) Keep your hand clear of the stand keeper slot or other pinch point.
- (d) Stand on the side of the switch ties on which the lever is latched to the switch stand.
- (e) Operate switch lever at arm's length using your palm only, then slowly lift the lever out of the keeper slot allowing it to completely release any tension. If the tension feels within normal range raise the handle to the horizontal position.

- (f) Face the switch stand, place one foot against the side of the headblock to which the lever will be moved. Place the other foot between the headblocks and against the side of the furthest tie.
- (g) Pull the lever as far as possible without interfering with your braced position.
- (h) Move to the side of the headblock to which the lever will be latched to the switch stand. Place one foot against the side of the timber and finish pulling the lever so it will be in line with the latch slot below.
- (i) Lower the lever into the keeper slot. Do not use your foot to push the lever.
- (j) Be sure that the diverting switch point fits up properly to the stock rail before you authorize movement over it. Be sure that the derail, if there is one, is in the proper position.

NOTE: Should the physical characteristics of the switch or any other factor make it impractical to follow any of the precautions above, take precautions to operate the switch without incident. Report any defects to your immediate supervisor.

OFFICE SAFETY

ELEVATORS IN AND NEAR OFFICES, BUILDINGS, ETC.

- 4347.** Never leave knives, pencils, pins, scissors or other sharp objects on the edge of a desk or in any place where they may cause injury. Carry them in a manner to avoid accident and use them only for their intended purposes. Protect them with a sheath when available especially when carrying them in a pocket or on your person.
- 4348.** To avoid paper cuts use care when handling papers.
- 4349.** To avoid injury to the eye or other body areas refrain from throwing articles such as cards, paper clips, pencils or any other office items.
- 4350.** Do not use wastebaskets for the disposal of sharp objects, glass or other articles that may cause injury. Such articles should be placed in special containers or wrapped and marked as “sharp objects” then placed beside the wastebasket for disposal.
- 4351.** Report any sharp edges, splinters or defective parts on office furniture. Avoid injury from the defect item until it is repaired or replaced and if necessary, remove the item from use. Never use defective furniture.
- 4352.** Open drawers can cause tripping hazards, snag clothing or even toppling of cabinets. To avoid injury, always close the drawers of filing cabinets or desks after using them. Never open more than one drawer at a time and be sure to arrange the contents of filing cabinets so they are not top-heavy.

Distribute the contents throughout the entire cabinet instead of only in the top drawer. Do not pile unnecessary, heavy items on top of file cabinets.

- 4353.** Use caution when operating paper cutters, trimmers and power punches. Keep your fingers clear of the cutting blades. Be sure to leave the blade of a paper cutter closed and latched when not in use.
- 4354.** Never handle electric fans while they are in operation. Tabletop electric fans should never be placed on the floor. If the placement of a fan appears potentially dangerous provide special safeguarding equipment. Never use a fan with unguarded blades.
- 4355.** Telephone and electrical cords in walking areas must be encased by a floor molding and not exposed as a tripping hazard.
- 4356.** To avoid spills or burns, use a tray to carry coffee or hot liquids in cups over any distance. Take time to wipe up all spills.
- 4357.** Never adjust or clean office equipment while they are in operation. If a machine jams turn off the power before attempting to remove any obstruction unless the machine has instructions for safe removal of obstructions while still under power.
- 4358.** The use of a flammable fluid to clean an electrically operated machine is prohibited.
- 4359.** All exposed rotating gears, belts, couplings and other moving parts must be covered with adequate guards if there is a possibility that fingers, jewelry or hair might be caught in them. These guards may be removed only by qualified maintenance personnel who are maintaining the machines while using proper lockout tag-out procedures.
- 4360.** Keep razor blades, thumbtacks and other sharp objects in a closed container.
- 4361.** Keep pencils stored flat. Do not carry pencils behind the ear. Remove staples with a staple remover, not your fingernails.
- 4362.** When you are cleaning a drawer or reaching into it take the following precautions:
 - (a) Look out for the sharp edge of any utensil or any other object in the drawer.
 - (b) Look out for pinch points. Keep your fingers and hands clear of them.
- 4363.** Hot light bulbs can reach temperatures over 400 degrees F. If you are changing a bulb first turn it off and wait for it to cool.
- 4364.** When using a chair or stool, take the following precautions:
 - (a) Hold the chair in place with your hand before sitting down.

(b) Keep all the legs of a chair or stool on the floor while using it as a seat. Note: It is recommended that only 5-wheeled chairs be purchased as 4-wheel chairs are less stable and may tip more easily.

(c) Do not scoot across the floor while sitting on a chair. Never lean back in the chair and place your feet on a desk.

(d) Never use a chair as a ladder or a step to climb up.

4365. Do not use a floor-mounted electrical outlet as a foot rest.

4366. The key elements in storage are neatness and stability. Keep these elements in mind when storing objects as follows:

(a) Store heavy objects close to the floor.

(b) Ensure that all materials are stored inside cabinets, files and lockers. Do not store them on top.

(c) Do not stack boxes or supplies higher than 6 feet.

4367. If ever you feel a tingling sensation when you touch a machine or if you see one smoking or sparking take the following actions:

(a) Unplug it provided that it is safe to do so.

(b) Put an “OUT OF ORDER” sign on it.

(c) Report the unsafe condition to the supervisor immediately and take any appropriate other measures to warn others of the unsafe condition.

4368. Always approach a door from the side away from the hinges and avoid its swing path. Before you get in front of the door (especially one without a window) grab the knob, knock gently and start opening it slowly so that you can step back if someone is coming through from the other side.

4369. All doors to enclosed stairwells must be kept closed and free of obstructions.

4370. Turn the power off all coffee makers or similar appliances during non-working hours to prevent fire hazards. When using an electrical appliance such as a coffee maker, oven, etc., make sure it is properly grounded, all cords are three-prong with ground and in good condition.

4371. When decorating offices take the following precautions:

(a) Make sure that electrically powered decorations are “UL” approved.

(b) Unplug decorations after working hours.

(c) Do not overload circuits.

(d) To prevent surges to computer equipment do not plug decorations into the same outlet/circuits as the computer equipment.

(e) Never use open flame candles.

4372. Make sure that extension cords do not present a tripping hazard.

FIRE SAFETY

4373. Be Prepared for a Fire. Know the evacuation routes in your building and learn how to use emergency equipment as well as where to find it. This information is posted in strategic locations throughout all facilities.

All employees must be familiar with where it is located and understand it. Local supervisors are responsible for instructing all employees in the proper procedure to be used in an emergency.

In Case of a Fire:

If you discover a fire, no matter how small, sound the alarm and notify the fire department. Alert the employees in the entire building. Then follow this procedure:

- (a) Start evacuation immediately. Know the prime fire exit and a secondary exit (in case the prime exit is blocked). Move calmly to the stairway exits closing doors as you go. Do not use elevators for escape.
- (b) Feel every door before opening it. If it is hot, do not open it. If it is cool, open it slowly and stay behind the door. If heat or pressure comes through the door close it immediately and ensure it remains closed.
- (c) If you cannot get to safety, retreat to a room with a window. Shut the door sealing off cracks if you can to keep the smoke out. If you are above the second floor open the window to get fresh air and signal firemen. Wait for help. **DO NOT JUMP.**

OTHER APPLICABLE RULES

In addition to the rules presented in this book, the applicable portions of the following, with any other applicable or subsequent instruction, must be observed.

- General Code of Operating Rules.
- Canadian Rail Operating Rules (CROR) in Canada
- Timetable for the Government of Employees.
- General Orders, Summary General Orders, Bulletin Orders, Division Notices.
- Hazardous Material Policies, Procedures and Regulations.
- Air Brake and Train Handling Instructions.
- Dominion, Federal, Province, State or Local Requirements.

RADIO RULES

The following rules and instructions cover the use of a Railroad Radio Communicating System and govern the employees using this system.

4374. Definitions and Jurisdiction

- (a) Railroad Radio Communicating System: A system that uses a radio for the transmission and reception of voice communications between moving equipment, between moving equipment and a fixed point, between fixed points, and/or between portable radio equipment.
- (b) Employee: Any person who is authorized by the company to use its radio facilities in connection with railroad operations.
- (c) Radios are under the jurisdiction of the Federal Communications Commission (FCC). The Company and its employees are governed by the rules of the FCC. Any violation is a federal offense. The use of radios other than those furnished by the company for railroad operations is prohibited. In Canada the aforementioned is governed by Transport Canada.

4375. The following procedures govern transmission, identifications, content, and code words of messages when using the radio:

- (a) Before transmitting by radio, listen to ensure that the channel on which you intend to transmit is not in use.
- (b) To originate a call, identify their railroad using name or initials.
- (c) Identify your base station, wayside station, or yard station by name or other designation of station and location.
- (d) Identify your radio unit by number or other appropriate unit designation which indicates the precise mobile transmitting station.
- (e) Identify yourself by name, occupation and location.
- (f) If an exchange of communications continues without substantial interruption, positive identification must be repeated every 15 minutes.
- (g) Communications must be as brief as possible using these key words:
 - (1) “ROGER” to signify that a message was received and understood. “ROGER” also means that you have repeated instructions correctly.
 - (2) “OVER” must be used at the close of each transmission to which a response is expected.
 - (3) “OUT” must be used at the close of each transmission to which a response is not necessary.

(4) “EMERGENCY” repeated three times to obtain use of radio channels for initial report of hazardous conditions.

- 4376.** All radio calls directed to a station must be promptly acknowledged. The receiving employee must identify the station in accordance with the requirements and stand by to receive, unless doing so would interfere with other duties relating to the safety of railroad operations. If the station acknowledging transmission fails to identify itself properly, the sending employee shall require a proper identification before proceeding with transmission.
- 4377.** When taking charge of a radio, employees must make a voice test on the channels provided. Such tests must be made between fixed stations or other portable equipment. The receiving station must advise the station conducting the test of the quality and readability of its transmission. If the radio does not operate properly, employees should notify their supervisor and remove it from service until repaired.
- 4378.** When their duties involve the use of a radio, employees must have the radio on and tuned to the proper channel at all times. The volume must be adjusted so that transmissions can be heard.
- 4379.** Employees must ensure that radio contact with the proper persons has been made and must not take action until certain that all conversation with them has been heard, understood, and acknowledged.
- 4380.** Any radio communication that is not fully understood or completed in accordance with the requirements of these rules shall not be acted upon and shall be treated as though not sent.
- 4381.** If necessary for clarity, use a phonetic alphabet to pronounce any letter used as an initial, except the initial letter of railroads.
- If you need to spell a word for precision, first pronounce it, and then spell it, letter by letter. If necessary, spell it a second time, using a phonetic alphabet. Pronounce numbers digit by digit. Give exact multiples of hundreds and thousands as such. For example, for 507, say “Five-zero-seven,” but for 500, say “Five hundred”. Indicate a decimal point by the word “Decimal”.
- 4382.** To make a distress call, first say the word “Emergency” three times. Make such a call only to cover initial reports of derailments, collisions, storms, washouts, fires, obstructions to tracks, and other hazardous conditions that could result in injury, damage to property, or serious disruption of railroad operations. Emergency transmissions must describe as completely as possible the nature, degree, and location of the hazard.
- 4383.** All employees shall give absolute priority to emergency communications. Except in answering or aiding a station in distress, employees shall refrain

from sending any communication until certain that no interference will result to the station in distress.

4384. Employees shall not knowingly transmit:

- (a) Any false distress communication.
- (b) Any unnecessary, irrelevant, or unidentified communication.
- (c) Any obscene, indecent, or profane remark.

4385. Railroad employees may hear messages sent by aircraft (or in coastal areas by boats), that use the following international code:

- “MAYDAY” = a distress message
- “PAN” = an urgent message
- “SECURITY” = a safety message

If you hear such a message, take two actions:

- (a) Report it immediately through authorized channels.
- (b) Take appropriate action to relieve the distress as may be practical.

4386. No employee shall divulge the existence, contents, purpose, effect, or meaning of a communication to anyone besides the person for whom the communication is intended or to another employee of the Company whose duties may require knowledge of the communication. Distress communications are the only exception, since they may require communication to someone outside the company.

This rule applies both to communications received directly and to any that might be intercepted.

4387. No technical adjustments may be made to a radio set, except by those employees specifically authorized.

4388. Employees shall permit inspection of the radio equipment in their charge and all FCC documents pertaining thereto by a duly accredited representative of the FCC at any reasonable time. In Canada this refers to Transport Canada.

4389. When you are using radio equipment, take care not to damage or lose it. If you are assigned a portable radio, you are responsible for the proper care and protection of it. Use the radio and all attachments, straps, or belts as follows:

- (a) Be sure that the body carrying case and/or belt or any other part are free of defects and properly adjusted.
- (b) Keep the antenna toward the rear and clear of any projection.
- (c) Handle the radio only by the handle or carrying strap, if it has one.
- (d) Maintain a firm grip and keep it under complete control so as to prevent

dropping it or striking any object.

- (e) In mobile equipment, keep the radio latched in the radio rack designed for it, with the straps or belts on the hook provided.
- (f) When you are placing the radio into the radio rack or removing it, keep your fingers clear of the latch and other pinch points.
- (g) Keep the radio rack latch closed and secured. Open it only to remove or replace the radio.
- (h) Keep the radio away from any stove, radiator, open flame, or other source of heat.
- (i) Place the radio in a position where it will not fall or be a tripping hazard.
- (j) Never use a radio in an area where explosives are stored or used.
- (k) Return exhausted batteries to the proper C&S employee responsible for radios, for proper disposal. Do not dispose of exhausted batteries as refuse or burn them.

4390. To prevent burns or related physical injury from radio frequency energy, do not operate the transmitter when anyone outside of the vehicle is within two feet of the antenna.

Annual Safety Rule Calendar

MECHANICAL EMPLOYEES

THE SAFE WAY MUST BE THE ONLY WAY

Accident prevention starts by knowing, understanding and practicing correct procedures whenever you perform any task.

Date	January	February	March	April	May	June
1	4000/24	4014	4220	4240	4211	4019
2	4001	4327	4304	4126	4195	4309
3	4002/2	4271	4175/6	4285	4056	4127
4	4003	4190	4194	4193	4238	4258/4370
5	1	4162	4125	4020	4143	4221
6	4027	8	4021	4284	4200/4348	4319
7	4030	4177	4257	4218	4224	4109
8	4	4100/4388	4213	4163	4160	4308
9	4029	4270	4173	4154	4090	4210
10	4031/3	4222	4091	4055	4241	4302
11	4028	4217	4141	4204	4011/4389	4174
12	4033	4142	4189	4058/4347	4265	4192
13	4032	4161/7	4010/11	4140	4110	4068
14	4035	4216	4239	4266	4283	4282
15	4005	4246	4089	4026	4123	4245
16	4038	4225	4259	4203	4209	4332/4349
17	4037/9	4153	4169(A)	4108	4191	4264
18	4040	4124	4223	4242	4322/4369	4178
19	4097	4183	4243	4320/12	4226	4321
20	4113	4018/10	4219	4065	4281	4059
21	4098	4182	4323	4155	4254/13	4303
22	4114/14	4260	4139	4328	4080	4253
23	4134	4078	4279	4079/4368	4326	4307
24	4165	4202	4045	4280	4066	4375
25	4188	4267	4244	4201	4306	4263(m)
26	4012	4115	4324(a-c)	4268	4169(B)	4386
27	4164/5	4305	4067	4111	4338	4325
28	4016	4263 (c)	4329	4339	4262	4341
29	4144	4208	4340	4261	4383	4387/4371
30	4176		4374	4345	4330	4372
31	4312		4384		4385	

Annual Safety Rule Calendar

MECHANICAL EMPLOYEES

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Date	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1	4214	4087	4004	4382	4298	4015
2	4106	4288	4290	4062	4150/4362	4297
3	4291	4063	4133	4136/4358	4073	4074
4	4086	4137	4049	4237	4296	4289
5	4228	4135/4350	4151	4009	4085	4061/21
6	4041/4351	4215	4072/4356	4171	4295	4310
7	4199	4235	4043	4050	4006	4334
8	4064	4094	4172	4273	4149	4107
9	4152	4022/20	4105	4104/4359	4122	4286
10	4095	4148	4166	4036	4051	4025
11	4007	4207	4052	4234	4132/4363	4272
12	4121/22	4048	4248	4092	4042	4082/4365
13	4227	4147	4117/15	4206	4186	4294
14	4071	4093/4367	4008	4116	4233	4103
15	4159	4236	4131	4070	4013	4187
16	4023	4053	4084	4311	4287/25	4069
17	4168/17	4120	4256	4145	4099	4313
18	4060	4158	4057	4255/4360	4170	4205
19	4130	4034	4146	4024	4232	4083
20	4198	4231/18	4185	4157	4054/16	4247/19
21	4017/4352	4129	4076	4315	4314	4318
22	4167	4249	4180	4075	4179	4118
23	4138	4047	4274/4357	4346	4081	4156
24	4250	4181	4046	4044	4269/4364	4128
25	4077	4096	4377	4331	4184	4335
26	4197	4275/4353	4119	4196	4112	4344
27	4276	4102	4299/23	4101	4278	4252
28	4169(c)	4229	4230	4333/4361	4376	4342/4366
29	4293	4292/26	4277	4251	4317	4378
30	4301	4300	4316/4039	4343	4379/27	4381
31	4373	4380		4337		4336