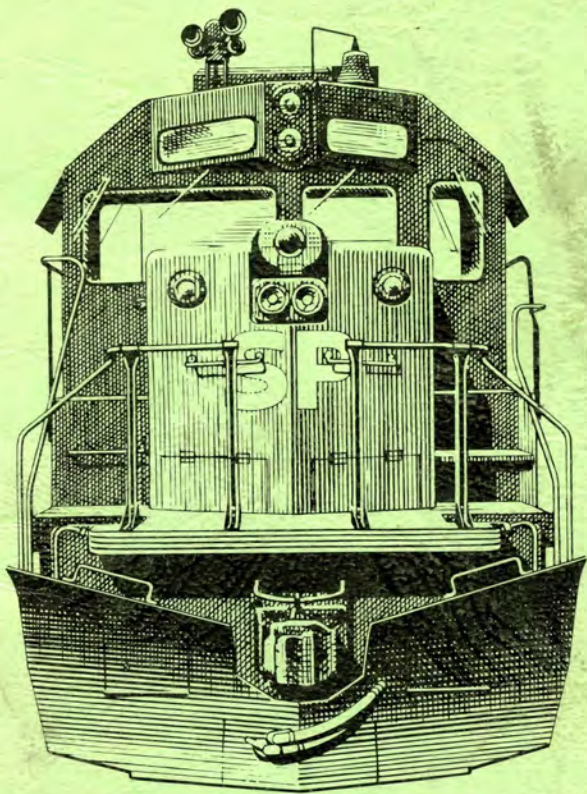


# SAFE WORK PRACTICES



**FOR SP/SSW  
EMPLOYEES IN TRAIN  
AND ENGINE SERVICE**

## **ALWAYS FOLLOW "SAFE WORK PRACTICES"**

The purpose of this booklet is to assist you in performing your duties as a professional railroader. By adhering to the "safe work practices" contained in this booklet, staying alert and never taking your work environment for granted, you will avoid injury to yourself and others.

Remember, developing good work habits is important. Never take shortcuts. Follow these "safe work practices" and avoid personal injury.

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## #1

### When ascending or descending equipment (for example, to set or release a hand brake):

- A. Observe condition of equipment, looking for defects such as bent, loose or missing stirrups, ladder rungs and brake platforms.
- B. Face equipment.
- C. Use side ladder only.
- D. Be alert for unexpected movement.
- E. Look down and check for obstructions before detrainning.
- F. **Never** place lantern on your arm when ascending or descending equipment. Hold lantern at base of thumb between thumb and index finger.

## #2

### When getting on moving equipment:

- A. Assure yourself speed is not greater than 10 mph.
- B. Be certain you are standing clear of car, engine or caboose so as not to be struck.
- C. Face equipment as it approaches you and determine that stirrups and hand holds are not excessively bent, hanging loose or missing.
- D. Board only leading end of car unless last in cut. You may board either end of an engine or caboose.
- E. When boarding engines, first grasp the leading grab iron with leading hand in

direction of movement. Then step up with trailing foot as you grasp trailing grab iron. Put trailing foot in trailing corner of step and let the movement lift you off the ground. Finally, place leading foot on step. (See Figs. 1 & 2)

- F. When boarding box cars, grasp lower ladder rung with leading hand in direction of movement, then place trailing foot in trailing side of stirrup. Next, grasp the next higher ladder rung with trailing hand and let the movement lift you off the ground. Finally, place leading foot in the stirrup. (See Fig. 3 next page)
- G. Boarding tank cars or TOFC/COFC cars while moving should be avoided if at all possible. If it is necessary for you to board a tank car, grasp sill hand hold and vertical hand hold simultaneously and place trailing foot in trailing corner of stirrup. Finally, as movement lifts you off the ground, place your leading foot either:



Fig. 1



Fig. 2



Fig. 3



Fig. 4

— in the stirrup; or, if the vertical grab iron is offset from the stirrup:

— on the catwalk while bringing your hand from the sill hand hold to the vertical grab iron, to preserve your balance and afford a secure position. (See Fig. 4)

Conventional flat cars must be stopped before boarding. Pay attention to hand hold locations on bulkhead flat cars. Some have sill grab irons and vertical hand holds similar to tank cars, while others have short ladder hand holds like box cars.

- H. When boarding a moving caboose while carrying a grip, it is best to place it on leading platform end. Then board at trailing end by sliding leading hand up curved grab iron, simultaneously placing trailing foot in trailing corner of vestibule step. Next, grasp the trailing grab iron with trailing hand, allowing movement to lift you off the ground. Finally, place leading foot on step. If you have to board with a

grip in your hand, hold it in your trailing hand. Slide leading hand to a firm grasp on the curved grab iron, simultaneously swinging grip up toward platform placing trailing foot in trailing corner of vestibule step. Let the movement lift you off the ground. Finally, place leading foot on step. If grip is on a shoulder strap, place strap on your leading shoulder with grip against leading side of your body as you board. (See Fig. 5, 6 & 7)



Fig. 5



Fig. 7

Fig. 6



- I. When working at night, shine your lantern on stirrup, ladder rungs and/or grab irons before mounting, assuring yourself they are not defective or missing. **Never** place lantern on your arm when boarding equipment. Hold lantern at base of thumb between thumb and index finger.
- J. **Remember** — if you feel movement is too fast and/or footing conditions are undesirable, stop or slow movement before boarding.

### #3

**When detraining from equipment which is standing or moving (no matter how slowly):**

- A. Face equipment.
- B. Maintain secure grasp on hand holds.
- C. Never have more than one hand occupied.
- D. Have feet solidly placed in stirrups, ladder rungs or vestibule steps.
- E. Always observe area where you plan to detrain, looking for obstructions.
- F. If equipment is standing, never release hand hold until feet are firmly on the ground.
- G. When detraining from a standing caboose, you may walk down steps facing away **until** you reach the bottom step. When you reach the bottom step, turn, face equipment and detrain. Remember, always determine that area where you are stepping is free of obstructions. If you are carrying a grip, place it on the top platform before proceeding to the bottom step.

When you reach the bottom step, turn and face equipment. Then pick up your grip and detrain.

- H. If equipment is moving, assure yourself speed is not greater than 10 mph.
- I. **Remember** — if you feel movement is too fast and/or footing conditions are undesirable, stop or slow movement before detraining.
- J. When equipment is moving, first place trailing foot in direction of movement on the ground. Then release hand hold with your leading hand. (See Fig. 8)



Fig. 8

- K. After trailing foot has made solid contact with ground, step down with forward foot, releasing hand hold with your rear hand, letting momentum carry you away from moving equipment.
- L. When working at night, shine your lantern on area where you plan to detrain,

looking for obstructions. **Never** place lantern on your arm when detraining. Hold lantern at base of thumb between thumb and index finger.

#### #4

##### When detraining from a moving caboose:

- A. Observe condition of caboose steps and grab irons.
- B. If carrying a grip, set it on the platform at top of steps before descending. Never detrain with more than one hand occupied.
- C. You may walk down steps facing away from equipment. Remember to use hand rails. When you reach the bottom step, turn and face caboose.
- D. If you have a grip, pick it up with your leading hand in direction of movement. Swing your grip free of the equipment as your trailing foot descends, while maintaining a firm hold with the trailing hand. Grips with shoulder straps must be placed on the leading shoulder.
- E. Face equipment and look ahead to area where you will place your feet, making sure area is free of obstructions.
- F. Place trailing foot in direction of movement on the ground first. If carrying a grip, swing it free of the equipment as your trailing foot descends, while maintaining a firm hold with the trailing hand. (See Fig. 9)



Fig. 9

- G. After trailing foot has made solid contact with the ground, step off with leading foot. Then release hand hold with trailing hand letting momentum carry you away from moving equipment.
- H. **Remember** — if you feel movement is too fast and/or footing conditions are undesirable, stop or slow movement before detraining.

#### #5

##### When required to ride side of car:

- A. Look in direction of movement.
- B. Maintain a firm grasp of ladder rung and have feet solidly placed in stirrup or on ladder rung. It may be necessary to angle feet slightly to the side to assure firm footing on ladder rung. (See Fig. 10 next page)



Fig. 10



Fig. 11

- C. Remain aware of conditions in direction of movement or ahead for impaired clearances, such as gate posts, gates, loading docks, sides of buildings, or fouling cars on adjacent track.

## #6

### When riding decks of empty conventional flat cars or TOFC/COFC cars:

- A. Take a balanced position near center of car with feet shoulder width apart, knees slightly flexed, facing and looking in direction of movement. Be prepared for slack action or any kind of unusual movement. (See Figure 11)

## #7

### When seated or standing in an engine or caboose (with equipment standing or moving):

- A. Be alert for conditions that can cause slack action. **Examples:** train brake operation, change in grade, or change in speed, particularly entering and leaving yards.
- B. Protect yourself from slack action by remaining seated as much as possible. When seated on an engine, position both feet on floor or on foot rest. When in a caboose, place one or both feet on wall in front of seat or firmly on floor at base of wall in front of you.
- C. Duties may require you to stand in an engine for an extended period of time. An example would be behind the engineer for the purpose of train inspection on a curve. Stand with feet shoulder width apart, one foot slightly ahead of the other, with hands braced on wall or grab iron when available.
- D. When you are required to stand on the rear platform of a moving caboose for any reason, stand on rear platform directly in front of the closed door with feet shoulder width apart, one foot slightly in front of the other. Keep both hands on grab rail, except when signaling or using walkie-talkie you must have one hand securely on grab rail.
- E. When in a caboose and you are required to move from your seat, do so expecting slack



action and have firm hand hold on grab rails, edges of bulkheads, and/or overhead grab rail if your body height permits, to prevent being thrown about.

## #8

### Switching movements with a caboose:

- A. Do not ride inside caboose during switching movement.

## #9

### When riding the leading car in a shoving movement:

- A. Use the side ladder if so equipped and keep alert for changing conditions in the direction of movement.
- B. You are not permitted to ride on end ladders or other end parts of moving cars, except when using hand brake to control speed of cars cut-off in motion.

## #10

### When it becomes necessary to ride cars and uncouple them while moving, you must not use feet to operate uncoupling lever.

- A. With both feet firmly in stirrup, one hand on grab iron and after determining there are no obstructions, crouch down and grasp cut lever keeping hand clear of pinch points.

- B. After you operate cut lever, assume proper position for riding on the side of moving equipment, or detrain.

## #11

### When crossing over standing equipment:

- A. Use engines, cabooses or cars equipped with end platforms and hand rails.
- B. If suitable car cannot be found, you may use the body of an empty flat car.
- C. **Remember** — never place any part of your body between coupler horn and end sill, regardless of whether car is equipped with standard draft gear arrangement, sliding sill arrangement or end-of-car cushioning device.
- D. As you detrain on opposite side, be alert for movement on adjacent track.

## #12

### When crossing over moving equipment:

- A. You are **never** permitted to cross over moving equipment except on engines or cabooses.
- B. Remember as you walk across platform do not loiter.
- C. Maintain firm hand hold on railings and grab irons remaining aware of your footing conditions.
- D. As you detrain on opposite side, be alert for movement on adjacent track.

## #13

### When walking between or crossing tracks:

- A. To avoid being struck by moving equipment, determine that track is clear by looking both ways before fouling, walking between or crossing tracks.
- B. Perform task quickly and get in the clear.

## #14

### When walking around the end of standing equipment:

- A. To avoid being struck by unexpected movement, be alert and give yourself at least twenty (20) feet clearance.

## #15

### When separating equipment for any reason:

- A. Make sure you separate cars and engines at least fifty (50) feet and equipment is stopped before stepping between.

## #16

### When couplers need alignment or adjustment:

- A. If it becomes necessary to make a coupler alignment or adjustment, be sure cars are separated by at least fifty (50) feet and stopped.
- B. Have a clear understanding with engineer and other crew members involved of the work to be performed and protection required.
- C. Then face coupler squarely, get as close as possible keeping back straight. Lift with leg muscles and move coupler to desired position.
- D. **Never** jerk, kick or use foot to make a coupler adjustment or alignment.
- E. If, after using **reasonable force**, coupler does not move to desired position, **obtain help**.
- F. When help is obtained, you must position one person as previously described and the second person on the side of the coupler prepared to push.
- G. **Remember** — each of you must practice good body mechanics keeping back straight, knees bent and lifting with leg muscles. Lift and push as a team.
- H. One person will have to control the movement by giving a command. (*See Figure 12 next page*)



Fig. 12

## #17

**When it becomes necessary to open or replace a knuckle in a coupler:**

- A. Make sure the cars are separated by at least fifty (50) feet, stopped and secured with hand brakes if required.
- B. Have a clear understanding with engineer and other crew members involved of the work to be performed and protection required.
- C. Keeping feet in the clear and making sure knuckle pin is in place, open the defective knuckle, remove knuckle pin from the coupler and set it within easy reach.

- D. Keeping feet in the clear, remove knuckle from the coupler. Holding defective knuckle as close to body as possible, dispose of it where it won't be a tripping hazard to yourself and others.
- E. Holding cut lever up, move knuckle thrower back into the coupler recess as far as it will go.
- F. Before lifting replacement knuckle up to the coupler, position it so that no unnecessary maneuvering will be required while fitting it into the coupler.
- G. Using good body mechanics, lift the knuckle and place it into the coupler.
- H. Insert the knuckle pin into the top coupler pin hole.
- I. Close the knuckle and check to see that the pin drops and knuckle locks.

## #18

**When uncoupling cars or engines:**

- A. Operate uncoupling lever with hand next to equipment and face direction of movement.
- B. **Do not jerk** on uncoupling lever.
- C. Be alert for pinch points. Always place your hand on portion of cut lever that is designed as the handle.

## #19

**When you are required to step between equipment to couple air hoses, use the following procedure:**

- A. If you couple hoses on cars that are coupled to an engine, have a clear understanding with the engineer of the work to be done and protection required.
- B. **Remember** — “Clear Understanding” means you must communicate to the engineer, orally or with an agreed-upon signal, and receive an **acknowledgement** from him before stepping between cars.
- C. When coupling air hoses together, keep one foot outside rail and place the other inside rail and be prepared to step out should cars move.

## #20

**When working with coupled or uncoupled air hoses:**

- A. Open angle cock slowly keeping legs and feet clear of couplings and listen for air escaping which will indicate coupling is faulty and may fly apart.
- B. If a leak is heard, close both angle cocks and make sure pressure in hoses is fully depleted before attempting adjustment or repairs.
- C. Never kick, strike or jostle pressurized hose couplings in an effort to stop leaks.

- D. Before opening angle cock to an uncoupled air hose, grasp hose at the glad hand, clear of vent port. Brace glad hand firmly against thigh, just above the knee. Before opening angle cock turn face away from glad hand. (See Fig. 13)



*Fig. 13*

## #21

### When applying vertical wheel-type hand brakes:

- A. Always be on the left side of hand brake during operation.
- B. Have both feet securely placed with the left foot on ladder rung at or near same level as brake platform and the right foot firmly on the brake platform. When setting brake on a tank car, have both feet securely placed on end platform. **Never** apply a vertical wheel hand brake from the ground.
- C. Have firm grasp of ladder rung or grab iron with left hand. (See Fig. 14)
- D. Operate the wheel with the right hand gripping in such a manner to always have your thumb on the outside of wheel rim. Do not use wheel spokes to apply brake.
- E. Wind slack out of the chain by turning the wheel in a clockwise direction until resistance is felt. Be prepared for unexpected bunching or slipping of brake chain.
- F. Now with legs slightly bent keeping back straight as possible, pull upward using short, steady strokes, with leg muscles doing the work, until reasonable force has been applied to wheel.
- G. **Never jerk or lunge on a brake wheel.**



Fig. 14

## #22

### When releasing vertical wheel-type hand brakes:

- A. Always be on the left side of the hand brake during operation.
- B. Have both feet securely placed with the left foot on ladder rung at or near same level as brake platform and the right foot firmly on the brake platform. **Never** release hand brake from the ground.
- C. Have firm grasp of ladder rung or grab iron with left hand.
- D. Operate the wheel with the right hand, gripping in such a manner as to always have your thumb on the outside of wheel rim. **Do not** use wheel spokes to release brakes.

- E. Inspect the release lever for proper method of operation by its design and any instructions stamped on the gear case. **Remember** — when brake is equipped with a quick release, use it, and in so doing keep your back straight, arms straight and lift with your leg muscles. **Do not jerk on handle.** If no quick release, grasp wheel in such a manner as to have thumb on outside of wheel rim. Release brake by pulling wheel in a counter-clockwise movement.
- F. Operate the release, keeping all parts of your body clear of the wheel in case it should spin during release.
- G. **Never** place your foot in the wheel spoke to release a vertical wheel-type hand brake.

### #23

#### Lever-type hand brakes — when operating low-type, which are mounted on side of car at deck level:

- A. Always set them from the ground and with equipment standing.
- B. Inspect for good footing.
- C. Inspect brake mechanism for obvious defects. **Do not** operate brake if defective.
- D. If no defects, position yourself at the brake with the left side of your body closest to the car.
- E. Place feet shoulder width apart with one foot slightly in front of the other.

- F. Grasp lever at its end with your left hand.
- G. Keeping back straight, operate the lever through its arc of travel with a slight rocking motion of your body until brake is applied using reasonable force.
- H. **Remember** — be prepared for unexpected bunching or slipping of brake chain. (See Fig. 15)



Fig. 15

## #24

**When operating lever-type hand brakes that are mounted on a bracket above the deck and on the side of a car, you may:**

- A. Operate from the ground after inspecting the footing, and while practicing good body mechanics or,
- B. Operate from the stirrup or ladder rung having feet securely placed with one hand holding onto the ladder rung or grab iron and the other at the end of the lever or,
- C. Operate from the empty deck of TOFC/COFC car practicing good body mechanics, placing one hand on grab iron and one hand on end of lever.
- D. Always inspect brake mechanism for obvious defects, and do not operate if defective. (Example: broken housing, kinked chain, etc.)
- E. **Remember** — be prepared for unexpected bunching or slipping of brake chain.

## #25

**When operating high stand rigid switches:**

- A. Observe switch points for any obvious obstruction, including spiked switches.
- B. Position yourself at the switch, clear of arc or line of travel of handle, and remove keeper or lock.
- C. Before throwing, place one hand on the target staff.
- D. With the other hand, take a full grasp at the end of the switch handle.
- E. Have feet approximately shoulder width

apart, firmly on ground, with one foot placed slightly in front of the other.

- F. Keep back as straight as possible and legs bent, and with a steady pull, lift the handle out of the slot, using your legs and not your back. (See Fig. 16)
- G. Pull the handle smoothly through its arc of travel until switch has moved to desired position. Press the handle into holder and secure with lock or keeper.
- H. If handle becomes hard to move, **stop!** Take a new position to avoid twisting or straining back muscles, then continue



Fig. 16

pulling to desired position and press handle into holder and secure with lock or keeper. **Never** jerk or lunge on a switch handle.

- I. If handle stops at any point as you are pulling it through its arc of travel, reset handle to its original position and inspect switch points for foreign objects. If foreign objects are found, remove them, and complete movement.
- J. If the switch cannot be operated using reasonable force, help must be obtained. If two people are required to throw a switch, one person must apply steady, firm pressure by pushing on handle while the other person is pulling in a normal manner. **Remember** — both must practice good body mechanics and not apply excessive, sudden force, causing you to lose control of movement. As is in any job when two people are lifting or pulling together, the action must commence on a command.
- K. **Never kick or otherwise use your feet to move switch handle.**
- L. Always report hard to throw switches to proper authority.

## #26

**When operating high-stand spring switches, the procedure is the same as for high-stand rigid switches with the following exceptions:**

- A. To complete the last two or three inches of movement it may be necessary to use both hands on switch handle. When this becomes necessary, **stop!** Take a new posi-

tion to avoid muscle strain to your back. Be sure your footing is firm, and your feet are shoulder width apart with one foot slightly in front of the other. Keeping your back straight, pull handle to slot. **Do not jerk or lunge on switch handle.**

- B. The procedure for throwing lever-type spring switches is exactly the same as for lever-type ground throw switches.

## #27

**When operating ground throw switches:**

- A. Observe switch points looking for any obvious obstructions, including spiked switches.
- B. At the switch stand, position yourself in such a manner that your body is clear of arc or travel of switch lever.
- C. If switch is equipped with foot latch, depress latch.
- D. Keep the latch depressed. Get into crouched position with back as straight as possible and lift ball or lever out of holder.
- E. Once ball or lever is clear of holder, release foot latch. Move foot clear of latch to solid position on ground and lift ball or lever to vertical position and **stop.**
- F. To prevent twisting or straining your back, take a new position that will allow lever movement to be completed with a pushing motion. (*See Fig. 17 next page*)
- G. **Never kick or otherwise use your feet to move a switch lever.** If switch becomes difficult to throw, stop and take a new position to avoid personal injury.





Fig. 17

- H. If switch stops, return lever to its original position and inspect switch points for obstruction. If obstructions are found, remove them and complete movement.
- I. Always report hard to throw switches to proper authority.

## #28

**When operating submarine switches, the procedure for throwing lever basically is the same as for ground throw switches with the following exceptions:**

- A. You may put the knee closest to the lid on the ground to aid in giving better balance. Take a firm grip on the lid and lift up.

**Caution:** Be certain area where you will put your knee is clear of obstructions. Keep back as straight as possible.

- B. With the lid open and after inspecting lever compartment for debris, re-adjust body position if necessary and throw lever.
- C. Close the lid from the back side to avoid closing lid on your foot.
- D. **Remember** — when this type of switch is located in a public street or road, assure yourself that protection from traffic is provided.

## #29

**Controlling switching or shoving movements:**

- A. Switching or shoving movements which can be controlled by hand signals must not be controlled by radio.

## #30

**When performing tasks on locomotives, be aware, and keep fingers and hands out of traps created by the operation of:**

- A. Seat adjuster mechanisms
- B. Sliding windows
- C. Cab doors
- D. Engine compartment doors
- E. Hand brake operating and releasing levers

## #31

### Applying blocking chains/material to locomotive wheels:

- A. When applying blocking chains or other blocking material to locomotive wheels, be aware: check head clearance when crouching to apply chains or blocking material, and again before rising. Afford yourself sufficient clearance so that hands and fingers are not caught between the chain or material and the wheel or brake rigging.
- B. When using blocking chains, grasp each handle rod at its center, then lay one chain portion over the top of the rail clear of the wheel and brake rigging. **Keeping hand in the clear**, slide the chain along the rail to a solid contact against the wheel. Repeat the process with the other chain portion.
- C. When using other blocking material, use a piece long enough to enable you to place the material under the brake rigging and against the wheel without catching hands or fingers. **Remember** — always store blocking chains on the hooks provided. Never store chains or other items on steps or walkways.

## #32

### When moving in and out of locomotive cabs and on walkways and ladders:

- A. Always use door handles or grab irons to open and close doors. Keep hands and fingers clear of door edges and door jambs. **Always** grasp grab irons, railings or other secure fixtures to prevent being thrown about.
- B. Keep all electrical and other compartment doors securely latched so you will not run into them. Report all defective latches and doors that won't stay closed.
- C. Always watch your footing closely. Locomotives vary in step and ladder arrangement. Know your equipment. Don't allow tools, chains or other items to be placed where you have to step.
- D. When carrying a grip on a locomotive, one hand must be kept free. Hold the grip in front of you to prevent it from catching on objects. Before ascending or descending locomotive steps or ladders, first place the grip on the platform, then ascend or descend facing the equipment using both hands.
- E. If you observe oil or other foreign substances on ladders, steps or walkways, warn other crew members and if practicable, avoid using that part of the equipment until the unsafe condition is corrected. Be sure you report it properly if you cannot correct it yourself.
- F. At night, have a plastic case flashlight in good working order and keep it with you.

## #33

### When applying locomotive wheel-type hand brakes:

- A. Inspect area where you will be standing, for obvious defects.
- B. Obtain protective stance with one foot slightly in front of the other, knees slightly bent and back as straight as possible.
- C. Operate the wheel in such a manner to always have your thumb on the outside of wheel rim. Do not use wheel spokes to apply brake.
- D. Wind the slack out of the chain by turning the wheel in a clockwise direction until resistance is felt. Be prepared for unexpected bunching or slipping of brake chain.
- E. Now with legs slightly bent, keeping back as straight as possible, pull upward using short, steady strokes until reasonable force has been applied to wheel. Let leg muscles do the work.
- F. **Never jerk or lunge on a brake wheel.**

### Releasing wheel-type hand brakes:

- A. When releasing wheel-type hand brake, turn wheel in a counter-clockwise direction. Protective stance is the same as when applying. Always inspect area where you will be standing and **do not** use wheel spokes to release the brake.
- B. Never place your foot in the wheel spoke to release a vertical wheel-type hand brake.

### Applying lever-type hand brakes:

- A. As always, inspect area where you will be standing for obvious defects and take a protective stance.
- B. Position yourself clear of the arc of travel of the operating lever.
- C. With one foot slightly in front of the other, knees slightly bent and back as straight as possible, grasp the end of the operating lever and apply the brake using steady, smooth strokes.
- D. As tension increases, shorten strokes and let leg muscles do the work until brake is applied using reasonable force.
- E. Be prepared for unexpected bunching or slipping of brake chain.

### Releasing lever-type hand brakes:

- A. Position yourself clear of the chain weight and operating lever before pulling up on release lever.
- B. When operating release lever have a protective stance and use a smooth steady pull.

## #34

### Walking safety and proper footwear

- A. When walking, pay attention to footing and other conditions which affect your safety.
- B. When you refer to a switch list, consist or timetable, do so standing still and clear of tracks.

C. Footwear is an important factor when developing good walking habits. Wear work boots/shoes with soles and heels firmly attached and heels that are not excessively worn over.

3-25-84

RUN 266 X 7956E-1608-7949-  
VAUNTURN 6588-6544-  
6619

C - ER WALLACE  
B - DICKMAN, FRED  
E - MERLE D PARKHILL

0-50-1447-1914 FEET  
O/D 1235AM - DEPT 240 PM

ARR 10<sup>05</sup> PM T/U 11<sup>25</sup> PM

**SP** Southern Pacific  
Transportation Company

**SSW** St. Louis Southwestern  
Railway Company