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# **THE PENNSYLVANIA RAILROAD**

# **SAFETY RULES**

**Maintenance of Way  
and  
Structures Employees**

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**Effective April 1, 1943.**

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**2023**

## NOTICE

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- These rules are effective April 1, 1943.

Employees to whom they apply will be furnished a copy and are required to understand and obey them.

Officers and supervisory forces will regularly make observations and checks and take such action as may be necessary to insure compliance with the rules.

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## GENERAL

**3001.** Report promptly to immediate supervisor all injuries, no matter how trivial.

**3002.** Obtain immediately, first aid and, if necessary, medical attention for all injuries.

**3003.** Foremen or other persons in charge of work shall be responsible for the safety instruction of all men under them, including men temporarily transferred or borrowed from another department or gang.

**3004.** When two or more gangs are assembled to work together, one foreman must be designated to take charge of the work and be responsible for the protection of the men. Each foreman involved will be advised which one of them is to be in charge. In emergency or until one foreman has been designated, the foreman in whose territory work is to be performed will take charge, but if he is not present, the foremen will agree as to which one of them will be in charge. The foreman in charge will advise each of the other foremen what his duties will be with respect to the safety of the men.

**3005.** Sitting, lying or crossing under car for protection or convenience is prohibited.

**3006.** Getting on or off moving engine, car, train, turntable, transfer table, drawbridge, or elevator is prohibited.

**3007.** Employe passengers are prohibited from getting on or off moving equipment.

**3008.** Disposing of garbage, bottles, ashes or other refuse from trains, other than at designated points, is prohibited.

**3009.** Keep as far as practicable from passing engine, car or train to avoid injury from falling objects, projections on equipment or material which you may be carrying coming in contact with equipment.

**3010.** Walking or stepping on rail, frog, switch, guard rail, interlocking machinery or connection, except when necessary in the performance of duty, is prohibited.

**3011.** Remove promptly, nails or screws from lumber or other material to be reclaimed. Bend flat pointed ends of nails protruding from lumber or other material not to be reclaimed, except when thrown directly to fire.

NOTE: Planks or boards which have been removed for the purpose of repairs and will be immediately replaced, may be left with nails protruding provided they are placed well out of the way with nails downward or driven back.

**3012.** Removing material or supplies from or placing them in keg, barrel or box before protruding nails, staples or loose ends of metal bands or wire have been removed from open end of container is prohibited.

**3013.** Leaving tools, nails, tacks or spikes driven in or protruding from telegraph, telephone and other poles, is prohibited, except for steps, and standard numbering or NO TRESPASS notices.

**3014.** Using finger to determine if holes are in proper alignment for the insertion of rivet, bolt or pin is prohibited.

**3015.** Use broom, bagging or other suitable material to prevent bolt head, nut, rivet or chip flying when cutting it off with impact tool.

**3016.** Walking through escaping steam which obscures the vision is prohibited.

**3017.** Wearing shoes with loose or thin soles is prohibited.

**3018.** Working with ends of shoe laces dangling far enough to cause a tripping hazard or with overshoes unbuckled is prohibited.

**3019.** Wearing overalls or trousers with bottom of cuffs or legs dragging is prohibited.

**3020.** Placing or leaving equipment, tool, grease, peeling or other material on platform or walkway where they will constitute a tripping or slipping hazard is prohibited.

**3021.** Standing on anything which makes one's position insecure is prohibited.

**3022.** Face object, use both hands, have secure handholds and firm footing when climbing on engine, tender, car, scaffold, trestle, ladder or other object. Carrying tool, material or other object which prevents secure hold with both hands or interferes with safe movements while climbing, is prohibited.

**3023.** Stepping or walking on skylights is prohibited.

**3024.** Ascending or descending stairways with hands in pockets is prohibited.

**3025.** Avoid stepping on surface covered with oil, grease, wet paint or other substance creating a slipping hazard.

**3026.** Avoid objects, obstructions, holes and openings to prevent tripping, slipping, falling or turning ankle. While walking or running, if necessary to look back, stop before doing so.

**3027.** Apply salt, sand, cinders, ashes, sawdust or other such material at locations made slippery by weather or other condition, if necessary to perform work there.

**3028.** Placing or leaving tool, material or other object on window sill, ladder, scaffold, platform, at edges of excavation or other place where it is likely to fall, or be knocked off, is prohibited.

**3029.** Leaving tool, material or other object that is likely to fall, standing unsecured on end or leaning against engine, car, wall or other structure, is prohibited.

**3030.** Using compressed air or gas to blow dirt from person or clothes is prohibited.

**3031.** Scuffling or playing jokes on fellow employees by air pressure, by electric shock or by other means, either on or off duty, while on company property, is prohibited.

**3032.** Secure raised window and raised lid against falling, and close door of telephone box when not in use.

**3033.** Standing near a cable, rope or chain unnecessarily when heavy pull is being made is prohibited.



**3034.** Wear rubber gloves when pouring or using acids.

**3035.** Handling or using dynamite or other explosive, unless authorized to do so, is prohibited.

**3036.** Use of gas or other cylinder or drum having contained explosive or inflammable, as a roller, is prohibited.

**3037.** Avoid rubbing face, arm or any part of body with hands while handling creosoted material.

**3038.** Knocking broken glass from window or door is prohibited. Remove broken glass with gloved hand and properly dispose of it.

**3039.** Use approved respirator when spray painting. (Supervisor to determine necessity for use of respirators in other work involving fumes or dust.)

**3040.** Danger sign, tag or banner placed on switch, valve or other place for the protection of employes shall be removed only by the person who placed it in position, and then only when it is safe to do so. Operating machine, switch, valve or other apparatus with danger sign attached is prohibited.

**3041.** Secure wire, strands or stranded cable before cutting to prevent ends flying or recoiling.

**3042.** Before performing or permitting any employe to perform work which necessitates going under, between or fouling engines or cars, including cleaning cars, have full understanding with person controlling movement and know that full protection has been provided.

**3043.** When lighting fusee, hold end to be lighted downward and far enough away to prevent fire dropping on hands, feet or clothing and rub it in direction away from body. If necessary to extinguish fusee, do so by holding lighted end downward away from body and strike side of fusee lightly over some object until powder loosens and causes lighted portion to drop off.

**3044.** Keep torpedoes separated from other objects.

**3045.** Close control valve and place DANGER—DO NOT OPERATE sign on valve and release pressure remaining in line, before cutting steam, air, gas or oil line.

**3046.** Be sure all employees are in a safe position before blowing dirt or condensation from pressure line or equipment.

**3047.** Unnecessarily working, walking or standing under other workmen where tool, material or other object is likely to fall is prohibited. If necessary, notify men above of your presence.

**3048.** Lifting beyond normal physical capabilities is prohibited. Avoid jerking or twisted positions and obtain help to lift or handle heavy or cumbersome objects. When lifting:

- (a) Have a secure footing,
- (b) Bend the knees and keep the back erect,
- (c) Take firm grasp on the object and slowly straighten the legs.

## **GASOLINE, KEROSENE AND OTHER INFLAMMABLE LIQUIDS**

**3060.** Using gasoline, kerosene or other inflammable liquid to start or build-up fire, is prohibited.

**3061.** Cleaning hands, gloves or clothing with gasoline is prohibited.

**3062.** Smoking or using open flame, such as lantern, where gasoline or oil is being handled, is prohibited.

**3063.** Throwing gasoline, kerosene or other inflammable liquid, or material saturated with such inflammables, into refuse container, is prohibited.

**3064.** Cleaning around engine, tank or other place where gasoline or kerosene fumes may be present, with steel wool or steel brush, is prohibited.

**3065.** Storing gasoline, kerosene or other inflammable liquid in open container for any purpose is prohibited.

**3066.** When practicable, handle inflammable liquids during daylight.

**3067.** Maintain metal contact between containers while transferring gasoline.

**3068.** Before opening container of gasoline, creosote or similar liquids, where there is possibility of pressure having built up, cover plug with cloth or bag.

## **EYE PROTECTION**

**3076.** Wear prescribed goggles, properly fitted and kept clean, when engaged in work listed below:

- (a) Acids or other irritants—using or handling in open container.
- (b) Adzing.
- (c) Blowing with compressed air or steam.
- (d) Coaling or sanding engines.
- (e) Concrete, stone, asphalt or cemented ballast—breaking or cutting.
- (f) Cranking gasoline motor with rope.
- (g) Frozen material (ground, gravel, cinders, ballast, coal or ice)—using handle tools to break or loosen.
- (h) Gas cutting or welding.
- (i) Grinding wheels—using or dressing.
- (j) Metal cutting or punching machinery—operating.
- (k) Molten metal—heating, pouring or other-otherwise handling.
- (l) Nails, tacks or spikes—pulling.
- (m) Paint spraying.
- (n) Rivets—heating.
- (o) Rivets or staybolts—bucking up.
- (p) Scaling or scraping.
- (q) Striking metal against metal (except when driving track spikes), or holding metal to be struck with metal.
- (r) Ties being spiked—holding up ends of.
- (s) Turning wood on lathe.
- (t) Performing other work hazardous to the eyes. (To be determined by supervising employe in charge.)

**3077.** Being near enough to the above operations to be exposed to their hazards, without wearing prescribed goggles, is prohibited.

**3078.** Use prescribed helmet or hand shield equipped with prescribed protective glass when electric welding or cutting or watching such operations.

**3079.** Use proper screens when electric welding or cutting. Using screen that is worn, torn, improperly placed, or of insufficient size or that otherwise does not protect others from harmful rays, is prohibited.

### **MOTOR, HAND, TRAILER OR PUSH CARS (TRACK CARS)**

In addition to rules shown below Rule 80 (Book of Rules), Time Table Instructions and Manual of Instructions (M.W. 52) must be observed when applicable. Includes rail-highway truck when used on track.

**3100.** Operation of track cars by unauthorized person is prohibited. Employees accompanying car shall obey instructions of driver as to its movement and protection.

**3101.** Permitting persons other than officers or employees directly connected with the work for which the car is operated, to ride on track car or car pulled by track car without written permission from the Superintendent, is prohibited.

**3102.** Proper inspection must be made each day before car is used. Operation of defective car is prohibited.

**3103.** When placing motor car on the track, push from the rear and not from the side. When necessary, employees are permitted to pull on front lift rail.

**3104.** When car is on the track, push it from the rear, when practicable. If necessary to push from the side, keep feet as far as possible from the wheels. Pulling or assisting to move car from front is prohibited.

**3105.** Placing car on or removing it from the track while a train is passing on next adjacent track, when the intertrack space is less than 20 feet, is prohibited.

**3106.** When pushing car, place hands where material or other objects will not roll, shift or fall on them.

**3107.** Loading tools, material, supplies, etc., on push truck, unless it is equipped with standard rack, is prohibited.

**3108.** Place tools, material, supplies or other objects on car so they will not project over sides or fall from ends or sides and not obstruct machinery or operating controls. Distribute load uniformly. Lining and other bars must be placed in the bottom of the tool tray, tools must be laid flat, spike poles with points to the rear and jacks, rail benders, drills or such appliances on trailing end of car. Securely fasten tools, material or other objects that will not fit inside the tool tray.

**3109.** Placing anything on car in such a manner as to prevent safe use of seating space or hand rail, is prohibited.

**3110.** Towing or pushing hand car with motor car is prohibited.

**3111.** Pushing car with motor car, except for short shifting movement at slow speed, is prohibited.

**3112.** Riding upon car being pushed by motor car is prohibited.

**3113.** Coupling track cars without using a rigid connection is prohibited.

**3114.** Before starting, driver must assign seat location to every person riding on car and have a thorough understanding as to what part each person is to take in removing the car from the track. Standing while car is in motion, is prohibited.

NOTE: Regular employes of a gang who have been assigned seat location need not be given the assignment before each trip but must sit at the assigned location unless otherwise instructed by the driver.

**3115.** Use hand rail, on car so equipped, when getting on, riding on or getting off.

**3116.** Sitting on material, tools or equipment loaded on car is prohibited.

**3117.** Riding on car with feet hanging over side or end, or sitting on car and propelling it with feet, is prohibited.

**3118.** Cranking motor or pushing car, with safety strap or rope hanging from body, is prohibited. Before getting on car, remove climbers.

**3119.** To start free running motor, not equipped with starter:

- (a) Make sure clutch is disengaged.
- (b) With ignition off, open choke and spin motor several times.
- (c) Retard spark fully and turn on ignition.
- (d) Properly engage crank to shaft, start cranking by lifting on crank, keeping fingers and thumb on same side of handle and keep-

ing body as far away as possible. If necessary to spin motor with ignition on, start with upward motion of crank.

**3120.** When arrangement of gasoline valve and carburetor permits, start motor of one-man car not equipped with starter or clutch as follows:

- (a) Fill carburetor and close valve in gasoline line.
- (b) Push car to start.
- (c) Mount car and open gasoline valve as soon as motor starts.

**3121.** Avoid pushing car to start motor while on open floor bridge or trestle, on track with empty cribs, through turnout, or over water pan. Push car slowly, walking between rails on open floor bridge or trestle, to a point where secure footing is available, before turning on ignition.

**3122.** Getting on or off moving car is prohibited, except in emergency or to get on after having started motor of car not equipped with starter or clutch.

**3123.** Starting car while men are getting on or off is prohibited.

**3124.** When two or more men are on car, one employe must be assigned a position where he will have the best possible view to the rear and must maintain a constant lookout in that direction while the car is in motion.

**3125.** When operating car, maintain a constant lookout, particularly at crossings and switches, for obstructions on rails or in flangeways.



**3126.** Driver must test brake immediately after starting car.

**3127.** Interfering with, or unnecessarily distracting attention of, driver of track car, is prohibited.

**3128.** Stepping from moving car to trailer or vice-versa is prohibited.

**3129.** Exceeding speed indicated below is prohibited:

MOTOR CARS	MPH
(a) Not otherwise specified—Maximum.....	20
(b) Pulling other cars.....	15
(c) Passing moving train on next adjacent track at location where intertrack space is less than 20 feet .....	10
(d) Through turnout, over switch, frog or derail...	5
(e) Over crossing .....	5
(f) Over track in which ballast is high enough that it is likely to obstruct free passage.....	10
(g) Over open floor bridge or trestle.....	10
(h) Approaching location at which men are work- ing on track on which car is running or when passing men or next adjacent track.....	10
(i) In backward motion.....	10

**3130.** Proceeding over crossing protected by gates, before gates are lowered, or over crossing protected by watchman, before stop signal for highway traffic is displayed by watchman, is prohibited.

**3131.** Riding on car through spring side of spring frog is prohibited. Before proceeding be sure all the wheels are properly on the rails.

**3132.** When a dog is running close to car or other animal is near track, reduce speed and stop if there is danger of running over it.

**3133.** Keep motor in gear while descending steep grade, using low gear if necessary to control car, except on car where belts and brakes are controlled by the same lever.

**3134.** Adjusting, cleaning or oiling any part of car, unless motor and car are stopped, is prohibited.

**3135.** Uncoupling moving track car, trailer or other equipment, is prohibited.

**3136.** Remove coupling rod from car when not in use.

**3137.** When car is left in sight and in prompt reach of employe in charge, secure it against movement. At other times place car clear of track and lock it.

**3138.** When necessary, provide flag protection for highway traffic when turning or setting car on or off track at crossing.

**3139.** Leaving car so it obstructs crossing, platform, path or other walkway, is prohibited.

**3140.** Application of unapproved device to car is prohibited.

**3141.** Removing cap from steaming radiator before water has cooled sufficiently to prevent steam or hot water gushing, is prohibited.

**3142.** Allowing motor to run while within building, unless provision has been made for the exhaust gases to be expelled outside the building, is prohibited.

**3143.** Use of other than approved cans when filling fuel tanks is prohibited.

**3144.** Filling gasoline tanks inside tool houses or while motor is running, is prohibited. Gasoline must not be allowed to overflow.

**3145.** Smoking or using open flame, such as lantern, where gasoline or oil is being handled, is prohibited.

**3146.** Cleaning around engine, tank or other place where gasoline or gasoline fumes may be present, with steel wool or steel brush, is prohibited.

**3147.** Maintain metal contact between containers while transferring gasoline.

**3148.** Inserting iron or steel pipe into metal container for the purpose of pumping gasoline from same, is prohibited. Use brass pipe, copper pipe or non-metallic flexible tubing.

**3149.** Operating motor car in backward motion beyond nearest set-off, crossing or possible turning point, is prohibited.

## **PROTECTION AGAINST BEING STRUCK BY ENGINES, CARS OR TRAINS**

(The term "track," as used under this heading, means the space between the rails and space within four feet outside each rail.)

**3200.** Walking, standing or sitting on track, except when necessary for the proper performance of duty, is prohibited.

**3201.** Carrying open umbrella while on track is prohibited.

**3202.** Wearing ear covering which seriously interferes with hearing is prohibited.

**3203.** Arrange all work so it will progress against the current of traffic when practicable.

**3204.** Where authorized path or route is provided, use of other routes or paths is prohibited.

**3205.** When necessary to walk on main track, walk against current of traffic and keep a sharp lookout in both directions for approaching trains. On approach of a train, clear all tracks.

**3206.** Look in both directions before driving or pulling vehicle on or across track. Driving or pulling vehicle on or across tracks closely in front of a moving engine, car or train, or after it has passed, until sure no other engine, car or train is approaching, is prohibited.

**3207.** Look in both directions for approaching engine, car or train before stepping on or crossing tracks. Walk straight across when possible to do so.

**NOTE:** To comply with Rules **3206** and **3207** it will be necessary to turn the head in both directions before reaching each track.

**3208.** Crossing track upon which engine, car or train is standing, closer than ten (10) feet from end of standing engine, car or train, or

stepping on or crossing track closely in front of moving engine, car or train, or after it has passed, until sure no other engine, car or train is approaching, is prohibited.

**3209.** Performing regular work on main track when view of approaching trains is obscured by fog, snow storm or other weather condition, is prohibited. For emergency work which must be performed under such conditions, absolute use of the track must be secured from the Superintendent and work performed under flag protection. Absolute use of the track is not required when men are assigned to snow duty in accordance with division snow program, but ample gang watchman protection must be provided, the gang watchman to stand clear of all tracks, where possible.

**3210.** Before three or more men, including man in charge, start work on main track, a gang watchman must be assigned when the density of traffic, restriction to view, weather conditions, or nature of the work makes it impracticable for the man in charge to maintain a sufficient lookout to warn gang of approaching trains from either direction in time to permit gang to clear tracks 15 seconds before train reaches point of work. (See rule **3222** for duties of Gang Watchman.)

**3211.** Before starting the operation of noisy machinery or equipment, or when outside noise prevents hearing the approach of trains, a gang watchman must be assigned to afford proper protection.

**3212.** When approaching trains, on any track in either direction, cannot be readily seen by the gang watchman near the gang (or by the Foreman when a gang watchman is not required) in time to give sufficient warning for the men to clear in accordance with the rules, additional gang watchmen must be assigned as needed.

If the separation of some man or men from other men prevents their distinctly hearing warning, such additional gang watchmen as necessary must be provided.

**3213.** Before starting work on track, the Foreman or man in charge will have an understanding with all the men as to where they will go when necessary to clear for trains.

**3214.** Unless otherwise instructed, all members of gang working on track must clear on same side of track as Foreman or man in charge.

**NOTE:** Gang watchmen stationed on opposite side of and clear of tracks are not required to cross tracks in order to clear on same side of track as Foreman or man in charge.

**3215.** When clearing tracks leave tools, equipment or material so they will not be struck by trains or equipment.

**3216.** Foreman, gang watchman and others in charge of men engaged in work on or about the tracks, must have warning whistle on outside of clothing, readily accessible for use.

**3217.** Gang watchman will, if practicable, be stationed clear of all tracks at a point where he will have the best view of approaching trains in both directions, and a sufficient distance from the gang to prevent attention being distracted by the work, but not farther than his warning whistle can be distinctly heard, except as follows:

**WHEN USING EQUIPMENT DESCRIBED BELOW**

**(a) Pneumatic Tie Tamper**

**GANG WATCHMAN TO BE STATIONED AS FOLLOWS: AT THE LEVER GATE VALVE.**

(Where practicable, lever gate valve shall be located between the gang and approaching trains in normal direction.)

**(b) Electric Tie Tamper**

**At A Point Giving Best View** of approaching trains permitted by extension line push button control switch, if so equipped. At power switch to generating plant if outfit is not equipped with extension push button control.

**(c) Unit Tie Tamper**

**Near The Men.** (One gang watchman for each rail length within which the tampers are being used.)

**(d) Ballast Cleaning Mole**

**One Rail Length From Mole.**

**(e) Rail Renewal Operations**

**Near The Men.** (One gang watchman for each machine or group of machines, and for each separate group of men as may be necessary.)

**(f) Other Noisy Machinery or Equipment** which does not obstruct the track and does not require absolute use of the track, such as flexible shaft grinder, outfit for spot-welding rail end or other machine of that nature.

**Near The Men.** (One gang watchman to be assigned to each machine.)

**(g) Other Noisy Machinery or Equipment** which must be placed on the track when in use and which requires absolute use of the track, such as electric or gas welding outfits for out-of-face work, power grinder, milling machine, power drill, power spike driver or puller or other machine of that nature.

**Near The Men.** (When all work is to be performed from gauge side of rail, one gang watchman for each three rail lengths within which the machines or welders are working. When necessary to perform any work from intertrack space, one gang watchman for each machine or welder.)

**3218.** Additional gang watchmen, when required because of obstruction to view, in addition to those specified in the previous rule, will be stationed at points where they will have the best view of approaching trains from the direction to which they are assigned, and where their warning signal can be plainly seen by the next gang watchman nearer the gang.



**3219.** Gang watchman (or foreman, when gang watchman is not required) must, on approach of a train from either direction, warn gang in time for it to clear all tracks at least fifteen (15) seconds before train reaches point of work.

When pneumatic or electric tie tamper is in use, the gang watchman stationed at the gate valve or control switch will first shut off power and then sound whistle.

When other noisy machinery or equipment is in use or outside noise interferes with hearing whistle, the gang watchman near the gang will, if men do not appear to hear whistle, warn them by touching them and continuing to sound whistle.

**3220.** Gang watchman nearest the gang (or foreman, when gang watchman is not required) will signal:

- (a) The approach of a train, by sounding whistle, by holding white disc at arm's length above the head and by hand signal indicating where they will clear. (Foreman of gang not requiring the protection of a gang watchman in accordance with Rule 3210 are not required to use the white disc.)
- (b) When safe to resume work, by holding white disc or hand horizontally at arm's length.

**Additional gang watchmen will signal:**

- (c) The approach of a train by sounding whistle and by holding white disc at arm's length above the head.

If signal is not acknowledged by the gang watchman nearest the gang, the additional gang watchmen will signal the train to stop.

- (d) When safe to resume work, by holding white disc horizontally at arm's length.

Gang watchman receiving a signal will repeat same as an acknowledgment and indication that it is understood.

At night or when white disc cannot be plainly seen, the above signals will be given and acknowledged with Car Inspector's type white lantern.

**3221.** Resuming work after the passage of a train before gang watchman (or Foreman, when gang watchman is not required) has signaled it is safe to do so, is prohibited. Where additional gang watchmen are involved, the gang watchman nearest the gang (or Foreman, when gang watchman is not required) must not give signal to resume work until he has received and acknowledged signal from additional gang watchman that no trains are approaching.

**3222.** Gang watchmen must give their entire attention to watching for trains and warning the men and are prohibited from performing, even momentarily, any other duties. They must not leave their post until instructed by the man in charge that protection is unnecessary or another

gang watchman has been assigned and is in position and watching for approaching trains.

**3223.** When necessary for gang watchman (or Foreman, when gang watchman is not required) to leave his post for any reason, even momentarily, the Foreman or other person in charge must assign another gang watchman in his place and see that he is in position, is properly equipped and watching for trains before permitting the regular gang watchman to leave his post.

**3224.** Should anything occur to prevent gang watchman having a good view of trains approaching in either direction or to interfere with his duties as a gang watchman, even momentarily, he must signal the gang to clear tracks. If, after warning has been given, no trains pass within reasonable time, Foreman will instruct men to remain clear of tracks and, after consulting gang watchman, make necessary arrangements to protect gang before resuming work.

**3225.** Immediately on receiving warning or knowing of approach of train, all men must clear main tracks and remain clear until instructed by gang watchman (or Foreman, when gang watchman is not required) to resume work, except under the following circumstances:

- (a) When a gang has a long unobstructed view and approaching trains occupy only those tracks which leave at least one open track between any train-occupied tracks and tracks on which the men are working. In this case men must stop work, stand erect,

and watch for trains in both directions in order to clear tracks if necessary to prevent being trapped.

- (b) In Terminals where speed of trains is restricted to twenty (20) miles or less per hour, this rule may be modified to suit local conditions with the approval of the General Manager.
- (c) When the main track on which the men are working is out of service with the permission of the Superintendent and protected in both directions by flag. In this case men must stop work and stand in center of track on which they are working.
- (d) When working on yard tracks, where they will clear track on which working on approach of engines or cars on that track. While engine, car or train is passing on next adjacent tracks they must stop work and stand in center of track, keeping a sharp lookout in both directions for approach of engine, car or train.

**3226.** On approach of a train on a track equipped with dragging equipment device, employees working on or about track must place themselves either on the side of the device from which the train is approaching or at least 100 feet from the device in the opposite direction.

**3227.** When working on track adjacent to track fence, remove and place clear of track,

such panels of fence as will insure safety of the men.

**3228.** Employees working in tunnels in which there are manholes must occupy them on approach of a train.

**3229.** Working in tunnels without an adequate number of lights is prohibited.

**3230.** In tunnels where clearance is limited and no manholes or other places of safety are provided, Foreman must arrange with the Superintendent for the use of the track and work under flag protection.

**3231.** Steps on camp cars placed for occupancy must not be used on side next to main, running or side track when intertrack space is less than twenty (20) feet.

NOTE: If intertrack space between camp cars and next adjoining live track is less than twenty (20) feet, fasten side doors in closed position or barricade platform or steps on side next to live track.

## **HANDLING MATERIAL**

**3300.** Keep hands or feet in a position where gang plank, transfer plate, skid, tackle or lifting device, or material being handled, cannot fall or slip on or against them.

**3301.** Before handling material or object, determine best place to take hold. Place hands in proper position and take grip or hold sufficient to prevent material or object falling from hands, or getting out of control.

**3302.** Keep hands clear of sharp edges, slivers

or other such projections while handling material or supplies. Wear gloves if impracticable to handle without danger of injury to hands.

**3303.** Place hands so they will not be caught between material being handled and other material or object.

**3304.** Wear leather or rubberized cotton gloves when handling creosoted material. Gloves saturated on inside with creosote should not be worn.

**3305.** Lifting beyond normal physical capabilities is prohibited. Avoid jerking or twisted positions and obtain help to lift or handle heavy or cumbersome objects. When lifting:

- (a) Have a secure footing.
- (b) Bend the knees and keep the back erect.
- (c) Take firm grip on the object and slowly straighten the legs.

**3306.** When necessary for two or more persons to handle heavy or bulky material or object by hand, the following precautions must be taken:

- (a) Remove slipping or tripping hazards when practicable; when not practicable, exercise care to prevent slipping or tripping.
- (b) Designate one person to give commands for all movements (lifting, walking, lowering or throwing) and, when practicable, place him at one end of object being handled.
- (c) Have person designated to give commands fully inform those assisting, just what is to be done and what the words of com-

- mand will be. Command to be given in a loud and distinct manner.
- (d) Giving of command by other than designated person is prohibited.
  - (e) Lift or make other movement only on command.
  - (f) Place men according to size, strength and experience.
  - (g) Avoid walking backwards, except when necessary.
  - (h) Unnecessary or loud talking when handling material is prohibited.

**3307.** Unloading material from train or track car moving in excess of five (5) miles per hour, is prohibited.

**3308.** Placing material in safety manhole in tunnel or on safety platform on bridge, is prohibited.

**3309.** Pile and stow material safely and in an orderly manner, "stepping" ends or interlocking it where practicable. Avoid high narrow pile.

**3310.** Keep material not being used a safe distance from edge of platform, track, switch or pathway.

**3311.** Leaving ends of material spacing-strips extended beyond edge of pile into aisle, path or walkway, is prohibited.

**3312.** When placing material on or removing it from pile, avoid dislodging other part from pile or take precautions to prevent injury if any parts be dislodged.

**3313.** Securely block round material or other objects that are likely to roll.

**3314.** When necessary to place car door, portable platform, sheet metal or similar material on edge, lean it at a sufficient angle to prevent its toppling over and secure at bottom to prevent sliding out. Lay such material flat when practicable.

**3315.** Throwing or dropping material, when it is likely to rebound or otherwise cause injury, is prohibited.

**3316.** Skids must be strong enough for purpose intended and must be properly secured, when placed in position, to prevent falling or shifting.

**3317.** Carrying long material or other long object over shoulder, close to moving train, is prohibited.

**3318.** Observe location of obstructions and persons nearby while carrying material, especially while making turn, to avoid striking them. Following closely behind material being carried is prohibited.

**3319.** When loading rail, frog, switch point, guard rail, timber or other long, heavy object upon push truck proceed as follows if men available are not able to lift it directly to the truck:

- (a) Place the object to be lifted between the rails.
- (b) Lift end nearest the truck and place suitable support across rails and under lifted end.
- (c) Lift elevated end of object in stages, blocking each lift until high enough to push truck under it at least eighteen (18)



inches and let object rest on truck, using rollers if available.

- (d) Repeat raising operations, blocking truck after each move until truck is far enough under to permit lower end of the object to be easily raised and object slid to a safe point on truck.

**3320.** In unloading rail, frog, switch point, guard rail, timber or other long, heavy object from push truck reverse the procedure outlined in previous rule, if undesirable to drop it, otherwise proceed as follows:

- (a) Move the object to the edge of the push car from which it is to be dropped.
- (b) Place men within gauge of track, at each end of object but far enough away from end of push truck to prevent being struck should it tilt or derail, and at word of command, push it off edge of push truck.

**3321.** Before cutting stay wire preparatory to unloading poles, piles, etc., place a one-inch rope or 5/16-inch or stronger strand around each end of load on the car.

**3322.** Use tongs to carry rail, frog, switch point, guard rail, tie, timber, ice or other such object when practicable.

**3323.** Dropping rail by hand to complete break is prohibited.

**3324.** Standing on rail or placing bar in bolt hole to steady or balance it while it is being cut is prohibited.

**3325.** Use rail fork, instead of lining or other bar, to roll rail. Keep all parts of body, except

hands, clear of line of fork and disengage fork the instant the rail rolls past balancing point. Release hold on rail fork should it fail to disengage. Using tongs to roll rail is prohibited.

**3326.** Keep feet and hands clear of roller or dolly upon which load is being moved.

**3327.** Using hands or feet to adjust or shift rollers under moving articles is prohibited. Use sledge or other suitable object for this purpose.

**3328.** Articles or equipment being moved on wheels or rollers must be so controlled that their movement can be stopped short of persons or obstructions.

**3329.** Push articles being moved on dollies or rollers from rear when practicable.

**3330.** Leaving material or part of equipment in an insecure position, when applying or removing it, is prohibited.

**3331.** Work from ends or from back of poles or piles when rolling them.

**3332.** Walking up, down or between skids used for loading or unloading material, is prohibited.

## **DERRICKS, CRANES OR OTHER HOISTING EQUIPMENT**

In addition to rules below, Manual of Instruction (M.W. 52) must be observed.

**3351.** Riding or working on hoisting equipment, or car on which mounted, without permission of the operator, is prohibited.

**Operator may grant such permission only when necessary for proper performance of duty and must insist on rider being in view, and must then guard against injury due to moving or working hoisting equipment.**

**3352.** Gin pole shall be securely set and guyed and men shall not be on it while lift is being made.

**3353.** Except for test purposes, operating hoisting equipment with safety guard absent, out of position or defective, is prohibited.

Report immediately to man in charge, lack of or defect in guard.

**3354.** Placing tool, material or other objects inside inclosures formed by guards is prohibited.

**3355.** Before filling gasoline tank from inside cab, secure in open position all windows and doors, keeping them in open position until cab is entirely free of fumes.

**3356.** Smoking or using open flame, such as lantern, where gasoline or oil is being handled, is prohibited.

**3357.** Cleaning around engine, tank or other place where gasoline or gasoline fumes may be present, with steel wool or steel brush, is prohibited.

**3358.** Maintain metal contact between containers while transferring gasoline.

**3359.** Allowing motor to run while within building, unless provision has been made for the exhaust gases to be expelled outside the building, is prohibited.

**3360.** The start free running motor, not equipped with starter:

- (a) With ignition off, open choke and spin motor several times.
- (b) Retard spark fully and turn on ignition.
- (c) Properly engage crank to shaft, start cranking by lifting on crank, keeping fingers and thumb on same side of handle and body as far away as possible.










If necessary to spin motor with ignition on, start with upward motion of crank.

**3361.** Removing cap from steaming radiator before water has cooled sufficiently to prevent steam or hot water gushing, is prohibited.

**3362.** If the operator is unable to maintain lookout in the direction he is moving equipment, an employe shall precede it and warn others of its approach.

**3363.** All men involved in operation of a machine, or machines working together, shall have a definite understanding before beginning operation, as to kind of signals and by whom they will be given.

**3364.** Use standard hand signals shown below to govern movements of power hoisting equipment.

 <p><b>HOIST</b>-FOREARM VERTICAL. MAKE SMALL HORIZONTAL CIRCLES WITH THE HAND.</p>	 <p><b>RAISE BOOM</b>-ARM EXTENDED FINGERS CLOSED, THUMB UP. JERK ARM UPWARDS.</p>	 <p><b>STOP</b>-ARM EXTENDED, HAND LEVEL WITH HIP, HOLD POSITION RIGIDLY.</p>
 <p><b>LOWER</b>-ARM EXTENDED. HAND BELOW HIP, WAVE FOREARM DOWNWARD.</p>	 <p><b>LOWER BOOM</b>-ARM EXTENDED FINGERS CLOSED, THUMB DOWN. JERK ARM DOWNWARDS.</p>	 <p><b>EMERGENCY STOP</b>-ARM EXTENDED, HAND LEVEL WITH HIP, WAVE HAND QUICKLY TO RIGHT AND LEFT.</p>
 <p><b>SWING BOOM</b>-ARM EXTENDED FOREFINGER INDICATING DIRECTION OF SWING.</p>	 <p><b>TRAVEL AHEAD</b>-RAISE AND LOWER ARM VERTICALLY.</p>	 <p><b>TRAVEL BACK</b>-SWING ARM VERTICALLY IN A CIRCLE AT HALF ARMS LENGTH.</p>

**3365.** Giving signals for operation of hoisting equipment by others than person designated to give signal, or operating hoisting equipment on signal from person not designated to give signal, is prohibited.

**3366.** Rail being turned end for end while suspended from crane must be so controlled that its movement can be stopped short of person or obstruction.

**3367.** Walking, standing or sitting in path of or under load, bucket or magnet handled by hoisting equipment, or under boom, is prohibited.

**3368.** Carrying load over workmen is prohibited.

**3369.** Riding or hanging on hook or load of hoisting equipment is prohibited.

**3370.** Using rope sling to hoist material is prohibited. Use chain or steel cable.

**3371.** Taking hold of cable or sheave on hoisting equipment, unless instructed to do so by the operator, who must first provide adequate protection, is prohibited.

**3372.** When hoisting material or machinery, attach chain or cable well above the center of gravity to prevent its tilting or falling over when lift is made.

**3373.** Place block or hook directly over load, if possible, so that the lift will be vertical to prevent load dragging or swinging. When necessary to lift at an angle see that all persons are in a safe position and hoist slowly until lift is vertical.

**3374.** Moving hoisting equipment with load swaying or rotating is prohibited.

**3375.** Lowering load on hoisting equipment so fast as to necessitate a sudden stop is prohibited.

**3376.** Handling timber or other long objects

between jaws of bucket or hoisting equipment not equipped with teeth, is prohibited.

**3377.** When freeing sling observe arrangement of load, be sure it has settled before unhooking and take a position to avoid being struck by sling or any part of load.

**3378.** Being in car which is being loaded or unloaded with bucket or magnet is prohibited.

**3379.** Keep from between object and load being handled to avoid being caught between them.

**3380.** Leaving hoisting equipment with load, bucket, magnet or other heavy attachment suspended, is prohibited.

**3381.** When unloading crane from, or loading it on car, proceed as follows:

- (a) See that ramp (if used) is properly and securely placed.
- (b) Boom shall trail in unloading and lead in loading and be as low as will permit its clearing car.
- (c) Remove load cable from sheave at upper end of boom and hook it to a sling fastened around draw bar at opposite end of car.
- (d) Set brakes on swing mechanism and place a short chain around cog wheel on swing gear to lock it.
- (e) Move crane slowly keeping travel clutches engaged during entire operation and, if necessary, use cable to keep crane from getting out of control.

**3382.** Keep doors of cab secured in either open or closed position when not in use.

**3383.** Blocking limit switch or making ineffective any other safety feature on hoisting equipment, is prohibited.

**3384.** When starting to lift an unusually heavy load, test brakes when load is a few inches from floor or ground.

### **OTHER MACHINERY OR EQUIPMENT**

In addition to rules shown below, Manual of Instruction (M.W. 52) must be observed.

**3400.** Placing machinery or equipment in safety manhole in tunnel or on safety platform on bridge or trestle, is prohibited.

**3401.** Operation of machinery or equipment, unless authorized to do so, is prohibited.

**3402.** Wearing loose or torn clothing that is likely to be caught, while near machine or machine tool, is prohibited. (Includes long necktie unless securely tucked in.)

**3403.** Except for test purposes, operating a machine or appliance with safety guard absent, out of position or defective, is prohibited. Report immediately to superior, absence of or defect in guard.

**3404.** Placing tool, material or other object inside enclosure formed by machine guard is prohibited.

**3405.** Before filling gasoline tank from inside confined spaces in buildings, secure in open position all windows and doors, keeping them in open position until building is entirely free of fumes.

**3406.** Smoking or using open flame, such as lantern, where gasoline or oil is being handled, is prohibited.



**3407.** Cleaning around engine, tank or other place where gasoline or gasoline fumes may be present, with steel wool or steel brush, is prohibited.

**3408.** Maintain metal contact between containers while transferring gasoline.

**3409.** Cranking motor, with safety strap or rope hanging from body, is prohibited.

**3410.** To start free running motor, not equipped with starter:

- (a) With ignition off, open choke and spin motor several times.
- (b) Retard spark fully and turn on ignition.
- (c) Properly engage crank to shaft, start cranking by lifting on crank, keeping fingers and thumb on same side of handle and body as far away as possible.

If necessary to spin motor with ignition on, start with upward motion of crank.

**3411.** When using rope starter, wrapping starter rope around hand is prohibited.

**3412.** Allowing engine to run while within building, unless provision has been made for the exhaust gases to be expelled outside building, is prohibited.

**3413.** Removing cap from steaming radiator before water has cooled sufficiently to prevent steam or hot water gushing, is prohibited.

**3414.** Take a position to prevent being caught in loop of wire, rope, cable or other tackle when it is tightened.

**3415.** Crossing over haulage cable of ballast cleaning machine while train is in motion, is prohibited.

**3416.** Leaving machinery or equipment so it obstructs crossing, platform or other pathway, is prohibited.

**3417.** Keep machinery and equipment a safe distance from track, switch or edge of platform, when not in use.

**3418.** Placing hand on moving belt is prohibited.

**3419.** Grinding on side of emery wheel, unless designed for that purpose, is prohibited. Tool rest shall not be more than  $\frac{1}{8}$  inch from wheel.

**3420.** Use tongs or other suitable tool to place material under or remove it from dies of power hammers or quick-acting presses. Using hands for this purpose is prohibited.

**3421.** Before starting conveyor, concrete mixer or other equipment, warn fellow employes and see that they are in a safe position.

**3422.** Changing gears on lathe while it is in motion, unless machine construction permits, is prohibited.

**3423.** Using hand to remove chip, cutting or scale from drill, hammer press or other machine, is prohibited.

**3424.** Leaving material or tool on a machine in such manner it is likely to fall off, is prohibited.

**3425.** Using circular rip saw, not equipped with spreader, is prohibited.

**3426.** Stand to side of power rip saw to avoid being struck in event of kick-back.

**3427.** Use push stick of sufficient length to feed short piece of wood or end of long piece through and clear of circular rip saw. Using fingers for this purpose is prohibited.

**3428.** Keep loose or scrap material away from saw blade. Remove such material from saw table immediately after cut is completed.

**3429.** Leaving machine or equipment, either with engine running or unit not properly secured, without attendant, is prohibited.

**3430.** Before going on duty at night, except in emergency, man in charge shall make an inspection within limits of work and caution men as to specific obstructions or hazards which may not be visible after dark.

## **TOOLS OR TACKLE**

**3451.** Placing tool in safety manhole in tunnel or on safety platform on bridge, is prohibited.

**3452.** Inspect tool, tackle, strap, safety belt, rope or other equipment at end of each day it is used. If defective, it must be repaired or so marked and kept separated from serviceable tools or equipment and in a suitable container, if practicable. Tool cracked or mushroomed is defective.

**3453.** Using defective tool, tackle, strap, rope or other equipment is prohibited. (Includes cracked or split handle bound by wire, tape or string.)

**NOTE:** To comply with this rule it will be necessary to frequently inspect, while in use, sledge, spiking hammer, punch, cutter or other such tool.

**3454.** Using rail cutter, track punch, spike lifter, or similar hand tool without hose or similar protection around head, is prohibited.

**3455.** Wedge handle on spiking hammer, sledge, hammer, hatchet, or other handle tool, the use of which requires swinging, and also in other tools to be used in overhead operation.

**3456.** Store all tools so they will be secure, heavy tools being placed on the floor, and sharp or edged tools in bin or rack or wrapped in burlap. Having tools at such a height that they cannot be safely placed or removed while standing on floor, is prohibited.

**3457.** Transporting assembled scythe on any moving equipment is prohibited. Protect cutting edge by suitable guard or wrapping when not in actual use.

**3458.** Keep tools, tackle, ropes or other objects, when not in use, a safe distance from edge of platform and from track, switch or pathway.

**3459.** Carrying tool or other object over shoulder, close to moving train, is prohibited.

**3460.** Observe location of obstructions and persons nearby, while carrying long tools, especially while making turn, to avoid striking them. Following closely behind tools being carried over shoulder of another person is prohibited.

**3461.** Unloading tool from moving train or throwing tool from standing train, without knowing it is safe to do so, is prohibited.

**3462.** Swinging tool without being sure your intention is known by person close by, who might move into swing of tool, is prohibited.

**3463.** Standing within swing of tool in the hands of workmen or in front of rivet or bolt being chiseled off, is prohibited.

**3464.** Deliver blows with axe, adze, sledge, hammer or other such tool in such manner that it will not catch upon or be deflected by other object.

**3465.** Holding or striking handle tool, when holder is in direct line with swing of sledge, is prohibited.

**3466.** Avoid standing on same side as striker, while holding bar cutter or punch.

**3467.** Sitting or standing on, or straddling, bar or lever while in use, is prohibited. Place it securely and be properly braced and alert to prevent injury due to unexpected movement of bar or lever. Have all parts of body so they will not be caught between bar or lever and other object.

**3468.** Using the following tools for purposes mentioned, or any other tools for purposes for which they are not intended, is prohibited:

- (a) Claw hammer or hatchet to strike punches, chisels or similar tools having metal heads.
- (b) Rail cutters, track punches, spike lifters or similar tools not wedged on handles for striking.
- (c) Spiking hammer to strike cutting, riveting, forming, backing out tools or lining pins.  
Employees patrolling track may use spik-

ing hammer to strike drift pin if sledge is not available.

- (d) Tamping end of pick as hammer.
- (e) Point end of pick as punch or drift.
- (f) Wrench as hammer.
- (g) File as pry or wedge.
- (h) Alligator wrench on square or hexagon bolt head or nut, except when assisting train or engine service men to renew hose.
- (i) Bar or other tool instead of rail fork to turn rail if rail fork is available.

**3469.** Striking file or using without handle, is prohibited.

**3470.** When using hand adze take the following precautions:

- (a) Remove nails, dirt, stones or other obstructions from object to be adzed.
- (b) Straddle object when possible and work adze between legs.
- (c) Cut with grain when practicable, notching and chipping out pieces if considerable amount is to be cut out.
- (d) Keep adze free of chips and be especially cautious when cutting cross grained lumber, knots, etc.; watch for and avoid striking nails, spikes or other metal not at first visible.

**3471.** When using wrench take following precautions:

- (a) Select proper size solid end wrench, or properly adjust other wrench, to fit object on which it is to be used.

- (b) Place monkey or similar wrench so the turn will be toward open end of jaws.
- (c) Using any object as a shim between jaws of wrench and nut, bolt head or other object, to make wrench fit, is prohibited.
- (d) Confine stroke of wrench to space available to prevent fingers, hands or any part of body striking against objects or being pinched.
- (e) Brace body securely to avoid overbalancing in case wrench slips or wrench, bolt, nut or other object fails.
- (f) Before attempting to apply full force, make sure wrench has proper grip and then gradually increase force until nut, bolt, pipe or other object turns.
- (g) Pull instead of pushing on track wrench when nut begins to tighten.

**3472.** When moving car, have handle of mover or bar slightly out of line with rail to avoid catching fingers.

**3473.** Place shovel, fork, rake, hoe or other pointed or edged tool with point or edge down, when not in use.

**3474.** Carrying file, ice pick or other pointed tool about person, unless point is protected, is prohibited.

**3475.** Placing hand in moving part of power-driven tool is prohibited.

**3476.** Connecting or disconnecting pneumatic tool, before closing valve to supply line and draining pressure from hose, is prohibited.

**3477.** Using pneumatic hammer for riveting, unless equipped with spring clip or other arrangement for holding die or set in hammer, is prohibited.

**3478.** While pneumatic hammer is held, but not actually in use, place thumb or finger under trigger.

**3479.** Allowing pneumatic hammer to point at a person is prohibited.

**3480.** Laying down an electric or pneumatic tool which is in operation is prohibited. Place such tool in a position where trigger, valve or switch is shielded to prevent tool being accidentally started.

**3481.** Secure or hold firmly, handle of electric or pneumatic motor while in use and be prepared for jerk if reamer, drill or tap should stick or jam.

**3482.** Attaching drill, reamer, tap or other tool to electric or pneumatic motor while motor is running, is prohibited.

**3483.** Leaving unattended in hole, a drill, reamer or tap, with electric or pneumatic motor attached, is prohibited.

**3484.** Using portable electric or pneumatic grinder, without suitable hood guard over wheel, is prohibited.

**3485.** Placing bolt, wire, nail or other such object in link of chain to repair, splice or shorten chain, is prohibited.

## **JACKS**

**3500.** Inspect jack at end of each day it is used. If defective it must be so marked and kept separated from serviceable jacks.



**3501.** Using defective jack is prohibited.

**3502.** Clean notches and latches and oil movable parts as frequently as necessary.

**3503.** When using jack the following precautions, where applicable, must be taken:

- (a) Using track jack between the rails is prohibited, except where necessary and then only under proper protection and in the hands of an experienced man.
- (b) Using more than two men to operate jack handle is prohibited.
- (c) Place firmly and in proper contact with object to be lifted. When jack is not high enough or foundation is insecure, place suitable blocking under jack. Insert a piece of wood between jack head and load when jacking against metal.
- (d) Use proper fitting steel handle in jack equipped with square socket, and standard wooden handle, in good condition, in other jacks. Sitting or standing on or straddling handles is prohibited.
- (e) Using jack unless handle is fully inserted in socket is prohibited.
- (f) Stand at side of handle in braced position and move handle slowly and uniformly, being sure that latches are fully engaged and that head is clear of handle before releasing pressure on it.
- (g) Raise handle socket of single action jacks to uppermost position as soon as top latches engage, and remove handle when lift has been completed.

- (h) Remove handle when jack is not being operated.
- (i) Have latches in full holding position while load is jacked up sufficiently high to make it possible for hands or feet of workmen to be under it.
- (j) Before tripping jacks under load, warn fellow employees and see that they are in a safe position.
- (k) Place suitable trestle or blocks under load jacked up, before doing any work necessitating placing any part of person under it.
- (l) Placing any part of person under load not properly blocked is prohibited.
- (m) Placing hand on top, head or rack of jack being operated, or while rack is in raised position, is prohibited.
- (n) When not in use lay jack down, taking precautions to prevent dirt or other objects from getting into the mechanism. When in tool house it may be left standing, with rack lowered, in space designated.

**3504.** When using a jacking timber (one end on jack and other end against object to be raised) it must be secured with a chain to prevent it slipping or springing out.

## **SPIKES OR BOLTS**

- 3510.** When starting spike, proceed as follows:
- (a) Wipe from head of spike any excessive amount of grease.
  - (b) Hold spike so that fingers will not be between spike and rail.

- (c) Strike light blows until spike is firm enough that it is unnecessary to hold it.

**3511.** Driving of one spike by two men at the same time, is prohibited.

**3512.** Spiking over rail except where lead, guard rail, water pan, or other such construction makes it necessary, is prohibited.

**3513.** When pulling spikes proceed as follows:

- (a) Place claw end of bar with firm grip under head of spike.
- (b) If spike cannot be firmly gripped with claw end of bar, use pinch end of bar under edge of tie plate or joint bar and pry it up sufficiently to permit firm grip under head of spike.
- (c) If impossible to pinch up sufficiently to grip properly, use sledge and spike lifter, with suitable protection over head of spike. Striking claw bar to start spike is prohibited.
- (d) If necessary to have block under heel of claw bar, make sure it is sound and securely placed.
- (e) Make sure no other employees are behind claw bar, stand in fully braced position and make light pulls on claw bar, slightly increasing the force of each pull. If it requires excessive force to start spike, use bagging or similar material or take other precautions to prevent injury should spike head fly up.

(f) After spike has started, and before pushing down on bar, observe what part of bar is likely to strike other objects and so place hands that they will not be caught if bar suddenly drops.

**3514.** Straightening spike or bolt by striking it when it is placed on head of rail is prohibited.

## **OTHER TRACK WORK**

**3520.** Working in tunnel which requires mechanical ventilation, when ventilating machinery is not in operation, is prohibited, except in emergency and then only with proper protection.

**3521.** Standing in line with drift pin or rail anchor while being driven, or driving while another is in such position, is prohibited.

**3522.** Piling or leaving ballast higher than top of rail is prohibited.

**3523.** Keep feet clear of edge of tie on side being pick tamped.

**3524.** Gripping barbed wire by hand while it is being stretched and until it is securely fastened to a post near the stretchers, is prohibited.

**3525.** If impracticable to line track sufficiently to safely remove tight or kinked rail, proceed as follows:

- (a) Beginning at one end of the rail remove twelve rail-holding spikes from the outside of the curve or kink of the rail.
- (b) Remove all rail anchors from the rail to be removed.

- (c) See that all persons move to the inside of the curve or kink and complete work from that side.
- (d) Remove all bolts and joint bars from the end of the rail from which the outside rail-holding spikes have been removed.
- (e) Raise rail-holding spikes not more than one inch on inside of curve or kink of rail on same ties from which outside rail-holding spikes have been removed.
- (f) Place jack at slight angle on inside of curve or kink of rail in first space from joint from which bars have been removed and operate jack until loose end of rail passes end of adjoining rail.

**3526.** When working about switch, movable point frog, derail or its connection, keep clothing, tools, material and all parts of body clear of all moving parts unless the open points have been blocked or lever of hand-operated switch is locked. A mechanical or power-operated switch, movable point frog or derail may be oiled with a long-handled brush, or oil can with a long spout, without blocking the switch point.

**3527.** Before operating hand-thrown switch, movable point frog or derail, warn employes who are in a position where they may be injured and assure yourself that all employes, tools and materials are clear of movable parts.

**3528.** Keep all parts of body clear of line of travel of ground switch lever and have fingers

and thumb under lever when releasing it from keeper, to avoid being struck by lever flying up.

**3529.** Keep hands and feet in position where they will not be caught by lever or ball of switch.

**3530.** Place feet firmly to prevent slipping or falling when operating switch.

**3531.** Brace body firmly, avoid any twisting movements and lift or pull steadily on lever, to avoid strain or sprain when operating switch.

## **ON OR ABOUT ENGINES, CARS OR TRAINS**

**3540.** Placing clothing, tool, or other object where it will foul ladder rung, handhold, foot-board, running board, step, end sill or other safety appliance on engine, tender or car, is prohibited.

**3541.** Going between or in front of moving engines or cars, those about to be moved, or those standing close together, is prohibited.

**3542.** Going under or between engines or cars, unless instructed to do so by the foreman or other person in charge, who must first have made arrangements with person in charge of movement for full protection against engine or car being bumped or moved, is prohibited.

**3543.** Getting on or off moving engine, car or train is prohibited.

**3544.** Getting on or off standing engine or car, except in performance of duty, is prohibited.

**3545.** Carrying tool, material or other object, which prevents taking a secure hold with both hands, or which interferes with safe movements, when getting on or off or ascending or descending ladder or step on engine, car or other equipment, is prohibited.

**3546.** While going up or down ladder on car or tender, turn foot slightly sideways and place portion of ball of foot on ladder rung. Keep body as close to the ladder as possible.

**3547.** When coming out of gangway of engine to steps, going up or down vertical steps or ladder on equipment or stepping from roof to brake board, face the equipment and place ball of foot firmly on step, ladder or brake board before placing weight on it.

**3548.** Use steps, ladders or handholds provided, when getting on or off engines, cars, or other equipment. Jumping off end sill or swinging up or down between two cars with a hand on each, is prohibited.

**3549.** When practicable, ride in car provided for that purpose. Riding on end sill or platform, unless required in the proper performance of duty, is prohibited.

**3550.** Riding between cars, or between engine and car, with either handhold or foothold on both, is prohibited.

**3551.** Be prepared to avoid injury from sudden starting, stopping, lurch or jerk of engine, car or

train by being seated, if possible, and if not seated by being braced and holding and moving about only when necessary.

**3552.** Passing from one moving car to another on work train is prohibited.

**3553.** While stepping from one standing car to another, have secure handhold on car to which stepping, when possible to do so.

**3554.** Standing or placing arm, leg or any part of body between side or end of car and lumber, pipe or other lading likely to shift, is prohibited, except when necessary to work about same and person in charge has had proper understanding with person controlling movement, to guard against car being bumped or moved.

**3555.** Riding on, astride or within swing of raised end of gate of drop end gondola car is prohibited. Before climbing over end gate, assure yourself it is securely latched.

**3556.** Placing hand on latch, in jamb of end gate of drop-end gondola or using side of car within swing of end gate, for a handhold, is prohibited.

**3557.** Opening end gate of gondola while standing inside car is prohibited. Stand outside of gate and take secure hold on grab iron before unlatching and pushing gate down.

**3558.** Attempting to close end gate of gondola car, without a sufficient number of men to do it safely and without a block to support it when necessary to change handhold, is prohibited.



**3559.** Riding leading footboard of engine, tender, tractor or on footboard between equipment, or on roof of box car, is prohibited.

**3560.** Riding on engine, car or train with foot, hand or any part of body projecting beyond side, is prohibited.

**3561.** Standing, walking or sitting on top of side or end of gondola or hopper car, is prohibited.

**3562.** Jumping from roof of closed car to open car or tender or jumping from top of car or engine to car or engine on another track, is prohibited.

**3563.** Hanging on car door with feet on truss rod or hanging on handhold with feet on truck, is prohibited.

**3564.** Kicking brake shoe while car is in motion is prohibited.

**3565.** Before getting off standing equipment, look in both directions for engine, car or train moving on adjacent track.

**3566.** When getting off standing equipment, except passenger train at station platform, retain handhold until foot is firmly placed, to avoid falling, slipping, tripping or turning ankle, due to obstruction, slippery surface or opening.

**3567.** Leaning against standing equipment is prohibited.

**3568.** Sitting on step of car or on footboard of engine, tender or tractor, is prohibited.

**3569.** Except in emergency, hand signal for the movement of work or wreck train, incident to the

work being performed, may be given only by train crew upon signal from, or understanding with, foreman or other person in charge

**3570.** Requesting train or engine crew to move engine, car or train, while employe is under or between them or before having warned men on or about it, is prohibited. Men who remain in car while it is being moved shall maintain a hold and remain as far as possible from hopper opening.

**3571.** Wear safety rope or belt while working inside hopper or drop bottom car when unloading coal, ballast or other material on trestle or open floor bridge.

**3572.** Opening door of hopper or drop bottom car, before warning men in the car and knowing that they are in a safe position, is prohibited.

**3573.** Use of any wrench other than a ratchet or self-adjusting wrench, when operating door-winding mechanism of drop bottom or hopper car, is prohibited.

**3574.** Using wrench to hold door-winding mechanism while releasing pawl from ratchet is prohibited. Knock pawl from ratchet and, if necessary, unwind with ratchet or self-adjusting car wrench. Using finger to release pawl from ratchet is prohibited.

**3575.** Going in opening made by material dropping through hopper or gondola car opening, until after material remaining in car has been shaped to prevent its falling or rolling, is prohibited.

**3576.** Entering or leaving hopper type car through hopper opening is prohibited.

**3577.** Using hand to remove material or object from hopper opening is prohibited.

**3578.** Before opening or closing hopper car door see that all persons are clear of door, particularly on opposite side of car.

**3579.** Use of hands to close doors of hopper cars equipped with drop latch is prohibited. Push door to first notch with foot and then place bar securely in loop provided and pull steadily on bar until door is latched.

**3580.** Before operating side door on box car, look and be certain door is properly tracked. If door is off track and cannot be retracked, use rope equipped with hook to pull door open or shut, keeping clear of door while doing so.

**3581.** While operating box car door, keep hands and fingers clear of edge or jamb of door and rail or casting on which door travels, to avoid having hands or fingers pinched. Keep body clear of opening made by door, to avoid being struck by falling objects.

**3582.** Keep all parts of body clear of moving parts while operating dump cars.

**3583.** Leaving joint bar, tie plate or other object on top of side or end of gondola or hopper car, when not holding it, is prohibited.

## **MOTOR VEHICLES**

**3600.** Operators of motor vehicles must obey all motor vehicle laws.

**3601.** Driving more than 25 miles per hour

when hauling men is prohibited. Driving more than 40 miles per hour at any time is prohibited.

**3602.** Allowing motor to run while within building, unless provision has been made for the exhaust gases to be expelled outside the building, is prohibited.

**3603.** Filling gasoline tanks inside building, or while motor is running, is prohibited.

**3604.** Before starting, driver must know that men and material are in a safe position.

**3605.** Smoking or using open flame, such as lantern, where gasoline or oil is being handled, is prohibited.

**3606.** Cleaning around engine, tank or other places where gasoline or gasoline fumes may be present, with steel wool or steel brush, is prohibited.

**3607.** Maintain metal contact between containers while transferring gasoline.

**3608.** To start free running motor not equipped with starter:

- (a) Make sure clutch is disengaged.
- (b) With ignition off, open choke and spin motor several times.
- (c) Retard spark fully and turn on ignition.
- (d) Properly engage crank to shaft, start cranking by lifting on crank, keeping fingers and thumb on same side of handle and body as far away as possible.

If necessary to spin motor with ignition on, start with upward motion of crank.

**3609.** Keep end gate closed when practicable.

**3610.** Removing cap from steaming radiator before water has cooled sufficiently to prevent steam or hot water from gushing, is prohibited.

**3611.** Cranking motor or riding on vehicle, while safety strap or rope is hanging from body, is prohibited.

**3612.** Getting on or off moving vehicle is prohibited. When practicable, get in or out of vehicle from side away from traffic.

**3613.** Permitting the crowding of the driver's seat or placing tools, material or other objects so as to interfere with safe driving of vehicle, is prohibited.

**3614.** Remain seated, when practicable, and maintain a secure hand hold while riding on vehicle.

**3615.** Riding on vehicle with hand, foot or any part of body projecting beyond side or rear is prohibited. Riding on running board, fenders, top of cab, or in open doorway of vehicle is prohibited.

**3616.** Riding on top of high load or in insecure position on any load, is prohibited.

**3617.** When chains are used, apply to both rear wheels.

**3618.** Keep motor in gear when descending steep grade, using low or second gear, if necessary, to control speed.

**3619.** When driving vehicle through brush or woods, observe space available, proceed slowly and warn men riding on same of low branches or brush.

**3620.** Driving vehicle with rope, chain, etc., dragging, is prohibited.

**3621.** Raised crossing gate, proceed indication from watchman or automatic signal or absence of gate watchman or signal, does not relieve the driver of responsibility of knowing it is safe to cross.

**3622.** Hauling unsafely loaded tools or material is prohibited.

**3623.** Jumping from standing position on deck of standing truck to ground is prohibited. If necessary to jump, assume sitting position first in order to decrease distance.

**3624.** Dropping barrel or other container of explosive or inflammable liquid is prohibited. If impracticable to lift down, use skids.

## **CAMP CARS AND CAMP COOKS OR ATTENDANTS**

**3631.** Place and protect camp cars, assigned for occupancy, as follows:

- (a) Place, where possible, on track which can be assigned exclusively to the camp cars and preferably not adjacent to main or running tracks.
- (b) On tracks assigned exclusively to camp cars, set connecting switches against movement to that track and spike or lock with a special lock to which is attached a blue disc bearing words, CAMP CARS.
- (c) On tracks to be used also for other purposes place blue signal bearing words CAMP

**CARS** at each end of the cars and disconnect and swing out one end of rail or place a portable derail to prevent equipment being moved against camp cars.

**3632.** Steps of camp cars placed for occupancy must not be used on side next to main, running or side track when intertrack space is less than twenty (20) feet.

**NOTE:** If intertrack space between camp cars and next adjacent "live" track is less than twenty (20) feet, fasten side doors in closed position or barricade platform or steps on side next to "live" track.

**3633.** Stack material and supplies evenly and securely.

**3634.** Overloading serving tray is prohibited.

**3635.** Wearing loose clothing, such as unbuttoned jacket, shirt sleeves unless rolled, or long necktie, or torn or greasy clothing about stoves, is prohibited.

**3636.** Open draught while building or refueling fire.

**3637.** Using grease, kerosene or other inflammable liquid in firebox, is prohibited.

**3638.** Driving nail, screwing in hook, installing shelf, wash line or other unauthorized object in or about camp car, is prohibited.

**3639.** Storing paper, rags or other unnecessary inflammables in kitchen, is prohibited.

**3640.** Remove refuse promptly to proper place.

**3641.** Keep car platforms and aisle clear of all material and supplies.

**3642.** Allowing locker, cupboard, refrigerator or other doors to stand open unnecessarily, is prohibited.

**3643.** When not in use, knife or other sharp or pointed tool must be kept in rack, or on hook.

**3644.** The use of cleaver or knife for opening can is prohibited. Use can opener.

**3645.** Take precautions necessary to avoid:

- (a) Striking sharp edge or point of bone or fin.
- (b) Getting hand or finger pinched in opening or closing drawer, well cover or locker or refrigerator door.
- (c) Being struck by locker, refrigerator or other door.
- (d) Bumping other person in kitchen or aisle-way.
- (e) Coming in contact with sharp edge of equipment, can, wire, nail, broken glass or china, knife or other sharp or pointed object.
- (f) Spilling or splashing hot liquid or coming in contact with steam or hot ashes or hot equipment.
- (g) Catching or pinching finger between material being handled and other object.
- (h) Slipping, tripping or falling.

**3646.** Smoking or using open flame, such as lantern, where gasoline or oil is being handled is prohibited.

**3647.** Cleaning around engine, tank or other place where gasoline or kerosene fumes may be



present, with steel wool or steel brush, is prohibited.

**3648.** Maintain metal contact between containers while transferring gasoline.

**3649.** Before filling gasoline tank from inside confined space in building, secure in open position all windows and doors, keeping them in open position until building is entirely free of fumes.

**3650.** Oil lamps, candles or other open flame lights must be secured to prevent falling or upsetting.

## **WORKING AROUND ELECTRICAL WIRES OR EQUIPMENT**

**3661.** Insulation on wire or electrical apparatus must not be depended upon for protection against shock.

**3662.** When drilling hole in partition, locate it so as to avoid contact with light, power or other wire or conductor of electricity.

**3663.** Tampering with electrical fuses, or otherwise destroying their over-current protective feature, except emergency work by qualified electricians, is prohibited. Fuses of larger than prescribed capacity are prohibited.

**3664.** Cleaning electric light bulb with current turned on is prohibited.

**3665.** Touching wire or other object hanging from power transmission or catenary system is prohibited. Report such condition to immediate supervisor at once and see that it is guarded until employe responsible for the repairs takes charge.

**3666.** Allowing person, tool, or material to touch wire not known to be de-energized, is prohibited.

**3667.** Keep water away from all contact with any electric wire or equipment.

**3668.** During a fire keep as far as possible from energized high voltage conductor. Arrange to have such wire de-energized and grounded.

**3669.** Use of hand extinguisher for fire around electrical circuit, unless approved for the purpose, is prohibited. When using chemical extinguisher use care to avoid being overcome by fumes.

**3670.** Before beginning excavating operation, foreman or man in charge must ascertain if there are any underground electric wires or apparatus in that vicinity and advise all men involved accordingly.

**3671.** Using lining bar or other all metal tool to loosen dirt in vicinity of underground electric wire or apparatus is prohibited.

**3672.** Measuring the height of wires and poles with wire or wet rope, steel tape line, or linen tape containing metallic reinforcement, is prohibited.

## **WORKING ON POLES**

**3701.** Climbing pole, except in emergency, by employe not qualified and equipped to do so, is prohibited.

**3702.** Climbing or working on pole during wind storm, except in emergency, is prohibited.

**3703.** Observe condition of wood pole to see that it is safe before climbing. Pay particular attention to the following:

- (a) Old or leaning pole.
- (b) Pole marked for replacement.
- (c) Pole not guyed against pull of wires running to side of branch lines, or making corner.
- (d) Abandoned pole to be removed.
- (e) Pole on straight line, not carrying messenger or more than ten (10) communication wires.
- (f) Poles with excessive weather cracks.

**3704.** If there is any doubt as to whether a wood pole is safe to climb, test it as follows:

- (a) The preferred test is by means of a pike pole about 8 feet long applied to the pole 8 to 12 feet from the ground on the side which has no support from wires or messenger. Rock or sway the pole sufficiently to determine its condition.
- (b) If pike pole is not available, remove the earth around the pole to at least six (6) inches below the surface of the ground. Use heavy screw driver, or similar tool to prod the decayed wood from around this portion of the pole to determine the amount of sound wood remaining. Sound the pole to a height of four (4) feet with a hammer or other suitable object, to detect the presence of hollow heart.

(c) Observe condition and take necessary precautions in making this test where a broken pole would cause contact with other lines, interfere with railroad or street traffic or cause injury or damage to others.

**3705.** Sliding down guy wire or rod is prohibited.

**3706.** Climbing a pole not in a safe condition to climb is prohibited.

**3707.** Use an approved safety strap or rope when working on poles.

**3708.** When in use, fasten safety strap in untwisted position with tongue of snap away from body.

**3709.** Climbing up a pole while another man is climbing above is prohibited.

**3710.** Starting to climb down a pole before man underneath is clear is prohibited.

**3711.** Using insulator, insulator pin, bracket, crossarm brace or conductor wire as support for the body while on pole, is prohibited.

**3712.** Be certain that crossarm, cable box, terminal or other attachment is strong enough before trusting weight on it.

**3713.** Throwing tools, material or other objects to workman on pole is prohibited. Use hand line for conveying tool, material or other object to employe working on pole.

**3714.** Dropping tool, material or other object from pole, without knowing it is safe to do so, is prohibited. When unsafe to drop it, use hand line.

**3715.** When working on pole along the right-of-way, keep rope, hand line or wire clear of passing train.

**3716.** Wearing climbers (spurs) unnecessarily is prohibited. Use care to avoid gaffing yourself or others.

**3717.** Placing spur strap, safety strap or body belt where it will come in contact with edged tool or sharp edge of material is prohibited.

**3718.** Repairing spur strap, safety strap or body belt with wire, tape or other material is prohibited.

**3719.** Sharpening climber spur on dry emery wheel is prohibited.

**3720.** Using spur with dull gaff or gaff less than  $1\frac{1}{4}$  inches in length is prohibited.

## **LADDERS, SCAFFOLDS, TRESTLES AND WORKING AT ELEVATED POSITIONS**

**3731.** Be certain of hand and foothold before climbing anywhere.

**3732.** Standing on anything which makes one's position insecure, is prohibited.

**3733.** Use a safety strap or rope, except when scaffold or other protection is provided, when working in the following locations:

- (a) Outside of window.
- (b) On steep pitched roof.
- (c) On steep hillside, cliff or embankment.
- (d) In dangerous position on bridge or other structure.

Adjust belt or rope so that there will not be more than 3 feet of slack and so belt or

rope will be suspended from a point within a two-foot radius horizontally of a point directly above which employe is to work.

**3734.** Wear life-saving vest when working at locations where it is impracticable to work from scaffold equipped with hand rails or to wear safety belt or rope and where there is danger of falling into more than 4 feet of water.

**3735.** Working on ladder or other elevated location during high wind storm, except in emergency, is prohibited.

**3736.** Unnecessarily working, walking or standing under other workmen where tool, material or other object is likely to fall, is prohibited. If necessary to work in such position, notify men above of your presence.

**3737.** Throwing tool, material or other object, except hot rivet when necessary, to employes working in elevated location, is prohibited. Use hand line to convey tool, material or other object to employe working in elevated location.

**3738.** Dropping tool, material or other object from platform or other elevation, without knowing it is safe to do so, is prohibited. When unsafe to drop it, use hand line.

**3739.** Rope off space or take other measures, where necessary to keep public from passing underneath work being performed. Where necessary for the public to walk underneath, provide guards to prevent tools, material or objects falling on them.

**3740.** When working on bridge, ladder, scaffold or other elevated location near or over track, keep rope, wire, chain, tackle or other object clear of passing train.

**3741.** Sliding down rope, cable, pipe or other object is prohibited.

**3742.** Guying platform, scaffold or ladder to movable object not under direct control of man in charge is prohibited.

**3743.** Using weak, cross grained or otherwise unsuitable material for scaffold, platform, ladder or hand rail is prohibited.

**3744.** Reaching or leaning out more than two feet from edge of ladder, scaffold or platform is prohibited.

**3745.** Frequently inspect ladder or scaffold while in use. Using defective ladder or scaffold is prohibited.

**3746.** Inspect ladder at end of each day it is used. If defective, ladder must be marked "defective" and kept separated from serviceable ladders.

**3747.** Before using step-ladder, open fully and set spreaders.

**3748.** Using trestle or "A" ladder as step-ladder or straight ladder, is prohibited.

**3749.** Using a ladder lengthened by splicing two short ladders together is prohibited, except an approved sectional ladder.

**3750.** Placing ladder on a box, barrel, block or other insecure object to make it reach, is prohibited.

**3751.** When climbing extension ladder, inspect the hooks before passing them.

**3752.** Before using, place portable straight ladder so that the distance from the base of the ladder to the object against which it is to be leaned is at least one-quarter of its length, if possible.

When impossible to place base of ladder at least one-quarter of its length from object against which it is to be leaned, lash or otherwise secure it.

**3753.** Using straight ladder not equipped with spikes or non-slip bases suitable for surface on which it is to be used, unless securely lashed or someone placed at base of ladder to hold it, is prohibited.

In case of doubt as to ladder being secure, station a man at the base of the ladder to hold it or securely lash it. No type of ladder base can be depended upon under all conditions. Securely lashing ladder is preferable to assigning a man to hold it.

**3754.** Assign an employe to guard ladder in use at location where persons or vehicles are likely to collide with it.

**3755.** Placing ladder against window sash or any movable object not under direct control of user is prohibited.

**3756.** When ladder is used within swing of a door, or so as to obstruct a doorway, lock or secure the door in closed position.

**3757.** Face rungs and use sides instead of rungs for hand holds when ascending or descending ladder.

**3758.** Use rungs while descending ladder. Jumping from ladder or sliding part way down is prohibited.



**3759.** Starting to ascend or descend ladder while another person is on it is prohibited.

**3760.** Carrying tool, material or other object which prevents taking secure hold with both hands or which prevents safe movement while ascending or descending straight ladder, is prohibited.

**3761.** "Walking" a ladder while on it is prohibited. Get off and move it.

**3762.** Before placing ladder against bridge warning or messenger cable, test the cable by throwing a rope or hooking a ladder over it and exert double the weight it will be required to hold.

**3763.** Inspect scaffold at end of each day it is used. If defective, repair before using.

**3764.** Walking or standing on board, if not sure it will hold your weight or is not securely placed, is prohibited.

**3765.** Maintain hold with one hand while performing work at elevated locations where losing balance is likely to result in falling off.

**3766.** When working at elevated location look before stepping in any direction to avoid losing balance or slipping, tripping or stumbling over any object.

**3767.** Using scaffold or platform made of loose boards not equipped with end stops to keep them from sliding or coming off the supporting trestle, horse, brace or bracket, is prohibited.

**3768.** Throwing or dropping heavy board, timber or other object on horse or scaffold, is prohibited.

**3769.** Having an unnecessary quantity of tools or material on scaffolds is prohibited.

**3770.** Standing on or carrying tool, material or other object while getting in or out of boat-swain chair is prohibited.

## **MANHOLE TRENCH, SEWER, TURNTABLE PIT OR OTHER EXCAVATION**

**3781.** Using fire or open flame to thaw frozen pit or manhole cover is prohibited. Bump it loose or use salt.

**3782.** Smoking or using open flame in or near manhole where gas may be present is prohibited.

**3783.** Entering sewer pit, manhole or oil tank, without an employe at top to render assistance in case of necessity, is prohibited.

**3784.** Entering sewer pit, manhole or tank where gas may be present is prohibited. If impracticable to ventilate, use gas mask.

**3785.** When in manhole, stand back as far as possible while hot material is being lowered.

**3786.** Come up at intervals for fresh air when working in sewer pit, manhole or oil tank where gas may be present.

**3787.** Rubbing face with hand while working in sewer pit is prohibited.

**3788.** Surround by suitable guard, or assign man to protect, manhole, pit, trap, or other such opening, cover of which has been removed or opened.

**3789.** Leaving open or unguarded after dark, any excavation about track or other places where persons are likely to walk, is prohibited.

**3790.** Keep a safe distance from edge of ash, inspection, turntable or other pits or trenches, except when necessary for the purpose of construction, inspection, maintenance or use.

**3791.** Stepping or jumping across ash or other pits is prohibited.

**3792.** Before entering or permitting any employe to enter a turntable or other pit containing machinery, foreman or man in charge must personally see that power to machinery is shut off and that control lever or handle is in "off" position and tagged DANGER—DO NOT OPERATE.

**3793.** Performing or permitting any employe to perform work in excavation  $4\frac{1}{2}$  or more feet in depth unless safely shored or sloped, when the nature of the ground indicates it is likely to cave in or slide, is prohibited.

## **CUTTING OR TRIMMING TREES**

**3801.** Working in tree during high wind storm is prohibited.

**3802.** When trimming trees use a ladder when practicable.

**3803.** Throwing tool to or from workmen in trees is prohibited. Use hand line.

**3804.** Taking axe or hatchet up a tree for trimming work is prohibited. Use saw or trimmer.

**3805.** Use rope to lower large, heavy limbs, when necessary.

**3806.** When cutting down tree, use rope, when necessary, to fell it in a desired direction.

**3807.** Keep yourself and others from directly under portion of tree being trimmed.

**3808.** Leaving felled tree or trimming where it will endanger traffic or passerby is prohibited.

## **CUTTING AND WELDING EQUIPMENT**

In addition to rules shown below, Instructions For the Safe Handling and Care of Oxygen, Acetylene and Other Gas Cylinders, Etc. (20-A), must be observed.

**3821.** Operation of gas or electric cutting or welding outfit by unauthorized persons is prohibited.

**3822.** Lifting or transporting gas cylinders by hoisting equipment is prohibited, except when a proper "cradle" is used.

**3823.** Throwing, dropping or otherwise roughly handling loaded or empty gas cylinders, is prohibited.

**3824.** Wear clothing and shoes that will give full body protection when performing gas or electric cutting or welding operation.

**3825.** Wearing torn or very oily or greasy clothing when performing gas or electric cutting or welding operation is prohibited.

**3826.** Using hands, whether gloved or not, to brush metal or slag from part being cut or welded, is prohibited.

**3827.** Leaving gas cutting or welding outfit under load being handled by magnet or clam shell is prohibited.

**3828.** Attempting to repair gas cylinder or valve by any method is prohibited.

**3829.** Before making repairs to gas hose, disconnect it from the tank.

**3830.** Using open flame or smoking in gas storage building is prohibited.

**3831.** Performing cutting, welding or heating operation on container unless properly vented to permit escape of gas or hot air is prohibited.

**3832.** Operating torch on or near receptacle where gas may be generated from oil, grease, gasoline, etc., or where fumes from torch might gather, is prohibited.

**3833.** Before cutting through sheet, plate or other part, be certain that there is no person on other side who might be burned.

**3834.** Leaving Oxy-acetylene torches on pressure lines unattended, unless valves at other end of hoses are closed, is prohibited.

**3835.** Using oxygen as a substitute for compressed air, or as a source of pressure, is prohibited.

**3836.** Use proper screens when electric welding or cutting. Using screen that is worn, torn, improperly placed, of insufficient size or that otherwise does not protect others from harmful rays, is prohibited.

## **PREPARING OR USING MOLTEN METALS**

**3851.** Leaving molten metal unattended is prohibited.

**3852.** Heat side of compound pot or otherwise provide for the escape of gas before placing it in furnace.

**3853.** Heat ladle or dipper before placing it in molten metal.

**3854.** Carrying molten metal over icy or slippery places is prohibited. Scatter cinders, ashes or dirt over slippery places.

**3855.** Spitting in or using any liquid in pot to test temperatures of material being heated is prohibited.

**3856.** Keep water out of solder, using cover when necessary.

**3857.** Placing furnace in path of traffic is prohibited.

**3858.** Filling a pouring or melting pot, to more than two-thirds its capacity, is prohibited.

**3859.** Remove ladle or dipper when passing pot of molten metal to workmen.

## **LANTERNS OR TORCHES**

### **(Includes Carbide Torches)**

**3871.** Shaking blow torch to extinguish flame is prohibited.

**3872.** Shaking or roughly handling carbide torch is prohibited.

**3873.** Replace filling plug on blow torch, furnace or lantern immediately after filling. Examine torch or lantern for leak and see that plug is tight before lighting.

**3874.** Removing filling cap while torch, furnace or lantern is burning is prohibited.

**3875.** When not in use carbide torch must be stored in a dry place.

**3876.** Inspect carbide torch before using. If torch has been punctured or if the cap over top

or bottom hole is missing or if torch is otherwise defective, it must be marked DEFECTIVE and kept separated from serviceable torches.

**3877.** Enlarging existing holes or making additional holes in carbide torch is prohibited.

**3878.** Put carbide torch, when ready to use it into bucket containing not less than fifteen (15) inches of clear water. Wedging or otherwise securing carbide torch in water container is prohibited. Allow it to seek its own water level.

**3879.** Stand at arm's length and light carbide torch with match or rolled paper as soon as gas starts to discharge from top hole.

**3880.** Not less than once a week, test each gasoline blow torch or furnace by emptying the contents, applying air pressure to the tank by means of the hand pump and while under pressure submerging the tank in water. If there is indication of leak, relieve pressure, mark torch or furnace DEFECTIVE and ask supervisor for instructions as to disposition.







