



THOMAS RAILROAD CONSULTING

Rail Safety Rules

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GLOSSARY

1. Safety

Safety is the most important element in performing duties. Obeying the rules is essential to job safety.

Don't get into bad habits by taking short cuts. They will lead to unsafe acts that can result in an injury.

2. Rules

Crew members must have a copy of, be familiar with, and comply with all railroad safety rules, operating rules, and special instructions. In case of doubt or uncertainty, always take the safe course. If uncertain as to the meaning of a rule, contact your supervisor for clarification.

Keep reading your rules and regulations. It will help you realize that working safely is the best and smartest way to work. Discuss the application of the rules with your fellow workers and your supervisor for better understanding.

3. Alert and Attentive

Crew members must report for duty properly rested at the designated time and place. They must be alert and attentive and devote themselves exclusively to the Company's service while on duty. They must not absent themselves from duty, exchange duties, or substitute others in their places without proper authority.

Don't burn the candle at both ends. Get your rest before you go to work. You will feel better and work safer.

4. Classes

Crew members must be familiar with and obey all rules, regulations, and instructions and must attend required classes. They must pass any required examinations.

Study your rules and regulations and show them what you are made of when taking your next test.

5. Safety Job Briefing

Before beginning work, all crew members must hold a Safety Job Briefing to ensure that each crew member has a clear understanding of their responsibilities of all the tasks to be performed.

Crew members must discuss the following topics during the Safety Job Briefing:

- The specific job(s) to be done or moves to be made
- The responsibilities of each crew member

- Any additional instructions due to an unusual situation or as may be listed in the Special Instructions
- The means of communication, such as radio or hand signals

Don't skip your job briefing because you think that everyone already knows what to do. When the work changes hold another job briefing to bring everyone up to speed. This could save a life.

6. Red Zone Protection (aka 3-Step protection)

No crew member can enter the Red Zone until all movement is stopped and the operator has placed the car mover in neutral, generator field to off, and applied the brakes. The operator cannot release the brakes and move the cars until the ground person is in the clear of all equipment and all tracks and conveys this information to the operator verbally over the radio.

Complying with Red Zone protection is one of the cardinal safety concepts in railroading. If everyone was diligent in getting 3-Step protection, there would be far fewer incidents.

7. Items that require Red Zone Protection

Operating the hand brake, angle cock, coupling air hoses, adjusting knuckle and crossing over equipment.

You need Red Zone protection when fouling a live track. A live track is a track with a car mover on it.

8. Speeds

- Maximum authorized speed on all industry tracks - 10 MPH unless otherwise posted
- Speed in or around buildings or structures - walking speed
- Coupling speed - walking speed

Nothing causes more problems around railroad equipment than excessive speed. Every inch of track has a posted speed limit. Maintain proper speeds and your day will go smoother.

9. Restricted Speed

A speed that will permit stopping within half the range of vision and short of train, engine, obstruction, railroad car, men or equipment fouling the track, derail or switch lined improperly, but not exceeding 10 MPH.

While working in an industrial environment you will never exceed restricted speed. About 90% of the railroad crews out there are going at restricted speed most of the time. Road trains running on the mainline under signal control can move at higher speeds above restricted speed.

10. Ground Person in Charge

The car mover operator will not move any equipment unless directed by the ground person using radio communication.

The person in charge of the crew is the person on the ground giving instructions over the radio of what move is to be made. He is trusting his life to the car mover operator. So, the car mover operator must not move any equipment on his own.

11. Appearance

Crew members must be clean and neat from the time they report for duty through the duration of their shift and while on-site and must wear the personal protective equipment (PPE) required for their particular job function.

Every work area has particular PPE for that location. Before entering a specific area know what PPE is required and have it on.

12. Duties of Crew Members

Each crew member is responsible for ensuring that they conduct their own work by following all applicable safety procedures. They must ensure that inexperienced crew members are familiar with their duties, determine the extent of their experience and knowledge of the rules. They must instruct them, when necessary, how to perform their work safely and properly. If any conditions are not covered by the rules, they must take precautions to provide protection.

Every new employee on any job needs some help to get up to speed. Remember that this new person may have your life in their hands in the future.

13. Movement of Rail Cars and Equipment

Crew members must anticipate that rail cars and equipment could move at any time, on any track, and in either direction.

This is one of the most important rules out there. If this concept were adhered to by all, we would have a much safer work place.

14. Aligning Draw Bars

When aligning drawbars and couplers, use good lifting techniques, and otherwise always have your back against the coupler. If you are unable to perform the task using such techniques, seek help from another crew member. Never attempt to align a coupler or close a knuckle by kicking it with your foot.

When someone kicks a piece of railroad equipment to adjust it, they are taking a short cut. All short cuts will eventually catch up to you and could result in an injury.

15. **By-Passed Couplers**

Do not cut off or leave equipment in curves and other locations where couplers may by-pass when re-coupling. Under such situations, the knuckles fail to couple, resulting in (1) the couplers by-passing each other and causing damage to the ends of the cars, and/or (2) enough lateral force, causing the wheels to be pushed off the rail, resulting in a derailment.

Always cut cars off on the straight track. It is much easier and safer to couple up on straight track than in a curve.

16. **Inspection of Rail Cars**

Each car placed in a train may be moved only after it receives and passes a safety inspection that includes checking the rail cars for the following:

- Leaning
- Sagging
- Improper position on the truck
- Objects hanging or dragging from the car or extending from the side
- Insecurely attached doors
- Broken or missing safety appliances
- Contents leaking from the placarded hazardous material car
- Insecure coupling device
- Overheated wheel or journal
- Broken or cracked wheel
- Brake that fails to release
- Any apparent hazard that could cause an accident

Rail cars can have defective or missing parts. Identify and repair the car before allowing it to leave in a train.

17. **Reporting Defects**

All crew members are responsible for reporting any defects to rail cars, car mover, or the track structure on the prescribed form and notifying their supervisor.

Inspect your equipment and make out necessary forms.

18. **Radio Communication Not Understood or Incomplete**

A crew member who does not understand a radio communication or who receives a communication that seems incomplete must stop movement until the communication is understood.

Don't assume that you know what the radio transmission meant. Make sure you understand what was said. If you don't know for sure, stop the movement and find out.

19. Emergency Calls

Emergency radio calls will begin with “Emergency, Emergency, Emergency.”

If you hear an emergency radio call, stop transmitting and pay attention to what’s being said. Then respond as needed.

20. Initiating a Radio Transmission

Before transmitting by radio, a crew member must:

- Listen, long enough, to ensure the channel is not being used
- Use positive identification procedures to identify the calling station, e.g., “Acme switchman Smith calling Acme operator Jones on locomotive 123, Over”
- Use positive identification procedures to identify the receiving station, e.g., “This is Acme operator Jones on Locomotive 123 answering switchman Smith, Over”

The radio rules and regulations that we use on the railroad and in industry are issued by the Federal Government – Federal Communications Commission (FCC). We merely use these regulations in our daily work and on the radio frequency allotted to us. So, start your transmission with a positive ID and end with OVER or OUT, it’s the law.

21. Ending a Radio Transmission

Radio transmissions will be ended as follows:

- OVER – The word “over” must be used at the close of each transmission to which a response is expected
- OUT – The word “out” must be preceded by positive identification at the close of each transmission to which a response is not expected

All our radio rules and regulations are federally mandated. End all radio transmissions with the words “over” or “out.”

22. Radio Usage

Before using a radio, ensure that it has been properly charged and it is in good working order. Perform a radio check, preferably with the crew member you will be working with.

Radio Check: e.g., "Acme switchman Smith calling Acme operator Jones on locomotive 123 for a radio check, Over."

e.g., "This is Acme operator Jones on Locomotive 123 answering switchman Smith, I read your radio loud and clear, Over."

Malfunctioning radios must not be used. If the radio fails, stop the movement and replace the radio.

At the beginning of your shift get a radio check. If a radio fails on your crew, stop and get it fixed or replaced immediately. Using radios is the safest way of switching cars.

23. Radio Identification

When positive identification is achieved in connection with switching, crew members may use short identification after the initial transmission and acknowledgment. Short identification must include a job or car mover number or driver's last name, such as, "Back up Acme 123" or Go ahead, Jones."

If an exchange of communications continues without substantial interruption, positive identification must be repeated every 15 minutes.

All our radio rules and regulations are federally mandated. Begin all radio transmissions with a positive identification.

24. Radio Communication While Switching Rail Cars

Crew members will use radio communication in connection with switching rail cars because it is the safest form of communication available.

Use radio communication to switch cars. It's safer than hand signals.

25. Radio Communication While Moving Equipment

Crew members must take the following actions when radio communication is used to control movement:

- The crew member directing the movement must specify a distance to be traveled. The distance specified must not exceed the distance known to be clear

The car mover operator must not move any equipment until the ground person gives a car count of distance seen to be clear.

- The movement must stop in one-half the specified distance unless additional instructions are received

If the operator does not hear any other car count, he must stop at one-half the distance first given.

- If the instructions are not understood or radio contact is not maintained, the movement must be stopped immediately. If the means of communication is changed, no movement may be made until all crew members have been notified

When in doubt to what the radio instructions are, stop and clarify.

- While using the radio, the car mover operator will not accept any hand signals, unless they are Stop signals

Changing signal sources during a movement has resulted in a fatality.

- The ground person must specify the position of any switches or derails involved with the move

All crew members should know the position of each switch and derail being used.

- The crew member directing the movement must indicate they are clear of all tracks

Clear the Red Zone ASAP. Don't stand in the foul of any tracks.

26. **Sounding Whistle**

The whistle may be used at any time as a warning regardless of any whistle prohibitions.

When other crew members are working in the immediate area, sound the required whistle signal before moving. Other forms of communications may be used in place of whistle signals. The required whistle signals are illustrated by “o” for short sounds and “—” for longer sounds:

Sound	Indication
A succession of short sounds	Use in an emergency or when people are on track
o o	Acknowledgment signal not otherwise provided for and go ahead
o o o	When stopped, back up
— — o —	Approaching and occupying crossings

27. **Headlight**

Display headlight on bright when moving.

28. **Switching Cars**

Crew members must observe the following precautions while switching:

- When coupling or shoving cars, take precaution to prevent damage or fouling other tracks. Leave equipment beyond the clearance point

All ways cut cars off within the clearance point.

- Make couplings at walking speed
- Stretch the slack to ensure that cars are coupled
- Before placing cars in a track, determine that there is sufficient room in the track to hold the cars. When cars are being shoved, a crew member must protect the movement by being at, on or ahead of the leading car

Don't make blind shoves.

At track locations subject to be fouled by ice or other debris, the following precautions must be taken before movements are made on the track:

- Clear the flangeway of ice and debris
- Move a loaded car over ice and snow buildup before an empty

Cars must be secured to prevent their rolling away before coupling when:

- Standing on grade
- Near the ends of the track, derails, gates, and public crossings
- Being loaded or unloaded

When coupling equipment, particularly in turnouts or in curves, couplers, and knuckles must be positioned to prevent damage due to bypassed couplers.

Always make sure that standing cars to be coupled to are secured with a hand brake before coupling.

29. **Mounting / Dismounting Equipment**

When mounting or dismounting equipment, crew members must:

- Mount or dismount equipment only when such equipment is standing, except in an emergency

All the major railroads have stopped the unsafe practice of getting on or off moving equipment years ago.

- Select a location that is free of obstructions such as switches, derails or any other underfoot condition that could cause tripping or stumbling
- Be alert to avoid equipment approaching on adjacent track, close clearances, and irregularities or openings in the ground
- Mount or dismount side away from the adjacent track, when conditions permit

30. Close Clearance

Close clearance is a place where there is limited space between a rail car and a structure.

One of the major causes of incidents and injuries is a close clearance. Do not ride or put yourself into a close clearance situation.

31. Use Safety Appliances

Side ladders, sill steps, and grab irons must be used when mounting or dismounting.

Do not step on cut-levers, knuckles, center sills, striker plates or similar items when getting on or off equipment.

32. Riding on Ends of Cars

Riding on ends of cars or platforms is prohibited.

When riding a shove move, ride the leading end of the leading car on the side ladder. Some companies allow riding a tank car standing on the outside edge of the platform with a firm grip on the hand hold. This would come under special instructions for your location.

33. Slack Action

Crew members must exercise care to avoid injury from slack action or from sudden start or stop. Crew members in a car mover must remain seated and braced for slack action.

Slack action can cause you to lose your balance and become injured. Each rail car has about 6 inches of slack. So, a small number of cars can have a few feet of slack action. This is one of the reasons that the railroads did away with cabooses on the rear of road trains.

34. Precautions for Coupling or Moving Cars

Before coupling to or moving cars, verify that the cars are properly secured and can be coupled and moved safely. Make couplings at a speed of not more than walking speed. Stretch the slack to ensure that all couplings are made.

35. Operating Hand Brakes (Vertical-Wheel, End-Mounted Hand Brakes)

- Unless an approved telescoping brake stick is used, mount the side ladder, climb to the level of the hand brake, and move on same level to end ladder. Stand with left foot on an end ladder rung, right foot on brake platform, left hand on an end ladder rung or top grab iron. With right hand grasping only the outer rim, rotate the brake wheel clockwise until slack is taken up, then give short pulls by using the legs until the necessary braking force is obtained. When applying final pressure, the outer rim should be gripped at the junction of the rim to spoke such that the spoke is on the side of the hand in the direction of pull to prevent hand slippage
- To release a hand brake, assume the same position, and operate the brake wheel or release lever
- To dismount, reverse the mounting procedure
- Operation of end-mounted hand brake from the ground is prohibited

If the car moved it could roll over you.

- It must be known before cars are cut off, that hand brakes are in good order. When a car mover is to be detached, equipment left standing must be properly secured. Air brakes must not be depended upon to hold cars or an unattended car mover standing on a grade, secure with hand brakes

The only thing that can be depended on to hold rail cars in place are hand brake.

- When operating hand brakes, keep the wheel or lever as close to the body as safely possible while maintaining firm grip, erect posture, and balance. Minimize twisting and side-to-side bending. Use smooth movements, do not jerk. Position hands and feet to ensure good balance and to take advantage of leg strength
- When mounting and dismounting equipment, always face equipment and maintain 3 points of contact

36. Operating Quick-Release Hand Brakes

Crew members operating quick release levers on wheel-type hand brakes must ensure that hands are not in a position where a spinning brake wheel can catch a hand or the crew member's clothing.

Quick release hand brake wheels can rapidly spin when released. Keep hands clear of the spokes.

37. Testing Hand Brakes

When hand brakes are used to prevent car movement, test the brakes to ensure that they are operating properly before using them.

Test hand brakes by applying and nudging them to see if they are engaged.

38. Hand Brake Operating Hand Brake

Step	Action to be taken:
1	Red Zone Protection
2	3 Points of Contact
3	Climb to Level of Hand Brake
4	Use Brake Platform
5	Apply Using Rim (Not Spokes) of Hand Wheel
6	Final Pressure – use Leg Muscles
7	Reverse Steps to Dismount
8	Check Ground for Safe Dismount

39. Securing Cars

Do not depend on air brakes to hold cars in place when left unattended. Apply a sufficient number of hand brakes to prevent movement. When the car mover is coupled to cars standing on a grade, do not release the hand brakes until the air brake system is fully charged. When cars are moved from any track, apply enough hand brakes to prevent any remaining cars from moving.

Apply hand brakes after cars to secure are placed in emergency application.

40. Coupling or Moving Cars Being Loaded or Unloaded

Before coupling to or moving cars on tracks where cars are being loaded or unloaded, crew members must be sure that all of the following have been removed or cleared:

- Persons in, on, or about cars
- Platforms
- Boards

- Tank car couplings and connections
- Conveyors
- Loading or unloading spouts and similar appliances or connections
- Derails
- Vehicles
- Chocks
- Other obstructions

In addition:

- Top hatch covers and bottom outlet covers must be in place and secured
- Do not handle cars that are improperly or unevenly loaded, the car could derail or overturn

41. Movement Through Gates or Doorways

Before moving car movers, cars, or other equipment through gates, doorways, or similar openings, stop to ensure that the gates, doorways, or openings are completely open on both ends of the track and secure. When overhead or side clearances are close, make sure movement is safe. Do not ride on side of a car, car mover or other equipment when moving through gates, doorways or similar openings.

One of the major causes of incidents and injuries is a close clearance. Do not ride or put yourself into a close clearance situation.

42. Operating Hand-Thrown Switches

- If applicable, remove locks before operating the switch. Check that no obstruction interferes with operation and that the switch is not spiked, clamped, or tagged
- While operating the switch lever or bow handle switches, the following techniques are to be used:
 - Release keeper (keeping clear of the lever)
 - Use smooth controlled movements. Do not jerk on the switch lever or bow handle
 - Face the switch with one foot on each side of the switch tie closest to the switch lever, bend your knees, and use your legs keeping your back straight and move the lever to the center position
 - Shift your feet to straddle opposite tie and complete the lining of the switch. Final foot pressure may be applied to the switch lever
 - Keep feet and hands clear of descending lever or ball

- After operating switch check points for a proper fit (points snug against stock rail). Secure with latch or lock, if so equipped
- Switch targets should not be depended on to determine if the switch is properly lined, observe switch points

43. Switches Run Through

Do not run through switches. If a rigid type switch is run through, it is unsafe. Switch point connecting rods could be bent, causing tension on lever. A car mover or car that partially runs through a switch must continue movement over the switch and not change direction over a damaged switch until it has been spiked or repaired.

44. Blue Signal Protection

Crew members assigned to wash, dry, load, and move cars must protect themselves against movement of such equipment in compliance with the following rules:

- Blue Signal — A clearly displayed blue flag or blue light
- Derail - A derail in the derailing position

Blue signals displayed in accordance with these rules signify that workmen are on, under, or between rolling equipment. Where required, blue signals must be displayed by each craft or group of workmen and may be removed only by the same craft or group. When so displayed:

- The equipment may not be coupled to
- The equipment may not be moved except in the confines of the blue flag by the protected workmen
- Other rolling equipment may be placed on the same track 25 feet from the blue flag
- Rolling equipment may not pass a displayed blue flag

45. Derail Location and Position

Crew members must know the location of all fixed derails. The movement must not continue until the derail is placed in the non-derailing position.

46. Derail use

The normal position of fixed derails is in the derailing position. Fixed derails shall be kept in the derailing position whether or not any rolling equipment is on the tracks they protect.

Crew members operating or verifying the position of a fixed derail shall:

- Be individually responsible for the position of the derail in use
- Be familiar with the location of derails
- When operating a hinge type derail, always lift the derail up and away from you

47. Switch Points and Derail Position

Crew members operating hand-operated switches must examine the switch points and know they fit the rail properly. The derail must be in the proper position before and after the operation. Crew members handling switches and derails must make sure they are properly lined for the intended route. Switches or derails found to be defective must be promptly reported.

48. Double Check Switch or Derail

Before moving over a repositioned switch or derail, the car mover operator will ask the ground person to **double-check** the position of the switch or derail to ensure that it is properly lined for safe movement.

49. Around End of Car

When walking around the end of a standing car or between standing separated cars, crew members must allow at least 25 feet of room between themselves and the nearest car or car mover and they must expect sudden movement by draft gears.

50. Adjusting Coupler or Knuckle

When adjusting the coupler or knuckle, crew members must stand to one side with feet clear of the falling knuckle.

51. Establish Protection

If a car mover is coupled to standing equipment or is on the same track in a position to couple to equipment, a crew member must communicate with the operator and establish protection before fouling the equipment to inspect, make adjustments, repairing, or operating appliances.

Before fouling equipment on a live track, one with a car mover, get 3-Step protection.

52. Lookout While Riding

Crew members riding on the side of moving equipment must maintain a lookout in the direction of movement and must frequently look back.

When riding a shove movement, always ride the leading end of the leading car on the side ladder.

53. Crew Members Must Not:

- Ride-on close-clearance side, between, or on the leading end of equipment moving adjacent to the platform, building, or close-clearance structure. They must not stand between moving equipment and adjacent platform, building, or close-clearance structure.
- Sit, stand, or step on handrails, brake wheels, cut levers, couplers, sliding center sills, or truck
- Adjust coupler or knuckle with the foot
- Operate hand brake with the foot
- Step on rails, guard rails, switches, or frogs
- Cross over between coupled cars unless duties require, then must maintain secure handhold and use a sill (end) platform
- Mount or dismount car movers or cars unless facing the equipment
- Go between cars and/or car movers to adjust a coupler or knuckle unless the equipment is separated by at least 50 feet
- Make adjustments to moving equipment
- Stand on track in front of closely approaching equipment, or step between coupled moving cars or car mover for any reason. They must not step between or immediately in front of standing cars or car mover unless necessary in the performance of duty, and then only after arranging for protection against the equipment being coupled to or moved
- Kick cars

Do not shove a car a short distance and uncouple it in motion.

54. Rail Car Air Brake Operation

- The air brake system works on an air reduction principle. The main air reservoir on the car mover supplies air to the brake pipe that charges air reservoirs on each car to 90 PSI
- To apply the brakes, the operator reduces the brake pipe air pressure, the control valve on each car allows air to flow from the auxiliary reservoir into the brake cylinder, pushing the piston out, resulting in the application of the brakes
- To release the brakes, move the brake lever towards the release position. A slight increase in the trail line air pressure will signal the control valves to release the air from the brake cylinders, resulting in the release of the brakes

You cannot release a portion of the air brake application – it's all or nothing.

55. Coupling the Air Hoses

- Couple car mover to the rail car
- After establishing Red Zone protection, grasp the closest air hose firmly just behind the glad hand and bend it towards you. Lift other hose bringing both glad hands together allowing them to mate up and fall in place
- Open the car angle cock
- Open the car mover angle cock
- Check to make sure the angle cock on the opposite end of the car mover is closed
- Connect any number of cars using the same procedure, making sure all brake pipes between the cars are connected, and that all angle cocks between the cars are open
- Close the angle cock on the end of the last car

56. Air Brake Operation

- The car mover's main reservoir air pressure should be approximately 120 lbs. on the gauge
- To charge the car brake system, place the Air Brake Valve in the running position
- It will take about 7 minutes to charge the brakes on one car, and about 1 minute for each additional car
- The pressure gauge signifies brake line pressure, which should be 90 lbs.

57. Test Car Air Brakes

- Test the air brakes before moving cars
- Charge all cars to proper pressure (90 lbs.)
- Wait for a signal to apply the brakes.
- Move air brake handle to make a 20 lb. brake pipe reduction
- Brakes must apply on each car, brake cylinder piston is **out**
- If all pistons do not come out, recharge and retest
- Wait for the signal to release the brakes
- Move brake handle to release
- Brakes must release on each car, brake cylinder piston is **in**
- Release hand brakes on cars
- Release car mover parking brake and move cars

58. To Apply Brakes on Moving Cars

- Move brake lever down for a reduction of 10 - 30 lbs. and brakes will apply
- A 30-psi brake pipe reduction is a full-service application of the brakes
- If additional braking is required after a 30 lb. reduction, immediately go to emergency

59. To Release Brakes

- To release brakes, place brake lever in the running position
- About 60 seconds is required for complete brake release
- All pistons should be **in**

60. Emergency Stops

- Emergency lever position is to be used only when necessary

- Put brake lever in the emergency position
- ALL BRAKES ON CONNECTED CARS WILL APPLY
- Pressure loss will occur, and at least 4 minutes of recharge time will be required
- Put brake lever in running position, wait for brake line pressure to reach about 90 lbs., and all pistons have gone in, then cars can be moved

61. Parking Air Charged Cars

- After stopping, place cars in emergency
- Secure with enough hand brakes to hold cars in place
- Close angle cock on car mover
- Always leave angle cock open on the car left standing (Don't bottle the air)
- Uncouple from the car

62. Moving Air Charged Cars

- Couple car mover to the car, and test coupling by stretching slack
- Set the parking brake
- Connect the brake pipe hoses
- Open car mover and car angle cocks
- Move brake lever to running position
- Perform an air brake test on the cars
- Release hand brakes on cars
- Release car mover parking brake and move cars

63. Charging Air Brakes

Handle cars by charging the air brake system on all cars to be moved

64. Brake Pipe Pressure

Standard Brake Pipe Pressure is 90 PSI

65. Application and Release of Car Air Brake

When making air brake tests, determine that the air brakes at the rear of the train have applied and released by:

Observing that the brake cylinder piston properly responds to air brake operation.

- APPLY - Piston out
- RELEASE - Piston in

66. Hand Signals

Hand Signals must be given from a point where they may be seen, in a manner that can be understood and sufficiently ahead of time to permit the train to comply.

The movement must be stopped if:

- There is doubt concerning the meaning of a signal
- There is a doubt for who the signal was intended
- The signal disappears from view
- Any object waved violently by anyone on or near the track

Hand signals, with or without a flag or light, must be given as follows:

- Stop
 - Swung horizontally at right angle to the track
- Reduce Speed
 - Held horizontally at arm's length
- Proceed
 - Raised and lowered vertically
- Back
 - Swung vertically in a circle, at right angle to the track
- Apply Air Brakes
 - Swung horizontally above the head when the train is standing

- Release Air Brakes
 - Held at arm's length above the head when the train is standing

Description of Signal	Indication	Movement
(1) Swung at right angle to the track	STOP	
(2) Raised and lowered vertically	PROCEED	
(3) Swung slowly at a right angle to the track	BACK UP	

67. Car Mover Daily Inspection

- The car mover is to be inspected for safe operation at the beginning of every shift
- These inspections should be documented on the "Daily Inspection Checklist" and any defects reported to the supervisor
- Before starting the car mover for the day, check the levels, oil, anti-freeze, etc. while the unit is cool
- Start car mover and check the operation of all controls, gauges, sanders, etc.
- Car mover should be inspected and serviced periodically by a qualified inspector/mechanic

68. Complete visual check of the outside of car mover to include:

- Tires
- Windows
- Steps
- Grab Irons
- Knuckle
- Lights
- Operation and level of sanders
- Brakes
- Hydraulic hoses
- Drain water from air reservoir
- Fuel level
- Grease rollers

69. Check Systems

- Engine oil level
- Hydraulic oil level
- Coolant level
- Battery water level
- Oil pressure
- Alternator charging
- Instrument panel gauges

70. Check Miscellaneous

- Whistle
- Radio working
- Fire Extinguisher
- Seat Belt

71. **Unattended Car Mover**

A car mover must not be left unattended unless:

- Transmission is placed in the neutral position
- Hand brakes and air brakes are applied
- Generator field is open or off

Glossary

Air Brake Valve

The handle that the operator uses to decrease or increase the air pressure in the brake pipe, thus applying or releasing the air brakes on the rail cars.

Angle Cock

The valve is located on the end of each rail car near the air hose that opens and closes the brake pipe.

Bow Handle Switch

Switch equipped with an operating lever that looks like one side of a bow tie.

Brake Cylinder Piston

Each rail car has an air brake cylinder with a piston. When air enters the brake cylinder the piston is forced out against the brake lever, resulting in the application of the brakes.

Brake Pipe

The 1 1/4 inch pipe travels the length of the rail car and is used to charge the air system on each car. It is also used to apply the brakes on each car when pressure is reduced.

Cars

Railroad cars

Car Mover

A mechanical device, such as a Locomotive, Shuttle Wagon, or Track Mobile that is used to move rail equipment.

Clearance Point

The location closest to a switch where it is safe for equipment, and a person riding the side of equipment, to pass equipment on an adjacent track. Clearance Point location may be identified by a clearance cone and/or painting of rails and ties.

Close Clearance

Close clearance is a place where there is limited space between a rail car and a structure.

Coupler Plunger

A lock lifting device to lock the knuckle in place.

Crossover

A combination of two switches that connect two adjacent tracks, normally used for crossover movements.

Derail

A device used to intentionally cause the wheels of a rail car to leave the track and derail.

Draw Bar

A device that attaches to the rail car's center sill on one end and the other end is the coupler that holds the knuckle.

Equipment

Railroad equipment.

Equipment Fouling a Track

The end of rolling equipment or on-track maintenance of way equipment left between the clearance point and the switch points leading to the track on which the equipment is standing.

Glad Hands

The ends of the air hose that couple together to form a continuous brake pipe.

Grab Irons

The safety appliances (metal handholds) are used to mount and dismount rail equipment.

Grease Rollers

Rollers that assist the side-to-side movement of the coupler.

Kicking Cars

To shove a car a short distance and uncouple it in motion.

Knuckle

That part of a coupling device that when engaged with an adjacent knuckle, and both are closed and locked, will allow rail cars to be moved together in a train.

Main Air Reservoir

The main air storage tank on a car mover.

Red Zone or Fouling the Track

An area on or near the track where contact with rail equipment is possible; within an arm's length from the end of the tie or approximately 4 feet outside the rail.

Slack

The free-rolling movement of rail cars caused by the space between the closed knuckles. Slack running in one direction is known as "slack action."

Switch Points

That part of a switch that lines railroad equipment from one track to another.

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[Notes]