



Track Car Excursion Operating Rules & Standards

Effective 01/01/2024

This document supersedes:
West Coast Railroaders Group Track Car Excursion Operating Rules & Standards
Effective 01/01/2023

This rulebook will govern the safe operation of West Coast Railroaders Group (WCRG) Track Car Excursions. These rules govern track car operators, and their passengers, as excursion participants operating privately owned (non-WCRG) track cars during excursion operations.

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Excursion participants must have a paper or digital copy of this document in their possession, or immediately available, at all times while on railroad property.



This document must be printed in color.

WCRG is the only organization providing trained, professional railroaders on every excursion we host, because there is nothing better than a qualified railroader on the job.

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WCRG'S SAFETY VISION FOR EXCURSION OPERATIONS

WCRG believes every accident or injury is preventable. Our vision is that WCRG will operate free of accidents and injuries. WCRG will achieve this vision through:

A culture that makes safety our highest priority, through continuous self examination to the effectiveness of our operating practices and performance.

An operating environment that provides the resources, tools, and knowledge for every excursion participant, while eliminating known hazards and implementing proper safeguards for continued safe operations.

Training and continual knowledge available to every excursion participant to make safety essential to every excursion.

Empowered excursion participants, where excursion participants are always encouraged and supported to take the safe course, including stopping operations when necessary for clarification on operating practices, rules compliance, or when the safety of the excursion, host railroad, or general public is in doubt.

WCRG'S SAFETY COMMITMENT TO EXCURSION PARTICIPANTS

Excursion participants are reminded that they, as individuals, have the authority to stop any excursion, at any time, when the safety of the excursion is in doubt, a mechanical problem distracts the operator from safely operating, or anytime clarification is needed regarding rules for safe operating practices. No excursion schedule is so urgent, no train meet so important, that we cannot take the time to operate safely over our host railroads. EVERY excursion. EVERY time.



Always take the SAFE course. When in doubt -STOP the Movement

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Introduction to West Coast Railroaders Group

West Coast Railroaders Group (commonly known as WCRG) provides on-track equipment services to railroads throughout the Western United States. WCRG provides these services using trained, professional railroaders. Founded in 2011, WCRG operates thousands of miles over our host railroads safely and efficiently each year. In addition to providing on-track equipment services, WCRG also provides track car (also referred to as motorcar) excursions on railroads in several Western States. Trained, professional railroaders guide every excursion WCRG hosts.

WCRG's Track Car Excursion Operating Rules & Standards

This rulebook outlines operator, passenger, and equipment requirements for participation on WCRG track car excursions. This rulebook, together with the Track Car Excursion Operating Rules & Standards Worksheet will assist in preparing excursion participants to operate privately owned (non-WCRG) track cars on WCRG excursions. This rulebook has been written by railroad industry professionals to ensure the safety of our excursions, while complying with the many complex railroad rules and regulations required by our host railroads, as well as Federal Regulations. While this document is approved by our host railroads as written, occasionally a host railroad may require additional rules or requirements as a condition to operate. When a host railroad requires additional rules or regulations, such changes will be noted in the "Excursion Itinerary & Special Instructions."

Safety is Essential for Continued Operations

Safety is the most important element during all WCRG track car excursions. Obeying these rules is essential to excursion safety and continued participation with WCRG. It is imperative that everyone (including passengers) attending WCRG excursions read, understand, and comprehend the rules and requirements outlined in this rulebook. Excursion participants are encouraged to direct questions about the application, purpose, or interpretation of any rule in this rulebook to a WCRG Manager or Employee in Charge for clarification before, during, or after any WCRG excursion.

Rules Compliance Prevents Accidents and Injuries

Rules protect two things: People and Property. "People" are everyone associated with the track car excursion, including you, your passengers, WCRG personnel, railroad personnel, as well as the general public. "Property" includes track cars and associated equipment, railroad property, and the property of the general public. Most importantly, WCRG excursions carry the most precious cargo of all - people.

WCRG's Host Railroads

The railroads that host WCRG excursions have placed their trust in us to operate safely, efficiently, and without accidents, incidents or rule violations. WCRG expects every operator to operate safely and efficiently, without fail, on every WCRG excursion. It is our commitment to our excursion participants to provide the tools, knowledge, training, and support for continued safe operations. It is our commitment to our host railroads to continue fostering a culture that makes safety our highest priority, through continuous self examination to the effectiveness of our operating practices and performance.

401: General Release of Liability and Hold Harmless Agreement

To participate in a WCRG excursion, all operators and passengers must read, understand, and sign the “General Release of Liability and Hold Harmless Agreement” and deliver them to the Employee in Charge, on the day of the event, but prior to unloading track car onto host railroad’s track. Questions are encouraged before signing and must be directed to the Employee in Charge.

At the discretion of a WCRG Manager or Employee in Charge, any excursion participant who is cognitively impaired, or who demonstrates a behavior, symptom, or appearance that suggests possible cognitive or mental impairment, which may affect the ability of the excursion participant to understand and comprehend the General Release of Liability and Hold Harmless Agreement, must not participate in the excursion. If excursion participant has already entered the premises/property/railroad, excursion participant must immediately leave the premises/property/railroad.

Except for minors, no one is permitted to sign on behalf of another individual or participant.

402: Track Car Excursion Participant Duties

Excursion participants operating a privately owned (non-WCRG) track car on WCRG excursions will be governed by WCRG and the host railroad. The WCRG Manager or Employee in Charge, or the host railroad may modify, add, or delete rules or operating practices to ensure the safe, efficient operation of the excursion group. Rules or regulations of other organizations will not apply on WCRG excursions.

A current version of the WCRG General Release of Liability and Hold Harmless Agreement, printed double sided, must be completed and returned to the WCRG Employee in Charge before any track car is removed from excursion participant’s trailer.

Track Car Operators and passengers must arrive at set-on in a timely manner and properly prepared for set-on. This includes completed paperwork, proper attire, track car and trailer prepared for safe and efficient set-on, etc. Track Car Operators must arrive prepared to have track car set-on and trailer properly parked prior to the expiration of the set-on time window specified in the relevant Excursion Itinerary & Special Instructions.

Operators and/or passengers who fail to comply with the rules and regulations of WCRG and/or the host railroad may be removed from current excursion and barred from future excursions.

Disabling or rendering a track car mounted safety device inoperative, such as taping over, unplugging, or otherwise silencing turntable audible alarm, covering over turntable visual light, or disabling ignition interlock, brake lights, shunts, etc. is prohibited. Any excursion participant found to have purposely or willfully disabled a track car mounted safety device may be barred from future WCRG excursions.

At the discretion of any WCRG Manager or Employee in Charge, permission to participate in WCRG excursions or other WCRG activities may be denied or revoked at anytime, with or without notice, for any reason or no reason. If on railroad property, person(s) will be instructed to immediately leave the premises/property/railroad.

All inquiries, questions, comments, concerns, complaints, and feedback regarding any aspect of WCRG, the railroad, and/or the excursion should be submitted to the Employee in Charge, or as an alternative, to a WCRG Manager. Do not take complaints to the railroad or railroad personnel. Violations will likely result in participant being barred from future WCRG excursions.

403: Physical Capabilities

Excursion participants must be in good physical health and fully rested before excursion starts. At the discretion of a WCRG Manager or Employee in Charge, any excursion participant who appears to be in poor health, or have physical limitations that could potentially adversely affect their safety, the safety of others, or the efficiency of the excursion, will not be allowed to participate.

Due to the safety sensitive and industrial nature of the railroad environment, WCRG excursions are exempt from complying with the Americans with Disabilities Act (ADA).

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404: Operator Requirements for Operating a Track Car on WCRG Excursions

To operate a privately owned (non-WCRG) track car on WCRG excursions, the following will apply to operators:

- Operators, who have previously operated a track car on a WCRG excursion, must have completed a WCRG Track Car Excursion Operating Rules & Standards Worksheet within the last 24 months.
- Operators, who have not previously operated a track car on a WCRG excursion, must complete a WCRG Track Car Excursion Operating Rules & Standards Worksheet and be evaluated by a WCRG Manager before excursion begins. Evaluation may be by phone and/or in person. A check ride may also be required in addition to the above requirements. A check ride will consist of a representative riding in the track car to observe and, if appropriate, provide feedback to the excursion participant. The duration of the check ride will be determined by the Employee in Charge.
- Successfully completed WCRG Track Car Excursion Operating Rules & Standards Worksheets are valid for a period of 24 months, at which time a new worksheet must be successfully completed. Operators who have exceeded 24 months since the last successfully completed WCRG Track Car Excursion Operating Rules & Standards Worksheet will not be allowed to operate on a WCRG excursion until a new worksheet is successfully completed. Additionally, operators who have exceeded 24 months may require a check ride.

Changes to the current WCRG Track Car Excursion Operating Rules & Standards will be issued by a WCRG Rulebook Change Notice. When WCRG Rulebook Change Notices are issued, excursion participants must keep a copy of such notices in their possession.

Additionally, changes to the current WCRG Track Car Excursion Operating Rules & Standards will also be noted on “Excursion Itinerary & Special Instructions” notices sent out prior to an excursion.

WCRG and host railroads reserve the right to inspect rulebooks and/or test any operator for rule compliance at any time during excursions.

Excursion participants are prohibited from operating WCRG on-track equipment unless authorized by a WCRG Manager.

405: Excursion Participant Passengers

Passengers are allowed on excursions, unless host railroad requests otherwise. Excursion participant (operator) must provide the names of all passengers on the WCRG Excursion Participant Registration Form.

A copy of the current WCRG Track Car Excursion Operating Rules & Standards and current WCRG Rulebook Change Notice (if applicable) must be made available to all passengers by the operator.

Depending upon the excursion, minimum age requirements may apply to minors.

Operators should only invite passengers who they know personally and believe are of appropriate character and condition to safely and responsibly participate in excursion activities.

Inviting numerous passengers is discouraged. At the discretion of the Employee in Charge, the number of passengers may be limited, on a case by case basis.

Due to the safety sensitive and industrial nature of the railroad environment, including track car operations, pets, including service animals, are prohibited on all WCRG excursions. WCRG excursions are exempt from complying with the Americans with Disabilities Act (ADA) as it relates to service animals on all WCRG excursions.

Operators and passengers are jointly responsible to communicate with each other any observed conditions that may be relevant to the operation of the track car and the excursion as described in WCRG Rule 442: “On Car Communication”.

Operators must instruct passengers on method of applying and setting brakes, method for shutting off engine, and location of battery and fuel shut offs.

Unless specifically authorized by a WCRG Manager, passengers of a track car are prohibited from operating or controlling the movement of a track car. EXCEPTION: In case of emergency, passengers may take appropriate action to stop the movement of a track car (including shutting off engine, battery, and fuel supply, if necessary.)

406: Job Briefings and Required Documents

An initial job briefing with the Employee in Charge will be held before the excursion begins each day. Additional job briefings may be required before resuming operations at turn around points, planned stops, layovers, or other times when operating plans or conditions change. Job briefings will generally be face to face, but may also be conducted via radio communication.

A job briefing must also be held before track cars are set-on or set-off. Set-on/set-off job briefing may take place with the Employee in Charge, or the WCRG representative handling set-on/set-off duties.

Excursion participants (and all passengers) are required to be present and attentive during the entirety of any, and all, job briefings. Unless prior approval is received from the Employee in Charge, operators and/or passengers who miss any portion of the day's initial job briefing will not be permitted to operate/ride.

Excursion participants must have all required documents in their possession, or immediately available, including:

- Current "WCRG Track Car Excursion Operating Rules & Standards." (Paper or digital copy.)
- Current "WCRG Rulebook Change Notice," if in effect. (Paper or digital copy.)
- Current "WCRG Track Car Inspection Form." (Paper only.)
- 3 (three) Extra Copies of the current "WCRG General Release of Liability and Hold Harmless Agreement." (Paper only.)
- "Excursion Itinerary & Special Instructions." (Paper or digital copy.)
- Current "WCRG Excursion Participant Safety Advisories" (recommended, not required.)

Excursion participants may use an electronic device (complying with Rule 409 Electronic Devices) to reference WCRG rules and/or WCRG documents as indicated above.

407: Alcohol/Drugs/Weapons

Excursion participants must not bring any alcohol or drugs onto railroad property. Excursion participants must not have any measurable alcohol/illegal drugs in their system while participating in excursions. Additionally, excursion participants must not use or possess any prescription or over-the-counter medication which may adversely affect their safety, or the safety of others, while on railroad property and/or participating in an excursion.

Excursion participants are prohibited from bringing onto railroad property any firearm or knife with a blade longer than 3 inches.

408: Smoking

Smoking (including electronic cigarettes) is prohibited at all times on railroad property.

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409: Electronic Devices

Excursion participants must not use electronic devices:

- Unless operations are suspended, all excursion participants, including passengers, must have electronic devices turned off and stowed out of sight, with any ear pieces removed, anytime operator or passenger is on a track car or other on-track equipment, when providing grade crossing protection, when loading or unloading track cars from highway trailers, or in any case when operator or passengers are within four feet of the nearest rail.

Excursion participants may use electronic devices:

- Electronic devices may be used when operations are suspended by the Employee in Charge over the radio or by face to face communication. However, excursion participants must not use an electronic device that would interfere with the safety of the excursion or other safety related duties. When notified by the Employee in Charge that operations are once again active, excursion participants (including passengers) must immediately turn off and stow all electronic devices.

Operators are responsible for the compliance of this rule by their passengers.

The restrictions in this rule apply to use of electronic devices by excursion participants. This rule does not apply to the use of mobile/railroad radios.

Outward facing cameras (including rear facing cameras) that continuously record the right of way at all times during operations are highly recommended.

Inward/Outward facing cameras (such as GoPro) are allowed provided camera is mounted securely to the track car and is not manipulated by operator or passenger while track car is in motion.

Excursion participants may use an electronic device to reference WCRG rules and/or WCRG documents only when operations are suspended as outlined above.

410: Proper Attire

Wear a waist-length shirt and ankle-length pants at all times when on railroad property. Clothing must not interfere with hearing, vision, or free use of hands and feet. Do not wear loose or ragged clothing or jewelry that has the potential of being caught in moving parts of equipment or machinery.

When arriving at railroad property:

- Prior to, or immediately upon, exiting their vehicle, each excursion participant must be wearing appropriate safety equipment (i.e. high visibility reflective safety vest, safety glasses, work boots.)

411: Footwear

When on railroad property, footwear must conform to the following criteria:

- Lace-up work boot.
- Leather or leather-like uppers.
- Near 90 degree heel.
- Safety toe (steel toe not required.)
- Six inch high (minimum.)

412: Eye Protection

Safety glasses must be worn by all excursion participants at all times while on railroad property and during track car operations. This includes while operating enclosed cab track cars. Corrective lenses or sunglasses will be considered compliant in the application of this rule. Excursion participants must not wear sunglasses at night, or under other low light conditions.

413: Hearing Protection

Use of hearing protection is highly recommended:

- When operating track cars.
- When around locomotives.
- When around on-track equipment.
- When around machinery.
- Other times when conditions require.

414: High Visibility Reflective Safety Vests

High visibility reflective safety vests will be required by all excursion participants (including passengers) at all times when on railroad property.

High visibility reflective safety vests shall be either orange, green or yellow in color, and must be plain with no railroad, private company or other organization's name. High visibility reflective safety vests with WCRG's logo are acceptable. Taping, painting, or otherwise covering up of names or logos of other railroads, private companies or other organization's safety vests is prohibited.

High visibility orange, green or yellow coats, rain gear, and/or shirts with reflective stripes will also meet the requirements of this rule when worn as outer most garment.

415: Walking On or About Tracks

Expect the movement of track cars, trains, engines, railroad cars, or other on-track equipment at any time, on any track, and in any direction. Do not foul or stand in front of an approaching track car, train, engine, railroad car, or other moving on-track equipment. Do not inspect, repair or otherwise go between or under track cars until all following or conflicting movements are stopped.

Look in both directions prior to:

- Fouling or crossing tracks.
- Moving from between on-track equipment.
- Getting on or off track cars, on-track equipment, trains, engines, and/or railroad cars.

Walk straight across tracks when possible.

Do not dismount track car while standing or stopped on any bridge without permission from the Employee in Charge. Do not walk or cross any bridge without permission from the Employee in Charge.

416: Step Over Rail

When walking near or crossing tracks, step over, not on:

- Rails.
- Frogs.
- Switches.
- Guardrails, etc.

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417: Fouling Tracks

When necessary to foul tracks:

- Do not walk between the rails, or foul the track, except when necessary and safe to do so.
- Do not cross within 10 feet of the end of standing trains, engines, and/or railroad cars, unless appropriate protection has been provided.
- Do not cross between uncoupled trains, engines, and/or railroad cars that is separated by less than 50 feet.
- Do not position yourself between any structure and standing or moving trains, engines, and/or railroad cars without sufficient clearance to avoid injury.

418: Passing Trains or Engines

When trains or engines are approaching or passing:

- Track car operators and passengers should dismount when safe to do so, and move at least 20 feet away from the track which train or engine is approaching on.
- Stand on the opposite side of track car from the side upon which train or engine is approaching or passing.
- Never stand between track car and approaching or passing train.
- When trains or engines are approaching or passing, do not stand in the gauge (between the rails) between track cars.
- Stand clear of all tracks when trains or engines are approaching or passing in either direction.
- Do not stand on one track while trains or engines are approaching or passing on an adjacent track.

419: Types of Track Cars Allowed on Excursions

Only factory built track cars will be allowed without prior approval from a WCRG Manager or Employee in Charge.

Factory built push-cars or trailers may be allowed on certain excursions with approval from a WCRG Manager or Employee in Charge. Passengers are prohibited from riding on push-cars or trailers unless authorized by the Employee in Charge.

Track cars may also be referred to as motorcars.

Railbikes, Handcars, All Terrain Vehicles, Utility Terrain Vehicles, and other similar vehicles are prohibited on all WCRG excursions.

Hy-rail vehicles are prohibited on all excursions, except for host railroad's Hy-rails.

420: Track Cars Acceptable for Use

WCRG personnel or host railroad may remove a privately owned track car from an excursion if, in the opinion of WCRG personnel or host railroad, it is defective, non-complying, or unsafe for use.

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421: Supplies Required

All track cars must be equipped with:

- Fire Extinguisher.
- First Aid Kit.
- Snake Bite Kit.
- Tow Bar.
- Flashlight.
- 2 (two) Red Flags.
- Gloves.
- Chain: minimum 3 foot length of 5/16 proof coil chain (for securing track cars against unintended movement.)
- Two cycle cars must carry a spare buzz coil (this does not apply to cars with electronic coils.)
- Two cycle cars must carry 2 (two) spare spark plugs.
- Minimum 3 (three) printed copies of the current WCRG General Release of Liability and Hold Harmless Agreement.

422: Window Glazing

All track cars must be equipped with safety glass or plastic type windows when so equipped. Front windshield glass must not be broken, cracked, or have other defects which impairs vision, except for small cracks that do not obstruct vision.

423: Spark Arrestor

All track cars must be equipped with a United States Department of Agriculture (USDA) and/or United States Forest Service (USFS) approved spark arrestor.

424: Audible Warning Device

All track cars must be equipped with an audible warning device. Portable air canister horns are acceptable. Bells or gongs do not meet the requirements of this rule.

425: Brake Lights

All track cars must be equipped with rear brake lights that are actuated by the track car's brake lever.

426: Headlight and Markers

All track cars must be equipped with, and display:

- A white headlight in front when proceeding forward.
- A red marker light in rear when proceeding forward.

Track cars equipped with a rear headlight must display rear headlight when moving in reverse.

Track cars must display headlight in the direction of travel when handling push-cars or trailers ahead of track car.

427: Shunting the Track

All track cars must be equipped to shunt track circuits to activate automatic crossing warning devices. Shunts must be connected at rear axle, from axle nut to wheel bolt. Left side must be secured with a thumb screw to allow for deactivation when required.

Instructions/parts required to shunt track cars for WCRG excursions:

- Drill and tap the rear axle nuts on both sides of track car. 1 3/16 axle (M9/M19/MT19 etc.) tap the axle nuts to 1/4 inch National Course Thread. 1 7/16 axle (M14/MT14/S2 etc.) tap the axle nuts to 5/16 inch National Course Thread. Drill and tap one wheel bolt on each side to 5/16 National Course Thread.
- Obtain four #6 AWG (American Wire Gauge) wire lugs, as well as #6 AWG (American Wire Gauge) stranded wire, one metal thumb screw, one non-conductive (nylon) thumb screw, and one non-conductive (nylon) washer. Spare metal thumb screws, non-conductive (nylon) thumb screws, and non-conductive (nylon) washers recommended.
- Assemble shunts, including crimp and solder ends of each wire lug.
- Use non-conductive (nylon) thumb screw and non-conductive (nylon) washer for insulated operation and a metal thumb screw for shunted operation on left side of car. Right side is permanently attached. Only left side needs to be cut in or out.
- Rubber tread wheels on rear axles are prohibited.
- Push-cars and trailers must be equipped with thumb screws on both sides.

428: Radio Requirements/Use of Mobile Radio

All track cars must have a working mobile radio, minimum of 25 watts, programmed with the Association of American Railroads (AAR) channels 005-097 and WCRG channel 1 (151.625) and WCRG channel 2 (151.505). Radios must be turned on, and remain on the assigned excursion channel for the duration of excursion. Radios must meet current Federal Communications Commission (FCC) regulations and transmit in narrow band mode only. Radios must not be set to “scan” mode. The Employee in Charge will carry a copy of the Federal Communications Commission Radio Station Authorization form authorizing WCRG to transmit on WCRG channel 1, WCRG channel 2, and WCRG channel 3. When excursion is authorized to transmit on host railroad’s channel/frequency, host railroad’s license will apply. Handheld radios do not meet the requirements of this rule.

Mobile radio use is limited to the Association of American Railroads (AAR) channels 005-097 and/or WCRG channel 1, WCRG channel 2, and WCRG channel 3, during WCRG excursions. Amateur (ham) radio, and/or Citizen Band (CB) radio use is prohibited during WCRG excursions.

Emergency calls will begin with the words “Emergency, Emergency, Emergency.” Emergency calls will only be used during emergency situations, such as derailment of track cars, medical emergencies, or other hazardous conditions that could result in injury, death, or damage to property. In addition, if mobile radio is equipped with Dual Tone Multi Frequency (DTMF) capabilities, Tone “911.”

It is highly recommended that mobile radios be equipped with Dual Tone Multi Frequency (DTMF) capabilities for emergency call purposes. Select WCRG radios, as well as many railroad radio systems use 911 as an emergency call feature. When a “911” tone via Dual Tone Multi Frequency (DTMF) is received, the WCRG radio, and/or host railroad’s radio system that is configured to receive a 911 emergency call receives an alarm indicating an emergency condition exists, therefore expediting an emergency response.

WCRG channel 3 (151.700) is optional and not currently required.

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429: Turntables

Only factory hydraulic turntables or Les King/Fredericksburg Shops electric turntables are allowed on WCRG excursions. All other aftermarket or owner-built turntables must be pre-inspected and approved by a WCRG Manager before operating on any WCRG excursion.

Requirements for track cars equipped with turntables:

- All track cars equipped with hydraulic or electric turntables must be equipped with an audible alarm that automatically sounds when the turntable is out of correspondence/not fully retracted. Audible alarm must be loud enough to be heard during all operations, including when wearing/using intercoms, radio headsets and/or hearing protection.
- All track cars equipped with hydraulic or electric turntables must be equipped with a visual light inside the track car that illuminates when the turntable is out of correspondence/not fully retracted. It is recommended the visual light be mounted in the operators normal view when operating.
- All track cars equipped with hydraulic or electric turntables must be equipped with an ignition interlock that automatically disables the ignition for gasoline engines, or the fuel shut off for diesel engines, to cause the engine to immediately shut down when the turntable is out of correspondence/not fully retracted.
- Electrical switch used to detect when the turntable is out of correspondence/not fully retracted connected to the audible alarm, visual light, and ignition interlock must be a Honeywell/Micro Switch 1LS1 precision roller lever limit switch. No other switches will be allowed. Switches such as push button or lever type automotive brake light switches, magnetic proximity sensors, or other similar switches not designed for this purpose are prohibited.
- Turntables must have a minimum 2.5 inch clearance above the top of the rail when fully retracted.
- Audible alarm, visual light, and ignition interlock must automatically activate when turntable is less than 2.5 inches above the top of the rail.
- Audible alarm, visual light, and ignition interlock must be connected to a constant hot electrical source and not be connected through the ignition or other switch that allows the audible alarm, visual light, and ignition interlock to be disconnected or disabled.
- Hydraulic turntables must have a properly functioning locking mechanism. Locking mechanism, on turntables so equipped, must be pinned to secure rod/linkage against unintended movement.
- Early electric (Les King/Fredericksburg Shops design) turntables with single center base plate attachment retaining bolt must be retrofitted with additional base plate attachment hardware (commonly referred to as the Willits modification) to prevent base plate from coming loose or falling off during operation.
- Any time turntable is operated, or before initiating or resuming movement after turntable operation, operators must verify that the turntable is fully retracted and in the locked position. Additionally, whenever a turntable (hydraulic or electric) is operated, a second person familiar with turntable operation must visually inspect and verify that the turntable is in the fully retracted and locked position. If no person is readily available to inspect the turntable, the Employee In Charge must be notified to visually verify that the turntable is in the fully retracted and locked position. If both people do not agree the turntable is in the fully retracted and locked position, the turntable will be considered as having a defective/non-complying condition. Movement must not start or resume until the Employee in Charge is notified and authorizes the track car to proceed.
- Turntables with less than 2.5 inches clearance above the top of the rail will be considered as having a defective/non-complying condition.
- Turntables with audible alarm, visual light, or ignition interlock that does not automatically activate when turntable is out of correspondence/not fully retracted will be considered as having a defective/non-complying condition.
- Track cars with dead batteries, turntable alarm circuit defects, or other electrical or mechanical problems that cause the turntable alarm, visual light, or ignition interlock system to become disabled will be considered defective/non-complying.
- Locking mechanisms with missing pins will be considered as a defective/non-complying condition.
- Whenever a defective/non-complying turntable condition becomes known or suspected, or there is any doubt regarding the integrity of the turntable, movement must immediately stop. If stopped, track car must remain stopped, and movement must not start or resume until the Employee in Charge is notified and authorizes the track car to proceed.
- Track cars with defective/non-complying turntables must not be operated, towed or moved until the defective/non-complying condition is corrected and the Employee in Charge authorizes further movement. If the turntable defect/non-complying condition cannot be corrected, the Employee in Charge will not authorize further movement of track car until the turntable is chained and locked with a WCRG keyed effective locking device that prevents the turntable from dropping below the minimum required 2.5 inches of clearance above the top of the rail.

Excursion participants may be required to demonstrate to the Employee in Charge at set-on that the turntable functions as intended and complies with these requirements.

430: Loading/Unloading Track Cars from Highway Trailers

When loading or unloading trailers used to transport track cars or other on-track equipment, stay clear of loading area and do not occupy the path of a track car that is being loaded/unloaded. Ensure that others working in the area stay clear of the loading and ramp areas. Remain alert for sudden uncontrolled movement. Do not foul ramp area unless duties require.

All track car loading/unloading must have movement controlled by an effective winch or similar device. Track cars must not be allowed to coast or free wheel as a method of unloading. Operator must not rely on the use of the track car's brakes as a method of controlling the unloading process. Excursion participants are prohibited from riding track car when unloading or loading.

431: Track Car Daily Inspection and Defect Reporting Requirements

Track cars (including push-cars and trailers) must be inspected daily for defects before the excursion begins.

Any defects or non-complying conditions which become known at set-on or before excursion begins, which are not immediately correctable, must be reported to the Employee in Charge immediately. Depending upon the defect, restrictions may be placed on the affected track car up to and including not being allowed to set-on or being set-off.

Any defects or non-complying conditions that become known at any point during the excursion must be reported to the Employee in Charge immediately. Movement must not start or resume until the Employee in Charge authorizes the track car to proceed. Depending on the defect, movement restrictions may be placed on the affected track car, up to and including setting-out or setting-off at the first available opportunity.

Written record of inspection must be on prescribed form and retained on track car for the entire excursion. WCRG and/or host railroad may request to inspect completed inspection form at any time during excursion.

Inspections items include, but are not limited to:

- Wheels must have satisfactory profile and will be deemed condemnable when thickness is less than 1/8 inch.
- Brake rigging acceptable and brakes hold in first notch.
- Frame members.
- Fuel systems (All fuel systems must have a fuel shut off easily accessible. Shut off must be able to be operated by hand without tools.)
- Electrical systems, including headlight(s), taillight(s), and brake light(s).
- Battery disconnect functions as intended (All track cars must be equipped with battery disconnect. Disconnect may be a master switch mounted on the car, or a switch/knob directly mounted to the battery post. All disconnects must be able to be operated by hand without tools.)
- Turntable, including ignition interlock.
- Mobile radio.
- Other applicable safety appliances.

Each individual excursion participant is solely responsible for the maintenance, condition, and safety of any and all privately owned (non-WCRG) on-track equipment they own, possess, control, and/or operate during a WCRG excursion. This rule applies regardless of any inspection, or absence thereof, by WCRG personnel of privately owned on-track equipment operated during a WCRG excursion.

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432: Fueling Track Cars

When fueling, the following applies:

- Turn off engine before fueling.
- Be careful not to spill fuel.
- Clean up spills before attempting to start the engine.
- No portable fuel containers are allowed to be carried on any track car during excursions.

Exception: Empty portable fuel containers may be carried for fueling when authorized by the Employee in Charge.

433: Fusees

Except when fusees are used to warn traffic at grade crossings, track cars must not pass a burning fusee on or near it's track without permission from the Employee in Charge.

Excursion participants are prohibited from carrying and/or using fusees.

434: Track Car Rail Sweeps

Track cars equipped with rail sweeps must have rail sweeps in the fully lowered position for direction of travel.

435: Attaching Push-Cars or Trailers and Handling Disabled Track Cars

Attach push-cars or trailers to track cars with tow bars suitable for the load. Fairmont hook style couplers must be drilled and pinned to secure latch in the closed position while in use. Track cars must be equipped with suitable tow attachment points on front and rear of track car at a height of 8 inches to 16 inches above the top of rail. Tow bar and attachment points must be equipped with 1 inch holes. When attaching tow bars, be alert for sudden movement, keeping one foot outside rail when possible. Wear gloves while handling tow bars.

Tow bar pins must have a retention device such as a hair pin, hitch pin, or other similar positive locking device to positively secure tow bar to track cars during push/pull operations.

Prior to pulling or pushing a disabled track car, track car operator must request and receive from the Employee in Charge the maximum authorized towing or pushing speed. Track car operator must not exceed authorized speed, but may operate at a slower speed if required to ensure safety.

When possible, a track car which is being pushed must be switched out and placed in a towed position behind the track car towing it, at the first safe and practical location. Employee in Charge must authorize such switching movement and be advised when the movement is complete.

436: Track Car Occupants Safe Operating Position

Passengers must not interfere with the safe operation of the track car. No part of operator or passenger's body may extend beyond the sides, front, or rear of the track car while it is in motion. Do not stand up when track car is moving. Except in an emergency, do not get on or off moving track cars.

437: Track Car Contents/Dropped Items from Moving Track Cars

Secure all items so that they do not fall off track car or interfere with the safe operation of the track car.

Excursion participants are not permitted to stop, without permission from the Employee in Charge, to retrieve items which fall out of their track cars. Radio communication should be made to the Employee in Charge in the rear most track car describing item and location. If practical, the rear car will attempt to locate and retrieve the lost item.

438: Blue Signal Protection of Workmen

Blue signal protection of workman signifies that workmen are on, under, or between rolling equipment. Blue flags and/or lights establish Blue Signal Protection of Workmen.

When a blue flag or blue light is displayed between the rails, track cars must not pass the blue flag or blue light.

When a blue flag or blue light is placed or displayed on a track car, do not operate or move a track car.

Blue flags or blue lights will only be removed by the craft or group who placed them. Excursion participants are prohibited from moving or removing blue flags or blue lights.

Blue flags may be displayed as a cloth or similar material, as a sign, and/or a blue light (lit or extinguished.)

Signs may also display "STOP," "DERAIL," "STOP-MEN WORKING," "EMPLOYEES WORKING," or similar markings.

439: Red Flags or Red Lights Displayed Between the Rails or Next to Track

Red flags and/or red lights are displayed where track cars must stop.

When a red flag or red light is displayed next to the track, or displayed between the rails, track cars must not pass the red flag or red light without permission from the Employee in Charge.

A red flag waved at an approaching track car is a signal to immediately stop movement. Do not resume movement without permission from the Employee in Charge.

A red flag or red light will only be removed by the person in charge of the red flag or red light. Excursion participants are prohibited from moving or removing red flags or red lights.

Red flags or red lights may be displayed as a cloth or similar material, as a sign, and/or a red light (lit or extinguished.)

Signs may also display "STOP," "DERAIL," "END OF TRACK," or similar markings.

440: Mandatory Directives

Excursion participants are prohibited from copying mandatory directives that authorize main track authority, grade crossing protections, speed restrictions, or similar directives from host railroad.

441: Track Car Attendance/Communicating Delays

Excursion participants must remain on track cars, ready to proceed at all times, unless Employee in Charge suspends operations over the radio or by face to face communication. When operations are resumed, excursion participants must immediately be on their track car ready to proceed.

When notified by the Employee in Charge that the excursion is ready to proceed, immediately notify the Employee in Charge if movement cannot occur promptly. Additionally, immediately notify the Employee in Charge when track car cannot maintain maximum authorized track speed or movement stops for any reason.

442: On Car Communication

When more than one person is riding track car, signals and conditions affecting their movement such as brake lights on track cars ahead, track speed changes, flags, approaching grade crossings, switches, derails, etc., must be communicated between each other (operator and passengers) to ensure the safety of track car operations and to maintain situational awareness.

443: Testing Brakes

Immediately after starting movement of a track car, test the brakes to ensure they are working properly. Operator must instruct passengers on how to apply track car brakes, and passengers must be familiar with applying track car brakes, in case of emergency.

444: Maximum Authorized Track Car Speed

Excursion participants will be informed of maximum excursion speeds at the initial job briefing, and must always operate at a speed that will allow the track car to stop within $\frac{1}{2}$ the distance the track is seen to be clear. Reduce speed as track conditions require. Reduce speed when operating over flange lubricators. When approaching workmen or others on or near the track, reduce speed. If necessary, stop track car. Operators must take into consideration that a greater distance is required to stop a track car when operating on wet or greasy rail.

445: Signal to Slow or Stop

Red brake lights will be the primary means of signaling slowing or stopping.

Excursion participants must maintain awareness of the location and speed of the track cars ahead, and keep a lookout for brake lights of track cars ahead at all times.

When track cars are operated in reverse, or brake lights become defective or inoperative, operators will signal slowing or stopping with a red flag and/or radio communication.

Push-cars or trailers being towed may not be equipped with brake lights or marker lights. When practical, track car towing push-cars or trailers will use red flag and/or radio to signal slowing or stopping.

At all times, track car operators are required to operate in a manner, speed, and following distance which allow the operator to safely stop behind any slowing or stopped track car, push-car or trailer, or other obstruction ahead. This requirement applies regardless of the existence/absence of properly operating brake lights, use of flags, and/or radio communication from the track car ahead.

446: Protect Following Movements

When stopped on a curve, bridge, tunnel or when other conditions require, operators must immediately protect following movements by flagging the following car with red flag to stop. Operators may use radio communication in lieu of flagging, providing radio communication is acknowledged by the following track car.

447: Change of Direction

Track car operators must obtain permission from, or be instructed by, the Employee in Charge before making a change of direction.

448: Operating Track Cars in Reverse

When operating a track car in reverse, reduce speed and use caution to prevent derailment of car. Special care must be used when operating Fairmont MT14/MT19 track cars in reverse.

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449: Operating Over Switches and Frogs

Track car operators must ensure that switches are properly lined for movement before passing through switches. Do not pass clearance point until WCRG personnel or railroad employee has lined switches for the intended route.

When operating track cars over jump/lift frogs, or through the closed side of spring frogs, operate as follows:

- The track car must proceed through frog prepared to stop if flange does not follow intended route.
- When available, a person must remain on the ground to guard against derailment and guide the track car to the intended route.

Track cars must not exceed the following speed:

- Track cars operating over jump/lift frogs, or through closed side of spring frogs, must not exceed 3 mph.
- Track cars operating over dual control/power-operated switches, derails or movable point frogs, or through turnout of self-guarded frogs must not exceed 3 MPH.
- Track cars operating through turnout of hand-operated switches and frogs must not exceed 10 MPH.

450: Railroad Crossings/Junctions at Grade

When instructed by the Employee in Charge, track car operators may occupy the limits of a railroad crossing at grade after verifying the route is clear before passing over the railroad crossing at grade. Speed must not exceed 10 MPH passing over railroad crossings at grade.

At locations that utilize one way low speed crossings:

- Track car operators must proceed prepared to stop if flange does not follow intended route, not exceeding 3 mph.
- When available, a person must remain on the ground to guard against derailment and guide the track car to the intended route.

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451: Grade Crossings Equipped with Automatic Warning Devices

Track cars must approach grade crossings equipped with automatic crossing warning devices prepared to stop and must yield the right-of-way to traffic. When approaching grade crossing and it is clearly seen that the automatic crossing warning devices have been activated long enough to provide warning (at least 20 seconds,) and the gates (if equipped) are in the fully lowered position, proceed only when movement can safely proceed through crossing, not exceeding 10 MPH (Employee in Charge may authorize a higher speed) until track car fully occupies the crossing.

If automatic crossing warning devices are not activated, or are intermittently activated, stop before occupying the crossing. After stopping, proceed only when movement can safely proceed through crossing, not exceeding 10 MPH (Employee in Charge may authorize a higher speed) until track car fully occupies the crossing. If conditions require, place flagman (if available) at the crossing to warn traffic.

Fully occupying the crossing means the track car has occupied all of the area of the crossing where motor vehicles, pedestrians or other traffic could drive, walk, or otherwise obstruct safe passage of track car.

Unless otherwise instructed by the Employee in Charge, track car operators that have been advised that automatic crossing warning devices are malfunctioning or have an activation failure must stop short of the crossing, even if devices are seen to be working as intended. After stopping, proceed only when movement can safely proceed through crossing not exceeding 10 MPH (Employee in Charge may authorize a higher speed) until track car fully occupies the crossing. If conditions require, place flagman (if available) at the crossing to warn traffic.

Track car operators must be alert for rusty rail conditions, as well as insulating commodities such as sand, dirt, clay chips, oil, grease, etc., on top of the rails. These conditions could cause loss of track shunt, causing the automatic crossing warning devices to fail to activate or to intermittently activate when approaching or passing over crossing.

Track car operators may be instructed by the Employee in Charge to cut out shunts when conditions require, or if stopped on the approach or island circuit of grade crossings to avoid unnecessary activation.

Do not give hand signals to proceed to motor vehicles, pedestrians or other traffic.

452: Grade Crossings Not Equipped with Automatic Warning Devices

Track cars must approach grade crossings not equipped with automatic crossing warning devices prepared to stop and must yield the right-of-way to traffic. When approaching grade crossing, and it is clearly seen that no traffic is stopped at the crossing or is approaching the crossing, proceed only when movement can safely proceed through crossing, not exceeding 10 MPH (Employee in Charge may authorize a higher speed) until track car fully occupies the crossing. If traffic is stopped at the crossing or is approaching the crossing, unless otherwise instructed by the Employee in Charge, stop before occupying the crossing. After stopping, proceed only when movement can safely proceed through crossing. If conditions require, place flagman (if available) at the crossing to warn traffic.

Do not give hand signals to proceed to motor vehicles, pedestrians or other traffic.

Fully occupying the crossing means the track car has occupied all of the area of the crossing where motor vehicles, pedestrians or other traffic could drive, walk, or otherwise obstruct safe passage of track car.

453: Automatic Warning Devices with Key Start/DTMF Radio Tone Activation

Excursion participants are prohibited from activating automatic crossing warning devices at grade crossings that are equipped with key start, Dual Tone Multi Frequency (DTMF) radio tone, or other means of activation.

454: Shunt Cables

Excursion participants are prohibited from placing or removing shunt cables from the tracks.

455: Switches and Fixed Derails

Excursion participants are prohibited from operating switches and/or fixed derails.

Do not operate track cars over fixed derails in the derailing position.

456: Portable Derails

Portable derails may be used to protect the excursion group when conditions require. Excursion participants are prohibited from placing or removing portable derails.

Do not operate track cars over portable derails in the derailing position.

457: Securing Track Cars Left Unattended

Track cars left unattended must have brakes set. Additionally, secure track car by chaining both sides of one wheel with a 5/16 proof coil chain. Effectiveness of chained wheel must be tested. Test by chaining wheel then releasing the brake and verify there is no movement of track car. Then, re-apply/set brake.

When setting chains, keep fingers clear of pinch points around wheel and rail. Do not use fingers to remove chain from under wheel, rather pull chain from under wheel while keeping fingers and hands clear of pinch points.

Track cars, push-cars, trailers, or other on-track equipment at front and/or rear of excursion group will be chained and locked to the rail with a WCRG keyed effective locking device when conditions require to protect against unauthorized movement. Under no circumstances shall any excursion participant lock their car to the rail with a private lock.

In the application of this rule, "unattended" means when a track car operator is more than 5 feet from on-track equipment.

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TRACK CAR EXCURSION OPERATING RULES & STANDARDS DEFINITIONS/ABBREVIATIONS

AAR

Association of American Railroads

Adjacent Tracks

Two or more tracks with track centers spaced less than 25 feet apart.

Automatic Crossing Warning Devices

Devices that protect roadway/highway crossings at grade with bells, flashing lights, and in most cases gates.

Automatic Crossing Warning Device Activation Failure

Devices that fail to activate.

Automatic Crossing Warning Device Malfunction

Devices that activate, but have one or more broken gates and/or lights not working, or are actuated for no apparent reason and/or activated intermittently.

Blue Signal

A blue colored flag,(cloth or similar material), blue light (lit or extinguished), and/or blue colored sign.

Signs may also display "STOP," "DERAIL," "STOP-MEN WORKING," "EMPLOYEES WORKING," or similar markings.

Blue Signal Protection of Workmen

Blue signal protection of workman signifies that workmen are on, under, or between rolling equipment. Blue flags and/or blue lights establish Blue Signal Protection of Workmen.

Change of Direction

Any movement opposite the direction which the excursion group is, or has been, traveling.

Clearance Point

The location near a switch or turnout beyond which it is unsafe for passage on an adjacent track.

EIC

See "Employee In Charge"

Electronic Device

Electronic device means an electronic or electrical device, including stand alone camera, either film or digital format, used to conduct oral, written, or visual communication; place or receive a telephone call; send or read an electronic mail message or text message; take and/or look at pictures; read a book or other written material; play a game; navigate the Internet; navigate the physical world; play, view, or listen to a video; play, view, or listen to a television broadcast; play or listen to a radio broadcast other than a radio broadcast by a railroad or WCRG; play or listen to music; execute a computational function; or, perform any other function that is not necessary for the health or safety of the person and that entails the risk of distracting the track car operator or excursion participant from a safety-related task.

For the purposes of this definition, inward/outward facing cameras or other securely mounted cameras such as GoPro type cameras used in compliance with WCRG Rule 409, and two way radio/railroad radios and intercom systems, are not considered "electronic devices."

Employee In Charge

Person in charge of excursion group and qualified under Title 49, Code of Federal Regulations Part 214 Subpart C. (There may be multiple WCRG personnel assigned to act as the Employee in Charge on any given excursion.)

Excursion

A track car excursion, outside of WCRG's regular railroad operations, which may include non-WCRG qualified operators who are operating non-WCRG track cars.

Excursion Participant

Track car operator or passenger participating in an excursion.

Flagman

Person, or persons, protecting highway crossings at grade, or warning track cars to stop.

Fixed Derail

A device permanently mounted to the track structure to provide protection by stopping movement of a locomotive, railroad car, or on-track equipment by derailing wheelset.

Foul/Fouling a Track

Placement of an individual, on-track equipment, trains, engines, and/or railroad cars in such proximity to a track that the individual or equipment could be struck by a moving train, engine, or other on-track equipment, or in any case is within four feet of the nearest rail.

Guest

All guests of a track car operator will be considered "Passengers," whether or not they actually ride a track car. Also see: "Passenger"

Grade Crossing

A crossing where a public highway, road, street, or private roadway, including associated sidewalks and pathways, crosses one or more railroad tracks at grade.

Jump/Lift Frog

A main track frog designed for use with low traffic turnouts. The main track side is made up of an unbroken rail and the turnout side carries the wheel over the main track rail by supporting the flange of the wheel.

Mandatory Directive

Any movement authority or speed restriction that affects a railroad operation.

Motorcar

See "On Track Equipment/Roadway Maintenance Machine"

Movable Point Frog

A frog with movable points operated by a dual control switch machine or similar mechanism.

Non Complying

Track car that does not meet WCRG requirements and/or has one or more defects.

On-Track Equipment/Roadway Maintenance Machine

A machine under 7,500 pounds, used on or near the track for escort, transportation of personnel, maintenance, repair, construction, or inspection of track, bridges, roadway signal and communication systems. Roadway machines may be on-track, off-track, or both. The machines include hy-rails, track cars, motorcars, roadway machines, work equipment, and other forms of on-track equipment. Excursion participant's privately owned track cars/equipment operated during a WCRG excursion are also considered on-track equipment/roadway maintenance machines. Trains, engines, or railroad cars are not on-track equipment/roadway maintenance machines.

One Way Low Speed Crossing

A railroad crossing at grade that utilizes a flange bearing design on one route, usually the lower traffic side.

Operator

See "Track Car Operator"

Out of Correspondence

When used to describe track switches: A set of switch points that do not show lined and locked in a normal or a reverse position, or crossover switches that are not lined for both crossover movement, or crossovers not lined for both straight track movement.

When used to describe a turntable: A turntable that is not fully retracted in the up position.

Passenger

Excursion Participant, riding with a track car operator, who carries certain responsibilities, but is not authorized to operate the track car.

Portable Derail

A lightweight portable device that clamps to the stock rail to provide protection by stopping movement of a locomotive, railroad car, or on-track equipment by derailing wheelset.

Push-Car

Non motorized on-track equipment designed to be pushed or pulled with a track car.

Railroad Crossings/Junctions at Grade

Railroad crossings that intersect at the same level.

Red Flag

A red colored flag,(cloth or similar material), a red light (lit or extinguished), and/or red colored sign.

Signs may also display "STOP," "DERAIL," "END OF TRACK," or similar markings.

Shunt Cable

A device to connect both rails electrically to shunt track circuits.

Self Guarded Frog

A frog that does not utilize guard rails on opposite side or outer rail. Guard rail is cast into frog.

Situational Awareness

Being aware of what is happening around you in terms of where you are, where you are supposed to be, and whether anyone or anything around you potentially compromises your safety, your passengers' safety, and/or the safety of the general public.

Spring Frog

A frog with a spring operated flangeway on one side of route.

Spring Switch

A switch with spring mechanism that returns the switch points to the original position after they are trailed through.

Suspended Operations

Operational status where excursion group is stopped and no on-track equipment movement will take place while operations are suspended.

Track Car

See "On-Track Equipment/Roadway Maintenance Machine"

Track Car Mounted Safety Device

A safety device mounted or installed on a track car, such as turntable audible alarm, turntable visual light, ignition interlock, brake lights, shunts, etc.

Track Car Operator

Excursion participant that has successfully completed a WCRG Track Car Excursion Operating Rules & Standards Worksheet within the last 24 months, and has completed a check ride or evaluation with a WCRG Manager, and that Manager has authorized the excursion participant to operate a track car on a WCRG excursion.

Track Shunt

A device attached to track cars, push-cars, trailers, and/or other on-track equipment to shunt track circuits for automatic crossing warning device activation.

Trailer

See "Push-Car"

Unattended

When operator is more than 5 feet from on-track equipment.

WCRG

West Coast Railroaders Group

Working Mobile Radio

A mobile radio, at least 25 watts, programmed to transmit and receive on the Association of American Railroads (AAR) channels 005-097 and WCRG channels 1 (151.625) and WCRG channel 2 (151.505).

WCRG channel 3 (151.700) is optional and not currently required.

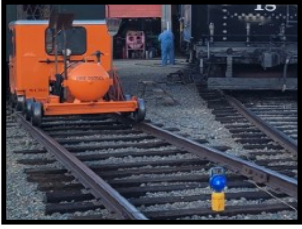
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Association of American Railroads (AAR) Radio Channel/Frequency Chart

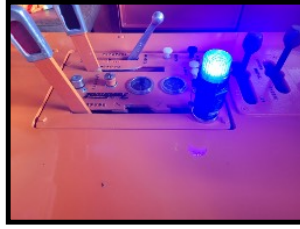
AAR Channel	Mhz	AAR Channel	Mhz	AAR Channel	Mhz	AAR Channel	Mhz	
005	160.185	030	160.560	055	160.935	080	161.310	
006	160.200	031	160.575	056	160.950	081	161.325	
007	160.215	032	160.590	057	160.965	082	161.340	
008	160.230	033	160.605	058	160.980	083	161.355	
009	160.245	034	160.620	059	160.995	084	161.370	
010	160.260	035	160.635	060	161.010	085	161.385	
011	160.275	036	160.650	061	161.025	086	161.400	
012	160.290	037	160.665	062	161.040	087	161.415	
013	160.305	038	160.680	063	161.055	088	161.430	
014	160.320	039	160.695	064	161.070	089	161.445	
015	160.335	040	160.710	065	161.085	090	161.460	
016	160.350	041	160.725	066	161.100	091	161.475	
017	160.365	042	160.740	067	161.115	096	161.490	
018	160.380	043	160.755	068	161.130	093	161.505	
019	160.395	044	160.770	069	161.145	094	161.520	
020	160.410	045	160.785	070	161.160	095	161.535	
021	160.425	046	160.800	071	161.175	096	161.550	
022	160.440	047	160.815	072	161.190	097	161.565	
023	160.455	048	160.830	073	161.205			
024	160.470	049	160.845	074	161.220			
025	160.485	050	160.860	075	161.235			
026	160.500	051	160.875	076	161.250			
027	160.515	052	160.890	077	161.265			
028	160.530	053	160.905	078	161.280			
029	160.545	054	160.920	079	161.295			
WCRG							Channels	
						Channel	Mhz	
						WCRG-1	151.625	
						WCRG-2	151.505	
						WCRG-3	151.700	

Examples of Flags, Lights, Derails, and Track Structures

Blue Flags/Blue Lights (Flags and Light Fixtures May Vary)



Blue Light Between Rails



Blue Light on Control Panel



Blue Flag Between Rails



Blue Flag Between Rails

Red Flags/Red Lights (Flags and Light Fixtures May Vary)



Red Light Between Rails



Red Flag Between Rails



Red Flag Between Rails



Red Flag Next to Track

Switch Frogs & One Way Low Speed Crossing



Jump/Lift Frog



Spring frog



Self Guarded Frog



One Way Low Speed Crossing

Derails (Derail color may vary)



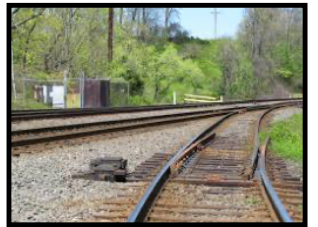
Portable Derail



Fixed Derail



Split Point Derail



Dual Control Derail

Derail Markers/Targets (May be different colors and markings)



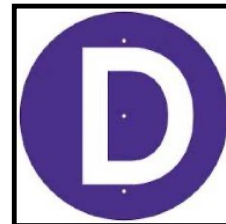
Blue



Red



Blue



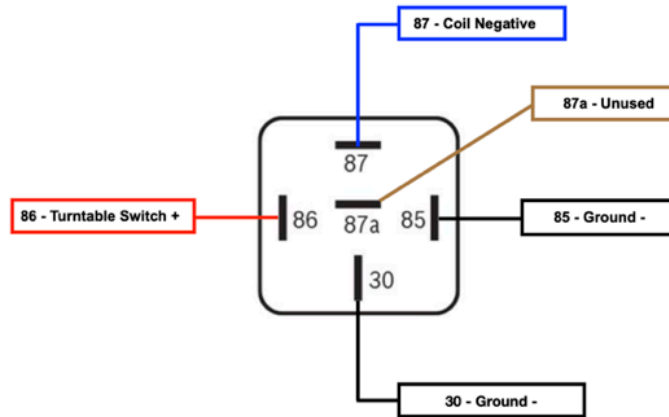
Purple



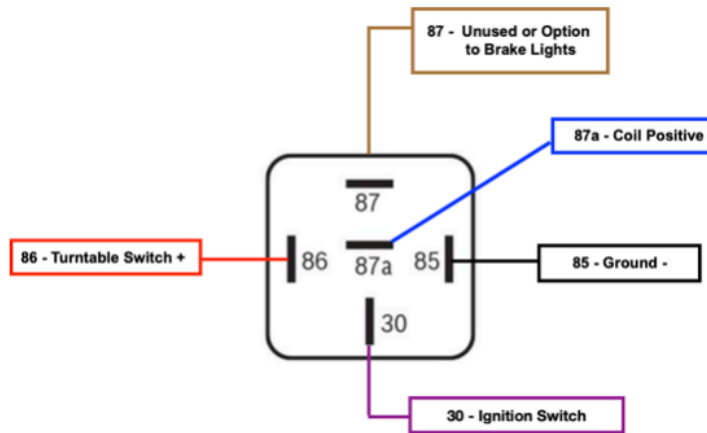
White

Turntable Ignition Interlock - Onan and other Four Cycle Engines

Option 1 - Coil Terminal Negative



Option 2 - Coil Terminal Positive



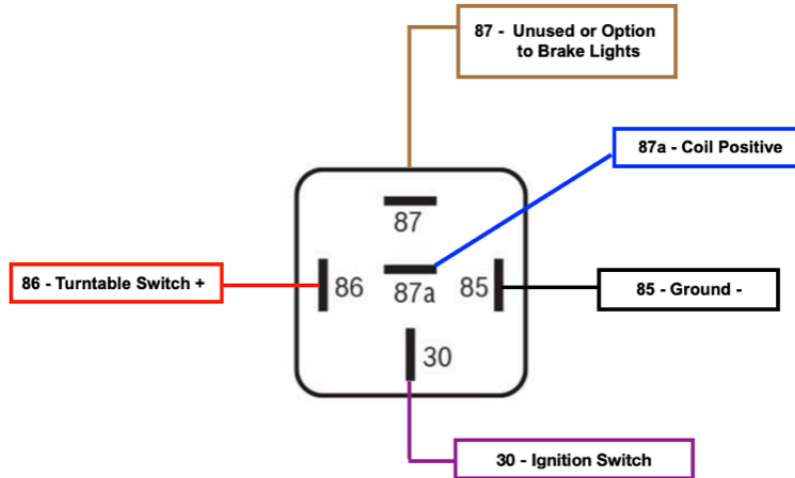
NOTE: Make sure to use a 5 Pin Relay with separate 87 & 87a pins.
If 87 & 87a are connected, the relay will not function properly in this application
If you purchase a relay with wiring harness, your color coding may be different than in the above diagrams.

Napa Relay - Napa Part # AR204

Napa Wiring Harness (optional) - Napa Part # EC23

Turntable Ignition Interlock - Two Cycle Fairmont

Two Cycle Fairmont Track Cars with 12 Volt Negative Ground



NOTE: Make sure to use a 5 Pin Relay with separate 87 & 87a pins.

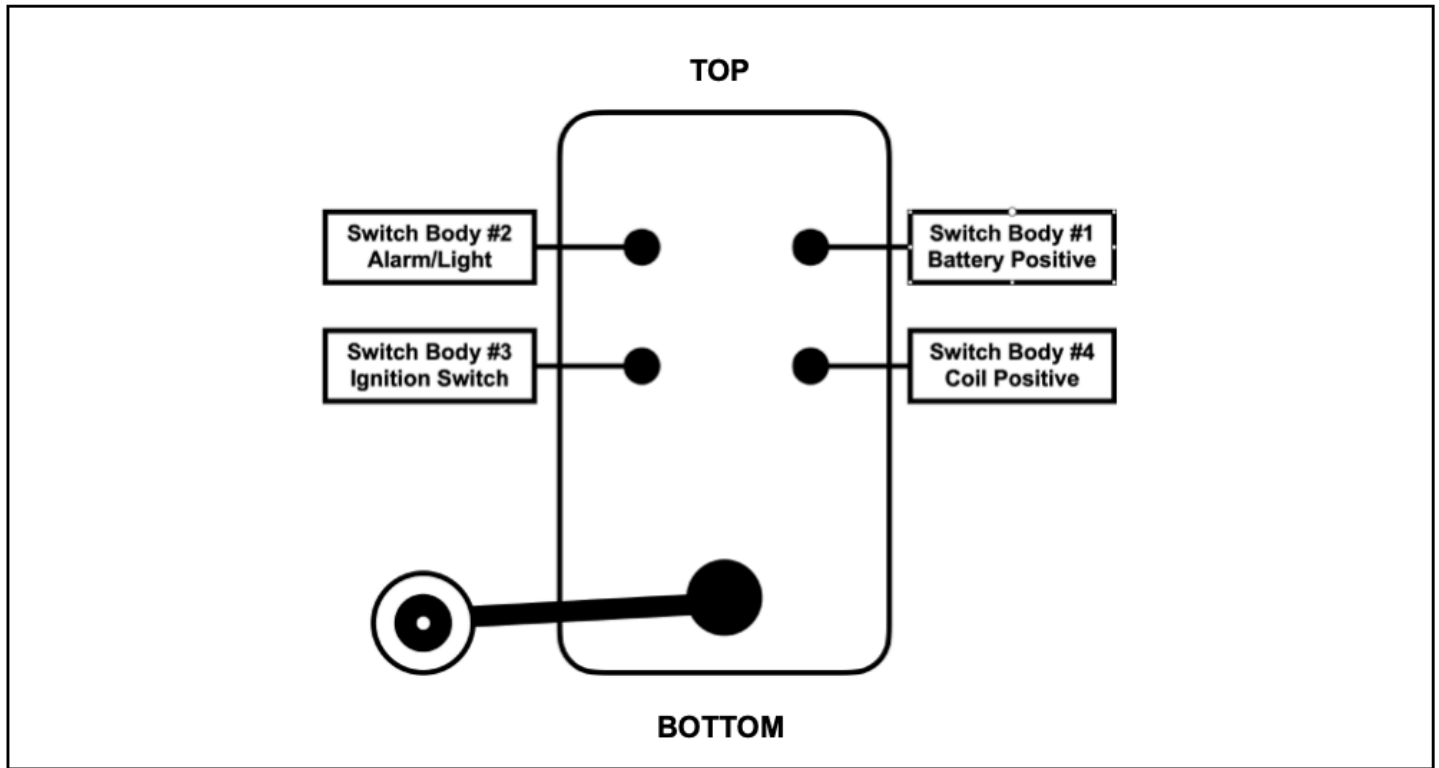
If 87 & 87a are connected, the relay will not function properly in this application

If you purchase a relay with wiring harness, your color coding may be different than in the above diagrams.

Napa Relay - Napa Part # AR204

Napa Wiring Harness (optional) - Napa Part # EC23

Turntable Ignition Interlock Two Cycle & Four Cycle 12 Volt Negative Ground Honeywell/Micro Switch 1LS1



Note: #1 and #2 - Normally OPEN when turntable is fully retracted.
#3 and #4 - Normally CLOSED when turntable is fully retracted.

Les King/Fredericksburg Shops Turntable Single Bolt Base Plate Modification Instructions (Willits Modification)

The after market turntable by Les King/Fredericksburg Shops is a good alternative to the hard to find and expensive Fairmont turntable. However there is one weak point on the early design turntable. That problem is in the area of attachment of the foot to the bottom of the shaft plate.

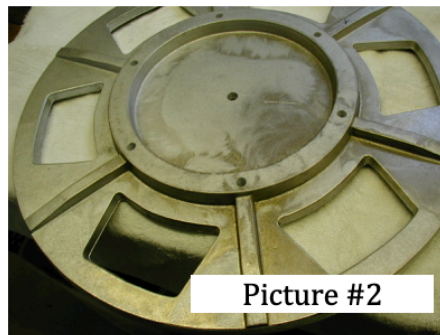
The problem is the single point attachment of the foot. If the bolt in the center of the foot is too tight the foot won't turn. If it is too loose the foot wobbles and allows the car to tip while it is in the up position. If the set screw that holds the center bolt becomes loose, the entire foot can fall off, or worse yet, fail while the car is being turned.

The solution is a plate made from $\frac{1}{4}$ " aluminum or steel plate. It is a disc that has a hole in the center of it. The part has an outside diameter of 11.5" and an inside diameter of 7". (picture #1)



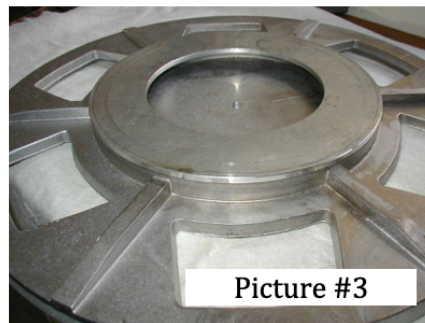
Picture #1

Remove the foot and drill six $\frac{3}{8}$ " holes. The holes are positioned around the ridge on the top of the foot and aligned with the 6 ribs. (picture #2)



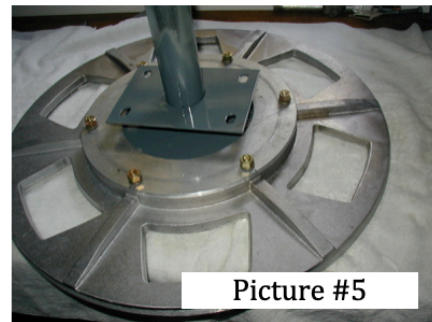
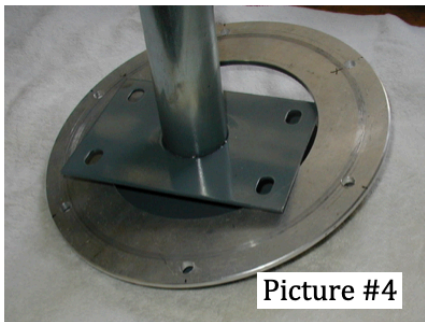
Picture #2

Center the new disc on top of the foot. (picture #3) Next turn the foot and disc over while keeping the two parts aligned. Mark the holes in the foot onto the disc, then drill the disc in those six places. Before moving the disc mark it and the foot so it can be put back in the same position. This needs to be done because there are six positions it can be placed in and if the disc is flipped over there are a total of 12 positions. The ribs are not evenly spaced, so only one position is correct. Center punch one of the ribs near the disc and put a corresponding center punch on the disc. Later the disc and foot can be washed, or even painted yet still be put back in the correct position.

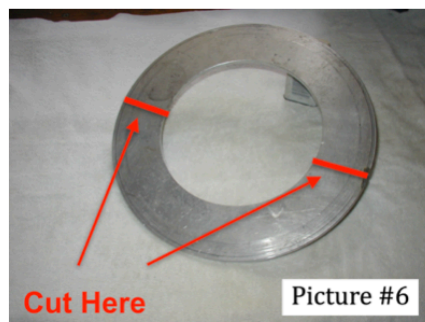


For installation on turntables removed from the car, remove turntable assembly. (For installations without removing turntable from the car, refer to Photo #6.) Put the disc over the turntable motor if still attached and down over the lower attachment plate. (picture #4 & 5) Now put the motor and shaft assembly back in the car. Next place the foot, with Teflon disc (supplied with the turntable kit) in the center of it, under the car. Then bolt the foot to the bottom of the turntable using 6 nuts, lock washers and 3/8" by 2 1/4" bolts.

The changes makes the following improvement: Replaces one bolt with 6. Allows those bolts to be fastened down tight and use lock washers on them so they can't come loose. Centers the bolts out around the center of the foot center so they have a better holding position.



For installations without removing the turntable from the car, or disassembling the turntable, cut plate in half as shown. (Picture #6) Be sure have holes pre-drilled in plate before cutting plate in two. Then slip plates in place and bolt in.



WCRG Shunting Requirements For Excursion Participant's Track Cars

All excursion participants track cars must be equipped to shunt track circuits to activate automatic crossing warning devices. Shunts must be connected at rear axle, from axle nut to wheel bolt. Left side must be secured with a thumb screw to allow for deactivation when required.

WARNING - Shunt kits sold by WCRG are designed for use on WCRG excursions only under the direction and supervision of WCRG trained and qualified personnel. Use of WCRG shunt kits, or WCRG'S shunt design on a non WCRG excursion, or any other railroad operation outside of WCRG's control may result in property damage, personal injury, and / or death. User assumes all liability when purchasing, installing, and operating with WCRG shunt kits.

Instructions/parts required to shunt track cars for WCRG excursions:

- Drill and tap the rear axle nuts on both sides of track car. 1 3/16 axle (M9/M19/MT19 etc.) tap the axle nuts to 1/4 inch National Course Thread. 1 7/16 axle (M14/MT14/S2 etc.) tap the axle nuts to 5/16 inch National Course Thread. Drill and tap one wheel bolt on each side to 5/16 National Course Thread.
- Obtain four #6 AWG (American Wire Gauge) wire lugs, as well as #6 AWG (American Wire Gauge) stranded wire, one metal thumb screw, one non-conductive (nylon) thumb screw, and one non-conductive (nylon) washer. Spare metal thumb screws, non-conductive (nylon) thumb screws, and non-conductive (nylon) washers recommended.
- Assemble shunts, including crimp and solder ends of each wire lug.
- Use non-conductive (nylon) thumb screw and non-conductive (nylon) washer for insulated operation and a metal thumb screw for shunted operation on left side of car. Right side is permanently attached. Only left side needs to be cut in or out.
- Rubber tread wheels on rear axles are prohibited.
- Push-cars and trailers must be equipped with thumb screws on both sides.

Wheel Shunt
Left Side
Showing
Thumbscrew
for
Activation/De
activation



Wheel Shunt
Right Side





Always take the SAFE course. When in doubt - STOP the Movement.