



# EMPLOYEE OPERATING MANUAL

EFFECTIVE April 2017



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## **Chapter 7 - Roadway Worker and On-Track Safety**

### **Introduction**

This sections defines procedures to prevent cars, locomotives, on-track equipment, or other equipment from striking roadway workers (including contractors) performing their duties. The rules in this section comply with the relevant regulations contained in the Code of Federal Regulations (CFR) Title 49, Part 214.

### **700 - General Requirements of Engineering Department Employees**

- 700.1** CSX has overall responsibility for ensuring employees understand and comply with the rules governing on-track safety. The following are the responsibility of each roadway worker:
1. Compliance with operating rules,
  2. Remaining clear of tracks until required by job task, and
  3. Determining that the appropriate on-track safety has been established before fouling a track.
- 700.2** Only one qualified roadway worker, referred to as the employee-in-charge, establishes and controls working limits for the purpose of on-track safety.
- 700.3** Do not perform any work that:
- a. Interferes with the safe passage of trains, or
  - b. Is not properly protected, or
  - c. Is not in accordance with operating rules, or
  - d. Interferes with the proper functioning of switch machines or code apparatus, or
  - e. Interferes with the proper functioning of signal control machines or code apparatus.
- 700.4** Do not operate any switch or derail on a controlled track without the permission of the train dispatcher.
- 700.5** An employee must obtain the required permission from the train dispatcher before taking a controlled location off line and maintain communication with the train dispatcher after receiving permission.
- 700.6** When no designated supervisor is on site and in cases of emergency, comply with the instructions of the chief train dispatcher.
- 700.7** Upon discovery of damage to a facility, make the necessary repairs then report the occurrence to the designated supervisor and the chief train dispatcher.

**700.8** When applying or removing temporary speed restrictions, make certain to pronounce all numbers digit by digit and comply with the following:

Step	Responsible Party	Action
1	Engineering	Make the request directly to the train dispatcher.
2	Train Dispatcher	Repeat the entire request and issue the restriction.
3	Engineering	Make certain that the proper signs are displayed.

**700.9** When handling gasoline or other flammables, make certain to keep material away from the following:

- a. Operating internal combustion engines, or
- b. Smoking, or
- c. Open flames.

**700.10** All parked or secured equipment and vehicles must remain a minimum of seven feet from the nearest rail of any track unless protected by the appropriate track protection.

**700.11** A train list or train line up provided by the train dispatcher must be recorded in writing by the receiving employee. It is for informational purposes only and does not authorize any employee to foul a track.

**700.12** Work performed by contractors must be monitored to ensure:

- 1. No work, activity, or equipment interferes with the safe passage of trains, and
- 2. Neither contractors nor their equipment fouls a track unless protection has been provided.

**700.13** Employees operating switches or derails are responsible for the position of the devices and must:

- 1. Visually determine switches and derails are properly lined for the intended route, and
- 2. Obtain permission from the train dispatcher, yardmaster, or other designated employee before switches and derails are spiked.



**700.14** When hand-operated main track switches are used, before releasing an authority or reporting by a specific location, the employee holding the authority or the employee-in-charge of a work group must:

1. Complete the Switch Position Awareness Form (SPAF) in ink,
2. Report the following to the train dispatcher:
  1. Location of the switch operated,
  2. Switch restored and locked in normal position,
  3. Time switch was initially reversed,
  4. Time switch was restored and locked in normal position, and
  5. Name of employee who operated the switch.
3. Retain the SPAF until the next tour of duty.

## **701 - On-Track Safety and Job Briefing Requirements**

**701.1** A Roadway Work Group is any group of workers, regardless of class or craft, working on a common task that involves fouling a track. One designated roadway worker in each group, referred to as the employee-in-charge, provides on-track safety for all members of the group. The employee-in-charge is responsible for ensuring the working group receives a job briefing on the type of on-track safety to be established.

**701.2** Prior to starting work that will require an employee to foul a track, the employee-in-charge or other designated employee must perform a job briefing with the group to discuss:

1. Tasks to be performed,
2. Sequence of basic job steps,
3. Potential hazards,
4. Requirement to inspect tools and equipment before use,
5. Personal protective equipment required, including fall protection,
6. Type of on-track safety provided,
7. Roadway maintenance machine(s) that will foul any adjacent track,
8. Adjacent track or adjacent controlled track to include the type of on-track safety for those tracks if deemed necessary by the employee-in-charge,
9. Pre-determined Place of Safety (PPS) when required,
10. Track or tracks protected,
11. Time limits of protection,
12. Rules governing on-track safety being provided, and
13. Confirmation that all members of the group understand the job briefing.

- 701.3** Before any member of a Roadway Work Group fouls a track, the employee-in-charge must inform each roadway worker:
1. Of the on-track safety protection established at the work location, and
  2. That there will be no change in the type of on-track safety protection without notification of the change to each roadway worker.

- 701.4** At the beginning of each tour of duty, or when communications are not immediately available, a lone worker must conduct a job briefing and communicate his or her work plan and intended procedures for on-track safety as soon as possible with:
- a. His or her designated supervisor, or
  - b. An employee designated by the supervisor.

## **702 - Reserved**

## **703 - Adjacent Controlled Track On-Track Safety**

- 703.1** On-track safety is required for each adjacent track by establishing working limits or train approach warning when:
- a. Deemed necessary by the employee-in-charge, consistent with adjacent controlled track on-track safety rules,
  - b. A roadway work group is on an occupied track and one or more roadway workers are on the ground engaged in a common task with on-track self-propelled or coupled equipment.
- Note: Self-propelled equipment does not include automated inspection cars, Hi-rail vehicles, or Rail-bound vehicles engaged in a common task for inspection or minor correction purposes, provided that no vehicle is coupled to one or more rail cars.
- 703.2** When multiple Hi-rail or Rail-bound vehicles are engaged in a common task for inspection or minor repairs, the on-track safety job briefing must include discussion of addressing the nature of the work that will be performed to determine if adjacent controlled track on-track safety is required.
- 703.3** The employee-in-charge with adjacent controlled track protection may permit other on-track equipment movements not associated with the roadway work group onto the occupied track within the working limits after:
1. Conducting on-track safety job briefing with the employee-in-charge of the requesting on-track equipment, and
  2. Recording onto the proper form the name of the employee-in-charge of the other roadway work group and the nature of work to be performed.

- 703.4** When notified that trains or on-track equipment are authorized to move on an adjacent controlled track at speeds greater than 25 MPH for freight trains and on-track equipment or greater than 40 MPH for passenger trains and passenger on-track equipment movements, each roadway worker must:
1. Ensure all work is stopped on the occupied track, including equipment movements, and between occupied track and the adjacent controlled track that movement is authorized, and
  2. Move to the predetermined place of safety (PPS)
- 703.5** When notified that trains or on-track equipment are authorized to move on an adjacent controlled track at 25 MPH or less for freight trains and on-track equipment or 40 MPH or less for passenger trains and passenger on-track equipment movements, each roadway worker must move to a predetermined place of safety (PPS). Work may only continue:
- A. On the side of the occupied track with no adjacent track, or
  - B. On the side nearest an adjacent controlled track with established on-track safety and no authorized movement, or
  - C. Between the rails of the occupied track when all of the following conditions are met:
    1. On-track equipment on the occupied track will not foul the adjacent controlled track movement is authorized,
    2. Roadway workers performing on-ground work exclusively between the rails of the occupied track, do not break the plane of the rail nearest the adjacent controlled track movement is authorized, and
    3. No on-ground work is performed within 25 feet in front of or behind any on-track self-propelled equipment or coupled equipment permitted to move on the occupied track.
- 703.6** In territories with an occupied track between two adjacent controlled tracks, each roadway worker must ensure all work is stopped and move to the predetermined place of safety (PPS) when either adjacent controlled track has one or more trains permitted for speeds greater than 25 MPH for freight trains or on-track equipment or greater than 40 MPH for passenger trains and passenger on-track equipment movements.
- 703.7** Roadway workers required to stop work must not resume work and equipment movements until the trailing end of all trains or other on-track equipment moving on the adjacent controlled track has passed and remains ahead of that roadway worker.
- 703.8** When a train or on-track equipment stops on an adjacent controlled track before its trailing end has passed all of the affected roadway workers, work must not be performed ahead of the trailing end of the train or on-track equipment until:
- A. On-track safety through train approach warning has been established on the adjacent controlled track, or
  - B. The employee-in-charge has directed the locomotive or on-track equipment operator that no further movements will be made until authorized by the employee-in-charge.

**703.9** Adjacent controlled track on-track safety is not required when all of the on-ground roadway workers are performing work while exclusively positioned on a side of the occupied track as follows:

- A. Side with no adjacent track, or
- B. Side with one or more adjacent tracks provided that it has an inter-track barrier between the occupied track and the closest adjacent track on that side.

**703.10** Adjacent controlled track on-track safety is not required when one or more roadway workers are performing maintenance or repairs alongside a roadway maintenance machine or coupled equipment when:

- A. The machine or equipment would effectively prevent the worker from fouling the adjacent controlled track on the other side of such equipment, or
- B. The maintenance or repairs are performed while positioned on the side of the occupied track as follows:
  - a. Side with no adjacent track, or
  - b. Side with one or more adjacent tracks when it has an inter-track barrier between the occupied track and the closest adjacent track on that side.

**703.11** Adjacent controlled track on-track safety is not required when one or more roadway workers are performing maintenance or repairs requiring the employee to go on or under a roadway maintenance machine or coupled equipment, provided that no part of the employee breaks the plane of the rail of the occupied track towards the adjacent controlled track.

## 704 - EC-1/EC-1e Line 1 Authority

**704.1** Before occupying or fouling a controlled track to perform short-term work or move on-track equipment, the employee-in-charge must:

- 1. Have a copy of the current day dispatcher bulletin for the territory involved, and
- 2. Receive authority to occupy or foul track and copy the authority onto line 1 of Form EC-1/EC-1e.

**704.2** Use radio communication, if possible, when requesting Form EC-1/EC-1e line 1 authority and provide the following to the control station:

- 1. Your name and ID number,
- 2. Specific location and milepost of initial occupancy,
- 3. Specific track name or number,
- 4. Beginning and ending limits of the request,
- 5. Direction of travel needed, and
- 6. Length of time necessary to complete work and clear the track.

**704.3** Copy Form EC-1/EC-1e line 1 authorities onto the prescribed form in the prescribed format.

**704.4** A Form EC-1/EC-1e line 1 authority may be issued in cases of emergency when a conflicting train is stopped within the required limits provided the train dispatcher confirms that the train is stopped. The employee requesting authority must:

1. Hold a job briefing with the crewmembers of the stopped train, and
2. Identify the train ID, locomotive number, and location and record that information on Form EC-1/EC-1e.

**704.5** When receiving and copying Form EC-1/EC-1e line 1 authority, copy the following into the remarks section:

1. Required information not contained in dispatcher bulletin, and
2. The following required information on any preceding train:
  1. Locomotive number,
  2. Train number,
  3. Direction of travel, and
  4. Location.

**704.6** After receiving and copying Form EC-1/EC-1e line 1 authority:

1. Conduct a job briefing with all employees who will operate or work under the authority,
2. In multiple track territory, ensure all employees covered by the protection acknowledge the specific track to be occupied or fouled,
3. Ensure all occupants of on-track equipment initial the copied Form EC-1/EC-1e, and
4. If it has been 30 minutes or more between the initial job briefing and time the track will be occupied or fouled, read Form EC-1/EC-1e aloud and conduct another job briefing.

**704.7** When issued a Form EC-1/EC-1e line 1 authority to follow a preceding train, do not foul or occupy the track until confirming the preceding train has passed the initial point of occupancy by:

- a. Visually identifying the train by locomotive number, or
- b. Verbal confirmation from the train crew or train dispatcher.



**704.8** The employee who received EC-1/EC-1e line 1 authority may permit on-track equipment movements not associated with the working group within the limits of the authority after:

1. Establishing on-track safety for the employees, and
2. Recording onto the proper form the name of the employee-in-charge of the other work group and the nature of the work to be performed.

**704.9** Do not operate into any authority issued to another employee until that employee gives permission to occupy the track within the authority. If granted permission of opposing limits within the authority, operators of opposing equipment must:

1. Announce passing all mileposts, and
2. Confirm understanding of any do not pass limit.

**704.10** When operating within the limits of an EC-1/EC-1e line 1 authority, employees must:

1. Stop at each control point and conduct a job briefing to verify authority extends beyond the control point before proceeding,
2. Not pass a preceding train without the permission and protection of the train dispatcher,
3. Not occupy or foul any track not covered by the authority,
4. Not move in a direction other than the one authorized, and
5. Not occupy a section of track after that section has been released or reported by.

**704.11** Employees operating within the limits of EC-1/EC-1e line 1 authority must make radio announcements:

1. Stating initial occupancy location prior to fouling or occupying the track,
2. Prior to passing a control point, and
3. In non-signal territory, prior to passing each end of siding locations.

**704.12** When making required radio announcements, employees must use positive identification and state:

1. Track name or number,
2. Direction of travel, and
3. Name and milepost of location.

**704.13** When instructed by the train dispatcher to report by specific locations, make sure:

1. The entire movement is clear of the location in the specified direction before reporting by the location, and
2. To receive a new authority for those limits prior to occupying any portion of track reported by.

- 704.14** Promptly release EC-1/EC-1e line 1 authorities to the train dispatcher after the entire movement clears the limits of the authority. Make every effort to clear the limits before the expiration of the time authorized and do not consider the authority clear until the train dispatcher acknowledges his or her understanding.
- 704.15** If unable to clear the limits of an authority before the time limit expires, contact the train dispatcher and request a time extension. If unable to contact the train dispatcher or if the train dispatcher does not grant a time extension, do not exceed restricted speed until the authority is cleared.

## 705 - Individual Train Detection, Train Approach Warning, and Train Coordination

- 705.1** A lone worker may use Individual Train Detection for on-track safety when he or she:
1. Knows the required sight distance and has completed a Statement of On-Track Safety (SOTS1) before fouling the track;
  2. Has access to a working radio;
  3. Is performing routine maintenance or minor repairs that will not affect the safe passage of trains or on-track equipment;
  4. Has completed a required job briefing, when communication is available;
  5. Is not performing work in an interlocking, control point, or remotely controlled hump yard;
  6. Has established a place of safety;
  7. Has the ability to see and hear the approach of a train or on-track equipment and that ability is not impaired by noise, lights, weather conditions, passing equipment on adjacent tracks, or any other condition;
  8. Is not prevented from hearing the approach of a train or on-track equipment and no power-operated tools or roadway maintenance machinery is in use; and
  9. Maintains the required sight distance and has the unrestricted ability to reach the predetermined place of safety at least 15 seconds before a train moving at the maximum authorized track speed reaches his or her location.
- 705.2** When using Individual Train Detection:
1. Do not perform any work that interferes with the ability to see or hear the approach of a train or on-track equipment,
  2. Maintain a constant lookout for approaching trains and on-track equipment,
  3. Keep the completed SOTS1 form in your possession at all times when fouling the track, and
  4. When a train or on-track equipment approaches, move to the designated place of safety at least 15 seconds before the train or on-track equipment reaches the location.

**705.3** Use Train Approach Warning for on-track safety only if:

1. At least two qualified roadway workers are working together and one of the employees is designated as the watchman,
2. All employees can reach an established place of safety at least 15 seconds before a train or on-track equipment reaches the location,
3. A method of communicating the approach of a train is established,
4. Employees hold a job briefing and all confirm their understanding and responsibilities,
5. Employees are performing routine maintenance or minor repairs that will not affect the safe passage of trains or on-track equipment,
6. Watchman/lookout knows and maintains required sight distance,
7. Watchman/lookout has unrestricted ability to see and hear approaching trains or on-track equipment, and
8. Watchman/lookout has access to a working radio.

**705.4** The employee protected by Train Approach Warning must:

1. Remain in a position that allows receiving a train approach warning from the watchman, and
2. Immediately move to the predetermined place of safety when a warning is received.

**705.5** When Train Approach Warning is used to protect more than one employee, the watchman must be equipped with and use the following devices to provide warning:

1. Whistle or air horn,
2. White disc or flag when visibility is good, and
3. White light or red fusee when visibility is poor.

**705.6** When Train Approach Warning is used to protect only one employee, audible and visual warnings are not required when:

1. Advanced watchman is not required, and
2. Watchman can physically touch the employee being protected.

**705.7** The employee providing watchman duties for Train Approach Warning must:

1. Not foul any track unless necessary to provide warning,
2. Not perform any tasks unrelated to providing warning or that interfere with providing warning to the employee being protected,
3. Provide warning as if every train or on-track equipment movement is approaching at the maximum authorized speed allowed, and
4. Provide warning sufficiently in advance to allow all workers and watchman to reach the predetermined place of safety at least 15 seconds before the train or on-track equipment reaches the location.

- 705.8** When necessary to establish on-track safety on controlled tracks with Train Coordination, the employee-in-charge must:
1. Visually determine the train is stopped,
  2. Conduct a job briefing with the crew of the train,
  3. Determine the limits of the train's authority,
  4. Determine which method of operation and related rules are in effect,
  5. Instruct the train crew not to move unless directed by the employee-in-charge, and
  6. Instruct the train crew not to release any authority until notified by the employee-in-charge that it is safe to do so.

**705.9** Once Train Coordination is established, the employee-in-charge must ensure no members of the working group foul any track outside of the train's authority.

**705.10** When Train Coordination on-track safety is no longer required:

1. Ensure all roadway workers are clear of the track, and
2. Inform the train crew that protection is no longer required and the instructions of the train dispatcher will govern their movements.

## **706 - Working Limits on Non-Controlled Tracks**

**706.1** To establish working limits on non-controlled tracks:

1. Make prior arrangements with the employee responsible for the track or tracks involved,
2. Ensure the tracks are not occupied by any equipment not under the control of the employee-in-charge, and
3. Make the tracks inaccessible to all trains, locomotives, and on-track equipment.

**706.2** Make non-controlled tracks inaccessible to all trains, locomotives, and on-track equipment by one of the following methods:

- a. A flagman posted with instructions and the capability to hold all movements clear of the limits, or
- b. Lining and locking switches with an effective locking device in a position that prevents movement into the tracks, or
- c. Applying a derail that is locked with an effective locking device at a location that prevents movement into the working limits, or
- d. Discontinuity of the rail to prevent movement into the working limits.

**706.3** When remotely controlled switches provide access to non-controlled tracks, the employee-in-charge must verify all of the following with the employee responsible for operating the remotely controlled switches:

1. Switches are lined in a position that prevents access into the tracks,
2. Locking devices or blocking has been applied to the switches to prevent operation, and
3. Locking or blocking will not be removed until permission has been granted by the employee-in-charge.

**706.4** Working limits are not required on non-controlled tracks when moving on-track equipment from the clearing location to the work site or back. When moving equipment on non-controlled tracks:

1. Make prior arrangements with the employee who is responsible for movement on the tracks, and
2. Make all movements prepared to stop within one-half the range of vision, not exceeding 10 MPH.

## **707 - Working Limits on Controlled Tracks (Conditional Stop)**

**707.1** When long-term working limits will be necessary, the employee-in-charge must request a dispatcher message to be issued. The request must be made at least 14 hours in advance and include:

1. Subdivision;
2. Date;
3. Time limits;
4. Name and initials of the employee-in-charge;
5. Specific track limits of either milepost, control point, or main track yard limits; and
6. Any instructions related to the posting of signs.

**707.2** Before any member of the working group fouls or occupies the track within the working limits, the employee-in-charge must:

1. Obtain a current dispatcher bulletin that contains the dispatcher message governing the working limits for that day;
2. Contact the train dispatcher and confirm the dispatcher bulletin date and dispatcher message number for the working limits;
3. Inform the train dispatcher if the signal system will be affected;
4. When control points are within the work limits, confirm with the train dispatcher how trains will move through the control point;
5. In multiple track territory, confirm with the train dispatcher which track will be occupied by work forces and which track will be used to pass trains;
6. Confirm with the train dispatcher the use and position of switches within the work limits;
7. Receive from the train dispatcher and copy on the dispatcher bulletin an authority number, train dispatcher OK and initials, and time authorized; and
8. Ensure signs are properly posted.



**707.3** Signs are required in conjunction with long-term working limits and must be:

1. Clean and easily recognizable, and
2. Posted no more than 30 minutes in advance of the effective time, as long as the employee-in-charge has the ability to communicate with any train or equipment that approaches the working limits.

**707.4** If permanent conditions prevent the display of wayside signs as directed by rule:

1. Train dispatcher must be notified, and
2. A dispatcher message must be issued stating how signs are displayed.

**707.5** Unless stated otherwise in a dispatcher message or Form EC-1, wayside signs will be placed at the beginning and end of the restriction as indicated by the chart below:

Number of Tracks	Sign Placement
One	Place signs next to the affected track.
Two	Place signs on the field side (outside) of the affected track.
Three or more	Place signs to the field side of the affected track for the outside track(s) and next to the affected track for middle track(s).

**707.6** Place Warning signs at least two miles, but not more than two and one-half miles, from the beginning of the working limits on each end.

**707.7** Place Conditional Stop signs in the following locations:

1. The beginning of the limits on each end,
2. Each junction point, and
3. Other locations as specified in dispatcher message.

**707.8** The employee-in-charge is responsible for all train and on-track equipment movements within the working limits and must make a written record on the prescribed form of all movements permitted to enter and move within the working limits.

**707.9** Before granting permission for movements not part of the working group to enter or move within the working limits, the employee-in-charge must:

1. Ascertain that all roadway workers and equipment of the working group are clear of the limits or that portion of the limits on which the movement will be authorized to operate,
2. Notify affected roadway work group the speed at which trains or on-track equipment will be authorized to operate through the working limits, and
3. Determine the track or portion of track is safe for movement.

**707.10** The employee-in-charge must communicate the following information when granting permission for a train or on-track equipment to enter long-term working limits using the following verbiage:

1. Locomotive number of a train or name of on-track equipment operator,
2. Name of the employee-in-charge of the working limits,
3. Milepost location of the working limits or specific portion of the working limits the train or on-track equipment may occupy, and
4. Permitted operating speed of the train or on-track equipment that must be one of the following:
  - a. A specific speed, or
  - b. Restricted speed, or
  - c. Authorized speed.

**707.11** The employee-in-charge may permit a train or on-track equipment to proceed to one intermediate location within the working limits and stop. When safe to do so, the employee-in-charge must clear the movement through the entire remaining limits.

**707.12** After granting permission to a train or on-track equipment that is not part of the working group to enter and move in the working limits, the employee-in-charge must not allow roadway workers and equipment in the working group to foul the affected track until the trailing end of all trains or other on-track equipment has passed and remains ahead of the affected roadway workers.

**707.13** The employee-in-charge must plan to have all roadway workers and equipment clear of the working limits before the expiration time. Before clearing the authority, make certain:

1. All roadway workers and equipment of the working group are clear of the limits,
2. The track is safe for normal operation or the train dispatcher has been advised of any necessary restrictions for movement,
3. All trains and on-track equipment that were cleared to enter and move within the limits have cleared the limits, and
4. Promptly remove signs after the work authority expires or is canceled.

**707.14** When employee-in-charge determines the track cannot be cleared before the expiration time, he or she must take one of the following actions at least five minutes before the expiration:

- a. Obtain a new authority from the train dispatcher, or
- b. Post a flagman at each Warning sign.

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## 708 - Flag Protection to Establish Emergency Working Limits

- 708.1** If unable to contact the train dispatcher to establish working limits, use flag protection in the following circumstances:
- a. In emergency situations; or
  - b. To protect defects in track, bridge, culvert, or other track structure; or
  - c. In unusual situations such as being unable to clear an authority before it expires.
- 708.2** Do not use flag protection when weather conditions obstruct or affect visibility, except in an emergency.
- 708.3** When using flag protection, maintain it in both directions until:
- a. The condition is corrected, or
  - b. Notified by the train dispatcher that protection has been provided and all affected trains have been notified.
- 708.4** Do not allow trains and on-track equipment to proceed beyond the point flagged until:
1. The employee-in-charge provides the flagman with written instructions, and
  2. The flagman shows the instructions to the locomotive operator or equipment operator.

## 709 - Maintenance Lock-Out, No-Check Functions, and Local Control

- 709.1** The electronic signal specialist (ESS) must give permission to place a control point in maintenance lock-out or no-check functions. Provide the following information to the ESS who must then provide the information to the train dispatcher:
1. Title and name of employee receiving the permission,
  2. Track designation,
  3. Track limits, and
  4. Time limits.
- 709.2** Before testing and inspecting the control point in maintenance lock-out or no-check functions:
1. The receiving employee must repeat the permission to the ESS,
  2. The ESS must confirm the repeated information is correct, and
  3. Proper on-track safety must be provided before fouling the track.

**709.3** Once provided, maintain protection for maintenance lock-out or no-check functions until the employee who received the protection releases it to the ESS. Before removing blocking devices:

1. The ESS must communicate the following to the train dispatcher:
  1. Employee title and name,
  2. Track designation, and
  3. Limits being released.
2. The information must be repeated by the ESS and confirmed by the employee releasing the protection.

**709.4** The train dispatcher must give permission to place a control point in local control. When making the request for permission, provide the following information:

1. Title and name of employee requesting the permission,
2. Track designation,
3. Track limits, and
4. Time limits.

**709.5** Before testing and inspecting the control point in local control:

1. The receiving employee must repeat the permission to the train dispatcher,
2. The train dispatcher must confirm the repeated information is correct, and
3. Proper on-track safety must be provided before fouling the track.

**709.6** Once provided, maintain protection for local control until the employee who received the protection releases it to the train dispatcher. Before removing blocking devices:

1. The employee must communicate the following to the train dispatcher:
  1. Employee title and name,
  2. Track designation, and
  3. Limits being released.
2. The train dispatcher must repeat the information and the employee releasing the protection must confirm it.

## **710 - Removing a Controlled Track from Service**

**710.1** Remove a controlled track from service only after receiving an authority from the train dispatcher under the following conditions:

- a. Track is rendered inoperative by act of nature, or
- b. Track is disrupted for other cause and prompt restoration cannot be made, or
- c. Construction work necessitates temporary removal from service.

**710.2** If necessary to take a controlled track out of service, a qualified employee must request from the train dispatcher an authority with defined limits. The employee must copy the authority onto Form EC-1/EC-1e line 11.

**710.3** All train and on-track equipment movements must obtain permission from the employee-in-charge of the out-of-service limits before fouling or occupying the limits.

**710.4** The employee-in-charge of the out-of-service limits directs all train and on-track equipment movements within the limits. When granting permission for trains or equipment to enter and move within the limits, the employee-in-charge must make a written record of the following:

1. Name of employee operating the locomotive or the employee in charge of the equipment,
2. Time permission was granted, and
3. Time train or equipment cleared the limits.

**710.5** Prior to returning track to service, the employee-in-charge must:

1. Notify the train dispatcher of any restrictions necessary to ensure safe passage of trains or on-track equipment,
2. Ensure track is clear of all trains and on-track equipment, and
3. If track is not clear of trains or on-track equipment, be governed by the train dispatcher's instructions before returning the track to service.

## **711 - Railroad Crossings at Grade and Drawbridges**

**711.1** At automatic and remotely controlled railroad crossings at grade, insulated on-track equipment that does not shunt the track circuit must:

1. Stop before fouling the railroad crossing at grade, and
2. Not proceed after stopping until the way is seen to be clear and it is safe to proceed.



**711.2** Non-insulated on-track equipment that does shunt the track circuit will proceed on signal indication at automatic and remotely controlled railroad crossings at grade. If the signal governing movement over the railroad crossing at grade is STOP and no conflicting move is evident, stop before fouling the crossing and contact the train dispatcher.

- a. If the train dispatcher has control of the intersecting line:
  1. Receive permission from the train dispatcher to make the desired movement,
  2. Provide the specific amount of equipment that will make the movement to the train dispatcher, and
  3. Report clear to the train dispatcher only after all of the equipment has cleared the crossing.
- b. If the train dispatcher does not have control of the intersecting line and the signal is equipped with a time release and no immediate conflicting movement is evident:
  1. The on-track equipment operator or employee-in-charge must operate the time release in accordance with instructions,
  2. The leading unit of the equipment must be stopped before reaching, but not more than 250 feet from, the Stop signal and remain at that location during the time-release interval,
  3. If the signal does not change its indication at the expiration of the time-release interval, the lead unit of on-track equipment will pull by the Stop signal at least 30 feet, stopping clear of the intersecting line, and
  4. The on-track equipment will wait a period of time equal to the time-release interval and, if no immediate conflicting movement is evident, the on-track equipment may proceed.
- c. If the train dispatcher does not have control of the intersecting line and the signal is not equipped with a time release and no immediate conflicting movement is evident:
  1. The lead unit of on-track equipment will pull by the Stop signal at least 30 feet, stopping clear of the intersecting line,
  2. Wait 10 minutes, and
  3. If after the 10 minute wait, no immediate conflicting movement is evident and it is safe to do so, the on-track equipment may proceed.

**711.3** At railroad crossings at grade that are not automatic or remotely controlled, on-track equipment must:

1. Stop before fouling the crossing;
2. Properly line gates, switches, or derails in accordance with special instructions;
3. Proceed after the way is seen to be clear and it is safe to do so; and
4. Restore gates, switches, or derails to normal position or in accordance with special instructions.

**711.4** On-track equipment must not stand between the opposing signals governing movement over a railroad crossing at grade unless protection has been established.

- 711.5** Obtain permission of the drawbridge tender before:
- a. Passing the home signal of a signaled drawbridge, or
  - b. Fouling the movable span of a non-signaled drawbridge.

## 712 - Operating Machines and On-Track Equipment

- 712.1** Employees who operate roadway maintenance machines must:
1. Pass a test certifying the employee understands how to apply proper on-track safety procedures for roadway maintenance machines,
  2. Receive training, and
  3. Be qualified as a roadway maintenance machine operator or as an employee-in-charge. Anyone not meeting this requirement must only operate the machine under the direct supervision of a qualified operator.
- 712.2** On-track equipment must be inspected before it is operated to make certain it is safe and in compliance with CSX standards and federal regulations.
- 712.3** Each on-track roadway maintenance machine and hi-rail vehicle must:
1. Be inspected each calendar day before use, and
  2. Have the operator's manual located on the equipment.
- 712.4** When inspecting on-track roadway maintenance machines and hi-rail vehicles, make certain each is equipped with the following:
1. Effective brakes;
  2. Operable horns/audible devices and change-of-direction alarms;
  3. Operable headlights and strobe lights;
  4. Fire extinguisher, first aid kit, and flagging kit;
  5. Safety glass and operable windshield wipers;
  6. Locking pins, if it is equipped with turntables; and
  7. Operable heater and ventilation system.
- 712.5** When inspecting on-track equipment that is not a roadway maintenance machine or a hi-rail vehicle, make certain it is equipped with the following:
1. Effective brakes,
  2. Lock-up devices that are in place, and
  3. Audible warning device unless operator is equipped with a whistle.

**712.6** The following roadway maintenance machines must have a pressurized cab:

1. Tampers,
2. Ballast regulators,
3. Tie bed scarifiers, and
4. Undercutters.

**712.7** If a component listed as an FRA safety required component is defective and the condition will not make the equipment unsafe to operate, then:

1. Complete and attach an FRA safety exception tag to the defective machine or hi-rail vehicle at or near the operator's control panel,
2. Report the condition to the employee-in-charge, and
3. Document the defect on the Machine Failure Report Form.

**712.8** If a defective condition makes the machine unsafe to operate:

1. Do not operate the equipment until repaired,
2. Affix an out-of-service tag to the ignition switch or similar device, if the equipment cannot be repaired, and
3. Report the condition to the employee-in-charge and document on the daily inspection report.

**712.9** If a defective condition does not make the machine unsafe to operate, the machine may be operated for up to seven days with the defect.

**712.10** When machine repairs are completed:

1. Document repairs in the machine's logbook, and
2. Remove the pre-addressed FRA safety exception tag and mail to Bryant Park Shop at 1 CSX Road, Richmond, VA 23286-5055.

**712.11** Any piece of equipment or vehicle large enough to carry its instructional manual must have the document(s) on the equipment or vehicle.

**712.12** Before occupying a controlled track, the leading and trailing pieces of on-track equipment working or traveling together as a group must have the flagging devices listed below. A single piece of on-track equipment operating independently, including hi-rail vehicles, must also have these flagging devices:

1. Four red fusees,
2. Two red flags, and
3. One white light.

**712.13** On-track equipment required to have operable lights must have those lights on when the equipment is moving.

**712.14** On-track equipment not equipped with lights must have a white light to the front and a red light on the rear when operating:

- a. At night, or
- b. In tunnels, or
- c. In fog or other weather conditions that limit visibility.

**712.15** When operating on-track equipment, employees must:

1. Ensure all occupants are seated in permanently installed seats,
2. Instruct occupants to look out in both directions,
3. Specify each employee's duties when the equipment must be removed from the track,
4. Apply brakes gradually unless a condition requires stopping in the shortest possible distance,
5. Communicate to workers on or about tracks before getting closer than 15 feet to them, and
6. Perform required maintenance, tests, and other adjustments in accordance with the manufacturer's recommendations.

**712.16** When operating on-track equipment, employees MUST NOT:

- a. Use the equipment for any purpose other than company business, or
- b. Permit tools or materials to obstruct the operation of the brakes or warning devices, or
- c. Restrict or interfere with the intended function of any device or equipment, or
- d. Permit employees to ride in or on the equipment unless authorized to do so by the proper authority and the employees are riding as part of their assigned duties, or
- e. Apply any device to any on-track equipment unless approved by the Director Work Equipment, or
- f. Tow equipment if doing so exceeds the braking capacity of the towing machine, or
- g. Operate equipment that is loaded beyond its maximum capacity.

**712.17** When operating on-track equipment, operate at a speed that permits stopping within one-half the range of vision. Do not exceed the speed authorized for trains on the same track or listed in the table below, whichever is less.

Type of Equipment or Operation	Must Not Exceed
Rail Detector Car	40 MPH
Rail-Highway vehicle less than 10,001 GVW	Forward – 40 MPH
	Reverse – 20 MPH
Rail-Highway vehicle more than 10,000 GVW	Forward – 30 MPH
	Reverse – 10 MPH
Type of Equipment or Operation	Must Not Exceed
Rail Grinders	50 MPH
Ballast shoulder cleaner and Loram Ditcher	40 MPH
Tampers, ballast regulators, and other self-propelled on-track equipment not previously designated	30 MPH
Burro Cranes	20 MPH
When pulling a push car	30 MPH
When pushing a push car	Straight Track – 10 MPH
	Curves – 5 MPH
All on-track equipment moving over self-guarded frogs or through the spring rail side of the frog	1 MPH
Type of Equipment or Operation	Must Not Exceed
Operating through the limits of long-term working limits or when more than one vehicle is operating within the limits of a single EC-1/EC-1e line 1 authority	20 MPH unless a higher speed is authorized by the employee-in-charge
Operating through turnouts, over facing point hand-operated switches or facing point frogs, over power-operated switches, over RR crossings at grade, passing people working around the tracks, passing passengers waiting for trains at passenger stops	5 MPH

**712.18** When using pushcarts:

1. Do not load beyond rated capacity, and
2. Unload before ramping on or off flat cars.

**712.19** Transport heavy materials only on push cars or trailer cars coupled behind self-propelled on-track equipment. Do not permit riders on push cars loaded with heavy materials except in cases of emergency and only after taking the necessary safeguards.



**712.20** When using personnel carriers:

1. Comply with all instructions of the safety decals,
2. When pulling a personnel carrier, do not pull other pushcarts with the same equipment,
3. Position them in gang consists to enable pulling the carrier in either direction, and
4. If they must be pushed, place the carrier in the trailing position at the first opportunity.

**712.21** Maintain the following minimum distances between the machine you are operating and the machine ahead for the described activity, when:

- a. Working: 40 feet unless a different distance is specified. Ballast regulators must maintain 200 feet, or
- b. Traveling: 200 feet. Ballast regulators must maintain 400 feet, or
- c. Bunching: 40 feet unless speed is 5 MPH or less, then maintain sufficient distance to prevent an accident.

**712.22** The Red Zone for on-track equipment that does not have extendible parts is as follows:

1. From 15 feet in front of the equipment to 15 feet behind the equipment, and
2. From the sides of the equipment as defined in the job briefing.

**712.23** Red Zone for on-track equipment that has extendible parts is as follows:

- a. From 15 feet in front of the equipment to 15 feet behind the equipment, or
- b. A minimum of 15 feet beyond the maximum reach of the extendible parts of the equipment on all sides.

**712.24** Employees must not enter the Red Zone of other equipment until the operator:

1. Notifies employees that it is safe to enter the Red Zone,
2. Establishes eye contact, and
3. Receives verbal notification that employees wish to enter the Red Zone.

**712.25** Operators of on-track equipment must not resume work when employees are located within the Red Zone of the equipment until holding a job briefing to establish safe work procedures.

**712.26** Employees and backhoe operators must take the following actions before employees enter the Red Zone of the backhoe:

1. The operator and the employee(s) must establish eye contact,
2. The backhoe operator must receive verbal communication from the employee(s) stating that the employee(s) wish to enter the Red Zone,
3. The backhoe operator must notify the employee(s) when it is safe to enter the Red Zone and employee(s) must not enter until it is safe to do so,
4. The backhoe operator must stop all movement of the equipment and place the backhoe in neutral, and
5. Backhoe operator must remove and raise hands from controls of the boom and bucket.

**712.27** When operating on-track equipment and it is necessary to inspect a switch:

1. Stop before reaching the switch,
2. Inspect the switch,
3. Restore the switch to the normal position,
4. Make certain switch points fit properly,
5. Lock the switch, and
6. Then proceed over the switch.

**712.28** When a main track switch has been lined for movement of on-track equipment or for other reasons, the switch must be:

1. Restored to the normal position,
2. Locked and the lock tested, and
3. Spring switches must be hand lined before operating through them.

**712.29** When approaching a highway-rail crossing at grade:

1. Be prepared to stop short of the crossing,
2. Do not operate on-track equipment over the crossing unless the way is known to be clear, and
3. If necessary, use a flagman wearing a lime yellow or orange vest to stop highway traffic.

**712.30** Do not operate on-track equipment between a passenger train that is receiving or discharging passengers and the station or station platform.

**712.31** When operating behind a train, employees must not:

- a. Follow a moving train closer than 600 feet, or
- b. Approach a standing train closer than 200 feet unless necessary to clear the track.

- 712.32** When operating equipment or hi-rail vehicles on a track that will be passed by a train on an adjacent track:
- If safe to do so, stop and exit the vehicle, or
  - If it is not safe or practical to stop and exit the vehicle, reduce speed to 10 MPH and maintain a lookout for objects falling or swinging from the train.
- 712.33** When a train is approaching a work location on an adjacent track:
- Ensure all employees and equipment are clear of the adjacent track,
  - Secure rotating machinery to prevent it from fouling the adjacent track, and
  - Lower all buckets and boom attachments to rest with the boom parallel to the track and load line tightened.
- 712.34** When being passed by a train on an adjacent track, inspect the passing train for defects as follows:
- Stand at least 30 feet from the passing train when possible,
  - If two or more employees are present, position at least one employee on each side of the train, and
  - Promptly notify the train crew of the results of the inspection.
- 712.35** When handling rail cars, make certain to:
- Only handle two cars at a time unless using a Brandt-type vehicle or car mover, and
  - Test the rail car air brakes when required as specified by CSXT Air Brake and Train Handling Rules.
- 712.36** A qualified CSX employee must directly supervise and instruct any non-CSX person operating equipment on CSX track. The CSX employee is responsible for establishing on-track safety, obtaining required authorities, and complying with all rules.
- 712.37** A component of a roadway maintenance machine must not foul an adjacent controlled track unless:
- Working limits have been established on the adjacent controlled track, and
  - No movements are permitted within the working limits on the adjacent controlled track.
- 712.38** When two or more operators are traveling within the same work limits and the same piece of equipment stops within those limits, equipment operators must:
- Notify the trailing equipment operator by radio that the equipment has stopped and the mile post location, and
  - If no positive communication is made with the trailing equipment, be prepared to exit the vehicle.

## 713 - Operating Cranes

**713.1** When operating cranes, employees must not:

- a. Operate a crane the employee is not qualified to operate unless under the direct supervision of a qualified operator, or
- b. Move a load over people, or
- c. Permit anyone to be under a load or between a load and a magnet attachment.

**713.2** The following signals must be given before a crane is moved:

- a. Two short blasts of the whistle before making a forward move, or
- b. Three short blasts of the whistle before making a reverse move.





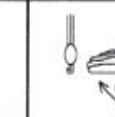


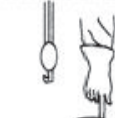



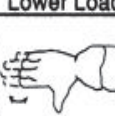
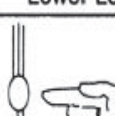
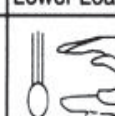
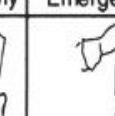
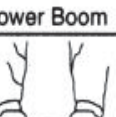

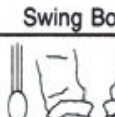
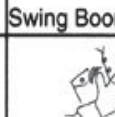
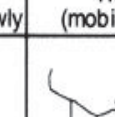
**713.3** Do not allow any part of the boom, cable, or equipment to come within 12 feet of any power line or other overhead aerial cables until all of the following safety precautions have been taken. Signal, communications, and cable lines may remain in operation at the discretion of the responsible and qualified person on-site after precautions have been taken to protect the lines from physical damage.

1. The owner of the power lines is present on-site and:
  1. Determines the voltage and required procedure to de-energize and ground the lines,
  2. De-energizes and grounds the lines, and
  3. Verifies the power lines are de-energized and it is safe to work.
2. After the power lines are de-energized, grounded, and verified to be safe by the qualified person on-site, the work may continue provided all other safety aspects are covered, and
3. After the work has been completed, make certain all booms, cables, and equipment are at least 12 feet clear of power lines before power is restored to the lines.

**713.4** Only the designated employee is allowed to give signals to the crane operator. When giving signals:

1. Use standard crane and derrick signals,
2. Have a clear understanding with the crane operator regarding the meaning of signals to be used, and
3. Remain in position that is in clear view of the crane operator.

**713.5** Use the following hand signals when directing crane movements:

 Main Hoist	 Auxiliary Hoist	 Hoist Load	 Hoist Load Slowly	 Stop
 Raise Boom	 Raise Boom & Lower Load	 Lower Load	 Lower Load Slowly	 Emergency Stop
 Lower Boom	 Lower Boom & Raise Load	 Swing Boom	 Swing Boom Slowly	 Travel (mobile eqpt)
 Retract Boom 2 hands	 Retract Boom 1 hand	 Extend Boom 2 hands	 Extend Boom 1 hand	 Dog Everything



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