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# Train Operations



Paul Finnegan

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# Engine Brake Check Procedure

Before moving an engine, the following brake check will be performed:

- Drain reservoirs.
- With handbrake set:
  1. Release independent, verify brakes released.
  2. Apply independent, verify brakes applied.
  3. Release independent, verify brakes released.
  4. Apply 20 pound train brake, verify brakes applied.
  5. Release train brake, verify brakes released.
  6. Apply 20 pound train brake, verify brakes applied.
  7. Bail-off train brake, verify brakes released.
  8. Release train brake and set independent brake.
- Release hand brake.
- Signal “Highball the Air” to engineer.



# Train Operations Topics

- Engine Brake Check Procedure
- Caboose Train Operations
  - Before Operations Procedures
  - Initial Tie On Procedures
  - Normal (Full) Operations
  - Push/Pull Operations
  - End of Operations Procedures
  - Student Brake Hours for Passenger Operations
- Yard Operations
- Reports
- Visitors
- Emergency Response Procedures

As always, Rule 108 applies to everything described in this document.



# Before Operations Procedures

- All crew members MUST log in the sign in log book and check the bulletin book for new information.
- All crew members MUST attend Safety Tailboard.
- Meeting leader MUST complete and file Safety Tailboard form signed by all attendees.
- Crew assignments made by Operations Supervisor/Superintendent or conductor, if Supervisor/Superintendent unavailable.
- Radios and switch keys issued as appropriate.
- Conductor updates the “Crew Board for the Day” outside the Operations Office.



# Caboose Train

## Initial Tie On Procedures

1. Conductor checks both sides of train for people and warns any people on or near the train.
2. Conductor authorizes brakeman to tie on and protects rear end of train.
3. Brakeman has locomotive tie on and stretches the joint between the locomotive and the first caboose.
4. If stretch is good, brakeman makes air and releases head-end caboose handbrake.
5. When all brakes are released, conductor does “full” stretch until knuckle on head end of last caboose is stretched.
6. If stretch is good, conductor waits 15 minutes and does full terminal brake test.
7. If brake test is good, conductor releases rear-end hand brake, gives hand signal for highball the air.
8. Conductor installs FRED on rear of train. Red Flag will not be needed if Caboose marker lights are working (in operation).
9. Trainmen walk the train opening doors and windows, emptying trash cans and picking up any trash as required.



# Normal (Full) Operations

## Departure

1. Conductor is responsible to ensure all switches are properly lined before departure of train.
2. Just before calling "All Aboard!" conductor confers with Museum Store about train and passenger current status.
3. Conductor calls "All Aboard!" 2 minutes before scheduled departure.
4. Conductor checks both sides of train, and when safe to do so, gives a go-away from me hand signal from rear of train.
5. Trainmen ride "the inside curve" side of train and watch the train for maintaining a safe run.
6. Approaching the east 3 switch conductor gives easy hand signal(s) and stops train east of the switch.
7. Conductor lines and locks the switch for westward movement into 3 rail and gives come to me hand signal.



# Normal (Full) Operations (con't.)

## Arrival

7. Conductor moves to north side of train on rear platform so the engine crew can see him and if the pedestrian crossing is clear gives a come to me hand signal to communicate the crossing is clear.
8. The brakeman makes the stop with the caboose train just west of the pedestrian crossing.
9. The brakemen turns the angle cock on the locomotive. Then uses the caboose's emergency brake valve to dump the air. Then lifts the pin on the caboose's coupler and gives a go away from me hand signal to detach locomotive from the train.
10. The brakemen boards the rear end of the locomotive.

# Normal (Full) Operations (con't.)

## Light Engine Move

11. Brakeman stops locomotive east of east 3 switch, lines and locks for the main.
12. Brakeman gives come to me signal to begin trip around balloon.
13. Brakeman boards leading end of the locomotive and watches track for safety (people, things, points on switches, etc.)
14. Brakeman stays in view of engineer during the whole light movement around balloon, giving a come to me hand signal to indicate crossings/track clear when appropriate.



# Normal (Full) Operations (con't.)

## Light Engine Tie On

15. Meanwhile the conductor opens the angle cock and knuckle on west end caboose, moves FRED to the east end of the train, closes the angle cock on the east end caboose and protects pedestrian crossing during light engine move.
16. As the light locomotive approaches the caboose train, the brakeman makes a safety stop at least one car length before the train.
17. Conductor checks both sides of train for people and warns any people on or near the train. When safe to do so, he gives the couple up signal to the brakeman.
18. The brakeman ties on the locomotive, gives a small stretch and makes air for the train.
19. Before the next train departure, the conductor uses hand signals to do a set and release brake test, checking at least the last caboose for a set and release. If successful, gives the highball hand signal to indicate the train is ready for the next run.

# Push/Pull Operations

## Departure

1. Conductor is responsible to ensure all switches are properly lined before departure of train.
2. Conductor calls “All Aboard!” 2 minutes before scheduled departure.
3. Conductor checks both sides of train, and when safe to do so, gives a go away from me hand signal from rear of train.
4. Conductor and brakeman ride “inside curve” side of train and watch the train for maintaining a safe run.
5. Engineer makes the stop near the Edenwold crossing. Sets the independent brake and releases the train brake.

# Push/Pull Operations (con't)

## Return

6. After the train brakes release, the conductor gives a come to me hand signal and boards leading platform of tail caboose.
7. If the sewer crossing is clear, gives a come to me hand signal to the engine crew.
8. The conductor spots the train on the platform before the east pedestrian crossing, giving easy hand signal(s) as appropriate.
9. Once train is unloaded, conductor gives release brakes hand signal to safely allow slack to run out.

# End of Operations Procedures

- Brakeman:
  - Spots the locomotive on the oil pan.
  - Sets handbrake on western most caboose.
- Enginemen shut down and secure locomotive if appropriate.
- Conductor:
  - Sets rear handbrake.
  - Removes FRED from the rear of the train.
- Trainmen:
  - Walk the train, closing doors and windows, emptying trash cans and picking up any trash as required.
- Post Operations Safety Meeting:
  - All crew **MUST** attend meeting.
  - Conductor completes reports and makes entries in service books. The conductor's service book **MUST** be signed by supervisor or another qualified conductor.
  - Radios and switch keys are returned. (Radios put on chargers.)
  - Sign out of the sign-in log if going off-duty.



# Student Brake Hours for Passenger Operations

- Student brakemen only get “student brakemen” hours if they have a brakeman instructor working one-on-one with them for normal operations. Service without a dedicated instructor will be logged as car attendant.
- If more than one student brakeman is working passenger operations, only time actually being instructed is logged as student brakeman hours. Time observing is useful and encouraged but does not count towards qualification.
- Student brakemen working on push/pull operations will be logged as car attendant. Up to one hour may be logged as student brakeman for crew meetings, tie-on and cut-off movements (15 minutes each.)

# Yard Operations

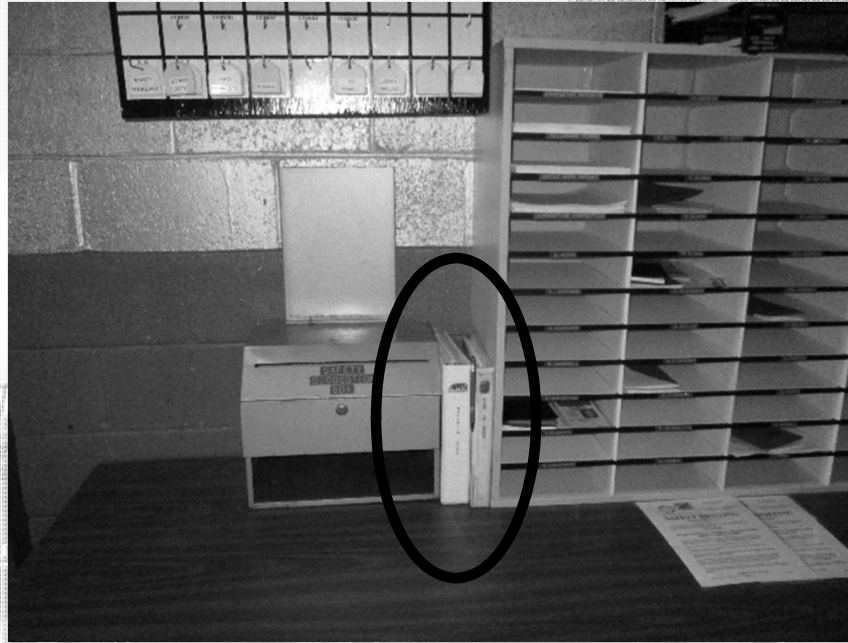
1. Remember we are an operating museum. Interact appropriately with visitors at all times.
2. Always know where your crew and visitors are before moving equipment.
3. Protect end of train when shoving into 1 or 2 rail. Always protect end of train on long consists moves.
4. Practice proper radio procedures.
  - a) Especially if multiple crews working in the yard.
  - b) Clearly communicate if going between radio & hand signals.
  - c) Clearly communicate passing control of movement.
5. Relay hand signals – EXCEPT RED ZONE
6. Exercise extra diligence during night, winter or bad weather operations.
7. When cutting off, open knuckle of equipment begin left behind.
8. Be aware of special rules & bulletins regarding RIP track and entering buildings.
9. When working on Secondary Track (6,7, RIP, Dodgepole etc.)
  - a) Be aware of track and equipment conditions
  - b) Be aware of footing and tripping hazards
  - c) Be careful of aggressive insects
  - d) Reduce speed
10. Be aware of special handling needs for equipment e.g.:
  - a) Never turn WP 917.
  - b) Use extreme care moving WP 165.
  - c) F units must not be coupled nose-to-nose.
  - d) Reduce speed if moving equipment with 3 or 4 axle trucks.
11. Yard Switches:
  - a) All switches must be locked when used by passenger trains, even if attended.
  - b) During yard operations a switch may be hasped rather than locked if switch is attended.
12. Do not operate outside the gate without authorization from Proper Authority.



# Comments Common to both Passenger and Yard Operations

- Per rule 1700 hand and lantern signals are the preferred forms of communication.
- During caboose operations there is normally no need for use of radios.
  - Use of “Crossing Clear” on radio or “Come to Me” hand signal during push/shove movement should be discussed at the Safety Tailboard so the crew understands what is expected for that day.
- The FRRS/WPRM Hand Signal set does not include a car count hand signal. It is not part of training and should not be used in operations. Use the easy and stop hand signals as appropriate.

# Sign-in Log/Bulletin Book



- The sign-in and bulletin books are kept on the desk outside of the Operations office.
  - **Every time** you go on duty – sign IN, when you go off-duty, sign OUT
  - **Every time** you go on duty, check the bulletin book for current bulletins.



# Paperwork

Blank forms and completed forms are kept in the storage baskets on top of the file mail boxes outside of the Operations office.



If there are no blank forms, contact an Operating Department manager or supervisor to get more from the file cabinet.

If you need a form and no one is available to get you a blank form, all of the forms may be printed from the Operating Department Forms and Documents web page from the Operating Department home page on the [wplives.org](http://wplives.org) web site.

# Required Reports

- Conductors Reports:
  - Conductor's Time Report (Daily Train Report)
    - Conductor's Time Report paper version
    - Conductor's Time Report on-line version
- Safety Tailboard Form 400
- Locomotive Inspection Form M1001
- Operating Department Work Report
- Mechanical Department Form No. 1003

# Dealing with Visitors

- In all circumstances:
  - Be polite.
  - Be helpful and helpful.
  - Your attitude and the conduct can make the difference in whether they have a safe and enjoyable visit, or an unpleasant experience that may cause harm to the museum.
- If you see a visitor in imminent danger:
  - Take immediate action.
  - Explain the danger to them.
  - Do not scold them.
- When visitors are found performing unsafe acts, use the opportunity to educate them, not to berate.
- Try to answer all questions. If you do not know the answer, offer to assist the visitor in locating someone who can help.

# Quality of Service Techniques:

## Here are four methods for defusing a Difficult Situation:

1. SMILE: give the visitor a warm, sincere hello with a smile.
2. ANTICIPATE: the visitor's complaint and head it off with a sincere, concerned comment. (Take the offensive with kindness.)
3. APOLOGIZE AND ASSUME RESPONSIBILITY: take the blame for the visitor's situation and empathize with them for their problem on behalf of your organization.
4. ACTION: solve the problems promptly.

## Six keys to Cooling Down an Irate Visitor:

1. LISTEN; carefully and with interest.
2. EMPATHIZE: put yourself in the visitors place.
3. Use Warm Fuzzies that are:
  1. Genuine
  2. Specific
  3. Timely
  4. Sincere
4. ASK QUESTIONS: in a mature, non-threatening way, that requires the visitor to think about his/her answers.
5. REPEAT: back to the visitor your understanding of their problem, then suggest one or more alternatives to answer their concerns.
6. SOLVE the problem: identify solutions to satisfy the visitor's needs or find someone who can.

# Emergency Response Procedures

- Request Help
  - Utilize other volunteers.
  - Contact Proper Authority as soon as possible.
  - If appropriate call 911.
  - Minimize use of radio to keep channel clear.
- Administer First Aid or CPR as trained and required.
- Do not move patients unless required for their safety.
- Maintain crowd control and restrict access to the problem area as required.
- Maintain Self Control.
- Establish and maintain a safe area/situation.
- Emergency Evacuation and /or meeting location is located in the main parking lot at the pedestrian entrance.
- Collect names and contact information for any witnesses or other related parties.
- Secure any equipment, vehicles, tools, etc. involved in the incident.
- Do not leave until released by proper authority.
- Do not discuss the incident with anyone except with proper authority or first responders.
- Do not discuss with media or post anything online about the incident.

# Revision History

- 6/14-15/16 – New Paul Finnegan
- 6/15/16 – Inputs from Kenneth Finnegan
- 11/19/16 – Removed Caboose from name
  - Split into Caboose and Yard Operations
- 11/20/16 – added changes from KDC
- 12/4/16 Paul Finnegan
  - Added slide for student brake hours for passenger operations.
  - Added slide for Comments Common to both Passenger and Yard Operations.
  - Removed car counts.
- 12/16/16 Paul Finnegan
  - Made a general pass and cleanup.
- 12/24,26/16 Paul Finnegan & Kenneth Finnegan
  - Made another general pass with lots of changes.
- 1/13/17 Paul Finnegan
  - Added material from volunteer manual for dealing with visitors
  - Reworded use of radio for push/shove movements.
- 1/14/17 Paul Finnegan
  - Added slide “Emergency Response Procedures”
- 1/15/17 Paul Finnegan
  - Added material to End of Operations slide.
  - Created Before Operations slide.
- 4/12/17 Paul Finnegan – included Don Nelson’s email (4/10/17) inputs
  - Caboose Train Initial Tie On Procedures #6: Wait 15 minutes after applying air to train brakes before a Full Terminal Brake Test.
  - Spell check - #7 “rear- end” not “read-end”
  - Normal (Full) Operations and Push/Pull Operations: Departure - At some point before calling “All Aboard”, Conductor should check with gift shop for pending riders on next train.
- 1/9/18 Paul Finnegan
  - Added on-line conductor report, removed bad daily train report.
  - Changed Gift Shop to Museum Store as requested by KDC
- 7/12/19 Paul Finnegan
  - Updated location of books/forms from Ops Office to new desk outside of Ops Office.
- 1/5/24 Paul Finnegan
  - Reversed order of slides 2 and 3.
  - Added “Red Flag will not be needed if Caboose marker lights are working (in operation).” to caboose tie-on procedure.

