

TRAIN OPERATION SEMINAR

Agenda

Thursday, October 14, 2004

Operation of Locomotives

- Throttle
- Reverser
- Parking Brake
- Speed
- Maintaining the fire
- Maintaining water in the boiler

Public Behavior

- Sharing
- One person fires up
- Smile

Attire

- Engineer – Overalls
- Conductor – Loud Whistle, hole punch for tickets, dark jeans/slacks, white shirt, black cap
- Station Master – dark pants, white shirt, cap, loud whistle

Hand Signals

Using the Whistle

Handling a derailment

Responsibilities

- Station Master – ultimate Boss in the station
- Engineer
- Conductor

The Conductor's Job on the Auburn Valley Rail Road

There is a lot more to being a good conductor than riding on the last seat on the train with a whistle. There are two main functions of the job: Safety and Public Relations. Sometimes they overlap.

Safety and Control of the Train:

The Engineer operates the locomotive, but the conductor controls the train. The engineer cannot see behind him/her, so the conductor must watch the train to detect derailments, cars coming uncoupled, and unruly or over-excited passengers. The engineer should not start the train until the conductor gives a whistle signal. Therefore the conductor must make sure the train is ready to move and all passengers are firmly in their seats, not jumping off and on. When moving, it is important that passengers sit still and face forward. If this is not maintained, as with unsupervised children who have ridden many times, the conductor should not hesitate to stop the train, and issue a polite warning to the offenders. This often corrects the problem. If there is a derailment of any of the cars, or if a car comes uncoupled, give the stop signal on your whistle immediately. All signals should be as loud as you can make them, as it is hard to hear at the locomotive with its noise and that of the passengers

Signals are as follows:

One long blast:	STOP
Two shorts blasts:	MOVE FORWARD
Three short blasts:	REVERSE

When the engineer is not sure whether a signal is given or not, he/she may ask for a signal from the conductor by giving four or five short blasts on the locomotive whistle. This can be then answered by the conductor, with one of the signals (listed above) on his/her mouth whistle. The engineer should answer the conductor's signals with his/her locomotive whistle which indicates both are in agreement and understand what is to be done.

Public Relations:

Acting like an old-time conductor and conversing and joking with the passengers is important for the flavor of the operation and enjoyment of those riding. Calling out the train and its forthcoming stops adds flavor. In this atmosphere, it is easy to request safety requirements, like keeping arms and legs inside the coaches at all times, and keeping their seats until the train is completely stopped. It is also important to balance weight on each car, and to ask a passenger to move if necessary in order to do this (if there are two people on a 4-passenger car, ask them to take the middle seats; if there is just one adult, ask him to take a middle seat etc.). The conductor, while usually taking the last seat on the train, should move to a middle seat on the last car, if the car is otherwise unoccupied. Whenever the train stops, the conductor should get up and stand alongside, unless he/she can be of help with a problem.

Train Operation Guidelines

1. Engineers :

- Watch the lubricator oil level
- Be aware of the water level in the tender
- When you need to fill the tender with water, do it when you pull into the station and let people load and unload while you are filling up
- If you need a break, tell the Station Master or your Conductor, don't just disappear
- Keep water in the boiler always
- Smile
- No tattered, stained, torn, clothing - possibly striped overalls would be nice but not required
- Have Fun !
- Be safe and aware of kids and people and the track at all times
- Don't hesitate to stop the train at any time if a passenger or passengers are disobeying safety rules.

2. Conductor:

- As soon as people start boarding the train, begin punching tickets from the front of the train
- Make sure the Engineer can hear your whistle to start or stop
- No tattered, torn, clothing - possibly blue jeans, clean shirt, loud whistle
- Smile
- Have Fun
- Be safe and aware of kids and people and the track at all times
- Don't hesitate to stop the train at any time if a passenger or passengers are disobeying safety rules. After stopping, speak to the offenders about it. This will break it up.

3. Station Master

- Call out the names of the "stops" loud and clear for all to hear
- Reserves the right to move an Engineer to speed things up if said Engineer is having difficulties with the locomotive and the line to ride the train becomes long
- Has the final word on who is a Conductor and who is an Engineer
- Smile
- Have Fun
- No tattered, torn, stained clothing - possibly blue jeans, clean shirt, spare whistle
- Be safe and aware of kids and people and the track at all times
- Don't hesitate to stop the train at any time if a passenger or passengers are disobeying safety rules. After stopping, speak to the offenders about it. This will break it up.

How to fire up a Locomotive

- Have a pair of leather gloves handy
- Figure spending about 1 hour for this operation
- Be absolutely sure that there is enough water in the boiler
Water level should be at the 3/4 mark in the sight glasses
- Throttle is open
- Connect air hose to the proper connection place on the engine to create the draft needed
- Have boxes of: wood , shingles , newspaper handy
- Open fire box door and load with crumpled up newspapers , shingles , hardwood pieces.
- Close firebox door , open valve on air hose about 1/4 for draft
- Light newspapers with a propane torch
- Wait while fire starts to burn before checking the progress
- Someone else can lubricate the engine at this time if available
- After a while add more shingles and hardwood to the fire
- After you have a good wood fire and start to see some steam developing on the steam gauge you can start to add some coal to the fire
- Be sure to use both wood and coal as you tend the fire.
- As the coal starts to burn it must be spread out on the grate so as not to create a hot spot
- Close the throttle as the steam starts to build up. You will start to see water coming out of the cylinder cocks at about this time
- When the steam pressure gets to the 60 - 70 psi range, close the air hose valve and open the stack blower draft valve (center hand wheel) in the cab. Now steam is making the draft for the fire.
- Remove the air hose from its attachment place and coil up near the valve on the building
- Steam pressure will start to build faster now so keep adding the wood , coal mix. Not as much wood is needed by this time if you have been doing it right
- If the steam pressure reaches the blow off valve pressure setting area try to anticipate this and relieve it manually by opening the valve on the bottom of the boiler. This will just drop the pressure slightly and let you add water to the boiler by injecting it. The water level will probably be lower and this action will use up some of the available high steam pressure.
- You must have a good coal fire to be able to move the locomotive and to pull the cars behind it! A weak fire should not be accepted!
- The engine can be turned and put on the track when the pressure is around the 100 psi mark and it has a good coal fire.
- After you get the locomotive off the turntable run it about 50 feet with the drain cocks open to remove the excess water. Then close these valves
- Run the engine and cars around the track with only the engineer and a conductor the first time to warm up the engine cylinders.
- Always watch the winker to be sure that oil is being pumped to the engine. If you don't see this happening make adjustments to the pump drive linkage.
- Always keep the water level up in the glass indicators
- Keep fire stoked at all times

10.14.04

AUBURN VALLEY RR

STATION CALLS FOR CONDUCTORS
(CLOCKWISE TRAVEL)

OPENING CALL FOR BOARDING" "NOW BOARDING ON TRACK # _____,
TRAIN # (401 OR 402) FOR

AUBURN MILLS

TABLE JUNCTION

LAKESIDE PARK

STEAM HILL TUNNELL

WEST YORKLYN"

REMIND PASSENGERS TO

- STAY SEATED AT ALL TIMES
- KEEP HANDS AND FEET IN,
- IF THEY DROP SOMETHING DO NOT LEAN
OVER TO PICK IT UP
--ASK THE CONDUCTOR TO STOP THE
TRAIN.

"THERE ARE NO DINING CARS OR RESTROOMS ON THIS TRAIN!"

NOTE: IT SPEEDS THINGS UP IF YOU PUNCH TICKETS AS PEOPLE GET
SEATED. DON'T WAIT UNTIL EVERYONE IS LOADED BEFORE STARTING TO
PUNCH TICKETS.

USE STANDARD WHISTLE CALLS TO SIGNAL THE ENGINEER WHO WILL
WAIT FOR YOUR SIGNAL BEFORE LEAVING THE STATION.

SAFETY QUESTIONS FOR AUBURN VALLEY VOLUNTEERS

If you are a conductor:

If one or more passengers are injured, what would you do?

If a car derails or becomes disconnected, what do you do?

If children are roudy (usually in a group after several rides), and won't sit still, what do you do?

If you are an engineer:

When you lose your steam pressure and can't get it back, what would you do?

When you can't get your injector(s) to pick up water and inject it into the boiler, what do you do?

If you have high water in the boiler, and the exhaust is "mushy" and you throw too much water (and coal and oil dirt) out the stack, what do you do?

If you can't see the water in the sight glass, what do you do? WHAT DON'T YOU DO?

If a car derails, how will you know it, and what do you do?

If the locomotive derails, what do you do?

While you and others are trying to get the engine back on the track, what do you do?

If a locomotive should upset, what do you do? WHAT DON'T YOU DO?

IT IS IMPORTANT THAT YOU LEARN THE ANSWERS TO THESE QUESTIONS.