NEVADA STATE RAILROAD MUSEUM

CARSON CITY, NEVADA

HOSTLER HANDBOOK

2010

Hostler

Description: A Hostler is a volunteer who prepares a locomotive, from pulling it out of the building to "Ready-To-Run," in a timely manner without needing supervisory help from others. The Hostler is responsible to and under the supervision of the Road Foreman, or in his absence, the Engineer assigned to the first shift of the day. The Hostler shall see that his locomotive is properly inspected, lubricated, fueled, filled with water and sand, and adequate air brake and steam pressure are made up for operation in a safe, timely manner. The Hostler shall be responsible for the safe operation of the engine until the assigned road crew comes aboard and the Engineer accepts the engine. In most cases the Hostler(s) will be the Engineer and/or Fireman assigned to the first shift of the day. The Hostler shall also supervise all Hostler Helpers and other individuals assisting in the preparation of the equipment under his jurisdiction.

Hostler's duties include:

1. Attending the daily pre-operation Safety Briefing.
2. Following the instructions in the NSRM Hostler's Handbook.
3. Being responsible to and taking direction from the Road Foreman.
4. Supervising those assisting in the preparation of the locomotive.

Requirements: The Hostler must be a qualified Fireman or Engineer.
A Hostler must be at least 21 years old.

All positions require that the Crew Member have passed the NSRM Rule Book / Safety Test. Attendance at the annual Safety Meeting is required to maintain status as a Crew Member.

1.0 INTRODUCTION

This Hostler's Handbook is intended to provide the basic information needed to perform the duties of a Hostler. Any update of the safety information will be noted in the text as a revision from the previous issue of the handbook.

Appearance is important.
You should at all times wear your volunteer's name badge.
It is understood that the Hostler's job is a dirty one. Be prepared to change into neater, cleaner clothing when the job as Hostler is finished.
It is preferred, but not mandatory, that Hostlers be dressed in the typical NSRM uniform: a museum logo shirt, jeans or overalls, a railroader's cap and jackets or coats when required by the weather.
Footwear is an important factor in safety. Wear work boots/shoes with soles and heels firmly attached and heels that are not excessively worn. Suitable footwear around shops, tracks, and moving equipment does NOT include high-heeled boots or shoes, sandals, low quarter slip-on shoes or tennis shoes.
Because of exposure to hot metal it is advisable to wear long sleeved shirts and gloves.

You should carry your NSRM Rulebook at all times while on duty.

2.0 SUMMARY OF HOSTLER'S DUTIES

The Hostler has responsibility for preparing the locomotive for use and maintaining safe and appropriate conditions. He will also direct and monitor the activities of the Hostler Helpers in their duties.

The Hostler MUST have a thorough knowledge of the locomotive appliances and the operation of each. This will include the brake system, combustion system, methods of proper lubrication, electrical generation, and proper use of the water delivery and monitoring system including the injector, gauge glass and try cocks.

A comprehensive knowledge of the basic skills is necessary in order to be able to safely respond to conditions which may arise. Serious injury or equipment damage could occur if mistakes are made while working in this capacity.

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2.1 PRIOR TO LIGHTING FIRE IN LOCOMOTIVE

Before moving locomotive from the Annex the following must be done:

1. All doors through which any portion of the train will pass must be fully open to the maximum of their travel and the operating chain secured with a keeper.
2. Inspect locomotive surroundings to make sure that there are no obstructions that might be hit when moving the locomotive.
3. Ensure that the Switcher Locomotive (Dinky) is coupled and the operator is aware of the movement to be done.
4. Release tender hand brake and make sure that reverse lever is positioned in the direction of intended movement and cylinder cocks are open.
5. Remove chain blocking driver and stow on its hook.
6. Position a person in a location to be sure that pedestrians and other workers can be made aware of the movement.
7. When all is clear signal Dinky operator to move locomotive from building.
8. When the locomotive is clear of the walk signal Switcher Locomotive (Dinky) operator to stop.
9. Remove chain from hook and place on both sides of driver nearest the engineer's cab window. Set tender hand brake.
10. Notify Dinky operator that movement is complete and that the Switcher Locomotive (Dinky) may be relocated and/or shut down.

2.2 INITIAL INSPECTION

The hostler must read log books and other bulletins or notices before the day's operation and inspect all items listed as needing attention to verify that they have been corrected and are in acceptable condition.

The first thing the hostler should do when getting on the locomotive is to inspect the boiler, paying particular attention to staybolts within and outside the firebox, leaky flues, and the general condition of the firebox. The hostler should make a general inspection of the exterior of the boiler to ensure there are no leaking fittings or appliances.

The hostler should inspect the injectors, lubricator, air pump, cylinder cocks, headlights and air brakes to ensure they are in working condition. Fill the sand box and sand dome and test the sander for proper operation. Blow down the water glass and verify the water level by using the try cocks.

The hostler should start an inspection of the locomotive forward from the right cab steps and inspect the engine on that side, then the front, and along the other side of the engine and tender, the back of the tender, and lastly inspect the tender on the side from which he started. He should inspect the main and side rods; look for loose, broken or worn brasses; wedges and crosshead keys; loose bolts or missing cotter pins; broken springs or defective rigging; and defects in brake gear, etc. He should verify that all the lubrication devices are in proper condition.

Fill the hydrostatic lubricator and adjust the feed rate.

The hostler should drain all condensation from the main air reservoir and before starting the air pump open its drain cocks to relieve condensation. Start the air pump slowly until sufficient pressure has been built up in the main reservoir to cushion it, and only then completely open the steam valve. Adjust the oil feed so as to feed oil to the steam cylinder before starting the air pump. Check the air pressure shown on the gauges to verify that the pump governor and feed valve are working properly. Test the brakes by applying them with each brake valve and note whether the air discharges freely and the gauges function properly.

The hostler should make sure that there is an adequate supply of fuel and water in the tender before leaving the terminal.

2.3 LIGHTING FIRE IN LOCOMOTIVE

1. Remove stack cover and ensure that atmosphere valve on steam dome is open if there is no pressure in the boiler.
2. Using try cocks, determine the water level in the boiler. Confirm that water glass shows the same level and that valves to water glass are open.
3. Check water and fuel levels in tender.
4. If there is no pressure in the boiler attach shop air line and start shop air compressor.
5. Inspect firebox for leaks or brick damage using a flashlight.
6. Open damper on firebox door and main firebox damper.
7. Cut in air line (or steam, if the boiler has pressure from a previous operation) to atomizer and blower and open valves to each in order to clear the line of any condensed water. Close valves after lines are clear.
8. Open oil valve beneath apron plate on Fireman's side of cab making sure that oil firing valve is shut.
9. Toss a lighted rag or fusee into the firebox in front of the burner.
10. Replace flash plate and close firebox door.
11. Open oil valve on tender oil tank.
12. Using the blower, atomizer and firing valve, light fire in the firebox and adjust to maintain a spot fire. Log time that fire was lit.

13. When starting with a cold boiler three hours should be allowed before reaching operating pressure. With a warm boiler allow two hours. Building steam at a faster rate causes uneven expansion of the boiler and can cause damage.
14. When starting with a cold boiler allow steam to escape from the atmosphere valve for three minutes before closing valve.
15. When starting with a cold boiler allow steam pressure to reach approximately 20 psi before transitioning to steam atomization and removing house air line.
16. Stop shop air compressor if it was started.
17. Allow steam pressure to build until safety valve lifts. Note pressure and time in log.
18. The Hostler is responsible for oiling and greasing the locomotive prior to train service and must be familiar with the proper methods and lubricants for all points to be lubricated and for appliances such as the air pump and dynamo.
19. Prior to departure for train service the Hostler must insure that all oil cans are filled and tools needed for routine service are available.

2.4 STANDARD CLOCK

The Standard Clock is in the Restoration Shop. This railroad runs on Pacific Time. The Standard Clock is set automatically via radio signal several times a day. You should adjust your watch to be within one minute of the Standard Clock. Compare your watch with that of the Conductor. Use of a digital watch is permitted.

2.5 EXCEPTIONS

All of the above describe the regular activities of an ordinary day's operation. There is *never* an ordinary day's operation. Be prepared for changes in your work necessitated by safety concerns, a different routine (such as Santa Train or night operation), differing equipment or the needs of the museum.

BE FLEXIBLE

BE SAFE

Date:	Description	
8/28/2009	Original release	
9/10/2009	Revised release	Electronic Device
1-31-2010	Revised Release	Standard Clock

The Nevada State Railroad Museum is an Agency of the Nevada Department of Cultural Affairs, Division of Museums & History.