



Fireman

**Performance
Checklist**

(Generic Version)

Version 1

June, 2011

IMPORTANT NOTICE

This booklet is one of a series of generic training and assessment templates developed by the Association of Tourist & Heritage Rail Australia Inc (ATHRA) as guides for heritage railway operators seeking to develop or upgrade their local training and assessment resources.

This booklet and others in the series are not intended to be training resources in their own right but rather to be suitably customised, embellished and adapted by railway operators to match the specific context of their own railway, e.g. types of locomotives, rollingstock and associated equipment, the track layout and infrastructure, the local standard procedures and rules, the safety management and safeworking systems, the railway organisational structure, and the roles and functions of personnel in the railway, etc.

Railway operators seeking to use this booklet and others in the series should initially refer to the ***ATHRA Customisation Guidelines Booklet*** which provides important information on how the generic templates should be used.

Disclaimer

The information contained herein is made available by the Association of Tourist & Heritage Rail Australia Inc (ATHRA) as part of a set of ***generic training and assessment templates*** for use by individual heritage railway operators.

It is intended that heritage railway operators will be able to create their own local training resources by suitably modifying, embellishing and customising the generic templates to meet their own requirements.

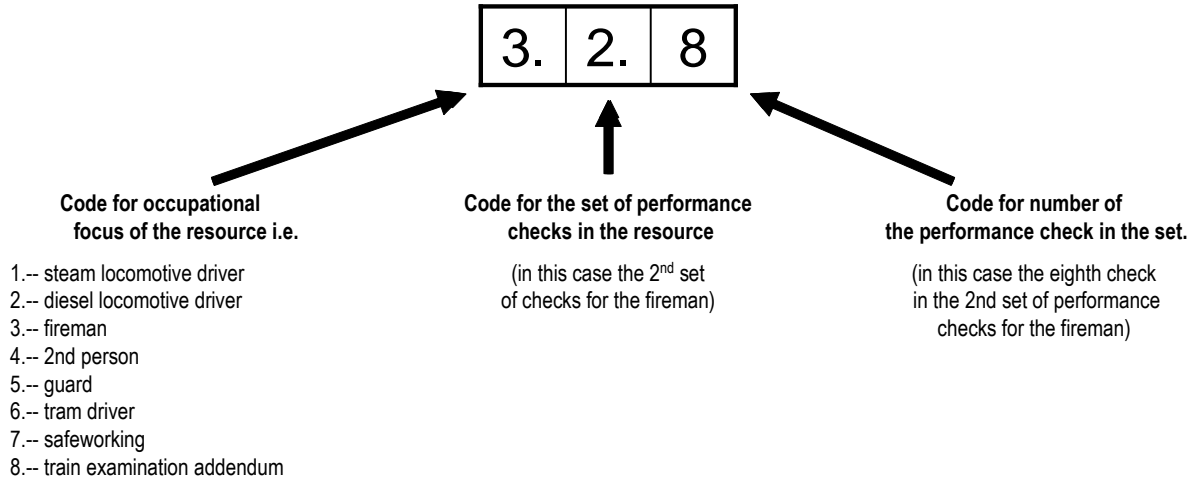
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NOTES

CODING SCHEME FOR THE ATHRA RESOURCES

The coding scheme for the ATHRA Resources is as follows:



CUSTOMISATION OF QUESTIONS AND ANSWERS IN THE 'PERFORMANCE CHECKLIST'

As explained in the ATHRA Customisation Guidelines, this **Performance Checklist** is a generic document designed to be customized and adapted, if necessary, by local heritage railways to match their own railway configuration, equipment, procedures, safety management systems, etc.

Performance checks in the booklet may be modified by updating the content of the existing templates to incorporate appropriate information about the railway's own operating system, equipment, road, procedures, safety management system, etc. This may involve appropriate alteration to existing performance checks or the insertion of additional suitable performance checks.

To aid in the addition of performance checks, if needed, a blank row has been provided at the end of each set of checks in the generic checklist. The following is a step-by-step process to incorporate any additional performance checks:

1. Using the mouse, select the blank row
2. In the 'TABLE' drop down menu at the top of the document select 'Insert'
3. Click on 'Insert rows below'
4. Repeat as many times as necessary until you have sufficient rows for the additional performance checks (including the original blank row in the generic document)
5. Insert the text for each of the additional performance checks
6. Insert the codes of the additional performance checks as per the coding scheme for the ATHRA training and assessment resources

3.1 Role and responsibilities of a fireman on a steam locomotive

(Under supervision, the learner is to carry out the following tasks)

- 3.1.1 Obtained, read and correctly interpreted a copy of the duties of a fireman for the rail operator concerned
- 3.1.2 Obtained, read and correctly interpreted copies of the rail operator 's documents describing the statutory responsibilities of a fireman, including rail safety and safeworking requirements and regulations related to the operation of boilers.....
- 3.1.3 Obtained, read and correctly interpreted a copy of the standard procedures of the rail operator applicable to a fireman, including record keeping and the reporting of defects and incidents
- 3.1.4 Demonstrated ability to recognise hazards and hazardous situations that may be faced by a fireman and to implement appropriate risk management strategies as per the railway operator's standard operating procedures.....
*(This may include **hypothetical hazardous situations** posed by the assessor requiring a verbal explanation by the candidate of what risk management strategies they would adopt if the hazardous situation occurred e.g. bushfire conditions, a fire incident, exposed steam pipes, broken hand rail, leaking steam pipes, etc.)*
- 3.1.5 Demonstrated ability to identify and use required personal protective equipment (PPE) as per the railway's safety management plan and related procedures
- 3.1.6 Demonstrated ability to hand over responsibility of the locomotive boiler to an incoming locomotive crew as per the railway operator's standard operating procedures
*(This may include a **hypothetical handover process** posed by the assessor requiring a physical demonstration or verbal explanation by the candidate of what actions they would take to handover responsibility for a boiler to a relieving fireman)*
- 3.1.7 *Blank for additional performance check?*

3.2 Conducting pre-operational checks on a steam locomotive boiler

(Under supervision, the learner is to carry out the following tasks in a safe and efficient manner)

3.2.1 Identified and described the following components of the boiler of a steam locomotive and its associated equipment (purpose, principal parts, functions and operation, and potential defects and related action).....

[The following list may be adjusted and customised to match the locomotive and the railway concerned]

- | | |
|--|--|
| <ul style="list-style-type: none"> • ashpans • blower • blower valve • blow down valve • boiler barrel • brick arch • clack valve • communication equipment provided on the locomotive • crosshead • dampers • dome • expansion brackets • fire-hole • firebox • firebox wrapper plate and backplate • foundation ring • fusible plug • gauge glasses • gudgeon pin | <ul style="list-style-type: none"> • injector • piston rods • regulator or throttle • safety valves • slidebars • steam pressure gauge • steam stop valve (also known as the manifold or turret) • superheater elements (if applicable) • tube plates • tubes • vital part of a boiler • washout plug • waterspace stays • water gauge
<i>(including: the water gauge glasses, the steam way cock and the water way cock)</i> • whistle valve |
|--|--|

3.2.2 Signed on

3.2.3 Checked roster, notices, locomotive assignments and located the locomotive to be prepared for service

3.2.4 Conducted a visual inspection and other required pre-operational checks of boiler and associated equipment
(Using the Railway's checklist for the boiler on the locomotive concerned)

3.2.5 Checked the level of water in the boiler.....

3.2.6 Carried out other required pre-operational checks of the locomotive and its equipment that are the responsibility of a fireman.....
(Using the Railway's pre operational checklist for the locomotive concerned)

3.2.7 Blank for additional performance check?

3.3 Lighting fire and raising steam

(Under supervision, the learner is to carry out the following tasks in a safe and efficient manner)

3.3.1 Conducted pre-light up procedures.....

3.3.2 Lit fire correctly

3.3.3 Raised steam.....

3.3.4 Checked to ensure adequate ventilation within the locomotive shed.....

3.3.5 Tested and read the water gauge glass fittings

3.3.6 Checked the operation of the feedwater injectors.....

3.3.7 Started turbo and tested the lights.....

3.3.8 Blank for additional performance check?

3.4 Operating the boiler during a train journey

(Under supervision, the learner is to carry out the following tasks in a safe and efficient manner)

3.4.1 Followed applicable safeworking rules throughout the train journey

3.4.2 Checked and maintained the water level in the boiler throughout the train journey.....

3.4.3 Fired and managed the boiler throughout the train journey

3.4.4 Monitored and tested equipment and instruments regularly to ensure an adequate supply of fuel and water to the boiler throughout the train journey

3.4.5 Optimised the burning of the fire and the level of steam throughout the train journey

3.4.6 Ensured adequate draft in firebox throughout the train journey

3.4.7 Checked and cleaned ash pan and smoke box as required

3.4.8 Took on water and fuel during the journey as required and applied any water treatment in accordance with the Railway's standard operating procedures.

- 3.4.9 Responded to the driver's instructions throughout the journey
- 3.4.10 Assisted the driver in the observance of fixed signals, point stand indicators, check points, track side signs and level crossings throughout the train journey
- 3.4.11 Demonstrated vigilance throughout the journey including looking back to train
- 3.4.12 Dealt with any abnormal situations arising during the train journey, including applicable emergency communication and evacuation procedures.....
*(This may include **hypothetical abnormal situations** posed by the assessor at various times during the journey requiring a verbal explanation by the candidate of what they would do if the abnormal situation occurred)*
- 3.4.13 Stopped and secured the train in the event of an emergency arising during the train journey, including the safe management of the boiler
*(This may include a **simulated emergency** situation)*
- 3.4.14 Blank for additional performance check?

3.5 **Cleaning and checking the boiler after operations**

(Under supervision, the learner is to carry out the following procedures in a safe and efficient manner)

- 3.5.1 Confirmed locomotive was secure prior to post-operational cleaning and checking operations
- 3.5.2 Cleaned smoke box
- 3.5.3 Conducted cleaning operations including fire cleaning, dumping of ash and other cleaning duties
- 3.5.4 Conducted a visual inspection and other post-operational checks of boiler and associated equipment.....
(Using the Railway's post-operational checklist for the locomotive concerned)
- 3.5.5 Completed all required lubrication and greasing tasks
- 3.5.6 Topped up water level in boiler as per standard procedures
- 3.5.7 Checked that tool kit, fire extinguisher, first aid kit and other locomotive equipment is in operational condition and is correctly stowed
- 3.5.8 Checked and confirmed that boiler and associated equipment has been restored to required post operational condition.....
- 3.5.9 Completed all required post-operational documents

3.5.10 In conjunction with the driver, recorded, rectified, isolated and/or tagged defects and deficiencies (as applicable) and/or reported them to relevant personnel.....

*(This may include **simulated faults or defects** posed by the assessor)*

3.5.11 Blank for additional performance check?

RECORD OF THE PERFORMANCE ASSESSMENT

Name of Rail Operator

Date assessment completed

Name of candidate

Signature of candidate

Name of the person conducting the assessment.....

Signature of the person conducting the assessment.....

COMMENTS OF THE PERSON CONDUCTING THE ASSESSMENT