

ALTONA MINIATURE RAILWAY Inc.

**Training Manual for
Operators and Attendants**

PART - A

**May – 2008
Version 1.0**



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Preface:

The manual has been compiled by the Altona Miniature Railway Safety Committee for use by all its member's so that a minimum standard of competency can be achieved.

By adopting the requirements and procedures outlined in this manual Altona Miniature Railway Inc. and all Affiliated Clubs of the AALS recognise their obligations to provide a safe environment.

This safe environment ensures that the public and members alike of all Affiliated Club of the AALS that visit Altona Miniature Railway feel safe. Also any Altona Miniature Railway member that visits other Affiliated Clubs locations throughout the Commonwealth can feel safe and certain that there is a National Standard of training and operation.

AMR Safety Committee



Section 1

Introduction:

This manual is intended to cover the minimum training requirements for operators and attendants of Altona Miniature Railway Inc.

AMR operates a ground level, dual gauge miniature railway of 5" & 7¼" with a maximum speed of 12 km/h as a non commercial operation.

With changes to Amusement Device Legislation within the Commonwealth and the trend for self regulation by industry and business in general the need for a high standard of competency in Operators and Attendants is required.

It has been determined by AMR that a single, multiple classifications competency certificate will be issued to each member. This will certify a member for the duties of; Station Attendant, Guard, Operator Non-Steam, Operator Steam, Signal Box Attendant. Please note that no member will be forced to complete a certification for a classification that they do not want to.

The basis of the new Certificate system will be a set of training guides followed by practical experience, that will be followed by a formal multiple question examination. It is most important that every member recognises that there is no intention to intimidate anyone by having to sit a simple test, but instead ensure that each member has knowledge of safe operations for the railway.

This Training Manual should be read in conjunction with the AALS Code of Practice for Operation of Miniature Railways, Road Vehicles and Plant Issue 2, April 1999 and AS 3533 — 1997 Amusement Rides and Devices Parts 1,2 and 3.

Definitions:

"AMR" shall be defined to mean the Executive Committee of the Altona Miniature Railway Inc.

"Safety Committee" is a sub-committee operating under the direction of the AMR Executive.

"Station Master" shall be defined as an AMR member who is competent to act in the position of the control of the Station area during a public run day, and is certified as a Station Attendant.

"Operator" shall be defined as a Driver and be a suitable person aged 18 years of age or over. A person aged a minimum of 15 years to 17 years for training purposes shall be under direct supervision by a competent person 18 years of age or over.

"Attendant" shall be a suitable trained person aged a minimum 15 years who acts as a Guard, Station Attendant, Signal Box Attendant or any other person who carries out any other function or activity necessary for or which contributes to the safe operation of the Miniature Railway.

"Duty Officer" shall be defined as the original position of Track Master.

"Locomotive" shall be defined as an Engine, Tender, Tank Engine, Non-Steam engine and any attached driving truck or carriage.



“Train” shall be defined as a Locomotive hauling a set of Public Passenger Carriages and/or Scale Type Rolling stock (Non-Riding).

“Competent Person” means a person whom the Society ensures has acquired, through a combination of training, education and experience, knowledge and skills enabling that person to correctly perform a specified task.

“Direct Supervision” means supervision by a competent person, 18 years of age or older, who will be in such a position that he/she can immediately take control in the event of an emergency, as an example, riding immediately behind the operator or walking alongside.

“Hazard” means the potential to cause harm to health and safety of persons or equipment within the Society environs.

“Risk” means the probability of persons in the Society environs being harmed by a hazard.

“Cut Out Device” shall be a suitable device, when operated, will render the locomotive or equipment inoperable.

In the interpretation of this code, the word 'SHALL' is to be understood as being mandatory; 'SHOULD' is advisory.

Responsibilities:

All AMR certified Operational Staff are under constant review at all times. By holding a Competency Certificate the AMR member acknowledges the responsibility to operate at all times within the AMR rules and must be aware of operational changes at the railway that may be introduced from time to time.

It is the responsibility of each AMR Operation Staff member to notify the AMR Executive if their VicRoads Drivers License is suspended due to medical reasons or their ability to safely operate could be impaired from taking medication. Under these conditions the members Competency Certificate may be withdrawn by AMR.

AMR reserves the right to retrain and retest any member if it is felt that the member is not operating within the rules. AMR will formally inform any member if it is felt that they require further training.

AMR may withdraw any member's certificate if their safety record is considered unacceptable.

AMR Operational Staff will only be recognised with a classification after successfully passing the respective section as set by the Competency Certificate Testing System.

AMR acknowledges the support and commitment of its certified members allowing all trainees as much practical training time as they require.

Training:

AMR is responsible for putting in place a suitable Training Program to examine competency of each classification of Operator, Guard and Attendant used during the public operating sessions.



AMR shall keep suitable records that verify the qualifications of each member.

AMR shall ensure that competent persons are used to undertake the training of members and are familiar with the tasks being performed.

AMR shall review training methods from time to time especially if there is a change to operating methods or new equipment is introduced into the club.

AMR shall appoint a suitably qualified and experienced person(s) to examine the competency of members.

Minimum Age:

The minimum age for Station Attendants when operating on Public Running days shall be fifteen (15) years of age.

Persons fifteen (15) to seventeen (17) years of age inclusive can only be trained while the site is not open to the public and shall be under direct supervision of a qualified Operator, eighteen (18) years of age or older at all times.

The minimum age for Operators on Public Running days shall be eighteen (18) of age.

Direct Supervision:

A trainee Guard or Operator shall be under direct supervision where the Instructor/Supervisor is riding immediately behind or beside the trainee and can take control should an emergency or similar situation arise.

A trainee Guard or Operator may be deemed to be under direct supervision when operating on a small circular track, eg. Portable track and the Instructor/Supervisor has visual contact.

A trainee Attendant shall be under direct supervision of a qualified Attendant, eighteen (18) years of age or older at all times.



Section 2 – Station Attendants

Job Description

Station Attendants shall assist with the safe loading and unloading of passengers and the control of the public.

Station Attendants shall not allow passengers to ride who are visibly ill, suspected of being under the influence of drugs or alcohol, or have unsuitable footwear. Persons who are handicapped, pregnant, or holding small children are to be advised of suitability to ride.

Station Attendants shall instruct passengers in the correct riding procedure before commencement of the ride.

Station Attendants are to give a signal to the Guard that all passengers are loaded and it is safe to depart the station.

Any other requirements as determined by AMR from time to time.

Training Syllabus

Candidates for the position of Station Attendant shall be competent in all sections of the syllabus as outlined below and complete on the job training.

Syllabus shall include training periods in the following subjects:

- Loading and unloading of trains.
- Suitable footwear for passengers.
- Emergency procedures, e.g. fire, injured persons etc.
- Verbal communication skills with operators, guards and the public.
- Control and organisation of the public.
- Location of Society's First Aid arrangements.
- Understand and be able to delegate duties and assume responsibilities of Station Master.
- Any special operating procedures as determined by AMR from time to time.

Typical duties, question and answers are shown in Appendix 1.



Sections 3 – Guards

Job Description

The guard is responsible for the safety and behaviour of all passengers and will instruct the operator to stop the train if safety is being compromised.

The Guard shall carry a device for signalling the driver and ride on the last vehicle of the train consisting of two (2) or more passenger carriages.

The Guard shall ensure all passengers are correctly seated before giving the signal for the train to move off and that they remain seated and refrain from such actions that are likely to affect the safety of the train during motion.

If it is necessary to back up or stop the train the Guard shall protect the rear of the train.

Any other requirements as determined by AMR from time to time.

Training Syllabus

Candidates for the position of guard shall be competent in all sections of the syllabus as outlined below and complete on the job training.

Syllabus shall include training periods in the following subjects:

- Loading and unloading trains.
- Be aware of suitable footwear for passengers.
- Protection for rear of train, by displaying a red flag.
- Assisting the operator as required.
- Emergency procedures eg. Derailments, Injured Passengers, etc.
- Location of Society's First Aid arrangements.
- Verbally communication with the operator and public with due respect to any public with a disabilities.
- If the train can not continue its trip and another empty train is not available the guard will escort all the passengers back to the station.
- Any special operating procedures as determined by AMR from time to time.

Typical duties, question and answers are shown in Appendix 2.



Section 4 – Non Steam and Steam Operators

Job Description

Operators shall be responsible for the safety of plant/equipment and persons under his/her control or care.

Any other requirements as determined by AMR from time to time.

Training Syllabus

Candidates for the position of Operator either Non-Steam or Steam shall be competent in the respective sections of the syllabus as outlined below and complete on the job training.

AMR shall establish a minimum period of practical experience prior to examinations. AMR also acknowledges the support of steam and non-steam locomotive owners allowing trainees the opportunity to gain as much practical experience on their locomotives

Syllabus shall include training periods in the following subjects for both Non-Steam and Steam operators:

- Shall have a thorough knowledge of area of operations, including:
 - AMR signal system.
 - Turnout indicators, who has right-of-way.
- Verbal communication skills with Station Attendants to report any track or equipment faults.
- Communication systems.
- Knowledge of emergency procedures.
- Location of Society's First Aid arrangements.
- Shall understand the operation of the item of plant such as:
 - Internal combustion engines, power transmission, braking systems etc.
 - Electrical systems, battery dangers and safety etc.
 - Steam - understand and display boiler safety, boiler construction, firing, feeding water, engine operation etc.
- Shall be aware of potential hazards in operation of equipment and the minimisation of associated risks.

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- Refuelling procedures.
- Shall be responsible that all AMR safety checks have been carried out before any locomotive and or riding/scale cars entering service for the first time on all club days has all the relevant check lists signed off.
- Any special operating procedures as determined by AMR from time to time.

Typical Non - Steam question and answers are shown in Appendix 3 and Steam questions in Appendix 4.



Section 5 – Signal Box Attendant

Job Description

At present AMR does not have or operate manually Controlled Signalling or Signal Box system.

When a system of signalling is in operation a Signal Box Attendants test will be added to this training manual.

When a system of signalling is in operation Signal Box Attendants shall be responsible for safe working procedures applicable at their location.

They shall guide trains within their section in a safe and efficient manner.

Any other requirements as determined by AMR as the systems develop.

Training Syllabus

Candidates for the position of Signal Box Attendant shall be competent in all sections of the syllabus as outlined below. AMR will establish a minimum period of practical experience prior to examinations and complete on the job training.

Syllabus shall include training periods in the following subjects:

- Complete understanding of track layout.
- Use and operation of the signalling equipment.
- Demonstration of safe working equipment.
- Emergency procedures in the event of equipment failure.
- Communication systems.
- Any other requirements as determined by AMR from time to time.

Typical duties, question and answers are shown in Appendix 5.



Section 6 – Duty Officer

Job Description

This person shall be a suitable responsible member with a minimum Station Attendant certificate and be well versed in all the AMR operating procedures and demonstrate sound public relation skills in dealing with members of the public.

A number of persons shall be appointed by AMR and they shall be responsible for the safe and efficient operations of the run day and inter club run day activities.

Notification of which Duty Officer shall be responsible on any Run Day or Club event will be given by AMR.

The Duty Officer's decision on any matter shall be final on that day.

Training Syllabus

Candidates for the position of Duty Officer shall be competent in all sections of the syllabus as outlined below. AMR will establish a minimum period of practical experience and provide all relevant information prior to examinations and complete on the job training.

Syllabus shall include training periods in the following subjects:

- Have a complete working knowledge of all A.A.L.S. Codes of Practice.
- Have a complete working knowledge of the Training Manual for Operators and Attendants.
- Have a confirmed record of operating as Station Master.
- Understand that they will be the only contact with all external authorities Police, Ambulance etc and shall hold all contact phone numbers if an incident occurs.,
- Collect all statements from the Public or Members and manage all incident and Hazard Reports.
- Manage the days running and appoint any Additional Personnel to carry out duties as deemed necessary.



Section 7 – Additional Personnel

AMR may find other positions necessary for the safe operation of the club's public or interclub open days.

They shall undertake suitable accreditation based on the above format, duties could be:

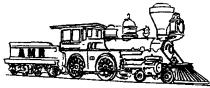
- Suitably certified person to examine all locomotives and rolling stock before a train is placed into traffic for public hauling.
 - To be able to verify that any AMBSC Boiler Certificate is genuine and valid.
 - To carry out a safety valve and accumulation inspection.
 - To be able to complete and file all AMR Safety Check Lists for club and members equipment before any locomotive, riding and scale cars enter service on all club run days.
 - Understand the brake testing procedure.
 - To at a glance assess the suitability on any visiting equipment to safely run on our site.
- Suitably experienced person to report track, turnout faults, etc.
- Ticket Sales – with accounting skills.



Section 8 – Amendments

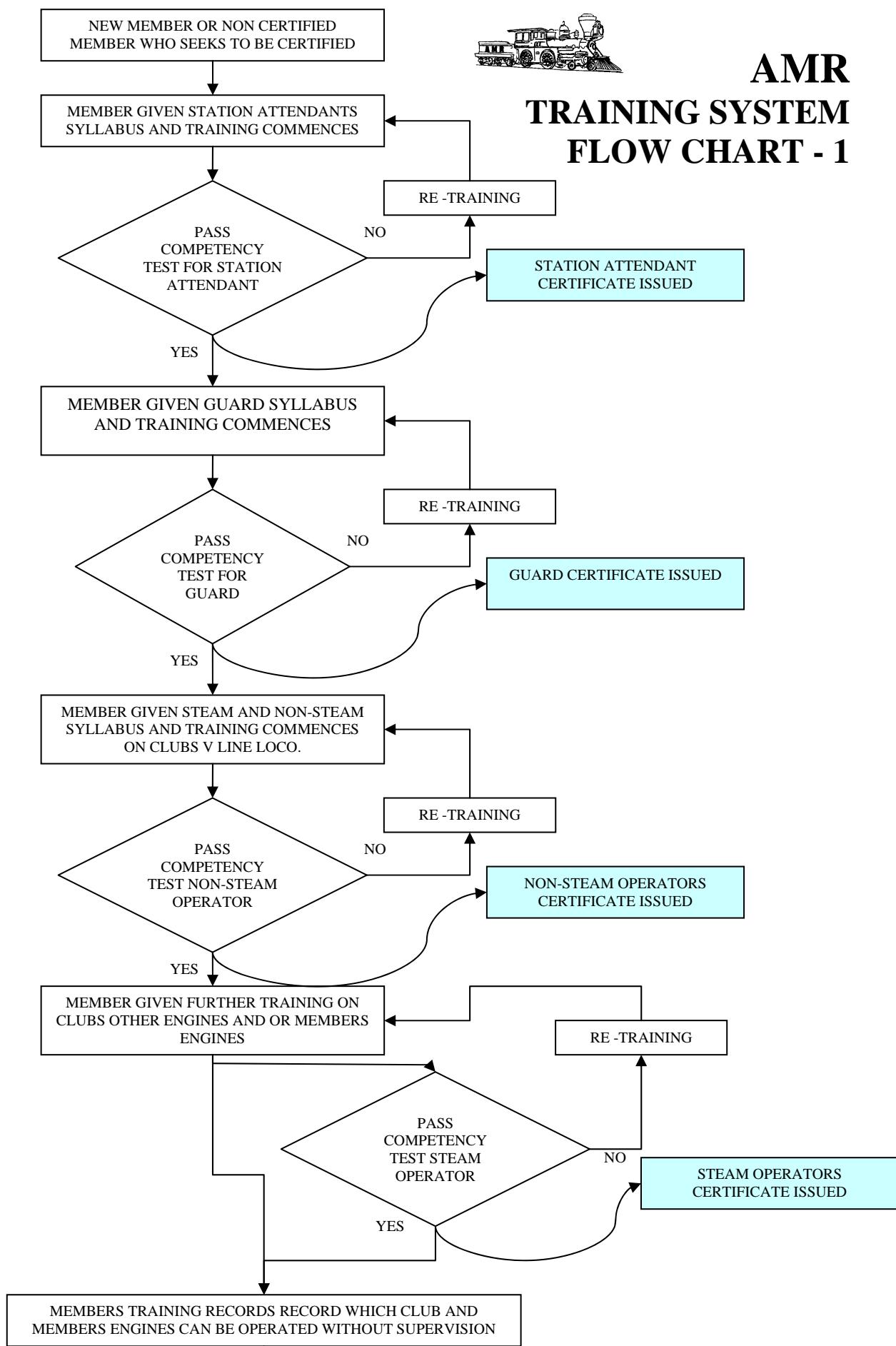
Amendments to this document may be made from time to time as laid down in the AMR constitution and By-Laws.

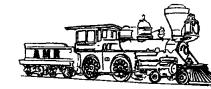
NEW MEMBER OR NON CERTIFIED MEMBER WHO SEEKS TO BE CERTIFIED



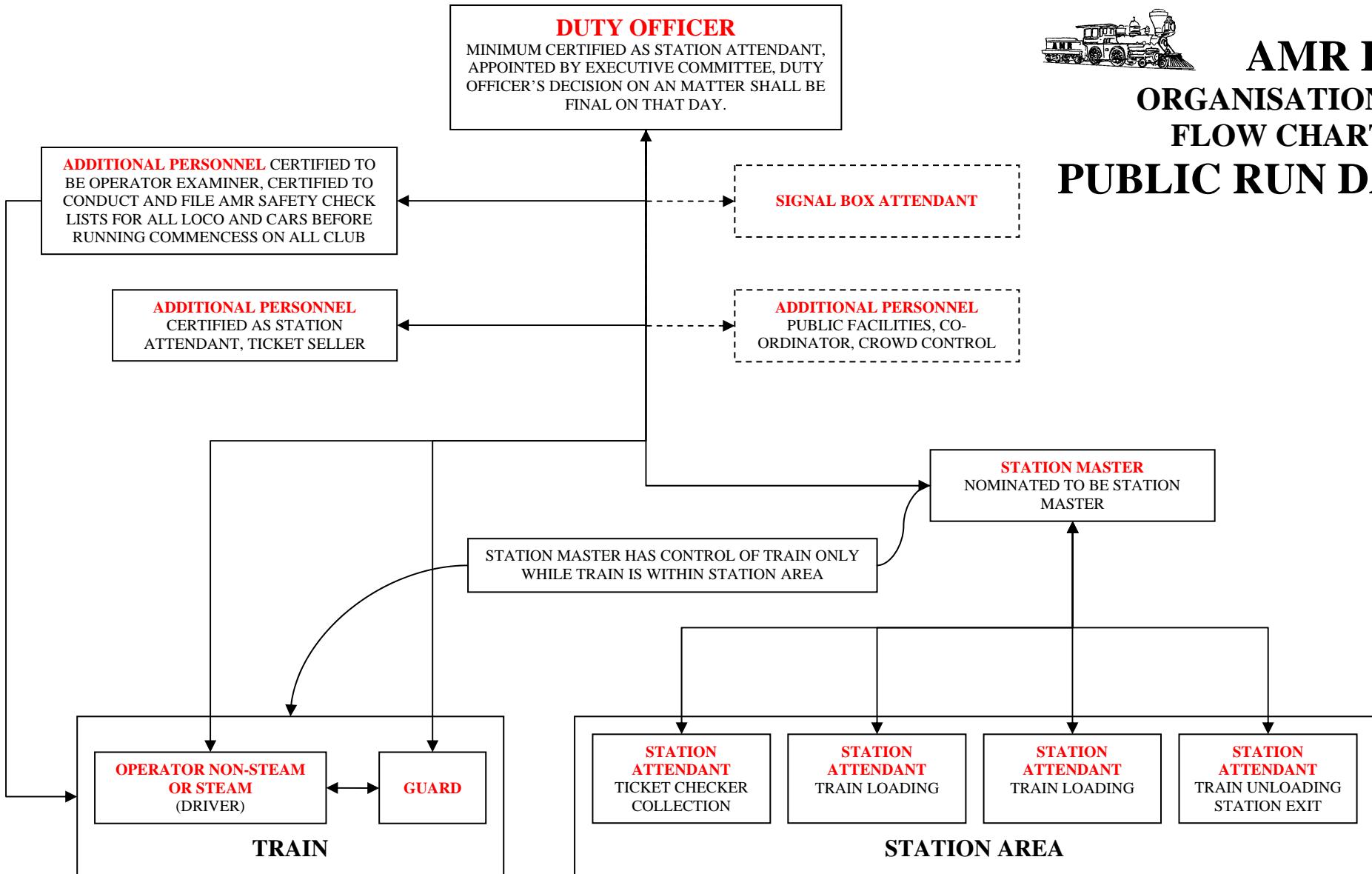
AMR

TRAINING SYSTEM FLOW CHART - 1





AMR Inc. ORGANISATIONAL FLOW CHART - 2 PUBLIC RUN DAY



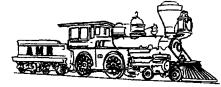


Appendix 1 -

AMR Whistle, Speed and Signal Requirements

The AMR Whistle, Speed and Signal Requirements has been removed from the Training Manual and is now located on our [Members Page](#) on our Web Site <https://altonaminiaturerailway.com.au/members/>

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Appendix 2 - Duty Officer Responsibilities

- Management of the public runday
- Ensuring the Grounds are open
- Unlock work shop and lunch room
- Unlock Choo Choo Van
- Unlock Toilets
- Unlock turntable
- Unlock tunnel
- Ensure water and air hoses are out
- Provide locomotive fuel
- Ensure site signs are out

- Ensure all point levers are installed
- Inspect rack for damage
- Assist with engine / carriage unloading as required
- Check and log in all engines into the Locomotive Register
- Be the contact point with emergency services

- Ensure site signs are away
- Put away locomotive fuel
- Put away water and air hoses
- Ensure work shop and lunch room are locked
- Ensure Choo Choo Van is locked
- Ensure Toilets is locked
- Ensure turntable is locked
- Ensure tunnel is locked
- Ensure all gates are locked
- Ensure all power and lights are switched off
- Cleanup and dispose of rubbish
- Assist with engine / carriage loading as required



Appendix 3 - Station Master Responsibilities

- Ensure the public knows the correct riding procedure
- Ensure the public board and alight from trains in a safe and expedient manner
- Ensure all gates are closed and latched whilst trains are moving in the confines of the station area
- Ensure that supplies of water, fuel and oil are available to drivers whilst trains are being loaded and unloaded in the station area
- Ensure that each passenger has a valid ticket for the ride undertaken

- Ensure there are the right amount of station attendants on the platform
- Ensure that each station attendants is rotated between positions and given a break
- Ensure that both exit and entry gates are always staffed
- Notify the Duty Officer of large crowds to ensure enough rolling stock is available
- Ensure the crowd is moved through as quickly as possible
- Notify the Duty Officer of any incidents that occur
- Ensure the track ahead is safe for the train to leave the station



INCIDENT AND HAZARD REPORT FORM

Incidents including personal injury, accidents, damage to club property, near misses, and significant machinery failures MUST be reported to the nominated Duty Officer as soon as possible. Verbally within 12 hours and Written within 24hours.

SECTION 1: DETAILS OF PERSON INVOLVED IN INCIDENT or PERSON REPORTING HAZARD

Surname: Given name:

AMR Member or Member of Public or Visitor. Incident or Hazard

If not an AMR Member,

Address
..... Post Code

Telephone #

SECTION 2: INCIDENT DETAILS or HAZARD or DAMAGE

Use back or separate sheet(s) if insufficient space

Date of incident/hazard/damage:/...../..... Time:am/pm

Location of incident/hazard/damage:

Normal Club Duties (no public) Run Day Duties (involving Public) or Visitor

Brief description of incident, hazard or damage (what happened?)

SECTION 3: INJURY DETAILS

This section only to be used if an injury has occurred

Describe injuries including part(s) and side (s) of body effected:

Name of witness or first person on scene: Telephone#:

Signature of injured person:

Signature of person completing form:

Signature of Duty Officer:

SAFETY COMMITTEE REVIEW DATE:/...../.....

Report No:

SIGNED OFF FURTHER REVIEW

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SECTION 2 Continued: INCIDENT DETAILS or HAZARD or DAMAGE

Drawings/Sketches may assist.

EXAMPLE

Privacy statement:

The information on the form is collected for the primary purpose of reporting, investigation and recording of hazards and incidents. The information may also be used for a related secondary purpose, providing required information to Australian Associated of Live Steamers and associated Insurance providers for Risk & Insurance; to also comply with legislative reporting requirements; attending to day to day administrative matters. The information collected on this form may be disclosed to other organisations such as government departments eg WorkSafe Victoria. If all of the information requested is not provided, it may not be possible for AMR Inc. to meet its legal obligations. You have a right to access personal information that AMR Inc. holds about you, subject to any exceptions in relevant legislation. If you wish to seek access to your personal information, please contact the Secretary in writing.



Appendix 5 - Typical Station Attendant duties, questions and answers

Question - Who can act as a Station Master?

Answer - Any AMR member who is competent to act in the position and has successfully completed the Station Attendants test.

Question - Who is responsible to ensure the riding public is advised of the correct riding procedures?

Answer - The Station Master

Question - Who is responsible for maintaining water, fuel and oil supplies within the station area?

Answer - The Station Master

Question - Who ensures that the station entry and exit gates are closed and secured while trains are moving in the confines of the station area?

Answer - The Station Master and any accredited AMR Station Attendant on duty

Question - How is the Guard advised that the train is safely loaded and ready to depart?

Answer - The Station Master will clearly show the Guard a White Flag and give a long Whistle blast

Question - If an accident/injury occurs within the station area what action should the Station Master and or Station Attendant take?

Answer - Make sure the area is free of hazards and attend to any injuries, seek help immediately. Make sure the track and train is safe to recommence operation and advise the Duty Officer (Track Master). Complete an incident report.

Question - What signals are given when the Station Master requires a train to stop within the station area?

Answer - One short Whistle blast and the display or a Red flag.

Question - Who is responsible for all activities on Public Running Days?

Answer - The Duty Officer (Track Master).

Question - Who is responsible for dispute resolution at the Station regarding Tickets and Train Riding?

Answer - The Station Master

Question - Where is the Club First Aid equipment kept?

Answer - In the cupboard within the Choo-Choo Bar service area and in the main Maintenance Workshop.

Question - At any Club activity where passengers are being hauled who is responsible for the overall operation of the Railway?

Answer - The Duty Officer (Track Master).

Question - Where any loss or damage to Club equipment is caused by a Member or their Visitor what action should be taken?

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Answer - Make a note in the Club Register and report incident to the Committee.

Question - Within the station area what action should the Station Master take if an Operator is not following normal operating procedures?

Answer - Report the incident to the Duty Officer (Track master) and or the Safety Committee.

Question - What action should the Station Master take if a malfunction or train fault is detected that may effect train running?

Answer - Shut the train down until the condition is corrected and advise the Duty Officer (Track Master).

AMR reserve the right to change at any time the content and scope of the Guard Certification questions as deemed necessary by the AMR Safety Committee, AALS or as the general hobby may require.



Appendix 6 - Typical Guard duties, questions and answers.

Question – When does a train require a Guard?
Answer – When the train has two carriages or more and is operating on the outer loop.

Question – How does the Guard signal the Operator?
Answer – By the use of a signal (could be any approved audible devise as a whistle or radio) and Flags.

Question – When does the Guard signal the Operator to proceed?
Answer – When the Station Master signals with a White Flag and a long Whistle blast.

Question – Who is responsible to see that passengers are boarded safely?
Answer – The Station Master and any Station Attendant on duty.

Question – What signal does the Guard give the Operator that it is safe to proceed?
Answer – A long blast on a Whistle and the display of a Green Flag.

Question – What action does the Guard take if a passenger becomes irrational or acts unsafe?
Answer – Signal the Operator to **STOP** immediately.

Question – In an emergency what signal does the Guard give the Operator?
Answer – Make a succession of loud short Whistle blasts and wave a Red flag violently.

Question – If a derailment occurs what action should the Guard take?
Answer – Check passengers for injuries and secure the train by placing a Red flag on the track approx. 5 meters from the rear of the train. Signal for help and if necessary assist in completing an Incident Report.

Question – What are the Whistle and Signal Codes used by the Guard?
Answer – Codes for Guards.

	<u>Whistle</u>	<u>Flag Signal</u>
Train Start	1 Long	Green Flag
Train Stop	2 Short	Red Flag
Train Reverse	3 Short	-
Call for Assistance	4 Long	-
Emergency	Succession of Short	Any Flag waved Violently

Question – When a hat is lost or blow off what should the Guard do?
Answer – Advise a Station Attendant at the next stop and request that the hat be picked up.

Question – Who is responsible for ensuring that the Club Policy regarding Footwear is observed?
Answer – The Station Master must ensure that all passengers are wearing approved covered footwear.

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Question - Who is responsible to ensure that track speed restrictions are observed at all times?
Answer - The train Operator.

Question - What is the primary responsibility of the train Guard?
Answer - Ensure that all persons riding on the train act responsibly safely and enjoy the experience.

Question - Where is the Club First Aid equipment kept?
Answer - In the cupboard within the Choo-Choo Bar service area and in the Maintenance Workshop.

Question - What should the Guard do at all times when the train is running?
Answer - Stay alert at all times and be prepared for an Emergency Stop.

AMR reserve the right to change at any time the content and scope of the Guard Certification questions as deemed necessary by the AMR Safety Committee, AALS or as the general hobby may require.



Appendix 7 - Typical Non-Steam Operators Questions and Answers

Question - What special precautions are required when a Club Loco requires to be refueled?
Answer - The loco must be moved off the Main Line, engine turned off, and care taken to stop or limit any splashing and have a rag handy to wipe any spillage. If a Steam loco is operating or in steam near by you must be a minimum of 20m away from it.

Petrol itself is actually not burned in a fire, but the fumes it creates ignite, causing the remaining liquid to evaporate. Petrol is extremely volatile and easily combusts, making any leakage or spillage extremely dangerous.

Question - What things should an Operator pay special attention to when taking over control of a Loco?
Answer - Any operator taking over control of a loco should be aware of all the safety devices and controls and how to operate them. The operator should understand the potential weight of a loaded train and make adjustments, i.e. increasing the braking distances.

Question - What preparations should an Operator carry out before a loco commences a run on the railway?
Answer - All the operating fluid levels should be checked while the loco is cold including the fuel level. Have a good look under the engine cowlings for loose wires, nuts and bolts loose and drive belts not in their place. Operate all the controls before the engine is started for free movement. When the operator is happy with all the pre-checks start the engine, (if the loco is under cover move it into the open as soon as possible). Check the function of the brakes and if the Operator is happy with all the checks the loco can be offered for inspection by the clubs nominated examiner of loco and train. If the inspection does not indicate any operational concerns the loco and train can commence running.

Question - When a train moves off carrying passengers in the forward direction, what signals does the Operator give?
Answer - A train can only move off when a signal that the train is safely loaded is given to the Guard by the Station Master. Only after receiving the start signal from the Guard the Operator gives one long Whistle or Horn signal.

Question - If a loco suffers a brake down of any of its systems and it is unsafe to continue operating what does the Operator do?
Answer - The safety of the passengers is the first consideration with their unloading hopefully back at the station. The loco should be removed from traffic off the main line and if it can be, returned to its storage. The Duty Officer shall be informed; an Out Of Service Tag placed on the loco control and ensure that the AMR or Safety Committee is informed.

Question - Who is ultimately responsible for the overall operation of a Train?
Answer - The Operator, including the speed of the train, not transiting any points set against the train and not passing any safety signal to stop.

Question - Why should you follow safety precautions when charging batteries?
Answer - The charging of lead-acid batteries can be hazardous. When batteries are being



recharged, they generate hydrogen gas that is explosive in certain concentrations in air (the flammability or explosive limits are 4.1% to 72% hydrogen in air). The spark-retarding vents help slow the rate of release of hydrogen, but the escaping hydrogen may form an explosive atmosphere around the battery if ventilation is poor. The ventilation around a charging battery should be adequate allowing fresh air to blow clear the area. This is essential to prevent an explosion.

Always keep sparks, flames, and other sources of ignition away from the battery recharging area. Wear protective eye wear when working near batteries. Do not break "live" circuits at the terminals of batteries.

Question - Are there any special precautions if a loco is to be left unattended?

Answer - The loco must be off the main line; engine switched off or power isolated, drive in neutral, brakes applied or transmission in park and starting system isolated.

Question - What special device should be fitted to all electrical locomotives?

Answer - All electrical locomotives must have a power isolating switch.

Question - Are there different types of braking systems, and how effective should they be?

Answer - For non-steam locomotives there are a number of different ways to apply brake force to stop a train.

Manually with levers and rods pulling or pushing on the brake rigging.

Air brakes – air under pressure acting on a piston in a cylinder pulling or pushes on the brake rigging..

Vacuum brakes – a vacuum (a pressure less than atmospheric pressure) acts on a diaphragm that pulls on the brake rigging.

Electrical (Dynamic) - During braking, the traction motor connections are reversed to turn them into electrical generators.

No matter what braking system is used it must be effective to stop a fully loaded train from 10km/hr within 15 meters.

Question - Are there any minimum distances that the Operator must maintain while on the main line?

Answer - Yes, while on the main line all trains must maintain a minimum distance of 20m between each other. However this distance can be reduced in the Station Area or as directed by the Station Master.

Question - Can an Operator sound the train whistle or horn at any time or place at AMR?

Answer - No, whistles or horns are not allowed to be sounded outside the times of 10am - 9pm or within 6m of the tunnel entry or exit or whilst traveling through it.

Question - Are there any special requirements when coupling a train together for public running?

Answer - All trains must have the correctly sized bars and pins as prescribed by the AALS – 5" and 7¼". Auto couplings are acceptable. All trains must have safety chains between each unit (chain must be closed welded type no open type link chains are allowed).

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Before any train enters the main line a check must be carried out by the Operator by walking the complete length of the train, checking; couplings in place, brake air lines installed and safety chains fitted correctly.

Question - If the exhaust leaks on a loco is it a requirement to remove the loco from service?

Answer - No exhaust fumes are to be a hazard to the Operator or Passengers. Each case would be considered individually, a decision will be made by the Duty Officer if the loco must be taken out of service.

AMR reserve the right to change at any time the content and scope of the Non-Steam Operators Certification questions as deemed necessary by the AMR Safety Committee, AALS or as the general hobby may require.



Appendix 8 - Typical Steam Operators Questions and Answers

Question - What is a boiler?

Answer - A closed vessel in which steam is generated for heating or driving engines.

Question - What is the vital part of a boiler, where is it in a locomotive type boiler?

Answer - It is the first part of the furnace to overheat at the loss of water. The damage can lead to distorted and or cracked plates. The only acceptable repair may require the damaged parts to be replaced. In a locomotive boiler, the vital part is the crown plate or inner wrapper plate.

Question - What safety devices protect the vital part?

Answer - Fusible plugs, a brass or bronze plug with a core of metal that will melt easily if water uncovers the vital part. Steam will blow through the plug quenching the fire.

Question - What mountings are necessary and fitted to every boiler?

Answer - Water gauge, safety valves, main stop valve, feed check, pressure gauge, blow down valve.

Question - What is meant - safe working pressure?

Answer - The pressure that the boiler may be worked at as defined by the relevant AMBSC code. The working pressure takes into account plate and barrel dimensions, and is set at the plan approval stage.

Question - Describe how to test a gauge glass for accuracy?

Answer - There are two methods; both should give the same result.

Quick test - By opening then closing the drain cock and observing how the water returns. The water level should return smartly in the glass, showing the correct water level in the boiler.

Independent test - Open the drain cock and close the steamway cock. Water should blow indicating water is above the waterway passage and the passage is clear. Repeat by closing the waterway cock open the steamway cock and drain. Steam should blow indicating that the steamway passage is clear. Open the waterway cock and close the drain cock. The water level should return smartly in the glass, showing the correct water level in the boiler.

If water does not show in the glass but the waterway passage test blew water this indicates that water is above the waterway passage but under the bottom gauge glass nut.

The AMBSC code requires; the bottom (visible) end of the glass shell be above the crown by no less than 10% of the height from the crown to the outer wrapper.

Question - Why are safety valves fitted, what controls their size/number?

Answer - In case of over pressurization the valves vent excess steam, protecting the boiler. The valves are fitted at the highest point, venting steam to atmosphere. Their number and size is set by; the working pressure of the boiler, the heating surface



area and valve orifice diameter.

AMBSC have developed a Nomogram that easily gives the required valve orifice diameter.

The safety valves when correctly sized will not allow the pressure in the boiler to rise above 110% of working pressure under full firing conditions. This is called the accumulation ability of the valves.

Question - What is the function of the main stop valve commonly called the regulator?

Answer - The main stop controls the passage of steam from the boiler via the steam line to the cylinders.

Question - What is the function of the feed check valve, where is it fitted on a locomotive boiler?

Answer - As steam is drawn off the boiler to do work, the water level will drop.

Water that is added (feed) enters via the feed check valve. The feed check is a non-return valve keep closed by the boiler pressure acting on the top of the valve. When water is feed (it must be at a slightly higher pressure than that in the boiler) the valve will lift off its seat allowing water to enter. As soon as the feed stops the pressure drop will snap the check valve back on its seat. The location is just under the low water level nearer the front end of the barrel. At this location, the cooler water entering absorbs more heat from the flue gases about to leave the tubes into the smoke box.

Question - What is the purpose of a steam pressure gauge, what other function does it do?

Answer - The gauge indicates the steam pressure in the boiler above the pressure of the atmosphere. It acts as a second check against the safety valves. The correct graduation or range of the gauge should be 1.5 times the working pressure, with a red mark on the face indicating the working pressure.

Question - What is the purpose of the blow down valve?

Answer - To remove sediment contained in the water which settles at the bottom of the boiler. This sediment can form hard scale deposits that will always adhere to the hottest plates. These scales impair heat transfer that will overheat plates causing possible irreversible damage. It is fitted at the lowest part of the boiler.

Question - State three ways water can be introduced into the boiler?

Answer -

- Hand pump
- Axle, steam driven feed pump and cross head pumps
- Injectors

Question - What is required of an Operator in charge of a steam locomotive before starting a run?

Answer - It is necessary to ensure there is sufficient fuel and water on board and that everything is in good working order. All checks as listed in the Non-Steam section should be carried out.

Question - What is the meaning of priming of a boiler and what should you do?

Answer - Priming is when water is being carried over with the steam. It is usually caused by



too much water in the boiler or foaming caused by poor quality feed water. The biggest danger is the water washes off lubrications or worst if in large quantities can break cylinder covers. The best way to manage priming is to open cylinder drains, close the main stop valve, easing the engine up and damper the fire until it stops.

Question - What precautions must you take before going down a long steep grade?

Answer - Before you reach the summit add water at least $\frac{3}{4}$ full so that you can be sure the crown plate will be covered on the down grade.

Question - Why should you be careful when using cylinder cocks and blow down valves?

Answer - The spray from the cylinder cocks and blow down might soil clothing and rolling stock nearby. The pure steam that is last exhausted from the blow down valve can cause scalding.

Question - When taking over control of a steam locomotive from another Operator what tests should you perform?

Answer - You must verify the water level in the boiler by visually inspecting the glass after performing a quick test. Remember the water must return smartly.

Question - What action should you take if you are leaving a live engine un-attended for a period?

Answer - The hand break must be applied, ensure the boiler has adequate water, the reversing lever in mid-gear, cylinder drain valves or cocks open and inspect the engine periodically.

Question - Explain how the exhaust steam creates a draft through the blast pipe and why is it important that the smokebox door is keep airtight?

Answer - The exhaust from the cylinders is discharged up the funnel causing a partial vacuum in the smokebox. To equalize this pressure air and gases from the furnace flow, this in turn produces a partial vacuum in the firebox. Air from out side is drawn in through the grate to equalize the pressure ensuring the fire and combustion is maintained.

The vacuum in the smokebox that is required to cause the draft on the fire will be destroyed. The boiler performance will be seriously reduced.

Question - How does the blower operate, when should it be used?

Answer - The blower directs a jet of live steam up the funnel, which produces a partial vacuum creating a draft through the firebox. It is used when the engine is stationary and should be just on when the firebox door is opened preventing flames and gases from rushing out of the door into the cab.

Question - What is the purpose of the slide or piston valve?

Answer - The valve controls the admission of steam to either end of the cylinder in time to suit the direction of the reversing lever. The valve sets the cut off and thus the expansion of the steam and the exhaust.

Question - Does a leaky piston valve affect the economy of a engine?

Answer - Yes, steam passes the piston valve from the live steam side to the exhaust side, thus causing an increased backpressure and loss of power. A greater amount of steam

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must be used to create the same power.

Question - What should be done if the crown plate should get red hot through a shortage of water?

Answer - The fire must be immediately put out. The safety valves opened to reduce the pressure, this will reduce the loads on the crown. Water should not be pumped into the boiler until it has cooled. Incidents of this magnitude must be reported to the boiler inspector with a visual inspection to verify that the boiler is safe to be returned into service.

Question - Are there different types of braking systems, and how effective should they be?

Answer - For steam locomotives there are a number of different ways to apply brake force to stop a train.

Manually with levers and rods pulling or pushing on the brake rigging.

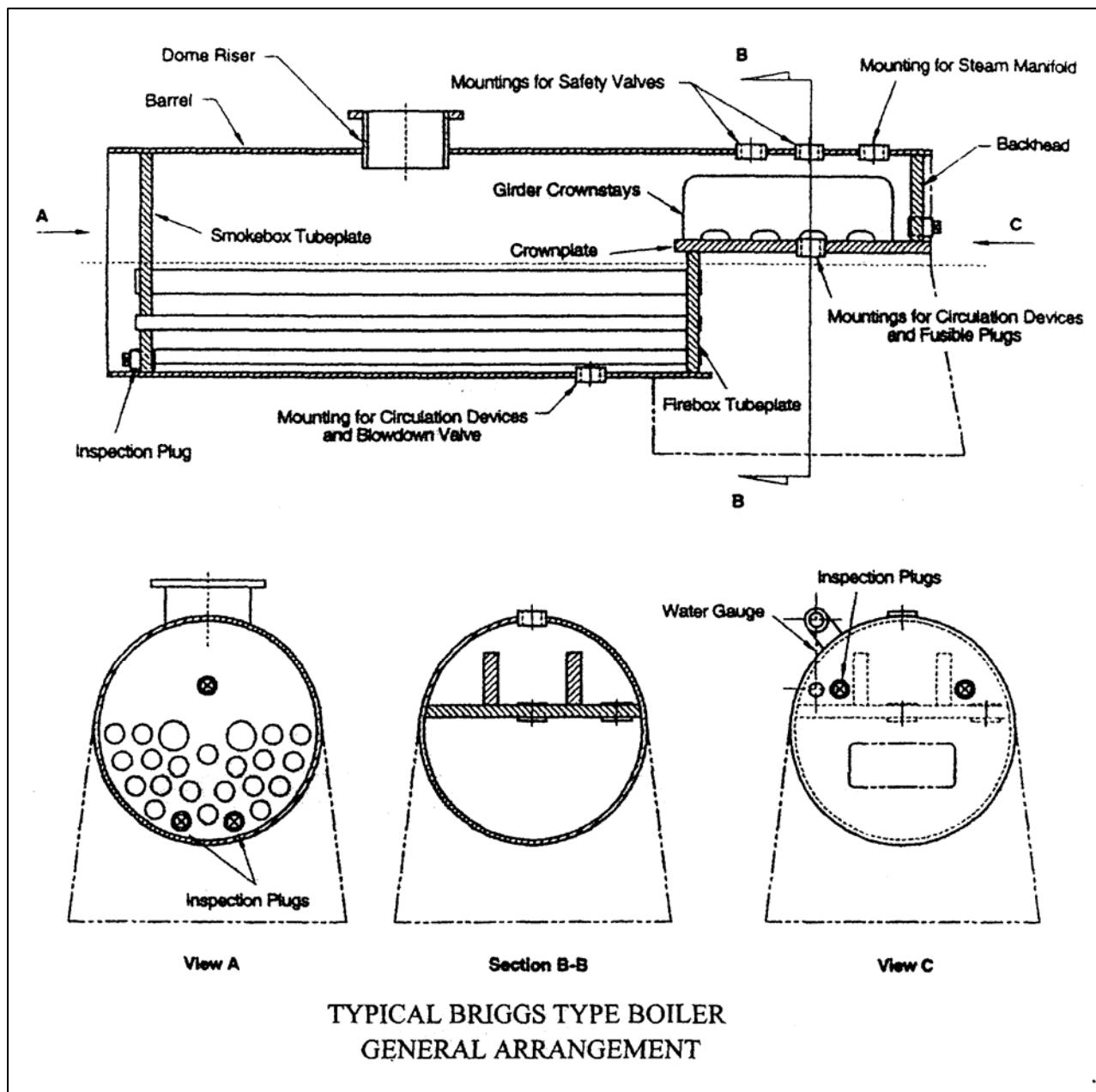
Steam or Air brakes – steam or air under pressure acting on a piston in a cylinder normally pushes on levers and then pulls on the brake rigging.

Vacuum brakes – a vacuum (a pressure less than atmospheric pressure) acts on a diaphragm that pulls on the brake rigging.

No matter what braking system is used it must be effective to stop a fully loaded train in a predetermined distance.

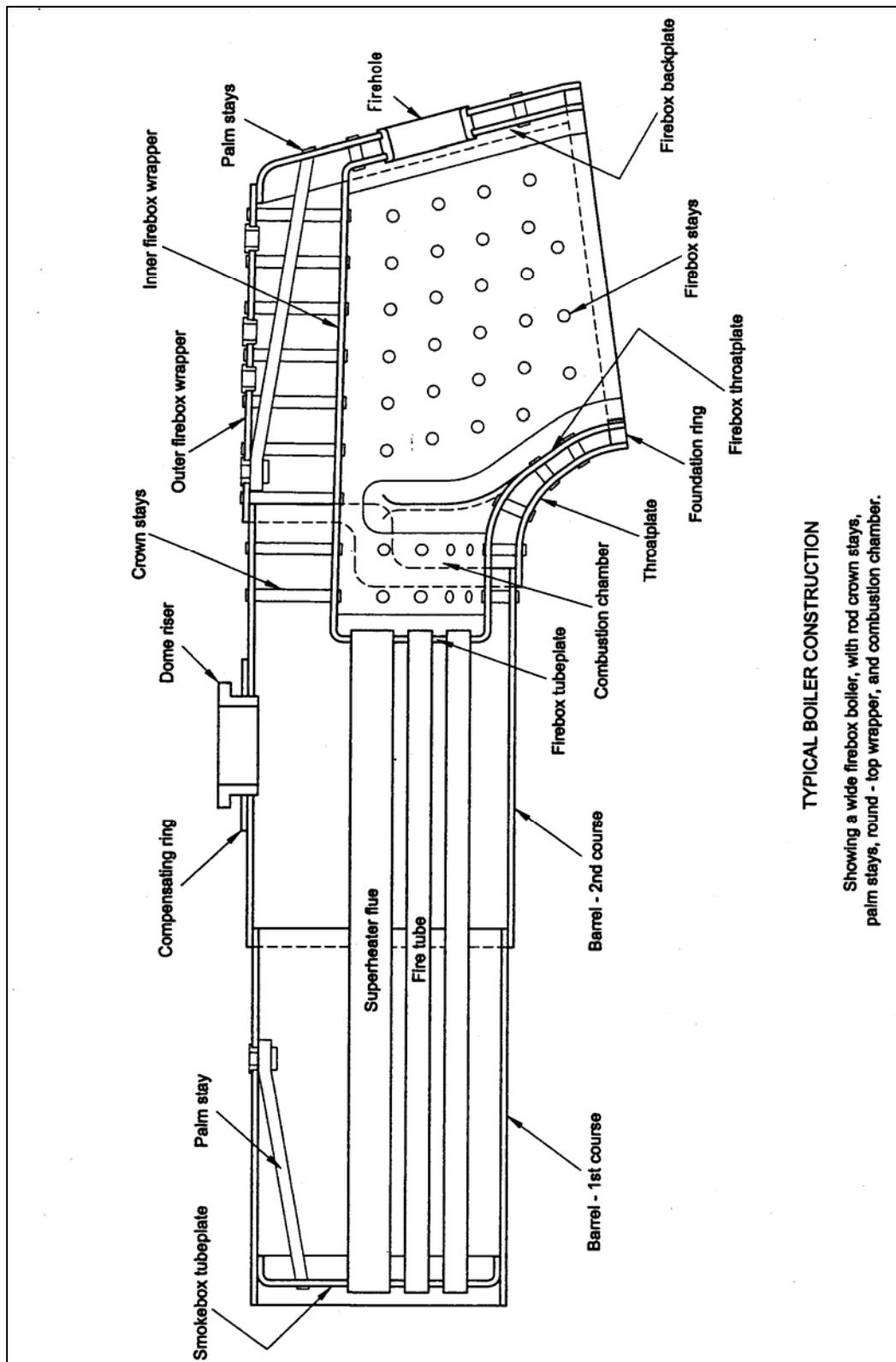


Briggs Steel Boiler - Section and the relevant parts and their various names.





Locomotive Type Copper Boiler –
Section and the relevant parts and their various names.



AMR reserve the right to change at any time the content and scope of Steam Operators Certification questions as deemed necessary by the AMR Safety Committee, AMBSC, AALS or as the general hobby may require.

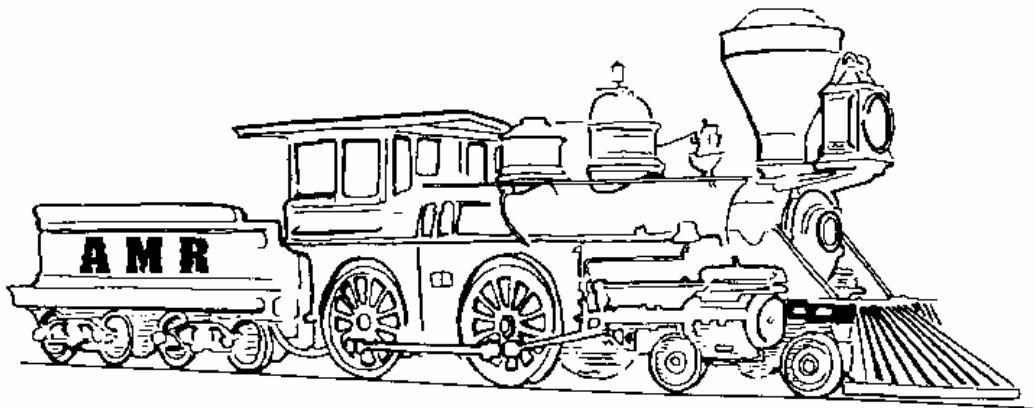


Appendix 9 - Typical Signal Box Attendant Questions and Answers

At present AMR does not have or operate manually Controlled Signalling or Signal Box system.

When a system of signalling is in operation a Signal Box Attendants questions and answers will be added to this training manual.

AMR reserve the right to change at any time the content and scope of the Signal Box Attendants Certification questions as deemed necessary by the AMR Safety Committee, AALS or as the general hobby may require.



ALTONA MINIATURE RAILWAY Inc.

Example
Multiple Choice and Practical
Examination for
Operators and Attendants.

PART - B

May – 2008
Version 1.0



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Introduction:

This section of the manual contains example Multiple Choice and Practical Examinations. A selection of these questions will be placed on the Exam when sat.

The Practical Examination also includes the sign off of sighting of completion of tasks and the number of hours completed in training.



Station Attendants Examination Example

Multiple Choice Question Test

Please place a cross 'X' in the box next to the response that you think best answers the question.

One of the responses for each question is in accordance with AMR Rules and Regulation Policy.

1 WHO CAN ACT AS A STATION MASTER?

- Any member of AMR.
- Any member of the public
- Any AMR member who is competent to act in the position and has completed the Station Attendants test.
- A junior member under 18.

2 WHO IS RESPONSIBLE TO ENSURE THE RIDING PUBLIC IS ADVISED OF THE CORRECT RIDING PROCEDURES?

- The Exit Gate Controller.
- The Guard.
- The Station Master.
- The Ticket Checker.

3 IS THE STATION MASTER RESPONSIBLE FOR ENSURING THAT SUPPLIES OF WATER, FUEL, AND OIL ARE AVAILABLE TO OPERATORS WHILE TRAINS ARE BEING UNLOADED AND LOADED IN THE STATION AREA?

- No.
- Maybe.
- Yes.
- Not sure.

4 WHO ENSURES THAT THE STATION ENTRY AND EXIT GATES ARE CLOSED AND SECURED WHILE TRAINS ARE MOVING IN THE CONFINES OF THE STATION AREA?

- The guard.
- The operator.
- Any member of the public.
- The Station Master and any accredited AMR member on duty.

5 HOW IS THE GUARD ADVISED THAT THE TRAIN IS SAFELY LOADED AND READY TO DEPART?

- By displaying a pink flag.
- By waving a red flag.
- By clearly showing the guard a white flag and one long whistle blast.
- Calling out "Ok to go".

6 IF AN ACCIDENT/INJURY OCCURES WITHIN THE STATION AREA WHAT ACTIONS SHOULD THE STATION MASTER TAKE?

- Make sure the area is free of hazards.
- Attend to any injuries and seek help.
- Mark sure the track and trains are safe to recommence operation.
- Advise the Duty Officer and complete an incident report.
- All of the above.

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7 WHAT SIGNALS SHOULD BE GIVEN IN AN EMERGENCY?

- Wave a White flag
- Call out Stop.
- Give a succession of short whistle blasts and wave any flag violently.
- Display a Green flag.

8 WHAT SIGNALS ARE GIVEN WHEN THE STATION MASTER REQUIRES A TRAIN TO STOP?

- One short and one long whistle blast.
- One short whistle blast and display of a Red flag.
- Green flag waved side to side.
- Three short whistle blasts.

9 WHO IS RESPONSIBLE FOR ALL ACTIVITIES ON PUBLIC RUNNING DAYS?

- The Station Master.
- The Ticket Collector.
- The Club Secretary.
- The Duty Officer.

10 WHO IS RESPONSIBLE FOR THE DISPUTE RESOLUTION AT THE STATION REGARDING TICKETS AND TRAIN RIDING?

- The Train Guard.
- The Station Master.
- The Ticket Collector.
- The Club President.

11 WHERE IS THE CLUB FIRST AID EQUIPMENT KEPT?

- At the back of each loco drivers seat.
- In the guards compartment.
- In the cupboard within the Choo-Choo Bar service area and in the Workshop.
- In the Tunnel.

12 AT ANY CLUB ACTIVITY WHERE PASSENGERS ARE BEING HAULED WHO IS RESPONSIBLE FOR THE OPERATION OF THE RAILWAY?

- The Station Master
- The Train Guard.
- The Duty Officer.
- The Exit Gate Controller.

13 WHERE ANY LOSS OR DAMAGE TO CLUB EQUIPMENT IS CAUSED BY A MEMBER OR THEIR VISITORS WHAT ACTION SHOULD BE TAKEN?

- Forget about it.
- Tell the Station Master.
- Advise the Property Officer.
- Make a note in the club register and report the incident to the committee.

14 WITHIN THE STATION AREA WHAT ACTION SHOULD THE STATION MASTER TAKE IF A DRIVER IS NOT FOLLOWING NORMAL OPERATING PROCEDURES?

- Bring the matter to the attention of the guard.
- Have a quick word with the driver.
- Report incident to the Duty Officer and or Safety Committee.
- Advise the Club Secretary.

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15 WHAT ACTION SHOULD THE STATION MASTER TAKE IF A MALFUNCTION OR TRAIN FAULT IS DETECTED THAT MAY EFFECT TRAIN RUNNING?

- Ask the Ticket Checker to have a look.
- Seek an opinion from a member of the public.
- Hope someone else finds the problem.
- Shut the train down until the condition is corrected and advise the Duty Officer.

16 WHO MAKES THE FINAL DECISION FOR THE GENERAL OPERATION OF THE STATION AREA?

- The Station Attendant running the exit gate.
- The Station Attendant loading or unloading the trains.
- Any Operator or Guard.
- The Station Master.
- All of the above.

17 WHAT IS THE MINIMUM DISTANCE BETWEEN TRANS WITH IN THE STATION AREA?

- They must maintain the main line 20m separation.
- There is no minimum distance what ever separation or clearance the Station Master wants to ease the safe loading and unloading of passengers.
- Trains can touch each other making it possible to get as many trains into the Station area at once.
- What ever the Guard wants.

18 WHICH WISTLE AND SIGNAL CODE IS INCORRECT?

- Train Start
- Train Stop
- Train reverse
- Call for assistance
- Emergency
- All are correct

Whistle

1 Long
2 Short
3 Short
4 Long
Succession of short

Flag Signal

Green flag
Red flag
-
-
Any Flag waved violently



Station Attendants Practical Examination Example

This practical test requires the examining officer to observe the member in the below examples and once happy make off the member as completing these tasks:

- Correct Loading of Passengers on a train
- Correct Unloading of Passengers on a train
- Checking of Suitable footwear on passengers
- Verbal communication skills with operators, guards and the public
- Control of the Entrance Gate
- Control of the Exit Gate
- Organisation of the public
- Any special operating procedures as determined by AMR from time to time
- Explain correct emergency procedures, e.g. fire, injured persons etc
- Pin Point the location of Society's First Aid arrangements



Guard Examination Example

Multiple Choice Question Test

Please place an 'X' in the box next to the response that you think best answers the question.

To be eligible to sit his test the candidate must already hold a Certificate of Competence as a Station Attendant.

The correct response for each question is in accordance with the A.M.R. Rules and Regulation Policy.

1 WHEN DOES A TRAIN REQUIRE A GUARD?

- When operating with No passengers.
- When the train has one carriage.
- When the train has two carriages or more and is operating on the outer loop.
- When the passengers are elderly.

2 HOW DOES THE GUARD SIGNAL THE DRIVER?

- By calling out.
- By use of a Yellow Flag.
- By use of a Whistle and Flags.
- Standing up and waving arms.

3 WHEN DOES THE GUARD SIGNAL THE OPERATOR TO PROCEED FROM THE STATION?

- When he or she is instructed by a member of the public.
- When a Club member says "Get Going".
- When the Station Master signals with a White flag and a long whistle blast.
- When a passenger is Standing Up.

4 WHO IS RESPONSIBLE TO SEE THAT PASSENGERS ARE BOARDED SAFELY?

- The Train Operator.
- The Ticket Collector.
- The AMR member on the exit gate.
- Station Staff.

5 WHAT SIGNAL DOES THE GUARD GIVE TO THE OPERATOR THAT IT IS SAFE TO PROCEED?

- A short Wave of an Orange flag.
- Rapid hand wave.
- A long blast on a whistle and display of a Green flag.
- By a loud shout "OK".

6 WHAT ACTION DOES THE GUARD TAKE IF A PASSENGER BECOMES IRRATIONAL OR ACTS UNSAFE?

- Ask the passengers to take action.
- Signal the Operator to stop immediately.
- Ask passengers to get off the train.
- Call out to Act Safely.

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7 IN AN EMERGENCY WHAT SIGNAL DOES THE GUARD GIVE THE OPERATOR?

- Three short blasts on the whistle.
- Wave Red flag once.
- Make a succession of short whistle blasts and wave a Red flag violently.
- An audio call.

8 IF A DERAILMENT OCCURS WHAT ACTION SHOULD THE GUARD TAKE?

- Check passengers for injuries.
- Secure train by placing a Red flag on the track approx. 5 meters from rear of train.
- Send for help.
- Assist in completing of an incident report.
- All of above.

9 WHICH WHISTLE AND SIGNAL CODE IS INCORRECT?

	Whistle	Flag Signal
<input type="checkbox"/> Train Start	1 Long	Green flag
<input type="checkbox"/> Train Stop	2 Short	Red flag
<input type="checkbox"/> Train reverse	3 Short	-
<input type="checkbox"/> Call for assistance	4 Long	-
<input type="checkbox"/> Emergency	Succession of short	Any Flag waved violently
<input type="checkbox"/> All are correct		

10 WHEN A HAT IS LOST OR BLOWN OFF DOES THE GUARD?

- Stop train and walk back to collect it.
- Make a grab for it.
- Take no action.
- Advise Station Attendant at next stop to collect.

11 WHO IS RESPONSIBLE FOR ENSURING THAT THE CLUB POLICY REGARDING FOOTWARE IS OBSERVED?

- Operator.
- Exit gate supervisor.
- Guard.
- Station Staff.

12 WHO IS RESPONSIBLE TO SEE THAT SPEED RESTRICTIONS ARE OBSERVED AT ALL TIMES?

- Station Master.
- Ticket Collector.
- Operator.
- Guard.

13 WHAT IS THE PRIMARY RESPONSIBILITY OF THE TRAIN GUARD?

- Make sure the club's "smoke Free Policy" is maintained.
- Ensure all trains are fully loaded.
- Ensure that all persons riding on the train act responsibly, safely and enjoy the experience.
- Has no responsibility.

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14 WHERE IS THE CLUB FIRST AID EQUIPMENT KEPT?

- At the back of each loco drivers seat.
- In the guards compartment.
- In the cupboard within the Choo-Choo Bar service area and in the work shop.
- In the tunnel.

15 WHAT SHOULD THE GUARD DO AT ALL TIMES WHEN THE TRAIN IS RUNNING?

- Look out for snakes.
- Stay alert and be prepared for an emergency stop.
- Wave out to the general public.
- Try and pickup any hats lying beside the track.

EXAMPIE



Guards Practical Examination Example

This practical test requires the examining officer to observe the member in the below examples and once happy make off the member as completing these tasks:

- Correct Loading of Passengers on a train
- Correct Unloading of Passengers on a train
- Checking of Suitable footwear on passengers
- Protecting the rear of train, by displaying a red flag
- Ability to change points and understand which way the points are facing
- Ensuring all passengers remain seated, don't lean over on the train at all times, if not obeyed then stopping the train to instruct passengers to stay seated
- Assisting the operator as required.
- Correct verbal communication with the operator, station staff and public with due respect to any public with a disabilities.
- Escorting of passengers back to the station if the train can not continue is trip and another empty train is not available.
- Explain correct emergency procedures, e.g. fire, injured persons etc
- Pin Point the location of Society's First Aid arrangements



Non-Steam Operators Examination Example

Multiple Choice Question Test

Please place an 'X' in the box next to the response that you think best answers the question.

To be eligible to sit his test the candidate must already hold a Certificate of Competence as a Station Attendant.

The correct response for each question is in accordance with the A.M.R. Rules and Regulation Policy.

1 WHEN ANY I.C. LOCO REQUIRES REFUELING WHAT PRECAUSIONS ARE REQUIRED?

- Stop running at the station on the main line and refuel.
- Tell the public to move away.
- Move the loco off the main line and be a min. of 20m away from any operating steam loco.
- Have the loco running at a safe idle speed.

2 IF A LOCO IS TO BE LEFT UNATTENDED WHAT STEPS MUST BE TAKEN?

- Stop the loco where it is and place a chock under the wheels.
- Be off the main line, engine stopped key or safety switch in OFF position, brakes applied or transmission in gear or locked park position.
- Inform the ticket collector.
- Leave a note on the operators seat – Back Soon.

3 WHAT IS THE MAXIMUM SPEED FOR MAIN LINE RUNNING?

- 10 km/hr
- 12 km/hr
- 20 km/hr
- 15 km/hr

4 WHEN AN OPERATOR TAKES CONTROL OF A LOCO WHAT MOST IMPORTANT THINGS SHOULD THEY PAY ATTENTION TO?

- What direction the locos will run.
- Who is the Station Master.
- How much fuel is in the loco tank.
- Be aware of all the controls and safety devices and how they work and how to operate them.

5 IF A COMPENTENT OPERATOR IS TRAINING A NON-CERTIFIED MEMBER IN THE EARILY STAGES OF DRIVE TRAINING WHAT SUPERVISION IS REQUIRED?

- Use a two way radio and sit at the station or in the club house under cover.
- Ride directly behind or walk beside the trainee so that control of the loco can be taken if required.
- Stand in the middle of the grounds so you can see the loco at most times and call out directions.
- Agree on what to do then set about to do what you want.

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6 WHEN PREPARING A LOCO FOR THE FIRST RUN OF THE DAY WHAT INSPECTIONS ARE REQUIRED?

- Check the coolant and oil levels, have a good look under the engine cowling for loose wires, loose bolts that drive belts are in their place and then have a good look around loco externally.
- Check the function of all the loco controls.
- Start the loco (if in a covered storage area move into the open as soon as possible) check the function of the brakes, throttle operation and make sure that all auxiliary switches for main line running are in their correct position.
- Offer the complete train for inspection by the nominated examiner and have it signed off.
- All of the above.

7 FOR ALL ELECTRICAL LOCO'S WHAT DIFFERENT DEVICES MUST BE FITTED TO THOSE ON I.C. LOCO'S?

- An effective braking system.
- A forward and or a reverse system.
- That fan for battery cooling is operating.
- Have a power isolating device

8 WHO IS ULTIMATELY RESPONSIBLE FOR SETTING THE ROAD AND SAFE TRANSIT AROUND THE RAILWAY?

- The loco operator and or guard.
- Other members or visitors moving their locos onto or off the main line.
- The Station Master.
- The Duty Officer (Track Master).

9 WHAT SIGNAL DOES THE GUARD GIVE THE OPERATOR TO INDICATE THE TRAIN IS LOADED AND READY TO DEPART?

- 2 short whistle blasts and a green flag waved from side to side.
- 1 short whistle blast and a green waved flag.
- 3 short whistle blasts and any flag the guard has in his compartment.
- 1 long whistle blast and shows a green flag.

10 IN RESPECT OF ELECTRICAL LOCO'S, ARE THERE ANY SPECIAL OPERATIONS THAT MUST BE UNDERSTOOD?

- Know the dangers associated with charging batteries, fire dangers, what gases may be present, know the club rules for leaving charges on while the site is unattended.
- There are no special operations to be aware of; all operations are the same as for I.C. locos.
- Understand how the electric loco braking system is powered and works.
- None of the above.

11 WHEN A LOCO STARTS OFF WHAT SIGNALS ARE TO BE GIVEN BY THE TRAIN OPERATOR?

- 2 short whistle blasts.
- 1 short whistle blast.
- 3 short whistle blasts.
- 1 long whistle blast.

12 IF A CLUB LOCO BREAKS DOWN WHAT PROCEDURES ARE TO BE FOLLOWED?

- Return the loco if possible to its storage, place an Out Of Service tag on the controls and inform the Duty Officer or inform the AMR and or Safety Committee.
- Do nothing return the loco to storage and go home.
- Try and effect repairs without assistance and do not report the fault.
- None of the above

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13 UNDER NORMAL CONDITIONS, THE PUBLIC SHALL BE LOADED AND UNLOADED ONLY AT?

- The direction of the Station Master.
- Anywhere the operator wants.
- Bridge crossings.
- Station area at any time.

14 ALL TRAINS CARRYING THE PUBLIC SHALL BE OPERATED BY?

- A certified operator.
- A certified operator with a Guard aboard for trains two cars or longer.
- Anyone approved by the Station Master on duty.
- Anyone as long as it is on their own equipment.

15 WHO IS ULTIMATELY RESPONSIBLE FOR THE OVERALL SAFE OPERATION OF A TRAIN?

- The Operator.
- The Safety Committee
- The Station Master.
- The Guard.

16 WHERE ARE I.C. EXHAUST FUMES TO BE DIRECTED?

- Out the top of the loco possibly into the face of the operator (Driver).
- Directed down into the loco body.
- Directed away from the operator and persons riding on the train.
- Any location that the owner wants.

17 CHECKING THE COUPLINGS BETWEEN THE ENGINE AND DRIVING TRUCK OR CARRAGES
SHALL BE INSPECTED BEFORE PUBLIC RUNNING BY?

- The Operator (Driver).
- The Guard.
- The Station Attendant.
- The Train Examiner.
- Can be any of the above.

18 WHEN TRAVELING AROUND THE TRACK WITH PASSENGERS ABOARD WHAT IS THE MINIMUM
DISTANCES THE OPERATOR CAN BRING HIS TRAIN TO THE REAR OF THE TRAIN AHEAD?

- There is no minimum distance.
- If traveling at the maximum speed - 25m.
- If traveling slowly 18m.
- In all cases 20m

19 WHEN APPROACHING THE TUNNEL WHEN IS IT SAFE TO ENTER?

- When the Green signal light is ON.
- When no lights are observed enter at full speed, power is probably off.
- When an Amber signal light is ON at full speed
- As long as you signal the horn right at the entrance every time.

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20 WHICH WISTLE AND SIGNAL CODE IS INCORRECT?

	Whistle	Flag Signal
<input type="checkbox"/> Train Start	1 Long	Green flag
<input type="checkbox"/> Train Stop	2 Short	Red flag
<input type="checkbox"/> Train reverse	3 Short	-
<input type="checkbox"/> Call for assistance	4 Long	-
<input type="checkbox"/> Emergency	Succession of short	Any Flag waved violently
<input type="checkbox"/> All are correct		

EXAMPIE



Non-Steam Operators Practical Examination Example

This practical test requires the examining officer to observe the member in the below examples and once happy make off the member as completing these tasks:

AMR Site Information

- Explain correct emergency procedures, e.g. fire, injured persons etc
- Pin Point the location of Society's First Aid arrangements

Knowledge of AMR signal system

- Identify Signals
- Identify Flags
- Obey all Signals

Points and Tracks

- Obey track speed limit
- Identify which road is set
- Identify point indicator

Communication

- Correct verbal communication with the operator, station staff and public with due respect to any public with a disabilities.

Train

- Correct way to attach rolling stock
- Train Inspection
- Ensuring all passengers remain seated, don't lean over on the train at all times, if not obeyed then stopping the train to instruct passengers to stay seated

Locomotive

- Identify Internal combustion engines, power transmission, braking systems
- Identify Electrical systems, battery dangers and safety etc.
- Identify Engine Cut-off System
- Identify what to do in an emergency
- Explain and Show correct refuelling procedures



Steam Operators Examination Example

Multiple Choice Question Test

Please place an 'X' in the box next to the response that you think best answers the question.

To be eligible to sit his test the candidate must already hold a Certificate of Competence as a Non-Steam Operator.

The correct response for each question is in accordance with the A.M.R. Rules and Regulation Policy.

1 WHAT IS A BOILER'S VITAL PART?

- The top section of the shell were the steam is drawn off.
- The first part of the furnace to overheat at the loss of water.
- The fire ring and door closing devise.
- The safety valves.

2 WHAT BOILER MOUNTINGS ARE NECESSARY AND FITTED TO EVERY BOILER?

- A - Water gauge, safety valve.
- B - Main stop, blow down.
- C - Feed check
- D - Pressure gauge
- All of above
- A+B
- B+D

3 WHAT IS THE MAXIMUM SPEED TO RUN A STEAM LOCO AT AMR?

- 10 km/hr
- 12 km/hr
- 8 km/hr
- 15 km/hr

4 WHY ARE SAFETY VALVES FITTED TO A BOILER AND WHAT CONTROLS THEIR SIZE/NUMBER?

- A- The number and size (valve orifice) developed by AMBSC nomogram.
- B- In case of over pressurizing the valve/s vent excess steam protecting the boiler.
- C- Not allowing the boiler pressure to go above 110% of the Safe Working Pressure.
- All of above.
- B+C

5 WHAT IS THE PURPOSE OF THE PRESSURE GAUGE?

- It fills up the space in the loco cab and looks good for the viewing public.
- It does nothing and can be isolated once the safety valves have been tested at the start of the running day.
- The gauge indicates the steam pressure above atmosphere and is a second check for the safety valves.
- It is the feed back to the driver of his performance of driving and is used as a speed indicator.

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6 INDICATE THE THREE ACCEPTABLE WAYS WATER CAN BE INTRODUCED INTO A BOILER WHEN IT IS STEAMING.

- Garden water hose at the steaming bay or hand pump or injector.
- Hand pump or garden water hose at the station or axle/steam driven water pump.
- Axle/steam driven pump or injector or hand pump.
- All of the above.

7 WHEN TAKING OVER CONTROL OF A STEAM ENGINE FROM ANOTHER OPERATOR WHAT TEST/S SHOULD BE PERFORMED?

- Check that the engine lubricator is full and operating.
- That the valve gear is in mid position.
- That the cylinder drains are operating
- You must verify the water level in the boiler by visually inspecting the gauge glass after performing a quick test.
- Ensure that the fire is hot enough to be able to complete one circuit with out the need to tender the fire.
- All of the above.

8 WHAT ACTION SHOULD A LOCO OPERATOR TAKE IF LEAVING A STEAM LOCO UN-ATTENDED FOR A PERIOD?

- Ensure the boiler has adequate water.
- Reversing lever must be in mid-gear.
- Hand break applied or wheels locked with a suitably sized bar.
- Cylinder drain valves or cocks are open.
- Inspect the engine periodically.
- All of the above.

9 WHO IS RESPONSIBLE TO SEE THAT PASSENGERS ARE BOARDED SAFELY?

- The Train Operator (Driver).
- The Ticket Collector.
- The AMR member on the exit gate.
- Station Staff.

10 WHERE IS THE CLUB FIRST AID EQUIPMENT KEPT?

- At the back of each loco Operators (Divers) seat.
- In the guards compartment.
- In the cupboard within the Choo-Choo Bar service area and in the work shop.
- In the tunnel.



11 INDICATE HOW TO TEST A GAUGE GLASS FOR ACCURACY?

Quick Test.

- Just look at the water level in the glass.
- Pump water in and observe the level rise.
- Open and then close the drain valve the water should return smartly.

Independent Test. This assumes the gauge glass has three valves.

- Open drain cock close steam way cock – water should blow indicating water above the waterway passage and it is clear.
- Close waterway cock open steam way cock and drain cock– steam should blow indicating steam way passage is clear.
- Open the waterway cock, close the drain cock, the water should return smartly in the glass indicating the correct water level in the boiler.
- If the water does not show in the glass after the above tests it indicates that the water is above the waterway passage but below the bottom gauge glass nut.
- All of the above.

12 IF A COMPENTENT OPERATOR IS TRAINING A NON-CERTIFIED MEMBER IN THE EARILY STAGES OF OPERATOR TRAINING WHAT SUPERVISION IS REQUIRED?

- Use a two way radio and sit at the station or in the club house under cover.
- Ride directly behind or walk beside the trainee so that control of the loco can be taken if required.
- Stand in the middle of the grounds so you can see the loco at most times and call out directions.
- Agree on what to do then set about to do what you want.

13 WHEN A STEAM LOCO STARTS OFF WHAT SIGNALS ARE TO BE GIVEN BY THE TRAIN OPERATOR?

- 2 short whistle blasts.
- 1 short whistle blast.
- 3 short whistle blasts.
- 1 long whistle blast.

14 WHAT SHOULD BE DONE IF A CROWN PLATE SHOULD GET RED HOT THROUGH A SHORTAGE IN WATER?

- A- Increase to a safe speed to get back to the station area to pump in water.
- B- Put out the fire immediately.
- C- Open the safety valve to reduce the loads on the crown plate.
- D- Report the incident to the club's boiler inspector so that an inspection can verify that the boiler is safe to be returned into service.
- E- Pump water in as soon as possible and return into passenger traffic.
- F- No need to tell anyone and repair any damage at home.
- All of above.
- B,C,E+F
- B,C,+D

15 WHY SHOULD YOU BE CAREFUL WHEN USING CYLINDER COCKS AND BLOW DOWN VALVES?

- A- Cylinder cocks waste steam and take away the lubricating ability of the steam.
- B- The spray from the cylinder drains might soil clothing and rolling stock nearby.
- C- The pure steam that is last exhausted from the blow down can cause scalding.
- A+B
- B+C

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16 WHAT PRECAUTIONS MUST BE TAKEN BEFORE GOING DOWN A LONG GRADE?

- There are no special precautions to be considered.
- Build up the fire.
- Notch back the valve gear.
- Have at least $\frac{3}{4}$ gauge glass before the summit so that you can be sure the crown plate will be covered on the down grade.
- None of the above.

17 WHEN TRAVELING AROUND THE TRACK WITH PASSENGERS ABOARD WHAT IS THE MINIMUM DISTANCES THE OPERATOR CAN BRING HIS TRAIN TO THE REAR OF THE TRAIN AHEAD?

- There is no minimum distance.
- If traveling at the maximum speed - 15m.
- If traveling slowly 18m.
- In all cases 20m

18 WHEN APPROACHING THE TUNNEL WHEN IS IT SAFE TO ENTER?

- When the Green signal light is ON.
- When no lights are observed enter at full speed, power is probably off.
- When an Amber signal light is ON at full speed.
- As long as you signal the horn right at the entrance every time.

19 WHAT SIGNAL DOES THE GUARD GIVE THE OPERATOR TO INDICATE THE TRAIN IS LOADED AND READY TO DEPART?

- 2 short whistle blasts and a green flag waved from side to side.
- 1 short whistle blast and a green waved flag.
- 3 short whistle blasts and any flag the guard has in his compartment.
- 1 long whistle blast and shows a green flag.



Steam Operators Practical Examination Example

This practical test requires the examining officer to observe the member in the below examples and once happy make off the member as completing these tasks:

AMR Site Information

- Explain correct emergency procedures, e.g. fire, injured persons etc
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Knowledge of AMR signal system

- Identify Signals
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Points and Tracks

- Obey track speed limit
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Communication

- Correct verbal communication with the operator, station staff and public with due respect to any public with a disabilities.

Train

- Correct way to attach rolling stock
- Train Inspection
- Ensuring all passengers remain seated, don't lean over on the train at all times, if not obeyed then stopping the train to instruct passengers to stay seated

Locomotive

- Identify Main Boiler Parts
- Display how to raise steam
- Display how to feed water into the boiler
- Display how to shutdown the boiler and make it safe
- Explain what happens when a gauge glass breaks and shutdown procedure



Signal Box Attendant Examination Example

Multiple Choice Question Test

Please place an 'X' in the box next to the response that you think best answers the question.

The correct response for each question is in accordance with the A.M.R. Rules and Regulation Policy.

At present AMR does not have or operate manually Controlled Signalling or Signal Box system.

When a system of signalling is in operation a Signal Box Attendants test will be added to this training manual.

EXAMPIE



Signal Box Attendant Practical Examination Example

At present AMR does not have or operate manually Controlled Signalling or Signal Box system.

When a system of signalling is in operation a Signal Box Attendants test will be added to this training manual.

EXAMPIE



Duty Officer Examination Example

Multiple Choice Question Test

Please place an 'X' in the box next to the response that you think best answers the question.

To be eligible to sit his test the candidate must already hold a Certificate of Competence as a Station Attendant and Guard.

The correct response for each question is in accordance with the A.M.R. Rules and Regulation Policy.

1 WHO MAKES THE DECISION ON WHO WILL BE THE STATION MASTER?

- From a vote of the Station staff.
- The Duty Officer.
- Any AMR member who is competent to act in the position and has completed the Station Attendants test and nominates themselves.
- A decision from the Operators following their meeting.

2 WHO IS RESPONSIBLE TO ENSURE THE RIDING PUBLIC IS ADVISED OF THE CORRECT RIDING PROCEDURES?

- The Exit Gate Controller.
- The Guard.
- Station Staff.
- The Ticket Checker.

3 IS THE STATION MASTER RESPONSIBLE FOR ENSURING THAT SUPPLIES OF WATER, FUEL, AND OIL ARE AVAILABLE TO OPERATORS WHILE TRAINS ARE BEING UNLOADED AND LOADED IN THE STATION AREA?

- No.
- Maybe.
- Yes.
- Not sure.

4 WHO ENSURES THAT THE STATION ENTRY AND EXIT GATES ARE CLOSED AND SECURED WHILE TRAINS ARE MOVING IN THE CONFINES OF THE STATION AREA?

- The guard.
- The operator.
- Any member of the public.
- The Station Master and any accredited AMR member on duty.

5 IF AN ACCIDENT/INJURY OCCURES WITHIN THE STATION AREA WHAT ACTIONS SHOULD THE STATION MASTER TAKE?

- Make sure the area is free of hazards.
- Attend to any injuries and seek help.
- Mark sure the track and trains are safe to recommence operation.
- If required contact the relevant authorities and complete an incident report.
- All of the above.

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6 WHAT SIGNALS ARE GIVEN WHEN THE STATION MASTER REQUIRES A TRAIN TO STOP?

- One short and one long whistle blast.
- One short whistle blast and display of a Red flag.
- Green flag waved side to side.
- Three short whistle blasts.

7 IF A DERAILMENT OCCURS WHAT ACTION SHOULD THE GUARD TAKE?

- Check passengers for injuries.
- Secure train by placing a Red flag on the track approx. 5 meters from rear of train.
- Send for help.
- Assist in completing of an incident report.
- All of above.

8 WHO IS RESPONSIBLE TO SEE THAT SPEED RESTRICTIONS ARE OBSERVED AT ALL TIMES?

- Station Master.
- Ticket Collector.
- Operator.
- Guard.

9 IN AN EMERGENCY WHAT SIGNAL DOES THE GUARD GIVE THE OPERATOR?

- Three short blasts on the whistle.
- Wave Red flag once.
- Make a succession of short whistle blasts and wave a Red flag violently.
- An audio call.

10 WHEN ANY I.C. LOCO REQUIRES REFUELING WHAT PRECAUSIONS ARE REQUIRED?

- Stop running at the station on the main line and refuel.
- Tell the public to move away.
- Move the loco off the main line and be a min. of 20m away from any operating steam loco.
- Have the loco running at a safe idle speed.

11 WHEN PREPARING A LOCO FOR THE FIRST RUN OF THE DAY WHAT INSPECTIONS ARE REQUIRED?

- Check the coolant and oil levels, have a good look under the engine cowling for loose wires, loose bolts that drive belts are in their place and then have a good look around loco externally.
- Check the function of all the loco controls.
- Start the loco (if in a covered storage area move into the open as soon as possible) check the function of the brakes, throttle operation and make sure that all auxiliary switches for main line running are in their correct position.
- All of the above.

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