



NATIONAL TRACTION ENGINE TRUST

Preserving our heritage with steam on the road

**Examination Syllabus
For The
NTET's Voluntary
Traction Engine Driver
Competency Certificate**

Introduction

The NTET's Traction Engine Driver Competency Scheme is a voluntary programme of individual betterment culminating with a practical examination of the management, operation and control of a steam propelled vehicle or steam powered stationary engine.

The scheme is described in detail in the pamphlet 'NTET's Traction Engine Driver Competency Scheme' published by the NTET Technical Services Unit.

Participants presenting themselves for examination under this scheme must be in possession of a current driving licence appropriate to the class of vehicle being driven. Where appropriate the 'student's' log book should be available for scrutiny along with the mentor's 'ready for test' recommendation. Self sponsoring participants are not required to present a log book for scrutiny.

Outline of Test

On arrival at the agreed test location the examiner will check the proposed layout in detail. Where there are any doubts as to the safe or practical application of the examination the examiner will request modifications to the proposed layout or route.

A Steersman must accompany the 'Driver' on the footplate where this is dictated by the type or size of engine. When a steersman is present the 'Driver' will be expected to instruct the Steersman as normal during the course of the examination. The Driver/Steersman relationship will form part of the examination. A point scoring system is used to record levels of competency for each element of the examination. One dangerous action will result in the failure of the test.

During the course of the examination the 'Driver' will be expected to answer related questions and to give commentary when requested by the 'Examiner'.

The examiner will endeavour to advise the participant of the adjudication as soon as the practical examination has been completed. There may however, be unforeseen circumstances which prevent the examiner from making the results immediately available in which case the reason for the delay and the date of 'intended notice' will be given by the examiner to the participant in writing

Where the participant is successful a 'Certificate of Driver Competency' will be awarded accompanied by a credit card sized 'proof of competency' card. These items will be posted to the driver as soon as is practical.

Where the participant is not successful the examiner will provide the reasoning behind the decision and will proffer advice on how the participant might rectify the situation. The examiner will also indicate what level has been attained in the participants' Log Book cycle. A re-examination will be necessary.

IMPORTANT NOTES

1. The holding of an NTET Traction Engine Drivers Certificate of Competency does not in itself imply that the recipient is qualified or suitable to act as a professional instructor in the management and operation of a Steam Traction Engine.
2. The General Council of the NTET does not seek to make the holding of a Certificate of Competency conditional upon being invited to attend an NTET authorised event.

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Examination Syllabus

Section

Principles and Scope of Examination

1. Preparation

Driver: A current Driving licence relating to the appropriate vehicle category should be provided by the 'Driver(s)'. Where applicable the Student Log Book and Mentor's 'proposal for examination' should be available for scrutiny.

A Current Road Fund Licence should be displayed where applicable.

Engine: A current NTET disc should be prominently displayed or the relevant Insurance and Inspection documentation should be available for examination.

The Engine should be presented in a clean and workable condition and parked on level ground with the brake set on, scotches in place and out of gear. No trailers to be attached at this point.

An appropriate set of 'tools' and spares should be assembled.

The 'Driver' will be required to describe, in simple terms, the operation of each component and all fixtures and fitting attached to the engine.

2. Raising Steam

Practical demonstration of the method of raising steam for the particular type of make/engine. The following aspects will be examined:

Pre fire lighting routine: general steam circuit condition checks; water level checks; fire tubes condition, fire grate cleanliness; smoke box condition; use of chimney covers and spark arrestors.

Fire management and Steam Raising: Method of laying and lighting the fire; transition to coal only; general combustion control; gauge glass blow-down routines; injector checks; safety valve operation and calming.

Engine Preparation: Lubrication routines; mechanical checks; bunkering and provisioning; general engine and motion examination and cleanliness.

3. Preparation for engine movement

Practical demonstration of the preparation of the traction engine prior to being put to work or moved. The following aspects will be examined:

Water levels and steam pressure checks; drains clearing routine; steam cylinder lubrication checks; drive-gear selection and moving off technique.

4. Driving - General

Practical demonstration of driving the traction engine and the management of the steam plant. The following aspects will be examined:

General all-round awareness; attitude to other vehicles and pedestrians; empathy with engine under changing conditions; reaction to changing circumstances; fire and steam management; progress planning.

Section	Principles and Scope of Examination
5. Manoeuvring	<p>Practical demonstration of the ability to manoeuvre and manage the traction engine according to the following requirements:</p> <p><i>Forward and reverse movement:</i> Driving straight-ahead and stopping at a marked position; reversing and stopping at a marked position.</p> <p><i>'T' junctions - from the 'T' junction ahead position:</i> Turning Right at the junction and driving for approximately 30 metres and stopping; reversing back into the 'branch' road, turning Left at the junction and driving for approximately 30 metres and stopping.</p> <p><i>Turning the engine in a 'tight' road:</i> The engine should be turned around to face the opposite direction of travel using the minimum number of shunting manoeuvres and without coming into contact with roadside kerbs, masonry or street furniture.</p> <p><i>Emergency Stop:</i> At some unspecified part of the examination the examiner will require the vehicle to be stopped under simulated 'emergency conditions'. The Driver's ability to safely bring the vehicle to a halt with due consideration for other traffic and pedestrians and the engines well being will be examined.</p> <p>Note 1. The driver will be advised when the 'Emergency Stop' examination is imminent.</p> <p><i>Starting and stopping on an incline:</i> Move off from a dead-stop condition up an incline, travel 30 metres and stop; move off from a dead-stop condition down an incline, travel for 30 metres and stop.</p> <p><i>Changing gear on an incline:</i> Demonstrate gear changing routine, high to low and low to high; use of safety measures</p> <p><i>Reverse to hitch:</i> Reverse accurately to a trailer hitch (or fixed point) set at an obtuse angle; demonstrate coupling and uncoupling the trailer.</p> <p>Note 2. This manoeuvre can be simulated with road cones or other similarly visual devices in which case a commentary will be required to describe the coupling/uncoupling routine.</p> <p><i>Removal and subsequent refitting of a drive pin(s);</i> where appropriate</p>
6. Parking up	<p>Practical demonstration of how to set the traction engine to a passive state. The following aspects will be examined:</p> <p>Setting of motion gear, gears, brakes, scotches and drain cocks; management of the fire, water levels and steam condition.</p>
7. Dealing with an Emergency	<p>Describe, using narrative and aided by hand drawn diagrams where thought appropriate, how various 'emergencies' might be dealt with. The list of possible 'emergencies' includes, but may not be restricted to; a broken gauge glass, fusible plug failure, leaking tubes, a sticking clack, injector failure, broken motion link pin, failed cylinder oil lubricator.</p>

Syllabus for the Examination for the NTET Traction Engine Driver Competency Certificate

