

Tyne & Wear Archives & Museums

Care of Working Collection Objects Policy

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Contents

1. Introduction
2. Overview of working objects within TWAM
3. Standards for the operation, maintenance and repair of working objects
 - 3.1 Conservation/Maintenance Plan
 - 3.2 Operating manual and Log
 - 3.3 Conservation Maintenance Record
 - 3.4 Training
 - 3.5 Inspection

- 3.6 Risk Assessments
- 3.7 Health & Safety requirements

1. Introduction

This policy covers the use of accessioned objects for means of demonstration or doing job for which they were made. It does not cover the operation of non-collection machinery.

Demonstrating an object in motion can add immeasurably to our understanding of its purpose and significance; riding on a transport exhibit designed to carry passengers not only shows us how it was made and controlled, but demonstrates conditions of life for those who worked on it or used it.

Operating an object may also actually contribute to its preservation, e.g. through distributing lubricants or varying stress points.

Operating an object may also help to preserve or rediscover appropriate skills.

Some objects will be identified as able to be operated, some as operable only occasionally and with care, and some as never to be operated. All should be regularly inspected and their status be reviewed.

2. Overview of working objects within TWAM

At Stevenson Railway Museum collection items (locomotives and carriages) operate under real power doing the real job for which they were designed and built (they are used for passenger carrying purposes on an operational heritage railway), which subjects them to the same rates of wear and deterioration and risk of damage as applied in their 'normal' working life.

Most of the operational accessioned objects in Discovery Museum within Science Maze are being demonstrated at very low stress using an external power source. This requires a different set of standards and it is equally important that they are covered. Wear and deterioration are still taking place and there is risk of damage, but the controls needed are different.

3. Standards for the operation, maintenance and repair of working objects

3.1 Conservation/Maintenance Plan

Only objects which have been identified as suitable for operation by the relevant curator and conservation specialist should be operated, and then in strict accordance with their Conservation/Maintenance Plan as drawn up by the relevant specialist and operating guidelines. These will include comprehensive instructions for their operation, inspection and maintenance, and a list of those authorised to operate them.

Both the Conservation/Maintenance Plan and the operating guidelines of every working object states the point beyond which operation will not be allowed to proceed, because to do so would result in an unacceptable loss of original material

through wear, repair and replacement of component parts, and risk of damage. The reasons for the decision to operate an object, and the operating cut-off point are recorded and included in the object's operating documents and EMu record.

The Conservation/Maintenance Plan should include comprehensive directions for the safe operation of each object. It should also include (in greater or lesser complexity as appropriate) a technical description of the object, operating and maintenance instructions and schedules, and should specify a syllabus for training personnel in the contents of the code.

3.2 Operating guidelines and documents

Each object to be operated should have operating guidelines which sets out in detail how it is to be operated and by whom, and operating documents which record every operation.

Workloads and running speeds should be determined in the object's operating guidelines. Excessive workloads or running speeds should be avoided, so that operating stresses and wear are limited.

Manufacturers' operating instructions may need to be used with care. They may include directions not compatible with established curatorial/conservation practice, or with current health and safety laws, and may assume that spare parts are available.

An operating documents should be kept for every working object, containing a record of all operations. This is attached to the EMu record

3.3 Conservation Maintenance record

A Conservation/Maintenance record should be kept for every working object, as for all other larger objects. It should contain a record of all work carried out on the object.

Fuels and lubricants should be carefully chosen according to their application. The manuals and lubrication instruction plates on old machines may require interpretation to establish the best currently available substitutes. Some modern fuels and lubricants (e.g. motor vehicle engine and gearbox oils) are unsuitable for many older machines; on the other hand some components, such as open gears, can probably be lubricated much better now than when the machine was made.

All maintenance work, repair and conservation should be recorded in the object's Conservation/Maintenance record. All work should be prepared in consultation between the curator, conservator and craftsperson/technician/engineer, setting out possible treatment options, specifying the action decided upon, the reasons for taking that decision, and recording the work undertaken. All lubricants and cleaning materials used should be recorded.

Where parts have to be replaced, the original part should normally be retained in the museum's collection and marked appropriately.

New or reproduction parts fitted to an object should wherever possible be clearly and indelibly marked to show the date of manufacture, and the identity of the museum.

3.4 Training

Appropriate training must be provided by an approved trainer to all who operate working objects, and appropriate supervision given to trainees.

The training and retraining of operators is extremely important. TWAM has stringent rules on who has permission to operate what, and what training they must undergo.

Museum staff and volunteers not infrequently have had previous experience of the same or similar museum objects in industry. It is important that the procedures they learned then be reviewed; they may not be appropriate in the museum context.

3.5 Inspection

Working objects must be inspected and maintained at regular intervals by the relevant member of staff. The results of the inspections of wearing components should be assessed against the operating cut-off point (see 3.1 above).

Particular care should be exercised with regard to the regular inspection and maintenance of infrequently or irregularly operated objects.

3.6 Risk assessments

The risk posed (to both object and people) by operating an object must be regularly assessed, and appropriate protection and supervision must be provided.

3.7 Health & Safety requirements

Most of the statutory requirements covering the operation of museum objects are concerned with safety. Those most widely applicable include the guarding of dangerous parts of operating machinery, specified in the *Factories Act 1961*, the *Offices, Shops and Railway Premises Act 1963* and the *Provision and Use of Work Equipment Regulations 1992*.

In the museum context there are two groups of people to be protected from dangerous machinery: the museum visitor, and the museum personnel operating the object.

Care too needs to be taken to install guarding that does not compromise the historic and aesthetic considerations of the museum display. It follows then that two levels of safety guarding may often be appropriate: one relying on 'safety by distance' for the uninitiated visitor, and one as unobtrusive as possible for the operator, who should (having undergone safety training) be aware of potential safety hazards. All guarding

originally fitted by a machine's manufacturer should be retained. In providing any additional protection necessary to meet modern requirements it is essential to find a mutually acceptable solution that maximises safety for visitor, operator and object, whilst respecting the aims of the museum.

There are numerous other statutory requirements applicable to museums with working objects, depending on their sphere of activity, including mining, agriculture and transport.

It is the responsibility of the person writing the risk assessment for a particular piece of collection to research and record the relevant statutory requirements in that document.

In addition there may be the requirements of various controlling authorities to be met, for example the Civil Aviation Authority, the Department of Trade & Industry, Environmental Health Officers and the Railway Inspectorate.

Museum personnel operating vehicles or boats must hold the appropriate licence.

Passengers should not be taken on board vehicles not designed or adapted for passenger carriage, and designated crew numbers should not be exceeded.

Particular care must be taken with moving parts, such as tank turrets, crane jibs or bulldozer blades.

Acknowledgement

Extensive use of the Museums & Galleries Commission report of 1994 'Standards in the Museum. Care of Larger and working objects' has been made in this document.