

Health and Safety Office – Guidance Note - Testing regimes

Topic:	Testing regimes required for Health and Safety compliance – Statutory and advisory
Date:	October 2010
Version:	1.3
Scope:	<p>A brief overview of the requirements for</p> <ul style="list-style-type: none"> • Statutory and advisory inspections and examinations • Calibration of testing equipment. • Relevance to University's policies. • Recording and storage of results.
Relevant Legislation:	<p>Provision and Use of Work Equipment Regulations 1998 (PUWER) Lifting Operations and Lifting Equipment Regulations 1998 (LOLER) Control of Substances Hazardous to Health Regulations 2002 (COSHH) Personal Protective Equipment at Work Regulations 1992 (PPE) Gas Safety (Installation and Use) Regulations 1998 (GasSafe) Pressure Systems Safety Regulations 2000 (PSSR) Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (CDG) Regulatory Reform (Fire Safety) Order 2005 (RRO) Electricity at Work Regulations 1989 (EaWR) Work at Height Regulations 2005 (WaHR) Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR)</p>
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1.0 Introduction:

Certain safety critical equipment is required by health and safety legislation to be examined at periodic intervals by a competent person. Examples of equipment that require testing includes lifting tackle, lifting machines, gas lines, pressure vessels and ventilation systems that extract hazardous fume.

Other tests are important but fall outside the bounds of legal statute, so have been written into University policy. An example of this is Portable (electrical) Appliance Testing which is not demanded by the legislation (where it requires items to be deemed safe) but is accepted as a method of ensuring the safety of users.

2.0 General background:

Statutory examinations and tests are either carried out by the engineering arm of the University's insurance company, external contractors or Estate Services. They are, for the majority of circumstances, organised by Estate Services who also maintain a register and computer database of equipment. One exception is microbiological safety cabinets and re-circulating fume cupboards, and reference should be made to the Procurement web-site for instructions, or contact the Health and Safety Office.

Other examinations and tests are advisory, but University Council has ratified as an internal policy how local users should react to ensure continuing safety. Details of these tests will include the expected period between tests and the required competence of those persons performing the tests. A summary of these can be found in the table in Appendix II

A comprehensive (but not exclusive) table of the most usual tests required can be found in Appendix I. The status of each is noted as S for statutory, or A as Advisory.

The Health and Safety Offices' involvement in this area is to advise at any stage in the process, or to inspect, especially during the regular planned audit process. For an audit, the Health and Safety Office receives from Estate Services their perception of a department's holdings, and the current test status. This is discussed on the departmental audit; the responsibility for the safe use of the equipment relies upon the local management and the user. Each department therefore must regularly monitor all testing/examination timings, and report to Estates (or the testing agent) any new equipment or details of the disposal of any defective/redundant equipment.

Should an accident occur due to the use of equipment that had not received an appropriate statutory inspection, then any subsequent legislative enforcement would be aimed at the department and not Estate Services as they are only a facilitator of the examination, and are only partly responsible for ensuring when it is carried out. The same applies to the examining agents such as insurance company's engineers. If they do not turn up and carry out the inspection, they will not carry the full legal liability for this omission. It is the equipment owner who has the main responsibility to ensure that the equipment is examined within the specified time limit and not to use it outside that limit. To this effect statutory testing is more stringently enforced than self-imposed periodicity.

2.1 Periodicity:

The period between tests is either determined by statute, or as the result of a risk assessment that takes into account frequency and type of use, environmental conditions, or the type of persons who might be exposed to hazards.

For any testing regime, there should be provision for extra tests to be made before the next due date in the event of circumstances or any other parameters (mentioned above) should change, or equipment has had to be altered or repaired.

The following is a breakdown of duties and responsibilities:

3.0 Responsibilities and Duties:

3.1 Departmental

Responsible for maintaining an inventory and register of all equipment requiring all statutory examination/inspection. This must contain the following details:

- (i) item description;
- (ii) item serial number (manufacturers serial number if available and/or departmental serial number);
- (iii) item location;
- (iv) date of last test;

- (v) date of the next test, and
- (vi) copies of test certificates – these may be hard-copy, but could be available and stored electronically.

2. It must ensure that any repair or maintenance is carried out on the specified equipment whether during normal use or as detailed in any inspection/examination report.
3. It must also ensure that any relevant equipment that has not received its statutory inspection or examination (i.e. is out-of-date) is physically disabled and removed from service until it has been performed. Ideally this should also be true for equipment due for advisory tests, but it is reasonable to perform a risk assessment based around a short extended time period.
4. Ensure that equipment taken out of use that no longer needs its statutory examination or inspection is not brought back into use without the appropriate examination/inspection.
5. Any item that needs non-statutory (advisory) testing must be subject to a special risk assessment to establish the feasibility to extend the test period or remove the item from use as above.
6. The department must carry out regular general health and safety inspections and as part of this, monitor that all testing regimes are within date. This must be documented in the local health and safety files and be kept available to be audited.
7. All defects or out-of-date equipment should be reported in writing to the central contact point for statutory inspections.
8. Users of all equipment should be adequately trained by their department, and informed that they should check the condition and the (in-date) status before use, not continue with its use if unsure of the safety, and then report any defects. **This check before use is particularly required by legislation for portable electrical appliances, vehicles, LEV, PPE, and all forms of access equipment (ladders, scaffolding etc.).**

3.2 Estates Services

1. Organising the Insurance Engineers to carry out statutory inspections/examinations.
2. Receiving inspection reports, written schemes of examination etc and maintaining a central database (made available upon request).
3. Carrying out statutory tests and examinations of fume cupboards and local exhaust ventilation. Filling in results signage (and also physically informing departments of failures) and maintaining suitable records.
4. Organising installation tests and reports for all systems including new fume cupboards and local exhaust ventilation either through Capital Maintenance and Infrastructure or the Capital Projects Office and their contracted commissioning engineers.
5. Carrying out the regular testing of the Fixed Electrical Installation, including Earth Loop testing.
6. Carrying out the regular tests on all the Fixed Electrical Equipment that they have been informed about.
7. Perform or help to organise any necessary service or repairs; this may incur a departmental cost.

The Estates Maintenance contact for the above is their Helpdesk on 0117 33 89898 for the attention of Allan Riddick (Testing Maintenance Manager)

4.0 INSPECTIONS, EXAMINATIONS and tests with actions required by departments.

Equipment type	Inspecting Agents	Regulation	Periodicity	Status	Comments and Actions
Lifting Tackle and personal safety harnesses	University Insurance	LOLER & PUWER	6 Monthly	S	Ensure holdings reported to Estates.
Lifting Machines	University Insurance	LOLER & PUWER	6 Monthly (Personnel) 12 monthly (Goods)	S S	As above
Fork Lift Trucks (lifting chain)	University Insurance	LOLER & PUWER	12 Monthly See Note1	S	As above
Local Exhaust Ventilation (LEV)	Estates Maintenance	COSHH	14 Monthly	S	As above
Re-circulation Fume Cupboards and Microbiological Safety Cabinets	Contractor through Procurement	COSHH	14 Monthly	S	Report holdings to the Health and Safety Office. The testing agency is at present Crowthorne Hi-Tec Ltd (2010). Departments must contact the contractor direct and Monitor re-test dates.
Pressure Systems	External contractor through user department	PSSR BCGA CoP Note 2 CDG	As dictated by the written Scheme of Examination 5 years 10 years	S A S	Includes compressed gas cylinders and associated regulators and pipe work. Regulators must be inspected at least annually, and replaced or refurbished after 5 years from manufacture. If cylinders are owned rather than leased, and will be transported. See Note 3 below
Pressure Vessels	University Insurance	PSSR	12 monthly external, 24 monthly internal.	S	Report all pressurised equipment to the Insurance via Estates for a decision on applicability.
Fixed Electrical Installation	Estates Maintenance	EaWR	5 Yearly installation check Residential properties 12 monthly earth loop	A	According to IEE Wiring Regulations 17 th Edition (BS7671:2008) Department to ensure that checks are carried out (keep date of last test/examination only).
Fixed Electrical Equipment	Estates Maintenance	EaWR	24 Monthly See Note 4	A	Defined as PAT testing according to IEE Code of Practice, 3 rd Edition. Ensure holdings reported to Estates. Must not be tested in-house.
Portable Electrical	Departmental	EaWR	Various	A	PAT testing according to IEE Code of Practice, 3 rd Edition.

Equipment	responsibility		Periodicities See Note 5		Department to raise appropriate register and inventory. Can be tested in-house by qualified or competent persons.
Gas installations and appliances	Estates Maintenance	Gas Safe	12 Monthly	S	Department must ensure annual examination carried out (keep date of last test/examination only).
Fire Extinguishers	Contractor through the Safety Office	RRO	12 Monthly		Keep date of last test – Report overdue equipment to Health and Safety Office.
Fire Alarms	Department or Site Services	RRO	Weekly	A	Test alarm sounders by using a different call point each week.
	Contractor through Estates		12 Monthly	S	Usually effected by testing 33% of system every 4 months.
Fire Doors	Site Services	RRO	6 monthly	A	
Emergency evacuation equipment	Contractor through Estates maintenance	RRO	12 monthly	A	Evacuation chairs and other systems as below.
	Department		6 monthly		Functionality and battery test for hearing disability aids.
Emergency Lights	Department	RRO	Daily	A	Visual
	Site Services		Monthly	A	
	Estates Maintenance		12 monthly	S	?
Flammable stores	Contractor through Estates Maintenance	DSEAR	12 monthly	A	All intrinsically safe (ATEX) electrical equipment. Ensure holdings reported to Estates.
	Departmental responsibility			A	Signage and fire precautions.
Personal Protective Equipment	Departmental responsibility	PPE	Monthly		All PPE other than that which is (single-shift) disposable e.g. Gloves, overalls and respirators.
Ladders / step-ladders	Departmental responsibility	WaHR	12 monthly	A	Formal testing, but pre-use check by user is essential.
Scaffolding	Departmental responsibility	WaHR	“As often as is necessary to avoid deterioration”	S	Before use whenever newly constructed, and then as necessary and after adverse weather if already constructed.
Water outlets (taps and showers)	Contractor through Estates Maintenance	COSHH	3 monthly	A	<u>Control of Legionella</u> . Shower head disinfection and de-scale.
	Departmental responsibility		Weekly	A	University policy requires that all are flushed if not in use throughout the week, and a record kept by departments (includes eye-wash stations, normal and drench showers).
Hot Water System	Estates Maintenance	COSHH	12 monthly	A	<u>Control of Legionella</u> .
Cold Water System	Estates Maintenance	COSHH	6 monthly	A	<u>Control of Legionella</u> .
Humidifiers	Departmental responsibility	COSHH	As often as is necessary, dictated	A	<u>Control of Legionella</u> .

			by risk assessment.		
Vehicles	Departmental responsibility		Weekly	A	Formal testing, but pre-use check by user is essential.
	Contractor		Annual	S	MOT if over 3 years old, otherwise advisory full service.
"Work Equipment" that will fail to the <u>harm condition</u> .	Contractors directly through departments	PUWER	As often as is necessary, dictated by risk assessment.	A	

Note 1 – “unless the truck operates for more than 40 hours a week, is used to lift people, or has a side shift or attachments fitted. By law, these must be thoroughly examined at least every six months”.

Note 2 – BCGA is the British Compressed Gas Association which has formulated Codes of Practice for a range of elements of the safety of gases and cryogenic liquids. Their CoPs are considered to be the equivalent to legislation as “Industry best practice”.

Note 3 From the HSE guidance to CDG.

Periodic inspection

The interval between periodic tests may be extended to 10 years for aluminium alloy pressure receptacles. This derogation may only be applied to UN pressure receptacles when the alloy of the pressure receptacle has been subjected to stress corrosion testing as specified in ISO 7866:1999.

The interval between inspections for steel cylinders may be extended to 15 years:

(a) with the agreement of the competent authority (authorities) of the country (countries) where the periodic inspection and the carriage take place; and

(b) in accordance with the requirements of a technical code or a standard recognised by the competent authority, or standard EN 1440:1996 "Transportable refillable welded cylinders for liquefied petroleum gas (LPG) – Periodic requalification".

Note 4 The periodicity may be extended on low usage equipment.

Note 5 The periodicity will depend upon the equipment and the environment it is used in (refer to Safety Office guidance).

5.0 Examples within the categories from section 4.0

- Fire precautions: Please refer to the Building Fire Safety Manual for comprehensive information.
- Lifting Tackle: Beams, shackles, straps, ropes, chains.
- Lifting machines: Hoists, cranes, lifts (elevators), Boom lifts (“Cherry Pickers”).
- Local Exhaust Ventilation: Fume cupboards (ducted and recirculating), Microbiological Safety Cabinets, Welding fume extractors, paint spray booths
- Pressure systems: Items connected on a semi-permanent basis eg Gas Cylinder, Regulator, Pipework, safety components and equipment being supplied.
- Pressure vessels: Autoclaves, compressors, pressure cookers, gas cylinders, some Dewar flasks.
- Work equipment: Ultra-Centrifuges, tractor Power-takeoffs (PTO), machine-shop guillotines.

6.0 References

Lifts: <http://www.hse.gov.uk/pubns/indg339.pdf>

Vehicles (eg Fork Lift Trucks); <http://www.hse.gov.uk/pubns/priced/hsg136.pdf>

<http://www.bristol.ac.uk/safety/guidance/driving-policy.pdf>

Electricity: <http://www.hse.gov.uk/pubns/priced/hsr25.pdf>

<http://www.bris.ac.uk/safe/Bursar/BuildingServices/safeorg/worksinst/WI12E.pdf>

PAT: <http://www.bristol.ac.uk/safety/guidance/gn07-03.pdf>

Gas: <http://www.bris.ac.uk/safe/Bursar/BuildingServices/safeorg/worksinst/WI13G.pdf>

Cylinders: <http://www.hse.gov.uk/cdg/pdf/safusgc.pdf>

Fire: <http://www.communities.gov.uk/fire/firesafety/firesafetylaw>

<http://www.bris.ac.uk/Depts/Safety/Fire/FireSafety.shtml>

ATEX / DSEAR: <http://www.hse.gov.uk/fireandexplosion/dsear.htm>

Water (Legionella): <http://www.bris.ac.uk/Depts/Bursar/BuildingServices/legionella/policy.pdf>

<http://www.bris.ac.uk/Depts/Bursar/BuildingServices/legionella/WI3.pdf>

