

PLANT & SAFETY

Pressure System Guide

How we help with Pressure System (PSSR 2000) Compliance - Inspections and Testing

What is PSSR?

The duties imposed by PSSR relate to pressure systems for use at work and the risk to health and safety.

The aim of these Regulations is to prevent serious injury from the hazard of stored energy as a result of the failure of a pressure system or one of its component parts

Before using any qualifying pressure equipment (new or otherwise), a Written Scheme of Examination (WSE) must be in place, and an examination undertaken.



Relevant Fluids Include:

- Steam at any pressure
- Compressed or liquefied gas, including air, at a pressure greater than 0.5 bar above atmospheric pressure
- Pressurised hot water above 110 °C
- A gas dissolved under pressure in a solvent (acetylene)

Definition of Pressure Systems:

- A system comprising one or more pressure vessels of rigid construction, any associated pipework and protective devices
- The pipework with its protective devices to which a transportable pressure receptacle is, or is intended to be, connected
- A pipeline and its protective devices

The aim is to control risk through safe design, operation, inspection, maintenance, and examination, reducing the likelihood of accidents from pressurised systems.

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0330 113 7920

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Who is responsible?

Employers, also known as 'dutyholders', including:

the owner of a mobile system, that is, one that can be easily moved, such as an air compressor taken from site to site

the user of an installed system, that is, one that is not a mobile system, such as a steam boiler.



Written Scheme of Examination

The user of hired or leased equipment should make sure that the WSE is in place and that the certificate of examination is also current.

PSSR Schedule 2 allows a supplier of an installed system to assume responsibility in writing for the WSE, the operation, the maintenance and the record keeping.

Air Compressors and Air Receivers

Many businesses don't realise their workshop air compressor and air receiver may fall under Pressure System Safety Regulations (PSSR 2000). If it stores compressed air above 0.5 bar gauge pressure, it is classified as a regulated pressure system.

For more information on dutyholders' responsibilities call our team on **0330 113 7920** or visit **www.plantandsafety.co.uk**

What is a Pressure System?

What is a pressure system in accordance with PSSR 2000 regulations?

Under Regulation 2 of the Pressure Systems Safety Regulations 2000 (PSSR), a pressure system is defined as:

- One or more pressure vessels of rigid construction
- Associated pipework and protective devices
- Pipelines and their protective devices

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Common examples of pressure systems

These include:

- Boilers and steam heating systems
- Pressurised process plant and piping
- Compressed air systems
- Autoclaves and retorts
- Heat exchangers and refrigeration plant
- Valves, steam traps and filters
- Pipework and hoses
- Pressure gauges and level indicators

These systems must contain a relevant fluid

Which includes:

- Steam
- Gases under pressure greater than 0.5 bar
- Liquids under vacuum

Does PSSR 2000 Apply to My Pressure System?

Start

Is there a relevant fluid in the system?
(Relevant fluid = steam, gases under pressure, or fluids at pressures above 0.5 bar, as defined by Reg 2 PSSR)

- **No** → **PSSR 2000 does not apply**
- **yes** → **Does the system include a pressure vessel that either:** Contains steam, or has pressure x volume product of **250 bar litres** or more?

- **No** → **PSSR Regulations 5(4)*, 8*, 9*, 10*, and 14* do not apply**
- **yes** → **Is the system mobile or subject to a lease/hire agreement?**

- **No** → **The user has duties under PSSR**
- **yes** → **The owner has duties under PSSR**

If PSSR applies, you must comply with the following regulations (as relevant):

Regulation 5 - Provision of information and marking
Regulation 7 - Safe operating limits
Regulation 8 - Written Scheme of Examination *
Regulation 9 - Examination in accordance with the Written Scheme *
Regulation 10 - Action in case of imminent danger *
Regulation 11 - Operation
Regulation 12 - Maintenance
Regulation 14 - Keeping of records *
Regulation 15 - Precautions to prevent pressurisation of certain vessels **(user only)**

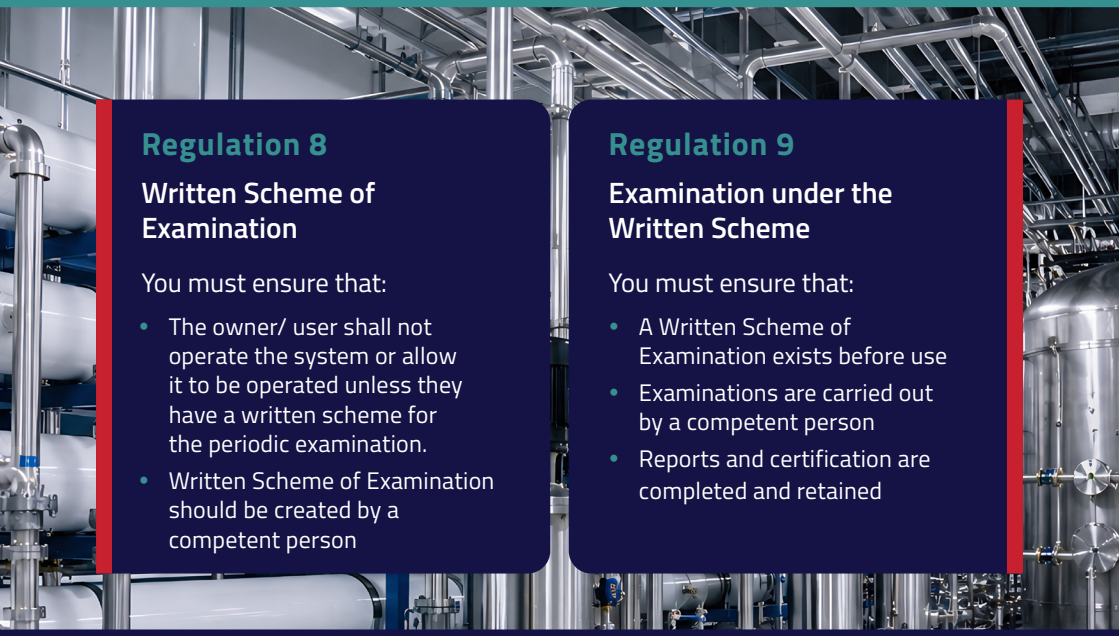


This decision tree only applies to type (a) pressure systems as defined in Regulation 2(1) PSSR: one or more pressure vessels of rigid construction, any associated pipework and protective devices. It does not apply to type (b) pressure systems (pipework with protective devices for transportable receptacles) or type (c) systems (pipelines and their protective devices). **Always refer to the (PSSR) Pressure Systems Safety Regulations 2000 (SI 128) and the HSE Approved Code of Practice L122 for full requirements.**

Regulation 8 and 9 Requirements

Written Scheme of Examination and Examination, What are the differences?

Under the Pressure Systems Safety Regulations 2000 (PSSR) framework, having a system in place is not enough, owners and users carry ongoing responsibilities. Regulations 8 and Regulations 9 lie at the heart of those duties.



Regulation 8

Written Scheme of Examination

You must ensure that:

- The owner/ user shall not operate the system or allow it to be operated unless they have a written scheme for the periodic examination.
- Written Scheme of Examination should be created by a competent person

Regulation 9

Examination under the Written Scheme

You must ensure that:

- A Written Scheme of Examination exists before use
- Examinations are carried out by a competent person
- Reports and certification are completed and retained

Why is it important?

Failure to comply with Regulations 8 and 9 of PSSR 2000 can lead to enforcement action, fines, prosecution, and significant safety risks. Every pressure system must have a current Written Scheme of Examination and be thoroughly examined, inspected and tested by a competent person at the required intervals, for more information **call 0330 113 7920 or email sales@plantandsafety.co.uk**



Written Scheme of Examination

Regulation 8

A Written Scheme of Examination is a legal requirement under PSSR. Regulation 8 states that a pressure system must not be operated unless a WSE is in place, and Regulation 9 requires examinations to be carried out in accordance with it.

What is a Written Scheme of Examination?

A Written Scheme of Examination is a formal document that sets out:

- Which parts of a pressure system need to be examined,
- How they will be examined,
- How often examinations are required, and
- The qualifications of the person certifying and carrying them out.

In short, it is the framework for ensuring that pressure systems remain safe to use.

Regulation 8

Why Do You Need a Written Scheme of Examination?

Having a Written Scheme of Examination (WSE) is not just about ticking a legal box. It provides:

- ✔ **Compliance:** meeting your obligations under PSSR.
- ✔ **Safety:** reducing the risk of dangerous failures.
- ✔ **Maintenance planning:** helping you schedule inspections, repairs, and upgrades.
- ✔ **Confidence:** demonstrating to regulators, insurers, and clients that your systems are properly managed.

Examination under the Written Scheme

Regulation 9

Under Pressure Systems Regulation 9, all systems must undergo regular inspection, testing and thorough examinations in accordance with a Written Scheme of Examination – (WSE), Regulation 8, to confirm their ongoing safety and integrity.



What Is Pressure Systems Regulation 9?

This regulation ensures that thorough examinations, inspection and testing are carried out at specified intervals and before first use, confirming that the system is safe to operate.

In simple terms, this means that every pressure system covered by a Written Scheme of Examination (WSE) must be inspected and tested by a competent person:

- Before first use, and
- At the specific intervals outlined in the Written Scheme

Regulation 9

What Happens During a Regulation 9, Pressure Systems Inspection?

A competent person will carry out a thorough inspection, testing and thorough examination (Regulation 9) of the pressure system in line with the Written Scheme of Examination (WSE). This includes assessment of:

- The condition of pressure vessels and associated pipework.
- The functionality of protective devices such as safety and relief valves.
- The integrity of joints, seals, and supports.
- Any signs of corrosion, erosion, or other forms of degradation.

Inspection Frequency

How Often Should Pressure Systems Be Inspected? UK PSSR Inspection Frequency Explained

Under the Pressure Systems Safety Regulations 2000 (PSSR), pressure systems used at work must be examined at intervals specified in a Written Scheme of Examination (WSE). A WSE must be prepared by a competent person and must include details of what to inspect and how often.

Legal Requirements

Every pressure system must have a current Written Scheme of Examination and be thoroughly examined, inspected and tested by a competent person at the required intervals.

12/14 month Inspection Frequency

Typically, air receivers and air compressors require inspection at least every 12-14 months, but this can vary based on the Written Scheme of Examination (WSE).



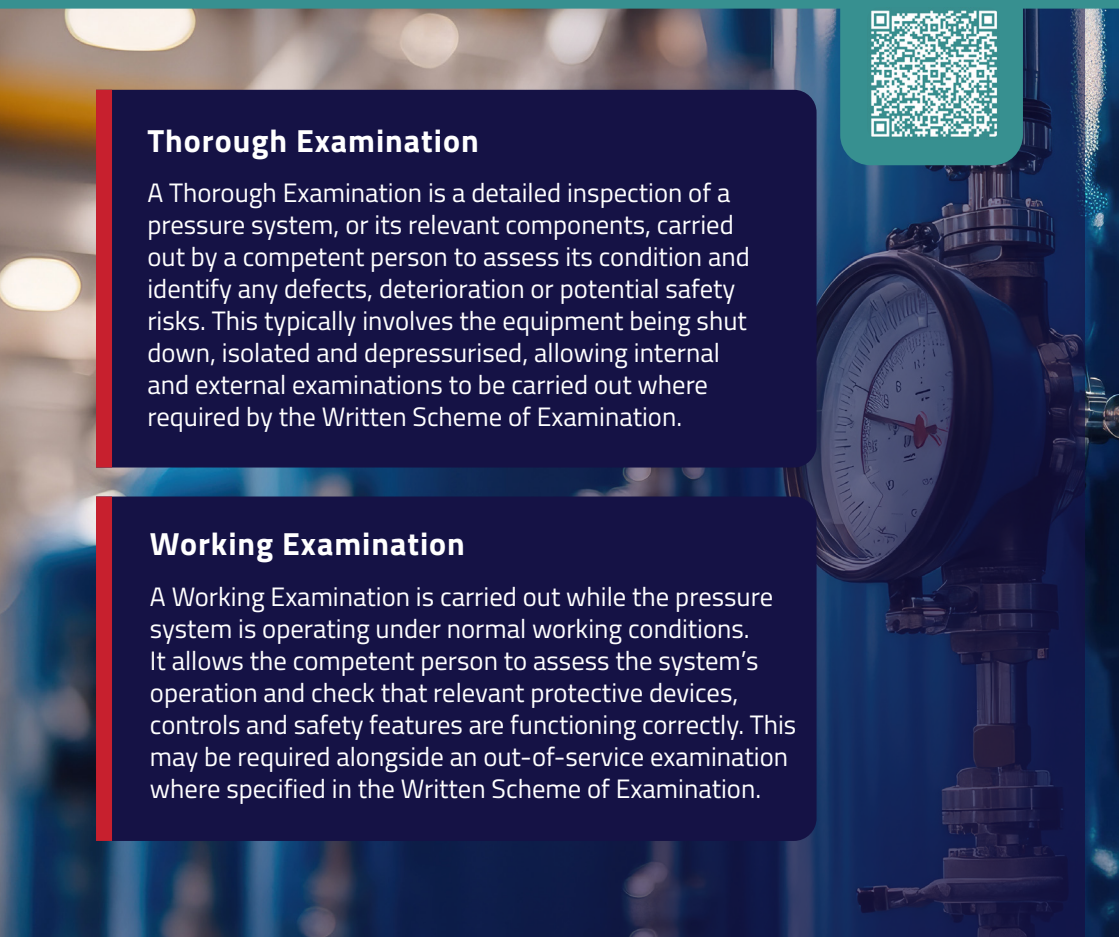
For more information on Inspection frequency call our team on **0330 113 7920** or visit **www.plantandsafety.co.uk**

Thorough Examination and Working Examination

What are the differences?

The nature of the examination should be specified in the written scheme. This may vary from out-of-service examination with the system stripped down, to in-service examination with the system running under normal operating conditions.

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Thorough Examination

A Thorough Examination is a detailed inspection of a pressure system, or its relevant components, carried out by a competent person to assess its condition and identify any defects, deterioration or potential safety risks. This typically involves the equipment being shut down, isolated and depressurised, allowing internal and external examinations to be carried out where required by the Written Scheme of Examination.

Working Examination

A Working Examination is carried out while the pressure system is operating under normal working conditions. It allows the competent person to assess the system's operation and check that relevant protective devices, controls and safety features are functioning correctly. This may be required alongside an out-of-service examination where specified in the Written Scheme of Examination.

Service Engineer

When do I need a service engineer to assist?

Depending on the complexity and installation of the pressure system, a service engineer may be required to assist with the thorough examination visit by a competent person.

You may need assistance from a service engineer when:

For some Pressure Systems, the thorough examination provider may require a service engineer to assist with the thorough examination, this could include system preparation, system shut downs, depressurisation, stripping and reassembly, removing and testing safety critical components, and repressurising systems once the examination has been completed.

Following an examination where the competent person identifies defects or recommends repairs before the equipment can safely return to service.



Important: Service engineer vs competent person

A service engineer and a PSSR competent person have different responsibilities.

A service engineer carries out maintenance, servicing and repairs. A competent person is responsible for carrying out statutory examinations in accordance with the Written Scheme of Examination.

A service engineer does not automatically qualify as a PSSR competent person. Equally, a statutory examination does not replace routine servicing and maintenance.

To ensure independence and impartiality, the service engineer and competent person should be different personnel.

PSSR Compliance

What happens if I don't comply?

The Pressure Systems Safety Regulations (PSSR) are in place to prevent serious injury caused by the failure of pressurised equipment. Dutyholders are legally responsible for ensuring their systems are safe, properly maintained, and examined at the required intervals.

Failure to comply with these regulations can have serious consequences for both people and businesses.

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Legal Requirements

Every pressure system must have a current Written Scheme of Examination and be thoroughly examined, inspected and tested by a competent person at the required intervals.

Legal Consequences

Non-compliance with PSSR is a breach of health and safety law. If a pressure system is not properly maintained, tested and inspected, organisations may face:

- Enforcement action from HSE (Health and Safety Executive)
- Improvement Notices requiring issues to be fixed within a set timeframe
- Prohibition Notices stopping equipment from being used with immediate effect.
- Prosecution and court action
- Significant financial penalties and legal costs.
- Reputation damage.

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Have a Question About PSSR Compliance?

Our team are happy to help

We provide expert inspection, testing and certification across a wide range of plant and equipment to support safe working practices and regulatory compliance.

0330 133 7920

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