

## Annex B (normative) Commissioning service procedures

The commissioning service procedures listed in Table B.1 should be carried out for the appropriate type of extinguisher.

Table B.1 shows a numbered sequence, from start to finish (left to right), of actions necessary to perform a commissioning service on the main types of extinguisher. Each action is composed of one or more operations or inspections, the details of which are described in Table B.2. It is not necessary, or possible, to perform every action on every type of extinguisher.

Table B.1 Sequence of actions for commissioning service procedures for extinguishers

Extinguisher type	Sequence of actions <sup>A)</sup>
<b>Stored pressure</b>	
Water, water-based (including foam), powder, and primary sealed powder	1, 2, 3, 4, 5, 9, 10, 11, 13, 15
<b>Carbon dioxide</b>	1, 3, 4, 5, 10, 11, 13, 15
<b>Cartridge-operated</b>	
Water and water-based (including foam)	1, 3, 4, 5, 6, 7, 9, 11, 12, 13, 14, 15
Powder	1, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15

<sup>A)</sup> The numbers refer to actions detailed in Table B.2.

Table B.2 Commissioning service actions – Initial operations

Action no.	Component and/or action	Procedure
1	Safety clip and indicating devices	Check the safety clip and indicating devices to determine whether the extinguisher has been operated.
2	Pressure-indicating devices	<p>Check the pressure-indicating device where fitted. If it is not operating freely or if the indicated pressure is outside the specified limits, refer to the extinguisher manufacturer's instructions to ascertain the appropriate action to be taken. Check that any dust covers needed on pressure-indicating or pressure-relief devices are in place and are of a size that does not obscure the reading of the gauge.</p> <p>Where a pressure-indicating device is not fitted, verify, by means of the connection provided for this purpose, that the internal pressure is correct. If it is not correct, refer to the extinguisher manufacturer's instructions to ascertain the appropriate action to be taken.</p>
3	External examination	<p>Examine the exterior for corrosion, dents, gouges or damage that could impair the safe operation of the extinguisher (see Clause 9).</p> <p>Competent persons carrying out initial service actions on new extinguishers finding these conditions should refer the extinguisher back to the supplier.</p>
4	Initial weight check	Weigh the extinguisher according to the extinguisher manufacturer's instructions (in the case of a CO <sub>2</sub> extinguisher, weigh after removal of the discharge horn/hose assembly). Record this on the maintenance label (see 6.2.2). In the event of a loss of content of more than 10%, either return the extinguisher to the manufacturer for replacement, or recharge the extinguisher if practicable to do so.

Table B.2 Commissioning service actions – Initial operations (continued)

Action no.	Component and/or action	Procedure
5	Operating instructions	Check the operating instructions for correctness and legibility, ensuring that the text is in English.
6	Opening a gas cartridge extinguisher	Open the extinguisher by unscrewing the headcap. Remove the gas cartridge.
7	Initial fill of all extinguisher types	<p>Refer to the extinguisher manufacturer's instructions. Examine the interior with the aid of an inspection light. Check for corrosion or lining deterioration.</p> <p>Check that the extinguisher is filled correctly. Follow the correct procedure to fill the extinguisher if it is not filled. Follow the correct procedure if it has been filled incorrectly.</p> <p>For pre-filled, water-based, cartridge-operated types which have the additive in a separate container, remove this container and check it for leakage. If the container has been leaking, discard the container and recharge the extinguisher. Rinse out the body before charging.</p>
8	Initial fill of cartridge-operated powder extinguisher	Where a cartridge-operated extinguisher has been pre-filled, examine the powder in the extinguisher. If there is any evidence of caking, lumps or foreign bodies, or if the powder is not free flowing, or if there is any doubt at all about the condition of the powder, discard all the powder. The use of sieves or machines to remove foreign bodies or caked or lumpy material is not recommended since this will involve considerable exposure of the powder to atmospheric humidity with a risk of subsequent caking. Refer to the extinguisher manufacturer's instructions.
9	Operating mechanism and air passages	<p>Clean if necessary and pass air through the air passages, paying particular attention to the vent holes (or other venting device) in the headcap. Check that the strainer (where fitted), internal discharge tube and breather valve (where fitted) are unobstructed. Rectify any problems or replace with a new tube or valve if necessary.</p> <p>Check the operating mechanism and discharge control (where fitted) for free movement. Rectify any problems or replace with a new operating mechanism or discharge control as necessary. Protect moving parts and threads against corrosion with a lubricant as recommended by the extinguisher manufacturer.</p>
10	Removable operating mechanism	Where the extinguisher is designed to have the operating mechanism removed without the discharge of contents or loss of pressure, remove and check the operating mechanism and discharge control (where fitted) for free movement. Clean and lubricate the operating mechanism, rectify any problems, or replace with a new operating mechanism as necessary.
11	Safety pin	Remove the safety pin and check that the operating lever is undamaged and its movement is unobstructed. Safety precautions should be taken to avoid inadvertent operation. Return the safety pin or, where necessary, a replacement pin to the extinguisher.

Table B.2 Commissioning service actions – Initial operations (continued)

Action no.	Component and/or action	Procedure
12	Gas cartridge	<p>Examine the gas cartridge externally for corrosion or damage. If the gas cartridge has suffered mechanical damage or is corroded, replace as recommended by the extinguisher supplier (see also 7.2).</p> <p>Weigh the gas cartridge and check the mass against that marked on the gas cartridge. If the gas cartridge has sustained a loss of content greater than 10% (15% for cartridges with a content mass of less than 30 g) of the original content, withdraw it from service and replace it with a gas cartridge as recommended by the extinguisher manufacturer. Check the date marked on the cartridge (see 7.2).</p>
13	Seals for the discharge horn, hose, nozzle, valve body and hose diaphragm	Ensure that all seals for the discharge horn, the hose, the nozzle and the valve body are in place, as prescribed in the extinguisher manufacturer's instructions.
14	Reassembly	<p>Reassemble the extinguisher in accordance with the extinguisher manufacturer's instructions. Replace with new any safety element designed to show whether the extinguisher might have been operated.</p> <p>Check that the nozzle, horn and hose are fitted correctly. Follow the correct procedure to fit the nozzle, horn and hose to the extinguisher if any of them are fitted incorrectly.</p>
15	Affix maintenance label	Affix the maintenance label to the extinguisher in an appropriate position on the extinguisher body, and complete the details on the maintenance label, as recommended in 6.2.2.