
Technical Bulletin 99/33

Fire Prevention and Fire Safety - Inspection, Testing and Maintenance of Sprinkler Installations

Note: This TB is a re-issue of TB 24/93 under a new issue number only. The contents of the TB have not been updated for this issue but will be reviewed in due course.

This Technical Bulletin (TB) is advisory. It covers the Property Manager's responsibilities to ensure that necessary inspection, testing and maintenance of sprinkler installations can be met.

On MOD Establishments where a Fire Brigade of the Defence Fire Service is located, they will carry out the inspection and testing procedures and submit a report to the Property Manager. The Property Manager is responsible for engaging a specialist contractor to undertake all maintenance.

On MOD Establishments where a Fire Brigade of the Defence Fire Service is not located, the Property Manager is to arrange for a specialist contractor to carry out all inspections testing and maintenance of sprinkler systems.

SUBJECT CONTACT POINT:

**DEFENCE ESTATES
MINISTRY OF DEFENCE**

December 1999

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Fire Prevention and Fire Safety - Inspection, Testing and Maintenance of Sprinkler Installation

INTRODUCTION

1. Sprinkler installations provide an efficient form of automatic first aid fire protection; failures are rare and can nearly always be traced to some action on the part of the occupiers.

BACKGROUND

2. On Establishments where a Fire Brigade of the Defence Fire Service is located, inspection and testing of sprinkler installations will be undertaken by the Fire Brigade and a report submitted to the Property Manager.

RESPONSIBILITY OF PROPERTY MANAGER

3. Notwithstanding Departmental arrangements, the Property Manager is to organise the inspection and action recommended below, and bring to the notice of all staff the need for care to avoid damaging the installation.

DAILY CHECKS

4. A watch should be kept on the following points and staff should report any deficiencies:
 - a. The main stop valve should be secured open by means of a padlocked leather strap. Chains or wire may be installed in certain locations.
 - b. The valve group should be kept clear of obstructions.
 - c. The manufacturer's instructions card should be permanently displayed near the valve group.
 - d. Sprinkler heads should be unobstructed.
 - e. Sprinkler heads must not be covered against frost or mechanical damage, eg. by paper bags, rags etc (this could result in failure to operate efficiently in an emergency).
 - f. A supply of spare heads of the correct type should be available in a box provided near the valve group.
 - g. The location plate "SPRINKLER STOP VALVE INSIDE" should be kept clean and easily visible.

DAILY INSPECTION BY MEMBERS OF THE STAFF BEFORE PREMISES ARE LEFT

5. Each night and at weekends a check should be made by a responsible person to ensure that 4a and 4b above are in order.

WEEKLY TEST

6. A separate test of the alarm gong should be made as explained on the manufacturer's instruction card and recorded on "sprinkler installation - record of weekly test", see Annex A. A general check of the installation should also be carried out covering all the above items.
7. When an alternative installation is on the Dry System the alarm can be tested, without allowing air to escape, by changing over the three-way cock to the position occupied when the installation is wet and then opening the appropriate alarm test valve i.e. the valve that is indicated for alarm testing when the system is dry. Extreme care must be taken to turn the three-way cock back after testing.
8. When the installation is dry, column 2 of the "sprinkler installation - record of weekly test" Form should be filled in to show the air pressure on gauge C, thereby indicating the weekly air leakage.
9. Make a check on the Water Supplies and record in column 5 of the "Sprinkler - Test Record".
10. Check that the valve chamber is maintained at temperatures at least +4 °C above freezing for a wet installation and +10 °C if a diesel pumpset is involved.
11. Where a dry installation is in use and is kept topped up by the automatic operation of a compressor, this should be checked once a week.

QUARTERLY INSPECTIONS AND TESTS

12. This will normally be the function of the Defence Fire Brigade or the approved maintenance contractor appointed by the Property Manager.
13. The servicing and maintenance inspections/tests should cover the following points, with any deficiencies being reported at once to the Property Manager.
 - a. Each water supply should be tested individually. When testing one supply, it is necessary to shut off all the others.
 - b. Manipulate the main stop-valve to ensure it is in good working order.
 - c. The system should be drained fully by opening the drain and test valves provided for the purpose.
 - d. Check that any mechanism that should be brought into action automatically, operates properly.
 - e. An inspection of the sprinkler heads and pipes should be made to ascertain that all the heads have freedom of operation, are free from signs of corrosion and that the heads have not been painted over since the previous inspection.

CHANGE OF OCCUPANCY

14. Any changes in occupancy, equipment or structure may call for alteration of the sprinkler system. Any proposed changes must be reported at once to the Property Manager.

WATER SUPPLIES

15. If water supplies have to be cut off (whether there has been a fire or not):
 - a. Notify the on site Fire Brigade and the unit, drawing attention to the need to rely on alternative first aid fire fighting appliances until the supply is restored.
 - b. Where supplies are cut off after a fire or because of damage to the system necessitating repairs, the Property Manager should be notified in order to get the system restored with a minimum of delay.

IF A FIRE OCCURS

16. **THE FIRE BRIGADE SHOULD BE CALLED IMMEDIATELY.**
17. A responsible person should be posted at the control valves with instructions:
 - a. That the main stop valve must not be closed except on the order of the Fire Brigade Officer.
 - b. Not to leave the control valves until the fire is out or he is relieved of his post by an Officer of the Fire Brigade.
 - c. The Senior Fire Brigade Officer will assume full responsibility on arrival and will decide when it is safe to close the sprinkler main stop valve and to ventilate the premises.

Bulleting Authorised By: _____

Mr J Lawlor
Head Specialist Services

ANNEX A

TECHNICAL BULLETIN

99/33

DATED

DECEMBER 1999

SPRINKLER - TEST RECORD

Should the test be unsatisfactory or should it be necessary for the water supplies to be cut off, the Property Manager should be notified immediately.

| Week Ending | Is the Main Stop Valve secured fully open by a chain or leather strap? | Water (or Air Pressure on Gauge above Alarm Valve (Gauge C) | | How soon after the 13mm testing tap was opened | | * Elevated Tank See A Below * Pressure Tank See B below * Pump, Hydraulic Apparatus See C below | Have water supplies been turned off at the installation main stop valve, or in the road, or elsewhere? If so, for what purposes. | Weekly Test made by |
|-------------|--|---|---------------|--|-------------------|---|--|---------------------|
| | | Before Testing | After Testing | Did the alarm sound | Was it continuous | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | | | | | | | | |

- * A Is the elevated tank full of clean water and the ball cock in order?
 - * B Is the pressure tank filled with water up to, but not beyond the water line; is the stop valve (if any) chained and padlocked fully open?; is the air pressure about bar?
 - * C Has the pump and hydraulic apparatus been tested and found in good order?
- * Delete as applicable.

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