**FIRE ALARM SYSTEM (FAS) VERIFICATION RECORDS**

# 28 FIRE ALARM SYSTEM VERIFICATION REPORT

## 28.1 Report

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| Electrical Permit No.: | | | | |  | | | | | Building Permit No.: | | |  | | | | | | | Date: | |  | | | |  |
|  |  |  | | | | | | | | | | | | | | | | | | | | | | | |  |
|  | Building Name & Address: |  | | | | | | | | | | | | | | | | | | | | | | | |  |
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|  | Building Owner or Representative’s Name: | | | | | | | |  | | | | | | |  | | | | | | | | | |  |
|  | The System Provides:  Single Stage Operation  Two Stage Operation  Other (Describe Operation): | | | | | | | | | | | | | | | | | | | |  | | | | |  |
|  | System Manufacturer: | | | | |  | | | | | | Model Number: | | | |  | | | | | | | | |  |  |
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| **A** | The *entire fire alarm system* has been verified in accordance with CAN/ULC 537:2019, *Standard for Verification of Fire Alarm Systems*. | | | | | | | | | | | | | | | | | | **Yes  No** | | | | | | |  |
| **B** | This is a partial verification for a partial occupancy. | | | | | | | | | | | | | | | | | | **Yes  No** | | | | | | |  |
| **C** | This is a partial verification for a *Fire Alarm System* that has been replaced in stages. | | | | | | | | | | | | | | | | | | **Yes  No** | | | | | | |  |
| **D** | This is a verification of a portion of an existing *Fire Alarm System* verified in accordance with Section 27, *System Modifications*. (See Note 4.) | | | | | | | | | | | | | | | | | | **Yes  No** | | | | | | |  |
| **E** | Installed in accordance with the design and CAN/ULC-S524, *Standard for the Installation of Fire Alarm Systems*. | | | | | | | | | | | | | | | | | | **Yes  No** | | | | | | |  |
|  | Record Edition of CAN/ULC-S524 to which this system was verified: | | | | | | | | | | | | | | | |  | | | | | | | | |  |
|  | Record Edition of Building Code in effect in the Jurisdiction applicable for the Design: | | | | | | | | | | | | | | | |  | | | | | | | | |  |
|  | Record Edition of the CEC (Canadian Electrical Code) in effect for the Design: | | | | | | | | | | | | | | | |  | | | | | | | | |  |
| **F** | The *Fire Alarm System* documentation is on site (per Section 29, Documentation). | | | | | | | | | | | | | | | | | | **Yes  No** | | | | | | |  |
| **G** | The fire alarm system sequence of operation specified in the design is confirmed and documentation is provided on site (per Section 29, Documentation). | | | | | | | | | | | | | | | | | | **Yes  No** | | | | | | |  |
| **H** | The *Fire Alarm System* is connected to a Fire Signal Receiving Centre. | | | | | | | | | | | | | | | | | | **Yes  No** | | | | | | |  |
| The communicator is ULC Listed for the purpose. | | | | | | | | | | | | | | | | | | **Yes  No** | | | | | | |
| The connections between the FAS and the communicator are supervised. | | | | | | | | | | | | | | | | | | **Yes  No** | | | | | | |
| If connected, the name and location of the Fire Signal Receiving Centre is: | | | | | | | | | | | | | | | | | |  | | | | | | |
|  | | | | | | | | | | | | | | | | | |  | | | | | | |
| ULC “Central Station Fire Protective Signalling Service” Certificate Number: | | | | | | | | | | | | |  | | | | | which is issued for the above | | | | | | |
| noted installation **is**  **is not** attached. | | | | | | | | | | | | | | | | | |  | | | | | | |
| **I** | The fire alarm system is fully functional (if “No” or N/A, provide comments below). | | | | | | | | | | | | | | | | | | **Yes  No  NA** | | | | | | |  |
| **J** | Comments: | |  | | | | | | | | | | | | | | | | | | | | | | | |
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| **K** | A copy of this report will be given to: | | | | | |  | | | | | | | | | | | **Yes  No** | | | | | | | |  |
| who is the owner or owner’s representative for this *building*. | | | | | | | | | | | | | | | | |
|  | During the Verification, were any Deficiencies identified? (See Page 2, if “Yes”) | | | | | | | | | | | | | | | | | **Yes  No** | | | | | | | |  |
|  | As of the following date (M/D/Y) all identified Deficiencies have been corrected: | | | | | | | | | | | | | |  | | |  | | | | | | | |  |
|  | During the Verification, were any Recommendations identified? See Page 3, if “Yes” | | | | | | | | | | | | | | | | | **Yes  No** | | | | | | | |  |
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|  | **CERTIFICATION** | | | | | | | | | | | | | | | | | | | | | | | | |  |
| This certifies that the information contained in this *Fire Alarm System Verification Report* (which incorporates the attached | | | | | | | | | | | | | | | | | | | | | | |  | pages) | | |
| is correct and complete. The system and equipment described here-in was tested/inspected in conformance with CAN/ULC 537:2019 by a qualified technician. The equipment was left in an operational condition except as detailed here-in. A copy of this report must be maintained on the premises for examination by the Fire Marshal, Building Inspector, or other *Authority Having Jurisdiction* at their request. | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  |  | | | | | | | | | | | | | | | | | | | | | | | | |  |
|  | **Supervising Technician:** | | | | | | | **Company and Contact Information:** | | | | | | | | |  | |  | | | | | | |  |
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|  |  | | | | | | | | |  |
|  | **Print Name:** | | |  | | | | **Telephone:** | | |  | | | | | |  |
|  | **Assisting Technician / Electrician:** | | | | | | | **Company and Contact Information:** | | | | | | | | |  |
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|  |  | | | | | | | | |  |
|  | **Print Name:** | | |  | | | | **Telephone:** | | |  | | | | | |  |
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## 28.2 DEFICIENCIES

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **The inspection and testing of any corrections/repairs of deficiencies noted on this form has been completed** by qualified personnel identified in the column marked “Technician Name & Certificate No.” | | | | | | | | | | | | | | | | |
| **To be completed by the primary individual who conducted the test and inspection.** | | | | | | | | **To be completed by the primary individual responsible for the repair.** | | | | | | | | |
| **Item #** | **Device**  **Type** | | **Device Location** | **Deficiency** | | | **CAN/ULC-S537**  **Clause Reference** | **Date Corrected**  **(MM/DD/YY)** | **Work Order or**  **Reference #** | **Name of Service Provider Responsible for the Repair** | | | | **Technician Name & Certificate No.** | | |
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| **Item #** | **Control Function or Feature** | | | **Deficiency** | | | **CAN/ULC-S537**  **Clause Reference** | **Date Corrected**  **(MM/DD/YY)** | **Work Order or**  **Reference #** | **Name of Service Provider Responsible for the Repair** | | | | **Technician Name & Certificate No.** | | |
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| **BUILDING OWNER’S / REPRESENTATIVE’S COMPLIANCE STATEMENT**  I understand that all deficiencies noted in the table above have been corrected. | | | | | | | | | | | | | | | | |
| Printed Name: | |  | | | **Signature:** |  | | | | | **Date:** |  |  | |  |  |
| **MM** | **DD** | | **YY** |
|  | | | | | | | | | | | | | | | | |

## 28.3 Recommendations

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| Additional Comments / Notes (from 28.1J) |
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# 29 Documentation

## 29.1

**“Yes” - Tested correctly “No” - Did not test correctly (NO answers are typically detailed in “Comments/Remarks”)**

**“NA” = Not applicable (the feature is not available or has not been programmed)**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| The following shall be examined, and documentation shall be:   1. Readily available to the inspection authority; 2. Retained on site in a single location; and 3. Revised and maintained throughout the life of the fire alarm system. | | | | | | | | | |
|  | | | | | | | **Yes** | **No** | **N/A** |
| A | Instructions for resetting the system and silencing alarm signals. | | | | | |  |  |  |
| B | Instructions for silencing the trouble signal and action to be taken when the trouble signal sounds. | | | | | |  |  |  |
| C | Description of the function of each operating control and indicator on the fire alarm control unit. | | | | | |  |  |  |
| D | Description of the area or fire zone protected by each alarm detection circuit (this may be in the form of a list or plan drawing). | | | | | |  |  |  |
| E | Description of alarm signal operation. | | | | | |  |  |  |
| F | Description of ancillary equipment controlled by the fire alarm system. | | | | | |  |  |  |
| G | In systems that provide logical control of a smoke control system, documentation is on site and includes a sequence of operation of the smoke control system. | | | | | |  |  |  |
| Smoke control installed in accordance with Measure: | | |  |  | |
| H | Building diagrams are on site that clearly indicate the type and location of all smoke control equipment (fans, dampers, etc.). | | | | |  |  |  |  |
| I | Description of fire alarm system: | | | | |  |  |  |  |
| i) | Sequence of Operation (see 5.9) | | | |  |  |  |  |
| ii) | Operating Instructions (see 5.9) | | | |  |  |  |  |
| iii) | Description of each type of field device | | | |  |  |  |  |
| iv) | Details of input to programmed output functions for programmed systems | | | |  |  |  |  |
| v) | Connection to fire signal receiving centre, if required by applicable codes and regulations | | | |  |  |  |  |
| vi) | Previous Verification Report(s) if applicable | | | |  |  |  |  |
| vii) | The plans of the building showing the fire alarm zoning, device address and locations of each control unit, transponder, remote power supply, field device of the fire alarm system including fault isolators, ancillary devices and annunciators or display and control centres | | | |  |  |  |  |
| viii) | Copy of site-specific software (if applicable) | | | |  |  |  |  |
| J | Indicate location of documentation: | |  | | | | | | |
| Indicate format of documentation: | |  | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Additional Documentation (not mandated by the Standard):** | | | | | | **Yes** | **No** |  |
|  | Fire Safety Plan documentation is on site. | | | | |  |  |
| Instructions to Occupants/Evacuation Floor Plans are posted. | | | | |  |  |
| There are a total of: |  | remotely installed amplifiers in this FAS. | | | | | |
|  | supervised power supplies in this FAS. | | | | | |
|  | remote sequential display units in this FAS. | | | | | |
|  | remote annunciators in this FAS. | | | | | |
|  | remote trouble units in this FAS. | | | | | |
|  | stand-by batteries in this FAS. | | | | | |
|  | remote booster/power supplies in this FAS. | | | | | |
| **List all locations where remotely installed booster / power supplies, batteries & amplifiers are installed:** | | | | | | | | |
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|  | | | | | | | | |
|  | | | | | | | | |
| **Design Company:** | | | | **Address:** | **Telephone:** | | | |
|  | | | |  |  | | | |
| **Installation Company:** | | | | **Address:** | **Telephone:** | | | |
|  | | | |  |  | | | |
| **Original Verification Company:** | | | | **Address:** | **Telephone:** | | | |
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# 30 Individual Field Device, Related Circuits and Circuit Fault Tolerance – Test and Inspection

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | **Yes** | **No** | **N/A** |
| A | Correct field termination, conductor type and wire gauge, in accordance with CSA C22.1, Canadian Electrical Code, Section 32. |  |  |  |
| B | Correct field termination, conductor type and wire gauge, in accordance with the equipment manufacturer’s installation instructions at all system termination points. |  |  |  |
| C | Correct circuit polarities. |  |  |  |
| D | An open circuit fault on a conventional device circuit causes a trouble signal. |  |  |  |
| E | Removal of any active or supporting field device circuit causes a trouble signal. |  |  |  |
| F | One contact device and one non-contact device tested for operation and annunciation at the control unit or transponder, when using a field verifying device. |  |  |  |
| G | Class “A” circuits serving conventional field devices tested for the capability of providing an alarm signal on each side of an open circuit fault connection at the electrically most remote point in the circuit. |  |  |  |
| H | Ground fault indications occur when tested at the electrically furthest field device, and do not result in normal to off-normal status change conditions. |  |  |  |
| I | Field device at the electrically furthest point from the power source (in every circuit) receives rated power in accordance with the manufacturer’s specifications. |  |  |  |
| J | Replaceable over-current devices are of the correct rating. |  |  |  |
| K | Where multiple strand optical fibre cable is not dedicated to the fire alarm system, the fire alarm system continues to function as required despite an impairment to other systems which share the cable. |  |  |  |
| L | Confirm circuit fault tolerance operation under OPEN CIRCUIT FAULT conditions (Record individual operation in 33.2, Individual Device Record and 33.4, Circuit Fault Tolerance Test Sheet). |  |  |  |
| M | Confirm circuit fault tolerance operation under SHORT CIRCUIT FAULT conditions (Record individual operation in 33.2, Individual Device Record and 33.4, Circuit Fault Tolerance Test Sheet). |  |  |  |
| N | Confirm circuit fault tolerance operation under GROUND FAULT conditions (Record individual operation in 33.2, Individual Device Record and 33.4, Circuit Fault Tolerance Test Sheet). |  |  |  |
| O | Where suite fault isolators are provided, confirm in-suite signal circuit fault tolerance operation under SHORT CIRCUIT FAULT conditions (Record individual operation in 33.2, Individual Device Record and 33.4, Circuit Fault Tolerance Test Sheet). |  |  |  |
| P | Under an alarm condition, confirm device operation on the source side of each shorted residential suite isolation module (Record individual operation in 33.2, Individual Device Record and 33.4, Circuit Fault Tolerance Test Sheet). |  |  |  |
| Q | Where voice communication systems are used to broadcast messages not related to life safety (e.g., general paging), fault detection for signalling busses or circuits is maintained while broadcasting. (Confirm operation in 32.4, Non-life Safety Message Circuit Supervision Test.) |  |  |  |

# 31 Operation Test Circuit Fault Tolerance

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No Data Communication Link is part of this system. | | | | (This Section is Not Applicable) | | | | |
| **Control Unit/Transponder Field Location:** | |  | | | | | |  |
| **Control Unit/Transponder Identification:** | |  | | | | | |  |
| **DCL Identification:** | |  | | | | | |  |
|  | | | | | | **Yes** | **No** | **N/A** |
| A | Each system abnormal condition specified in Table 3.1 – Abnormal System Conditions, tested for each data communication link at the control unit or transponder. | | | |  |  |  |  |
| B | Tests for alarm and trouble received under a single ground fault condition conducted on each conductor of that data communication link independently. | | | |  |  |  |  |
| C | Each conductor in a data communication link, Class A (DCLA) tested for the capability of providing an alarm signal on each side of a single open circuit fault condition. | | | |  |  |  |  |
| D | Where data communication link(s) are installed without fault isolation, impose a wire-to-wire short circuit fault on each data communication link during a non-fire alarm condition and confirm receipt of trouble and alarm condition from each adjacent data communication link (Record results in 33.4, Circuit Fault Tolerance Test Sheet). | | | |  |  |  |  |
| E | Where fault isolators are installed in data communication links serving field devices, impose a wire-to-wire short on the isolated side during non-fire alarm condition, confirm annunciation of the fault, and then operate a device on the source side, and confirm activation at the control unit or transponder (Record results in 33.4, Circuit Fault Tolerance Test Sheet). | | | |  |  |  |  |
| F | Where fault isolation in data communication links is provided between control units or transponders, the field wiring shorted between each pair of control units or transponders, in turn, annunciation of the fault confirmed and operation outside the shorted section is confirmed (Record results in 33.4, Circuit Fault Tolerance Test Sheet). | | | |  |  |  |  |
| No additional Data Communication Links are installed. | | | (This Section is Not Applicable) | | | | | |
| **Control Unit/Transponder Field Location:** | |  | | | | | |  |
| **Control Unit/Transponder Identification:** | |  | | | | | |  |
| **DCL Identification:** | |  | | | | | |  |
|  | | | | | | **Yes** | **No** | **N/A** |
| A | Each system abnormal condition specified in Table 3.1 – Abnormal System Conditions, tested for each data communication link at the control unit or transponder. | | | |  |  |  |  |
| B | Tests for alarm and trouble received under a single ground fault condition conducted on each conductor of that data communication link independently. | | | |  |  |  |  |
| C | Each conductor in a data communication link, Class A (DCLA) tested for the capability of providing an alarm signal on each side of a single open circuit fault condition. | | | |  |  |  |  |
| D | Where data communication link(s) are installed without fault isolation, impose a wire-to-wire short circuit fault on each data communication link during a non-fire alarm condition and confirm receipt of trouble and alarm condition from each adjacent data communication link (Record results in 33.4, Circuit Fault Tolerance Test Sheet). | | | |  |  |  |  |
| E | Where fault isolators are installed in data communication links serving field devices, impose a wire-to-wire short on the isolated side during non-fire alarm condition, confirm annunciation of the fault, and then operate a device on the source side, and confirm activation at the control unit or transponder (Record results in 33.4, Circuit Fault Tolerance Test Sheet). | | | |  |  |  |  |
| F | Where fault isolation in data communication links is provided between control units or transponders, the field wiring shorted between each pair of control units or transponders, in turn, annunciation of the fault confirmed and operation outside the shorted section is confirmed (Record results in 33.4, Circuit Fault Tolerance Test Sheet). | | | |  |  |  |  |

## 32.1 Control Unit or Transponder Inspection

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| **Control Unit/Transponder Field Location:** | | | | |  | | | | |  |
| **Control Unit/Transponder Identification:** | | | | |  | | | | |  |
|  | | | | | | | | **Yes** | **No** | **N/A** |
| A | Input circuit designations correctly identified in relation to connected field devices. | | | | | | |  |  |  |
| B | Output circuit designations correctly identified in relation to connected field devices. | | | | | | |  |  |  |
| C | Correct designations for common control functions and indicators. | | | | | | |  |  |  |
| D | Plug-in components and modules securely in place. | | | | | | |  |  |  |
| E | Plug-in cables securely in place. | | | | | | |  |  |  |
| F | Record the date, revision, and version of control unit or transponder firmware: | | | | | | |  |  |  |
| Date: |  | Revision: |  | | Version: |  |
| Record the date, revision, and version of the program software: | | | | | | |
| Date: |  | Revision: |  | | Version: |  |
| G | Control unit/transponder is clean and free of dust and dirt. | | | | | | |  |  |  |
| H | Fuses in accordance with the manufacturer’s specification. | | | | | | |  |  |  |
| I | Control unit/transponder lock is functional. | | | | | | |  |  |  |
| J | Termination points for wiring to field devices secure. | | | | | | |  |  |  |
| K | Control unit/transponder power disconnects in accordance with C22.1, Safety Standard for Electrical Installations, Canadian Electrical Code,  Part 1. | | | | | | |  |  |  |
| L | Field wiring entry points for the various circuits and circuit separations are in accordance with the manufacturer’s installation instructions. | | | | | | |  |  |  |
| M | Main power supply feed wiring is in accordance with the manufacturer’s specifications. | | | | | | |  |  |  |
| N | Verify control units/transponders with stand alone capability serve the same area for both input circuits and output circuits. | | | | | | |  |  |  |
| O | Control units or transponders which operate with stand alone capability have signal silence, reset, and trouble silence switches with visual indications, degraded mode capability and stand-alone capability indicators. | | | | | | |  |  |  |
| P | Each control unit/transponder has been furnished with installation, operating and maintenance instructions. | | | | | | |  |  |  |
| Q | Control unit/transponder visual indicators comply with Table 8.1 – Visual Indicators Colour Code. | | | | | | |  |  |  |

## 32.2 Control Unit or Transponder Testing

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| **Control Unit/Transponder Field Location:** | | | |  | | | | | |  |
| **Control Unit/Transponder Identification:** | | | |  | | | | | |  |
|  | | | | | | | | **Yes** | **No** | **N/A** |
| A | Power ‘on’ visual indicator operates. | | | | | | |  |  |  |
| B | Time and date indication corresponds with the local time and date. | | | | | | |  |  |  |
| C | Common visual trouble signal operates. | | | | | | |  |  |  |
| D | Common audible trouble signal operates. | | | | | | |  |  |  |
| E | Trouble signal silence switch operates. | | | | | | |  |  |  |
| F | Main Power supply failure trouble signal operates. | | | | | | |  |  |  |
| G | Trouble signal operates during positive and negative ground fault tests. | | | | | | |  |  |  |
| H | Alert signal operates. | | | | | | |  |  |  |
| I | Alarm signal operates. | | | | | | |  |  |  |
| J | Automatic transfer from alert signal to alarm signal operates. | | | | Time: |  |  |  |  |  |
| K | Manual transfer from alert signal to alarm signal. | | | | | | |  |  |  |
| L | Automatic transfer from alert to alarm signal cancel (acknowledge) operates on a two stage system. | | | | | | |  |  |  |
| M | Alarm signal silence inhibit function operates. | | | | | | |  |  |  |
| N | Alarm signal manual silence operates. | | | | | | |  |  |  |
| O | Alarm signal silence visual indication operates | | | | | | |  |  |  |
| P | Alarm signal, when silenced, automatically reinitiate only upon subsequent alarm from another NBC required fire alarm zone. | | | | | | |  |  |  |
| Q | Duration of alarm signal prior to automatic silence. | | | | |  |  |  |  |  |
| R | Audible, visual, alert, and alarm signals programmed and operate as per manufacturer’s design and specification. | | | | | | |  |  |  |
| S | Input circuit alarm and supervisory operation including audible and visual indicator operates. | | | | | | |  |  |  |
| T | Input circuit supervision fault causes a trouble indication. | | | | | | |  |  |  |
| U | Output circuit alarm indicators operate. | | | | | | |  |  |  |
| V | Output circuit supervision fault causes a trouble indication. | | | | | | |  |  |  |
| W | Visual indicator test (lamp test) operates. | | | | | | |  |  |  |
| X | Coded signal sequences are not interrupted by subsequent alarms. | | | | | | |  |  |  |
| Y | Ancillary device control circuit is rated for the intended purpose. | | | | | | |  |  |  |
| Z | Ancillary device by-pass results in trouble signal. | | | | | | |  |  |  |
| AA | Input circuit to output circuit operation including ancillary device circuits (refer to Appendix C5.12, Ancillary Device Circuit Test), for correct program operation as per design and specification. | | | | | | |  |  |  |
| BB | Fire alarm reset function operates. | | | | | | |  |  |  |
| Record reset time: |  | seconds | | | | |
| CC | Main power to emergency power supply transfer operates. | | | | | | |  |  |  |
| DD | Control unit or transponder enclosure bonded to ground. | | | | | | |  |  |  |
| EE | Status change confirmation feature (smoke detectors only) verified. | | | | | | |  |  |  |

## 32.3 Voice Communication Test

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| No Voice Communication Equipment is part of this system. | | | (This Section is Not Applicable) | | | | |
|  | | | | | | | |
| **Location:** | |  | | | | |  |
| **Identification:** | |  | | | | |  |
|  | | | | | **Yes** | **No** | **N/A** |
| A | Power ‘on’ visual indicator operates. | | |  |  |  |  |
| B | Common visual trouble signal operates. | | |  |  |  |  |
| C | Common audible trouble signal operates. | | |  |  |  |  |
| D | Trouble signal silence switch operates. | | |  |  |  |  |
| E | All-call voice paging, including visual indicator, operates. | | |  |  |  |  |
| F | Output circuits for selective voice paging, including visual indication, operates. | | |  |  |  |  |
| G | Output circuits for selective voice paging trouble operation, including visual indication, operates. | | |  |  |  |  |
| H | Microphone, including press to talk switch, operates. | | |  |  |  |  |
| I | Operation of voice paging does not interfere with initial inhibit time of alert signal and alarm signal. | | |  |  |  |  |
| J | All-call voice paging operates (on emergency power supply). | | |  |  |  |  |
| K | Upon failure of one amplifier, system automatically transfers to backup amplifier(s). | | |  |  |  |  |
| L | Circuits for emergency telephone call-in operation, including audible and visual indication operates. | | |  |  |  |  |
| M | Circuits for emergency telephones for operation, including two-way voice communication, operates. | | |  |  |  |  |
| N | Circuits for emergency telephone trouble operation, including visual indication, operates. | | |  |  |  |  |
| O | Emergency telephone verbal communication operates. | | |  |  |  |  |
| P | Emergency telephone operable or in-use tone at handset operates. | | |  |  |  |  |
| Q | In standby mode, a short, or open on a paging, alert, alarm, or emergency telephone voice communication buss results in a buss specific trouble condition. | | |  |  |  |  |
| R | Where the voice paging system is also used for non-life safety related messages, the life safety related messages take precedence. | | |  |  |  |  |

## 32.4 Non-life Safety Message Circuit Supervision Test

**No – Unacceptable (NO answers shall be recorded as a Deficiency)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Circuit Fault Test Location** | **Circuit Number** | **Type of Fault Tested**  **(Check all that apply)** | | | **Speaker Circuit Fault Annunciation Confired at Fire Alarm Control Panel** | |
| **Identify area served by speaker circuit to which fault was introduced and confirmed during NON-FIRE ALARM audio broadcast** | **Identify circuit serving area** | **Short** | **Open** | **Grnd** | **Yes** | **No** |
|  |  |  |  |  |  |  |
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## 32.5 Required System Response Times

(Reference Table 6.1)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | |
| **Control Unit/Transponder Field Location:** | |  | | | | |  |
| **Control Unit/Transponder Identification:** | |  | | | | |  |
|  | | | | | **Yes** | **No** | **N/A** |
| A | Audible signal devices and visible signal devices within the same manually initiated fire alarm zone operated within five seconds. | | | |  |  |  |
| B | Audible signal devices and visible signal devices operated within ten seconds and;  subsequent input operated within ten seconds. | | |  |  |  |
|  |  |
| C | Remote connection operated within ten seconds. | | |  |  |  |  |
| D | Releasing device start of sequence operated within ten seconds. | | |  |  |  |  |
| E | Required Annunciation operated within ten seconds and;  subsequent input operation within ten seconds. | | | |  |  |  |
|  |  |  |
| F | Required central alarm and control facility operated within ten seconds; and  subsequent input operation within ten seconds. | | | |  |  |  |
|  |  |  |
| G | Ancillary circuits operated within ten seconds, and  Subsequent input operation within 30 seconds | | |  |  |  |  |
|  |  |  |
| H | Trouble signal activation annunciates within ninety seconds and;  subsequent trouble input annunciates within ninety seconds | | |  |  |  |  |
|  |  |  |
| I | Water flow devices activation operated within ten seconds and;  subsequent activation operated within ten seconds. | | |  |  |  |  |
|  |  |  |
| Only one control unit / transponder was tested in this Verification. | | | (This Section is Not Applicable) | | | | |
| **Control Unit/Transponder Field Location:** | |  | | | | |  |
| **Control Unit/Transponder Identification:** | |  | | | | |  |
|  | | | | | **Yes** | **No** | **N/A** |
| A | Audible signal devices and visible signal devices within the same manually initiated fire alarm zone operated within five seconds. | | | |  |  |  |
| B | Audible signal devices and visible signal devices operated within ten seconds and;  subsequent input operated within ten seconds. | | |  |  |  |
|  |  |
| C | Remote connection operated within ten seconds. | | |  |  |  |  |
| D | Releasing device start of sequence operated within ten seconds. | | |  |  |  |  |
| E | Required Annunciation operated within ten seconds and;  subsequent input operation within ten seconds. | | | |  |  |  |
|  |  |  |
| F | Required central alarm and control facility operated within ten seconds; and  subsequent input operation within ten seconds. | | | |  |  |  |
|  |  |  |
| G | Ancillary circuits operated within ten seconds, and  Subsequent input operation within 30 seconds | | |  |  |  |  |
|  |  |  |
| H | Trouble signal activation annunciates within ninety seconds and;  subsequent trouble input annunciates within ninety seconds | | |  |  |  |  |
|  |  |  |
| I | Water flow devices activation operated within ten seconds and;  subsequent activation operated within ten seconds. | | |  |  |  |  |
|  |  |  |

## 32.6 Large-Scale Network Systems

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| This system does not qualify as a Large-Scale Network System | | | | (This Section is Not Applicable) | | | | | |
| **Control Unit/Transponder Field Location:** | | |  | | | | | |  |
| **Control Unit/Transponder Identification:** | | |  | | | | | |  |
|  | | | | | | | **Yes** | **No** | **N/A** |
| A | Control units or transponders serve the same area for both input circuits and output circuits. | | | | |  |  |  |  |
| B | Control units or transponders with stand alone capability have signal silence, reset, and trouble silence switches with visual indicators, degraded mode capability and stand alone capability indicators. | | | | |  |  |  |  |
| C | A single open circuit fault, wire-to-wire short circuit fault, or ground fault on the network results in a trouble signal and continued alarm receipt capability at each node under these conditions. | | | | |  |  |  |  |
| D | Under data communication link failure condition, each control unit or transponder with stand-alone capability is capable of receiving an alarm initiation and provides output operation in the area as served by the control unit or transponder. | | | | |  |  |  |  |
| E | Under multiple data communication link failure conditions which create two network segments, each control unit or transponder with degraded mode capability for each segment of the network provides the following operations: | | | | |  |  |  |  |
| (i) | Signals operate in accordance with the system sequence of operation. | | | |  |  |  |
| (ii) | Alert signals and alarm signals are synchronized throughout each separate network segment. | | | |  |  |  |
| (iii) | Ancillary device controls continue to operate within each network segment. | | | |  |  |  |
| (iv) | Acknowledge, signal silence, reset and trouble silence switches with visual indicators, degraded mode capability and stand-alone capability indicators, function for each network segment. | | | |  |  |  |
| There are no additional loop controllers installed on this system | | | | | (This Section is Not Applicable) | | | | |
| **Control Unit/Transponder Field Location:** | | |  | | | | | |  |
| **Control Unit/Transponder Identification:** | | |  | | | | | |  |
|  | | | | | | | **Yes** | **No** | **N/A** |
| A | Control units or transponders serve the same area for both input circuits and output circuits. | | | | |  |  |  |  |
| B | Control units or transponders with stand alone capability have signal silence, reset, and trouble silence switches with visual indicators, degraded mode capability and stand alone capability indicators. | | | | |  |  |  |  |
| C | A single open circuit fault, wire-to-wire short circuit fault, or ground fault on the network results in a trouble signal and continued alarm receipt capability at each node under these conditions. | | | | |  |  |  |  |
| D | Under data communication link failure condition, each control unit or transponder with stand-alone capability is capable of receiving an alarm initiation and provides output operation in the area as served by the control unit or transponder. | | | | |  |  |  |  |
| E | Under multiple data communication link failure conditions which create two network segments, each control unit or transponder with degraded mode capability for each segment of the network provides the following operations: | | | | |  |  |  |  |
| (i) | Signals operate in accordance with the system sequence of operation. | | | |  |  |  |
| (ii) | Alert signals and alarm signals are synchronized throughout each separate network segment. | | | |  |  |  |
| (iii) | Ancillary device controls continue to operate within each network segment. | | | |  |  |  |
| (iv) | Acknowledge, signal silence, reset and trouble silence switches with visual indicators, degraded mode capability and stand-alone capability indicators, function for each network segment. | | | |  |  |  |

## 32.7 Power Supply Inspection

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | |
| **Control Unit or Transponder Location:** | |  | | | |  |
| **Control Unit or Transponder Identification:** | |  | | | |  |
| **Circuit Disconnect Means or Breaker Location:** | |  | | | |  |
| **Circuit Disconnect Means or Breaker Identification:** | |  | | | |  |
|  | | | | **Yes** | **No** | **N/A** |
| A | Conforms with the requirements of CAN/ULC-S524, Standard for the Installation of Fire Alarm Systems; and C22.1, Safety Standard for Electrical Installations, Canadian Electrical Code, Part 1, Section 32. | |  |  |  |  |
| B | Fused in accordance with the manufacturer’s marked rating of the system. | |  |  |  |  |
| C | Equipped with the identified disconnect means. | |  |  |  |  |
| D | Adequate to meet the requirements of the system. | |  |  |  |  |
| E | Power for ancillary devices is taken from a source separate from the fire alarm system control unit or transponder power supply. | |  |  |  |  |
| F | Power for ancillary devices is taken from the control unit or transponder that is designed to provide such power. | |  |  |  |  |
| G | Ancillary devices, which are powered from the control unit or transponder, are recorded. | |  |  |  |  |

## 32.8 Emergency Power Supply Test and Inspection

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | | | | | | | | | | | |
| **Emergency Power Supply Location:** | | | | | | |  | | | | | | | | | | | | | | | | |  |
| **Emergency Power Supply Identification:** | | | | | | |  | | | | | | | | | | | | | | | | |  |
| **Emergency Power Supply Provided By:** | | | | | | | Batteries  UPS  Generator  Combination | | | | | | | | | | | | | | | | |  |
| **Battery Type (as installed):** | | | | | | | Sealed Lead Acid  Ni-Cad  Lithium-Ion  Wet Lead | | | | | | | | | | | | | | | | |  |
| **Battery Capacity (as installed):** | | | | | | | Qty: |  | | | VDC: | |  | | | AH: | |  | | | | |  |  |
| **Required Building Code Alarm Operation:** | | | | | | | 5 minutes  30 minutes  60 minutes  120 minutes | | | | | | | | | | | | | | | | |  |
| Battery Tests (Reference 10.4) | | | | | | | | | | | | | | | | | | | | | **Yes** | **No** | | **N/A** |
| A | Correct battery type as recommended by the manufacturer. | | | | | | | | | | | | | | | | | |  | |  |  | |  |
| B | Correct battery rating as determined by battery calculations based on full system load. | | | | | | | | | | | | | | | | | |  | |  |  | |  |
| C | Battery voltage – main power supply “ON”: | | | | | | | | | | | |  | | | | VDC | | | |  | | | |
| Battery current – main power supply “ON”: | | | | | | | | | | | |  | | | | mA | | | |
| D | Battery voltage – main power “off” – FAS in supervisory condition: | | | | | | | | | | | |  | | | | VDC | | | |
| Battery current - main power “off” – FAS in supervisory condition: | | | | | | | | | | | |  | | | | mA | | | |
| E | Battery voltage – main power “off” – FAS in full load ALARM: | | | | | | | | | | | |  | | | | VDC | | | |
| Battery current – main power “off” – FAS in full load ALARM: | | | | | | | | | | | |  | | | | A | | | |
| F | Inspected for physical damage. | | | | | | | | | | | | | | | | | |  | |  |  | |  |
| G | Terminals cleaned and lubricated. | | | | | | | | | | | | | | | | | |  | |  |  | |  |
| H | Terminals clamped tightly. | | | | | | | | | | | | | | | | | |  | |  |  | |  |
| I | Correct electrolyte level. | | | | | | | | | | | | | | | | | |  | |  |  | |  |
| J | Specific gravity of the electrolyte is within the battery manufacturer’s specifications. | | | | | | | | | | | | | | | | | |  | |  |  | |  |
| K | Inspected for electrolyte leakage. | | | | | | | | | | | | | | | | | |  | |  |  | |  |
| L | Adequately ventilated. | | | | | | | | | | | | | | | | | |  | |  |  | |  |
| M | Record manufacturer’s date code or in-service date: | | | | | | | | | | |  | | | | | | |  | |  |  | |  |
| N | Disconnection causes trouble signal. | | | | | | | | | | | | | | | | | |  | |  |  | |  |
| O | Indicate type of tests performed on a fully charged battery: | | | | | | | | | | | | | | | | | |  | |  |  | |  |
| (i) | | Required supervisory load for 24 h followed by the required full load operation | | | | | | | | | | | | | | | |  | |  |  | |  |
| (ii) | | Silent test using load resistor method for full duration test (refer to Appendix D1) | | | | | | | | | | | | | | | |  | |  |  | |  |
| (iii) | | Silent accelerated test (refer to Appendix D2) | | | | | | | | | | | | | | | |  | |  |  | |  |
| P | Record calculated battery capacity (refer to Appendix D3.1-C). | | | | | | | | | | |  | | | AH | | | | | |  |  | |  |
| Q | Record the battery terminal voltage after tests are completed. | | | | | | | | | | |  | | | VDC | | | | | |  |  | |  |
| R | Battery voltage not less than 85% of its rated capacity after tests completed. | | | | | | | | | | | | | | | | | |  | |  |  | |  |
| Emergency Power Generator Tests (Reference: 10.5) | | | | | | | | | | | | | | | | | | | | | **Yes** | **No** | | **NA** |
| A | Generator provides power to the AC circuit serving the fire alarm system. | | | | | | | | | | | | | | | | | |  | |  |  | |  |
| B | Trouble condition at the emergency generator results in an audible common trouble signal and a visual indication at the required annunciator. | | | | | | | | | | | | | | | | | | | |  |  | |  |
| C | Generator Run condition at the emergency generator shall result in an audible common trouble signal and a visual indication at the required annunciator. | | | | | | | | | | | | | | | | | | | |  |  | |  |
| D | Testing coordinated with emergency power generator tests: | | | | | | | | | | | | | | | | | | | |  |  | |  |
| E | Low Fuel Level trouble results in an audible trouble signal and a visual indication at the required annunciator? | | | | | | | | | | | | | | | | | | | |  |  | |  |
| Generator fueled by:  Diesel  Natural Gas  Other: | | | | | | | | | |  | | | | | | | | | |  | | | | |
| Fuel Level: | |  | | | % of full capacity | | | | Estimated run time: | | | | |  | | | | | | Hours | | | | |
| Low Fuel Level Set-point: | | | |  | | % of full capacity  Gallons  Litres | | | | | | | | | | | | | | | | | | |

## 32.9 Annunciator Inspection

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No Annunciator is installed in this system. | | | (This Section is Not Applicable) | | | |
| (This section is for the primary annunciator as required by the National Building Code of Canada) | | | | | | |
| **Annunciator Location:** | |  | | | |  |
| **Annunciator Identification:** | |  | | | |  |
|  | | | | **Yes** | **No** | **N/A** |
| A | Power “on” indicator operates. | | |  |  |  |
| B | Individual alarm and supervisory input zone clearly indicated and separately designated. | | |  |  |  |
| C | Individual alarm and supervisory input zone designation labels are properly identified. | | |  |  |  |
| D | Where active and supporting field devices are utilized, device labels correspond with actual field location. | | |  |  |  |
| E | Common trouble signal operates. | | |  |  |  |
| F | Visual indicator test (lamp test) operates. | | |  |  |  |
| G | Input wiring from control unit or transponder is supervised and of the correct type and gauge in accordance with the equipment manufacturer’s installation wiring requirements. | | |  |  |  |
| H | Alarm signal silence visual indicator operates. | | |  |  |  |
| I | Switches for ancillary functions operate as per design and specification. | | |  |  |  |
| J | Ancillary functions visual indicators operates. | | |  |  |  |
| K | Manual activation of alarm signal and indication operates. | | |  |  |  |
| L | Displays are visible in the installed location. | | |  |  |  |
| M | Operates on emergency power. | | |  |  |  |
| N | Visual indicators comply with Table 3 – Visual indicators Colour Code | | |  |  |  |
| O | Multi-line sequential display operates as per Appendix C5.9 (Annunciators or Sequential Displays), where utilized. | | |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Recommended Additional Testing (Not Mandated in the Standard) – FOR OUTDOOR INSTALLATIONS** | | | | | |
| Rating of Enclosure:  CAT 3  CAT 3R  CAT 4  Other: | |  |  | | |
| Interior free of dirt or evidence of moisture (no corrosion)? | | |  |  |  |
| Is the installed heater compatible with the enclosure?  24VDC  24VAC  120VAC | | |  |  |  |
| Is voltage present at the  heater  thermostat terminals? | | |  |  |  |
| Disconnect means on a separate circuit? | | |  |  |  |
| Disconnect means identification – Panel and Circuit Number: |  | |  |  |  |
| Internal environment supervised by the fire alarm control panel?  Temperature  Power | | |  |  |  |
| Low voltage transformer of the correct size and rating as per the manufacturer’s instructions? | | |  |  |  |

## 32.10 Annunciators or Sequential Displays

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No Annunciator or Sequential Display is installed in this system. | | | (This Section is Not Applicable) | | | |
| If the fire alarm system DOES utilize remote annunciators, complete 32.10 for each annunciator or sequential display. | | | | | | |
| **Annunciator/Sequential Display Location:** | |  | | | |  |
| **Annunciator/Sequential Display Identification:** | |  | | | |  |
|  | | | | **Yes** | **No** | **N/A** |
| A | Power “on” indicator operates. | | |  |  |  |
| B | Individual alarm and supervisory input zone designation labels are properly identified. | | |  |  |  |
| C | Where individual devices are also annunciated confirm the individual alarm and supervisory indications are properly identified. | | |  |  |  |
| D | Where active and supporting field devices are utilized, device labels correspond with actual field location. | | |  |  |  |
| E | Common trouble signal operates. | | |  |  |  |
| F | Visual indicator test (lamp test) operates. | | |  |  |  |
| G | Input wiring from control unit or transponder is supervised. | | |  |  |  |
| H | Alarm signal silence visual indicator operates. | | |  |  |  |
| I | Switches for ancillary functions operate as per design and specification. | | |  |  |  |
| J | Ancillary functions visual indicators operates. | | |  |  |  |
| K | Manual activation of alarm signal and indication operates. | | |  |  |  |
| L | Displays are visible in the installed location. | | |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Recommended Additional Testing (Not Mandated in the Standard) – FOR OUTDOOR INSTALLATIONS** | | | | | |
| Rating of Enclosure:  CAT 3  CAT 3R  CAT 4  Other: | |  |  | | |
| Interior free of dirt or evidence of moisture (no corrosion)? | | |  |  |  |
| Is the installed heater compatible with the enclosure?  24VDC  24VAC  120VAC | | |  |  |  |
| Is voltage present at the  heater  thermostat terminals? | | |  |  |  |
| Disconnect means on a separate circuit? | | |  |  |  |
| Disconnect means identification – Panel and Circuit Number: |  | |  |  |  |
| Internal environment supervised by the fire alarm control panel?  Temperature  Power | | |  |  |  |
| Low voltage transformer of the correct size and rating as per the manufacturer’s instructions? | | |  |  |  |

## 32.11 Remote Trouble Signal Unit Test and Inspection

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| No Remote Trouble Signal Unit is installed in this system. | | | (This Section is Not Applicable) | | | | |
| **Remote trouble signal unit location:** | |  | | | | |  |
| **Remote trouble signal unit identification:** | |  | | | | |  |
|  | | | | | **Yes** | **No** | **N/A** |
| A | Input wiring from control unit or transponder is supervised. | | |  |  |  |  |
| B | Visual trouble signal operates. | | |  |  |  |  |
| C | Audible trouble signal operates. | | |  |  |  |  |
| D | Audible trouble signal silence operates. | | |  |  |  |  |

## 32.12 Printer Test

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| No Printers are installed in this system. | | | (This Section is Not Applicable) | | | | |
| **Printer Location:** | |  | | | | |  |
| **Printer Identification:** | |  | | | | |  |
|  | | | | | **Yes** | **No** | **N/A** |
| A | Operates as per design and specification | | |  |  |  |  |
| B | Zone of each alarm initiating device is correctly printed. | | |  |  |  |  |
| C | Rated voltage is present. | | |  |  |  |  |

## 32.13 Ancillary Device Circuit Test

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Identify Ancillary Circuit and Device | | **Ancillary Circuit is Powered by:** | | **Operation of Ancillary Circuit Confirmed** | | |
| **FACU** | **Other (Specify)** | **Yes** | **No** | **Confirmation Method (See Annex A, A22.10)** |
|  | |  |  |  |  |  |
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| \*FACU - Fire Alarm Control Unit | | | | | | |
| Note: | The tests reported on this form may not include the actual operational test of ancillary devices except when noted in the Confirmation Method column. | | | | | |

## 32.14 Interconnection to the Fire Signal Receiving Centre

(Refer to 8.3.2)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No Interconnection to a Fire Signal Receiving Centre has been provided. | | | | | | | (This Section is Not Applicable) | | | | |
| **Communicator Location:** | | |  | | | | | | | |  |
| **Circuit Disconnect Means Location:** | | |  | | | | | | | |  |
| **Circuit Panel/Breaker Identification:** | | |  | | | | | | | |  |
|  | | | | | | | | | **Yes** | **No** | **N/A** |
| A | The fire signal receiving centre transmitter is integral to the fire alarm control unit or; | | | | | | | |  |  |  |
| An interconnection between the fire alarm control unit and a separate fire signal receiving centre transmitter is provided. | | | | | | | |  |  |
| B | Receipt of the alarm transmission to the fire signal receiving centre. | | | | | | | |  |  |
| C | Confirm that the supervisory transmission to the fire signal receiving centre is received. | | | | | | | |  |  |  |
| D | Confirm that the trouble transmission to the fire signal receiving centre is received. | | | | | | | |  |  |  |
| E | Disabling or disconnection the fire signal receiving centre transmitter results in a specific trouble signal at the control unit or transmitter and transmits a trouble signal to the fire signal receiving centre. | | | | | | | |  |  |  |
| F | Disabling or disconnecting the fire signal receiving centre transmitter transmits a trouble signal to the fire signal receiving centre. | | | | | | | |  |  |  |
| G | The contact information of the fire signal receiving centre is: | | | | | | | |  | | |
| Company: |  | | Telephone: |  | - | |  |
| Address: |  | | | | | | | | | |
|  | | | | | | | | | | | |

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| --- | --- | --- | --- | --- | --- | --- |
| **Additional Information (not mandated by the Standard):** | | | | **Yes** | **No** | **N/A** |
| The communicator installed in accordance with CAN/ULC-S561-13. | | | |  |  |  |
| The fire signal receiving centre is ULC Listed. | | | |  |  |  |
| The fire signal receiving centre ULC certification number is: | |  | | | | |
| The communicator is being tested in accordance with CAN/ULC-S561-13. | | | |  |  |  |
| Supporting documentation attesting to this is on site and has been reviewed. | | | |  |  |  |
| The ULC “Central Station Fire Protective Signalling Service” Certificate is valid. | | | |  |  |  |
| The ULC “Central Station Fire Protective Signalling Service” Certificate expires on: | | |  | | | |
| The last inspection noted on the Certificate occurred on: |  | | | | | |
| The communicator has been reset following completion of testing. | | | |  |  |  |
| The communicator is trouble free. | | | |  |  |  |
| The communicator has been placed back into service. | | | |  |  |  |

# 33.1 Field Device Testing - LEGEND

|  |  |  |  |
| --- | --- | --- | --- |
| **Device** | **Description** | **Type** | **Model Number** |
|  | Manual Initiating Devices |  |  |
| **M** | Manual pull station |  |  |
| **MAS** | Manual Abort Station |  |  |
|  | Automatic Fire Detection Devices |  |  |
| **HT** | **Heat Detector**, restorable or non-restorable, fixed temperature |  |  |
| **RHT** | **Heat Detector**, restorable, **rate-of-rise thermostat** |  |  |
| **S** | Ionization **Smoke** detector(9) |  |  |
| Sensitivity Test Method (or Test Equipment Model/Method): |  |  |
|  |
| Manufacturer’s Sensitivity Test Range: |
|  |
| **PS** | **Photo-electric Smoke** detector (9) |  |  |
| Sensitivity Test Method (or Test Equipment Model/Method): |  |  |
|  |
| Manufacturer’s Sensitivity Test Range: |
|  |
| **DS** | **Duct Smoke** detector (9, 29) |  |  |
| Sensitivity Test Method (or Test Equipment Model/Method): |  |  |
|  |
| Manufacturer’s Sensitivity Test Range: |
|  |
| **MC** | **Multi-Criteria** typedetector (specify detection types) (9) |  |  |
| Sensitivity Test Method (or Test Equipment Model/Method): |  |  |
|  |
| Manufacturer’s Sensitivity Test Range: |
|  |
| **CO** | **Carbon Monoxide** detector |  |  |
| **OD** | **Other Detector** type (specify) |  |  |
| **EOL(R)** | **End-of-Line** resistor (“**R**” indicates “Power Supervision Relay”) |  |  |
|  | **Fire Sprinkler Devices** |  |  |
| **FS** | Sprinkler **Flow Switch** (29) |  |  |
| **FPS** | Sprinkler **Flow Pressure Switch** (29) |  |  |
| **TS** | Sprinkler valve supervisory **Tamper Switch** |  |  |
| **LA** | **Low Air** supervisory device (6) |  |  |
| **LT** | **Low Temperature** supervisory device (7) |  |  |
| **HTC** | **Heat Trace Controller** |  |  |
| **TLW** | **Tank Low Water** supervisory device |  |  |
|  | **Fire Alarm Signalling Devices** |  |  |
| **B** | **Bell** |  |  |
| **H** | **Horn** |  |  |
| **BZ(S)** | Mini **Buzzer** (“**S**” indicates “silenceable” type) |  |  |
| **SSB** | **Smoke Sounder Base** |  |  |
| **SSS** | **Suite Silencing Switch** |  |  |
| **V** | **Visual** alarm device (specify strobe type or corridor indicator) |  |  |
| **SP** | Cone type **Speaker** |  |  |
| **HSP** | **Horn Type** **Speaker** |  |  |
| **AV** | Combination **Audible/Visual** Device - specify type (i.e., Horn/Strobe Unit) |  |  |
| **SCIM** | **Signal Circuit Isolation Module** |  |  |
| **ET** | **Emergency Telephone** (Fire Fighter’s Phone) |  |  |
| **SYNC** | Signalling Circuit **Synchronization** Module |  |  |
|  | **Supporting Field Devices** (Addressable Systems) |  |  |
| **RPM** | **Remote Point Module** |  |  |
| **SRIM** | **Single** point **Remote Initiating Module** |  |  |
| **DRIM** | **Dual** input **Remote Initiating Module** |  |  |
| **EM** | **Fault Isolator** |  |  |
| **SCRM** | **Signal Circuit Remote Module** |  |  |
| **RRM(S)** | **Remote Relay Module** (“**S**” provides supervised outputs) |  |  |
|  | **Extinguishment Releasing Devices** |  |  |
| **RS** | **Releasing Solenoid** |  |  |
| **PDS** | **Pressure Discharge Switch** |  |  |
| **LPS** | **Low Cylinder Pressure Switch** |  |  |
|  | **Ancillary Devices** |  |  |
| **DH(M,FL)** | **Door Holder** (“**M**” is **Magnetic**, “**FL**” is **Fusible Link**) |  |  |
| **DM** | **Damper Motor** |  |  |
| **R** | **Relay** |  |  |
| **AD** | Other **Ancillary Device** (8, 12) |  |  |

## 33.1.1 The following notes apply to 33.2, Individual Device Record:

|  |
| --- |
| 1. Smoke detector sensitivity reading confirmed by the control panel or measurement obtained through testing to be recorded in the remarks column.      1. Smoke detector cleaning or replacement date to be recorded in the remarks column. 2. Status change, including time delay, to be recorded in the remarks column. Refer to A3.78 and Annex E. 3. Duct smoke detector pressure differential to be confirmed and recorded in the remarks column. 4. Transport time of air sampling type detector to be confirmed and recorded in the Readings Column. 5. Time delay setting of waterflow device to be recorded in the remarks column. 6. Sprinkler supervisory switches cause trouble condition to be annunciated but not an alarm condition. 7. Upper and lower pressure setting of supervisory devices should be recorded in the “Remarks” column. 8. Low temperature setting should be recorded in the “Remarks” column. 9. Identify the specific ancillary devices in the “Remarks” column. 10. Identify correct field device operation (e.g., alarm, trouble supervisory, annunciation indication). 11. Identify zone, circuit number, or address. 12. Identify conventional field device locations. 13. Identify active field device and supporting field device, data communication link (DCL), address and location. 14. a) Test and confirm conventional field device supervision of wiring via open circuit fault.   b) Test and confirm active and supporting field device supervision via absence of the device.   1. Confirm field device is free of damage. 2. Confirm field device is free of foreign substance. 3. Confirm field device is mechanically supported independently of the wiring. 4. Confirm field device protective dust shields or covers removed. 5. Test and confirm that visible signal devices used to advise occupants that a fire emergency exists is to be turned off automatically when audible signals are silenced and shall be turned on automatically when audible signals are reactivated.   *Exception: Visible signal devices to advise occupants to not enter and area, or for a similar purpose, shall remain on until the fire alarm system is reset.*   1. End of line voltage to be recorded in the Remarks column. 2. When testing manual stations, response time of signals to be confirmed in accordance with the 5 s requirement of Table 6.1. 3. Smoke detectors that employ sounder bases or activate local audible signaling devices, used in lieu of smoke alarms, to be tested to confirm local sounder operation and annunciation at the control panel, including visible device operation, as applicable, and individually recorded.   **Caution: The tests reported on this form do not include the actual operational test of ancillary devices.** |

**33.2 Individual Device Record**

**““ Yes - Acceptable “X” No – Unacceptable (Explain NO answers in comments and list *Deficiencies* on page two) “Dash” - Not applicable**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Device Location** | **Annunciation Label or**  **LCD Text Displayed**  **(if applicable)** | **Device Type** | **Requires Service, Repairs, Cleaning or Missing** | **Circuit Number or**  **Address** | **Annunciated Fire Zone** | **Correctly Installed** | **Additional Readings (Remarks)** | **Alarm / Operation Confirmed** | **Annunciation Indication Confirmed** | **Supervision of Wiring or Device Confirmed** | **Remarks** |
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**33.2 Individual Device Record**

**““ Yes - Acceptable “X” No – Unacceptable (Explain NO answers in comments and list *Deficiencies* on page two) “Dash” - Not applicable**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Device Location** | **Annunciation Label or**  **LCD Text Displayed**  **(if applicable)** | **Device Type** | **Requires Service, Repairs, Cleaning or Missing** | **Circuit Number or**  **Address** | **Annunciated Fire Zone** | **Correctly Installed** | **Additional Readings (Remarks)** | **Alarm / Operation Confirmed** | **Annunciation Indication Confirmed** | **Supervision of Wiring or Device Confirmed** | **Remarks** |
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33.3 subsequent alarm (alarm resound) control panel test sheet

**No – Unacceptable (NO answers shall be recorded as a Deficiency)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Initial Fire Alarm Input Zone Test Location** | **Field Device Label** | **Subsequent Alarm Activation Test (Following Alarm Singal Silence)** | **Field Device Label** | **Alarm Signals Remain Silent** | |
| **Identify NBC Zone Designation Where Initial Firer Alarm Condition Was Activated** | **Identify fire alarm device used to initiate fire alarm signals activation** | **Identify NBC zone designation where subsequent fire alarm device was activated following alarm signal silence.** | **Identify subsequent fire alarm device activated in same NBC zone following signal silence.** | **Yes** | **No** |
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| Note: If signals re-activated following signal silence resulting from a fire alarm device located in the same NBC fire alarm zone, this is a deficiency which must be recorded in Section 28.2, Deficiencies. | | | | | |

33.4 Circuit Fault Tolerance Test Sheet

**“P” - Passed Test “F” - Failed Test (Failed Tests must be recorded as a Deficiency)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Circuit Fault Test Location** | **Type of Fault Tested**  **(check all that apply)** | | | **Isolation Results** | **Non-Faulted Circuit Location** | **Test**  **Result** |
| **Identify Device Location where circuit fault was introduced and description of affected NBC Fire Alarm zone or area** | **Short** | **Open** | **Ground** | **Identify NBC Fire Alarm Zone or area Location where devices failed due to fault condition** | **Identify Individual Device tested for operation located in Non Faulted NBC Fire Alarm zone or area** | **Pass or Fail**  **(P / F)** |
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**33.5 SIGNALLING DEVICE SOUND LEVEL MEASUREMENT**

Reference: Clause 23.2, 23.4, 27.1(f)

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| --- | --- | --- | --- | --- |
| **Zone** | **Location/Description** | **Ambient dBA** | **Alarm dBA** | **Remarks** |
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| **Remarks/Comments** |
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| **Additional Comments / Observations** |
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