Inspection, Testing and Maintenance of Carbon Dioxide Extinguishing Systems

Service Company			Date of Service	Time	Last Service Date
			☐ Monthly ☐ Semi-annually ☐ Annual ☐ Fifth year ☐ Connected Fire alarm ☐ Central Station		
			Volume Protected ☐ Above Ceiling ☐ Below raised floor ☐ Between floor & ceiling		
Building Name:			**Owner:**		**Phone:** **Fax:**
Address:	**City:**	**Postal Code:**	**Contact Person:**		**Phone:** **Fax:**

General Information:

Room or area designation?	System concentration?
CO2 system manufacturer?	Weight of CO2 agent with cylinder?
Date system was installed?	Weight of cylinder (tare weight)?
Detector manufacturer?	Weight of CO2 agent?
Control panel manufacturer?	☐ Low pressure ☐ High Pressure

Detection system

_____ Ionization type smoke detectors?
_____ Photoelectric type smoke detectors?
_____ Rate of rise heat detectors?
_____ Fixed temperature heat detectors?
_____ Rate compensation heat detectors?
_____ Other?_____

Type of detection for system operation:

_____ Single zone?
_____ Two zones (cross-zoned)?
_____ Two detectors on any zone?
_____ Other?_____
_____
_____

The following tests should be conducted at the frequency indicated in NFPA 12 Standard on Carbon Dioxide Fire Extinguishing Systems and in conformance with the Manufacturer's requirements.

Technicians may be required to be certified by the Manufacturer. Maintenance shall be conducted in accordance with the manufacturer's maintenance manual. As a minimum, such maintenance shall consist of the following: All "NO" answers are to be explained in Comments.

"√"Yes - Satisfactory "X" No - Unsatisfactory N/A Not applicable (Explain "X" No answers in comments)

Inspections

Weekly

_____ Inspect to ensue all doors are self closing or capable of being closed?
_____ There are no changes to the hazard protected?
_____ Low pressure containers liquid level acceptable?

Monthly

_____ High pressure cylinders in place and properly secured?
Low pressure storage unit:
_____ - gauge normal pressure
_____ - tank shut off valve is open?
_____ - pilot pressure supply valve is open?
_____ - liquid level is acceptable – loss of 10% refill?
_____ - no sign of physical damage to system components?
_____ CO2 storage is connected to piping?

Monthly con't

_____ Manual actuators are in place and tamper seals intact?
_____ Nozzles: connected, aligned, free from obstruction?
_____ Detectors in place and free from obstruction?
_____ System control panel showing normal ready condition?

Annually

_____ No sign of physical damage to flexible connectors?
_____ No changes to size, type and configuration of the system?

Semi-Annual

High pressure cylinders:
_____ Cylinder weight _____kgs/lbs (Pressure loss greater than 10% requires filling)? Weigh with discharge control valve.
_____ Hydrostatic test date:_____
_____ Control valve operation satisfactory?
_____ Control head operation satisfactory?

Maintenance

Annual

Supervised circuts;

_____ Exercise all functions?
_____ Supervisory for proper operation?

Control Panel:

_____ Exercise all functions?
_____ Check supervision as per mfg requirements?

Annual cont

_____ **Power supply**: Check routing, breakers fuses & disconnect

Emergency Power:

_____ -battery operation acceptable?
_____ -charger operation and fuse acceptable?
_____ -automatic changeover acceptable?
_____ -generator maintenance acceptable?

Annual cont **Annual con't**

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Detectors:

_____ - test using heat/smoke or mfg test device?
_____ - electric type clean adjust and check sensitivity?
_____ -electric type wiring condition acceptable?
_____ - pneumatic tightness of tubing and operation acceptable?
_____ **Time Delay**: function, time limit and cycle acceptable?
_____ **Alarms**: operation, audible and visual acceptable?
_____ **Selector valves** functions and resets properly?
_____ **Release devices**, dampers, doors acceptable operation?
_____ **Equipment** shutdown function and adequacy acceptable?

Manual releases:

Mechanical:
_____ -pull, force and length of pull acceptable?
_____ -operation and adjust all devices?
_____ -tightness of connectors acceptable?
_____ -condition of conduit acceptable?
_____ -condition and operation of corner pulleys acceptable?

Electric Type:
_____ - manual release operation acceptable?
_____ - covers are in place?
_____ Pneumatic releases acceptable?
_____ Accessibility during fire acceptable?
_____ Separate main and reserve manual pulls that require only one operation, to obtain discharge of either main or reserve supply of gas?
_____ Manual releases marked and identified?

Piping:

_____ Security and adequately supported acceptable?
_____ Condition of piping acceptable?

Nozzles:

_____ Orientation and orifice size acceptable?
_____ Cleanliness, security and seal acceptable?

Containers:

_____ - physical condition acceptable?
_____ - cylinder weight _____kgs/lbs (Pressure loss more than 10% requires filling)?
_____ - liquid level gauge verified?
_____ - Cylinder connectors condition acceptable?
_____ - release mechanism weights and cables acceptable?
_____ - release devices arrangement acceptable?
_____ -explosive release devices date and condition acceptable?

Tests

Annual

_____ Perform recommended discharge tests when there is any question as to the adequacy of the system?

5 Year Hose and Container Inspection

_____ Hydrostatic test system hoses?

12 Year Test and Maintenance

_____ Discharge test of the system conducted and satisfactory?
_____ Hydrostatic test of the cylinders?

Comments:

I state that the information on this form is correct at the time and place of my inspection, and that all equipment was tested in conformance with applicable codes and the Manufacturers requirements and at this time was left in operational condition upon completion of this inspection except as noted in comments.

Technician Stamp	Date	Time	Owner or Authorized Agent