

LIGHTNING PREVENTOR OF AMERICA
a DIVISION OF HEARY BROTHERS LIGHTNING PROTECTION COMPANY INC.
11291 MOORE ROAD
SPRINGVILLE, NY 14141

ANNUAL INSPECTION REQUIREMENTS
for LPA-2005 Lightning Preventor Systems
HBP-27

I. General Visual Inspection of Mast, Cable and Accessories at Roof Level

ITEM #	COMPLETED (INITIAL)	DATE	DESCRIPTION OF PROCEDURE
1			Visually inspect general condition of mast and support structure.
2			Visually inspect LPA-2005 Air Terminal for undue wear or mechanical damage.
3			Visually inspect cable connection to mast , to ensure tightness and connection is still intact.
4			Visually inspect cable/ conductor for mechanical damage.
5			Verify that all conductors maintain a horizontal or downward course, free from "U" and/ or "V" (down and up) pockets. (see Standard HBP-21 page 16-17 sec 5.1 E and F)
6			Verify that no bend of a conductor shall form an angle of less than 90 degrees nor shall have a radius of bend of less than 8 inches. (See HBLP-21 page 17 sec 5.1 F)
7			Ensure that all adhesive cable fasteners, mechanical cable fasteners are spaced at intervals not exceed 3' - 0" on center and that all fasteners are securely fastened to the structure
8			Ensure that all roof penetrations are properly flashed / sealed in accordance with roofing manufacturer's requirements and guarantee
9			Ensure that bare copper conductors are not installed on aluminum surfaces or aluminum materials are not installed on copper surfaces.

II. Verification of proper installation of ESE Lightning Preventor

ITEM #	COMPLETED	DATE	DESCRIPTION OF PROCEDURE
1			Verify that LPA-2005 Air Terminal is a minimum of 20' above all projections on the structure.
2			Verify metallic masts (antennas, flagpoles, satellite dishes, metal stacks, etc) that are 5'- 0" or more above finished roof, are grounded to the E.S.E system with a main size conductor.
3			Verify that the LPA-2005 Air Terminal and Mast are positioned as to provide the provide proper coverage for the entire structure. That includes that no modifications or additions have been made to the building structure requiring an additional installation of E.S.E. system components.
4			Verify that connections to rebar and or structural steel have been made in accordance HBP-21.
5			Verify that all connections are secure by removing connections cleaning all debris corrosion etc, from conductors and connections.
6			Verify that mast support and mounting system is properly installed and in good condition.
7			Check cable to mast connection for corrosion , decay or damage. Remove connection clean and reinstall.

III. Inspection for down conductors and grounding system

ITEM #	COMPLETED	DATE	DESCRIPTION OF PROCEDURE
1			Verify that each Lightning Preventor System is provided with 2 connections to ground (Down Conductors) (Exception when connection from base of mast is less than 65' then only one down conductor is required) Verify installation is in accordance with HBP-21
2			Verify that each down conductor is connected to the structural steel and / or rebar with main size conductor at the upper and lower extremities of each conductor. Remove connections and clean surface an reinstall.
3			Verify that any portion of the structure steel/ framework that is utilized as the lightning protection conductor has a minimum wall thickness of 3/16". Further confirm that structural used in bonded in accordance with HPB21
4			Remove , clean and reinstall all cable connections including but not limited to cable to steel, cable to rebar, cable to ground rod, cable to cable connections
5			Locate connections to ground rod, ground loops and inspect for mechanical damage.
6			Remove connections to ground rods and or loops and clean and re-install Inspect ground rods for undue corrosion
7			Inspect and establish that all grounding whether shown on drawings or not is intact and operational
8			Inspect to verify that all material in the E.S.E system is manufactured by Heary Bros. Lightning Protection or its Division Lightning Preventor of America, in order to qualify for any manufacturer's guarantee or warranty.
9			Verify that waterlines (fire and domestic) are bonded to the nearest structural steel, down conductor or ground rod in accordance with HB-21

IV. Ground Resistance Testing and TVSS Responsibilities

ITEM #	COMPLETED	DATE	DESCRIPTION OF PROCEDURE
1			Perform Ground Resistance test on lightning protection grounding system. Use the "Fall of Potential" Method . Provide findings in accordance with the requirements of HBP21. Further verify that test was perform with the proper equipment and in accordance with equipment manufacturers requirements.
2			Inspect and document that the building ground loop, including ground rods and bonding to base of structural steel, is intact and operational
3			Inspect and document status of surge protection / TVSS (Transient Voltage Surge Suppression) systems/ equipment. Note bene: The Transient Voltage Surge Suppression of all services including but not limited to, services entrances, computers, copiers, telephones, fire alarms, security systems and all other electrical / electronic systems is not the responsibility of the manufacturer of the ESE system and is the responsibility of the owner, electrical engineer, electrical contractor or others. TVSS system should be installed in accordance with NEC 70 or other applicable codes or standards.

V. Documentation requirements for inspections

ITEM #	COMPLETED	DATE	DESCRIPTION OF PROCEDURE
1			<p>Prepare and submit a 2 copies of this form to Manufacturer along with Video tape detailing all inspection performed. The videotape shall included video detailing but not limited to, mast, mast mounting, bonding connections, (waterline & structural steel), down conductors, ground rods/ grids and location of all buried or concealed connections and components. Also provide video detailing the the testing of ground system as well as cleaning of all connections. Documentation shall be returned within 2 weeks of completion of inspection to the manufacturer for evaluation. Failure to comply will make guarantee null and void</p>

Notes/ Conditions

Inspect and confirm that no additions and/or modifications to the structure necessitate additional lightning protection: If there have been modification or additions to the structure contact the manufacturer or distributor, to evaluate the need for additional lightning protection.

This checklist is not inclusive of all factors governing the installation and maintenance of an E.S.E. It is intended as a guide for the building owner / maintenance people to perform annual inspections

The guarantee we provide is limited to the structure of the building only and excludes surge protection (TVSS)

Because this guarantee is limited to the structure of the building, it does not cover electrical/ electronic equipment sensitive equipment, computers and/ or other such equipment. Likewise it does not cover damage caused by surge/transients which enter or exit a structure

Any litigation regarding the warranties or product performance, our contractual relationship imposes the cost of such litigation on the parties instituting the litigation. We do not bear such expense since it is not built into the cost of the system, our experience is that the systems when properly installed and maintained , they do not experience failure and we encourage all customers to comply with proper maintenance procedures, including without limitation annual inspections.

Failure to perform annual inspection and document such will void all warranties