Government of West Bengal
Chief Engineer Electrical
Public Works Directorate
Khadya Bhawan ,A Block (3rd Floor) ,11A , Mirza Galib Street , Kolkata - 700087
Phone : 033-22524574,Fax : 2252-5806. e-mail ID : ceelect1pwd@wb.gov.in , ceepwd@gmail.com

MEMO NO: 736/CEE/2018 DATED: 16.05.2018

To
The Superintending Engineer,
Presidency Electrical Circle / IT Circle /Kolkata Electrical Circle / Health Electrical Circle / Southern Electrical Circle /Central Electrical Circle /South Western Electrical Circle / Western Electrical Circle /Northern Electrical Circle / North Bengal Electrical Circle , PWD

Sub: Some salient point for checking, testing and maintenance of unitary room Air- Conditioner installed at different Government buildings throughout the State.

Ref : State Administrative Review Meeting held on 8th May,2018 .

Dear Sir,

In reference to the subject stated I would like to inform you that we have been further directed in the state Administrative Review Meeting, held on 8th May, 2018 with the Hob'ble Chief Minister, West Bengal , for taking proper care for maintenance of AC machines installed at different Government buildings throughout the State , so as to avoid the occurrence of incident of fire.

. Previously , the different guidelines were circulated to them in connection for proper maintenance; checking and testing of air conditioning machines that must be followed. In addition to that I would like to enclose herewith some salient points that should be checked positively and immediately.

It appears that all the machines are put into either annual maintenance contract or are within warranty period. You are requested to please look into and monitor so that all the machines are being maintained according to the terms and condition and recommendation of manufacturer.

The check point that is being enclosed herewith should be checked by the maintenance agency with supervision of Assistant Engineer and Junior Engineer and accordingly it would be recorded in the log book in addition to the check point those are included in the existing terms and condition and ordered by them. Again, such checking and testing should be recorded by the thermal imaging scanner and to be preserved date wise in addition to record in the log book .

The direction above must be circulated up to the level of the Junior Engineers. However if you like to add more for betterment of such maintenance in addition to that you can do that accordingly.

Thanking you,

Sincerely yours,

Enclo: As stated.

Sd/- K. K. Chaudhury

Chief Engineer Electrical
PWD

MEMO NO: 736/1(1) CEE/2018

DATED: 16.05.2018

1.Copy forwarded to the Additional Chief Secretary to the Government of West Bengal, Public Works Department, for kind information.

Enclo: As stated.

Sd/- K. K. Chaudhury

Chief Engineer Electrical
PWD

MEMO NO: 736/2(1) CEE/2018

DATED: 16.05.2018

1.Copy forwarded to the Engineer-in- Chief & Ex-Officio Secretary, Public Works Directorate , for kind information.

Enclo: As stated.

Sd/- K. K. Chaudhury

Chief Engineer Electrical
PWD

MEMO NO : 736/3(5)CEE/2017

DATED : 16.05.2018

1.Copy forwarded to the Chief Engineers , South Zone/ West Zone / North Zone /Social Sector / Electrical Planning, PWD, for kind information and kind participation.

Enclo: As stated.

Sd/- K. K. Chaudhury

Chief Engineer Electrical
PWD

MEMO NO: 736/4(33) CEE/2018 DATED: 16.05.2018

Copy forwarded to the Executive Engineers : Kolkata Electrical Division /West Kolkata Electrical Division /Howrah Electrical Division /IT Division /North Kolkata Health Electrical Division (EE- I & II) /Central Kolkata Health Electrical Division (EE- I & II) /South Kolkata Health Electrical Division (EE- I & II) /Bidhannagar Electrical Division/Electrical Construction Division /Kolkata Central Electrical Division/Kolkata North Electrical Division /Nadia Electrical Division /Murshidabad Electrical Division /North 24 Parganas Electrical Division / South 24 Parganas Electrical Division / Purulia Electrical Division /Bankura Electrical Division /Paschim Medinipur Electrical Division / Purba Medinipur Electrical Division / Birbhum Electrical Division /Bardhaman Electrical Division /Hooghly Electrical Division/Coochbehar Electrical Division / Jalpaiguri Electrical Division /Darjeeling Electrical Division /Malda Electrical Division /Dakshin Dinajpur Electrical Division /Jhargram Electrical Division /Asansol Electrical Division / Kalimpong Electrical Division, PWD.

Enclo : As stated.

16.5.2018

Chief Engineer Electrical
PWD

NO. 1108(4) dt. 16/05/2018

Copy forwarded for information & strict compliance.

1) AE/AESD
2) AE/EESD
3) AE/DDESD
4) AE/SSESD

Memo No. 736/4(33) Dated 17.05.18

To, JE-I/II/III/IV/V AECD

Forwarded for information & strict compliance pl.

17/5/18

Assistant Engineer P.W.D.
Alipore Electrical Sub-Divn.

16/5

Executive Engineer, P.W.D.
Elecl. Constn. Divn.
Govt. of West Bengal

o/c

SOME SALIENT POINT FOR CHECKING, TESTING & MAINTENANCE OF UNITARY ROOM AIR-CONDITIONER

CHECK POINT	REMARKS
MCB	The Current rating and Type (Curve - C) of the MCB in the Power Distribution Board (PDB) must be according to the Tonnage Capacity of the RAC. Check it.
WIRING	The size (current carrying capacity) of the Copper| FRLS	Wire (Phase & Neutral) must be according to the Tonnage Capacity of the RAC. But due consideration should be given for " Voltage Drop " and accordingly wire size should be selected. The size of the Earth Continuity Wire (FRLS,Copper) to be drawn from the PDB to the Power Plug must be selected accordingly.Chek it.
LOOSE CONNECTION	For Poor Workmanship of Electrical Wiring, Loose Connection, impoper soldering/crimping of lugs, improper fitting of screws etc may generate heat. Check it.
STARTER	The Starter to be used must have provision for protection against Over Voltage / Under Voltage / Overcurrent and provision for Time delay to start.Check it.
CAPACITOR	Capacitors having highest level of safety features as per IEC 60252-1-2001-02 standard, i.e. S2 / P2 protected with self healing properties and overpressure disconnection device, should be used.Check it
LEAKAGE CURRENT	It must be tested whether there is leakage current in the AC Unit and suitable actions should be taken to detect the causes of it and to remove the causes and accordingly protection should by taken.
TIME SWITCH	Time Switch must be installed for avoiding continuous running. It should be installed near the PDB and outside the room. Check it.
PROPER SETTING OF THERMOSTAT	Thermostat should be set properly and should be checked whether malfunctioning to avoid continuous running .
GRILL TEMPERATURE AND REFRIGERANT PRESSURE	Grill Temperature and refrigerant pressure must be measured to check whether it is within the desisgned value.
PCB	Overheating of transformer provided in the PCB of the air conditioner may lead to its burning, resulting in initiation of fire.So it should be checked, whether there is any symptoms of overheating in the PCB during running condition for the transformer or other.

[Continued]

BLOWER FAN IN THE INDOOR UNIT	If there is any more sound beyond the specified limit it might be that the blower fan is getting obstructed during running. This may cause overheating to the fan motor. Again, if the filter is not cleaned the blower fan has to work hard and may generate heat. This must be checked whether the blower fan is rotating freely and is not obstructed.
SHORT CYCLING OF THE COMPRESSOR	Short Cycling of Air conditioning can happen due to obtructed compressor, leaking refrigerant, faulty thermostat, dirty air filter, icy coils, electrical issues etc. Short cycling can have several negative effects and can put a lot of stress on the AC unit, leading to breakdowns. Check those.
CLEANING	Failing to clean air conditioner properly & as per Manufacturer Guideline results in the accumulation of dirt and dust particles/insects in its air vents, filters, coils and fins. This obstructs normal air flow and could result malfunctioning and in the end cause a fire.Check it.
COMBUSTIBLE MATERIAL	Allowing combustible materials too close to air conditioning system puts it at a risk of catching fire.Keep the space around unit free and clear with any materials or debris. User should be made concus accordingly.
PROPER SETTING OF ROOM TEMPERAURE	National Building Code puts the optimum temperature condition at 27.5 degree Celsius. Rated efficiency of Room ACs is tested and specified at 27 degree Celsius. Studies suggest that efficiency of AC drops by 3 - 10% with every degree below 27oC.
OBSTRUCTION OF INDOOR & OUTDOOR UNIT	The INDOOR UNIT and OUTDOOR UNIT must be free from any obstruction around it.
LOG BOOK & RECORDING IN THERMAL IMAGING SCANNER	Such Checking & Testing by maintenance agency and due supervision of it by AE & JE must be recorded in the log book in addition to the other checking as ordered by them and evidence of such testing should be recorded in the Thermal Imaging Scanner date wise.

CHIEF ENGINEER ELECTRICAL
PWD