

# AIR-CONDITIONING UNIT(ACU) MAINTENANCE SERVICES MANUAL

Class Code: D
Reference Code:
OM-ACU-1.0
Revision Number:
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24<sup>TH</sup> Floor LBP Plaza 1598 M.H Del Pilar cor. Dr. J. Quintos St. Malate Manila **Chapter 1: General Provisions** 

Date: Effective
Nov. 20, 2018
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### **A. Purpose and Scope**

This Manual is issued in order to adopt a standard and uniform rules and regulations governing the maintenance services of LBRDC specifically Air Conditioning Unit (ACU) maintenance for Land Bank Branches and Field Units and other private and government clients.

The policies and guidelines herein shall govern and apply to all activities involving the implementation of the ACU maintenance services of the corporation.

### **B. Policy Statements**

- As provided for in the secondary purposes of LBRDC, the corporation may engage in, operate and carry on, the business of providing maintenance services. Further, on 23 June 2011, the LBRDC Board of Directors, thru Board Resolution No. 11-059, approved the proposal of management to render air conditioning unit (ACU) cleaning and preventive maintenance services to Land Bank Metro Manila Branches and other private/government clients.
- 2. The Corporation shall ensure that the delivery of services meets, if not exceeds client expectations in accordance with all labor laws and standards, and in line with the Corporation's values.
- 3. LBRDC shall use the Code of Practice for Refrigeration and Air Conditioning as reference on good practices in handling and working with refrigerants, including regulations and legislations concerning with the trade and compliance with environmental laws.
- 4. LBRDC shall provide ACU maintenance services to LBP under an agency-to-agency arrangement in accordance with Republic Act No. 9184.

### C. Definition of Terms and Acronyms

Air Conditioning Unit (ACU) An appliance, system, or mechanism designed to regulate the temperature, humidity, cleanliness and air flow inside a room or a building.

Material Safety
Data Sheet
(MSDS)

A document that provides health and safety information about products, substances or chemicals that are



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classified as hazardous substances or dangerous goods. It contains information on:

- the manufacturer or importing supplier
- the product (e.g. its name, ingredients and properties)
- how the product can affect a person's health
- precautions for using or storing it safely

Personal Protective Equipment (PPE) Clothing or equipment used or worn by a person to minimize risk to the person's health and safety such as boots, face masks, hard hats, gloves, safety harness, etc.

Preventive Maintenance The care and servicing by personnel for the purpose of maintaining equipment and facilities in satisfactory operating condition by providing systematic inspection, detection, correction, and prevention of incipient failures, to avoid or mitigate the consequences of failure of equipment.

Recovery

The removal of a refrigerant in any condition (vapor, liquid or mixed with other substance) from a system and to store it in an external container.

Recovery Machine A machine/equipment used to extract refrigerant.

Refrigerant

A substance used in a cooling mechanism, such as an air conditioner or refrigerator.

#### **D. Scope of Services**

- 1. Cleaning and Preventive Maintenance of ACU
  - 1.1. Cleaning and preventive maintenance procedures shall be aimed to:
    - 1.1.1. Promote safety by avoiding accidents to personnel and preventing damage to goods and properties;
    - 1.1.2. Identify system leaks at the earliest possible time;



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- 1.1.3. Ensure good working condition of all components and parts;
- 1.1.4. Minimize energy consumption; and
- 1.1.5. Maintain continuous operation of the system and provide the necessary comfort to the bank employees and clients at the same time ensure maintenance of needed temperature condition for all the computers and automated teller machine (ATM) systems of the branch/unit.
- 1.2. Below are the standard scopes of cleaning and preventive maintenance services:

FREQUENCY	SERVICES		
Monthly	<ul> <li>Air filter cleaning</li> <li>Check/adjust and record refrigerant charge to standard operating pressure (suction pressure and discharge pressure)</li> <li>Check and record full load current readings</li> <li>Check for leaks</li> <li>Recommend repair and/or replacement of parts, if necessary</li> <li>Submit service report and discuss to the branch or client's authorized personnel immediately after the activities</li> </ul>		
Quarterly	<ul> <li>General cleaning of the following:         <ul> <li>Air filter</li> <li>Evaporator</li> <li>Condenser coils</li> <li>Condensate pan and drainage lines</li> <li>Blower wheel and scroll assemblies</li> <li>Housing, bases, and fan blades</li> </ul> </li> <li>Check/clean and retighten electrical components such as:         <ul> <li>Circuit breakers, panel boards, to include retightening of terminals, bolts, connections, etc.</li> </ul> </li> </ul>		



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	<ul> <li>Motor controllers (contractors, switches, temperature controllers, pressure switches, gauges, etc.)</li> <li>Check/adjust and record refrigerant charge to standard operating pressure – suction pressure; discharge pressure</li> <li>Check and record full load current readings</li> <li>Check for leaks</li> <li>Submit service report and discuss to the branch or client's authorized personnel immediately after the activities</li> </ul>
Semi- annual	<ul> <li>Grease/repack motor/pillow block bearings</li> <li>Check unit vibration</li> <li>Submit service report and discuss to the branch or client's authorized personnel immediately after the activities</li> </ul>
Annual	<ul> <li>Check liquid line filter driers and pipe insulation</li> <li>Check piping, joints, connections, etc. Apply anti-rust/paint finish to rusted steel members.</li> <li>Submit service report and discuss to the branch or client's authorized personnel immediately after the activities</li> </ul>

- 1.3. The fixed monthly service fee shall be on per ACU, per visit basis. The following conditions shall be included in the quotation/offer:
  - 1.3.1. Validity period of the quotation/offer;
  - 1.3.2. An annual price escalation rate to be determined by management;
  - 1.3.3. In case of mandated wage increases and drastic increases in the price of commodities within the validity period, the fee shall be shouldered by LBP/Client.
- 1.4. During the maintenance activities, LBRDC shall use at its own expense the appropriate equipment, hand tools, and personal



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protective gears and equipment, supplies and other consumables (i.e., refrigerant recovery pump, high pressure washer, gloves, dust masks, rubber boots, rags, paint, paint brush, liquid soap, etc.).

1.5. Replacement parts as well as other cleaning chemicals and consumables not included in the above but may be necessary to the maintenance works (such as air filter, fan belt, filter drier with flare nuts, silver rod, refrigerant, industrial gas, grease and oil) shall be provided by LBRDC.

### 2. Repair of ACU

- 2.1. LBRDC may also undertake the repair of ACUs if and when requested/ instructed by the branch/client.
- 2.2. For defects/damages detected during the conduct of periodic preventive maintenance, the LBRDC ACU Technician shall recommend repair of a unit and prepare cost estimates for approval by the authorized signatories.
- 2.3. For on-call requests or defects/damages reported by the branch/client, the ACU Technician of LBRDC shall report at the branch office and inspect, verify, and assess the condition of the reported defective unit. A minimum check-up fee of P500.00 plus applicable taxes shall be charged to the branch/client. However, fees may vary depending on the distance or location of the ACU from the LBRDC office.
- 2.4. After assessing the defects/damages, the ACU Technician shall prepare and submit a quotation to the end-user/unit owner for approval.
- 2.5. For actual repair, the price shall be actual cost of labor and replacement parts/materials plus 10% service fee and applicable taxes.
- 2.6. The labor cost shall be computed based on the length of time required and the number of workers engaged to complete the repair works. A minimum of P500.00 shall be charged for the first four (4) hours per worker. In excess of the first four (4) hours, an additional P150.00 for every hour of work or a fraction



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thereof shall be charged multiply by the number of workers that implemented the repair works in the Branch.

2.7. Below are the standard components of the quotation.

I. Direct Cost		
1. Actual cost of replacement parts a	nd supplies P	
2. Labor		
II. Service Fee (10% of Direct Cost)	Sub-total	
11. Service Fee (10% of Direct Cost)	Sub-total	
III. Value-Added Tax (12%)	Sub total	
, ,	Sub-total	
TOT	AL BILLING P	======

2.8. ACU Technician shall turn-over the damaged spare parts and other waste materials removed from the unit.