



Skilling India in Electronics

Participant Handbook

Sector
Electronics

Sub-Sector
Consumer Electronics

Occupation
After Sales Support

Reference ID:
ELE/Q3101



**Field Technician
Air Conditioner**

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Shri Narendra Modi
Prime Minister of India

“ Skilling is building a better India.
If we have to move India towards
development then Skill Development
should be our mission. ”



Certificate

**COMPLIANCE TO
QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARD**

Is hereby issued by the

Electronics Sector Skills Council of India

for

Skilling Content : Field Technician Air Conditioner

Complying to National Occupational Standards of

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CEO

Electronics Sector Skills Council of India

About this Book

This Participant Handbook is designed to enable training for the specific Qualification Pack (QP). Each National Occupational (NOS) is covered across Unit/s.

Key Learning Objectives for the specific NOS mark the beginning of the Unit/s for that NOS. The symbols used in this book are described below.

Symbols Used



Key Learning
Outcomes



Steps



Role Play



Tips



Notes



Unit
Objectives



Activity

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1. Engage with Customers for Service

Unit 1.1 – Understand Customer Requirements

Unit 1.2 – Interaction with Customers

Unit 1.3 – Suggest resolution to Problems

Unit 1.4 – Maintaining records for complaints and resolutions

Unit 1.5 – Achieving Productivity and Quality



Key Learning Outcomes



At the end of this module, you will be able to:

1. Understand customer requirements
2. Learn how to interact with customers
3. Suggest resolution to the problems of customers
4. Learn how to maintain records of customer's complaints and resolutions
5. Describe the importance of productivity and quality

UNIT 1.1: Understand Customers Requirements

Unit Objectives

At the end of this unit, you will be able to:

1. Identify the customer requirements
2. Educate customer about different aspects of repairing of the air conditioner

1.1.1 Understand Customer Requirements

Understanding the needs of a customer is one of the foremost parts of a technician's job role. This includes the following practices:

- Call the customer as per the complaint registered to understand the problem
- Fix time of visiting the customer
- Greet the customer and talk politely
- Understand the customer's requirement
- Provide the best possible and cost effective solution to the customer
- Ensure that the customer is satisfied with the service
- Address the queries and issues raised by the customer about the equipment

1.1.2 Educating and Informing the Customer

Educating the customer about the products and their operation which is an important aspect of for a field technician. For the satisfaction of customer, a field technician should inform the customer about the operational behaviour and other information of equipment repaired by him at the customer premises.

The following figure shows list of information about equipment which is to be used by customer:

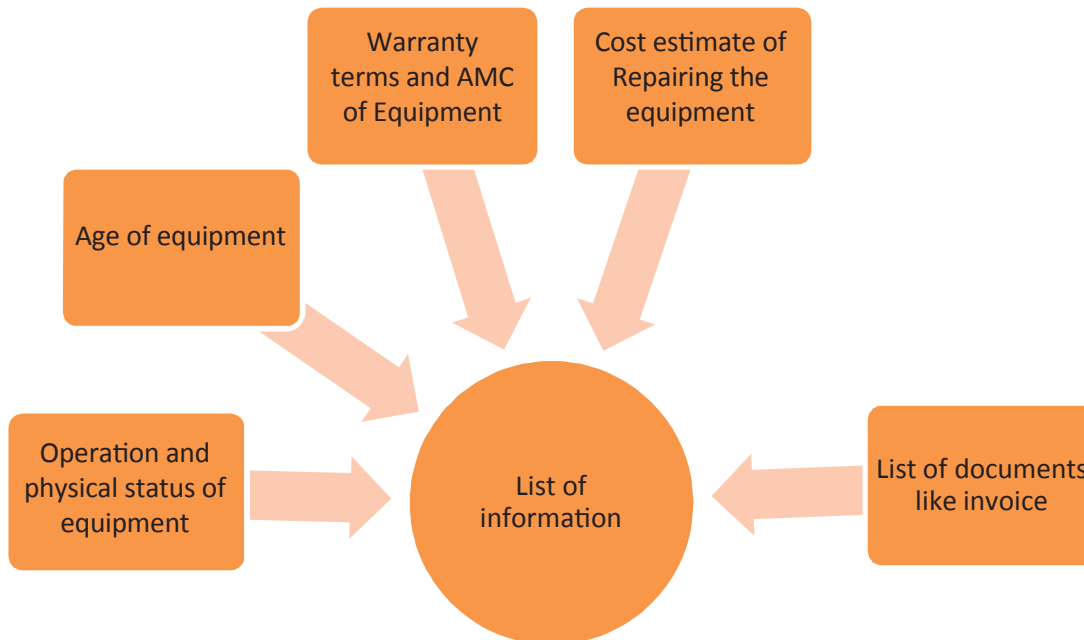


Fig 1.1.2: List of information about equipment

UNIT 1.2: Interaction with Customers

Unit Objectives

At the end of this unit, you will be able to:

1. Analyse location requirements for equipment
2. Analyse the problem
3. Inform customers about repair procedure and warranty coverage of equipment
4. Educate customer about annual maintenance contract

1.2.1 Analyse Location Requirements

For a field technician, it is important to analyse the location because it will help him in making his route plan

1.2.2 Asking Questions

Asking Questions is also a skill. Questions may be asked to get more details or to be sure of something. A field technician should ask customer queries to analyse the problems faced and seek inputs from them to understand the symptoms.

This figure enlists the points to be asked at customer's premises:

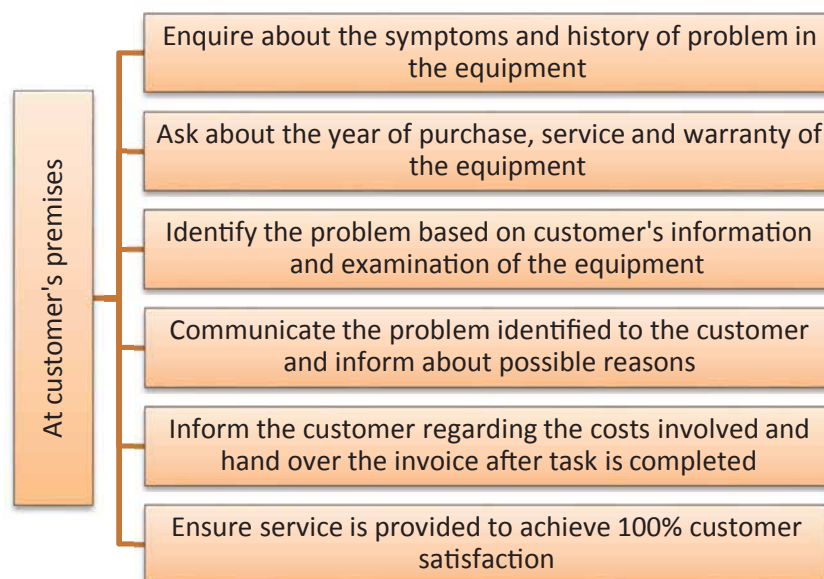


Fig 1.2.2: Points to be asked at customer's premises

1.2.3 Warranty Coverage and Annual Maintenance Contract

A warranty coverage is an agreement between manufacturer and buyer which assure the customer to give free repair service till the mentioned date of warranty. A field technician should enquire about warranty coverage after inspecting the device which is to be replaced or repair.

If the air conditioner is out of warranty coverage, inform the customer about the initial charges of replacing the damaged part

The following figure shows a warranty card template:

Name _____

Address _____

Zip code _____ State _____

Email _____ Contact number _____

Model number _____ Serial number _____
(these can be found on the base of the machine)

Date of purchase _____ Place of purchase _____

Barcode: [Barcode] [Red box]

[Red arrow pointing to the red box]

Fig 1.2.3.1: Warranty card template

Informing Customer about Replacement

In this, a technician is responsible to inform customer about the replacement or repairing procedure of equipment. Tell the customer about the estimated cost of repairing or whether the repairing will take place at service centre.

Annual Maintenance Contract

It is defined as a contract between two parties about maintenance of the product owned by other party on some terms and conditions which is negotiated in the starting and it is maintained in the form of legal contract.

A technician should educate customer about this contract and its benefits regarding product maintenance and legal terms and conditions, so that in future customer should be able to use this contract for repairing purpose of the damaged products.

This image shows template for annual maintenance contract of equipment

MAINTENANCE CONTRACT FOR AIR CONDITIONER AND ACCESSORIES

Between _____ represented by
(hereinafter referred to as the COMPANY)

and _____ represented by
(hereinafter referred to as the CUSTOMER)

1. OBJECT

The CUSTOMER agrees to provide and the CONTRACTOR agrees to provide a Maintenance Service to the Equipment listed in schedule and serial number in the schedule to appear in subject to the following terms and conditions:

2. MAINTENANCE SERVICE

The CONTRACTOR shall provide all necessary labor, transport, replacement parts and test Equipment to maintain the Equipment in good working condition.

The CONTRACTOR's Maintenance Service shall consist of:

a. Routine Preventive Maintenance Service

The CONTRACTOR shall provide the following services to the Equipment listed in the schedule and serial number in the schedule to appear in subject to the following terms and conditions:

b. Breakdown Maintenance Service

The CONTRACTOR shall provide the following services to the Equipment listed in the schedule and serial number in the schedule to appear in subject to the following terms and conditions:

The CONTRACTOR shall provide the following services to the Equipment listed in the schedule and serial number in the schedule to appear in subject to the following terms and conditions:

c. Emergency Maintenance Service

The CONTRACTOR shall provide the following services to the Equipment listed in the schedule and serial number in the schedule to appear in subject to the following terms and conditions:

The CONTRACTOR shall provide the following services to the Equipment listed in the schedule and serial number in the schedule to appear in subject to the following terms and conditions:

Fig 1.2.3.2: Template for annual maintenance contract

UNIT 1.3: Suggest resolution to Problems

Unit Objectives

At the end of this unit, you will be able to:

1. Provide solution to the customer problems
2. Explain customer about the estimated cost of repairing under warranty and time required to repair the faulty equipment
3. Inform customer whether the module require replacement with reasons

1.3.1 Suggest a Solution to the Customer

After identifying the problem, a field technician needs to offer solutions. The field technician should explain all the possible solutions along with the cost associated. The field technician should then propose the best solution and let the customer decide whether to go ahead with the given solution or not.

The following figure shows the steps involved in offering solutions to a customer:

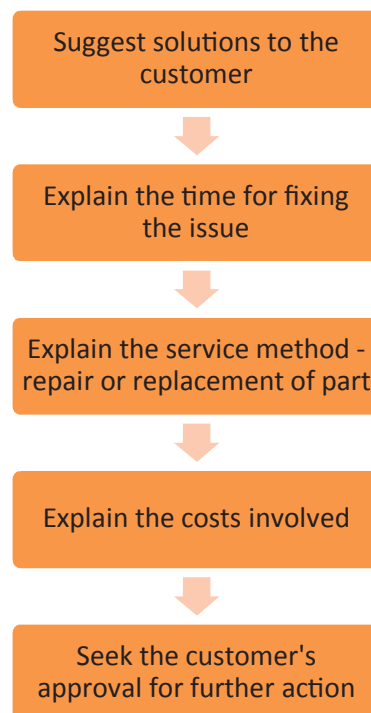


Fig 1.3.1: Suggesting a solution to the customer for an issue

1.3.2 Inform and Explain Customer about Modules Replacement

Under this topic, a technician required to inform customers on whether the module has to be replaced or repaired with reasons. For an instance, if the product is under warranty coverage then tell the customer about the estimated cost of repairing and time required to repair it.

The following figure shows the step required to inform the customer about modules replacement:

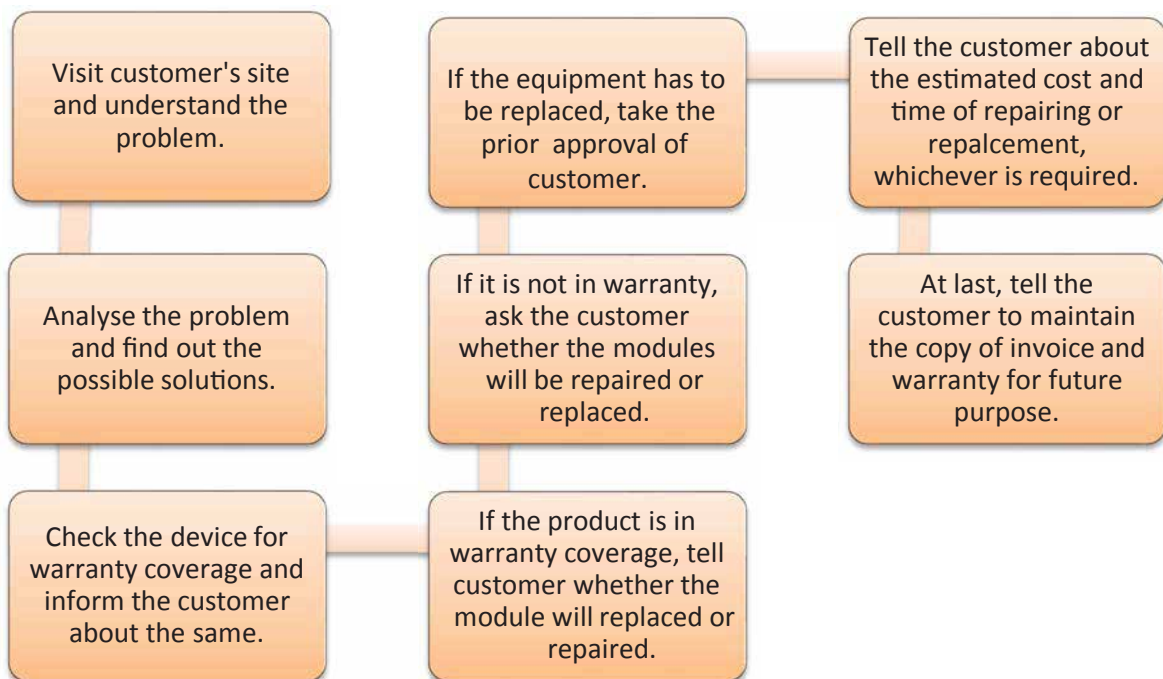


Fig 1.3.2: Steps required to inform the customer about modules replacement

UNIT 1.4: Maintaining records for complaints and resolutions

Unit Objectives

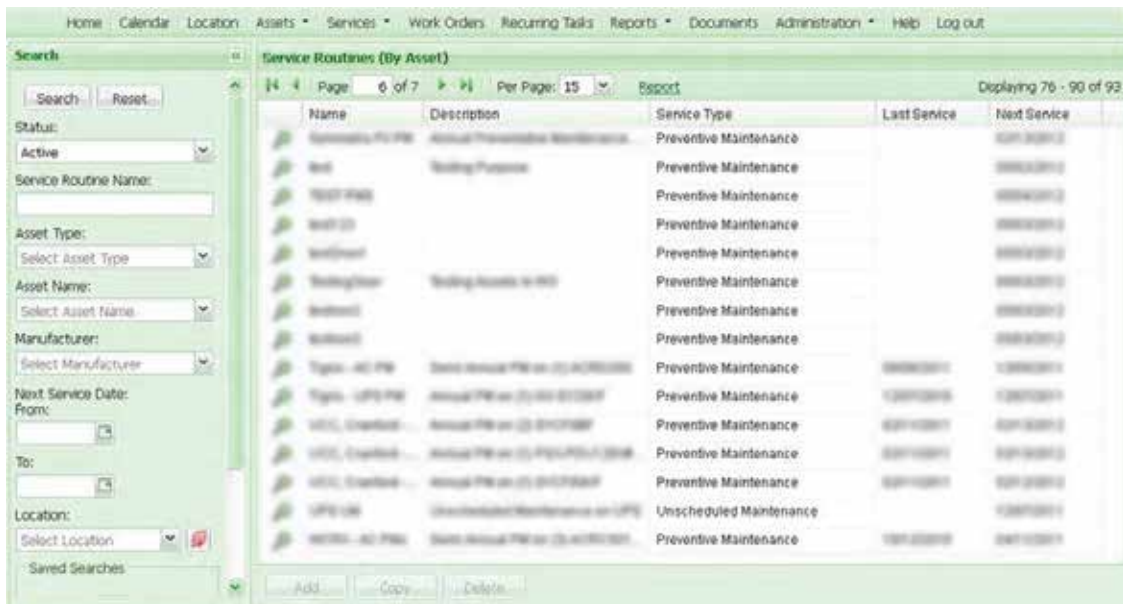
At the end of this unit, you will be able to:

1. Explain maintenance schedules
2. Tell customer to retain the copy of invoice and provide the same

1.4.1 Maintenance Schedule

Maintenance schedule is vital for keeping records of servicing, repairing and performing preventive maintenance. The service engineer should maintain service records and next servicing schedules to be informed the customer about the maintenance of the components at the facility. The service engineer needs to perform timely equipment maintenance.

The following image shows a sample maintenance schedule report:



Name	Description	Service Type	Last Service	Next Service
Service Routine 1	Annual Preventive Maintenance	Preventive Maintenance		12/31/2011
Unit	Testing Process	Preventive Maintenance		08/01/2011
Unit 100		Preventive Maintenance		08/01/2011
Unit 101		Preventive Maintenance		08/01/2011
Unit 102		Preventive Maintenance		08/01/2011
Unit 103	Testing Process	Preventive Maintenance		08/01/2011
Unit 104		Preventive Maintenance		08/01/2011
Unit 105		Preventive Maintenance		08/01/2011
Unit 106		Preventive Maintenance		08/01/2011
Unit 107		Preventive Maintenance		08/01/2011
Unit 108		Preventive Maintenance		08/01/2011
Unit 109		Preventive Maintenance		08/01/2011
Unit 110		Preventive Maintenance		08/01/2011
Unit 111		Preventive Maintenance		08/01/2011
Unit 112		Preventive Maintenance		08/01/2011
Unit 113		Preventive Maintenance		08/01/2011
Unit 114		Preventive Maintenance		08/01/2011
Unit 115		Preventive Maintenance		08/01/2011
Unit 116		Preventive Maintenance		08/01/2011
Unit 117		Preventive Maintenance		08/01/2011
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Unit 175		Preventive Maintenance		08/01/2011
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Unit 182		Preventive Maintenance		08/01/2011
Unit 183		Preventive Maintenance		08/01/2011
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Unit 190		Preventive Maintenance		08/01/2011
Unit 191		Preventive Maintenance		08/01/2011
Unit 192		Preventive Maintenance		08/01/2011
Unit 193		Preventive Maintenance		08/01/2011
Unit 194		Preventive Maintenance		08/01/2011
Unit 195		Preventive Maintenance		08/01/2011
Unit 196		Preventive Maintenance		08/01/2011
Unit 197		Preventive Maintenance		08/01/2011
Unit 198		Preventive Maintenance		08/01/2011
Unit 199		Preventive Maintenance		08/01/2011
Unit 200		Preventive Maintenance		08/01/2011

Fig. 1.4.1.1: Sample maintenance schedule report

Equipment Maintenance

The field technician should assess the condition of equipment components and upgrade them if required. He/she should be aware of the compatibility issue. He also needs to maintain the warranty details of the components. If the warranty period is going to expire, he/she should communicate that with the customer and ask for any extended warranty he needs.

In this case, there are two ways:

- The customer can ask for extending the warranty period.
- The customer doesn't want to extend it. If there is any problem, he will buy a new one.

The field technician need to communicate about the above two ways and then tell the details of further procedure.

The following image shows a sample maintenance requirement form:

The screenshot shows a software window titled "Enter Maintenance Requirements". The form is organized into several sections:

- Equipment Unit ID:** Contains two text input fields: "Internal Control No.:" and "Mfr. Serial No.:".
- Equipment Unit Description:** Contains several fields: "Name:" (with a dropdown arrow), "Brand:", "Model:", "Capacity:", "Classification:" (with a dropdown arrow), and "Unit Location:".
- Maintenance:** Contains "Start Date:" (with a date picker showing 10/24/2008), "Starting Usage:" (with a numeric input field showing 0 00000000), "Maintenance Profile:" (with a dropdown arrow), and "Description:".
- Comments:** A large text area for entering notes.
- Warranty Date:** A text input field.
- Certified?:** A checkbox.
- Maximum Load:** A text input field.
- Customer:** A dropdown menu.
- Buttons:** A "Customize Captions" button and a group of six buttons: "Reproduce", "Print", "Delete", "Cancel", "Help", and "Ok".
- Table:** A table with three columns: "Type", "Elapsed Time Freq (Days)", and "Usage Frequency (Hrs)". The table is currently empty.

Fig. 1.4.1.2: Sample maintenance requirement form

The technician should maintain a checklist for scheduling the maintenance.

UNIT 1.5: Achieving Productivity and Quality

Unit Objectives

At the end of this unit, you will be able to:

1. Deliver the service within service level agreement (SLA) time
2. Identify customer's requirement and put them at ease by providing appropriate solutions
3. Achieve customer's satisfaction
4. Maintain no repeat or second escalation from customer

1.5.1 Deliver Service within SLA time

To achieve customer's satisfaction, it is necessary to deliver the service within the time as mentioned in SLA. Managing the expectation of a customer is not easy for a field technician. The expectations can turn into a grave problem if the responsibilities and the roles of both the parties are not clearly defined on paper and agreed upon by both the customer and the service provider.

An agreement of a sort is therefore important to understand that both the parties customer and organization have duties and responsibilities to each other and these must be properly detailed. This is where Service Level Agreement (SLA) comes in. An SLA is a formal contract between the service provider and the customer, defining services, responsibilities, scope and duties of both the parties. For instance, an IT hardware company may offer routine inspection and maintenance service for a certain period of time as part of one time cost at the time of purchase of equipment.

The following image shows an SLA:



Fig. 1.5.1.1: Writing out an SLA

It's important for the service engineer to read and understand the SLA before visiting a customer, so that all the queries, support and service can be addressed according to the terms specified. This will minimize all the issues related to service expectations of a customer.

The following figure enlist points required to achieve customer's satisfaction:

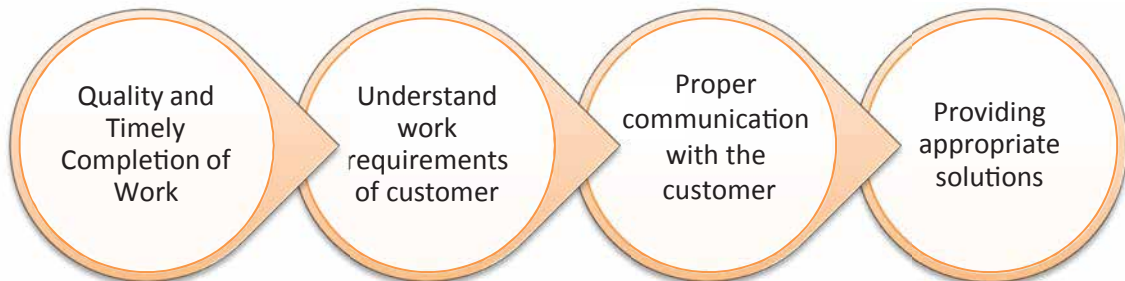


Fig. 1.5.1.2: Points required to achieve customer's satisfaction

Maintain Records of Activity

One of the most important parts of good customer service is maintaining accurate records, containing details of dealings with the customers. Customer records can help gather information about how best to market a company's services and also help to ensure that the organisation runs smoothly. Most records are stored electronically on a database.

Objectives of Documentation

- To record all the problems reported by users.
- To record the timing of the corrective action.
- To record the issues that are escalated and to whom.
- To record what action has been taken by whom.
- To record when the outstanding requests get cleared.

1.5.2 Maintain No Repeat or Second Escalation from Customer

Zero defect in work can be achieved in the following ways:

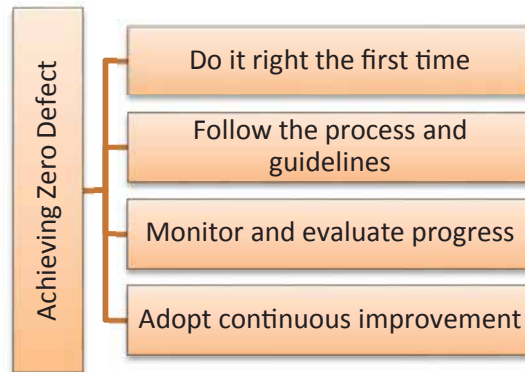


Fig. 1.5.2.1: Measures to achieve zero defect in work

Escalation Process

There may be cases where the customer's request is not closed within the agreed SLA time frame. In such a situation, the technician should escalate the matter to his superior/ back line support and the escalation manager. The supervisor is responsible for ensuring that all escalated enquiries are dealt with and resolved promptly. However, the technician should try to exhaust all the options at his level before escalating any enquiry to the supervisor. A customer enquiry should reach the supervisor only if there is a need to oversee the issue from a holistic viewpoint. The manager will evaluate the situation, facilitate the issue resolution and act as an advocate on behalf of the customer.

Complaints escalation process

The technician should do everything to resolve an issue in the first instance. To facilitate the fast and efficient resolution of the issues at the first point of contact, a complaint process needs to be designed and followed.

If an issue is unresolved and needs expert guidance, the helpdesk technician should clearly explain the escalation options to the customer before proceeding.

The following figure illustrates the steps of a complaint resolution process:



Fig.1.5.2.2: A complaint resolution process

Step 1: First contact

A helpdesk technician needs to be empowered to resolve first level complaints, complex issues and make rational customer service decisions.

Step 2: Escalation to a supervisor or manager

If a helpdesk technician is not able to resolve a complaint, it can be escalated to a supervisor or manager. The manager will review the problem, respond to the complainant and attempt to resolve the issue to the customer's satisfaction.

In circumstances where the manager is unable to resolve the complaint to the customer's satisfaction, the complaint will be referred to the Solutions team.

Step 3: Referred to Solutions team

The Solutions team will review and try to resolve the issue to the customer's satisfaction in accordance with industry code and regulation.

Step 4: Further options

Most of the complaints can be handled internally by utilizing all possible avenues in resolving the complaint. However, if customer is still not satisfied with the handling of the complaint, then as a last resort helpdesk technician may seek complaint mediation or further assistance from the supervisor.

