



# INDUSTRIAL ELECTRICAL MACHIN DRIVE TECHNOLOGY LEVEL II

## LEARNIG GUIDE- 19

<b>Unit of Competence:</b>	<b>Install and terminate wiring system</b>
<b>Module Title:</b>	<b>Installing and terminating wiring system</b>
<b>LG Code:</b>	<b><u>EEL EMD2 05 0811</u></b>
<b>TTLM Code:</b>	<b><u>EEL EMD2 M05 1019</u></b>

### LO4: clean- up

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## Instruction Sheet

## Learning Guide #19

This learning guide is developed to provide you the necessary information regarding the following learning outcome and content coverage

### **MODULE CONTENTS:**

#### **LO4 clean- up**

- Checking and maintaining tools and equipment
- Cleaning work area
- Returning surplus materials ware house

This guide will also assist you to attain the learning outcome and contents stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to:-

- Check and maintain tools and equipment
- Clean works area
- Return surplus materials ware house

### **Learning Instructions:**

1. Read the specific objectives of this Learning Guide.
2. Follow the instruction described blew 3 to 5
3. Read the information written in the “Information Sheet 1 up to information sheet 3”.
4. Accomplish the “Self-check 1, self-check 2, and Self-check 3, ” in page ( 5, 10 and 12 ) respectively.
5. If you earned a satisfactory evaluation from the “Self-check” proceed to other information sheet.

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## Information Sheet-1

### Checking and maintaining tools and equipment

#### 1. Tool work habits

Learning objectives: Describe the Tool Control Program. List several good tool work habits. "A place for everything and everything in its place" is just good common sense. You cannot do an efficient repair job if you have to stop and look around for each tool you need. The following rules will make your job easier and safer.

- **Keep each tool in its proper storage place.**

All divisions have incorporated a Tool Control Program as directed.

The Tool Control Program is based on the concept of a family of specialized toolboxes and pouches configured for instant inventory before and after each maintenance action. The content and configuration of each container is tailored to the task, work center, and equipment maintained. Work center containers are assigned to and maintained within a work center. Other boxes and specialized tools are checked out from the tool control center (tool room).

- ✓ Keep your tools in good condition.
- ✓ Protect them from rust, nicks, burrs, and breakage.
- ✓ Keep your tool allowance complete.

When you are issued a toolbox, each tool should be placed in it when not in use. When the toolbox is not actually at the work site, it should be locked and stored in a designated area.

- **Use each tool only for the job it was designed to do.**

Each particular type of tool has a specific purpose. If you use the wrong tool when performing maintenance or repairs, you may cause damage to the equipment you're working on or damage the tool itself. Remember, improper use of tools results in improper maintenance. Improper maintenance results in damage to equipment and possible injury or death to you or others.

- **Safe maintenance practices**

Always avoid placing tools on or above machinery or an electrical apparatus. Never leave tools unattended where machinery are running.

- **Never use damaged tools.**

Abused screwdriver may slip and spoil the screw slot, damage other parts, or cause painful injury. A gauge strained out of shape will result in inaccurate measurements. Remember, the efficiency of craftsmen and the tools they use are determined to a great extent by the way they keep their tools. Likewise, they are frequently judged by the

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manner in which they handle and care for them. Anyone watching skilled craftsmen at work notices the care and precision with which they use the tools of their trade. The care of hand tools should follow the same pattern as for personal articles; that is, always keep hand tools clean and free from dirt, grease, and foreign matter. After use, return tools promptly to their proper place in the toolbox. Improve your own efficiency by organizing your tools so that those used most frequently can be reached easily without digging through the entire contents of the box. Avoid accumulating unnecessary junk.

- **Care of hand tools**

Tools are expensive; tools are vital equipment. When the need for their use arises, common sense plus a little preventive maintenance prolongs their usefulness. The following precautions for the care of tools should be observed:

- ✓ Clean tools after each use. Oily, dirty, and greasy tools are slippery and dangerous to use.
- ✓ NEVER hammer with a wrench.
- ✓ NEVER leave tools scattered about. When they are not in use, stow them neatly on racks or in toolboxes.
- ✓ Apply a light film of oil after cleaning to prevent rust on tools.
- ✓ INVENTORY tools after use to prevent loss.

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Self-check 1	Written test
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Name ..... Date.....

**Direction :** Say true or false

1. Keep each tool in its proper storage place
2. Use each tool only for the job it was designed to do
3. Never avoid placing tools on or above machinery or an electrical apparatus
4. We can use damaged tools.

**Note: Satisfactory rating - 4 points**

**Unsatisfactory - below 4 points**

You can ask you teacher for the copy of the correct answers.

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<b>Information Sheet-2</b>	Cleaning work area
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## 2. Cleaning work area

Work station is defined as an area, in an office, outfitted with equipment and furnishings for one or more workers. Normally leather goods are operated in a work shop therefore the work station for a leather goods worker would be the workshop. It is necessary for a worker to prepare his work station and the pieces to be done but before doing so a worker should be well aware of the safety rules and regulations.

- **Housekeeping**

Good housekeeping involves every phase of industrial operations and should apply throughout the entire premises, indoors and out. It is more than mere cleanliness.

It requires orderly conditions, the avoidance of congestion, and attention to such details as an orderly layout of the whole workplace, the marking of aisles, adequate storage arrangements, and suitable provision for cleaning and maintenance. Efficient production and a good working environment are complementary.

The elimination of inefficiencies and accident hazards caused by unfavorable conditions in and about the workplace is essential in getting the job done properly and safely. The attention to these important details—which may be overlooked when management’s attention is concentrated upon such amenities as good cloakrooms, canteens, rest rooms, recreational facilities, etc.—is widely referred to as “good housekeeping.”

A clean, well-ordered, attractive work environment sets the tone of your establishment. It encourages tidy work habits in employees. It helps reduce fatigue. It promotes good worker-management relations. It also gives a lift to morale, which is reflected in the quality of production and overall efficiency. Good housekeeping is also a good advertisement for your company. Customers and clients have more confidence in an organization when they see work being carried out efficiently in clean, pleasant, well ordered surroundings. There’s an even more important reason why good housekeeping matters — it makes the undertaking a safer place to work in.

Good housekeeping is a vital factor in preventing accidents. The great majority of all work accidents are caused during the handling of goods or materials, and by people falling, being hit by falling objects, or striking against objects in the

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workplace. All these causes can be reduced by good housekeeping practices in fact; good housekeeping is the only cure for hundreds of accidents that occur. Here are some kinds of accidents commonly caused by *bad* housekeeping:

- Tripping over loose objects on floors, stairs and platforms
- Articles dropping from above
- Slipping on greasy, wet or dirty surfaces
- Striking against projecting, poorly stacked, or misplaced material
- Tearing the hands or other parts of the body on projecting nails, wire, steel strapping on bales or crates, etc.

Typical examples of poor housekeeping that lead to these accidents are:

- Excessive material, waste or chips in the working area
- Congested aisles
- Tools left on machines
- Waste containers overflowing
- Lockers and workrooms in disorder
- Acids in open containers
- Broken glass
- Electric leads or air lines across aisles
- Dirty light fittings, windows and skylights

Where housekeeping is bad, fire is a constant hazard. It can be caused by many housekeeping problems such as oil-soaked rags and clothing igniting from spontaneous combustion; dust collectors not being properly or frequently cleaned; or piles of paper and other packing materials being allowed to accumulate. Poor housekeeping can also lead to infestation by pests such as rodents and cockroaches and create serious health risks.

### **Elements of a Good Housekeeping**

The following are the basic elements of a good housekeeping:

- **Passageways:** Wide enough for traffic movements, marked off by floor lines from work positions and storage areas.
- **Space:** Insuring sufficient room for the individual to work.
- **Storage:** Adequate and convenient space for materials and tools.
- **Materials Handling:** Layout planned for materials flow, with efficient methods and equipment.

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- **Ventilation:** Good general ventilation plus local exhaust ventilation to remove air contaminants at the source.
- **Floors and Walls:** They need to be constructed with materials that are easy to clean and if needed easy to repair.
- **Lighting** Well distributed artificial light and effective use of available daylight.
- **Amenities:** Clean, up-to-date washrooms and lockers for clothing, and clean and inviting lunch room for employees to eat their meals.
- **Waste Removal:** Adequate facilities to prevent congestion and disorr.

**Let us look at some of these elements in detail:**

**Keep Passageways Clear:** Passageway space should be reserved for the movement of personnel, products and materials. It should be kept clean and clear and should never be used for “bottleneck” or “overflow” storage. This also applies to passageways and emergency exits. Blind corners should be eliminated or be adequately protected by warning signs.

Aisle boundary markings should be drawn to show clearly the space which has been reserved for traffic. Markings should be sufficiently wide (say a minimum of 30 mm) and of a color to make them clearly visible. Paint or durable plastic strips can be used.

**Improve Storage Facilities:** Tidiness and order are essential in overcoming storage problems, both in storerooms and in the yard. Good storage utilizes air space instead of floor space, and also saves time-wasting delays. It’s important to prevent stores and scraps accumulating on the floor and around machines. Never keep more stores and materials than necessary near machines and provide proper facilities (such as bins, shelves, boxes, racks, etc.) in which to store them.

**Keep Floors Clean:** Every year thousands of work injuries are caused by people falling. Floor conditions are responsible for many of these accidents. When floors are given the right treatment they are much easier to keep clean and hygienic. Spilt oil and other liquids should be cleaned up at once. Chips, shavings, dust, and similar wastes should never be allowed to accumulate. They should be removed frequently, or better still, be suitably trapped before they reach the floor

**Paint the Walls:** Paint is one of the cheapest means of renovating walls, and a fresh coat of paint can give a boost to morale. Light-colored walls reflect light. Dirty or dark-colored walls absorb light. Dirty walls have a depressing effect and encourage dirty habits and sloppy attitudes. Choose suitable colors to paint walls, ceilings and working surfaces. See that the paintwork is cleaned down periodically. Color can be harnessed to assist with safety. For example it can be used to warn of physical hazards and to mark obstructions such as pillars. Painting handrails, machine guards and other safety equipment renders them

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distinctive and also prevents rust. Color can be used to highlight the hazardous parts of machinery but it can never substitute for a needed guard.

**Maintain Light Fittings:** Attention to light fittings should be an integral part of any good housekeeping programme. Dirty lamps and shades, and lamps whose output has deteriorated with use, deprive employees of essential light. It's been found that lighting efficiency may be improved by 20 to 30 percent simply by cleaning the lamps and reflectors.

**Clean the Windows:** Clean windows let in light; dirty ones keep it out. Insufficient light causes eye strain and leads to accidents because employees are unable to see properly. Ensure that windows are not blocked by stacked

**Dispose of Scrap and Prevent Spillage:** It's a common practice to let the floor catch all the waste and then spend time and energy cleaning it up. It is obviously better to provide convenient containers for scrap and waste and educate employees to use them. Safety will benefit, expense will be saved, and the factory will be a better place in which to work. Oily floors are a common accident and fire hazard. Splash guards and drip pans should be installed wherever oil spills or drips may occur. Prevent accidents by keeping oil and grease off the floor.

**Get Rid of Dust and Dirt:** In some jobs, dust, dirt, chips, etc., are unavoidable. If they can't be collected as part of the process (e.g. by enclosure and exhaust methods) you need a way to clean them up. Vacuum cleaners are suitable for removing light dust and dirt. Industrial models have special fittings for cleaning walls, ceilings, ledges, machinery, and other hard-to-reach places where dust and dirt collect. If light dust is removed by sweeping, floors should be dampened first rather than swept dry. Oiling floors occasionally with light oil helps to lay the dust but take care that slipping hazards do not occur. Remember, it is not only floors that need sweeping. Dust and grime also collect on ledges, shelves, piping, conduits, lamps, reflectors, windows, cupboards, lockers, and so on and all these places need attention.

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Self-check 2	Written test
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Name ..... Date.....

**Direction:** Blank space

1. List down at least 5 elements of a Good Housekeeping
  - a. ....
  - b. ....
  - c. ....
  - d. ....
  - e. ....
2. List out examples of poor housekeeping that lead to accidents are
  - a. ....
  - b. ....
  - c. ....
  - d. ....
  - e. ....

**Note: Satisfactory rating - 10 points                      Unsatisfactory - below 5 points**  
You can ask you teacher for the copy of the correct answers.

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<b>Information Sheet-3</b>	Returning surplus materials ware house
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### 3.1 Objectives of returning surplus materials ware house

- To ensure that surplus materials are properly identified and managed
- To ensure adequate and accurate surplus inventory records are maintained at all times
- To help accelerate the utilization and disposal of surplus materials to provide clarity about relevant activities/processes around surplus materials

### 3.2 Fundamentals for returning surplus materials ware house

All surplus materials should be identified, inspected, labeled, transferred to another project or returned to Logistics. This can take place during project execution or after project completion and/or cancellation. All materials planned for return shall be segregated and transferred to relevant storage facility in accordance with the following criteria:

- Items which have potential use but not part of 'general stock' (standard materials) and where required, having shall be returned to surplus storage facilities.
- Items which have potential use and are part of 'general stock' and where required, having shall be returned to standard stock storage facilities.
- All other materials should be sent to auction yards within the respective area, flagged for disposal and disposed through sale to other operators or auctioned via public tender.

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- Any item that can be immediately used on another approved project or transferred to general stock shall be transferred to the next approved project at the original procurement cost.
- Surplus materials should be properly marked, labeled and preserved at all time in accordance with procedures and guidelines

Self-check 3	Written test
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Name ..... Date.....

**Direction:** Say true or false

1. All surplus materials should be identified, inspected, labeled, transferred to another project or returned to Logistics.
2. To help accelerate the utilization and disposal of surplus materials to provide clarity about relevant activities/processes around surplus materials
3. Materials should not be sent to auction yards within the respective area, flagged for disposal.
4. Surplus materials should be properly marked, labeled and preserved.

**Note: Satisfactory rating - 4 points**

**Unsatisfactory - below 4 points**

You can ask you teacher for the copy of the correct answers.

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## Reference

- <https://www.ihsa.ca/resources/tool equip maintenance.aspx>

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## Acknowledgement

The FEDERAL TVET BUREAU wishes to extend thanks and appreciation to the trainers who donated their time and expertise to the revised of this Out Come Based Curriculum and TTLM for the TVET Program **Industrial electrical machine drive technology** Level - II.

Moreover, we are pleased to appreciate and thank ALL REGIONAL TVET BUREAU Human Resource office programmers for active facilitation of the revision of the curriculum.

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