



REFRIGERATION AND AIR-CONDITIONING MECHANIC LEVEL 3

EES Course Number: PNGNATTB30121

Program Area: Refrigeration & Air-conditioning sector

Description

Those gaining this qualification will be able to install and carry out maintenance on refrigeration and air-conditioning installations and equipment which is non-routine, complex and unpredictable. Typical work function includes working safely, installing RAC systems and components, including fault-finding and diagnosing circuits, servicing and repair RAC equipment, including testing, recovering and charging RAC systems. Designing basic RAC systems, undertaking test and commissioning procedures, and/or decommissioning systems is included in the work functions which will require self-autonomy.

On completion of the required modules, learners will find opportunities to perform groups of foundation and basic work activities in a particular job at this level which is non-routine, complex and unpredictable.

Learners will also be eligible to pursue higher qualifications (i.e Level 4).

Career opportunities:

Career and job opportunities include electrical trade assistance, sales person, and store man, etc.

Entry requirements:

It is recommended that learners wishing to undertake this course must complete RAC level 2 competency training as pre-requisite; physically, mentally and medically fit; non-color blind; and have a good moral character. Recognition of prior learning and current competencies will be considered on application.

Workplace Skills Developed:

Learners completing this qualification will be competent to:

RAC301 – INSTALL REFRIGERATION, AIR CONDITIONING AND HEATING PUMP SYSTEMS AND APPLIANCES

- **RAC302 – MAINTAIN AND REPAIR COMMERCIAL AIR CONDITIONING SYSTEMS AND COMPONENTS Co2**
- **RAC303 – DISCONNECT/RECONNECT FIXED WIRE EQUIPMENT UP TO 1000VAC/1500VDC**
- **RAC304 – ENTER AND CHANGE PROGRAMMABLE CONTROLLER OPERATIONAL PARAMETERS**
- **RAC305 – SERVICE AND REPAIR SELF-CONTAINED HYDROCARBON AIR-CONDITIONING AND REFRIGERATION SYSTEM**
- **RAC306 – MAINTAIN AND REPAIR CENTRAL AIR HANDLING SYSTEMS AND ASSOCIATED EQUIPMENT**

- **RAC307 – SERVICE, MAINTAIN, REPAIR/REPLACE AND ADJUST REFRIGERANT FLOW CONTROLS AND ASSOCIATED EQUIPMENT**
- **RAC308 – DISMANTLE REPLACE AND ASSEMBLE ENGINEERING COMPONENT**
- **RAC309 – UNDERTAKE COMMISSIONING PROCEDURES FOR PLANT AND/OR EQUIPMENT**
- **RAC310 – TEST, COMMISSION AND OPERATE REFRIGERATION AND AIR-CONDITIONING SYSTEM**
- **RAC311 – CEASE OPERATION, DECOMMISSION AND DISPOSE OF ALL RAC COMPONENTS AND FLUIDS**
- **RAC312 – DESIGN BASIC REFRIGERATION AND AIR-CONDITIONING SYSTEM: CALCULATE LOAD, PIPE SIZE, ELECTRICAL WIRING/COMPONENT CONTROLS; COMPRESSURES, CONDENSORS, EVAPORATORS; METERING DEVICES, TEMPERATURE CONTROLS**

Modules:

Learners must complete the following modules for this qualification

- Occupational Health & Safety policies and procedures for Dangerous goods Act
- Co2 RAC systems, components and Heat pump systems and appliance Commercial, industrial air-conditioning systems and components Co2
- Wiring systems and equipment up to 1000VAC/1500VDC
- Hydro-carbon air-conditioning systems and plants
- Central air-handling systems and associated equipment
- Programmable controllers and systems (PLC)
- RAC refrigerant flow controls and associated equipment
- Test and commissioning procedures and techniques
- Decommissioning and disposal procedures and techniques
- Designing basic RAC systems

Academic Award:

Learners will receive the Certificate of Competency in *Level 3 Refrigeration and Air-conditioning Mechanic* on successful completion of the required modules/relevant course requirements.

Duration:

- 4 weeks

Course Location:

- Pacific Maritime Training college

Course Fees:

- TBA