

NATIONAL METAL AND ENGINEERING CURRICULUM

MODULE: TIMERS AND CONTROLLERS (NR022)

PURPOSE: The module aims to provide the TAFE component necessary to supplement the On Job Training necessary for the student to develop the required skills to service and fault find appliance timers and controllers.

NOMINAL DURATION: Half module

This module is designed on the assumption that most of the students will achieve the competencies specified in 35 to 40 hours.

The length of time taken to complete a module will vary depending on factors such as teaching method used, knowledge and skills at entry and individual students ability.

PREREQUISITES: Appliance Motors and Circuits (NR08)

LEARNING OUTCOMES: On completion of this module the student should be able to:

1. Identify and state the application and operation of typical timers and controllers used in the appliance industry
2. Use appropriate test equipment to test and fault find appliance timers and control devices

STUDENTS SHOULD BE MADE AWARE OF OCCUPATIONAL HEALTH AND SAFETY ISSUES IN ALL SITUATIONS AND BE EXPECTED TO DEMONSTRATE SAFE WORKING PRACTICES AT ALL TIMES.

OUTLINE OF CONTENT: This module contains:

1. Application and Operation
 - . timer types
 - mechanical
 - electrical
 - electronic
 - microprocessor
 - . controllers
 - thermostats
 - safety cut outs
 - solenoids
 - drain valves
 - water level controls
 - . relevant SAA Codes (eg AS3000 to AS3300 series)

2. **Fault Finding**
 - . typical faults from symptoms
 - . test equipment
 - . manufacturers' circuits diagrams
 - . maintenance manuals
 - . testing procedures
 - . fault isolation and repair
 - . electrical safety

* Details of above Outline topics are available in APPENDIX 1

ON THE JOB TRAINING:

For consolidation, the material in this module should be linked with and complemented by relevant on-job skill practice or other equivalent experience.

PERFORMANCE CRITERIA:

The criteria for each learning outcome should be:

Learning Outcome 1

Assessment:

Short answer questions
Practical assignments

Performance:

- a. Identify typical timers and controllers and state their applications
- b. Describe the principle of operation of each type of timer and controller

Learning Outcome 2

Assessment:

Practical exercises

Performance:

- a. Given symptoms identify typical faults
- b. Select and use appropriate test equipment and manufacturers' data to fault find timers and controllers