

1. Title	Repair and maintain heat-pump type air-conditioners
2. Code	EMACOR315A
3. Range	Repair and maintain heat-pump type air-conditioners at servicing stations or external sites with spare parts.
4. Level	3
5. Credit	6
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Working principles of heat-pump type air-conditioners</p> <ul style="list-style-type: none"> ◆ Understand the working principles of heat-pump air-conditioners, including being able to: <ul style="list-style-type: none"> • Illustrate the definition of heat pump's C.O.P. • Use pressure-enthalpy (p-h) diagram to illustrate reverse cycle heat pump theory • Illustrate the controlling procedures for heating cycle and cooling cycle of heat-pump type air-conditioners ◆ Compare the constructional difference between heat-pump type air-conditioners and cooling type air-conditioners ◆ Compare the advantages and disadvantages of the heating methods used by heat-pump air-conditioners and electric heaters <p>6.2 Methods and procedures of repairing and maintaining heat-pump type air-conditioners</p> <ul style="list-style-type: none"> ◆ Perform maintenance for typical heat-pump type air-conditioners ◆ Charge and recover refrigerant ◆ Check and repair faults of four-way solenoid valves ◆ Check and repair typical faults of heat-pump type air-conditioners <p>6.3 Professionalism in repairing and maintaining heat-pump type air-conditioners</p> <ul style="list-style-type: none"> ◆ Follow the manual instructions to repair and maintain heat-pump type air-conditioners ◆ Understand the safety guidelines as required by the law and the code of practice to repair and maintain heat-pump type air-conditioners
7. Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are</p> <p>(i) Capable to identify and eliminate the faults systematically and efficiently in order to complete repair and maintenance heat-pump type air-conditioners; and</p> <p>(ii) Capable to explain clearly to clients the key points of operation, repair and maintenance of heat-pump type air-conditioners.</p>
8. Remarks	<p>This unit of competency is applicable to practitioners engaged in heat-pump type air-conditioner repair and maintenance. The credit value of this unit of competency is set on the presumption that the person already possesses the competency of general repair and maintenance of window-type air-conditioners.</p>