Name of Assessed Person: **Registration:**

UNIT MEA362: Maintain Aircraft Vapour Cycle Air Conditioning Systems					
1. **Inspect vapour cycle air conditioning systems**	a. Refrigeration system compressor, condenser, receiver dryer, thermal expansion valve and evaporator	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No
	b. Magnetic clutch and drive system (belt, power takeoff, electric motor, hydraulic motor or pneumatic as applicable)	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No
	c. Condenser extension and retraction system	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No
	d. Blower	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No

Performance Criteria:

1.1. Isolation tags already attached to the system or related systems are checked and aircraft/engine configured for safe system inspection and operation in accordance with applicable maintenance manual.

1.2. Vapour cycle air conditioning systems are visually or physically checked for external and internal signs of defects in accordance with applicable maintenance manual while observing all relevant work health and safety (WHS) requirements, including the use of material safety data sheets (MSDS) and items of personal protective equipment (PPE).

Name of Assessed Person: **Registration:**

UNIT MEA362: Maintain Aircraft Vapour Cycle Air Conditioning Systems					
1. Cont'd **Inspect vapour cycle air conditioning systems**	e. Throttle system shutoff	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No
	f. Temperature control system.	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No

Performance Criteria:

1.1. Isolation tags already attached to the system or related systems are checked and aircraft/engine configured for safe system inspection and operation in accordance with applicable maintenance manual.

1.2. Vapour cycle air conditioning systems are visually or physically checked for external and internal signs of defects in accordance with applicable maintenance manual while observing all relevant work health and safety (WHS) requirements, including the use of material safety data sheets (MSDS) and items of personal protective equipment (PPE).

Maintenance. "The upkeep of equipment. Mechanical and electrical equipment must be periodically inspected, to be sure it performs as it was designed and built to perform. When it begins to fail, correct maintenance will usually prevent the problem becoming major."

<u>Maintenance of component parts may include:</u>

a. Cleaning
b. Inspection for wear or damage
c. Adjustment
d. Lubrication, where applicable

Name of Assessed Person: **Registration:**

UNIT MEA362: Maintain Aircraft Vapour Cycle Air Conditioning Systems					
2. **Test vapour cycle air conditioning systems**	a. Refrigeration system compressor, condenser, receiver dryer, thermal expansion valve and evaporator	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No
	b. Magnetic clutch and drive system (belt, power takeoff, electric motor, hydraulic motor or pneumatic as applicable)	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No
	c. Condenser extension and retraction system	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No
	d. Blower	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No

Performance Criteria:

2.1 Aircraft and system are correctly prepared in accordance with applicable maintenance manual.
2.2 Vapour cycle air conditioning system is tested in accordance with prescribed test procedures to establish serviceability and correct function in accordance with applicable maintenance manual.

Name of Assessed Person: **Registration:**

UNIT MEA362: Maintain Aircraft Vapour Cycle Air Conditioning Systems					
2. Cont'd **Test vapour cycle air conditioning systems**	e. Throttle system shutoff	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No
	f. Temperature control system.	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No

Performance Criteria:

2.1 Aircraft and system are correctly prepared in accordance with applicable maintenance manual.
2.2 Vapour cycle air conditioning system is tested in accordance with prescribed test procedures to establish serviceability and correct function in accordance with applicable maintenance manual.

Name of Assessed Person: **Registration:**

UNIT MEA362: Maintain Aircraft Vapour Cycle Air Conditioning Systems					
3. **Troubleshoot vapour cycle air conditioning systems**	a. Refrigeration system compressor, condenser, receiver dryer, thermal expansion valve and evaporator	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No
	b. Magnetic clutch and drive system (belt, power takeoff, electric motor, hydraulic motor or pneumatic as applicable)	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No
	c. Condenser extension and retraction system	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No
	d. Blower	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No

Performance Criteria:

3.1 Available information from maintenance documentation and inspection and test results is used, where necessary, to assist in fault determination.
3.2 Maintenance manual fault diagnosis guide and logical processes are used to ensure efficient and accurate troubleshooting to line replacement level.
3.3 Specialist advice is obtained, where required, to assist with the troubleshooting process.
3.4 Vapour cycle air conditioning system faults are located and the causes of the faults are clearly identified and correctly recorded in maintenance documentation, where required.
3.5 Fault rectification requirements are determined to assist in planning the repair.

Name of Assessed Person: **Registration:**

UNIT MEA362: Maintain Aircraft Vapour Cycle Air Conditioning Systems					
3. Cont'd **Troubleshoot vapour cycle air conditioning systems**	e. Throttle system shutoff	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No
	f. Temperature control system.	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No

Performance Criteria:

3.1 Available information from maintenance documentation and inspection and test results is used, where necessary, to assist in fault determination.
3.2 Maintenance manual fault diagnosis guide and logical processes are used to ensure efficient and accurate troubleshooting to line replacement level.
3.3 Specialist advice is obtained, where required, to assist with the troubleshooting process.
3.4 Vapour cycle air conditioning system faults are located and the causes of the faults are clearly identified and correctly recorded in maintenance documentation, where required.
3.5 Fault rectification requirements are determined to assist in planning the repair.

Name of Assessed Person: **Registration:**

UNIT MEA362: Maintain Aircraft Vapour Cycle Air Conditioning Systems					
4. Remove vapour cycle air conditioning system components	a. Refrigeration system compressor, condenser, receiver dryer, thermal expansion valve and evaporator	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No
	b. Magnetic clutch and drive system (belt, power takeoff, electric motor, hydraulic motor or pneumatic as applicable)	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No
	c. Condenser extension and retraction system	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No
	d. Blower	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No

Performance Criteria:

4.1 Aircraft and vapour cycle air conditioning system is rendered safe in accordance with the applicable maintenance manual and isolation tags are fitted, where necessary, to ensure the safety of personnel and freedom from damage during component removal.
4.2 Where refrigerant evacuation is necessary, evacuation is performed in accordance with regulatory requirements and maintenance manual procedures.
4.3 Component removal is carried out in accordance with the applicable maintenance manual while observing all relevant WHS requirements, including the use of MSDS and items of PPE.
4.4 Component is tagged and prepared for transport or storage in accordance with the specified procedures.
4.5 Required maintenance documentation is completed and processed in accordance with standard enterprise procedures.

Name of Assessed Person: **Registration:**

UNIT MEA362: Maintain Aircraft Vapour Cycle Air Conditioning Systems

4. Cont'd **Remove vapour cycle air conditioning system components**	e. Throttle system shutoff	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No
	f. Temperature control system.	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No

Performance Criteria:

4.1 Aircraft and vapour cycle air conditioning system is rendered safe in accordance with the applicable maintenance manual and isolation tags are fitted, where necessary, to ensure the safety of personnel and freedom from damage during component removal.
4.2 Where refrigerant evacuation is necessary, evacuation is performed in accordance with regulatory requirements and maintenance manual procedures.
4.3 Component removal is carried out in accordance with the applicable maintenance manual while observing all relevant WHS requirements, including the use of MSDS and items of PPE.
4.4 Component is tagged and prepared for transport or storage in accordance with the specified procedures.
4.5 Required maintenance documentation is completed and processed in accordance with standard enterprise procedures.

Name of Assessed Person: **Registration:**

UNIT MEA362: Maintain Aircraft Vapour Cycle Air Conditioning Systems					
5. **Install vapour cycle air conditioning system components**	a. Refrigeration system compressor, condenser, receiver dryer, thermal expansion valve and evaporator	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No
	b. Magnetic clutch and drive system (belt, power takeoff, electric motor, hydraulic motor or pneumatic as applicable)	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No
	c. Condenser extension and retraction system	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No
	d. Blower	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No

Performance Criteria:

5.1 Component to be installed is checked to confirm correct part or model numbers, modification status and serviceability.
5.2 Installation is carried out in accordance with the applicable maintenance manual while observing all relevant WHS requirements, including the use of MSDS and items of PPE.
5.3 Vapour cycle air conditioning system is recharged with refrigerant, where necessary, in accordance with maintenance manual procedures and regulatory requirements.
5.4 Vapour cycle air conditioning system is tested for correct function and freedom from refrigerant leaks if system recharging has been performed.
5.5 Required maintenance documentation is completed and processed in accordance with standard enterprise procedures.

UNIT MEA362: Maintain Aircraft Vapour Cycle Air Conditioning Systems					
5. Cont'd **Install vapour cycle air conditioning system components**	e. Throttle system shutoff	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No
	f. Temperature control system.	No. of Entries	1	2	3
		Tail / Job No.			
		LAME Sign.			
		Date			
		Simulated	Yes No	Yes No	Yes No

Performance Criteria:

5.1 Component to be installed is checked to confirm correct part or model numbers, modification status and serviceability.
5.2 Installation is carried out in accordance with the applicable maintenance manual while observing all relevant WHS requirements, including the use of MSDS and items of PPE.
5.3 Vapour cycle air conditioning system is recharged with refrigerant, where necessary, in accordance with maintenance manual procedures and regulatory requirements.
5.4 Vapour cycle air conditioning system is tested for correct function and freedom from refrigerant leaks if system recharging has been performed.
5.5 Required maintenance documentation is completed and processed in accordance with standard enterprise procedures.

Name of Assessed Person: **Registration:**

Certification of Underpinning Knowledge and Skills to Maintain Aircraft Vapour Cycle Air Conditioning Systems

A person cannot be assessed as competent until it can be demonstrated to the satisfaction of the workplace assessor that the relevant elements of this unit of competency are being achieved under routine supervision on a system and and at least one (1) component in each of the following a) to f). This shall be established via the records in the Log of Industrial Experience and Achievement or, where appropriate, an equivalent Industry Evidence Guide (for details refer to the Companion Volume Implementation Guide).

UNIT MEA362: Maintain Aircraft Vapour Cycle Air Conditioning Systems	
Evidence has been confirmed of the attainment of the following pre-requisite units of competency (as they are related to attainment of the elements of competency specified in this unit). **201 & 246**	
Evidence has been confirmed of the knowledge requirements for this unit as delivered by a CASR 147 Approved Organisation. **OR** Assessment has been conducted to determine that the underpinning knowledge and skills have been achieved in accordance with the Competency Unit.	

Certification of Unit Completion

I certify that I have reviewed the certification of the elements for this competency unit and that all of the competency unit requirements have been met.

Signed: _____ **Assessor No.** _____ **MTO:** _____ **Date:** _____

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