Objectives:	Participants gain skills in 4 Inspection of electrical compressor circuit (incl. insulation resistance test) 5 Observation and application of measures for occupational health and safety and accident prevention regulations. 6 Observation and application of environmental protection and rational use of material resources and energy. 7 Planning and controlling structured work processes, controlling and evaluating work results ○ Preparing workstation with consideration of the work task ○ Planning and defining work steps and procedures ○ Arrange work tasks for teamwork ○ Arrange for division of work ○ Read and interpret written technical information related to the work task ○ Apply verbal and written practices of communication ○ Select and use appropriate equipment & tools ○ Demonstrate knowledge and skills for electrical circuit inspection Visual inspection a. General inspection b. Protective measures against direct contact (basic protection) c. Protective measures with protective earth conductor Testing and measuring d. Measuring the operating voltages e. Protective earth conductor measurement f. Measurement of insulation resistances g. Measuring the Earth-Bond Resistance ○ Checking, evaluating and documenting work results through target and actual value comparisons ○ Write a report about the evaluated conditions ○ Cleaning of installation site 8 Maintenance and servicing of tools & equipment ○ Cleaning, maintaining and preserving tools & equipment
Duration:	70 minutes
Material:	Whiteboard/Blackboard or handout of exercise description D_HO_PE3_Work description – Electrical testing compressors D_HO_Last minute risk assessment D_HO_Safe electric isolation procedure D_HO_Instruction manual insulation tester D_HO_PID & Wiring Example Split-AC D_HO_Insulation test record
Tools & equipment:	1. Two-pole voltage tester 2. Insulation resistance test meter with suitable probes and leads 3. Insulated electrician tools 4. RAC appliance or hermetic compressor (within a system or separate)
Workshop	Workshop is arranged for up to sixteen (16) participants. Provision of eight (8)

arrangements	different RAC appliances, eight (8) complete sets of tools. Sufficient workshop space

Figure 1: Example electrical testing of compressor (scroll)

Summary – Session Overview				
TIME	**CONTENT**	**OBJECTIVES**	**TRAINING MATERIAL**	**DESCRIPTION OF TRAINING SESSION AND TRAINER NOTES**
20’	• Participants briefing • General safety briefing	Participants: • Understand the given work-task • Are familiar with the required safety arrangements • Are familiar with the local conditions • Are familiar with electrical test instruments	• D_HO_PE3_Work description • D_HO_Last minute risk assessment • D_HO_Safe electric isolation procedure • D_HO_Instruction manual insulation tester • D_HO_PID & Wiring Example Split-AC • D_HO_Insulation test record	<u>Plenary</u> 1. Trainer explains work task and executes safety briefing 2. Trainees build up team 3. Trainees arrange for division of work 4. Trainees obtain permit of work
50’	**Electrical testing of an electrical circuit according to documentation provided** Filling of check-list and report while executing work-steps: • Obtain permit of work, execute risk assessment • Undertake worksite preparation, test equipment and PPE check (having risk assessment in mind) • Safeguard the workshop area and inform involved parties • Use of electrical circuit drawing as provided by OEM indicating important requirements	Participants: • Obtain knowledge on how to execute a risk assessment at installation site • Learn how to get familiar with using PPE • Learn how to inspect and test a simple electrical circuit • Learn to understand and apply the electrical testing principles. • Learn to understand and apply the documentation of used tools and equipment	1. Test equipment and tools as specified above. 2. RAC appliance for testing or separate hermetic compressor	Trainer observes work routine and gives instructions to participants if they have questions. Trainer grants permit of work. Trainer evaluates work according to outlined criteria with the help of an assessment sheet (will be provided at a later date). <u>Group work of 2 participants at one workstation</u>: a. All authorisation was obtained b. Appropriate PPE is selected in line with the job requirements c. Work area is safeguarded d. Workplace arrangements are structured and in clean conditions. e. All necessary test equipment is in safe conditions and well arranged f. Work instructions technical plans/drawings are interpreted as per job requirements

Summary – Session Overview				
TIME	**CONTENT**	**OBJECTIVES**	**TRAINING MATERIAL**	**DESCRIPTION OF TRAINING SESSION AND TRAINER NOTES**
	• Read and understand the insulation resistance tester user manual • Carry out inspection of circuit • Carry out the following tests and document the measured values and observations: 1. Continuity of earth conductors 2. Continuity of live conductors (live and neutral) 3. Polarity 4. Short circuit check (ensure there is no contact between live and neutral) 5. Insulation resistance 6. Earth-Bond Resistance • Cleaning, maintaining and preserving of tools, practical exercise and work-place • Hand over the records to the trainer	• Obtain knowledge and skills to practically execute electrical inspection and testing. • Report generating (and client briefing)		g. Testing requirements are verified in line with site conditions and local regulations and standards h. Electrical testing is carried out correctly and tests are carried out in the correct order. i. Result of testing is prepared in line with VETC regulatory j. Data is filled in the equipment records and report about one or more tests and checks carried out during the examination is obtained <u>Competency must be assessed through:</u> • Direct observation • Demonstration • Questions related to required knowledge • Competency may be assessed in the work place or in a simulated work place setting <u>Assessment requires evidence in form of:</u> • Conducted survey of site for installation of the circuit. • Conducted the relevant risk assessment • Ensured continuous OHS measures • Conducted all required tests • Verified compliance conditions • Obtain testing and measuring report • Ensured continuously organised and clean workplace condition • (Verify client briefing)
70 min	Total time			