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| Title | **Conduct preventive maintenance on HVAC equipment** | | |
| Level | **2** | **Credits** | **14** |

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| Purpose | This Competency Standard focuses on the skills required to inspect HVAC system components, heat exchanger, clean burners, blowers, air filter, and replace filters, belts, lubrication HVAC motors, and bearing, adjust belt alignment and tension in conduct preventive maintenance of HVAC units. Your knowledge regarding preventive maintenance schedule, parameters, use of chemical, servicing, lubrication, replacing procedures, methods, criteria, interpret drawings, codes, standards, will be sufficient to provide you the basis for preventive maintenance of HVAC work. |

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| Classification ISCED | 0714 Electronics and automation |

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| Available grade | Competent / Not yet competent |

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| Modification history | N/A |

| **Competency Unit** | **Performance Criteria** | **Knowledge and Understanding** |
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| **E-1 Inspect HVAC system components** | ***Trainee must be able to:***   1. Check drain system 2. Check electrical components 3. Check mechanical components 4. Check physical condition of evaporator 5. Check physical condition of condenser 6. Fill the preventive maintenance chart | ***You need to know and understand***   1. Understand preventive maintenance schedule 2. Understand the maintenance parameters |
| **E-2 Clean heat exchangers** | ***Trainee must be able to:***   1. Remove air filter 2. Clean evaporator coil 3. Clean condenser coil 4. Clean drain pipes | ***You need to know and understand***   1. Understand cleaning process 2. Understand use of chemical |
| **E-3 Clean burners** | ***Trainee must be able to:***   1. Dismantling burners 2. Remove carbon fire nozzle 3. Re-assemble burners | ***You need to know and understand***   1. Understand construction of burners 2. Understand method of servicing |
| **E-4 Clean blower assembly** | ***Trainee must be able to:***   1. Dismantle blower assembly 2. Clean parts 3. Lubricate moving parts 4. Re-assemble blower | ***You need to know and understand***   1. Understand construction of blower assembly 2. Understand method of lubrication |
| **E-5 Clean air filters** | ***Trainee must be able to:***   1. Remove air filter 2. Clean air filter 3. Re-fix air filter | ***You need to know and understand***   1. Understand cleaning method of air filer |
| **E-6 Replace filters** | ***Trainee must be able to:***   1. Check physical condition of filter 2. Remove filter 3. Replace filter | ***You need to know and understand***   1. Understand type of filters 2. Understand replacing procedure |
| **E-7 Lubricate HVAC motors and bearings** | ***Trainee must be able to:***   1. Dismantle motor 2. Check bearing 3. Lubricate bearing | ***You need to know and understand***   1. Understand construction of motor 2. Understand type of lubricant 3. Understand method of lubrication |
| **E-8 Replace belts** | ***Trainee must be able to:***   1. Check the belts 2. Replace belts | ***You need to know and understand***   1. Understand type of belts 2. Understand replacement procedure |
| **E-9 Adjust belt alignment and tension** | ***Trainee must be able to:***   1. Check the alignment 2. Check the noise level 3. Align the belt | ***You need to know and understand***   1. Understand alignment methods 2. Understand use of alignment tools 3. Understand alignment procedure |