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| Title | **Maintain suspension and steering systems** |
| Level | **2** | **Credits** | **8** |

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| Purpose | This Competency Standard identifies the competencies required to perform service of ignition system of vehicle, at workplace by Automobile Mechanic, in accordance with the organization’s approved guidelines and procedures. You will be expected to diagnose ignition system problems of vehicle, service distributor and C.B point of ignition system and Service spark plugs & wires of vehicle, service emission control system of vehicle and perform ignition road test of vehicle, at workplace. Your underpinning knowledge regarding service of ignition system of a vehicle will be sufficient to provide you the basis for your work. |

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| Classification ISCED | 0716 Motor vehicles, ships and aircraft |

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| Available grade | Competent / Not yet competent |

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| Modification history | N/A |

| **Unit of Competency** | **Performance Criteria** | **Knowledge & Understanding**  | **Tools & Equipment** |
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| G1. Diagnose steering and/or suspension problems of vehicle | You will be able to:P1: Arrange tools and equipment required to diagnose steering/suspension problems P2. Follow the instructions of repair manual to diagnose steering/suspension problemsP3. Inspect the following components of steering/suspension system according to repair manual:* Steering rack
* Steering box
* Steering column
* Intermediate shaft (cross)
* Electronic control unit (ECU) of power steering
* Electric power motor (EPS)
* Power steering pump
* Shock absorbers
* Lower control arms
* Upper control arms
* Ball joints
* Rack end set
* Tie rod end set
* Stabilizer bar
* Z links
* Coil springs
* Leaf springs
* Shock mounting

P4. Follow safety precautions at workplace | You will be able to:K1. Explain the usage of tools and equipment for diagnosing steering/suspension problemsK2. Explain the usage of special service tools (SSTs) for diagnosing steering/suspension problemsK3. Read and interpret repair manualK4. describe the types of steeringK5. Describe the function of scanner for electric power steering K6. Describe the function of power steering pump K6. Describe the role of stabilizer barK7. Describe the geometry of suspension system of vehicleK8. Describe the function of shock absorber K9. Describe the turning radius of steering system K10. Describe the function of leaf spring K11. Explain the safety precautions regarding personal health and workplace | Jack, safety stand, Wheel aligner, wheel balancer, hammers, ball joint opener, tire lever, wheel spanner, spanner set, SSTs, air pressure gauge, sockets, screw drivers, lift, PPE |
| G2. Service suspension components of vehicle  | You will be able to: P1: Arrange tools and equipment required to service suspension componentsP2. Follow the instructions of repair manual to service suspension components P3. Service the following components of suspension system according to repair manual:* Hub knuckle
* Wheel hub
* hub stud
* Springs
* Shock absorber
* Sway bar
* Z link
* Control arm
* Ball joints

P4. Follow safety precautions at workplace | You will be able to:K1. Explain the usage of tools and equipment for servicing suspension componentsK2. Explain the usage of special service tools (SSTs) for service suspension componentsK3. Read and interpret repair manualK4. Explain the types of suspension system K5. Describe the function of bushesK6. Describe the function of wheel hub bearingK7. Identify the noises of wheel bearingsK8. Describe the types and function of shock absorber K9. Describe the types and function of springs K10. Describe the function stabilizer barK11. Describe the function of ball joints and control arms K12. Explain the safety precautions regarding personal health and workplace | Jack, safety stand, hammers, ball joint opener, tire lever, wheel spanner, spanner set, scanner, SSTs, sockets, screw drivers, lift, bench vice, PPE |
| G3. Service steering system of vehicle  | You will be able to: P1: Arrange tools and equipment required to service steering system of vehicleP2. Follow the instructions of repair manual to service steering system of vehicleP3. Service the following components of steering system according to repair manual:* Steering rack
* Steering box
* Steering column
* Intermediate shaft (cross)
* Electronic control unit (ECU) of power steering
* Electric power steering (EPS)
* Power steering pump

P3. Follow safety precautions at workplace | You will be able to: K1. Explain the usage of tools and equipment for servicing steering system of vehicleK2. Explain the usage of special service tools (SSTs) for servicing steering system of vehicleK3. Read and interpret repair manualK4. describe the types of steeringK5. Describe the function of scanner for electric power steering K6. Describe the function of power steering pump K7. Describe the geometry of steering system of vehicleK8. Describe the turning radius of steering system K9. Describe the importance of power steering fluid K10. Explain the safety precautions regarding personal health and workplace | Jack, safety stand, Wheel aligner, wheel balancer, hammers, wheel spanner, spanner set, SSTs, air pressure gauge, sockets, screw drivers, lift, PPE |