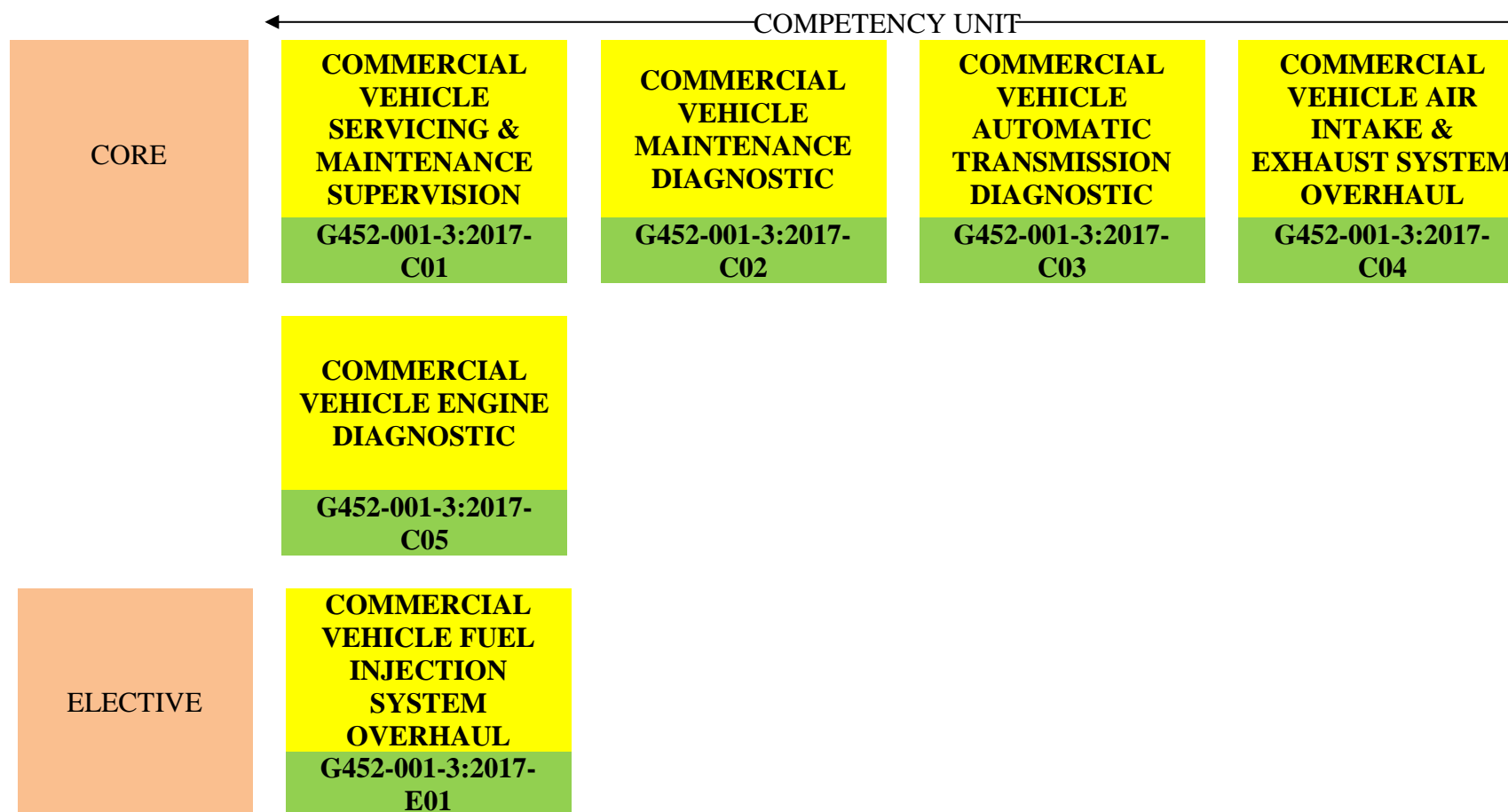


7. Competency Profile Chart (CPC)

SECTOR	WHOLESALE AND RETAIL TRADE, REPAIR OF MOTOR VEHICLES AND MOTORCYCLES (G)		
SUB SECTOR	MAINTENANCE AND REPAIR OF MOTOR VEHICLES (452)		
JOB AREA	AUTOMOTIVE WORK		
NOSS TITLE	COMMERCIAL VEHICLE – TROUBLESHOOTING SERVICE		
JOB LEVEL	THREE (3)	NOSS CODE	G452-001-3:2017



8. Competency Profile (CP)

SECTOR	WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND MOTORCYCLES (G)		
SUB SECTOR	MAINTENANCE AND REPAIR OF MOTOR VEHICLES (452)		
JOB AREA	AUTOMOTIVE WORK		
NOSS TITLE	COMMERCIAL VEHICLES – TROUBLESHOOTING SERVICE		
LEVEL	THREE (3)	NOSS CODE	G452-001-3:2017

CU TITLE	CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
1. Commercial Vehicle Servicing & Maintenance Supervision	G452-001-3:2017-C01	<p>Commercial vehicle servicing & maintenance supervision is to administer and supervise the whole work process in work place.</p> <p>The person who is competent in commercial vehicle servicing & maintenance shall be able to prepare work schedule, conduct briefing session, prepare sectional operation budget information, monitor staff performance, coordinate staff training, monitor workshop safety and monitor clean work place environment in accordance with workshop manual.</p>	1. Prepare Work Schedule.	1.1 Manpower capacity and resources identified 1.2 Manpower requirements determined in accordance with job requirements 1.3 Work schedule analysed in accordance with job requirements 1.4 Work schedule prepared in accordance with job requirements
			2. Conduct Briefing Session.	2.1 Staff briefing requirements determined in accordance with company standard practice 2.2 Items to brief identified in accordance with briefing session requirements 2.3 Staff briefing conducted in accordance with company operating procedure

CU TITLE	CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
		<p>The outcome of this competency is to provide supervisory skills so that the workshop is supervised professionally in accordance with company requirements and related regulations.</p> <p>The outcome of this competency is to make sure no abnormal knocking sound, no visible and possible leaking from the engine and free from defective to ensure the engine functions in full optimal performance also defective free.</p>		<p>2.4 Information delivered and explained clearly</p> <p>2.5 Deliver information interpreted and acted upon by subordinates in accordance with job requirements</p>
			3. Prepare Sectional Operation Budget Information.	<p>3.1 Previous year sectional operation budget analysed in accordance with budget preparation requirements</p> <p>3.2 Yearly manpower requirement determined in accordance with company annual planning</p> <p>3.3 Forecasted expenditure determined in accordance with company budget requirements</p> <p>3.4 Sectional operation budget prepared in accordance with section operation plan.</p>
			4. Monitor Staff Performance	<p>4.1 Standard performance guidelines identified in accordance with appraisal requirements</p> <p>4.2 Method of monitoring staff performance identified</p> <p>4.3 Actual staff performance observed</p> <p>4.4 Previous year personnel appraisal analysed in</p>

CU TITLE	CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
				<p>accordance with human resource guidelines</p> <p>4.5 Personnel appraisal session coordinated in accordance with human resource guidelines.</p> <p>4.6 Personnel appraisal recommendation carried out in accordance with company operating procedures</p> <p>4.7 Personnel appraisal report prepared and presented in accordance with human resource guidelines.</p>
			5. Coordinate Staff Training	<p>5.1 Training Need Analysis (TNA) conducted as per company requirements</p> <p>5.2 Training requirements determined in accordance with TNA finding</p> <p>5.3 Logistic of training coordinated in accordance with company SOP</p> <p>5.4 Staff training coordinated in accordance with the training need.</p>
			6. Monitor Workshop Safety	6.1 Workshop safety requirements determined in accordance with company SOP

CU TITLE	CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
				<p>6.2 Workshop safety compliance monitored in accordance with company regulations</p> <p>6.3 Workshop safety measures enforced in accordance with occupational safety & health act 1994 (Act 514) and regulations.</p>
			7. Monitor Clean Work Place Environment.	<p>7.1 Clean Work place environment requirements determined in accordance with relevant authority regulations</p> <p>7.2 Clean Work place environment compliance monitored in accordance with company requirements.</p> <p>7.3 Clean Work place environment measure enforced in accordance with environmental quality such as regulation 1978.</p>
2. Commercial Vehicle Maintenance Diagnostic	G452-001-3:2017-C02	Commercial vehicles maintenance diagnostic outlines work activities to determine condition, performance and replacement of parts & components in accordance with workshop manual.	1. Perform Fault Finding Test Drive On Vehicle.	<p>1.1 Vehicle test drive preparations are performed in accordance with the workshop manual.</p> <p>1.2 Customer is interviewed for identifying problem of the vehicle in accordance with workshop manual.</p>

CU TITLE	CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
		<p>The person who is competent in commercial vehicle maintenance diagnostic shall be able to perform fault finding test drive on vehicle, perform braking system maintenance diagnostics' perform supplementary restraint system (SRS) maintenance diagnostics, perform electric & electronic system maintenance diagnostics and perform power steering system maintenance diagnostic in accordance with manufacturer specification.</p> <p>The outcome of this competency is to diagnose and detect malfunctions, defect in parts & components and assign the required maintenance job.</p>		<p>1.3 Test drive vehicle with client to identify problems are performed in accordance with workshop manual.</p> <p>1.4 Vehicles faulty and problems are identified and confirmed in accordance with workshop manual.</p> <p>1.5 Diagnostics report from the test drive are prepared as per diagnose vehicle requirement in accordance workshop manual.</p>
			2. Perform Braking System Maintenance Diagnostics.	<p>2.1 Related tools, equipment and parts determined in accordance with job order.</p> <p>2.2 Tools, equipment and parts prepared in accordance with job assignment.</p> <p>2.3 Scan tool/ diagnostic tester determined in accordance with job requirements.</p> <p>2.4 Types of braking system which include hydraulic, full air and parking brake are identified in accordance with workshop manual.</p> <p>2.5 Types of braking assist system which include</p>

CU TITLE	CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
				<p>Anti-lock Braking System (ABS) and Electronic Brake-force Distribution (EBD) system are identified in accordance with workshop manual.</p> <p>2.6 Types of parking brake system which include spring operated and cable operated are identified in accordance with workshop manual.</p> <p>2.7 Procedure of scan tool operation adhered in accordance with workshop manual.</p> <p>2.8 Scan tool result analysed and interpreted, referring to manufacturer specification.</p> <p>2.9 Braking system functionality and condition are determined in accordance with workshop manual.</p> <p>2.10 Prepare braking system maintenance diagnostic report in accordance with workshop manual.</p>
			<p>3. Perform Supplementary Restraint System</p>	<p>3.1 Related tools, equipment and parts determined in accordance with job order</p>

CU TITLE	CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
			<p>(SRS) Maintenance Diagnostics</p>	<p>3.2 Tools, equipment and parts prepared in accordance with job assignment.</p> <p>3.3 Scan tool/ diagnostic tester determined in accordance with job requirements</p> <p>3.4 Procedure of scan tool operation adhered in accordance with manufacturer specification</p> <p>3.5 Scan tool operated for diagnosing SRS system in accordance with workshop manual.</p> <p>3.6 System data result analysed, referring to manufacturer specification.</p> <p>3.7 SRS defective parts and components replaced in accordance with workshop manual.</p> <p>3.8 Prepare Supplementary Restraint System (SRS) Maintenance Diagnostic report prepared in accordance with workshop manual.</p>
			<p>4. Perform Electric & Electronic System Maintenance Diagnostics.</p>	<p>4.1 Related tools, equipment and parts determined in accordance with job order.</p>

CU TITLE	CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
				<p>4.2 Tools, equipment and parts prepared in accordance with job assignment.</p> <p>4.3 Scan tool/ diagnostic tester determined in accordance with job requirements.</p> <p>4.4 Procedure of scan tool operation adhered in accordance with workshop manual.</p> <p>4.5 Engine electrical wiring system continuity test are carried out in accordance with workshop manual.</p> <p>4.6 Electrical & electronic parts and components condition diagnosed for defects and problems in accordance with workshop manual.</p> <p>4.7 Charging system components condition diagnosed for defect and problems in accordance with workshop manual.</p> <p>4.8 Starting system components condition diagnosed for defect and problems in accordance with workshop manual.</p> <p>4.9 Electric & electronic system maintenance</p>

CU TITLE	CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
				diagnostic report prepared in accordance with workshop manual.
			5. Perform Power Steering System Maintenance Diagnostic.	5.1 Related tools, equipment and parts determined in accordance with job order 5.2 Tools, equipment and parts prepared in accordance with job assignment. 5.3 Scan tool/ diagnostic tester determined in accordance with job requirements. 5.4 Procedure of scan tool operation adhered in accordance with manufacturer specification 5.5 Electric Power Steering system condition test carried out in accordance with workshop manual. 5.6 Defective Electric Power Steering Components replaced in accordance with workshop manual. 5.7 Steering System Maintenance Diagnostic report prepared in accordance with workshop manual.

CU TITLE	CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
3. Commercial Vehicle Automatic Transmission Diagnostic	G452-001-3:2017-C03	Automatic transmission is a scope of competency to restore automatic transmission unit providing torque needed to move the vehicle under a variety of road and load condition.	1. Obtain Automatic Transmission Functional Test Report.	1.1 Vehicle repair manual for automatic transmission are identified in accordance with manufacturer specification. 1.2 Automatic transmission functionality test are performed in accordance with manufacturer specification. 1.3 Automatic transmission functionality status are confirmed.
		The person who is competent in commercial vehicle automatic transmission diagnostic shall be able to obtain automatic transmission functional test report, obtain vehicle repair history, diagnose vehicle automatic transmission, and prepare diagnosis recommendation in accordance with manufacturer specification.	2. Obtain Vehicle Repair History.	2.1 Vehicle type and models are identified in accordance with manufacturer specification. 2.2 Age and current mileage of the vehicle are confirmed in accordance with manufacturer specification. 2.3 Past maintenance record (wear and tear record) are confirmed in accordance with manufacturer specification.
		The outcome of this competency is to assess problems, defect in automatic transmission unit and assign the required repair job.	3. Diagnose Vehicle Automatic Transmission.	3.1 Test drive vehicle foreman with client to identify problems are performed in accordance with manufacturer specification.

CU TITLE	CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
				<p>3.2 Test drive vehicle client with foreman to identify problems are performed in accordance with manufacturer specification.</p> <p>3.3 Customer interviewed while test drive in accordance with manufacturer specification.</p> <p>3.4 Diagnose report from the test drive prepared as per diagnose vehicle transmission requirement.</p>
			4. Prepare Diagnosis Recommendation	<p>4.1 The result of the automatic transmission diagnosis informed to customer.</p> <p>4.2 Automatic transmission diagnosis recommendation report for the customer prepared.</p> <p>4.3 Automatic transmission estimate cost of repair prepared.</p>
4. Commercial Vehicle Air Intake & Exhaust System Overhaul	G452-001-3:2017-C04	Commercial vehicle air intake & exhaust system overhaul work outlines work activities to determine condition, performance and replacement of turbo charger system parts &	1. Inspect Air Intake & Exhaust System Components Condition.	<p>1.1 Job order received & acknowledged.</p> <p>1.2 Related tools, equipment and parts determined in accordance with job order.</p> <p>1.3 Tools, equipment and parts prepared in accordance with job assignment.</p>

CU TITLE	CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
		<p>components in accordance with service manual.</p> <p>The person who is competent in commercial vehicle air intake & exhaust system overhaul shall be able to inspect air intake & exhaust system components condition, rectify air intake & exhaust system components, service turbo charger unit, carry out emission test and air intake & exhaust system overhaul report in accordance with manufacturer specification.</p> <p>The outcome of this competency is to provide clean emission, defect free and optimum performance of the turbo charger.</p>		<p>1.4 Air intake & exhaust system components condition checked in accordance with workshop manual.</p> <p>1.5 Inspection checklist prepared in accordance with workshop manual.</p>
			2. Rectify Air Intake & Exhaust System Components.	<p>2.1 Air intake parts and components rectification work carried out in accordance with workshop manual.</p> <p>2.2 Exhaust system parts and components rectification work carried out in accordance with workshop manual.</p> <p>2.3 Air intake & exhaust system components installation checklist completed and submitted in accordance with workshop manual.</p>
			3. Service Turbo Charger Unit.	<p>3.1 Job order interpreted in accordance with customer requirements.</p> <p>3.2 Related tools, equipment and parts determined in accordance with job order</p> <p>3.3 Tools, equipment and parts prepared in accordance with job assignment.</p>

CU TITLE	CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
				<p>3.4 Procedure of turbocharger waste-gate actuator condition checking complied in accordance with manufacturer specification.</p> <p>3.5 Turbocharger waste-gate actuator serviceability determined</p> <p>3.6 Procedure of turbocharger waste-gate actuator replacement complied with in accordance with manufacturer's specification</p> <p>3.7 Turbocharger waste-gate rod adjusted in accordance with manufacturer's specification</p> <p>3.8 Procedure of turbo charger unit condition checking complied in accordance with manufacturer specification.</p> <p>3.9 Turbocharger parts and components condition and functionality checked in accordance with workshop manual.</p> <p>3.10 Turbocharger oil pressure hoses and pipes checked in accordance with manufacturer specification.</p>

CU TITLE	CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
				3.11 Turbocharger unit replaced in accordance with manufacturers specification.
			4. Carry Out Emission Test.	4.1 Road test/machine dyno for functionality test identified in accordance with workshop manual. 4.2 Air intake & exhaust performance tested in accordance with manufacturer's specifications 4.3 Performance test report prepared following the end result
			5. Prepare Air Intake & Exhaust System Overhaul Report.	5.1 Air intake & exhaust system overhaul report obtained in accordance with manufacturer's specification. 5.2 Content of report assessed and interpreted. 5.3 Checking and installation report documents prepared in accordance with manufacturer's specification.
5. Commercial Vehicle Engine Diagnostic	G452-001-3:2017-C05	Commercial Vehicle Engine Diagnostic outlines work activities to determine condition and test	1. Setup scan tool	1.1 Engine diagnosis requirements determined in accordance with job requirements.

CU TITLE	CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
		<p>performance of engine management system parts & components in accordance with service manual.</p> <p>The person who is competent in commercial vehicle engine diagnostic shall be able to setup scan tool, perform fuel pressure test, operate scan tool fuel system diagnosis, analyse oscilloscope pattern and check engine management system components condition in accordance with manufacturer specification.</p>		<p>1.2 Job order interpreted in accordance with customer requirements.</p> <p>1.3 Related tools, equipment and parts determined in accordance with job order.</p> <p>1.4 Scan tool/ diagnostic tester determined in accordance with job requirements.</p> <p>1.5 Procedure of scan tool setup adhered in accordance with manufacturer specification.</p> <p>1.6 Scan tool connected to vehicle and switched on in accordance with manufacturer specification.</p>
		<p>The outcome of this competency is to detect defect and problem of the engine system, ability to assess problems and overhauling the engine system for defect and make sure the engine are running smooth and problems free.</p>	2. Perform Fuel Pressure Test	<p>2.1 Procedure of fuel pressure test followed in accordance with manufacturer specification.</p> <p>2.2 Fuel pressure tested in accordance with manufacturer specification.</p> <p>2.3 Fuel pressure tested to determine functionality of fuel system components.</p>
			3. Operate Scan Tool Fuel System Diagnosis	<p>3.1 Five gases (CO₂, COHC, etc.) measurement equipment operated in accordance with manufacturer specification</p>

CU TITLE	CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
				<p>3.2 Procedure of scan tool operation adhered in accordance with manufacturer specification</p> <p>3.3 Type of scan tool system determined in accordance with job requirement</p> <p>3.4 System data result analysed in reference to manufacturer specification.</p>
			4. Analyse Oscilloscope Pattern	<p>4.1 Type of vehicle fuel system mode in scan tools determined in accordance with manufacturer specification</p> <p>4.2 Oscilloscope pattern identified in accordance with manufacturer specification</p> <p>4.3 System graphic / oscilloscope mode interpreted with service manual in accordance with manufacturer specification.</p>
			5. Check Engine Management System Components Condition	<p>5.1 Procedure of inspecting engine management system components condition followed in accordance with company SOP</p> <p>5.2 Engine management system components serviceability are determined in</p>

CU TITLE	CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
				accordance with service manual 5.3 Vehicle trouble code determined in accordance with service manual.
6. Commercial Vehicle Fuel Injection System Overhaul	G452-001-3:2017-E01	<p>Commercial vehicles fuel injection system overhaul outlines work activities to determine condition, dismantle, reassemble and calibrate fuel injection in accordance with the service manual.</p> <p>The person who is competent in commercial vehicle fuel Injection System Overhaul shall be able to prepare system diagnosis tools & equipment, perform fuel injector pump functionality and condition test, perform fuel injector functionality and condition test, fuel injection system overhaul report and perform fuel injection system functionality test in</p>	1. Prepare System Diagnosis Tools & Equipment.	<p>1.1 Job order interpreted in accordance with customer requirements.</p> <p>1.2 Related tools, equipment and parts determined accordance with manufacturer specification</p> <p>1.3 Procedure of scan tools system prepared in accordance with manufacturer specification.</p>
			2. Perform Fuel Injector Pump Functionality And Condition Test.	<p>2.1 Fuel injection pump units disassembled from the fuel injection system in accordance with fuel injection pump test requirement.</p> <p>2.2 Fuel injection pump pressure tested and determined in accordance with workshop manual.</p> <p>2.3 Fuel injection pump unit rectification work</p>

CU TITLE	CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
		<p>accordance with manufacturer specification.</p> <p>The outcome of this competency is to provide required skills in fuel injection to detect defect, clean emission of the fuel injection and assign the required repair job.</p>	<p>3. Perform Fuel Injector Functionality And Condition Test.</p>	<p>completed in accordance with OEM specification.</p> <p>2.4 Fuel injection pump unit condition confirmed in accordance with OEM specification.</p> <p>2.5 Fuel injection pump unit reassembled into fuel injection system in accordance with workshop manual.</p> <p>2.6 Fuel injection pump test condition report prepared as per workshop manual.</p> <p>3.1 Fuel injector units disassembled from the fuel injector system in accordance of fuel injection pump test requirement.</p> <p>3.2 Fuel injector pressure tested and determined in accordance with workshop manual.</p> <p>3.3 Fuel injector spray pattern tested and determined in accordance with workshop manual.</p>

CU TITLE	CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
				<p>3.4 Fuel injector unit calibrated in accordance with OEM specification.</p> <p>3.5 Fuel injector test condition report prepared as per workshop manual</p>
			<p>4. Fuel Injection System Overhaul Report.</p>	<p>4.1 Fuel injection system components functionality test performed in accordance with manufacturer's specification.</p> <p>4.2 Fuel injection system components functionality determined in accordance with manufacturer's specification.</p> <p>4.3 Fuel injection system components faulty determined in accordance with manufacturer's specification.</p> <p>4.4 Fuel injection system components condition report prepared as per workshop manual.</p>

CU TITLE	CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
			5. Perform Fuel Injection System Functionality Test.	5.1 Commercial Vehicles Fuel Injection System Overhaul report obtained in accordance with manufacturer's specification. 5.2 Content of report assessed and interpreted. 5.3 Checking and installation report findings updated. 5.4 Checking and installation report documents prepared in accordance with manufacturer's specification