



GOVERNMENT OF INDIA  
MINISTRY OF SKILL DEVELOPMENT & ENTREPRENEURSHIP  
DIRECTORATE GENERAL OF TRAINING

**COMPETENCY BASED CURRICULUM**

**CERTIFICATE COURSE ON**

# **AUTOMOTIVE ENGINE ELECTRONICS DIAGNOSTIC TECHNICIAN (PETROL)**



**NSQF LEVEL- 5**

## **SECTOR : AUTOMOTIVE**

# **AUTOMOTIVE ENGINE ELECTRONICS DIAGNOSTIC TECHNICIAN (PETROL)**

**Duration: 240 Hours**

**NSQF LEVEL - 5**

**(Version: 1.0)**

**Designed in 2020**

**Developed By**

Ministry of Skill Development and Entrepreneurship  
Directorate General of Training  
**Sectoral Trade Course Committee of Automotive Sector**  
&  
**CENTRAL STAFF TRAINING AND RESEARCH INSTITUTE**  
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## 1. COURSE INFORMATION

### 1.1 GENERAL

The Directorate General of Training (DGT) under Ministry of Skill Development & Entrepreneurship offers a range of vocational training courses catering to the need of different sectors of the economy/ labour market. The vocational training programs of short term duration are intended for up skilling of NTC/ NAC pass out candidates. After passing out of the course, the trainee is awarded a competency based certificate approved by DGT.

Automotive Engine Electronics Diagnostic Technician (Petrol)' is of 240 Hours of duration and will be offered as add on after completing Mechanic motor vehicle, Mechanic Diesel or other related courses under CTS/ATS.

In this course, Trainee will learn about the emerging new trends in engine repair, including advanced engine diagnostics, repair methods, hardware used in the automotive engine diagnosis and fuel delivery systems. This is a hands-on intensive course, which covers the diagnostic tools and equipment to repair the automotive diesel engine. Trainees will learn skills to diagnosis, repair, rebuild, and install parts to repair the engine utilizing the knowledge and competencies learned in the previous Training.

### 1.2 PROGRESSION PATHWAYS

- Progression for this up-skilling programme will remain same as that of base trades for which this course is designed.
- Can join industry as Technician and will progress further as Senior Technician, Supervisor and can rise up to the level of Manager.
- Can become Entrepreneur in the related field.

### 1.3 COURSE STRUCTURE

Table below depicts the distribution of training hours across various course elements during a period of 6 weeks: -

S No.	Course Element	Notional Training Hours
1.	Professional Skill (Trade Practical)	180
2.	Professional Knowledge (Trade Theory)	60
	<b>Total</b>	<b>240</b>

### 1.3 ASSESSMENT & CERTIFICATION

The trainee will be tested for his skill, knowledge and attitude during the period of course through formative assessment and at the end of the training programme through summative assessment as notified by the DGT from time to time.

a) The Continuous Assessment (Internal) during the period of training will be done by Formative Assessment Method by testing for assessment criteria listed against learning outcomes. The training institute has to maintain an individual trainee portfolio as detailed in assessment guideline.

b) The pattern and marking structure is being notified by DGT from time to time. The learning outcome and assessment criteria will be the basis for setting question papers for final assessment.

c) Assessment will be evidence based comprising the following:

- Job carried out in labs/workshop/Field
- Answer sheet of assessment
- Viva-voce
- Participation and punctuality

Evidences of internal assessments are to be preserved until forthcoming Block examination for audit and verification by examining body.

d) The minimum pass percentage for skill test is 60%.

## 2. JOB ROLE

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### **Brief description of Job roles:**

This course is designed for Trainees who interested in vehicle diagnosing field. As modern vehicles are equipped with so many electronic control components which is connected to the vehicle computer. This course enables Trainee to understand in depth about the functioning of all sensors, control modules and actuators. This ADD ON Courses includes inspecting and repairing of sensors, control modules, actuators with latest scan tool and other diagnosing equipments. After the completion of course Trainees becomes an Automobile Vehicle diagnostic specialist.

### 3. GENERAL INFORMATION

<b>Name of the Trade</b>	<b>AUTOMOTIVE ENGINE ELECTRONICS DIAGNOSTIC TECHNICIAN (PETROL)</b>	
<b>Trade Code</b>	DGT/8007	
<b>Reference NCO - 2015</b>	7231.0107 – Auto Service Technician - Mechanic	
<b>NSQF Level</b>	Level 5	
<b>Duration of Craftsmen Training</b>	240 Hours	
<b>Entry Qualification</b>	Passed 10th Class Examination with CTS course in MMV trade.	
<b>Unit Strength (No. of Student)</b>	16	
<b>Space Norms</b>	56 Sq. m (Including Parking)	
<b>Power Norms</b>	4.5 KW	
<b>Instructors Qualification for:</b>		
<b>(i) AUTOMOTIVE ENGINE ELECTRONICS DIAGNOSTIC TECHNICIAN (PETROL)</b>	Degree in Automobile/ Mechanical Engineering from recognized Engineering College/ university with one-year experience in the relevant field. <p style="text-align: center;"><b>OR</b></p> Diploma in Automobile/ Mechanical Engineering from recognized board of technical education with two-year experience in the relevant field. <p style="text-align: center;"><b>OR</b></p> NTC/NAC passed in the Trade of “Mechanic Motor Vehicle” with three years post qualification experience in the relevant field.	
<b>List of Tools and Equipment</b>	As per Annexure – I	
<b>Distribution of training on hourly basis: (Indicative only)</b>		
<b>Total hours/ Week</b>	<b>Trade practical</b>	<b>Trade theory</b>
40	30	10

## 4. LEARNING OUTCOME

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*Learning outcomes are a reflection of total competencies of a trainee and assessment will be carried out as per the assessment criteria.*

### 4.1 LEARNING OUTCOMES

1. Apply safe working practices.
2. Comply with environment regulation and housekeeping.
3. Generate Diagnostic report using appropriate tools and equipment while observing related safety precautions.
4. Analyze electronic components of vehicle
5. Diagnose and Rectify errors in Electronic Ignition system
6. Perform on board diagnosis using scan tool, Testing of sensors
7. Perform Testing of actuators



**SYLLABUS – AUTOMOTIVE ENGINE ELECTRONICS DIAGNOSTIC TECHNICIAN (PETROL)**

**Duration: 240 Hours**

<b>Duration Week</b>	<b>Reference Learning outcome</b>	<b>Professional Skills (Trade Practical)</b>	<b>Professional Knowledge (Trade Theory)</b>
Professional skills-30Hrs  Professional Knowledge-10 Hrs	Generate Diagnostic report using appropriate tools and equipment while observing related safety precautions.	<ol style="list-style-type: none"> <li>1. Demonstration on use of fire extinguisher.</li> <li>2. Identification of Read customer complaint job card, Interpret service manual data, circuit diagram and Laying out results in the standard format</li> <li>3. Perform stripping of wires and joining wires using soldering Iron</li> <li>4. Construction of simple electrical circuits</li> <li>5. Checking of a electrical Circuit, Voltage drop, Current, Resistance, continuity test for open and short circuit using Multimeter.</li> <li>6. Identify and location of fuse box, Checking of fuses, jumper wires, fusible links, and circuit breakers.</li> <li>7. Check electrical circuit with a test lamp.</li> <li>8. checking of Battery Performance.</li> <li>9. Use of Oscilloscope and interpretation of Waves forms</li> <li>10. Connect the scan tool with vehicle data link connector and study the scan tool operations.</li> </ol>	<ul style="list-style-type: none"> <li>- A safety precaution is to be followed while working on engine.</li> <li>- Fire safety and types of fire extinguisher used.</li> <li>- Electrical safety, Safe working practices.</li> <li>- Proper customer relation procedures.</li> <li>- Diagnostic terminologies-Fault, symptom, Diagnostics, logical procedure and report.</li> <li>- Preparation of report. Use the three Cs (concern, cause, and correction) to diagnose the vehicle problem.</li> <li>- Types of data necessary for diagnostics.</li> <li>- Tools and equipments used for engine diagnostics-Hand tools, Multimeter, Oscilloscope, Scanners/fault code readers, Exhaust gas analyser.</li> <li>- Review of Electrical, Principles, OHM's Law-Power, Voltage, Current, resistance, Series and Parallel circuit Reading of Electrical wiring circuits and symbols, Stripping wire insulation.</li> <li>- Generic Electrical testing procedure, Battery testing, Fuse rating and types of Fuse, wiring harness- Voltage drop test, short circuits, Open circuit, Continuity test, conductor Resistance, Ballast resistor, Relays and Switches, On and OFF load tests-checking of</li> </ul>

			<p>current and voltage of circuits,</p> <ul style="list-style-type: none"> <li>- Safety precaution to be followed during Electrical checking. Wiring color codes and sizes related to engine. wiring couplers. Resistors in Series circuits, Parallel circuits and Series-parallel circuits, Capacitors and its applications. Capacitors in series and parallel.</li> </ul> <p>Use of service manual wiring diagram for troubleshooting</p>
<p>Professional skills-30Hrs</p> <p>Professional Knowledge-10 Hrs</p>	<p>Analyze electronic components of vehicle</p>	<p>11. Test power and signal connectors for continuity</p> <p>12. Test different type of Diodes</p> <p>13. Carryout NPN &amp; PNP Transistors for its functionality</p> <p>14. Construct and test simple logic circuits OR, AND &amp; NOT and Logic gates using switches.</p> <ul style="list-style-type: none"> <li>- Start petrol engine and Check the warning lights of Instrument cluster</li> </ul>	<ul style="list-style-type: none"> <li>- Basic electronics: Description of Semiconductors, Solid state devices- Diodes, Transistors, thyristors, Uni-Junction Transistors ( UJT), Metal Oxide Field Effect Transistors ( MOSFETs), Integrated circuits,</li> <li>- Logic gates-OR, AND &amp; NOT and Logic gates using switches. Brief description of microprocessor</li> <li>• Study of various gauges/instrument on a dash board of a vehicle- Speedometer, Tachometer, Odometer and Fuel gauge, and Indicators such as oil pressure warning light, coolant low level warning light , vehicle service warning light, immobilizer warning light and an Engine-malfunction light.</li> </ul>
<p>Professional skills-30Hrs</p> <p>Professional Knowledge-10 Hrs</p>	<p>Diagnose and Rectify errors in Electronic Ignition system</p>	<p>15. Identify and locate the components of MPFI System</p> <p>16. Trace out the Engine control system electrical circuit</p> <p>17. Carryout removal and installation of Engine Control Module (ECM) (follow the Exercise of procedure for registration of ignition key)</p> <p>18. Register for ECM replacement procedure.</p> <ul style="list-style-type: none"> <li>- Register for Fuel Injector Petrol vehicle</li> </ul>	<ul style="list-style-type: none"> <li>- Latest development on petrol Engines.</li> <li>- Vehicle emissions. Emission control norms - Bharat stage I to VI and Euro I to VII .</li> <li>- Engine management system- Electronic control unit, Electronic Fuel Injection and its types, Multi point Fuel Injection (MPFI)system</li> <li>- Layout of MPFI Petrol Engine, Components of MPFI Petrol Engine and its working-Fuel pump, Fuel Tank, Fuel tank unit,</li> </ul>

			<p>Fuel rail, Rail pressure regulators, Fuel injectors-solenoid</p> <ul style="list-style-type: none"> <li>- Hydraulically actuated Electronic Ignition system and its types-Distributor type, Distributor less (Waste spark),Direct spark Ignition(Coil on plug) &amp; Digital Twin spark Ignition systems.</li> <li>- Ignition timing Ignition timing mark, Valve Timing, valve Timing Marks, Valve timing diagram.</li> <li>- Variable valve Timing technology and its types-Honda VTECH, Cam phasing technology, Variable Intake system.</li> <li>- Turbo charger and Variable geometric Turbo charger.</li> <li>- Engine control system electrical circuit diagram</li> </ul>
<p>Professional skills- 60Hrs</p> <p>Professional Knowledge- 20 Hrs</p>	<p>Perform on board diagnosis using scan tool, Testing of sensors</p>	<p>19. Identify the terminal arrangement of ECM connector</p> <p>20. Perform On board diagnosis using scan tool -Connecting of scan tool with data link connector, Reading of diagnostic trouble code, Reviewing of Engine freezing data and live data's, Deletion of error code memory</p> <p>21. Inspect On-Vehicle for Crankshaft Position sensor (CKP) performance, Removal and Installation of Crank position sensor(CKP) and test the circuit.</p> <p>22. Inspect On-Vehicle for Cam Position sensor (CMP) performance, Removal and Installation of Cam position sensor(CMP) and test the circuit</p> <p>23. Inspect On-Vehicle for Manifold Absolute pressure sensor (MAP) performance , Removal and Installation of Manifold absolute</p>	<ul style="list-style-type: none"> <li>- On board Diagnostics system (OBD),OBD-II and EOBD,OBD Cycles</li> <li>- Malfunction indication lamp</li> <li>- Diagnostics trouble codes (DTC- P Codes, B Codes , C Codes,)</li> <li>- Data link connector and its pin configuration, Input and output of electronic control unit with respect to engine and emission control systems.</li> <li>- Electronic control Module (ECM) coupler pin configuration.</li> <li>- Engine problems and symptoms related to the engine electronics.</li> <li>- Scan tool data description and standard reference values on engine normal running condition</li> <li>- Working Principles of Sensors Crank position sensor(CKP), Cam position sensor(CMP),</li> </ul>

		<p>pressure sensor(MAP)and test the circuit</p> <p>24. Inspect On-Vehicle for Coolant Temperature Sensor (CTS) performance, Removal and Installation of Coolant Temperature sensor(CTS) and test the circuit</p> <p>25. Inspect On-Vehicle for Throttle Position sensor (TPS) performance, Removal and Installation of Throttle body assembly and test the circuit</p> <p>26. Inspect On-Vehicle for Accelerator Pedal Position sensor (APP) performance, Removal and Installation of Accelerator pedal position sensor(APP) and test the circuit</p> <p>27. Inspect On-Vehicle for Knock sensor performance, Removal and Installation of Knock sensor and test the circuit</p> <p>28. Inspect On-Vehicle for Inlet Air Temperature sensor (IAT) performance, Removal and Installation of Inlet air temperature sensor(IAT) and test the circuit</p> <p>29. Inspect On-Vehicle for Boost pressure sensor (BPP) performance, Removal and Installation of Boost Pressure sensor(BPP) and test the circuit</p> <p>30. Inspect On-Vehicle for Heated oxygen sensor (HO2) performance, Removal and Installation of Heated oxygen sensor and test the circuit</p> <p>31. Inspect On-Vehicle for Air-Fuel Ratio sensor performance, Removal and Installation of Air-Fuel Ratio sensor and test the circuit</p> <p>32. Inspect On-Vehicle for vehicle speed sensor performance, Removal and Installation of</p>	<ul style="list-style-type: none"> <li>- Coolant Temperature sensor(CTS),</li> <li>- Throttle Position Sensor(TPS),</li> <li>- Accelerator pedal position sensor(APP),</li> <li>- Knock sensor,</li> <li>- Inlet air temperature sensor(IAT),</li> <li>- Manifold absolute pressure sensor(MAP),</li> <li>- Boost pressure sensor,</li> <li>- Heated oxygen sensor,</li> <li>- Air -Fuel ratio sensors,</li> <li>- Vehicle speed sensor,</li> <li>- A/c pressure switch/Transducer</li> </ul>
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		<p>vehicle speed sensor and test the circuit</p> <p>33. Trace and Test AC pressure switch circuit.</p> <p>34. Trace and test of Distributor type Electronic ignition system circuit</p> <p>35. Trace and test of Distributor less(waste spark) ignition system circuit</p> <ul style="list-style-type: none"> <li>- Trace and test of Direct spark ignition(coil on plug) system circuit</li> </ul>	
<p>Professional skills-30Hrs</p> <p>Professional Knowledge-10 Hrs</p>	<p>Perform Testing of actuators</p>	<p>36. inspect fuel pump relay, starting motor control relay, main relay and fuel heater relay</p> <p>37. Trace and test of Actuators idle air control valve circuit</p> <p>38. Trace and test of Fuel injectors circuit</p> <p>39. Trace and test of Positive crank case ventilation valve(PCV) circuit</p> <p>40. Trace and test of Evaporative canister purge control valve</p> <p>41. circuit Trace and test of Radiator cooling fan circuit</p> <p>42. Trace and test of Engine oil pressure circuit</p> <p>43. Trace and Test of Engine Immobilizer system</p>	<ul style="list-style-type: none"> <li>- Working principles of Actuators</li> <li>- Fuel injectors, Idle speed Air control valve</li> <li>- Electronic throttle control, Purge control solenoid valve</li> <li>- Variable valve timing solenoid valve,</li> <li>- VGT control solenoid, Main relay and Fuel pump relay.</li> <li>- Radiator cooling fan control system.</li> <li>- Engine Oil pressure circuit</li> <li>- Engine immobilizer system</li> <li>- Emission control system</li> <li>- Positive crankcase ventilation system</li> <li>- catalytic converter</li> <li>- Evaporative emission control system</li> </ul>
<b>Examination</b>			

## 7. ASSESSMENT CRITERIA

LEARNING OUTCOME	ASSESSMENT CRITERIA
<p>1. Apply safe working practices</p>	Follow and maintain procedures to achieve a safe working environment in line with occupational health and safety regulations and requirements, and according to policy.
	Recognize and report all unsafe situations according to policy.
	Identify and take necessary precautions on fire and safety hazards and report according to work policy and procedures.
	Identify, handle and store/ dispose-off dangerous goods and substances according to policy and procedures following safety regulations and requirements.
	Identify and observe policies and procedures with regard to illness or accident.
	Identify safety alarms accurately.
	Report supervisor/ competent of authority in the event of accident or sickness of any staff and record accident details correctly according to accident/injury procedures.
	Identify and observe evacuation procedures according to site policy.
	Identify Personal Productive Equipment (PPE) and use the same as per related working environment.
	Identify basic first-aid and use them under different circumstances.
	Identify different fire extinguisher and use the same as per requirement.
<p>2. Comply with environment regulation and housekeeping</p>	Identify environmental pollution & contribute to the avoidance of instances of environmental pollution.
	Deploy environmental protection legislation & regulations.
	Take opportunities to use energy and materials in an environmentally friendly manner.
	Avoid waste and dispose waste as per procedure.
	Their applications will be assessed during execution of assessable outcome.
<p>3. Generate Diagnostic report using appropriate tools and equipment while observing related safety precautions.</p>	Plan work in compliance with standard safety norms.
	Ascertain and select tools and materials for the job and make this available for use in a timely manner.
	Identify the different vehicle engine specification data and information.
	Identify and location of fuse box, Checking of fuses, jumper wires, fusible links, and circuit breakers
	Demonstrate of Oscilloscope and interpretation of Waves forms

4. Analyze electronic components of vehicle	Test different type of Diodes
	Carryout NPN & PNP Transistors for its functionality
	Demonstrate of logic gates using switches
	Identify & Check the function of Mal Indication Lamp (MIL), Oil pressure warning light, charge indication light, Temperature warning light/gauge, Seat belt warning light, ABS warning light, Parking light, fuel level gauge.
5. Diagnose and Rectify errors in Electronic Ignition system	Identify and locate the components of MPFI System
	Trace out the Engine control system electrical circuit
	Carryout removal and installation of Engine Control Module (ECM)
	Register for ECM replacement procedure
	Register for Fuel Injector Petrol vehicle
6. Perform onboard, diagnosis using scan tool, Testing of sensors	Connect the scan tool to the Data link connector of given engine.
	Read the Error code
	Test the reference voltage and continuity of the circuit as per vehicle wiring circuit.
	Repair/Replace the defective part or wiring.
	Erase the error memory.
	Perform on vehicle Engine Tests to analyze need of Overall
	Test the various sensors fitted on the given engine using multi meter/scan tool.
	Start and check the engine.
7. Perform Testing of actuators	Trace and test of Actuators idle air control valve circuit
	Trace and test of Fuel injectors circuit
	Trace and test of PCV & ECP control valve circuit
	Trace and Test of Engine Immobilizer system

<b>LIST OF TOOLS &amp; EQUIPMENT</b>			
<b>AUTOMOTIVE ENGINE ELECTRONICS DIAGNOSTIC TECHNICIAN (PETROL)</b>			
<b>S No.</b>	<b>Name of the Tools and Equipment</b>	<b>Specification</b>	<b>Quantity</b>
<b>A. TRAINEES TOOL KIT</b>			
1.	Allen Key set of 12 pieces	2mm to 14mm	5+1 Nos
2.	Caliper inside with spring	15 cm	5+1 Nos
3.	Calipers outside with spring	15 cm	5+1 Nos
4.	Center Punch.	10 mm. Dia. x 100 mm	5+1 Nos
5.	Dividers with spring	15 cm	5+1 Nos
6.	Electrician Screw Driver	250mm	5+1 Nos
7.	Hammer ball peen with handle	0.5 kg	5+1 Nos
8.	Hands file for Second cut flat	20 cm.	5+1 Nos
9.	Philips Screw Driver set of 5 pieces	Philips Screw Driver set of 5 pieces	5+1 Nos
10.	Pliers combination	20 cm.	5+1 Nos
11.	Screw driver Blade	20cm.X 9mm	5+1 Nos
12.	Screw driver Blade	30 cm. X 9 mm.	5+1 Nos
13.	Scriber	15 cm	5+1 Nos
14.	Spanner D.E. set of 12 pieces	6mm to 32mm	5+1 Nos
15.	Spanner, ring set of 12	6 to 32 mm. (metric)	5+1 Nos
16.	Spanners socket with speed handle, T-bar, ratchet and universal set of 28 pieces with box	up to 32 mm	5+1 Nos
17.	Steel rule	30 cm inch and metric	5+1 Nos



18.	Wire cutter and stripper	-	5+1 Nos
<b>B.SHOP OUTFIT &amp; MEASURING INSTRUMENTS</b>			
19.	Adjustable spanner (pipe wrench)	350 mm	4 nos.
20.	Cleaning tray	45x30 cm.	2 nos.
21.	Hammer Ball Peen	0.75 Kg	2 nos.
22.	Hammer Mallet	-	4 nos.
23.	Hammer Plastic	-	4 nos.
24.	Oil can	0.5/0.25 liter capacity	4 nos.
25.	Pliers flat nose	15 cm	4 nos.
26.	Torque wrenches	5-35 Nm, 12-68 Nm & 50-225 Nm	1 each
27.	Circlip pliers Expanding and contracting	15cm and 20cm	4 each
28.	Feeler gauge	20 blades (metric)	4 nos.
29.	Tachometer	Digital and counter type	1 no.
30.	Vernier caliper	0-300 mm with least count 0.02mm	1 no.
31.	Multi meter digital	LCD Display	5 nos.
32.	Insulated Screw driver	20 cm x 9mm blade	4 nos.
33.	Insulated Screw driver	30 cm x 9mm blade	4 nos.
34.	Test lamps for continuity test	-	4 nos.
35.	Electric soldering Iron	125 watts,65 watts	5 nos each
36.	Battery Charger		1 no
37.	Battery Tester		1 no
<b>GENERAL INSTALLAION AND MACHINERIES</b>			
38.	LMV vehicle	With Recent MPFI Engine	1 no
39.	MPFI petrol engine with Fault simulation board	Latest 4 Stroke 3/4 cylinder MPFI Engine in running condition 800-1600cc with ECM, BCM and all sensors, wiring, fuel feed system,	1 no

		cooling system & instrument cluster.	
40.	Multi Scan Tool To scan Engine, ABS & EBD, AT, SRS, Body Control and immobilizer	Should perform automotive sensor simulation test specially designed to diagnose and simulate vehicle sensor faults for sensors like MAP sensor, Intake air temperature sensor, TP sensor etc.	1 no
41.	Oscilloscope with test leads	100Mhz with CAN BUS inbuilt	1 no
42.	OBD scanner	Scanners/fault code readers	1 no
43.	Horses and wheel choke	-	4 nos
44.	Screw jack	2 ton , 3 ton , 10 ton	1 each
45.	Two post car lift – capacity 4000 kg	Hydraulic Type with Mechanical Arms Locking.	1 no.

**NOTE: If Above Tools, Equipments and general machineries are available with MMV Trade running on the ITI the same may be utilized.**

**ANNEXURE-II**

The DGT sincerely acknowledges contributions of the Industries, State Directorates, Trade Experts, Domain Experts and all others who contributed in designing/ revising the curriculum. Special acknowledgement is extended by DGT to the following expert members who had contributed immensely in this curriculum.

<b>List of Expert Members contributed/ participated for finalizing the course curriculum of AUTOMOTIVE ENGINE ELECTRONICS DIAGNOSTIC TECHNICIAN (PETROL).</b>			
<b>S No.</b>	<b>Name &amp; Designation Shri/Mr./Ms</b>	<b>Organization</b>	<b>Remarks</b>
1.	Sh. K. Srinivasa Rao, Director,	RDSDE Tamil Nadu	STCC Convener
2.	Sh. C. S. Murthy, JD,	CSTARI, Kolkata	Member
3.	Sh. Nirmalya Nath, DD,	NIMI, Chennai	Member
4.	Sh. Sankar R- Head Service Training	Ashok Leyland	Expert
5.	Sh. Anurag Saxena - Training Delivery Manager( Service Training)	Ashok Leyland	Expert
6.	Sh. Suresh Babu- Head DTI	Ashok Leyland Driver Training Institute, Namakkal	Expert
7.	Sh. P Mohammed Ali- Training Head	Ashok Leyland Driver Training Institute, Namakkal	Expert
8.	Sh.V.Krishna Shankar	Retd.DGM-CSR, Ashok Leyland	Expert
9.	Sh.C.Prakash	Retd.GM-Product Development, Ashok Leyland	Expert
10.	Sh.Ajay Dhuri	Divisional Manager, Tata Motors Limited	Expert
11.	Sh.Sathish	South Head Servicing, HYUNDAI MOTOR INDIA	Expert
12.	Sh.Abhijit Mandal	Dy. Director Technical, NATRIP	Expert
13.	Sh.Arun Lakshman	Industry expert (Road Transportation), ASDC	Expert
14.	Sh.Dharmendra Sharma	Head – Industry Alliance and World skills, ASDC	Expert
15.	Sh.Venkat raman	Manager Ramkay TVS, Adyar	Expert
16.	Sh.karthik Johan	Country head auto electrical, Mahindra electric	Expert

17.	Sh.Sathish	Senior Manager-Customer care, Mahindra Electric	Expert
18.	Sh.Sankar	GM, BMW India	Expert
19.	Sh.P. Thangapazham	DGM Training, DAIMLER INDIA COMMERCIAL VEHICLE PVT. LTD.	Expert
20.	Sh.Awadhut Vedpathak	Service head, Piaggio Vehicles Pvt. Ltd.	Expert
21.	Sh. Rajan	Managing Director, Cuuro motors	Expert
22.	Sh. Shekhar Malani	MD, Devise Electronics Pvt Ltd	Expert
23.	Sh.Khurana	MARURI SUZUKI INDIA LTD.	Expert
24.	Sh..Viswanathan.D	Training Head, Lanson Toyota	Expert
25.	Sh.Arulmozhivarman	Technical Head,Lanson Toyota	Expert
26.	Sh. C. Yuvaraj, DD,	NSTI, Howrah	Member
27.	Sh. G. Venkatesh, DD,	RDSDE, Bangalore	Member
28.	Sh. Aman Kumar, AD,	RDSDE Tamil Nadu	Member
29.	Sh. R. Rajesh kanna, TO,	NSTI, Chennai	Member
30.	Sh. N. Ramesh Kumar, TO,	NSTI Chennai	Member
31.	Sh. S. Shankar, TO,	NSTI Chennai	Member
32.	Sh. Mane,V.I	NSTI Mumbai	Member
33.	Sh,A. Duraiswamy, ATO	Govt ITI, Coonor	Member
34.	Sh.K. Maharajan,JTO,	Govt ITI Radhapuram	Member
35.	Sh.A. Muthuvel,ATO,	Govt.ITI, Nagapattinam	Member