

**One day Mechanics Training:**

<b>Sr.No</b>	<b>Topic</b>	<b>Time</b>	<b>Contents</b>	<b>Teaching Aid.</b>
1	Introduction & safety	30 Minutes	Why this Training? Companies History. Safety Practices Men's & Vehicles	
2	Basic Vehicles Electrical/Electronics	1.50 Hrs.	Current, Volts & Resistance. Uses of multimeter. How to check sensor & wirings.	
3	Existing Cars	1.5 Hrs.	Types of cars by seating & drive arrangement, emission Norms, Important Modifications - Catalytic Convertor, Turbo charger, EGR, EMS etc.	
4	Latest Cars	2.0 Hrs.	Engine Types e.g- cc, Engine timing, Fuel pump Timing & adjustment etc. Engine Management system, fault finding/Blink code systems	Photo copy of blink codes
5	CRDI or DICOR	1.00 Hrs.	What is CRDI, Important Modifications, Sensors, ECU etc.	
6	Vehicles safety Features	1.00 Hrs.	Air bag, What is ABS? What is ESP? Dashboard Gauges & signs.	

**Training program for Technician and workshop supervisor.**

Sr No.	Topic	Content	Time	Teaching Aid
D-1	Workshop safety	Use of protective cloths, gloves, Working on Cars, Use of tools, Goggles, Jacks, Batteries, Compress, air, acids, welding, painting, etc.	1 hr.	
	Shop Floor Measurement	Metric system, mm,cm,km, Measuring Length,Area, Volume, Speed,Measuring gauges & Instruments, Scale, Micrometer, Vernier caliper, Bore gauges, etc.	3 hrs	
D-2	Hand Tools & Workshop Equipment	Types of spanners,Pliers, Hacksaw, dills,taps,bench vice,worktables, Aggregate stands,Allen keys, screw,drivers, radius gauge,feeler gauge etc.	4 hrs	
D-3	Basic Electricals	Current, Voltage, Resistance, Ohms law, Battery construction,wire color codes, Charging,Relays,ECU,sensors,Series,Parallel,Types of resistance, Electromagnetism,Controls, Fuses, Circuit symbols,Electrical safety	4 hrs	
D-4	Car Servicing	Service types, Service schedules, Recommended Oils & Lubricants, Aggregate oil capacities,Standard Checks, Service Operations -oil change,Hub greasing,belt tensioning etc.	4 hrs	Handout
D-5 D-6	Basic Automobile	Four stroke Diesel & Petrol cycle, cylinder ,valve, piston, camshaft, arrangements, DI & PC engines, Power, Torque, Front drive, Rear drive, Four wheel, drive,Transfer case,Transverse engines,	8 hrs	
D-7	Tata PCBU Products	Car Types, Car Models, Engine names, Chassis numbering, Car specifications	4 hrs	
D-8 D-9	MUV Servicing	Service types, Service schedules, Recommended Oils & Lubricants, Aggregate oil capacities, Standard Checks, Service Operations -oil change, Hub greasing, belt tensioning etc.	8 hrs	Handout
D-10 D-11	IDI Engine	IDI-BS III Engine Working systems-cooling, Lubs, Fuel, Engine Repairs-Timing belt replacing, FIP timing,Tappet setting, Ring clearances, Compression checking, Reasons for overhauling.ECU, Sensors Diagnostic & Blink codes	8 hrs	
D-12 D-13	DICOR, Quadra jet Engine, MPFI/LPG/CNG Engines.	What & Why DICOR? Construction & features, ECU, timing belt fitment MPFI/LPG/CNG features & Repairs ECU functions & diagnostic	8 hrs	

D-14	Clutch	Clutch function, construction, Mechanical & Hydraulic Clutch, Clutch problem, diagnostic & repairs	4 hrs
D-15	Transmission	Gear box function, synchromesh arrangement & Repairs, Gear box problems, diagnostic & repairs	4 hrs
D-16	Rear Axle	Differential function, construction, Axle shafts, Hubs, Differential problems & repairs	4 hrs
D-17	Brakes	Vacuum brakes, Disc & drum brakes, Brakes working, ABS, EBD, ESP, Brake problems & repairs	4 hrs
D-18	Power Steering	Hydraulic rack - pinion/worm-nut steering, steering working, bleeding Problem & diagnostic	4 hrs
D-19 D-20	Suspension	Mach-pherson strut suspension, leaf suspension, torsion bar suspension, antiroll bars, Wheel alignment, Steering problem & Rep	8 hrs
		Four Days are reserved for Review Tests Discussions, Trainees difficulties and latest trends	16 hrs

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**Fresh Engineers Training**

<b>Sr.No.</b>	<b>Topic</b>	<b>Contents</b>	<b>Teaching Aid.</b>
1	Introduction & safety	Why this Training? Safety Practices.BS-Norms.(Emission).	
2	Latest Cars V/s Existing Cars Technology	Engine Types eg.- cc, Engine timing, Fuel pump Timing & adjustment etc. drive arrangement, emission Norms, Important Modifications - Catalytic Converter, Turbo charger, EGR, EMS etc Engine Management system, fault finding/Blink code systems	Training Handout
3	Basic Vehicles Electrical/Electronics	Current, Volts & Resistance. Uses of multimeter. How to check sensor & wirings.	
4	CRDI or DICOR	What is CRDI Technology?	
5	Vehicles safety Features	Air bags, What is ABS & EBD? What is ESP? Dashboard Gauges & signs.	

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