

Mechanic Tractor
LIST OF TOOLS & EQUIPMNT

Syllabus e S.No.	Name of the items	Quantity of DGET
1	Allen Key set of 12 pieces (2mm to 14mm)	(5+1)
2	Caliper inside 15 cm Spring	6
3	Calipers outside 15 cm spring	6
4	Center Punch 10 mm. Dia. x 100 mm.	6
5	Dividers 15 cm Spring	6
6	Electrician Screw Driver 250mm	6
7	Hammer ball peen 0.5 kg with handle	6
8	Hands file 20 cm. Second cut flat	6
9	Philips Screw Driver set of 5 pieces (100 mm to 300 mm)	6
10	Pliers combination 20 cm.	6
11	Screw driver 20cm.X 9mm. Blade	6
12	Screw driver 30 cm. X 9 mm. Blade	6
13	Scriber 15 cm	6
14	Spanner D.E. set of 12 pieces (6mm to 32mm)	6
15	Spanner, ring set of 12 metric sizes 6 to 32 mm.	6
16	Spanners socket with speed handle, T-bar, ratchet and universal upto 32 mm set of 28 pieces with box	6
17	Steel rule 30 cm inch and metric	6
18	Steel tool box with lock and key (folding type) 400x200x150 mm	6
19	Wire cutter and stripper	6
1	AC alternator slip ring puller	1
2	Adjustable spanner (pipe wrench 350 mm)	2
3	Air blow gun with standard accessories	1
4	Air impact wrench with standard accessories	4
5	Air ratchet with standard accessories	4
6	Allen Key set of 12 pieces (2mm to 14mm)	2
7	Alternator for tractor – different type	2
8	Ammeter 300A/ 60A DC with external shunt	4
9	Angle plate adjustable 250x150x175	1
10	Angle plate size 200x100x200mm	2
11	Anvil 50 Kgs with Stand	1
12	Arbor press hand operated 2 ton capacity	1
13	Auto Electrical test bench It consists of:	1

	<ul style="list-style-type: none"> • Power supply cable • 4 parallel interfaces to the lights and headlights fitted, • vehicle electrical system control unit, • additional brake light, • Wiper motor, • gateway, • 2 earth distribution boxes, • fuse panel, • original wiring harness, • fault switch box with 15 faults <p>The power is supplied using a normal 12V vehicle battery</p>	
14	Battery –charger	2
15	Belt Tensioner gauge	1
16	Blow Lamp 1 litre	2
17	Caliper inside 15 cm Spring	4
18	Calipers outside 15 cm spring	4
19	Car Jet washer with standard accessories	1
20	Carburetor repair tool kit	1
21	Chain Pulley Block-3 ton capacity with tripod stand	1
22	Chaser hard W/V 9 to 40 T.P.I. set of 11 external.	1 set
23	Chaser, hand W/W 9 to 40 T.P.I. set of 11 internal.	1 set
24	Chisel 10 cm flat	4
25	Chisels cross cut 200 mm X 6mm	4
26	Circlip pliers Expanding and contracting type 15cm and 20cm each	4
27	Clamps C 100mm	2
28	Clamps C 150mm	2
29	Clamps C 200mm	2
30	Cleaning tray 45x30 cm.	4
31	Clutches, different types such as cone type, disc type	1 each
32	Compression testing gauge suitable for diesel Engine	2
33	Connecting rod alignment fixture	1
34	Copper bit soldering iron 0.25 Kg	4
35	Cut section model of fuel filter	1
36	Cylinder bore gauge capacity 20 to 160 mm	4
37	Cylinder liner- Dry & wet liner, press fit & slidefit liner	1 each
38	DC Ohmmeter 0 to 300 Ohms, mid scales at 20 Ohms	2
39	Depth micrometer 0-25mm	4

40	Dial gauge type 1 Gr. A (complete with clamping devices and stand)	4
41	Different type of Engine Bearing model	1 set
42	Different type of piston model	1each
43	Dividers 15 cm Spring	4
44	Drift Punch Copper 15 Cm	4
45	Drift, copper 10 x 15 1/2 mm	2
46	Drill point angle gauge	1
47	Drill twist 1.5 mm to 15 mm (various sizes) by 0.5 mm	4
48	Electric Soldering Iron 230 V 60 watts 230 V 25 watts	2 each
49	Electric testing screw driver	4
50	Engineer's square 15 cm. Blade	4
51	Engineers stethoscope	1
52	Equipment puncture, in box,	1
53	Feeler gauge 20 blades (metric)	2
54	File flat 20 cm bastard	4
55	File, half round 20 cm second cut	4
56	File, Square 20 cm second cut	4
57	File, Square 30 cm round	4
58	File, triangular 15 cm second cut	4
59	Files assorted sizes and types including safe edge file (20 Nos)	2 set
60	Flat File 25 cm second cut	4
61	Flat File 35 cm bastard	4
62	Fuel feed pump for Diesel	1
63	Fuel injection pump (Diesel) inline	1
64	Glow plug tester	2
65	Granite surface plate 1600 x 1000 with stand and cover	1
66	Grease Gun	2
67	Grover – 3, 4, 6mm.	1 Each
68	Growler	2
69	Hacksaw frame adjustable 20-30 cm	10
70	Hammer Ball Peen 0.75 Kg	4
71	Hammer Chipping 0.25 Kg	4
72	Hammer copper 1 Kg with handle	4
73	Hammer Mallet	4
74	Hammer Plastic	2
75	Hand operated crimping tool (i) for crimping up to 4mm and (ii) for crimping up to 10mm	2
76	Hand reamers adjustable 10.5 to 11.25 mm, 11.25 to 12.75 mm, 12.75 to 14.25 mm and 14.25 to 15.75 mm	2sets
77	Hand Shear Universal 250mm	2
78	Hand vice – 37 mm	2
79	High rate discharge tester (cell tester)	1

80	Hollow Punch set of seven pieces 6mm to 15mm	2 sets each
81	Hydraulic jack HI-LIFT type -3 ton capacity,	1
82	Injector – Multi hole type, Pintle type	4 each
83	Injector cleaning unit	1
84	Injector testing set (Hand tester)	1
85	Insulated Screw driver 20 cm x 9mm blade	8
86	Insulated Screw driver 30 cm x 9mm blade	8
87	Left cut snips 250mm	4
88	Lifting jack screw type 3 ton capacity	4
89	Magneto spanner set with 8 spanners	1 set
90	Magnifying glass 75mm	2
91	Marking out table 90X60X90 cm.	1
92	Multi Scan Tool Technical Specification <ul style="list-style-type: none"> o Android OS, prevailing panel pc configuration o CPU: Dual core 1GHz o Polymer lithium-ion battery, 3000mA o Extended memory card, support 32G Micro SD (TF) card o Storage capacity: 2GB o Internal Memory: 512MB o Screen Size: 7.0 inch o Screen Resolution: 1024 * 600 o Touch Screen: Multi-touch capacitor screen o Cameras: 2 mega rear and 0.3 mega front o Wireless Communication: WIFI, Bluetooth o Working Temperature:-10 C-55 C (14 F to 131 F) o Storage Temperature:-20 C-70 C (-4 F to 158 F) 	1
93	Multimeter digital Technical Specifications: DC Voltage range :200mV, 2V, 20V, 200V, 600V Accuracy :+(0.5% + 4 Digit) DC Current range : 200microA , 2mA, 20mA, 200mA, 10A Accuracy :+(1.5% + 3 Digit) AC Voltage range :200V , 600V Accuracy :+(1.2% + 10 Digit) Resistance range :200ohm, 2Kohm, 20Kohm, 200Kohm, 20Mohm Accuracy :+(0.8% + 5 Digit) Input impedance :10Mohm Sampling Rate :3s AC Frequency Response:40 ~ 400Hz Power requirement : Battery 9V (Included) Standard Accessories : Probes, Batteries, Instruction manual	5
94	Oil can 0.5/0.25 liter capacity	2

95	Oil pump for dismantling and assembling.	2
96	Oil Stone 15 cm x 5 cm x 2.5 cm	1
97	<p>Oscilloscope 20MHz</p> <p>Features : DC ~ 20MHz Dual channel, X Y mode 6" display cathode ray tube, sensitivity triggering up to 1mV/divison TV synchronous separation circuit to observe stable TV signal Polarity reversal, CH 1Sync output</p> <p>Technical Specifications : CRT : 6" Rectangular screen with internal graticule, 8 x 10 Div (1Div=1cm)</p> <p>Vertical Deflection Vertical Operation Mode: CH1, CH2, ADD, ALT, CHOP (CH1, CH2) Sensitivity : 5mV/div to 5V/div +3%, 1mV/div to 1V/div +5% (x5),10 steps Rise time : <17.5ns Input impedance: 1Mohm Max. Input voltage: 250V (DC+AC peak value) at 1kHz (250V, DC+AC) Input coupling: AC, DC, GND Polarity selection: +(CH2 only) Display mode : 1, 10, X-Y</p> <p>Horizontal Deflection Sweep time : 0.2micros/div to 0.2s/div Sweep expansion : x10 Accuracy : 3%</p> <p>Trigger System Triggering mode: Auto, NORM, TV-V, TV-H Trigger source: VERT,CH1, LINE, EXT Sensitivity auto: 20Hz~20MHz(VERT) Frequency norm: 0.5div INT, 0.5Vp-p EXT TV-H : At least 1div or 1Vp-p Input impedance: 1M ohm X-Y Phase Difference: <30, DC-50KHz Calibration waveform: Frequency: 1kHz 20%, Voltage: 0.5V 1% Power requirement: 220 VAC +10% , 50 Hz Weight : 8.0Kg Approx. Dimensions (mm): 310 (L) x370(B) x 130(H)</p> <p>Standard Accessories : Power cable, Probe - 2Nos., Instruction manual</p>	1
98	Outside micrometer 0 to 25 mm	4
99	Outside micrometer 25 to 50 mm	4
100	Outside micrometer 50 to 75 mm	1

101	Outside micrometer 75 to 100 mm	1
102	Pat melting	2
103	Philips Screw Driver set of 5 pieces (100 mm to 300 mm)	2 sets
104	Pipe cutting tool	2
105	Pipe flaring tool	2
106	Piston ring compressor	2
107	Piston Ring expander and remover.	2
108	Piston Ring groove cleaner.	1
109	Pliers combination 20 cm.	2
110	Pliers flat nose 15 cm	2
111	Pliers round nose 15 cm	2
112	Pliers side cutting 15 cm	2
113	Poker	2
114	Portable electric drill Machine	1
115	Portable oil monitoring Indicator	1
116	Power Supply 0-12 v, lamp	1
117	Prick Punch 15 cm	4
118	Punch Letter 4mm	2 set
119	Radiator cut section-cross flow	1
120	Radiator cut section-down flow	1
121	Radiator pressure cap	2
122	Rake	1
123	Rear axle assembly-gear box steering box assembly of the diesel engine	2 set
124	Ridger.	2
125	Right cut snips 250mm	4
126	Rivet sets snap and Dolly combined 3mm, 4mm, 6mm	4
127	Scraper flat 25 cm	2
128	Scraper half round 25 cm	2
129	Scraper Triangular 25 cm	2
130	Scriber 15 cm	2
131	Scriber with scribing black universal	2
132	Set of stock and dies - UNC, UNF and metric	2 sets
133	Shear Tin Man's 450 mm x 600mm	4
134	Sheet Metal Gauge	2
135	Sher Tinmans 300mm	4
136	Shovel	2
137	Soldering Copper Hatchet type 500gms	4
138	Solid Parallels in pairs (Different size) in Metric	2
139	Spanner Clyburn 15 cm	1
140	Spanner D.E. set of 12 pieces (6mm to 32mm)	4
141	Spanner T. flocks for screwing up and up-screwing inaccessible positions	2

170	Torque wrenches 5-35 Nm, 12-68 Nm & 50-225 Nm	1 each
171	Trammel 30 cm	2
172	Turbocharger cut sectional view	1
173	Tyre pressure gauge with holding nipple	2
174	Universal puller for removing pulleys, bearings	1
175	V' Block 75 x 38 mm pair with Clamps	2
176	Vacuum gauge to read 0 to 760 mm of Hg.	2
177	Valve Lifter	1
178	Valve spring compressor universal.	1
179	vernier caliper 0-300 mm with least count 0.02mm	4
180	Vice grip pliers	2
181	Voltmeter 50V/DC	4
182	Water pump for dismantling and assembling	2
183	Wing compass 25 cm	2
184	Wire Gauge (metric)	4
185	Work bench 250 x 120 x 60 cm with 4 vices 12cm Jaw	4
1	3 furrow disc plough with scrapersyk	1
2	9 tine cultivator-spring loaded mounted type	1
3	Arbor press hand operated 2 ton capacity	1
4A	<p>Automotive exhaust (gas analyzer Petrol) Conforms to IS : 14553 - derived from ISO 11614 : 1999</p> <ul style="list-style-type: none"> • Measures smoke opacity of diesel vehicles in % opacity and K value • Measurement principle : Partial flow, optics based on folded geometry • Suitable for free acceleration test • Engine RPM (Battery based) and Engine oil temperature measurement • Operates on 230V AC (or) 12V DC power supply • Portable, Compact & light weight design, suitable for "Road Tests" using vehicle battery • Low & High voltage indication for battery operation • Automatic Zero and Span calibration • Automatic Pressure regulation and moisture separation • Handheld, Menu driven LCD remote control unit • Pass / Fail indication and emission limit in printout • Vehicle no., vehicle specification, operator name and test data in printout • RS232C serial port for PC interface 	1
4B	<p>Diesel Smoke meter</p> <ul style="list-style-type: none"> • Conforms to ISO 3930 • NDIR technology • Engine RPM measurement facility • 7 Segment LED display 	

	<ul style="list-style-type: none"> • Automatic condensate discharge • Automatic zero calibration • Digital span calibration • RS232C serial port for PC interface • NOx measurement (Optional) • Engine oil temperature measurement (Optional) • Portable light weight design • DC operation suitable for “Road tests” using vehicle battery • Display of Lambda / AFR / PEF • Petrol / CNG / LPG selection • Indication for Low / High flow • Indication for battery Low / High voltage • Electronic leak check facility • Gas scrubber for cleaning of impure particles • HC residue test 	
5	Bench lever shears 250mm Blade x 3mm Capacity	1
6	<p>Discrete Component Trainer / Basic Electronics Trainer</p> <p>Technical Specifications :</p> <p>Inbuilt Variable / Fixed DC Regulated Power Supplies</p> <p>Output voltages : 0-3VDC : 0-30VDC : +5VDC</p> <p>Inbuilt AC Power Supplies</p> <p>Output voltages : 10 - 0 - 10VAC/ 500mA</p> <p>Glass Epoxit PCB used as front panel of 270 mm x 170 mm & mounted on light weight shock proof plastic cabinet</p> <p>Symbol diagram printed on Glass Epoxit PCB & all important test Points are brought out on front panel</p> <p>Power requirement : 230 VAC 10%, 50Hz.</p> <p>Weight : 2.2 Kg Approx.</p> <p>Dimensions (mm) : 300(L) x 175(B) x 75(H)</p>	1
7	Drilling machine bench to drill up to 12mm dia along with accessories	1
8	Dual Magnetization Yoke : AC / HWDC, 230 VAC, 50Hz	1 set
9	Gas Welding Table 1220mm x760mm	2
10	Grinding machine (general purpose) D.E. pedestal with 300 mm dia wheels rough and smooth	1
11	Liquid penetrant Inspection kit	1 set
12	<p>Multi Scan Tool</p> <p>Technical Specification</p> <ul style="list-style-type: none"> ○ Android OS, prevailing panel pc configuration ○ CPU: Dual core 1GHz ○ Polymer lithium-ion battery, 3000mA ○ Extended memory card, support 32G Micro SD (TF) card ○ Storage capacity: 2GB ○ Internal Memory: 512MB 	1

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13	P.T.O. operated rotary lawn mower	1
14	Pipe Bending Machine (Hydraulic type) 12mm to 30mm	1
15	Pneumatic rivet gun	2
16	Spring tension tester	1
17	Tin smiths bench folder 600 x 1.6mm	1
18	Tractor Diesel Engine 4 stroke for Dismantling and assembling with	2
19	Trolley type portable air compressor single cylinder with 45 liters capacity Air	1
20	Welding plant Oxy-Acetylene complete (high pressure)	1
21	Welding Transformer (150-300 Amps)	1
22	Wheel type tractor fitted with diesel engine with standard accessories	2
1	Automatic Transmission oils	As required
2	Battery- SMF	As required
3	Brake fluids	As required
4	Chalk, Prussian blue.	As required
5	Chemical compound for fasteners	As required
6	Diesel	As required
7	Different type gasket material	As required
8	Different type of oil seal	As required
9	Drill Twist (assorted)	As required
10	Emery paper - 36-60 grit , 80-120	As required
11	Engine coolant	As required
12	Engine oil	As required
13	Gear oils	As required
14	Hacksaw blade (consumable)	As required
15	Hand rubber gloves tested for 5000 V	5 pair

16	Holders, lamp teakwood boards, plug sockets, solders, flux wires and cables batteries round consumable blocks and other consumables as required	As required
17	Hydrometer	8
18	Lapping abrasives	As required
19	Leather Apron	5
20	Petrol	As required
21	Power steering oil	As required
22	Radiator Coolants	As required
23	Safety glasses	As required
24	Steel wire Brush 50mmx150mm	5
25	Engine Spare Parts	As per req.
26	Gloves for Welding (Leather and Asbestos)	5 sets
1	Book shelf (glass panel) 6½ ' x 3' x 1½'	As required
2	Computer Chair	1+1
3	Computer Table	1+1
4	Desktop computer and related MS office software	1+1
5	Discussion Table 8' x 4' x 2½ '	2
6	Fire Extinguishers, first- aid box	As required
7	Instructional Material – NIMI Books/Ref.books	As required
8	Internet connection with all accessories	As required
9	Laser printer	1
10	LCD projector/ LED /LCD TV (42")	
11	Multimedia DVD for Automotive application/subjects	As required
12	Online UPS 2KVA	1
13	Stools	21
14	Storage Rack 6½ ' x 3' x 1½'	As required
15	Storage shelf 6½ ' x 3' x 1½'	As required.
16	Suitable class room furniture	As required
17	Suitable Work Tables with vices	As required
18	Tool Cabinet - 6½ ' x 3' x 1½'	2

19	Trainees locker 6½' x 3' x 1½'	2 Nos. to accommodate 20 Lockers
	Draughtsman drawing instrument box	20+1 set
	Set square celluloid 45(250 X 1.5	20+1 set
	Set square celluloid 30-60 (50 X 1.5 mm)	20+1 set
	Mini drafter	20+1 set
	Drawing board (700mm x500 mm) IS: 1444	20+1 set
	Draughtsman table	20 Nos.
	Draughtsman stool	20Nos.