



CHEMICAL INDUSTRIES EDUCATION & TRAINING AUTHORITY
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SD - 004: ELECTRICIAN EQUIPMENT AND TOOL LIST

SECTION A: TOOL LIST

To be completed by applicant during self evaluation

No.	TOOLS	RATIO TO APPIE / LEARN	YES	NO
	KEY – ALLEN ARNDT 911 ETZ 162 1/16 – 0.05	1 : 1		
1.	KEY – ALLEN ARNDT 911 ETM 1.5 – 12MM	1 : 1		
2.	PLIER – LONGNOSE WILL 35/BS 200	1 : 1		
3.	PLIER – COMBINATION WILL 62/A3 200	1 : 1		
4.	PLIER – SIDECUT HD SKILLCRAFT M200	1 : 1		
5.	PLIER – WATERPUMP GEDORE 141 250 MM	1 : 1		
6.	PLIER – CIRCLIP O/S STR WILL 141 160	1 : 1		
7.	PLIER – CIRCLIP INS STR WILL 143 180	1 : 1		
8.	VICE GRIP – GEDORE 137 250MM	1 : 1		
9.	SCREWDRIVER – WERALIT 10001 BLK PT	1 : 1		
10.	FRAME HACKSAW – MITCO PROFESSIONAL	1 : 1		
11.	FRAME HACKSAW – ECLIPSE JUNIOR 14J	1 : 1		
12.	KNIFE TRIMM – STANLEY 2-10-099 RET	1 : 1		
13.	HAMMER – BALLPEIN GEDORE 300G	1 : 1		
14.	HAMMER – CLUB DIAMOND 1.8KG	1 : 1		
15.	NYLON Mallet - THORN	1 : 1		
16.	WRENCH ADJUSTABLE – GEDORE 62 300MM	1 : 1		
17.	WRENCH ADJUSTABLE – IREGA 99 150MM	1 : 1		
18.	SPANNER – GEDORE 1B/18M 6 – 30MM	1 : 1		
19.	SPANNER – GEDORE 1B COMB. 23MM	1 : 1		
20.	SOCKET SET – GEDORE C19 TM97U-10T	1 : 1		
21.	DIVIDER SPRING – GROZ DD/6150MM	1 : 1		
22.	TINSNIP – GEDORE 8531 300MM	1 : 1		
23.	SIDE CUTTERS – CRESCENT 180MM	1 : 1		
24.	TOOLBOX SET – GEDORE # 1262 46 X 26 X 21 M	1 : 1		
25.	BRASS LOCK – VIRO 302 40MM	1 : 1		
MEASURING EQUIPMENT				
26.	CALIPER VERNIER – MIT 530101 150 1/20	1 : 1		
27.	CALIPER VERNIER 0 - 150	1 : 1		
28.	GAUGE – FEELER VOGEL GV16C M100	1 : 1		
29.	TAPE MEASURE – STANLEY 33 – 194 5M	1 : 1		
30.	STEEL RULE – GROZ 150MM	1 : 1		
31.	STEEL RULE – GROZ 300MM	1 : 1		
WORKSHOP EQUIPMENT				
32.	PORTABLE DRILLING MACHINE	One per w.shop		
33.	PORTABLE GRINDING MACHINE	One per w.shop		
34.	PORTABLE JIG-SAW	One per w.shop		

No.	TOOLS	RATIO TO APPIE / LEARN	Yes	No
ARC WELDING				
35.	AC/DC WELDING MACHINES	5:1		
36.	WELDING SCREENS	5:1		
37.	ELECTRODE HOLDER	5:1		
38.	EARTH CLAMPS	5:1		
39.	CABLES	5:1		
40.	WIRE BRUSH	5:1		
41.	CHIPPING HAMMER	5:1		
42.	ARC WELDING HELMET	5:1		
43.	CONSUMABLE MATERIALS	5:1		
GAS WELDING/BRAZING				
44.	OXYGEN CYLINDER	5:1		
45.	ACETYLENE CYLINDER	5:1		
46.	CYLINDER TROLLEY	5:1		
47.	PRESSURE REGULATORS	5:1		
48.	HOSES AND COUPLINGS	5:1		
49.	FLASHBACK ARRESTERS	5:1		
50.	TORCHES	5:1		
51.	NOZZLES (ASSORMENT OF SIZES)	5:1		
52.	TIP CLEANERS	5:1		
53.	SPARK LIGHTER	5:1		
54.	CONSUMABLE MATERIAL (APPLICABLE)	5:1		
55.	GOGGLES (WELDING)	5:1		
BASIC LIFTING EQUIPMENT				
56.	CHAIN BLOCK: 2 TON MAX	One per w.shop		
57.	COFFING BLOCK: 2 TON MAX	One per w.shop		
58.	SHACKLES: 2 TON MAX	One per w.shop		
59.	CHAIN CLINGS: 2.5 TON MAX	One per w.shop		
60.	WIRE ROPE SLINGS: 20MM DIAMETER	One per w.shop		
ELECTRONICS				
61.	Resistors - wire wound up to 10 watts - carbon and metal oxides (1 watt) Capacitors - electrolytic and ceramic Diodes Transistors	5:1		

No.	TOOLS	RATIO TO APPIE / LEARN	YES	NO
	Thyristors Integrated circuits			
62.	Construct, solder and fault find the following electronic circuits: Bi-stable multi vibrator, A-stable multi vibrator, Mono-stable multi vibrator, Class A amplifier, elementary SCR speed control.	5:1		
63.	Programme P.L.C. systems.	5:1		
ELECTRONIC AND ELECTRONIC TEST INSTRUMENTS				
64.	Select and use the following test instruments and interpret the readings: <ul style="list-style-type: none"> - voltmeter - analogue and digital - ammeter - analogue and digital - ohmmeter - analogue and digital - multimeter - analogue and digital - wheatstone bridge - analogue or digital - pulse generator - oscilloscope (analogue dual trace up to 20mHZ) - frequency counter - milli-amp source - milli-volt source - capacitance meter analogue and digital 5 dual power supply 0-30 volt 3 amp (with current limiting)	5:1		
SOLDERING AND DE-SOLDERING				
65.	Display the ability to Solder and de-solder electronic components from PC boards.	5:1		
MICRO PROCESSORS				
90	Microprocessor with reference to the bus systems keyboard, I/O parts, registers, memory and CPU.	5:1		
91	Various Sensors and transmitters used for pressure; temperature; level; load cell and flow.	5:1		
CABLES				
95	Multi and single core, stranded PVC armoured cable up to 16mm ² 4 core, 1200 volt insulation.	5:1		
AC MACHINES				
96	AC machines: <ul style="list-style-type: none"> - single phase induction motors - 3 phase slip ring induction motors - 3 phase squirrel cage induction motors - alternators - transformers 	5:1		
D C MACHINES				
97	. series motor . shunt motor . compound motor	5:1		
WIRING				
98	Panels, starters, motors, motor control gear, electrical	5:1		

No.	TOOLS	RATIO TO APPIE / LEARN	YES	NO
	distribution systems, protective systems, lighting systems including discharge and fluorescent lamps.			
INSTALLATIONS				
100	<ul style="list-style-type: none"> . switch boards . distribution boards . motor control gear . isolators . electrical equipment 	5:1		
101	Introduction to wire-ways including the following: <ul style="list-style-type: none"> . racks . trunking . flexible conduit 	5:1		
SAFETY				
66.	Overall	1 : 1		
67.	Safety Boots	1 : 1		
68.	Ear Plugs	1 : 1		
69.	Safety Goggles	1 : 1		
70.	Hard Hat	1 : 1		
COMMENTS				
APPLICANT		DATE		

*Apprentice must have exposure on these areas

SECTION B: SITE VISIT INSPECTION

To be completed by CHIETA Representative during sit visit

COMMENTS			
CHIETA REPRESENTATIVE		DATE	