#### FOR OFFICIAL USE ONLY

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06.06.0000.214.eval.23/Truck maint & wksp Lor (med)

\6 April 2024

## EVALUATION OF TRUCK MAINTENANCE (MEDIUM) / WORKSHOP LORRY (MEDIUM)

#### Reference:

- A. Army Headquarters, Master General of the Ordnance Branch, Electrical and Mechanical Engineers Directorate letter number 23.01.901.048.06.079.01.09.04.24 Dated 09 April 2024 (Not to all).
- 1. Please be informed that, Bangladesh Army is planning to procure **Truck Maintenance (Medium)** / **Workshop Lorry (Medium)** for Bangladesh Army. In this regard, you are requested to provide technical offer along with original brochure/ catalogue, technical/ training/ operational/maintenance manuals and budgetary offers along with 100% updated original spare parts catalogue (Hard & Soft copy) and authorization letter. Offered models should be compatible with general technical specification attached herewith and to be submitted directly to Army Headquarters, Master General of the Ordnance Branch, Electrical and Mechanical Engineers Directorate, Dhaka Cantonment by **30 April 2024** with intimation to this office. You are also requested to provide enlistment certificate of DGDP along with technical offer. Lack of any information will disqualify the offer.
- 2. Forwarded for your information and necessary action please.

SHEULY AKTER Lieutenant Colonel For Director General

A. Technical Specification of Truck Maintenance (Medium) / Workshop Lorry (Medium) - 11 (Eleven) Pages only.

Distribution:

Annexure:

External:

Action:

(All Concerned Supplier/Firm)

Information:

Army Headquarters, General Staff Branch, Weapon Equipment and Statistic Directorate

Army Headquarters, Master General of the Ordnance Branch, Ordnance Directorate

Army Headquarters, Master General of the Ordnance Branch, Electrical and Mechanical Engineers Directorate Internal:

IT Section: Publish in web site.

## GENERAL SPECIFICATION: TRUCK MAINTENANCE (MEDIUM) / WORKSHOP LORRY (MEDIUM)

	Description of General Specifications : GENERAL SPECIFICATION	Required Specifications	Remark
1.	Name of the Firm/Local Agent with Full	To be mentioned	the many and
1.0	Address (Addresses, Telephone, Fax, Email,		
	Website)		
2.	Name of Manufacturer with Full Address	To be mentioned	
	(Addresses, Telephone, Fax, Email,		
	Website)		
3.	Name of Principal with Full Address	To be mentioned	
	(Addresses, Telephone, Fax, Email,		
	Website)		
4.	Nomenclature	Truck Maintenance (Medium) /	
		Workshop Lorry (Medium)	
5.	Make & Model	To be mentioned	
6.	Country of Origin	Group-A & B	
7.	Country of Manufacturer	Group-A & B	
8.	Country of Assembly	Group-A & B	
9.	Year of Manufacture	Not before the year of contract	
10.	Type of Drive	RHD	
11.	Configuration	Minimum 4x4	
12.	Weights (in Kg or Ton).		
	a. Kerb Weight (Chassis + Superstructure)	To be mentioned	
	b. Pay Load	To be mentioned	
	c. Gross Vehicle Weight (GVW)	To be mentioned	
40	d. Power/Weight Ratio	To be mentioned	
13.	Dimensions.	To be monthined	
	a. Overall Length (mm)	To be mentioned	
	b. Overall Width (mm)	To be mentioned	
	c. Overall Height (mm)	To be mentioned	
	d. Wheel Base (mm)	To be mentioned	
	e. Wheel Tread Front (mm)	To be mentioned	
	f. Wheel Tread Rear (mm)	To be mentioned	
	g. Ground Clearance (mm)	Minimum 300 mm	
	h. Angle of Approach in degree	Minimum 30°	
	j. Angle of Departure in degree	Minimum 30 <sup>0</sup>	
	k. Gradeability (degree)	Minimum 30 <sup>0</sup>	
	I. Maximum Turning Radius (Meter) - from	To be mentioned	
	outer wheel		
	m. Fording Ability (mm)	600 mm (Minimum)	
	n. Ground Pressure (kg/square cm)	To be mentioned	
_	2: TECHINICAL SPECIFICATION		
14.	Engine.		
	a. Type	To be mentioned	
	b. Make & Model	To be mentioned	
	c. Country of Origin	Group-A & B	
	d. Country of Assembly	Group-A & B	
	e. Country of Manufacture	Group-A & B	
	f. Year of Manufacture	Not before the year of contract	
	g. No of Cylinder	6 cylinder (Minimum)	
	h. Bore & Stroke	To be mentioned	
	j. Displacement Volume (cc)	7000cc (Minimum)	
	k. Compression Ratio	To be mentioned	
	I. Torque (N-m) at rated rpm	To be mentioned	
		To be mentioned 240 HP (Minimum), rpm to be	
	I. Torque (N-m) at rated rpm m. HP at Rated rpm	To be mentioned 240 HP (Minimum), rpm to be mentioned	
	Torque (N-m) at rated rpm     HP at Rated rpm     Type of Injection	To be mentioned 240 HP (Minimum), rpm to be mentioned To be mentioned	
	I. Torque (N-m) at rated rpm m. HP at Rated rpm n. Type of Injection p. Cooling System	To be mentioned 240 HP (Minimum), rpm to be mentioned To be mentioned Liquid Cooled	
	I. Torque (N-m) at rated rpm m. HP at Rated rpm n. Type of Injection p. Cooling System q. Turbo charger with intercooler (if available)	To be mentioned 240 HP (Minimum), rpm to be mentioned To be mentioned Liquid Cooled To be mentioned	
	I. Torque (N-m) at rated rpm m. HP at Rated rpm n. Type of Injection p. Cooling System	To be mentioned 240 HP (Minimum), rpm to be mentioned To be mentioned Liquid Cooled To be mentioned During inspection Engine Test Bench	
	I. Torque (N-m) at rated rpm m. HP at Rated rpm n. Type of Injection p. Cooling System q. Turbo charger with intercooler (if available)	To be mentioned  240 HP (Minimum), rpm to be mentioned  To be mentioned  Liquid Cooled  To be mentioned  During inspection Engine Test Bench Report (for each model) which was	
	I. Torque (N-m) at rated rpm m. HP at Rated rpm n. Type of Injection p. Cooling System q. Turbo charger with intercooler (if available)	To be mentioned  240 HP (Minimum), rpm to be mentioned  To be mentioned  Liquid Cooled  To be mentioned  During inspection Engine Test Bench Report (for each model) which was prepared by manufacturer during	
	I. Torque (N-m) at rated rpm m. HP at Rated rpm n. Type of Injection p. Cooling System q. Turbo charger with intercooler (if available)	To be mentioned  240 HP (Minimum), rpm to be mentioned  To be mentioned  Liquid Cooled  To be mentioned  During inspection Engine Test Bench Report (for each model) which was prepared by manufacturer during production of engine at manufacturing	
	I. Torque (N-m) at rated rpm m. HP at Rated rpm n. Type of Injection p. Cooling System q. Turbo charger with intercooler (if available)	To be mentioned  240 HP (Minimum), rpm to be mentioned  To be mentioned  Liquid Cooled  To be mentioned  During inspection Engine Test Bench Report (for each model) which was prepared by manufacturer during production of engine at manufacturing factory must be produced and submitted	
	I. Torque (N-m) at rated rpm m. HP at Rated rpm n. Type of Injection p. Cooling System q. Turbo charger with intercooler (if available)	To be mentioned  240 HP (Minimum), rpm to be mentioned  To be mentioned  Liquid Cooled  To be mentioned  During inspection Engine Test Bench Report (for each model) which was prepared by manufacturer during production of engine at manufacturing factory must be produced and submitted to the PSI team for each model (duly	,
	I. Torque (N-m) at rated rpm m. HP at Rated rpm n. Type of Injection p. Cooling System q. Turbo charger with intercooler (if available)	To be mentioned  240 HP (Minimum), rpm to be mentioned  To be mentioned  Liquid Cooled  To be mentioned  During inspection Engine Test Bench Report (for each model) which was prepared by manufacturer during production of engine at manufacturing factory must be produced and submitted to the PSI team for each model (duly signed and stamped by the	,
	I. Torque (N-m) at rated rpm m. HP at Rated rpm n. Type of Injection p. Cooling System q. Turbo charger with intercooler (if available)	To be mentioned  240 HP (Minimum), rpm to be mentioned  To be mentioned  Liquid Cooled  To be mentioned  During inspection Engine Test Bench Report (for each model) which was prepared by manufacturer during production of engine at manufacturing factory must be produced and submitted to the PSI team for each model (duly signed and stamped by the manufacturer). Other engines	,
	I. Torque (N-m) at rated rpm m. HP at Rated rpm n. Type of Injection p. Cooling System q. Turbo charger with intercooler (if available)	To be mentioned  240 HP (Minimum), rpm to be mentioned  To be mentioned  Liquid Cooled  To be mentioned  During inspection Engine Test Bench Report (for each model) which was prepared by manufacturer during production of engine at manufacturing factory must be produced and submitted to the PSI team for each model (duly signed and stamped by the manufacturer). Other engines (mentioning engine number) of the same	
	I. Torque (N-m) at rated rpm m. HP at Rated rpm n. Type of Injection p. Cooling System q. Turbo charger with intercooler (if available)	To be mentioned  240 HP (Minimum), rpm to be mentioned  To be mentioned  Liquid Cooled  To be mentioned  During inspection Engine Test Bench Report (for each model) which was prepared by manufacturer during production of engine at manufacturing factory must be produced and submitted to the PSI team for each model (duly signed and stamped by the manufacturer). Other engines (mentioning engine number) of the same model must be certified confirming the	
	I. Torque (N-m) at rated rpm m. HP at Rated rpm n. Type of Injection p. Cooling System q. Turbo charger with intercooler (if available)	To be mentioned  240 HP (Minimum), rpm to be mentioned  To be mentioned  Liquid Cooled  To be mentioned  During inspection Engine Test Bench Report (for each model) which was prepared by manufacturer during production of engine at manufacturing factory must be produced and submitted to the PSI team for each model (duly signed and stamped by the manufacturer). Other engines (mentioning engine number) of the same model must be certified confirming the engine Test Bench Report by the	, DIR
	I. Torque (N-m) at rated rpm m. HP at Rated rpm n. Type of Injection p. Cooling System q. Turbo charger with intercooler (if available)	To be mentioned  240 HP (Minimum), rpm to be mentioned  To be mentioned  Liquid Cooled  To be mentioned  During inspection Engine Test Bench Report (for each model) which was prepared by manufacturer during production of engine at manufacturing factory must be produced and submitted to the PSI team for each model (duly signed and stamped by the manufacturer). Other engines (mentioning engine number) of the same model must be certified confirming the engine Test Bench Report by the manufacturer (duly signed and	J. DIR
	I. Torque (N-m) at rated rpm m. HP at Rated rpm n. Type of Injection p. Cooling System q. Turbo charger with intercooler (if available) r. Engine Test Bench Report	To be mentioned  240 HP (Minimum), rpm to be mentioned  To be mentioned  Liquid Cooled  To be mentioned  During inspection Engine Test Bench Report (for each model) which was prepared by manufacturer during production of engine at manufacturing factory must be produced and submitted to the PSI team for each model (duly signed and stamped by the manufacturer). Other engines (mentioning engine number) of the same model must be certified confirming the engine Test Bench Report by the manufacturer (duly signed and stamped).	DIR DIR
	I. Torque (N-m) at rated rpm m. HP at Rated rpm n. Type of Injection p. Cooling System q. Turbo charger with intercooler (if available)	To be mentioned  240 HP (Minimum), rpm to be mentioned  To be mentioned  Liquid Cooled  To be mentioned  During inspection Engine Test Bench Report (for each model) which was prepared by manufacturer during production of engine at manufacturing factory must be produced and submitted to the PSI team for each model (duly signed and stamped by the manufacturer). Other engines (mentioning engine number) of the same model must be certified confirming the engine Test Bench Report by the manufacturer (duly signed and	DIR
	I. Torque (N-m) at rated rpm m. HP at Rated rpm n. Type of Injection p. Cooling System q. Turbo charger with intercooler (if available) r. Engine Test Bench Report	To be mentioned  240 HP (Minimum), rpm to be mentioned  To be mentioned  Liquid Cooled  To be mentioned  During inspection Engine Test Bench Report (for each model) which was prepared by manufacturer during production of engine at manufacturing factory must be produced and submitted to the PSI team for each model (duly signed and stamped by the manufacturer). Other engines (mentioning engine number) of the same model must be certified confirming the engine Test Bench Report by the manufacturer (duly signed and stamped).	DATE
	I. Torque (N-m) at rated rpm m. HP at Rated rpm n. Type of Injection p. Cooling System q. Turbo charger with intercooler (if available) r. Engine Test Bench Report s. Emission Standard	To be mentioned  240 HP (Minimum), rpm to be mentioned  To be mentioned  Liquid Cooled  To be mentioned  During inspection Engine Test Bench Report (for each model) which was prepared by manufacturer during production of engine at manufacturing factory must be produced and submitted to the PSI team for each model (duly signed and stamped by the manufacturer). Other engines (mentioning engine number) of the same model must be certified confirming the engine Test Bench Report by the manufacturer (duly signed and stamped).  Euro-3/ Euro-4	DIR ONTE

erial	Description of General Specifications	Required opcomodations	Remark
15.	Fuel System.	Details to be mentioned	
	a. Type of Fuel	Diesel	
- 1	b. Fuel Tank Capacity (litre)	250 litre (Minimum)	
1	c. Cruising Range	Minimum 500 km	
1	d. Fuel Consumption (for 100 km)	To be mentioned	
1	e. Fuel Injection Pump	Details to be mentioned	
16.	Chassis.	4 2A (U) 1 224 1	
10.	a. Type	To be mentioned	
-	b. Country of Origin	Group-A & B	
	c. Country of Manufacturer	Group-A & B	
	c. Country of Manufacturer	Group-A & B	
	d. Country of Assembly	To be mentioned	
	e. Length (mm)	To be mentioned	
	f. Width (mm)	To be mentioned	
	g. Height from Ground (mm)	To be mentioned	
	h. Thickness of Chassis (mm)	To be mentioned	
17.	Transmission.	- 1 (Const.)	
200	a. Type of Transmission (Manual/Auto)	To be mentioned	
	b. Make & Model	To be mentioned	
	c. Country of Origin	Group-A & B	
	d. Country of Manufacturer	Group-A & B	
	e. Country of assembly	Group-A & B	
	f. No of Gears (Forward & Reverse)	To be mentioned	
	g. Gear Ratio	To be mentioned	
40	g. Gear Ratio		
18.		To be mentioned	
	a. Type of Transfer Case	To be mentioned	
	b. Make & Model	Group-A & B	
	c. Country of Origin		
	d. Country of Manufacturer	Group-A & B	
	e. Country of Assembly	Group-A & B	
19.	Front Axle		
101	a. Type	To be mentioned	
	b. Axle Capacity	To be mentioned	
	c. Country of Origin	Group-A & B	
	d. Country of Manufacturer	Group-A & B	
	d. Country of Manufacturer		
20.	Rear Axle.	To be mentioned	
	а. Туре	To be mentioned	
	b. Axle Capacity		
	c. Country of Origin	Group-A & B	(Caralle 1) (Caralle 1)
	d. Country of Manufacturer	Group-A & B	
21.	Vehicle Speed		
-	a. High Way	To be mentioned	
	b. Cross Country	To be mentioned	
22.	Electrical System.		
	a. Electric System of Vehicle (Volt)	24 Volt	
	b. Battery (Volt & AH)	To be mentioned	
	c. No of Battery	To be mentioned	
	d. Alternator (Volt & Amp)	Volt & Amp to be mentioned	
	e. Starter (Volt & KW)	Volt & KW to be mentioned	
		700,000	
23.	Brake System.	To be mentioned	
	a. Service Brake	To be mentioned	
	b. Parking Brake	Two line trailer brake coupling at rear	
Į.	c. Trailer Brake	with 12 pin elec connector NATO std for	
Į.			
1		trailer	
	d. Any other Brake	Details to be mentioned	
24.	Steering System	Power Steering	1
25.			1
1	a. Front	To be mentioned	
	b. Rear	To be mentioned	
26	- The late of the second secon		
20.	a. Tyre Size	To be mentioned	
	b. Tyre Brand	Bridgestone/ Dunlop/ Goodyear/	
	D. Tyle Dialid	Yokohama/ Toyo/ Uniroyal/ Continental/	
		Michelin/ Folda/ Firestone/ Armstrong/	
		AMTEL/ Pirelli/ Hankook and Kumho	1
	c. Country of Origin & Manufacturer	USA Japan, EU Countries, Russia,	
	6. Country of Origin & Mandiacturer	Brazil, Indonesia, Malaysia, Philippines	
1		Singapore, Thailand and South Korea	
		Non-Directional (ND), Ground Grip (GG)	1000
	d. Tyre Type/Pattern	and Cross Country (CC).	1/2 HE
1			17.17
	e. Number of Tyres Including Spare Tyre	To be mentioned	I CRIF I
	f. Rim size	To be mentioned	111 1
	3		1181
		2	138AD
	sers\GSPC\Desktop\Gen Spec -Truck Maint & wksp lorry Med -Fwd DGDP.do	RESTRICTED	- manual

Serial	Description of General Specifications	Required Specifications	Remark
27.	Cabin with AC.	Reinforced structure, hard top, insulated with thermal controller (AC)	
	a. Make and Model	To be mentioned	
	b. Country of Origin	Group-A & B	
	c. Country of Manufacturer	Group-A & B	
	d. Country of Assembly	Group-A & B	
	e. Seating Capacity (Minimum)	1 x Driver + 1 x Co-driver	
	f. Details of AC	To be mentioned	
28.	Standard Accessories	10 DO INCINIONEO	
	a. <u>Blackout Lights</u> (i) 02 x Blackout Light at Front (ii) 02 x Blackout Light at Rear (iii) 01 x Blackout Convoy Light (iv) 01 x Blackout Driving Light	To be provided	
	b. Tool Box and Jerrican	Tool box carrier to be provided below the load body with external lockers	
	c. First Aid Box	To be provided	
3	d. Towing Hook (At Front two shackles of 15	To be provided	
	Ton & at Rear one hook of 8 Ton) (Minimum)	To be provided	
29.	Accessories to be Provided With Each Vehicle:		
	a. 01 set x Spare Wheel Complete set with Fitting Attachment under the Floor with	To be provided	
	lifting/Jack up facilities b. Lights: 02 x Head Lights, 04 x Turn Signal Light (Front & Rear), 02 x Stop/Brake Lights, 02 x Reverse Light, 01 x Cabin Light, All Gauges and Meters in Dashboard Fuel Gauges, Hazard Warning Lights etc as Required for Proper Functioning of All	To be provided	
	System of the Vehicle  c. 02 x Fog Lamp at Front for Driving During Foggy Weather	To be provided	
	d. 01 kg A, B, C and E type Fire extinguisher with Bracket and Chemical	To be provided	
	e. Seat belt for Driver and Co-driver	To be provided	
	f. Inspection Lamp Complete with Cable (10 meter), Plug & Arrangement of Socket in the Vehicle for using Inspection Lamp/Inspection Lamp with Battery and Battery Charger	To be provided	
	g. 01 set x Complete Floor mat Front and Rear	To be provided	8
	h. 02 x Sun Visors with Fitting Brackets	To be provided	
	<li>j. Rear View Camera with LCD Display for Driver</li>	To be provided	
	k. AM/FM Radio set Complete	To be provided	
	I. CD/DVD Player Complete	To be provided	
	m. Both side Front Door. Full size Normal Door with Normal Winding Windows Power Operated.	To be provided	
	n. Type of Seat and Seat Material	Details to be mentioned	
	p. Boost Ventilator with Fresh, Cool and Hot Air Circulation (Auto FR, LH, RH independent control + manual RR cooler i.e. duel type air condition for driver cabin)	To be provided	
	q. Driver seat: Double side Front and Rear Height Adjustable with Full Tilting System of Back Rest for Driver and Second Seater	To be provided	
	r. Rifle Clip for Placing three Rifles Inside the Cabin	To be provided	
	s. Intermittent Windshield Wiper 02 x Front and 01 x Rear	To be provided	19
	t. Hydraulic Jack 20 Ton capacity with Handle u. <u>Blackout light</u> . Each Vehicle must have special lights for night driving and convoy	To be provided	<b>y</b>
-	driving:		
	(1) 01 x Blackout head light at front RH (2) 02xBlackout combination light NATO	To be provided  To be provided	
	std side & stop) at rear LH & RH	Taba	
-	(3) 01 x Convoy light at rear	To be provided	
30.	(4) 01 x Map reading light 'Standard Maintenance Tools with each	To be provided	1/50
	Standard Maintenance Tools with each vehicle	Provided with each vehicle which is enough for standard maintenance of the	13/

Serial	Description of General Specifications	Required Specifications vehicle (Details with quantity)	Remark
31.	Colour	As per Indentor's requirement	
32.	Petrol Oil Lubricant (POL) Information.	As per indentor's requirement	
02.	a. Grade of Fuel used in Vehicle	To be mentioned	
	b. Type of Engine Oil used in Vehicle	To be mentioned	
	c. Type of Gear Oil (Equivalent grade) used in Vehicle	To be mentioned	
	d. Grade of Fuel to be used in Bangladesh	The Vehicle must be Suitable for using Fuel Available in Bangladesh	
33.	Dimension of Rear Cabin LxWxH (mm)	To be mentioned	
34.	Weapon Stowage	Should be equipped with stowage of at	2
0.5		least three personal weapons.	
35.	Workshop Portion	Group-A & B Countries	
	a. Dimension of Work Bench	Provision of Work Bench with Chest Drawers with Chest Length 3'-5", Breadth 1'-11", Height 2'-7"	
	b. Layout of Workshop	A Separate Layout Paper with Necessary Diagram, Location and Drawing of Various Equipment and Tools to be provided with the Offer.	
	c. Doors and Flaps	Double Door at the Rear Fitted with Glass Window	
36.	Body and Floor.		
,	a. Hard Top Steel Sheet Body with Anti-Skid Floor, for housing work bench with drawers/ shelves and required machines/ equipment which are easily removable.	To be provided	
	b. Two side flaps fitted with boosted power facilities for easy opening and closing	To be provided	
	c. Minimum four windows fitted with that Aluminum Sliding Glass	To be provided	
	d. A collapsible light weight stairs with checkered Aluminum	To be provided	
	e. 02 x Exhaust Fan & 02x Wall Fan on 2 Sides of the working cargo to be Fitted	To be provided	
	f. 4x LED Lights on the roof of working cargo to be fitted	To be provided	
37.	Electrical Wiring.		
	a. The unit should have provision of getting supplied from single/three phase local electrical sources. The offered phase of electric source must support all the machineries that are installed in the Workshop Portion (i.e. Lathe Machine, Electronic Welding Machine, Vulcanizing	To be provided	
	Machine etc).  b. Sufficient Receptacles to get all Electrical	To be provided	
	Equipment's Connected.  c. Safety measures with Earthing	To be provided	
20	system/Main Switch must be complied with		
38.	Terms and Condition	1 V	
	a. Time of Free Service b. Warranty/Guarantee	1 Year  1 Year from the Date of Receipt of Equipment by user unit after Accepted by IV&EE	
	c. Technical Offer should be on the Original Pad of Principal/Manufacturer with Sign and Seal	To be submitted	
	d. Authorization Certificate to be Provided by Manufacturer in Favour of Principal	To be submitted	
	e. Authorization Certificate to be Provided by principal in favour of local agent	To be submitted	
	f. After Sale service, Repair and Maintenance		
	i) After Sale service, Repair and Maintenance by local agent (Minimum 10 years)	Details to be mentioned (Workshop address, Authorization certificate)	***********
	ii) Details of maintenance schedule g. Model Validity (Minimum 10 years from the	To be mentioned  Certificate to be provided	
DADT	signing of contract) 3: TRAINING REQUIREMENT.	Solution to so provided	- cycle brag
39.	Training Requirements.		10.5
03.	a. User Training	To be provided (As per User/Sponsor	7
	a. Oser training	Directorate)	MIE PO

Seria	The state of ordineral specifications	Required Specifications	Remark
	D. Operation, Repair and Maintenance Training	To be provided (As per Requirement of	T. C. TIGIT
	C Equipment 1	EME Directorate)	1
	c. Equipment Management Training	To be provided (As per Requirement of	+
			1
ART	4: REPAIR AND MAINTENANCE REQUIREM	ENT LESS LIST OF SPARES	
40.	Books and Publications.	ENT ELOS LIST OF SPARES.	
177,127	a Owners/Operators Manual in English	TT :	
	(Book Type) including Soft Copy		
	1 yee) including Soft Copy	Electrical and Mechanical Engineering	
		Directorate)	1
	b. Workshop/Repair Manual in English (Book	To be provided (As per Requirement of	-
	Type) Including Soft Copy	Electrical and Mechanical Engineering	
		Directorate)	
	c. 100% Updated Master Spare Parts	Directorate)	
	Catalogue in English (Book Type) Including		
	Soft Copy		
	d Committee	Directorate)	
	d. Complete and Updated Master Spare	To be provided (As per Requirement of	
	Parts Price Catalogue/List in English (Rook	Electrical and Mechanical Engineering	
	Type) Including Soft Copy	Directorate)	
ART :	5: LIST OF SPARES.	- Directorate)	
	Recommended 10% Fast and Slow Moving	T- I	
	Spare Parts List (Hard and Slow Woving	To be provided	
	Spare Parts List (Hard copy) (Fast moving		
	for 2 years and Slow moving for 5 years)		10
B-	Including Soft Copy		
RT	6: TOOL LIST FOR DIFFERENT LEVEL OF MA	INTENANCE	
2.	Analyzer, Measuring & Testing/Fault Finding	To be provided (A-	100
	and Diagnostic set	To be provided (As per Requirement of	
3.	Special Service Tools (SST)	EME Directorate)	
٥.	opecial Service 100IS (SST)	List to be provided (As per Requirement	
1	Constal Constal	of EME Directorate)	
4.	Special Service Materials (SSM)	List to be provided (As per Requirement	
		of EME Directorate)	
5.	Equipment for Each Vehicle.	To be provided	
	a. Main Equipment List 21 Line Items	To be provided	
	a. Main Equipment List 21 Line Items	To be provided as per Appendix-1	124
		mentioning following details:	
		i. Brand	
	h Tanil Kiringua	ii. Country of Origin	
	b. Tool Kit "B" Vehicle 83 Line Items per Set.	To be provided as per Appendix-2	
		mentioning following details:	
		i. Brand	
	c. Tool Kit "C" Vehicle 20 Line Items per Set.	ii. Country of Origin	
	or verilide 20 Line items per Set.	To be provided as per Appendix-3	
		mentioning following details:	
		i. Brand	
,		ii. Country of Origin	
	d. Carpenter Tool Box 19 line items per Set.	To be provided as per Appendix-4	
	7. 300	mentioning following data:	
		mentioning following details:	
		i. Brand	
	e Telecom Tochnisis T 1 2	ii. Country of Origin	
	e. Telecom Technician Tool Box 23 Line	To be provided as per Appendix-5	
	Items per Set.	mentioning following details:	
1		i. Brand	
1		ii. Country of Origin	
	f. Tool kit instrument 32 line items per Set.	To be provided	
	The fields per Set.	To be provided as per Appendix-6	
		mentioning following details:	
		i. Brand	
-	- /// 1.1	ii. Country of Origin	
	g. Welder tools box 29 line items per Set.	To be provided as per Appendix-7	
		mentioning following details:	
		i. Brand	
	2	Control Contro	
	h. Armour tools box 16 line items per Set.	ii. Country of Origin	
	tools box to line items per Set.	To be provided as per Appendix-8	
		mentioning following details:	
		i. Brand	
		ii. Country of Origin	
	j. Machinist tools box 16 line items per Set.	To be provided as per Apper 11 2	
	re into items per det.	To be provided as per Appendix-9	
		mentioning following details:	SP
	1	i. Brand	570.
		II Country of Origin	
	h A	ii. Country of Origin	
	h. Armament tools box 13 line items per Set.	ii. Country of Origin To be provided as per Appendiy-10	
	h. Armament tools box 13 line items per Set.	To be provided as per Appendix-10	
		To be provided as per Appendix-10 mentioning following details:	
		To be provided as per Appendix-10 mentioning following details: i. Brand	
		To be provided as per Appendix-10 mentioning following details:	
T-7.	FINANCIAL SPECIFICATION.	To be provided as per Appendix-10 mentioning following details: i. Brand	DIREC
T-7.	FINANCIAL SPECIFICATION	To be provided as per Appendix-10 mentioning following details: i. Brand ii. Country of Origin	DIREC
T-7.	FINANCIAL SPECIFICATION. Financial Implication / Specifications	To be provided as per Appendix-10 mentioning following details: i. Brand	DIRECTOR OF THE PROPERTY OF TH

# LIST OF MAIN EQUIPMENT

	Nomenclature/Description	Quantity	Remark
Serial	Nomenciature/Description	01	Make, Model
1.	Gas Welding Set Complete (nozzle size: 5, 7,10 &18 pipe size: 2x 30		and Country of
	feet)	01	Origin to be
2.	Portable Electric Welding Machine 220/440 VAC, 400 Amp with		mentioned
	Accessories	01	
3.	Electric Hand Drilling Machine 75 kw 220 VAC	01	
4.	Angle Die Grinder 220 VAC	01	
5.	Power Angle Grinder 220 VAC	01	
6.	Electric Bench Grinder Machine 550 Watt, 2950 rpm (Minimum)	02	
7.	Gas Cylinders (Oxygen & Acetylene)	01	
8.	Gas Regulator	01	
9.	Mini Iron Cutting Machine	01	1
10.	Mini Iron Cutting Machine  Manual Hydraulic Pipe Bending machine (bending moulds of 1/2" ~ 2")  Manual Hydraulic Pipe Bending machine (bending moulds of 1/2" ~ 2")	01	1
11.	Lathe Machine 4' (ft) with Both mm and inch type, Height of Center 8"		
	(inches).	01	
12.	Vulcanizing Machine with Accessories	01	
13.	Table Vice 6".	01 set	7
14.	Tap and Die Set mm (Set of 41 pieces).	01 (each)	1
15.	Chain pulling 1 ton, 2 ton	01	
16.	Spray Gun minimum 01 ltr capacity	01	-
17.	Air compressor capacity: 150 psi 100 ltr (Minimum), 220 VAC 50 T12		
	Motor driven	01	
18.	Power Saw Machine 16 inch 1300 watt	01	
19.	Grease Gun hand operated 20 ltr tank capacity  Fast Lead Acid Battery Charger Input: 220 VAC and Output: 12-48	01	
20.		01	Brand, Country
21.	Generator minimum 6 KVA, 230v, 50Hz with Self-starter & Battery. Type	01	of Origin
	of Fuel (Diesel)	1	Engine Model
			and Phase to
	· · · · · · · · · · · · · · · · · · ·		be mentioned

## APPX 2

# LIST OF TOOLS KIT FOR B VEHICLE

	Nomenclature/Description	Quantity	Remark
Serial	and the state of t	01	
1.	should contain items from serial no 2 to 63 (4x trolley recay)		
	tom incorporate)	01(each)	
2.	Hammer engineer Ball Pen with handle ( Size. 8 & 24 Ozs)	01	
3.	Hammer Plastic tip	01	3
4.	File all purpose (Magneto) 3 1/2"	01	
5.	File basted 12"	01	
6.	File half round 8"	01	
7.	File half round 2 <sup>nd</sup> cut 6"	01	
8.	File half round smooth 4"	01	
9.	File square 2 <sup>nd</sup> cut 6"	01	
10.	File three square 2" cut 4"	01	
11.	File round basted 8"	01	
12.	File round smooth 6"	01	
13.	File handle for 4" & 6" files	01	
14.	File handle for 8" files	01	
15.	File handle for 12" files	01	
16.	Scrow driver 4" blade length	01set	
17.	Screw driver Phillips (Size: No '0', '1', '2', '3' & '4')	01	
18.	Screw driver electric 4" blade length	01	1
19.	Screw driver electric 3/16"	01	_
20.	Coroni driver engineer 7-5/8" B/length	01	_
21.	Llegan duty engineer screw driver 11- /10 D/length	01	
22.	Screw driver 15/16" blade length Chubby (Carburetor)	01	2
23.	Davind mass Dillor 6" length	01	
24.	Lisans duty angineer comb pliers w/side cutting /	01	-
25.	Needle nose pliers w/side cutting PVC grip handle 7-3/3	01	+
26.	Heavy duty diagonal cutting 6" length	01	+
27.	Circlip pliers nose 18 to 75mm PVC	01	-
28.	Water pump pliers slip joint 10"	01	-
29.	Circlip pliers nose 40 to 100mm	01	16.14
30.	Water grip pliers adjustable 7"	01	1
31.		01	TATZ
	6 RESTRICTED  IGSPC\Desktop\Gen Spec -Truck Maint & wksp lorry Med -Fwd DGDP.docx		Mes.

rial	Nomenclature/Description	Quantity	Remark
32.	Ratchet spa 1/4" SD w/plastic handle	01	
33.	Extension bar 2" SD	01	
34.	Ratchet revisable 1/4"	01	
35.	Universal joint 1/4"	01	
36.	Flexible extension ¼"	01	
37.	'T' handle 1/4"	01	- 7
38.	Extension har 4"	01	
39.	Hex socket ¼" SD made from chrome alloy steel comprising following 08 pcs (size in inch: 3/16", 7/32", 9/32", 5/16", 11/32", 3/8", 7/16" & ¼")	01 set	
40.	Hex socket 1/2" SD made from chrome alloy steel comprising following 05 pcs	01set	
41.	(Size in mm: 5, 6,7,8 & 9) Spanner OTDE comprising following 11 pcs (size in mm: 6x7, 8x9, 10x11, 12x13, 14x15, 16x17, 18x19, 20x22, 21x23,	01 set	
42.	24x26 & 27x30)	01 set	
	(size in inch: ¼" x 5/16", 3/8" x 7/16", ½" x 9/16", 5/8" x 11/16", ¾ " x 7/8", 7/8 x 15/16", 1" x 1/ ¼" & 11/16" x 1/ ¼")	01 set	
43.	Spanner ring type double ended comprising following 07 pcs (size in mm: 6x7, 8x9, 10x11, 12x13, 14x15, 17x19, 20x22)	01 set	
44.	Spanner ring type double ended comprising following 06 pcs (size in inch: ¾ x 7/16, ½ x9/16, 5/8x11/16, ¾ x7/8, 1"x15/16 &		
45.	Spanner socket ½" SD made from chrome alloy steel comprising following 17	01 set	
46.	(size in mm: 10, 11,12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 & 26)  Spanner socket ½" SD made from chrome alloy steel comprising following 12 pcs (size in inch: 3/8, 7/16, ½, 9/16, 19/32, 5/8, 11/16, ¾, 13/16, 7/8, 15/16 &	01 set	
	1)	01	
47.	Spark plug socket 14mm 13/16"	01	
48.	Spark plug socket 10mm 5/8"	01	
49.	Spark plug socket ½ 18mm Opening 26mm	01	+
50.	Spark plug gauge in mm	01	
51.	Spark plug gauge in inch	01	+
52.	Combination filler & Ignition gauge (inch size) 26 blades	(0.55%)	
20000	Combination filler & Ignition gauge (mm size) 13 blades	01	1
53.	Combination files a ignition gasge (************************************	01	
54.	Breaker bar with plastic handle 15"	01	
55.	Ratchet reversible with plastic handle 10"	01	
56.	Braches bar with plastic handle 16"	01	
57.	"T" handle 11-5/8" length	01	
58.	Adopter ½ "SD to ¾"SD (3/4" plug ½" socket)	01	
59.	Extension bar 6" with driller head	01	
60.	Extension bar 12" with driller head	01	
61.	Torque wrench 50-250 lbs capacity	01	
62.	Piston ring expender 3 ½" to 5"	01	_
63.	Piston ring compressor 2, 3/8" to 5"	01	-
64. 65.	Puller triple grip Jaw opening 3-1/8" max  Ignition spanner set of 07 pcs ( size: 3/26", 7/32", 9/32", 8/16", 11/32", 3/8" 8		
66.	7/16")	01 set	
67.	Allen key set 1/16, 3/64, 3/32, 3/16, 3/32, 4/1 5/16 & 3/8 (set of 10 pcs) (Inch)	01 set	
68.	Allen key set of 09 pcs ( size in mm: 2,3,4,5,6,7,8,9,&10)	01	
69.	Chisel cold 6"	01	
70.	Chisel cold cross cut 7/8"	01	
71.	Punch center tool steel 4 1/4"		-
72	Punch starter tool steel 41/4"	01	
73	1 - 1		-
74		01	_
75		01	
76		01	
77		01	
78		01	
79		01	y
80		01	
81		01	
82		01	
02	B. Universal Joint	01	1

## LIST OF TOOLS KIT FOR C VEHICLE

Serial	Nomenclature/Description	Quantity	Remark
1.	Tool chest 28(H)x27(L)x18(W) inch with three Drawers, Compartment (which should contain items from serial no 2 to 20) four heavy rubber tyred with fitting nut & bolts carrying handle and locking system	01	
2.	Ratchet Reversable with Handle 1" SD reversible length 28"	01	
3.	'T' Handle 1" SD 28" length	01	
4.	Bar Extension 8"X $\frac{3}{4}$ " SD	01	
5.	Universal Joint 1" SD	01	
6.	Bar Extension 16"X 1"SD	01	
, 7.	Convertor/Adaptor 3/4" square socket X 1" plug	01	
8.	Convertor/Adaptor 3/4" square plug 1"	01	
9.	Spanner Socket ¾" SD made from chrome alloy steel comprising following sizes in Inch: 1-1/16", 1-1/8", 1-1/4", 1-5/16", 1-7/16", 1-1/2", 1-5/8", 1-1/16", 1-3/4", 1-13/16", 1-7/8" & 2" (AF) (12 pcs)	01 set	
10.	Socket 3/4" SD made from chrome alloy steel comprising following sizes size in mm: 27, 29, 30, 32, 36, 38, 40, 42, 46 & 50 (10 Pcs)	01 Set	_
11.	Socket with 1" SD made from chrome alloy steel comprising following sizes in Inch: 2-1/16", 2-1/8", 2-3/16", 2-1/4", 2-3/8", 2-1/2", 2-9/16", 2-5/8", 2-3/4", 2-15/16" & 3-1/8" (11 pcs)	01 set	
12.	Socket 1" SD made from chrome alloy steel comprising following 06 (mm)	01 Set	
13.	Torque multiplier with variable cranked reaction bar comprising 1 multiplier 2 reaction bars and 1 spare drive square all in a carrying case(75' Foot Lbs Input and 750' Foot Ibs output).	01	Ti
14.	Celling Chain Pulley 03 Ton	01	-
15.	Pipe Wrench 18 & 39 inch	01 (each)	
16.	Hammer 5 & 10 lbs	01 (each)	
17.	Spanner Open Jaw Double Ended 46-50 mm	01	
18.	Spanner Open Jaw Double Ended 55-60 mm	01	
19.	Spanner Open Jaw and R/T Combination comprising following sizes in inch: 1 5/8 –1½", 1 7/16"–1 3/8", 1 3/4"–2", 2 3/8"–2 5/16", 2 7/16" –2½", 2 5/8"–2 11/16", 2 3/4"–2 25/32" & 2 15/16"–3" (08 pcs)	01 set	
20.	Allen Key 9/16"-2" (set 0f 23 pieces)	01 set	

## APPX 4

## LIST OF TOOLS KIT FOR CARPENTER

Serial	Nomenclature/Description	Quantity	Remark
1.	Chests tool empty 'J' wood 26 x 13 x 7 inch internal directions fitted with runner 3 inch from top of chest, running full length for one tray 16-1/2x11" x2-1/8 inch with portions to carryout handled hasps and staple qty-1 per set with Pad lock	01	
2.	Augers eyed 1" dia bore of eye 1" overall length 25" un-handled, scotch pattern with round shank and barrel eye.	01	
3.	Bevels, wood, carpenters, 10-1/2" bade polished rose wood or jarrah stocks tempered steel blade.	01	
4.	Braces carpenters bits expansive with 2 cutters to cut from 7/8" to 3" dia in wooden case	01	
5.	Chisels, firmer handled 3/4" width on cut length bolsters to point 4-1/4".	01	
6.	Chisels, firmer handled 1/8" width on cut length bolsters to point 4-1/2".	01	
7.	Chisels, firmer handled 3/4" width on cut length 5"	01	
8.	Files saw taper second cut single 4"	01	
9.	Files saw taper second cut single 6"	01	
10.	Gauge mortise and marking (Rose wood)	01	
11.	Hammer carpenters warring ton 1 lbl handled cross pane	01	
12.	Mallets carpenters for tinsmiths, length 15" dimension of head 6" x 4" x 2-3/4"	01	
13.	Planes, smoothing 2-1/8" (width of iron) length of plans 14"	01	
14.	Saw hand 18"	01	
15.	Oil store fine 8"	01	
17.	Adjustable Wrench 12 inch	01	
18.	Tri Square Set 12", 14", 18"	01 set	
19.	Double side Stainless Steel L Shape Ruler 24 inch	01	A STATE OF THE PARTY OF THE PAR

### APPX 5

## LIST OF TOOLS KIT FOR TELECOM TECHNICIAN

Serial	Nomenclature/Description	Quantity	Remark
1.	Alignment tools (Set of 8 pcs)	01	
2.	Flash light 2 cell	01	
3.	Brush for cleaner	. 01	
4.	L key (Set of 7 pcs)	01	
5.	Screw driver flat (Set of 6 pcs)	01	
6.	Screw driver Philips (set of 6 pcs)	01	
7.	Solder reel	01	-
8.	Soldering iron 40 watt 220 volt	01	
9.	Solder sucker	01	
10.	3 piece soldering aid tools	01	
11.	Tweezers 4"	01	
12.	Spanner adjustable 6" crescent	01	
13.	Wire cutter 8"	01	
14.	Multi meter digital (Pocket type)	01	
15.	Ampere Meter (20- 50 amp)	01	
16.	Alternating Current Tester	01	
17.	Digital Tong Tester/ Clamp on meter (110~600 V AC and 1000 Amp)	01	
18.	Pliers side cutting 7"	01	
19.	Nose Pliers 8"	01	
20.	Heavy Duty Pliers 7"	01	
21.	1/4 in Drive and deep Metric Socket set (set of 32 pcs)	01 set	
22.	Hammer Ball Pen 0.8 oz	01	
23.	Tools box for (briefcase type high quality) carrying above tools	01	

## APPX 6

## LIST OF TOOLS KIT FOR INSTRUMENT

Serial	Nomenclature/Description	Quantity	Remark
1.	Hammer engineering ball pens 8 oz	01	
2.	Hammer soft face plastic 8 oz	01	m
3.	Hammer rubber mallet 8 oz	01	
4.	Pliers side cutting 7"	01	
5.	Pliers long nose 4"	01	•
6.	Screw driver instrument maker (Set of six)	01 set	
7.	Screw driver elect & sig 8"	01	
8.	Screw driver elect & sig 10"	01	
9.	Screw driver Philips O/L 6"	01	
10.	Screw driver Philips O/L 8"	01	X.
11.	Center punches 4-1/2"	01	
12.	Chisel cold 1/8" cut length 4"	01	
13.	Spanner adjustable 6" crescent	01	
14.	Allen key set size: 1.5~10 mm (Set of 9 pcs)	01 set	
15.	File round smooth 8"	01	
16.	File half round smooth 8"	01	
17.	File flat smooth 8"	01	
18.	File triangular smooth 6"	01	
19.	Handle file no 1 & 2	01 (each)	
20.	Rules steel flexible 3 meter	01	
21.	Saw heck hand frame 8-12"	01	
22.	Soldering iron elect 220 volt 60 watt	01	
23.	Tweezers 4-1/2"	01	
24.	Eye glass single focus	01	
25.	Brushes W/maker soft	01	
26.	Gar glass (With cover)	01	
27.	Tool watch maker (set of 6)	01 set	-
28.	Multi-function digital voltage tester 12~250 V AC/DC	01	
29.	Glue gun 100 watt	01	
31.	Hot air gun 750 watt	01	
32.	Tools Box Empty (Briefcase type) for carrying above mentioned tools	01	1/ ***

## LIST OF TOOLS KIT FOR WELDER

## APPX 7

Serial	Nomenclature/Description	Quantity	Remark
1.	Rule Steel 12"	01	1107
2.	Caliper 6" out side	01	Hickory C

Serial	Nomenclature/Description	Quantity	Remark
3.	Caliper 6" in side	01	
4.	Cross ring 7"	01	
5.	Spanner ring type DE 25/32" x 13x16"	01	
6.	Adjustable spanner 12"	01	
7.	Chisel cold cross cut carbon steel 1/4" cut	01	
8.	Chisel cold cross cut carbon steel 3/4 " cut	01	
9.	Hammer engineering ball 1 1/2 " lb	01	
10.	Hammer sealing 1 lbs with handle	01	
11.	File round 10" with handle	01	
12.	File flat basted 12" with handle	01	
13.	Brush steel wire 2-12" side x 7" long	01	
14.	Rimer File	01 set	
15.	Tung smiths large 19"	01	
16.	Apron leather	02 pair	
17.	Cap apron	02 pair	
18.	Dividers 8"	01	
19.	Hand Gloves	10	
20.	Sledge Hammer 7/8 lbs	01	
21.	Eye Shield with extra glass	01	
22.	Eye Goggles	01	
23.	Cutting Stone 4 inch set (50 pcs)	01 set	
24.	Digital Compass Divider	01	
25.	Glass Cutter Diamond Glazer	01	
26.	Rivet gun	01	
27.	Tin Cutter (Hand)	01	
28.	Wire Gauge	01	
29.	Chest tool empty for carrying above mentioned tools with Pad Lock 11/2 inch	01	

## APPX 8 LIST OF TOOLS KIT FOR ARMOURER

Serial	Nomenclature/Description	Quantity	Remark
1.	Gauges filler 4"	01	
2.	Gauges firmer ¾ "	01	
3.	Gauges firmer ¼ "	01	
4.	Lamp Brazing 1 pt complete	01	N.
5.	Punches round 3/4 "	01	
6.	Vice hand 5"	01	
7.	Horse armr	01	
8.	Pincer armr 8"	01	
9.	Barrel reflector	01	
10.	Zeroing tools (7.62 mm auto Rifle BD-08)	01	
11.	Cartridge head space gauge set ( size: 32.72, 32.92, 32.98 & 33 mm)	01 set	
12.	Firing pin protrusion 1.1~1.22 mm	01	
13.	Gauges inspector plug 7.607-7.772 mm	01	
14.	Screw driver fork 12"	01	
15.	Extractor head space gauge 1.7 -1.9 mm	01	
16.	Chest tool empty for carrying above mentioned tools with pad lock	01	

## LIST OF TOOLS KIT FOR MACHINIST

## APPX 9

Serial	Nomenclature/Description	Quantity	Remark
1.	Point Drill Bit Set.	01	
2.	Cobalt Drill Bit Set.	01	
3.	Drill Bit Sharpener.	01	
4.	Quick Change Bit Set.	01	
5.	Pliers Side Cutting	01	
6.	Hack Saw Blade With Frame	01	
7.	Micrometer (0~1", 1~2" & 2~3")	01 (each)	
8.	Adjustable Wrench 12 inch	01	
9.	Venire Slide Calipers	01	
10.	X-Cut Chisel Set	01 set	
11.	File Set	01 set	
12.	Screw Driver Set	01 set	
13.	Steel Rule	01	
14.	Cutting Tools HSS bar ½ x ½ x 6 inch set of 12 pcs	01 set	15
15.	Socket Spanner set (8~24 mm) with T handle	01 set	1137
16.	Chest tool empty for carrying above mentioned tools with pad lock	01	113/200
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## LIST OF TOOLS FOR ARMAMENT

Serial	Nomenclature/Description	Quantity	Remark
Serial		01	
1.	Nitrogen Cylinder	01	
2.	Hose Pipe (10 Feet)		
3.	3 Way Tep	01	
4.	Charging Valve	01	
5.	Pressure Gauge	01	
	Litmus Paper (set 10 pcs)	01 set	
6.		01	
7.	T Handle for 122 mm How T-54		
8	T Handle for 105 mm How M-56/33, M-56, 122 mm How T-83, D-30, 96, 130 mm Med Gun	01 set	
	Adjustable 18 Inch	01	/
9.	Adjustable to filet	01	
10.	Screw Driver Phillips Type 12 Inch	01	
11.	Screw Driver Flat Type 12 Inch	01	+
12.	Bliggs side cutting 10 Inch		
13.	Chest tool empty for carrying above (serial no 3-12) tools with pad lock	01	DIREC
			1 hours