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05 Bhadra 1430

20 August 2023

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EVALUATION/ RE-EVALUATION/STANDARDIZATION OF TRUCK MAINTENANCE HEAVY

Reference:

A. Army Headquarters, Master General of the Ordnance Branch, Electrical and Mechanical Engineers Directorate letter number 23.01.901.048.20.079.03.17.08.23 Dated 17 August 2023.

1. Please be informed that, Bangladesh Army is planning to procure Truck Maintenance Heavy for Bangladesh Army. In this regard, you are requested to provide offer, Brochure, Catalogue, technical/training/operational/maintenance manuals and budgetary offers along with 100% updated original spare parts catalogue (Hard & Soft copy) etcetera for evaluation/re-evaluation/standardization of models Truck Maintenance Heavy. Offered models should be compatible with general technical specification attached herewith and submits directly to Army Headquarters, Master General of the Ordnance Branch, Electrical and Mechanical Engineers Directorate, Dhaka Cantonment by **10 September 2023** with intimation to this office. You are also requested to provide enlistment certificate of DGDP along with technical offer.

2. Forwarded for your information and necessary action please.



MD SHAHARIARE KHAN
Lieutenant Colonel
For Director General

Annexure:

A. Technical Specification of Truck Maintenance Heavy - 15 (Fifteen) Pages only.

Distribution:

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:

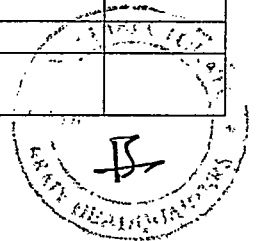
IT Section - (For sending to enlisted Supplier/Firm with DGDP through e-mail). Also publish in web site.

Notice Board

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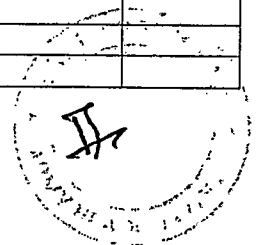
GENERAL TECHNICAL SPECIFICATION: TRUCK MAINTENANCE HEAVY

| Ser | Nomenclature/Description | Required Specifications | Rmk |
|-----|--|--|-----|
| 1. | Name of the Firm/Local Agent with Full Address | To be mentioned | |
| 2. | Name of Principal with Full Address | To be mentioned | |
| 3. | Name of Manufacturer with Full Address | To be mentioned | |
| 4. | Nomenclature | Truck Maintenance Heavy | |
| 5. | Vehicle Make & Model | To be mentioned | |
| 6. | Country of Origin | Group-A | |
| 7. | Country of Manufacturer | Group-A | |
| 8. | Country of Assembly | Group-A | |
| 9. | Year of Manufacture | Not before the year of contract | |
| 10. | Type of Drive | 6x6 RHD | |
| 11. | <u>Truck Specification</u> | | |
| | a. Make and Model | To be mentioned | |
| | b. Country of Origin | Group-A | |
| | c. Country of Manufacturer | Group-A | |
| | d. Country of Assembly | Group-A | |
| 12. | <u>Weights</u> | | |
| | a. Kerb Weight (kg/ton) | To be mentioned | |
| | b. Pay Load | 10 Tons (Minimum) | |
| | c. Gross Vehicle Weight (GVW) | To be mentioned | |
| | d. Power/Weight Ratio | To be mentioned | |
| 13. | <u>Dimensions</u> | | |
| | a. Overall Length | To be mentioned | |
| | b. Overall Width | To be mentioned | |
| | c. Overall Height | To be mentioned | |
| | d. Wheel Base (mm) | Front to middle and middle to rear to be mentioned | |
| | e. Wheel Tread Front | To be mentioned | |
| | f. Wheel Tread Rear | To be mentioned | |
| | g. Ground Clearance (mm) | 280 mm (Minimum) | |
| | h. Angle of Approach in degree (Minimum) | 30° | |
| | j. Angle of Departure in degree (Minimum) | 30° | |
| | k. Grade Ability (degree) (Minimum) | 30° | |
| | l. Maximum Turning Radius (Meter) – from outer wheel | To be mentioned | |
| | m. Ford Ability (mm) | 600 mm (Minimum) | |
| | n. Ground Pressure (kg/square cm) | To be mentioned | |
| | p. Front over hang | To be mentioned | |
| | q. Rear over hang | To be mentioned | |
| 14. | <u>Engine</u> | | |
| | a. Type | To be mentioned | |
| | b. Make & Model | To be mentioned | |
| | c. Country of Origin | Group-A | |
| | d. Country of Assembly | Group-A | |
| | e. Country of Manufacture | Group-A | |
| | 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) | 8000 cc (Minimum) | |
| | k. Compression Ratio | To be mentioned | |
| | l. Torque at rated rpm | To be mentioned | |
| | m. HP at Rated rpm | 240 HP (Minimum), rpm to be mentioned | |
| | n. Type of Injection | To be mentioned | |
| | p. Cooling System | Liquid Cooled | |
| | q. Air cleaner type | To be mentioned | |
| | r. Turbo charger with intercooler (if available) | To be mentioned | |



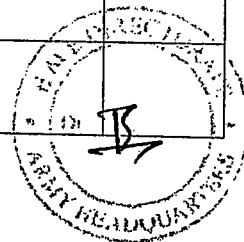
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| Ser | Nomenclature/Description | Required Specifications | Rmk |
|-----|---|--|-----|
| | s. Engine Test Bench Report | During inspection Engine Test Bench Report (for each model) which was prepared by manufacturer during production of engine at 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). | |
| 15. | <u>Fuel System</u> | | |
| | a. Type of Fuel | Diesel | |
| | b. Fuel Tank Capacity (litre) | To be mentioned | |
| | c. Cruising Range | To be mentioned | |
| | d. Fuel Consumption (for 100 km) | To be mentioned | |
| 16. | <u>Chassis</u> | | |
| | a. Type | To be mentioned | |
| | b. Country of Origin | Group-A | |
| | c. Country of Manufacturer | Group-A | |
| | d. Country of Assembly | Group-A | |
| | e. Length (mm) | To be mentioned | |
| | f. Width (mm) | To be mentioned | |
| | g. Thickness of Chassis (mm) | To be mentioned | |
| | h. Chassis frame Resistance to Bending Moment | The truck chassis should be capable to carry offered pay load. The chassis will not be cracked / fractured and no other defects will arise up to 10 years. (Chassis manufacturer's certificate to be provided with details calculation). | |
| 17. | <u>Transmission</u> | | |
| | a. Type of Transmission (Manual/Auto) | To be mentioned | |
| | b. Make & Model | To be mentioned | |
| | c. Country of Origin | Group-A | |
| | d. Country of Manufacturer | Group-A | |
| | e. Country of assembly | Group-A | |
| | f. No of Gears | To be mentioned | |
| | g. Gear ration | To be mentioned | |
| 18. | <u>Transfer Case</u> | | |
| | a. Type of Transfer Case | To be mentioned | |
| | b. Make & Model | To be mentioned | |
| | c. Country of Origin | Group-A | |
| | d. Country of Manufacturer | Group-A | |
| | e. Country of Assembly | Group-A | |
| 19. | <u>Front Axle</u> | | |
| | a. Type | To be mentioned | |
| | b. Make and Model | To be mentioned | |
| | c. Axle Capacity | To be mentioned | |
| | d. Country of Origin | Group-A | |
| | e. Country of Manufacturer | Group-A | |
| | f. Country of Assembly | Group-A | |
| 20. | <u>Rear Axle</u> | | |
| | a. Type | To be mentioned | |
| | b. Make and Model | To be mentioned | |
| | c. Axle Capacity | To be mentioned | |



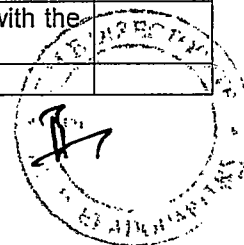
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| Ser | Nomenclature/Description | Required Specifications | Rmk |
|-----|---|---|-----|
| | d. Country of Origin | Group-A | |
| | e. Country of Manufacturer | Group-A | |
| | f. Country of Assembly | Group-A | |
| 21. | <u>Vehicle Speed</u> | | |
| | a. High Way | To be mentioned | |
| | b. Cross Country | To be mentioned | |
| 22. | <u>Electrical System</u> | | |
| | 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) | To be mentioned | |
| | e. Starter (Volt & KW) | To be mentioned | |
| 23. | <u>Brake System</u> | | |
| | a. Service Brake | To be mentioned | |
| | b. Parking Brake | To be mentioned | |
| | c. Any other Brake | Details to be mentioned | |
| 24. | <u>Steering System</u> | Hydraulic Assisted Power Steering | |
| 25. | <u>Suspension</u> | | |
| | a. Front | To be mentioned | |
| | b. Rear | To be mentioned | |
| 26. | <u>Tyre</u> | | |
| | a. Tyre Size | To be mentioned | |
| | b. Tyre Brand | Bridgestone/Dunlop/Goodyear/Yokohama/Toyo/ Uniroyal/Continental/Michelin/Folda/ Firestone/Armstrong/AMTEL/Pirelli/Hankook and Kumho | |
| | c. Country of Origin | USA, Japan, EU Countries, Russia, Brazil, Indonesia, Malaysia, Philippines Singapore, Thailand and South Korea | |
| | d. Tyre Type/Pattern | Non-Directional (ND), Ground Grip (GG) and Cross Country (CC). | |
| | e. Number of Tyres Including Spare Tyre | To be mentioned | |
| | f. Rim size | To be mentioned | |
| 27. | <u>Cabin with AC</u> | | |
| | a. Make and Model | To be mentioned | |
| | b. Country of Origin | Group-A | |
| | c. Country of Manufacturer | Group-A | |
| | d. Country of Assembly | Group-A | |
| 28. | <u>Seating Capacity (Minimum)</u> | 1 x Driver + 1 x Co-driver | |
| 29. | <u>Provision of repair, maintenance and after sale service support from local firm (Minimum 10 yrs)</u> | Details to be mentioned | |
| 30. | <u>Standard Accessories</u> | | |
| | 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 | |
| | d. Towing Hook at front | 20 Ton (Minimum) | |
| 31. | <u>Accessories to be Provided With Each Vehicle:</u> | | |
| | a. 01 set x Spare Wheel Complete set with Fitting Attachment under the Floor | To be provided | |
| | b. <u>Lights:</u> 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 | To be provided | |



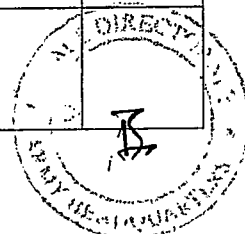
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|-----|---|--|-----|
| | Meters in Dashboard Fuel Gauges, Hazard Warning Lights etc as Required for Proper Functioning of All System of the Vehicle | | |
| | c. 02 x Fog Lamp at Front for Driving During Foggy Weather | To be provided | |
| | d. 01 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 | |
| | h. 02 x Sun Visors with Fitting Brackets | To be provided | |
| | j. Rear View Camera with LCD Display for Driver | To be provided | |
| | k. AM/FM Radio set Complete | To be provided | |
| | l. 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. dual 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. Intermittent Windshield Wiper 02 x Front and 01 x Rear | To be provided | |
| | s. Pintail Hook Facility | To be provided | |
| 32. | <u>Colour</u> | As per Indentor's requirement | |
| 33. | <u>Requirement of Publications</u> | | |
| | a. Owners/Operators Manual in English (Book Type) including CD/DVD | To be provided (As per Requirement of Electrical and Mechanical Engineering Directorate) | |
| | b. Workshop/Repair Manual in English (Book Type) Including CD/DVD | To be provided (As per Requirement of Electrical and Mechanical Engineering Directorate) | |
| | c. 100% Updated Master Spare Parts Catalogue in English (Book Type) Including CD/DVD | To be provided (As per Requirement of Electrical and Mechanical Engineering Directorate) | |
| | d. Complete and Updated Master Spare Parts Price Catalogue/List in English (Book Type) including CD/DVD | To be provided (As per Requirement of Electrical and Mechanical Engineering Directorate) | |
| 34. | Recommended 10% Fast and Slow Moving Spare Parts List (Hard copy) (Fast moving for 2 years and Slow moving for 5 years) Including CD/DVD | To be provided (As per Requirement of Electrical and Mechanical Engineering Directorate) | |
| 35. | Analyzer, Measuring & Testing/Fault Finding and Diagnostic set | To be provided (As per Requirement of EME Directorate) | |
| 36. | Special Service Tools (SST) | List to be provided (As per Requirement of EME Directorate) | |
| 37. | Special Service Materials (SSM) | List to be provided (As per Requirement of EME Directorate) | |
| 38. | <u>Petrol Oil Lubricant (POL) Information.</u> The following information must be submitted with the offer: | | |
| | a. Grade of Fuel used in Vehicle | To be mentioned | |



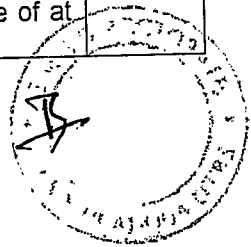
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| Ser | Nomenclature/Description | Required Specifications | Rmk |
|-----|---|---|-----|
| | b. Type of Engine Oil used in Vehicle | To be mentioned | |
| | c. Type of Gear Oil (Equivalent grade) used in Vehicle | To be mentioned | |
| | d. Grade of Fuel to be used in Bangladesh | The vehicle must be suitable to be used with Fuel available in Bangladesh | |
| 39. | <u>Training Requirements</u> | | |
| | a. User Training | To be provided (As per User/Sponsor Directorate) | |
| | b. Operation, Repair and Maintenance Training | To be provided (As per Requirement of Electrical and Mechanical Engineers Directorate) | |
| | c. Equipment Management Training | To be provided (As per Requirement of Ordnance Directorate) | |
| 40. | <u>Terms and Condition</u> | | |
| | a. Time of Free Service | 1 Year | |
| | b. Warranty/Guarantee | 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 by local agent | Details to be mentioned | |
| 41. | Production Date | Manufacture not before the year of contract | |
| 42. | Dimension of Rear Cabin LxWxH (mm) | To be mentioned | |
| 43. | <u>Workshop Portion</u> | Group-A | |
| | a. Dimension of Store Bin | Provision of installation of 1500 mm (H) x 575 mm (L) x 610 mm (W) steel welded construction for housing one 300 mm x 300 mm x 68 mm, four 1050 mm x 575 mm drawer and 500 mm x 300 mm x 1150 mm store space rack which are easily removable. | |
| | 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 | |
| 44. | <u>Body and Floor</u> | | |
| | a. Hard Top Steel Sheet Body with Anti-Skid Floor | 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. 04 x Fan on 2 Sides of the working cargo to be Fitted | To be provided | |
| 45. | <u>Equipment for Each Vehicle</u> | | |
| | a. Generator (Minimum) 10 KVA, 230v, 50Hz with Self-starter & Battery. Type of Fuel (Diesel) (Brand, Country of Origin, Engine model, Fuel used and phase). | Group-A | |



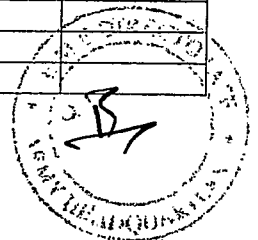
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| Ser | Nomenclature/Description | Required Specifications | Rmk |
|-----|---|---|-----|
| | b. Lathe Machine 4' (ft) with Both mm and inch type, Height of Center 8" (inches), Length of Lathe 60" (Model and Country of Origin). | To be provided | |
| | c. Work Bench with Chest Drawers with Chest Length 3'-5", Breadth 1'-11", Height 2'-7". | To be provided | |
| | d. Angle Die Grinder (Model and Country of Origin). | To be mentioned | |
| | e. Cobalt Drill Bit Set. | To be provided | |
| | f. Heat Gun (Model and Country of Origin). | To be mentioned | |
| | g. Point Drill Bit Set. | To be provided | |
| | h. Drill Bit Sharpener. | To be provided | |
| | j. Electronic Welding Machine with Accessories (Model and Country of Origin). | To be mentioned | |
| | k. Vulcanizing Machine with Accessories (Model and Country of Origin). | To be mentioned | |
| | l. Quick Change Bit Set. | To be provided | |
| | m. Table Vice 4". | To be provided | |
| | n. Tap and Die Set mm (Set of 41 pieces). | To be provided | |
| | p. Tool Kit "B" Vehicle 154 Pieces per Set. | To be provided as per appendix 1 | |
| | q. Carpenter Tool Box 16 line items per Set. | To be provided as per appendix 2 | |
| | r. TT Tool Box 16 Line Items per Set. | To be provided as per appendix 3 | |
| | s. Tool kit instrument 29 line items per Set. | To be provided as per appendix 4 | |
| | t. Welder tools box 20 line items per Set. | To be provided as per appendix 5 | |
| | u. Armour tools box 16 line items per Set. | To be provided as per appendix 6 | |
| | v. Tool Kit "C" Vehicle 33 Pieces per Set. | To be provided as per appendix 7 | |
| | w. First Aid Box with Kit. | To be provided | |
| | x. Electric hand drilling machine. | To be provided | |
| | y. Rivet gun | To be provided | |
| | z. Chain pulling 1 ton | To be provided | |
| | aa. Spray Gun | To be provided | |
| | bb. Air compressor (Minimum) 200 litter tank capacity and 145 PSI 220V 50Hz, rpm-2800 (Motor driven) with all accessories | Group-A | |
| 46. | <u>Electrical Wiring</u> | | |
| | 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 Machine etc). | To be provided | |
| | b. Sufficient Receptacles to get all Electrical Equipment's Connected. | To be provided | |
| | c. Safety measures with Earthing system/Main Switch must be complied with | To be provided | |
| 47. | Weapon Stowage | Should be equipped with stowage of at least two personal weapons. | |



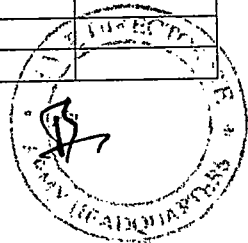
LIST OF TOOLS KIT FOR VEHICLE (B VEH)

| Ser | Nomenclature/Description | Qty | Required Specifications | Rmk |
|-----|--|-----|-------------------------|-----|
| 1. | Tool chest with drawer compartment | 01 | To be provided | |
| 2. | Hammer engineer Ball Pen with handle 24 OZs | 01 | To be provided | |
| 3. | Hammer engineer Ball Pen with handle 8 OZs | 01 | To be provided | |
| 4. | Hammer Plastic tip | 01 | To be provided | |
| 5. | File all purpose (Magneto) 3 1/2" | 01 | To be provided | |
| 6. | File bastd 12" | 01 | To be provided | |
| 7. | File half round 8" | 01 | To be provided | |
| 8. | File half round 2 nd cut 6" | 01 | To be provided | |
| 9. | File half round smooth 4" | 01 | To be provided | |
| 10. | File square 2 nd cut 6" | 01 | To be provided | |
| 11. | File three square 2 nd cut 4" | 01 | To be provided | |
| 12. | File round bastd 8" | 01 | To be provided | |
| 13. | File round smooth 6" | 01 | To be provided | |
| 14. | File handle for 4" & 6" files | 01 | To be provided | |
| 15. | File handle for 8" files | 01 | To be provided | |
| 16. | File handle for 12" files | 01 | To be provided | |
| 17. | Screw driver 4" blade length | 01 | To be provided | |
| 18. | Screw driver Phillips No 'O' | 01 | To be provided | |
| 19. | Screw driver Phillips No '1' | 01 | To be provided | |
| 20. | Screw driver Phillips No '2' | 01 | To be provided | |
| 21. | Screw driver Phillips No '3' | 01 | To be provided | |
| 22. | Screw driver Phillips No '4' | 01 | To be provided | |
| 23. | Screw driver electric 4" blade length | 01 | To be provided | |
| 24. | Screw driver electric 3/16" | 01 | To be provided | |
| 25. | Screw driver engineer 7-5/8" B/length | 01 | To be provided | |
| 26. | Heavy duty engineer screw driver 11 13/16" B/length | 01 | To be provided | |
| 27. | Screw driver 15/16" blade length Chubby (Carburetor) | 01 | To be provided | |
| 28. | Round nose Pillar 6" length | 01 | To be provided | |
| 29. | Heavy duty engineer comb pliers w/side cutting 7" | 01 | To be provided | |
| 30. | Needle nose pliers w/side cutting PVC grip handle 7 5/8" | 01 | To be provided | |
| 31. | Heavy duty diagonal cutting 6" length | 01 | To be provided | |
| 32. | Circlip pliers nose 18 to 75mm PVC | 01 | To be provided | |
| 33. | Water pump pliers slip joint 10" | 01 | To be provided | |
| 34. | Circlip pliers nose 40 to 100mm | 01 | To be provided | |
| 35. | Water grip pliers adjustable 7" | 01 | To be provided | |
| 36. | Metal box for 1/4" SD Tools | 01 | To be provided | |
| 37. | Ratchet spa 1/4" SD w/plastic handle | 01 | To be provided | |
| 38. | Extension bar 2" SD | 01 | To be provided | |
| 39. | Ratchet revisable 1/4" | 01 | To be provided | |
| 40. | Universal joint 1/4" | 01 | To be provided | |
| 41. | Flexible extension 1/4" | 01 | To be provided | |
| 42. | 'T' handle 1/4" | 01 | To be provided | |
| 43. | Extension bar 4" | 01 | To be provided | |
| 44. | Hex socket 1/4" 3/16" | 01 | To be provided | |
| 45. | Hex socket 1/4" x 7/32" | 01 | To be provided | |
| 46. | Hex socket 1/4" x 9/32" | 01 | To be provided | |
| 47. | Hex socket 1/4" x 5/16" | 01 | To be provided | |
| 48. | Hex socket 1/4" x 11/32" | 01 | To be provided | |
| 49. | Hex socket 1/4" x 3/8" | 01 | To be provided | |
| 50. | Hex socket 1/4" x 6mm | 01 | To be provided | |
| 51. | Hex socket 1/4" x 5mm | 01 | To be provided | |
| 52. | Hex socket 1/4" x 7mm | 01 | To be provided | |



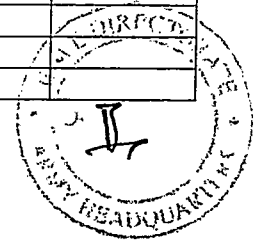
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| Ser | Nomenclature/Description | Qty | Required Specifications | Rmk |
|------|---|-----|-------------------------|-----|
| 53. | Hex socket 1/4" x 8mm | 01 | To be provided | |
| 54. | Hex socket 1/4" x 9mm | 01 | To be provided | |
| 55. | Hex socket 1/4" x 7/16" | 01 | To be provided | |
| 56. | Hex socket 1/4" x 1/4" | 01 | To be provided | |
| 57. | Spanner OTDE MM size 6x7 | 01 | To be provided | |
| 58. | Spanner OTDE MM size 8x9 | 01 | To be provided | |
| 59. | Spanner OTDE MM size 10x11 | 01 | To be provided | |
| 60. | Spanner OTDE MM size 12x13 | 01 | To be provided | |
| 61. | Spanner OTDE MM size 14x15 | 01 | To be provided | |
| 62. | Spanner OTDE MM size 16x17 | 01 | To be provided | |
| 63. | Spanner OTDE MM size 18x19 | 01 | To be provided | |
| 64. | Spanner OTDE MM size 20x22 | 01 | To be provided | |
| 65. | Spanner OTDE MM size 22x23 | 01 | To be provided | |
| 66. | Spanner OTDE MM size 24x26 | 01 | To be provided | |
| 67. | Spanner OTDE MM size 27x30 | 01 | To be provided | |
| 68. | Spanner OZDE inch 1/4" x 5/16" | 01 | To be provided | |
| 69. | Spanner OZDE inch 3/8" x 7/16" | 01 | To be provided | |
| 70. | Spanner OZDE inch 1/2" x 9/16" | 01 | To be provided | |
| 71. | Spanner OZDE inch 5/8" x 11/16" | 01 | To be provided | |
| 72. | Spanner OZDE inch 3/4" x 7/8" | 01 | To be provided | |
| 73. | Spanner OZDE inch 7/8 x 15/16" | 01 | To be provided | |
| 74. | Spanner OZDE inch 1" x 1/4" | 01 | To be provided | |
| 75. | Spanner OZDE inch 11/16" x 1/4" | 01 | To be provided | |
| 76. | Spanner ring type double ended 6x7mm | 01 | To be provided | |
| 77. | Spanner ring type double ended 8x9mm | 01 | To be provided | |
| 78. | Spanner ring type double ended 10x11mm | 01 | To be provided | |
| 79. | Spanner ring type double ended 12x13mm | 01 | To be provided | |
| 80. | Spanner ring type double ended 14x15mm | 01 | To be provided | |
| 81. | Spanner ring type double ended 17x19mm | 01 | To be provided | |
| 82. | Spanner ring type double ended 20x22mm | 01 | To be provided | |
| 83. | Spanner ring type double ended 3/4 x 7/16 Inch | 01 | To be provided | |
| 84. | Spanner ring type double ended 1/2 x 9/16 Inch | 01 | To be provided | |
| 85. | Spanner ring type double ended 5/8x11/16 Inch | 01 | To be provided | |
| 86. | Spanner ring type double ended 3/4 x 7/8 Inch | 01 | To be provided | |
| 87. | Spanner ring type double ended 1"x15/16 Inch | 01 | To be provided | |
| 88. | Spanner ring type double ended 1/4 x 11/16 Inch | 01 | To be provided | |
| 89. | Spanner socket 1/2" x 10mm | 01 | To be provided | |
| 90. | Spanner socket 1/2" x 11mm | 01 | To be provided | |
| 91. | Spanner socket 1/2" x 12mm | 01 | To be provided | |
| 92. | Spanner socket 1/2" x 13mm | 01 | To be provided | |
| 93. | Spanner socket 1/2" x 14mm | 01 | To be provided | |
| 94. | Spanner socket 1/2" x 15mm | 01 | To be provided | |
| 95. | Spanner socket 1/2" x 16mm | 01 | To be provided | |
| 96. | Spanner socket 1/2" x 17mm | 01 | To be provided | |
| 97. | Spanner socket 1/2" x 18mm | 01 | To be provided | |
| 98. | Spanner socket 1/2" x 19mm | 01 | To be provided | |
| 99. | Spanner socket 1/2" x 20mm | 01 | To be provided | |
| 100. | Spanner socket 1/2" x 21mm | 01 | To be provided | |
| 101. | Spanner socket 1/2" x 22mm | 01 | To be provided | |
| 102. | Spanner socket 1/2" x 23mm | 01 | To be provided | |
| 103. | Spanner socket 1/2" x 24mm | 01 | To be provided | |
| 104. | Spanner socket 1/2" x 25mm | 01 | To be provided | |
| 105. | Spanner socket 1/2" x 26mm | 01 | To be provided | |
| 106. | Spanner socket 1/2" x 3/16 Inch | 01 | To be provided | |
| 107. | Spanner socket 1/2x10 | 01 | To be provided | |
| 108. | Spanner socket 1/2" x 1/2" | 01 | To be provided | |
| 109. | Spanner socket 1/2" x 9/16" | 01 | To be provided | |
| 110. | Spanner socket 1/2" x 19/32" | 01 | To be provided | |



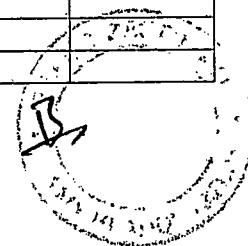
RESTRICTED

| Ser | Nomenclature/Description | Qty | Required Specifications | Rmk |
|------|---|-----|-------------------------|-----|
| 111. | Spanner socket 1/2" x 5/8" | 01 | To be provided | |
| 112. | Spanner socket 1/2" x 11/16" | 01 | To be provided | |
| 113. | Spanner socket 1/2" x 3/4" | 01 | To be provided | |
| 114. | Spanner socket 1/2" x 13/16" | 01 | To be provided | |
| 115. | Spanner socket 1/2" x 7/8" | 01 | To be provided | |
| 116. | Spanner socket 1/2" x 15/16" | 01 | To be provided | |
| 117. | Spanner socket 1/2" x 1" | 01 | To be provided | |
| 118. | Spark plug socket 14mm 13/16" | 01 | To be provided | |
| 119. | Spark plug socket 10mm 5/8" | 01 | To be provided | |
| 120. | Spark plug socket 1/2 18mm Opening 26mm | 01 | To be provided | |
| 121. | Spark plug gauge | 01 | To be provided | |
| 122. | Spark plug gauge | 01 | To be provided | |
| 123. | Combination filler & Ignition gauge (inch size) 26 blades | 01 | To be provided | |
| 124. | Combination filler & Ignition gauge (mm size) 13 blades | 01 | To be provided | |
| 125. | Breaker bar with plastic handle 15" | 01 | To be provided | |
| 126. | Ratchet reversible with plastic handle 10" | 01 | To be provided | |
| 127. | Braches bar with plastic handle 16" | 01 | To be provided | |
| 128. | "T" handle 11-5/8" length | 01 | To be provided | |
| 129. | Adopter 1/2 " SD to 3/4" SD (3/4" plug 1/2" socket) | 01 | To be provided | |
| 130. | Extension bar 6" with driller head | 01 | To be provided | |
| 131. | Extension bar 12" with driller head | 01 | To be provided | |
| 132. | Torque wrench 50-250 lbs capacity | 01 | To be provided | |
| 133. | Piston ring expended 3 1/2" to 5" | 01 | To be provided | |
| 134. | Piston ring compressor 2, 3/8" to 5" | 01 | To be provided | |
| 135. | Puller triple grip Jaw opening 3-1/8" max | 01 | To be provided | |
| 136. | Ignition spanner set 3/26", 7/32", 9/32", 8/16", 11/32", 3/8" & 7/16" | 01 | To be provided | |
| 137. | Ignition spanner set (4mm to 7 mm) | 01 | To be provided | |
| 138. | Allen key set 1/16, 3/64, 3/32, 3/16, 3/32, 4/1 5/16 & 3/8 (set of 10) (Inch) | 01 | To be provided | |
| 139. | Allen key set 2,2,3,4,5,6,7,8,9,&10 mm | 01 | To be provided | |
| 140. | Chisel cold 6" | 01 | To be provided | |
| 141. | Chisel cold cross cut 7/8" | 01 | To be provided | |
| 142. | Punch center 4 tool steel 4 / 1/4" | 01 | To be provided | |
| 143. | Punch starter tool steel 4 1/4" | 01 | To be provided | |
| 144. | Punch starter tool steel 7" | 01 | To be provided | |
| 145. | Drift brass parallel 6" | 01 | To be provided | |
| 146. | Rule steel grad ate 12" | 01 | To be provided | |
| 147. | Carbon scriper 9 3/4" | 01 | To be provided | |
| 148. | Scriper double ended 9" | 01 | To be provided | |
| 149. | Automatic light tester | 01 | To be provided | |
| 150. | Oil can 1/2 pt | 01 | To be provided | |
| 151. | Clearing brush 6" long | 01 | To be provided | |
| 152. | Hack saw frame 10" to 12" | 01 | To be provided | |
| 153. | Pad lock | 01 | To be provided | |
| 154. | Universal Joint | 01 | To be provided | |



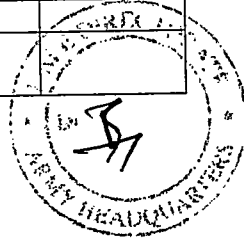
LIST OF TOOLS KIT FOR CARPENTER

| Ser | Nomenclature/Description | Qty | Required Specifications | Rmk |
|-----|---|-----|-------------------------|-----|
| 1. | Chests tool empty 'J' wood 22-1/2" x 11" x 7" internal directions fitted with runner 3" from top of chest, running full length for one try 16-1/2"x11" x2-1/8" with proteins two carryout handled hasps and staple qty-1 per set. | 01 | To be provided | |
| 2. | Augers eyed 1" dia bore of eye 1" overall length 25" UN handled, scotch pattern with round shank and barrel eye. | 01 | To be provided | |
| 3. | Bevels, wood, carpenters, 10-1/2" bade polished rose wood or jarrah stocks tempered steel blade. | 01 | To be provided | |
| 4. | Braces carpenters bits expansive with 2 cutters to cut from 7/8" to 3" dia in wooden case | 01 | To be provided | |
| 5. | Chisels, firmer handled 3/4" width on cut length bolsters to point 4-1/4". | 01 | To be provided | |
| 6. | Chisels, firmer handled 1/8" width on cut length bolsters to point 4-1/2". | 01 | To be provided | |
| 7. | Chisels, firmer handled 3/4" width on cut length 5" | 01 | To be provided | |
| 8. | Files saw taper second cut single 4" | 01 | To be provided | |
| 9. | Files saw taper second cut single 6" | 01 | To be provided | |
| 10. | Gauge mortise and marking (Rose wood) | 01 | To be provided | |
| 11. | Hammer carpenters warring ton 1 lbl handled cross pane | 01 | To be provided | |
| 12. | Mallets carpenters for tinsmiths, length 15" dimension of head 6" x 4" x 2-3/4" | 01 | To be provided | |
| 13. | Planes, smoothing 2-1/8" (width of iron) length of plans 14" | 01 | To be provided | |
| 14. | Saw stone fine 18" | 01 | To be provided | |
| 15. | Oil store fine 8" | 01 | To be provided | |
| 16. | Pad lock 1-1/4" (with key) | 01 | To be provided | |



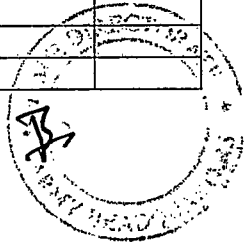
LIST OF TOOLS KIT FOR TELECOM TECHNICIAN

| Ser | Nomenclature/Description | Qty | Required Specifications | Rmk |
|-----|--|-----|-------------------------|-----|
| 1. | Alignment tools (Set of 8 pcs) | 01 | To be provided | |
| 2. | Flash light 2 cell | 01 | To be provided | |
| 3. | Pliers side cutting 7" | 01 | To be provided | |
| 4. | Brush for cleaner | 01 | To be provided | |
| 5. | Land key (Set of 7 pcs) | 01 | To be provided | |
| 6. | Screw driver flat (Set of 6 pcs) | 01 | To be provided | |
| 7. | Screw driver Philips (set of 6 pcs) | 01 | To be provided | |
| 8. | Multi meter digital (Pocket type) | 01 | To be provided | |
| 9. | Solder reel | 01 | To be provided | |
| 10. | Soldering iron 40 watt 220 volt | 01 | To be provided | |
| 11. | Solder sucker | 01 | To be provided | |
| 12. | 3 piece soldering aid tools | 01 | To be provided | |
| 13. | Tweezers 4" | 01 | To be provided | |
| 14. | Spanner adjustable 6" crescent | 01 | To be provided | |
| 15. | Wire cutter 8" | 01 | To be provided | |
| 16. | Tools box for (briefcase type high quality) carrying above tools | 01 | To be provided | |



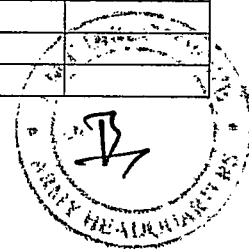
LIST OF TOOLS KIT FOR INSTRUMENT

| Ser | Nomenclature/Description | Qty | Required Specifications | Rmk |
|-----|--|-----|-------------------------|-----|
| 1. | Hammer eng ball pens 8 oz | 01 | To be provided | |
| 2. | Hammer eng ball pens 8 oz | 01 | To be provided | |
| 3. | Hammer eng ball pens 8 oz | 01 | To be provided | |
| 4. | Pliers side cutting 7" | 01 | To be provided | |
| 5. | Pliers long nose 4" | 01 | To be provided | |
| 6. | Screw driver instrument maker (Set of six) | 01 | To be provided | |
| 7. | Screw driver elect & 8" | 01 | To be provided | |
| 8. | Screw driver elect & sig 10" | 01 | To be provided | |
| 9. | Screw driver Philips O/L 6" | 01 | To be provided | |
| 10. | Screw driver Philips O/L 8" | 01 | To be provided | |
| 11. | Center punches 4-1/2" | 01 | To be provided | |
| 12. | Chisel cold 1/8" cut length 4" | 01 | To be provided | |
| 13. | Spanner adjustable 6" crescent | 01 | To be provided | |
| 14. | Land key set (Set of 7 pcs) | 01 | To be provided | |
| 15. | File round smooth 8" | 01 | To be provided | |
| 16. | File flat smooth 8" | 01 | To be provided | |
| 17. | File flat smooth 8" | 01 | To be provided | |
| 18. | File triangular smooth 6" | 01 | To be provided | |
| 19. | Handle file no 1 | 01 | To be provided | |
| 20. | Handle file no 2 | 01 | To be provided | |
| 21. | Rules steel flexible 3 meter | 01 | To be provided | |
| 22. | Saw heck hand frame 8-12" | 01 | To be provided | |
| 23. | Soldering iron elect 220 volt 40 watt | 01 | To be provided | |
| 24. | Tweezers 4-1/2" | 01 | To be provided | |
| 25. | Eye glass single focus | 01 | To be provided | |
| 26. | Brushes W/maker soft | 01 | To be provided | |
| 27. | Gar glass (With cover) | 01 | To be provided | |
| 28. | Tool watch maker (set of 6) | 01 | To be provided | |
| 29. | Tools Box Empty (Briefcase type) | 01 | To be provided | |



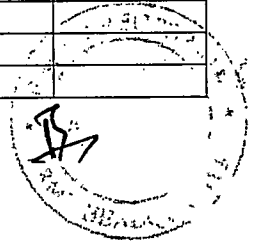
LIST OF TOOLS KIT FOR WELDER

| Ser | Nomenclature/Description | Qty | Required Specifications | Rmk |
|-----|---|-----|-------------------------|-----|
| 1. | Rule Steel 12" | 01 | To be provided | |
| 2. | Caliper 6" out side | 01 | To be provided | |
| 3. | Caliper 6" in side | 01 | To be provided | |
| 4. | Cross ring 7" | 01 | To be provided | |
| 5. | Spanner ring type DE 25/32 x 13x16" | 01 | To be provided | |
| 6. | Adjustable spanner 12" | 01 | To be provided | |
| 7. | Chisel cold cross cut carbon steel 1/4" cut | 01 | To be provided | |
| 8. | Chisel cold cross cut carbon steel 3/4" cut | 01 | To be provided | |
| 9. | Hammer engineering ball 1 1/2" lb | 01 | To be provided | |
| 10. | Hammer sealing 1 lbs with handle | 01 | To be provided | |
| 11. | File round 10" with handle | 01 | To be provided | |
| 12. | File flat basted 12" with handle | 01 | To be provided | |
| 13. | Brush steel wire 2-12" side x 7" long | 01 | To be provided | |
| 14. | Amife riming | 01 | To be provided | |
| 15. | Tung smiths large 19" | 01 | To be provided | |
| 16. | Apron leather | 01 | To be provided | |
| 17. | Cap apron | 01 | To be provided | |
| 18. | Dividers 8" | 01 | To be provided | |
| 19. | Chest tool empty | 01 | To be provided | |
| 20. | Pad lock 1 1/2" | 01 | To be provided | |



LIST OF TOOLS KIT FOR ARMOUR

| Ser | Nomenclature/Description | Qty | Required Specifications | Rmk |
|-----|--|-----|-------------------------|-----|
| 1. | Gauges feeler 4" | 01 | To be provided | |
| 2. | Gauges firmer 3/4 " | 01 | To be provided | |
| 3. | Gauges firmer 1/4 " | 01 | To be provided | |
| 4. | Lamp Brazing 1 pt complete | 01 | To be provided | |
| 5. | Punches round 3/4 " | 01 | To be provided | |
| 6. | Vice hand 5" | 01 | To be provided | |
| 7. | Horse armr | 01 | To be provided | |
| 8. | Pincer armr 8" | 01 | To be provided | |
| 9. | Barrel reflector | 01 | To be provided | |
| 10. | Zeroing tools (7.62 mm auto Rifle BD-08) | 01 | To be provided | |
| 11. | Cartridge head space gauge | 01 | To be provided | |
| 12. | Firing pin protrusion | 01 | To be provided | |
| 13. | Gauges spacture plug 7.607-7.772 | 01 | To be provided | |
| 14. | Screw driver fork 12" | 01 | To be provided | |
| 15. | Extractor head space gauge 1.7 -1.9 mm | 01 | To be provided | |
| 16. | Chest tool empty | 01 | To be provided | |



LIST OF TOOLS KIT FOR VEHICLE (C VEH)

| Ser | Nomenclature/Description | Qty | Required Specifications | Rmk |
|-----|---|--------|-------------------------|-----|
| 1. | Ratchet with Handle 1" SD reversible length 28" | 01 | To be provided | |
| 2. | 'T' Handle 1" SD 28" length | 01 | To be provided | |
| 3. | Bar Extension 8"X $\frac{3}{4}$ " SD | 01 | To be provided | |
| 4. | Universal Joint 1" SD | 01 | To be provided | |
| 5. | Bar Extension 16"X 1"SD | 01 | To be provided | |
| 6. | Convertor/Adaptor 3/4" square socket X 1" plug | 01 | To be provided | |
| 7. | Convertor/Adaptor 3/4" square plug 1" | 01 | To be provided | |
| 8. | 1-1/16" (AF) | 01 | To be provided | |
| 9. | 1-1/8" (AF) | 01 | To be provided | |
| 10. | 1-1/4" (AF) | 01 | To be provided | |
| 11. | 1-5/16" (AF) | 01 | To be provided | |
| 12. | 1-7/16" (AF) | 01 | To be provided | |
| 13. | 1-1/2" (AF) | 01 | To be provided | |
| 14. | 1-5/8" (AF) | 01 | To be provided | |
| 15. | 1-11/16" (AF) | 01 | To be provided | |
| 16. | 1-3/4" (AF) | 01 | To be provided | |
| 17. | 2-3/8" | 01 | To be provided | |
| 18. | 1-7/8" (AF) | 01 | To be provided | |
| 19. | 2" (AF) | 01 | To be provided | |
| 20. | Socket 3/4" SD made from chrome alloy steel comprising following 10 (mm) sizes: 27, 29, 30, 32, 36, 38, 40, 42, 46 & 50 (10 Pcs) | 01 Set | To be provided | |
| 21. | 2-1/16" | 01 | To be provided | |
| 22. | 2-1/8" | 01 | To be provided | |
| 23. | 2-3/16" | 01 | To be provided | |
| 24. | 2-1/4" | 01 | To be provided | |
| 25. | 2-3/8" | 01 | To be provided | |
| 26. | 2-1/2" | 01 | To be provided | |
| 27. | 2-9/16" | 01 | To be provided | |
| 28. | 2-5/8" | 01 | To be provided | |
| 29. | 2-3/4" | 01 | To be provided | |
| 30. | 2-15/16" | 01 | To be provided | |
| 31. | 3-1/8" | 01 | To be provided | |
| 32. | Socket 1" SD made from chrome alloy steel comprising following 06 (mm) sizes: 55, 60, 65, 70, 75 & 80 (06 Pcs) | 01 Set | To be provided | |
| 33. | Torque multiplier with variable cranked reaction bar comprising 1 multiplier 2 reaction bars and 1 spare drive square all in a carrying case. | 01 Set | To be provided | |

