Basic Life Support Ambulance

(1): SCHEDULE OF REQUIREMENTS

No	Item	
1	Basic Life Support Ambulance	

(2) TECHNICAL SPECIFICATIONS

2.1 Technical Specifications of Vehicles

يجب ارفاق المطلوبات التالية للسيارات
The following information should be submitted

✓	المطلوبات Requirements	
	Brand type and manufacture نوع السيارة والشركات المصنعة	-1
	Technical specification المواصفات الفنية للسيارة	-2
	Country of origin بلد المنشاء .	-3
	Year of production سنة التصنيع.	-4
	Warranty Booklet الضمان, يجب ارفاق كتيب الضمان عند التوريد	-5
	After sales services خدمات ما بعد البيع .	-6
	Drawing or Pictures: To provide inside, outside, set up within the vehicle and all other necessary configurations and fittings. صورللسيارة من الداخل و الخارج ورسومات توضح التعديلات والاضافات المصاحبة لتصميم الاسعافات	-7
	Sound level of Sarnia at one meter in (dB). مستوى صوت السارينا على مسافة متر.	-8

Minimum Requirements of 4WD VEHICLE: LHD – BASIC CAR

الاحتياجات الاساسية لسيارات الدفع الرباعى – الاساسية

1	**General Features**
1.1	3 doors
1.2	(6) Seats
1.3	Air Conditioning (F+R)
1.4	Fabric seat upholstery
1.5	Transmission: Manual, 5 speed, floor mount lever, cabin operated, high/low transfer with free wheel hubs
1.6	Front suspension: Coil springs Rear suspension: leaf springs
1.7	Brake Front: Disc: Brake Rear: Drum or Disc with ABS.
2	**Vehicle Dimensions**
2.1	Wheelbase: Approx 2200mm, L: Approx: 5000mm.
2.2	Ground Clearance: Approx 2000mm
2.3	Tank Capacity: Approx 90 litres+ sub tank.
3	**Engine Features**
3.1	Mount: Front inline
3.2	Displacement: Approx 3000 cc
3.3	Water cooled
3.4	Fuel Type: **Diesel**
3.5	Air intake with snorkel
4	**Steering**
4.1	Left Hand Drive
4.2	Power Assisted Steering
5	**Electricals**
5.1	12 Volts System
6	**Others accessories**
6.1	Owner’s manual in English and Arabic
6.2	First aid kit
6.3	Fire extinguisher
6.4	Emergency reflective triangles
6.5	Air bag (D+P)
7	Manufacturing Year: Must Be 2023 or 2024.

General Vehicular Design and Floor Plans

This ambulance should be either of international designated testing authority approved Monocoque design manufacturer.
The ambulance should be designed, built and complete with operating accessories as specified herein. The assembly, sub-assembly and equipment should be integrated in such a way so as to enable the vehicle function in a reliable way and in a sustained fashion with durability and ensuring safety and comfort to patient and team.

The design of the vehicle and the specified equipment shall permit accessibility for servicing / replacement and adjustment of components / parts and accessories, with minimum disturbance to other components and systems. Also, the bidder shall ensure that sufficient reinforcement is provided to protect the components, assemblies, pipelines, tubing, wirings, etc. which are susceptible to damage / hazards encountered during on-road, off road operations of ambulance.

The emergency medical care vehicles, including base vehicle, equipment, devices, medical accessories and electronic equipment should be brand new standard commercial products, tested and certified to meet or exceed the these specifications. The bidder should enclose all necessary brochures, certifications and proofs in this regard along with the technical bid. The technical bid evaluation committee shall base its opinion on the enclosed documentary proofs with regards to compliance with the specifications asked for and may summarily reject the technical bid if adequate supporting documents are not enclosed with the technical bid or any of the furnished documents are found to reflect factually incorrect information. The technical bid evaluation committee reserves the right to ask for additional information if necessary.

Patient Compartment:
Patient Compartment volumetric space shall be sufficient in size to transport occupants and accommodate / store equipment & fitments specified.

An access window between Driver's Cabin and Patient Compartment should be provided at appropriate location for visual checks and voice communication between the cabin and patient compartment. This window should be latch able from the patient cabin side and should be transparent, shatter proof and shall have adjustable opening.

The interior panelling of the patient compartment including sidewalls, partition between patient cabin and driver cabin, roof, door panels and all other surfaces in the patient compartment should be made from long life superior quality. There should be PUF / PU insulation, minimum 12 mm thick between the outer and inner panels of these vehicles for reduction of heat and noise within the patient compartment. The insulating material should be non-toxic, non-settling type, vermin proof, mild dew proof and non-hygroscopic.

Adequate provision for storage of medicines/consumables/equipment should be made by providing lockable cabinets & drawers. These should be made from non-wood & non-ferrous fire retardant material in sync with the ambulance's internal look and feel. The drawers should be on guide ways &should be provided with appropriate self-restraining mechanism to arrest the inadvertent opening of the unlocked drawers unless pulled while the vehicle is in motion. One number of drugs storage console with at least 40 individual bins should be provided in easy reach of paramedic when seated. These bins must permit the user to take out the drugs without removing the bin & should be secured firmly to avoid drugs or bins from falling when the ambulance is in motion.

The floor (except the wheel humps) should be flat, anti-static & should be finished with minimum 2mm thick two component PU coating with anti-scratch treatment or 2mm thick Anti-skid PVC vinyl matting or FRP / ABS with Anti-skid coating.

Door: There shall be a 'two leaf' divided rear door or 'flap type' rear door at the rear end of the patient compartment for entry and exit of personnel as well as loading and unloading of the ambulance cot. This door shall not be less than 1170mm in height with minimum width of 1120mm and the door opening should be side-ways or bottom to top. Each door should be hinged at least at two places and should have firm latching provision. It shall be capable of being positively restrained in the open position. A "Door-Open" warning device shall signal (indicate in the cab) when doors are not closed. Each door shall have effective compression or overlapping seals to prevent leakage of exhaust fumes, dust, water, and air.

The opening of the door should be possible from inside and outside at all times. Under no condition, during travel mode, this door should open on its own.

The doors of the patient's compartment shall be fitted with an appropriate mechanism to enable the following:

- lock and unlock from inside without use of a key;
- lock and unlock from outside with use of a key;
- unlock from the outside using a key when the door is locked from the inside

Windows: In the patient's compartment, there shall be a minimum of two external windows. There shall be one on each side or one on the side and other at the rear. The windows shall be positioned or screened to ensure patient's privacy when required. Windows shall be fitted with safety glasses complying with the requirements of international standards.

Ambulance Cot as per specifications detailed in this document should be provided for the primary patient.

A foldable seat for the Doctor/Paramedic should be installed facing towards the rear of the patient compartment & it should be near to the primary patient's head for easy accessibility. This seat should have adequate restrains for the passenger and should be fitted with foldable arm rests.

A Squad bench with backrest suitable to accommodate minimum four sitting patients or folding/scoop stretcher shall be installed along the side wall. The squad bench should be upholstered with waterproof washable cover and should have adequate restrains for the sitting patients as well as the stretcher.

Grab Rail made of stainless steel pipe with proper support / fixing, for ease in entering shall be installed in the ceiling. Minimum two IV hooks or holders to be provided at suitable locations to ensure proper patient care.

Dust Bin

Concealed portable dust bins for waste disposal should be provided at suitable locations.

Fire extinguisher

Two numbers of multipurpose fire extinguishers of ABC Type duly filled should be provided. One fire extinguisher shall be placed in the Driver's cabin and the second in patient's compartment, at appropriate location, where it is easily visible and symbolized.

All fitments/equipment/outlets/switches/storage spaces, etc in the patient compartment should be permanently& clearly labelled in English. The font used should be easily readable and in contrasting color of the background.

Oxygen Delivery System

The ambulance shall have piped medical oxygen system (manifold) capable of storing and supplying medical grade oxygen. The manifold should have two oxygen cylinders which should be at least B-type. All oxygen cylinders being used in the ambulance including the portable cylinders.

The cylinders attached to the manifold should be individually changeable from outside the patient compartment and a cylinder changing wrench should be housed at an appropriate location. The manifold should be so designed that it shall ensure proper fixation of cylinders during travel and should ensure easy cylinder changing and positioning.

Minimum two medical oxygen outlets for the primary patient, flush with right side wall (distance between patient head and oxygen outlets to be less than 890mm) to be provided.

The oxygen outlets should be universal in design to be able to accommodate the probe of the oxygen flow-meter and the probe of the driving gas hose of the ventilator directly in one single action without any intermediate connectors and adapters.

Noise

Noise testing of patient compartment will be as per international standards.

Air-Conditioning

The AC unit should be installed at a suitable location in the patient cabin to ensure there is no congestion in the driver/patient cabin. With all windows & doors closed, the system should be capable of lowering the cabin temperature to a maximum of 26 degrees Celsius within 30 minutes from 35 degrees Celsius ambient temperature. The gas used for Air conditioning should be environment friendly as per International regulatory requirements. The engine idling rpm should be so designed and tuned to fulfil the requirements of AC Unit.

Siren

All siren loudspeakers have to be mounted on the front of the vehicle. Hidden installation is allowed. The main sound direction must be in driving direction. The frequency range must be at least one octave and should be between 500Hz and 2.000Hz. An additional electronic air horn can be used. Further there should be a public address system that can be worked at all times ergonomically from the driver's seat. The siren switch can only be used if the warning lights are on.

Exterior Special Lighting and Illumination

The ambulance should have the following lighting fitments (12V):

- LED based flashing lights with top red lens having minimum four LED flashers visible on both sides of the ambulance (integrated or enclosed in a light bar) mounted on the roof top. The LED flashers should flash cyclically using appropriate flashers.
- At least two LED flashers & one spot lamp on both sides of the ambulance as well as two flashers & a rear loading lamp on the rear wall of the ambulance mounted at the highest position feasible. (The rear loading light shall automatically be activated when rear doors are opened.)

Interior Patient Compartment Illumination:

There should be diffused flicker free automotive grade (12V, minimum 4000 deg Kelvin) lighting in the patient compartment. All interior lighting shall be flush mounted and should not get loose or fall down during vehicle movement or vibration. Normal white illumination within the patient compartment without outside ambient light shall not be less than 100 Lux (lx) when measured along the centre line of the clear floor; and 150 lx on at least 90% of the surface area of the primary patient cot. At least one patient compartment light and rear loading lamp shall be automatically activated when the patient compartment rear doors are open.

Electrical System

The electrical system should be of uniform specification across Basic Life Support Ambulances. There shall be two independent forward electrical circuits in the ambulance: the Original Equipment Manufacture-Base Vehicle Circuit and the non-Original Equipment Manufacture-Base electrical circuit. At no point shall the forward Original Equipment Manufacture-Base base vehicle circuit be tampered with to provide for any non- Original Equipment Manufacture-Base electrical load requirements.

Each ambulance should have additional 'supplementary battery(s)' sufficient enough to power the non- Original Equipment Manufacture-Base electrical load requirements of the homologated vehicle. These batteries should be located at a suitable location outside the patient compartment and should be automatically charged by the vehicle alternator while the vehicle is on and via 220V external AC supply if connected when stationary. The alternator of the base vehicle should have the current rating which is at least 10% higher than the peak current consumption of the fully equipped ambulance. (Including current for charging of the

batteries, running of air conditioning system as well as all the medical and non-medical devices, etc.)

A permanently fitted automotive grade battery charger should be provided to enable charging of the supplementary batteries via external 220V AC supply whenever connected.

Adequate number of power receptacles / connections should be provided in the patient compartment to simultaneously power all the equipment's & fitments asked for in this document. The mountings of all electrical outlets shall be sturdy enough to handle wire/plug pressure and vibrations during transit. There should be at least one free automotive grade 12V DC receptacle provided in the patient & driver compartment each at an easily accessible location.

All switches, connectors, end-wiring should be rated to carry out minimum 125 % of their maximum ampere load. All wiring should confirm to international standards specification.

Electrical panels that are accessible to accidental contact shall have a protective cover, shield, and so forth, to prevent shorts that can result in injury, fire, or damage to the electrical system.

Electrical wiring and components shall not terminate in the oxygen storage compartment except for the oxygen controlled solenoid, compartment light, and switch plunger or trigger device. Wiring necessarily passing through an oxygen compartment shall be routed in a metallic conduit.

Radio Frequency Interference (RFI)

The ambulance electrical / electronic and mechanical equipment in running mode / on condition, should meet the Radio Frequency Interference standards.

Emblems, Marking & Color Scheme

Complete body exterior should be uniform white in color. All external marking should be retro- reflective in nature and materials used for the same should meet or exceed the requirements of international standards.

Guidelines in regards to Emblems and Markings for Ambulances issued by the Government from time to time shall be applicable. However, the quality parameters of the markings indicated above shall remain constant.

Operating Manuals, etc.

Comprehensive User Manual/s written in simple English with detailed parts description, operating instructions, service contact numbers, etc for the Base Vehicle, Patient/Driver Compartment Equipments, Fittings, etc shall be provided. These should be printed on high quality paper and housed in water-resistant pouches.

Laminated sheets, clearly showing the Patient and Driver Cabin Layout with location

of equipment, fittings, switches, consumables, etc suitably depicted should be fixed in the patient and driver cabin

at suitable locations. Laminated sheet showing the non-Original Equipment Manufacture electrical wiring diagram complete with location of various fuses and circuit breakers should be displayed in the vehicle at a suitable location.

Layout Drawings

Sample drawing showing the layout of patient cabin for Basic Life Support Ambulance is attached along with. This drawing is indicative of an ideal ambulance layout and the bidders should adhere to this guidance in consonance with the above detailed specifications as regards the location and positioning of various medical equipment & patient care ergonomics while adapting the remaining fitments to their vehicle dimensions. Any dimension/fitment/equipment depicted in the sample drawing and not asked for in this tender document maybe ignored.

The bidders **MUST** provide 2D & 3D rendered drawings for all types of quoted ambulances showing location of various components, sub-assemblies for structure, interior layouts, fitment of oxygen system components, layout of seats & furniture, medical equipments, non- Original Equipment Manufacture electrical system layout, etc along with the technical bid.

2.2 Technical Specifications of medical equipment

Equipment for Basic Life Support Ambulance

All equipment & accessories being used in the ambulance including those in the Oxygen Delivery System should be US Food and Drug Administration (FDA) or European CE certified (where ever mentioned in the Technical Specification & Copy of the certificate to be enclosed along with the technical bid). Bidders should clearly state the technical specifications of their offered equipment including manufacturer, Country of origin, equipment model, warranty, manufacturing date and the certificate (CE or FDA).

Ambulance Equipment List:

No	Requested equipment	Quantity For Basic
1	Ambulance stretcher	One
2	Spine Board	One
3	Scoop Stretcher	One
4	Pulse Oximeter	One
5	Oxygen Flow Meter with Humidifier	Two
6	Suction Pump (Manual & Handheld)	One
7	Suction Pump (electric)	One
8	Resuscitation Bag (Ambo bag)set	One set
9	Mouth to Mask ventilation device	One
10	Oxygen Cylinder	Two
11	Laryngoscope with blades	One
12	Nebulizer	One
13	Stethoscope	One
14	Sphygmomanometer (Manual)	One
15	Pupillary Torch	One
16	Needle Sharp Container	One
17	Thermometer (Digital)	One
18	Pneumatic Splints	One set
19	Cervical Collars	One
20	EMT Shears	One
21	Artery Forceps	Two
22	Toothed Forceps	Two
23	Magill's forceps	Two
24	Kidney dish	Two
25	First Aid Kit with bag	One
26	Search Light	Two
27	Rescue Equipment	One
28		
29		

Price list of all consumables, accessories & spares valid for a period of 2 years must be submitted along with the technical bid. (These prices will not be taken into account during the technical or financial bid evaluation).

The equipment have to be supplied in the Basic Life Support Ambulances as specified in the above list. If multiple offers of any equipment are quoted in the technical bid they must be fully compliant with the tender specifications.

1. **Ambulance stretcher**

Ambulance stretcher for transporting patients in critical medical conditions including

- Roll-in Self Collapsing Ambulance stretcher.
- Should withstand more than 150kg patient.
- Should be supplied with a fixation system.
- Should have Net weight less than 50kg (excluding the mattress & other accessories).
- The stretcher mattress should be water proof and upholstered with fire proof material.
- Should load seamlessly and no manual intervention vis-a-vis the locking mechanism.
- Should have at least three strap-type restraining devices (chest, hip, and knee) to prevent longitudinal or transverse dislodgment of the patient during transit.
- Should be supplied with suitable accessories to fix the supplied portable oxygen cylinder
- One number of folding IV Poles should be provided
- The stretcher should be able to be guided in and out of the ambulance without any part of the stretcher (including the legs) striking any part of the ambulance body including the rear footstep.
- The loading angle of the stretcher should not be more than 16 degrees.

2. **Spine Board**
    - Should be made of plastic.
    - Should be buoyant.
    - Should have dimensions of approximately 200 X40X7cm (length X width X thickness).
    - Should have light weight (less 5kg).
    - Should have handles for carrying the patient.
    - Should be X ray & MRI compatible.

3. **Scoop Stretcher**
    - Should have Light weight (Net weight: <15 Kgs)
    - Should be made of plastic or aluminum.
    - Should be supplied with quick release straps.
    - Can be split into two sections (vertically).
    - Should have dimensions approximately 200 X 40 cm (Length X width)
    - Should have a depth of about 5cm.

4. **Pulse Oximeter**
    - A pulse Oximeter is a medical device that indirectly measures the amount of oxygen in a patient's blood and changes in blood volume in the skin, producing a photoplethysmography.

- Pulse Oximeter, complete unit with all standard accessories
- Suitable for all types of patient range, adult, pediatric and infant
- Pulse oximeter with integrated color OLED Screen
- Screen should display SpO2 & Pulse Rate
- Should have built in Alarms for low saturation, low battery, etc.
- Should be powered with standard AA or AAA batteries
- Should have auto power down feature when not in use.
- Should be supplied with appropriate batteries and storing case.

5. Oxygen Flow Meter with Humidifier

- Dial setting type without any floats, needles or moving parts to indicate the flow level.
- Pressure compensated for inlet pressure range of 3 to 5 bar, be able to regulate the flow from 0 to 15 liters per min and should show the actual oxygen flow rate.
- Installed vertically so as to not interfere with the other outlets and should be easily readable from the Doctor's/Paramedic' seat.
- The inlet probe should be fully adaptable to the terminal outlet in the ambulance as well as to the outlet adapter of the portable oxygen cylinder specified below in the list of medical equipments
- The outlet of the flow-meter should be universal in design to accept the humidifier, the flow selector switch or a direct connector
- Should have a humidifier made up of an impact resistant polycarbonate bowl with cap and inlet outlet nipples
- Should include a flow selector switch to bypass the flow of the oxygen through the humidifier and allow nebulization to the patient directly using the flow of the oxygen
- Should be supplied with a direct connector to provide oxygen therapy without humidifier, insufflation kit and nasal prong
- Should be European CE or US FDA certified

6. Suction Pump (Manual & Handheld)

- Portable & Lightweight
- Vacuum (max): 550mmHg.
- Non disposable and autoclavable container of minimum 250 ml connecting jar made out of polycarbonate with overfilling valve.
- Maximum Weight: <1Kg

7. Suction Pump (electronic)

- Electronic Suction device with ambulance mount
- Control knob for continuously adjustable vacuum level up to at least 550 mmHg starting from zero
- Suction capacity of minimum 30 liters per minutes

- Minimum 500ml capacity secretion bottles with efficient over-flow protected
- Ambulance Wall / floor mounted
- Rechargeable Battery with minimum capacity of 30 minutes
- The ambulance wall mount should have built in charger with integrated DC charging module to directly charge the internal batteries of the device from the 12V ambulance batteries as soon as the device is placed on the bracket.
- Should be supplied with Wide – bore tubing, rigid pharyngeal curved suction tip;
- Tonsillar and flexible suction catheters, 5F – 14F
- Should be European CE or US FDA certified

8. Resuscitation Bag (ambo bag) set

- Should be made of silicon
- Hand operated, self-re-expanding bags (2L, 1L & 500ml sizes) or minimum (1500 ml, 500 ml, 200 ml), with oxygen reservoir/accumulator, clear mask (adult, child, infant and neonate sizes); valve (clear, disposable)
- Working temperature up to 40 degrees.
- To be supplied in proper Carrying case.
- Should be CE or US FDA certified

9. Mouth to Mask ventilation device

- Suitable for Adult, Child & Infant/Neonate

10. Oxygen Cylinder (Portable) with Oxygen Pressure Reducer

- Should be manufactured as per international and Sudanese standards.
- Max. Working Pressure at 15O C: 150kgf/cm2
- Water capacity: min 1L
- Built in / attached with Pressure gauge, regulator and cylinder wrench/key
- Pressure regulator with plug-in type outlet port capable to accommodate the probe of the driving gas hose of ventilator or the inlet probe of the oxygen flow-meter directly in single action without any intermediate connectors or adapters etc.
- Adequate length tubing, mask (adult, child and infant sizes), transparent, non- rebreathing, venturi, and valveless, nasal cannulas (adult, child and infant sizes)

11. Laryngoscope with blades

- Stainless steel, Fiber optic laryngoscope consisting of:
- Penlight laryngoscope handle with knurled finish and uses AA batteries.
- Blade with fiber optic for cool light

- Stainless steel blades
- Blade size 1 , miller type
- Blade size 2, miller type
- Blade size 3, Macintosh type
- Blade size 4, Macintosh type
- Should be European CE or US FDA certified

12. Nebulizer

- Heavy duty
- Compact, light-weight, low noise.
- Durable long life compressor.
- Max Press=2.0-2.5 bars.
- Should produce particle of size 1-5 micron.
- Air delivery rate approx. 15 L/min.
- Flow control and flow gauge.
- Input power supply: 220/240 volt AC , 50Hz Schuko plug
- **Accessories**
- Air delivery tube
- Dosage cup
- Reusable mask for pediatrics.
- Reusable mask for adults.
- Should be European CE or US FDA certified

13. Stethoscope

- Dual-head stethoscope
- Y tube treated rubber with 10mm diameter
- Chest-pieces: stainless steel or chrome brass, with Φ28 mm diaphragm
- Sensitivity of 3.2 dB in a range from 50 to 500 Hz for cardiology
- Sensitivity of 8.1 dB in a range from 600 to 1500 Hz for pneumology.
- Arm: stainless steel or chrome brass, with spring to give lasting spring and maximum reliability and comfort.
- Removable plastic ear-pieces.
- Included spare ear tips and diaphragm.
- Should be European CE or US FDA certified.

14. Sphygmomanometer (Manual)

- Aneroid type sphygmomanometer
- Manual, Dial Type
- Manometer with a range from 0 to 300mmHg fine graduation.
- Measurement tolerance below ±5mmHg
- Tubing system Ø approx: 1.5cm.
- A bulb with air releasing valve.
- Durable latex-free cuff for adult and another pediatrics.
- Wall-mountable.

15. Pupillary Torch

- Spot illumination without peripheral ring of light
- Pen type torch
- 3 volts DC bulb
- 2 AAA batteries.

16. Needle & Syringe Destroyer and Sharp Container (Mechanical)

- To be securely placed at an appropriate location to allow easy disposal of needles
- Maximum weight 2.5 Kgs
- Motion Tolerant

17. Thermometer (Digital)

- Battery operated thermometer
- Clinical Digital thermometer
- An audible signal for temperature measurement and
- Digital display of temperature value
- Range of measurement between 32 to 42 °C with an accuracy of ±0.1 degree C.
- Auto shut-off
- Designed for oral, rectal, or axillary use
- Automatic self-test

18. Pneumatic Splints

- Set of 6 adult sizes (Hand & wrist, Half arm, Full arm, Foot and ankle, Half leg & Full leg) with carrying case
- X-ray through the splints
- Inflatory tubes' extension with closing clamp makes closing easy and quick after inflation
- Fixing of splint is by zipper or belt
- Distal end left open to expose toes
- Should be washable and reusable
- Should be supplied with the appropriate pump required to inflate the splints

19. Cervical Collars

- Rigid and should be suitable for children aged 2 years or older, infant and adults
- Should be adjustable to 4 different sizes- Tall, Regular, Small & No neck
- Should have pre-mounded chin support, locking clips and rear ventilation panel, enlarged trachea opening.
- Should be high-density polyethylene and foam padding with one piece design enabling efficient storage where space is limited
- Should be X-ray lucent and easy to clean and disinfect

20. EMT Shears

- One Nos with Thermoplastic handles.
- Should be capable of cutting a coin.
- 6” made of SS with one edge round and other edge sharp
- Should be as per CE/FDA/BIS/ISI standards

21. Artery Forceps

- Stainless steel
- Artery Forceps Spencer (Straight) has length of 15cm.
- Artery Forceps spencer (Straight) has length of 22cm

22. Dissecting Forceps

- Stainless Steel
- Adson forceps has length of 12cm.
- Adson forceps has length of 18cm.

23. Magill’s forceps

- Stainless steel forceps
- Two sizes 18cm and 22cm.

24. Kidney Tray

- 18/ 8 Stainless Steel.
- 500 ml capacity
-

25. First Aid Kit with Bag

- First Aid Kit with Bag made of Nylon/tougher material having space for Emergency

26. Search Light

- Light Source: Xenon Bulb or LED
- Light Output: minimum 145 lumen
- Construction: Super tough - chemical and heat resistant
- It should be Waterproof
- Portable with Spot beam of around 500 meters.
- Sealed Lead Acid/ NiCd battery operated
- Capacity of 60 minutes with full intensity
- Docking station style charging base which should be wall and vehicle mountable.
- Should be chargeable from 12V DC

27. Rescue Equipment

- Hammer, four pound with 15” handle
- One Axe
- Wrecking Bar, minimum 24-inch (bar and two preceding items can either be separate or combined as a forcible entry tool).

- Crowbar, minimum 48 inches, with pinch point.
- Heavy duty scissors for cutting clothes, belts and boots

DRUGS & CONSUMABLES FOR EACH AMBULANCE:

The bidder must ensure adequate and appropriate storage space to house the drugs and consumables securely during ambulance's day to day run as per international guidelines.