



## NKANGALA DISTRICT MUNICIPALITY



**PROJECT NO: 530**

### **SUPPLY AND DELIVERY OF (1) FIRE RESPONSE VEHICLE FOR Dr JS MOROKA FIRE STATION**

#### **SCOPE OF WORK**

#### **Part C3: Scope of work**

C3 Scope of work



C3	SCOPE OF WORK
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## **FIRE & RESCUE RESPONSE VEHICLE**

### **1. BACKGROUND**

Fire & rescue services vehicle are required for use of responding to an emergency situation around Dr JS Moroka local municipality. This forms part of the responsibilities of the Fire & rescue service on response and servicing the community.

### **2. SCOPE OF WORKS**

#### **2.1 FIRE RESPONSE VEHICLE**

This specification provides for the supply registration and delivery of (1) fire response vehicle and the supply and mounting of equipment thereon (where applicable). The completed vehicle shall be delivered to **DR JS MOROKA FIRE STATION**

**Preference will be given to South African Manufacturers. Tenderers must provide a breakdown of their South African manufacturing facilities including a list of machinery and tools with the tender documents.**

#### **EQUIPMENT AND ACCESSORIES:**

The successful tenderer(s) shall offer a complete vehicle including all the equipment and accessories where applicable and shall be responsible to have such items supplied and fitted.

#### **STATUTORY REQUIREMENTS**

The vehicle on offer must meet the following statutory requirements:

South African Occupational Health and Safety Act  
South African National Road Traffic Act  
SANS codes where applicable

#### **MANUALS:**

The successful tenderer shall supply with the vehicle manuals for the vehicle as well as the accompanying equipment. The following shall be applicable:

- a) One (1) only operator's manual
- b) One (1) Individual vehicle service book.
- c) One (1) only maintenance manual
- d) One (1) only spare parts manual where applicable



### **WARRANTY:**

Tenderers shall submit full details of their warranty commitments on the vehicles as well as all new equipment. Tenderers shall also undertake to ensure that satisfactory after sales service and maintenance support is provided.

The warranty period shall commence from the official date in service applicable to the vehicle and the minimum warrantee shall be as follows:

Chassis	Supplier OEM
Paint	3 Years
Plumbing	1 Years
Pump	1 Years
Water and Foam Tanks	1 year

### **INSPECTION OF VEHICLES:**

Provision shall be made for two inspections for two officials namely when the chassis arrives at the plant and the second inspection when the completed vehicle is ready for delivery. This inspection must be at the manufacturing plant of the successful tenderer(s).

If the successful tenderer requires any additional inspections, it must be clearly indicated in the tender documents. All of the above shall be for the account of the successful tenderer.

### **SPARES:**

The successful tenderer shall maintain a spares of skidunit department to furnish replacement parts and service. Ample stock of individual components and unit replacements shall be carried for as long a period as demand warrants.

### **COMPLIANCE SHEET**

A detailed compliance sheet must be submitted with the tender – **No Exception (Answering only yes or comply will not be accepted)**



Note: This is just an example and not part of this specification

Item Number	Specification requirement	Comply Yes/No
1	The pump delivery shall be at least 3000 l/min	Yes

#### TESTING:

The following tests must be carried out and certification provided upon delivery where applicable:

Complete Operational Test

#### CHASSIS AND CAB

##### *DRIVER'S CAB*

A two-door all steel/metal cab is required. The body shall be waterproof and shall be insulated against heat. The driver's seat shall be adjustable for driver's comfort. A passenger seat is required for the passenger side. All seats shall be upholstered.

##### *ENGINE*

A 4.2 litre six (6) cylinder in line diesel engine is required.

##### *FUEL*

The vehicle shall have two 90 litre diesel fuel tanks. **Vehicles with one tank shall not be accepted.**

##### *TRANSMISSION*

A manual transmission is required with five (5) forward and one (1) reserve gears. The transmission offered shall feature a selectable two-speed (high/low range) four-wheel drive, which shall be manually engaged from the hubs. These vehicles shall be equipped with a differential lock. A gearbox with synchronized gear selection in all the forward gears is required.

##### *CLUTCH*

The clutch shall be of the disc type and shall be sealed off to exclude dust and water.



### *BRAKES*

Service brakes shall be fitted to all wheels. The brake system shall be vacuum assisted with load sensing capabilities. The parking brake shall operate independent from the service brake and shall be able to hold a fully laden vehicle on an incline of 1 in 5. The vehicles shall have disc brakes front and rear

### *SUSPENSION*

The vehicle shall have a heavy duty suspension and shall be fitted with an upgraded suspension ensure added weight carrying capabilities and smoother driving.

### *TYRES*

All tyres shall be of local manufacture in accordance with SABS 1550 & ARP 007. Factory fitted all terrain tyres and mag rims.

### *STEERING*

Steering shall be for right hand drive

### *REPLACEMENT BUMPER WITH WINCH AND SPOT LIGHTS*

Each vehicle shall be fitted with a heavy duty replacement type bumper. The bumper shall have mountings for a winch and spot lights. Two LED spot lights shall be fitted on the bumper. LED spotlights must carry a lifetime warrantee

An electric 3 500-kg winch with at least 27-meter cable shall be mounted in the bumper c/w electric control cable.

### *IMMOBILIZER*

All vehicles shall be fitted with an engine immobilizer. The system shall be coupled to the ignition system of the vehicle and shall be automatically activated when the engine of the vehicle is switched off. The system shall make use of a jack plug to de-activate the system and in order to start the vehicle. The system shall be fitted with a by-pass switch to by-pass the system should any fault occur in the system.

The wiring of the system shall pass through distribution boxes equipped with fuses, shall form harnesses and shall be guided as such that it will not affect the operation of any of the vehicle components. The system shall be sealed and shall be installed in such a way that it may not easily be damaged.



#### *ADDITIONAL FITTINGS:*

Tenderers are requested to include the following fittings in the tender price:

Load box heavy Duty Rubberizing  
Roll Bar  
Step Tow Bar  
Snorkel  
Rear Underbody protection plate  
Front Sump Protection plate

#### **EQUIPMENT BOX**

The vehicle shall be fitted with an aluminium equipment box at the rear of the load box the tail flap of the load bin must act as the closing door of the equipment box(2mx500mm)

#### **WATER AND FOAM TANK**

A 600 litre capacity water tank and 25 litre foam tank shall be provided. The position of the tank shall ensure the lowest possible centre of gravity

Tank shall be baffled with an anti-vortex plate over the tank to pump connection.

A manhole inspection lid shall be provided. The manhole can also be used for top filling of the water tank. A tank sump shall be fitted with a drain valve of 25 mm.

#### **ULTRA HIGH PRESSURE FIRE FIGHTING PUMP**

The vehicle shall be fitted with an ultra-high pressure pump, with the following specifications:

The module shall consist of an engine, a piston pump, two delivery hoses with high pressure nozzle (fog gun), a water tank, and a foam tank. The engine and pump shall be mounted on a purposely designed frame fitted to the vehicle.

#### *ENGINE:*

The engine shall be a 4-stroke, air-cooled, single cylinder, petrol engine with a power output of at least 14 horsepower.

#### **PUMP:**

The pump shall be coupled directly to the engine and have a water flow of at least 40l/min at a pressure of 100bar when using one hose reel and 20 l/min at 50 bar when using both hose reels.

The pump shall also have a mixing system to use foam or other liquid additives with similar viscosity. The venturi mixing system shall be capable of allowing a mixing ratio of 0% to 6% with manual regulation. The pump shall also be able to deep lift from open water. A suitable deep lift connection c/w suction strainer shall be provided.

#### *FIRST AID HIGH PRESSURE HOSE REELS*

Two axial feed high-pressure aluminium hose-reels with rewind handle and locking device shall be installed with the pump and shall have the following characteristics:

Temperature	150° C
Hose length	±50 m
Nominal hose diameter	11 mm
Maximum operating pressure hose	180 bar

The hose reels shall be supplied with a nozzle equipped with foam cone and be adjustable between full jet and fog. The nozzle shall be able to withstand a maximum pressure of 200bar and a temperature of 150° C. The additional hose should also be equipped with a nozzle of the same characteristics as mentioned above.

The reels shall be manually rewind with a locking mechanism preventing the hose from unwinding while in use.



*PLUMBING*

All rigid piping shall be designed not to cause any obstruction and limit friction and loss of pressure to a minimum. All piping to be hot dip galvanized inside and outside.

**TANK TO PUMP PLUMBING**

A valve shall be furnished from the tank to the pump.

**ELECTRONIC SIREN AND PA SYSTEM**

A 3 tone siren with Hyper, Yelp and auxiliary tones with a hardwired microphone, PA system and speaker shall be provided and mounted in the cab.

**EMERGENCY LIGHTING**

The apparatus shall have the following emergency lighting equipment. Lighting shall comply with all aspects of SABS.



### *LIGHT BAR*

One (1) LED light bar shall be mounted on the roof of the vehicle or on the roll bar.

### **PAINTING**

The vehicle shall be painted fire engine red

The following coats of paint shall be applied.

- Two coats of primer
- One coat of universal primer
- Two layers of final coat

White reflective 3M striping shall be fitted to the vehicle. Fire fighting logo branded with the signwriting and decals to the satisfaction of the client.

### **MISCELLANEOUS**

#### *KEYS*

Two (2) sets of keys shall be supplied for the following:

- Ignition
- Cabin doors

#### *SIGNS AND LABELS*

All labels shall be in English.

A vehicle data plate shall be fixed in the door of the vehicle.

Tyre pressure labels shall be placed above all wheels indicating advised tyre pressure.

### **ACCESSORIES**

One (1) each of the following accessories shall be supplied.

- Vehicle hydraulic jack with handle
- Wheel wrench
- Pair of reflective triangles

### **MANUALS**

The following manuals shall be supplied:

- One (1) x vehicle operator's handbook
- One (1) x operation manual
- One (1) equipment catalogue

### **EQUIPMENT**

The following equipment must be supplied and mounted:

- 4 x knapsack tanks
- 8 x grass beaters with aluminium handles
- 4 x drip torch
- 1 x soft suction hose to refill tank
- 3 x hayfork
- 1 x spade
- 2 x Rake Hoe