

# SOUTH AFRICAN POST OFFICE LIMITED

SPECIFICATION No. SAPO - B - 0227

TITLE: BICYCLE, HEAVY-DUTY, MAIL DELIVERY, LADIES – BACK PEDAL BRAKE.

CATALOGUE No. CON080032

## 1. SCOPE

This specification covers the requirements for a heavy-duty postman's mail delivery bicycle capable of performing over variable types of terrain in all weather conditions whilst carrying a maximum static load of 25 kg in the front carrier.

## 2. NORMATIVE REFERENCES

2.1 Specification: SABS 657 Part 2 – 2004 Steel tubes for cycles.

## 3. REQUIREMENTS

Fully assembled ladies bicycle with 22" frame, 26 x 2 x 1¾" wheels including tyres and tubes and fitted with back pedal brakes.

### 3.1 FRAME

#### 3.1.1 MATERIAL

DIMENSIONS OF CENTRAL FRAME TUBES		
Tube position	Outside diameter (mm)	Wall thickness (mm)
Top tube	25	1.2
Bottom tube	28	1.2
Seat tube	28	1.2
Head tube	31	1.2

The central frame shall have an inclined top tube. The tubing is connected at the joints with lugs and the joints shall be securely brazed.

#### 3.1.2 HEAD TUBE

The frame head tube is fitted with a fork fitting set (set of 8) which is cleaned, polished and chromed.

#### 3.1.3 OPC (ONE PIECE CRANK) BOTTOM BRACKET SHELL (BB SHELL)

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The OPC BB Shell shall be a specially developed shell on which two bushes are welded to accommodate the seat tube and the bottom tube. The seat tube and bottom tube are brazed into the bushes.

**3.1.4 SEAT STAYS**

The seat stay tubing shall have an outside diameter of 15mm and a wall thickness of 1.2mm.

**3.1.5 CHAIN STAYS**

The chain stay tubing shall have an outside diameter of 22mm and a wall thickness of 1.2mm.

**3.1.6 FRONT FORK**

The front fork blade tubing shall have an outside diameter of 23mm and a wall thickness of 1.2mm. The fork blades shall be securely and permanently attached to a crown lug of forged steel.

**3.1.7 CHAIN ADJUSTERS**

A chain adjuster is provided at the junction of the chain and seat stays and is used to vary the distance between the rear sprocket and front chain wheel so that the tension of the driving chain can be adjusted. The screw on the chain adjuster shall have a self-locking arrangement to help maintain the relative position of the sprocket and chain wheel.

**3.2 HANDLEBARS AND STEM**

The handlebars tubing shall have an outside diameter of 22mm and a wall thickness of 1.2mm. They shall be securely attached to the stem, which shall have an outside diameter of 22mm and a wall thickness of 1.2mm.

**3.3 HANDLEBAR GRIPS**

Durable PVC, length 110mm, they shall be securely fitted to handlebars.

**3.4 SADDLE**

The saddle shall be adult size of durable construction suitable for heavy-duty use. It shall have a suitably formed seat that is adequately padded and covered with a very durable heavy-duty vinyl. The seat shall be mounted on two coil springs and shall be provided with universal seat clamps suitable for clamping the saddle to the seat pillar.

**3.5 SEAT PILLAR**

The seat pillar shall have an outside diameter of 25mm and a wall thickness of 1.2mm. Length of seat pillar 175mm. The upper end shall be so formed as

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to accommodate the saddle clamp.

### **3.6 OPC SET (ONE PIECE CRANK WITH SPROCKET AND GUARD)**

The OPC shall be CW 170mm (Hot forged). The OPC is fitted with a 46 tooth sprocket CP (Chrome plated) with chain guard for the OPC. The OPC is assembled to the OPC BB Shell of the bicycle with a BB cup set of 11 (Eleven) for the OPC consisting of the right and left cups, two bearings, two bearing holders, two washers, two dust caps and finally a lock nut all appropriately greased. A Rear 18 tooth Sprocket (cog) shall also be fitted.

### **3.7 PEDALS** (Preferred brand – **Union** or approved equivalent).

The pedals are size 4" / 95mm with block rubber in a steel body riveted both sides and incorporating reflectors. The Thread of the pedals must be ½" to fit the OPC (One Piece Crank).

### **3.8 DRIVE CHAIN**

The drive chain is 3/16" heavy duty with 114 links. Chain to include a join link.

### **3.9 COASTER BRAKE**

The bicycle shall be fitted with a high quality "Velo" steel rear coaster brake hub complete with axle.

### **3.10 FRONT AXLE**

The bicycle shall be fitted with a heavy-duty 3/8" axle suitable for a thick barrel front hub.

### **3.11 FRONT WHEEL HUB**

This comprises a 3/8" axle with thick barrel hub with 36 holes to accommodate 12 gauge spokes.

### **3.12 WHEEL SPOKES**

The spokes shall be heavy-duty 12-gauge steel and 276mm long. They shall be galvanised and the nipples shall be brass to protect against corrosion. There shall be 36 spokes per rim.

### **3.13 RIMS**

The rim shall be the Westwood type, chrome plated, and made from 1mm thick steel. It shall contain 36 holes sized to accommodate 12-gauge spokes. It shall be so designed to accept a tyre and tube of size: 26" x 2" x 1¾".

### **3.7 TYRES AND TUBES** (Preferred brand – **International** (Govind Rubber Ltd.) or approved equivalent).

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Tube: 26" x 2" x 1 $\frac{3}{4}$ ". Heavy-duty - car type valve.

Tyre: 26" x 2" x 1 $\frac{3}{4}$ ". 26" x 2 x 1  $\frac{3}{4}$ " - Black, Dunlop pattern.

### **3.15 MUDGUARDS**

The mudguards shall be manufactured from 0,4mm thick steel. They shall be dome shaped with wire stays and mounted to the bicycle frame with nuts and bolts.

### **3.16 REFLECTORS**

A Ø38mm red reflector shall be fitted to the rear mudguard and shall be secured by means of a stud and nut, attachment by means of adhesive shall not be acceptable.

### **3.17 WARNING DEVICE**

A warning device shall be fitted to each bicycle; it shall comprise a bell.

## **4. FINISH**

The frame, forks, mudguards etc. shall be coated with a primer to protect against corrosion. The topcoat shall be Post Office red enamel.

The rear end of the rear mudguard shall be painted white. The size of the white area shall conform to the relevant requirements of the Road Traffic Regulations.

## **5. INSPECTION**

Inspection will be carried out at the discretion of the Quality Department.

All equipment manufactured for the Post Office shall be subject to inspection prior to delivery.

When inspection at the contractor's place of work or warehouse is required, the Post Office's authorised inspector shall have free access to the premises of the contractor at all times during working hours: shall have liberty to inspect work which is the subject of the contract or order, at any stage of manufacture, and may reject any goods which are found to be incomplete, defective or in any way not in conformity with the terms of the contract or order. The contractor shall afford all reasonable facilities for such access and inspection.

The contractor shall supply without charge to the Post Office all tools, gauges, templates and relevant equipment which may be required for inspecting the work in accordance with requirements specified in the contract or order and shall render all reasonable assistance in carrying out this checking and inspection.

## **6. QUALITY:**

It is the manufacturer's responsibility to ensure that all items meet both the

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specifications and quality standards set.

A contractor supplying goods for the first time shall first supply a pre-production sample.

## 7. GUARANTEE

The contractor shall offer a guarantee of a 5 year period on the frame. The remainder of the parts shall only be covered for defective workmanship or inferior quality.

**Note:** The guarantee shall exclude reasonable wear and tear and abuse.

## 8. PACKAGING FOR DELIVERY

Bicycles shall be so packed as to prevent damage during transportation and storage.

Pedals shall be turned inwards.

Handlebars turned 90°.

## 9. IDENTIFICATION MARK

Each bicycle shall have neatly stamped on the upper end of the seat stay tubing an alphanumeric number: it shall consist of the prefix **LB** followed by the number of the bicycle being manufactured, e.g. **LB 1** as well as a **supplier identification mark**.

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ANNEX A



Bicycle shown packed for transportation – alternate suitable packaging material shall also be acceptable.