
**Part C1:
Agreement and Contract Data**

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Contract Data

The Employer is Name **Transnet SOC Limited Trading as Transnet Freight Rail.....**

Address **Nzasm Building, Room 210, Corner Paul Kruger and Minnaar Streets, Pretoria.....**

Telephone **(012) 315 2059** Fax No. **(012) 315-2125.....**

E-mail **Yvonne.scannell@Transnet.net**

The work is **THE DESIGN, SUPPLY, INSTALL, TEST AND COMMISSION OF 25KV MOTOR OPERATED DISCONNECTS, BATTERY CHARGER AND ASSOCIATED EQUIPMENT AT STEPHANUS TRACTION SECTIONING STATION UNDER THE CONTROL OF THE DEPOT ENGINEER, KOEDOESPOORT**

The sites are **STEPHANUS TRACTION SECTIONING STATION**

The starting date is TBA.....

The completion date is TBA.....

The reply period is Two weeks.....

The defects date is 52 Weeks after completion.....

The defect correction period is **immediately after defects date.**

The delay damages are **R1,000.00.....** per day

The assessment day is the **13th (THIRTEENTH).....** of each month

The retention is 10% on the total contract value

Does the United Kingdom Housing Grants, Construction and Regeneration Act (1996) apply? **No.....**

The Adjudicator is

Name **To be advised if disputes arises.....**

Address

Telephone Fax No.

E-mail

Contract Data

The interest rate on late payment is two percent (2%) per complete week of delay.

The *Contractor* is not liable to the *Employer* for loss of or damage to the *Employer's* property in excess of R2,000,000.00 (two million Rand) for any one event.

The *Employer* provides this: **Insurance Transnet Principal Control Insurance**

The minimum amount of cover for the third insurance stated in the Insurance Table is:
> R25, 000.00 (Limited to R10, 000,000.00. for any one event).

The minimum amount of cover for the fourth insurance stated in the Insurance Table is:

Not applicable.....

The adjudicator nominating body is: **The Chairman of the Association of Arbitrators (Southern Africa)**

The tribunal is: **Arbitration**.....

If the tribunal is arbitration, the arbitration procedure is: **The rules for the Conduct of Arbitrators of the Association of Arbitrators (Southern Africa)**.....

The *conditions of contract* are the NEC3 Engineering and Construction Short Contract (June 2005) and the following additional conditions:

As mentioned in paragraph 1.0 (Contractual obligations)

1.0 CONTRACTUAL OBLIGATIONS

This project specification covers Transnet freight rail's requirements for the design, supply, install, test and commission of 25kV motor operated disconnects, battery charger and associated equipment at Stephanus traction sectioning station under the control of the Depot engineer, Koedoespoort.

- 1.1 The Contractor shall not make use of any sub-Contractor to perform the works or parts thereof without prior permission from the Employer's Deputy.
- 1.2 The Contractor shall ensure that a safety representative is at site at all times.
- 1.3 The Contractor shall comply with all applicable legislation and Transnet safety requirements adopted from time to time and instructed by the Employer's Deputy / Supervisor. Such compliance shall be entirely at his own cost, and shall be deemed to have been allowed for in the rates and prices in the contract.
- 1.4 The Contractor shall, in particular, comply with the following Acts and Transnet Specifications:-
 - 1.4.1 The Compensation for Occupational Injuries and Diseases Act, No. 130 of 1993. The Contractor shall produce proof of his registration and good standing with the Compensation Commissioner in terms of the Act.
 - 1.4.2 The Occupational Health and Safety Act (Act 85 of 1993).

- 1.4.3 The explosive Act No. 26 of 1956 (as amended). The Contractor shall, when applicable, furnish the Employer's Deputy / Supervisor with copies of the permits authorising him or his employees, to establish an explosives magazine on or near the site and to undertake blasting operations in compliance with the Act.
- 1.4.4 The Contractor shall comply with the current Transnet Specification E.4E, Safety Arrangements and Procedural Compliance with the Occupational Health and Safety Act, Act 85 of 1993 and Regulations and shall before commencement with the execution of the contract, which shall include site establishment and delivery of plant, equipment or materials, submit to the Employer's Deputy / Supervisor.
- 1.4.5 The Contractor shall comply with the current Specification for Works On, Over, Under or Adjacent to Railway Lines and near High Voltage Equipment – E7/1, if applicable, and shall take particular care of the safety of his employees on or in close proximity to a railway line during track occupations as well as under normal operational conditions.
- 1.4.6 The Contractor's Health and Safety Programme shall be subject to agreement by the Employer's Deputy / Supervisor, who may, in consultation with the Contractor, order supplementary and/or additional safety arrangements and/or different safe working methods to ensure full compliance by the Contractor with his obligations as an employer in terms of the Act.
- 1.4.7 In addition to compliance with clause 1.4 hereof, the Contractor shall report all incidents in writing to the Employer's Deputy / Supervisor. Any incident resulting in the death of or injury to any person on the works shall be reported within 24 hours of its occurrence and any other incident shall be reported within 48 hours of its occurrence.
- 1.4.8 The Contractor shall make necessary arrangements for sanitation, water and electricity at these relevant sites during the installation of the equipments.
- 1.4.9 A penalty charge of **R1,000.00** per day will be levied for late completion.
- 1.4.10 10% retention money will be retained and will be released 12 months after the completion date of the contract.
- 1.4.11 The Contractor shall supply a **site diary** (with triplicate pages). This book shall be used to record any unusual events during the period of the work. Any delays to the work shall also be recorded such as delays caused by poor weather conditions, delays caused by permits being cancelled etc. The appointed Employer's Deputy or Supervisor must countersign such delays. Other delays such as non-availability of equipment from 3rd party suppliers must be communicated to the Employer's Deputy or Supervisor in writing.
- 1.4.12 The Contractor shall supply a **site instruction book** (with triplicate pages). This book shall be used to record any instructions to the Contractor regarding problems encountered on site – for example the quality of work or the placement of equipment. This book shall be filled in by the Employer's Deputy or Supervisor and must be countersigned by the Contractor.
- 1.4.13 Both books mentioned in 1.10 and 1.11 shall be the property of Transnet Freight Rail and shall be handed over to the Employer's Deputy or Supervisor on the day of energising or handing over.
- 1.4.14 All processes or the manufacture and assembly of the product components must be subjected to a quality assurance system.
- 1.4.15 The Contractor will assume full responsibility for assuring that the products purchased meet the requirements of Transnet Freight Rail for function, performance, and reliability, including purchased products from 3rd part suppliers/Manufacturers.
- 1.4.16 The Contractor shall prove to Transnet Freight Rail that his equipment or those supplied from 3rd party suppliers/manufacturers confirms to Transnet freight rail specifications.

1.4.17 The Contractor will remain liable for contractual delivery dates irrespective of deficiencies discovered during workshop inspections.

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Contract Data

The Contractor's Offer

The Contractor is

Name

Address

Telephone Fax No.

E-mail

The percentage for overheads and profit added to the Defined Cost for people is..... %.

The percentage for overheads and profit added to other Defined Cost is..... %.

The Contractor offers to provide the Works in accordance with the conditions of contract for an amount to be determined in accordance with the conditions of contract.

The offered total of the prices is: (**Amount in words, VAT inclusive**).....

Total price in figures(VAT inclusive): R.....

Signed on behalf of the Contractor

Name

Position

Signature Date

The Employer's Acceptance

The Employer accepts the Contractor's Offer to Provide the Works

Signed on behalf of the Employer

Name

Position

Signature Date

**Part C2:
Pricing Data**

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Part C2.1: Pricing Data Price Instructions

2.0 PRICING INSTRUCTIONS

1. The agreement is based on the NEC Engineering and Construction Short Contract 3. The contract specific variables are as stated in the contract data. Only the headings and clause numbers for which allowance must be made in the Price list are recited.
2. Preliminary and General Requirements are based on part 1 of SANS 1921, 'Construction and Management Requirements for Works Contracts'. The additions, deletions and alterations to SANS 1921 as well as the contract specific variables are as stated in the contract data. Only the headings and clause numbers for which allowance must be made in the Price list are recited.
3. It will be assumed that prices included in the Price list are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders.
4. Reference to any particular trademark, name, patent, design, type, specific origin or producer is purely to establish a standard for requirements. Products or articles of an equivalent standard may be substituted.
5. The Price list is not intended for the ordering of materials. Any ordering of materials, based only on the Price list, is at the Contractor's risk.
6. The amount of the Preliminaries to be included in each monthly payment certificate shall be assessed as an amount prorated to the value of the work duly executed in the same ratio as the preliminaries bears to the total of prices excluding any contingency sum, the amount of the Preliminaries and any amount in respect of contract price adjustment provided for in the contract.
7. The amount or items of the Preliminaries shall be adjusted to take account of the theoretical financial effect which changes in time or value (or both) have on this section. Such adjustments shall be based on adjustments in the following categories as recorded in the Price list:
 - a) An amount which is not to be varied, namely Fixed (F).
 - b) An amount which is to be varied in proportion to the contract value, namely Value Related (V).
 - c) An amount which is to be varied in proportion to the contract period as compared to the initial construction period, excluding revisions to the construction period for which no adjustment the Contractor is entitled to in terms of the contract, namely Time Related (T).
8. The following abbreviations are used in the Price list:

Hr	=	Hour
Ea	=	Each
Quant	=	Quantity
OCB	=	Oil circuit breaker
GCB	=	Gas circuit breaker
9. The prices and rates in these Price list are fully inclusive prices for the work described under the items. Such prices and rates cover all costs and expenses that may be required in and for the execution of the work described in accordance with the provisions of the scope of work and shall cover liabilities and obligations set forth or implied in the Contract data, as well as profit.

- 10 Where the scope of work requires detailed drawings and designs or other information to be provided, all costs associated therewith are deemed to have been provided for and included in the unit rates and sum amount tendered for such items.
- 11 Where no quantity has been provided against an item in the Price list, the Contractor shall use their discretion and provide the quantity.
- 12 The quantities set out in these Price list are approximate and do not necessarily represent the actual amount of work to be done. The quantities of work accepted and certified for payment will be used for determining payments due and not the quantities given in these Price list.
- 13 The short descriptions of the items of payment given in these Price list are only for purposes of identifying the items. More details regarding the extent of the work entailed under each item appear in the Scope of Work.
- 14 Contractor shall ensure that provision (financial as well as time) for excavations in a range of soil types is made for in their tenders.
- 15 For each item in the Price list, including Preliminaries, the Contractor shall provide in the appropriate column the portion of the tendered sum (inclusive of labour and material) which has been sourced locally (Republic of South Africa).
- 16 The Contractor shall also arrange forward cover within two weeks after contract award on all imported items.
- 17 The Contractor shall provide information related to imported content, i.e. equipment to be imported, value and applicable exchange rates. This information shall be provided as an Annexure to the Price list.
- 18 The total in the Price list shall be exclusive of VAT.
- 19 Transnet Freight Rail payment terms: 30 days from month end statement.

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Contract Data
Price List

SCHEDULE OF QUANTITIES AND PRICES

This schedule of quantities is included in this document to cover any repairs of which Transnet Freight Rail approves that is not covered in the above specifications.

Item No.	Description		Total Price (Excl. VAT)
	Pricing to be used for any minor repairs required to be carried out during the contract period.		
1.0	Normal working hours (Monday to Friday from 07H00 to 16H30)		
1.1	Labour Rate	Per hour	
2.0	After hours (Monday to Friday)		
2.1	Labour Rate	Per hour	
3.0	Material mark-up	%	

SCHEDULE OF QUANTITIES

<u>Make of unit offered</u>	<u>Guarantee period</u>	<u>Are spare's and technical back up service available locally</u> <u>Yes / No</u>

**Part C3:
Works information**

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Contract Data

Works Information

2.1 SCOPE

For the installation of Thirty-Four (34) new inverter type energy saving Air-Conditioning unit's at Transnet Freight Rail's building asset's as per asset list below in the Koedoespoort area as per attached specification (Part 3)

2.2 DEFINITIONS

Employer's Deputy means the Technical Supervisor or any person appointed by Transnet Freight Rail from time to time to supervise and take charge of the Contract.

Transnet Freight Rail is a business unit of Transnet Limited, Registration No 90/00900/30, a Company registered under the Company Laws of the Republic of South Africa.

Works means the works to be executed in terms of this contract.

2.3. EXTENT OF WORK:

The contractor shall execute all work in accordance with the Specification Part 3.

2.4 WORK SITE:

The work site is situated at Pyramid South. The work site shall be kept clean and tidy at all times. All rubble shall be dumped at a registered Metro-dumping site. Contractor shall move cover and protect all furniture and equipment at all times. The Contractor shall supply and have available on the site at all times and A5 size triplicate carbon copy book with detachable sheets for receiving and recording instructions by the Employer's Deputy or other officers of Transnet.

The Contractor shall request the person concerned to write the instruction in the site book to sign and to record his official designation. The Contractor shall countersign the instruction. The contractor and Transnet Freight Rail's Employer's Deputy shall take a copy of the instruction – one copy to remain in the book.

2.5 GUARANTEE

The Contractor shall, at his own expense, make good to the satisfaction of the Employer's Deputy all defective materials and workmanship which may manifest themselves within a period of twelve months after completion of the Works.

2.6 PROOF OF COMPETENCE

The Tenderer shall, if requested by Transnet Freight Rail, provide a statement of works successfully executed previously as the evidence of his ability to complete the Works specified in the contract.

2.7 TENDER PRICE

The amount tendered shall be inclusive of all transport, cartage of plant, etc. costs for completion of the Works as specified in the contract documents.

2.8 VALUE ADDED TAX

The amount tendered shall be **exclusive** of value added tax.

2.9 ESCALATION

No claims for escalation in costs will be entertained in this contract.

2.10 SUPERVISION

The Contractor, or a responsible person empowered to act on his behalf, shall be present at the Work Site to supervise the Works and to receive the instructions of the Employer's Deputy.

2.11 INCOMPETENT EMPLOYEES

All persons employed by the Contractor to carry out the Contract shall be competent, responsible and of good character.

If, in the opinion of the Employer's Deputy, any person employed by the Contractor is inefficient, negligent, disrespectful or objectionable, the Employer's Deputy may, after consultation with the Contractor, instruct that such person be removed from the Works.

2.12 HOURS OF DUTY/NORMAL WORKING HOURS

All work shall be carried out between the hours of 07:00 and 16:30, Monday to Friday unless otherwise arranged with the Supervisor.

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Contract Data

Particular specification

3. PARTICULAR SPECIFICATION:

3.1 Transnet Freight Rail's requirements for unit type air-conditioning units

Equipment offered must comply fully with S.A.B.S. 1125: Specification for room type air-conditioners.

Where equipment offered complies with another recognised standard but does not comply with S.A.B.S. 1125, such equipment will be considered at the discretion of the Supervisor.

3.2 Removal of existing unit's

Disconnect the power cable from the isolator.

Remove the old air-conditioning units and all associated equipment.

Make good all holes in the walls as per specifications below.

3.3 New air-conditioning units to be sized as follows

Asset No and rooms in building where units are to be installed are as follows:

Asset No.	No. of Units	Size of Units in BTU's	Type of unit
Rayton Relay Room	2	12000	Install a new mid-wall inverter type energy saving air-conditioning units complete strictly in accordance with the attached specifications including power point and all building work. Also include protection steel cage to protect the unit on the outside from theft/vandalism.
Van Der Merwe Relay Room	2	12000	Install a new mid-wall inverter type energy saving air-conditioning units complete strictly in accordance with the attached specifications including power point and all building work. Also include protection steel cage to protect the unit on the outside from theft/vandalism.
Panpoort Relay Room	2	12000	Install a new mid-wall inverter type energy saving air-conditioning units complete strictly in accordance with the attached specifications including power point and all building work. Also include protection steel cage to protect the unit on the outside from theft/vandalism.
GreenView-			Install a new mid-wall inverter type energy saving

Panpoort Relay Room	2	12000	air-conditioning units complete strictly in accordance with the attached specifications including power point and all building work. Also include protection steel cage to protect the unit on the outside from theft/vandalism.
Leeufontein Relay Room	2	12000	Install a new mid-wall inverter type energy saving air-conditioning units complete strictly in accordance with the attached specifications including power point and all building work. Also include protection steel cage to protect the unit on the outside from theft/vandalism.
Kameeldrift Relay Room	2	12000	Install a new mid-wall inverter type energy saving air-conditioning units complete strictly in accordance with the attached specifications including power point and all building work. Also include protection steel cage to protect the unit on the outside from theft/vandalism.
Baviaanspoort Relay Room	2	12000	Install a new mid-wall inverter type energy saving air-conditioning units complete strictly in accordance with the attached specifications including power point and all building work. Also include protection steel cage to protect the unit on the outside from theft/vandalism.
Bon Accord Relay Room	2	12000	Install a new mid-wall inverter type energy saving air-conditioning units complete strictly in accordance with the attached specifications including power point and all building work. Also include protection steel cage to protect the unit on the outside from theft/vandalism.
Pyramid Relay Room	4	12000	Install a new mid-wall inverter type energy saving air-conditioning units complete strictly in accordance with the attached specifications including power point and all building work. Also include protection steel cage to protect the unit on the outside from theft/vandalism.
	2	9000	
Dam Relay Room	2	12000	Install a new mid-wall inverter type energy saving air-conditioning units complete strictly in accordance with the attached specifications including power point and all building work. Also include protection steel cage to protect the unit on the outside from theft/vandalism.
Wildebeesthoek Relay Room	2	12000	Install a new mid-wall inverter type energy saving air-conditioning units complete strictly in accordance with the attached specifications including power point and all building work. Also include protection steel cage to protect the unit on the outside from theft/vandalism.

De Wildt Relay Room	2	12000	Install a new mid-wall inverter type energy saving air-conditioning units complete strictly in accordance with the attached specifications including power point and all building work. Also include protection steel cage to protect the unit on the outside from theft/vandalism.
Pendoring Relay Room	4	12000	Install a new mid-wall inverter type energy saving air-conditioning units complete strictly in accordance with the attached specifications including power point and all building work. Also include protection steel cage to protect the unit on the outside from theft/vandalism.
	2	9000	

Contractor must install / alter power points for all the new air-conditioning units complete including all wiring, trunking / conduit / mini trunking, weather proof box, isolator correctly sized and curve 1 MCB in distribution board correctly sized. An electrical compliance certificate must be issued for all electrical work carried out; this compliance certificate must be handed to the Transnet Supervisor upon completion of works.

The cooling capacity of the units installed must not be less than that specified above.

The units must be of the inverter energy saving type air-conditioning units and be heating and cooling.

The installations include for the removal of the existing units including all building work, painting of section of wall to match as close as possible to the existing wall colour.

The removal complete of the complete ducted system in asset 02BD389 room D21 including the repairs to the ceiling and all painting of repaired sections of wall and ceiling. The new condenser fan in unit one must be removed and delivered to the Supervisors office. The existing new controller must be used to control the two units if not possible state so in tender offer (if not used remove and deliver the existing new controller to the Supervisors office).

3.4 Inverter type Energy Saving Air-conditioning Units.

The air-conditioning unit must be of the inverter type and must be at least 40% more energy efficient than conventional type air-conditioning units.

The units must be installed strictly in accordance with all the clauses in the specification below.

The air-conditioning unit must operate at a steady temperature fluctuation; as soon as the desired temperature is reached it must finely adjust to cope with any changes resulting in less temperature fluctuations.

The air-conditioning unit must be able to reach the desired air temperature at least 15% faster for cooling and 50% faster for heating.

After reaching the desired set temperature the air-conditioning unit must change its mode to economic mode, by avoiding inefficient and frequent switching of the compressor.

The air-conditioning unit must be able to provide sufficient cooling even with outside temperatures of up to 50°C and to provide sufficient heating with outside temperatures of as low as -20°C.

The evaporator coil and filter must be able to trap microscopic dust particles, be able to kill fungi and to remove unpleasant odours.

3.5 **Installation of new units**

3.5.1 **Window / wall and console type units**

If the unit is installed in the wall cut a hole in the wall just large enough to fit the new air-conditioning units.

Care must be taken to minimise the spread of dust in the offices when cutting the hole in the wall. All dust created must be cleaned up before leaving site.

A wooden architrave must be installed around each unit on the inner and outer walls. All wooden architraves must be varnished with an approved weather and UV resistant varnish. Type of varnish to be approved by the Supervisor.

If unit is installed in the window the window frame must be altered in such a way as to prevent vibration. If existing windows have burglar proofing, the tenderer must allow for the securing of the unit with an anti-theft hot dip galvanised bracket.

3.5.2 **Console type units**

Floor mounted or console type units must be installed in approved wooden, cement or metal lined aperture in the wall.

Exterior grilles for console type units must be permanently fixed to the wall and be constructed of heavy gauge extruded aluminium or other type of non-ferrous material.

3.5.3 **Split type units**

All condensing units must be installed on hot dip galvanised brackets at least 500mm off the floor surface, unless instructed by the Supervisor to install the unit differently. Unit must be adequately secured to the brackets with vibration pads.

Threads of all bolts used in mounting the condensing unit must be coated with copper or silver grease.

Only copper pipe approved for air-conditioning work must be used i.e. dehydrated hard drawn copper tubing. All joints must be sweated in the approved manner using an approved soldering medium. Joints must be kept to a minimum.

All suction line piping between the evaporator and the condensing units must be lagged with armour- flex or an equal and approved product.

All piping and cabling must be adequately supported by means of galvanised or non-ferrous screws and saddles. All inside pipe and cable work must be installed inside trunking. Trunking must be installed at an angle of not less than 10 degrees to allow for good drainage condensate water. All outside visible piping and electrical cables to be installed in white PVC trunking.

All electrical cables in ceiling between the air-conditioning unit and the distribution board must be installed in conduit.

3.5.4 **General**

Filters must be provided with the unit. Filters must be easily removable and be of the permanent washable type. The evaporator coil and filter must be able to trap microscopic dust particles, be able to kill fungi and to remove unpleasant odours.

The contractor must ensure that the installation is completely weather proof. No rain or wind must be allowed to enter the room causing discomfort or flooding.

The contractor must ensure that moisture collected by the unit is adequately disposed of to the nearest drain point using an adequately sized heavy-duty UV resistant white PVC pipe adequately saddled to the wall with heavy duty white PVC saddles.

All piping and electrical cabling must be installed in PVC trunking on the inside and outside of the building.

3.6 **Brickwork**

Make good all surfaces where old unit was removed. Close up all small holes in the walls with cement filler. All large holes in the wall must be bricked up. If the wall surface is face brick the bricks used to brick up the hole must match the existing type, colour and design of brick as close as is possible. All existing surfaces that are plastered tenderer must allow for the plastering of the brickwork.

All holes must be touched up, marks and plasterwork must be painted with an approved under coat and two coats of topcoat. Colour used for topcoat must match existing paint work as close as possible, unless otherwise stated by the Supervisor at the site meeting.

The type of paint to be used is to be approved by the Supervisor.

NOTE: THERE IS NO WATER AVAILABLE ON ALL SITES; THE CONTRACTOR HAS TO PROVIDE THEIR OWN WATER.

3.7 **Electrical work**

All air-conditioning units supplied must operate at 240 volts (or 380 volts please specify), at 50 Hz. All electrical work must be included in tender offer.

Where a remotely mounted condensing unit is provided, that part of the equipment which is remotely mounted from the cooling coil must be provided with an adequately rated double pole or three pole isolator either adjacent to or on the remote equipment.

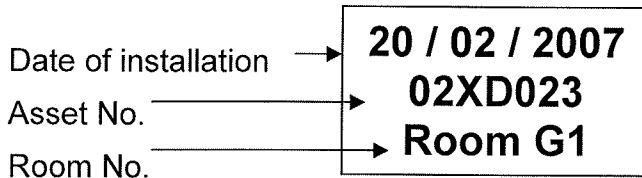
Contractor must insure a registered installation electrician to provide and connect the electricity supply to the isolator feeding the unit. Contractor must connect the new unit to the newly installed isolator.

All electrical work carried out by the contractor must comply fully with the new Electrical Code of Practice SANS 10142-1 and all subsequent amendment.

The contractor must supply Transnet Freight Rail's Supervisor with a compliance certificate for all new and / or altered electrical circuits upon completion of electrical works

3.8 **All Unit type air-conditioning units must be labelled as per example below.**

Labels must be stencilled onto the units using a permanent marker and a stencil with lettering of 10mm in size. The position of the label must be confirmed with the Supervisor before stencilling the label on:



All labels on Window / wall units must be secured to the inside unit on the front side of casing so as to be easily visible when the cover is removed and on the front cover so as to be easily visible.

All console units must be labelled on the side of the unit in a clearly visible position so as to be seen without stripping the unit.

All split units and under ceiling units must be labelled on the casing outside and the unit inside in such a way that it will be easily visible without stripping anything.

Inverter type units must also be clearly labelled that they are inverter type units and the type of refrigerant used must also be clearly labelled on the outside of the condensing unit visible from the ground.

3.9 **Servicing**

All newly installed units must be serviced Eight times during the 24-months guarantee period, this cost must be included in the installation pricing on the bill of quantities document. The units must be serviced according to the attached service schedule.

The attached service report must be supplied to the Transnet Freight Rail's Supervisor at the end of the guarantee period. Until this document is received the unit will still be considered as been under guarantee, even after the 12-month period is up.

3.10 **Literature**

Contractor must provide pamphlets describing the units offered. The contractor must supply Transnet Freight Rail full operating and maintenance instruction booklets as part of the contract.

3.11 **Prefabrication and ordering of components**

Prefabrication of replacement components and the ordering of the filler pack must be done timely to minimise down time.

3.12 **Reporting**

Any item found not to be serviceable that is not covered in the above specification is to be reported to Transnet Freight Rail's Supervisor.

3.13 **Commissioning**

Upon completion of the works the Contractor shall test, commission and hand over the completed works to Transnet Freight Rail's Supervisor.

Schedule No. RU01.06		Maintenance Schedule for Room Units: Window, Console, Under ceiling, Mid Wall and Cassette Units.	
Item	Reference	Trade	Description of task
			Frequency: 120 days Time: hrs
B1		T/H	Inspect the evaporator coil for dirt, if dirty clean with an environmentally friendly chemical. Clean and / or replace filter. Inspect filter frame and front grill for air bypass.
B2		T/H	Inspect unit for functionality. Test operation of cooling and heating cycles or functions. If of the heat pump type of unit check 3-way valve operation.
B3		T/H	Inspect condenser / condensing unit if of the split type of unit. Inspect condenser coil for dirt, if dirty clean with an environmentally friendly chemical. Check condenser fan and fan impellers for functionality.
B4		T/H	Inspect unit for any vibration, loose bolts, nuts, any wear and fatigued on parts.
B5		T/H	Inspect all bearings and bushes on all motors. Lubricate all motor bearings / bushes as prescribed by the manufacturer.
B6		T/H	Inspect all fan motor impellers for any wear, vibration and corrosion. If any corrosion, strip sand down and clean. Apply anti rust treatment and repaint
B7		T/H	Inspect unit (indoor and outdoor) for any condensation water build-up and blocked drains. If any clean out drip trays and drain pipes. Check for organic growth, if any treat with chemicals. Check condensation lift pump for functionality.
B8		T/H	Inspect and test unit for any refrigerant leaks. If any report to Spoornet in writing.
B9		Technician	INSPECT AND CHECK COMPLETE UNIT ELECTRICALLY FOR ANY DEFECTS AND LOOSE CONNECTIONS.
B10		T/H	Inspect all fan impellers for any dirt and debris build-up. If any remove unit and clean.
B11		Technician	Calibrate and set all controls as per manufacturers design conditions.
B12		Technician	Inspect unit (indoor and outdoor) frame and outer box for any corrosion, wear, fatigue. If any strip sand down and clean. Apply anti rust treatment and repaint.

NB Tenderer must report any defects in writing on service report, which must be handed in with invoice.

INSTALLATION / SERVICE REPORT FOR UNIT TYPE AIR-CONDITIONING UNITS

Building location: _____ Asset no.: _____

Date installed: _____ Date last serviced: _____

Room No.: _____

Type of unit: _____ Make of unit: _____

Size of unit: _____ BTU's

Serial No.: _____

Service report:

Company Name: _____

Service Technician: _____

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