Camden
Power Station

ESKOM GENERATION

2025

THE PROVISION OF MOTOR MAINTENANCE, REPAIRS AND SERVICE FOR A PERIOD OF 60- MONTHS AT CAMDEN POWER STATION - BILLS OF QUANTITIES

CONTRACT NUMBER :

CONTRACTOR :

CONTRACT AMOUNT (EXCL. VAT) :

CONTRACT AMOUNT (INCL. VAT) :

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THE PROVISION OF MOTOR MAINTENANCE, REPAIRS AND SERVICE FOR A PERIOD OF 60- MONTHS AT CAMDEN POWER STATION - BILLS OF QUANTITIES

NOTES TO TENDERERS

1. BILLS OF QUANTITIES

This document comprises Notes to Tenderers and Bills of Quantities and is hereafter referred to as "the Bills of Quantities".

The Tenderers are to note that this is a Contract with a Bills of Quantities.

2.1 CONTRACT DOCUMENTS

The contract documents will consist of:

2.1.1 The NEC3 Term Services Contract 2013 together with all amendments.

2.1.2 These Bills of Quantities, including all annexures and supplementary documentation referred to therein.

2.1.3 Documents to be provided by the Contractor in terms of the requirements of these Bills of Quantities.

2.1.4 Construction Regulations 2014

2.1.5 Occupational Health and Safety Act of 1993

2.1.6 The Contractor is reffered to the Scope of works Document and to pay carefull attention to the requirements of this document

3 DRAWINGS

There are no drawings for this contract.

4 VALUE ADDED TAX

Tenderers should compute their rates from the net costs (excluding Value Added Tax). Value Added Tax at the current rate of 15% is to be added to the net sub-total on the final summary page by means of a single sum calculation to establish the tender price.

5 SCOPE OF WORK

As a guide only, the work comprises as follows:-

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6 ADDRESS WHERE DOCUMENTS CAN BE OBTAINED

Tender documents will be made available Electronically on an online portal to be provided by Eskom

7 POSSESSION OF SITE

The date of which possession of the Site shall be given to the Contractor shall be within 7 **working days** of the acceptance of this tender.

8 CONSTRUCTION PERIOD - DATES FOR PRACTICAL COMPLETION

The intended date for practical completion and penalty for each calendar day for non-completion shall be:

Practical Completion: 60 Months from the date of Site Handover

Tenderers are to note that the Contract will be delivered as a whole and NOT to be phased.

9 COMMON LAW OR BY-LAW REQUIREMENTS

No liability for not specifically mentioning any normal contractual, Common Law or By-Law requirements will be accepted by the Employer, or Contracts Manager.

10 ORDERING OF MATERIALS

No claims will be entertained due to non-availability of materials or labour. The Tenderer is therefore required to investigate and ensure that the specific materials and components required for the works will be available at the relevant estimated construction times, at the time of tendering.

11 CONTRACT PRICE ADJUSTMENT

The Contract Sum shall be subject to CPAP.

12. PRICED BILLS OF QUANTITIES:

Tenderers must submit to the Contracts Manager a copy of the Bills of Quantities fully priced and extended, with his tender. After the Bills have been checked, and when called upon, each page of the Bills of Quantities shall be initialed and the Index page and the Final Summary page signed in full.

13 DIFFERENCE AND DISCREPANCIES:

Should there be any difference or discrepancy between the prices or particulars contained in the official Tender Form and those contained in any covering letter from the Tenderer, the prices contained in the official Tender Form shall prevail.

Every Tenderer shall be deemed to have waived, renounced and abandoned any conditions printed or written upon any stationery used by him for the purpose of or in connection with the submission of his Tender, which are in conflict with the Conditions of Tender.

Tenderers are warned that any material divergence from the official conditions or specifications may render their Tenders liable to disqualification.

The Tenderers are to note that if there are any arithmetical errors in the Tenderers' form of tender in calculation of the Tender Sum, the Contracts Manager will correct the calculation accordingly.

14 COMMUNICATION WITH MEMBERS OF THE CLIENT COMPANY OR PROFESSIONAL TEAM

A Tenderer shall not in any way communicate with a member of the Client Company or Professional Team or with any officer on a question affecting any contract or the supply of goods or for any work, undertaking or service which is the subject of a Tender during the period between the closing date for receipt of Tenders and the dispatch of the written notification of the Employer's decision on the award of the contract; provided that a Tenderer shall not hereby be precluded from obtaining from the Employer or his authorised representative information as to the date upon which the award of the contract is likely to be made or, after the decision upon the award has been made by the Contracts Manager to which the Employer had delegated its powers, information as to the nature of the decision or such information as was publicly disclosed at the opening of Tenders.

15 IMPORT PERMITS:

Tenderers must apply direct for any import permit and/or currency required, however the Contracts Manager will furnish successful Tenderers with a supporting statement if required.

16 BILLS OF QUANTITIES:

No alteration, erasure, omission or addition is to be made to the text and conditions of these Bills of Quantities and should any such alteration, amendment, note or addition be made, the same will not be recognised, but the reading of the Bills of Quantities as prepared by the Contracts Manager will be adhered to.

It should be understood that the system of measurement herein adopted is the only system of measurement which will be recognised in connection with this contract. Before the signing of the contract, the Contracts Manager will be entitled to call for adjustments of individual rates and rectify discrepancies, as he considers necessary without alterations to the Tender amount.

6 Ensure that every employee or person (including visitors) who enters the site of the Works undergoes health and safety induction training pertaining to hazards identified on the site of the Works and upon such training having been successfully completed, the Contractor must issue written confirmation by a competent person to the trained employees or persons who shall be further instructed to carry such confirmation with them at all times whilst on the site of the Works;

7 Issue, on loan, the necessary personal protective equipment to visitors to the site of the Works; and

8 Be in good standing with the Compensation Commissioner at all times during the duration of the Contract.

9 The Contractor is to sign a Non-Disclosure Agreement prior to collecting or receiving any proprietary information from Eskom, drawings, documentation, reports and photographs

The Contractor will be deemed to have satisfied himself with his obligations in terms of the Act and to have allowed for all costs arising from compliance with the Act as no claim for extra costs arising from compliance with, and obligations in terms of the Act will be entertained.

17 PRICING OF THESE GENERAL NOTES

The Contractor must allow in his pricing for any additional costs arising from these "General Notes" as no later claims for additional costs will be considered.

18 TAX COMPLIANCE

Failure to provide mandatory information required in this Bid will result in the submissions being deemed null and void and shall be considered non-responsive. An Electronic Tax Compliance Status (TCS) System will be used to verify the bidder’s tax compliance status so bidders must request a unique security personal identification number (PIN) from SARS which must be submitted with the bid

No alternative tender offers will be considered and these bills of quantitites are not to be used for the purpose of ordering materials
All Bill rates are to include for material, labour, plant, wastage, transport and profit.

THE PROVISION OF MOTOR MAINTENANCE, REPAIRS AND SERVICE FOR A PERIOD OF 60- MONTHS AT CAMDEN POWER STATION - BILLS OF QUANTITIES					
Item	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
	PRELIMINARIES AND GENERAL				
	PREAMBLES				
	RATES				
	The tenderer is advised that all rates must include the following breakdown:				
	Labour, Transport Plant,wastage and Profit.				
	PRICING OF THIS BILLS OF QUANTITIES				
	Any items left unpriced will be understood to be provided free of charge and no claim for any extras arising out of the Tenderers omission to price any item will be entertained.				
	SCOPE OF WORKS				
	The Contractor is referred to entire Scope of Woks for the details of the Scope. The Contractor is to study the details of this document prior to pricing this Bills of Quantities as these documents are contractual and Eskom will not be held responsible for any ambiguity				
	CONTRACT PERIOD				
	60 Months				
	CURRENCY				
	All rates tendered on and / or pricing in these bills of quantities to be in the South African Rands Currency (ZAR)				
	All individual amounts in these bills of quantities exclude Value Added Tax (VAT) VAT is to be calculated as a lump sum and added to the total of all values in the Final Summary under the item provided for VAT				
	HEALTH AND SAFETY				
	The contractor must ensure that all health and safety regulatory and safety requirements are met and valid.				
	PRICING OF THIS BILLS OF QUANTITIES				
	Any items left unpriced will be understood to be provided free of charge and no claim for any extras arising out of the tenderes omission to price any item will be entertained				
	The contractor's prices for all items throughout this document must take account of and include for all obligations, requirements and specifications given in the said works information/scope of work				
	BILL OF QUANTITIES				
	BILL NO.01 - PRELIMINARIES AND GENERAL				
	FIXED CHARGES				
	ESTABLISHMENT OF FACILITIES ON SITE				
1	De- establishment	Sum	1	R	R
2	SAPS Vetting and /or Finger Print Check	No	75	R	R
	Contractor's obligations in respect of the Occupational Health and Safety Act				
3	Health and Safety Requirements (Safety File etc)	Sum	1	R	R
4	PPE	No	75	R	R
5	Medicals entry and Induction and exit	No	90	R	R
6	De- establishment	Sum	1	R	R

	SUB TOTAL COST FIXED CHARGES (A)				**R**
	TIME RELATED CHARGES				
7	Comsumable	Sum	1	R	R
8	Travelling per kilometre (standard car)	km	52000	R	R
9	Travelling per kilometre (LDV)	km	52000	R	R
10	Ermergency Call-Outs	km	52000	R	R
11	Standby allowance Fitter per month	No	60	R	R
12	Standby allowance Fitter Assistant per month (3 People PW X 52 week x 5 Years = Standby periods)	No	780	R	R
13	Monthly overheads (Office admin, Toiletries, Coffee stuff)	No	60	R	R
14	Miscellenous (Bolts, Nuts, insulation tapes, cable ties and other consumables)	No	60	R	R
15	1 x Supervisor	Hrs	10380	R	R
16	Overtime after hours (1.5)	Hrs	2400	R	R
17	Overtime (2)	Hrs	1800	R	R
18	1 X Safety Officer	Hrs	10380	R	R
19	4 x Fitter	Hrs	41520	R	R
20	Overtime (1.5)	Hrs	16800	R	R
21	Overtime (2)	Hrs	10800	R	R
22	4 x Fitter Assitant	Hrs	41520	R	R
23	Overtime(1.5)	Hrs	16800	R	R
24	Overtime(2)	Hrs	10800	R	R
25	4 x Semi Skilled	Hrs	41520	R	R
26	Overtime(1.5)	Hrs	16800	R	R
27	Overtime(2)	Hrs	10800	R	R
28	1 x Cleaner	Hrs	10380	R	R
	SUB TOTAL COST TIME RELATED ITEMS (B)				**R**
	TOTAL COST A+B TRANSFERRED TO FINAL SUMMARY				**R**

THE PROVISION OF MOTOR MAINTENANCE, REPAIRS AND SERVICE FOR A PERIOD OF 60- MONTHS AT CAMDEN POWER STATION - BILLS OF QUANTITIES

HV and LV Motors	6,6kV, 2465kW, EFP Motor	Stock No 0230905	QTY	RateE2:E7	Total Cost
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
1	**Motor Transport**				
	Collect motor from Camden power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load.	ea	5	R	**R**
	Strip and Quote				
	Clean motor down externally and strip motor. Remove rotor.	ea	5	R	**R**
	Clean, remove all debris/fly ash/pf from the coolers, motor internal, ventilation paths, star point internal and cable terminal internal boxes. Note condition on assessment form.	ea	5	R	**R**
	Inspect motor internally (Stator core, windings and stator winding wedges and externally (Frame) noting all defects and then complete assessment report (HV assessment form).	ea	5	R	**R**
	Motor Terminal Boxes/Leads				
	Replacement of damaged terminal box and gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Replacements of damaged terminal box cover and seals/gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Inspect motor terminal bushings for cracks, signs of excessive damage and replace if necessary.	ea	5	R	**R**
	Inspect the motor leads insulation for cracks, frays, signs of brittleness, and swelling from oil contamination. Stipulate repair or replacement cost.	ea	5	R	**R**
	Inspect the stator to see if motor lead wire has been used to make circuit jumper connections. Report any discrepancies.	ea	5	R	**R**
	Inspect motor lead lugs for signs of overheating and perform a pull and turn check for loose crimp connections. Ensure that insulation of the terminal wire is in touch with the lug. Price if one lug has to be replaced.	ea	5	R	**R**
	Inspect motor terminal studs and bolts. Replace if necessary.	ea	5	R	**R**
2	**6,6kV, 2465kW, EFP Motor**	**Stock No 0230905**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Motor Star point Boxes/Leads				
	Replacement of damaged star point terminal box and gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Replacement of damaged star point box cover and seals/gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Inspect star point bushings for cracks, signs of excessive damage and replace if necessary.	ea	5	R	**R**
	Record whether motor is equipped with internal or external star point.	ea	5	R	**R**
	Inspect star point leads insulation for cracks, frays, signs of brittleness, and swelling from oil contamination. Stipulate repair or replacement cost.	ea	5	R	**R**
	Inspect the stator to see if motor lead wire has been used to make circuit jumper connections. Report any discrepancies.				
	Inspect motor lead lugs for signs of overheating and perform a pull and turn check for loose crimp connections. Ensure that insulation of the terminal wire are in touch with the lug.	ea	5	R	**R**
	Inspect motor star point terminal studs, bolts and star bar. Replace if necessary.	ea	5	R	**R**
	Cooler				

	Strip and clean cooler. (Note wet, air forced or oil cooler)	ea	5	R	**R**
	Overhaul the cooler. Note the condition of cooler whether rust, fly-ash or any other debris is present.	ea	5	R	**R**
	Assemble cooler, ensure all intake and outlets are free from any foreign matter.	ea	5	R	**R**
	Pressures test the cooler to manufacturer's specifications and attach test certificate.	ea	5	R	**R**
	Replace cooler with new cooler. Attach test certificate.	ea	5	R	**R**
	Replace cooler with refurbished cooler. Attach test certificate.	ea	5	R	**R**
	Space Heaters				
	Inspect and test motor space heaters and wiring upto and including space heater terminal box. Wiring must be installed in such a way that wind generated inside the motor cannot disturb the wiring installation.	ea	5	R	**R**
	Defective heaters must be replaced and wire to space heater terminal box.	ea	5	R	**R**
	PT 100 Motor Winding Temperature Thermocouple				
	Test PT 100 motor winding temperature thermocouple to design specifications. Ensure thermocouple and wiring is mounted rigid and sound. The maximum load permitted for the resistance thermometers Pt 100 (100° at 0°C) is 10 mA. Only use a single button Wheatstone bridge for testing.	ea	5	R	**R**
	Defective PT 100 winding temperature thermocouples must be replaced and wire to winding temperature terminal box.	ea	5	R	**R**
2	**6.6kV, 2465kW, EFP Motor**	**Stock No 0230905**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator Housing				
	Inspect stator housing, clean and dry stator housing. Ensure air paths are clean and not contaminated by foreign materials.	ea	5	R	**R**
	Inspect stator foot mounting and polish.	ea	5	R	**R**
	Repair stator footing if damaged, bend or broken.	ea	5	R	**R**
	Inspect and test the concentricity of the stator on the drive and non-drive end sides.	ea	5	R	**R**
	Correct the stator concentricity to within the allowable specification of the OEM.	ea	5	R	**R**
	If stator housing cracks are evident, record and repair. Ensure all cracks are noted and repair method specified.	ea	5	R	**R**
	Inspect and repair drive end and non-drive end landings of the end shield and repair if necessary.	ea	5	R	**R**
	Stator windings and Stator Core Laminations				
	Winding patch due to rubbing, insulation damage and foreign damage	ea	5	R	**R**
	Motor stator winding burnt, failed or completely damaged. Remove old winding, clean slots and rewind stator completely. Treat and paint stator with varnish.	ea	5	R	**R**
	Inspect stator core laminations for signs of arching, damage and lamination insulation failure. Submit repair method to employer for approval.	ea	5	R	**R**
	Treat and paint stator with vanish only. Old stator windings still serviceable.	ea	5	R	**R**
	Conduct IR and PI test on stator winding to OEM specifications and record. Submit report with motor.	ea	5	R	**R**
	Stator core flux test to determine hot sports on motor stator core laminations.	ea	5	R	**R**
	Carry out concentricity test on the stator	ea	5	R	**R**
	Correct the stator concentricity if out of Eskom minimum specification as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Motor Rotor				

	circuit bars, missing clamping fingers and vent duct spacers, localized heating or blocked air ducts before cleaning. If cracked rotor laminations, core damage/migration are found, submit repair method and contact employer before cleaning.	ea	5	R	**R**
	Replace rotor bars and rotor short circuit ring as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Repair rotor bars and rotor short circuit ring as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
3	**6,6kV, 2465kW, EFP Motor**	**Stock No 0230905**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Replace rotor cage as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Replace rotor shaft as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Clean rotor, remove all corrosion, treat and paint rotor with anti-rust paint.	ea	5	R	**R**
	Balance rotor at operating speed with fan and half key inserted. Balancing shall be in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish the journals (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish the journals (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish labyrinth seal landings (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish labyrinth seal landings (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish Fan landing (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish Fan landing (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Check shaft run out / concentricity in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Rectify or correct the rotor concentricity in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Micro weld rotor shaft/Journal (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Micro weld rotor shaft/Journal (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Inspect bearing hub-to-shaft fit. If it is too loose, it shall be corrected by restoring the shaft dimensions to OEM specifications or manufacture a new hub.	ea	5	R	**R**
	Inspect and rotor balance cooling fan.	ea	5	R	**R**
4	**6,6kV, 2465kW, EFP Motor**	**Stock No 0230905**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
4	**Drive-end and Non Drive-end Shields**				
	Inspect end shield covers bolts. If corrosion is found, clean up and replace fixing bolts	ea	5	R	**R**
	Inspect DE and NDE shields for cracks or damage. Submit repair procedure to employer.	ea	5	R	**R**
	DE and NDE Bearings & Bearing Housings				
	Re-metal white metal DE bearing according to shaft size and fit in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors. Bearing shall be ultrasonic tested.	ea	5	R	**R**
	Clean and polish DE bearing with Scotch-brite ® cloth.	ea	5	R	**R**

	Re-metal white metal NDE bearing according to shaft size and fit in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors. Bearing shall be ultrasonic tested.	ea	5	R	**R**
	Clean and polish NDE bearing with Scotch-brite ® cloth.	ea	5	R	**R**
	Inspect DE bearing housing for concentricity and clean.	ea	5	R	**R**
	Inspect NDE bearing housing for concentricity and clean.	ea	5	R	**R**
	Overhaul DE seal, oil ring, oil scoop in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Replace DE seal, oil ring, oil scoop.	ea	5	R	**R**
	Overhaul NDE seal, oil ring, oil scoop in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Replace NDE seal, oil ring, oil scoop.	ea	5	R	**R**
	Replace site glass and clean the ports, DE	ea	5	R	**R**
	Replace site glass and clean the ports, NDE	ea	5	R	**R**
	Carry out bearing insulation test point inspect	ea	5	R	**R**
	Carry out bearing insulation test point repair	ea	5	R	**R**
	Assemble Motor				
	Assemble motor completely before any mechanical tests, checks and Routine testing can be done	ea	5	R	**R**
	Mechanical Tests and Checks after Assembly				
	Measure air gap between stator and rotor in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Motor magnetic center shall be done in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
5	**6,6kV, 2465kW, EFP Motor**	**Stock No 0230905**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Routine tests and required tests when instructed				
	Perform El-cid test on stator.	ea	5	R	**R**
	Perform El-cid test on rotor.	ea	5	R	**R**
	Perform Rotor bar to bar test.	ea	5	R	**R**
	Carry out Tan-Delta test on the stator.	ea	5	R	**R**
	Ultrasonic testing on white metal bearing surface.	ea	5	R	**R**
	NDT on fan impellers or runners (Whole impeller).	ea	5	R	**R**
	NDT on the rotor shaft.	ea	5	R	**R**
	Copper material analysis test / check.	ea	5	R	**R**
	Test run the motor and verifies bearing temperatures, vibration, winding temperatures to be with OEM specification in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Apply load and load test the motor to site conditions.	ea	5	R	**R**
	Special charges				
	Emergency repair charge (20%)	ea	5	R	**R**
	Paint Motor				
	Treat and paint motor noting Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Delivery to Site				
	Deliver motor to Camden power station as per Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	10	R	**R**
5a	**6,6kV, 2000kW, ID Fan Motor**	**Stock No 0230816**			

	Description	Unit	QTY	Rates	Amount
	Motor Transport				
	Collect motor from Camden power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load.	ea	2	R	**R**
	Strip and Quote				
	Clean motor down externally and strip motor. Remove rotor.	ea	2	R	**R**
	Clean, remove all debris/fly ash/pf from the coolers, motor internal, ventilation paths, star point internal and cable terminal internal boxes. Note condition on assessment form.	ea	2	R	**R**
	Inspect motor internally (Stator core, windings and stator winding wedges and externally (Frame) noting all defects and then complete assessment report (HV assessment form).	ea	2	R	**R**
	Motor Terminal Boxes/Leads				
	Replacement of damaged terminal box and gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	2	R	**R**
	Replacements of damaged terminal box cover and seals/gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	2	R	**R**
	Inspect motor terminal bushings for cracks, signs of excessive damage and replace if necessary.	ea	2	R	**R**
	Inspect the motor leads insulation for cracks, frays, signs of brittleness, and swelling from oil contamination. Stipulate repair or replacement cost.	ea	2	R	**R**
	Inspect the stator to see if motor lead wire has been used to make circuit jumper connections. Report any discrepancies.	ea	2	R	**R**
	Inspect motor lead lugs for signs of overheating and perform a pull and turn check for loose crimp connections. Ensure that insulation of the terminal wire is in touch with the lug. Price if one lug has to be replaced.	ea	2	R	**R**
	Inspect motor terminal studs and bolts. Replace if necessary.	ea	2	R	**R**
6	**6,6kV, 2000kW, ID Fan Motor**	**Stock No 0230816**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Motor Star point Boxes/Leads				
	Replacement of damaged star point terminal box and gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	2	R	**R**
	Replacement of damaged star point box cover and seals/gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	2	R	**R**
	Inspect star point bushings for cracks, signs of excessive damage and replace if necessary.	ea	2	R	**R**
	Record whether motor is equipped with internal or external star point.	ea	2	R	**R**
	Inspect star point leads insulation for cracks, frays, signs of brittleness, and swelling from oil contamination. Stipulate repair or replacement cost.	ea	2	R	**R**
	Inspect the stator to see if motor lead wire has been used to make circuit jumper connections. Report any discrepancies.				
	Inspect motor lead lugs for signs of overheating and perform a pull and turn check for loose crimp connections. Ensure that insulation of the terminal wire is in touch with the lug.	ea	2	R	**R**
	Inspect motor star point terminal studs, bolts and star bar. Replace if necessary.	ea	2	R	**R**
	Cooler				
	Strip and clean cooler. (Note wet, air forced or oil cooler)	ea	2	R	**R**

	Overhaul the cooler. Note the condition of cooler whether rust, fly-ash or any other debris present is.	ea	2	R	**R**
	Assemble cooler, ensure all intake and outlets are free from any foreign matter.	ea	2	R	**R**
	Pressures test the cooler to manufacturer's specifications and attach test certificate.	ea	2	R	**R**
	Replace cooler with new cooler. Attach test certificate	ea	2	R	**R**
	Replace cooler with refurbished cooler. Attach test certificate	ea	2	R	**R**
	Space Heaters				
	Inspect and test motor space heaters and wiring upto and including space heater terminal box. Wiring must be installed in such a way that wind generated inside the motor cannot disturb the wiring installation.	ea	2	R	**R**
	Defective heaters must be replaced and wire to space heater terminal box.	ea	2	R	**R**
	PT 100 Motor Winding Temperature Thermocouple				
	Test PT 100 motor winding temperature thermocouple to design specifications. Ensure thermocouple and wiring is mounted rigid and sound. The maximum load permitted for the resistance thermometers Pt 100 (100° at 0° C) is 10 mA. Only use a single button Wheatstone bridge for testing.	ea	2	R	**R**
	Defective PT 100 winding temperature thermocouples must be replaced and wire to winding temperature terminal box.	ea	2	R	**R**
7	**6,6kV, 2000kW, ID Fan Motor**	**Stock No 0230816**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator Housing				
	Inspect stator housing, clean and dry stator housing. Ensure air paths are clean and not contaminated by foreign materials.	ea	2	R	**R**
	Inspect stator foot mounting and polish.	ea	2	R	**R**
	Repair stator footing if damaged, bend or broken.	ea	2	R	**R**
	Inspect and test the concentricity of the stator on the drive and non-drive end sides.	ea	2	R	**R**
	Correct the stator concentricity to within the allowable specification of the OEM.	ea	2	R	**R**
	If stator housing cracks are evident, record and repair. Ensure all cracks are noted and repair method specified.	ea	2	R	**R**
	Inspect and repair drive end and non-drive end landings of the end shield and repair if necessary.	ea	2	R	**R**
	Stator windings and Stator Core Laminations				
	Winding patch due to rubbing, insulation damage and foreign damage	ea	2	R	**R**
	Motor stator winding burnt, failed or completely damaged. Remove old winding, clean slots and rewind stator completely. Treat and paint stator with varnish.	ea	2	R	**R**
	Inspect stator core laminations for signs of arching, damage and lamination insulation failure. Submit repair method to employer for approval.	ea	2	R	**R**
	Treat and paint stator with vanish only. Old stator windings still serviceable.	ea	2	R	**R**
	Conduct IR and PI test on stator winding to OEM specifications and record. Submit report with motor.	ea	2	R	**R**
	Stator core flux test to determine hot sports on motor stator core laminations.	ea	2	R	**R**
	Carry out concentricity test on the stator	ea	2	R	**R**
	Correct the stator concentricity if out of Eskom minimum specification as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	2	R	**R**
	Motor Rotor				
	Inspect rotor core for looseness, overheating, loose/cracked rotor and short circuit bars, missing clamping fingers and vent duct spacers, localized heating or blocked air ducts before cleaning. If cracked rotor laminations, core damage/migration are found, submit repair method and contact employer before cleaning.	ea	2	R	**R**

	Replace rotor bars and rotor short circuit ring as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	2	R	**R**
	Repair rotor bars and rotor short circuit ring as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	2	R	**R**
	6,6kV, 2000kW, ID Fan Motor	**Stock No 0230816**			
	Description	**Unit**	**QTY**	**Rates**	**Amount**
	Replace rotor cage as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	2	R	**R**
	Replace rotor shaft as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	2	R	**R**
	Clean rotor, remove all corrosion, treat and paint rotor with anti-rust paint.	ea	2	R	**R**
	Balance rotor at operating speed with fan and half key inserted. Balancing shall be in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	2	R	**R**
	Polish the journals (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	2	R	**R**
	Polish the journals (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	2	R	**R**
	Polish labyrinth seal landings (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	2	R	**R**
	Polish labyrinth seal landings (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	2	R	**R**
	Polish Fan landing (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	2	R	**R**
	Polish Fan landing (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	2	R	**R**
	Check shaft run out / concentricity in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	2	R	**R**
	Rectify or correct the rotor concentricity in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	2	R	**R**
	Micro weld rotor shaft/Journal (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	2	R	**R**
	Micro weld rotor shaft/Journal (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	2	R	**R**
	Inspect bearing hub-to-shaft fit. If it is too loose, it shall be corrected by restoring the shaft dimensions to OEM specifications or manufacture a new hub.	ea	2	R	**R**
	Inspect and rotor balance cooling fan.	ea	2	R	**R**
8	**6,6kV, 2000kW, ID Fan Motor**	**Stock No 0230816**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	<u>Drive-end and Non Drive-end Shields</u>				
	Inspect end shield covers bolts. If corrosion is found, clean up and replace fixing bolts	ea	2	R	**R**
	Inspect DE and NDE shields for cracks or damage. Submit repair procedure to employer.	ea	2	R	**R**
	<u>DE and NDE Bearings & Bearing Housings</u>				
	Re-metal white metal DE bearing according to shaft size and fit in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors. Bearing shall be ultrasonic tested.	ea	2	R	**R**
	Clean and polish DE bearing with Scotch-brite ® cloth.	ea	2	R	**R**
	Re-metal white metal NDE bearing according to shaft size and fit in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors. Bearing shall be ultrasonic tested.	ea	2	R	**R**

	Clean and polish NDE bearing with Scotch-brite ® cloth.	ea	2	R	**R**
	Inspect DE bearing housing for concentricity and clean.	ea	2	R	**R**
	Inspect NDE bearing housing for concentricity and clean.	ea	2	R	**R**
	Overhaul DE seal, oil ring, oil scoop in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	2	R	**R**
	Replace DE seal, oil ring, oil scoop.	ea	2	R	**R**
	Overhaul NDE seal, oil ring, oil scoop in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	2	R	**R**
	Replace NDE seal, oil ring, oil scoop.	ea	2	R	**R**
	Replace site glass and clean the ports, DE	ea	2	R	**R**
	Replace site glass and clean the ports, NDE	ea	2	R	**R**
	Carry out bearing insulation test point inspect	ea	2	R	**R**
	Carry out bearing insulation test point repair	ea	2	R	**R**
	Assemble Motor				
	Assemble motor completely before any mechanical tests, checks and Routine testing can be done.	ea	2	R	**R**
	Mechanical Tests and Checks after Assembly				
	Measure air gap between stator and rotor in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	2	R	**R**
	Motor magnetic center shall be done in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	2	R	**R**
9	**6,6kV, 2000kW, ID Fan Motor**	**Stock No 0230816**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Routine tests and required tests when instructed				
	Perform El-cid test on stator.	ea	2	R	**R**
	Perform El-cid test on rotor.	ea	2	R	**R**
	Perform Rotor bar to bar test.	ea	2	R	**R**
	Carry out Tan-Delta test on the stator.	ea	2	R	**R**
	Ultrasonic testing on white metal bearing surface.	ea	2	R	**R**
	NDT on fan impellers or runners (Whole impeller).	ea	2	R	**R**
	NDT on the rotor shaft.	ea	2	R	**R**
	Copper material analysis test / check.	ea	2	R	**R**
	Test run the motor and verifies bearing temperatures, vibration, winding temperatures to be with OEM specification in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	2	R	**R**
	Apply load and load test the motor to site conditions.	ea	2	R	**R**
	Special charges				
	Emergency repair charge (20%)	ea	2	R	**R**
	Paint Motor				
	Treat and paint motor noting Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	2	R	**R**
	Delivery to Site				
	Deliver motor to Camden power station as per Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	2	R	**R**
10	**6,6kV, 860kW, FD Fan Motor**	**Stock No 0230910**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Motor Transport				
	Collect motor from Camden power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load.	ea	5	R	**R**
	Strip and Quote				
	Clean motor down externally and strip motor. Remove rotor.	ea	5	R	**R**

	Clean, remove all debris/fly ash/pf from the coolers, motor internal, ventilation paths, star point internal and cable terminal internal boxes. Note condition on assessment form.	ea	5	R	**R**
	Inspect motor internally (Stator core, windings and stator winding wedges and externally (Frame) noting all defects and then complete assessment report (HV assessment form).	ea	5	R	**R**
	Motor Terminal Boxes/Leads				
	Replacement of damaged terminal box and gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Replacements of damaged terminal box cover and seals/gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Inspect motor terminal bushings for cracks, signs of excessive damage and replace if necessary.	ea	5	R	**R**
	Inspect the motor leads insulation for cracks, frays, signs of brittleness, and swelling from oil contamination. Stipulate repair or replacement cost.	ea	5	R	**R**
	Inspect the stator to see if motor lead wire has been used to make circuit jumper connections. Report any discrepancies.	ea	5	R	**R**
	Inspect motor lead lugs for signs of overheating and perform a pull and turn check for loose crimp connections. Ensure that insulation of the terminal wire is in touch with the lug. Price if one lug has to be replaced.	ea	5	R	**R**
	Inspect motor terminal studs and bolts. Replace if necessary.	ea	5	R	**R**
11	**6,6kV, 860kW, FD Fan Motor**	**Stock No 0230910**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Motor Star point Boxes/Leads				
	Replacement of damaged star point terminal box and gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Replacement of damaged star point box cover and seals/gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Inspect star point bushings for cracks, signs of excessive damage and replace if necessary.	ea	5	R	**R**
	Record whether motor is equipped with internal or external star point.	ea	5	R	**R**
	Inspect star point leads insulation for cracks, frays, signs of brittleness, and swelling from oil contamination. Stipulate repair or replacement cost.	ea	5	R	**R**
	Inspect the stator to see if motor lead wire has been used to make circuit jumper connections. Report any discrepancies.	ea	5	R	**R**
	Inspect motor lead lugs for signs of overheating and perform a pull and turn check for loose crimp connections. Ensure that insulation of the terminal wire is in touch with the lug.	ea	5	R	**R**
	Inspect motor star point terminal studs, bolts and star bar. Replace if necessary.	ea	5	R	**R**
	Cooler				
	Strip and clean cooler. (Note wet, air forced or oil cooler)	ea	5	R	**R**
	Overhaul the cooler. Note the condition of cooler whether rust, fly-ash or any other debris present is.	ea	5	R	**R**
	Assemble cooler, ensure all intake and outlets are free from any foreign matter.	ea	5	R	**R**
	Pressures test the cooler to manufacturer's specifications and attach test certificate.	ea	5	R	**R**
	Replace cooler with new cooler. Attach test certificate	ea	5	R	**R**
	Replace cooler with refurbished cooler. Attach test certificate	ea	5	R	**R**
	Space Heaters				
	Inspect and test motor space heaters and wiring upto and including space heater terminal box. Wiring must be installed in such a way that wind generated inside the motor cannot disturb the wiring installation.	ea	5	R	**R**
	Defective heaters must be replaced and wire to space heater terminal box.	ea	5	R	**R**

	PT 100 Motor Winding Temperature Thermocouple				
	Test PT 100 motor winding temperature thermocouple to design specifications. Ensure thermocouple and wiring is mounted rigid and sound. The maximum load permitted for the resistance thermometers Pt 100 (100° at 0° C) is 10 mA. Only use a single button Wheatstone bridge for testing.	ea	5	R	**R**
	Defective PT 100 winding temperature thermocouples must be replaced and wire to winding temperature terminal box.	ea	5	R	**R**
12	**6,6kV, 860kW, FD Fan Motor**	**Stock No 0230910**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator Housing				
	Inspect stator housing, clean and dry stator housing. Ensure air paths are clean and not contaminated by foreign materials.	ea	5	R	**R**
	Inspect stator foot mounting and polish.	ea	5	R	**R**
	Repair stator footing if damaged, bend or broken.	ea	5	R	**R**
	Inspect and test the concentricity of the stator on the drive and non-drive end sides.	ea	5	R	**R**
	Correct the stator concentricity to within the allowable specification of the OEM.	ea	5	R	**R**
	If stator housing cracks are evident, record and repair. Ensure all cracks are noted and repair method specified.	ea	5	R	**R**
	Inspect and repair drive end and non-drive end landings of the end shield and repair if necessary.	ea	5	R	**R**
	Stator windings and Stator Core Laminations				
	Winding patch due to rubbing, insulation damage and foreign damage	ea	5	R	**R**
	Motor stator winding burnt, failed or completely damaged. Remove old winding, clean slots and rewind stator completely. Treat and paint stator with varnish.	ea	5	R	**R**
	Inspect stator core laminations for signs of arching, damage and lamination insulation failure. Submit repair method to employer for approval.	ea	5	R	**R**
	Treat and paint stator with vanish only. Old stator windings still serviceable.	ea	5	R	**R**
	Conduct IR and PI test on stator winding to OEM specifications and record. Submit report with motor.	ea	5	R	**R**
	Stator core flux test to determine hot sports on motor stator core laminations.	ea	5	R	**R**
	Carry out concentricity test on the stator.	ea	5	R	**R**
	Correct the stator concentricity if out of Eskom minimum specification as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**

	Motor Rotor				
	Inspect rotor core for looseness, overheating, loose/cracked rotor and short circuit bars, missing clamping fingers and vent duct spacers, localized heating or blocked air ducts before cleaning. If cracked rotor laminations, core damage/migration are found, submit repair method and contact employer before cleaning.	ea	5	R	**R**
	Replace rotor bars and rotor short circuit ring as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Repair rotor bars and rotor short circuit ring as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
13	**6,6kV, 860kW, FD Fan Motor**	**Stock No 0230910**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Replace rotor cage as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Replace rotor shaft as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Clean rotor, remove all corrosion, treat and paint rotor with anti-rust paint.	ea	5	R	**R**
	Balance rotor at operating speed with fan and half key inserted. Balancing shall be in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish the journals (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish the journals (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish labyrinth seal landings (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish labyrinth seal landings (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish Fan landing (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish Fan landing (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Check shaft run out / concentricity in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Rectify or correct the rotor concentricity in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Micro weld rotor shaft/Journal (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Micro weld rotor shaft/Journal (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Inspect bearing hub-to-shaft fit. If it is too loose, it shall be corrected by restoring the shaft dimensions to OEM specifications or manufacture a new hub.	ea	5	R	**R**
	Inspect and rotor balance cooling fan.	ea	5	R	**R**
14	**6,6kV, 860kW, FD Fan Motor**	**Stock No 0230910**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Drive-end and Non Drive-end Shields				

	Inspect end shield covers bolts. If corrosion is found, clean up and replace fixing bolts	ea	5	R	**R**
	Inspect DE and NDE shields for cracks or damage. Submit repair procedure to employer.	ea	5	R	**R**
	DE and NDE Bearings & Bearing Housings				
	Re-metal white metal DE bearing according to shaft size and fit in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors. Bearing shall be ultrasonic tested.	ea	5	R	**R**
	Clean and polish DE bearing with Scotch-brite ® cloth.	ea	5	R	**R**
	Re-metal white metal NDE bearing according to shaft size and fit in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors. Bearing shall be ultrasonic tested.	ea	5	R	**R**
	Clean and polish NDE bearing with Scotch-brite ® cloth.	ea	5	R	**R**
	Inspect DE bearing housing for concentricity and clean.	ea	5	R	**R**
	Inspect NDE bearing housing for concentricity and clean.	ea	5	R	**R**
	Overhaul DE seal, oil ring, oil scoop in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Replace DE seal, oil ring, oil scoop.	ea	5	R	**R**
	Overhaul NDE seal, oil ring, oil scoop in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Replace NDE seal, oil ring, oil scoop.	ea	5	R	**R**
	Replace site glass and clean the ports, DE	ea	5	R	**R**
	Replace site glass and clean the ports, NDE	ea	5	R	**R**
	Carry out bearing insulation test point inspect	ea	5	R	**R**
	Carry out bearing insulation test point repair	ea	5	R	**R**
	Assemble Motor				
	Assemble motor completely before any mechanical tests, checks and Routine testing can be done	ea	5	R	**R**
	Mechanical Tests and Checks after Assembly				
	Measure air gap between stator and rotor in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Motor magnetic center shall be done in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**

15	6,6kV, 860kW, FD Fan Motor	Stock No 0230910			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Routine tests and required tests when instructed				
	Perform El-cid test on stator.	ea	5	R	**R**
	Perform El-cid test on rotor.	ea	5	R	**R**
	Perform Rotor bar to bar test.	ea	5	R	**R**
	Carry out Tan-Delta test on the stator.	ea	5	R	**R**
	Ultrasonic testing on white metal bearing surface.	ea	5	R	**R**
	NDT on fan impellers or runners (Whole impeller).	ea	5	R	**R**
	NDT on the rotor shaft.	ea	5	R	**R**
	Copper material analysis test / check.	ea	5	R	**R**
	Test run the motor and verifies bearing temperatures, vibration, winding temperatures to be with OEM specification in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Apply load and load test the motor to site conditions.	ea	5	R	**R**
	Special charges				
	Emergency repair charge (20%)	ea	1	R	**R**
	Paint Motor				
	Treat and paint motor noting Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Delivery to Site				
	Deliver motor to Camden power station as per Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	5	R	**R**
16	6,6kV, 485HP, CEP Motor	Stock No 0230907			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Motor Transport				

	Collect motor from Camden power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load.	ea	5	R	**R**
	Strip and Quote				
	Clean motor down externally and strip motor. Remove rotor.	ea	5	R	**R**
	Clean, remove all debris/fly ash/pf from the coolers, motor internal, ventilation paths, star point internal and cable terminal internal boxes. Note condition on assessment form.	ea	5	R	**R**
	Inspect motor internally (Stator core, windings and stator winding wedges and externally (Frame) noting all defects and then complete assessment report (HV assessment form).	ea	5	R	**R**
	Motor Terminal Boxes/Leads				
	Replacement of damaged terminal box and gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Replacements of damaged terminal box cover and seals/gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Inspect motor terminal bushings for cracks, signs of excessive damage and replace if necessary.	ea	5	R	**R**
	Inspect the motor leads insulation for cracks, frays, signs of brittleness, and swelling from oil contamination. Stipulate repair or replacement cost.	ea	5	R	**R**
	Inspect the stator to see if motor lead wire has been used to make circuit jumper connections. Report any discrepancies.	ea	5	R	**R**
	Inspect motor lead lugs for signs of overheating and perform a pull and turn check for loose crimp connections. Ensure that insulation of the terminal wire is in touch with the lug. Price if one lug has to be replaced.	ea	5	R	**R**
	Inspect motor terminal studs and bolts. Replace if necessary.	ea	5	R	**R**
17	**6,6kV, 485HP, CEP Fan Motor**	**Stock No 0230907**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Motor Star point Boxes/Leads				
	Replacement of damaged star point terminal box and gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Replacement of damaged star point box cover and seals/gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Inspect star point bushings for cracks, signs of excessive damage and replace if necessary.	ea	5	R	**R**
	Record whether motor is equipped with internal or external star point.	ea	5	R	**R**
	Inspect star point leads insulation for cracks, frays, signs of brittleness, and swelling from oil contamination. Stipulate repair or replacement cost.	ea	5	R	**R**
	Inspect the stator to see if motor lead wire has been used to make circuit jumper connections. Report any discrepancies.	ea	5	R	**R**

	Inspect motor lead lugs for signs of overheating and perform a pull and turn check for loose crimp connections. Ensure that insulation of the terminal wire are in touch with the lug.	ea	5	R	**R**
	Inspect motor star point terminal studs, bolts and star bar. Replace if necessary.	ea	5	R	**R**
	Cooler				
	Strip and clean cooler. (Note wet, air forced or oil cooler)	ea	5	R	**R**
	Overhaul the cooler. Note the condition of cooler whether rust, fly-ash or any other debris present is.	ea	5	R	**R**
	Assemble cooler, ensure all intake and outlets are free from any foreign matter.	ea	5	R	**R**
	Pressures test the cooler to manufacturer's specifications and attach test certificate.	ea	5	R	**R**
	Replace cooler with new cooler. Attach test certificate	ea	5	R	**R**
	Replace cooler with refurbished cooler. Attach test certificate	ea	5	R	**R**
	Space Heaters				
	Inspect and test motor space heaters and wiring upto and including space heater terminal box. Wiring must be installed in such a way that wind generated inside the motor cannot disturb the wiring installation.	ea	5	R	**R**
	Defective heaters must be replaced and wire to space heater terminal box.	ea	5	R	**R**
	PT 100 Motor Winding Temperature Thermocouple				
	Test PT 100 motor winding temperature thermocouple to design specifications. Ensure thermocouple and wiring is mounted rigid and sound. The maximum load permitted for the resistance thermometers Pt 100 (100° at 0° C) is 10 mA. Only use a single button Wheatstone bridge for testing.	ea	5	R	**R**
	Defective PT 100 winding temperature thermocouples must be replaced and wire to winding temperature terminal box.	ea	5	R	**R**
18	**6,6kV, 485HP, CEP Fan Motor**	**Stock No 0230907**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator Housing				
	Inspect stator housing, clean and dry stator housing. Ensure air paths are clean and not contaminated by foreign materials.	ea	5	R	**R**
	Inspect stator foot mounting and polish.	ea	5	R	**R**

	Repair stator footing if damaged, bend or broken.	ea	5	R	**R**
	Inspect and test the concentricity of the stator on the drive and non-drive end sides.	ea	5	R	**R**
	Correct the stator concentricity to within the allowable specification of the OEM.	ea	5	R	**R**
	If stator housing cracks are evident, record and repair. Ensure all cracks are noted and repair method specified.	ea	5	R	**R**
	Inspect and repair drive end and non-drive end landings of the end shield and repair if necessary.	ea	5	R	**R**
	Stator windings and Stator Core Laminations				
	Winding patch due to rubbing, insulation damage and foreign damage	ea	5	R	**R**
	Motor stator winding burnt, failed or completely damaged. Remove old winding, clean slots and rewind stator completely. Treat and paint stator with varnish.	ea	5	R	**R**
	Inspect stator core laminations for signs of arching, damage and lamination insulation failure. Submit repair method to employer for approval.	ea	5	R	**R**
	Treat and paint stator with vanish only. Old stator windings still serviceable.	ea	5	R	**R**
	Conduct IR and PI test on stator winding to OEM specifications and record. Submit report with motor.	ea	5	R	**R**
	Stator core flux test to determine hot sports on motor stator core laminations.	ea	5	R	**R**
	Carry out concentricity test on the stator	ea	5	R	**R**
	Correct the stator concentricity if out of Eskom minimum specification as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Motor Rotor				
	Inspect rotor core for looseness, overheating, loose/cracked rotor and short circuit bars, missing clamping fingers and vent duct spacers, localized heating or blocked air ducts before cleaning. If cracked rotor laminations, core damage/migration are found, submit repair method and contact employer before cleaning.	ea	5	R	**R**
	Replace rotor bars and rotor short circuit ring as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Repair rotor bars and rotor short circuit ring as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
19	**6,6kV, 485HP, CEP Fan Motor**	**Stock No 0230907**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Replace rotor cage as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Replace rotor shaft as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**

	Clean rotor, remove all corrosion, treat and paint rotor with anti-rust paint.	ea	5	R	**R**
	Balance rotor at operating speed with fan and half key inserted. Balancing shall be in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish the journals (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish the journals (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish labyrinth seal landings (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish labyrinth seal landings (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish Fan landing (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish Fan landing (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Check shaft run out / concentricity in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Rectify or correct the rotor concentricity in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Micro weld rotor shaft/Journal (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Micro weld rotor shaft/Journal (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Inspect bearing hub-to-shaft fit. If it is too loose, it shall be corrected by restoring the shaft dimensions to OEM specifications or manufacture a new hub.	ea	5	R	**R**
	Inspect and rotor balance cooling fan.	ea	5	R	**R**
20	**6,6kV, 485HP, CEP Fan Motor**	**Stock No 0230907**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Drive-end and Non Drive-end Shields				
	Inspect end shield covers bolts. If corrosion is found, clean up and replace fixing bolts	ea	5	R	**R**
	Inspect DE and NDE shields for cracks or damage. Submit repair procedure to employer.	ea	5	R	**R**
	CEP motor with sleeve bearings				
	DE and NDE Bearings & Bearing Housings				
	Re-metal white metal DE bearing according to shaft size and fit in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors. Bearing shall be ultrasonic tested. Clean and polish DE bearing with Scotch-brite ® cloth.	ea	5	R	**R**
	Re-metal white metal NDE bearing according to shaft size and fit in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors. Bearing shall be ultrasonic tested.	ea	5	R	**R**

	Clean and polish DE & NDE bearing with Scotch-brite ® cloth.	ea	5	R	**R**
	Inspect DE bearing housing for concentricity and clean.	ea	5	R	**R**
	Inspect NDE bearing housing for concentricity and clean.	ea	5	R	**R**
	Overhaul DE seal, oil ring, oil scoop in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Replace DE seal, oil ring, oil scoop.	ea	5	R	**R**
	Overhaul NDE seal, oil ring, oil scoop in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Replace NDE seal, oil ring, oil scoop.	ea	5	R	**R**
	Replace site glass and clean the ports, DE	ea	5	R	**R**
	Replace site glass and clean the ports, NDE	ea	5	R	**R**
	Carry out bearing insulation test point inspect	ea	5	R	**R**
	Carry out bearing insulation test point repair	ea	5	R	**R**
	CEP with Ball and roller bearings				
	Drive-end and Non Drive-end Shields				
	Inspect end shield covers bolts. If corrosion is found, clean up and replace fixing bolts	ea	5	R	**R**
	Inspect DE and NDE shields for cracks or damage. Submit repair procedure to employer.	ea	5	R	**R**
	DE and NDE Bearing Housings				
	Replace DE ball and roller ball bearings in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Replace NDE ball and roller bearing in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Inspect DE bearing housing for concentricity and clean.	ea	5	R	**R**
	Inspect NDE bearing housing for concentricity and clean.	ea	5	R	**R**
	Drive-end and Non Drive-end Shields				
	Inspect end shield covers bolts. If corrosion is found, clean up and replace fixing bolts	ea	5	R	**R**
	Inspect DE and NDE shields for cracks or damage. Submit repair procedure to employer.	ea	5	R	**R**

	Assemble Motor				
	Assemble motor completely before any mechanical tests, checks and Routine testing can be done	ea	5	R	**R**
	Mechanical Tests and Checks after Assembly				
	Measure air gap between stator and rotor in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Motor magnetic center shall be done in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
21	**6,6kV, 485HP, CEP Fan Motor**	**Stock No 0230907**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Routine tests and required tests when instructed				
	Perform El-cid test on stator.	ea	5	R	**R**
	Perform El-cid test on rotor.	ea	5	R	**R**
	Perform Rotor bar to bar test.	ea	5	R	**R**
	Carry out Tan-Delta test on the stator.	ea	5	R	**R**
	Ultrasonic testing on white metal bearing surface.	ea	5	R	**R**
	NDT on fan impellers or runners (Whole impeller).	ea	5	R	**R**
	NDT on the rotor shaft.	ea	5	R	**R**
	Copper material analysis test / check.	ea	5	R	**R**
	Test run the motor and verifies bearing temperatures, vibration, winding temperatures to be with OEM specification in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Apply load and load test the motor to site conditions.	ea	5	R	**R**
	Special charges				
	Emergency repair charge (20%)	ea	3	R	**R**

	Paint Motor				
	Treat and paint motor noting Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Delivery to Site				
	Deliver motor to Camden power station as per Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	5	R	**R**
22	**6,6kV, 2500HP, CW Pump Motor**	**Stock No 0230903**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Motor Transport				
	Collect motor from Camden power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load.	ea	5	R	**R**
	Strip and Quote				
	Clean motor down externally and strip motor. Remove rotor.	ea	5	R	**R**
	Clean, remove all debris/fly ash/pf from the coolers, motor internal, ventilation paths, star point internal and cable terminal internal boxes. Note condition on assessment form.	ea	5	R	**R**
	Inspect motor internally (Stator core, windings and stator winding wedges and externally (Frame) noting all defects and then complete assessment report (HV assessment form).	ea	5	R	**R**
	Motor Terminal Boxes/Leads				
	Replacement of damaged terminal box and gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Replacements of damaged terminal box cover and seals/gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Inspect motor terminal bushings for cracks, signs of excessive damage and replace if necessary.	ea	5	R	**R**
	Inspect the motor leads insulation for cracks, frays, signs of brittleness, and swelling from oil contamination. Stipulate repair or replacement cost.	ea	5	R	**R**
	Inspect the stator to see if motor lead wire has been used to make circuit jumper connections. Report any discrepancies.	ea	5	R	**R**
	Inspect motor lead lugs for signs of overheating and perform a pull and turn check for loose crimp connections. Ensure that insulation of the terminal wire is in touch with the lug. Price if one lug has to be replaced.	ea	5	R	**R**
	Inspect motor terminal studs and bolts. Replace if necessary.	ea	5	R	**R**
23	**6,6kV, 2500HP, CW Pump Motor**	**Stock No 0230903**			

Item	Description	Unit	QTY	Rates	Amount
	Motor Star point Boxes/Leads				
	Replacement of damaged star point terminal box and gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Replacement of damaged star point box cover and seals/gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Inspect star point bushings for cracks, signs of excessive damage and replace if necessary.	ea	5	R	**R**
	Record whether motor is equipped with internal or external star point.	ea	5	R	**R**
	Inspect star point leads insulation for cracks, frays, signs of brittleness, and swelling from oil contamination. Stipulate repair or replacement cost.	ea	5	R	**R**
	Inspect the stator to see if motor lead wire has been used to make circuit jumper connections. Report any discrepancies.	ea	5	R	**R**
	Inspect motor lead lugs for signs of overheating and perform a pull and turn check for loose crimp connections. Ensure that insulation of the terminal wire are in touch with the lug.	ea	5	R	**R**
	Inspect motor star point terminal studs, bolts and star bar. Replace if necessary.	ea	5	R	**R**
	Cooler				
	Strip and clean cooler. (Note wet, air forced or oil cooler)	ea	5	R	**R**
	Overhaul the cooler. Note the condition of cooler whether rust, fly-ash or any other debris present is.	ea	5	R	**R**
	Assemble cooler, ensure all intake and outlets are free from any foreign matter.	ea	5	R	**R**
	Pressures test the cooler to manufacturer's specifications and attach test certificate.	ea	5	R	**R**
	Replace cooler with new cooler. Attach test certificate	ea	5	R	**R**
	Replace cooler with refurbished cooler. Attach test certificate	ea	5	R	**R**
	Space Heaters				
	Inspect and test motor space heaters and wiring upto and including space heater terminal box. Wiring must be installed in such a way that wind generated inside the motor cannot disturb the wiring installation.	ea	5	R	**R**
	Defective heaters must be replaced and wire to space heater terminal box.	ea	5	R	**R**
	PT 100 Motor Winding Temperature Thermocouple				

	Test PT 100 motor winding temperature thermocouple to design specifications. Ensure thermocouple and wiring is mounted rigid and sound. The maximum load permitted for the resistance thermometers Pt 100 (100° at 0° C) is 10 mA. Only use a single button Wheatstone bridge for testing.	ea	5	R	**R**
	Defective PT 100 winding temperature thermocouples must be replaced and wire to winding temperature terminal box.	ea	5	R	**R**
24	**6,6kV, 2500HP, CW Pump Motor**	**Stock No 0230903**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator Housing				
	Inspect stator housing, clean and dry stator housing. Ensure air paths are clean and not contaminated by foreign materials.	ea	5	R	**R**
	Inspect stator foot mounting and polish.	ea	5	R	**R**
	Repair stator footing if damaged, bend or broken.	ea	5	R	**R**
	Inspect and test the concentricity of the stator on the drive and non-drive end sides.	ea	5	R	**R**
	Correct the stator concentricity to within the allowable specification of the OEM.	ea	5	R	**R**
	If stator housing cracks are evident, record and repair. Ensure all cracks are noted and repair method specified.	ea	5	R	**R**
	Inspect and repair drive end and non-drive end landings of the end shield and repair if necessary.	ea	5	R	**R**
	Stator windings and Stator Core Laminations				
	Winding patch due to rubbing, insulation damage and foreign damage	ea	5	R	**R**
	Motor stator winding burnt, failed or completely damaged. Remove old winding, clean slots and rewind stator completely. Treat and paint stator with varnish.	ea	5	R	**R**
	Inspect stator core laminations for signs of arching, damage and lamination insulation failure. Submit repair method to employer for approval.	ea	5	R	**R**
	Treat and paint stator with vanish only. Old stator windings still serviceable.	ea	5	R	**R**
	Conduct IR and PI test on stator winding to OEM specifications and record. Submit report with motor.	ea	5	R	**R**
	Stator core flux test to determine hot sports on motor stator core laminations.	ea	5	R	**R**
	Carry out concentricity test on the stator	ea	5	R	**R**
	Correct the stator concentricity if out of Eskom minimum specification as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Motor Rotor				

	Inspect rotor core for looseness, overheating, loose/cracked rotor and short circuit bars, missing clamping fingers and vent duct spacers, localized heating or blocked air ducts before cleaning. If cracked rotor laminations, core damage/migration are found, submit repair method and contact employer before cleaning.	ea	5	R	**R**
	Replace rotor bars and rotor short circuit ring as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Repair rotor bars and rotor short circuit ring as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
25	**6,6kV, 2500HP, CW Pump Motor**	**Stock No 0230903**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Replace rotor cage as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Replace rotor shaft as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Clean rotor, remove all corrosion, treat and paint rotor with anti-rust paint.	ea	5	R	**R**
	Balance rotor at operating speed with fan and half key inserted. Balancing shall be in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish the journals (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish the journals (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish labyrinth seal landings (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish labyrinth seal landings (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish Fan landing (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish Fan landing (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Check shaft run out / concentricity in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Rectify or correct the rotor concentricity in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Micro weld rotor shaft/Journal (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Micro weld rotor shaft/Journal (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Inspect bearing hub-to-shaft fit. If it is too loose, it shall be corrected by restoring the shaft dimensions to OEM specifications or manufacture a new hub.	ea	5	R	**R**
	Inspect and rotor balance cooling fan.	ea	5	R	**R**
26	**6,6kV, 2500HP, CW Pump Motor**	**Stock No 0230903**			

Item	Description	Unit	QTY	Rates	Amount
	Drive-end and Non Drive-end Shields				
	Inspect end shield covers bolts. If corrosion is found, clean up and replace fixing bolts	ea	5	R	**R**
	Inspect DE and NDE shields for cracks or damage. Submit repair procedure to employer.	ea	5	R	**R**
	DE and NDE Bearings & Bearing Housings				
	Re-metal white metal DE bearing according to shaft size and fit in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors. Bearing shall be ultrasonic tested.	ea	5	R	**R**
	Clean and polish DE bearing with Scotch-brite ® cloth.	ea	5	R	**R**
	Re-metal white metal NDE bearing according to shaft size and fit in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors. Bearing shall be ultrasonic tested.	ea	5	R	**R**
	Clean and polish NDE bearing with Scotch-brite ® cloth.	ea	5	R	**R**
	Inspect DE bearing housing for concentricity and clean.	ea	5	R	**R**
	Inspect NDE bearing housing for concentricity and clean.	ea	5	R	**R**
	Overhaul DE seal, oil ring, oil scoop in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Replace DE seal, oil ring, oil scoop.	ea	5	R	**R**
	Overhaul NDE seal, oil ring, oil scoop in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Replace NDE seal, oil ring, oil scoop.	ea	5	R	**R**
	Replace site glass and clean the ports, DE	ea	5	R	**R**
	Replace site glass and clean the ports, NDE	ea	5	R	**R**
	Carry out bearing insulation test point inspect	ea	5	R	**R**
	Carry out bearing insulation test point repair	ea	5	R	**R**
	Assemble Motor				
	Assemble motor completely before any mechanical tests, checks and Routine testing can be done	ea	5	R	**R**

	Mechanical Tests and Checks after Assembly				
	Measure air gap between stator and rotor in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Motor magnetic center shall be done in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
27	**6,6kV, 2500HP, CW Pump Motor**	**Stock No 0230903**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Routine tests and required tests when instructed				
	Perform El-cid test on stator.	ea	5	R	**R**
	Perform El-cid test on rotor.	ea	5	R	**R**
	Perform Rotor bar to bar test.	ea	5	R	**R**
	Carry out Tan-Delta test on the stator.	ea	5	R	**R**
	Ultrasonic testing on white metal bearing surface.	ea	5	R	**R**
	NDT on fan impellers or runners (Whole impeller).	ea	5	R	**R**
	NDT on the rotor shaft.	ea	5	R	**R**
	Copper material analysis test / check.	ea	5	R	**R**
	Test run the motor and verifies bearing temperatures, vibration, winding temperatures to be with OEM specification in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Apply load and load test the motor to site conditions.	ea	5	R	**R**
	Special charges				
	Emergency repair charge (20%)	ea	3	R	**R**
	Paint Motor				
	Treat and paint motor noting Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Delivery to Site				

	Deliver motor to Camden power station as per Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	5	R	**R**
28	**6,6kV, 235kW, Mill Motor**		**Stock No 0230908**		
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Motor Transport				
	Collect motor from Camden power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load.	ea	5	R	**R**
	Strip and Quote				
	Clean motor down externally and strip motor. Remove rotor.	ea	5	R	**R**
	Clean, remove all debris/fly ash/pf from the coolers, motor internal, ventilation paths, star point internal and cable terminal internal boxes. Note condition on assessment form.	ea	5	R	**R**
	Inspect motor internally (Stator core, windings and stator winding wedges and externally (Frame) noting all defects and then complete assessment report (HV assessment form).	ea	5	R	**R**
	Motor Terminal Boxes/Leads				
	Replacement of damaged terminal box and gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Replacements of damaged terminal box cover and seals/gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Inspect motor terminal bushings for cracks, signs of excessive damage and replace if necessary.	ea	5	R	**R**
	Inspect the motor leads insulation for cracks, frays, signs of brittleness, and swelling from oil contamination. Stipulate repair or replacement cost.	ea	5	R	**R**
	Inspect the stator to see if motor lead wire has been used to make circuit jumper connections. Report any discrepancies.	ea	5	R	**R**
	Inspect motor lead lugs for signs of overheating and perform a pull and turn check for loose crimp connections. Ensure that insulation of the terminal wire is in touch with the lug. Price if one lug has to be replaced.	ea	5	R	**R**
	Inspect motor terminal studs and bolts. Replace if necessary.	ea	5	R	**R**
29	**6,6kV, 235kW, Mill Motor**		**Stock No 0230908**		
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Motor Star point Boxes/Leads				
	Replacement of damaged star point terminal box and gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**

	Replacement of damaged star point box cover and seals/gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Inspect star point bushings for cracks, signs of excessive damage and replace if necessary.	ea	5	R	**R**
	Record whether motor is equipped with internal or external star point.	ea	5	R	**R**
	Inspect star point leads insulation for cracks, frays, signs of brittleness, and swelling from oil contamination. Stipulate repair or replacement cost.	ea	5	R	**R**
	Inspect the stator to see if motor lead wire has been used to make circuit jumper connections. Report any discrepancies.	ea	5	R	**R**
	Inspect motor lead lugs for signs of overheating and perform a pull and turn check for loose crimp connections. Ensure that insulation of the terminal wire are in touch with the lug.	ea	5	R	**R**
	Inspect motor star point terminal studs, bolts and star bar. Replace if necessary.	ea	5	R	**R**
	Cooler				
	Strip and clean cooler. (Note wet, air forced or oil cooler)	ea	5	R	**R**
	Overhaul the cooler. Note the condition of cooler whether rust, fly-ash or any other debris present is.	ea	5	R	**R**
	Assemble cooler, ensure all intake and outlets are free from any foreign matter.	ea	5	R	**R**
	Pressures test the cooler to manufacturer's specifications and attach test certificate.	ea	5	R	**R**
	Replace cooler with new cooler. Attach test certificate	ea	5	R	**R**
	Replace cooler with refurbished cooler. Attach test certificate	ea	5	R	**R**
	Space Heaters				
	Inspect and test motor space heaters and wiring upto and including space heater terminal box. Wiring must be installed in such a way that wind generated inside the motor cannot disturb the wiring installation.	ea	5	R	**R**
	Defective heaters must be replaced and wire to space heater terminal box.	ea	5	R	**R**
	PT 100 Motor Winding Temperature Thermocouple				
	Test PT 100 motor winding temperature thermocouple to design specifications. Ensure thermocouple and wiring is mounted rigid and sound. The maximum load permitted for the resistance thermometers Pt 100 (100° at 0° C) is 10 mA. Only use a single button Wheatstone bridge for testing.	ea	5	R	**R**
	Defective PT 100 winding temperature thermocouples must be replaced and wire to winding temperature terminal box.	ea	5	R	**R**
30	**6,6kV, 235kW, Mill Motor**	**Stock No 0230908**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**

	Stator Housing				
	Inspect stator housing, clean and dry stator housing. Ensure air paths are clean and not contaminated by foreign materials.	ea	5	R	**R**
	Inspect stator foot mounting and polish.	ea	5	R	**R**
	Repair stator footing if damaged, bend or broken.	ea	5	R	**R**
	Inspect and test the concentricity of the stator on the drive and non-drive end sides.	ea	5	R	**R**
	Correct the stator concentricity to within the allowable specification of the OEM.	ea	5	R	**R**
	If stator housing cracks are evident, record and repair. Ensure all cracks are noted and repair method specified.	ea	5	R	**R**
	Inspect and repair drive end and non-drive end landings of the end shield and repair if necessary.	ea	5	R	**R**
	Stator windings and Stator Core Laminations				
	Winding patch due to rubbing, insulation damage and foreign damage	ea	5	R	**R**
	Motor stator winding burnt, failed or completely damaged. Remove old winding, clean slots and rewind stator completely. Treat and paint stator with varnish.	ea	5	R	**R**
	Inspect stator core laminations for signs of arching, damage and lamination insulation failure. Submit repair method to employer for approval.	ea	5	R	**R**
	Treat and paint stator with vanish only. Old stator windings still serviceable.	ea	5	R	**R**
	Conduct IR and PI test on stator winding to OEM specifications and record. Submit report with motor.	ea	5	R	**R**
	Stator core flux test to determine hot sports on motor stator core laminations.	ea	5	R	**R**
	Carry out concentricity test on the stator	ea	5	R	**R**
	Correct the stator concentricity if out of Eskom minimum specification as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Motor Rotor				
	Inspect rotor core for looseness, overheating, loose/cracked rotor and short circuit bars, missing clamping fingers and vent duct spacers, localized heating or blocked air ducts before cleaning. If cracked rotor laminations, core damage/migration are found, submit repair method and contact employer before cleaning.	ea	5	R	**R**
	Replace rotor bars and rotor short circuit ring as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Repair rotor bars and rotor short circuit ring as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
31	**6,6kV, 235kW, Mill Motor**	**Stock No 0230908**			

Item	Description	Unit	QTY	Rates	Amount
	Replace rotor cage as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Replace rotor shaft as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Clean rotor, remove all corrosion, treat and paint rotor with anti-rust paint.	ea	5	R	**R**
	Balance rotor at operating speed with fan and half key inserted. Balancing shall be in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish the journals (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish the journals (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish labyrinth seal landings (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish labyrinth seal landings (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish Fan landing (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish Fan landing (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Check shaft run out / concentricity in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Rectify or correct the rotor concentricity in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Micro weld rotor shaft/Journal (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Micro weld rotor shaft/Journal (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Inspect bearing hub-to-shaft fit. If it is too loose, it shall be corrected by restoring the shaft dimensions to OEM specifications or manufacture a new hub.	ea	5	R	**R**
	Inspect and rotor balance cooling fan.	ea	5	R	**R**
32	**6,6kV, 235kW, Mill Motor**	**Stock No 0230908**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	<u>Drive-end and Non Drive-end Shields</u>				
	Inspect end shield covers bolts. If corrosion is found, clean up and replace fixing bolts	ea	5	R	**R**
	Inspect DE and NDE shields for cracks or damage. Submit repair procedure to employer.	ea	5	R	**R**
	<u>DE and NDE Bearing Housings</u>				

	Replace DE ball and roller ball bearings in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Replace NDE ball and roller bearing in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Inspect DE bearing housing for concentricity and clean.	ea	5	R	**R**
	Inspect NDE bearing housing for concentricity and clean.	ea	5	R	**R**
	Assemble Motor				
	Assemble motor completely before any mechanical tests, checks and Routine testing can be done	ea	5	R	**R**
	Mechanical Tests and Checks after Assembly				
	Measure air gap between stator and rotor in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
33	**6,6kV, 235kW, Mill Motor**	**Stock No 0230908**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Routine tests and required tests when instructed				
	Perform El-cid test on stator.	ea	5	R	**R**
	Perform El-cid test on rotor.	ea	5	R	**R**
	Perform Rotor bar to bar test.	ea	5	R	**R**
	Carry out Tan-Delta test on the stator.	ea	5	R	**R**
	NDT on fan impellers or runners (Whole impeller).	ea	5	R	**R**
	NDT on the rotor shaft.	ea	5	R	**R**
	Copper material analysis test / check.	ea	5	R	**R**
	Test run the motor and verifies bearing temperatures, vibration, winding temperatures to be with OEM specification in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Apply load and load test the motor to site conditions.	ea	5	R	**R**
	Special charges				

	Emergency repair charge (20%)	ea	5	R	**R**
	Paint Motor				
	Treat and paint motor noting Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Delivery to Site				
	Deliver motor to Camden power station as per Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	5	R	**R**
34	**6,6kV, 335kW, PA Fan Motor**	**Stock No 0230909**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Motor Transport				
	Collect motor from Camden power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load.	ea	5	R	**R**
	Strip and Quote				
	Clean motor down externally and strip motor. Remove rotor.	ea	5	R	**R**
	Clean, remove all debris/fly ash/pf from the coolers, motor internal, ventilation paths, star point internal and cable terminal internal boxes. Note condition on assessment form.	ea	5	R	**R**
	Inspect motor internally (Stator core, windings and stator winding wedges and externally (Frame) noting all defects and then complete assessment report (HV assessment form).	ea	5	R	**R**
	Motor Terminal Boxes/Leads				
	Replacement of damaged terminal box and gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Replacements of damaged terminal box cover and seals/gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Inspect motor terminal bushings for cracks, signs of excessive damage and replace if necessary.	ea	5	R	**R**
	Inspect the motor leads insulation for cracks, frays, signs of brittleness, and swelling from oil contamination. Stipulate repair or replacement cost.	ea	5	R	**R**
	Inspect the stator to see if motor lead wire has been used to make circuit jumper connections. Report any discrepancies.	ea	5	R	**R**
	Inspect motor lead lugs for signs of overheating and perform a pull and turn check for loose crimp connections. Ensure that insulation of the terminal wire is in touch with the lug. Price if one lug has to be replaced.	ea	5	R	**R**

	Inspect motor terminal studs and bolts. Replace if necessary.	ea	5	R	**R**
35	**6,6kV, 335kW, PA Fan Motor**	**Stock No 0230909**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Motor Star point Boxes/Leads				
	Replacement of damaged star point terminal box and gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Replacement of damaged star point box cover and seals/gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Inspect star point bushings for cracks, signs of excessive damage and replace if necessary.	ea	5	R	**R**
	Record whether motor is equipped with internal or external star point.	ea	5	R	**R**
	Inspect star point leads insulation for cracks, frays, signs of brittleness, and swelling from oil contamination. Stipulate repair or replacement cost.	ea	5	R	**R**
	Inspect the stator to see if motor lead wire has been used to make circuit jumper connections. Report any discrepancies.	ea	5	R	**R**
	Inspect motor lead lugs for signs of overheating and perform a pull and turn check for loose crimp connections. Ensure that insulation of the terminal wire are in touch with the lug.	ea	5	R	**R**
	Inspect motor star point terminal studs, bolts and star bar. Replace if necessary.	ea	5	R	**R**
	Cooler				
	Strip and clean cooler. (Note wet, air forced or oil cooler)	ea	5	R	**R**
	Overhaul the cooler. Note the condition of cooler whether rust, fly-ash or any other debris present is.	ea	5	R	**R**
	Assemble cooler, ensure all intake and outlets are free from any foreign matter.	ea	5	R	**R**
	Pressures test the cooler to manufacturer's specifications and attach test certificate.	ea	5	R	**R**
	Replace cooler with new cooler. Attach test certificate	ea	5	R	**R**
	Replace cooler with refurbished cooler. Attach test certificate	ea	5	R	**R**
	Space Heaters				
	Inspect and test motor space heaters and wiring upto and including space heater terminal box. Wiring must be installed in such a way that wind generated inside the motor cannot disturb the wiring installation.	ea	5	R	**R**
	Defective heaters must be replaced and wire to space heater terminal box.	ea	5	R	**R**

	PT 100 Motor Winding Temperature Thermocouple				
	Test PT 100 motor winding temperature thermocouple to design specifications. Ensure thermocouple and wiring is mounted rigid and sound. The maximum load permitted for the resistance thermometers Pt 100 (100° at 0° C) is 10 mA. Only use a single button Wheatstone bridge for testing.	ea	5	R	**R**
	Defective PT 100 winding temperature thermocouples must be replaced and wire to winding temperature terminal box.	ea	5	R	**R**
36	**6,6kV, 335kW, PA Fan Motor**	**Stock No 0230909**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator Housing				
	Inspect stator housing, clean and dry stator housing. Ensure air paths are clean and not contaminated by foreign materials.	ea	5	R	**R**
	Inspect stator foot mounting and polish.	ea	5	R	**R**
	Repair stator footing if damaged, bend or broken.	ea	5	R	**R**
	Inspect and test the concentricity of the stator on the drive and non-drive end sides.	ea	5	R	**R**
	Correct the stator concentricity to within the allowable specification of the OEM.	ea	5	R	**R**
	If stator housing cracks are evident, record and repair. Ensure all cracks are noted and repair method specified.	ea	5	R	**R**
	Inspect and repair drive end and non-drive end landings of the end shield and repair if necessary.	ea	5	R	**R**
	Stator windings and Stator Core Laminations				
	Winding patch due to rubbing, insulation damage and foreign damage	ea	5	R	**R**
	Motor stator winding burnt, failed or completely damaged. Remove old winding, clean slots and rewind stator completely. Treat and paint stator with varnish.	ea	5	R	**R**
	Inspect stator core laminations for signs of arching, damage and lamination insulation failure. Submit repair method to employer for approval.	ea	5	R	**R**
	Treat and paint stator with vanish only. Old stator windings still serviceable.	ea	5	R	**R**
	Conduct IR and PI test on stator winding to OEM specifications and record. Submit report with motor.	ea	5	R	**R**
	Stator core flux test to determine hot sports on motor stator core laminations.	ea	5	R	**R**
	Carry out concentricity test on the stator	ea	5	R	**R**
	Correct the stator concentricity if out of Eskom minimum specification as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**

	Motor Rotor				
	Inspect rotor core for looseness, overheating, loose/cracked rotor and short circuit bars, missing clamping fingers and vent duct spacers, localized heating or blocked air ducts before cleaning. If cracked rotor laminations, core damage/migration are found, submit repair method and contact employer before cleaning.	ea	5	R	**R**
	Replace rotor bars and rotor short circuit ring as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Repair rotor bars and rotor short circuit ring as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
37	**6,6kV, 335kW, PA Fan Motor**	**Stock No 0230909**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Replace rotor cage as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Replace rotor shaft as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Clean rotor, remove all corrosion, treat and paint rotor with anti-rust paint.	ea	5	R	**R**
	Balance rotor at operating speed with fan and half key inserted. Balancing shall be in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish the journals (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish the journals (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish labyrinth seal landings (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish labyrinth seal landings (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish Fan landing (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish Fan landing (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Check shaft run out / concentricity in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Rectify or correct the rotor concentricity in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Micro weld rotor shaft/Journal (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Micro weld rotor shaft/Journal (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Inspect bearing hub-to-shaft fit. If it is too loose, it shall be corrected by restoring the shaft dimensions to OEM specifications or manufacture a new hub.	ea	5	R	**R**
	Inspect and rotor balance cooling fan.	ea	5	R	**R**
38	**6,6kV, 335kW, PA fan Motor**	**Stock No 0230909**			

Item	Description	Unit	QTY	Rates	Amount
	Drive-end and Non Drive-end Shields				
	Inspect end shield covers bolts. If corrosion is found, clean up and replace fixing bolts	ea	5	R	**R**
	Inspect DE and NDE shields for cracks or damage. Submit repair procedure to employer.	ea	5	R	**R**
	DE and NDE Bearing Housings				
	Replace DE ball and roller ball bearings in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Replace NDE ball and roller bearing in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Inspect DE bearing housing for concentricity and clean.	ea	5	R	**R**
	Inspect NDE bearing housing for concentricity and clean.	ea	5	R	**R**
	Assemble Motor				
	Assemble motor completely before any mechanical tests, checks and Routine testing can be done	ea	5	R	**R**
	Mechanical Tests and Checks after Assembly				
	Measure air gap between stator and rotor in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
39	**6,6kV, 335kW, PA Fan Motor**	**Stock No 0230909**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Routine tests and required tests when instructed				
	Perform El-cid test on stator.	ea	5	R	**R**
	Perform El-cid test on rotor.	ea	5	R	**R**
	Perform Rotor bar to bar test.	ea	5	R	**R**
	Carry out Tan-Delta test on the stator.	ea	5	R	**R**
	NDT on fan impellers or runners (Whole impeller).	ea	5	R	**R**

	NDT on the rotor shaft.	ea	5	R	**R**
	Copper material analysis test / check.	ea	5	R	**R**
	Test run the motor and verifies bearing temperatures, vibration, winding temperatures to be with OEM specification in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Apply load and load test the motor to site conditions.	ea	5	R	**R**
	Special charges				
	Emergency repair charge (20%)	ea	5	R	**R**
	Paint Motor				
	Treat and paint motor noting Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Delivery to Site				
	Deliver motor to Camden power station as per Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	5	R	**R**
40	**6,6kV, 440HP, Sluice Pump Motor**	**Stock No 0230904**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Motor Transport				
	Collect motor from Camden power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load.	ea	5	R	**R**
	Strip and Quote				
	Clean motor down externally and strip motor. Remove rotor.	ea	5	R	**R**
	Clean, remove all debris/fly ash/pf from the coolers, motor internal, ventilation paths, star point internal and cable terminal internal boxes. Note condition on assessment form.	ea	5	R	**R**
	Inspect motor internally (Stator core, windings and stator winding wedges and externally (Frame) noting all defects and then complete assessment report (HV assessment form).	ea	5	R	**R**
	Motor Terminal Boxes/Leads				
	Replacement of damaged terminal box and gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**

	Replacements of damaged terminal box cover and seals/gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Inspect motor terminal bushings for cracks, signs of excessive damage and replace if necessary.	ea	5	R	**R**
	Inspect the motor leads insulation for cracks, frays, signs of brittleness, and swelling from oil contamination. Stipulate repair or replacement cost.	ea	5	R	**R**
	Inspect the stator to see if motor lead wire has been used to make circuit jumper connections. Report any discrepancies.	ea	5	R	**R**
	Inspect motor lead lugs for signs of overheating and perform a pull and turn check for loose crimp connections. Ensure that insulation of the terminal wire is in touch with the lug. Price if one lug has to be replaced.	ea	5	R	**R**
	Inspect motor terminal studs and bolts. Replace if necessary.	ea	5	R	**R**
41	**6,6kV, 440HP, Sluice Pump Motor**	**Stock No 0230904**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	<u>Motor Star point Boxes/Leads</u>				
	Replacement of damaged star point terminal box and gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Replacement of damaged star point box cover and seals/gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Inspect star point bushings for cracks, signs of excessive damage and replace if necessary.	ea	5	R	**R**
	Record whether motor is equipped with internal or external star point.	ea	5	R	**R**
	Inspect star point leads insulation for cracks, frays, signs of brittleness, and swelling from oil contamination. Stipulate repair or replacement cost.	ea	5	R	**R**
	Inspect the stator to see if motor lead wire has been used to make circuit jumper connections. Report any discrepancies.	ea	5	R	**R**
	Inspect motor lead lugs for signs of overheating and perform a pull and turn check for loose crimp connections. Ensure that insulation of the terminal wire are in touch with the lug.	ea	5	R	**R**
	Inspect motor star point terminal studs, bolts and star bar. Replace if necessary.	ea	5	R	**R**
	<u>Cooler</u>				
	Strip and clean cooler. (Note wet, air forced or oil cooler)	ea	5	R	**R**
	Overhaul the cooler. Note the condition of cooler whether rust, fly-ash or any other debris present is.	ea	5	R	**R**
	Assemble cooler, ensure all intake and outlets are free from any foreign matter.	ea	5	R	**R**
	Pressures test the cooler to manufacturer's specifications and attach test certificate.	ea	5	R	**R**
	Replace cooler with new cooler. Attach test certificate	ea	5	R	**R**

	Replace cooler with refurbished cooler. Attach test certificate	ea	5	R	**R**
	Space Heaters				
	Inspect and test motor space heaters and wiring upto and including space heater terminal box. Wiring must be installed in such a way that wind generated inside the motor cannot disturb the wiring installation.	ea	5	R	**R**
	Defective heaters must be replaced and wire to space heater terminal box.	ea	5	R	**R**
	PT 100 Motor Winding Temperature Thermocouple				
	Test PT 100 motor winding temperature thermocouple to design specifications. Ensure thermocouple and wiring is mounted rigid and sound. The maximum load permitted for the resistance thermometers Pt 100 (100° at 0° C) is 10 mA. Only use a single button Wheatstone bridge for testing.	ea	5	R	**R**
	Defective PT 100 winding temperature thermocouples must be replaced and wire to winding temperature terminal box.	ea	5	R	**R**
42	**6,6kV, 440HP, Sluice Pump Motor**	**Stock No 0230904**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator Housing				
	Inspect stator housing, clean and dry stator housing. Ensure air paths are clean and not contaminated by foreign materials.	ea	5	R	**R**
	Inspect stator foot mounting and polish.	ea	5	R	**R**
	Repair stator footing if damaged, bend or broken.	ea	5	R	**R**
	Inspect and test the concentricity of the stator on the drive and non-drive end sides.	ea	5	R	**R**
	Correct the stator concentricity to within the allowable specification of the OEM.	ea	5	R	**R**
	If stator housing cracks are evident, record and repair. Ensure all cracks are noted and repair method specified.	ea	5	R	**R**
	Inspect and repair drive end and non-drive end landings of the end shield and repair if necessary.	ea	5	R	**R**
	Stator windings and Stator Core Laminations				
	Winding patch due to rubbing, insulation damage and foreign damage	ea	5	R	**R**
	Motor stator winding burnt, failed or completely damaged. Remove old winding, clean slots and rewind stator completely. Treat and paint stator with varnish.	ea	5	R	**R**
	Inspect stator core laminations for signs of arching, damage and lamination insulation failure. Submit repair method to employer for approval.	ea	5	R	**R**
	Treat and paint stator with vanish only. Old stator windings still serviceable.	ea	5	R	**R**

	Conduct IR and PI test on stator winding to OEM specifications and record. Submit report with motor.	ea	5	R	**R**
	Stator core flux test to determine hot sports on motor stator core laminations.	ea	5	R	**R**
	Carry out concentricity test on the stator	ea	5	R	**R**
	Correct the stator concentricity if out of Eskom minimum specification as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Motor Rotor				
	Inspect rotor core for looseness, overheating, loose/cracked rotor and short circuit bars, missing clamping fingers and vent duct spacers, localized heating or blocked air ducts before cleaning. If cracked rotor laminations, core damage/migration are found, submit repair method and contact employer before cleaning.	ea	5	R	**R**
	Replace rotor bars and rotor short circuit ring as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Repair rotor bars and rotor short circuit ring as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
43	**6,6kV, 440HP, Sluice Pump Motor**	**Stock No 0230904**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Replace rotor cage as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Replace rotor shaft as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Clean rotor, remove all corrosion, treat and paint rotor with anti-rust paint.	ea	5	R	**R**
	Balance rotor at operating speed with fan and half key inserted. Balancing shall be in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish the journals (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish the journals (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish labyrinth seal landings (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish labyrinth seal landings (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish Fan landing (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish Fan landing (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Check shaft run out / concentricity in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Rectify or correct the rotor concentricity in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Micro weld rotor shaft/Journal (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**

	Micro weld rotor shaft/Journal (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Inspect bearing hub-to-shaft fit. If it is too loose, it shall be corrected by restoring the shaft dimensions to OEM specifications or manufacture a new hub.	ea	5	R	**R**
	Inspect and rotor balance cooling fan.	ea	5	R	**R**
44	**6,6kV, 440HP, Sluice Pump Motor**	**Stock No 0230904**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Drive-end and Non Drive-end Shields				
	Inspect end shield covers bolts. If corrosion is found, clean up and replace fixing bolts	ea	5	R	**R**
	Inspect DE and NDE shields for cracks or damage. Submit repair procedure to employer.	ea	5	R	**R**
	DE and NDE Bearing Housings				
	Replace DE roller ball bearings rotor in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Replace NDE ball bearing rotor in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Inspect DE bearing housing for concentricity and clean.	ea	5	R	**R**
	Inspect NDE bearing housing for concentricity and clean.	ea	5	R	**R**
	Assemble Motor				
	Assemble motor completely before any mechanical tests, checks and Routine testing can be done	ea	5	R	**R**
	Mechanical Tests and Checks after Assembly				
	Measure air gap between stator and rotor in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Motor magnetic center shall be done in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
45	**6,6kV, 440HP, Sluice Pump Motor**	**Stock No 0230904**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**

	Routine tests and required tests when instructed				
	Perform El-cid test on stator.	ea	5	R	**R**
	Perform El-cid test on rotor.	ea	5	R	**R**
	Perform Rotor bar to bar test.	ea	5	R	**R**
	Carry out Tan-Delta test on the stator.	ea	5	R	**R**
	NDT on fan impellers or runners (Whole impeller).	ea	5	R	**R**
	NDT on the rotor shaft.	ea	5	R	**R**
	Copper material analysis test / check.	ea	5	R	**R**
	Test run the motor and verifies bearing temperatures, vibration, winding temperatures to be with OEM specification in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Apply load and load test the motor to site conditions.	ea	5	R	**R**
	Special charges				
	Emergency repair charge (20%)	ea	5	R	**R**
	Paint Motor				
	Treat and paint motor noting Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Delivery to Site				
	Deliver motor to Camden power station as per Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	5	R	**R**
46	**6,6kV, 500kW, Ash Pump Motor**	**Stock No 0226186**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Motor Transport				
	Collect motor from Camden power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load.	ea	8	R	**R**
	Strip and Quote				

	Clean motor down externally and strip motor. Remove rotor.	ea	8	R	**R**
	Clean, remove all debris/fly ash/pf from the coolers, motor internal, ventilation paths, star point internal and cable terminal internal boxes. Note condition on assessment form.	ea	8	R	**R**
	Inspect motor internally (Stator core, windings and stator winding wedges and externally (Frame) noting all defects and then complete assessment report (HV assessment form).	ea	8	R	**R**
	Motor Terminal Boxes/Leads				
	Replacement of damaged terminal box and gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	8	R	**R**
	Replacements of damaged terminal box cover and seals/gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	8	R	**R**
	Inspect motor terminal bushings for cracks, signs of excessive damage and replace if necessary.	ea	8	R	**R**
	Inspect the motor leads insulation for cracks, frays, signs of brittleness, and swelling from oil contamination. Stipulate repair or replacement cost.	ea	8	R	**R**
	Inspect the stator to see if motor lead wire has been used to make circuit jumper connections. Report any discrepancies.	ea	8	R	**R**
	Inspect motor lead lugs for signs of overheating and perform a pull and turn check for loose crimp connections. Ensure that insulation of the terminal wire is in touch with the lug. Price if one lug has to be replaced.	ea	8	R	**R**
	Inspect motor terminal studs and bolts. Replace if necessary.	ea	8	R	**R**
47	**6,6kV, 500kW, Ash Pump Motor**	**Stock No 0226186**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Motor Star point Boxes/Leads				
	Replacement of damaged star point terminal box and gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	8	R	**R**
	Replacement of damaged star point box cover and seals/gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	8	R	**R**
	Inspect star point bushings for cracks, signs of excessive damage and replace if necessary.	ea	8	R	**R**
	Record whether motor is equipped with internal or external star point.	ea	8	R	**R**
	Inspect star point leads insulation for cracks, frays, signs of brittleness, and swelling from oil contamination. Stipulate repair or replacement cost.	ea	8	R	**R**
	Inspect the stator to see if motor lead wire has been used to make circuit jumper connections. Report any discrepancies.	ea	8	R	**R**
	Inspect motor lead lugs for signs of overheating and perform a pull and turn check for loose crimp connections. Ensure that insulation of the terminal wire are in touch with the lug.	ea	8	R	**R**
	Inspect motor star point terminal studs, bolts and star bar. Replace if necessary.	ea	8	R	**R**

	Space Heaters				
	Inspect and test motor space heaters and wiring upto and including space heater terminal box. Wiring must be installed in such a way that wind generated inside the motor cannot disturb the wiring installation.	ea	8	R	**R**
	Defective heaters must be replaced and wire to space heater terminal box.	ea	8	R	**R**
	PT 100 Motor Winding Temperature Thermocouple				
	Test PT 100 motor winding temperature thermocouple to design specifications. Ensure thermocouple and wiring is mounted rigid and sound. The maximum load permitted for the resistance thermometers Pt 100 (100° at 0° C) is 10 mA. Only use a single button Wheatstone bridge for testing.	ea	8	R	**R**
	Defective PT 100 winding temperature thermocouples must be replaced and wire to winding temperature terminal box.	ea	8	R	**R**
48	**6,6kV, 500kW, Ash Pump Motor**	**Stock No 0226186**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator Housing				
	Inspect stator housing, clean and dry stator housing. Ensure air paths are clean and not contaminated by foreign materials.	ea	8	R	**R**
	Inspect stator foot mounting and polish.	ea	8	R	**R**
	Repair stator footing if damaged, bend or broken.	ea	8	R	**R**
	Inspect and test the concentricity of the stator on the drive and non-drive end sides.	ea	8	R	**R**
	Correct the stator concentricity to within the allowable specification of the OEM.	ea	8	R	**R**
	If stator housing cracks are evident, record and repair. Ensure all cracks are noted and repair method specified.	ea	8	R	**R**
	Inspect and repair drive end and non-drive end landings of the end shield and repair if necessary.	ea	8	R	**R**
	Stator windings and Stator Core Laminations				
	Winding patch due to rubbing, insulation damage and foreign damage	ea	8	R	**R**
	Motor stator winding burnt, failed or completely damaged. Remove old winding, clean slots and rewind stator completely. Treat and paint stator with varnish.	ea	8	R	**R**
	Inspect stator core laminations for signs of arching, damage and lamination insulation failure. Submit repair method to employer for approval.	ea	8	R	**R**
	Treat and paint stator with vanish only. Old stator windings still serviceable.	ea	8	R	**R**
	Conduct IR and PI test on stator winding to OEM specifications and record. Submit report with motor.	ea	8	R	**R**
	Stator core flux test to determine hot sports on motor stator core laminations.	ea	8	R	**R**

	Carry out concentricity test on the stator	ea	8	R	**R**
	Correct the stator concentricity if out of Eskom minimum specification as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	8	R	**R**
	Motor Rotor				
	Inspect rotor core for looseness, overheating, loose/cracked rotor and short circuit bars, missing clamping fingers and vent duct spacers, localized heating or blocked air ducts before cleaning. If cracked rotor laminations, core damage/migration are found, submit repair method and contact employer before cleaning.	ea	8	R	**R**
	Replace rotor bars and rotor short circuit ring as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	8	R	**R**
	Repair rotor bars and rotor short circuit ring as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	8	R	**R**
49	**6,6kV, 500kW, Ash Pump Motor**	**Stock No 0226186**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Replace rotor cage as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	8	R	**R**
	Replace rotor shaft as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	8	R	**R**
	Clean rotor, remove all corrosion, treat and paint rotor with anti-rust paint.	ea	8	R	**R**
	Balance rotor at operating speed with fan and half key inserted. Balancing shall be in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	8	R	**R**
	Polish the journals (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	8	R	**R**
	Polish the journals (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	8	R	**R**
	Polish labyrinth seal landings (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	8	R	**R**
	Polish labyrinth seal landings (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	8	R	**R**
	Polish Fan landing (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	8	R	**R**
	Polish Fan landing (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	8	R	**R**
	Check shaft run out / concentricity in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	8	R	**R**
	Rectify or correct the rotor concentricity in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	8	R	**R**
	Micro weld rotor shaft/Journal (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	8	R	**R**
	Micro weld rotor shaft/Journal (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	8	R	**R**

	Inspect bearing hub-to-shaft fit. If it is too loose, it shall be corrected by restoring the shaft dimensions to OEM specifications or manufacture a new hub.	ea	8	R	**R**
	Inspect and rotor balance cooling fan.	ea	8	R	**R**
50	**6,6kV, 500kW, Ash Pump Motor**	**Stock No 0226186**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Drive-end and Non Drive-end Shields				
	Inspect end shield covers bolts. If corrosion is found, clean up and replace fixing bolts	ea	8	R	**R**
	Inspect DE and NDE shields for cracks or damage. Submit repair procedure to employer.	ea	8	R	**R**
	DE and NDE Bearing Housings				
	Replace DE ball and roller bearings in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	8	R	**R**
	Replace NDE replace ball and roller bearings in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	8	R	**R**
	Inspect DE bearing housing for concentricity and clean.	ea	8	R	**R**
	Inspect NDE bearing housing for concentricity and clean.	ea	8	R	**R**
	Assemble Motor				
	Assemble motor completely before any mechanical tests, checks and Routine testing can be done	ea	8	R	**R**
	Mechanical Tests and Checks after Assembly				
	Measure air gap between stator and rotor in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	8	R	**R**
51	**6,6kV, 500kW, Ash Pump Motor**	**Stock No 0226186**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Routine tests and required tests when instructed				
	Perform El-cid test on stator.	ea	8	R	**R**
	Perform El-cid test on rotor.	ea	8	R	**R**

	Perform Rotor bar to bar test.	ea	8	R	**R**
	Carry out Tan-Delta test on the stator.	ea	8	R	**R**
	NDT on fan impellers or runners (Whole impeller).	ea	8	R	**R**
	NDT on the rotor shaft.	ea	8	R	**R**
	Copper material analysis test / check.	ea	8	R	**R**
	Test run the motor and verifies bearing temperatures, vibration, winding temperatures to be with OEM specification in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	8	R	**R**
	Apply load and load test the motor to site conditions.	ea	8	R	**R**
	Special charges				
	Emergency repair charge (20%)	ea	4	R	**R**
	Paint Motor				
	Treat and paint motor noting Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	8	R	**R**
	Delivery to Site				
	Deliver motor to Camden power station as per Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	8	R	**R**
	Delivery to Site				
	Deliver motor to Camden power station as per Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	8	R	**R**
52	**6,6kV, 385HP, CW Booster Pump Motor**	**Stock No 0230906**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Motor Transport				
	Collect motor from Camden power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load.	ea	1	R	**R**
	Strip and Quote				
	Clean motor down externally and strip motor. Remove rotor.	ea	1	R	**R**

	Clean, remove all debris/fly ash/pf from the coolers, motor internal, ventilation paths, star point internal and cable terminal internal boxes. Note condition on assessment form.	ea	1	R	**R**
	Inspect motor internally (Stator core, windings and stator winding wedges and externally (Frame) noting all defects and then complete assessment report (HV assessment form).	ea	1	R	**R**
	Motor Terminal Boxes/Leads				
	Replacement of damaged terminal box and gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	1	R	**R**
	Replacements of damaged terminal box cover and seals/gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	1	R	**R**
	Inspect motor terminal bushings for cracks, signs of excessive damage and replace if necessary.	ea	1	R	**R**
	Inspect the motor leads insulation for cracks, frays, signs of brittleness, and swelling from oil contamination. Stipulate repair or replacement cost.	ea	1	R	**R**
	Inspect the stator to see if motor lead wire has been used to make circuit jumper connections. Report any discrepancies.				
	Inspect motor lead lugs for signs of overheating and perform a pull and turn check for loose crimp connections. Ensure that insulation of the terminal wire is in touch with the lug. Price if one lug has to be replaced.	ea	1	R	**R**
	Inspect motor terminal studs and bolts. Replace if necessary.	ea	1	R	**R**
53	**6,6kV, 385HP, CW Booster Pump Motor**	**Stock No 0230906**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Motor Star point Boxes/Leads				
	Replacement of damaged star point terminal box and gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	1	R	**R**
	Replacement of damaged star point box cover and seals/gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	1	R	**R**
	Inspect star point bushings for cracks, signs of excessive damage and replace if necessary.	ea	1	R	**R**
	Record whether motor is equipped with internal or external star point.	ea	1	R	**R**
	Inspect star point leads insulation for cracks, frays, signs of brittleness, and swelling from oil contamination. Stipulate repair or replacement cost.	ea	1	R	**R**
	Inspect the stator to see if motor lead wire has been used to make circuit jumper connections. Report any discrepancies.	ea	1	R	**R**
	Inspect motor lead lugs for signs of overheating and perform a pull and turn check for loose crimp connections. Ensure that insulation of the terminal wire are in touch with the lug.	ea	1	R	**R**
	Inspect motor star point terminal studs, bolts and star bar. Replace if necessary.	ea	1	R	**R**
	Cooler				

	Strip and clean cooler. (Note wet, air forced or oil cooler)	ea	1	R	**R**
	Overhaul the cooler. Note the condition of cooler whether rust, fly-ash or any other debris present is.	ea	1	R	**R**
	Assemble cooler, ensure all intake and outlets are free from any foreign matter.	ea	1	R	**R**
	Pressures test the cooler to manufacturer's specifications and attach test certificate.	ea	1	R	**R**
	Replace cooler with new cooler. Attach test certificate	ea	1	R	**R**
	Replace cooler with refurbished cooler. Attach test certificate	ea	1	R	**R**
	Space Heaters				
	Inspect and test motor space heaters and wiring upto and including space heater terminal box. Wiring must be installed in such a way that wind generated inside the motor cannot disturb the wiring installation.	ea	1	R	**R**
	Defective heaters must be replaced and wire to space heater terminal box.	ea	1	R	**R**
	PT 100 Motor Winding Temperature Thermocouple				
	Test PT 100 motor winding temperature thermocouple to design specifications. Ensure thermocouple and wiring is mounted rigid and sound. The maximum load permitted for the resistance thermometers Pt 100 (100° at 0° C) is 10 mA. Only use a single button Wheatstone bridge for testing.	ea	1	R	**R**
	Defective PT 100 winding temperature thermocouples must be replaced and wire to winding temperature terminal box.	ea	1	R	**R**
54	**6,6kV, 385HP, CW Booster Pump Motor**	**Stock No 0230906**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator Housing				
	Inspect stator housing, clean and dry stator housing. Ensure air paths are clean and not contaminated by foreign materials.	ea	1	R	**R**
	Inspect stator foot mounting and polish.	ea	1	R	**R**
	Repair stator footing if damaged, bend or broken.	ea	1	R	**R**
	Inspect and test the concentricity of the stator on the drive and non-drive end sides.	ea	1	R	**R**
	Correct the stator concentricity to within the allowable specification of the OEM.	ea	1	R	**R**
	If stator housing cracks are evident, record and repair. Ensure all cracks are noted and repair method specified.	ea	1	R	**R**
	Inspect and repair drive end and non-drive end landings of the end shield and repair if necessary.	ea	1	R	**R**

	Stator windings and Stator Core Laminations				
	Winding patch due to rubbing, insulation damage and foreign damage	ea	1	R	**R**
	Motor stator winding burnt, failed or completely damaged. Remove old winding, clean slots and rewind stator completely. Treat and paint stator with varnish.	ea	1	R	**R**
	Inspect stator core laminations for signs of arching, damage and lamination insulation failure. Submit repair method to employer for approval.	ea	1	R	**R**
	Treat and paint stator with vanish only. Old stator windings still serviceable.	ea	1	R	**R**
	Conduct IR and PI test on stator winding to OEM specifications and record. Submit report with motor.	ea	1	R	**R**
	Stator core flux test to determine hot sports on motor stator core laminations.	ea	1	R	**R**
	Carry out concentricity test on the stator	ea	1	R	**R**
	Correct the stator concentricity if out of Eskom minimum specification as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	1	R	**R**
	Motor Rotor				
	Inspect rotor core for looseness, overheating, loose/cracked rotor and short circuit bars, missing clamping fingers and vent duct spacers, localized heating or blocked air ducts before cleaning. If cracked rotor laminations, core damage/migration are found, submit repair method and contact employer before cleaning.	ea	1	R	**R**
	Replace rotor bars and rotor short circuit ring as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	1	R	**R**
	Repair rotor bars and rotor short circuit ring as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	1	R	**R**
55	**6,6kV, 385HP, CW Booster Pump Motor**	**Stock No 0230906**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Replace rotor cage as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	1	R	**R**
	Replace rotor shaft as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	1	R	**R**
	Clean rotor, remove all corrosion, treat and paint rotor with anti-rust paint.	ea	1	R	**R**
	Balance rotor at operating speed with fan and half key inserted. Balancing shall be in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	1	R	**R**
	Polish the journals (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	1	R	**R**
	Polish the journals (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	1	R	**R**
	Polish labyrinth seal landings (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	1	R	**R**
	Polish labyrinth seal landings (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	1	R	**R**

	Polish Fan landing (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	1	R	**R**
	Polish Fan landing (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	1	R	**R**
	Check shaft run out / concentricity in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	1	R	**R**
	Rectify or correct the rotor concentricity in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	1	R	**R**
	Micro weld rotor shaft/Journal (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	1	R	**R**
	Micro weld rotor shaft/Journal (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	1	R	**R**
	Inspect bearing hub-to-shaft fit. If it is too loose, it shall be corrected by restoring the shaft dimensions to OEM specifications or manufacture a new hub.	ea	1	R	**R**
	Inspect and rotor balance cooling fan.	ea	1	R	**R**
56	**6,6kV, 385HP, CW Booster pump Motor**	**Stock No 0230906**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Drive-end and Non Drive-end Shields				
	Inspect end shield covers bolts. If corrosion is found, clean up and replace fixing bolts	ea	1	R	**R**
	Inspect DE and NDE shields for cracks or damage. Submit repair procedure to employer.	ea	1	R	**R**
	DE and NDE Bearings & Bearing Housings				
	Re-metal white metal DE bearing according to shaft size and fit in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors. Bearing shall be ultrasonic tested.	ea	1	R	**R**
	Clean and polish DE bearing with Scotch-brite ® cloth.	ea	1	R	**R**
	Re-metal white metal NDE bearing according to shaft size and fit in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors. Bearing shall be ultrasonic tested.	ea	1	R	**R**
	Clean and polish NDE bearing with Scotch-brite ® cloth.	ea	1	R	**R**
	Inspect DE bearing housing for concentricity and clean.	ea	1	R	**R**
	Inspect NDE bearing housing for concentricity and clean.	ea	1	R	**R**
	Overhaul DE seal, oil ring, oil scoop in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	1	R	**R**
	Replace DE seal, oil ring, oil scoop.	ea	1	R	**R**
	Overhaul NDE seal, oil ring, oil scoop in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	1	R	**R**

	Replace NDE seal, oil ring, oil scoop.	ea	1	R	**R**
	Replace site glass and clean the ports, DE	ea	1	R	**R**
	Replace site glass and clean the ports, NDE	ea	1	R	**R**
	Carry out bearing insulation test point inspect	ea	1	R	**R**
	Carry out bearing insulation test point repair	ea	1	R	**R**
	Assemble Motor				
	Assemble motor completely before any mechanical tests, checks and Routine testing can be done.	ea	1	R	**R**
	Mechanical Tests and Checks after Assembly				
	Measure air gap between stator and rotor in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	1	R	**R**
	Motor magnetic center shall be done in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	1	R	**R**
57	**6,6kV, 385HP, CW Booster pump Motor**	**Stock No 0230906**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Routine tests and required tests when instructed				
	Perform El-cid test on stator.	ea	1	R	**R**
	Perform El-cid test on rotor.	ea	1	R	**R**
	Perform Rotor bar to bar test.	ea	1	R	**R**
	Carry out Tan-Delta test on the stator.	ea	1	R	**R**
	Ultrasonic testing on white metal bearing surface.	ea	1	R	**R**
	NDT on fan impellers or runners (Whole impeller).	ea	1	R	**R**
	NDT on the rotor shaft.	ea	1	R	**R**
	Copper material analysis test / check.	ea	1	R	**R**
	Test run the motor and verifies bearing temperatures, vibration, winding temperatures to be with OEM specification in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	1	R	**R**

	Apply load and load test the motor to site conditions.	ea	1	R	**R**
	Special charges				
	Emergency repair charge (20%)	ea	1	R	**R**
	Paint Motor				
	Treat and paint motor noting Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	1	R	**R**
	Delivery to Site				
	Deliver motor to Camden power station as per Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	1	R	**R**
58	**6,6kV, 185kW, Incline Conveyor Motor**	**Stock No 0644365**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Motor Transport				
	Collect motor from Camden power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load.	ea	5	R	**R**
	Strip and Quote				
	Clean motor down externally and strip motor. Remove rotor.	ea	5	R	**R**
	Clean, remove all debris/fly ash/pf from the coolers, motor internal, ventilation paths, star point internal and cable terminal internal boxes. Note condition on assessment form.	ea	5	R	**R**
	Inspect motor internally (Stator core, windings and stator winding wedges and externally (Frame) noting all defects and then complete assessment report (HV assessment form).	ea	5	R	**R**
	Motor Terminal Boxes/Leads				
	Replacement of damaged terminal box and gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Replacements of damaged terminal box cover and seals/gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Inspect motor terminal bushings for cracks, signs of excessive damage and replace if necessary.	ea	5	R	**R**
	Inspect the motor leads insulation for cracks, frays, signs of brittleness, and swelling from oil contamination. Stipulate repair or replacement cost.	ea	5	R	**R**

	Inspect the stator to see if motor lead wire has been used to make circuit jumper connections. Report any discrepancies.	ea	5	R	**R**
	Inspect motor lead lugs for signs of overheating and perform a pull and turn check for loose crimp connections. Ensure that insulation of the terminal wire is in touch with the lug. Price if one lug has to be replaced.	ea	5	R	**R**
	Inspect motor terminal studs and bolts. Replace if necessary.	ea	5	R	**R**
59	**6,6kV, 185kW, Incline Conveyor Motor**	**Stock No 0644365**			
	Description	**Unit**	**QTY**	**Rates**	**Amount**
	Motor Star point Boxes/Leads				
	Replacement of damaged star point terminal box and gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Replacement of damaged star point box cover and seals/gaskets. The type of gasket or seal to be used shall be cork packing or rubber.	ea	5	R	**R**
	Inspect star point bushings for cracks, signs of excessive damage and replace if necessary.	ea	5	R	**R**
	Record whether motor is equipped with internal or external star point.	ea	5	R	**R**
	Inspect star point leads insulation for cracks, frays, signs of brittleness, and swelling from oil contamination. Stipulate repair or replacement cost.	ea	5	R	**R**
	Inspect the stator to see if motor lead wire has been used to make circuit jumper connections. Report any discrepancies.	ea	5	R	**R**
	Inspect motor lead lugs for signs of overheating and perform a pull and turn check for loose crimp connections. Ensure that insulation of the terminal wire are in touch with the lug.	ea	5	R	**R**
	Inspect motor star point terminal studs, bolts and star bar. Replace if necessary.	ea	5	R	**R**
	Space Heaters				
	Inspect and test motor space heaters and wiring upto and including space heater terminal box. Wiring must be installed in such a way that wind generated inside the motor cannot disturb the wiring installation.	ea	5	R	**R**
	Defective heaters must be replaced and wire to space heater terminal box.	ea	5	R	**R**
	PT 100 Motor Winding Temperature Thermocouple				
	Test PT 100 motor winding temperature thermocouple to design specifications. Ensure thermocouple and wiring is mounted rigid and sound. The maximum load permitted for the resistance thermometers Pt 100 (100° at 0° C) is 10 mA. Only use a single button Wheatstone bridge for testing.	ea	5	R	**R**
	Defective PT 100 winding temperature thermocouples must be replaced and wire to winding temperature terminal box.	ea	5	R	**R**
60	**6,6kV, 185kW, Incline Conveyor Motor**	**Stock No 0644365**			

Item	Description	Unit	QTY	Rates	Amount
	Stator Housing				
	Inspect stator housing, clean and dry stator housing. Ensure air paths are clean and not contaminated by foreign materials.	ea	5	R	**R**
	Inspect stator foot mounting and polish.	ea	5	R	**R**
	Repair stator footing if damaged, bend or broken.	ea	5	R	**R**
	Inspect and test the concentricity of the stator on the drive and non-drive end sides.	ea	5	R	**R**
	Correct the stator concentricity to within the allowable specification of the OEM.	ea	5	R	**R**
	If stator housing cracks are evident, record and repair. Ensure all cracks are noted and repair method specified.	ea	5	R	**R**
	Inspect and repair drive end and non-drive end landings of the end shield and repair if necessary.	ea	5	R	**R**
	Stator windings and Stator Core Laminations				
	Winding patch due to rubbing, insulation damage and foreign damage	ea	5	R	**R**
	Motor stator winding burnt, failed or completely damaged. Remove old winding, clean slots and rewind stator completely. Treat and paint stator with varnish.	ea	5	R	**R**
	Inspect stator core laminations for signs of arching, damage and lamination insulation failure. Submit repair method to employer for approval.	ea	5	R	**R**
	Treat and paint stator with vanish only. Old stator windings still serviceable.	ea	5	R	**R**
	Conduct IR and PI test on stator winding to OEM specifications and record. Submit report with motor.	ea	5	R	**R**
	Stator core flux test to determine hot sports on motor stator core laminations.	ea	5	R	**R**
	Carry out concentricity test on the stator	ea	5	R	**R**
	Correct the stator concentricity if out of Eskom minimum specification as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Motor Rotor				
	Inspect rotor core for looseness, overheating, loose/cracked rotor and short circuit bars, missing clamping fingers and vent duct spacers, localized heating or blocked air ducts before cleaning. If cracked rotor laminations, core damage/migration are found, submit repair method and contact employer before cleaning.	ea	5	R	**R**
	Replace rotor bars and rotor short circuit ring as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Repair rotor bars and rotor short circuit ring as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**

61	6,6kV, 185kW, Incline Conveyor Motor	Stock No 0644365			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Replace rotor cage as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Replace rotor shaft as per Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Clean rotor, remove all corrosion, treat and paint rotor with anti-rust paint.	ea	5	R	**R**
	Balance rotor at operating speed with fan and half key inserted. Balancing shall be in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish the journals (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish the journals (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish labyrinth seal landings (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish labyrinth seal landings (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish Fan landing (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Polish Fan landing (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Check shaft run out / concentricity in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Rectify or correct the rotor concentricity in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Micro weld rotor shaft/Journal (DE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Micro weld rotor shaft/Journal (NDE) in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Inspect bearing hub-to-shaft fit. If it is too loose, it shall be corrected by restoring the shaft dimensions to OEM specifications or manufacture a new hub.	ea	5	R	**R**
	Inspect and rotor balance cooling fan.	ea	5	R	**R**

62	6,6kV, 185kW, Incline Conveyor Motor	Stock No 0644365			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Drive-end and Non Drive-end Shields				
	Inspect end shield covers bolts. If corrosion is found, clean up and replace fixing bolts	ea	5	R	**R**
	Inspect DE and NDE shields for cracks or damage. Submit repair procedure to employer.	ea	5	R	**R**

	DE and NDE Bearing Housings				
	Replace DE ball and roller bearings in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Replace NDE replace ball and roller bearings in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Inspect DE bearing housing for concentricity and clean.	ea	5	R	**R**
	Inspect NDE bearing housing for concentricity and clean.	ea	5	R	**R**
	Assemble Motor				
	Assemble motor completely before any mechanical tests, checks and Routine testing can be done	ea	5	R	**R**
	Mechanical Tests and Checks after Assembly				
	Measure air gap between stator and rotor in accordance with Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
63	**6,6kV, 185kW, Incline Conveyor Motor**	**Stock No 0644365**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Routine tests and required tests when instructed				
	Perform El-cid test on stator.	ea	5	R	**R**
	Perform El-cid test on rotor.	ea	5	R	**R**
	Perform Rotor bar to bar test.	ea	5	R	**R**
	Carry out Tan-Delta test on the stator.	ea	5	R	**R**
	NDT on fan impellers or runners (Whole impeller).	ea	5	R	**R**
	NDT on the rotor shaft.	ea	5	R	**R**
	Copper material analysis test / check.	ea	5	R	**R**
	Test run the motor and verifies bearing temperatures, vibration, winding temperatures to be with OEM specification in terms of Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Apply load and load test the motor to site conditions.	ea	5	R	**R**
	Special charges				

	Emergency repair charge. (20%)	ea	5	R	**R**
	Paint Motor				
	Treat and paint motor noting Document 240-56358854, Refurbishment and Repair of Power Station Electrical Motors.	ea	5	R	**R**
	Delivery to Site				
	Deliver motor to Camden power station as per Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	5	R	**R**
	Re-certify Motor to Ex Compliant for zone 21	ea	5	R	**R**
	Replace with new Ex Compliant motor for zone 21	ea	5	R	**R**
	1. The LV motor price list: LV Motors, 3 Phase, 2 Pole				
64	**LV Motors, 0.55kW, 380V AC 3PH 2P**	**Stock No: 579876**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	5	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	5	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	5	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	5	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.,	ea	5	R	**R**
	Replace cooling fan cover due to damage.	ea	5	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Rotor				

	Replace rotor shaft if damaged.	ea	5	R	**R**
	Replace motor rotor if damaged.	ea	5	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	5	R	**R**
	Replace motor bearings DE and NDE.	ea	5	R	**R**
65	**LV Motors, 0.55kW, 380V AC 3PH 2P**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	5	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	5	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	5	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	5	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	5	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	5	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	5	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	**5**	R	**R**
	Replace Motor				
	Replace with normal motor of the correct size as per the motor data plate.	ea	**5**	R	**R**
	Replace with new Ex rated Motor and issue certificate.	ea	5	R	**R**
66	**LV Motors, 0.75kW, 380V AC 3PH**	**Stock No:**			

Item	Description	Unit	QTY	Rates	Amount
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	5	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	5	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	5	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	5	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.	ea	5	R	**R**
	Replace cooling fan cover due to damage.	ea	5	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	5	R	**R**
	Replace motor rotor if damaged.	ea	5	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	5	R	**R**
	Replace motor bearings DE and NDE.	ea	5	R	**R**
67	**LV Motors, 0.75kW, 380V AC 3PH**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	5	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	5	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	5	R	**R**

	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	5	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	5	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	5	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	5	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	5	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate. Any variance must be communicated for approval via Employer system engineer.	ea	**5**	R	**R**
	NB: No Ex rated motor for 0.75KW	**ea**	**3**	R	**R**
68	**LV Motors, 1.1kW, 380V AC 3PH**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	5	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	5	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	5	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	5	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.	ea	5	R	**R**
	Replace cooling fan cover due to damage.	ea	5	R	**R**
	DE and NDE Shields				

	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	5	R	**R**
	Replace motor rotor if damaged.	ea	5	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	5	R	**R**
	Replace motor bearings DE and NDE.	ea	5	R	**R**
69	**LV Motors, 1.1kW, 380V AC 3PH**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	5	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	5	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	5	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	5	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	5	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	5	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	5	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	**5**	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate.	ea	**5**	R	**R**

70	**LV Motors, 1.5kW, 380V AC 3PH 2P**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	5	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	5	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	5	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	5	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.	ea	5	R	**R**
	Replace cooling fan cover due to damage.	ea	5	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	5	R	**R**
	Replace motor rotor if damaged.	ea	5	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	5	R	**R**
	Replace motor bearings DE and NDE.	ea	5	R	**R**
71	**LV Motors, 1.5kW, 380V AC 3PH**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	5	R	**R**

	Treat and paint stator with vanish and oven bake to dry varnish.	ea	5	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	5	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	5	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	5	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	5	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	5	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	5	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate.	ea	5	R	**R**
72	**LV Motors, 4kW, 380V AC 3PH 2P**	**Stock No: 224519 & 0566964**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	5	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	5	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	5	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	5	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.,	ea	5	R	**R**
	Replace cooling fan cover due to damage.	ea	5	R	**R**

	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	5	R	**R**
	Replace motor rotor if damaged.	ea	5	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	5	R	**R**
	Replace motor bearings DE and NDE.	ea	5	R	**R**
73	**LV Motors, 4kW, 380V AC 3PH**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	5	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	5	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	5	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	5	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	5	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	5	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	5	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	5	R	**R**
	Replace Motor				

	Replace motor with the correct size as per the motor data plate.	ea	5	R	**R**
	Provide new Ex rated motor and issue certificate	**ea**	**5**	R	**R**
74	**LV Motors, 5.5kW, 380V AC 3PH 2P**	**Stock No: 0576146**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	5	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	5	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	5	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	5	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.,	ea	5	R	**R**
	Replace cooling fan cover due to damage.	ea	5	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	5	R	**R**
	Replace motor rotor if damaged.	ea	5	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	5	R	**R**
	Replace motor bearings DE and NDE.	ea	5	R	**R**
75	**LV Motors, 5.5kW, 380V AC 3PH**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**

	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	5	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	5	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	5	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	5	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	5	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	5	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	5	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	5	R	**R**
	Replace Motor				
	Replace motor with normal correct size as per the motor data plate.	ea	**5**	R	**R**
	Provide Ex rated motor and issue certificate	**ea**	**5**	R	**R**
76	**LV Motors, 18.5kW, 380V AC 3PH - KW:18.5; A:37; SPEED:2984r/min;INSUL: CLASS F BEARING:6903 C3;IP55;380V**	**Stock No: 225899 & 227958**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	5	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	5	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	5	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	5	R	**R**

	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.,	ea	5	R	**R**
	Replace cooling fan cover due to damage.	ea	5	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	5	R	**R**
	Replace motor rotor if damaged.	ea	5	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	5	R	**R**
	Replace motor bearings DE and NDE.	ea	5	R	**R**
77	**LV Motors, 18.5kW, 380V AC 3PH**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	5	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	5	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	5	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	5	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	5	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	5	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	5	R	**R**

	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	5	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate. Any variance must be communicated for approval via Employer system engineer.	ea	**5**	R	**R**
	Provide new Ex rated Motor and issue certificate	ea	5	R	**R**
78	**LV Motors, 22kW, 380V AC 3PH 2P**	**Stock No: 139730**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	5	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	5	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	5	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	5	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.,	ea	5	R	**R**
	Replace cooling fan cover due to damage.	ea	5	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	5	R	**R**
	Replace motor rotor if damaged.	ea	5	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	5	R	**R**
	Replace motor bearings DE and NDE.	ea	5	R	**R**

79	**LV Motors, 22kW, 380V AC 3PH**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	5	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	5	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	5	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	5	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	5	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	5	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	5	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	5	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate.	ea	5	R	**R**
80	**LV Motors, 30kW, 380V AC 3PH 2P**	**Stock No: 227518**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	25	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	25	R	**R**
	Terminal Box				

	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	25	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	25	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.,	ea	25	R	**R**
	Replace cooling fan cover due to damage.	ea	25	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	25	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	25	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	25	R	**R**
	Replace motor rotor if damaged.	ea	25	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	25	R	**R**
	Replace motor bearings DE and NDE.	ea	25	R	**R**
81	**LV Motors, 30kW, 380V AC 3PH**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	25	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	25	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	25	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	25	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	25	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	25	R	**R**

	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	25	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	**25**	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate.	ea	**25**	R	**R**
	Replace with New Ex Motor and issue certificate	**ea**	**25**	R	**R**
82	**LV Motors, 37kW, 380V AC 3PH 2P - WTP DMN PMP MTRs: 79A, 2915RPM, Frame: 180L, IP 55, Delta**	**None Stock: 222821**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	5	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	5	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	5	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	5	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.,	ea	5	R	**R**
	Replace cooling fan cover due to damage.	ea	5	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	5	R	**R**
	Replace motor rotor if damaged.	ea	5	R	**R**

	Replace Mechanical O' rings DE & NDE.	ea	5	R	**R**
	Replace motor bearings DE and NDE.	ea	5	R	**R**
83	**LV Motors, 37kW, 380V AC 3PH**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	5	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	5	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	5	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	5	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	5	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	5	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	5	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	**5**	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate. .	ea	**5**	R	**R**
84	**LV Motors, 55kW, 380V AC 3PH - KW:55; A:95.1; SPEED:2970r/min;INSUL:F;IM:B3.**	**Stock No: 236416 & 238185**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	10	R	**R**

	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	10	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	10	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	10	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.,	ea	10	R	**R**
	Replace cooling fan cover due to damage.	ea	10	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	10	R	**R**
	Replace motor rotor if damaged.	ea	10	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	10	R	**R**
	Replace motor bearings DE and NDE.	ea	10	R	**R**
85	**LV Motors, 55kW, 380V AC 3PH**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	10	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	10	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	10	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	10	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	10	R	**R**

	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	10	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	10	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	10	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate.	ea	10	R	**R**
	Replace with new Ex motor and issue the certificate	**ea**	**10**	R	**R**
	2. The LV motor price list: LV Motors, 3 Phase, 4 Pole				
86	**LV Motors, 0.37kW, 380V AC 3PH 4P**	**Stock No: 0623100**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	5	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	5	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	5	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	5	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.	ea	5	R	**R**
	Replace cooling fan cover due to damage.	ea	5	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**

	Rotor				
	Replace rotor shaft if damaged.	ea	5	R	**R**
	Replace motor rotor if damaged.	ea	5	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	5	R	**R**
	Replace motor bearings DE and NDE.	ea	5	R	**R**
87	**LV Motors, 0.37kW, 380V AC 3PH**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	5	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	5	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	5	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	5	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	5	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	5	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	5	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	5	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate. Any variance must be communicated for approval via Employer system engineer.	ea	5	R	**R**
	Provide New Ex rated motor and issue certificate	ea	5	R	**R**
88	**LV Motors, 0.55kW, 380V AC 3PH 4P**		**Stokc No: 249263**		

Item	Description	Unit	QTY	Rates	Amount
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	10	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	10	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	10	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	10	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.	ea	10	R	**R**
	Replace cooling fan cover due to damage.	ea	10	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	10	R	**R**
	Replace motor rotor if damaged.	ea	10	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	10	R	**R**
	Replace motor bearings DE and NDE.	ea	10	R	**R**
89	**LV Motors, 0.55kW, 380V AC 3PH**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	10	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	10	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	10	R	**R**

	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	10	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	10	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	10	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	10	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	**10**	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate. Any variance must be communicated for approval via Employer system engineer.	ea	**5**	R	**R**
90	**LV Motors, 1.1kW, 380V AC 3PH 4P**	**Stock No: 234083**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	10	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	10	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	10	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	10	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.	ea	10	R	**R**
	Replace cooling fan cover due to damage.	ea	10	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**

	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	10	R	**R**
	Replace motor rotor if damaged.	ea	10	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	10	R	**R**
	Replace motor bearings DE and NDE.	ea	10	R	**R**
91	**LV Motors, 1.1kW, 380V AC 3PH**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	10	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	10	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	10	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	10	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	10	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	10	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	10	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	10	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate. Any variance must be communicated for approval via Employer system engineer.	ea	10	R	**R**

92	LV Motors, 1.5kW, 380V AC 3PH 4P	Stock No: 218422, 554179, 222818 & 227954			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	15	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	15	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	15	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	15	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.	ea	15	R	**R**
	Replace cooling fan cover due to damage.	ea	15	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	15	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	15	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	15	R	**R**
	Replace motor rotor if damaged.	ea	15	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	15	R	**R**
	Replace motor bearings DE and NDE.	ea	15	R	**R**
93	**LV Motors, 1.5kW, 380V AC 3PH**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	15	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	15	R	**R**

	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	15	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	15	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	15	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	15	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	15	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	15	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate. Any variance must be communicated for approval via Employer system engineer.	ea	15	R	**R**
94	**LV Motors, 3 kW, 380V AC 3PH 4P (New item added)**	**Stock No: 227957, 249156 & 600417**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	10	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	10	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	10	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	10	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.,	ea	10	R	**R**
	Replace cooling fan cover due to damage.	ea	10	R	**R**
	DE and NDE Shields				

	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	10	R	**R**
	Replace motor rotor if damaged.	ea	10	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	10	R	**R**
	Replace motor bearings DE and NDE.	ea	10	R	**R**
95	**LV Motors, 3 kW, 380V AC 3PH 4P**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	10	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	10	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	10	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	10	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	10	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	10	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	10	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	**10**	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate. Any variance must be communicated for approval via Employer system engineer.	ea	**10**	R	**R**

96	**LV Motors, 4 kW, 380V AC 3PH 4P (New item added)**	**Stock No: 238188 & 603304**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	10	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	10	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	10	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	10	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.,	ea	10	R	**R**
	Replace cooling fan cover due to damage.	ea	10	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	10	R	**R**
	Replace motor rotor if damaged.	ea	10	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	10	R	**R**
	Replace motor bearings DE and NDE.	ea	10	R	**R**
97	**LV Motors, 4 kW, 380V AC 3PH 4P**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	10	R	**R**

	Treat and paint stator with vanish and oven bake to dry varnish.	ea	10	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	10	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	10	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	10	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	10	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	10	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	10	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate.	ea	10	R	**R**
	Replace with new Ex Rated motor and issue certificate	ea	10	R	**R**
98	**LV Motors, 5.5 kW, 380V AC 3PH 4P**	**Stock No: 246934 & 576169**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	10	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	10	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	10	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	10	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.,	ea	10	R	**R**

	Replace cooling fan cover due to damage.	ea	10	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	10	R	**R**
	Replace motor rotor if damaged.	ea	10	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	10	R	**R**
	Replace motor bearings DE and NDE.	ea	10	R	**R**
99	**LV Motors, 5.5 kW, 380V AC 3PH 4P**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	10	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	10	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	10	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	10	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	10	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	10	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	10	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	10	R	**R**

	Replace Motor				
	Replace motor with the correct size as per the motor data plate. Any variance must be communicated for approval via Employer system engineer.	ea	10	R	**R**
	Replace with new EX rated motor and issue certificate	ea	10	R	**R**
100	**LV Motors, 7.5 kW, 380V AC 3PH 4P**	**Stock No: 608161 & 246902**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	10	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	10	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	10	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	10	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.,	ea	10	R	**R**
	Replace cooling fan cover due to damage.	ea	10	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	10	R	**R**
	Replace motor rotor if damaged.	ea	10	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	10	R	**R**
	Replace motor bearings DE and NDE.	ea	10	R	**R**
101	**LV Motors, 7.5 kW, 380V AC 3PH 4P**				

Item	Description	Unit	QTY	Rates	Amount
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	10	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	10	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	10	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	10	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	10	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	10	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	10	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	10	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate. Any variance must be communicated for approval via Employer system engineer.	ea	10	R	**R**
	Replace with new Ex Rated motor and issue certificate	ea	10	R	**R**
102	**LV Motors, 11 kW, 380V AC 3PH 4P**	**Stock No: 563872**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	15	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	15	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	15	R	**R**

	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	15	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.,	ea	15	R	**R**
	Replace cooling fan cover due to damage.	ea	15	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	15	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	15	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	15	R	**R**
	Replace motor rotor if damaged.	ea	15	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	15	R	**R**
	Replace motor bearings DE and NDE.	ea	15	R	**R**
103	**LV Motors, 11kW, 380V AC 3PH 4P**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	15	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	15	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	15	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	15	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	15	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	15	R	**R**
	Deliver Motor to Site				

	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	15	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	**15**	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate. Any variance must be communicated for approval via Employer system engineer.	ea	15	R	**R**
	Replace with new Ex rated motor and issue certificate	ea	6	R	**R**
104	**LV Motors, 15 kW, 380V AC 3PH 4P**	**Stock No: 139727, 222819, 224515 & 224518**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	10	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	10	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	10	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	10	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.,	ea	10	R	**R**
	Replace cooling fan cover due to damage.	ea	10	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	10	R	**R**
	Replace motor rotor if damaged.	ea	10	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	10	R	**R**

	Replace motor bearings DE and NDE.	ea	10	R	**R**
105	**LV Motors, 15kW, 380V AC 3PH 4P**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	10	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	10	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	10	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	10	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	10	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	10	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	10	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	10	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate. Any variance must be communicated for approval via Employer system engineer.	ea	10	R	**R**
	Replace with new Ex rated motor and issue certificate	ea	10	R	**R**
106	**LV Motors, 30 kW, 380V AC 3PH 4P (New item added)**	**Stock No:600911**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	10	R	**R**

	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	10	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	10	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	10	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.,	ea	10	R	**R**
	Replace cooling fan cover due to damage.	ea	10	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	10	R	**R**
	Replace motor rotor if damaged.	ea	10	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	10	R	**R**
	Replace motor bearings DE and NDE.	ea	10	R	**R**
107	**LV Motors, 30 kW, 380V AC 3PH 4P**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	10	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	10	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	10	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	10	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	10	R	**R**

	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	10	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	10	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	**10**	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate. Any variance must be communicated for approval via Employer system engineer.	ea	10	R	R
	Replace with new Ex rated motor and issue certificate	ea	10	R	R
108	**LV Motors, 37 kW, 380V AC 3PH 4P (New item added)**	**Stock No:662271 & 139731**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	15	R	R
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	15	R	R
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	15	R	R
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	15	R	R
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.,	ea	15	R	R
	Replace cooling fan cover due to damage.	ea	15	R	R
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	15	R	R
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	15	R	R
	Rotor				

	Replace rotor shaft if damaged.	ea	15	R	R
	Replace motor rotor if damaged.	ea	15	R	R
	Replace Mechanical O' rings DE & NDE.	ea	15	R	R
	Replace motor bearings DE and NDE.	ea	15	R	R
109	**LV Motors, 37 kW, 380V AC 3PH 4P**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	15	R	R
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	15	R	R
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	15	R	R
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	15	R	R
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	15	R	R
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	15	R	R
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	15	R	R
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	**15**	R	R
	Replace Motor				
	Replace motor with the correct size as per the motor data plate. Any variance must be communicated for approval via Employer system engineer.	ea	15	R	R
	Replace with new Ex rated motor and issue certificate	ea	5	R	R
110	**LV Motors, 45 kW, 380V AC 3PH 4P**	**Stock No: 238187**			

Item	Description	Unit	QTY	Rates	Amount
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	10	R	R
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	10	R	R
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	10	R	R
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	10	R	R
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.,	ea	10	R	R
	Replace cooling fan cover due to damage.	ea	10	R	R
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	R
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	R
	Rotor				
	Replace rotor shaft if damaged.	ea	10	R	R
	Replace motor rotor if damaged.	ea	10	R	R
	Replace Mechanical O' rings DE & NDE.	ea	10	R	R
	Replace motor bearings DE and NDE.	ea	10	R	R
111	**LV Motors, 45 kW, 380V AC 3PH 4P**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	10	R	R
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	10	R	R
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	10	R	R

	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	10	R	R
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	10	R	R
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	10	R	R
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	10	R	R
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	10	R	R
	Replace Motor				
	Replace motor with the correct size as per the motor data plate. Any variance must be communicated for approval via Employer system engineer.	ea	10	R	R
	Replace with new Ex rated motor and issue certificate	ea	5	R	R
112	**LV Motors, 55 kW, 380V AC 3PH 4P**	**Stock No: 222822**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	15	R	R
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	15	R	R
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	15	R	R
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	15	R	R
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.,	ea	15	R	R
	Replace cooling fan cover due to damage.	ea	15	R	R
	DE and NDE Shields				

	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	15	R	R
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	15	R	R
	Rotor				
	Replace rotor shaft if damaged.	ea	15	R	R
	Replace motor rotor if damaged.	ea	15	R	R
	Replace Mechanical O' rings DE & NDE.	ea	15	R	R
	Replace motor bearings DE and NDE.	ea	15	R	R
113	**LV Motors, 55 kW, 380V AC 3PH 4P**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	15	R	R
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	15	R	R
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	15	R	R
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	15	R	R
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	15	R	R
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	15	R	R
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	15	R	R
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	**15**	R	R
	Replace Motor				
	Replace motor with the correct size as per the motor data plate. Any variance must be communicated for approval via Employer system engineer.	ea	8	R	R

	Replace with new Ex rated motor and issue certificate	ea	8	R	R
114	**LV Motors, 75kW, 380V AC 3PH 4P**	**Stock No: 224514, 224517 &139733**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	15	R	R
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	15	R	R
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	15	R	R
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	15	R	R
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.,	ea	15	R	R
	Replace cooling fan cover due to damage.	ea	15	R	R
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	15	R	R
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	15	R	R
	Rotor				
	Replace rotor shaft if damaged.	ea	15	R	R
	Replace motor rotor if damaged.	ea	15	R	R
	Replace Mechanical O' rings DE & NDE.	ea	15	R	R
	Replace motor bearings DE and NDE.	ea	15	R	R
115	**LV Motors, 75 kW, 380V AC 3PH 4P**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				

	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	15	R	R
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	15	R	R
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	15	R	R
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	15	R	R
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	15	R	R
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	15	R	R
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	15	R	R
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	**15**	R	R
	Replace Motor				
	Replace motor with the correct size as per the motor data plate.	ea	8	R	R
	Replace with new Ex rated motor and issue certificate	ea	8	R	R
116	**LV Motors, 90 kW, 380V AC 3PH 4P**	**Stock No: 224516**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	5	R	R
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	5	R	R
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	5	R	R
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	5	R	R
	Cooling Fan				

	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.,	ea	5	R	R
	Replace cooling fan cover due to damage.	ea	5	R	R
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	R
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	R
	Rotor				
	Replace rotor shaft if damaged.	ea	5	R	R
	Replace motor rotor if damaged.	ea	5	R	R
	Replace Mechanical O' rings DE & NDE.	ea	5	R	R
	Replace motor bearings DE and NDE.	ea	5	R	R
117	**LV Motors, 90 kW, 380V AC 3PH 4P**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	5	R	R
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	5	R	R
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	5	R	R
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	5	R	R
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	5	R	R
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	5	R	R
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	5	R	R
	Special Charges				

	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	5	R	R
	Replace Motor				
	Replace motor with the correct size as per the motor data plate.	ea	5	R	R
	Replace with new Ex rated motor and isuse certificate	ea	5	R	R
118	**LV Motors, 132 kW, 380V AC 3PH 4P**	**Stock No: 737152**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	5	R	R
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	5	R	R
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	5	R	R
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	5	R	R
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.,	ea	5	R	**R**
	Replace cooling fan cover due to damage.	ea	5	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	5	R	**R**
	Replace motor rotor if damaged.	ea	5	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	5	R	**R**
	Replace motor bearings DE and NDE.	ea	5	R	**R**

119	**LV Motors, 132 kW, 380V AC 3PH 4P**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	5	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	5	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	5	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	5	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	5	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	5	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	5	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	5	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate.	ea	5	R	**R**
	Replace with new Ex rated motor and isuse certificate	ea	5	R	**R**
	MOTOR 380V AC 3PH 6P				
120	**LV Motors, 0.55 kW, 380V AC 3PH 6P**	**Stock: 233595**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	5	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	5	R	**R**

	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	5	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	5	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.	ea	5	R	**R**
	Replace cooling fan cover due to damage.	ea	5	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	5	R	**R**
	Replace motor rotor if damaged.	ea	5	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	5	R	**R**
	Replace motor bearings DE and NDE.	ea	5	R	**R**
121	**LV Motors, 0.55 kW, 380V AC 3PH 6P**				
Item	**Description**	**Unit**		**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	5	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	5	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	5	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	5	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	5	R	**R**
	Test Run Motor				

	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	5	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	5	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	5	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate.	ea	5	R	**R**
	Replace with new Ex rated motor and issue certificate.	ea	5	R	**R**
122	**LV Motors, 2.2kW, 380V AC 3PH 6P**	**Stock: 227515**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	5	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	5	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	5	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	5	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.	ea	5	R	**R**
	Replace cooling fan cover due to damage.	ea	5	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	5	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	5	R	**R**

	Replace motor rotor if damaged.	ea	5	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	5	R	**R**
	Replace motor bearings DE and NDE.	ea	5	R	**R**
123	**LV Motors, 2.2 kW, 380V AC 3PH 6P**				
Item	**Description**	**Unit**		**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	5	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	5	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	5	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	5	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	5	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	5	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	5	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	5	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate.	ea	5	R	**R**
	Replace with new Ex rated motor and issue certificate.	ea	5	R	**R**
	1+A2655:A266+B26713				
124	**LV Motors, 4 kW, 380V AC 3PH 6P (New item added)**	**Stock No:227517**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**

	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	10	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	10	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	10	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	10	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.	ea	10	R	**R**
	Replace cooling fan cover due to damage.	ea	10	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	10	R	**R**
	Replace motor rotor if damaged.	ea	10	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	10	R	**R**
	Replace motor bearings DE and NDE.	ea	10	R	**R**
125	**LV Motors, 4 kW, 380V AC 3PH**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	10	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	10	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	10	R	**R**
	Assemble Motor				

	Assemble motor completely as to be ready for installation.	ea	10	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	10	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	10	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	10	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	10	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate. Any variance must be communicated for approval via Employer system engineer.	ea	10	R	**R**
	Replace with new Ex rated motor and issue certifcate	ea	10	R	**R**
126	**LV Motors, 7.5 kW, 380V AC 3PH 6P (New item added)**	**Stock No: 731567**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	10	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	10	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	10	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	10	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.	ea	10	R	**R**
	Replace cooling fan cover due to damage.	ea	10	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**

	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	10	R	**R**
	Replace motor rotor if damaged.	ea	10	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	10	R	**R**
	Replace motor bearings DE and NDE.	ea	10	R	**R**
127	**LV Motors, 7.5 kW, 380V AC 3PH 6P**				
Item	**Description**	**Unit**		**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	10	R	**R**
	Treat and paint stator with vanish and oven bake to dry varnish.	ea	10	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	10	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	10	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	10	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	10	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	10	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	20	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate.	ea	10	R	**R**
	Replace with new Ex Motor and issue certificate	ea	5	R	**R**

128	**LV Motors, 11 kW, 380V AC 3PH 6P (New item added)**	**Stock No: 238186**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	10	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor, bearings, terminal box and motor core. Complete assessment report.	ea	10	R	**R**
	Terminal Box				
	Replace terminal box cover with terminal box cover securing bolts. This must include motor terminal box cover gasket.	ea	10	R	**R**
	Replace terminal block, connect windings and test motor to ensure correct winding terminal arrangement.	ea	10	R	**R**
	Cooling Fan				
	Replace damaged cooling fan with the same or equivalent type of cooling fan. The replacement cooling fan must not degrade the designed cooling of the motor.	ea	10	R	**R**
	Replace cooling fan cover due to damage.	ea	10	R	**R**
	DE and NDE Shields				
	Replace DE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**
	Replace NDE shield if it has been damaged beyond repair. This includes shield bolts.	ea	10	R	**R**
	Rotor				
	Replace rotor shaft if damaged.	ea	10	R	**R**
	Replace motor rotor if damaged.	ea	10	R	**R**
	Replace Mechanical O' rings DE & NDE.	ea	10	R	**R**
	Replace motor bearings DE and NDE.	ea	10	R	**R**
129	**LV Motors, 11 kW, 380V AC 3PH 6P**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Stator				
	Rewind motor stator. The rewind must reflect motor nameplate data.	ea	10	R	**R**

	Treat and paint stator with vanish and oven bake to dry varnish.	ea	10	R	**R**
	Conduct IR (Insulation Resistance) test on motor windings in terms of SANS 10142, Part 1 and winding balance test (Galvano meter)	ea	10	R	**R**
	Assemble Motor				
	Assemble motor completely as to be ready for installation.	ea	10	R	**R**
	Clean all corrosion of the motor and paint motor Emerald Grey (G29).	ea	10	R	**R**
	Test Run Motor				
	Test run for vibrations and current balance test. Compare results with motor nameplate data. Variance should be within 5%. Motor shall be runned until temperatures settled out.	ea	10	R	**R**
	Deliver Motor to Site				
	Secure motor for delivery to site and deliver. Transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435	ea	10	R	**R**
	Special Charges				
	Emergency repair charge. This is an emergency repair and includes total cost of the motor repair and testing. Transport must be included.	ea	10	R	**R**
	Replace Motor				
	Replace motor with the correct size as per the motor data plate. Any variance must be communicated for approval via Employer system engineer.	ea	10	R	**R**
	Replace with new Ex rated motor and issue certifcate	ea	5	R	**R**
	220V DC MOTORS				
130	**1.5KW 220V DC Stator Coolant Pump Motor**	**None Stock**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	2	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor & rotor sliprings, slipring brushes & slipring brush holder and spring, bearings, terminal box and motor core. Complete assessment report.	ea	2	R	**R**
	Terminal Box, Terminal Block, Brushes, Slipring Brushes and Slipring Brush Holder				
	Repair terminal box. Terminal box gasket and terminal box cover cover gasket is included. All hold down bolts is included.	ea	2	R	**R**
	Replace terminal box. Terminal box gasket and terminal box cover cover gasket is included. All hold down bolts is included.	ea	2	R	**R**

	Replace terminal block.	ea	2	R	**R**
	Repair brush holder if damaged..	ea	2	R	**R**
	Replace brush holder and spring if damaged beyond repair.	ea	2	R	**R**
	Replace brushes, inspect brush holder spring tension.	ea	2	R	**R**
	Cooling Fan				
	Replace cooling fan with the same size and shape as to comply with OEM air flow requirements.	ea	2	R	**R**
	Repair cooling fan if damaged.	ea	2	R	**R**
	Replace/ repair cooling fan key and key way.	ea	2	R	**R**
	DE and NDE End Shields				
	Micro-weld and polish DE bearing housing.	ea	2	R	**R**
	Micro-weld and polish NDE bearing housing.	ea	2	R	**R**
	Fit DE and NDE grease nipples.	ea	2	R	**R**
	Rotor/ Armature				
	Replace the rotor including sliprings.	ea	2	R	**R**
	Replace rotor shaft.	ea	2	R	**R**
	Replace/ repair armature core.	ea	2	R	**R**
	Rewind armature and repair slots.	ea	2	R	**R**
131	**1.5KW 220V DC Stator Coolant Pump Motor**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Rotor/ Armature Continue				
	Replace/ repair commutator.	ea	2	R	**R**
	Replace/ repair laminations.	ea	2	R	**R**
	Micro welding rotor shaft journal and polish (DE).	ea	2	R	**R**
	Micro welding rotor shaft journal and polish (NDE).	ea	2	R	**R**

	Balance the rotor with a cooling fan.	ea	2	R	**R**
	Replace Mechanical O' rings DE and NDE.	ea	2	R	**R**
	Replace DE & NDE bearing.	ea	2	R	**R**
	Stator				
	Rewind Field	ea	2	R	**R**
	Replace/ repair permanent magnets	ea	2	R	**R**
	Replace/ repair pole shoe	ea	2	R	**R**
	Replace/ repair iron core	ea	2	R	**R**
	Treat and paint field with vanish	ea	2	R	**R**
	Conduct IR, winding balance test	ea	2	R	**R**
	Test run for vibrations and current balance test	ea	2	R	**R**
	Assemble and Paint Motor				
	Assemble motor	ea	2	R	**R**
	Treat and paint motor with anti-rust paint	ea	2	R	**R**
	Deliver Motor to Power Station				
	Deliver motor	ea	2	R	**R**
	Special Charges				
	Emergency repair charge	ea	**2**	R	**R**
	Replace motor				
	Replace Motor with the same nameplate details as the scrapped motor.	ea	**2**	R	**R**
132	**3.7kW, 220VDC Jacking Oil Pump Motor**	**Stock No: 501250**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	2	R	**R**

	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor & rotor sliprings, slipring brushes & slipring brush holder and spring, bearings, terminal box and motor core. Complete assessment report.	ea	2	R	**R**
	Terminal Box, Terminal Block, Brushes, Slipring Brushes and Slipring Brush Holder				
	Repair terminal box. Terminal box gasket and terminal box cover cover gasket is included. All hold down bolts is included.	ea	2	R	**R**
	Replace terminal box. Terminal box gasket and terminal box cover cover gasket is included. All hold down bolts is included.	ea	2	R	**R**
	Replace terminal block.	ea	2	R	**R**
	Repair brush holder if damaged..	ea	2	R	**R**
	Replace brush holder and spring if damaged beyond repair.	ea	2	R	**R**
	Replace brushes, inspect brush holder spring tension.	ea	2	R	**R**
	Cooling Fan				
	Replace cooling fan with the same size and shape as to comply with OEM air flow requirements.	ea	2	R	**R**
	Repair cooling fan if damaged.	ea	2	R	**R**
	Replace/ repair cooling fan key and key way.	ea	2	R	**R**
	DE and NDE End Shields				
	Micro-weld and polish DE bearing housing.	ea	2	R	**R**
	Micro-weld and polish NDE bearing housing.	ea	2	R	**R**
	Fit DE and NDE grease nipples.	ea	2	R	**R**
	Rotor/ Armature				
	Replace the rotor including sliprings.	ea	2	R	**R**
	Replace rotor shaft.	ea	2	R	**R**
	Replace/ repair armature core.	ea	2	R	**R**
	Rewind armature and repair slots.	ea	2	R	**R**
133	**3.7kW, 220VDC Jacking Oil Pump Motor**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**

	Rotor/ Armature Continue				
	Replace/ repair commutator.	ea	2	R	**R**
	Replace/ repair laminations.	ea	2	R	**R**
	Micro welding rotor shaft journal and polish (DE).	ea	2	R	**R**
	Micro welding rotor shaft journal and polish (NDE).	ea	2	R	**R**
	Balance the rotor with a cooling fan.	ea	2	R	**R**
	Replace Mechanical O' rings DE and NDE.	ea	2	R	**R**
	Replace DE & NDE bearing.	ea	2	R	**R**
	Stator				
	Rewind Field	ea	2	R	**R**
	Replace/ repair permanent magnets	ea	2	R	**R**
	Replace/ repair pole shoe	ea	2	R	**R**
	Replace/ repair iron core	ea	2	R	**R**
	Treat and paint field with vanish	ea	2	R	**R**
	Conduct IR, winding balance test	ea	2	R	**R**
	Test run for vibrations and current balance test	ea	2	R	**R**
	Assemble and Paint Motor				
	Assemble motor	ea	2	R	**R**
	Treat and paint motor with anti-rust paint	ea	2	R	**R**
	Deliver Motor to Power Station				
	Deliver motor	ea	2	R	**R**
	Special Charges				
	Emergency repair charge	ea	2	R	**R**
	Replace motor				
	Replace Motor with the same nameplate details as the scrapped motor.	ea	2	R	**R**

134	**15HP(11KW), 220VDC- Bearing Oil Pump Motor**	**None Stock**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	2	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor & rotor sliprings, slipring brushes & slipring brush holder and spring, bearings, terminal box and motor core. Complete assessment report.	ea	2	R	**R**
	Terminal Box, Terminal Block, Brushes, Slipring Brushes and Slipring Brush Holder				
	Repair terminal box. Terminal box gasket and terminal box cover cover gasket is included. All hold down bolts is included.	ea	2	R	**R**
	Replace terminal box. Terminal box gasket and terminal box cover cover gasket is included. All hold down bolts is included.	ea	2	R	**R**
	Replace terminal block.	ea	2	R	**R**
	Repair brush holder if damaged..	ea	2	R	**R**
	Replace brush holder and spring if damaged beyond repair.	ea	2	R	**R**
	Replace brushes, inspect brush holder spring tension.	ea	2	R	**R**
	Cooling Fan				
	Replace cooling fan with the same size and shape as to comply with OEM air flow requirements.	ea	2	R	**R**
	Repair cooling fan if damaged.	ea	2	R	**R**
	Replace/ repair cooling fan key and key way.	ea	2	R	**R**
	DE and NDE End Shields				
	Micro-weld and polish DE bearing housing.	ea	2	R	**R**
	Micro-weld and polish NDE bearing housing.	ea	2	R	**R**
	Fit DE and NDE grease nipples.	ea	2	R	**R**
	Rotor/ Armature				
	Replace the rotor including sliprings.	ea	2	R	**R**
	Replace rotor shaft.	ea	2	R	**R**
	Replace/ repair armature core.	ea	2	R	**R**

	Rewind armature and repair slots.	ea	2	R	**R**
135	**15HP, 220VDC- Bearing Oil Pump Motor**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Rotor/ Armature Continue				
	Replace/ repair commutator.	ea	2	R	**R**
	Replace/ repair laminations.	ea	2	R	**R**
	Micro welding rotor shaft journal and polish (DE).	ea	2	R	**R**
	Micro welding rotor shaft journal and polish (NDE).	ea	2	R	**R**
	Balance the rotor with a cooling fan.	ea	2	R	**R**
	Replace Mechanical O' rings DE and NDE.	ea	2	R	**R**
	Replace DE & NDE bearing.	ea	2	R	**R**
	Stator				
	Rewind Field	ea	2	R	**R**
	Replace/ repair permanent magnets	ea	2	R	**R**
	Replace/ repair pole shoe	ea	2	R	**R**
	Replace/ repair iron core	ea	2	R	**R**
	Treat and paint field with vanish	ea	2	R	**R**
	Conduct IR, winding balance test	ea	2	R	**R**
	Test run for vibrations and current balance test	ea	2	R	**R**
	Assemble and Paint Motor				
	Assemble motor	ea	2	R	**R**
	Treat and paint motor with anti-rust paint	ea	2	R	**R**
	Deliver Motor to Power Station				
	Deliver motor	ea	2	R	**R**

	Special Charges				
	Emergency repair charge	ea	2	R	**R**
	Replace motor				
	Replace Motor with the same nameplate details as the scrapped motor.	ea	2	R	**R**
136	**20HP (15KW), 230VDC- Seal Oil Pump Motor**	**None Stock**			
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	General				
	Collect motor from Camden Power station, transport in accordance with Eskom standard for transport of electrical motors, Document number: 240-56361435 to contractor works and off-load at works.	ea	2	R	**R**
	Clean & inspect motor external, Record findings. Strip motor; inspect stator, rotor & rotor sliprings, slipring brushes & slipring brush holder and spring, bearings, terminal box and motor core. Complete assessment report.	ea	2	R	**R**
	Terminal Box, Terminal Block, Brushes, Slipring Brushes and Slipring Brush Holder				
	Repair terminal box. Terminal box gasket and terminal box cover cover gasket is included. All hold down bolts is included.	ea	2	R	**R**
	Replace terminal box. Terminal box gasket and terminal box cover cover gasket is included. All hold down bolts is included.	ea	2	R	**R**
	Replace terminal block.	ea	2	R	**R**
	Repair brush holder if damaged..	ea	2	R	**R**
	Replace brush holder and spring if damaged beyond repair.	ea	2	R	**R**
	Replace brushes, inspect brush holder spring tension.	ea	2	R	**R**
	Cooling Fan				
	Replace cooling fan with the same size and shape as to comply with OEM air flow requirements.	ea	2	R	**R**
	Repair cooling fan if damaged.	ea	2	R	**R**
	Replace/ repair cooling fan key and key way.	ea	2	R	**R**
	DE and NDE End Shields				
	Micro-weld and polish DE bearing housing.	ea	2	R	**R**
	Micro-weld and polish NDE bearing housing.	ea	2	R	**R**

	Fit DE and NDE grease nipples.	ea	2	R	**R**
	Rotor/ Armature				
	Replace the rotor including sliprings.	ea	2	R	**R**
	Replace rotor shaft.	ea	2	R	**R**
	Replace/ repair armature core.	ea	2	R	**R**
	Rewind armature and repair slots.	ea	2	R	**R**
137	**20HP, 230VDC- Seal Oil Pump Motor**				
Item	**Description**	**Unit**	**QTY**	**Rates**	**Amount**
	Rotor/ Armature Continue				
	Replace/ repair commutator.	ea	2	R	**R**
	Replace/ repair laminations.	ea	2	R	**R**
	Micro welding rotor shaft journal and polish (DE).	ea	2	R	**R**
	Micro welding rotor shaft journal and polish (NDE).	ea	2	R	**R**
	Balance the rotor with a cooling fan.	ea	2	R	**R**
	Replace Mechanical O' rings DE and NDE.	ea	2	R	**R**
	Replace DE & NDE bearing.	ea	2	R	**R**
	Stator				
	Rewind Field	ea	2	R	**R**
	Replace/ repair permanent magnets	ea	2	R	**R**
	Replace/ repair pole shoe	ea	2	R	**R**
	Replace/ repair iron core	ea	2	R	**R**
	Treat and paint field with vanish	ea	2	R	**R**
	Conduct IR, winding balance test	ea	2	R	**R**
	Test run for vibrations and current balance test	ea	2	R	**R**
	Assemble and Paint Motor				

	Assemble motor	ea	2	R	**R**
	Treat and paint motor with anti-rust paint	ea	2	R	**R**
	Deliver Motor to Power Station				
	Deliver motor	ea	2	R	**R**
	Special Charges				
	Emergency repair charge	ea	2	R	**R**
	Replace motor				
	Replace Motor with the same nameplate details as the scrapped motor.	ea	2	R	**R**
Grand Total (Excl. VAT) Transferred to Final Summary Page					**R**

THE PROVISION OF MOTOR MAINTENANCE, REPAIRS AND SERVICE FOR A PERIOD OF 60- MONTHS AT CAMDEN POWER STATION - BILLS OF QUANTITIES

FINAL SUMMARY

No	Description	Amount
1	Section 1 - Preliminaries and General	**R**
2	Section 2 - BOQ	**R**
	Sub-Total	**R**
3	Value Added Tax @ 15%	**R**
4	**Grand Total (Incl. VAT) - Carried to Form of Offer and Acecptance**	**R**